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Date: MAR 01 2011
Refer To: EP2011-0091

Mr. Brian Snyder, Water Division Director
Acting Public Utilities Division Director
Sangre de Cristo Water Division
City of Santa Fe
801 West San Mateo
P.O. Box 909
Santa Fe, New Mexico 87504

Subject: Los Alamos National Laboratory Sitewide Monitoring Program Drinking Water Results for the City of Santa Fe Buckman Water Supply Wells

Dear Mr. Snyder:

This report, prepared by Los Alamos National Laboratory (the Laboratory), provides the analytical results from the November 10, 2010, sampling and analysis of the City of Santa Fe Buckman Water Supply Wells No. 1, 6, and 8. All results were below the U.S. Environmental Protection Agency (EPA) primary and secondary drinking water standards with the exception of the following:

- Arsenic (As) was measured in an unfiltered sample from Buckman Well No. 1 at a concentration of 11.5 μg/L; the EPA maximum contaminant level (MCL) for arsenic in drinking water is 10 μg/L.

Routine monitoring of select Buckman water supply wells is conducted in accordance with the April 22, 2010, sampling and analysis plan cooperatively developed between the Laboratory and City of Santa Fe staff. Under this plan, Buckman Wells No. 1, 6, and 8 will be sampled quarterly by the Laboratory: twice per year for full-suite analysis (radionuclides [including tritium], general inorganics [including perchlorate], metals [including chromium], and organics) and twice per year for low-level tritium.

The attached CD contains the following items: (1) General Engineering Laboratories, Inc. (GEL), data packages and (2) an Excel file of the analytical results (Tables 1–6) with a glossary of laboratory qualification codes, secondary validation codes, and secondary validation reason codes. The analytical results are as follows.

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Radionuclides: Analytical results from sampling Buckman Wells No. 1, 6, and 8 for radionuclides are presented in Table 1.

- **Americium-241, Cesium-137, Neptunium-237, Plutonium-238, Plutonium-239/240, and Strontium-90**: All results at all locations were nondetect, as indicated by the analytical laboratory qualifier code "U."

- **Gross Alpha:** The gross-alpha activities at Buckman Wells No. 1, 6, and 8 were 4.70 pCi/L, 8.56 pCi/L, and 8.83 pCi/L, respectively. All results were below the EPA MCL for gross alpha in drinking water of 15 pCi/L.

- **Gross Beta:** Gross-beta activities at Buckman Wells No. 1, 6, and 8 were 4.33 pCi/L, 6.47 pCi/L, and 8.17 pCi/L, respectively. All results were below the EPA screening level for gross beta in drinking water of 50 pCi/L (40 Code of Federal Regulations § 141.26).

- **Combined Radium-226 and Radium-228:** The combined radium-226 and radium-228 activities at Buckman Wells No. 1, 6, and 8 ranged from nondetect (lab qualifier code "U") to a maximum value of 1.4 pCi/L. The results at all locations were below the EPA MCL of 5 pCi/L for combined radium-226 and radium-228 in drinking water.

- **Tritium:** Tritium results were pending at the time this report was prepared.

- **Isotopic Uranium:** Unfiltered samples from Buckman Wells No. 1, 6, and 8 were analyzed for isotopic uranium using alpha spectroscopy (alpha spec), an analytical method that indirectly measures the alpha activity in a sample. Using alpha spectroscopy, GEL analyzed the samples for uranium isotopes, uranium-234, uranium-235/236, and uranium-238. EPA has not established an activity-based MCL for uranium isotopes in drinking water; the current EPA MCL of 30 µg/L is a mass-based standard.

  The mass of total uranium in the sample was calculated using the following formula, which incorporates the specific activities for the isotopes:

  $$\text{Total uranium } (\mu g/L) = ({}^{234}U/6250) + ({}^{235/236}U/2.16) + ({}^{238}U/0.336)$$

  The calculated concentrations of total uranium are presented in the table below, along with the results obtained from inductively coupled plasma mass spectrometry (ICPMS) analysis (see Table 3). All results were below the EPA MCL of 30 µg/L for uranium in drinking water.

Total Uranium Concentrations, Buckman Wells No. 1, 6, and 8, November 10, 2010

All Units: µg/L	Buckman Well No. 1	Buckman Well No. 6	Buckman Well No. 8
Total U: Calculated	15.9	5.72	19.7
Total U: ICPMS	18.8	5.44	21.2

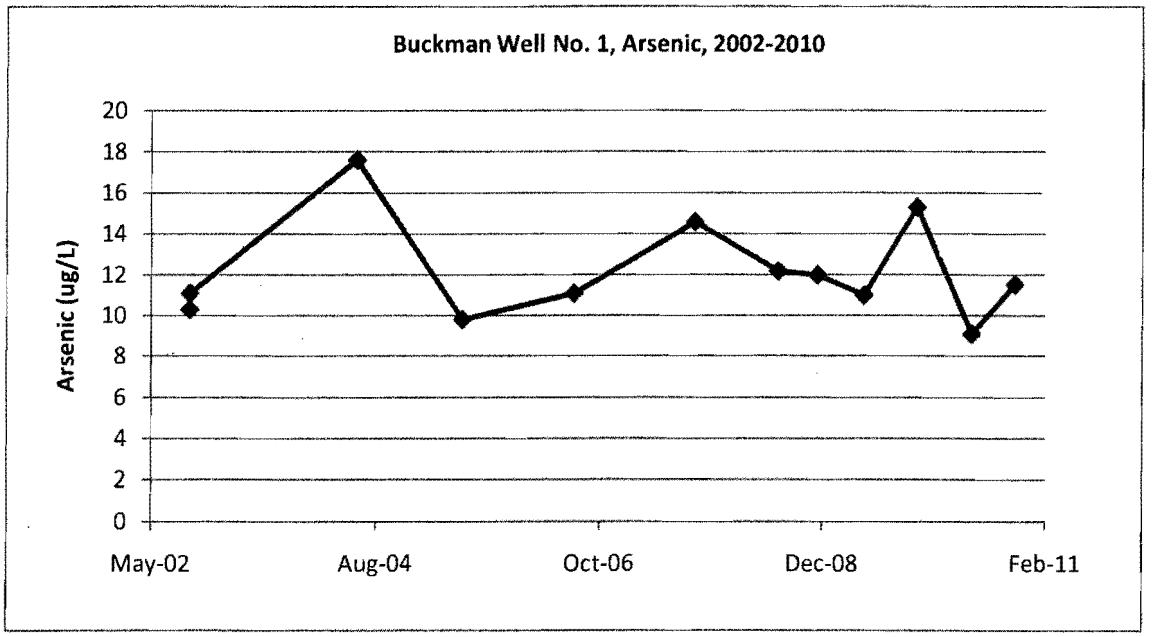
General Inorganics: The analytical results from sampling Buckman Wells No. 1, 6, and 8 for general inorganics are summarized in Table 2.

- **Perchlorate:** The unfiltered perchlorate concentrations at Buckman Wells No. 1, 6, and 8 were 0.34 µg/L, 0.46 µg/L, and 0.32 µg/L, respectively. Currently, neither the federal government nor the State of New Mexico has established a drinking water standard for perchlorate. On January 8, 2009, EPA issued an interim health advisory of 15 µg/L for perchlorate in drinking water, replacing the existing preliminary remediation goal of 24.5 µg/L.

- **Cyanide, Chloride, Fluoride, Nitrate+Nitrite, Sulfate, and Total Dissolved Solids:** Cyanide, chloride, fluoride, nitrate+nitrite (as N), sulfate, and total dissolved solids concentrations at all locations were below the EPA primary and secondary drinking water standards.

Metals: The analytical results from sampling Buckman Wells No. 1, 6, and 8 for metals are summarized in Table 3.

- **Arsenic:** The unfiltered arsenic concentrations at Buckman Wells No. 1, 6, and 8 were 11.5 µg/L, 9.3 µg/L, and 6.7 µg/L, respectively. The reported value from Buckman Well No. 1 exceeds the EPA MCL of 10 µg/L for arsenic in drinking water. As shown in the figure below, arsenic concentrations at Buckman Well No. 1 have ranged from approximately 9 µg/L to approximately 18 µg/L between 2002 and 2010.



- **Chromium:** The filtered and unfiltered chromium concentrations at Buckman Wells No. 1, 6, and 8 ranged between 6.3 µg/L and 10.9 µg/L, well below the EPA MCL of 100 µg/L and the New Mexico groundwater standard of 50 µg/L.

- **Strontium (metal):** The unfiltered strontium (metal) concentrations at Buckman Wells No. 1, 6, and 8 were 136 µg/L, 1250 µg/L, and 537 µg/L, respectively. There is no EPA

drinking water standard or New Mexico groundwater standard for strontium (metal). The EPA has established a regional screening level for strontium (metal) in tap water of 22,000 µg/L (noncancer). Since 2008, strontium (metal) concentrations at Buckman Well No. 6 have ranged from 527 µg/L to 1250 µg/L with a mean concentration of 856 µg/L. Mean strontium (metal) concentrations at Buckman Wells No. 1 and 8 were 127 µg/L and 462 µg/L, respectively.

Organics: The analytical results from sampling Buckman Wells No. 1, 6, and 8 for organics are summarized in Tables 4, 5, and 6.

- **High Explosives (HE):** No HE compounds were detected at concentrations greater than GEL's method detection limit (MDL).

- **Polychlorinated Biphenyls (PCBs):** No PCBs were detected at concentrations greater than GEL's MDL.

- **Volatile Organic Compounds (VOCs):** No VOCs were detected in samples or in field trip blanks at concentrations greater than GEL's MDL.

In summary, all results presented in this report are below EPA MCLs and New Mexico groundwater standards with the exception of arsenic at Buckman Well No. 1.

If you would like additional information regarding this report, please contact Bob Beers at (505) 667-7969 (bbeers@lanl.gov).

Sincerely,

Michael J. Graham, Associate Director
Environmental Programs
Los Alamos National Laboratory

MG/CD/SP/BB:sm

Attachment: CD with the following items:
(1) GEL data packages
(2) Excel file of Tables 1–6 and glossary of laboratory qualification codes, secondary validation codes, and secondary validation reason codes (LA-UR-11-0783)

Cy: (w/att.)
Claudia Borchert, City of Santa Fe, 801 West San Mateo, Santa Fe, NM 87505
Michael Gonzales, City of Santa Fe, 801 West San Mateo, Santa Fe, NM 87505
James Bearzi, NMED-HWB, 2905 Rodeo Park Drive East, Building 1, Santa Fe, NM 87505
Margaret Ryan, NMED-DWB, P.O. Box 5469, Santa Fe, NM 87502
Neil Weber, San Ildefonso Pueblo
Gene Turner, DOE-LASO, MS A316
Bob Beers, ENV-RCRA, MS K490
RPF, MS M707

Cy: (Letter and CD and/or DVD only))
Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB, MS M894
Hai Shen, DOE-LASO, MS A316
Steve Paris, EP-CAP, MS M992
Suzanne Coyne, IRM-DCS, MS M992
William Alexander, EP-BPS, MS M992

Cy: (w/o att.)
Tom Skibitski, NMED-OB, Santa Fe, NM (date-stamped letter emailed)
Annette Russell, DOE-LASO, MS A316 (date-stamped letter emailed)
Michael B. Mallory, PADOPS, A102 (date-stamped letter emailed)
James C. Cantwell, ADESHQ, MS K491 (date-stamped letter emailed)
Mike Saladen, ENV-RCRA, MS K490 (date-stamped letter emailed)
Danny Katzman, EP-ET, MS M992 (date-stamped letter emailed)
Craig Douglass, EP-CAP, MS M992 (date-stamped letter emailed)
Michael J. Graham, ADEP, MS M991 (date-stamped letter emailed)

Table 1.0
Buckman Water Supply Wells
Radionuclides

Location Name	Start Date	Analyte	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Uncertainty (1s)	Std Mda	Lab Qual Code	Concat Flag Code	Lab Code	Sample Id
Buckman 1	11/10/2010	Am-241	HASL-300:AM-241	UF	<	-0.00013	pCi/L	0.003	0.03	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Co-60	EPA:901.1	UF	<	1.32	pCi/L	1.4	5.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Cs-137	EPA:901.1	UF	<	0.63	pCi/L	1.6	5.3	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	GROSSA	EPA:900	UF		4.70	pCi/L	1.4	2.7			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	GROSSB	EPA:900	UF		4.33	pCi/L	1.0	2.4			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	GROSSG	EPA:901.1	UF	<	29.5	pCi/L	19	44	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	K-40	EPA:901.1	UF	<	-12.8	pCi/L	21	66	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Na-22	EPA:901.1	UF	<	-3.04	pCi/L	1.7	4.5	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Np-237	EPA:901.1	UF	<	2.02	pCi/L	3.1	10	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Np-237	HASL-300:Np-237	UF	<	0.017	pCi/L	0.008	0.02	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Pu-238	HASL-300:ISOPU	UF	<	-0.0022	pCi/L	0.003	0.03	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Pu-239/240	HASL-300:ISOPU	UF	<	-0.0043	pCi/L	0.004	0.04	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Ra-226	EPA:903.1	UF	<	0.12	pCi/L	0.09	0.30	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Ra-228	EPA:904	UF		0.78	pCi/L	0.23	0.56			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Sr-90	EPA:905.0	UF	<	-0.24	pCi/L	0.12	0.50	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Th-228	HASL-300:ISOTH	UF	<	0.007	pCi/L	0.006	0.03	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Th-230	HASL-300:ISOTH	UF	<	0.019	pCi/L	0.009	0.05	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Th-232	HASL-300:ISOTH	UF	<	0.002	pCi/L	0.004	0.02	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	U-234	HASL-300:ISOU	UF		7.90	pCi/L	0.57	0.05			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	U-235/236	HASL-300:ISOU	UF		0.296	pCi/L	0.036	0.03			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	U-238	HASL-300:ISOU	UF		5.29	pCi/L	0.39	0.03			GELC	Buckman1-11-1944
Buckman 6	11/10/2010	Am-241	HASL-300:AM-241	UF	<	-0.005	pCi/L	0.005	0.03	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Co-60	EPA:901.1	UF	<	-0.46	pCi/L	1.7	5.5	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Cs-137	EPA:901.1	UF	<	-2.10	pCi/L	2.3	8.0	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	GROSSA	EPA:900	UF		8.56	pCi/L	1.9	2.9			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	GROSSB	EPA:900	UF		6.47	pCi/L	1.4	3.0			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	GROSSG	EPA:901.1	UF	<	18.1	pCi/L	19	21	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	K-40	EPA:901.1	UF	<	-27.2	pCi/L	19	61	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Na-22	EPA:901.1	UF	<	-1.59	pCi/L	1.7	5.0	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Np-237	EPA:901.1	UF	<	1.55	pCi/L	2.4	8.3	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Np-237	HASL-300:Np-237	UF	<	-0.003	pCi/L	0.01	0.02	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Pu-238	HASL-300:ISOPU	UF	<	0.0000	pCi/L	0.005	0.02	U	U	GELC	Buckman06-11-1970

Table 1.0
Buckman Water Supply Wells
Radionuclides

Location Name	Start Date	Analyte	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Uncertainty (1s)	Std Mda	Lab Qual Code	Concat Flag Code	Lab Code	Sample Id
Buckman 6	11/10/2010	Pu-239/240	HASL-300:ISOPU	UF	<	0.0000	pCi/L	0.004	0.04	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Ra-226	EPA:903.1	UF	<	0.268	pCi/L	0.10	0.24		U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Ra-228	EPA:904	UF	<	0.650	pCi/L	0.22	0.58		U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Sr-90	EPA:905.0	UF	<	-0.039	pCi/L	0.13	0.49	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Th-228	HASL-300:ISOTH	UF	<	0.014	pCi/L	0.01	0.03	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Th-230	HASL-300:ISOTH	UF	<	0.027	pCi/L	0.01	0.06	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Th-232	HASL-300:ISOTH	UF	<	0.002	pCi/L	0.003	0.03	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	U-234	HASL-300:ISOU	UF		8.56	pCi/L	0.63	0.06			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	U-235/236	HASL-300:ISOU	UF		0.129	pCi/L	0.02	0.04			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	U-238	HASL-300:ISOU	UF		1.90	pCi/L	0.15	0.04			GELC	Buckman06-11-1970
Buckman 8	11/10/2010	Am-241	HASL-300:AM-241	UF	<	-0.005	pCi/L	0.004	0.04	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Co-60	EPA:901.1	UF	<	-1.47	pCi/L	1.6	4.6	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Cs-137	EPA:901.1	UF	<	-0.17	pCi/L	1.4	4.7	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	GROSSA	EPA:900	UF		8.83	pCi/L	2.0	2.9			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	GROSSB	EPA:900	UF		8.17	pCi/L	1.4	2.5			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	GROSSG	EPA:901.1	UF	<	35.2	pCi/L	24	67	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	K-40	EPA:901.1	UF	<	-7.11	pCi/L	19	67	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Na-22	EPA:901.1	UF	<	-2.60	pCi/L	1.6	4.5	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Np-237	HASL-300:Np-237	UF	<	0.007	pCi/L	0.014	0.03	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Np-237	EPA:901.1	UF	<	-1.28	pCi/L	3.5	11	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Pu-238	HASL-300:ISOPU	UF	<	-0.007	pCi/L	0.01	0.03	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Pu-239/240	HASL-300:ISOPU	UF	<	-0.002	pCi/L	0.004	0.05	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Ra-226	EPA:903.1	UF	<	0.217	pCi/L	0.09	0.24	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Ra-228	EPA:904	UF		1.13	pCi/L	0.28	0.57			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Sr-90	EPA:905.0	UF	<	0.404	pCi/L	0.16	0.49	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Th-228	HASL-300:ISOTH	UF	<	-0.007	pCi/L	0.01	0.03	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Th-230	HASL-300:ISOTH	UF	<	0.040	pCi/L	0.01	0.05	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Th-232	HASL-300:ISOTH	UF	<	-0.0005	pCi/L	0.01	0.02	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	U-234	HASL-300:ISOU	UF		11.2	pCi/L	0.82	0.05			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	U-235/236	HASL-300:ISOU	UF		0.362	pCi/L	0.04	0.04			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	U-238	HASL-300:ISOU	UF		6.56	pCi/L	0.48	0.04			GELC	Buckman08-11-2042

Table 2.0
Buckman Water Supply Wells
General Inorganics

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Sample Id
Buckman 1	11/10/2010	ALK-CO3	Alkalinity-CO3	EPA:310.1	UF	<	1	mg/L	0.73	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	ALK-CO3+HCO3	Alkalinity-CO3+HCO3	EPA:310.1	UF		199	mg/L	0.73			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	NH3-N	Ammonia as Nitrogen	EPA:350.1	UF		0.036	mg/L	0.02	J	J	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Br(-1)	Bromide	EPA:300.0	UF	<	0.2	mg/L	0.066	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Ca	Calcium	SW-846:6010B	UF		7.59	mg/L	0.05			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Cl(-1)	Chloride	EPA:300.0	UF		2.45	mg/L	0.07			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	CN(TOTAL)	Cyanide (Total)	EPA:335.4	UF	<	0.005	mg/L	0.002	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	DO	Dissolved Oxygen	Generic Field Measurement	UF		6.69	mg/L				FLD	Buckman1-11-1944
Buckman 1	11/10/2010	F(-1)	Fluoride	EPA:300.0	UF		0.786	mg/L	0.03			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	HARDNESS	Hardness	SM:A2340B	UF		20.5	mg/L	0.35			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Mg	Magnesium	SW-846:6010B	UF		0.38	mg/L	0.09			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	EPA:353.2	UF		0.995	mg/L	0.05			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	ORP	Oxidation Reduction Potential	Generic Field Measurement	UF		308	mV				FLD	Buckman1-11-1944
Buckman 1	11/10/2010	ClO4	Perchlorate	SW-846:6850	UF		0.34	ug/L	0.05			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	K	Potassium	SW-846:6010B	UF		2.05	mg/L	0.05			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Na	Sodium	SW-846:6010B	UF		97.9	mg/L	0.10			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	SPEC_CONDC	Specific Conductance	FIELD CONDUCTIVITY	UF		435	uS/cm				FLD	Buckman1-11-1944
Buckman 1	11/10/2010	SPEC_CONDC	Specific Conductance	EPA:120.1	UF		432	uS/cm	1.00			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	SO4(-2)	Sulfate	EPA:300.0	UF		11.1	mg/L	0.1			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	TEMP	Temperature	GENERIC FIELD TEMP	UF		18.0	deg C				FLD	Buckman1-11-1944
Buckman 1	11/10/2010	TDS	Total Dissolved Solids	EPA:160.1	UF		277	mg/L	2.40			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	TKN	Total Kjeldahl Nitrogen	EPA:351.2	UF	<	0.1	mg/L	0.03	U	UJ	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	TOC	Total Organic Carbon	SW-846:9060	UF		0.429	mg/L	0.33	J	J	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	PO4-P	Total Phosphate as Phosphorus	EPA:365.4	UF		0.015	mg/L	0.02	J	J	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	TURB	Turbidity	GENERIC FIELD TURB	UF		0.37	NTU				FLD	Buckman1-11-1944
Buckman 1	11/10/2010	pH	pH	GENERIC FIELD PH	UF		7.99	SU				FLD	Buckman1-11-1944
Buckman 1	11/10/2010	pH	pH	EPA:150.1	UF		8.29	SU	0.01	H	J-	GELC	Buckman1-11-1944
Buckman 6	11/10/2010	ALK-CO3	Alkalinity-CO3	EPA:310.1	UF	<	1	mg/L	0.73	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	ALK-CO3+HCO3	Alkalinity-CO3+HCO3	EPA:310.1	UF		285	mg/L	0.73			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	NH3-N	Ammonia as Nitrogen	EPA:350.1	UF	<	0.05	mg/L	0.02	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Br(-1)	Bromide	EPA:300.0	UF	<	0.2	mg/L	0.07	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Ca	Calcium	SW-846:6010B	UF		58.6	mg/L	0.05			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Cl(-1)	Chloride	EPA:300.0	UF		3.6	mg/L	0.07			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	CN(TOTAL)	Cyanide (Total)	EPA:335.4	UF	<	0.005	mg/L	0.00	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	DO	Dissolved Oxygen	Generic Field Measurement	UF		5.86	mg/L				FLD	Buckman06-11-1970
Buckman 6	11/10/2010	F(-1)	Fluoride	EPA:300.0	UF		0.505	mg/L	0.03			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	HARDNESS	Hardness	SM:A2340B	UF		178	mg/L	0.35			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Mg	Magnesium	SW-846:6010B	UF		7.82	mg/L	0.09			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	EPA:353.2	UF		1.45	mg/L	0.05			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	ORP	Oxidation Reduction Potential	Generic Field Measurement	UF		486	mV				FLD	Buckman06-11-1970
Buckman 6	11/10/2010	ClO4	Perchlorate	SW-846:6850	UF		0.46	ug/L	0.05			GELC	Buckman06-11-1970

Table 2.0
Buckman Water Supply Wells
General Inorganics

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Sample Id
Buckman 6	11/10/2010	K	Potassium	SW-846:6010B	UF		4.55	mg/L	0.05			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Na	Sodium	SW-846:6010B	UF		73.6	mg/L	0.10			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	SPEC_CONDC	Specific Conductance	FIELD CONDUCTIVITY	UF		638	uS/cm				FLD	Buckman06-11-1970
Buckman 6	11/10/2010	SPEC_CONDC	Specific Conductance	EPA:120.1	UF		626	uS/cm	1.0			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	SO4(-2)	Sulfate	EPA:300.0	UF		19.4	mg/L	0.10			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	TEMP	Temperature	GENERIC FIELD TEMP	UF		20.2	deg C				FLD	Buckman06-11-1970
Buckman 6	11/10/2010	TDS	Total Dissolved Solids	EPA:160.1	UF		386	mg/L	2.4			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	TKN	Total Kjeldahl Nitrogen	EPA:351.2	UF	<	0.1	mg/L	0.03	U	UJ	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	TOC	Total Organic Carbon	SW-846:9060	UF		1.06	mg/L	0.33			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	PO4-P	Total Phosphate as Phosphorus	EPA:365.4	UF		0.078	mg/L	0.02			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	TURB	Turbidity	GENERIC FIELD TURB	UF		2.13	NTU				FLD	Buckman06-11-1970
Buckman 6	11/10/2010	pH	pH	EPA:150.1	UF		7.15	SU	0.01	H	J-	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	pH	pH	GENERIC FIELD PH	UF		6.58	SU				FLD	Buckman06-11-1970
Buckman 8	11/10/2010	ALK-CO3	Alkalinity-CO3	EPA:310.1	UF	<	1	mg/L	0.73	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	ALK-CO3+HCO3	Alkalinity-CO3+HCO3	EPA:310.1	UF		254	mg/L	0.73			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	NH3-N	Ammonia as Nitrogen	EPA:350.1	UF		0.032	mg/L	0.02	J	J-	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Br(-1)	Bromide	EPA:300.0	UF	<	0.2	mg/L	0.07	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Ca	Calcium	SW-846:6010B	UF		22.5	mg/L	0.05			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Cl(-1)	Chloride	EPA:300.0	UF		2.34	mg/L	0.07			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	CN(TOTAL)	Cyanide (Total)	EPA:335.4	UF		0.004	mg/L	0.002	J	J	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	DO	Dissolved Oxygen	Generic Field Measurement	UF		5.6	mg/L				FLD	Buckman08-11-2042
Buckman 8	11/10/2010	F(-1)	Fluoride	EPA:300.0	UF		0.484	mg/L	0.03			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	HARDNESS	Hardness	SM:A2340B	UF		71	mg/L	0.35			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Mg	Magnesium	SW-846:6010B	UF		3.6	mg/L	0.09			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	EPA:353.2	UF		0.715	mg/L	0.05			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	ORP	Oxidation Reduction Potential	Generic Field Measurement	UF		350	mV				FLD	Buckman08-11-2042
Buckman 8	11/10/2010	ClO4	Perchlorate	SW-846:6850	UF		0.32	ug/L	0.05			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	K	Potassium	SW-846:6010B	UF		3.04	mg/L	0.05			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Na	Sodium	SW-846:6010B	UF		99.8	mg/L	0.10			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	SPEC_CONDC	Specific Conductance	EPA:120.1	UF		543	uS/cm	1.0			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	SPEC_CONDC	Specific Conductance	FIELD CONDUCTIVITY	UF		560	uS/cm				FLD	Buckman08-11-2042
Buckman 8	11/10/2010	SO4(-2)	Sulfate	EPA:300.0	UF		13.1	mg/L	0.10			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	TEMP	Temperature	GENERIC FIELD TEMP	UF		22.8	deg C				FLD	Buckman08-11-2042
Buckman 8	11/10/2010	TDS	Total Dissolved Solids	EPA:160.1	UF		335	mg/L	2.4			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	TKN	Total Kjeldahl Nitrogen	EPA:351.2	UF	<	0.1	mg/L	0.03	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	TOC	Total Organic Carbon	SW-846:9060	UF		0.745	mg/L	0.33	J	J	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	PO4-P	Total Phosphate as Phosphorus	EPA:365.4	UF		0.062	mg/L	0.02			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	TURB	Turbidity	GENERIC FIELD TURB	UF		3.73	NTU				FLD	Buckman08-11-2042
Buckman 8	11/10/2010	pH	pH	GENERIC FIELD PH	UF		7.21	SU				FLD	Buckman08-11-2042
Buckman 8	11/10/2010	pH	pH	EPA:150.1	UF		7.84	SU	0.01	H	J-	GELC	Buckman08-11-2042

Table 3.0
Buckman Water Supply Wells
Metals

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Sample Id
Buckman 1	11/10/2010	Al	Aluminum	SW-846:6010B	UF	<	200	ug/L	68	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Sb	Antimony	SW-846:6020	UF	<	3	ug/L	0.50	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	As	Arsenic	SW-846:6020	UF		11.5	ug/L	1.5			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Ba	Barium	SW-846:6010B	UF		21.2	ug/L	1.0			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Be	Beryllium	SW-846:6010B	UF	<	5	ug/L	1.0	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	B	Boron	SW-846:6010B	UF		113	ug/L	15			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Cd	Cadmium	SW-846:6020	UF	<	1	ug/L	0.11	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Cr	Chromium	SW-846:6020	UF		10.9	ug/L	2.5			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Cr	Chromium	SW-846:6020	F		10.5	ug/L	2.5			GELC	Buckman1-11-1945
Buckman 1	11/10/2010	Co	Cobalt	SW-846:6010B	UF	<	5	ug/L	1.0	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Cu	Copper	SW-846:6010B	UF		14.6	ug/L	3.0			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Fe	Iron	SW-846:6010B	UF	<	100	ug/L	30	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Pb	Lead	SW-846:6020	UF		1.11	ug/L	0.50	J	J	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Mn	Manganese	SW-846:6010B	UF	<	10	ug/L	2.0	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Hg	Mercury	EPA:245.2	UF	<	0.2	ug/L	0.07	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Mo	Molybdenum	SW-846:6020	UF		3.8	ug/L	0.10	N	J	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Ni	Nickel	SW-846:6020	UF	<	2	ug/L	0.50	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Se	Selenium	SW-846:6020	UF	<	5	ug/L	1.0	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	SiO2	Silicon Dioxide	SW-846:6010B	UF		40.2	mg/L	0.05			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Ag	Silver	SW-846:6020	UF	<	1	ug/L	0.20	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Sr	Strontium	SW-846:6010B	UF		136	ug/L	1.0			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Tl	Thallium	SW-846:6020	UF	<	1	ug/L	0.30	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Sn	Tin	SW-846:6010B	UF	<	10	ug/L	2.5	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	U	Uranium	SW-846:6020	UF		18.8	ug/L	0.05			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	V	Vanadium	SW-846:6010B	UF		37.9	ug/L	1.0			GELC	Buckman1-11-1944
Buckman 1	11/10/2010	Zn	Zinc	SW-846:6010B	UF		7.14	ug/L	3.3	J	J	GELC	Buckman1-11-1944
Buckman 6	11/10/2010	Al	Aluminum	SW-846:6010B	UF	<	200	ug/L	68	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Sb	Antimony	SW-846:6020	UF	<	3	ug/L	0.50	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	As	Arsenic	SW-846:6020	UF		9.34	ug/L	1.5			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Ba	Barium	SW-846:6010B	UF		188	ug/L	1.0			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Be	Beryllium	SW-846:6010B	UF	<	5	ug/L	1.0	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	B	Boron	SW-846:6010B	UF		85	ug/L	15			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Cd	Cadmium	SW-846:6020	UF	<	1	ug/L	0.11	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Cr	Chromium	SW-846:6020	UF		6.92	ug/L	2.5	J	J	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Cr	Chromium	SW-846:6020	F		6.34	ug/L	2.5	J	J	GELC	Buckman06-11-1971
Buckman 6	11/10/2010	Co	Cobalt	SW-846:6010B	UF	<	5	ug/L	1.0	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Cu	Copper	SW-846:6010B	UF		53.1	ug/L	3.0			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Fe	Iron	SW-846:6010B	UF	<	100	ug/L	30	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Pb	Lead	SW-846:6020	UF		2.55	ug/L	0.50			GELC	Buckman06-11-1970

Table 3.0
Buckman Water Supply Wells
Metals

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Sample Id
Buckman 6	11/10/2010	Mn	Manganese	SW-846:6010B	UF	<	10	ug/L	2.0	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Hg	Mercury	EPA:245.2	UF	<	0.2	ug/L	0.07	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Mo	Molybdenum	SW-846:6020	UF		4.72	ug/L	0.10	N	J	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Ni	Nickel	SW-846:6020	UF		1.37	ug/L	0.50	J	J	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Se	Selenium	SW-846:6020	UF	<	5	ug/L	1.0	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	SiO2	Silicon Dioxide	SW-846:6010B	UF		37.4	mg/L	0.05			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Ag	Silver	SW-846:6020	UF	<	1	ug/L	0.20	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Sr	Strontium	SW-846:6010B	UF		1250	ug/L	1.0			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Tl	Thallium	SW-846:6020	UF	<	1	ug/L	0.30	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Sn	Tin	SW-846:6010B	UF	<	50	ug/L	13	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	U	Uranium	SW-846:6020	UF		5.44	ug/L	0.05			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	V	Vanadium	SW-846:6010B	UF		14.8	ug/L	1.0			GELC	Buckman06-11-1970
Buckman 6	11/10/2010	Zn	Zinc	SW-846:6010B	UF		3.56	ug/L	3.3	J	J	GELC	Buckman06-11-1970
Buckman 8	11/10/2010	Al	Aluminum	SW-846:6010B	UF	<	200	ug/L	68	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Sb	Antimony	SW-846:6020	UF	<	3	ug/L	0.50	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	As	Arsenic	SW-846:6020	UF		6.74	ug/L	1.5			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Ba	Barium	SW-846:6010B	UF		67.7	ug/L	1.0			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Be	Beryllium	SW-846:6010B	UF	<	5	ug/L	1.0	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	B	Boron	SW-846:6010B	UF		99.5	ug/L	15			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Cd	Cadmium	SW-846:6020	UF	<	1	ug/L	0.11	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Cr	Chromium	SW-846:6020	F		7.50	ug/L	2.5	J	J	GELC	Buckman08-11-2043
Buckman 8	11/10/2010	Cr	Chromium	SW-846:6020	UF		7.74	ug/L	2.5	J	J	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Co	Cobalt	SW-846:6010B	UF	<	5	ug/L	1.0	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Cu	Copper	SW-846:6010B	UF		24.5	ug/L	3.0			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Fe	Iron	SW-846:6010B	UF	<	100	ug/L	30	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Pb	Lead	SW-846:6020	UF		2.31	ug/L	0.50			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Mn	Manganese	SW-846:6010B	UF	<	10	ug/L	2.0	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Hg	Mercury	EPA:245.2	UF	<	0.2	ug/L	0.07	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Mo	Molybdenum	SW-846:6020	UF		3.03	ug/L	0.10	N	J	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Ni	Nickel	SW-846:6020	UF		0.834	ug/L	0.50	J	J	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Se	Selenium	SW-846:6020	UF	<	5	ug/L	1.0	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	SiO2	Silicon Dioxide	SW-846:6010B	UF		39.1	mg/L	0.05			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Ag	Silver	SW-846:6020	UF	<	1	ug/L	0.20	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Sr	Strontium	SW-846:6010B	UF		537	ug/L	1.0			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Tl	Thallium	SW-846:6020	UF	<	1	ug/L	0.30	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Sn	Tin	SW-846:6010B	UF	<	10	ug/L	2.5	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	U	Uranium	SW-846:6020	UF		21.2	ug/L	0.05			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	V	Vanadium	SW-846:6010B	UF		37.3	ug/L	1.0			GELC	Buckman08-11-2042
Buckman 8	11/10/2010	Zn	Zinc	SW-846:6010B	UF		5.66	ug/L	3.3	J	J	GELC	Buckman08-11-2042

Table 4.0
Buckman Water Supply Wells
High Explosives (HE)

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Sample Id
Buckman 1	11/10/2010	6629-29-4	2,4-Diamino-6-nitrotoluene	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	59229-75-3	2,6-Diamino-4-nitrotoluene	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	618-87-1	3,5-Dinitroaniline	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	19406-51-0	Amino-2,6-dinitrotoluene[4-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	35572-78-2	Amino-4,6-dinitrotoluene[2-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	99-65-0	Dinitrobenzene[1,3-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	121-14-2	Dinitrotoluene[2,4-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	606-20-2	Dinitrotoluene[2,6-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.078	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	2691-41-0	HMX	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	98-95-3	Nitrobenzene	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	88-72-2	Nitrotoluene[2-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	99-08-1	Nitrotoluene[3-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	99-99-0	Nitrotoluene[4-]	SW-846:8321A_MOD	UF	<	0.65	ug/L	0.1	U	UJ	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	78-11-5	PETN	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.13	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	121-82-4	RDX	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	3058-38-6	TATB	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	479-45-8	Tetryl	SW-846:8321A_MOD	UF	<	0.65	ug/L	0.13	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	99-35-4	Trinitrobenzene[1,3,5-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	118-96-7	Trinitrotoluene[2,4,6-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	78-30-8	Tris (o-cresyl) phosphate	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman1-11-1944
Buckman 6	11/10/2010	6629-29-4	2,4-Diamino-6-nitrotoluene	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	59229-75-3	2,6-Diamino-4-nitrotoluene	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	618-87-1	3,5-Dinitroaniline	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	19406-51-0	Amino-2,6-dinitrotoluene[4-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	35572-78-2	Amino-4,6-dinitrotoluene[2-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	99-65-0	Dinitrobenzene[1,3-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	121-14-2	Dinitrotoluene[2,4-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	606-20-2	Dinitrotoluene[2,6-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.078	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	2691-41-0	HMX	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	98-95-3	Nitrobenzene	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970

Table 4.0
Buckman Water Supply Wells
High Explosives (HE)

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Sample Id
Buckman 6	11/10/2010	88-72-2	Nitrotoluene[2-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	99-08-1	Nitrotoluene[3-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	99-99-0	Nitrotoluene[4-]	SW-846:8321A_MOD	UF	<	0.65	ug/L	0.1	U	UJ	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	78-11-5	PETN	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.13	U	UJ	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	121-82-4	RDX	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	3058-38-6	TATB	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	479-45-8	Tetryl	SW-846:8321A_MOD	UF	<	0.65	ug/L	0.13	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	99-35-4	Trinitrobenzene[1,3,5-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	118-96-7	Trinitrotoluene[2,4,6-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	78-30-8	Tris (o-cresyl) phosphate	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman06-11-1970
Buckman 8	11/10/2010	6629-29-4	2,4-Diamino-6-nitrotoluene	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	59229-75-3	2,6-Diamino-4-nitrotoluene	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	618-87-1	3,5-Dinitroaniline	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	19406-51-0	Amino-2,6-dinitrotoluene[4-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	35572-78-2	Amino-4,6-dinitrotoluene[2-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	99-65-0	Dinitrobenzene[1,3-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	121-14-2	Dinitrotoluene[2,4-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	606-20-2	Dinitrotoluene[2,6-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.078	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	2691-41-0	HMX	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	98-95-3	Nitrobenzene	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	88-72-2	Nitrotoluene[2-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	99-08-1	Nitrotoluene[3-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	99-99-0	Nitrotoluene[4-]	SW-846:8321A_MOD	UF	<	0.65	ug/L	0.1	U	UJ	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	78-11-5	PETN	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.13	U	UJ	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	121-82-4	RDX	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	3058-38-6	TATB	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	479-45-8	Tetryl	SW-846:8321A_MOD	UF	<	0.65	ug/L	0.13	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	99-35-4	Trinitrobenzene[1,3,5-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	118-96-7	Trinitrotoluene[2,4,6-]	SW-846:8321A_MOD	UF	<	0.33	ug/L	0.1	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	78-30-8	Tris (o-cresyl) phosphate	SW-846:8321A_MOD	UF	<	1.3	ug/L	0.39	U	U	GELC	Buckman08-11-2042

Table 5.0
Buckman Water Supply Wells
PCBs

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Sample Id
Buckman 1	11/10/2010	12674-11-2	Aroclor-1016	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	11104-28-2	Aroclor-1221	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	11141-16-5	Aroclor-1232	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	53469-21-9	Aroclor-1242	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	12672-29-6	Aroclor-1248	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	11097-69-1	Aroclor-1254	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	11096-82-5	Aroclor-1260	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman1-11-1944
Buckman 1	11/10/2010	37324-23-5	Aroclor-1262	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman1-11-1944
Buckman 6	11/10/2010	12674-11-2	Aroclor-1016	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	11104-28-2	Aroclor-1221	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	11141-16-5	Aroclor-1232	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	53469-21-9	Aroclor-1242	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	12672-29-6	Aroclor-1248	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	11097-69-1	Aroclor-1254	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	11096-82-5	Aroclor-1260	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman06-11-1970
Buckman 6	11/10/2010	37324-23-5	Aroclor-1262	SW-846:8082	UF	<	0.10	ug/L	0.033	U	U	GELC	Buckman06-11-1970
Buckman 8	11/10/2010	12674-11-2	Aroclor-1016	SW-846:8082	UF	<	0.10	ug/L	0.034	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	11104-28-2	Aroclor-1221	SW-846:8082	UF	<	0.10	ug/L	0.034	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	11141-16-5	Aroclor-1232	SW-846:8082	UF	<	0.10	ug/L	0.034	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	53469-21-9	Aroclor-1242	SW-846:8082	UF	<	0.10	ug/L	0.034	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	12672-29-6	Aroclor-1248	SW-846:8082	UF	<	0.10	ug/L	0.034	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	11097-69-1	Aroclor-1254	SW-846:8082	UF	<	0.10	ug/L	0.034	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	11096-82-5	Aroclor-1260	SW-846:8082	UF	<	0.10	ug/L	0.034	U	U	GELC	Buckman08-11-2042
Buckman 8	11/10/2010	37324-23-5	Aroclor-1262	SW-846:8082	UF	<	0.10	ug/L	0.034	U	U	GELC	Buckman08-11-2042

Table 6.0
Buckman Water Supply Wells
Detected Volatile Organic Compounds (VOCs)

Location Name	Start Date	Analytical Suite	Anyl Meth Code	Fld Prep Code	Result	Units	Analyte	Analyte Description	Fld Qc Type Code	Lab Code	Sample ID
Buckman 1	11/10/2010	VOC	SW-846:8260B	UF	U[1]	ug/L				GELC	Buckman1-11-1944
Buckman 6	11/10/2010	VOC	SW-846:8260B	UF	U[1]	ug/L				GELC	Buckman06-11-1970
Buckman 8	11/10/2010	VOC	SW-846:8260B	UF	U[1]	ug/L				GELC	Buckman08-11-2042
Buckman 8	11/10/2010	VOC	SW-846:8260B	UF	U[1]	ug/L			FTB	GELC	Buckman08-11-2044

Notes:

[1]U means that all 80 analytes in the VOC suite were not detected at concentrations greater than GEL's Method Detection Limit (MDL).

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Case Narrative

Case Narrative for
ARS International (63641-10)
LANL-WQH Water Samples
Workorder #: 266877
SDG # : 11-463

November 15, 2010

Laboratory Identification:

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

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on November 12, 2010 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. Please see attached e-mail for discrepancies. All sample containers arrived without any visible signs of tampering or breakage. The Gross A/B containers were preserved prior to analysis. The containers for radiochemistry were received at 14/16C temperatures. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
266877001	Buckman1-11-1944
266877002	Buckman1-11-1944
266877003	Buckman06-11-1970
266877004	Buckman06-11-1970
266877005	Buckman08-11-2042
266877006	Buckman08-11-2042
266877007	Buckman08-11-2044

Case Narrative

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

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Explosives by LCMSMS, GC Semivolatile PCB, GC/MS Volatile and Radiochemistry.

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

for

Valerie Davis
Project Manager

List of current GEL Certifications as of 15 November 2010

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

Chain of Custody and Supporting Documentation

Thursday, November 11, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 11-463C

LOS ALAMOS
NATIONAL LABORATORY

REQUEST NUMBER: 11-463

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

TURNAROUND/REPORT DUE: 12/11/2010
TURNAROUND REQ'D: 30

LAB REQUEST COMMENTS:

266877

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
Buckman1-11-1944	1	POLY	Ra226+228	Nitric Acid	WG
Buckman1-11-1944	1	AMBER GLASS	WSP-8082-PCB	Ice	WG
Buckman1-11-1944	2	AMBER GLASS	WSP-8082-PCB	Ice	WG
Buckman1-11-1944	3	AMBER GLASS	WSP-8082-PCB	Ice	WG
Buckman1-11-1944	1	SEPTUM AMBER GLASS	WSP-8260B-VOA	Hydrochloric Acid (Hydrogen Chloride)	WG
Buckman1-11-1944	2	SEPTUM AMBER GLASS	WSP-8260B-VOA	Hydrochloric Acid (Hydrogen Chloride)	WG
Buckman1-11-1944	1	AMBER GLASS	WSP-8321A-NMED HEXP	Ice	WG
Buckman1-11-1944	2	AMBER GLASS	WSP-8321A-NMED HEXP	Ice	WG
Buckman1-11-1944	3	AMBER GLASS	WSP-8321A-NMED HEXP	Ice	WG
Buckman1-11-1944	1	POLY	WSP-GrossA/B	None	WG
Buckman1-11-1944	1	POLY	WSP-RAD	Nitric Acid	WG
Buckman06-11-1970	1	POLY	Ra226+228	Nitric Acid	WG
Buckman06-11-1970	1	AMBER GLASS	WSP-8082-PCB	Ice	WG
Buckman06-11-1970	2	AMBER GLASS	WSP-8082-PCB	Ice	WG
Buckman06-11-1970	3	AMBER GLASS	WSP-8082-PCB	Ice	WG
Buckman06-11-1970	1	SEPTUM AMBER GLASS	WSP-8260B-VOA	Hydrochloric Acid (Hydrogen Chloride)	WG
Buckman06-11-1970	2	SEPTUM AMBER GLASS	WSP-8260B-VOA	Hydrochloric Acid (Hydrogen Chloride)	WG

Thursday, November 11, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 11-463C

LOS ALAMOS

NATIONAL LABORATORY

REQUEST NUMBER: 11-463

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

TURNAROUND/REPORT DUE: 12/11/2010

TURNAROUND REQ'D: 30

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
Buckman06-11-1970	1	AMBER GLASS	WSP-8321A-NMED HEXP	Ice	WG
Buckman06-11-1970	2	AMBER GLASS	WSP-8321A-NMED HEXP	Ice	WG
Buckman06-11-1970	3	AMBER GLASS	WSP-8321A-NMED HEXP	Ice	WG
Buckman06-11-1970	1	POLY	WSP-GrossA/B	None	WG
Buckman06-11-1970	1	POLY	WSP-RAD	Nitric Acid	WG
Buckman08-11-2042	1	POLY	Ra226+228	Nitric Acid	WG
Buckman08-11-2042	1	AMBER GLASS	WSP-8082-PCB	Ice	WG
Buckman08-11-2042	2	AMBER GLASS	WSP-8082-PCB	Ice	WG
Buckman08-11-2042	3	AMBER GLASS	WSP-8082-PCB	Ice	WG
Buckman08-11-2042	1	SEPTUM AMBER GLASS	WSP-8260B-VOA	Hydrochloric Acid (Hydrogen Chloride)	WG
Buckman08-11-2042	2	SEPTUM AMBER GLASS	WSP-8260B-VOA	Hydrochloric Acid (Hydrogen Chloride)	WG
Buckman08-11-2042	1	AMBER GLASS	WSP-8321A-NMED HEXP	Ice	WG
Buckman08-11-2042	2	AMBER GLASS	WSP-8321A-NMED HEXP	Ice	WG
Buckman08-11-2042	3	AMBER GLASS	WSP-8321A-NMED HEXP	Ice	WG
Buckman08-11-2042	1	POLY	WSP-GrossA/B	None	WG
Buckman08-11-2042	1	POLY	WSP-RAD	Nitric Acid	WG
Buckman08-11-2044	1	SEPTUM AMBER GLASS	WSP-8260B-VOA	Hydrochloric Acid (Hydrogen Chloride)	WG

Thursday, November 11, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 11-463C

LOS ALAMOS

NATIONAL LABORATORY

REQUEST NUMBER: 11-463

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

TURNAROUND/REPORT DUE: 12/11/2010

TURNAROUND REQ'D: 30

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
Buckman08-11-2044	2	SEPTUM AMBER GLASS	WSP-8260B-VOA	Hydrochloric Acid (Hydrogen Chloride)	WG

Relinquished By:		Date	Time	Received By:		Date	Time
		11/11/10	3:00	Dionne Franco		11/12/10	0850
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

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

Printed Name Signature

Hard Copy Required

Thursday, November 11, 2010

REQUEST NUMBER: 11-463

LOS ALAMOS
NATIONAL LABORATORY

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

These Samples are on:
LANL Request Number:11-463
Per Agreement Number:126310011
Project Cost Code: WEPR1158W100

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 11/11/2010
TURNAROUND/REPORT DUE: 12/11/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:900	1	Buckman1-11-1944	WG	11/10/2010	Add gamma analysis.
		1	Buckman06-11-1970	WG	11/10/2010	Add gamma analysis.
		1	Buckman08-11-2042	WG	11/10/2010	Add gamma analysis.
	EPA:901.1	1	Buckman1-11-1944	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
		1	Buckman06-11-1970	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
		1	Buckman08-11-2042	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
	EPA:903.1	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	

Thursday, November 11, 2010

REQUEST NUMBER: 11-463

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:904	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:905.0	1	Buckman1-11-1944	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
		1	Buckman06-11-1970	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
		1	Buckman08-11-2042	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
	HASL-300:AM-241	1	Buckman1-11-1944	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
		1	Buckman06-11-1970	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
		1	Buckman08-11-2042	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
	HASL-300:ISOPU	1	Buckman1-11-1944	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
		1	Buckman06-11-1970	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
		1	Buckman08-11-2042	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
	HASL-300:ISOU	1	Buckman1-11-1944	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
		1	Buckman06-11-1970	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
		1	Buckman08-11-2042	WG	11/10/2010	Add Np-237 and isotopic Th analysis (HASL-300)
	SW-846:8082	1	Buckman1-11-1944	WG	11/10/2010	
		2	Buckman1-11-1944	WG	11/10/2010	
		3	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		2	Buckman06-11-1970	WG	11/10/2010	
		3	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
		2	Buckman08-11-2042	WG	11/10/2010	
		3	Buckman08-11-2042	WG	11/10/2010	

Thursday, November 11, 2010

REQUEST NUMBER: 11-463

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8260B	1	Buckman1-11-1944	WG	11/10/2010	
		2	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		2	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
		2	Buckman08-11-2042	WG	11/10/2010	
		1	Buckman08-11-2044	WG	11/10/2010	
		2	Buckman08-11-2044	WG	11/10/2010	
	SW-846:8321A_MOD	1	Buckman1-11-1944	WG	11/10/2010	
		2	Buckman1-11-1944	WG	11/10/2010	
		3	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		2	Buckman06-11-1970	WG	11/10/2010	
		3	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
		2	Buckman08-11-2042	WG	11/10/2010	
		3	Buckman08-11-2042	WG	11/10/2010	

Final Page of REQUEST NUMBER 11-463

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/AR/COC/Work Order: 11-463**
Received By: Dionne Francis	**Date Received: November 12, 2010**

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

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?	X			Preservation Method: Ice bags **Blue ice** Dry ice **None** Other (describe) **3-5C 14,16C**
2a	Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: **61524649** Secondary Temperature Device Serial # (If Applicable):
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?			X	Sample ID's, containers affected and observed pH: **Buckman1-11-1944, 06-11-1970, 08-11-2042** If Preservation added, Lot#: **J32045**
6	VOA vials free of headspace (defined as < 6mm bubble)?	X			Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected: **time not indicated on COCs**
11	Number of containers received match number indicated on COC?			X	Sample ID's affected: **Buckman06-11-1970, 08-11-2042, 2044** **Please see attached e-mail**
12	COC form is properly signed in relinquished/received sections?	X			
13	Carrier and tracking number.	X			Circle Applicable: **FedEx Air** FedEx Ground UPS Field Services Courier Other **7209 7852 8341 3C 7209 7852 8319 3C 7209 7852 8363 3C 7209 7852 8374 3C 7209 7852 8385 4C 7209 7852 8396 4C 7209 7852 8330 5C 7209 7852 8352 4C 7297 7852 8308 16C 7209 7852 8320 14C**

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AVIZ Date 11/15/10 Page 1 of 1

Subject: Sample Receipt for 11/12/10
From: Dionne Francis <Dionne.Francis@gel.com>
Date: Fri, 12 Nov 2010 14:52:46 -0500
To: "Keith R. Greene" <kgreene@lanl.gov>, Joylene Valdez <joylenev@lanl.gov>, "team.davis" <team.davis@gel.com>
CC: LANL@amrad.com

Keith,

RN#11-463: The lab rec'd (2) 1L amber glass PCB/HEXP containers ea for sample Buckman06-11-1970, (2) 1L amber glass PCB, (1) 1L amber glass HEXP containers for sample Buckman08-11-2402 instead of (3) as indicated on the COC, and (1) 40ml vial 8260B container for sample Buckman08-11-2044 instead of (2) as indicated on the COC. The Gross A/B containers were preserved prior to analysis.

RN#11-467: The lab rec'd (2) 1L amber glass SVOA containers for sample CAMO-11-1273 instead of (3) as indicated on the COC.

RN#11-468: The lab did not rec the poly AM241+GS+ISOPU+ISOU+SR90 container for sample WST50-11-2081. The lab rec'd (1) 40ml vial 8260B container for sample WST50-11-2091 instead of (2) as indicated on the COC.

RN#11-469: The lab rec'd (1) 40ml vial 8260B container for sample WST02-11-2204 instead of (2) as indicated on the COC. The lab did not rec the poly AM241+GS+ISOPU+ISOU+SR90, METALS+U containers for sample WST02-11-2203.

RN#11-471: The lab rec'd (2) 1L amber glass SVOA containers for sample CAMO-11-1256, (1) 1L amber glass SVOA container ea for samples CAMO-11-1258 and 1259 instead of (3) as indicated on the COC.

RN#11-472: The Gross A/B container was preserved prior to analysis.

The following sample containers were rec'd without a COC:
RE02-10-23349 thru RE02-10-23354 - (2) 250ml poly ea for pH, Metals (soils)
RE02-10-23369 - 1L poly Metals (water)

Please fax COC at your earliest convenience.
Thanks,
Dionne

--
Dionne Francis
Project Manager Assistant
GEL Laboratories, LLC
2040 Savage Road
Charleston, SC (USA) 29407
Direct: 843.769.7376 Ext. 4432
Main: 843.556.8171
Fax: 843.766.1178
E-mail: daf@gel.com

Web: www.gel.com

God makes a promise, Faith believes it, Hope anticipates it,
Patience quietly awaits it.

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

°VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

3

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

J181818095818124

2 of 3
PS# 263 7209 7852 8341
str# 7209 7852 8330 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

585C1/BCDA/DA47

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 50.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

°VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

3

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

J181818095818124

1 of 3
TRK# 0201 7209 7852 8363
MASTER

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

°VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

3

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMRA1A015AGWK0

FedEx Express

J181818095818124

2 of 3
MPS# 0263 7209 7852 8319
Mstr# 7209 7852 8308 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156148-434 AIT2 08/10

585C1/BCDA/DA47

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 44.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

°VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

3

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

J181818095818124

2 of 3
MPS# 0263 7209 7852 8374
Mstr# 7209 7852 8363 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 51.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

4

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

J181818098181 24

3 of 3
MPS# 0263 7209 7852 8385
Mstr# 7209 7852 8363 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156148-434 RITZ 08/1

50SC1/BCDA/DA47

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 40.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

4

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWE6L11570000

FedEx Express

TRK# 0201 7209 7852 8396

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156148-434 RITZ 08/1

50SC1/BCDA/DA47

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 48.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

5

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

J181818098181 24

1 of 3
TRK# 0201 7209 7852 8330
MASTER

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX AIRA

29407

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 47.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

4

MDAB

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

3 of 3
MPS# 0263 7209 7852 8352
Mstr# 7209 7852 8330 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

29407
SC-U
CH

XX CHSA

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 56.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

16

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMRA1A015AGWK0

FedEx Express

J1010100301010124

1 of 3

TRK# 0201 7209 7852 8308

MASTER

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156148-434 RITZ 08/10

5B5C1/BCDA/DA47

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 35.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

14

RT 249 - 1

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMRA1A015AGWK0

FZ

FedEx Express

J1010100301010124

3 of 3

MPS# 0263 7209 7852 8320

Mstr# 7209 7852 8308 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156148-434 RITZ 08/10

5B5C1/BCDA/DA47

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

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

Volatile Analysis

Case Narrative

ChemStation Case Narrative
ARS International (ARSL)
SDG 11-463

Method/Analysis Information

Procedure: Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
Analytical Method: SW846 8260B DOE-AL
Prep Method: SW846 5030B
Analytical Batch Number: 1050223

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
266877007	Buckman08-11-2044
1202267678	Method Blank (MB)
1202267681	Laboratory Control Sample (LCS)
1202267682	Laboratory Control Sample (LCS)
1202270903	Method Blank (MB)
1202270904	Laboratory Control Sample (LCS)
1202270905	Laboratory Control Sample (LCS)
1202267679	266779010(CASA-11-1340) Post Spike (PS)
1202267680	266779010(CASA-11-1340) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

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

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 14. Raw data reports are processed and reviewed by the analyst using the Chemstation software package. False positives have been removed from the quantitation reports per standard operating procedures (SOP) section 19.1.2. False positive analytes are designated on the quantitation report with a 'd' qualifier.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the processing method. Since the laboratory may calibrate with multiple

solutions on different days using the same processing method, the software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package. The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 266779010 (CASA-11-1340) was designated for spike analysis in this SDG.

Matrix Spike (PS) Recovery Statement
The spike recoveries for this SDG were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate recoveries for this SDG were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD between the matrix spike pair were not all within the acceptance limits: 1202267679 (CASA-11-1340) and 1202267680 (CASA-11-1340). See DER# 903455.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-analyses were not required for samples in this SDG.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation
The following DER was generated for this SDG: 903455

Manual Integrations
Data files associated with the initial calibration, continuing calibration check, and samples did not require manual integrations.

TIC Comment
Tentatively identified compounds (TIC) were required for this sample delivery group/work order. Please note that non-requested target analytes that are reported on the quantitation reports will not be present on the Form I. These detected analytes are included in the calibrated method and as a result cannot be reported on the TIC quantitation report.

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration
The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA7.I	Gas Chromatograph/Mass Spectrometer	HP6890N/HP5973N	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

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

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ARSL001 ARS International (63641-10)

Client SDG: 11-463 GEL Work Order: 266877

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Stacy Calloway **Name: Stacy Calloway**

Date: 09 DEC 2010 **Title: Data Validator**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877001**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman1-11-1944**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 22:24**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 22:24**				
Data File:	**111810V7\7H416.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877001**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman1-11-1944**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 22:24**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 22:24**				
Data File:	**111810V7\7H416.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877001**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman1-11-1944**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 22:24**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 22:24**				
Data File:	**111810V7\7H416.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	48.6	50.0	ug/L	97.2	(71%-130%)
Bromofluorobenzene	49.4	50.0	ug/L	98.8	(80%-120%)
Toluene-d8	47.0	50.0	ug/L	94.0	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877003**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman06-11-1970**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:01**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:01**				
Data File:	**111810V7\7H417.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877003**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman06-11-1970**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:01**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:01**				
Data File:	**111810V7\7H417.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877003**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman06-11-1970**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:01**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:01**				
Data File:	**111810V7\7H417.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	49.9	50.0	ug/L	99.8	(71%-130%)
Bromofluorobenzene	48.8	50.0	ug/L	97.6	(80%-120%)
Toluene-d8	48.3	50.0	ug/L	96.5	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877005**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2042**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:36**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:36**				
Data File:	**111810V7\7H418.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877005**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2042**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:36**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:36**				
Data File:	**111810V7\7H418.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877005**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2042**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:36**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:36**				
Data File:	**111810V7\7H418.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	48.8	50.0	ug/L	97.5	(71%-130%)
Bromofluorobenzene	49.3	50.0	ug/L	98.6	(80%-120%)
Toluene-d8	47.5	50.0	ug/L	95.1	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877007**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2044**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 13:50**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 13:50**				
Data File:	**111910V7\7H509.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877007**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2044**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 13:50**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 13:50**				
Data File:	**111910V7\7H509.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877007**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2044**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 13:50**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 13:50**				
Data File:	**111910V7\7H509.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	50.8	50.0	ug/L	102	(71%-130%)
Bromofluorobenzene	49.7	50.0	ug/L	99.3	(80%-120%)
Toluene-d8	48.0	50.0	ug/L	96.1	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 11-463

Matrix Type: LIQUID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1202267681	LCS for batch 1050223	107	99	104
1202267682	LCS for batch 1050223	105	101	103
1202267678	MB for batch 1050223	103	99	98
266877001	Buckman1-11-1944	97	94	99
266877003	Buckman06-11-1970	100	97	98
266877005	Buckman08-11-2042	98	95	99
1202267679	CASA-11-1340PS	97	95	97
1202267680	CASA-11-1340PSD	102	94	97
1202270904	LCS for batch 1050223	101	95	99
1202270905	LCS for batch 1050223	104	99	102
1202270903	MB for batch 1050223	103	97	99
266877007	Buckman08-11-2044	102	96	99

Surrogate			Acceptance Limits
DCED4	=	1,2-Dichloroethane-d4	(71%-130%)
TOL	=	Toluene-d8	(80%-120%)
BFB	=	Bromofluorobenzene	(80%-120%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **CASA-11-1340PS**
Lab Sample ID: **1202267679**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Post Spike**
Matrix: **WS**
Analysis Date: **11/19/2010 00:47**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	30.5	61	32-142
74-87-3	PS	Chloromethane	50.0	0.00	U	34.2	68	46-129
75-01-4	PS	Vinyl chloride	50.0	0.00	U	29.8	60	53-132
74-83-9	PS	Bromomethane	50.0	0.00	U	40.3	81	56-135
75-00-3	PS	Chloroethane	50.0	0.00	U	42.7	85	65-120
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	38.1	76	63-131
60-29-7	PS	Ethyl ether	50.0	0.00	U	34.3	69	67-117
67-64-1	PS	Acetone	250	0.00	U	115	46	15-131
75-05-8	PS	Acetonitrile	1250	0.00	U	1010	81	56-129
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	39.6	79	61-123
74-88-4	PS	Iodomethane	250	0.00	U	214	85	59-123
75-09-2	PS	Methylene chloride	50.0	0.00	U	44.0	88	64-125
75-15-0	PS	Carbon disulfide	250	0.00	U	208	83	63-131
1634-04-4	PS	tert-Butyl methyl ether	50.0	0.00	U	39.4	79	61-125
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	40.1	80	65-121
108-05-4	PS	Vinyl acetate	250	0.00	U	229	91	32-164
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	41.2	82	70-120
78-93-3	PS	2-Butanone	250	0.00	U	142	57	5-132
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	41.7	83	63-127
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	38.9	78	60-134
67-66-3	PS	Chloroform	50.0	6.73		49.3	85	69-121
74-97-5	PS	Bromochloromethane	50.0	0.00	U	45.7	91	71-119

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463** **Sample Type:** **Post Spike**
Client ID: **CASA-11-1340PS** **Matrix:** **WS**
Lab Sample ID: **1202267679**
Instrument: **VOA7.I** **Analysis Date:** **11/19/2010 00:47** **Dilution: 1**
Analyst: **AXO1** **Prep Batch ID:** **1050223**
Purge Vol: **5 mL** **Batch ID:** **1050223**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	44.0	88	67-127
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	41.2	82	68-125
71-36-3	PS	n-Butyl alcohol	5000	0.00	U	4140	83	56-138
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	44.2	88	66-133
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	45.4	91	65-126
71-43-2	PS	Benzene	50.0	0.00	U	44.9	90	68-117
79-01-6	PS	Trichloroethylene	50.0	0.00	U	43.2	86	61-128
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	39.9	80	70-121
75-27-4	PS	Bromodichloromethane	50.0	7.99		53.7	91	72-128
74-95-3	PS	Dibromomethane	50.0	0.00	U	47.0	94	72-120
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	188	75	50-134
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	44.8	90	70-124
108-88-3	PS	Toluene	50.0	0.00	U	40.5	81	63-118
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	45.9	92	68-129
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	44.7	89	67-121
591-78-6	PS	2-Hexanone	250	0.00	U	153	61	21-124
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	42.1	84	67-121
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	45.1	90	64-117
124-48-1	PS	Dibromochloromethane	50.0	4.94		52.4	95	73-128
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	45.5	91	73-118
108-90-7	PS	Chlorobenzene	50.0	0.00	U	44.2	88	72-115
100-41-4	PS	Ethylbenzene	50.0	0.00	U	41.0	82	64-123

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463** **Sample Type:** **Post Spike**
Client ID: **CASA-11-1340PS** **Matrix:** **WS**
Lab Sample ID: **1202267679**
Instrument: **VOA7.I** **Analysis Date:** **11/19/2010 00:47** **Dilution: 1**
Analyst: **AXO1** **Prep Batch ID:** **1050223**
Purge Vol: **5 mL** **Batch ID:** **1050223**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	PS	m,p-Xylenes	100	0.00	U	81.5	82	66-121
95-47-6	PS	o-Xylene	50.0	0.00	U	40.9	82	66-124
100-42-5	PS	Styrene	50.0	0.00	U	42.3	85	57-131
75-25-2	PS	Bromoform	50.0	0.910	J	45.9	90	66-131
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	44.9	90	59-129
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	50.2	100	66-124
108-86-1	PS	Bromobenzene	50.0	0.00	U	42.2	84	68-119
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	39.7	79	61-129
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	41.8	84	67-122
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	40.7	81	62-126
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	40.9	82	61-130
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	43.6	87	66-122
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	41.1	82	63-127
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	41.9	84	61-128
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	41.7	83	63-126
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	42.3	85	62-127
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	42.6	85	68-117
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	42.8	86	68-116
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	42.0	84	64-131
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	47.1	94	59-129
87-68-3	PS	Hexachlorobutadiene	50.0	0.00	U	40.3	81	50-128
91-20-3	PS	Naphthalene	50.0	0.00	U	43.8	88	53-131

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Sample Type: **Post Spike**
Client ID: **CASA-11-1340PS**
Matrix: **WS**
Lab Sample ID: **1202267679**
Instrument: **VOA7.I**
Analysis Date: **11/19/2010 00:47**
Dilution: 1
Analyst: **AXO1**
Prep Batch ID: **1050223**
Purge Vol: **5 mL**
Batch ID: **1050223**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
87-61-6	PS	1,2,3-Trichlorobenzene	50.0	0.00	U	45.3	91	55-130
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	46.4	93	73-125
120-82-1	PS	1,2,4-Trichlorobenzene	50.0	0.00	U	42.1	84	57-124
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	43.3	87	69-117

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **CASA-11-1340PSD**
Lab Sample ID: **1202267680**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **WS**
Analysis Date: **11/19/2010 01:21**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	32.7	65	32-142	7	0-20
74-87-3	PSD	Chloromethane	50.0	0.00	U	39.8	80	46-129	15	0-20
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	38.0	76	53-132	24 *	0-20
74-83-9	PSD	Bromomethane	50.0	0.00	U	41.1	82	56-135	2	0-20
75-00-3	PSD	Chloroethane	50.0	0.00	U	42.6	85	65-120	0	0-20
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	40.6	81	63-131	6	0-20
60-29-7	PSD	Ethyl ether	50.0	0.00	U	38.4	77	67-117	11	0-20
67-64-1	PSD	Acetone	250	0.00	U	127	51	15-131	10	0-21
75-05-8	PSD	Acetonitrile	1250	0.00	U	1090	87	56-129	7	0-20
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	43.4	87	61-123	9	0-20
74-88-4	PSD	Iodomethane	250	0.00	U	223	89	59-123	4	0-20
75-09-2	PSD	Methylene chloride	50.0	0.00	U	46.9	94	64-125	7	0-20
75-15-0	PSD	Carbon disulfide	250	0.00	U	215	86	63-131	3	0-20
1634-04-4	PSD	tert-Butyl methyl ether	50.0	0.00	U	43.6	87	61-125	10	0-20
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	42.2	84	65-121	5	0-20
108-05-4	PSD	Vinyl acetate	250	0.00	U	245	98	32-164	7	0-20
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	43.9	88	70-120	6	0-20
78-93-3	PSD	2-Butanone	250	0.00	U	156	62	5-132	9	0-20
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	42.9	86	63-127	3	0-20
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	40.2	80	60-134	3	0-20
67-66-3	PSD	Chloroform	50.0	6.73		52.4	91	69-121	6	0-20
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	48.2	96	71-119	5	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **CASA-11-1340PSD**
Lab Sample ID: **1202267680**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **WS**
Analysis Date: **11/19/2010 01:21**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	45.9	92	67-127	4	0-20
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	43.5	87	68-125	6	0-20
71-36-3	PSD	n-Butyl alcohol	5000	0.00	U	4520	90	56-138	9	0-20
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	46.6	93	66-133	5	0-20
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	49.3	99	65-126	8	0-20
71-43-2	PSD	Benzene	50.0	0.00	U	46.5	93	68-117	3	0-20
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	45.4	91	61-128	5	0-20
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	44.1	88	70-121	10	0-20
75-27-4	PSD	Bromodichloromethane	50.0	7.99		57.1	98	72-128	6	0-20
74-95-3	PSD	Dibromomethane	50.0	0.00	U	49.1	98	72-120	4	0-20
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	206	82	50-134	9	0-20
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	47.5	95	70-124	6	0-20
108-88-3	PSD	Toluene	50.0	0.00	U	41.9	84	63-118	3	0-20
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	48.3	97	68-129	5	0-20
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	47.1	94	67-121	5	0-20
591-78-6	PSD	2-Hexanone	250	0.00	U	164	65	21-124	7	0-20
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	44.2	88	67-121	5	0-20
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	47.2	94	64-117	5	0-20
124-48-1	PSD	Dibromochloromethane	50.0	4.94		55.1	100	73-128	5	0-20
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	48.3	97	73-118	6	0-20
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	45.6	91	72-115	3	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	42.5	85	64-123	3	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **CASA-11-1340PSD**
Lab Sample ID: **1202267680**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **WS**
Analysis Date: **11/19/2010 01:21**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	84.5	85	66-121	4	0-20
95-47-6	PSD	o-Xylene	50.0	0.00	U	42.5	85	66-124	4	0-20
100-42-5	PSD	Styrene	50.0	0.00	U	44.4	89	57-131	5	0-20
75-25-2	PSD	Bromoform	50.0	0.910	J	49.9	98	66-131	8	0-20
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	47.3	95	59-129	5	0-20
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	52.6	105	66-124	5	0-20
108-86-1	PSD	Bromobenzene	50.0	0.00	U	45.0	90	68-119	6	0-20
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	41.6	83	61-129	4	0-20
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	42.8	86	67-122	2	0-20
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	42.5	85	62-126	4	0-20
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	42.4	85	61-130	4	0-20
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	46.0	92	66-122	5	0-20
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	42.3	85	63-127	3	0-20
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	43.6	87	61-128	4	0-20
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	43.0	86	63-126	3	0-20
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	44.0	88	62-127	4	0-20
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	44.5	89	68-117	4	0-20
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	44.6	89	68-116	4	0-20
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	43.4	87	64-131	3	0-20
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	49.9	100	59-129	6	0-20
87-68-3	PSD	Hexachlorobutadiene	50.0	0.00	U	42.0	84	50-128	4	0-20
91-20-3	PSD	Naphthalene	50.0	0.00	U	46.1	92	53-131	5	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **CASA-11-1340PSD**
Lab Sample ID: **1202267680**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **WS**
Analysis Date: **11/19/2010 01:21**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
87-61-6	PSD	1,2,3-Trichlorobenzene	50.0	0.00	U	47.9	96	55-130	6	0-20
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	47.3	95	73-125	2	0-20
120-82-1	PSD	1,2,4-Trichlorobenzene	50.0	0.00	U	44.4	89	57-124	5	0-22
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	46.0	92	69-117	6	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **LCS for batch 1050223**
Lab Sample ID: **1202267681**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **11/18/2010 14:56**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	40.8	82	58-147
74-87-3	LCS	Chloromethane	50.0	0.0	42.8	86	58-121
75-01-4	LCS	Vinyl chloride	50.0	0.0	40.1	80	65-128
74-83-9	LCS	Bromomethane	50.0	0.0	41.6	83	70-127
75-00-3	LCS	Chloroethane	50.0	0.0	48.4	97	71-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	49.8	100	72-137
60-29-7	LCS	Ethyl ether	50.0	0.0	38.6	77	68-122
67-64-1	LCS	Acetone	250	0.0	321	128	37-146
75-05-8	LCS	Acetonitrile	1250	0.0	1130	90	60-121
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	45.8	92	71-124
74-88-4	LCS	Iodomethane	250	0.0	226	90	71-129
75-09-2	LCS	Methylene chloride	50.0	0.0	44.6	89	69-123
75-15-0	LCS	Carbon disulfide	250	0.0	227	91	71-131
1634-04-4	LCS	tert-Butyl methyl ether	50.0	0.0	43.0	86	70-120
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	46.8	94	73-120
108-05-4	LCS	Vinyl acetate	250	0.0	245	98	62-143
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	45.7	91	76-120
78-93-3	LCS	2-Butanone	250	0.0	270	108	46-134
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	43.2	86	75-119
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	51.5	103	74-138
67-66-3	LCS	Chloroform	50.0	0.0	48.1	96	75-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	46.1	92	74-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **LCS for batch 1050223**
Lab Sample ID: **1202267681**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **11/18/2010 14:56**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	53.7	107	74-130
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	49.8	100	79-130
71-36-3	LCS	n-Butyl alcohol	5000	0.0	4850	97	60-141
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	54.1	108	72-139
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	47.8	96	69-120
71-43-2	LCS	Benzene	50.0	0.0	48.7	97	74-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	48.1	96	76-120
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	44.0	88	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	50.1	100	77-124
74-95-3	LCS	Dibromomethane	50.0	0.0	47.6	95	75-120
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	226	90	60-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	49.0	98	79-123
108-88-3	LCS	Toluene	50.0	0.0	44.5	89	74-120
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	49.4	99	76-128
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	46.0	92	73-120
591-78-6	LCS	2-Hexanone	250	0.0	246	98	39-142
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	43.1	86	74-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	53.1	106	72-121
124-48-1	LCS	Dibromochloromethane	50.0	0.0	49.7	99	76-126
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	47.9	96	77-120
108-90-7	LCS	Chlorobenzene	50.0	0.0	47.5	95	77-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	46.4	93	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **LCS for batch 1050223**
Lab Sample ID: **1202267681**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **11/18/2010 14:56**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	LCS	m,p-Xylenes	100	0.0	91.6	92	75-121
95-47-6	LCS	o-Xylene	50.0	0.0	45.0	90	74-122
100-42-5	LCS	Styrene	50.0	0.0	45.5	91	74-123
75-25-2	LCS	Bromoform	50.0	0.0	50.5	101	70-131
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	47.3	95	69-120
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	53.0	106	69-121
108-86-1	LCS	Bromobenzene	50.0	0.0	46.6	93	74-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	46.6	93	70-123
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	46.5	93	72-121
98-82-8	LCS	Isopropylbenzene	50.0	0.0	48.3	97	58-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	47.5	95	71-125
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	48.5	97	73-122
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	48.9	98	75-127
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	47.8	96	71-125
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	49.8	100	74-126
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	50.2	100	76-129
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	47.1	94	75-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	46.8	94	75-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	50.8	102	75-130
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	52.0	104	66-130
87-68-3	LCS	Hexachlorobutadiene	50.0	0.0	51.2	102	67-132
91-20-3	LCS	Naphthalene	50.0	0.0	48.0	96	66-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **LCS for batch 1050223**
Lab Sample ID: **1202267681**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **11/18/2010 14:56**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
87-61-6	LCS	1,2,3-Trichlorobenzene	50.0	0.0	51.2	102	71-130
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	47.9	96	76-125
120-82-1	LCS	1,2,4-Trichlorobenzene	50.0	0.0	49.6	99	73-127
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	47.3	95	75-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **LCS for batch 1050223**
Lab Sample ID: **1202267682**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **11/18/2010 16:05**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
107-02-8	LCS	Acrolein	250	0.0	231	92	43-147
76-13-1	LCS	Trichlorotrifluoroethane	250	0.0	270	108	59-148
107-05-1	LCS	Allyl chloride	250	0.0	232	93	61-137
107-13-1	LCS	Acrylonitrile	250	0.0	215	86	69-125
126-99-8	LCS	2-Chloro-1,3-butadiene	50.0	0.0	52.0	104	71-143
107-12-0	LCS	Propionitrile	250	0.0	217	87	68-131
126-98-7	LCS	Methacrylonitrile	250	0.0	219	87	54-134
78-83-1	LCS	Isobutyl alcohol	2500	0.0	2290	92	50-143
80-62-6	LCS	Methyl methacrylate	250	0.0	212	85	63-133
97-63-2	LCS	Ethyl methacrylate	250	0.0	206	82	66-128

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **LCS for batch 1050223**
Lab Sample ID: **1202270904**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **11/19/2010 10:24**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	38.7	77	58-147
74-87-3	LCS	Chloromethane	50.0	0.0	40.8	82	58-121
75-01-4	LCS	Vinyl chloride	50.0	0.0	38.9	78	65-128
74-83-9	LCS	Bromomethane	50.0	0.0	39.9	80	70-127
75-00-3	LCS	Chloroethane	50.0	0.0	45.8	92	71-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	48.8	98	72-137
60-29-7	LCS	Ethyl ether	50.0	0.0	37.1	74	68-122
67-64-1	LCS	Acetone	250	0.0	302	121	37-146
75-05-8	LCS	Acetonitrile	1250	0.0	1000	80	60-121
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	46.2	92	71-124
74-88-4	LCS	Iodomethane	250	0.0	221	88	71-129
75-09-2	LCS	Methylene chloride	50.0	0.0	44.3	89	69-123
75-15-0	LCS	Carbon disulfide	250	0.0	223	89	71-131
1634-04-4	LCS	tert-Butyl methyl ether	50.0	0.0	41.9	84	70-120
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	45.6	91	73-120
108-05-4	LCS	Vinyl acetate	250	0.0	231	93	62-143
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	45.2	90	76-120
78-93-3	LCS	2-Butanone	250	0.0	253	101	46-134
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	41.7	83	75-119
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	51.2	102	74-138
67-66-3	LCS	Chloroform	50.0	0.0	47.8	96	75-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	45.9	92	74-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **LCS for batch 1050223**
Lab Sample ID: **1202270904**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **11/19/2010 10:24**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	52.8	106	74-130
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	48.7	97	79-130
71-36-3	LCS	n-Butyl alcohol	5000	0.0	4360	87	60-141
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	53.1	106	72-139
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	47.1	94	69-120
71-43-2	LCS	Benzene	50.0	0.0	47.7	95	74-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	47.3	95	76-120
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	43.2	86	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	49.8	100	77-124
74-95-3	LCS	Dibromomethane	50.0	0.0	46.7	93	75-120
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	212	85	60-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	48.0	96	79-123
108-88-3	LCS	Toluene	50.0	0.0	43.5	87	74-120
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	47.8	96	76-128
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	44.6	89	73-120
591-78-6	LCS	2-Hexanone	250	0.0	236	94	39-142
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	41.7	83	74-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	51.8	104	72-121
124-48-1	LCS	Dibromochloromethane	50.0	0.0	47.6	95	76-126
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	45.1	90	77-120
108-90-7	LCS	Chlorobenzene	50.0	0.0	45.9	92	77-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	46.1	92	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **LCS for batch 1050223**
Lab Sample ID: **1202270904**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **11/19/2010 10:24**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	LCS	m,p-Xylenes	100	0.0	88.9	89	75-121
95-47-6	LCS	o-Xylene	50.0	0.0	44.2	88	74-122
100-42-5	LCS	Styrene	50.0	0.0	44.3	89	74-123
75-25-2	LCS	Bromoform	50.0	0.0	46.6	93	70-131
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	43.7	87	69-120
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	48.7	97	69-121
108-86-1	LCS	Bromobenzene	50.0	0.0	44.7	89	74-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	45.1	90	70-123
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	44.8	90	72-121
98-82-8	LCS	Isopropylbenzene	50.0	0.0	46.3	93	58-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	45.4	91	71-125
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	46.7	93	73-122
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	46.8	94	75-127
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	45.3	91	71-125
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	47.2	94	74-126
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	47.5	95	76-129
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	44.6	89	75-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	44.8	90	75-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	47.8	96	75-130
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	45.7	91	66-130
87-68-3	LCS	Hexachlorobutadiene	50.0	0.0	48.4	97	67-132
91-20-3	LCS	Naphthalene	50.0	0.0	43.6	87	66-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **LCS for batch 1050223**
Lab Sample ID: **1202270904**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **11/19/2010 10:24**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
87-61-6	LCS	1,2,3-Trichlorobenzene	50.0	0.0	48.3	97	71-130
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	47.3	95	76-125
120-82-1	LCS	1,2,4-Trichlorobenzene	50.0	0.0	46.5	93	73-127
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	44.8	90	75-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **11-463**
Client ID: **LCS for batch 1050223**
Lab Sample ID: **1202270905**
Instrument: **VOA7.I**
Analyst: **AXO1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **11/19/2010 11:31**
Prep Batch ID: **1050223**
Batch ID: **1050223**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
107-02-8	LCS	Acrolein	250	0.0	234	93	43-147
76-13-1	LCS	Trichlorotrifluoroethane	250	0.0	263	105	59-148
107-05-1	LCS	Allyl chloride	250	0.0	224	90	61-137
107-13-1	LCS	Acrylonitrile	250	0.0	221	88	69-125
126-99-8	LCS	2-Chloro-1,3-butadiene	50.0	0.0	50.9	102	71-143
107-12-0	LCS	Propionitrile	250	0.0	228	91	68-131
126-98-7	LCS	Methacrylonitrile	250	0.0	224	89	54-134
78-83-1	LCS	Isobutyl alcohol	2500	0.0	2510	100	50-143
80-62-6	LCS	Methyl methacrylate	250	0.0	215	86	63-133
97-63-2	LCS	Ethyl methacrylate	250	0.0	210	84	66-128

Method Blank Summary

SDG Number:	**11-463**	**Client:**	**ARSL001**	**Matrix:**	**WATER**
Client ID:	**MB for batch 1050223**	**Instrument ID:**	**VOA7.I**	**Data File:**	**111810V7\7H406B1.D**
Lab Sample ID:	**1202267678**	**Prep Date:**	**11/18/2010 16:39**	**Analyzed:**	**11/18/10 16:39**
Column:	**DB-624**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 1050223	1202267681	111810V7\7H403L1.D	11/18/10	1456
02	LCS for batch 1050223	1202267682	111810V7\7H405L1.D	11/18/10	1605
03	Buckman1-11-1944	266877001	111810V7\7H416.D	11/18/10	2224
04	Buckman06-11-1970	266877003	111810V7\7H417.D	11/18/10	2301
05	Buckman08-11-2042	266877005	111810V7\7H418.D	11/18/10	2336
06	CASA-11-1340PS	1202267679	111810V7\7H420.D	11/19/10	0047
07	CASA-11-1340PSD	1202267680	111810V7\7H421.D	11/19/10	0121

Method Blank Summary

SDG Number:	**11-463**	**Client:**	**ARSL001**	**Matrix:**	**WATER**
Client ID:	**MB for batch 1050223**	**Instrument ID:**	**VOA7.I**	**Data File:**	**111910V7\7H507B1.D**
Lab Sample ID:	**1202270903**	**Prep Date:**	**11/19/2010 12:41**	**Analyzed:**	**11/19/10 12:41**
Column:	**DB-624**				

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 1050223	1202270904	111910V7\7H503LCS.D	11/19/10	1024
02 LCS for batch 1050223	1202270905	111910V7\7H505L1.D	11/19/10	1131
03 Buckman08-11-2044	266877007	111910V7\7H509.D	11/19/10	1350

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 11-463

Instrument ID: VOA7.I **Injection Date/Time:** 15-NOV-10 11:33

Column Description: DB-624 **Lab File ID** 111510V7\7H102.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	27.4
75	30.0 - 60.0% of mass 95	50.3
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	93.3
175	5.0 -9.0% of mass 174	7.3
176	95.0 - 101.0% of mass 174	96.7
177	5.0 - 9.0% of mass 176	6.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[A]	W7VM101115-01	111510V7\7H103.D	15-NOV-10 12:07
ICALMIX[A]	W7VM101115-02	111510V7\7H104.D	15-NOV-10 12:41
ICALMIX[A]	W7VM101115-03	111510V7\7H105.D	15-NOV-10 13:15
ICALMIX[A]	W7VM101115-04	111510V7\7H106.D	15-NOV-10 13:48
ICALMIX[A]	W7VM101115-05	111510V7\7H107.D	15-NOV-10 14:23
ICALMIX[A]	W7VM101115-07	111510V7\7H109.D	15-NOV-10 15:30
ICALMIX[A]	W7VM101115-08	111510V7\7H110.D	15-NOV-10 16:05
ICALMIX[A]	W7VM101115-09	111510V7\7H112.D	15-NOV-10 17:12
ICALMIX[B]	W7VM101115-10	111510V7\7H113.D	15-NOV-10 17:46
ICALMIX[B]	W7VM101115-11	111510V7\7H114.D	15-NOV-10 18:20
ICALMIX[B]	W7VM101115-12	111510V7\7H115.D	15-NOV-10 18:56
ICALMIX[B]	W7VM101115-13	111510V7\7H116.D	15-NOV-10 19:31
ICALMIX[B]	W7VM101115-14	111510V7\7H117.D	15-NOV-10 20:04
ICALMIX[B]	W7VM101115-15	111510V7\7H118.D	15-NOV-10 20:37
ICALMIX[B]	W7VM101115-16	111510V7\7H119.D	15-NOV-10 21:11
ICALMIX[B]	W7VM101115-17	111510V7\7H120.D	15-NOV-10 21:46
ICVMIX[B]01	W7VM101115-19	111510V7\7H123.D	15-NOV-10 23:31

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 11-463

Instrument ID: VOA7.I **Injection Date/Time:** 16-NOV-10 11:36

Column Description: DB-624 **Lab File ID** 111610V7\7H201.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	28.3
75	30.0 - 60.0% of mass 95	50.7
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	90.2
175	5.0 -9.0% of mass 174	6.9
176	95.0 - 101.0% of mass 174	97.6
177	5.0 - 9.0% of mass 176	6.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICVMIX[A]03	W7VM101116-02	111610V7\7H202ICV.D	16-NOV-10 12:10

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 11-463

Instrument ID: VOA7.I **Injection Date/Time:** 18-NOV-10 13:49

Column Description: DB-624 **Lab File ID** 111810V7\7H401.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	32.6
75	30.0 - 60.0% of mass 95	54.6
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	78.3
175	5.0 -9.0% of mass 174	7.4
176	95.0 - 101.0% of mass 174	96.3
177	5.0 - 9.0% of mass 176	6.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVMIX[A]03	W7VM101118-02	111810V7\7H403.D	18-NOV-10 14:56
BLK01LCS	1202267681	111810V7\7H403L1.D	18-NOV-10 14:56
CCVMIX[B]04	W7VM101118-04	111810V7\7H405.D	18-NOV-10 16:05
BLK01SLCS	1202267682	111810V7\7H405L1.D	18-NOV-10 16:05
BLK01	1202267678	111810V7\7H406B1.D	18-NOV-10 16:39
Buckman1-11-1944	266877001	111810V7\7H416.D	18-NOV-10 22:24
Buckman06-11-1970	266877003	111810V7\7H417.D	18-NOV-10 23:01
Buckman08-11-2042	266877005	111810V7\7H418.D	18-NOV-10 23:36
CASA-11-1340MS	1202267679	111810V7\7H420.D	19-NOV-10 00:47
CASA-11-1340MSD	1202267680	111810V7\7H421.D	19-NOV-10 01:21

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 11-463

Instrument ID: VOA7.I **Injection Date/Time:** 19-NOV-10 09:15

Column Description: DB-624 **Lab File ID** 111910V7\7H501.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	29.2
75	30.0 - 60.0% of mass 95	51.7
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	91.4
175	5.0 -9.0% of mass 174	7.1
176	95.0 - 101.0% of mass 174	98.2
177	5.0 - 9.0% of mass 176	6.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVMIX[A]05	W7VM101119-01	111910V7\7H502.D	19-NOV-10 09:49
BLK02LCS	1202270904	111910V7\7H503LCS.D	19-NOV-10 10:24
CCVMIX[B]06	W7VM101119-04	111910V7\7H505.D	19-NOV-10 11:31
BLK02SLCS	1202270905	111910V7\7H505L1.D	19-NOV-10 11:31
BLK02	1202270903	111910V7\7H507B1.D	19-NOV-10 12:41
Buckman08-11-2044	266877007	111910V7\7H509.D	19-NOV-10 13:50

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 11-463

Instrument: VOA7.I

STD Analysis Time: 18-NOV-10 14:56

GC Column: DB-624

Data File: C:\msdchem\1\DATA\111810V7\7H403.D

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	965983		15.2	821820		18.6	557255		20.9
Upper Limit	1931966		15.7	1643640		19.1	1114510		21.4
Lower Limit	482992		14.7	410910		18.1	278628		20.4
Sample ID									
BLK01LCS	965983		15.2	821820		18.6	557255		20.9
BLK01SLCS	999881		15.2	860992		18.6	583285		20.9
BLK01	1045974		15.2	866755		18.6	581870		20.9
Buckman1-11-1944	927121		15.2	777269		18.6	501505		20.9
Buckman06-11-1970	901505		15.2	752763		18.6	500438		20.9
Buckman08-11-2042	900409		15.2	755374		18.6	487170		20.9
CASA-11-1340MS	899916		15.2	770756		18.6	538605		20.9
CASA-11-1340MSD	949955		15.2	821732		18.6	570894		20.9

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 11-463

Instrument: VOA7.I

STD Analysis Time: 19-NOV-10 09:49

GC Column: DB-624

Data File: C:\msdchem\1\DATA\111910V7\7H502.D

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	943806		15.2	831592		18.6	570198		20.9
Upper Limit	1887612		15.7	1663184		19.1	1140396		21.4
Lower Limit	471903		14.7	415796		18.1	285099		20.4
Sample ID									
BLK02LCS	985895		15.2	847378		18.6	584022		20.9
BLK02SLCS	966645		15.2	826328		18.6	555666		20.9
BLK02	957107		15.2	807991		18.6	531618		20.9
Buckman08-11-2044	941614		15.2	795773		18.6	519784		20.9

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877001**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman1-11-1944**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 22:24**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 22:24**				
Data File:	**111810V7\7H416.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877001**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman1-11-1944**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 22:24**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 22:24**				
Data File:	**111810V7\7H416.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877001**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman1-11-1944**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 22:24**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 22:24**				
Data File:	**111810V7\7H416.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	48.6	50.0	ug/L	97.2	(71%-130%)
Bromofluorobenzene	49.4	50.0	ug/L	98.8	(80%-120%)
Toluene-d8	47.0	50.0	ug/L	94.0	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H416.D
Acq On : 18 Nov 2010 10:24 pm
Operator : AXO1
InstName : VOA7
Sample : |266877001|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 19 09:08:39 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	927121	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	777269	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	501505	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	927121	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	777269	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	501505	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	437010	48.59	ug/L	0.00
43) Toluene-d8	17.032	17.032	0.918	98	1132502	46.99	ug/L	0.00
61) Bromofluorobenzene	19.712	19.712	0.944	95	508312	49.38	ug/L	0.00

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	97.18%
43) Toluene-d8	50.000	80 - 120	93.98%
61) Bromofluorobenzene	50.000	80 - 120	98.76%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	0.000	5.058	0.000		0	N.D.		
3) Chloromethane	5.638	5.638	0.371	50	520	N.D.		
4) Vinyl chloride	0.000	6.054	0.000		0	N.D.		
5) Bromomethane	0.000	7.266	0.000		0	N.D.		
6) Chloroethane	0.000	7.682	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000	8.637	0.000		0	N.D.		
8) Ethyl ether	0.000	9.550	0.000		0	N.D.		
9) Acetone	10.363	10.271	0.682	43	6703	Below Cal		57
10) 1,1-Dichloroethylene	0.000	10.159	0.000		0	N.D.		
11) Iodomethane	0.000	10.525	0.000		0	N.D.		
12) Acetonitrile	11.012	10.931	0.725	41	173	N.D.		
13) Methyl acetate	11.134	11.083	0.733	43	155	N.D.		
14) Carbon disulfide	10.708	10.698	0.705	76	155	N.D.		
15) Methylene chloride	11.307	11.307	0.744	84	3890	Below Cal		89
16) tert-Butyl methyl ether	0.000	11.885	0.000		0	N.D.		
17) trans-1,2-Dichloroethy...	0.000	11.885	0.000		0	N.D.		
18) Vinyl acetate	0.000	12.728	0.000		0	N.D.		
19) 1,1-Dichloroethane	0.000	12.667	0.000		0	N.D.		
20) 2-Butanone	13.631	13.591	0.897	43	154	N.D.		
21) cis-1,2-Dichloroethylene	0.000	13.611	0.000		0	N.D.		
22) 2,2-Dichloropropane	0.000	13.621	0.000		0	N.D.		
23) Bromochloromethane	0.000	13.966	0.000		0	N.D.		
24) Chloroform	0.000	14.068	0.000		0	N.D.		
25) 1,1,1-Trichloroethane	0.000	14.362	0.000		0	N.D.		
26) Cyclohexane	0.000	14.464	0.000		0	N.D.		
27) 1,1-Dichloropropene	0.000	14.576	0.000		0	N.D.		
28) Carbon tetrachloride	0.000	14.606	0.000		0	N.D.		
30) 1,2-Dichloroethane	0.000	14.860	0.000		0	N.D.		
31) Benzene	0.000	14.860	0.000		0	N.D.		
32) Cyclohexene	0.000	15.002	0.000		0	N.D.		
33) n-Butyl alcohol	0.000	15.449	0.000		0	N.D.		
34) Trichloroethylene	0.000	15.652	0.000		0	N.D.		
35) 1,2-Dichloropropane	0.000	15.916	0.000		0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H416.D
Acq On : 18 Nov 2010 10:24 pm
Operator : AXO1
InstName : VOA7
Sample : |266877001|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 19 09:08:39 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
36) Methylcyclohexane	0.000	15.916	0.000		0	N.D.	
37) Dibromomethane	0.000	16.068	0.000		0	N.D.	
38) Bromodichloromethane	0.000	16.220	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000	16.494	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000	16.707	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000	16.829	0.000		0	N.D.	
44) Toluene	17.103	17.103	0.922	91	1455	N.D.	
45) trans-1,3-Dichloroprop...	17.337	17.276	0.934	75	481	N.D.	
46) 1,1,2-Trichloroethane	0.000	17.499	0.000		0	N.D.	
47) 2-Hexanone	17.702	17.692	0.954	43	501	N.D.	
48) 1,3-Dichloropropane	0.000	17.682	0.000		0	N.D.	
49) Tetrachloroethylene	0.000	17.702	0.000		0	N.D.	
50) Dibromochloromethane	0.000	17.956	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000	18.108	0.000		0	N.D.	
52) Chlorobenzene	0.000	18.586	0.000		0	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000	18.646	0.000		0	N.D.	
54) Ethylbenzene	18.657	18.657	1.005	91	384	N.D.	
55) m,p-Xylenes	18.768	18.758	1.011	106	233	N.D.	
56) o-Xylene	0.000	19.174	0.000		0	N.D.	
57) Styrene	0.000	19.184	0.000		0	N.D.	
59) Bromoform	0.000	19.428	0.000		0	N.D.	
60) Isopropylbenzene	19.591	19.519	0.938	105	250	N.D.	
62) 1,1,2,2-Tetrachloroethane	0.000	19.783	0.000		0	N.D.	
63) 1,2,3-Trichloropropane	0.000	19.865	0.000		0	N.D.	
64) Bromobenzene	0.000	19.905	0.000		0	N.D.	
65) n-Propylbenzene	19.926	19.926	0.954	91	272	N.D.	
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	585	N.D.	
67) 2-Chlorotoluene	0.000	20.068	0.000		0	N.D.	
68) 4-Chlorotoluene	20.159	20.159	0.965	91	436	N.D.	
69) tert-Butylbenzene	0.000	20.423	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	20.453	20.464	0.980	105	178	N.D.	
71) sec-Butylbenzene	0.000	20.636	0.000		0	N.D.	
72) 4-Isopropyltoluene	0.000	20.758	0.000		0	N.D.	
73) 1,3-Dichlorobenzene	20.829	20.819	0.998	146	194	N.D.	
74) 1,4-Dichlorobenzene	20.910	20.900	1.001	146	436	N.D.	
75) n-Butylbenzene	21.184	21.184	1.015	91	172	N.D.	
76) 1,2-Dichlorobenzene	21.316	21.326	1.021	146	211	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000	22.179	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	23.215	23.225	1.112	180	175	N.D.	
79) Hexachlorobutadiene	0.000	23.397	0.000		0	N.D.	
80) Naphthalene	23.621	23.611	1.131	128	1301	N.D.	
81) 1,2,3-Trichlorobenzene	0.000	23.956	0.000		0	N.D.	
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.	
85) Acrolein	0.000	9.875	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.	
87) Isopropyl Alcohol	10.677	10.637	0.703	45	228	N.D.	
88) Allyl chloride	11.012	11.043	0.725	41	173	N.D.	
89) tert-Butyl Alcohol	0.000	11.530	0.000		0	N.D.	
90) Acrylonitrile	0.000	11.794	0.000		0	N.D.	
91) Isopropyl ether	0.000	12.779	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000	12.829	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H416.D
Acq On : 18 Nov 2010 10:24 pm
Operator : AXO1
InstName : VOA7
Sample : |266877001|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 19 09:08:39 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

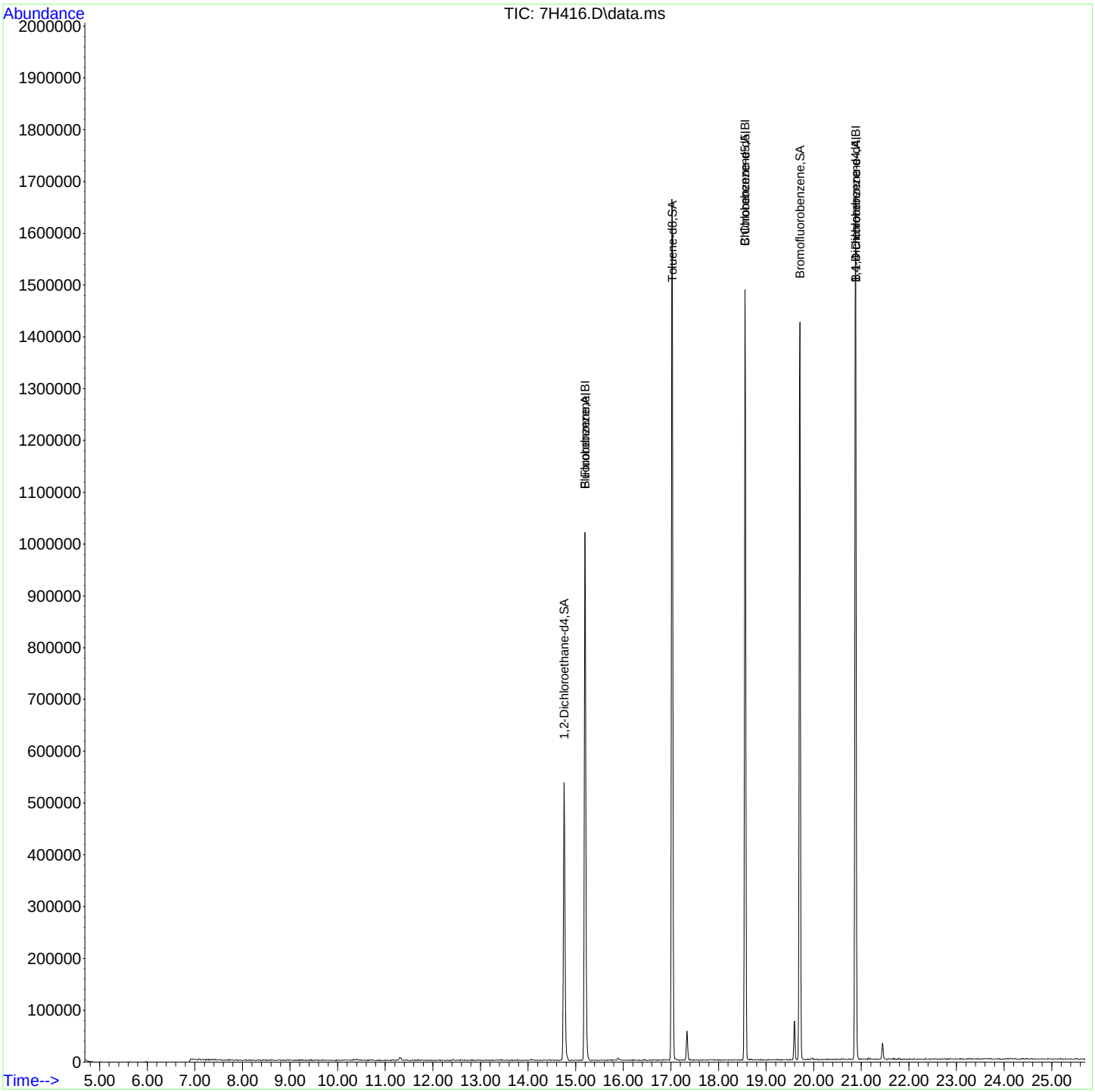
Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
93) Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.	
94) Ethyl acetate	13.631	13.682	0.897	43	154	N.D.	
95) Propionitrile	0.000	13.682	0.000		0	N.D.	
96) Methacrylonitrile	0.000	13.916	0.000		0	N.D.	
97) Tetrahydrofuran	14.078	14.037	0.927	42	1107	N.D.	
98) Isobutyl alcohol	0.000	14.626	0.000		0	N.D.	
99) Methyl tert-amyl ether	0.000	14.961	0.000		0	N.D.	
100) Methyl methacrylate	0.000	15.966	0.000		0	N.D.	
101) 1,4-Dioxane	0.000	16.047	0.000		0	N.D.	
102) 2-Nitropropane	0.000	16.443	0.000		0	N.D.	
104) Ethyl methacrylate	0.000	17.306	0.000		0	N.D.	
106) 1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107) cis-1,4-Dichloro-2-butene	0.000	19.560	0.000		0	N.D.	
108) Cyclohexanone	0.000	19.662	0.000		0	N.D.	
109) trans-1,4-Dichloro-2-b...	0.000	19.824	0.000		0	N.D.	
110) Pentachloroethane	0.000	20.494	0.000		0	N.D.	
111) Benzyl chloride	0.000	21.012	0.000		0	N.D.	
112) bis(2-Chloroisopropyl)...	21.438	21.398	1.027	45	1631	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H416.D
Acq On : 18 Nov 2010 10:24 pm
Operator : AXO1
InstName : VOA7
Sample : |266877001|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 19 09:08:39 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H416.D
Acq On : 18 Nov 2010 10:24 pm
Operator : AXO1
Sample : |266877001|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

```
  Data Path : C:\msdchem\1\DATA\111810V7\
  Data File : 7H416.D
  Acq On    : 18 Nov 2010  10:24 pm
  Operator  : AXO1
  Sample    : |266877001|1050223|1|VOAF|1|VOA8260LFD|
  Misc      : ARSL 5mL pH2
  ALS Vial  : 16   Sample Multiplier: 1

  Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
  Quant Title  : Volatile Organics 8260B                     SubList :

  TIC Library   : C:\Database\NIST05.L
  TIC Integration Parameters: default.P

                                                     |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877003**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman06-11-1970**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:01**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:01**				
Data File:	**111810V7\7H417.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877003**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman06-11-1970**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:01**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:01**				
Data File:	**111810V7\7H417.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877003**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman06-11-1970**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:01**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:01**				
Data File:	**111810V7\7H417.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	49.9	50.0	ug/L	99.8	(71%-130%)
Bromofluorobenzene	48.8	50.0	ug/L	97.6	(80%-120%)
Toluene-d8	48.3	50.0	ug/L	96.5	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H417.D
Acq On : 18 Nov 2010 11:01 pm
Operator : AXO1
InstName : VOA7
Sample : |266877003|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 19 09:08:42 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	901505	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	752763	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	500438	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	901505	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	752763	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	500438	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	436225	49.88	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1126736	48.27	ug/L	-0.01
61) Bromofluorobenzene	19.712	19.712	0.944	95	501173	48.79	ug/L	0.00

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	99.76%
43) Toluene-d8	50.000	80 - 120	96.54%
61) Bromofluorobenzene	50.000	80 - 120	97.58%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	0.000	5.058	0.000		0	N.D.		
3) Chloromethane	0.000	5.638	0.000		0	N.D.		
4) Vinyl chloride	0.000	6.054	0.000		0	N.D.		
5) Bromomethane	0.000	7.266	0.000		0	N.D.		
6) Chloroethane	0.000	7.682	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000	8.637	0.000		0	N.D.		
8) Ethyl ether	0.000	9.550	0.000		0	N.D.		
9) Acetone	10.342	10.271	0.681	43	7844	Below Cal		68
10) 1,1-Dichloroethylene	0.000	10.159	0.000		0	N.D.		
11) Iodomethane	0.000	10.525	0.000		0	N.D.		
12) Acetonitrile	10.992	10.931	0.723	41	208	N.D.		
13) Methyl acetate	0.000	11.083	0.000		0	N.D.		
14) Carbon disulfide	10.708	10.698	0.705	76	153	N.D.		
15) Methylene chloride	11.317	11.307	0.745	84	2859	Below Cal	#	73
16) tert-Butyl methyl ether	0.000	11.885	0.000		0	N.D.		
17) trans-1,2-Dichloroethy...	0.000	11.885	0.000		0	N.D.		
18) Vinyl acetate	0.000	12.728	0.000		0	N.D.		
19) 1,1-Dichloroethane	0.000	12.667	0.000		0	N.D.		
20) 2-Butanone	0.000	13.591	0.000		0	N.D.		
21) cis-1,2-Dichloroethylene	0.000	13.611	0.000		0	N.D.		
22) 2,2-Dichloropropane	0.000	13.621	0.000		0	N.D.		
23) Bromochloromethane	0.000	13.966	0.000		0	N.D.		
24) Chloroform	0.000	14.068	0.000		0	N.D.		
25) 1,1,1-Trichloroethane	0.000	14.362	0.000		0	N.D.		
26) Cyclohexane	0.000	14.464	0.000		0	N.D.		
27) 1,1-Dichloropropene	0.000	14.576	0.000		0	N.D.		
28) Carbon tetrachloride	0.000	14.606	0.000		0	N.D.		
30) 1,2-Dichloroethane	0.000	14.860	0.000		0	N.D.		
31) Benzene	0.000	14.860	0.000		0	N.D.		
32) Cyclohexene	0.000	15.002	0.000		0	N.D.		
33) n-Butyl alcohol	0.000	15.449	0.000		0	N.D.		
34) Trichloroethylene	0.000	15.652	0.000		0	N.D.		
35) 1,2-Dichloropropane	0.000	15.916	0.000		0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H417.D
Acq On : 18 Nov 2010 11:01 pm
Operator : AXO1
InstName : VOA7
Sample : |266877003|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 19 09:08:42 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
36) Methylcyclohexane	0.000	15.916	0.000		0	N.D.	
37) Dibromomethane	0.000	16.068	0.000		0	N.D.	
38) Bromodichloromethane	0.000	16.220	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000	16.494	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000	16.707	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000	16.829	0.000		0	N.D.	
44) Toluene	17.103	17.103	0.922	91	1034	N.D.	
45) trans-1,3-Dichloroprop...	17.337	17.276	0.934	75	398	N.D.	
46) 1,1,2-Trichloroethane	0.000	17.499	0.000		0	N.D.	
47) 2-Hexanone	17.692	17.692	0.953	43	403	N.D.	
48) 1,3-Dichloropropane	0.000	17.682	0.000		0	N.D.	
49) Tetrachloroethylene	0.000	17.702	0.000		0	N.D.	
50) Dibromochloromethane	0.000	17.956	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000	18.108	0.000		0	N.D.	
52) Chlorobenzene	18.586	18.586	1.002	112	180	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000	18.646	0.000		0	N.D.	
54) Ethylbenzene	0.000	18.657	0.000		0	N.D.	
55) m,p-Xylenes	18.768	18.758	1.011	106	205	N.D.	
56) o-Xylene	0.000	19.174	0.000		0	N.D.	
57) Styrene	0.000	19.184	0.000		0	N.D.	
59) Bromoform	0.000	19.428	0.000		0	N.D.	
60) Isopropylbenzene	0.000	19.519	0.000		0	N.D.	
62) 1,1,2,2-Tetrachloroethane	19.712	19.783	0.944	83	165	N.D.	
63) 1,2,3-Trichloropropane	0.000	19.865	0.000		0	N.D.	
64) Bromobenzene	0.000	19.905	0.000		0	N.D.	
65) n-Propylbenzene	19.915	19.926	0.954	91	178	N.D.	
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	1117	N.D.	
67) 2-Chlorotoluene	0.000	20.068	0.000		0	N.D.	
68) 4-Chlorotoluene	20.159	20.159	0.965	91	254	N.D.	
69) tert-Butylbenzene	0.000	20.423	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	20.454	20.464	0.980	105	316	N.D.	
71) sec-Butylbenzene	20.636	20.636	0.988	105	157	N.D.	
72) 4-Isopropyltoluene	0.000	20.758	0.000		0	N.D.	
73) 1,3-Dichlorobenzene	0.000	20.819	0.000		0	N.D.	
74) 1,4-Dichlorobenzene	0.000	20.900	0.000		0	N.D.	
75) n-Butylbenzene	21.195	21.184	1.015	91	157	N.D.	
76) 1,2-Dichlorobenzene	0.000	21.326	0.000		0	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000	22.179	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	23.235	23.225	1.113	180	521	N.D.	
79) Hexachlorobutadiene	0.000	23.397	0.000		0	N.D.	
80) Naphthalene	23.611	23.611	1.131	128	878	N.D.	
81) 1,2,3-Trichlorobenzene	0.000	23.956	0.000		0	N.D.	
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.	
85) Acrolein	0.000	9.875	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.	
87) Isopropyl Alcohol	10.728	10.637	0.706	45	987	N.D.	
88) Allyl chloride	11.053	11.043	0.727	41	191	N.D.	
89) tert-Butyl Alcohol	0.000	11.530	0.000		0	N.D.	
90) Acrylonitrile	0.000	11.794	0.000		0	N.D.	
91) Isopropyl ether	0.000	12.779	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000	12.829	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H417.D
Acq On : 18 Nov 2010 11:01 pm
Operator : AXO1
InstName : VOA7
Sample : |266877003|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 19 09:08:42 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

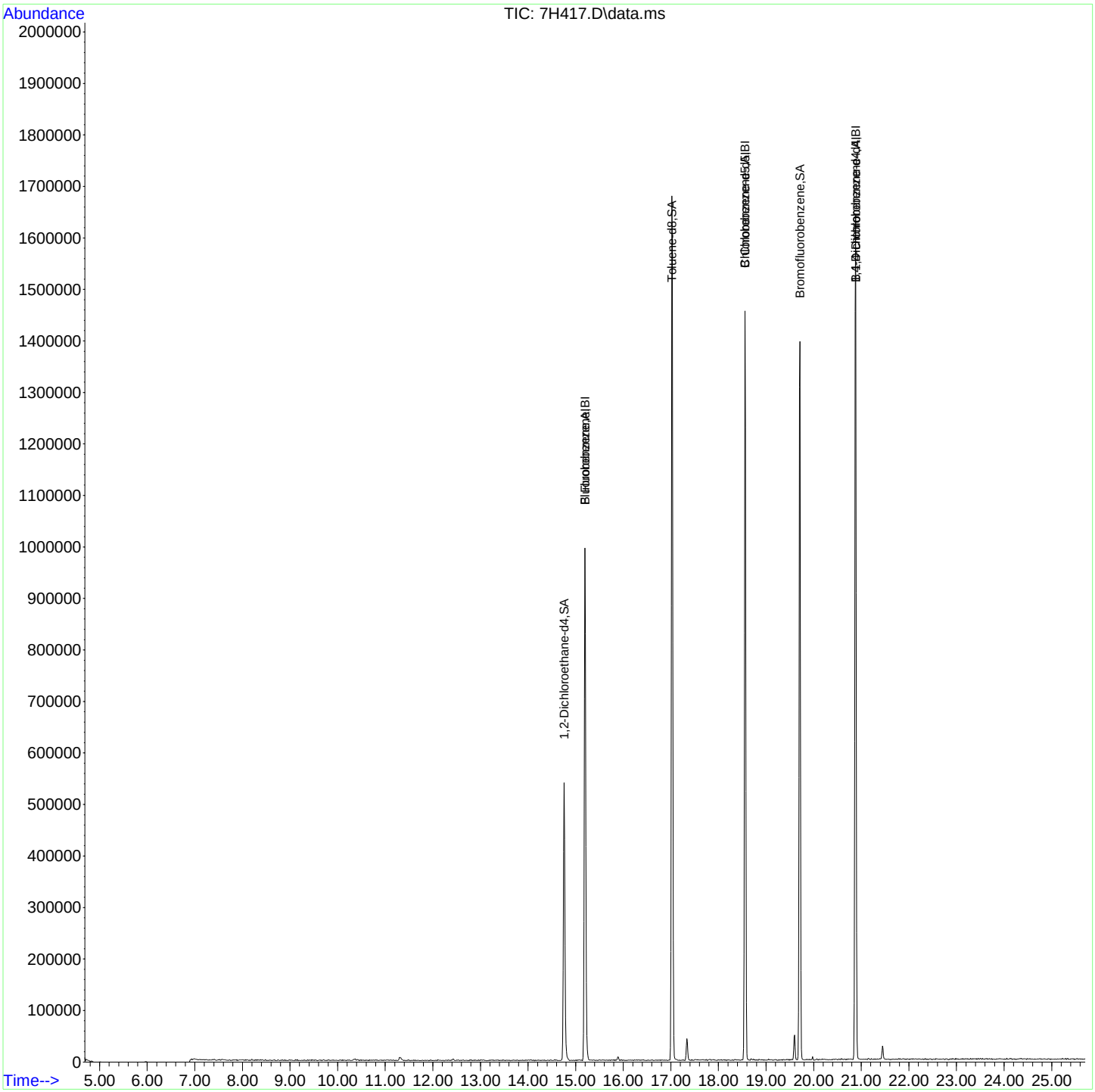
Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
93) Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.	
94) Ethyl acetate	0.000	13.682	0.000		0	N.D.	
95) Propionitrile	0.000	13.682	0.000		0	N.D.	
96) Methacrylonitrile	0.000	13.916	0.000		0	N.D.	
97) Tetrahydrofuran	14.048	14.037	0.925	42	1184	N.D.	
98) Isobutyl alcohol	0.000	14.626	0.000		0	N.D.	
99) Methyl tert-amyl ether	0.000	14.961	0.000		0	N.D.	
100) Methyl methacrylate	0.000	15.966	0.000		0	N.D.	
101) 1,4-Dioxane	0.000	16.047	0.000		0	N.D.	
102) 2-Nitropropane	0.000	16.443	0.000		0	N.D.	
104) Ethyl methacrylate	0.000	17.306	0.000		0	N.D.	
106) 1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107) cis-1,4-Dichloro-2-butene	0.000	19.560	0.000		0	N.D.	
108) Cyclohexanone	0.000	19.662	0.000		0	N.D.	
109) trans-1,4-Dichloro-2-b...	0.000	19.824	0.000		0	N.D.	
110) Pentachloroethane	0.000	20.494	0.000		0	N.D.	
111) Benzyl chloride	0.000	21.012	0.000		0	N.D.	
112) bis(2-Chloroisopropyl)...	21.448	21.398	1.027	45	2138	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H417.D
Acq On : 18 Nov 2010 11:01 pm
Operator : AXO1
InstName : VOA7
Sample : |266877003|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 19 09:08:42 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H417.D
Acq On : 18 Nov 2010 11:01 pm
Operator : AXO1
Sample : |266877003|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H417.D
Acq On    : 18 Nov 2010  11:01 pm
Operator  : AXO1
Sample    : |266877003|1050223|1|VOAF|1|VOA8260LFD|
Misc      : ARSL 5mL pH2
ALS Vial  : 17   Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title  : Volatile Organics 8260B                     SubList :

TIC Library   : C:\Database\NIST05.L
TIC Integration Parameters: default.P

                                                      |--Internal Standard---|
TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877005**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2042**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:36**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:36**				
Data File:	**111810V7\7H418.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877005**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2042**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:36**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:36**				
Data File:	**111810V7\7H418.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877005**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2042**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 23:36**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 23:36**				
Data File:	**111810V7\7H418.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	48.8	50.0	ug/L	97.5	(71%-130%)
Bromofluorobenzene	49.3	50.0	ug/L	98.6	(80%-120%)
Toluene-d8	47.5	50.0	ug/L	95.1	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H418.D
Acq On : 18 Nov 2010 11:36 pm
Operator : AXO1
InstName : VOA7
Sample : |266877005|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 19 09:08:45 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	900409	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	755374	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	487170	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	900409	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	755374	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	487170	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	426018	48.77	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1113426	47.54	ug/L	-0.01
61) Bromofluorobenzene	19.712	19.712	0.944	95	492869	49.28	ug/L	0.00

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	97.54%
43) Toluene-d8	50.000	80 - 120	95.08%
61) Bromofluorobenzene	50.000	80 - 120	98.56%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	0.000	5.058	0.000		0	N.D.		
3) Chloromethane	0.000	5.638	0.000		0	N.D.		
4) Vinyl chloride	0.000	6.054	0.000		0	N.D.		
5) Bromomethane	0.000	7.266	0.000		0	N.D.		
6) Chloroethane	0.000	7.682	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000	8.637	0.000		0	N.D.		
8) Ethyl ether	0.000	9.550	0.000		0	N.D.		
9) Acetone	10.342	10.271	0.681	43	5490	Below Cal		59
10) 1,1-Dichloroethylene	0.000	10.159	0.000		0	N.D.		
11) Iodomethane	0.000	10.525	0.000		0	N.D.		
12) Acetonitrile	0.000	10.931	0.000		0	N.D.		
13) Methyl acetate	0.000	11.083	0.000		0	N.D.		
14) Carbon disulfide	10.698	10.698	0.704	76	192	N.D.		
15) Methylene chloride	11.307	11.307	0.744	84	7940	Below Cal		88
16) tert-Butyl methyl ether	0.000	11.885	0.000		0	N.D.		
17) trans-1,2-Dichloroethy...	0.000	11.885	0.000		0	N.D.		
18) Vinyl acetate	0.000	12.728	0.000		0	N.D.		
19) 1,1-Dichloroethane	0.000	12.667	0.000		0	N.D.		
20) 2-Butanone	13.479	13.591	0.887	43	157	N.D.		
21) cis-1,2-Dichloroethylene	0.000	13.611	0.000		0	N.D.		
22) 2,2-Dichloropropane	0.000	13.621	0.000		0	N.D.		
23) Bromochloromethane	0.000	13.966	0.000		0	N.D.		
24) Chloroform	0.000	14.068	0.000		0	N.D.		
25) 1,1,1-Trichloroethane	0.000	14.362	0.000		0	N.D.		
26) Cyclohexane	0.000	14.464	0.000		0	N.D.		
27) 1,1-Dichloropropene	0.000	14.576	0.000		0	N.D.		
28) Carbon tetrachloride	0.000	14.606	0.000		0	N.D.		
30) 1,2-Dichloroethane	0.000	14.860	0.000		0	N.D.		
31) Benzene	0.000	14.860	0.000		0	N.D.		
32) Cyclohexene	0.000	15.002	0.000		0	N.D.		
33) n-Butyl alcohol	0.000	15.449	0.000		0	N.D.		
34) Trichloroethylene	0.000	15.652	0.000		0	N.D.		
35) 1,2-Dichloropropane	0.000	15.916	0.000		0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H418.D
Acq On : 18 Nov 2010 11:36 pm
Operator : AXO1
InstName : VOA7
Sample : |266877005|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 19 09:08:45 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
36) Methylcyclohexane	0.000	15.916	0.000		0	N.D.	
37) Dibromomethane	0.000	16.068	0.000		0	N.D.	
38) Bromodichloromethane	0.000	16.220	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000	16.494	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000	16.707	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000	16.829	0.000		0	N.D.	
44) Toluene	17.093	17.103	0.921	91	1314	N.D.	
45) trans-1,3-Dichloroprop...	0.000	17.276	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000	17.499	0.000		0	N.D.	
47) 2-Hexanone	17.702	17.692	0.954	43	336	N.D.	
48) 1,3-Dichloropropane	0.000	17.682	0.000		0	N.D.	
49) Tetrachloroethylene	0.000	17.702	0.000		0	N.D.	
50) Dibromochloromethane	0.000	17.956	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000	18.108	0.000		0	N.D.	
52) Chlorobenzene	0.000	18.586	0.000		0	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000	18.646	0.000		0	N.D.	
54) Ethylbenzene	18.657	18.657	1.005	91	267	N.D.	
55) m,p-Xylenes	18.768	18.758	1.011	106	245	N.D.	
56) o-Xylene	0.000	19.174	0.000		0	N.D.	
57) Styrene	0.000	19.184	0.000		0	N.D.	
59) Bromoform	0.000	19.428	0.000		0	N.D.	
60) Isopropylbenzene	0.000	19.519	0.000		0	N.D.	
62) 1,1,2,2-Tetrachloroethane	0.000	19.783	0.000		0	N.D.	
63) 1,2,3-Trichloropropane	0.000	19.865	0.000		0	N.D.	
64) Bromobenzene	0.000	19.905	0.000		0	N.D.	
65) n-Propylbenzene	19.926	19.926	0.954	91	335	N.D.	
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	264	N.D.	
67) 2-Chlorotoluene	0.000	20.068	0.000		0	N.D.	
68) 4-Chlorotoluene	0.000	20.159	0.000		0	N.D.	
69) tert-Butylbenzene	0.000	20.423	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	0.000	20.464	0.000		0	N.D.	
71) sec-Butylbenzene	0.000	20.636	0.000		0	N.D.	
72) 4-Isopropyltoluene	0.000	20.758	0.000		0	N.D.	
73) 1,3-Dichlorobenzene	20.819	20.819	0.997	146	197	N.D.	
74) 1,4-Dichlorobenzene	20.910	20.900	1.001	146	217	N.D.	
75) n-Butylbenzene	21.185	21.184	1.015	91	153	N.D.	
76) 1,2-Dichlorobenzene	21.316	21.326	1.021	146	162	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000	22.179	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	0.000	23.225	0.000		0	N.D.	
79) Hexachlorobutadiene	0.000	23.397	0.000		0	N.D.	
80) Naphthalene	23.611	23.611	1.131	128	998	N.D.	
81) 1,2,3-Trichlorobenzene	0.000	23.956	0.000		0	N.D.	
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.	
85) Acrolein	0.000	9.875	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000	10.637	0.000		0	N.D.	
88) Allyl chloride	0.000	11.043	0.000		0	N.D.	
89) tert-Butyl Alcohol	0.000	11.530	0.000		0	N.D.	
90) Acrylonitrile	0.000	11.794	0.000		0	N.D.	
91) Isopropyl ether	0.000	12.779	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000	12.829	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H418.D
Acq On : 18 Nov 2010 11:36 pm
Operator : AXO1
InstName : VOA7
Sample : |266877005|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 19 09:08:45 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

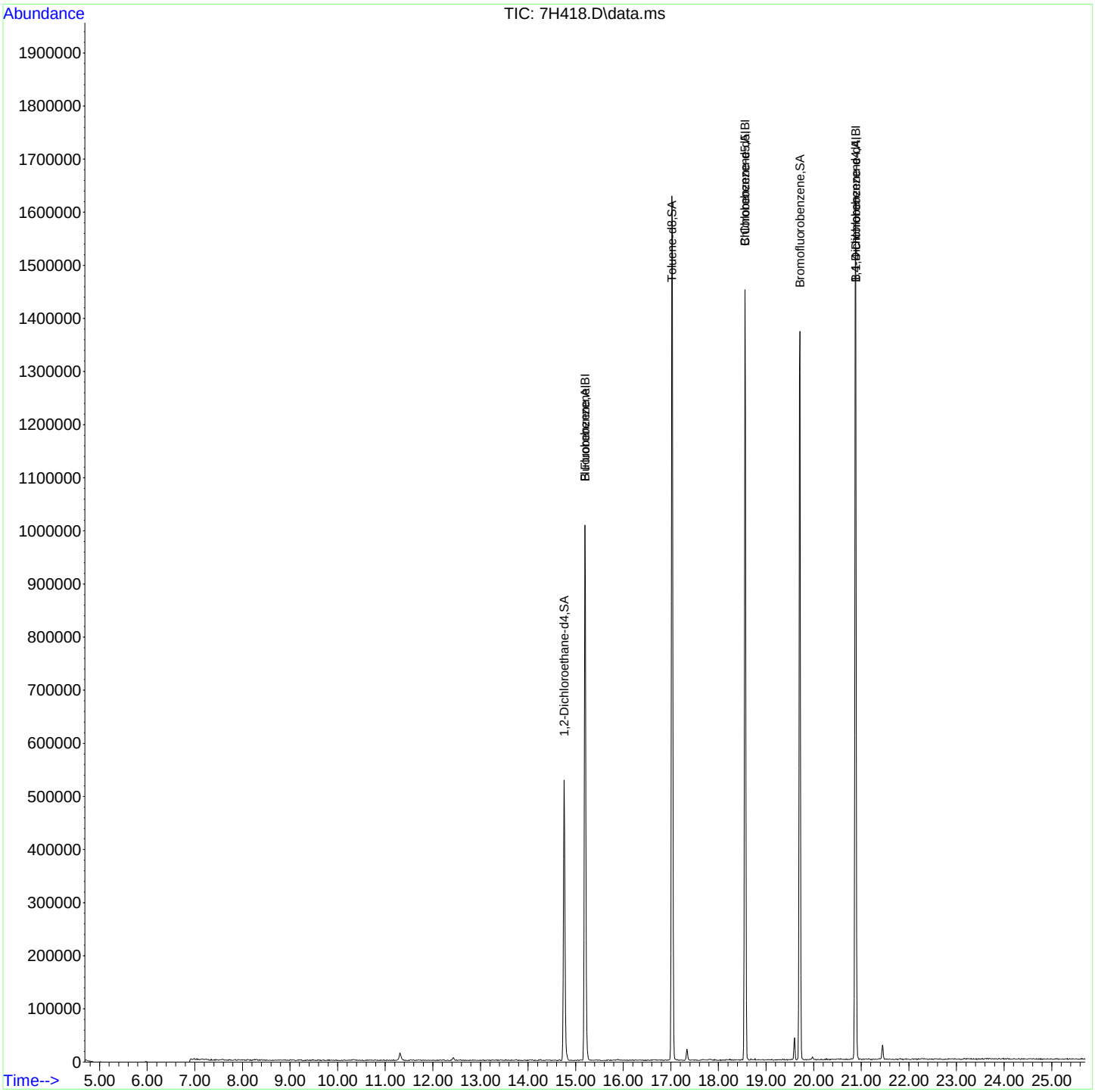
Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
93) Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.	
94) Ethyl acetate	0.000	13.682	0.000		0	N.D.	
95) Propionitrile	0.000	13.682	0.000		0	N.D.	
96) Methacrylonitrile	0.000	13.916	0.000		0	N.D.	
97) Tetrahydrofuran	14.058	14.037	0.925	42	1438	N.D.	
98) Isobutyl alcohol	0.000	14.626	0.000		0	N.D.	
99) Methyl tert-amyl ether	0.000	14.961	0.000		0	N.D.	
100) Methyl methacrylate	0.000	15.966	0.000		0	N.D.	
101) 1,4-Dioxane	0.000	16.047	0.000		0	N.D.	
102) 2-Nitropropane	0.000	16.443	0.000		0	N.D.	
104) Ethyl methacrylate	0.000	17.306	0.000		0	N.D.	
106) 1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107) cis-1,4-Dichloro-2-butene	0.000	19.560	0.000		0	N.D.	
108) Cyclohexanone	0.000	19.662	0.000		0	N.D.	
109) trans-1,4-Dichloro-2-b...	0.000	19.824	0.000		0	N.D.	
110) Pentachloroethane	0.000	20.494	0.000		0	N.D.	
111) Benzyl chloride	0.000	21.012	0.000		0	N.D.	
112) bis(2-Chloroisopropyl)...	21.438	21.398	1.027	45	2395	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H418.D
Acq On : 18 Nov 2010 11:36 pm
Operator : AXO1
InstName : VOA7
Sample : |266877005|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 19 09:08:45 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H418.D
Acq On : 18 Nov 2010 11:36 pm
Operator : AXO1
Sample : |266877005|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

```
  Data Path : C:\msdchem\1\DATA\111810V7\
  Data File : 7H418.D
  Acq On    : 18 Nov 2010  11:36 pm
  Operator  : AXO1
  Sample    : |266877005|1050223|1|VOAF|1|VOA8260LFD|
  Misc      : ARSL 5mL pH2
  ALS Vial  : 18   Sample Multiplier: 1

  Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
  Quant Title  : Volatile Organics 8260B                     SubList :

  TIC Library   : C:\Database\NIST05.L
  TIC Integration Parameters: default.P

                                                     |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877007**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2044**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 13:50**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 13:50**				
Data File:	**111910V7\7H509.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877007**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2044**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 13:50**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 13:50**				
Data File:	**111910V7\7H509.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877007**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08-11-2044**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 13:50**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 13:50**				
Data File:	**111910V7\7H509.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	50.8	50.0	ug/L	102	(71%-130%)
Bromofluorobenzene	49.7	50.0	ug/L	99.3	(80%-120%)
Toluene-d8	48.0	50.0	ug/L	96.1	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H509.D
Acq On : 19 Nov 2010 1:50 pm
Operator : AXO1
InstName : VOA7
Sample : |266877007|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 19 16:00:33 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	941614	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	795773	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	519784	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	941614	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	795773	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	519784	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	463877	50.78	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1185054	48.03	ug/L	-0.01
61) Bromofluorobenzene	19.702	19.712	0.944	95	529775	49.65	ug/L	-0.01

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	101.56%
43) Toluene-d8	50.000	80 - 120	96.06%
61) Bromofluorobenzene	50.000	80 - 120	99.30%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	0.000	5.058	0.000		0	N.D.		
3) Chloromethane	5.638	5.638	0.371	50	558	N.D.		
4) Vinyl chloride	0.000	6.054	0.000		0	N.D.		
5) Bromomethane	0.000	7.266	0.000		0	N.D.		
6) Chloroethane	0.000	7.682	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000	8.637	0.000		0	N.D.		
8) Ethyl ether	0.000	9.550	0.000		0	N.D.		
9) Acetone	10.342	10.271	0.681	43	12603	Below Cal		84
10) 1,1-Dichloroethylene	0.000	10.159	0.000		0	N.D.		
11) Iodomethane	0.000	10.525	0.000		0	N.D.		
12) Acetonitrile	11.033	10.931	0.726	41	198	N.D.		
13) Methyl acetate	0.000	11.083	0.000		0	N.D.		
14) Carbon disulfide	10.688	10.698	0.703	76	655	N.D.		
15) Methylene chloride	11.307	11.307	0.744	84	5242	Below Cal		92
16) tert-Butyl methyl ether	0.000	11.885	0.000		0	N.D.		
17) trans-1,2-Dichloroethy...	0.000	11.885	0.000		0	N.D.		
18) Vinyl acetate	0.000	12.728	0.000		0	N.D.		
19) 1,1-Dichloroethane	0.000	12.667	0.000		0	N.D.		
20) 2-Butanone	13.621	13.591	0.896	43	384	N.D.		
21) cis-1,2-Dichloroethylene	0.000	13.611	0.000		0	N.D.		
22) 2,2-Dichloropropane	0.000	13.621	0.000		0	N.D.		
23) Bromochloromethane	0.000	13.966	0.000		0	N.D.		
24) Chloroform	0.000	14.068	0.000		0	N.D.		
25) 1,1,1-Trichloroethane	0.000	14.362	0.000		0	N.D.		
26) Cyclohexane	0.000	14.464	0.000		0	N.D.		
27) 1,1-Dichloropropene	0.000	14.576	0.000		0	N.D.		
28) Carbon tetrachloride	0.000	14.606	0.000		0	N.D.		
30) 1,2-Dichloroethane	0.000	14.860	0.000		0	N.D.		
31) Benzene	14.870	14.860	0.979	78	208	Below Cal	#	46
32) Cyclohexene	0.000	15.002	0.000		0	N.D.		
33) n-Butyl alcohol	0.000	15.449	0.000		0	N.D.		
34) Trichloroethylene	0.000	15.652	0.000		0	N.D.		
35) 1,2-Dichloropropane	0.000	15.916	0.000		0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H509.D
Acq On : 19 Nov 2010 1:50 pm
Operator : AXO1
InstName : VOA7
Sample : |266877007|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 19 16:00:33 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
36) Methylcyclohexane	0.000	15.916	0.000		0	N.D.	
37) Dibromomethane	0.000	16.068	0.000		0	N.D.	
38) Bromodichloromethane	0.000	16.220	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000	16.494	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000	16.707	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000	16.829	0.000		0	N.D.	
44) Toluene	17.103	17.103	0.922	91	1462	N.D.	
45) trans-1,3-Dichloroprop...	17.327	17.276	0.934	75	1693	N.D.	
46) 1,1,2-Trichloroethane	0.000	17.499	0.000		0	N.D.	
47) 2-Hexanone	17.702	17.692	0.954	43	1099	N.D.	
48) 1,3-Dichloropropane	0.000	17.682	0.000		0	N.D.	
49) Tetrachloroethylene	0.000	17.702	0.000		0	N.D.	
50) Dibromochloromethane	0.000	17.956	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000	18.108	0.000		0	N.D.	
52) Chlorobenzene	18.586	18.586	1.002	112	239	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000	18.646	0.000		0	N.D.	
54) Ethylbenzene	18.667	18.657	1.006	91	434	N.D.	
55) m,p-Xylenes	18.768	18.758	1.011	106	267	N.D.	
56) o-Xylene	0.000	19.174	0.000		0	N.D.	
57) Styrene	19.195	19.184	1.034	104	368	N.D.	
59) Bromoform	0.000	19.428	0.000		0	N.D.	
60) Isopropylbenzene	19.581	19.519	0.938	105	182	N.D.	
62) 1,1,2,2-Tetrachloroethane	0.000	19.783	0.000		0	N.D.	
63) 1,2,3-Trichloropropane	0.000	19.865	0.000		0	N.D.	
64) Bromobenzene	0.000	19.905	0.000		0	N.D.	
65) n-Propylbenzene	19.926	19.926	0.954	91	863	N.D.	
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	1428	N.D.	
67) 2-Chlorotoluene	0.000	20.068	0.000		0	N.D.	
68) 4-Chlorotoluene	20.159	20.159	0.965	91	835	N.D.	
69) tert-Butylbenzene	0.000	20.423	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	20.454	20.464	0.980	105	687	N.D.	
71) sec-Butylbenzene	20.646	20.636	0.989	105	164	N.D.	
72) 4-Isopropyltoluene	20.758	20.758	0.994	119	219	N.D.	
73) 1,3-Dichlorobenzene	20.819	20.819	0.997	146	676	N.D.	
74) 1,4-Dichlorobenzene	20.900	20.900	1.001	146	883	N.D.	
75) n-Butylbenzene	21.185	21.184	1.015	91	753	N.D.	
76) 1,2-Dichlorobenzene	21.327	21.326	1.021	146	586	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000	22.179	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112	180	452	N.D.	
79) Hexachlorobutadiene	0.000	23.397	0.000		0	N.D.	
80) Naphthalene	23.611	23.611	1.131	128	1648	N.D.	
81) 1,2,3-Trichlorobenzene	23.946	23.956	1.147	180	221	N.D.	
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.	
85) Acrolein	0.000	9.875	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000	10.637	0.000		0	N.D.	
88) Allyl chloride	11.033	11.043	0.726	41	198	N.D.	
89) tert-Butyl Alcohol	0.000	11.530	0.000		0	N.D.	
90) Acrylonitrile	0.000	11.794	0.000		0	N.D.	
91) Isopropyl ether	0.000	12.779	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000	12.829	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H509.D
Acq On : 19 Nov 2010 1:50 pm
Operator : AXO1
InstName : VOA7
Sample : |266877007|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 19 16:00:33 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

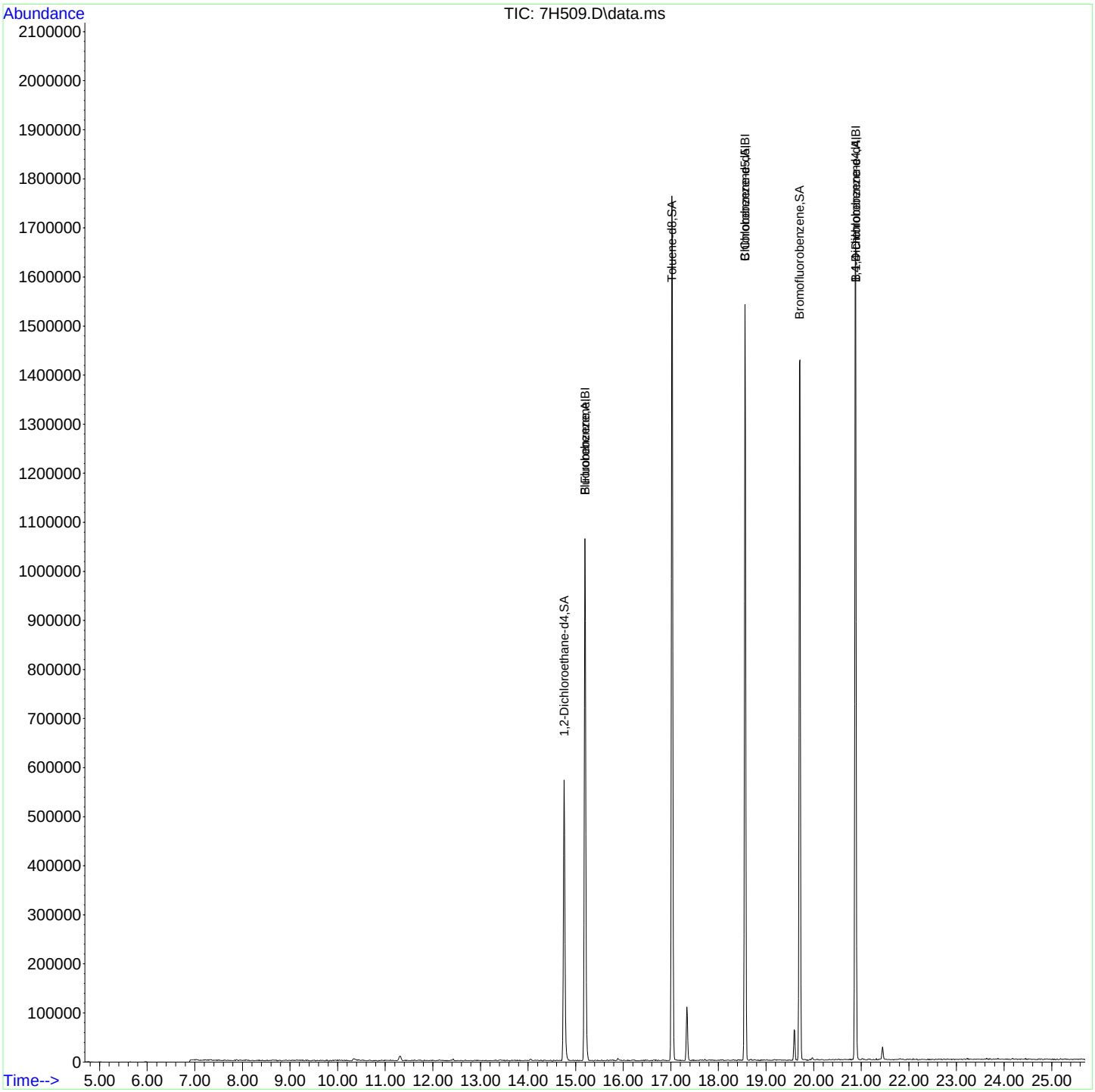
	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
93)	Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.	
94)	Ethyl acetate	13.621	13.682	0.896	43	384	N.D.	
95)	Propionitrile	0.000	13.682	0.000		0	N.D.	
96)	Methacrylonitrile	0.000	13.916	0.000		0	N.D.	
97)	Tetrahydrofuran	14.048	14.037	0.925	42	2754	N.D.	
98)	Isobutyl alcohol	0.000	14.626	0.000		0	N.D.	
99)	Methyl tert-amyl ether	0.000	14.961	0.000		0	N.D.	
100)	Methyl methacrylate	0.000	15.966	0.000		0	N.D.	
101)	1,4-Dioxane	0.000	16.047	0.000		0	N.D.	
102)	2-Nitropropane	0.000	16.443	0.000		0	N.D.	
104)	Ethyl methacrylate	0.000	17.306	0.000		0	N.D.	
106)	1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107)	cis-1,4-Dichloro-2-butene	19.560	19.560	0.937	53	191	N.D.	
108)	Cyclohexanone	0.000	19.662	0.000		0	N.D.	
109)	trans-1,4-Dichloro-2-b...	19.814	19.824	0.949	53	180	N.D.	
110)	Pentachloroethane	0.000	20.494	0.000		0	N.D.	
111)	Benzyl chloride	21.002	21.012	1.006	91	1369	N.D.	
112)	bis(2-Chloroisopropyl)...	21.388	21.398	1.024	45	640	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H509.D
Acq On    : 19 Nov 2010   1:50 pm
Operator  : AXO1
InstName  : VOA7
Sample    : |266877007|1050223|1|VOAF|1|VOA8260LFD|
Misc      : ARSL 5mL pH2
ALS Vial  : 9   Sample Multiplier: 1

Quant Time: Nov 19 16:00:33 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title  : Volatile Organics 8260B                    SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE
```



Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H509.D
Acq On : 19 Nov 2010 1:50 pm
Operator : AXO1
Sample : |266877007|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

```
  Data Path : C:\msdchem\1\DATA\111910V7\
  Data File : 7H509.D
  Acq On    : 19 Nov 2010   1:50 pm
  Operator  : AXO1
  Sample    : |266877007|1050223|1|VOAF|1|VOA8260LFD|
  Misc      : ARSL 5mL pH2
  ALS Vial  : 9   Sample Multiplier: 1

  Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
  Quant Title  : Volatile Organics 8260B                     SubList :

  TIC Library   : C:\Database\NIST05.L
  TIC Integration Parameters: default.P

                                                      |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Standards

Low level SW846 8260B and Regular level 8260B and EPA 624

Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4	Level 5	Level 6 #	Level 7 !	Level 7a
Fluorobenzene (IS)	20	20/50	20/50	20/50	20/50	20/50	20/50	20/50	20/50
1,2-Dichloroethane-d4(surr)		20/50	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol		50	100	200	500	1000	2000	5000	10000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane		2	5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	150	200
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	150	200
Tetrahydrofuran			5	10	25	50	100	250	500
tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Chlorobenzene-d5 (IS)	20	20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Toluene-d8 (surr)		20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Ethyl methacrylate			5	10	25	50	100	250	500
1,4-Dichlorobenzene-d4 (IS)	20	20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Bromofluorobenzene (surr)		20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
Cyclohexanone			25	50	125	250	500	1250	2500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Method	PQL	Concentration range		
SW 846 8260B low level	Level 1 &1a	Levels 1-> 7a	IS/SS @ 20 ppb	
EPA 524.2	Level 1a	Levels 1a-> 7a	IS/SS @ 20 ppb	
SW846 8260B/624	Level 2	Levels 1a-> 7a	IS/SS @ 50 ppb	n-butyl alchol only in 1a

#: Indicates calibration verification concentration level used for low level analysis

!: Indicates calibration verification concentration level used for regular level analysis

Calibration History Report VOA7
GEL Laboratories, LLC
Method File : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Last Update : Tue Nov 16 10:59:25 2010
Integrator : (RTE Integrator) Response via : Initial Calibration

Cal Lvl:8 Amt:0.0 Last Updated with: C:\msdchem\1\DATA\111510V7\7H112.D

Injection Date	Mix	Calibration File
15 Nov 2010 5:12 pm	A	C:\msdchem\1\DATA\111510V7\7H112.D

Cal Lvl:1 Amt:1.0 Last Updated with: C:\msdchem\1\DATA\111510V7\7H113.D

Injection Date	Mix	Calibration File
15 Nov 2010 12:07 pm	A	C:\msdchem\1\DATA\111510V7\7H103.D
15 Nov 2010 5:46 pm	B	C:\msdchem\1\DATA\111510V7\7H113.D

Cal Lvl:2 Amt:2.0 Last Updated with: C:\msdchem\1\DATA\111510V7\7H114.D

Injection Date	Mix	Calibration File
15 Nov 2010 12:41 pm	A	C:\msdchem\1\DATA\111510V7\7H104.D
15 Nov 2010 6:20 pm	B	C:\msdchem\1\DATA\111510V7\7H114.D

Cal Lvl:3 Amt:5.0 Last Updated with: C:\msdchem\1\DATA\111510V7\7H115.D

Injection Date	Mix	Calibration File
15 Nov 2010 1:15 pm	A	C:\msdchem\1\DATA\111510V7\7H105.D
15 Nov 2010 6:56 pm	B	C:\msdchem\1\DATA\111510V7\7H115.D

Cal Lvl:4 Amt:10.0 Last Updated with: C:\msdchem\1\DATA\111510V7\7H116.D

Injection Date	Mix	Calibration File
15 Nov 2010 1:48 pm	A	C:\msdchem\1\DATA\111510V7\7H106.D
15 Nov 2010 7:31 pm	B	C:\msdchem\1\DATA\111510V7\7H116.D

Cal Lvl:5 Amt:20.0 Last Updated with: C:\msdchem\1\DATA\111510V7\7H117.D

Injection Date	Mix	Calibration File
15 Nov 2010 2:23 pm	A	C:\msdchem\1\DATA\111510V7\7H107.D
15 Nov 2010 8:04 pm	B	C:\msdchem\1\DATA\111510V7\7H117.D

Cal Lvl:6 Amt:50.0 Last Updated with: C:\msdchem\1\DATA\111510V7\7H118.D

Injection Date	Mix	Calibration File
15 Nov 2010 2:56 pm	A	C:\msdchem\1\DATA\111510V7\7H108.D
15 Nov 2010 8:37 pm	B	C:\msdchem\1\DATA\111510V7\7H118.D

Cal Lvl:7 Amt:100.0 Last Updated with: C:\msdchem\1\DATA\111510V7\7H120.D

Injection Date	Mix	Calibration File
15 Nov 2010 4:05 pm	A	C:\msdchem\1\DATA\111510V7\7H110.D
15 Nov 2010 9:46 pm	B	C:\msdchem\1\DATA\111510V7\7H120.D

Cal Lvl:9 Amt:80.0 Last Updated with: C:\msdchem\1\DATA\111510V7\7H119.D

Injection Date	Mix	Calibration File

Calibration History Report VOA7
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Last Update : Tue Nov 16 10:59:25 2010
Integrator : (RTE Integrator) Response via : Initial Calibration

15 Nov 2010 3:30 pm	A	C:\msdchem\1\DATA\111510V7\7H109.D
15 Nov 2010 9:11 pm	B	C:\msdchem\1\DATA\111510V7\7H119.D

VOA7-8260-111510.M Mon Dec 06 07:47:29 2010

Response Factor Report VOA7
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Last Update : Tue Nov 16 10:59:25 2010
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r^2
2)MA Dichlorodifluoromethane 0.0015 | 0.3116 | 0.00		11404 772924	14995 599906	34125	73697	152192		LINR	#	0.9992
3)MPA Chloromethane		0.7891362 0.5386787	0.6345599 0.5778831	0.5741241	0.5962219	0.5776284	0.6126	AVRG		13.5413
4)MCA Vinyl chloride 0.0012 | 0.3638 | 0.00		12998 898594	18004 706010	44343	87638	164491		LINR		0.9985
5)MA Bromomethane		0.3290185 0.2572421	0.3061270 0.2738767	0.2684289	0.2740130	0.2571195	0.2808	AVRG		9.5650
6)MA Chloroethane		0.2772804 0.2665362	0.2683357 0.2738221	0.2608812	0.2584061	0.2586678	0.2663	AVRG		2.7905
7)MA Trichlorofluoromethane		0.5257682 0.4160719	0.4423431 0.4268295	0.4588969	0.4333065	0.4080332	0.4445	AVRG		8.9016
8)MA Ethyl ether		0.5377450 0.4031222	0.3945141 0.4126286	0.4192693	0.3988722	0.3955906	0.4231	AVRG		12.1391
9)MA Acetone 0.0594 | 0.2975 | 0.00		52615 3658496	93289 3008614	222760	380327	934397		LINR		0.9938
10)MCA 1,1-Dichloroethylene		0.6256150 0.5241005	0.5742911 0.5632655	0.6125535	0.5510670	0.5299550	0.5687	AVRG		6.8196
11)MA Iodomethane		0.4938705 0.4318035	0.5271570 0.4685539	0.5189620	0.4810163	0.4699544	0.4845	AVRG		6.7149
12)MA Acetonitrile		0.0862376 0.0683990	0.0857996 0.0752550	0.0851014	0.0759845	0.0769326	0.0791	AVRG		8.5672
13)MA Methyl acetate		0.5071135 0.3962236	0.4940327 0.4399150	0.5224463	0.4696285	0.4772176	0.4724	AVRG		9.0918
14)MA Carbon disulfide		0.9117026 	0.8739451 0.7370396	0.9162756	0.8150513	0.7640738	0.8363	AVRG		9.1091
15)MA Methylene chloride 0.0180 | 0.3168 | 0.00		25417 805364	33182 627880	54077	89940	188652		LINR	#	0.9987
16)MA tert-Butyl methyl ether		0.9697960 0.8864338	1.0834018 0.9427521	0.9829770	0.9280965	0.9360844	0.9614	AVRG		6.4595

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For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r^2
17)MA trans-1,2-Dichloroethyle		0.5675458 0.4952025	0.5739694 0.5277722	0.6158857	0.5399150	0.5289761	0.5499	AVRG		7.1456
18)MA Vinyl acetate		0.9268651 0.7657431	0.9911797 0.8634162	1.0457463	0.9030939	0.9152469	0.9159	AVRG		9.7771
19)MPA 1,1-Dichloroethane		0.7307041 0.6424864	0.7106359 0.6750161	0.7208189	0.6562447	0.6653086	0.6859	AVRG		5.0313
20)MA 2-Butanone		0.4225099 0.3237796	0.4366637 0.3651028	0.4426278	0.3777735	0.4319578	0.4001	AVRG		11.2764
21)MA cis-1,2-Dichloroethylene		0.3347851 0.2841382	0.3645298 0.2993092	0.3499056	0.3011606	0.3032655	0.3196	AVRG		9.4252
22)MA 2,2-Dichloropropane		0.3672070 0.3120229	0.3754898 0.3409281	0.3762133	0.3382984	0.3332154	0.3491	AVRG		6.9881
23)MA Bromochloromethane		0.1615856 0.1551810	0.1810853 0.1648935	0.1682884	0.1524425	0.1577803	0.1630	AVRG		5.9281
24)MCA Chloroform		0.5867005 0.5219022	0.5898838 0.5600760	0.5985601	0.5382407	0.5405583	0.5623	AVRG		5.3154
25)MA 1,1,1-Trichloroethane		0.4408017 0.4055808	0.4622039 0.4360376	0.4798259	0.4303294	0.4154401	0.4386	AVRG		5.8597
26)MA Cyclohexane		0.7502218 0.6031041	0.7099710 0.6478161	0.7786117	0.6634844	0.6393073	0.6846	AVRG		9.2915
27)MA 1,1-Dichloropropene		0.4311638 0.3393115	0.4069968 0.3653633	0.4101386	0.3643013	0.3546923	0.3817	AVRG		8.9426
28)MA Carbon tetrachloride		0.4282603 0.3444654	0.3894095 0.3724960	0.4063516	0.3652453	0.3539545	0.3800	AVRG		7.8407
29)SA 1,2-Dichloroethane-d4		0.4701750 0.4789047	0.5038456 0.4973888	0.4974357	0.4695081	0.4783357	0.4851	AVRG		2.9210
30)MA 1,2-Dichloroethane		0.5962174 0.5551876	0.6303990 0.5954841	0.6308849	0.5924547	0.5907028	0.5988	AVRG		4.3409
31)MA Benzene 0.0158 | 0.9975 | 0.00	15306	29101 2470620	57024 1949738	135326	260371	511272		LINR	#	0.9985

Response Factor Report VOA7
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For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r^2
32)MA Cyclohexene		0.6196467 0.5026317	0.5830848 0.5359975	0.6160431	0.5420506	0.5320706	0.5616	AVRG		8.0227
33)MA n-Butyl alcohol	0.0213747	0.0153520 0.0158063	0.0133866 0.0179622	0.0189365	0.0169370	0.0180481	0.0172	AVRG		14.1705
34)MA Trichloroethylene		0.3265586 0.2728942	0.3236714 0.2941872	0.3223123	0.2840118	0.2836445	0.3010	AVRG		7.4865
35)MCA 1,2-Dichloropropane		0.4217679 0.3588916	0.4341714 0.3801063	0.4214908	0.3936272	0.3818428	0.3988	AVRG		6.9044
36)MA Methylcyclohexane		0.4977418 0.3872283	0.4916306 0.4135236	0.5189900	0.4396193	0.4199978	0.4527	AVRG		11.0456
37)MA Dibromomethane		0.2110251 0.2086013	0.2221367 0.2230058	0.2230640	0.2092363	0.2125011	0.2157	AVRG		3.1295
38)MA Bromodichloromethane		0.4574562 0.4363755	0.4581288 0.4627025	0.4598852	0.4338361	0.4460531	0.4506	AVRG		2.6263
39)MA 2-Chloroethylvinyl ether 0.0322 | 0.2267 | 0.00		33218 2797641	62688 2262614	161963	297542	612388		LINR	#	0.9967
40)MA cis-1,3-Dichloropropylen		0.5250423 0.5063560	0.5592560 0.5317753	0.5402425	0.5004963	0.5171840	0.5258	AVRG		3.8487
42)MA 4-Methyl-2-pentanone		0.2494674 0.2140950	0.2614303 0.2330412	0.2744453	0.2361174	0.2479119	0.2452	AVRG		8.0571
43)SA Toluene-d8		1.5215012 1.5765751	1.5862934 1.5676895	1.5884498	1.5138609	1.4982959	1.5504	AVRG		2.4427
44)MCA Toluene		1.6564174 1.2542905	1.6662630 1.3311458	1.5921087	1.4228639	1.3586088	1.4688	AVRG		11.4131
45)MA trans-1,3-Dichloropropyl		0.5639147 0.6011030	0.6038839 0.6277865	0.6196224	0.5849365	0.5930232	0.5992	AVRG		3.5707
46)MA 1,1,2-Trichloroethane		0.3266997 0.2860713	0.3052927 0.2996728	0.3112270	0.2956142	0.2993068	0.3034	AVRG		4.2534
47)MA 2-Hexanone		0.6803860	0.7067555 0.5247742	0.7131008	0.6240490	0.6539248	0.6505	AVRG		10.7599

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For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r^2
48)MA 1,3-Dichloropropane		0.6101899 0.5250428	0.6682336 0.5482363	0.6581307	0.5857010	0.5845374	0.5972	AVRG		8.8675
49)MA Tetrachloroethylene 0.0072 | 0.2415 | 0.00		7157 498241	12423 395866	32638	54977	107832		LINR	#	0.9990
50)MA Dibromochloromethane		0.3875728 0.4207468	0.4299817 0.4423610	0.4264656	0.3931811	0.4073566	0.4154	AVRG		4.8382
51)MA 1,2-Dibromoethane		0.3744834 0.3759917	0.4024512 0.3946151	0.4052548	0.3671867	0.3637053	0.3834	AVRG		4.4565
52)MPA Chlorobenzene		1.0623338 0.8941926	1.0562728 0.9536727	1.0703108	0.9596239	0.9427441	0.9913	AVRG		7.0993
53)MA 1,1,1,2-Tetrachloroethan		0.4056741 0.3600679	0.3872371 0.3828018	0.4014580	0.3748889	0.3628426	0.3821	AVRG		4.6144
54)MCA Ethylbenzene		1.8323214 1.4141522	1.8095040 1.5124690	1.8734178	1.6737731	1.5796913	1.6708	AVRG		10.5277
55)MA m,p-Xylenes		0.7195521 0.5539201	0.7166835 0.5935878	0.7064172	0.6521619	0.6029605	0.6493	AVRG		10.3492
56)MA o-Xylene		0.7587959 0.5798212	0.6857765 0.6202412	0.7423060	0.6739436	0.6405270	0.6716	AVRG		9.5792
57)MA Styrene		1.1787759 0.9811335	1.1715694 1.0634743	1.1907461	1.1201674	1.0824243	1.1126	AVRG		6.8280
59)MPA Bromoform		0.4953674 0.5354857	0.5037969 0.5519003	0.4833977	0.4869601	0.5030259	0.5086	AVRG		5.0327
60)MA Isopropylbenzene		2.6623615 2.1747548	2.6689213 2.3008069	2.7500395	2.5052045	2.3609279	2.4890	AVRG		8.7008
61)SA Bromofluorobenzene		0.9985633 1.0658158	1.0462671 1.0655893	1.0305316	0.9909663	0.9869590	1.0264	AVRG		3.3485
62)MPA 1,1,2,2-Tetrachloroethan		0.8016918 0.7634467	0.8397003 0.8092200	0.8877168	0.7708858	0.8065924	0.8113	AVRG		5.2021
63)MA 1,2,3-Trichloropropane		0.2270128 0.2073140	0.2149766 0.2178760	0.2330115	0.2001209	0.2033744	0.2148	AVRG		5.6772

Response Factor Report VOA7
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For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r^2
64)MA Bromobenzene		0.8096083	0.7932377	0.8270490	0.7473735	0.7253147				
		0.6987889	0.7288993				0.7615	AVRG		6.3714
65)MA n-Propylbenzene		3.3925116	3.3123773	3.4307270	3.0355081	2.8511386				
		2.5228673	2.6925048				3.0339	AVRG		11.8438
66)MA 1,3,5-Trimethylbenzene		2.3849909	2.2620054	2.4204472	2.1747633	2.0475475				
		1.8533017	1.9800944				2.1605	AVRG		9.7852
67)MA 2-Chlorotoluene		0.6449012	0.7069058	0.6745984	0.6245878	0.5985748				
		0.5426831	0.5759948				0.6240	AVRG		9.1201
68)MA 4-Chlorotoluene		2.2255615	2.1716788	2.1685149	2.0067075	1.9044934				
		1.8028546	1.9158911				2.0280	AVRG		8.0117
69)MA tert-Butylbenzene		0.5169911	0.4918128	0.5468709	0.4961708	0.4522965				
		0.4426435	0.4592143				0.4866	AVRG		7.7509
70)MA 1,2,4-Trimethylbenzene		2.5292471	2.5527261	2.5077827	2.3375246	2.1839118				
		2.0272194	2.1532090				2.3274	AVRG		9.0332
71)MA sec-Butylbenzene		3.1688706	2.9716260	3.1674772	2.8362331	2.6943518				
		2.4283312	2.5786210				2.8351	AVRG		10.0961
72)MA 4-Isopropyltoluene		2.4373277	2.3638895	2.5796085	2.2727130	2.1739197				
		1.9974734	2.1398691				2.2807	AVRG		8.6278
73)MA 1,3-Dichlorobenzene		1.5214332	1.5641362	1.4902981	1.3758852	1.3086525				
		1.2290006	1.3112091				1.4001	AVRG		9.0294
74)MA 1,4-Dichlorobenzene		1.5195274	1.5530829	1.5044847	1.3476893	1.2919557				
		1.2298603	1.3126283				1.3942	AVRG		9.2317
75)MA n-Butylbenzene		2.4859262	2.4526260	2.5987047	2.3211788	2.1968606				
		2.0320979	2.1783260				2.3237	AVRG		8.6219
76)MA 1,2-Dichlorobenzene		1.4827303	1.5219786	1.4508784	1.4033763	1.3312777				
		1.2417944	1.3216898				1.3934	AVRG		7.1708
77)MA 1,2-Dibromo-3-chloroprop		0.1661731	0.1893795	0.2056743	0.1904560	0.1966177				
		0.2120835	0.2243935				0.1978	AVRG		9.4564
78)MA 1,2,4-Trichlorobenzene		1.2685451	1.1702128	1.1573266	1.0757626	1.0598790				
		1.0330914	1.0901934				1.1221	AVRG		7.2727

Response Factor Report VOA7
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Last Update : Tue Nov 16 10:59:25 2010
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r^2
79)MA Hexachlorobutadiene		0.7699525	0.7446033	0.7752757	0.6779174	0.6437324				
		0.6455308	0.6733973				0.7043	AVRG		8.1447
80)MA Naphthalene		2.4726588	2.4406032	2.4160478	2.2939540	2.2834204				
		2.2221519	2.3561167				2.3550	AVRG		3.9302
81)MA 1,2,3-Trichlorobenzene		1.0291444	1.0487818	1.0362939	1.0045286	0.9701582				
		0.9558686	1.0051178				1.0071	AVRG		3.4097
83)B Chlorotrifluoroethylene		0.1257545	0.1531729	0.1559468	0.1401487	0.1700436				
	0.1585681	0.1549201	0.1618025				0.1525	AVRG		8.9924
84)B 2-Chloro-1,1,1-trifluoro		0.3329695	0.3270561	0.3237788	0.3242340	0.3809188				
	0.3142132	0.3003753	0.3206201				0.3280	AVRG		7.1641
85)B Acrolein		0.0766506	0.0800613	0.0923987	0.0882877	0.1067094				
	0.0941761	0.0852178	0.0950613				0.0898	AVRG		10.5665
86)B Trichlorotrifluoroethane		0.1160683	0.1199193	0.1159385	0.1136956	0.1343704				
	0.1065095	0.0982665	0.1072676				0.1140	AVRG		9.4187
87)B Isopropyl Alcohol		0.0392258	0.0407808	0.0431235	0.0412217	0.0506484				
	0.0465302	0.0398194	0.0430143				0.0430	AVRG		8.9289
88)B Allyl chloride		0.7646618	0.7377958	0.7203628	0.7151119	0.8258940				
	0.6303032	0.5443537	0.6237927				0.6953	AVRG		12.9575
89)B tert-Butyl Alcohol		0.0590501	0.0586881	0.0635848	0.0586550	0.0711724				
	0.0633790	0.0523098	0.0584096				0.0607	AVRG		9.0675
90)B Acrylonitrile		0.2020396	0.2014927	0.2082040	0.1926713	0.2360386				
	0.1982891	0.1779169	0.1988828				0.2019	AVRG		8.1322
91)B Isopropyl ether		1.7751671	1.7914817	1.7693029	1.8184521	2.1899961				
	1.7343116	1.5433926	1.6280541				1.7813	AVRG		10.6304
92)B 2-Chloro-1,3-butadiene		0.6627490	0.6152651	0.6494753	0.6431755	0.7810487				
	0.6249107	0.5900080	0.4725898				0.6299	AVRG		13.5589
93)B Ethyl tert-butyl ether		1.3847699	1.4160257	1.3905996	1.3966175	1.7496732				
	1.3988875	1.2877417	1.3476472				1.4215	AVRG		9.7517
94)B Ethyl acetate		0.5789874	0.5391546	0.5598208	0.5230762	0.6233759				
	0.4992982	0.4142869	0.4899126				0.5285	AVRG		11.9802

Response Factor Report VOA7
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Last Update : Tue Nov 16 10:59:25 2010
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r^2
95)B Propionitrile		0.0760940	0.0818472	0.0850234	0.0790820	0.0938677				
	0.0799451	0.0699579	0.0795661				0.0807	AVRG		8.5685
96)B Methacrylonitrile		0.3343900	0.3353284	0.3436967	0.3291932	0.3896232				
	0.3127706	0.2651994	0.3080666				0.3273	AVRG		10.7772
97)B Tetrahydrofuran		0.2040832	0.1935911	0.1963615	0.1751668	0.2078902				
	0.1737908	0.1481784	0.1719330				0.1839	AVRG		10.9347
98)B Isobutyl alcohol		0.0214475	0.0221180	0.0230243	0.0215118	0.0253315				
	0.0218091	0.0180936	0.0214021				0.0218	AVRG		9.1828
99)B Methyl tert-amyl ether		0.8793179	0.8953618	0.9232612	0.9335529	1.1479353				
	0.9285754	0.8630962	0.8916698				0.9328	AVRG		9.6907
100)B Methyl methacrylate		0.2248678	0.2323286	0.2386803	0.2272858	0.2689380				
	0.2124010	0.1831665	0.2113777				0.2249	AVRG		10.9839
101)B 1,4-Dioxane		0.0031451	0.0036813	0.0035883	0.0032904	0.0041687				
	0.0035472	0.0031917	0.0025428				0.0034	AVRG	#	14.0049
102)B 2-Nitropropane		0.1544642	0.1447573	0.1644030	0.1619985	0.2004697				
	0.1790505	0.1587072	0.1793025				0.1679	AVRG		10.4694
104)B Ethyl methacrylate		0.5291971	0.5106723	0.5460321	0.5211552	0.6111036				
	0.4604812	0.3822898	0.4560876				0.5021	AVRG		13.7125
106)B 1-Chlorohexane		0.6827799	0.7155690	0.7377926	0.7453690	0.8807997				
	0.7081352	0.6267870	0.6736951				0.7214	AVRG		10.3712
107)B cis-1,4-Dichloro-2-buten		0.3859025	0.3676614	0.3968657	0.3831519	0.4567272				
	0.3725894	0.3225927	0.3727717				0.3823	AVRG		9.7525
108)B Cyclohexanone		0.0286475	0.0300467	0.0325191	0.0311215	0.0368578				
	0.0315644	0.0293037	0.0335592				0.0317	AVRG		8.3350
109)B trans-1,4-Dichloro-2-but		0.3042033	0.3087348	0.3309299	0.3281707	0.3859838				
	0.3190991	0.2766746	0.3197920				0.3217	AVRG		9.6681
110)B Pentachloroethane		0.4247741	0.4377464	0.4394015	0.4447365	0.4901197				
	0.3892471	0.3325268	0.3888275				0.4184	AVRG		11.3515
111)B Benzyl chloride		1.0699278	1.0876573	1.1989632	1.1776099	1.3929292				
	1.0805759	0.8694361	1.0541953				1.1164	AVRG		13.3787

Response Factor Report VOA7
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Last Update : Tue Nov 16 10:59:25 2010
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b m1 m2	6	7	9							
12)B bis(2-Chloroisopropyl)et		0.6760986	0.6473779	0.6933807	0.6373556	0.7618554				
	0.6311901	0.5242671	0.6303673				0.6502	AVRG		10.3638

(#) = Out of Range ($) = Individual RF Out of Range

Continuing Calibration Summary

Client SDG: 11-463

Instrument ID: VOA7.I **Injection Date:** 15-NOV-10 23:31

Data File: 111510V7\7H123.D **Init. Cal. Date(s)** 15-NOV-10 12:07 - 15-NOV-10 21:4

Lab Sample ID W7VM101115-19 **Method:** 111510V7\VOA7-8260-111510.M

Quant Type ISTD **Method Update:** 16-NOV-10 10:59

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.4851	0.4852		.01		0.02061	30		Averaged
S	Toluene-d8	1.5504	1.4842		.01		-4.26987	30		Averaged
S	Bromofluorobenzene	1.0264	0.98944		.01		-3.60094	30		Averaged
	Chlorotrifluoroethylene	0.1525	0.16842		.01		10.43934	30		Averaged
	2-Chloro-1,1,1-trifluoroethane	0.328	0.30687		.01		-6.44207	30		Averaged
	Acrolein	0.0898	0.08126		.01		-9.51002	30		Averaged
	Trichlorotrifluoroethane	0.114	0.1025		.01		-10.08772	30		Averaged
	Isopropyl Alcohol	0.043	0.04182		.01		-2.74419	40		Averaged
	Allyl chloride	0.6953	0.61319		.01		-11.80929	30		Averaged
	tert-Butyl Alcohol	0.0607	0.05685		.01		-6.34267	40		Averaged
	Acrylonitrile	0.2019	0.175		.01		-13.32343	30		Averaged
	Isopropyl ether	1.7813	1.72457		.01		-3.18475	30		Averaged
	2-Chloro-1,3-butadiene	0.6299	0.58234		.01		-7.5504	30		Averaged
	Ethyl tert-butyl ether	1.4215	1.41073		.01		-0.75765	30		Averaged
	Propionitrile	0.0807	0.0709		.01		-12.14374	30		Averaged
	Ethyl acetate	0.5285	0.45685		.01		-13.55724	40		Averaged
	Methacrylonitrile	0.3273	0.27896		.01		-14.76932	30		Averaged
	Tetrahydrofuran	0.1839	0.15274		.01		-16.94399	30		Averaged
	Isobutyl alcohol	0.0218	0.01933		.01		-11.33028	40		Averaged
	Methyl tert-amyl ether	0.9328	0.92434		.01		-0.90695	30		Averaged
	Methyl methacrylate	0.2249	0.19708		.01		-12.36994	30		Averaged
	1,4-Dioxane	0.0034	0.00295		.01		-13.23529	40		Averaged
	2-Nitropropane	0.1679	0.16025		.01		-4.55628	30		Averaged
	Ethyl methacrylate	0.5021	0.43069		.01		-14.22227	30		Averaged
	1-Chlorohexane	0.7214	0.71404		.01		-1.02024	30		Averaged
	cis-1,4-Dichloro-2-butene	0.3823	0.33971		.01		-11.14047	30		Averaged
	Cyclohexanone	0.0317	0.02521		.01		-20.47319	40		Averaged
	trans-1,4-Dichloro-2-butene	0.3217	0.31877		.01		-0.91079	30		Averaged
	Pentachloroethane	0.4184	0.36952		.01		-11.6826	30		Averaged
	Benzyl chloride	1.1164	0.92754		.01		-16.91688	30		Averaged
	bis(2-Chloroisopropyl)ether	0.6502	0.60622		.01		-6.76407	30		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111510V7\
Data File : 7H123.D
Acq On : 15 Nov 2010 11:31 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101115-19|ICV|1|VOAF|1|VOA8260BL|
Misc : ICV 5uL N/A MIX[B] 1105-08A/1025-08B
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 16 11:03:21 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	15.195	15.195	1.000	96	1208886	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	1022816	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	689497	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	1208886	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	1022816	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	689497	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	586553	50.01	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1518065	47.87	ug/L	-0.01
61) Bromofluorobenzene	19.712	19.712	0.944	95	682217	48.20	ug/L	0.00

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	0.000	5.058	0.000		0	N.D.		
3) Chloromethane	5.638	5.638	0.371		0m	N.D.	d	
4) Vinyl chloride	6.054	6.054	0.398		0m	N.D.	d	
5) Bromomethane	7.246	7.266	0.477		0m	N.D.	d	
6) Chloroethane	7.703	7.682	0.507		0m	N.D.	d	
7) Trichlorofluoromethane	8.627	8.637	0.568		0m	N.D.	d	
8) Ethyl ether	9.571	9.550	0.630		0m	N.D.	d	
9) Acetone	10.220	10.271	0.673		0m	N.D.	d	
10) 1,1-Dichloroethylene	10.210	10.159	0.672		0m	N.D.	d	
11) Iodomethane	10.525	10.525	0.693		0m	N.D.	d	
12) Acetonitrile	11.043	10.931	0.727		0m	N.D.	d	
13) Methyl acetate	11.104	11.083	0.731		0m	N.D.	d	
14) Carbon disulfide	10.698	10.698	0.704		0m	N.D.	d	
15) Methylene chloride	11.307	11.307	0.744		0m	N.D.	d	
16) tert-Butyl methyl ether	11.885	11.885	0.782		0m	N.D.	d	
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782		0m	N.D.	d	
18) Vinyl acetate	12.779	12.728	0.841		0m	N.D.	d	
19) 1,1-Dichloroethane	12.667	12.667	0.834		0m	N.D.	d	
20) 2-Butanone	13.682	13.591	0.900		0m	N.D.	d	
21) cis-1,2-Dichloroethylene	13.611	13.611	0.896		0m	N.D.	d	
22) 2,2-Dichloropropane	13.621	13.621	0.896		0m	N.D.	d	
23) Bromochloromethane	13.967	13.966	0.919		0m	N.D.	d	
24) Chloroform	14.068	14.068	0.926		0m	N.D.	d	
25) 1,1,1-Trichloroethane	14.362	14.362	0.945		0m	N.D.	d	
26) Cyclohexane	14.484	14.464	0.953		0m	N.D.	d	
27) 1,1-Dichloropropene	14.576	14.576	0.959		0m	N.D.	d	
28) Carbon tetrachloride	14.606	14.606	0.961		0m	N.D.	d	
30) 1,2-Dichloroethane	14.850	14.860	0.977		0m	N.D.	d	
31) Benzene	14.870	14.860	0.979		0m	N.D.	d	
32) Cyclohexene	15.002	15.002	0.987		0m	N.D.	d	
33) n-Butyl alcohol	15.459	15.449	1.017		0m	N.D.	d	
34) Trichloroethylene	15.652	15.652	1.030		0m	N.D.	d	
35) 1,2-Dichloropropane	15.916	15.916	1.047		0m	N.D.	d	
36) Methylcyclohexane	15.916	15.916	1.047		0m	N.D.	d	
37) Dibromomethane	16.068	16.068	1.057		0m	N.D.	d	
38) Bromodichloromethane	16.220	16.220	1.067		0m	N.D.	d	
39) 2-Chloroethylvinyl ether	16.494	16.494	1.086		0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111510V7\
Data File : 7H123.D
Acq On : 15 Nov 2010 11:31 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101115-19|ICV|1|VOAF|1|VOA8260BL|
Misc : ICV 5uL N/A MIX[B] 1105-08A/1025-08B
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 16 11:03:21 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
40) cis-1,3-Dichloropropylene	16.708	16.707	1.100		0m	N.D.	d	
42) 4-Methyl-2-pentanone	16.829	16.829	0.907		0m	N.D.	d	
44) Toluene	17.103	17.103	0.922		0m	N.D.	d	
45) trans-1,3-Dichloroprop...	17.286	17.276	0.932		0m	N.D.	d	
46) 1,1,2-Trichloroethane	17.489	17.499	0.943		0m	N.D.	d	
47) 2-Hexanone	17.692	17.692	0.953		0m	N.D.	d	
48) 1,3-Dichloropropane	17.682	17.682	0.953		0m	N.D.	d	
49) Tetrachloroethylene	17.702	17.702	0.954		0m	N.D.	d	
50) Dibromochloromethane	17.956	17.956	0.968		0m	N.D.	d	
51) 1,2-Dibromoethane	18.108	18.108	0.976		0m	N.D.	d	
52) Chlorobenzene	18.586	18.586	1.002		0m	N.D.	d	
53) 1,1,1,2-Tetrachloroethane	18.647	18.646	1.005		0m	N.D.	d	
54) Ethylbenzene	18.657	18.657	1.005		0m	N.D.	d	
55) m,p-Xylenes	18.758	18.758	1.011		0m	N.D.	d	
56) o-Xylene	19.185	19.174	1.034		0m	N.D.	d	
57) Styrene	19.185	19.184	1.034		0m	N.D.	d	
59) Bromoform	19.428	19.428	0.930		0m	N.D.	d	
60) Isopropylbenzene	19.520	19.519	0.935		0m	N.D.	d	
62) 1,1,2,2-Tetrachloroethane	19.784	19.783	0.947		0m	N.D.	d	
63) 1,2,3-Trichloropropane	19.865	19.865	0.951		0m	N.D.	d	
64) Bromobenzene	19.916	19.905	0.954		0m	N.D.	d	
65) n-Propylbenzene	19.926	19.926	0.954		0m	N.D.	d	
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961		0m	N.D.	d	
67) 2-Chlorotoluene	20.068	20.068	0.961		0m	N.D.	d	
68) 4-Chlorotoluene	20.159	20.159	0.965		0m	N.D.	d	
69) tert-Butylbenzene	20.433	20.423	0.979		0m	N.D.	d	
70) 1,2,4-Trimethylbenzene	20.464	20.464	0.980		0m	N.D.	d	
71) sec-Butylbenzene	20.636	20.636	0.988		0m	N.D.	d	
72) 4-Isopropyltoluene	20.758	20.758	0.994		0m	N.D.	d	
73) 1,3-Dichlorobenzene	20.819	20.819	0.997		0m	N.D.	d	
74) 1,4-Dichlorobenzene	20.910	20.900	1.001		0m	N.D.	d	
75) n-Butylbenzene	21.184	21.184	1.015		0m	N.D.	d	
76) 1,2-Dichlorobenzene	21.327	21.326	1.021		0m	N.D.	d	
77) 1,2-Dibromo-3-chloropr...	22.169	22.179	1.062		0m	N.D.	d	
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112		0m	N.D.	d	
79) Hexachlorobutadiene	23.408	23.397	1.121		0m	N.D.	d	
80) Naphthalene	23.611	23.611	1.131		0m	N.D.	d	
81) 1,2,3-Trichlorobenzene	23.946	23.956	1.147		0m	N.D.	d	
83) Chlorotrifluoroethylene	4.940	4.939	0.325	116	610795	165.61	ug/L	100
84) 2-Chloro-1,1,1-trifluo...	6.470	6.470	0.426	118	1112929	140.33	ug/L	100
85) Acrolein	9.875	9.875	0.650	56	491142	226.16	ug/L	99
86) Trichlorotrifluoroethane	10.231	10.220	0.673	85	619544	224.77	ug/L	99
87) Isopropyl Alcohol	10.637	10.637	0.700	45	2527619	2428.67	ug/L	99
88) Allyl chloride	11.043	11.043	0.727	41	3706374	220.48	ug/L	99
89) tert-Butyl Alcohol	11.530	11.530	0.759	59	3435987	2342.94	ug/L	99
90) Acrylonitrile	11.794	11.794	0.776	53	1057785	216.65	ug/L	99
91) Isopropyl ether	12.779	12.779	0.841	45	2084812	48.41	ug/L	98
92) 2-Chloro-1,3-butadiene	12.830	12.829	0.844	53	703987	46.22	ug/L	99
93) Ethyl tert-butyl ether	13.368	13.367	0.880	59	1705406	49.62	ug/L	99
94) Ethyl acetate	13.682	13.682	0.900	43	2761405	216.11	ug/L	99
95) Propionitrile	13.682	13.682	0.900	54	428537	219.71	ug/L	100
96) Methacrylonitrile	13.916	13.916	0.916	41	1686158	213.09	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111510V7\
Data File : 7H123.D
Acq On : 15 Nov 2010 11:31 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101115-19|ICV|1|VOAF|1|VOA8260BL|
Misc : ICV 5uL N/A MIX[B] 1105-08A/1025-08B
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 16 11:03:21 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

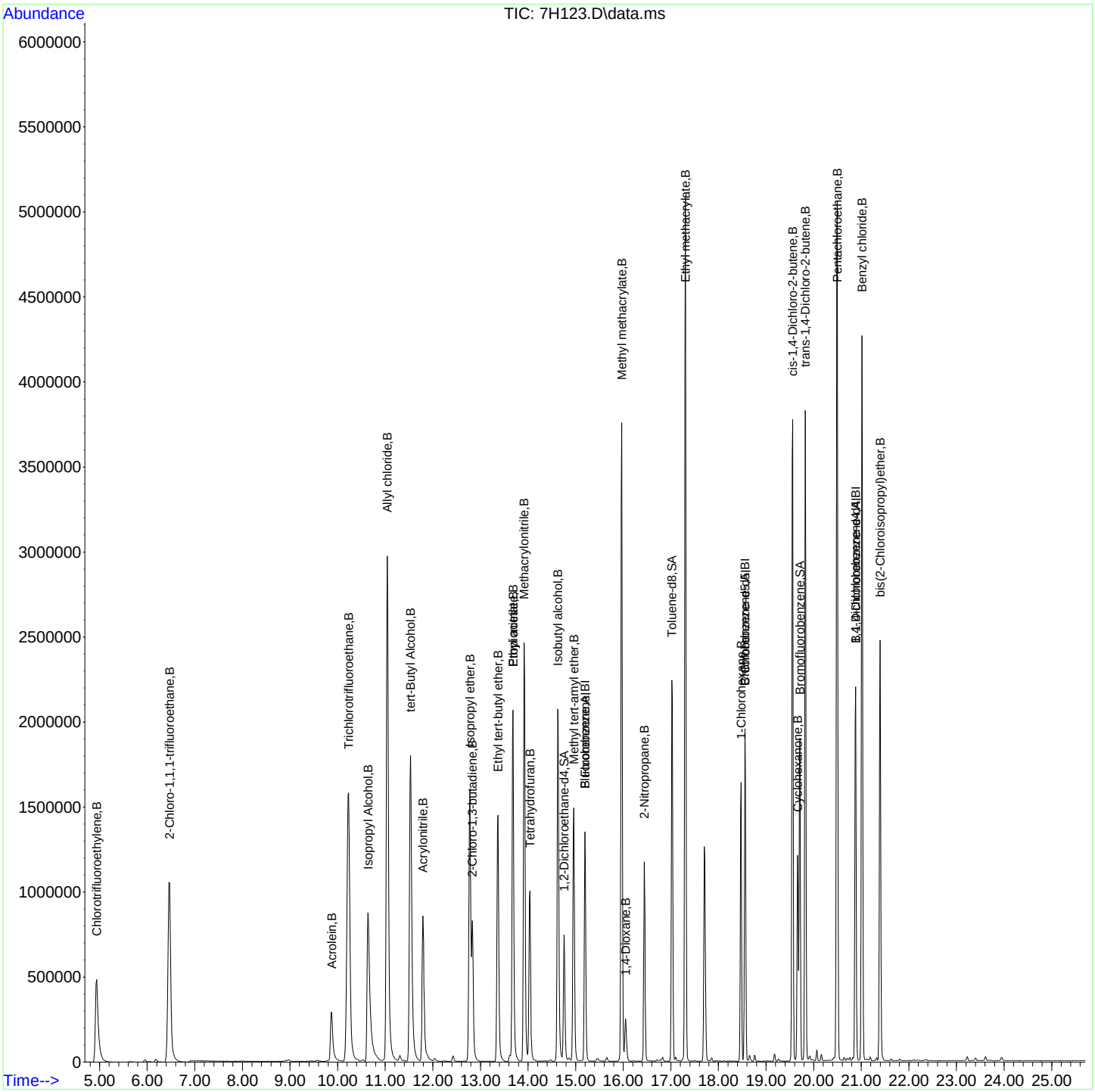
	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
97)	Tetrahydrofuran	14.038	14.037	0.924	42	923202	207.66	ug/L	99
98)	Isobutyl alcohol	14.626	14.626	0.963	41	1168232	2212.16	ug/L	100
99)	Methyl tert-amyl ether	14.961	14.961	0.985	73	1117423	49.54	ug/L	99
100)	Methyl methacrylate	15.966	15.966	1.051	69	1191233	219.09	ug/L	98
101)	1,4-Dioxane	16.048	16.047	1.056	88	178231	2171.70	ug/L	98
102)	2-Nitropropane	16.444	16.443	1.082	43	968604	238.61	ug/L	99
104)	Ethyl methacrylate	17.306	17.306	0.933	69	2202563	214.43	ug/L	98
106)	1-Chlorohexane	18.474	18.474	0.885	55	492330	49.49	ug/L	99
107)	cis-1,4-Dichloro-2-butene	19.560	19.560	0.937	53	1171159	222.16	ug/L	100
108)	Cyclohexanone	19.662	19.662	0.942	42	434608	994.13	ug/L	99
109)	trans-1,4-Dichloro-2-b...	19.824	19.824	0.949	53	1098939	247.72	ug/L	99
110)	Pentachloroethane	20.494	20.494	0.982	167	1273901	220.78	ug/L	99
111)	Benzyl chloride	21.012	21.012	1.006	91	3197682	207.71	ug/L	100
112)	bis(2-Chloroisopropyl)...	21.398	21.398	1.025	45	2089919	233.07	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111510V7\
Data File : 7H123.D
Acq On : 15 Nov 2010 11:31 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101115-19|ICV|1|VOAF|1|VOA8260BL|
Misc : ICV 5uL N/A MIX[B] 1105-08A/1025-08B
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 16 11:03:21 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 11-463

Instrument ID: VOA7.I **Injection Date:** 16-NOV-10 12:10

Data File: 111610V7\7H202ICV.D **Init. Cal. Date(s)** 15-NOV-10 12:07 - 15-NOV-10 21:4

Lab Sample ID W7VM101116-02 **Method:** 111510V7\VOA7-8260-111510.M

Quant Type ISTD **Method Update:** 16-NOV-10 10:59

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.4851	0.48478		.01		-0.06597	30		Averaged	
S	Toluene-d8	1.5504	1.47988		.01		-4.5485	30		Averaged	
S	Bromofluorobenzene	1.0264	1.01646		.01		-0.96843	30		Averaged	
	Dichlorodifluoromethane	50	54.46	50			8.92	30		Linear	
	Chloromethane	0.6126	0.60475		.1		-1.28142	30		Averaged	spcc
	Vinyl chloride	50	49	50			-2	20		Linear	ccc
	Bromomethane	0.2808	0.2663		.01		-5.16382	30		Averaged	
	Chloroethane	0.2663	0.29535		.01		10.90875	30		Averaged	
	Trichlorofluoromethane	0.4445	0.49218		.01		10.72666	30		Averaged	
	Ethyl ether	0.4231	0.35512		.01		-16.06712	30		Averaged	
	1,1-Dichloroethylene	0.5687	0.59058		.01		3.84737	20		Averaged	ccc
	Acetone	250	322.68	250			29.072	40		Linear	
	Iodomethane	0.4845	0.47082		.01		-2.82353	30		Averaged	
	Carbon disulfide	0.8363	0.84975		.01		1.60827	30		Averaged	
	Acetonitrile	0.0791	0.06968		.01		-11.90898	30		Averaged	
	Methyl acetate	0.4724	0.3917		.01		-17.08298	40		Averaged	
	Methylene chloride	50	49.24	50			-1.52	30		Linear	
	trans-1,2-Dichloroethylene	0.5499	0.56236		.01		2.26587	30		Averaged	
	tert-Butyl methyl ether	0.9614	0.87502		.01		-8.98481	30		Averaged	
	1,1-Dichloroethane	0.6859	0.6902		.1		0.62691	30		Averaged	spcc
	Vinyl acetate	0.9159	0.92642		.01		1.1486	40		Averaged	
	2-Butanone	0.4001	0.43446		.01		8.58785	40		Averaged	
	cis-1,2-Dichloroethylene	0.3196	0.29897		.01		-6.45494	30		Averaged	
	2,2-Dichloropropane	0.3491	0.3988		.01		14.23661	30		Averaged	
	Bromochloromethane	0.163	0.16082		.01		-1.33742	30		Averaged	
	Chloroform	0.5623	0.57225		.01		1.76952	20		Averaged	ccc
	1,1,1-Trichloroethane	0.4386	0.50049		.01		14.11081	30		Averaged	
	Cyclohexane	0.6846	0.74355		.01		8.61087	30		Averaged	
	1,1-Dichloropropene	0.3817	0.41524		.01		8.78701	30		Averaged	
	Carbon tetrachloride	0.38	0.43571		.01		14.66053	30		Averaged	
	1,2-Dichloroethane	0.5988	0.59101		.01		-1.30094	30		Averaged	
	Benzene	50	53.49	50			6.98	30		Linear	
	Cyclohexene	0.5616	0.57463		.01		2.32016	30		Averaged	
	n-Butyl alcohol	0.0172	0.01635		.01		-4.94186	40		Averaged	
	Trichloroethylene	0.301	0.31227		.01		3.74419	30		Averaged	
	1,2-Dichloropropane	0.3988	0.37798		.01		-5.22066	20		Averaged	ccc
	Methylcyclohexane	0.4527	0.48803		.01		7.80429	30		Averaged	

Continuing Calibration Summary

Instrument ID: VOA7.I **Injection Date:** 16-NOV-10 12:10

Data File: 111610V7\7H202ICV.D **Init. Cal. Date(s)** 15-NOV-10 12:07 15-NOV-10 21:4

Lab Sample ID W7VM101116-02 **Method:** 111510V7\VOA7-8260-111510.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.2157	0.21396		.01		-0.80668	30		Averaged	
Bromodichloromethane	0.4506	0.47208		.01		4.76698	30		Averaged	
2-Chloroethylvinyl ether	250	214.66	250			-14.136	30		Linear	
cis-1,3-Dichloropropylene	0.5258	0.54616		.01		3.87219	30		Averaged	
4-Methyl-2-pentanone	0.2452	0.22574		.01		-7.93638	40		Averaged	
Toluene	1.4688	1.40537		.01		-4.31849	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.5992	0.6303		.01		5.19025	30		Averaged	
1,1,2-Trichloroethane	0.3034	0.29225		.01		-3.67502	30		Averaged	
1,3-Dichloropropane	0.5972	0.53688		.01		-10.10047	30		Averaged	
2-Hexanone	0.6505	0.63529		.01		-2.3382	40		Averaged	
Tetrachloroethylene	50	57.67	50			15.34	30		Linear	
Dibromochloromethane	0.4154	0.42725		.01		2.85267	30		Averaged	
1,2-Dibromoethane	0.3834	0.3778		.01		-1.46062	30		Averaged	
Chlorobenzene	0.9913	0.99924		.3		0.80097	30		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.3821	0.38132		.01		-0.20414	30		Averaged	
Ethylbenzene	1.6708	1.6448		.01		-1.55614	20		Averaged	ccc
m,p-Xylenes	0.6493	0.63455		.01		-2.27168	30		Averaged	
o-Xylene	0.6716	0.64884		.01		-3.38892	30		Averaged	
Styrene	1.1126	1.07911		.01		-3.01007	30		Averaged	
Bromoform	0.5086	0.5272		.1		3.6571	30		Averaged	spcc
Isopropylbenzene	2.489	2.61207		.01		4.94456	30		Averaged	
1,1,2,2-Tetrachloroethane	0.8113	0.78757		.3		-2.92494	30		Averaged	spcc
1,2,3-Trichloropropane	0.2148	0.22347		.01		4.03631	30		Averaged	
Bromobenzene	0.7615	0.75058		.01		-1.43401	30		Averaged	
n-Propylbenzene	3.0339	3.06807		.01		1.12627	30		Averaged	
2-Chlorotoluene	0.624	0.61475		.01		-1.48237	30		Averaged	
1,3,5-Trimethylbenzene	2.1605	2.18244		.01		1.01551	30		Averaged	
4-Chlorotoluene	2.028	2.08939		.01		3.02712	30		Averaged	
tert-Butylbenzene	0.4866	0.5188		.01		6.61734	30		Averaged	
1,2,4-Trimethylbenzene	2.3274	2.34174		.01		0.61614	30		Averaged	
sec-Butylbenzene	2.8351	3.02181		.01		6.58566	30		Averaged	
4-Isopropyltoluene	2.2807	2.43221		.01		6.64314	30		Averaged	
1,3-Dichlorobenzene	1.4001	1.38415		.01		-1.1392	30		Averaged	
1,4-Dichlorobenzene	1.3942	1.37146		.01		-1.63104	30		Averaged	
n-Butylbenzene	2.3237	2.51453		.01		8.21233	30		Averaged	
1,2-Dichlorobenzene	1.3934	1.36875		.01		-1.76905	30		Averaged	
1,2-Dibromo-3-chloropropane	0.1978	0.20135		.01		1.79474	30		Averaged	

Continuing Calibration Summary

Instrument ID: VOA7.I **Injection Date:** 16-NOV-10 12:10

Data File: 111610V7\7H202ICV.D **Init. Cal. Date(s)** 15-NOV-10 12:07 15-NOV-10 21:4

Lab Sample ID W7VM101116-02 **Method:** 111510V7\VOA7-8260-111510.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	1.1221	1.15441		.01		2.87942	30		Averaged
Hexachlorobutadiene	0.7043	0.74873		.01		6.30839	30		Averaged
Naphthalene	2.355	2.26662		.01		-3.75287	30		Averaged
1,2,3-Trichlorobenzene	1.0071	1.05847		.01		5.10078	30		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111610V7\
Data File : 7H202ICV.D
Acq On : 16 Nov 2010 12:10 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101116-02|ICV|1|VOAF|1|VOA8260BL|
Misc : ICV 5uL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 12:46:20 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	15.195	15.195	1.000	96	1127291	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	957940	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	638928	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	1127291	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	957940	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	638928	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	546493	49.97	ug/L	0.00
43) Toluene-d8	17.032	17.032	0.918	98	1417638	47.73	ug/L	0.00
61) Bromofluorobenzene	19.712	19.712	0.944	95	649444	49.52	ug/L	0.00

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333	85	384254	54.46	ug/L	99
3) Chloromethane	5.638	5.638	0.371	50	681734	49.36	ug/L	99
4) Vinyl chloride	6.054	6.054	0.398	62	403306	49.00	ug/L	99
5) Bromomethane	7.266	7.266	0.478	94	300200	47.41	ug/L	99
6) Chloroethane	7.672	7.682	0.505	64	332946	55.46	ug/L	100
7) Trichlorofluoromethane	8.637	8.637	0.568	101	554830	55.37	ug/L	98
8) Ethyl ether	9.550	9.550	0.629	59	400325	41.97	ug/L	99
9) Acetone	10.271	10.271	0.676	43	2231320	322.68	ug/L	97
10) 1,1-Dichloroethylene	10.159	10.159	0.669	61	665755	51.92	ug/L	99
11) Iodomethane	10.525	10.525	0.693	142	2653733	242.95	ug/L	99
12) Acetonitrile	10.931	10.931	0.719	41	1963638	1101.06	ug/L	100
13) Methyl acetate	11.083	11.083	0.729	43	2207788	207.31	ug/L	100
14) Carbon disulfide	10.687	10.698	0.703	76	4789570	254.01	ug/L	100
15) Methylene chloride	11.307	11.307	0.744	84	372021	49.24	ug/L	99
16) tert-Butyl methyl ether	11.885	11.885	0.782	73	986403	45.51	ug/L	98
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782	61	633939	51.13	ug/L	98
18) Vinyl acetate	12.728	12.728	0.838	43	5221697	252.87	ug/L	99
19) 1,1-Dichloroethane	12.667	12.667	0.834	63	778059	50.31	ug/L	100
20) 2-Butanone	13.591	13.591	0.894	43	2448841	271.50	ug/L	99
21) cis-1,2-Dichloroethylene	13.611	13.611	0.896	96	337021	46.77	ug/L	96
22) 2,2-Dichloropropane	13.621	13.621	0.896	77	449569	57.13	ug/L	99
23) Bromochloromethane	13.966	13.966	0.919	128	181288	49.32	ug/L	99
24) Chloroform	14.068	14.068	0.926	83	645093	50.89	ug/L	99
25) 1,1,1-Trichloroethane	14.362	14.362	0.945	97	564195	57.05	ug/L	99
26) Cyclohexane	14.464	14.464	0.952	56	838193	54.30	ug/L	100
27) 1,1-Dichloropropene	14.576	14.576	0.959	75	468098	54.39	ug/L	97
28) Carbon tetrachloride	14.606	14.606	0.961	117	491169	57.33	ug/L	100
30) 1,2-Dichloroethane	14.860	14.860	0.978	62	666240	49.35	ug/L	99
31) Benzene	14.860	14.860	0.978	78	1220864	53.49	ug/L	99
32) Cyclohexene	15.002	15.002	0.987	67	647779	51.16	ug/L	99
33) n-Butyl alcohol	15.449	15.449	1.017	56	1842857	4745.21	ug/L	97
34) Trichloroethylene	15.652	15.652	1.030	95	352024	51.87	ug/L	99
35) 1,2-Dichloropropane	15.916	15.916	1.047	63	426090	47.38	ug/L	100
36) Methylcyclohexane	15.916	15.916	1.047	83	550152	53.91	ug/L	98
37) Dibromomethane	16.068	16.068	1.057	93	241194	49.61	ug/L	98
38) Bromodichloromethane	16.220	16.220	1.067	83	532170	52.38	ug/L	100
39) 2-Chloroethylvinyl ether	16.494	16.494	1.086	63	1133534	214.66	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111610V7\
Data File : 7H202ICV.D
Acq On : 16 Nov 2010 12:10 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101116-02|ICV|1|VOAF|1|VOA8260BL|
Misc : ICV 5uL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 12:46:20 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
40) cis-1,3-Dichloropropylene	16.707	16.707	1.100	75	615686	51.94	ug/L	98
42) 4-Methyl-2-pentanone	16.829	16.829	0.907	58	1081230	230.15	ug/L	93
44) Toluene	17.103	17.103	0.922	91	1346261	47.84	ug/L	99
45) trans-1,3-Dichloroprop...	17.276	17.276	0.931	75	603794	52.60	ug/L	99
46) 1,1,2-Trichloroethane	17.499	17.499	0.943	83	279962	48.16	ug/L	98
47) 2-Hexanone	17.692	17.692	0.953	43	3042828	244.15	ug/L	99
48) 1,3-Dichloropropane	17.682	17.682	0.953	76	514298	44.95	ug/L	88
49) Tetrachloroethylene	17.712	17.702	0.955	164	273730	57.67	ug/L	98
50) Dibromochloromethane	17.956	17.956	0.968	129	409284	51.43	ug/L	99
51) 1,2-Dibromoethane	18.108	18.108	0.976	107	361910	49.27	ug/L	99
52) Chlorobenzene	18.596	18.586	1.002	112	957216	50.40	ug/L	100
53) 1,1,1,2-Tetrachloroethane	18.646	18.646	1.005	131	365282	49.89	ug/L	99
54) Ethylbenzene	18.657	18.657	1.005	91	1575624	49.22	ug/L	100
55) m,p-Xylenes	18.758	18.758	1.011	106	1215714	97.72	ug/L	99
56) o-Xylene	19.174	19.174	1.033	106	621552	48.30	ug/L	100
57) Styrene	19.184	19.184	1.034	104	1033724	48.49	ug/L	99
59) Bromoform	19.428	19.428	0.930	173	336846	51.83	ug/L	97
60) Isopropylbenzene	19.519	19.519	0.935	105	1668927	52.47	ug/L	100
62) 1,1,2,2-Tetrachloroethane	19.783	19.783	0.947	83	503203	48.54	ug/L	100
63) 1,2,3-Trichloropropane	19.865	19.865	0.951	110	142779	52.01	ug/L #	91
64) Bromobenzene	19.905	19.905	0.953	156	479567	49.29	ug/L	97
65) n-Propylbenzene	19.926	19.926	0.954	91	1960277	50.56	ug/L	99
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	1394421	50.51	ug/L	100
67) 2-Chlorotoluene	20.068	20.068	0.961	126	392780	49.26	ug/L	98
68) 4-Chlorotoluene	20.159	20.159	0.965	91	1334968	51.51	ug/L	98
69) tert-Butylbenzene	20.423	20.423	0.978	134	331478	53.31	ug/L	99
70) 1,2,4-Trimethylbenzene	20.464	20.464	0.980	105	1496204	50.31	ug/L	100
71) sec-Butylbenzene	20.636	20.636	0.988	105	1930722	53.29	ug/L	99
72) 4-Isopropyltoluene	20.758	20.758	0.994	119	1554009	53.32	ug/L	99
73) 1,3-Dichlorobenzene	20.819	20.819	0.997	146	884371	49.43	ug/L	99
74) 1,4-Dichlorobenzene	20.910	20.900	1.001	146	876263	49.19	ug/L	99
75) n-Butylbenzene	21.184	21.184	1.015	91	1606604	54.11	ug/L	99
76) 1,2-Dichlorobenzene	21.326	21.326	1.021	146	874532	49.12	ug/L	99
77) 1,2-Dibromo-3-chloropr...	22.179	22.179	1.062	157	128647	50.89	ug/L	97
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112	180	737584	51.44	ug/L	99
79) Hexachlorobutadiene	23.397	23.397	1.121	225	478384	53.15	ug/L	99
80) Naphthalene	23.611	23.611	1.131	128	1448208	48.12	ug/L	99
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147	180	676287	52.55	ug/L	99
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.		
85) Acrolein	9.896	9.875	0.651		0m	N.D.	d	
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.		
87) Isopropyl Alcohol	10.698	10.637	0.704		0m	N.D.	d	
88) Allyl chloride	10.931	11.043	0.719		0m	N.D.	d	
89) tert-Butyl Alcohol	11.550	11.530	0.760		0m	N.D.	d	
90) Acrylonitrile	11.885	11.794	0.782		0m	N.D.	d	
91) Isopropyl ether	12.728	12.779	0.838		0m	N.D.	d	
92) 2-Chloro-1,3-butadiene	12.728	12.829	0.838		0m	N.D.	d	
93) Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.		
94) Ethyl acetate	13.591	13.682	0.894		0m	N.D.	d	
95) Propionitrile	13.601	13.682	0.895		0m	N.D.	d	
96) Methacrylonitrile	13.936	13.916	0.917		0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111610V7\
Data File : 7H202ICV.D
Acq On : 16 Nov 2010 12:10 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101116-02|ICV|1|VOAF|1|VOA8260BL|
Misc : ICV 5uL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 12:46:20 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

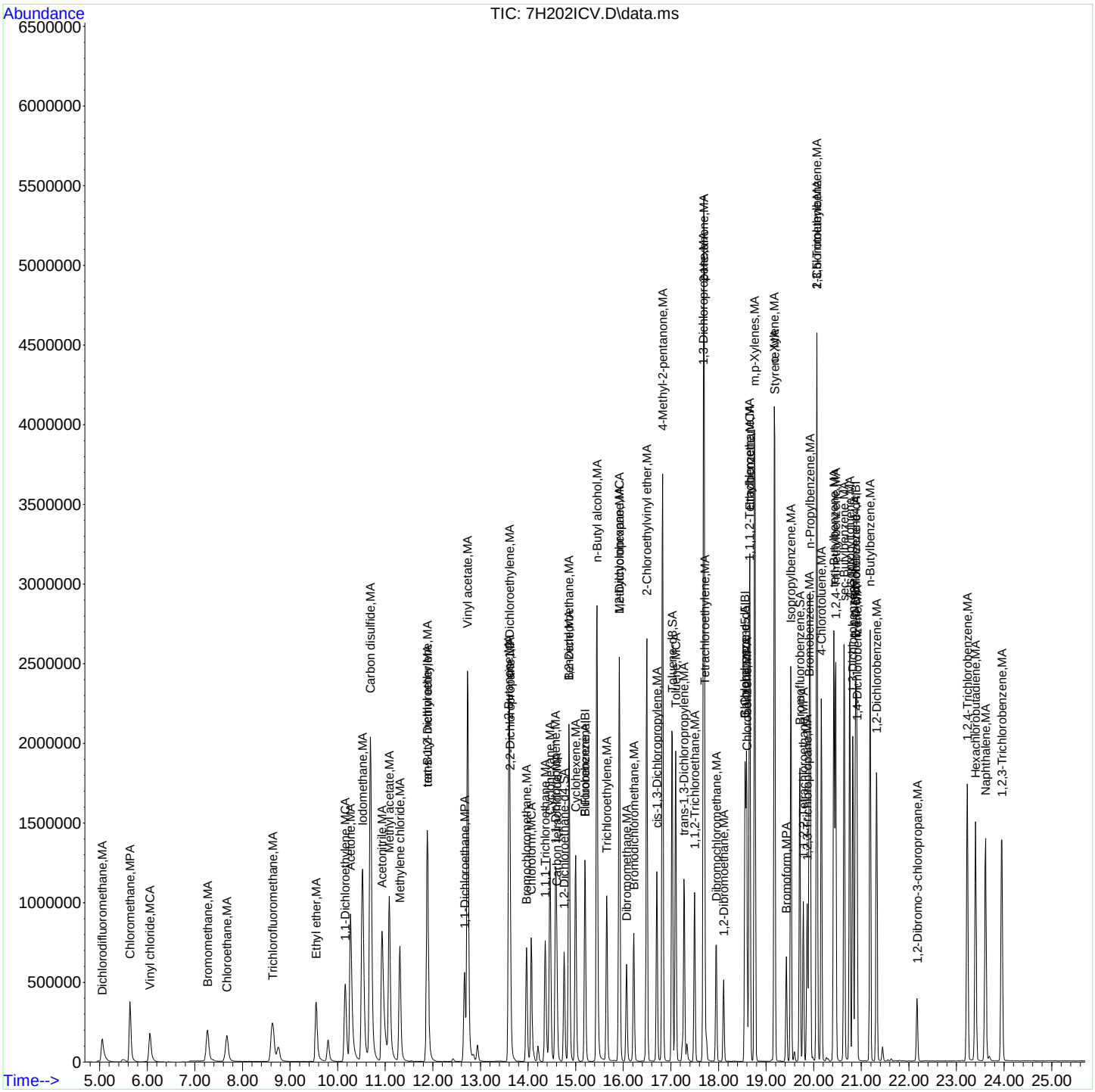
	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
97)	Tetrahydrofuran	14.048	14.037	0.925		0m	N.D.	d
98)	Isobutyl alcohol	14.768	14.626	0.972		0m	N.D.	d
99)	Methyl tert-amyl ether	15.002	14.961	0.987		0m	N.D.	d
100)	Methyl methacrylate	15.916	15.966	1.047		0m	N.D.	d
101)	1,4-Dioxane	16.068	16.047	1.057		0m	N.D.	d
102)	2-Nitropropane	16.494	16.443	1.086		0m	N.D.	d
104)	Ethyl methacrylate	17.306	17.306	0.933		0m	N.D.	d
106)	1-Chlorohexane	18.464	18.474	0.884		0m	N.D.	d
107)	cis-1,4-Dichloro-2-butene	19.519	19.560	0.935		0m	N.D.	d
108)	Cyclohexanone	19.682	19.662	0.943		0m	N.D.	d
109)	trans-1,4-Dichloro-2-b...	0.000	19.824	0.000		0	N.D.	
110)	Pentachloroethane	20.494	20.494	0.982		0m	N.D.	d
111)	Benzyl chloride	21.002	21.012	1.006		0m	N.D.	d
112)	bis(2-Chloroisopropyl)...	21.448	21.398	1.027		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111610V7\
Data File : 7H202ICV.D
Acq On : 16 Nov 2010 12:10 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101116-02|ICV|1|VOAF|1|VOA8260BL|
Misc : ICV 5uL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 12:46:20 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 11-463

Instrument ID: VOA7.I **Injection Date:** 18-NOV-10 14:56

Data File: 111810V7\7H403.D **Init. Cal. Date(s)** 15-NOV-10 12:07 - 15-NOV-10 21:4

Lab Sample ID W7VM101118-02 **Method:** 111510V7\VOA7-8260-111510.M

Quant Type ISTD **Method Update:** 16-NOV-10 10:59

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.4851	0.51945		.01		7.08101	30		Averaged	
S	Toluene-d8	1.5504	1.54167		.01		-0.56308	30		Averaged	
S	Bromofluorobenzene	1.0264	1.06284		.01		3.55027	30		Averaged	
	Dichlorodifluoromethane	50	40.81	50			-18.38	30		Linear	
	Chloromethane	0.6126	0.52422		.1		-14.42703	30		Averaged	spcc
	Vinyl chloride	50	40.07	50			-19.86	20		Linear	ccc
	Bromomethane	0.2808	0.23357		.01		-16.8198	30		Averaged	
	Chloroethane	0.2663	0.25752		.01		-3.29703	30		Averaged	
	Trichlorofluoromethane	0.4445	0.44296		.01		-0.34646	30		Averaged	
	Ethyl ether	0.4231	0.32671		.01		-22.78185	30		Averaged	
	1,1-Dichloroethylene	0.5687	0.52116		.01		-8.35942	20		Averaged	ccc
	Acetone	250	320.88	250			28.352	40		Linear	
	Iodomethane	0.4845	0.43744		.01		-9.71311	30		Averaged	
	Carbon disulfide	0.8363	0.758		.01		-9.36267	30		Averaged	
	Acetonitrile	0.0791	0.07133		.01		-9.82301	30		Averaged	
	Methyl acetate	0.4724	0.39929		.01		-15.47629	40		Averaged	
	Methylene chloride	50	44.6	50			-10.8	30		Linear	
	trans-1,2-Dichloroethylene	0.5499	0.51501		.01		-6.34479	30		Averaged	
	tert-Butyl methyl ether	0.9614	0.82708		.01		-13.97129	30		Averaged	
	1,1-Dichloroethane	0.6859	0.62645		.1		-8.66744	30		Averaged	spcc
	Vinyl acetate	0.9159	0.89733		.01		-2.02751	40		Averaged	
	2-Butanone	0.4001	0.43279		.01		8.17046	40		Averaged	
	cis-1,2-Dichloroethylene	0.3196	0.27635		.01		-13.53254	30		Averaged	
	2,2-Dichloropropane	0.3491	0.35916		.01		2.8817	30		Averaged	
	Bromochloromethane	0.163	0.15029		.01		-7.79755	30		Averaged	
	Chloroform	0.5623	0.541		.01		-3.78801	20		Averaged	ccc
	1,1,1-Trichloroethane	0.4386	0.47126		.01		7.44642	30		Averaged	
	Cyclohexane	0.6846	0.65152		.01		-4.83202	30		Averaged	
	1,1-Dichloropropene	0.3817	0.37999		.01		-0.448	30		Averaged	
	Carbon tetrachloride	0.38	0.41151		.01		8.29211	30		Averaged	
	1,2-Dichloroethane	0.5988	0.57244		.01		-4.40214	30		Averaged	
	Benzene	50	48.72	50			-2.56	30		Linear	
	Cyclohexene	0.5616	0.51322		.01		-8.61467	30		Averaged	
	n-Butyl alcohol	0.0172	0.01671		.01		-2.84884	40		Averaged	
	Trichloroethylene	0.301	0.28946		.01		-3.83389	30		Averaged	
	1,2-Dichloropropane	0.3988	0.3507		.01		-12.06118	20		Averaged	ccc
	Methylcyclohexane	0.4527	0.43166		.01		-4.64767	30		Averaged	

Continuing Calibration Summary

Instrument ID: VOA7.I **Injection Date:** 18-NOV-10 14:56

Data File: 111810V7\7H403.D **Init. Cal. Date(s)** 15-NOV-10 12:07 15-NOV-10 21:4

Lab Sample ID W7VM101118-02 **Method:** 111510V7\VOA7-8260-111510.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.2157	0.20543		.01		-4.76124	30		Averaged	
Bromodichloromethane	0.4506	0.4515		.01		0.19973	30		Averaged	
2-Chloroethylvinyl ether	250	195.68	250			-21.728	30		Linear	
cis-1,3-Dichloropropylene	0.5258	0.51535		.01		-1.98745	30		Averaged	
4-Methyl-2-pentanone	0.2452	0.22175		.01		-9.56362	40		Averaged	
Toluene	1.4688	1.30623		.01		-11.06822	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.5992	0.59151		.01		-1.28338	30		Averaged	
1,1,2-Trichloroethane	0.3034	0.27931		.01		-7.94001	30		Averaged	
1,3-Dichloropropane	0.5972	0.51498		.01		-13.76758	30		Averaged	
2-Hexanone	0.6505	0.64023		.01		-1.57879	40		Averaged	
Tetrachloroethylene	50	53.08	50			6.16	30		Linear	
Dibromochloromethane	0.4154	0.41296		.01		-0.58739	30		Averaged	
1,2-Dibromoethane	0.3834	0.36717		.01		-4.23318	30		Averaged	
Chlorobenzene	0.9913	0.94173		.3		-5.0005	30		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.3821	0.36613		.01		-4.17953	30		Averaged	
Ethylbenzene	1.6708	1.54869		.01		-7.30847	20		Averaged	ccc
m,p-Xylenes	0.6493	0.59484		.01		-8.38749	30		Averaged	
o-Xylene	0.6716	0.60397		.01		-10.06998	30		Averaged	
Styrene	1.1126	1.01234		.01		-9.01132	30		Averaged	
Bromoform	0.5086	0.51322		.1		0.90838	30		Averaged	spcc
Isopropylbenzene	2.489	2.40558		.01		-3.35155	30		Averaged	
1,1,2,2-Tetrachloroethane	0.8113	0.76731		.3		-5.42216	30		Averaged	spcc
1,2,3-Trichloropropane	0.2148	0.22753		.01		5.92644	30		Averaged	
Bromobenzene	0.7615	0.70996		.01		-6.76822	30		Averaged	
n-Propylbenzene	3.0339	2.82985		.01		-6.72567	30		Averaged	
2-Chlorotoluene	0.624	0.58069		.01		-6.94071	30		Averaged	
1,3,5-Trimethylbenzene	2.1605	2.0524		.01		-5.00347	30		Averaged	
4-Chlorotoluene	2.028	1.96592		.01		-3.06114	30		Averaged	
tert-Butylbenzene	0.4866	0.47599		.01		-2.18044	30		Averaged	
1,2,4-Trimethylbenzene	2.3274	2.2242		.01		-4.43413	30		Averaged	
sec-Butylbenzene	2.8351	2.82474		.01		-0.36542	30		Averaged	
4-Isopropyltoluene	2.2807	2.28946		.01		0.38409	30		Averaged	
1,3-Dichlorobenzene	1.4001	1.31949		.01		-5.75745	30		Averaged	
1,4-Dichlorobenzene	1.3942	1.30587		.01		-6.33553	30		Averaged	
n-Butylbenzene	2.3237	2.36131		.01		1.61854	30		Averaged	
1,2-Dichlorobenzene	1.3934	1.31817		.01		-5.39902	30		Averaged	
1,2-Dibromo-3-chloropropane	0.1978	0.20564		.01		3.9636	30		Averaged	

Continuing Calibration Summary

Instrument ID: VOA7.I **Injection Date:** 18-NOV-10 14:56

Data File: 111810V7\7H403.D **Init. Cal. Date(s)** 15-NOV-10 12:07 15-NOV-10 21:4

Lab Sample ID W7VM101118-02 **Method:** 111510V7\VOA7-8260-111510.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	1.1221	1.11258		.01		-0.84841	30		Averaged
Hexachlorobutadiene	0.7043	0.72126		.01		2.40806	30		Averaged
Naphthalene	2.355	2.26179		.01		-3.95796	30		Averaged
1,2,3-Trichlorobenzene	1.0071	1.03182		.01		2.45457	30		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H403.D
Acq On : 18 Nov 2010 2:56 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101118-02|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 18 16:30:12 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	15.195	15.195	1.000	96	965983	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	821820	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	557255	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	965983	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	821820	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	557255	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	501783	53.54	ug/L	0.00
43) Toluene-d8	17.032	17.032	0.918	98	1266976	49.72	ug/L	0.00
61) Bromofluorobenzene	19.712	19.712	0.944	95	592274	51.78	ug/L	0.00

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333	85	247098	40.81	ug/L	100
3) Chloromethane	5.638	5.638	0.371	50	506390	42.79	ug/L	99
4) Vinyl chloride	6.054	6.054	0.398	62	282808	40.07	ug/L	100
5) Bromomethane	7.256	7.266	0.478	94	225623	41.59	ug/L	97
6) Chloroethane	7.672	7.682	0.505	64	248756	48.36	ug/L	100
7) Trichlorofluoromethane	8.626	8.637	0.568	101	427894	49.83	ug/L	99
8) Ethyl ether	9.550	9.550	0.629	59	315597	38.61	ug/L	97
9) Acetone	10.271	10.271	0.676	43	1901672	320.88	ug/L	97
10) 1,1-Dichloroethylene	10.159	10.159	0.669	61	503433	45.82	ug/L	98
11) Iodomethane	10.525	10.525	0.693	142	2112817	225.73	ug/L	98
12) Acetonitrile	10.931	10.931	0.719	41	1722618	1127.21	ug/L	99
13) Methyl acetate	11.083	11.083	0.729	43	1928554	211.33	ug/L	99
14) Carbon disulfide	10.687	10.698	0.703	76	3661077	226.58	ug/L	100
15) Methylene chloride	11.307	11.307	0.744	84	290329	44.60	ug/L	97
16) tert-Butyl methyl ether	11.885	11.885	0.782	73	798947	43.02	ug/L	98
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782	61	497494	46.83	ug/L	99
18) Vinyl acetate	12.728	12.728	0.838	43	4334028	244.93	ug/L	99
19) 1,1-Dichloroethane	12.667	12.667	0.834	63	605143	45.67	ug/L	99
20) 2-Butanone	13.591	13.591	0.894	43	2090352	270.46	ug/L	98
21) cis-1,2-Dichloroethylene	13.611	13.611	0.896	96	266947	43.24	ug/L	97
22) 2,2-Dichloropropane	13.621	13.621	0.896	77	346938	51.45	ug/L	95
23) Bromochloromethane	13.966	13.966	0.919	128	145182	46.09	ug/L	98
24) Chloroform	14.068	14.068	0.926	83	522595	48.11	ug/L	100
25) 1,1,1-Trichloroethane	14.362	14.362	0.945	97	455229	53.72	ug/L	98
26) Cyclohexane	14.464	14.464	0.952	56	629360	47.58	ug/L	99
27) 1,1-Dichloropropene	14.575	14.576	0.959	75	367061	49.77	ug/L	96
28) Carbon tetrachloride	14.606	14.606	0.961	117	397514	54.14	ug/L	99
30) 1,2-Dichloroethane	14.860	14.860	0.978	62	552971	47.80	ug/L	100
31) Benzene	14.860	14.860	0.978	78	954221	48.72	ug/L	98
32) Cyclohexene	15.002	15.002	0.987	67	495761	45.69	ug/L	97
33) n-Butyl alcohol	15.449	15.449	1.017	56	1614402	4851.12	ug/L	94
34) Trichloroethylene	15.652	15.652	1.030	95	279612	48.08	ug/L	99
35) 1,2-Dichloropropane	15.916	15.916	1.047	63	338774	43.97	ug/L	100
36) Methylcyclohexane	15.916	15.916	1.047	83	416980	47.68	ug/L	98
37) Dibromomethane	16.068	16.068	1.057	93	198440	47.63	ug/L	99
38) Bromodichloromethane	16.220	16.220	1.067	83	436143	50.10	ug/L	100
39) 2-Chloroethylvinyl ether	16.494	16.494	1.086	63	888205	195.68	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H403.D
Acq On : 18 Nov 2010 2:56 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101118-02|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 18 16:30:12 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units		
40) cis-1,3-Dichloropropylene	16.707	16.707	1.100	75	497824	49.01	ug/L		96
42) 4-Methyl-2-pentanone	16.829	16.829	0.907	58	911201	226.08	ug/L		89
44) Toluene	17.103	17.103	0.922	91	1073487	44.47	ug/L		100
45) trans-1,3-Dichloroprop...	17.276	17.276	0.931	75	486113	49.36	ug/L		98
46) 1,1,2-Trichloroethane	17.499	17.499	0.943	83	229540	46.03	ug/L		98
47) 2-Hexanone	17.692	17.692	0.953	43	2630774	246.05	ug/L		97
48) 1,3-Dichloropropane	17.682	17.682	0.953	76	423217	43.12	ug/L	#	82
49) Tetrachloroethylene	17.712	17.702	0.955	164	216637	53.08	ug/L		97
50) Dibromochloromethane	17.956	17.956	0.968	129	339380	49.71	ug/L		97
51) 1,2-Dibromoethane	18.108	18.108	0.976	107	301744	47.88	ug/L		99
52) Chlorobenzene	18.596	18.586	1.002	112	773933	47.50	ug/L		100
53) 1,1,1,2-Tetrachloroethane	18.646	18.646	1.005	131	300889	47.90	ug/L		99
54) Ethylbenzene	18.657	18.657	1.005	91	1272748	46.35	ug/L		99
55) m,p-Xylenes	18.768	18.758	1.011	106	977708	91.61	ug/L		97
56) o-Xylene	19.174	19.174	1.033	106	496358	44.96	ug/L		98
57) Styrene	19.184	19.184	1.034	104	831963	45.49	ug/L		98
59) Bromoform	19.428	19.428	0.930	173	285996	50.46	ug/L		97
60) Isopropylbenzene	19.519	19.519	0.935	105	1340520	48.32	ug/L		99
62) 1,1,2,2-Tetrachloroethane	19.783	19.783	0.947	83	427589	47.29	ug/L		99
63) 1,2,3-Trichloropropane	19.865	19.865	0.951	110	126790	52.96	ug/L	#	83
64) Bromobenzene	19.905	19.905	0.953	156	395629	46.62	ug/L		97
65) n-Propylbenzene	19.925	19.926	0.954	91	1576950	46.64	ug/L		99
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	1143708	47.50	ug/L		98
67) 2-Chlorotoluene	20.068	20.068	0.961	126	323593	46.53	ug/L		99
68) 4-Chlorotoluene	20.159	20.159	0.965	91	1095521	48.47	ug/L		99
69) tert-Butylbenzene	20.423	20.423	0.978	134	265246	48.91	ug/L		98
70) 1,2,4-Trimethylbenzene	20.464	20.464	0.980	105	1239444	47.78	ug/L		98
71) sec-Butylbenzene	20.636	20.636	0.988	105	1574100	49.82	ug/L		99
72) 4-Isopropyltoluene	20.758	20.758	0.994	119	1275812	50.19	ug/L		99
73) 1,3-Dichlorobenzene	20.819	20.819	0.997	146	735290	47.12	ug/L		99
74) 1,4-Dichlorobenzene	20.910	20.900	1.001	146	727701	46.83	ug/L		99
75) n-Butylbenzene	21.184	21.184	1.015	91	1315853	50.81	ug/L		100
76) 1,2-Dichlorobenzene	21.326	21.326	1.021	146	734555	47.30	ug/L		99
77) 1,2-Dibromo-3-chloropr...	22.179	22.179	1.062	157	114592	51.97	ug/L		98
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112	180	619989	49.57	ug/L		100
79) Hexachlorobutadiene	23.397	23.397	1.121	225	401923	51.20	ug/L		99
80) Naphthalene	23.611	23.611	1.131	128	1260396	48.02	ug/L		100
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147	180	574987	51.23	ug/L		99
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.			
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.			
85) Acrolein	9.814	9.875	0.646		0m	N.D.	d		
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.			
87) Isopropyl Alcohol	10.677	10.637	0.703		0m	N.D.	d		
88) Allyl chloride	10.931	11.043	0.719		0m	N.D.	d		
89) tert-Butyl Alcohol	11.550	11.530	0.760		0m	N.D.	d		
90) Acrylonitrile	11.875	11.794	0.782		0m	N.D.	d		
91) Isopropyl ether	12.738	12.779	0.838		0m	N.D.	d		
92) 2-Chloro-1,3-butadiene	12.718	12.829	0.837		0m	N.D.	d		
93) Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.			
94) Ethyl acetate	13.591	13.682	0.894		0m	N.D.	d		
95) Propionitrile	13.601	13.682	0.895		0m	N.D.	d		
96) Methacrylonitrile	13.926	13.916	0.916		0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H403.D
Acq On : 18 Nov 2010 2:56 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101118-02|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 18 16:30:12 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
97) Tetrahydrofuran	14.058	14.037	0.925		0m	N.D.	d
98) Isobutyl alcohol	0.000	14.626	0.000		0	N.D.	
99) Methyl tert-amyl ether	15.002	14.961	0.987		0m	N.D.	d
100) Methyl methacrylate	15.916	15.966	1.047		0m	N.D.	d
101) 1,4-Dioxane	16.058	16.047	1.057		0m	N.D.	d
102) 2-Nitropropane	16.494	16.443	1.086		0m	N.D.	d
104) Ethyl methacrylate	17.235	17.306	0.929		0m	N.D.	d
106) 1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107) cis-1,4-Dichloro-2-butene	19.519	19.560	0.935		0m	N.D.	d
108) Cyclohexanone	0.000	19.662	0.000		0	N.D.	
109) trans-1,4-Dichloro-2-b...	19.834	19.824	0.950		0m	N.D.	d
110) Pentachloroethane	20.494	20.494	0.982		0m	N.D.	d
111) Benzyl chloride	21.002	21.012	1.006		0m	N.D.	d
112) bis(2-Chloroisopropyl)...	21.398	21.398	1.025		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H403.D
Acq On    : 18 Nov 2010   2:56 pm
Operator  : AXO1
InstName  : VOA7
Sample    : |W7VM101118-02|CCV|1|VOAF|1|VOA8260BL|
Misc      : CCV 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial  : 3   Sample Multiplier: 1

Quant Time: Nov 18 16:30:12 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title  : Volatile Organics 8260B                    SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE
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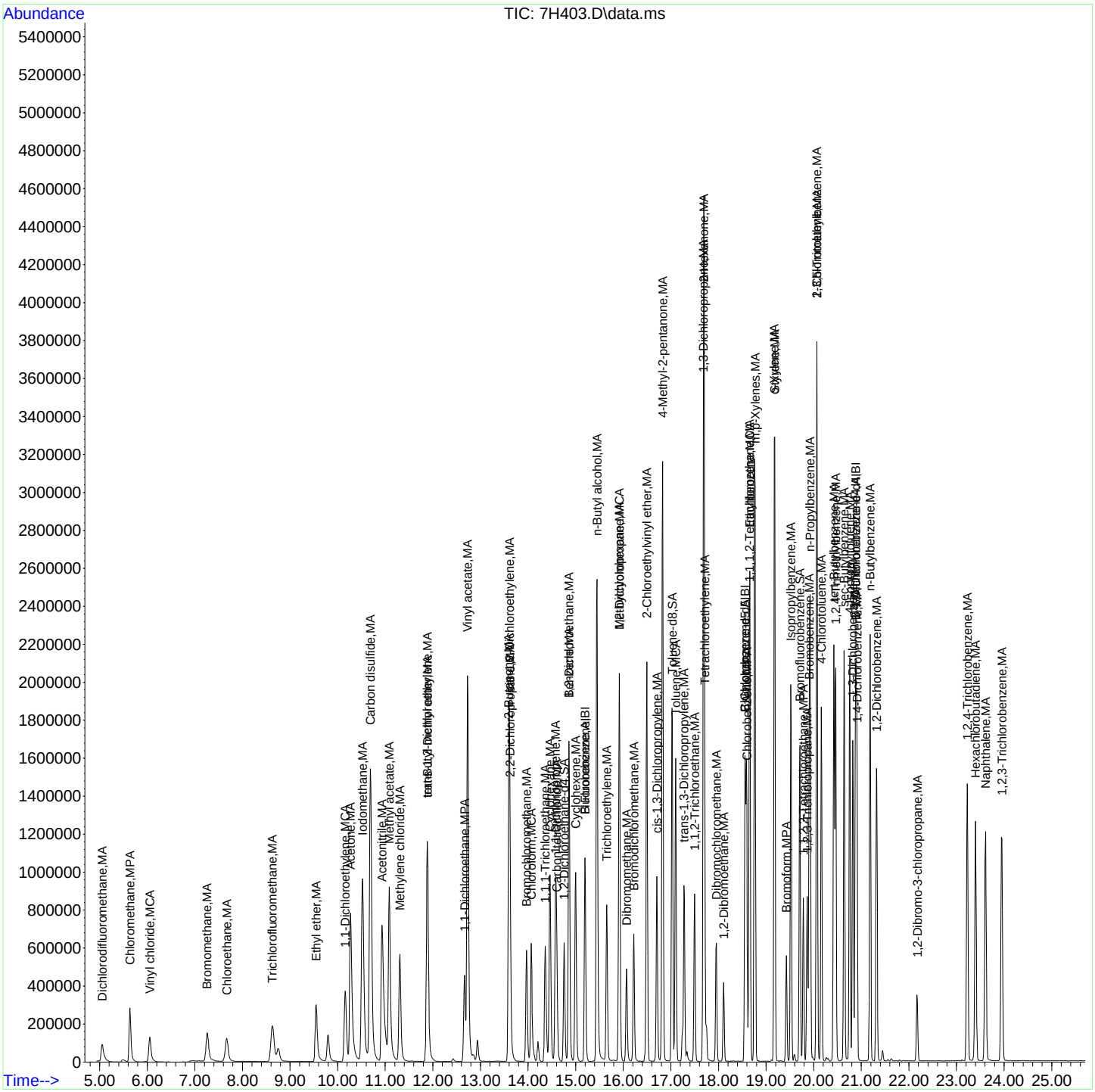


Continuing Calibration Summary

Client SDG: 11-463

Instrument ID: VOA7.I

Injection Date: 18-NOV-10 16:05

Data File: 111810V7\7H405.D

Init. Cal. Date(s) 15-NOV-10 12:07 - 15-NOV-10 21:4

Lab Sample ID W7VM101118-04

Method: 111510V7\VOA7-8260-111510.M

Quant Type ISTD

Method Update: 16-NOV-10 10:59

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.4851	0.50764		.01		4.64646	30		Averaged
S	Toluene-d8	1.5504	1.56372		.01		0.85913	30		Averaged
S	Bromofluorobenzene	1.0264	1.05348		.01		2.63835	30		Averaged
	Acrolein	0.0898	0.08301		.01		-7.56125	30		Averaged
	Trichlorotrifluoroethane	0.114	0.12332		.01		8.17544	30		Averaged
	Allyl chloride	0.6953	0.64574		.01		-7.12786	30		Averaged
	Acrylonitrile	0.2019	0.17372		.01		-13.9574	30		Averaged
	2-Chloro-1,3-butadiene	0.6299	0.65472		.01		3.94031	30		Averaged
	Propionitrile	0.0807	0.06995		.01		-13.32094	30		Averaged
	Ethyl acetate	0.5285	0.46825		.01		-11.40019	40		Averaged
	Methacrylonitrile	0.3273	0.28617		.01		-12.56645	30		Averaged
	Tetrahydrofuran	0.1839	0.15335		.01		-16.61229	30		Averaged
	Isobutyl alcohol	0.0218	0.02001		.01		-8.21101	40		Averaged
	Methyl methacrylate	0.2249	0.19055		.01		-15.27345	30		Averaged
	1,4-Dioxane	0.0034	0.00326		.01		-4.11765	40		Averaged
	2-Nitropropane	0.1679	0.16796		.01		0.03574	30		Averaged
	Ethyl methacrylate	0.5021	0.41402		.01		-17.54232	30		Averaged
	cis-1,4-Dichloro-2-butene	0.3823	0.37283		.01		-2.47711	30		Averaged
	Cyclohexanone	0.0317	0.02677		.01		-15.55205	40		Averaged
	trans-1,4-Dichloro-2-butene	0.3217	0.35175		.01		9.341	30		Averaged
	Pentachloroethane	0.4184	0.43671		.01		4.3762	30		Averaged
	Benzyl chloride	1.1164	1.25924		.01		12.7947	30		Averaged
	bis(2-Chloroisopropyl)ether	0.6502	0.6318		.01		-2.8299	30		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H405.D
Acq On : 18 Nov 2010 4:05 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101118-04|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 23 15:32:14 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	999881	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	860992	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	583285	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	999881	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	860992	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	583285	50.00	ug/L	0.00
System Monitoring Compounds								
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	507580	52.32	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1346353	50.43	ug/L	-0.01
61) Bromofluorobenzene	19.712	19.712	0.944	95	614477	51.32	ug/L	0.00

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333		0m	N.D.	d	
3) Chloromethane	5.638	5.638	0.371		0m	N.D.	d	
4) Vinyl chloride	6.054	6.054	0.398		0m	N.D.	d	
5) Bromomethane	7.286	7.266	0.480		0m	N.D.	d	
6) Chloroethane	7.662	7.682	0.504		0m	N.D.	d	
7) Trichlorofluoromethane	8.616	8.637	0.567		0m	N.D.	d	
8) Ethyl ether	9.571	9.550	0.630		0m	N.D.	d	
9) Acetone	10.231	10.271	0.673		0m	N.D.	d	
10) 1,1-Dichloroethylene	10.241	10.159	0.674		0m	N.D.	d	
11) Iodomethane	10.525	10.525	0.693		0m	N.D.	d	
12) Acetonitrile	11.043	10.931	0.727		0m	N.D.	d	
13) Methyl acetate	11.114	11.083	0.731		0m	N.D.	d	
14) Carbon disulfide	10.687	10.698	0.703		0m	N.D.	d	
15) Methylene chloride	11.307	11.307	0.744		0m	N.D.	d	
16) tert-Butyl methyl ether	11.895	11.885	0.783		0m	N.D.	d	
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782		0m	N.D.	d	
18) Vinyl acetate	12.738	12.728	0.838		0m	N.D.	d	
19) 1,1-Dichloroethane	12.667	12.667	0.834		0m	N.D.	d	
20) 2-Butanone	13.682	13.591	0.900		0m	N.D.	d	
21) cis-1,2-Dichloroethylene	13.601	13.611	0.895		0m	N.D.	d	
22) 2,2-Dichloropropane	13.621	13.621	0.896		0m	N.D.	d	
23) Bromochloromethane	13.956	13.966	0.918		0m	N.D.	d	
24) Chloroform	14.068	14.068	0.926		0m	N.D.	d	
25) 1,1,1-Trichloroethane	14.352	14.362	0.945		0m	N.D.	d	
26) Cyclohexane	14.464	14.464	0.952		0m	N.D.	d	
27) 1,1-Dichloropropene	14.576	14.576	0.959		0m	N.D.	d	
28) Carbon tetrachloride	14.606	14.606	0.961		0m	N.D.	d	
30) 1,2-Dichloroethane	14.860	14.860	0.978		0m	N.D.	d	
31) Benzene	14.870	14.860	0.979		0m	N.D.	d	
32) Cyclohexene	14.992	15.002	0.987		0m	N.D.	d	
33) n-Butyl alcohol	15.449	15.449	1.017		0m	N.D.	d	
34) Trichloroethylene	15.652	15.652	1.030		0m	N.D.	d	
35) 1,2-Dichloropropane	15.926	15.916	1.048		0m	N.D.	d	
36) Methylcyclohexane	15.916	15.916	1.047		0m	N.D.	d	
37) Dibromomethane	16.068	16.068	1.057		0m	N.D.	d	
38) Bromodichloromethane	16.220	16.220	1.067		0m	N.D.	d	
39) 2-Chloroethylvinyl ether	16.504	16.494	1.086		0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H405.D
Acq On : 18 Nov 2010 4:05 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101118-04|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 23 15:32:14 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
40)	cis-1,3-Dichloropropylene	16.707	16.707	1.100		0m	N.D.	d	
42)	4-Methyl-2-pentanone	16.829	16.829	0.907		0m	N.D.	d	
44)	Toluene	17.103	17.103	0.922		0m	N.D.	d	
45)	trans-1,3-Dichloroprop...	17.286	17.276	0.932		0m	N.D.	d	
46)	1,1,2-Trichloroethane	17.499	17.499	0.943		0m	N.D.	d	
47)	2-Hexanone	17.692	17.692	0.953		0m	N.D.	d	
48)	1,3-Dichloropropane	17.682	17.682	0.953		0m	N.D.	d	
49)	Tetrachloroethylene	17.702	17.702	0.954		0m	N.D.	d	
50)	Dibromochloromethane	17.946	17.956	0.967		0m	N.D.	d	
51)	1,2-Dibromoethane	18.108	18.108	0.976		0m	N.D.	d	
52)	Chlorobenzene	18.585	18.586	1.002		0m	N.D.	d	
53)	1,1,1,2-Tetrachloroethane	18.646	18.646	1.005		0m	N.D.	d	
54)	Ethylbenzene	18.657	18.657	1.005		0m	N.D.	d	
55)	m,p-Xylenes	18.768	18.758	1.011		0m	N.D.	d	
56)	o-Xylene	19.184	19.174	1.034		0m	N.D.	d	
57)	Styrene	19.184	19.184	1.034		0m	N.D.	d	
59)	Bromoform	19.428	19.428	0.930		0m	N.D.	d	
60)	Isopropylbenzene	19.519	19.519	0.935		0m	N.D.	d	
62)	1,1,2,2-Tetrachloroethane	19.783	19.783	0.947		0m	N.D.	d	
63)	1,2,3-Trichloropropane	19.865	19.865	0.951		0m	N.D.	d	
64)	Bromobenzene	19.915	19.905	0.954		0m	N.D.	d	
65)	n-Propylbenzene	19.926	19.926	0.954		0m	N.D.	d	
66)	1,3,5-Trimethylbenzene	20.068	20.068	0.961		0m	N.D.	d	
67)	2-Chlorotoluene	20.068	20.068	0.961		0m	N.D.	d	
68)	4-Chlorotoluene	20.159	20.159	0.965		0m	N.D.	d	
69)	tert-Butylbenzene	20.423	20.423	0.978		0m	N.D.	d	
70)	1,2,4-Trimethylbenzene	20.453	20.464	0.980		0m	N.D.	d	
71)	sec-Butylbenzene	20.636	20.636	0.988		0m	N.D.	d	
72)	4-Isopropyltoluene	20.758	20.758	0.994		0m	N.D.	d	
73)	1,3-Dichlorobenzene	20.819	20.819	0.997		0m	N.D.	d	
74)	1,4-Dichlorobenzene	20.910	20.900	1.001		0m	N.D.	d	
75)	n-Butylbenzene	21.184	21.184	1.015		0m	N.D.	d	
76)	1,2-Dichlorobenzene	21.326	21.326	1.021		0m	N.D.	d	
77)	1,2-Dibromo-3-chloropr...	22.169	22.179	1.062		0m	N.D.	d	
78)	1,2,4-Trichlorobenzene	23.225	23.225	1.112		0m	N.D.	d	
79)	Hexachlorobutadiene	23.397	23.397	1.121		0m	N.D.	d	
80)	Naphthalene	23.611	23.611	1.131		0m	N.D.	d	
81)	1,2,3-Trichlorobenzene	23.956	23.956	1.147		0m	N.D.	d	
83)	Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.		
84)	2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.		
85)	Acrolein	9.865	9.875	0.649	56	414981	231.03	ug/L	96
86)	Trichlorotrifluoroethane	10.231	10.220	0.673	85	616517	270.42	ug/L	98
87)	Isopropyl Alcohol	10.718	10.637	0.705	45	174	N.D.		
88)	Allyl chloride	11.043	11.043	0.727	41	3228328	232.19	ug/L	98
89)	tert-Butyl Alcohol	11.571	11.530	0.761	59	341	N.D.		
90)	Acrylonitrile	11.794	11.794	0.776	53	868486	215.06	ug/L	100
91)	Isopropyl ether	12.789	12.779	0.842	45	803	N.D.		
92)	2-Chloro-1,3-butadiene	12.829	12.829	0.844	53	654638	51.97	ug/L	95
93)	Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.		
94)	Ethyl acetate	13.682	13.682	0.900	43	2340976	221.50	ug/L	99
95)	Propionitrile	13.682	13.682	0.900	54	349693	216.76	ug/L	99
96)	Methacrylonitrile	13.916	13.916	0.916	41	1430683	218.60	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H405.D
Acq On : 18 Nov 2010 4:05 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101118-04|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 23 15:32:14 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

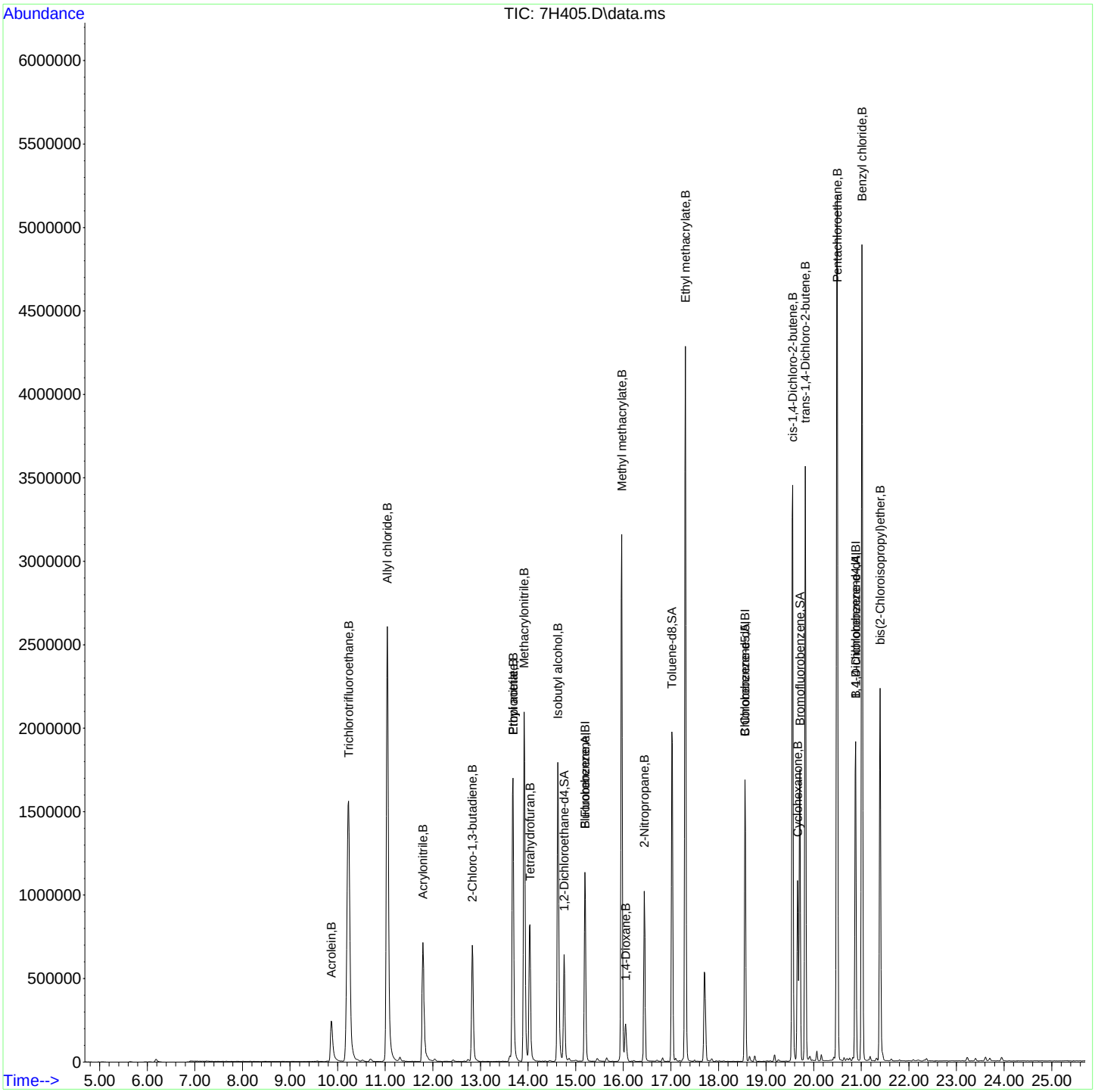
	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
97)	Tetrahydrofuran	14.037	14.037	0.924	42	766667	208.50	ug/L	99
98)	Isobutyl alcohol	14.626	14.626	0.963	41	1000551	2290.68	ug/L	99
99)	Methyl tert-amyl ether	14.961	14.961	0.985	73	167	N.D.		
100)	Methyl methacrylate	15.966	15.966	1.051	69	952661	211.84	ug/L	95
101)	1,4-Dioxane	16.048	16.047	1.056	88	163229	2404.65	ug/L	100
102)	2-Nitropropane	16.443	16.443	1.082	43	839688	250.09	ug/L	100
104)	Ethyl methacrylate	17.306	17.306	0.933	69	1782348	206.13	ug/L	96
106)	1-Chlorohexane	0.000	18.474	0.000		0	N.D.		
107)	cis-1,4-Dichloro-2-butene	19.560	19.560	0.937	53	1087329	243.82	ug/L	99
108)	Cyclohexanone	19.662	19.662	0.942	42	390380	1055.56	ug/L	97
109)	trans-1,4-Dichloro-2-b...	19.824	19.824	0.949	53	1025849	273.35	ug/L	98
110)	Pentachloroethane	20.494	20.494	0.982	167	1273639	260.93	ug/L	99
111)	Benzyl chloride	21.012	21.012	1.006	91	3672484	281.98	ug/L	99
112)	bis(2-Chloroisopropyl)...	21.398	21.398	1.025	45	1842603	242.91	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H405.D
Acq On : 18 Nov 2010 4:05 pm
Operator : AXO1
InstName : VOA7
Sample : |W7VM101118-04|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 23 15:32:14 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 11-463

Instrument ID: VOA7.I **Injection Date:** 19-NOV-10 09:49

Data File: 111910V7\7H502.D **Init. Cal. Date(s)** 15-NOV-10 12:07 - 15-NOV-10 21:4

Lab Sample ID W7VM101119-01 **Method:** 111510V7\VOA7-8260-111510.M

Quant Type ISTD **Method Update:** 16-NOV-10 10:59

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.4851	0.48697		.01		0.38549	30		Averaged	
S	Toluene-d8	1.5504	1.43164		.01		-7.65996	30		Averaged	
S	Bromofluorobenzene	1.0264	1.02564		.01		-0.07405	30		Averaged	
	Dichlorodifluoromethane	50	69.8	50			39.6	30	*	Linear	
	Chloromethane	0.6126	0.60117		.1		-1.86582	30		Averaged	spcc
	Vinyl chloride	50	48.49	50			-3.02	20		Linear	ccc
	Bromomethane	0.2808	0.31292		.01		11.43875	30		Averaged	
	Chloroethane	0.2663	0.29771		.01		11.79497	30		Averaged	
	Trichlorofluoromethane	0.4445	0.58209		.01		30.95388	30	*	Averaged	
	Ethyl ether	0.4231	0.35723		.01		-15.56842	30		Averaged	
	1,1-Dichloroethylene	0.5687	0.67144		.01		18.06576	20		Averaged	ccc
	Acetone	250	314.69	250			25.876	40		Linear	
	Iodomethane	0.4845	0.52133		.01		7.60165	30		Averaged	
	Carbon disulfide	0.8363	0.87319		.01		4.4111	30		Averaged	
	Acetonitrile	0.0791	0.06912		.01		-12.61694	30		Averaged	
	Methyl acetate	0.4724	0.43076		.01		-8.81456	40		Averaged	
	Methylene chloride	50	50.22	50			0.44	30		Linear	
	trans-1,2-Dichloroethylene	0.5499	0.59916		.01		8.95799	30		Averaged	
	tert-Butyl methyl ether	0.9614	0.89146		.01		-7.27481	30		Averaged	
	1,1-Dichloroethane	0.6859	0.72508		.1		5.7122	30		Averaged	spcc
	Vinyl acetate	0.9159	0.85461		.01		-6.69178	40		Averaged	
	2-Butanone	0.4001	0.4236		.01		5.87353	40		Averaged	
	cis-1,2-Dichloroethylene	0.3196	0.31394		.01		-1.77096	30		Averaged	
	2,2-Dichloropropane	0.3491	0.42626		.01		22.10255	30		Averaged	
	Bromochloromethane	0.163	0.16475		.01		1.07362	30		Averaged	
	Chloroform	0.5623	0.61755		.01		9.82572	20		Averaged	ccc
	1,1,1-Trichloroethane	0.4386	0.55994		.01		27.6653	30		Averaged	
	Cyclohexane	0.6846	0.7877		.01		15.05989	30		Averaged	
	1,1-Dichloropropene	0.3817	0.44798		.01		17.36442	30		Averaged	
	Carbon tetrachloride	0.38	0.49976		.01		31.51579	30	*	Averaged	
	1,2-Dichloroethane	0.5988	0.62294		.01		4.0314	30		Averaged	
	Benzene	50	55.28	50			10.56	30		Linear	
	Cyclohexene	0.5616	0.65446		.01		16.5349	30		Averaged	
	n-Butyl alcohol	0.0172	0.0158		.01		-8.13953	40		Averaged	
	Trichloroethylene	0.301	0.35134		.01		16.72425	30		Averaged	
	1,2-Dichloropropane	0.3988	0.37507		.01		-5.95035	20		Averaged	ccc
	Methylcyclohexane	0.4527	0.52137		.01		15.16899	30		Averaged	

Continuing Calibration Summary

Instrument ID: VOA7.I **Injection Date:** 19-NOV-10 09:49

Data File: 111910V7\7H502.D **Init. Cal. Date(s)** 15-NOV-10 12:07 15-NOV-10 21:4

Lab Sample ID W7VM101119-01 **Method:** 111510V7\VOA7-8260-111510.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.2157	0.22453		.01		4.09365	30		Averaged	
Bromodichloromethane	0.4506	0.49858		.01		10.64802	30		Averaged	
2-Chloroethylvinyl ether	250	238.6	250			-4.56	30		Linear	
cis-1,3-Dichloropropylene	0.5258	0.54113		.01		2.91556	30		Averaged	
4-Methyl-2-pentanone	0.2452	0.21654		.01		-11.68842	40		Averaged	
Toluene	1.4688	1.46406		.01		-0.32271	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.5992	0.61875		.01		3.26268	30		Averaged	
1,1,2-Trichloroethane	0.3034	0.2957		.01		-2.5379	30		Averaged	
1,3-Dichloropropane	0.5972	0.52287		.01		-12.44642	30		Averaged	
2-Hexanone	0.6505	0.64479		.01		-0.87779	40		Averaged	
Tetrachloroethylene	50	60.38	50			20.76	30		Linear	
Dibromochloromethane	0.4154	0.44406		.01		6.89937	30		Averaged	
1,2-Dibromoethane	0.3834	0.38038		.01		-0.78769	30		Averaged	
Chlorobenzene	0.9913	1.01068		.3		1.95501	30		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.3821	0.39501		.01		3.3787	30		Averaged	
Ethylbenzene	1.6708	1.72342		.01		3.14939	20		Averaged	ccc
m,p-Xylenes	0.6493	0.65331		.01		0.61759	30		Averaged	
o-Xylene	0.6716	0.67086		.01		-0.11018	30		Averaged	
Styrene	1.1126	1.10541		.01		-0.64623	30		Averaged	
Bromoform	0.5086	0.52535		.1		3.29335	30		Averaged	spcc
Isopropylbenzene	2.489	2.70711		.01		8.76296	30		Averaged	
1,1,2,2-Tetrachloroethane	0.8113	0.77406		.3		-4.59016	30		Averaged	spcc
1,2,3-Trichloropropane	0.2148	0.20222		.01		-5.85661	30		Averaged	
Bromobenzene	0.7615	0.73033		.01		-4.09324	30		Averaged	
n-Propylbenzene	3.0339	3.19397		.01		5.27605	30		Averaged	
2-Chlorotoluene	0.624	0.62127		.01		-0.4375	30		Averaged	
1,3,5-Trimethylbenzene	2.1605	2.24507		.01		3.91437	30		Averaged	
4-Chlorotoluene	2.028	2.08588		.01		2.85404	30		Averaged	
tert-Butylbenzene	0.4866	0.53263		.01		9.45952	30		Averaged	
1,2,4-Trimethylbenzene	2.3274	2.43073		.01		4.43972	30		Averaged	
sec-Butylbenzene	2.8351	3.14448		.01		10.91249	30		Averaged	
4-Isopropyltoluene	2.2807	2.56049		.01		12.26772	30		Averaged	
1,3-Dichlorobenzene	1.4001	1.39299		.01		-0.50782	30		Averaged	
1,4-Dichlorobenzene	1.3942	1.37844		.01		-1.1304	30		Averaged	
n-Butylbenzene	2.3237	2.63102		.01		13.22546	30		Averaged	
1,2-Dichlorobenzene	1.3934	1.35995		.01		-2.4006	30		Averaged	
1,2-Dibromo-3-chloropropane	0.1978	0.19857		.01		0.38928	30		Averaged	

Continuing Calibration Summary

Instrument ID: VOA7.I **Injection Date:** 19-NOV-10 09:49

Data File: 111910V7\7H502.D **Init. Cal. Date(s)** 15-NOV-10 12:07 15-NOV-10 21:4

Lab Sample ID W7VM101119-01 **Method:** 111510V7\VOA7-8260-111510.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	1.1221	1.13946		.01		1.5471	30		Averaged
Hexachlorobutadiene	0.7043	0.78046		.01		10.81357	30		Averaged
Naphthalene	2.355	2.21735		.01		-5.84501	30		Averaged
1,2,3-Trichlorobenzene	1.0071	1.00681		.01		-0.0288	30		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H502.D
Acq On : 19 Nov 2010 9:49 am
Operator : AXO1
InstName : VOA7
Sample : |W7VM101119-01|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[A] 1025-07C/1022-07C
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 10:17:09 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	15.195	15.195	1.000	96	943806	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	831592	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	570198	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	943806	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	831592	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	570198	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	459605	50.19	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1190543	46.17	ug/L	-0.01
61) Bromofluorobenzene	19.712	19.712	0.944	95	584818	49.96	ug/L	0.00

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333	85	411912	69.80	ug/L	100
3) Chloromethane	5.638	5.638	0.371	50	567392	49.07	ug/L	98
4) Vinyl chloride	6.054	6.054	0.398	62	334105	48.49	ug/L	100
5) Bromomethane	7.266	7.266	0.478	94	295336	55.71	ug/L	100
6) Chloroethane	7.672	7.682	0.505	64	280977	55.90	ug/L	100
7) Trichlorofluoromethane	8.626	8.637	0.568	101	549376	65.48	ug/L	98
8) Ethyl ether	9.540	9.550	0.628	59	337153	42.21	ug/L	94
9) Acetone	10.271	10.271	0.676	43	1823231	314.69	ug/L	95
10) 1,1-Dichloroethylene	10.159	10.159	0.669	61	633705	59.03	ug/L	99
11) Iodomethane	10.525	10.525	0.693	142	2460191	269.02	ug/L	97
12) Acetonitrile	10.931	10.931	0.719	41	1630902	1092.27	ug/L	99
13) Methyl acetate	11.083	11.083	0.729	43	2032781	227.98	ug/L	99
14) Carbon disulfide	10.687	10.698	0.703	76	4120629	261.01	ug/L	100
15) Methylene chloride	11.307	11.307	0.744	84	317278	50.22	ug/L	98
16) tert-Butyl methyl ether	11.885	11.885	0.782	73	841365	46.36	ug/L	98
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782	61	565492	54.48	ug/L	98
18) Vinyl acetate	12.728	12.728	0.838	43	4032923	233.27	ug/L	99
19) 1,1-Dichloroethane	12.667	12.667	0.834	63	684334	52.86	ug/L	99
20) 2-Butanone	13.591	13.591	0.894	43	1998980	264.71	ug/L	97
21) cis-1,2-Dichloroethylene	13.611	13.611	0.896	96	296298	49.12	ug/L	97
22) 2,2-Dichloropropane	13.621	13.621	0.896	77	402305	61.06	ug/L	96
23) Bromochloromethane	13.966	13.966	0.919	128	155492	50.53	ug/L	99
24) Chloroform	14.068	14.068	0.926	83	582850	54.92	ug/L	99
25) 1,1,1-Trichloroethane	14.362	14.362	0.945	97	528478	63.83	ug/L	99
26) Cyclohexane	14.464	14.464	0.952	56	743438	57.53	ug/L	97
27) 1,1-Dichloropropene	14.575	14.576	0.959	75	422809	58.68	ug/L	94
28) Carbon tetrachloride	14.606	14.606	0.961	117	471672	65.75	ug/L	99
30) 1,2-Dichloroethane	14.860	14.860	0.978	62	587935	52.02	ug/L	99
31) Benzene	14.860	14.860	0.978	78	1055885	55.28	ug/L	97
32) Cyclohexene	15.002	15.002	0.987	67	617683	58.26	ug/L	98
33) n-Butyl alcohol	15.448	15.449	1.017	56	1490758	4584.84	ug/L	92
34) Trichloroethylene	15.652	15.652	1.030	95	331600	58.35	ug/L	99
35) 1,2-Dichloropropane	15.915	15.916	1.047	63	353998	47.02	ug/L	98
36) Methylcyclohexane	15.915	15.916	1.047	83	492073	57.59	ug/L	98
37) Dibromomethane	16.068	16.068	1.057	93	211914	52.06	ug/L	97
38) Bromodichloromethane	16.220	16.220	1.067	83	470561	55.32	ug/L	99
39) 2-Chloroethylvinyl ether	16.494	16.494	1.086	63	1051465	238.60	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H502.D
Acq On : 19 Nov 2010 9:49 am
Operator : AXO1
InstName : VOA7
Sample : |W7VM101119-01|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[A] 1025-07C/1022-07C
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 10:17:09 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
40) cis-1,3-Dichloropropylene	16.707	16.707	1.100	75	510726	51.46	ug/L	94
42) 4-Methyl-2-pentanone	16.829	16.829	0.907	58	900381	220.77	ug/L	85
44) Toluene	17.103	17.103	0.922	91	1217499	49.84	ug/L	99
45) trans-1,3-Dichloroprop...	17.276	17.276	0.931	75	514545	51.63	ug/L	97
46) 1,1,2-Trichloroethane	17.499	17.499	0.943	83	245901	48.73	ug/L	99
47) 2-Hexanone	17.692	17.692	0.953	43	2680998	247.80	ug/L	96
48) 1,3-Dichloropropane	17.682	17.682	0.953	76	434815	43.78	ug/L #	81
49) Tetrachloroethylene	17.712	17.702	0.955	164	248529	60.38	ug/L	97
50) Dibromochloromethane	17.946	17.956	0.967	129	369276	53.45	ug/L	100
51) 1,2-Dibromoethane	18.108	18.108	0.976	107	316321	49.61	ug/L	98
52) Chlorobenzene	18.585	18.586	1.002	112	840474	50.98	ug/L	100
53) 1,1,1,2-Tetrachloroethane	18.646	18.646	1.005	131	328484	51.68	ug/L	99
54) Ethylbenzene	18.656	18.657	1.005	91	1433183	51.58	ug/L	100
55) m,p-Xylenes	18.758	18.758	1.011	106	1086578	100.61	ug/L	96
56) o-Xylene	19.174	19.174	1.033	106	557885	49.94	ug/L	99
57) Styrene	19.184	19.184	1.034	104	919252	49.68	ug/L	97
59) Bromoform	19.428	19.428	0.930	173	299556	51.65	ug/L	99
60) Isopropylbenzene	19.519	19.519	0.935	105	1543591	54.38	ug/L	99
62) 1,1,2,2-Tetrachloroethane	19.783	19.783	0.947	83	441369	47.70	ug/L	98
63) 1,2,3-Trichloropropane	19.865	19.865	0.951	110	115305	47.07	ug/L	94
64) Bromobenzene	19.905	19.905	0.953	156	416433	47.96	ug/L	95
65) n-Propylbenzene	19.925	19.926	0.954	91	1821197	52.64	ug/L	100
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	1280132	51.96	ug/L	99
67) 2-Chlorotoluene	20.068	20.068	0.961	126	354248	49.78	ug/L	97
68) 4-Chlorotoluene	20.159	20.159	0.965	91	1189365	51.43	ug/L	99
69) tert-Butylbenzene	20.423	20.423	0.978	134	303707	54.73	ug/L	98
70) 1,2,4-Trimethylbenzene	20.463	20.464	0.980	105	1385998	52.22	ug/L	99
71) sec-Butylbenzene	20.636	20.636	0.988	105	1792979	55.46	ug/L	99
72) 4-Isopropyltoluene	20.758	20.758	0.994	119	1459984	56.13	ug/L	99
73) 1,3-Dichlorobenzene	20.819	20.819	0.997	146	794278	49.75	ug/L	99
74) 1,4-Dichlorobenzene	20.900	20.900	1.001	146	785981	49.44	ug/L	99
75) n-Butylbenzene	21.184	21.184	1.015	91	1500202	56.61	ug/L	100
76) 1,2-Dichlorobenzene	21.326	21.326	1.021	146	775442	48.80	ug/L	99
77) 1,2-Dibromo-3-chloropr...	22.179	22.179	1.062	157	113226	50.19	ug/L	98
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112	180	649720	50.77	ug/L	98
79) Hexachlorobutadiene	23.397	23.397	1.121	225	445014	55.40	ug/L	100
80) Naphthalene	23.611	23.611	1.131	128	1264330	47.08	ug/L	100
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147	180	574079	49.98	ug/L	99
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.		
85) Acrolein	9.804	9.875	0.645		0m	N.D.	d	
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.		
87) Isopropyl Alcohol	10.687	10.637	0.703		0m	N.D.	d	
88) Allyl chloride	10.931	11.043	0.719		0m	N.D.	d	
89) tert-Butyl Alcohol	11.540	11.530	0.759		0m	N.D.	d	
90) Acrylonitrile	11.875	11.794	0.782		0m	N.D.	d	
91) Isopropyl ether	12.728	12.779	0.838		0m	N.D.	d	
92) 2-Chloro-1,3-butadiene	12.738	12.829	0.838		0m	N.D.	d	
93) Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.		
94) Ethyl acetate	13.591	13.682	0.894		0m	N.D.	d	
95) Propionitrile	13.591	13.682	0.894		0m	N.D.	d	
96) Methacrylonitrile	13.905	13.916	0.915		0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H502.D
Acq On : 19 Nov 2010 9:49 am
Operator : AXO1
InstName : VOA7
Sample : |W7VM101119-01|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[A] 1025-07C/1022-07C
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 10:17:09 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

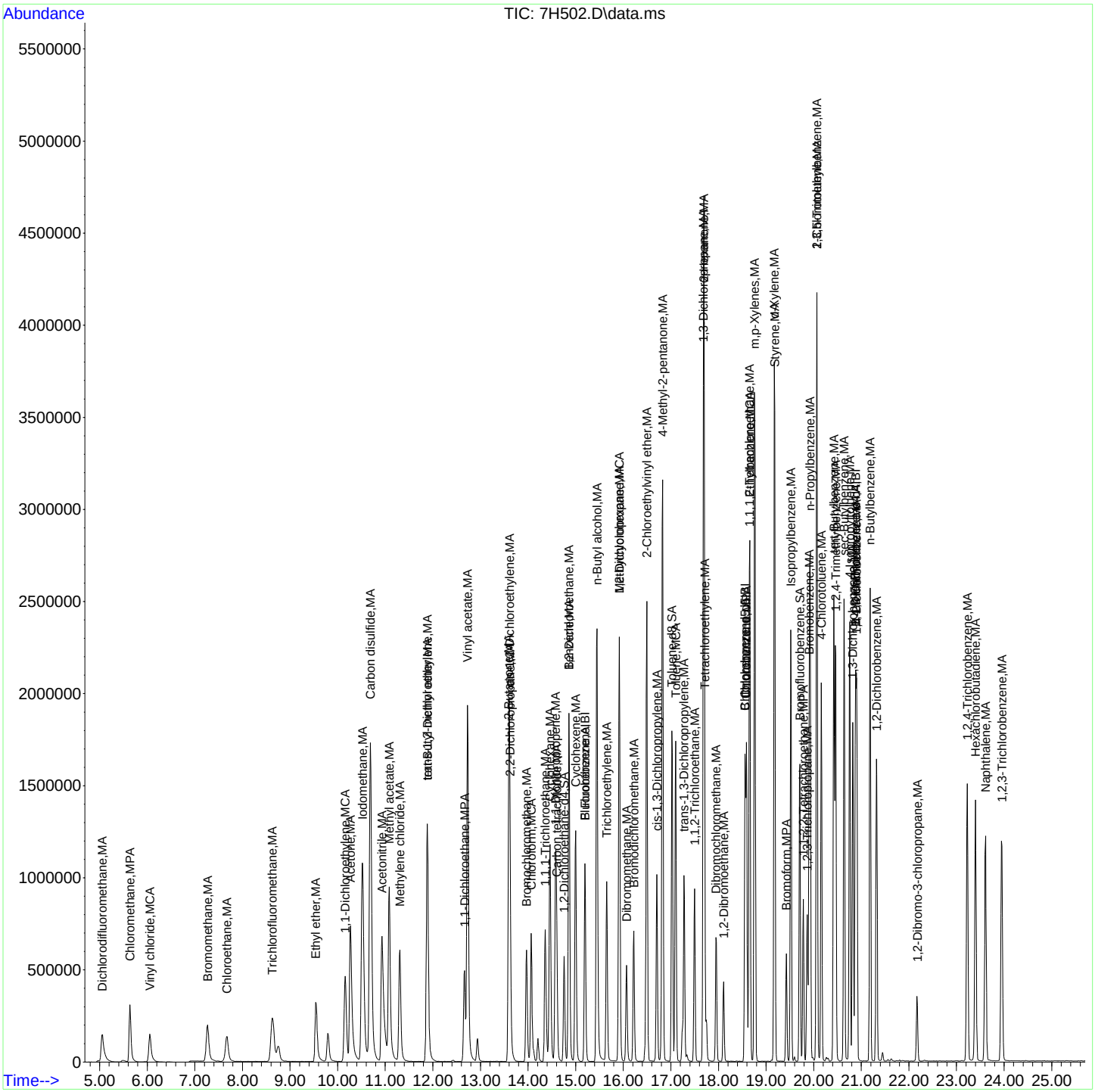
	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
97)	Tetrahydrofuran	14.058	14.037	0.925		0m	N.D.	d
98)	Isobutyl alcohol	14.758	14.626	0.971		0m	N.D.	d
99)	Methyl tert-amyl ether	14.992	14.961	0.987		0m	N.D.	d
100)	Methyl methacrylate	15.915	15.966	1.047		0m	N.D.	d
101)	1,4-Dioxane	16.068	16.047	1.057		0m	N.D.	d
102)	2-Nitropropane	16.494	16.443	1.086		0m	N.D.	d
104)	Ethyl methacrylate	17.245	17.306	0.929		0m	N.D.	d
106)	1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107)	cis-1,4-Dichloro-2-butene	19.519	19.560	0.935		0m	N.D.	d
108)	Cyclohexanone	0.000	19.662	0.000		0	N.D.	
109)	trans-1,4-Dichloro-2-b...	0.000	19.824	0.000		0	N.D.	
110)	Pentachloroethane	20.494	20.494	0.982		0m	N.D.	d
111)	Benzyl chloride	20.991	21.012	1.005		0m	N.D.	d
112)	bis(2-Chloroisopropyl)...	21.438	21.398	1.027		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H502.D
Acq On : 19 Nov 2010 9:49 am
Operator : AXO1
InstName : VOA7
Sample : |W7VM101119-01|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[A] 1025-07C/1022-07C
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 10:17:09 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 11-463

Instrument ID: VOA7.I

Injection Date: 19-NOV-10 11:31

Data File: 111910V7\7H505.D

Init. Cal. Date(s) 15-NOV-10 12:07 - 15-NOV-10 21:4

Lab Sample ID W7VM101119-04

Method: 111510V7\VOA7-8260-111510.M

Quant Type ISTD

Method Update: 16-NOV-10 10:59

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.4851	0.50602		.01		4.31251	30		Averaged
S	Toluene-d8	1.5504	1.53935		.01		-0.71272	30		Averaged
S	Bromofluorobenzene	1.0264	1.05		.01		2.2993	30		Averaged
	Acrolein	0.0898	0.08398		.01		-6.48107	30		Averaged
	Trichlorotrifluoroethane	0.114	0.12005		.01		5.30702	30		Averaged
	Allyl chloride	0.6953	0.62391		.01		-10.26751	30		Averaged
	Acrylonitrile	0.2019	0.17844		.01		-11.61961	30		Averaged
	2-Chloro-1,3-butadiene	0.6299	0.64135		.01		1.81775	30		Averaged
	Propionitrile	0.0807	0.07348		.01		-8.94672	30		Averaged
	Ethyl acetate	0.5285	0.48828		.01		-7.61022	40		Averaged
	Methacrylonitrile	0.3273	0.29269		.01		-10.5744	30		Averaged
	Tetrahydrofuran	0.1839	0.16131		.01		-12.28385	30		Averaged
	Isobutyl alcohol	0.0218	0.0219		.01		0.45872	40		Averaged
	Methyl methacrylate	0.2249	0.19322		.01		-14.08626	30		Averaged
	1,4-Dioxane	0.0034	0.00335		.01		-1.47059	40		Averaged
	2-Nitropropane	0.1679	0.17588		.01		4.75283	30		Averaged
	Ethyl methacrylate	0.5021	0.42258		.01		-15.83748	30		Averaged
	cis-1,4-Dichloro-2-butene	0.3823	0.3887		.01		1.67408	30		Averaged
	Cyclohexanone	0.0317	0.02934		.01		-7.44479	40		Averaged
	trans-1,4-Dichloro-2-butene	0.3217	0.36675		.01		14.00373	30		Averaged
	Pentachloroethane	0.4184	0.41857		.01		0.04063	30		Averaged
	Benzyl chloride	1.1164	1.28415		.01		15.02598	30		Averaged
	bis(2-Chloroisopropyl)ether	0.6502	0.6801		.01		4.59859	30		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H505.D
Acq On : 19 Nov 2010 11:31 am
Operator : AXO1
InstName : VOA7
Sample : |W7VM101119-04|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 19 12:15:31 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	15.195	15.195	1.000	96	966645	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	826328	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	555666	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	966645	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	826328	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	555666	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	489138	52.16	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1272006	49.64	ug/L	-0.01
61) Bromofluorobenzene	19.712	19.712	0.944	95	583448	51.15	ug/L	0.00

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333		0m	N.D.	d	
3) Chloromethane	5.638	5.638	0.371		0m	N.D.	d	
4) Vinyl chloride	6.054	6.054	0.398		0m	N.D.	d	
5) Bromomethane	7.276	7.266	0.479		0m	N.D.	d	
6) Chloroethane	7.662	7.682	0.504		0m	N.D.	d	
7) Trichlorofluoromethane	8.627	8.637	0.568		0m	N.D.	d	
8) Ethyl ether	9.571	9.550	0.630		0m	N.D.	d	
9) Acetone	10.220	10.271	0.673		0m	N.D.	d	
10) 1,1-Dichloroethylene	10.180	10.159	0.670		0m	N.D.	d	
11) Iodomethane	10.525	10.525	0.693		0m	N.D.	d	
12) Acetonitrile	11.043	10.931	0.727		0m	N.D.	d	
13) Methyl acetate	11.053	11.083	0.727		0m	N.D.	d	
14) Carbon disulfide	10.687	10.698	0.703		0m	N.D.	d	
15) Methylene chloride	11.307	11.307	0.744		0m	N.D.	d	
16) tert-Butyl methyl ether	11.895	11.885	0.783		0m	N.D.	d	
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782		0m	N.D.	d	
18) Vinyl acetate	12.738	12.728	0.838		0m	N.D.	d	
19) 1,1-Dichloroethane	12.657	12.667	0.833		0m	N.D.	d	
20) 2-Butanone	13.682	13.591	0.900		0m	N.D.	d	
21) cis-1,2-Dichloroethylene	13.611	13.611	0.896		0m	N.D.	d	
22) 2,2-Dichloropropane	13.621	13.621	0.896		0m	N.D.	d	
23) Bromochloromethane	13.977	13.966	0.920		0m	N.D.	d	
24) Chloroform	14.068	14.068	0.926		0m	N.D.	d	
25) 1,1,1-Trichloroethane	14.362	14.362	0.945		0m	N.D.	d	
26) Cyclohexane	14.454	14.464	0.951		0m	N.D.	d	
27) 1,1-Dichloropropene	14.575	14.576	0.959		0m	N.D.	d	
28) Carbon tetrachloride	14.596	14.606	0.961		0m	N.D.	d	
30) 1,2-Dichloroethane	14.860	14.860	0.978		0m	N.D.	d	
31) Benzene	14.870	14.860	0.979		0m	N.D.	d	
32) Cyclohexene	15.002	15.002	0.987		0m	N.D.	d	
33) n-Butyl alcohol	15.459	15.449	1.017		0m	N.D.	d	
34) Trichloroethylene	15.652	15.652	1.030		0m	N.D.	d	
35) 1,2-Dichloropropane	15.916	15.916	1.047		0m	N.D.	d	
36) Methylcyclohexane	15.916	15.916	1.047		0m	N.D.	d	
37) Dibromomethane	16.068	16.068	1.057		0m	N.D.	d	
38) Bromodichloromethane	16.210	16.220	1.067		0m	N.D.	d	
39) 2-Chloroethylvinyl ether	16.494	16.494	1.086		0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H505.D
Acq On : 19 Nov 2010 11:31 am
Operator : AXO1
InstName : VOA7
Sample : |W7VM101119-04|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 19 12:15:31 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
40) cis-1,3-Dichloropropylene	16.707	16.707	1.100		0m	N.D.	d	
42) 4-Methyl-2-pentanone	16.829	16.829	0.907		0m	N.D.	d	
44) Toluene	17.103	17.103	0.922		0m	N.D.	d	
45) trans-1,3-Dichloroprop...	17.276	17.276	0.931		0m	N.D.	d	
46) 1,1,2-Trichloroethane	17.499	17.499	0.943		0m	N.D.	d	
47) 2-Hexanone	17.692	17.692	0.953		0m	N.D.	d	
48) 1,3-Dichloropropane	17.682	17.682	0.953		0m	N.D.	d	
49) Tetrachloroethylene	17.702	17.702	0.954		0m	N.D.	d	
50) Dibromochloromethane	17.956	17.956	0.968		0m	N.D.	d	
51) 1,2-Dibromoethane	18.108	18.108	0.976		0m	N.D.	d	
52) Chlorobenzene	18.596	18.586	1.002		0m	N.D.	d	
53) 1,1,1,2-Tetrachloroethane	18.646	18.646	1.005		0m	N.D.	d	
54) Ethylbenzene	18.657	18.657	1.005		0m	N.D.	d	
55) m,p-Xylenes	18.758	18.758	1.011		0m	N.D.	d	
56) o-Xylene	19.184	19.174	1.034		0m	N.D.	d	
57) Styrene	19.184	19.184	1.034		0m	N.D.	d	
59) Bromoform	19.418	19.428	0.930		0m	N.D.	d	
60) Isopropylbenzene	19.519	19.519	0.935		0m	N.D.	d	
62) 1,1,2,2-Tetrachloroethane	19.783	19.783	0.947		0m	N.D.	d	
63) 1,2,3-Trichloropropane	19.875	19.865	0.952		0m	N.D.	d	
64) Bromobenzene	19.905	19.905	0.953		0m	N.D.	d	
65) n-Propylbenzene	19.926	19.926	0.954		0m	N.D.	d	
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961		0m	N.D.	d	
67) 2-Chlorotoluene	20.068	20.068	0.961		0m	N.D.	d	
68) 4-Chlorotoluene	20.159	20.159	0.965		0m	N.D.	d	
69) tert-Butylbenzene	20.423	20.423	0.978		0m	N.D.	d	
70) 1,2,4-Trimethylbenzene	20.464	20.464	0.980		0m	N.D.	d	
71) sec-Butylbenzene	20.646	20.636	0.989		0m	N.D.	d	
72) 4-Isopropyltoluene	20.758	20.758	0.994		0m	N.D.	d	
73) 1,3-Dichlorobenzene	20.819	20.819	0.997		0m	N.D.	d	
74) 1,4-Dichlorobenzene	20.900	20.900	1.001		0m	N.D.	d	
75) n-Butylbenzene	21.184	21.184	1.015		0m	N.D.	d	
76) 1,2-Dichlorobenzene	21.326	21.326	1.021		0m	N.D.	d	
77) 1,2-Dibromo-3-chloropr...	22.179	22.179	1.062		0m	N.D.	d	
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112		0m	N.D.	d	
79) Hexachlorobutadiene	23.397	23.397	1.121		0m	N.D.	d	
80) Naphthalene	23.611	23.611	1.131		0m	N.D.	d	
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147		0m	N.D.	d	
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.		
85) Acrolein	9.875	9.875	0.650	56	405881	233.74	ug/L	96
86) Trichlorotrifluoroethane	10.230	10.220	0.673	85	580217	263.25	ug/L	98
87) Isopropyl Alcohol	10.677	10.637	0.703	45	155	N.D.		
88) Allyl chloride	11.043	11.043	0.727	41	3015502	224.34	ug/L	98
89) tert-Butyl Alcohol	11.530	11.530	0.759	59	724	N.D.		
90) Acrylonitrile	11.794	11.794	0.776	53	862418	220.90	ug/L	99
91) Isopropyl ether	12.779	12.779	0.841	45	417	N.D.		
92) 2-Chloro-1,3-butadiene	12.829	12.829	0.844	53	619954	50.91	ug/L	95
93) Ethyl tert-butyl ether	13.367	13.367	0.880	59	377	N.D.		
94) Ethyl acetate	13.682	13.682	0.900	43	2359946	230.98	ug/L	98
95) Propionitrile	13.682	13.682	0.900	54	355144	227.71	ug/L	99
96) Methacrylonitrile	13.916	13.916	0.916	41	1414642	223.58	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H505.D
Acq On : 19 Nov 2010 11:31 am
Operator : AXO1
InstName : VOA7
Sample : |W7VM101119-04|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 19 12:15:31 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

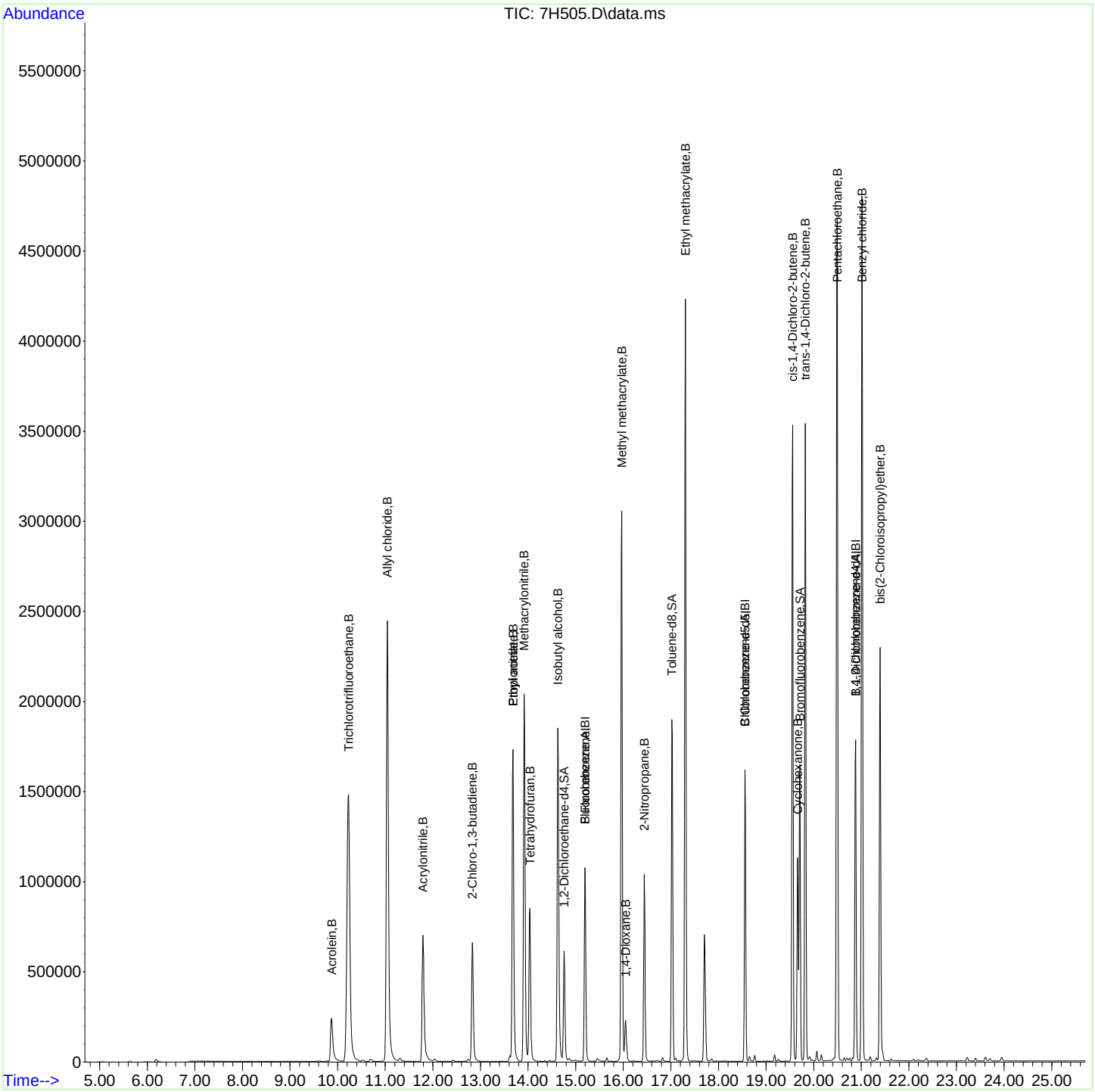
	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
97)	Tetrahydrofuran	14.037	14.037	0.924	42	779663	219.33	ug/L	98
98)	Isobutyl alcohol	14.626	14.626	0.963	41	1058316	2506.23	ug/L	98
99)	Methyl tert-amyl ether	14.982	14.961	0.986	73	163	N.D.		
100)	Methyl methacrylate	15.966	15.966	1.051	69	933878	214.80	ug/L	95
101)	1,4-Dioxane	16.047	16.047	1.056	88	162076	2469.76	ug/L	97
102)	2-Nitropropane	16.443	16.443	1.082	43	850086	261.90	ug/L	100
104)	Ethyl methacrylate	17.306	17.306	0.933	69	1745946	210.39	ug/L	96
106)	1-Chlorohexane	18.474	18.474	0.885	55	414	N.D.		
107)	cis-1,4-Dichloro-2-butene	19.560	19.560	0.937	53	1079929	254.19	ug/L	99
108)	Cyclohexanone	19.662	19.662	0.942	42	407566	1156.81	ug/L	97
109)	trans-1,4-Dichloro-2-b...	19.824	19.824	0.949	53	1018956	285.01	ug/L	97
110)	Pentachloroethane	20.494	20.494	0.982	167	1162933	250.09	ug/L	98
111)	Benzyl chloride	21.012	21.012	1.006	91	3567806	287.56	ug/L	99
112)	bis(2-Chloroisopropyl)...	21.398	21.398	1.025	45	1889546	261.48	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H505.D
Acq On : 19 Nov 2010 11:31 am
Operator : AXO1
InstName : VOA7
Sample : |W7VM101119-04|CCV|1|VOAF|1|VOA8260BL|
Misc : CCV 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 19 12:15:31 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



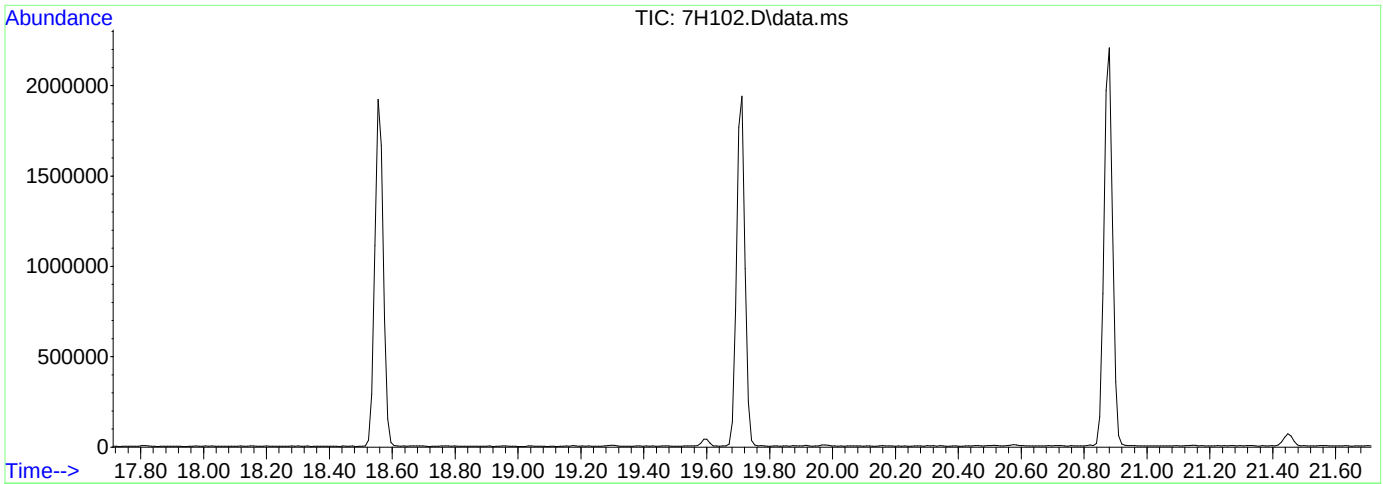
Quality Control Data

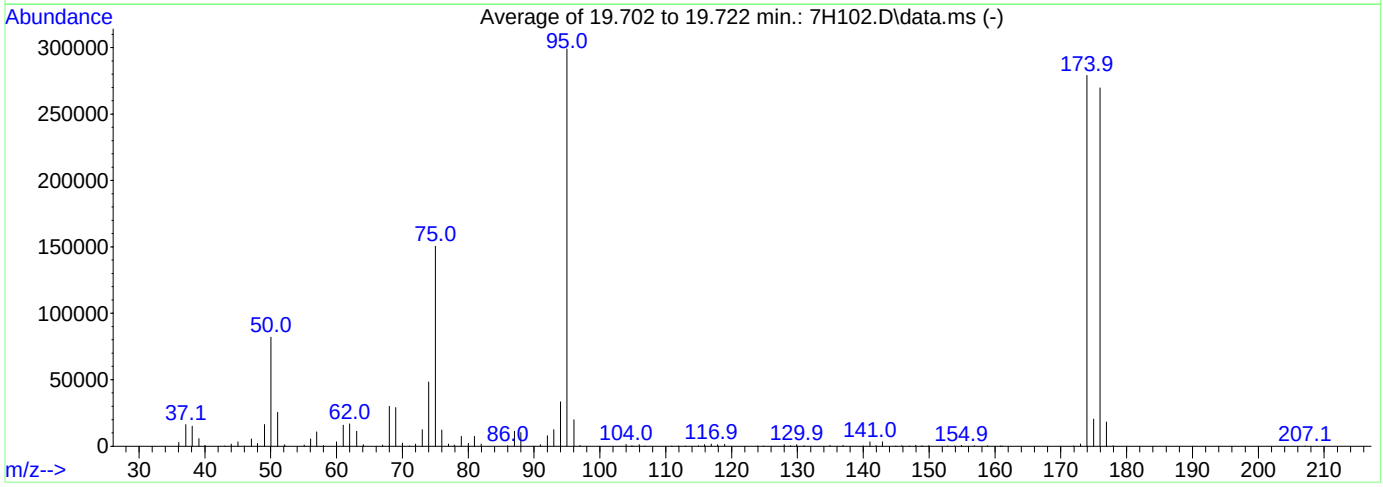
Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111510V7\
Data File : 7H102.D
Acq On : 15 Nov 2010 11:33 am
Operator : AXO1
Sample : |UVM100927-02|BFB|1|VOAF|1|VOA8260BL|
Misc : BFB 5mL N/A
ALS Vial : 2 Sample Multiplier: 1

Integration File: ron.P

Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Title : Volatile Organics 8260B SubList :
Last Update : Tue Nov 16 10:59:25 2010





Spectrum Information: Average of 19.702 to 19.722 min.

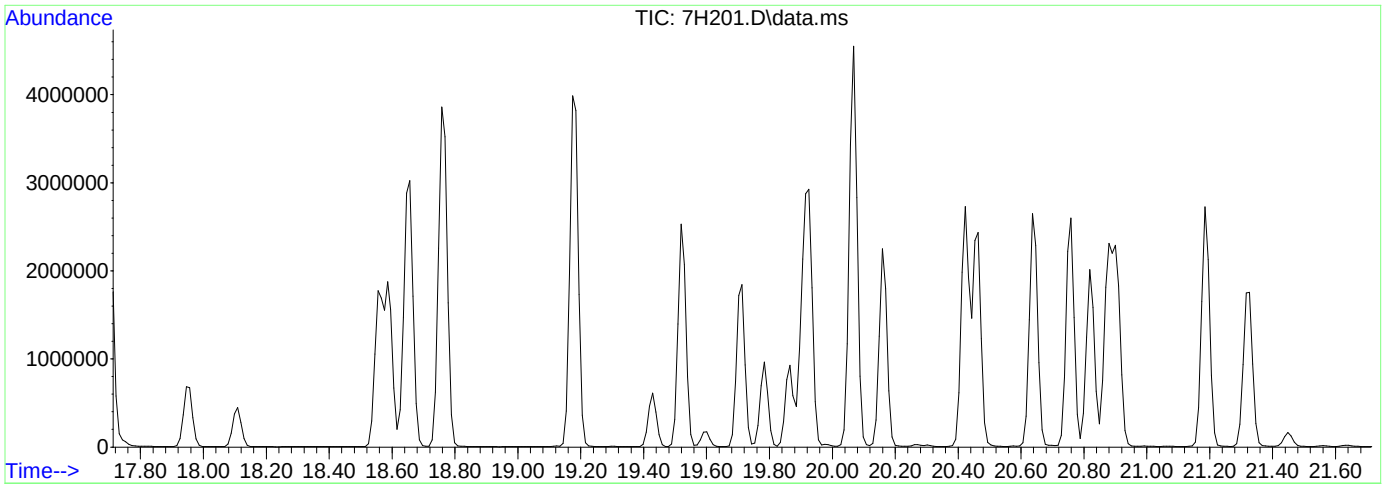
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.4	82045	PASS
75	95	30	60	50.3	150336	PASS
95	95	100	100	100.0	299157	PASS
96	95	5	9	6.7	19970	PASS
173	174	0.00	2	0.6	1543	PASS
174	95	50	100	93.3	278997	PASS
175	174	5	9	7.3	20310	PASS
176	174	95	101	96.7	269781	PASS
177	176	5	9	6.8	18245	PASS

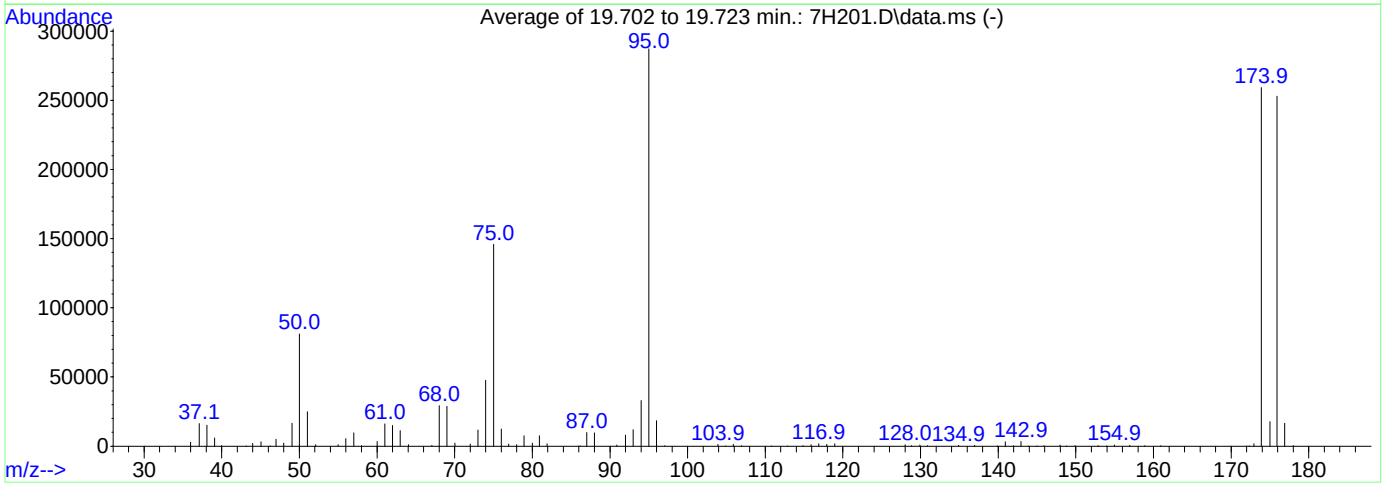
Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111610V7\
Data File : 7H201.D
Acq On : 16 Nov 2010 11:36 am
Operator : AXO1
Sample : |W7VM101116-01|BFB|1|VOAF|1|VOA8260BL|
Misc : BFB 5uL N/A MIX[A] 1026-01D/1116-01
ALS Vial : 1 Sample Multiplier: 1

Integration File: ron.P

Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Title : Volatile Organics 8260B SubList :
Last Update : Tue Nov 16 10:59:25 2010





Spectrum Information: Average of 19.702 to 19.723 min.

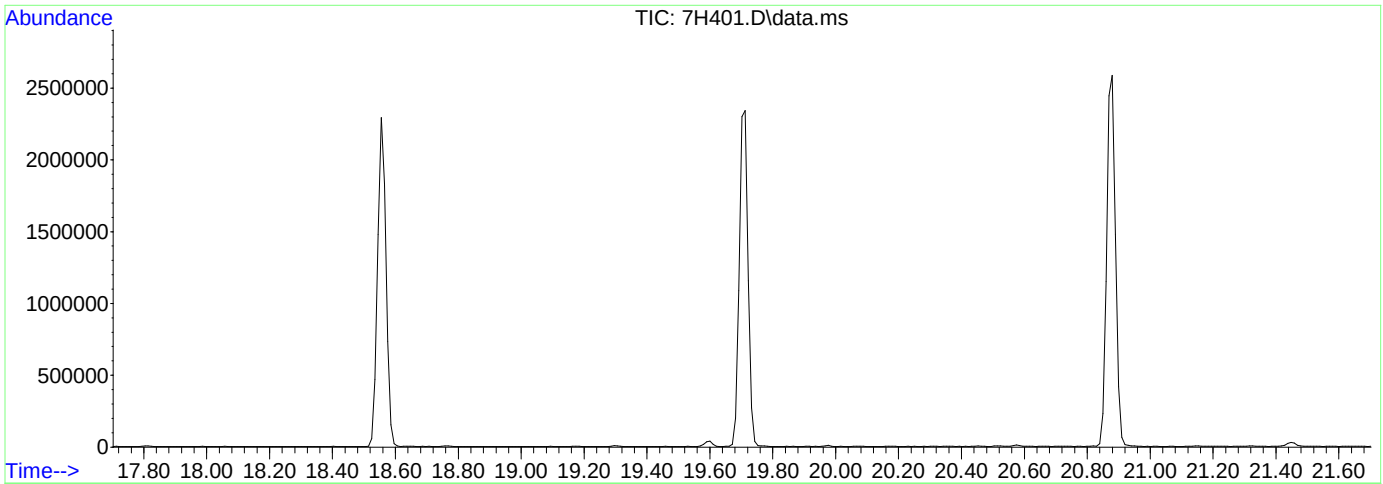
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	28.3	81192	PASS
75	95	30	60	50.7	145749	PASS
95	95	100	100	100.0	287253	PASS
96	95	5	9	6.4	18453	PASS
173	174	0.00	2	0.7	1722	PASS
174	95	50	100	90.2	259072	PASS
175	174	5	9	6.9	17823	PASS
176	174	95	101	97.6	252907	PASS
177	176	5	9	6.5	16518	PASS

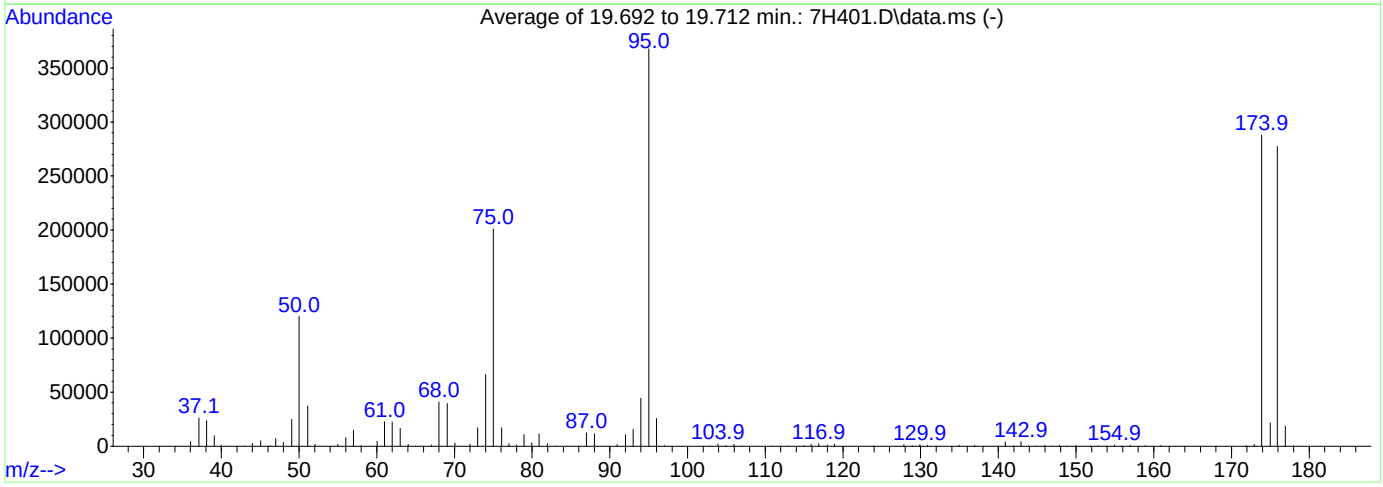
Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H401.D
Acq On : 18 Nov 2010 1:49 pm
Operator : AXO1
Sample : |UVM100927-02|BFB1|VOAF|1|VOA8260BL|
Misc : BFB 5mL N/A
ALS Vial : 1 Sample Multiplier: 1

Integration File: ron.P

Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Title : Volatile Organics 8260B SubList :
Last Update : Tue Nov 16 10:59:25 2010





Spectrum Information: Average of 19.692 to 19.712 min.

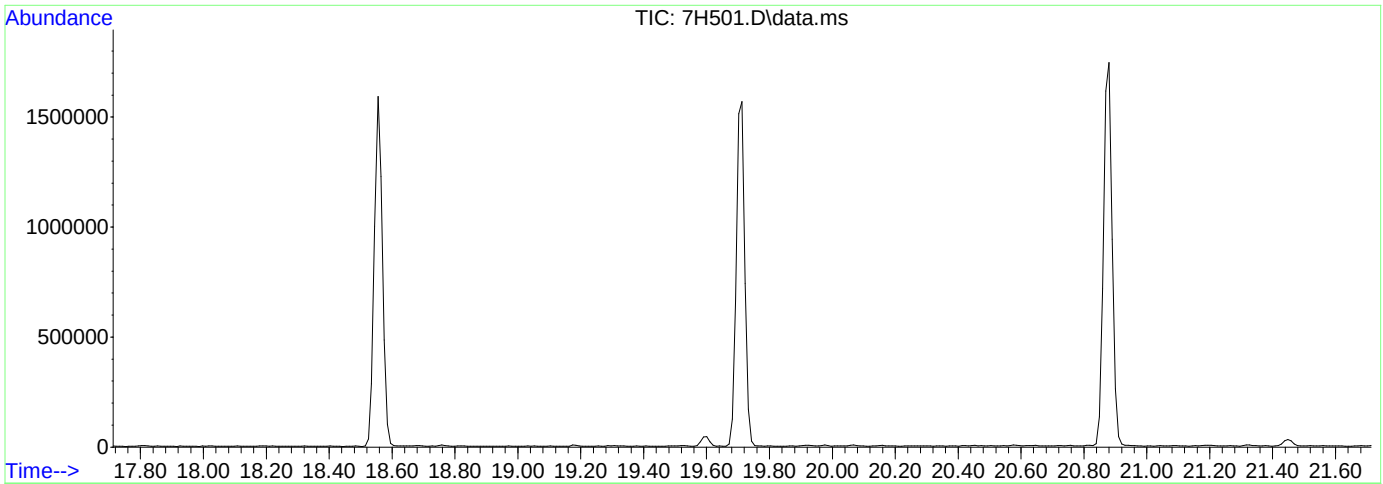
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	32.6	120040	PASS
75	95	30	60	54.6	200819	PASS
95	95	100	100	100.0	367808	PASS
96	95	5	9	6.9	25502	PASS
173	174	0.00	2	0.6	1736	PASS
174	95	50	100	78.3	287925	PASS
175	174	5	9	7.4	21450	PASS
176	174	95	101	96.3	277347	PASS
177	176	5	9	6.7	18514	PASS

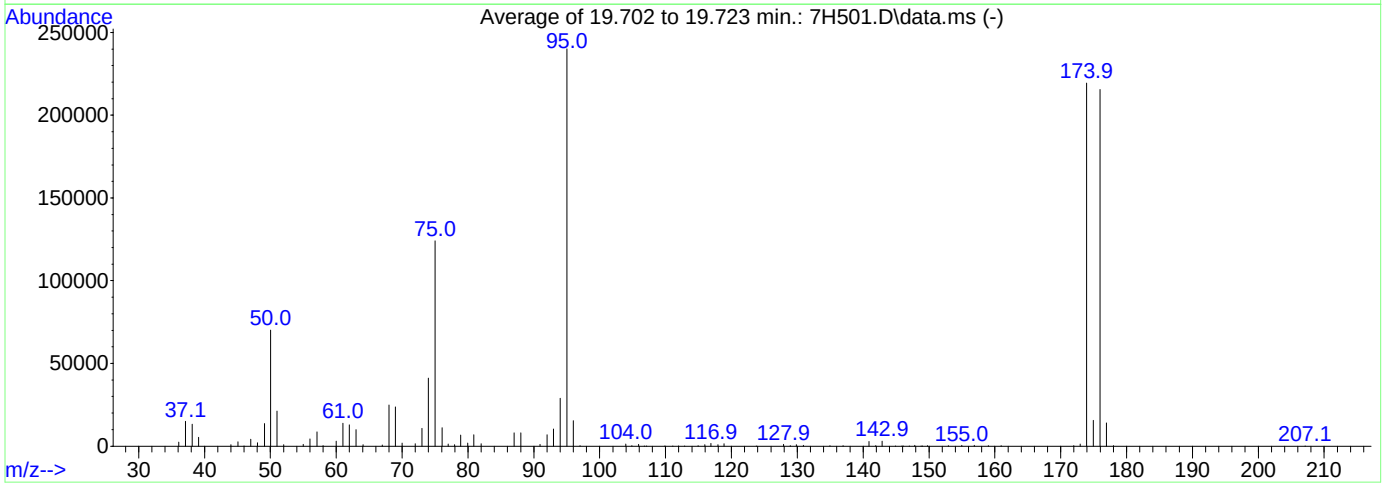
Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H501.D
Acq On : 19 Nov 2010 9:15 am
Operator : AXO1
Sample : |UVM100927-02|BFB|1|VOAF|1|VOA8260BL|
Misc : BFB 5mL N/A
ALS Vial : 1 Sample Multiplier: 1

Integration File: ron.P

Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Title : Volatile Organics 8260B SubList :
Last Update : Tue Nov 16 10:59:25 2010





Spectrum Information: Average of 19.702 to 19.723 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.2	70027	PASS
75	95	30	60	51.7	124080	PASS
95	95	100	100	100.0	240189	PASS
96	95	5	9	6.4	15305	PASS
173	174	0.00	2	0.6	1248	PASS
174	95	50	100	91.4	219456	PASS
175	174	5	9	7.1	15589	PASS
176	174	95	101	98.2	215509	PASS
177	176	5	9	6.5	13957	PASS

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202267678**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**MB for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 16:39**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 16:39**				
Data File:	**111810V7\7H406B1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202267678**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**MB for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 16:39**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 16:39**				
Data File:	**111810V7\7H406B1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202267678**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**MB for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 16:39**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 16:39**				
Data File:	**111810V7\7H406B1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	51.3	50.0	ug/L	103	(71%-130%)
Bromofluorobenzene	49.0	50.0	ug/L	98.0	(80%-120%)
Toluene-d8	49.4	50.0	ug/L	98.8	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H406B1.D
Acq On : 18 Nov 2010 4:39 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267678|1050223|1|VOAF|1|VOA8260LFD|
Misc : BLANK 5mL N/A
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 19 09:08:09 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	1045974	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	866755	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	581870	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	1045974	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	866755	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	581870	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	520849	51.33	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1327601	49.40	ug/L	-0.01
61) Bromofluorobenzene	19.702	19.712	0.944	95	585041	48.98	ug/L	-0.01

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	102.66%
43) Toluene-d8	50.000	80 - 120	98.80%
61) Bromofluorobenzene	50.000	80 - 120	97.96%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	0.000	5.058	0.000		0	N.D.		
3) Chloromethane	0.000	5.638	0.000		0	N.D.		
4) Vinyl chloride	6.054	6.054	0.398	62	472	Below Cal	#	44
5) Bromomethane	0.000	7.266	0.000		0	N.D.		
6) Chloroethane	0.000	7.682	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000	8.637	0.000		0	N.D.		
8) Ethyl ether	0.000	9.550	0.000		0	N.D.		
9) Acetone	10.352	10.271	0.681	43	8012	Below Cal		75
10) 1,1-Dichloroethylene	0.000	10.159	0.000		0	N.D.		
11) Iodomethane	0.000	10.525	0.000		0	N.D.		
12) Acetonitrile	10.992	10.931	0.723	41	773	N.D.		
13) Methyl acetate	11.134	11.083	0.733	43	512	N.D.		
14) Carbon disulfide	10.698	10.698	0.704	76	1045	N.D.		
15) Methylene chloride	11.307	11.307	0.744	84	5415	Below Cal		88
16) tert-Butyl methyl ether	0.000	11.885	0.000		0	N.D.		
17) trans-1,2-Dichloroethy...	0.000	11.885	0.000		0	N.D.		
18) Vinyl acetate	12.769	12.728	0.840	43	614	N.D.		
19) 1,1-Dichloroethane	0.000	12.667	0.000		0	N.D.		
20) 2-Butanone	13.632	13.591	0.897	43	1301	N.D.		
21) cis-1,2-Dichloroethylene	0.000	13.611	0.000		0	N.D.		
22) 2,2-Dichloropropane	0.000	13.621	0.000		0	N.D.		
23) Bromochloromethane	0.000	13.966	0.000		0	N.D.		
24) Chloroform	14.068	14.068	0.926	83	505	N.D.		
25) 1,1,1-Trichloroethane	0.000	14.362	0.000		0	N.D.		
26) Cyclohexane	0.000	14.464	0.000		0	N.D.		
27) 1,1-Dichloropropene	0.000	14.576	0.000		0	N.D.		
28) Carbon tetrachloride	0.000	14.606	0.000		0	N.D.		
30) 1,2-Dichloroethane	0.000	14.860	0.000		0	N.D.		
31) Benzene	14.870	14.860	0.979	78	502	Below Cal	#	46
32) Cyclohexene	0.000	15.002	0.000		0	N.D.		
33) n-Butyl alcohol	15.479	15.449	1.019	56	886	N.D.		
34) Trichloroethylene	0.000	15.652	0.000		0	N.D.		
35) 1,2-Dichloropropane	0.000	15.916	0.000		0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H406B1.D
Acq On : 18 Nov 2010 4:39 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267678|1050223|1|VOAF|1|VOA8260LFD|
Misc : BLANK 5mL N/A
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 19 09:08:09 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
36) Methylcyclohexane	0.000	15.916	0.000		0	N.D.	
37) Dibromomethane	0.000	16.068	0.000		0	N.D.	
38) Bromodichloromethane	0.000	16.220	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000	16.494	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	16.708	16.707	1.100	75	179	N.D.	
42) 4-Methyl-2-pentanone	16.829	16.829	0.907	58	163	N.D.	
44) Toluene	17.103	17.103	0.922	91	2405	N.D.	
45) trans-1,3-Dichloroprop...	0.000	17.276	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000	17.499	0.000		0	N.D.	
47) 2-Hexanone	17.692	17.692	0.953	43	2571	N.D.	
48) 1,3-Dichloropropane	0.000	17.682	0.000		0	N.D.	
49) Tetrachloroethylene	0.000	17.702	0.000		0	N.D.	
50) Dibromochloromethane	0.000	17.956	0.000		0	N.D.	
51) 1,2-Dibromoethane	18.108	18.108	0.976	107	157	N.D.	
52) Chlorobenzene	18.586	18.586	1.002	112	836	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000	18.646	0.000		0	N.D.	
54) Ethylbenzene	18.657	18.657	1.005	91	1325	N.D.	
55) m,p-Xylenes	18.758	18.758	1.011	106	1205	N.D.	
56) o-Xylene	19.195	19.174	1.034	106	405	N.D.	
57) Styrene	19.185	19.184	1.034	104	1177	N.D.	
59) Bromoform	0.000	19.428	0.000		0	N.D.	
60) Isopropylbenzene	19.520	19.519	0.935	105	807	N.D.	
62) 1,1,2,2-Tetrachloroethane	0.000	19.783	0.000		0	N.D.	
63) 1,2,3-Trichloropropane	0.000	19.865	0.000		0	N.D.	
64) Bromobenzene	19.905	19.905	0.953	156	697	N.D.	
65) n-Propylbenzene	19.916	19.926	0.954	91	1788	N.D.	
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	1235	N.D.	
67) 2-Chlorotoluene	20.058	20.068	0.961	126	375	N.D.	
68) 4-Chlorotoluene	20.159	20.159	0.965	91	1988	N.D.	
69) tert-Butylbenzene	0.000	20.423	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	20.454	20.464	0.980	105	1049	N.D.	
71) sec-Butylbenzene	20.636	20.636	0.988	105	1262	N.D.	
72) 4-Isopropyltoluene	20.758	20.758	0.994	119	825	N.D.	
73) 1,3-Dichlorobenzene	20.829	20.819	0.998	146	1460	N.D.	
74) 1,4-Dichlorobenzene	20.910	20.900	1.001	146	2096	N.D.	
75) n-Butylbenzene	21.185	21.184	1.015	91	1627	N.D.	
76) 1,2-Dichlorobenzene	21.327	21.326	1.021	146	1499	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000	22.179	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112	180	2133	N.D.	
79) Hexachlorobutadiene	23.398	23.397	1.121	225	642	N.D.	
80) Naphthalene	23.611	23.611	1.131	128	5565	N.D.	
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147	180	2020	N.D.	
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.	
85) Acrolein	0.000	9.875	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000	10.637	0.000		0	N.D.	
88) Allyl chloride	10.992	11.043	0.723	41	773	N.D.	
89) tert-Butyl Alcohol	0.000	11.530	0.000		0	N.D.	
90) Acrylonitrile	11.814	11.794	0.778	53	465	N.D.	
91) Isopropyl ether	0.000	12.779	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000	12.829	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H406B1.D
Acq On : 18 Nov 2010 4:39 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267678|1050223|1|VOAF|1|VOA8260LFD|
Misc : BLANK 5mL N/A
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 19 09:08:09 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

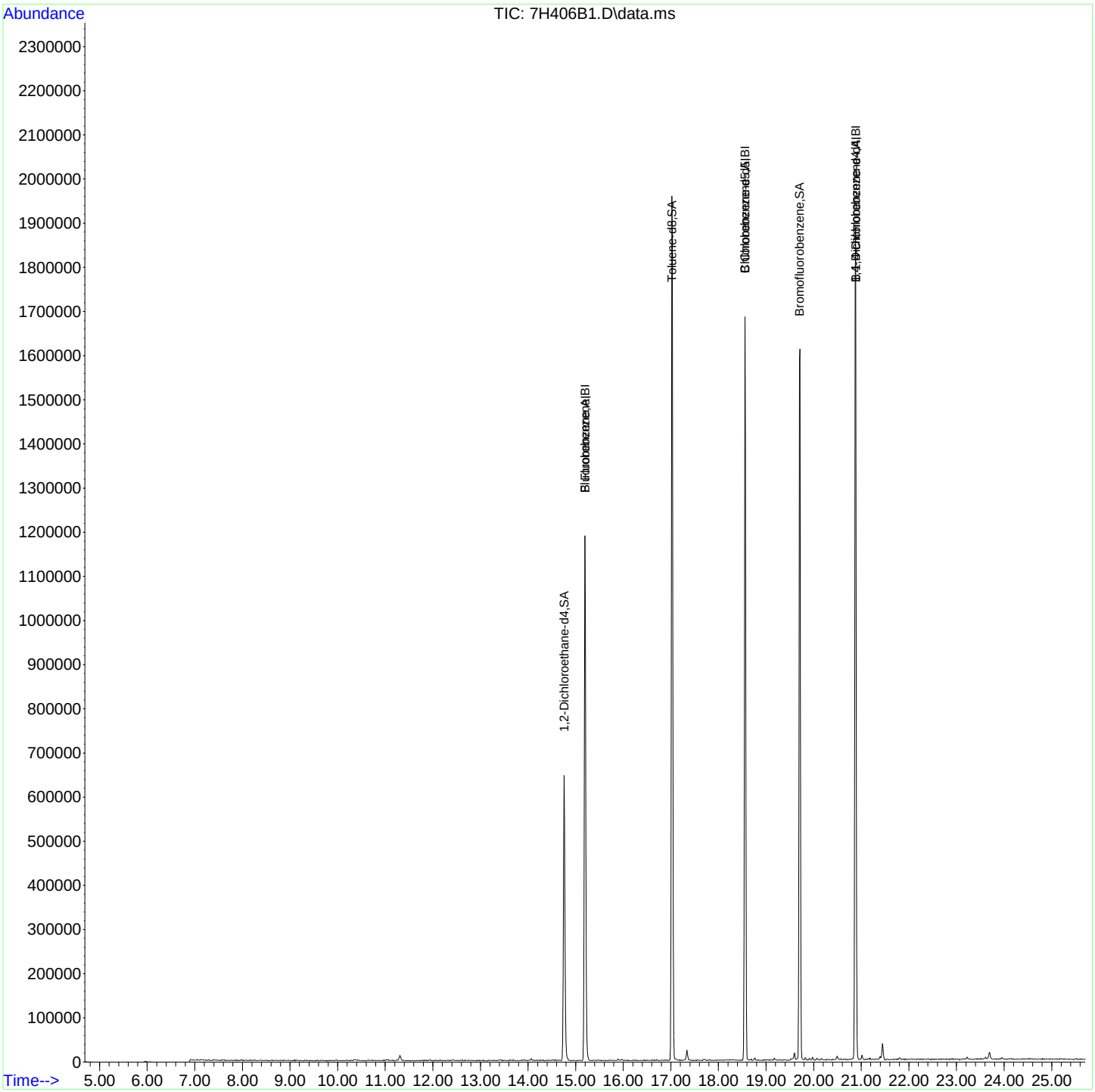
	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
93)	Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.	
94)	Ethyl acetate	13.632	13.682	0.897	43	1301	N.D.	
95)	Propionitrile	0.000	13.682	0.000		0	N.D.	
96)	Methacrylonitrile	13.936	13.916	0.917	41	801	N.D.	
97)	Tetrahydrofuran	14.048	14.037	0.925	42	3020	N.D.	
98)	Isobutyl alcohol	14.637	14.626	0.963	41	439	N.D.	
99)	Methyl tert-amyl ether	0.000	14.961	0.000		0	N.D.	
100)	Methyl methacrylate	15.977	15.966	1.051	69	672	N.D.	
101)	1,4-Dioxane	0.000	16.047	0.000		0	N.D.	
102)	2-Nitropropane	16.444	16.443	1.082	43	431	N.D.	
104)	Ethyl methacrylate	17.307	17.306	0.933	69	1263	N.D.	
106)	1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107)	cis-1,4-Dichloro-2-butene	19.550	19.560	0.936	53	1411	N.D.	
108)	Cyclohexanone	19.672	19.662	0.942	42	1219	N.D.	
109)	trans-1,4-Dichloro-2-b...	19.824	19.824	0.949	53	2167	N.D.	
110)	Pentachloroethane	20.494	20.494	0.982	167	1795	N.D.	
111)	Benzyl chloride	21.012	21.012	1.006	91	7951	N.D.	
112)	bis(2-Chloroisopropyl)...	21.398	21.398	1.025	45	5671	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H406B1.D
Acq On : 18 Nov 2010 4:39 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267678|1050223|1|VOAF|1|VOA8260LFD|
Misc : BLANK 5mL N/A
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 19 09:08:09 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H406B1.D
Acq On : 18 Nov 2010 4:39 pm
Operator : AXO1
Sample : |1202267678|1050223|1|VOAF|1|VOA8260LFD|
Misc : BLANK 5mL N/A
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

```
  Data Path : C:\msdchem\1\DATA\111810V7\
  Data File : 7H406B1.D
  Acq On    : 18 Nov 2010   4:39 pm
  Operator  : AXO1
  Sample    : |1202267678|1050223|1|VOAF|1|VOA8260LFD|
  Misc      : BLANK 5mL N/A
  ALS Vial  : 6   Sample Multiplier: 1

  Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
  Quant Title  : Volatile Organics 8260B                     SubList :

  TIC Library   : C:\Database\NIST05.L
  TIC Integration Parameters: default.P

                                                     |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202270903**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**MB for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 12:41**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 12:41**				
Data File:	**111910V7\7H507B1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202270903**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**MB for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 12:41**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 12:41**				
Data File:	**111910V7\7H507B1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202270903**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**MB for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 12:41**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 12:41**				
Data File:	**111910V7\7H507B1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	51.6	50.0	ug/L	103	(71%-130%)
Bromofluorobenzene	49.4	50.0	ug/L	98.8	(80%-120%)
Toluene-d8	48.7	50.0	ug/L	97.3	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/L		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H507B1.D
Acq On : 19 Nov 2010 12:41 pm
Operator : AXO1
InstName : VOA7
Sample : |1202270903|1050223|1|VOAF|1|VOA8260LFD|
Misc : BLANK 5mL N/A
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 19 16:00:04 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	957107	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	807991	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	531618	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	957107	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	807991	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	531618	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	479137	51.60	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1219217	48.66	ug/L	-0.01
61) Bromofluorobenzene	19.702	19.712	0.944	95	538996	49.39	ug/L	-0.01

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	103.20%
43) Toluene-d8	50.000	80 - 120	97.32%
61) Bromofluorobenzene	50.000	80 - 120	98.78%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	0.000	5.058	0.000		0	N.D.		
3) Chloromethane	5.638	5.638	0.371	50	298	N.D.		
4) Vinyl chloride	6.054	6.054	0.398	62	235	Below Cal	#	44
5) Bromomethane	0.000	7.266	0.000		0	N.D.		
6) Chloroethane	0.000	7.682	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000	8.637	0.000		0	N.D.		
8) Ethyl ether	0.000	9.550	0.000		0	N.D.		
9) Acetone	10.352	10.271	0.681	43	7126	Below Cal		75
10) 1,1-Dichloroethylene	0.000	10.159	0.000		0	N.D.		
11) Iodomethane	0.000	10.525	0.000		0	N.D.		
12) Acetonitrile	11.043	10.931	0.727	41	3930	N.D.		
13) Methyl acetate	0.000	11.083	0.000		0	N.D.		
14) Carbon disulfide	10.698	10.698	0.704	76	753	N.D.		
15) Methylene chloride	11.307	11.307	0.744	84	8842	Below Cal	#	80
16) tert-Butyl methyl ether	0.000	11.885	0.000		0	N.D.		
17) trans-1,2-Dichloroethy...	0.000	11.885	0.000		0	N.D.		
18) Vinyl acetate	0.000	12.728	0.000		0	N.D.		
19) 1,1-Dichloroethane	0.000	12.667	0.000		0	N.D.		
20) 2-Butanone	13.621	13.591	0.896	43	372	N.D.		
21) cis-1,2-Dichloroethylene	0.000	13.611	0.000		0	N.D.		
22) 2,2-Dichloropropane	0.000	13.621	0.000		0	N.D.		
23) Bromochloromethane	0.000	13.966	0.000		0	N.D.		
24) Chloroform	0.000	14.068	0.000		0	N.D.		
25) 1,1,1-Trichloroethane	0.000	14.362	0.000		0	N.D.		
26) Cyclohexane	0.000	14.464	0.000		0	N.D.		
27) 1,1-Dichloropropene	0.000	14.576	0.000		0	N.D.		
28) Carbon tetrachloride	0.000	14.606	0.000		0	N.D.		
30) 1,2-Dichloroethane	14.789	14.860	0.973	62	160	N.D.		
31) Benzene	14.860	14.860	0.978	78	434	Below Cal	#	46
32) Cyclohexene	0.000	15.002	0.000		0	N.D.		
33) n-Butyl alcohol	15.469	15.449	1.018	56	360	N.D.		
34) Trichloroethylene	0.000	15.652	0.000		0	N.D.		
35) 1,2-Dichloropropane	0.000	15.916	0.000		0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H507B1.D
Acq On : 19 Nov 2010 12:41 pm
Operator : AXO1
InstName : VOA7
Sample : |1202270903|1050223|1|VOAF|1|VOA8260LFD|
Misc : BLANK 5mL N/A
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 19 16:00:04 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
36) Methylcyclohexane	0.000	15.916	0.000		0	N.D.	
37) Dibromomethane	0.000	16.068	0.000		0	N.D.	
38) Bromodichloromethane	0.000	16.220	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000	16.494	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000	16.707	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000	16.829	0.000		0	N.D.	
44) Toluene	17.103	17.103	0.922	91	2495	N.D.	
45) trans-1,3-Dichloroprop...	17.337	17.276	0.934	75	177	N.D.	
46) 1,1,2-Trichloroethane	0.000	17.499	0.000		0	N.D.	
47) 2-Hexanone	17.713	17.692	0.955	43	1091	N.D.	
48) 1,3-Dichloropropane	0.000	17.682	0.000		0	N.D.	
49) Tetrachloroethylene	17.702	17.702	0.954	164	164	Below Cal #	6
50) Dibromochloromethane	0.000	17.956	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000	18.108	0.000		0	N.D.	
52) Chlorobenzene	18.596	18.586	1.002	112	586	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000	18.646	0.000		0	N.D.	
54) Ethylbenzene	18.657	18.657	1.005	91	1037	N.D.	
55) m,p-Xylenes	18.768	18.758	1.011	106	717	N.D.	
56) o-Xylene	19.185	19.174	1.034	106	166	N.D.	
57) Styrene	19.174	19.184	1.033	104	808	N.D.	
59) Bromoform	0.000	19.428	0.000		0	N.D.	
60) Isopropylbenzene	19.520	19.519	0.935	105	404	N.D.	
62) 1,1,2,2-Tetrachloroethane	0.000	19.783	0.000		0	N.D.	
63) 1,2,3-Trichloropropane	0.000	19.865	0.000		0	N.D.	
64) Bromobenzene	19.905	19.905	0.953	156	276	N.D.	
65) n-Propylbenzene	19.926	19.926	0.954	91	1071	N.D.	
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	1335	N.D.	
67) 2-Chlorotoluene	0.000	20.068	0.000		0	N.D.	
68) 4-Chlorotoluene	20.159	20.159	0.965	91	1723	N.D.	
69) tert-Butylbenzene	0.000	20.423	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	20.464	20.464	0.980	105	1205	N.D.	
71) sec-Butylbenzene	20.636	20.636	0.988	105	844	N.D.	
72) 4-Isopropyltoluene	20.748	20.758	0.994	119	617	N.D.	
73) 1,3-Dichlorobenzene	20.819	20.819	0.997	146	1314	N.D.	
74) 1,4-Dichlorobenzene	20.910	20.900	1.001	146	1295	N.D.	
75) n-Butylbenzene	21.174	21.184	1.014	91	1043	N.D.	
76) 1,2-Dichlorobenzene	21.327	21.326	1.021	146	863	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000	22.179	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112	180	1092	N.D.	
79) Hexachlorobutadiene	0.000	23.397	0.000		0	N.D.	
80) Naphthalene	23.611	23.611	1.131	128	3641	N.D.	
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147	180	1021	N.D.	
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.	
85) Acrolein	0.000	9.875	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000	10.637	0.000		0	N.D.	
88) Allyl chloride	11.043	11.043	0.727	41	3930	N.D.	
89) tert-Butyl Alcohol	0.000	11.530	0.000		0	N.D.	
90) Acrylonitrile	11.824	11.794	0.778	53	348	N.D.	
91) Isopropyl ether	0.000	12.779	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000	12.829	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H507B1.D
Acq On : 19 Nov 2010 12:41 pm
Operator : AXO1
InstName : VOA7
Sample : |1202270903|1050223|1|VOAF|1|VOA8260LFD|
Misc : BLANK 5mL N/A
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 19 16:00:04 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

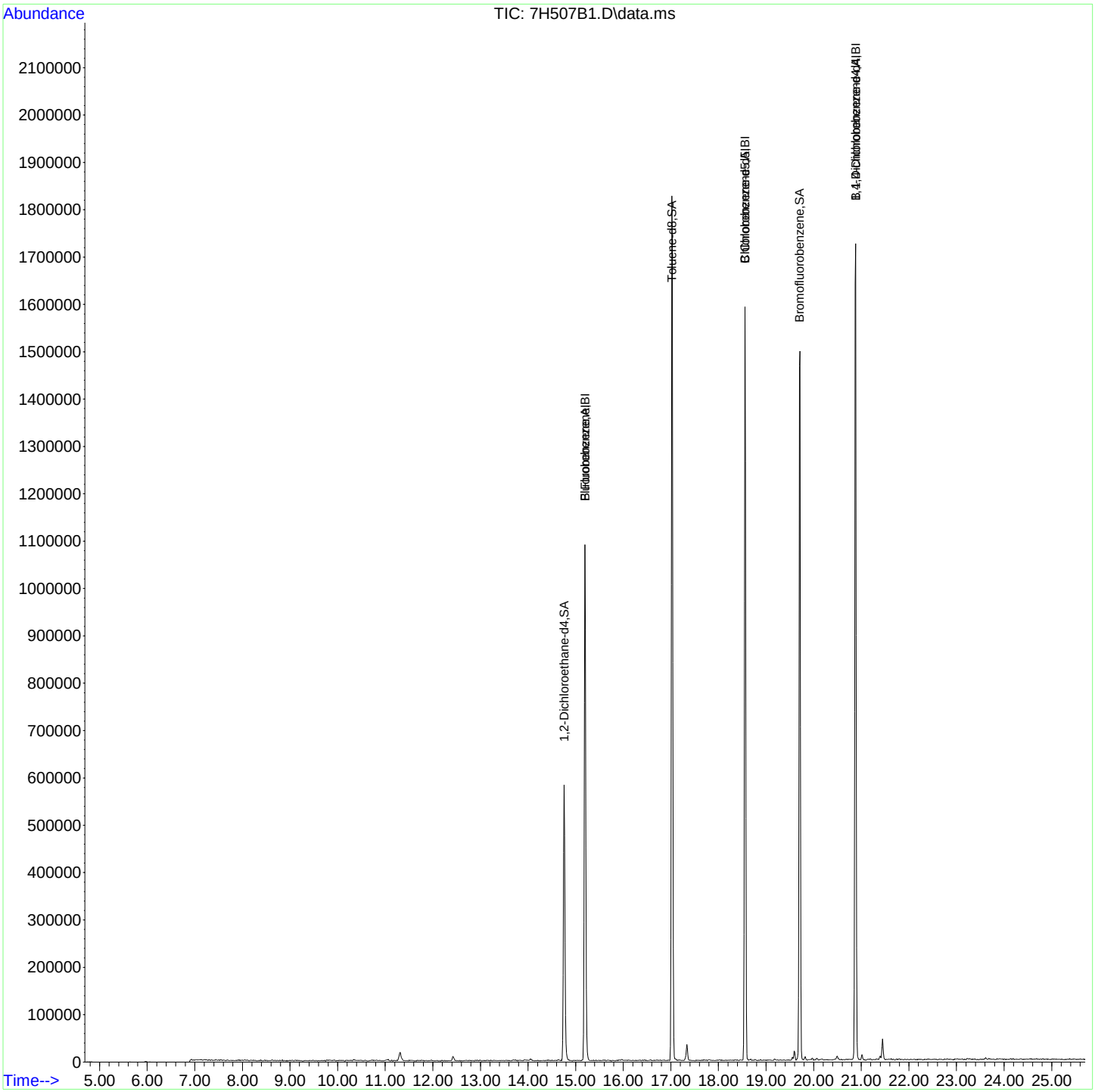
	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
93)	Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.	
94)	Ethyl acetate	13.621	13.682	0.896	43	372	N.D.	
95)	Propionitrile	0.000	13.682	0.000		0	N.D.	
96)	Methacrylonitrile	13.926	13.916	0.916	41	1716	N.D.	
97)	Tetrahydrofuran	14.058	14.037	0.925	42	2949	N.D.	
98)	Isobutyl alcohol	14.637	14.626	0.963	41	1053	N.D.	
99)	Methyl tert-amyl ether	0.000	14.961	0.000		0	N.D.	
100)	Methyl methacrylate	15.966	15.966	1.051	69	732	N.D.	
101)	1,4-Dioxane	0.000	16.047	0.000		0	N.D.	
102)	2-Nitropropane	16.444	16.443	1.082	43	357	N.D.	
104)	Ethyl methacrylate	17.306	17.306	0.933	69	1977	N.D.	
106)	1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107)	cis-1,4-Dichloro-2-butene	19.560	19.560	0.937	53	1963	N.D.	
108)	Cyclohexanone	19.672	19.662	0.942	42	1708	N.D.	
109)	trans-1,4-Dichloro-2-b...	19.824	19.824	0.949	53	2484	N.D.	
110)	Pentachloroethane	20.494	20.494	0.982	167	1676	N.D.	
111)	Benzyl chloride	21.012	21.012	1.006	91	9642	N.D.	
112)	bis(2-Chloroisopropyl)...	21.398	21.398	1.025	45	7237	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H507B1.D
Acq On : 19 Nov 2010 12:41 pm
Operator : AXO1
InstName : VOA7
Sample : |1202270903|1050223|1|VOAF|1|VOA8260LFD|
Misc : BLANK 5mL N/A
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 19 16:00:04 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H507B1.D
Acq On : 19 Nov 2010 12:41 pm
Operator : AXO1
Sample : |1202270903|1050223|1|VOAF|1|VOA8260LFD|
Misc : BLANK 5mL N/A
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

```
  Data Path : C:\msdchem\1\DATA\111910V7\
  Data File : 7H507B1.D
  Acq On    : 19 Nov 2010  12:41 pm
  Operator  : AXO1
  Sample    : |1202270903|1050223|1|VOAF|1|VOA8260LFD|
  Misc      : BLANK 5mL N/A
  ALS Vial  : 7   Sample Multiplier: 1

  Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
  Quant Title  : Volatile Organics 8260B                     SubList :

  TIC Library   : C:\Database\NIST05.L
  TIC Integration Parameters: default.P

                                                     |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202267681**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 14:56**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 14:56**				
Data File:	**111810V7\7H403L1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		40.8	ug/L	0.300	1.00
74-87-3	Chloromethane		42.8	ug/L	0.300	1.00
75-01-4	Vinyl chloride		40.1	ug/L	0.500	1.00
74-83-9	Bromomethane		41.6	ug/L	0.300	1.00
75-00-3	Chloroethane		48.4	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane		49.8	ug/L	0.300	1.00
60-29-7	Ethyl ether		38.6	ug/L	0.300	1.00
67-64-1	Acetone		321	ug/L	3.50	10.0
75-05-8	Acetonitrile		1130	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene		45.8	ug/L	0.300	1.00
74-88-4	Iodomethane		226	ug/L	1.25	5.00
75-09-2	Methylene chloride		44.6	ug/L	3.00	10.0
75-15-0	Carbon disulfide		227	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether		43.0	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene		46.8	ug/L	0.300	1.00
108-05-4	Vinyl acetate		245	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane		45.7	ug/L	0.300	1.00
78-93-3	2-Butanone		270	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene		43.2	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane		51.5	ug/L	0.300	1.00
67-66-3	Chloroform		48.1	ug/L	0.250	1.00
74-97-5	Bromochloromethane		46.1	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane		53.7	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene		49.8	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol		4850	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride		54.1	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane		47.8	ug/L	0.250	1.00
71-43-2	Benzene		48.7	ug/L	0.300	1.00
79-01-6	Trichloroethylene		48.1	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane		44.0	ug/L	0.250	1.00
75-27-4	Bromodichloromethane		50.1	ug/L	0.250	1.00
74-95-3	Dibromomethane		47.6	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone		226	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		49.0	ug/L	0.250	1.00
108-88-3	Toluene		44.5	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene		49.4	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane		46.0	ug/L	0.250	1.00
591-78-6	2-Hexanone		246	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202267681**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 14:56**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 14:56**				
Data File:	**111810V7\7H403L1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane		43.1	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene		53.1	ug/L	0.300	1.00
124-48-1	Dibromochloromethane		49.7	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane		47.9	ug/L	0.250	1.00
108-90-7	Chlorobenzene		47.5	ug/L	0.250	1.00
100-41-4	Ethylbenzene		46.4	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes		91.6	ug/L	0.500	2.00
95-47-6	o-Xylene		45.0	ug/L	0.300	1.00
100-42-5	Styrene		45.5	ug/L	0.250	1.00
75-25-2	Bromoform		50.5	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane		47.3	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane		53.0	ug/L	0.300	1.00
108-86-1	Bromobenzene		46.6	ug/L	0.250	1.00
103-65-1	n-Propylbenzene		46.6	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene		46.5	ug/L	0.250	1.00
98-82-8	Isopropylbenzene		48.3	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene		47.5	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene		48.5	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene		48.9	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene		47.8	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene		49.8	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene		50.2	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene		47.1	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene		46.8	ug/L	0.250	1.00
104-51-8	n-Butylbenzene		50.8	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane		52.0	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene		51.2	ug/L	0.300	1.00
91-20-3	Naphthalene		48.0	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene		51.2	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202267681**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 14:56**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 14:56**				
Data File:	**111810V7\7H403L1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane		47.9	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene		49.6	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene		47.3	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	53.5	50.0	ug/L	107	(71%-130%)
Bromofluorobenzene	51.8	50.0	ug/L	104	(80%-120%)
Toluene-d8	49.7	50.0	ug/L	99.4	(80%-120%)

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H403L1.D
Acq On : 18 Nov 2010 2:56 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267681|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 18 15:30:49 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	965983	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	821820	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	557255	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	965983	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	821820	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	557255	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	501783	53.54	ug/L	0.00
43) Toluene-d8	17.032	17.032	0.918	98	1266976	49.72	ug/L	0.00
61) Bromofluorobenzene	19.712	19.712	0.944	95	592274	51.78	ug/L	0.00

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	107.08%
43) Toluene-d8	50.000	80 - 120	99.44%
61) Bromofluorobenzene	50.000	80 - 120	103.56%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333	85	247098	40.81	ug/L	100
3) Chloromethane	5.638	5.638	0.371	50	506390	42.79	ug/L	99
4) Vinyl chloride	6.054	6.054	0.398	62	282808	40.07	ug/L	100
5) Bromomethane	7.256	7.266	0.478	94	225623	41.59	ug/L	97
6) Chloroethane	7.672	7.682	0.505	64	248756	48.36	ug/L	100
7) Trichlorofluoromethane	8.626	8.637	0.568	101	427894	49.83	ug/L	99
8) Ethyl ether	9.550	9.550	0.629	59	315597	38.61	ug/L	97
9) Acetone	10.271	10.271	0.676	43	1901672	320.88	ug/L	97
10) 1,1-Dichloroethylene	10.159	10.159	0.669	61	503433	45.82	ug/L	98
11) Iodomethane	10.525	10.525	0.693	142	2112817	225.73	ug/L	98
12) Acetonitrile	10.931	10.931	0.719	41	1722618	1127.21	ug/L	99
13) Methyl acetate	11.083	11.083	0.729	43	1928554	211.33	ug/L	99
14) Carbon disulfide	10.687	10.698	0.703	76	3661077	226.58	ug/L	100
15) Methylene chloride	11.307	11.307	0.744	84	290329	44.60	ug/L	97
16) tert-Butyl methyl ether	11.885	11.885	0.782	73	798947	43.02	ug/L	98
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782	61	497494	46.83	ug/L	99
18) Vinyl acetate	12.728	12.728	0.838	43	4334028	244.93	ug/L	99
19) 1,1-Dichloroethane	12.667	12.667	0.834	63	605143	45.67	ug/L	99
20) 2-Butanone	13.591	13.591	0.894	43	2090352	270.46	ug/L	98
21) cis-1,2-Dichloroethylene	13.611	13.611	0.896	96	266947	43.24	ug/L	97
22) 2,2-Dichloropropane	13.621	13.621	0.896	77	346938	51.45	ug/L	95
23) Bromochloromethane	13.966	13.966	0.919	128	145182	46.09	ug/L	98
24) Chloroform	14.068	14.068	0.926	83	522595	48.11	ug/L	100
25) 1,1,1-Trichloroethane	14.362	14.362	0.945	97	455229	53.72	ug/L	98
26) Cyclohexane	14.464	14.464	0.952	56	629360	47.58	ug/L	99
27) 1,1-Dichloropropene	14.575	14.576	0.959	75	367061	49.77	ug/L	96
28) Carbon tetrachloride	14.606	14.606	0.961	117	397514	54.14	ug/L	99
30) 1,2-Dichloroethane	14.860	14.860	0.978	62	552971	47.80	ug/L	100
31) Benzene	14.860	14.860	0.978	78	954221	48.72	ug/L	98
32) Cyclohexene	15.002	15.002	0.987	67	495761	45.69	ug/L	97
33) n-Butyl alcohol	15.449	15.449	1.017	56	1614402	4851.12	ug/L	94
34) Trichloroethylene	15.652	15.652	1.030	95	279612	48.08	ug/L	99
35) 1,2-Dichloropropane	15.916	15.916	1.047	63	338774	43.97	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H403L1.D
Acq On : 18 Nov 2010 2:56 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267681|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 18 15:30:49 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units		
36) Methylcyclohexane	15.916	15.916	1.047	83	416980	47.68	ug/L		98
37) Dibromomethane	16.068	16.068	1.057	93	198440	47.63	ug/L		99
38) Bromodichloromethane	16.220	16.220	1.067	83	436143	50.10	ug/L		100
39) 2-Chloroethylvinyl ether	16.494	16.494	1.086	63	888205	195.68	ug/L		100
40) cis-1,3-Dichloropropylene	16.707	16.707	1.100	75	497824	49.01	ug/L		96
42) 4-Methyl-2-pentanone	16.829	16.829	0.907	58	911201	226.08	ug/L		89
44) Toluene	17.103	17.103	0.922	91	1073487	44.47	ug/L		100
45) trans-1,3-Dichloroprop...	17.276	17.276	0.931	75	486113	49.36	ug/L		98
46) 1,1,2-Trichloroethane	17.499	17.499	0.943	83	229540	46.03	ug/L		98
47) 2-Hexanone	17.692	17.692	0.953	43	2630774	246.05	ug/L		97
48) 1,3-Dichloropropane	17.682	17.682	0.953	76	423217	43.12	ug/L	#	82
49) Tetrachloroethylene	17.712	17.702	0.955	164	216637	53.08	ug/L		97
50) Dibromochloromethane	17.956	17.956	0.968	129	339380	49.71	ug/L		97
51) 1,2-Dibromoethane	18.108	18.108	0.976	107	301744	47.88	ug/L		99
52) Chlorobenzene	18.596	18.586	1.002	112	773933	47.50	ug/L		100
53) 1,1,1,2-Tetrachloroethane	18.646	18.646	1.005	131	300889	47.90	ug/L		99
54) Ethylbenzene	18.657	18.657	1.005	91	1272748	46.35	ug/L		99
55) m,p-Xylenes	18.768	18.758	1.011	106	977708	91.61	ug/L		97
56) o-Xylene	19.174	19.174	1.033	106	496358	44.96	ug/L		98
57) Styrene	19.184	19.184	1.034	104	831963	45.49	ug/L		98
59) Bromoform	19.428	19.428	0.930	173	285996	50.46	ug/L		97
60) Isopropylbenzene	19.519	19.519	0.935	105	1340520	48.32	ug/L		99
62) 1,1,2,2-Tetrachloroethane	19.783	19.783	0.947	83	427589	47.29	ug/L		99
63) 1,2,3-Trichloropropane	19.865	19.865	0.951	110	126790	52.96	ug/L	#	83
64) Bromobenzene	19.905	19.905	0.953	156	395629	46.62	ug/L		97
65) n-Propylbenzene	19.925	19.926	0.954	91	1576950	46.64	ug/L		99
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	1143708	47.50	ug/L		98
67) 2-Chlorotoluene	20.068	20.068	0.961	126	323593	46.53	ug/L		99
68) 4-Chlorotoluene	20.159	20.159	0.965	91	1095521	48.47	ug/L		99
69) tert-Butylbenzene	20.423	20.423	0.978	134	265246	48.91	ug/L		98
70) 1,2,4-Trimethylbenzene	20.464	20.464	0.980	105	1239444	47.78	ug/L		98
71) sec-Butylbenzene	20.636	20.636	0.988	105	1574100	49.82	ug/L		99
72) 4-Isopropyltoluene	20.758	20.758	0.994	119	1275812	50.19	ug/L		99
73) 1,3-Dichlorobenzene	20.819	20.819	0.997	146	735290	47.12	ug/L		99
74) 1,4-Dichlorobenzene	20.910	20.900	1.001	146	727701	46.83	ug/L		99
75) n-Butylbenzene	21.184	21.184	1.015	91	1315853	50.81	ug/L		100
76) 1,2-Dichlorobenzene	21.326	21.326	1.021	146	734555	47.30	ug/L		99
77) 1,2-Dibromo-3-chloropr...	22.179	22.179	1.062	157	114592	51.97	ug/L		98
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112	180	619989	49.57	ug/L		100
79) Hexachlorobutadiene	23.397	23.397	1.121	225	401923	51.20	ug/L		99
80) Naphthalene	23.611	23.611	1.131	128	1260396	48.02	ug/L		100
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147	180	574987	51.23	ug/L		99
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.			
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.			
85) Acrolein	9.814	9.875	0.646		0m	N.D.	d		
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.			
87) Isopropyl Alcohol	10.677	10.637	0.703		0m	N.D.	d		
88) Allyl chloride	10.931	11.043	0.719		0m	N.D.	d		
89) tert-Butyl Alcohol	11.550	11.530	0.760		0m	N.D.	d		
90) Acrylonitrile	11.875	11.794	0.782		0m	N.D.	d		
91) Isopropyl ether	12.738	12.779	0.838		0m	N.D.	d		
92) 2-Chloro-1,3-butadiene	12.718	12.829	0.837		0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H403L1.D
Acq On : 18 Nov 2010 2:56 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267681|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 18 15:30:49 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

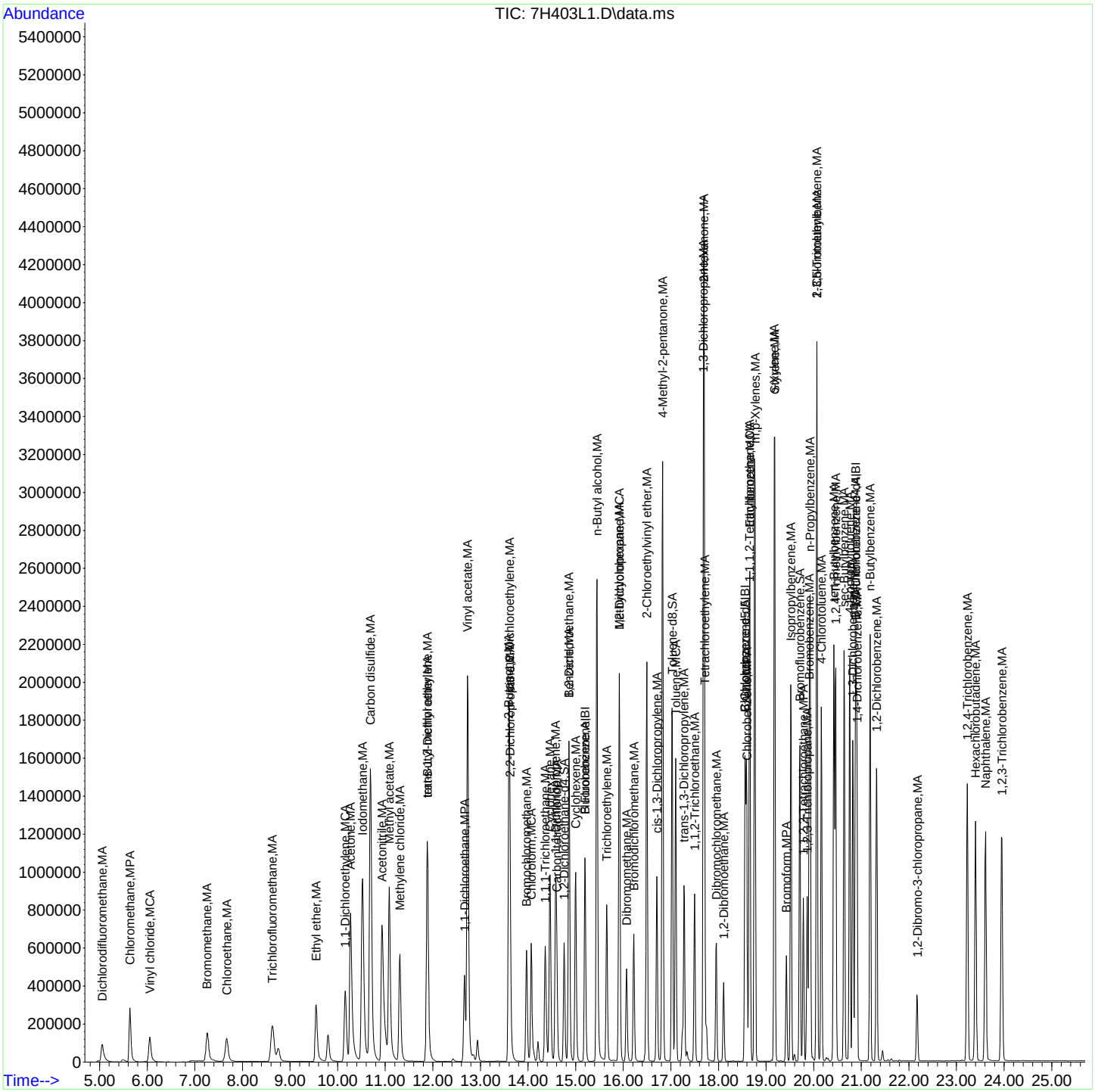
Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
93) Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.	
94) Ethyl acetate	13.591	13.682	0.894		0m	N.D.	d
95) Propionitrile	13.601	13.682	0.895		0m	N.D.	d
96) Methacrylonitrile	13.926	13.916	0.916		0m	N.D.	d
97) Tetrahydrofuran	14.058	14.037	0.925		0m	N.D.	d
98) Isobutyl alcohol	0.000	14.626	0.000		0	N.D.	
99) Methyl tert-amyl ether	15.002	14.961	0.987		0m	N.D.	d
100) Methyl methacrylate	15.916	15.966	1.047		0m	N.D.	d
101) 1,4-Dioxane	16.058	16.047	1.057		0m	N.D.	d
102) 2-Nitropropane	16.494	16.443	1.086		0m	N.D.	d
104) Ethyl methacrylate	17.235	17.306	0.929		0m	N.D.	d
106) 1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107) cis-1,4-Dichloro-2-butene	19.519	19.560	0.935		0m	N.D.	d
108) Cyclohexanone	0.000	19.662	0.000		0	N.D.	
109) trans-1,4-Dichloro-2-b...	19.834	19.824	0.950		0m	N.D.	d
110) Pentachloroethane	20.494	20.494	0.982		0m	N.D.	d
111) Benzyl chloride	21.002	21.012	1.006		0m	N.D.	d
112) bis(2-Chloroisopropyl)...	21.398	21.398	1.025		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H403L1.D
Acq On : 18 Nov 2010 2:56 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267681|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 18 15:30:49 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202267682**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 16:05**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 16:05**				
Data File:	**111810V7\7H405L1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202267682**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 16:05**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 16:05**				
Data File:	**111810V7\7H405L1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein		231	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane		270	ug/L	1.00	5.00
107-05-1	Allyl chloride		232	ug/L	1.50	5.00
107-13-1	Acrylonitrile		215	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene		52.0	ug/L	0.300	1.00
107-12-0	Propionitrile		217	ug/L	1.50	5.00
126-98-7	Methacrylonitrile		219	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol		2290	ug/L	12.5	50.0
80-62-6	Methyl methacrylate		212	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202267682**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/18/2010 16:05**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/18/2010 16:05**				
Data File:	**111810V7\7H405L1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate		206	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	52.3	50.0	ug/L	105	(71%-130%)
Bromofluorobenzene	51.3	50.0	ug/L	103	(80%-120%)
Toluene-d8	50.4	50.0	ug/L	101	(80%-120%)

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H405L1.D
Acq On : 18 Nov 2010 4:05 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267682|1050223|1|VOAF|1|VOA8260BLFD|
Misc : LCS 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 23 15:32:14 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	999881	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	860992	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	583285	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	999881	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	860992	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	583285	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	507580	52.32	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1346353	50.43	ug/L	-0.01
61) Bromofluorobenzene	19.712	19.712	0.944	95	614477	51.32	ug/L	0.00

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	104.64%
43) Toluene-d8	50.000	80 - 120	100.86%
61) Bromofluorobenzene	50.000	80 - 120	102.64%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333		0m	N.D.	d	
3) Chloromethane	5.638	5.638	0.371		0m	N.D.	d	
4) Vinyl chloride	6.054	6.054	0.398		0m	N.D.	d	
5) Bromomethane	7.286	7.266	0.480		0m	N.D.	d	
6) Chloroethane	7.662	7.682	0.504		0m	N.D.	d	
7) Trichlorofluoromethane	8.616	8.637	0.567		0m	N.D.	d	
8) Ethyl ether	9.571	9.550	0.630		0m	N.D.	d	
9) Acetone	10.231	10.271	0.673		0m	N.D.	d	
10) 1,1-Dichloroethylene	10.241	10.159	0.674		0m	N.D.	d	
11) Iodomethane	10.525	10.525	0.693		0m	N.D.	d	
12) Acetonitrile	11.043	10.931	0.727		0m	N.D.	d	
13) Methyl acetate	11.114	11.083	0.731		0m	N.D.	d	
14) Carbon disulfide	10.687	10.698	0.703		0m	N.D.	d	
15) Methylene chloride	11.307	11.307	0.744		0m	N.D.	d	
16) tert-Butyl methyl ether	11.895	11.885	0.783		0m	N.D.	d	
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782		0m	N.D.	d	
18) Vinyl acetate	12.738	12.728	0.838		0m	N.D.	d	
19) 1,1-Dichloroethane	12.667	12.667	0.834		0m	N.D.	d	
20) 2-Butanone	13.682	13.591	0.900		0m	N.D.	d	
21) cis-1,2-Dichloroethylene	13.601	13.611	0.895		0m	N.D.	d	
22) 2,2-Dichloropropane	13.621	13.621	0.896		0m	N.D.	d	
23) Bromochloromethane	13.956	13.966	0.918		0m	N.D.	d	
24) Chloroform	14.068	14.068	0.926		0m	N.D.	d	
25) 1,1,1-Trichloroethane	14.352	14.362	0.945		0m	N.D.	d	
26) Cyclohexane	14.464	14.464	0.952		0m	N.D.	d	
27) 1,1-Dichloropropene	14.576	14.576	0.959		0m	N.D.	d	
28) Carbon tetrachloride	14.606	14.606	0.961		0m	N.D.	d	
30) 1,2-Dichloroethane	14.860	14.860	0.978		0m	N.D.	d	
31) Benzene	14.870	14.860	0.979		0m	N.D.	d	
32) Cyclohexene	14.992	15.002	0.987		0m	N.D.	d	
33) n-Butyl alcohol	15.449	15.449	1.017		0m	N.D.	d	
34) Trichloroethylene	15.652	15.652	1.030		0m	N.D.	d	
35) 1,2-Dichloropropane	15.926	15.916	1.048		0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H405L1.D
Acq On : 18 Nov 2010 4:05 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267682|1050223|1|VOAF|1|VOA8260BLFD|
Misc : LCS 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 23 15:32:14 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
36) Methylcyclohexane	15.916	15.916	1.047		0m	N.D.	d	
37) Dibromomethane	16.068	16.068	1.057		0m	N.D.	d	
38) Bromodichloromethane	16.220	16.220	1.067		0m	N.D.	d	
39) 2-Chloroethylvinyl ether	16.504	16.494	1.086		0m	N.D.	d	
40) cis-1,3-Dichloropropylene	16.707	16.707	1.100		0m	N.D.	d	
42) 4-Methyl-2-pentanone	16.829	16.829	0.907		0m	N.D.	d	
44) Toluene	17.103	17.103	0.922		0m	N.D.	d	
45) trans-1,3-Dichloroprop...	17.286	17.276	0.932		0m	N.D.	d	
46) 1,1,2-Trichloroethane	17.499	17.499	0.943		0m	N.D.	d	
47) 2-Hexanone	17.692	17.692	0.953		0m	N.D.	d	
48) 1,3-Dichloropropane	17.682	17.682	0.953		0m	N.D.	d	
49) Tetrachloroethylene	17.702	17.702	0.954		0m	N.D.	d	
50) Dibromochloromethane	17.946	17.956	0.967		0m	N.D.	d	
51) 1,2-Dibromoethane	18.108	18.108	0.976		0m	N.D.	d	
52) Chlorobenzene	18.585	18.586	1.002		0m	N.D.	d	
53) 1,1,1,2-Tetrachloroethane	18.646	18.646	1.005		0m	N.D.	d	
54) Ethylbenzene	18.657	18.657	1.005		0m	N.D.	d	
55) m,p-Xylenes	18.768	18.758	1.011		0m	N.D.	d	
56) o-Xylene	19.184	19.174	1.034		0m	N.D.	d	
57) Styrene	19.184	19.184	1.034		0m	N.D.	d	
59) Bromoform	19.428	19.428	0.930		0m	N.D.	d	
60) Isopropylbenzene	19.519	19.519	0.935		0m	N.D.	d	
62) 1,1,2,2-Tetrachloroethane	19.783	19.783	0.947		0m	N.D.	d	
63) 1,2,3-Trichloropropane	19.865	19.865	0.951		0m	N.D.	d	
64) Bromobenzene	19.915	19.905	0.954		0m	N.D.	d	
65) n-Propylbenzene	19.926	19.926	0.954		0m	N.D.	d	
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961		0m	N.D.	d	
67) 2-Chlorotoluene	20.068	20.068	0.961		0m	N.D.	d	
68) 4-Chlorotoluene	20.159	20.159	0.965		0m	N.D.	d	
69) tert-Butylbenzene	20.423	20.423	0.978		0m	N.D.	d	
70) 1,2,4-Trimethylbenzene	20.453	20.464	0.980		0m	N.D.	d	
71) sec-Butylbenzene	20.636	20.636	0.988		0m	N.D.	d	
72) 4-Isopropyltoluene	20.758	20.758	0.994		0m	N.D.	d	
73) 1,3-Dichlorobenzene	20.819	20.819	0.997		0m	N.D.	d	
74) 1,4-Dichlorobenzene	20.910	20.900	1.001		0m	N.D.	d	
75) n-Butylbenzene	21.184	21.184	1.015		0m	N.D.	d	
76) 1,2-Dichlorobenzene	21.326	21.326	1.021		0m	N.D.	d	
77) 1,2-Dibromo-3-chloropr...	22.169	22.179	1.062		0m	N.D.	d	
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112		0m	N.D.	d	
79) Hexachlorobutadiene	23.397	23.397	1.121		0m	N.D.	d	
80) Naphthalene	23.611	23.611	1.131		0m	N.D.	d	
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147		0m	N.D.	d	
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.		
85) Acrolein	9.865	9.875	0.649	56	414981	231.03	ug/L	96
86) Trichlorotrifluoroethane	10.231	10.220	0.673	85	616517	270.42	ug/L	98
87) Isopropyl Alcohol	10.718	10.637	0.705	45	174	N.D.		
88) Allyl chloride	11.043	11.043	0.727	41	3228328	232.19	ug/L	98
89) tert-Butyl Alcohol	11.571	11.530	0.761	59	341	N.D.		
90) Acrylonitrile	11.794	11.794	0.776	53	868486	215.06	ug/L	100
91) Isopropyl ether	12.789	12.779	0.842	45	803	N.D.		
92) 2-Chloro-1,3-butadiene	12.829	12.829	0.844	53	654638	51.97	ug/L	95

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H405L1.D
Acq On : 18 Nov 2010 4:05 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267682|1050223|1|VOAF|1|VOA8260BLFD|
Misc : LCS 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 23 15:32:14 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

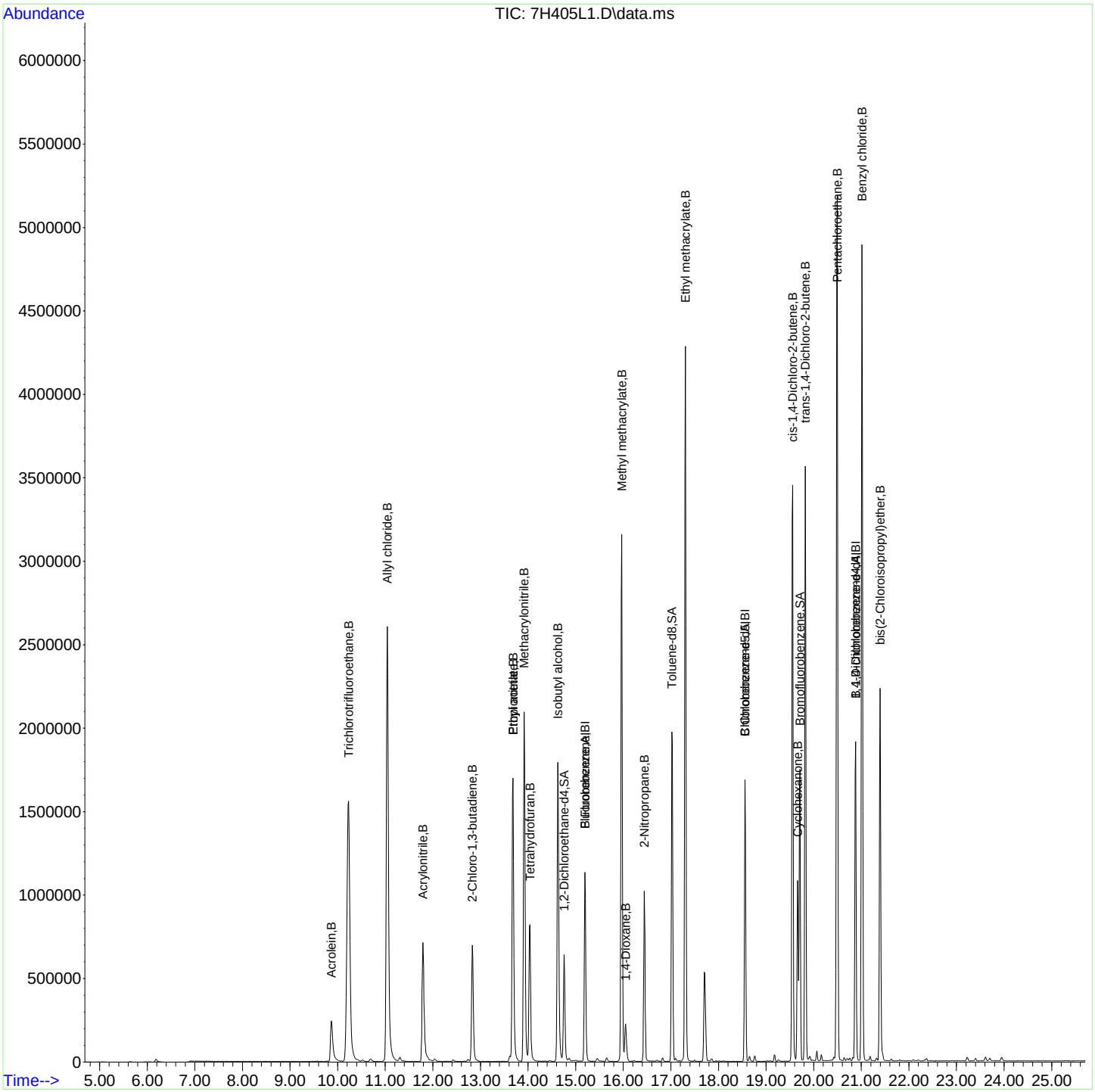
Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
93) Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.		
94) Ethyl acetate	13.682	13.682	0.900	43	2340976	221.50	ug/L	99
95) Propionitrile	13.682	13.682	0.900	54	349693	216.76	ug/L	99
96) Methacrylonitrile	13.916	13.916	0.916	41	1430683	218.60	ug/L	100
97) Tetrahydrofuran	14.037	14.037	0.924	42	766667	208.50	ug/L	99
98) Isobutyl alcohol	14.626	14.626	0.963	41	1000551	2290.68	ug/L	99
99) Methyl tert-amyl ether	14.961	14.961	0.985	73	167	N.D.		
100) Methyl methacrylate	15.966	15.966	1.051	69	952661	211.84	ug/L	95
101) 1,4-Dioxane	16.048	16.047	1.056	88	163229	2404.65	ug/L	100
102) 2-Nitropropane	16.443	16.443	1.082	43	839688	250.09	ug/L	100
104) Ethyl methacrylate	17.306	17.306	0.933	69	1782348	206.13	ug/L	96
106) 1-Chlorohexane	0.000	18.474	0.000		0	N.D.		
107) cis-1,4-Dichloro-2-butene	19.560	19.560	0.937	53	1087329	243.82	ug/L	99
108) Cyclohexanone	19.662	19.662	0.942	42	390380	1055.56	ug/L	97
109) trans-1,4-Dichloro-2-b...	19.824	19.824	0.949	53	1025849	273.35	ug/L	98
110) Pentachloroethane	20.494	20.494	0.982	167	1273639	260.93	ug/L	99
111) Benzyl chloride	21.012	21.012	1.006	91	3672484	281.98	ug/L	99
112) bis(2-Chloroisopropyl)...	21.398	21.398	1.025	45	1842603	242.91	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H405L1.D
Acq On : 18 Nov 2010 4:05 pm
Operator : AXO1
InstName : VOA7
Sample : |1202267682|1050223|1|VOAF|1|VOA8260BLFD|
Misc : LCS 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 23 15:32:14 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202270904**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 10:24**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 10:24**				
Data File:	**111910V7\7H503LCS.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		38.7	ug/L	0.300	1.00
74-87-3	Chloromethane		40.8	ug/L	0.300	1.00
75-01-4	Vinyl chloride		38.9	ug/L	0.500	1.00
74-83-9	Bromomethane		39.9	ug/L	0.300	1.00
75-00-3	Chloroethane		45.8	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane		48.8	ug/L	0.300	1.00
60-29-7	Ethyl ether		37.1	ug/L	0.300	1.00
67-64-1	Acetone		302	ug/L	3.50	10.0
75-05-8	Acetonitrile		1000	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene		46.2	ug/L	0.300	1.00
74-88-4	Iodomethane		221	ug/L	1.25	5.00
75-09-2	Methylene chloride		44.3	ug/L	3.00	10.0
75-15-0	Carbon disulfide		223	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether		41.9	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene		45.6	ug/L	0.300	1.00
108-05-4	Vinyl acetate		231	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane		45.2	ug/L	0.300	1.00
78-93-3	2-Butanone		253	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene		41.7	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane		51.2	ug/L	0.300	1.00
67-66-3	Chloroform		47.8	ug/L	0.250	1.00
74-97-5	Bromochloromethane		45.9	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane		52.8	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene		48.7	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol		4360	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride		53.1	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane		47.1	ug/L	0.250	1.00
71-43-2	Benzene		47.7	ug/L	0.300	1.00
79-01-6	Trichloroethylene		47.3	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane		43.2	ug/L	0.250	1.00
75-27-4	Bromodichloromethane		49.8	ug/L	0.250	1.00
74-95-3	Dibromomethane		46.7	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone		212	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		48.0	ug/L	0.250	1.00
108-88-3	Toluene		43.5	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene		47.8	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane		44.6	ug/L	0.250	1.00
591-78-6	2-Hexanone		236	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202270904**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 10:24**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 10:24**				
Data File:	**111910V7\7H503LCS.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane		41.7	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene		51.8	ug/L	0.300	1.00
124-48-1	Dibromochloromethane		47.6	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane		45.1	ug/L	0.250	1.00
108-90-7	Chlorobenzene		45.9	ug/L	0.250	1.00
100-41-4	Ethylbenzene		46.1	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes		88.9	ug/L	0.500	2.00
95-47-6	o-Xylene		44.2	ug/L	0.300	1.00
100-42-5	Styrene		44.3	ug/L	0.250	1.00
75-25-2	Bromoform		46.6	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane		43.7	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane		48.7	ug/L	0.300	1.00
108-86-1	Bromobenzene		44.7	ug/L	0.250	1.00
103-65-1	n-Propylbenzene		45.1	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene		44.8	ug/L	0.250	1.00
98-82-8	Isopropylbenzene		46.3	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene		45.4	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene		46.7	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene		46.8	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene		45.3	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene		47.2	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene		47.5	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene		44.6	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene		44.8	ug/L	0.250	1.00
104-51-8	n-Butylbenzene		47.8	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane		45.7	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene		48.4	ug/L	0.300	1.00
91-20-3	Naphthalene		43.6	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene		48.3	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202270904**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 10:24**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 10:24**				
Data File:	**111910V7\7H503LCS.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane		47.3	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene		46.5	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene		44.8	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	50.5	50.0	ug/L	101	(71%-130%)
Bromofluorobenzene	49.3	50.0	ug/L	98.6	(80%-120%)
Toluene-d8	47.6	50.0	ug/L	95.2	(80%-120%)

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H503LCS.D
Acq On : 19 Nov 2010 10:24 am
Operator : AXO1
InstName : VOA7
Sample : |1202270904|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 19 12:13:55 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	15.195	15.195	1.000	96	985895	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	847378	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	584022	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	985895	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	847378	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	584022	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	482658	50.46	ug/L	0.00
43) Toluene-d8	17.032	17.032	0.918	98	1251276	47.62	ug/L	0.00
61) Bromofluorobenzene	19.712	19.712	0.944	95	591239	49.32	ug/L	0.00

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	100.92%
43) Toluene-d8	50.000	80 - 120	95.24%
61) Bromofluorobenzene	50.000	80 - 120	98.64%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333	85	239062	38.67	ug/L	100
3) Chloromethane	5.638	5.638	0.371	50	492349	40.76	ug/L	98
4) Vinyl chloride	6.054	6.054	0.398	62	280173	38.89	ug/L	99
5) Bromomethane	7.266	7.266	0.478	94	220937	39.90	ug/L	99
6) Chloroethane	7.672	7.682	0.505	64	240335	45.77	ug/L	100
7) Trichlorofluoromethane	8.627	8.637	0.568	101	427842	48.82	ug/L	98
8) Ethyl ether	9.550	9.550	0.629	59	309223	37.06	ug/L	96
9) Acetone	10.271	10.271	0.676	43	1831464	302.23	ug/L	96
10) 1,1-Dichloroethylene	10.160	10.159	0.669	61	517734	46.17	ug/L	99
11) Iodomethane	10.525	10.525	0.693	142	2109808	220.86	ug/L	98
12) Acetonitrile	10.931	10.931	0.719	41	1563384	1002.35	ug/L	99
13) Methyl acetate	11.083	11.083	0.729	43	1822203	195.64	ug/L	99
14) Carbon disulfide	10.687	10.698	0.703	76	3681602	223.25	ug/L	100
15) Methylene chloride	11.307	11.307	0.744	84	294593	44.32	ug/L	97
16) tert-Butyl methyl ether	11.885	11.885	0.782	73	793329	41.85	ug/L	98
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782	61	494546	45.61	ug/L	99
18) Vinyl acetate	12.728	12.728	0.838	43	4176891	231.28	ug/L	99
19) 1,1-Dichloroethane	12.667	12.667	0.834	63	611264	45.20	ug/L	99
20) 2-Butanone	13.591	13.591	0.894	43	1995897	253.02	ug/L	97
21) cis-1,2-Dichloroethylene	13.611	13.611	0.896	96	262860	41.71	ug/L	94
22) 2,2-Dichloropropane	13.621	13.621	0.896	77	352530	51.22	ug/L	98
23) Bromochloromethane	13.966	13.966	0.919	128	147492	45.88	ug/L	100
24) Chloroform	14.068	14.068	0.926	83	529934	47.80	ug/L	99
25) 1,1,1-Trichloroethane	14.362	14.362	0.945	97	456548	52.79	ug/L	99
26) Cyclohexane	14.464	14.464	0.952	56	642167	47.57	ug/L	100
27) 1,1-Dichloropropene	14.576	14.576	0.959	75	366694	48.72	ug/L	95
28) Carbon tetrachloride	14.606	14.606	0.961	117	397636	53.07	ug/L	99
30) 1,2-Dichloroethane	14.860	14.860	0.978	62	556498	47.14	ug/L	99
31) Benzene	14.860	14.860	0.978	78	953651	47.69	ug/L	97
32) Cyclohexene	15.002	15.002	0.987	67	503130	45.43	ug/L	98
33) n-Butyl alcohol	15.449	15.449	1.017	56	1479598	4356.25	ug/L	94
34) Trichloroethylene	15.652	15.652	1.030	95	280735	47.29	ug/L	98
35) 1,2-Dichloropropane	15.916	15.916	1.047	63	340086	43.24	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H503LCS.D
Acq On : 19 Nov 2010 10:24 am
Operator : AXO1
InstName : VOA7
Sample : |1202270904|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 19 12:13:55 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
36) Methylcyclohexane	15.916	15.916	1.047	83	413073	46.28	ug/L	97
37) Dibromomethane	16.068	16.068	1.057	93	198421	46.66	ug/L	98
38) Bromodichloromethane	16.220	16.220	1.067	83	442842	49.84	ug/L	100
39) 2-Chloroethylvinyl ether	16.494	16.494	1.086	63	851233	183.32	ug/L	100
40) cis-1,3-Dichloropropylene	16.707	16.707	1.100	75	497213	47.96	ug/L	96
42) 4-Methyl-2-pentanone	16.829	16.829	0.907	58	879515	211.64	ug/L	90
44) Toluene	17.103	17.103	0.922	91	1082941	43.50	ug/L	99
45) trans-1,3-Dichloroprop...	17.276	17.276	0.931	75	485401	47.80	ug/L	98
46) 1,1,2-Trichloroethane	17.499	17.499	0.943	83	229440	44.62	ug/L	99
47) 2-Hexanone	17.692	17.692	0.953	43	2599769	235.82	ug/L	97
48) 1,3-Dichloropropane	17.682	17.682	0.953	76	421559	41.65	ug/L	83
49) Tetrachloroethylene	17.702	17.702	0.954	164	218253	51.83	ug/L	97
50) Dibromochloromethane	17.956	17.956	0.968	129	334849	47.57	ug/L	96
51) 1,2-Dibromoethane	18.108	18.108	0.976	107	293247	45.13	ug/L	99
52) Chlorobenzene	18.586	18.586	1.002	112	770640	45.87	ug/L	99
53) 1,1,1,2-Tetrachloroethane	18.646	18.646	1.005	131	306436	47.32	ug/L	99
54) Ethylbenzene	18.657	18.657	1.005	91	1304790	46.08	ug/L	98
55) m,p-Xylenes	18.758	18.758	1.011	106	977726	88.85	ug/L	96
56) o-Xylene	19.174	19.174	1.033	106	503257	44.21	ug/L	98
57) Styrene	19.184	19.184	1.034	104	835645	44.32	ug/L	97
59) Bromoform	19.428	19.428	0.930	173	277030	46.64	ug/L	98
60) Isopropylbenzene	19.520	19.519	0.935	105	1345608	46.28	ug/L	100
62) 1,1,2,2-Tetrachloroethane	19.783	19.783	0.947	83	414443	43.73	ug/L	98
63) 1,2,3-Trichloropropane	19.865	19.865	0.951	110	122266	48.73	ug/L #	88
64) Bromobenzene	19.905	19.905	0.953	156	397960	44.74	ug/L	97
65) n-Propylbenzene	19.926	19.926	0.954	91	1596372	45.05	ug/L	100
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	1146660	45.44	ug/L	98
67) 2-Chlorotoluene	20.068	20.068	0.961	126	326295	44.77	ug/L	99
68) 4-Chlorotoluene	20.159	20.159	0.965	91	1106701	46.72	ug/L	100
69) tert-Butylbenzene	20.423	20.423	0.978	134	265829	46.77	ug/L	99
70) 1,2,4-Trimethylbenzene	20.464	20.464	0.980	105	1231869	45.31	ug/L	99
71) sec-Butylbenzene	20.636	20.636	0.988	105	1563084	47.20	ug/L	99
72) 4-Isopropyltoluene	20.758	20.758	0.994	119	1266227	47.53	ug/L	99
73) 1,3-Dichlorobenzene	20.819	20.819	0.997	146	728667	44.56	ug/L	99
74) 1,4-Dichlorobenzene	20.900	20.900	1.001	146	728744	44.75	ug/L	99
75) n-Butylbenzene	21.184	21.184	1.015	91	1297529	47.81	ug/L	99
76) 1,2-Dichlorobenzene	21.327	21.326	1.021	146	729640	44.83	ug/L	99
77) 1,2-Dibromo-3-chloropr...	22.169	22.179	1.062	157	105668	45.73	ug/L	99
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112	180	610034	46.54	ug/L	99
79) Hexachlorobutadiene	23.398	23.397	1.121	225	397806	48.35	ug/L	99
80) Naphthalene	23.611	23.611	1.131	128	1199751	43.62	ug/L	100
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147	180	568386	48.32	ug/L	99
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.		
85) Acrolein	9.804	9.875	0.645		0m	N.D.	d	
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.		
87) Isopropyl Alcohol	10.687	10.637	0.703		0m	N.D.	d	
88) Allyl chloride	10.931	11.043	0.719		0m	N.D.	d	
89) tert-Butyl Alcohol	11.560	11.530	0.761		0m	N.D.	d	
90) Acrylonitrile	11.885	11.794	0.782		0m	N.D.	d	
91) Isopropyl ether	12.728	12.779	0.838		0m	N.D.	d	
92) 2-Chloro-1,3-butadiene	12.738	12.829	0.838		0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H503LCS.D
Acq On : 19 Nov 2010 10:24 am
Operator : AXO1
InstName : VOA7
Sample : |1202270904|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 19 12:13:55 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

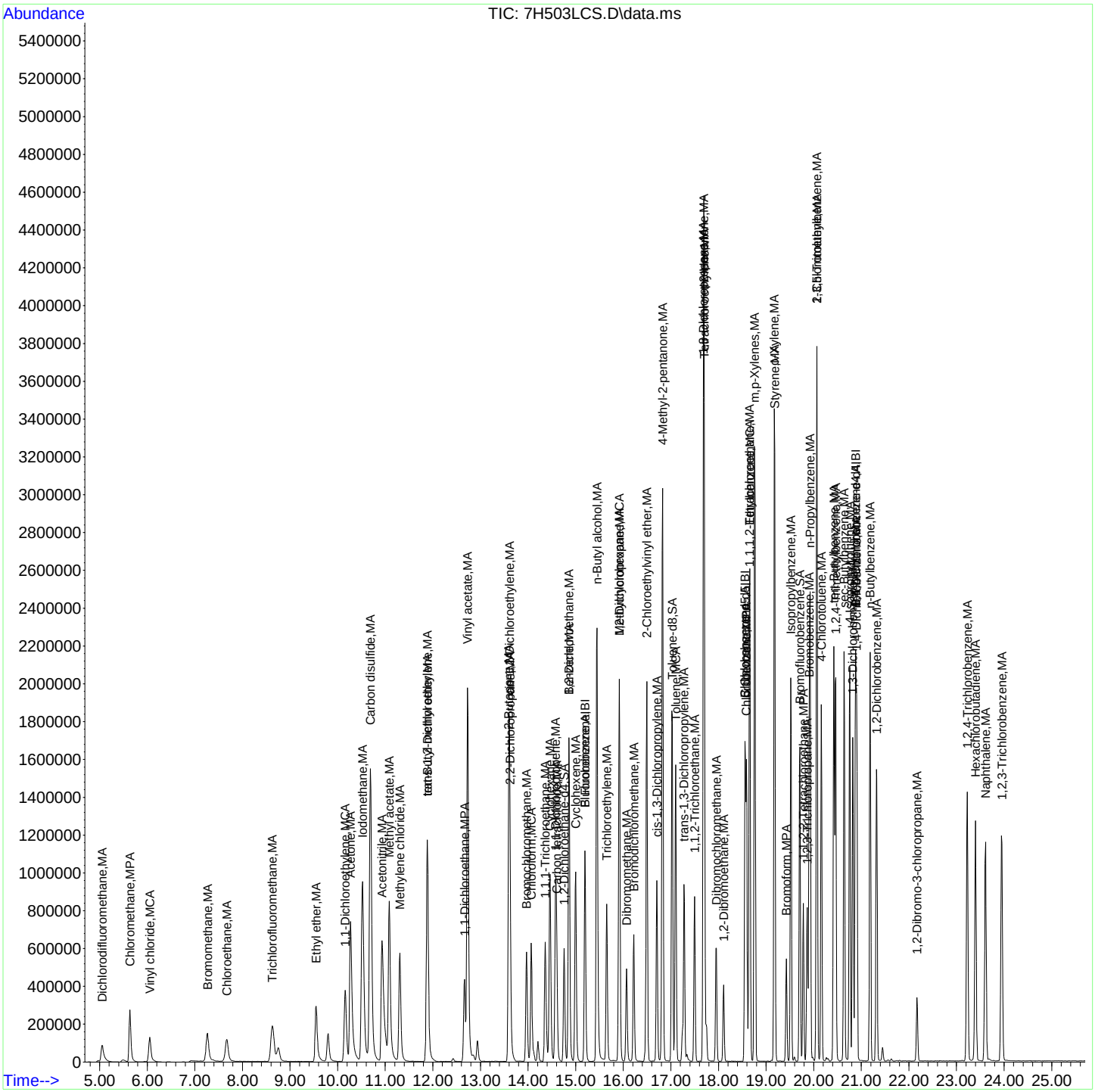
	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
93)	Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.	
94)	Ethyl acetate	13.591	13.682	0.894		0m	N.D.	d
95)	Propionitrile	13.591	13.682	0.894		0m	N.D.	d
96)	Methacrylonitrile	13.916	13.916	0.916		0m	N.D.	d
97)	Tetrahydrofuran	14.058	14.037	0.925		0m	N.D.	d
98)	Isobutyl alcohol	0.000	14.626	0.000		0	N.D.	
99)	Methyl tert-amyl ether	14.992	14.961	0.987		0m	N.D.	d
100)	Methyl methacrylate	15.916	15.966	1.047		0m	N.D.	d
101)	1,4-Dioxane	16.058	16.047	1.057		0m	N.D.	d
102)	2-Nitropropane	16.494	16.443	1.086		0m	N.D.	d
104)	Ethyl methacrylate	17.317	17.306	0.933		0m	N.D.	d
106)	1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107)	cis-1,4-Dichloro-2-butene	19.520	19.560	0.935		0m	N.D.	d
108)	Cyclohexanone	19.641	19.662	0.941		0m	N.D.	d
109)	trans-1,4-Dichloro-2-b...	19.824	19.824	0.949		0m	N.D.	d
110)	Pentachloroethane	20.494	20.494	0.982		0m	N.D.	d
111)	Benzyl chloride	21.012	21.012	1.006		0m	N.D.	d
112)	bis(2-Chloroisopropyl)...	21.448	21.398	1.027		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H503LCS.D
Acq On : 19 Nov 2010 10:24 am
Operator : AXO1
InstName : VOA7
Sample : |1202270904|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[A] 1026-01E/1116-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 19 12:13:55 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202270905**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 11:31**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 11:31**				
Data File:	**111910V7\7H505L1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
67-64-1	Acetone	U	10.0	ug/L	3.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.25	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide	U	5.00	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202270905**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 11:31**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 11:31**				
Data File:	**111910V7\7H505L1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.250	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.500	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.332	1.00
107-02-8	Acrolein		234	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane		263	ug/L	1.00	5.00
107-05-1	Allyl chloride		224	ug/L	1.50	5.00
107-13-1	Acrylonitrile		221	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene		50.9	ug/L	0.300	1.00
107-12-0	Propionitrile		228	ug/L	1.50	5.00
126-98-7	Methacrylonitrile		224	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol		2510	ug/L	12.5	50.0
80-62-6	Methyl methacrylate		215	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202270905**				
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1050223**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 11:31**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 11:31**				
Data File:	**111910V7\7H505L1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate		210	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	52.2	50.0	ug/L	104	(71%-130%)
Bromofluorobenzene	51.2	50.0	ug/L	102	(80%-120%)
Toluene-d8	49.6	50.0	ug/L	99.3	(80%-120%)

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H505L1.D
Acq On : 19 Nov 2010 11:31 am
Operator : AXO1
InstName : VOA7
Sample : |1202270905|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 19 12:15:31 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	966645	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	826328	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	555666	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	966645	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	826328	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	555666	50.00	ug/L	0.00
System Monitoring Compounds								
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	489138	52.16	ug/L	0.00
43) Toluene-d8	17.022	17.032	0.917	98	1272006	49.64	ug/L	-0.01
61) Bromofluorobenzene	19.712	19.712	0.944	95	583448	51.15	ug/L	0.00

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	104.32%
43) Toluene-d8	50.000	80 - 120	99.28%
61) Bromofluorobenzene	50.000	80 - 120	102.30%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333		0m	N.D.	d	
3) Chloromethane	5.638	5.638	0.371		0m	N.D.	d	
4) Vinyl chloride	6.054	6.054	0.398		0m	N.D.	d	
5) Bromomethane	7.276	7.266	0.479		0m	N.D.	d	
6) Chloroethane	7.662	7.682	0.504		0m	N.D.	d	
7) Trichlorofluoromethane	8.627	8.637	0.568		0m	N.D.	d	
8) Ethyl ether	9.571	9.550	0.630		0m	N.D.	d	
9) Acetone	10.220	10.271	0.673		0m	N.D.	d	
10) 1,1-Dichloroethylene	10.180	10.159	0.670		0m	N.D.	d	
11) Iodomethane	10.525	10.525	0.693		0m	N.D.	d	
12) Acetonitrile	11.043	10.931	0.727		0m	N.D.	d	
13) Methyl acetate	11.053	11.083	0.727		0m	N.D.	d	
14) Carbon disulfide	10.687	10.698	0.703		0m	N.D.	d	
15) Methylene chloride	11.307	11.307	0.744		0m	N.D.	d	
16) tert-Butyl methyl ether	11.895	11.885	0.783		0m	N.D.	d	
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782		0m	N.D.	d	
18) Vinyl acetate	12.738	12.728	0.838		0m	N.D.	d	
19) 1,1-Dichloroethane	12.657	12.667	0.833		0m	N.D.	d	
20) 2-Butanone	13.682	13.591	0.900		0m	N.D.	d	
21) cis-1,2-Dichloroethylene	13.611	13.611	0.896		0m	N.D.	d	
22) 2,2-Dichloropropane	13.621	13.621	0.896		0m	N.D.	d	
23) Bromochloromethane	13.977	13.966	0.920		0m	N.D.	d	
24) Chloroform	14.068	14.068	0.926		0m	N.D.	d	
25) 1,1,1-Trichloroethane	14.362	14.362	0.945		0m	N.D.	d	
26) Cyclohexane	14.454	14.464	0.951		0m	N.D.	d	
27) 1,1-Dichloropropene	14.575	14.576	0.959		0m	N.D.	d	
28) Carbon tetrachloride	14.596	14.606	0.961		0m	N.D.	d	
30) 1,2-Dichloroethane	14.860	14.860	0.978		0m	N.D.	d	
31) Benzene	14.870	14.860	0.979		0m	N.D.	d	
32) Cyclohexene	15.002	15.002	0.987		0m	N.D.	d	
33) n-Butyl alcohol	15.459	15.449	1.017		0m	N.D.	d	
34) Trichloroethylene	15.652	15.652	1.030		0m	N.D.	d	
35) 1,2-Dichloropropane	15.916	15.916	1.047		0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H505L1.D
Acq On : 19 Nov 2010 11:31 am
Operator : AXO1
InstName : VOA7
Sample : |1202270905|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 19 12:15:31 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
36) Methylcyclohexane	15.916	15.916	1.047		0m	N.D.	d	
37) Dibromomethane	16.068	16.068	1.057		0m	N.D.	d	
38) Bromodichloromethane	16.210	16.220	1.067		0m	N.D.	d	
39) 2-Chloroethylvinyl ether	16.494	16.494	1.086		0m	N.D.	d	
40) cis-1,3-Dichloropropylene	16.707	16.707	1.100		0m	N.D.	d	
42) 4-Methyl-2-pentanone	16.829	16.829	0.907		0m	N.D.	d	
44) Toluene	17.103	17.103	0.922		0m	N.D.	d	
45) trans-1,3-Dichloroprop...	17.276	17.276	0.931		0m	N.D.	d	
46) 1,1,2-Trichloroethane	17.499	17.499	0.943		0m	N.D.	d	
47) 2-Hexanone	17.692	17.692	0.953		0m	N.D.	d	
48) 1,3-Dichloropropane	17.682	17.682	0.953		0m	N.D.	d	
49) Tetrachloroethylene	17.702	17.702	0.954		0m	N.D.	d	
50) Dibromochloromethane	17.956	17.956	0.968		0m	N.D.	d	
51) 1,2-Dibromoethane	18.108	18.108	0.976		0m	N.D.	d	
52) Chlorobenzene	18.596	18.586	1.002		0m	N.D.	d	
53) 1,1,1,2-Tetrachloroethane	18.646	18.646	1.005		0m	N.D.	d	
54) Ethylbenzene	18.657	18.657	1.005		0m	N.D.	d	
55) m,p-Xylenes	18.758	18.758	1.011		0m	N.D.	d	
56) o-Xylene	19.184	19.174	1.034		0m	N.D.	d	
57) Styrene	19.184	19.184	1.034		0m	N.D.	d	
59) Bromoform	19.418	19.428	0.930		0m	N.D.	d	
60) Isopropylbenzene	19.519	19.519	0.935		0m	N.D.	d	
62) 1,1,2,2-Tetrachloroethane	19.783	19.783	0.947		0m	N.D.	d	
63) 1,2,3-Trichloropropane	19.875	19.865	0.952		0m	N.D.	d	
64) Bromobenzene	19.905	19.905	0.953		0m	N.D.	d	
65) n-Propylbenzene	19.926	19.926	0.954		0m	N.D.	d	
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961		0m	N.D.	d	
67) 2-Chlorotoluene	20.068	20.068	0.961		0m	N.D.	d	
68) 4-Chlorotoluene	20.159	20.159	0.965		0m	N.D.	d	
69) tert-Butylbenzene	20.423	20.423	0.978		0m	N.D.	d	
70) 1,2,4-Trimethylbenzene	20.464	20.464	0.980		0m	N.D.	d	
71) sec-Butylbenzene	20.646	20.636	0.989		0m	N.D.	d	
72) 4-Isopropyltoluene	20.758	20.758	0.994		0m	N.D.	d	
73) 1,3-Dichlorobenzene	20.819	20.819	0.997		0m	N.D.	d	
74) 1,4-Dichlorobenzene	20.900	20.900	1.001		0m	N.D.	d	
75) n-Butylbenzene	21.184	21.184	1.015		0m	N.D.	d	
76) 1,2-Dichlorobenzene	21.326	21.326	1.021		0m	N.D.	d	
77) 1,2-Dibromo-3-chloropr...	22.179	22.179	1.062		0m	N.D.	d	
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112		0m	N.D.	d	
79) Hexachlorobutadiene	23.397	23.397	1.121		0m	N.D.	d	
80) Naphthalene	23.611	23.611	1.131		0m	N.D.	d	
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147		0m	N.D.	d	
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.		
85) Acrolein	9.875	9.875	0.650	56	405881	233.74	ug/L	96
86) Trichlorotrifluoroethane	10.230	10.220	0.673	85	580217	263.25	ug/L	98
87) Isopropyl Alcohol	10.677	10.637	0.703	45	155	N.D.		
88) Allyl chloride	11.043	11.043	0.727	41	3015502	224.34	ug/L	98
89) tert-Butyl Alcohol	11.530	11.530	0.759	59	724	N.D.		
90) Acrylonitrile	11.794	11.794	0.776	53	862418	220.90	ug/L	99
91) Isopropyl ether	12.779	12.779	0.841	45	417	N.D.		
92) 2-Chloro-1,3-butadiene	12.829	12.829	0.844	53	619954	50.91	ug/L	95

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H505L1.D
Acq On : 19 Nov 2010 11:31 am
Operator : AXO1
InstName : VOA7
Sample : |1202270905|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 19 12:15:31 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

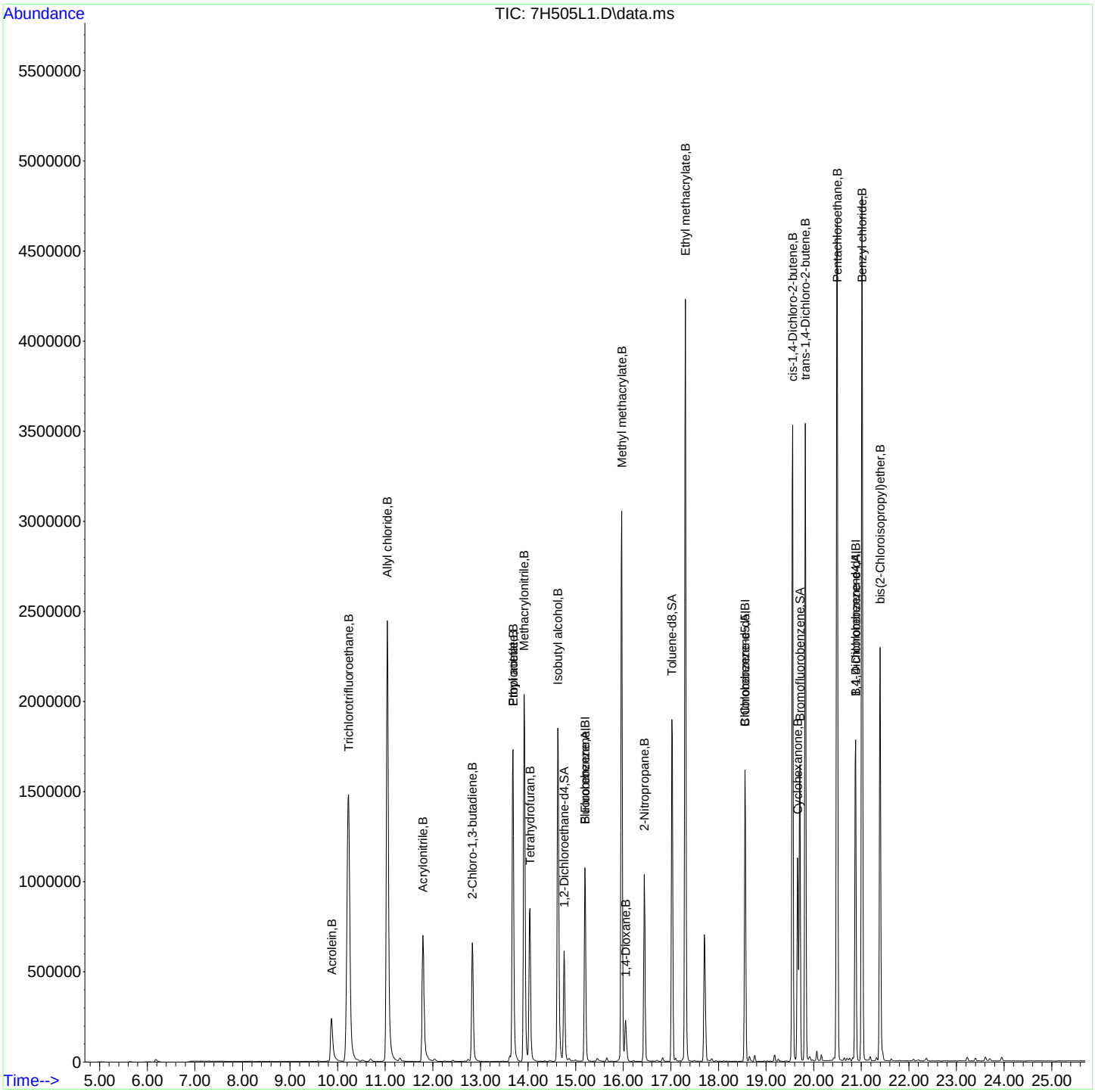
	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
93)	Ethyl tert-butyl ether	13.367	13.367	0.880	59	377	N.D.		
94)	Ethyl acetate	13.682	13.682	0.900	43	2359946	230.98	ug/L	98
95)	Propionitrile	13.682	13.682	0.900	54	355144	227.71	ug/L	99
96)	Methacrylonitrile	13.916	13.916	0.916	41	1414642	223.58	ug/L	100
97)	Tetrahydrofuran	14.037	14.037	0.924	42	779663	219.33	ug/L	98
98)	Isobutyl alcohol	14.626	14.626	0.963	41	1058316	2506.23	ug/L	98
99)	Methyl tert-amyl ether	14.982	14.961	0.986	73	163	N.D.		
100)	Methyl methacrylate	15.966	15.966	1.051	69	933878	214.80	ug/L	95
101)	1,4-Dioxane	16.047	16.047	1.056	88	162076	2469.76	ug/L	97
102)	2-Nitropropane	16.443	16.443	1.082	43	850086	261.90	ug/L	100
104)	Ethyl methacrylate	17.306	17.306	0.933	69	1745946	210.39	ug/L	96
106)	1-Chlorohexane	18.474	18.474	0.885	55	414	N.D.		
107)	cis-1,4-Dichloro-2-butene	19.560	19.560	0.937	53	1079929	254.19	ug/L	99
108)	Cyclohexanone	19.662	19.662	0.942	42	407566	1156.81	ug/L	97
109)	trans-1,4-Dichloro-2-b...	19.824	19.824	0.949	53	1018956	285.01	ug/L	97
110)	Pentachloroethane	20.494	20.494	0.982	167	1162933	250.09	ug/L	98
111)	Benzyl chloride	21.012	21.012	1.006	91	3567806	287.56	ug/L	99
112)	bis(2-Chloroisopropyl)...	21.398	21.398	1.025	45	1889546	261.48	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111910V7\
Data File : 7H505L1.D
Acq On : 19 Nov 2010 11:31 am
Operator : AXO1
InstName : VOA7
Sample : |1202270905|1050223|1|VOAF|1|VOA8260LFD|
Misc : LCS 5mL N/A MIX[B] 1105-01A
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 19 12:15:31 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/09/2010 12:00**	**Matrix:**	**WS**
Lab Sample ID:	**1202267679**	**Date Received:**	**11/11/2010 08:00**		
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**CASA-11-1340PS**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 00:47**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 00:47**				
Data File:	**111810V7\7H420.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		30.5	ug/L	0.300	1.00
74-87-3	Chloromethane		34.2	ug/L	0.300	1.00
75-01-4	Vinyl chloride		29.8	ug/L	0.500	1.00
74-83-9	Bromomethane		40.3	ug/L	0.300	1.00
75-00-3	Chloroethane		42.7	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane		38.1	ug/L	0.300	1.00
60-29-7	Ethyl ether		34.3	ug/L	0.300	1.00
67-64-1	Acetone		115	ug/L	3.50	10.0
75-05-8	Acetonitrile		1010	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene		39.6	ug/L	0.300	1.00
74-88-4	Iodomethane		214	ug/L	1.25	5.00
75-09-2	Methylene chloride		44.0	ug/L	3.00	10.0
75-15-0	Carbon disulfide		208	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether		39.4	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene		40.1	ug/L	0.300	1.00
108-05-4	Vinyl acetate		229	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane		41.2	ug/L	0.300	1.00
78-93-3	2-Butanone		142	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene		41.7	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane		38.9	ug/L	0.300	1.00
67-66-3	Chloroform		49.3	ug/L	0.250	1.00
74-97-5	Bromochloromethane		45.7	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane		44.0	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene		41.2	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol		4140	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride		44.2	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane		45.4	ug/L	0.250	1.00
71-43-2	Benzene		44.9	ug/L	0.300	1.00
79-01-6	Trichloroethylene		43.2	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane		39.9	ug/L	0.250	1.00
75-27-4	Bromodichloromethane		53.7	ug/L	0.250	1.00
74-95-3	Dibromomethane		47.0	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone		188	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		44.8	ug/L	0.250	1.00
108-88-3	Toluene		40.5	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene		45.9	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane		44.7	ug/L	0.250	1.00
591-78-6	2-Hexanone		153	ug/L	1.25	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/09/2010 12:00**	**Matrix:**	**WS**
Lab Sample ID:	**1202267679**	**Date Received:**	**11/11/2010 08:00**		
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**CASA-11-1340PS**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 00:47**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 00:47**				
Data File:	**111810V7\7H420.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane		42.1	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene		45.1	ug/L	0.300	1.00
124-48-1	Dibromochloromethane		52.4	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane		45.5	ug/L	0.250	1.00
108-90-7	Chlorobenzene		44.2	ug/L	0.250	1.00
100-41-4	Ethylbenzene		41.0	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes		81.5	ug/L	0.500	2.00
95-47-6	o-Xylene		40.9	ug/L	0.300	1.00
100-42-5	Styrene		42.3	ug/L	0.250	1.00
75-25-2	Bromoform		45.9	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane		44.9	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane		50.2	ug/L	0.300	1.00
108-86-1	Bromobenzene		42.2	ug/L	0.250	1.00
103-65-1	n-Propylbenzene		39.7	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene		41.8	ug/L	0.250	1.00
98-82-8	Isopropylbenzene		40.7	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene		40.9	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene		43.6	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene		41.1	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene		41.9	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene		41.7	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene		42.3	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene		42.6	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene		42.8	ug/L	0.250	1.00
104-51-8	n-Butylbenzene		42.0	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane		47.1	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene		40.3	ug/L	0.300	1.00
91-20-3	Naphthalene		43.8	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene		45.3	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/09/2010 12:00**	**Matrix:**	**WS**
Lab Sample ID:	**1202267679**	**Date Received:**	**11/11/2010 08:00**		
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**CASA-11-1340PS**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 00:47**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 00:47**				
Data File:	**111810V7\7H420.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane		46.4	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene		42.1	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene		43.3	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	48.7	50.0	ug/L	97.4	(71%-130%)
Bromofluorobenzene	48.5	50.0	ug/L	97.1	(80%-120%)
Toluene-d8	47.5	50.0	ug/L	95.0	(80%-120%)

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H420.D
Acq On : 19 Nov 2010 12:47 am
Operator : AXO1
InstName : VOA7
Sample : |1202267679|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2 MIX[A] MS 266779010
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 19 09:08:51 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	15.195	15.195	1.000	96	899916	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	770756	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	538605	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	899916	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	770756	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	538605	50.00	ug/L	0.00
System Monitoring Compounds								
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	425337	48.72	ug/L	0.00
43) Toluene-d8	17.032	17.032	0.918	98	1135579	47.52	ug/L	0.00
61) Bromofluorobenzene	19.712	19.712	0.944	95	536705	48.54	ug/L	0.00

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	97.44%
43) Toluene-d8	50.000	80 - 120	95.04%
61) Bromofluorobenzene	50.000	80 - 120	97.08%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333	85	172205	30.47	ug/L	99
3) Chloromethane	5.638	5.638	0.371	50	376622	34.16	ug/L	98
4) Vinyl chloride	6.054	6.054	0.398	62	195907	29.75	ug/L	99
5) Bromomethane	7.266	7.266	0.478	94	203844	40.33	ug/L	99
6) Chloroethane	7.672	7.682	0.505	64	204843	42.74	ug/L	99
7) Trichlorofluoromethane	8.637	8.637	0.568	101	304697	38.09	ug/L	98
8) Ethyl ether	9.550	9.550	0.629	59	261075	34.28	ug/L	94
9) Acetone	10.271	10.271	0.676	43	671223	115.38	ug/L	94
10) 1,1-Dichloroethylene	10.170	10.159	0.669	61	405695	39.64	ug/L	98
11) Iodomethane	10.535	10.525	0.693	142	1862858	213.64	ug/L	99
12) Acetonitrile	10.931	10.931	0.719	41	1439616	1011.18	ug/L	99
13) Methyl acetate	11.083	11.083	0.729	43	1591701	187.22	ug/L	100
14) Carbon disulfide	10.698	10.698	0.704	76	3136852	208.39	ug/L	100
15) Methylene chloride	11.307	11.307	0.744	84	266934	43.97	ug/L	98
16) tert-Butyl methyl ether	11.885	11.885	0.782	73	681529	39.39	ug/L	97
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782	61	397074	40.12	ug/L	95
18) Vinyl acetate	12.728	12.728	0.838	43	3769272	228.65	ug/L	99
19) 1,1-Dichloroethane	12.667	12.667	0.834	63	508483	41.19	ug/L	99
20) 2-Butanone	13.601	13.591	0.895	43	1021872	141.92	ug/L	97
21) cis-1,2-Dichloroethylene	13.611	13.611	0.896	96	239987	41.72	ug/L	97
22) 2,2-Dichloropropane	13.621	13.621	0.896	77	244198	38.87	ug/L	94
23) Bromochloromethane	13.967	13.966	0.919	128	134224	45.74	ug/L	95
24) Chloroform	14.068	14.068	0.926	83	499086	49.32	ug/L	100
25) 1,1,1-Trichloroethane	14.362	14.362	0.945	97	346949	43.95	ug/L	98
26) Cyclohexane	14.464	14.464	0.952	56	448562	36.40	ug/L	96
27) 1,1-Dichloropropene	14.576	14.576	0.959	75	282838	41.17	ug/L	94
28) Carbon tetrachloride	14.606	14.606	0.961	117	302538	44.23	ug/L	100
30) 1,2-Dichloroethane	14.860	14.860	0.978	62	489280	45.40	ug/L	100
31) Benzene	14.860	14.860	0.978	78	820615	44.91	ug/L	98
32) Cyclohexene	15.002	15.002	0.987	67	372164	36.82	ug/L	99
33) n-Butyl alcohol	15.449	15.449	1.017	56	1282739	4137.49	ug/L	90
34) Trichloroethylene	15.652	15.652	1.030	95	234038	43.19	ug/L	99
35) 1,2-Dichloropropane	15.916	15.916	1.047	63	286537	39.92	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H420.D
Acq On : 19 Nov 2010 12:47 am
Operator : AXO1
InstName : VOA7
Sample : |1202267679|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2 MIX[A] MS 266779010
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 19 09:08:51 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
36) Methylcyclohexane	15.916	15.916	1.047	83	307281	37.72	ug/L	99
37) Dibromomethane	16.068	16.068	1.057	93	182382	46.99	ug/L	96
38) Bromodichloromethane	16.220	16.220	1.067	83	435768	53.73	ug/L	99
39) 2-Chloroethylvinyl ether	0.000	16.494	0.000		0	N.D.		
40) cis-1,3-Dichloropropylene	16.708	16.707	1.100	75	424026	44.81	ug/L	95
42) 4-Methyl-2-pentanone	16.829	16.829	0.907	58	711929	188.34	ug/L #	82
44) Toluene	17.103	17.103	0.922	91	917097	40.50	ug/L	100
45) trans-1,3-Dichloroprop...	17.276	17.276	0.931	75	423629	45.86	ug/L	99
46) 1,1,2-Trichloroethane	17.499	17.499	0.943	83	209199	44.73	ug/L	99
47) 2-Hexanone	17.692	17.692	0.953	43	1530552	152.64	ug/L	94
48) 1,3-Dichloropropane	17.682	17.682	0.953	76	387833	42.13	ug/L	93
49) Tetrachloroethylene	17.713	17.702	0.955	164	173396	45.09	ug/L	97
50) Dibromochloromethane	17.956	17.956	0.968	129	335746	52.43	ug/L	99
51) 1,2-Dibromoethane	18.108	18.108	0.976	107	268644	45.46	ug/L	99
52) Chlorobenzene	18.586	18.586	1.002	112	675465	44.20	ug/L	99
53) 1,1,1,2-Tetrachloroethane	18.647	18.646	1.005	131	273030	46.35	ug/L	99
54) Ethylbenzene	18.657	18.657	1.005	91	1056890	41.04	ug/L	99
55) m,p-Xylenes	18.758	18.758	1.011	106	815735	81.50	ug/L	95
56) o-Xylene	19.174	19.174	1.033	106	423828	40.94	ug/L	98
57) Styrene	19.185	19.184	1.034	104	725419	42.30	ug/L	99
59) Bromoform	19.428	19.428	0.930	173	251230	45.86	ug/L	99
60) Isopropylbenzene	19.520	19.519	0.935	105	1089850	40.65	ug/L	99
62) 1,1,2,2-Tetrachloroethane	19.784	19.783	0.947	83	391935	44.85	ug/L	100
63) 1,2,3-Trichloropropane	19.865	19.865	0.951	110	116044	50.15	ug/L #	78
64) Bromobenzene	19.905	19.905	0.953	156	346516	42.24	ug/L	96
65) n-Propylbenzene	19.926	19.926	0.954	91	1298670	39.74	ug/L	100
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	951528	40.89	ug/L	99
67) 2-Chlorotoluene	20.068	20.068	0.961	126	281096	41.82	ug/L	99
68) 4-Chlorotoluene	20.159	20.159	0.965	91	951340	43.55	ug/L	100
69) tert-Butylbenzene	20.423	20.423	0.978	134	215418	41.10	ug/L	97
70) 1,2,4-Trimethylbenzene	20.464	20.464	0.980	105	1050188	41.89	ug/L	98
71) sec-Butylbenzene	20.636	20.636	0.988	105	1273672	41.71	ug/L	98
72) 4-Isopropyltoluene	20.758	20.758	0.994	119	1038727	42.28	ug/L	99
73) 1,3-Dichlorobenzene	20.819	20.819	0.997	146	641689	42.55	ug/L	99
74) 1,4-Dichlorobenzene	20.910	20.900	1.001	146	642666	42.79	ug/L	100
75) n-Butylbenzene	21.185	21.184	1.015	91	1052282	42.04	ug/L	100
76) 1,2-Dichlorobenzene	21.327	21.326	1.021	146	650567	43.34	ug/L	99
77) 1,2-Dibromo-3-chloropr...	22.179	22.179	1.062	157	100415	47.12	ug/L	97
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112	180	508413	42.06	ug/L	100
79) Hexachlorobutadiene	23.398	23.397	1.121	225	306084	40.34	ug/L	99
80) Naphthalene	23.611	23.611	1.131	128	1112248	43.84	ug/L	99
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147	180	491308	45.29	ug/L	99
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.		
85) Acrolein	9.926	9.875	0.653		0m	N.D.	d	
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.		
87) Isopropyl Alcohol	10.698	10.637	0.704		0m	N.D.	d	
88) Allyl chloride	10.931	11.043	0.719		0m	N.D.	d	
89) tert-Butyl Alcohol	11.561	11.530	0.761		0m	N.D.	d	
90) Acrylonitrile	11.885	11.794	0.782		0m	N.D.	d	
91) Isopropyl ether	12.728	12.779	0.838		0m	N.D.	d	
92) 2-Chloro-1,3-butadiene	12.728	12.829	0.838		0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H420.D
Acq On : 19 Nov 2010 12:47 am
Operator : AXO1
InstName : VOA7
Sample : |1202267679|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2 MIX[A] MS 266779010
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 19 09:08:51 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
93)	Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.	
94)	Ethyl acetate	13.601	13.682	0.895		0m	N.D.	d
95)	Propionitrile	13.601	13.682	0.895		0m	N.D.	d
96)	Methacrylonitrile	0.000	13.916	0.000		0	N.D.	
97)	Tetrahydrofuran	14.058	14.037	0.925		0m	N.D.	d
98)	Isobutyl alcohol	0.000	14.626	0.000		0	N.D.	
99)	Methyl tert-amyl ether	15.002	14.961	0.987		0m	N.D.	d
100)	Methyl methacrylate	15.916	15.966	1.047		0m	N.D.	d
101)	1,4-Dioxane	16.058	16.047	1.057		0m	N.D.	d
102)	2-Nitropropane	16.474	16.443	1.084		0m	N.D.	d
104)	Ethyl methacrylate	17.317	17.306	0.933		0m	N.D.	d
106)	1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107)	cis-1,4-Dichloro-2-butene	19.520	19.560	0.935		0m	N.D.	d
108)	Cyclohexanone	0.000	19.662	0.000		0	N.D.	
109)	trans-1,4-Dichloro-2-b...	0.000	19.824	0.000		0	N.D.	
110)	Pentachloroethane	20.494	20.494	0.982		0m	N.D.	d
111)	Benzyl chloride	21.002	21.012	1.006		0m	N.D.	d
112)	bis(2-Chloroisopropyl)...	21.438	21.398	1.027		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

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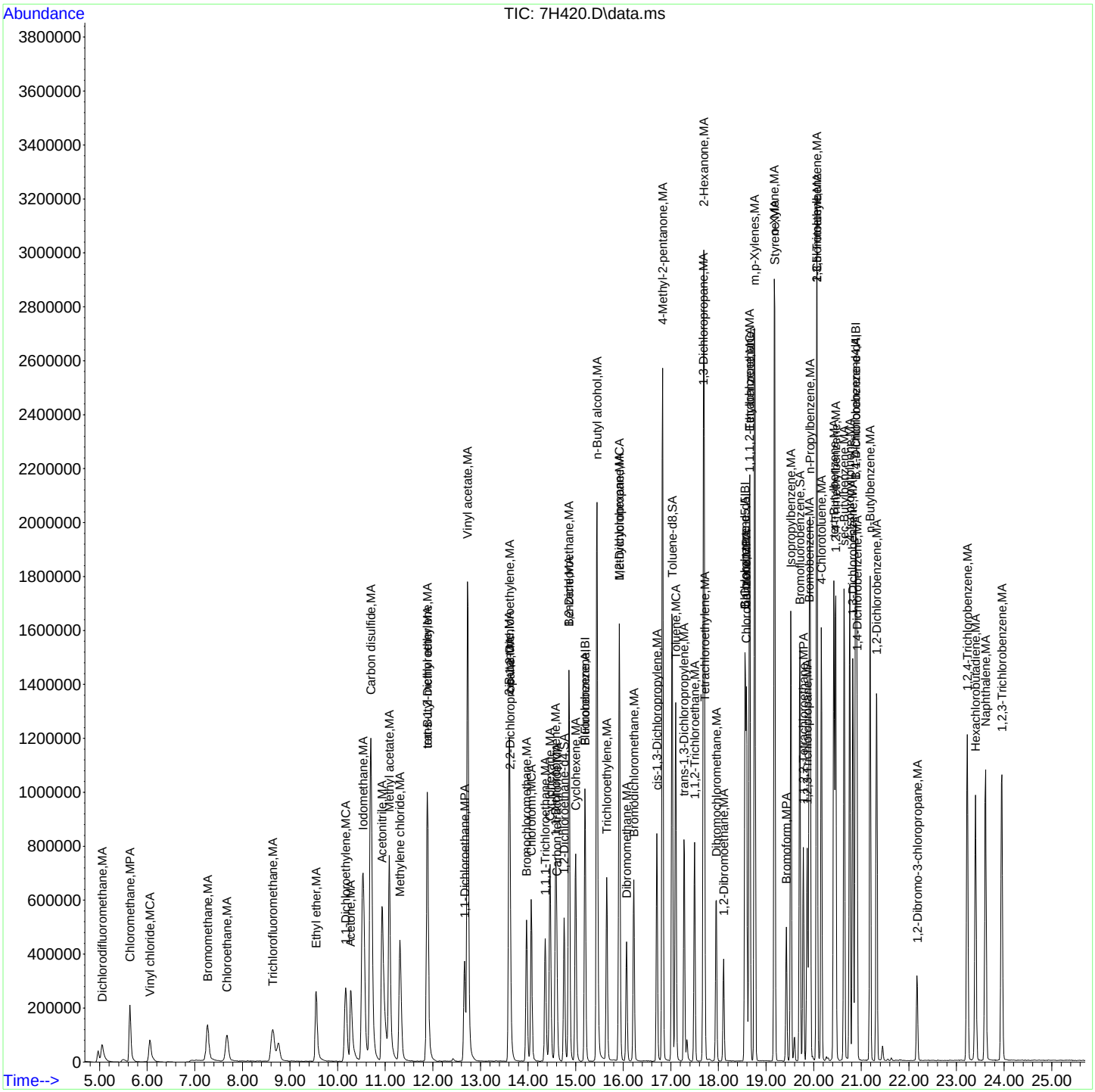

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/09/2010 12:00**	**Matrix:**	**WS**
Lab Sample ID:	**1202267680**	**Date Received:**	**11/11/2010 08:00**		
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**CASA-11-1340PSD**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 01:21**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 01:21**				
Data File:	**111810V7\7H421.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		32.7	ug/L	0.300	1.00
74-87-3	Chloromethane		39.8	ug/L	0.300	1.00
75-01-4	Vinyl chloride		38.0	ug/L	0.500	1.00
74-83-9	Bromomethane		41.1	ug/L	0.300	1.00
75-00-3	Chloroethane		42.6	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane		40.6	ug/L	0.300	1.00
60-29-7	Ethyl ether		38.4	ug/L	0.300	1.00
67-64-1	Acetone		127	ug/L	3.50	10.0
75-05-8	Acetonitrile		1090	ug/L	6.25	25.0
75-35-4	1,1-Dichloroethylene		43.4	ug/L	0.300	1.00
74-88-4	Iodomethane		223	ug/L	1.25	5.00
75-09-2	Methylene chloride		46.9	ug/L	3.00	10.0
75-15-0	Carbon disulfide		215	ug/L	1.25	5.00
1634-04-4	tert-Butyl methyl ether		43.6	ug/L	0.250	1.00
156-60-5	trans-1,2-Dichloroethylene		42.2	ug/L	0.300	1.00
108-05-4	Vinyl acetate		245	ug/L	1.50	5.00
75-34-3	1,1-Dichloroethane		43.9	ug/L	0.300	1.00
78-93-3	2-Butanone		156	ug/L	1.25	5.00
156-59-2	cis-1,2-Dichloroethylene		42.9	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane		40.2	ug/L	0.300	1.00
67-66-3	Chloroform		52.4	ug/L	0.250	1.00
74-97-5	Bromochloromethane		48.2	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane		45.9	ug/L	0.325	1.00
563-58-6	1,1-Dichloropropene		43.5	ug/L	0.250	1.00
71-36-3	n-Butyl alcohol		4520	ug/L	15.0	50.0
56-23-5	Carbon tetrachloride		46.6	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane		49.3	ug/L	0.250	1.00
71-43-2	Benzene		46.5	ug/L	0.300	1.00
79-01-6	Trichloroethylene		45.4	ug/L	0.250	1.00
78-87-5	1,2-Dichloropropane		44.1	ug/L	0.250	1.00
75-27-4	Bromodichloromethane		57.1	ug/L	0.250	1.00
74-95-3	Dibromomethane		49.1	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone		206	ug/L	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		47.5	ug/L	0.250	1.00
108-88-3	Toluene		41.9	ug/L	0.250	1.00
10061-02-6	trans-1,3-Dichloropropylene		48.3	ug/L	0.250	1.00
79-00-5	1,1,2-Trichloroethane		47.1	ug/L	0.250	1.00
591-78-6	2-Hexanone		164	ug/L	1.25	5.00

Volatile
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Sample Summary

SDG Number:	**11-463**	**Date Collected:**	**11/09/2010 12:00**	**Matrix:**	**WS**
Lab Sample ID:	**1202267680**	**Date Received:**	**11/11/2010 08:00**		
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**CASA-11-1340PSD**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 01:21**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 01:21**				
Data File:	**111810V7\7H421.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
142-28-9	1,3-Dichloropropane		44.2	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene		47.2	ug/L	0.300	1.00
124-48-1	Dibromochloromethane		55.1	ug/L	0.300	1.00
106-93-4	1,2-Dibromoethane		48.3	ug/L	0.250	1.00
108-90-7	Chlorobenzene		45.6	ug/L	0.250	1.00
100-41-4	Ethylbenzene		42.5	ug/L	0.250	1.00
179601-23-1	m,p-Xylenes		84.5	ug/L	0.500	2.00
95-47-6	o-Xylene		42.5	ug/L	0.300	1.00
100-42-5	Styrene		44.4	ug/L	0.250	1.00
75-25-2	Bromoform		49.9	ug/L	0.250	1.00
79-34-5	1,1,2,2-Tetrachloroethane		47.3	ug/L	0.250	1.00
96-18-4	1,2,3-Trichloropropane		52.6	ug/L	0.300	1.00
108-86-1	Bromobenzene		45.0	ug/L	0.250	1.00
103-65-1	n-Propylbenzene		41.6	ug/L	0.250	1.00
95-49-8	2-Chlorotoluene		42.8	ug/L	0.250	1.00
98-82-8	Isopropylbenzene		42.5	ug/L	0.250	1.00
108-67-8	1,3,5-Trimethylbenzene		42.4	ug/L	0.250	1.00
106-43-4	4-Chlorotoluene		46.0	ug/L	0.250	1.00
98-06-6	tert-Butylbenzene		42.3	ug/L	0.250	1.00
95-63-6	1,2,4-Trimethylbenzene		43.6	ug/L	0.250	1.00
135-98-8	sec-Butylbenzene		43.0	ug/L	0.250	1.00
99-87-6	4-Isopropyltoluene		44.0	ug/L	0.250	1.00
541-73-1	1,3-Dichlorobenzene		44.5	ug/L	0.250	1.00
106-46-7	1,4-Dichlorobenzene		44.6	ug/L	0.250	1.00
104-51-8	n-Butylbenzene		43.4	ug/L	0.250	1.00
96-12-8	1,2-Dibromo-3-chloropropane		49.9	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene		42.0	ug/L	0.300	1.00
91-20-3	Naphthalene		46.1	ug/L	0.250	1.00
87-61-6	1,2,3-Trichlorobenzene		47.9	ug/L	0.332	1.00
107-02-8	Acrolein	U	5.00	ug/L	1.25	5.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.00	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.00	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	12.5	50.0
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.00	5.00

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Sample Summary

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Lab Sample ID:	**1202267680**	**Date Received:**	**11/11/2010 08:00**		
Client Sample:	**QC for batch 1050223**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**CASA-11-1340PSD**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1050223**	**Inst:**	**VOA7.I**	**Dilution:**	**1**
Run Date:	**11/19/2010 01:21**	**Analyst:**	**AXO1**	**Purge Vol:**	**5 mL**
Prep Date:	**11/19/2010 01:21**				
Data File:	**111810V7\7H421.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane		47.3	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene		44.4	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene		46.0	ug/L	0.250	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	50.9	50.0	ug/L	102	(71%-130%)
Bromofluorobenzene	48.6	50.0	ug/L	97.2	(80%-120%)
Toluene-d8	47.2	50.0	ug/L	94.4	(80%-120%)

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Misc : ARSL 5mL pH2 MIX[A] MSD 266779010
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 19 09:08:54 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	15.195	15.195	1.000	96	949955	50.00	ug/L	0.00
41) Chlorobenzene-d5	18.555	18.555	1.000	117	821732	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	570894	50.00	ug/L	0.00
82) B Fluorobenzene	15.195	15.195	1.000	96	949955	50.00	ug/L	0.00
103) B Chlorobenzene-d5	18.555	18.555	1.000	117	821732	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	20.880	20.880	1.000	152	570894	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
29) 1,2-Dichloroethane-d4	14.758	14.758	0.971	65	469398	50.93	ug/L	0.00
43) Toluene-d8	17.032	17.032	0.918	98	1202562	47.20	ug/L	0.00
61) Bromofluorobenzene	19.702	19.712	0.944	95	569542	48.60	ug/L	-0.01

Compound	Amount	Range	Recovery
29) 1,2-Dichloroethane-d4	50.000	71 - 130	101.86%
43) Toluene-d8	50.000	80 - 120	94.40%
61) Bromofluorobenzene	50.000	80 - 120	97.20%

Target Compounds	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	5.058	5.058	0.333	85	194708	32.65	ug/L	100
3) Chloromethane	5.638	5.638	0.371	50	462852	39.77	ug/L	98
4) Vinyl chloride	6.069	6.054	0.399	62	263685	37.98	ug/L	99
5) Bromomethane	7.266	7.266	0.478	94	219305	41.10	ug/L	99
6) Chloroethane	7.682	7.682	0.506	64	215534	42.60	ug/L	100
7) Trichlorofluoromethane	8.637	8.637	0.568	101	342647	40.58	ug/L	98
8) Ethyl ether	9.550	9.550	0.629	59	308685	38.40	ug/L	96
9) Acetone	10.281	10.271	0.677	43	774455	127.04	ug/L	94
10) 1,1-Dichloroethylene	10.170	10.159	0.669	61	468772	43.39	ug/L	99
11) Iodomethane	10.535	10.525	0.693	142	2055820	223.35	ug/L	98
12) Acetonitrile	10.931	10.931	0.719	41	1634707	1087.73	ug/L	99
13) Methyl acetate	11.083	11.083	0.729	43	1841386	205.18	ug/L	99
14) Carbon disulfide	10.697	10.698	0.704	76	3416629	215.02	ug/L	100
15) Methylene chloride	11.307	11.307	0.744	84	299644	46.94	ug/L	98
16) tert-Butyl methyl ether	11.885	11.885	0.782	73	796026	43.58	ug/L	97
17) trans-1,2-Dichloroethy...	11.885	11.885	0.782	61	440714	42.18	ug/L	97
18) Vinyl acetate	12.728	12.728	0.838	43	4264760	245.08	ug/L	99
19) 1,1-Dichloroethane	12.667	12.667	0.834	63	572240	43.91	ug/L	99
20) 2-Butanone	13.591	13.591	0.894	43	1185372	155.95	ug/L	97
21) cis-1,2-Dichloroethylene	13.611	13.611	0.896	96	260408	42.89	ug/L	99
22) 2,2-Dichloropropane	13.621	13.621	0.896	77	266255	40.15	ug/L	94
23) Bromochloromethane	13.966	13.966	0.919	128	149417	48.24	ug/L	99
24) Chloroform	14.068	14.068	0.926	83	560031	52.42	ug/L	99
25) 1,1,1-Trichloroethane	14.362	14.362	0.945	97	382478	45.90	ug/L	99
26) Cyclohexane	14.464	14.464	0.952	56	502999	38.67	ug/L	97
27) 1,1-Dichloropropene	14.575	14.576	0.959	75	315722	43.54	ug/L	94
28) Carbon tetrachloride	14.606	14.606	0.961	117	336111	46.55	ug/L	100
30) 1,2-Dichloroethane	14.860	14.860	0.978	62	561002	49.31	ug/L	100
31) Benzene	14.860	14.860	0.978	78	895710	46.47	ug/L	97
32) Cyclohexene	15.002	15.002	0.987	67	418459	39.22	ug/L	100
33) n-Butyl alcohol	15.448	15.449	1.017	56	1479109	4519.57	ug/L	92
34) Trichloroethylene	15.652	15.652	1.030	95	259721	45.41	ug/L	99
35) 1,2-Dichloropropane	15.915	15.916	1.047	63	334084	44.09	ug/L	100

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Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
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Integrator: RTE

Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units	
36) Methylcyclohexane	15.915	15.916	1.047	83	338569	39.37	ug/L	99
37) Dibromomethane	16.068	16.068	1.057	93	201328	49.14	ug/L	97
38) Bromodichloromethane	16.220	16.220	1.067	83	489143	57.13	ug/L	99
39) 2-Chloroethylvinyl ether	0.000	16.494	0.000		0	N.D.		
40) cis-1,3-Dichloropropylene	16.707	16.707	1.100	75	474491	47.50	ug/L	95
42) 4-Methyl-2-pentanone	16.829	16.829	0.907	58	828395	205.56	ug/L	85
44) Toluene	17.103	17.103	0.922	91	1011088	41.89	ug/L	100
45) trans-1,3-Dichloroprop...	17.276	17.276	0.931	75	475164	48.25	ug/L	100
46) 1,1,2-Trichloroethane	17.499	17.499	0.943	83	234906	47.11	ug/L	99
47) 2-Hexanone	17.692	17.692	0.953	43	1750470	163.74	ug/L	95
48) 1,3-Dichloropropane	17.682	17.682	0.953	76	434203	44.24	ug/L	94
49) Tetrachloroethylene	17.702	17.702	0.954	164	193128	47.17	ug/L	99
50) Dibromochloromethane	17.956	17.956	0.968	129	376240	55.11	ug/L	99
51) 1,2-Dibromoethane	18.108	18.108	0.976	107	304404	48.31	ug/L	98
52) Chlorobenzene	18.585	18.586	1.002	112	742479	45.57	ug/L	100
53) 1,1,1,2-Tetrachloroethane	18.646	18.646	1.005	131	297137	47.31	ug/L	100
54) Ethylbenzene	18.656	18.657	1.005	91	1166348	42.48	ug/L	100
55) m,p-Xylenes	18.758	18.758	1.011	106	901886	84.51	ug/L	95
56) o-Xylene	19.174	19.174	1.033	106	468995	42.49	ug/L	96
57) Styrene	19.184	19.184	1.034	104	811314	44.37	ug/L	97
59) Bromoform	19.428	19.428	0.930	173	289512	49.86	ug/L	99
60) Isopropylbenzene	19.519	19.519	0.935	105	1207101	42.47	ug/L	99
62) 1,1,2,2-Tetrachloroethane	19.783	19.783	0.947	83	438342	47.32	ug/L	99
63) 1,2,3-Trichloropropane	19.865	19.865	0.951	110	128881	52.55	ug/L #	80
64) Bromobenzene	19.905	19.905	0.953	156	391614	45.04	ug/L	96
65) n-Propylbenzene	19.925	19.926	0.954	91	1439515	41.55	ug/L	100
66) 1,3,5-Trimethylbenzene	20.068	20.068	0.961	105	1046570	42.43	ug/L	99
67) 2-Chlorotoluene	20.068	20.068	0.961	126	305058	42.81	ug/L	97
68) 4-Chlorotoluene	20.159	20.159	0.965	91	1064569	45.98	ug/L	100
69) tert-Butylbenzene	20.423	20.423	0.978	134	235171	42.33	ug/L	94
70) 1,2,4-Trimethylbenzene	20.464	20.464	0.980	105	1159176	43.62	ug/L	98
71) sec-Butylbenzene	20.636	20.636	0.988	105	1391942	43.00	ug/L	99
72) 4-Isopropyltoluene	20.758	20.758	0.994	119	1145406	43.99	ug/L	99
73) 1,3-Dichlorobenzene	20.819	20.819	0.997	146	711373	44.50	ug/L	100
74) 1,4-Dichlorobenzene	20.900	20.900	1.001	146	709788	44.59	ug/L	99
75) n-Butylbenzene	21.184	21.184	1.015	91	1150682	43.37	ug/L	99
76) 1,2-Dichlorobenzene	21.326	21.326	1.021	146	731497	45.98	ug/L	99
77) 1,2-Dibromo-3-chloropr...	22.179	22.179	1.062	157	112800	49.94	ug/L	97
78) 1,2,4-Trichlorobenzene	23.225	23.225	1.112	180	568461	44.37	ug/L	100
79) Hexachlorobutadiene	23.397	23.397	1.121	225	337620	41.98	ug/L	99
80) Naphthalene	23.611	23.611	1.131	128	1239268	46.09	ug/L	99
81) 1,2,3-Trichlorobenzene	23.956	23.956	1.147	180	551124	47.93	ug/L	99
83) Chlorotrifluoroethylene	0.000	4.939	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000	6.470	0.000		0	N.D.		
85) Acrolein	0.000	9.875	0.000		0	N.D.		
86) Trichlorotrifluoroethane	0.000	10.220	0.000		0	N.D.		
87) Isopropyl Alcohol	10.687	10.637	0.703		0m	N.D.	d	
88) Allyl chloride	10.931	11.043	0.719		0m	N.D.	d	
89) tert-Butyl Alcohol	11.540	11.530	0.759		0m	N.D.	d	
90) Acrylonitrile	11.875	11.794	0.782		0m	N.D.	d	
91) Isopropyl ether	12.738	12.779	0.838		0m	N.D.	d	
92) 2-Chloro-1,3-butadiene	12.738	12.829	0.838		0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H421.D
Acq On : 19 Nov 2010 1:21 am
Operator : AXO1
InstName : VOA7
Sample : |1202267680|1050223|1|VOAF|1|VOA8260LFD|
Misc : ARSL 5mL pH2 MIX[A] MSD 266779010
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 19 09:08:54 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE

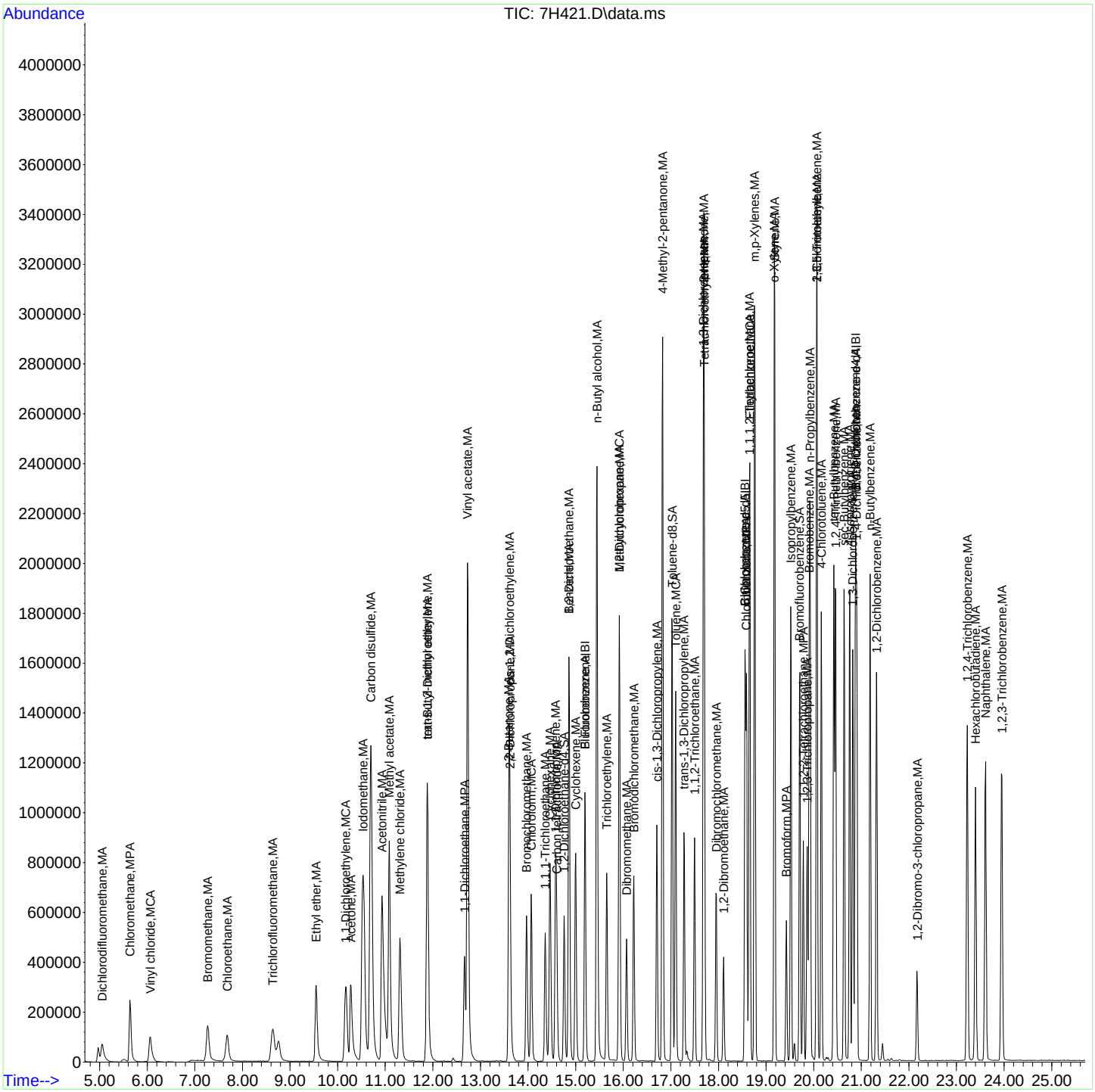
Compound	R.T.	Exp RT	Rel RT	QIon	Response	Conc	Units
93) Ethyl tert-butyl ether	0.000	13.367	0.000		0	N.D.	
94) Ethyl acetate	13.591	13.682	0.894		0m	N.D.	d
95) Propionitrile	13.591	13.682	0.894		0m	N.D.	d
96) Methacrylonitrile	13.936	13.916	0.917		0m	N.D.	d
97) Tetrahydrofuran	14.058	14.037	0.925		0m	N.D.	d
98) Isobutyl alcohol	14.687	14.626	0.967		0m	N.D.	d
99) Methyl tert-amyl ether	15.002	14.961	0.987		0m	N.D.	d
100) Methyl methacrylate	15.915	15.966	1.047		0m	N.D.	d
101) 1,4-Dioxane	16.068	16.047	1.057		0m	N.D.	d
102) 2-Nitropropane	16.443	16.443	1.082		0m	N.D.	d
104) Ethyl methacrylate	17.306	17.306	0.933		0m	N.D.	d
106) 1-Chlorohexane	0.000	18.474	0.000		0	N.D.	
107) cis-1,4-Dichloro-2-butene	19.519	19.560	0.935		0m	N.D.	d
108) Cyclohexanone	0.000	19.662	0.000		0	N.D.	
109) trans-1,4-Dichloro-2-b...	0.000	19.824	0.000		0	N.D.	
110) Pentachloroethane	20.494	20.494	0.982		0m	N.D.	d
111) Benzyl chloride	21.012	21.012	1.006		0m	N.D.	d
112) bis(2-Chloroisopropyl)...	21.448	21.398	1.027		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\111810V7\
Data File : 7H421.D
Acq On    : 19 Nov 2010   1:21 am
Operator  : AXO1
InstName  : VOA7
Sample    : |1202267680|1050223|1|VOAF|1|VOA8260LFD|
Misc      : ARSL 5mL pH2 MIX[A] MSD 266779010
ALS Vial  : 21   Sample Multiplier: 1

Quant Time: Nov 19 09:08:54 2010
Quant Method : C:\msdchem\1\DATA\111510V7\VOA7-8260-111510.M
Quant Title  : Volatile Organics 8260B                    SubList :
QLast Update : Tue Nov 16 10:59:25 2010
Response via : Initial Calibration
Integrator: RTE
```



Miscellaneous

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA7

Date: 11/15/2010 Method 8260B/624 Operator: AXO1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1541

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 11/15/2010

(See pg. 307, 308 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 111510V7

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
LONG ICV	W7VM101115-18		5+5		
IS	UVM101019-01	1	1	1	
SS	UVM100927-02	1	1	1	
BFB	UVM100927-02				1
SHORT ICV	W7VM101115-19		5+5		

Purge Amount	
5	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
11/15/2010	10:58	7H101.D	120225----	GEL	BLANK	5mL	1	N/A	1	w	AXO1	N/A	X	
11/15/2010	11:33	7H102.D	UVM100927-02	GEL	BFB	5mL	1	N/A	2	w	AXO1	N/A	O	
11/15/2010	12:07	7H103.D	W7VM101115-01	ICAL	ICAL	5uL	1	N/A	3	w	AXO1	N/A	O	MIX[A] UVM100908-02C/UVM101022-02B 1.0
11/15/2010	12:41	7H104.D	W7VM101115-02	ICAL	ICAL	5uL	1	N/A	4	w	AXO1	N/A	O	MIX[A] UVM100908-03C/UVM101022-03B 2.0
11/15/2010	13:15	7H105.D	W7VM101115-03	ICAL	ICAL	5uL	1	N/A	5	w	AXO1	N/A	O	MIX[A] UVM100908-04C/UVM101022-04B 5.0
11/15/2010	13:48	7H106.D	W7VM101115-04	ICAL	ICAL	5uL	1	N/A	6	w	AXO1	N/A	O	MIX[A] UVM100908-05C/UVM101022-05B 10
11/15/2010	14:23	7H107.D	W7VM101115-05	ICAL	ICAL	5uL	1	N/A	7	w	AXO1	N/A	O	MIX[A] UVM100908-06C/UVM101022-06B 20
11/15/2010	14:56	7H108.D	W7VM101115-06	ICAL	ICAL	5uL	1	N/A	8	w	AXO1	N/A	X	MIX[A] UVM100908-07C/UVM101022-07B 50 2-Hexanone Variance
11/15/2010	15:30	7H109.D	W7VM101115-07	ICAL	ICAL	4uL	1	N/A	9	w	AXO1	N/A	O	MIX[A] UVM100908-08C/UVM101022-08B 80
11/15/2010	16:05	7H110.D	W7VM101115-08	ICAL	ICAL	5uL	1	N/A	10	w	AXO1	N/A	O	MIX[A] UVM100908-08C/UVM101022-08B 100
11/15/2010	16:39	7H111.D	120225----	RINSE	RINSE	5mL	1	N/A	11	w	AXO1	N/A	X	
11/15/2010	17:12	7H112.D	W7VM101115-09	ICAL	ICAL	5uL	1	N/A	12	w	AXO1	N/A	O	MIX[A] UVM100908-02C/UVM101022-02B 0.5
11/15/2010	17:46	7H113.D	W7VM101115-10	ICAL	ICAL	5uL	1	N/A	13	w	AXO1	N/A	O	MIX[B] UVM101025-01C/UVM101105-01 5.0
11/15/2010	18:20	7H114.D	W7VM101115-11	ICAL	ICAL	5uL	1	N/A	14	w	AXO1	N/A	O	MIX[B] UVM101025-02C/UVM101105-02 10
11/15/2010	18:56	7H115.D	W7VM101115-12	ICAL	ICAL	5uL	1	N/A	15	w	AXO1	N/A	O	MIX[B] UVM101025-03C/UVM101105-03 25
11/15/2010	19:31	7H116.D	W7VM101115-13	ICAL	ICAL	5uL	1	N/A	16	w	AXO1	N/A	O	MIX[B] UVM101025-04C/UVM101105-04 50
11/15/2010	20:04	7H117.D	W7VM101115-14	ICAL	ICAL	5uL	1	N/A	17	w	AXO1	N/A	O	MIX[B] UVM101025-05C/UVM101105-05 100
11/15/2010	20:37	7H118.D	W7VM101115-15	ICAL	ICAL	5uL	1	N/A	18	w	AXO1	N/A	O	MIX[B] UVM101025-06C/UVM101105-06 250
11/15/2010	21:11	7H119.D	W7VM101115-16	ICAL	ICAL	3+4uL	1	N/A	19	w	AXO1	N/A	O	MIX[B] UVM101025-07C/UVM101105-07 300
11/15/2010	21:46	7H120.D	W7VM101115-17	ICAL	ICAL	5uL	1	N/A	20	w	AXO1	N/A	O	MIX[B] UVM101025-07C/UVM101105-07 500
11/15/2010	22:20	7H121.D	120225----	RINSE	RINSE	5mL	1	N/A	21	w	AXO1	N/A	X	
11/15/2010	22:56	7H122.D	W7VM101115-18	ICV	ICV	5uL	1	N/A	22	w	AXO1	N/A	X	MIX[A] UVM101026-01D/IVM101112-01 See 7H202
11/15/2010	23:31	7H123.D	W7VM101115-19	ICV	ICV	5uL	1	N/A	23	w	AXO1	N/A	O	MIX[B] UVM101105-08A/UVM101025-08B
11/16/2010	0:05	7H124.D	W7VM101115-20	ICV	ICV	5uL	1	N/A	24	w	AXO1	N/A	X	MIX[A] UVM101104-01A/IVM101112-01
11/16/2010	0:39	7H125.D	120225----	RINSE	RINSE	5mL	1	N/A	25	w	AXO1	N/A	X	
11/16/2010	1:13	7H126.D	120225----	RINSE	RINSE	5mL	1	N/A	26	w	AXO1	N/A	X	

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA7

Date: 11/15/2010 Method 8260B/624 Operator: AXO1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1541

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 11/15/2010

(See pg. 307, 308 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 111510V7

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
LONG ICV	W7VM101115-18		5+5		
IS	UVM101019-01	1	1	1	
SS	UVM100927-02	1	1	1	
BFB	UVM100927-02				1
SHORT ICV	W7VM101115-19		5+5		

Purge Amount	
5	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
11/16/2010	1:47	7H127.D	Bisulfate 165914-a	o2si	o2si	5mL	1	N/A	27	w	AXO1	N/A	X	Screen analysis
11/16/2010	2:24	7H128.D	Bisulfate 165914-b	o2si	o2si	5mL	1	N/A	28	w	AXO1	N/A	X	Screen analysis
11/16/2010	3:00	7H129.D	Bisulfate 165821-a	o2si	o2si	5mL	1	N/A	29	w	AXO1	N/A	X	Screen analysis
11/16/2010	3:35	7H130.D	Bisulfate 165821-b	o2si	o2si	5mL	1	N/A	30	w	AXO1	N/A	X	Screen analysis
11/16/2010	4:09	7H131.D	Bisulfate 165822-a	o2si	o2si	5mL	1	N/A	31	w	AXO1	N/A	X	Screen analysis
11/16/2010	4:44	7H132.D	Bisulfate 165822-b	o2si	o2si	5mL	1	N/A	32	w	AXO1	N/A	X	Screen analysis
11/16/2010	5:19	7H133.D	Bisulfate 165929	o2si	o2si	5mL	1	N/A	33	w	AXO1	N/A	X	Screen analysis
11/16/2010	5:55	7H134.D	Bisulfate 165932	o2si	o2si	5mL	1	N/A	34	w	AXO1	N/A	X	Screen analysis
11/16/2010	6:32	7H135.D	Bisulfate 165860-a	o2si	o2si	5mL	1	N/A	35	w	AXO1	N/A	X	Screen analysis
11/16/2010	7:07	7H136.D	Bisulfate 165860-b	o2si	o2si	5mL	1	N/A	36	w	AXO1	N/A	X	Screen analysis

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA7

Date: 11/16/2010 Method 8260B/624 Operator: AXO1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1541

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 11/15/2010

(See pg. 307,308 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 84515

Sequence Number: 111610V7

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W7VM101116-02		5+5		
IS	UVM101019-01	1	1	1	
SS	UVM100927-02	1	1	1	
LCS/MS	W7VM101116-05			5+5	
BFB	UVM100927-02				1
SHORT	W7VM101116-04		5	5	

Purge Amount	
5	Water Purge Vol:
N/A	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
11/16/2010	11:36	7H201.D	W7VM101116-01	GEL	BFB	5mL	1	N/A	1	w	AXO1	N/A	X	SEE 7H202
11/16/2010	12:10	7H202.D	W7VM101116-02	GEL	BFB/ICV/CCV	5mL	1	N/A	2	w	AXO1	N/A	O	MIX[A] UVM101026-01E/IVM101116-01
11/16/2010	13:23	7H203.D	W7VM101116-03	GEL	LCS	5mL	1	N/A	3	w	AXO1	N/A	X	MIX[A] UVM101026-01E/IVM101116-01
11/16/2010	13:57	7H204.D	W7VM101116-04	GEL	CCV	5mL	1	N/A	4	w	AXO1	N/A	O	MIX[B] UVM101105-01A
11/16/2010	14:31	7H205.D	W7VM101116-05	GEL	LCS	5mL	1	N/A	5	w	AXO1	N/A	O	MIX[A] UVM101026-01D/IVM101116-01
11/16/2010	15:04	7H206.D	W7VM101116-06	GEL	LCS	5mL	1	N/A	6	w	AXO1	N/A	X	MIX[B] UVM101105-01A Not required
11/16/2010	15:39	7H207.D	120226----	GEL	BLANK	5mL	1	N/A	7	w	AXO1	N/A	O	
11/16/2010	16:14	7H208.D	266348001	CH2M	1049461	5mL	1	pH2	8	w	AXO1	N	O	
11/16/2010	16:48	7H209.D	266348003	CH2M	1049461	5mL	1	pH2	9	w	AXO1	N	X	SS Failure SEE 7H215
11/16/2010	17:21	7H210.D	266348004	CH2M	1049461	5mL	1	pH2	10	w	AXO1	N	O	
11/16/2010	17:55	7H211.D	266348005	CH2M	1049461	250uL	20	pH2	11	w	AXO1	N	O	
11/16/2010	18:30	7H212.D	266348002	CH2M	1049461	200uL	25	pH2	12	w	AXO1	N	O	
11/16/2010	19:05	7H213.D	120226----	RINSE	RINSE	5mL	1	N/A	13	w	AXO1	N/A	O	
11/16/2010	19:39	7H214.D	266348001	CH2M	1049461	5mL	1	pH2	14	w	AXO1	N	X	Not required
11/16/2010	20:12	7H215.D	266348003	CH2M	1049461	5mL	1	pH2	15	w	AXO1	N	O	
11/16/2010	20:46	7H216.D	266348004	CH2M	1049461	5mL	1	pH2	16	w	AXO1	N	X	Not required
11/16/2010	21:21	7H217.D	266348009	CH2M	1049461	5mL	1	pH2	17	w	AXO1	N	O	
11/16/2010	21:55	7H218.D	266348010	CH2M	1049461	5mL	1	pH2	18	w	AXO1	N	O	
11/16/2010	22:30	7H219.D	266348012	CH2M	1049461	5mL	1	pH2	19	w	AXO1	N	X	SS Failure SEE 7H236
11/16/2010	23:05	7H220.D	266348013	CH2M	1049461	5mL	1	pH2	20	w	AXO1	N	O	
11/16/2010	23:39	7H221.D	266348016	CH2M	1049461	5mL	1	pH2	21	w	AXO1	N	O	

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA7

Date: 11/18/2010 Method 8260B/624 Operator: AXO1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1541

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 11/15/2010

(See pg. 307,308 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 84515

Sequence Number: 111810v7

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W7VM101118-02		5+5		
IS	UVM101019-01	1	1	1	
SS	UVM100927-02	1	1	1	
LCS/MS	W7VM101118-02			5+5	
BFB	UVM100927-02				1
SHORT	W7VM101118-04		5	5	

Purge Amount	
5	Water Purge Vol:
n/a	Soil Purge Wt.
n/a	Mid level ext. MeOH Vol:
n/a	ul
n/a	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
11/18/2010	13:49	7H401.D	UVM100927-02	GEL	BFB	5mL	1	N/A	1	w	AXO1	N/A	O	
11/18/2010	14:22	7H402.D	W7VM101118-01	GEL	CCV	5mL	1	N/A	2	w	AXO1	N/A	X	MIX[A] UVM101025-07C/UVM101022-07C
11/18/2010	14:56	7H403.D	W7VM101118-02	GEL	CCV/LCS	5mL	1	N/A	3	w	AXO1	N/A	O	MIX[A] UVM101026-01E/IVM101116-01
11/18/2010	15:32	7H404.D	W7VM101118-03	GEL	LCS	5g	1	N/A	4	w	AXO1	N/A	X	N/A MIX[A] UVM101026-01E/IVM101116-01 Soil not required.
11/18/2010	16:05	7H405.D	W7VM101118-04	GEL	CCV	5mL	1	N/A	5	w	AXO1	N/A	O	MIX[B] UVM101105-01A
11/18/2010	16:39	7H406.D	120226----	GEL	BLANK	5mL	1	N/A	6	w	AXO1	N/A	O	
11/18/2010	17:12	7H407.D	266779008	ARSL	1050223	5mL	1	pH2	7	w	AXO1	N	O	
11/18/2010	17:47	7H408.D	266779010	ARSL	1050223	5mL	1	pH2	8	w	AXO1	N	O	
11/18/2010	18:22	7H409.D	266779011	ARSL	1050223	5mL	1	pH2	9	w	AXO1	N	O	
11/18/2010	18:57	7H410.D	266779012	ARSL	1050223	5mL	1	pH2	10	w	AXO1	N	O	
11/18/2010	19:30	7H411.D	266779013	ARSL	1050223	5mL	1	pH2	11	w	AXO1	N	O	
11/18/2010	20:04	7H412.D	266779014	ARSL	1050223	5mL	1	pH2	12	w	AXO1	N	O	
11/18/2010	20:39	7H413.D	266779015	ARSL	1050223	5mL	1	pH2	13	w	AXO1	N	O	
11/18/2010	21:15	7H414.D	266779016	ARSL	1050223	5mL	1	pH2	14	w	AXO1	N	O	
11/18/2010	21:49	7H415.D	266779017	ARSL	1050223	5mL	1	pH2	15	w	AXO1	N	O	
11/18/2010	22:24	7H416.D	266877001	ARSL	1050223	5mL	1	pH2	16	w	AXO1	N	O	
11/18/2010	23:01	7H417.D	266877003	ARSL	1050223	5mL	1	pH2	17	w	AXO1	N	O	
11/18/2010	23:36	7H418.D	266877005	ARSL	1050223	5mL	1	pH2	18	w	AXO1	N	O	
11/19/2010	0:11	7H419.D	266877007	ARSL	1050223	5mL	1	pH2	19	w	AXO1	N	X	IS Failure see 7H509
11/19/2010	0:47	7H420.D	1202267679	ARSL	1050223	5mL	1	pH2	20	w	AXO1	N	O	MIX[A] MS 266779010
11/19/2010	1:21	7H421.D	1202267680	ARSL	1050223	5mL	1	pH2	21	w	AXO1	N	O	MIX[A] MSD 266779010

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA7

Date: 11/19/2010 Method 8260B/624 Operator: AXO1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1541

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 11/15/2010

(See pg. 307,308 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 84515

Sequence Number: 111910V7

Daily Standard	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W7VM101119-01		5+5		
IS	UVM101019-01	1	1	1	
SS	UVM100927-02	1	1	1	
LCS/MS	W7VM101119-02/03			5+5	
BFB	UVM100927-02				1
SHORT	W7VM101119-04/05		5	5	

Purge Amount	
5	Water Purge Vol:
5g	Soil Purge Wt.
Y	Mid level ext. MeOH Vol:
Various	ul
DC275	Methanol Lot #
x	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
11/19/2010 9:15	7H501.D	UVM100927-02	GEL	BFB	5mL	1	N/A	1	w	AXO1	N/A	O	
11/19/2010 9:49	7H502.D	W7VM101119-01	GEL	CCV	5mL	1	N/A	2	w	AXO1	N/A	O	MIX[A] UVM101025-07C/UVM101022-07C
11/19/2010 10:24	7H503.D	W7VM101119-02	GEL	LCS	5mL	1	N/A	3	w	AXO1	N/A	O	MIX[A] UVM101026-01E/IVM101116-01
11/19/2010 10:58	7H504.D	W7VM101119-03	GEL	LCS	5g	1	N/A	4	s	AXO1	N/A	O	N/A MIX[A] UVM101026-01E/IVM101116-01
11/19/2010 11:31	7H505.D	W7VM101119-04	GEL	CCV	5mL	1	N/A	5	w	AXO1	N/A	O	MIX[B] UVM101105-01A
11/19/2010 12:07	7H506.D	W7VM101119-05	GEL	LCS	5g	1	N/A	6	s	AXO1	N/A	O	SOIL MIX[B] UVM101105-01A
11/19/2010 12:41	7H507.D	120226----	GEL	BLANK	5mL	1	N/A	7	w	AXO1	N/A	O	
11/19/2010 13:14	7H508.D	120226----	GEL	BLANK	5g	1	N/A	8	s	AXO1	N/A	O	SOIL
11/19/2010 13:50	7H509.D	266877007	ARSL	1050223	5mL	1	pH2	9	w	AXO1	N	O	
11/19/2010 16:03	7H510.D	120226----	GEL	BLANK	0.1mL	50	N/A	10	s	AXO1	N/A	O	SOIL HB
11/19/2010 16:39	7H511.D	267073005	PAES	1050722	5g	1	N/A	11	s	AXO1	N/A	O	SOIL
11/19/2010 17:14	7H512.D	267218002	BWXT	1050718	0.1mL	50	N/A	12	s	AXO1	N/A	O	SOIL
11/19/2010 17:48	7H513.D	267218004	BWXT	1050718	0.1mL	50	N/A	13	s	AXO1	N/A	O	SOIL OR TCE see also 7I110
11/19/2010 18:21	7H514.D	267218006	BWXT	1050718	0.1mL	50	N/A	14	s	AXO1	N/A	X	SOIL rr for C.O. see 7I109
11/19/2010 18:55	7H515.D	267218009	BWXT	1050718	5uL	1000	N/A	15	s	AXO1	N/A	O	SOIL OR NAPTH. see also 7I111
11/19/2010 19:29	7H516.D	267218008	BWXT	1050718	10uL	500000	N/A	16	w	AXO1	N/A	X	FROM 200X see 7I112
11/19/2010 20:04	7H517.D	1202268907	PAES	1050722	5g	1	N/A	17	s	AXO1	N/A	X	SOIL MIX[A] MS 267073005 see 7I113
11/19/2010 20:39	7H518.D	1202268908	PAES	1050722	5g	1	N/A	18	s	AXO1	N/A	X	SOIL MIX[A] MSD 267073005 see 7I114
11/19/2010 21:14	7H519.D	1202268879	BWXT	1050718	0.1mL	50	N/A	19	s	AXO1	N/A	X	SOIL MIX[A] MS 267218002
11/19/2010 21:50	7H520.D	1202268880	BWXT	1050718	0.1mL	50	N/A	20	s	AXO1	N/A	X	SOIL MIX[A] MSD 267218002
11/19/2010 22:23	7H521.D	1202268883	BWXT	1050718	10uL	500000	N/A	21	w	AXO1	N/A	X	MIX[A] MS 267218008
11/19/2010 22:57	7H522.D	1202268884	BWXT	1050718	10uL	500000	N/A	22	w	AXO1	N/A	X	MIX[A] MSD 267218008

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
01-DEC-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
VOA GC/MS	SW846 8260B DOE-AL	Liquid	ESHL
Batch ID:	**Sample Numbers:**		
1050223	See Below		

Potentially affected work order(s)(SDG): 266779(11-445),266877(11-463)

Application Issues:

Failed RPD for MS/MSD, or PS/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. The RPD between the matrix spike pair were not all within the acceptance limits for Vinyl Chloride. Vinyl Chloride had an RPD of 24.3%. The acceptance criteria is 0%-20%.	The RPD values were not all within the acceptance limits. The matrix spike pair passed recoveries for all analytes. The results are reported.

Originator's Name:

Kelle Bellamy 02-DEC-10

Data Validator/Group Leader:

Erin Haubert 02-DEC-10

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LC/MS/MS EXPLOSIVES ANALYSIS

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LC/MS/MS Case Narrative
ARS International (ARSL)
SDG 11-463

Method/Analysis Information

Procedure:	**Definitive Low Level Analysis of Nitroaromatic Explosives Utilizing Liquid Chromatography / Mass Spectrometry / Mass Spectrometry (LC/MS/MS) by SW-846 Method 8321 Modified (8321M)**
Analytical Method:	SW846 3535/8321A Modified
Prep Method:	SW846 Method 3535
Analytical Batch Number:	1048168
Prep Batch Number:	1048167

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 3535/8321A Modified :

Sample ID	Client ID
266877002	Buckman1-11-1944
266877004	Buckman06-11-1970
266877006	Buckman08-11-2042
1202262546	Method Blank (MB)
1202262547	Laboratory Control Sample (LCS)
1202262548	266877002(Buckman1-11-1944) Matrix Spike (MS)
1202262549	266877002(Buckman1-11-1944) Matrix Spike Duplicate (MSD)

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-056 REV# 12.

Primary Analyte Analysis

Calibration Information

Initial Calibration
All initial calibration requirements for this analysis have been met for this SDG.

Calibration Verification Standard Requirements
All associated calibration verification standard(s) (ICV or CCV) for this analysis met the acceptance criteria.

Calibration Blank Requirements
All initial or continuing calibration blanks (ICB or CCB) bracketing the analyses associated with this batch for this analysis were within acceptance criteria. Due to software limitations, the CCBs and/or the ICBs may have a concentration for target analytes in the Found column. These values should be zero.

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CRI Requirements
All low level calibration verification (CRI) requirements for this analysis were met by all bracketing CRI standards and may be based off the grand mean average percent recovery of all target analytes.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG for this analysis met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria in this SDG in this analytical batch for this analysis.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation
Sample 266877002 (Buckman1-11-1944) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS spike recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD spike recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC in this SDG.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
According to the GEL SOP for Method 8321A, all sample and QC extracts are diluted 1:1 v/v with HPLC grade water. The samples in this SDG in this analytical batch for this analysis did not require any additional dilutions.

Sample Re-extraction/Re-analysis
Samples 266877004 (Buckman06-11-1970) and 266877006 (Buckman08-11-2042) failed ISTD acceptance criteria. They were re-analyzed and passed acceptance criteria. The re-analyses are reported.

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Secondary Analyte Analysis

Calibration Information

Initial Calibration
All initial calibration requirements for this analysis have been met for this SDG.

Calibration Verification Standard Requirements
All associated calibration verification standard(s) (ICV or CCV) for this analysis met the acceptance criteria.

Calibration Blank Requirements
All initial or continuing calibration blanks (ICB or CCB) bracketing the analyses associated with this batch for this analysis were within acceptance criteria. Due to software limitations, the CCBs and/or the ICBs may have a concentration for target analytes in the Found column. These values should be zero.

CRI Requirements
All low level calibration verification (CRI) requirements for this analysis were met by all bracketing CRI standards and may be based off the grand mean average percent recovery of all target analytes.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG for this analysis met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria in this SDG in this analytical batch for this analysis.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation
Sample 266877002 (Buckman1-11-1944) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS spike recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD spike recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standards were not added to the secondary analyte extracts.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

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Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
According to the GEL SOP for Method 8321A, all sample and QC extracts are diluted 1:1 v/v with HPLC grade water. The samples in this SDG in this analytical batch for this analysis did not require any additional dilutions.

Sample Re-extraction/Re-analysis
The SDG was re-analyzed due to a CVS failing acceptance criteria. The re-analysis passed acceptance criteria and is reported.

Miscellaneous Information

Data Exception (DER) Documentation
Data exception reports (DERs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG for this analytical batch.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples required manual integrations due to software limitations.

Flagging Convention
The samples were not originally analyzed using SW-846 Method 8330.

Additional Comments
Due to software limitations, all initial calibration blanks must be designated as XIB001 in order for the forms to be correct.

Due to software limitations in the Secondary analyte analysis, false positives and analytes detected below the MDL cannot be deleted from the raw data.

Due to software limitations, file extensions such as DL, RE, etc. may not appear on the generated forms and/or raw data.

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for primary analyte analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for the primary analyte analysis. The laboratory also utilizes an Agilent 1100 liquid chromatography instrument for either primary or secondary analyte analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as either LCMSMS #3 or LCMSMS #4. It is fitted with an APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for both the primary and secondary analyte analysis.

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Chromatographic Columns

The detection of the primary analyte nitroaromatic and nitramines is accomplished through analysis on the following reversed phase column:

Phenomenex: Ultracarb 5u ODS (20), 250 x 4.60 mm ID.

The detection of the secondary analytes is accomplished through analysis on the following reversed phase column:

YMC: J'sphere ODS-H80, 150 x 4.6mm I.D.

Certification Statement

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

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GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ARSL001 ARS International (63641–10)

Client SDG: 11–463 GEL Work Order: 266877

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re–analyzed without re–extraction.
RE Indicates that sample is re–extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP–like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Herbert N Maier **Name:** **Herbert Maier**

Date: **30 NOV 2010** **Title:** **Data Validator**

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SAMPLE DATA SUMMARY

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1–11–1944

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877002

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXP1119068a

Date Analyzed: 20–NOV–10 23:40

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
118–96–7	2,4,6–Trinitrotoluene	0.325	U	0.104	0.325
118–96–7	*2,4,6–Trinitrotoluene*				
121–14–2	2,4–Dinitrotoluene	0.325	U	0.104	0.325
121–14–2	*2,4–Dinitrotoluene*				
121–82–4	RDX	0.325	U	0.104	0.325
121–82–4	*RDX*				
19406–51–0	4–Amino–2,6–dinitrotoluene	0.325	U	0.104	0.325
19406–51–0	*4–Amino–2,6–dinitrotoluene*				
2691–41–0	HMX	0.325	U	0.104	0.325
2691–41–0	*HMX*				
35572–78–2	2–Amino–4,6–dinitrotoluene	0.325	U	0.104	0.325
35572–78–2	*2–Amino–4,6–dinitrotoluene*				
606–20–2	2,6–Dinitrotoluene	0.325	U	0.0779	0.325
606–20–2	*2,6–Dinitrotoluene*				
88–72–2	o–Nitrotoluene	0.325	U	0.104	0.325
88–72–2	*o–Nitrotoluene*				
98–95–3	Nitrobenzene	0.325	U	0.104	0.325
98–95–3	*Nitrobenzene*				
99–08–1	m–Nitrotoluene	0.325	U	0.104	0.325
99–08–1	*m–Nitrotoluene*				
99–35–4	1,3,5–Trinitrobenzene	0.325	U	0.104	0.325
99–35–4	*1,3,5–Trinitrobenzene*				
99–65–0	m–Dinitrobenzene	0.325	U	0.104	0.325
99–65–0	*m–Dinitrobenzene*				
479–45–8	Tetryl	0.649	U	0.130	0.649
479–45–8	*Tetryl*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1–11–1944

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877002

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

Cas No.	Compound	Concentration*	Q	MDL	PQL
99–99–0	p–Nitrotoluene	0.649	U	0.104	0.649
99–99–0	*p–Nitrotoluene*				
78–11–5	PETN	1.30	U	0.130	1.30
78–11–5	*PETN*				

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1–11–1944

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877002

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXS11240024.wiff

Date Analyzed: 24–NOV–10 16:30

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
3058–38–6	TATB	1.30	U	0.390	1.30
3058–38–6	*TATB*				
59229–75–3	2,6–Diamino–4–nitrotoluene	1.30	U	0.390	1.30
59229–75–3	*2,6–Diamino–4–nitrotoluene*				
618–87–1	3,5–Dinitroaniline	1.30	U	0.390	1.30
618–87–1	*3,5–Dinitroaniline*				
6629–29–4	2,4–Diamino–6–nitrotoluene	1.30	U	0.390	1.30
6629–29–4	*2,4–Diamino–6–nitrotoluene*				
78–30–8	tris(o–cresyl) phosphate	1.30	U	0.390	1.30
78–30–8	*tris(o–cresyl) phosphate*				

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman06–11–1970

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877004

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXP1123015a

Date Analyzed: 23–NOV–10 21:53

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
118–96–7	2,4,6–Trinitrotoluene	0.325	U	0.104	0.325
118–96–7	*2,4,6–Trinitrotoluene*				
121–14–2	2,4–Dinitrotoluene	0.325	U	0.104	0.325
121–14–2	*2,4–Dinitrotoluene*				
121–82–4	RDX	0.325	U	0.104	0.325
121–82–4	*RDX*				
19406–51–0	4–Amino–2,6–dinitrotoluene	0.325	U	0.104	0.325
19406–51–0	*4–Amino–2,6–dinitrotoluene*				
2691–41–0	HMX	0.325	U	0.104	0.325
2691–41–0	*HMX*				
35572–78–2	2–Amino–4,6–dinitrotoluene	0.325	U	0.104	0.325
35572–78–2	*2–Amino–4,6–dinitrotoluene*				
606–20–2	2,6–Dinitrotoluene	0.325	U	0.0779	0.325
606–20–2	*2,6–Dinitrotoluene*				
88–72–2	o–Nitrotoluene	0.325	U	0.104	0.325
88–72–2	*o–Nitrotoluene*				
98–95–3	Nitrobenzene	0.325	U	0.104	0.325
98–95–3	*Nitrobenzene*				
99–08–1	m–Nitrotoluene	0.325	U	0.104	0.325
99–08–1	*m–Nitrotoluene*				
99–35–4	1,3,5–Trinitrobenzene	0.325	U	0.104	0.325
99–35–4	*1,3,5–Trinitrobenzene*				
99–65–0	m–Dinitrobenzene	0.325	U	0.104	0.325
99–65–0	*m–Dinitrobenzene*				
479–45–8	Tetryl	0.649	U	0.130	0.649
479–45–8	*Tetryl*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman06–11–1970

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877004

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

Cas No.	Compound	Concentration*	Q	MDL	PQL
99–99–0	p–Nitrotoluene	0.649	U	0.104	0.649
99–99–0	*p–Nitrotoluene*				
78–11–5	PETN	1.30	U	0.130	1.30
78–11–5	*PETN*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman06–11–1970

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877004

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXS11240027.wiff

Date Analyzed: 24–NOV–10 17:18

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
3058–38–6	TATB	1.30	U	0.390	1.30
3058–38–6	*TATB*				
59229–75–3	2,6–Diamino–4–nitrotoluene	1.30	U	0.390	1.30
59229–75–3	*2,6–Diamino–4–nitrotoluene*				
618–87–1	3,5–Dinitroaniline	1.30	U	0.390	1.30
618–87–1	*3,5–Dinitroaniline*				
6629–29–4	2,4–Diamino–6–nitrotoluene	1.30	U	0.390	1.30
6629–29–4	*2,4–Diamino–6–nitrotoluene*				
78–30–8	tris(o–cresyl) phosphate	1.30	U	0.390	1.30
78–30–8	*tris(o–cresyl) phosphate*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman08–11–2042

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877006

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXP1123016a

Date Analyzed: 23–NOV–10 22:23

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
118–96–7	2,4,6–Trinitrotoluene	0.325	U	0.104	0.325
118–96–7	*2,4,6–Trinitrotoluene*				
121–14–2	2,4–Dinitrotoluene	0.325	U	0.104	0.325
121–14–2	*2,4–Dinitrotoluene*				
121–82–4	RDX	0.325	U	0.104	0.325
121–82–4	*RDX*				
19406–51–0	4–Amino–2,6–dinitrotoluene	0.325	U	0.104	0.325
19406–51–0	*4–Amino–2,6–dinitrotoluene*				
2691–41–0	HMX	0.325	U	0.104	0.325
2691–41–0	*HMX*				
35572–78–2	2–Amino–4,6–dinitrotoluene	0.325	U	0.104	0.325
35572–78–2	*2–Amino–4,6–dinitrotoluene*				
606–20–2	2,6–Dinitrotoluene	0.325	U	0.0779	0.325
606–20–2	*2,6–Dinitrotoluene*				
88–72–2	o–Nitrotoluene	0.325	U	0.104	0.325
88–72–2	*o–Nitrotoluene*				
98–95–3	Nitrobenzene	0.325	U	0.104	0.325
98–95–3	*Nitrobenzene*				
99–08–1	m–Nitrotoluene	0.325	U	0.104	0.325
99–08–1	*m–Nitrotoluene*				
99–35–4	1,3,5–Trinitrobenzene	0.325	U	0.104	0.325
99–35–4	*1,3,5–Trinitrobenzene*				
99–65–0	m–Dinitrobenzene	0.325	U	0.104	0.325
99–65–0	*m–Dinitrobenzene*				
479–45–8	Tetryl	0.649	U	0.130	0.649
479–45–8	*Tetryl*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman08–11–2042

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877006

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

Cas No.	Compound	Concentration*	Q	MDL	PQL
99–99–0	p–Nitrotoluene	0.649	U	0.104	0.649
99–99–0	*p–Nitrotoluene*				
78–11–5	PETN	1.30	U	0.130	1.30
78–11–5	*PETN*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman08–11–2042

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877006

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXS11240028.wiff

Date Analyzed: 24–NOV–10 17:33

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
3058–38–6	TATB	1.30	U	0.390	1.30
3058–38–6	*TATB*				
59229–75–3	2,6–Diamino–4–nitrotoluene	1.30	U	0.390	1.30
59229–75–3	*2,6–Diamino–4–nitrotoluene*				
618–87–1	3,5–Dinitroaniline	1.30	U	0.390	1.30
618–87–1	*3,5–Dinitroaniline*				
6629–29–4	2,4–Diamino–6–nitrotoluene	1.30	U	0.390	1.30
6629–29–4	*2,4–Diamino–6–nitrotoluene*				
78–30–8	tris(o–cresyl) phosphate	1.30	U	0.390	1.30
78–30–8	*tris(o–cresyl) phosphate*				

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QUALITY CONTROL SUMMARY

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2

High Explosives Surrogate Recovery Summary

Lab Name: GEL Laboratories LLC **GEL Job No (SDG):** 11–463

Lab Code: GEL **HPLC Column:** Phenomenex Ultracarb 5u ODS(20)

Lab Sample ID	Client Sample ID	DNT	QC Limits	Flg
266877002	Buckman1–11–1944	102	69 – 125	
266877002	Buckman1–11–1944	83.2	69 – 125	
266877004	Buckman06–11–1970	75.3	69 – 125	
266877004	Buckman06–11–1970	79.2	69 – 125	
266877006	Buckman08–11–2042	81.4	69 – 125	
266877006	Buckman08–11–2042	84.4	69 – 125	
1202262546	MB for batch 1048167	89.8	69 – 125	
1202262546	MB for batch 1048167	78	69 – 125	
1202262547	LCS for batch 1048167	89.7	69 – 125	
1202262547	LCS for batch 1048167	81.2	69 – 125	
1202262548	Buckman1–11–1944(266877002MS)	93.8	69 – 125	
1202262548	Buckman1–11–1944(266877002MS)	84	69 – 125	
1202262549	Buckman1–11–1944(266877002MSD	92.6	69 – 125	
1202262549	Buckman1–11–1944(266877002MSD	84.8	69 – 125	

DNT = 3,4–Dinitrotoluene

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3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 11–463

Extract Batch Code: 1048167

Date Extracted: 15–NOV–10

GEL LCS ID: 1202262547

GEL LCSDUP ID:

Analysis Date/Time: 20–NOV–10 23:11

DUP Analysis Date/Time:

Reporting Units: ug/L

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
RDX	6.49351	6.32	97.3					63 – 134
Tetryl	6.49351	5.88	90.6					51 – 133
m–Dinitrobenzene	6.49351	6.16	94.9					77 – 106
m–Nitrotoluene	6.49351	5.62	86.5					58 – 110
o–Nitrotoluene	6.49351	5.79	89.1					58 – 107
p–Nitrotoluene	6.49351	6.02	92.8					57 – 118
1,3,5–Trinitrobenzene	6.49351	5.9	90.9					62 – 120
2,4–Dinitrotoluene	6.49351	6.08	93.7					73 – 117
2–Amino–4,6–dinitrotoluene	6.49351	6.06	93.3					70 – 122
PETN	6.49351	6.42	98.8					62 – 135
Nitrobenzene	6.49351	5.24	80.7					61 – 108
HMX	6.49351	5.56	85.6					50 – 129
4–Amino–2,6–dinitrotoluene	6.49351	6.26	96.4					71 – 119
2,6–Dinitrotoluene	6.49351	6.08	93.6					76 – 106
2,4,6–Trinitrotoluene	6.49351	6.33	97.5					68 – 130

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

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3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 11–463

Extract Batch Code: 1048167

Date Extracted: 15–NOV–10

GEL LCS ID: 1202262547

GEL LCSDUP ID:

Analysis Date/Time: 24–NOV–10 16:15

DUP Analysis Date/Time:

Reporting Units: ug/L

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
2,4–Diamino–6–nitrotoluene	6.49351	5.23	80.6					50 – 105
2,6–Diamino–4–nitrotoluene	6.49351	5.49	84.6					47 – 125
3,5–Dinitroaniline	6.49351	5.69	87.6					71 – 113
TATB	6.49351	5.73	88.2					44 – 119
tris(o–cresyl) phosphate	6.49351	2.51	38.6					15 – 57

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

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3

High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: Buckman1–11–1944

Lab Code: GEL

GEL Job No (SDG) 11–463

Extract Batch Code: 1048167

Date Extracted: 15–NOV–10

GEL Spike ID: 1202262548

GEL SpikeDup ID: 1202262549

Analysis Date/Time: 21–NOV–10 00:10

MSD Analysis Date/Time: 21–NOV–10 00:39

Reporting Units: ug/L

QC Type: MS/MSD

Compound	Spike Added	Sample Conc	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Rec Limits
1,3,5–Trinitrobenzene	6.49351	0	5.62	86.6	6.18	95.2	9.5	23	51 – 120
2,4,6–Trinitrotoluene	6.49351	0	6.33	97.5	6.57	101	3.73	26	58 – 135
2,6–Dinitrotoluene	6.49351	0	6.27	96.5	6.61	102	5.26	25	77 – 109
2–Amino–4,6–dinitrotoluene	6.49351	0	6.18	95.1	6.68	103	7.77	26	69 – 125
2,4–Dinitrotoluene	6.49351	0	6.56	101	6.91	106	5.11	20	73 – 121
4–Amino–2,6–dinitrotoluene	6.49351	0	6.02	92.8	6.39	98.5	5.97	25	56 – 135
Nitrobenzene	6.49351	0	4.94	76.1	5.61	86.3	12.6	24	57 – 116
RDX	6.49351	0	6.6	102	6.89	106	4.28	26	53 – 143
m–Dinitrobenzene	6.49351	0	6.27	96.5	6.63	102	5.72	25	77 – 109
p–Nitrotoluene	6.49351	0	5.61	86.4	6.27	96.5	11.1	25	59 – 122
o–Nitrotoluene	6.49351	0	5.66	87.2	6.24	96.1	9.73	25	60 – 115
m–Nitrotoluene	6.49351	0	5.67	87.3	6.18	95.2	8.69	26	59 – 115
Tetryl	6.49351	0	4.63	71.3	4.98	76.7	7.31	25	30 – 148
PETN	6.49351	0	6.05	93.2	6.58	101	8.48	28	53 – 145
HMX	6.49351	0	5.72	88.1	5.85	90.1	2.21	26	46 – 132

#Column to be used to flag recovery and RPD values with an asterisk

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3

High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: Buckman1–11–1944

Lab Code: GEL

GEL Job No (SDG) 11–463

Extract Batch Code: 1048167

Date Extracted: 15–NOV–10

GEL Spike ID: 1202262548

GEL SpikeDup ID: 1202262549

Analysis Date/Time: 24–NOV–10 16:46

MSD Analysis Date/Time: 24–NOV–10 17:02

Reporting Units: ug/L

QC Type: MS/MSD

Compound	Spike Added	Sample Conc	MS Conc	MS Rec	#	MSD Conc	MSD Rec	#	RPD	#	RPD Limit	Rec Limits
2,6–Diamino–4–nitrotoluene	6.49351	0	5.19	80		4.82	74.2		7.52		22	31 – 137
3,5–Dinitroaniline	6.49351	0	5.91	91		6.16	94.8		4.09		22	66 – 121
2,4–Diamino–6–nitrotoluene	6.49351	0	5.32	82		5.6	86.2		4.99		28	12 – 139
TATB	6.49351	0	5.4	83.2		5.66	87.2		4.7		25	39 – 130
tris(o–cresyl) phosphate	6.49351	0	2.29	35.2		2.7	41.6		16.7		28	15 – 85

#Column to be used to flag recovery and RPD values with an asterisk

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 19–NOV–10 14:44

GEL Data File: EXP1119001a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	563.174
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	545.4
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

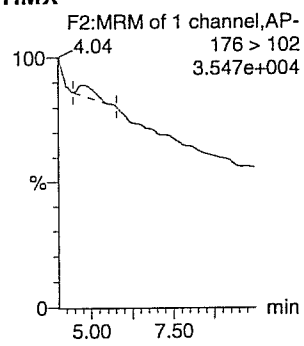
Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\111910expa.mdb, Time: Sun Nov 21 10:33:04 2010
Calibration: Untitled, Time: Sun Nov 21 11:03:17 2010

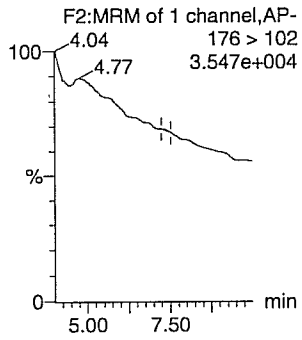
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119001a
Date: 19-Nov-2010
Time: 14:44:12
ID: XIBLK01
Vial: 1:1,A

MATT 11/22/10

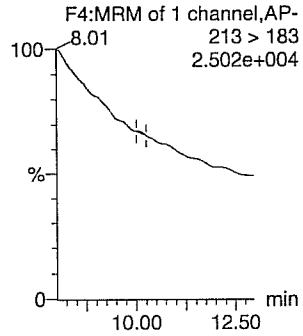
HMX



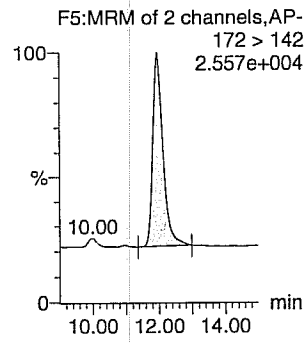
RDX



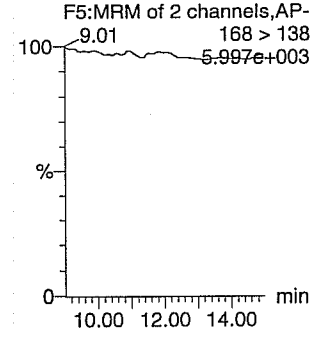
135-Trinitrobenzene



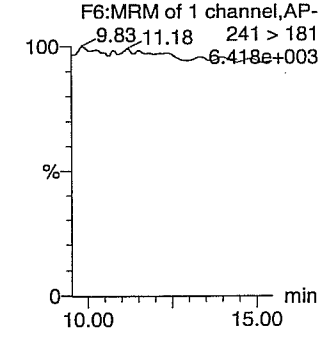
13-Dinitrobenzene-d4



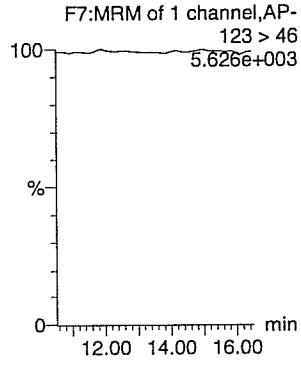
13-Dinitrobenzene



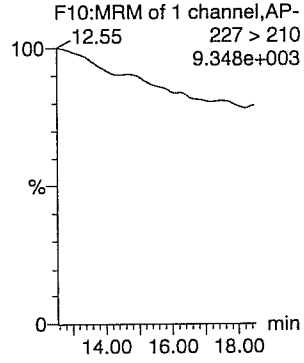
Tetryl



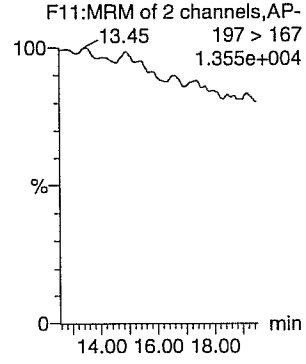
Nitrobenzene



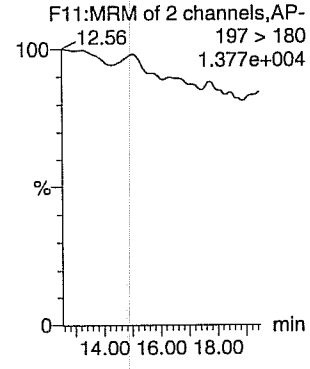
246-Trinitrotoluene



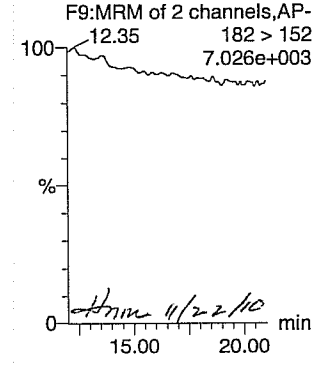
4-Amino-26-dinitrotoluene



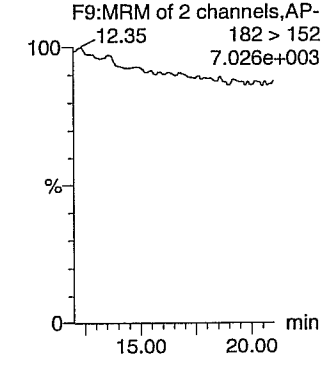
2-Amino-46-dinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



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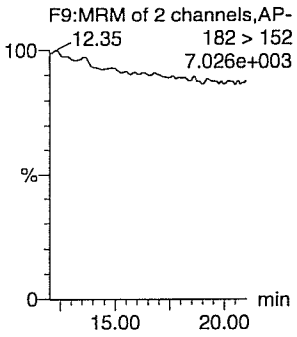
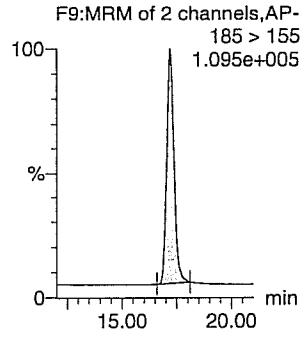
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

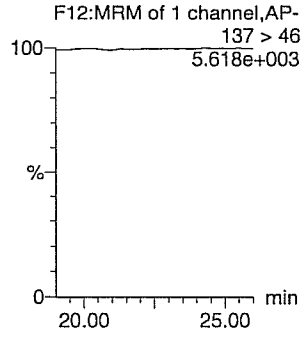
24-dinitrotoluene



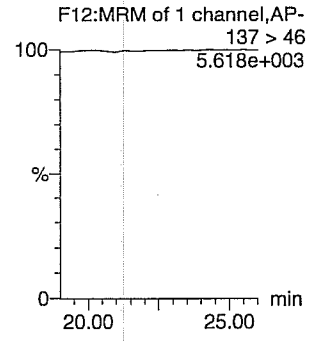
26-dinitrotoluene-d3



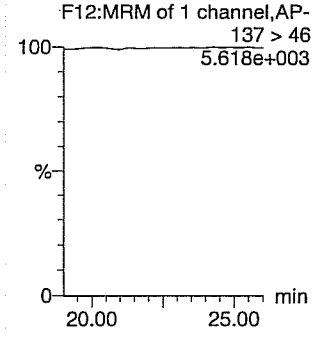
2-Nitrotoluene



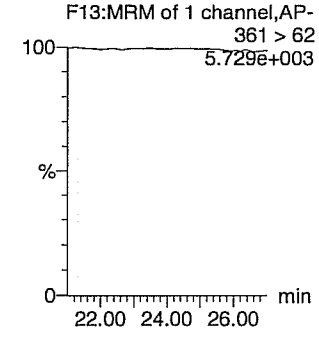
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			7225.117			MM-	21-Nov-10	10:37:38				
XIBLK01	RDX	176 > 102			7225.117			MM-	21-Nov-10	10:39:21				
XIBLK01	135-Trinitrobenzene	213 > 183			7225.117			MM-	21-Nov-10	10:40:07				
XIBLK01	13-Dinitrobenzene-d4	172 > 142	11.95	7225.117		7225.117	7225.117	bb			563.1744	112.6	12.6	642.0
XIBLK01	13-Dinitrobenzene	168 > 138			7225.117									
XIBLK01	Tetryl	241 > 181			7225.117									
XIBLK01	Nitrobenzene	123 > 46			7225.117									
XIBLK01	246-Trinitrotoluene	227 > 210			41561.930									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			41561.930									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			41561.930									
XIBLK01	34-dinitrotoluene	182 > 152			41561.930									
XIBLK01	26-dinitrotoluene	182 > 152			41561.930									
XIBLK01	24-dinitrotoluene	182 > 152			41561.930									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.18	41561.930		41561.930	41561.930	bb			545.3999	109.1	9.1	3229.9
XIBLK01	2-Nitrotoluene	137 > 46			41561.930									
XIBLK01	4-Nitrotoluene	137 > 46			41561.930									
XIBLK01	3-Nitrotoluene	137 > 46			41561.930									
XIBLK01	PETN	361 > 62			41561.930									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 19–NOV–10 15:13

GEL Data File: EXP1119002a

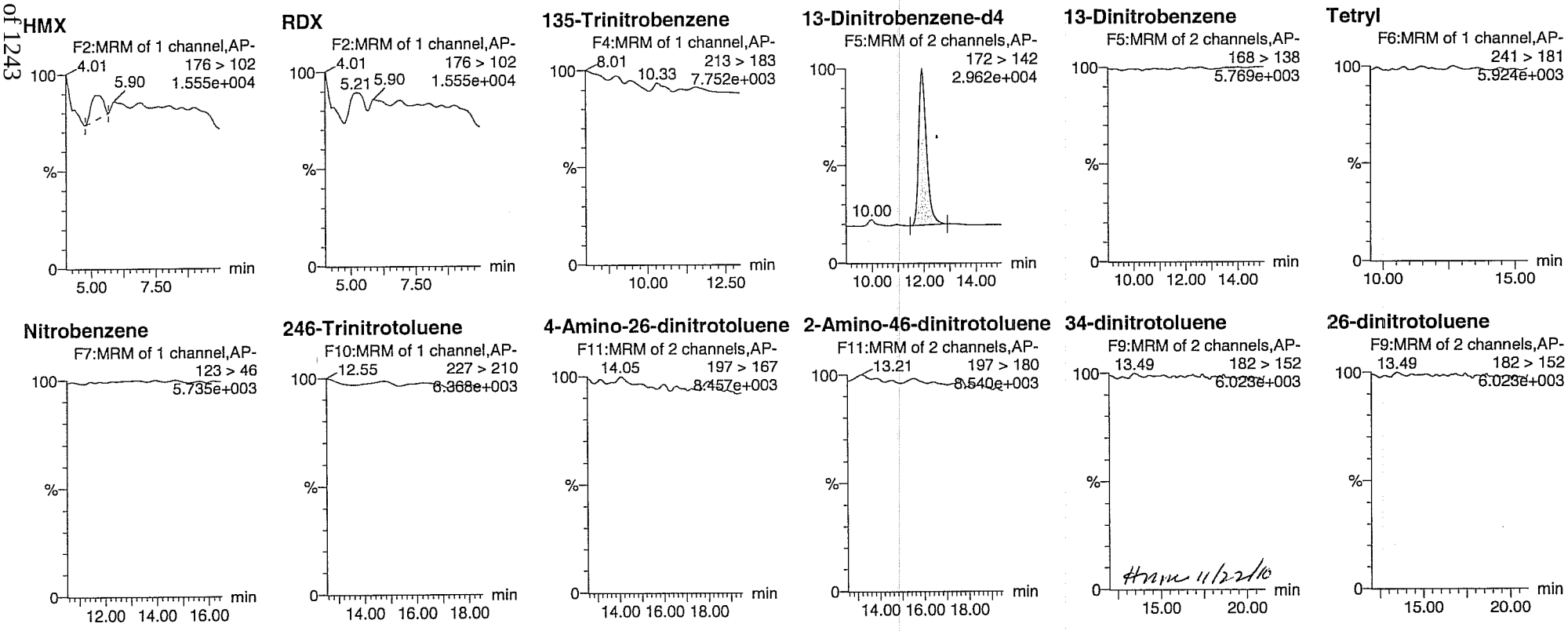
Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	651.134
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	548.793
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119002a
Date: 19-Nov-2010
Time: 15:13:43
ID: XIBLK01
Vial: 1:1,A



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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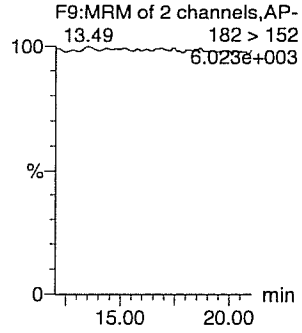
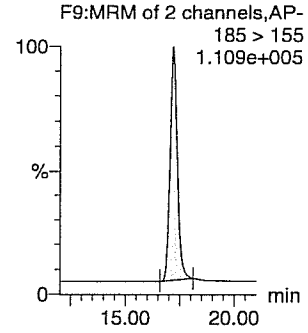
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

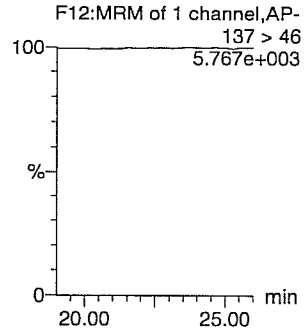
24-dinitrotoluene



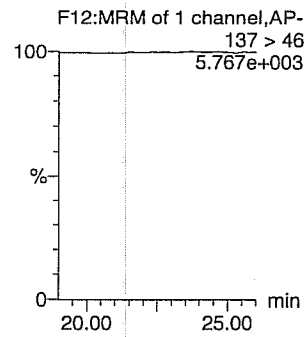
26-dinitrotoluene-d3



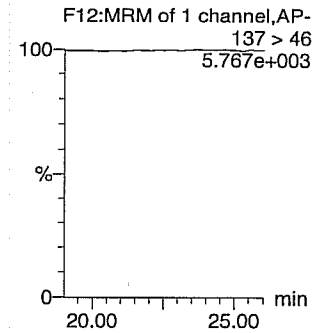
2-Nitrotoluene



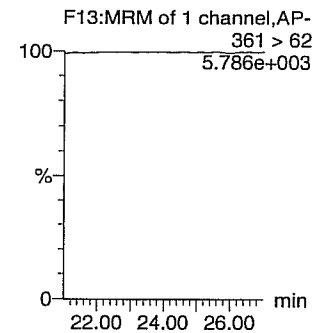
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			8353.573			MM-	21-Nov-10	10:37:42				
XIBLK01	RDX	176 > 102			8353.573									
XIBLK01	135-Trinitrobenzene	213 > 183			8353.573									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	11.95	8353.573		8353.573	8353.573	bb			651.1339	130.2	30.2	824.8
XIBLK01	13-Dinitrobenzene	168 > 138			8353.573									
XIBLK01	Tetryl	241 > 181			8353.573									
XIBLK01	Nitrobenzene	123 > 46			8353.573									
XIBLK01	246-Trinitrotoluene	227 > 210			41820.512									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			41820.512									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			41820.512									
XIBLK01	34-dinitrotoluene	182 > 152			41820.512									
XIBLK01	26-dinitrotoluene	182 > 152			41820.512									
XIBLK01	24-dinitrotoluene	182 > 152			41820.512									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.18	41820.512		41820.512	41820.512	bb			548.7932	109.8	9.8	2580.0
XIBLK01	2-Nitrotoluene	137 > 46			41820.512									
XIBLK01	4-Nitrotoluene	137 > 46			41820.512									
XIBLK01	3-Nitrotoluene	137 > 46			41820.512									
XIBLK01	PETN	361 > 62			41820.512									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 23–NOV–10 15:00

GEL Data File: EXP1123001a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	459.729
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	434.197
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

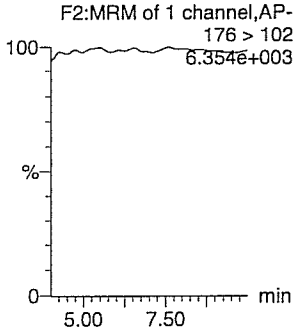
Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\112310expa.mdb, Time: Fri Nov 26 07:51:44 2010
Calibration: Untitled, Time: Fri Nov 26 13:46:46 2010

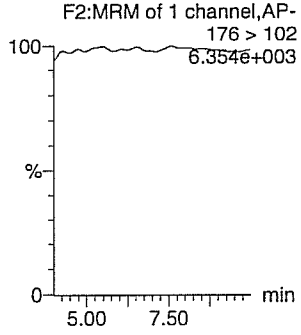
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123001a
Date: 23-Nov-2010
Time: 15:00:23
ID: XIBLK01
Vial: 1:1,A

Lcn 11/29/10

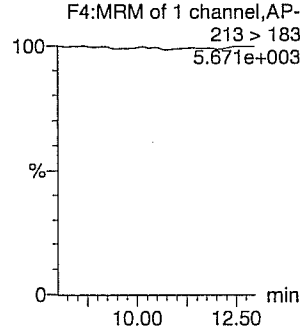
HMX



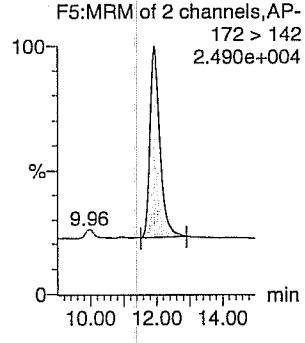
RDX



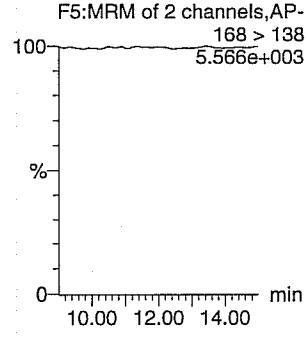
135-Trinitrobenzene



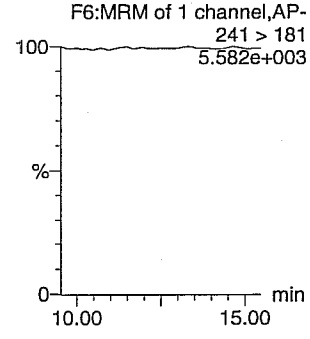
13-Dinitrobenzene-d4



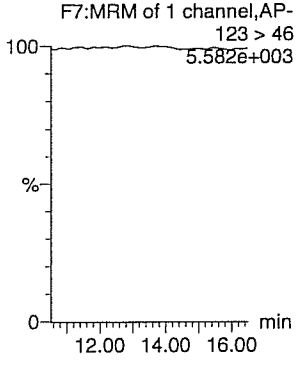
13-Dinitrobenzene



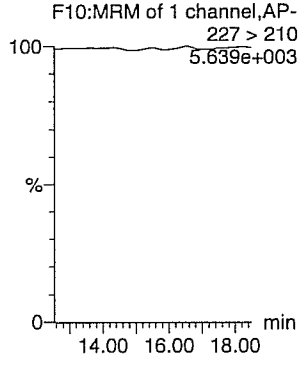
Tetryl



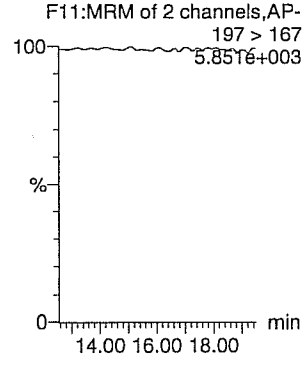
Nitrobenzene



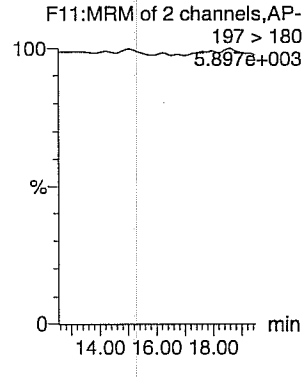
246-Trinitrotoluene



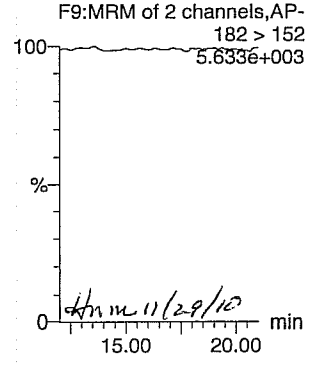
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

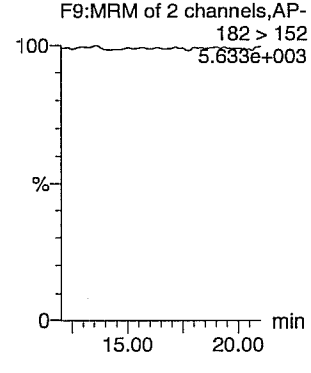


34-dinitrotoluene



HMM 11/29/10

26-dinitrotoluene



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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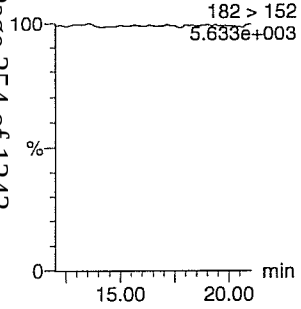
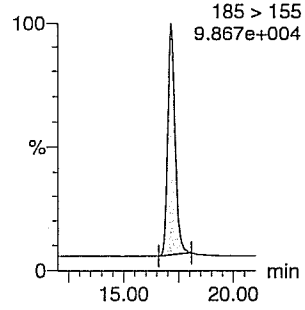
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

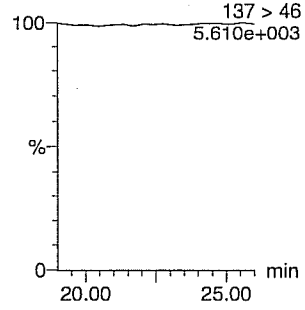
24-dinitrotoluene



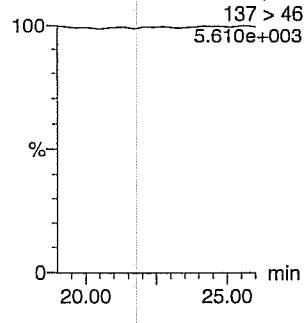
26-dinitrotoluene-d3



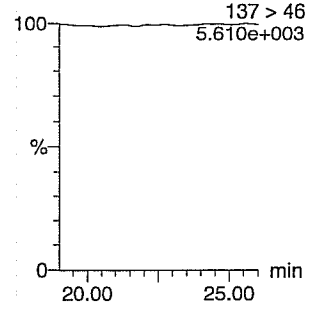
2-Nitrotoluene



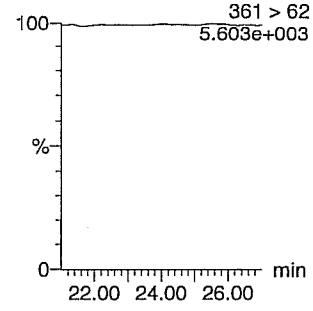
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			6856.087									
XIBLK01	RDX	176 > 102			6856.087									
XIBLK01	135-Trinitrobenzene	213 > 183			6856.087									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	11.91	6856.087		6856.087	6856.087	bb			459.7291	91.9	-8.1	974.6
XIBLK01	13-Dinitrobenzene	168 > 138			6856.087									
XIBLK01	Tetryl	241 > 181			6856.087									
XIBLK01	Nitrobenzene	123 > 46			6856.087									
XIBLK01	246-Trinitrotoluene	227 > 210			36992.430									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			36992.430									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			36992.430									
XIBLK01	34-dinitrotoluene	182 > 152			36992.430									
XIBLK01	26-dinitrotoluene	182 > 152			36992.430									
XIBLK01	24-dinitrotoluene	182 > 152			36992.430									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.14	36992.430		36992.430	36992.430	bb			434.1968	86.8	-13.2	2358.4
XIBLK01	2-Nitrotoluene	137 > 46			36992.430									
XIBLK01	4-Nitrotoluene	137 > 46			36992.430									
XIBLK01	3-Nitrotoluene	137 > 46			36992.430									
XIBLK01	PETN	361 > 62			36992.430									

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 23–NOV–10 15:30

GEL Data File: EXP1123002a

Instrument ID: LCMSMS

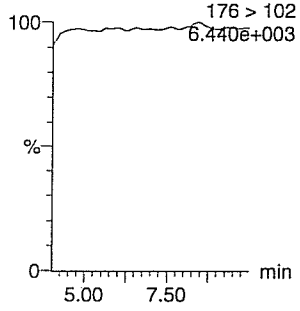
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	411.258
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	448.911
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0

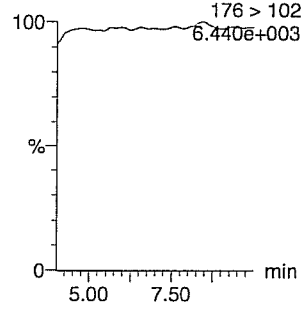
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123002a
Date: 23-Nov-2010
Time: 15:30:10
ID: XIBLK01
Vial: 1:1,A

LCr 11/29/10

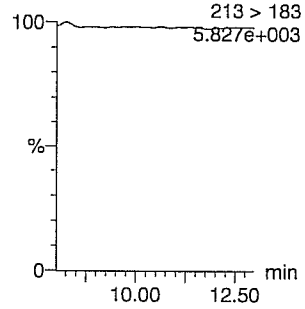
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.440e+003



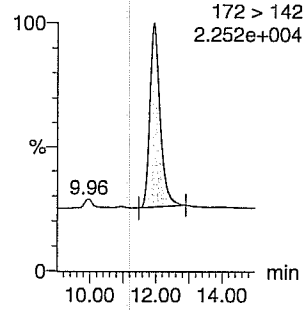
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.440e+003



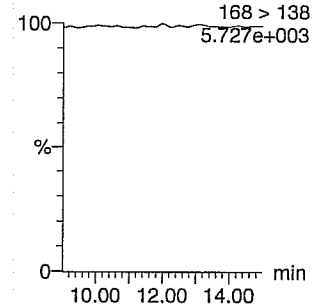
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.827e+003



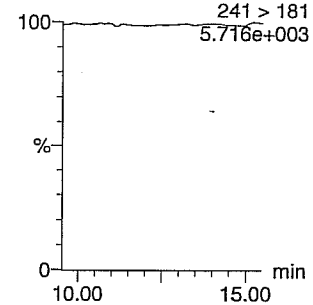
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.252e+004



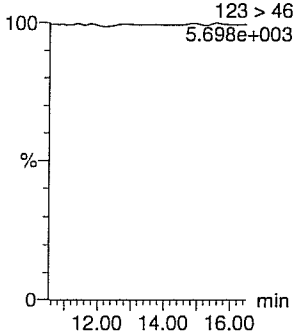
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.727e+003



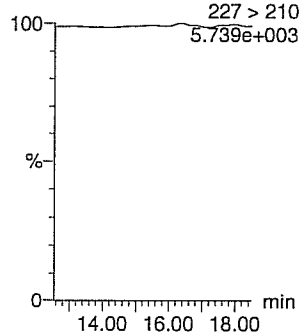
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.716e+003



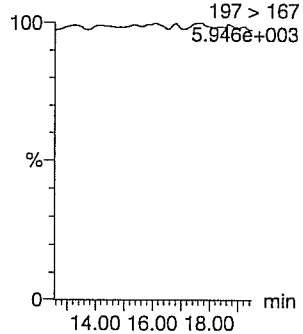
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.698e+003



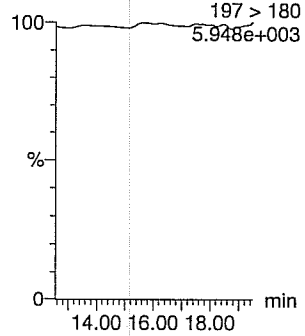
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.739e+003



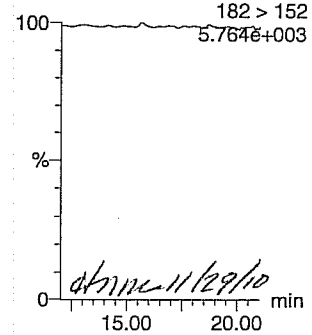
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
5.946e+003



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.948e+003

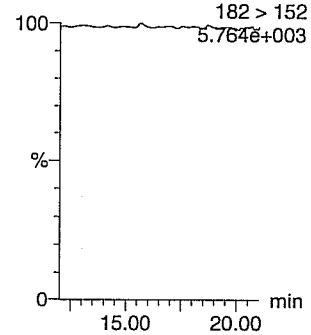


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.764e+003



dhmc 11/29/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.764e+003



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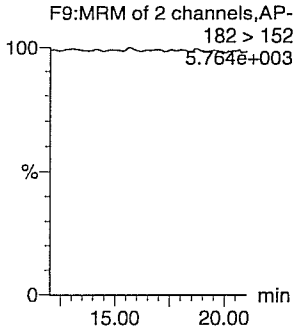
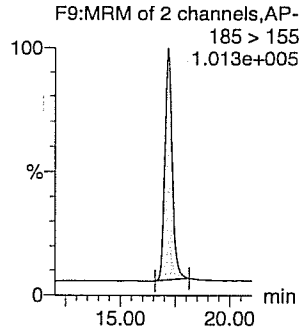
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

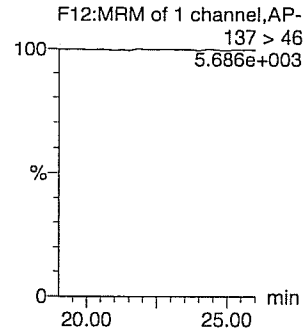
24-dinitrotoluene



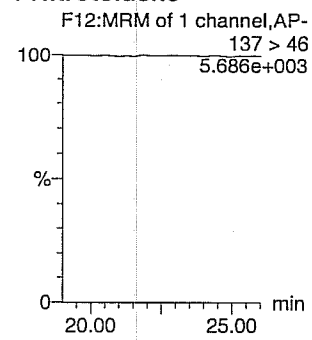
26-dinitrotoluene-d3



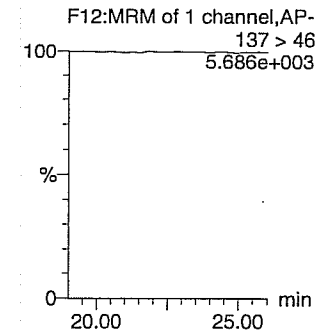
2-Nitrotoluene



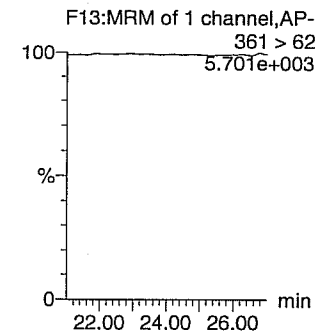
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			6133.221									
XIBLK01	RDX	176 > 102			6133.221									
XIBLK01	135-Trinitrobenzene	213 > 183			6133.221									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	11.95	6133.221		6133.221	6133.221	bb			411.2580	82.3	-17.7	312.4
XIBLK01	13-Dinitrobenzene	168 > 138			6133.221									
XIBLK01	Tetryl	241 > 181			6133.221									
XIBLK01	Nitrobenzene	123 > 46			6133.221									
XIBLK01	246-Trinitrotoluene	227 > 210			38246.066									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			38246.066									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			38246.066									
XIBLK01	34-dinitrotoluene	182 > 152			38246.066									
XIBLK01	26-dinitrotoluene	182 > 152			38246.066									
XIBLK01	24-dinitrotoluene	182 > 152			38246.066									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.18	38246.066		38246.066	38246.066	bb			448.9113	89.8	-10.2	2378.5
XIBLK01	2-Nitrotoluene	137 > 46			38246.066									
XIBLK01	4-Nitrotoluene	137 > 46			38246.066									
XIBLK01	3-Nitrotoluene	137 > 46			38246.066									
XIBLK01	PETN	361 > 62			38246.066									

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 24–NOV–10 10:29

GEL Data File: EXS11240001.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	0
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

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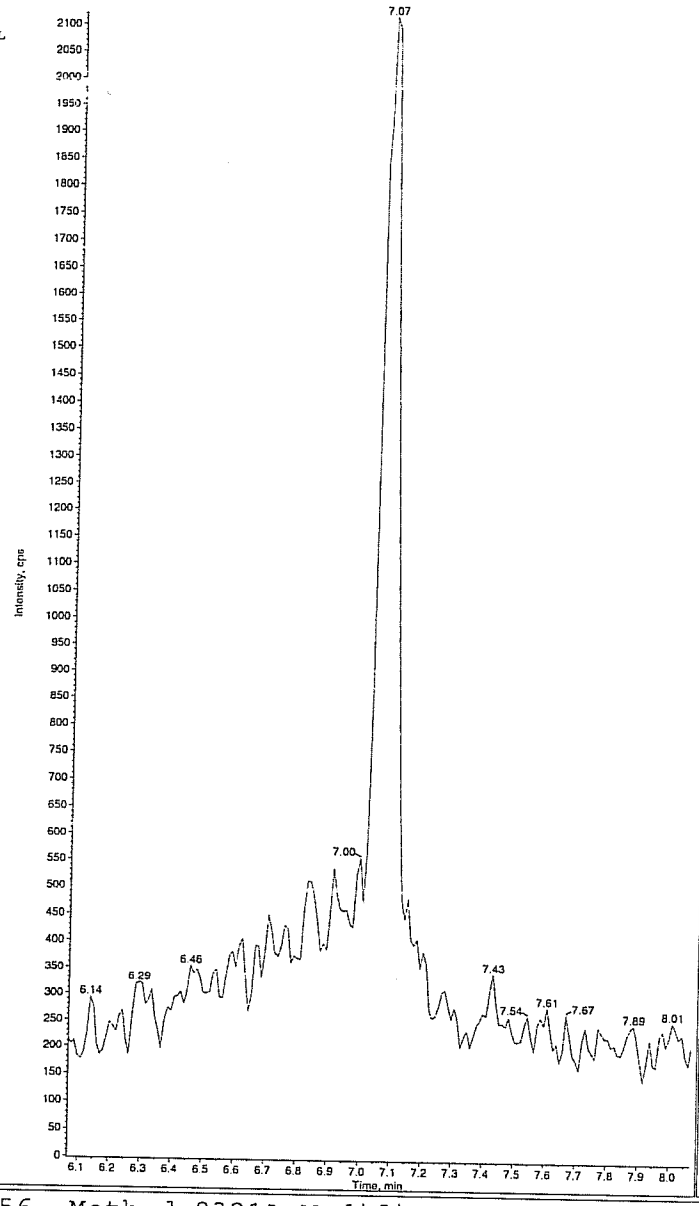
Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS11240001.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:29:24 AM

Modified: No

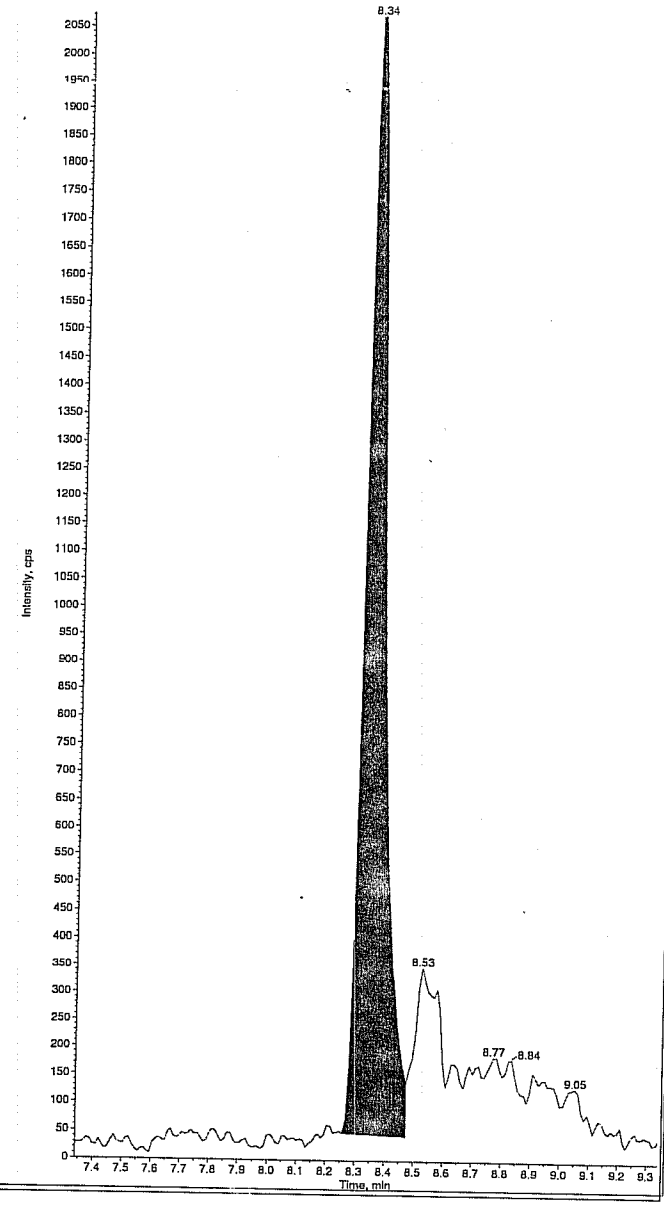


Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS11240001.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: No Intercept
Acq. Date: 11/24/2010
Acq. Time: 10:29:24 AM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.34 min
Area: 1.02e+004 counts
Height: 2026.251 cps
Start Time: 8.26 min
End Time: 8.47 min



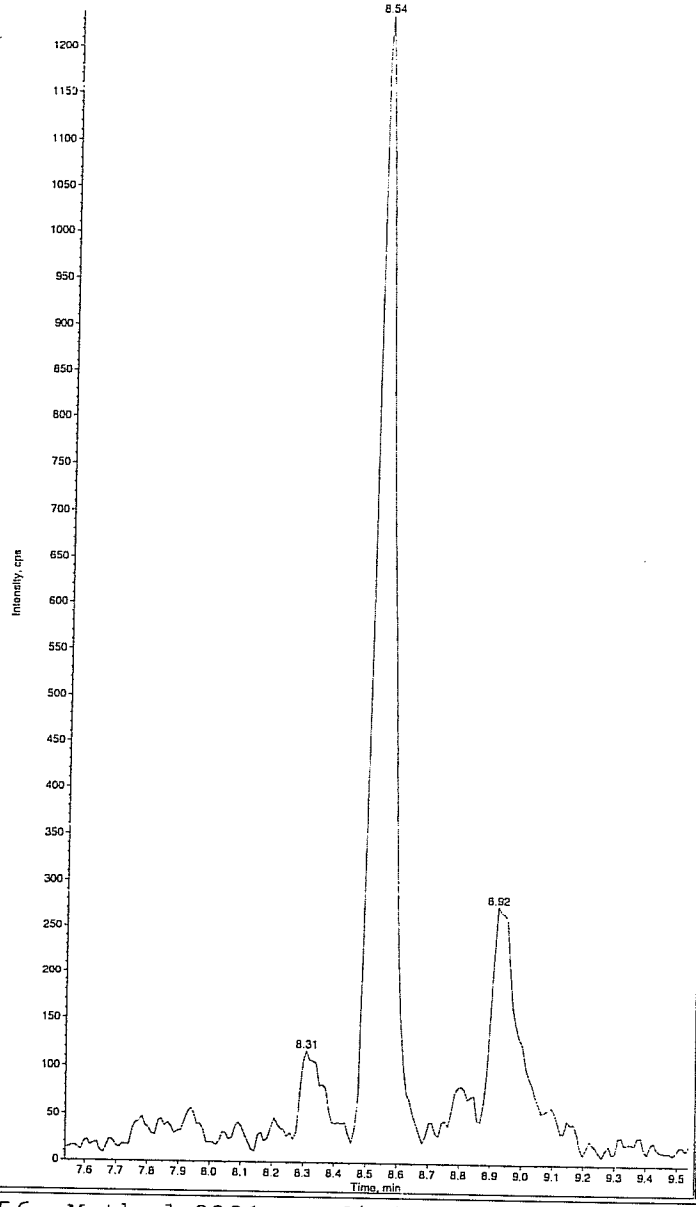
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS11240001.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:29:24 AM

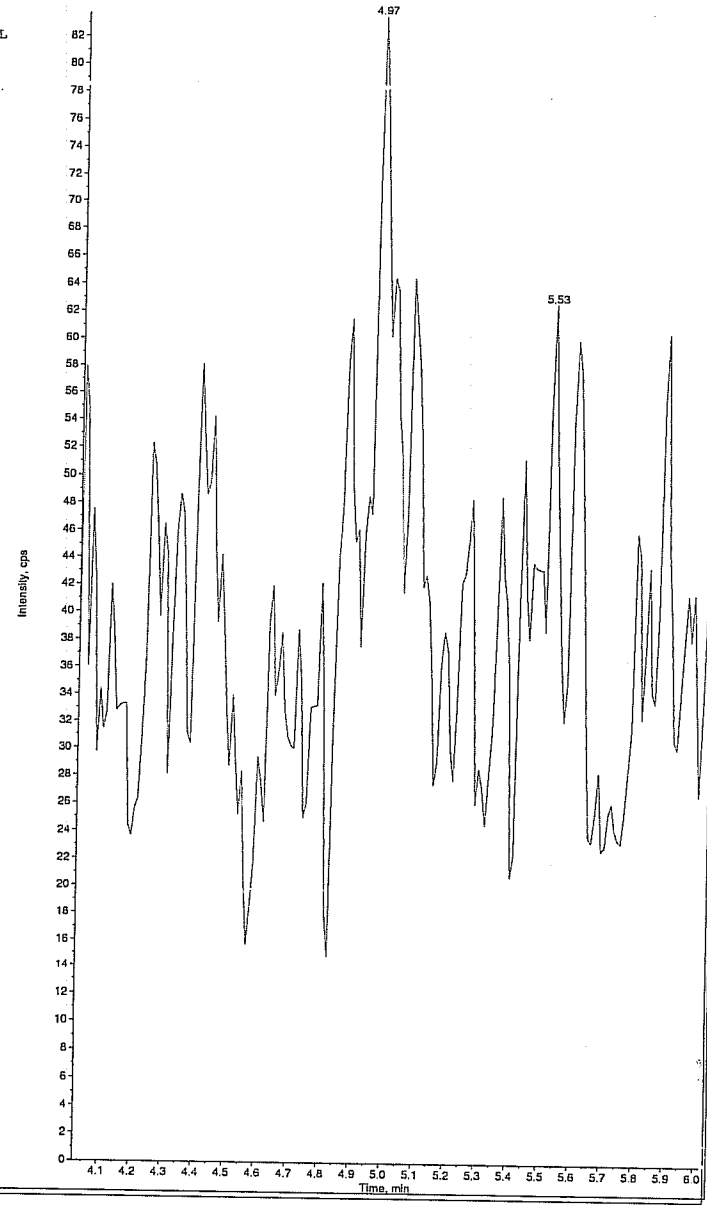
Modified: No



Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS11240001.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:29:24 AM

Modified: No



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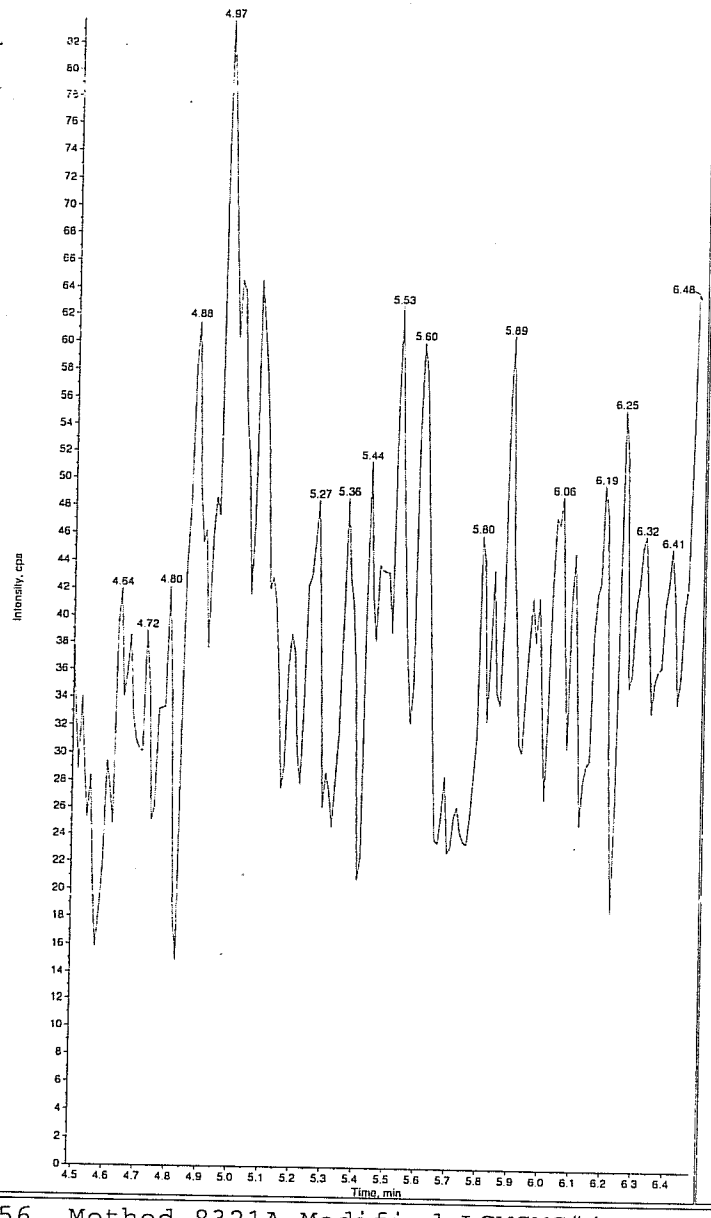
Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS11240001.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: "*"

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:29:24 AM

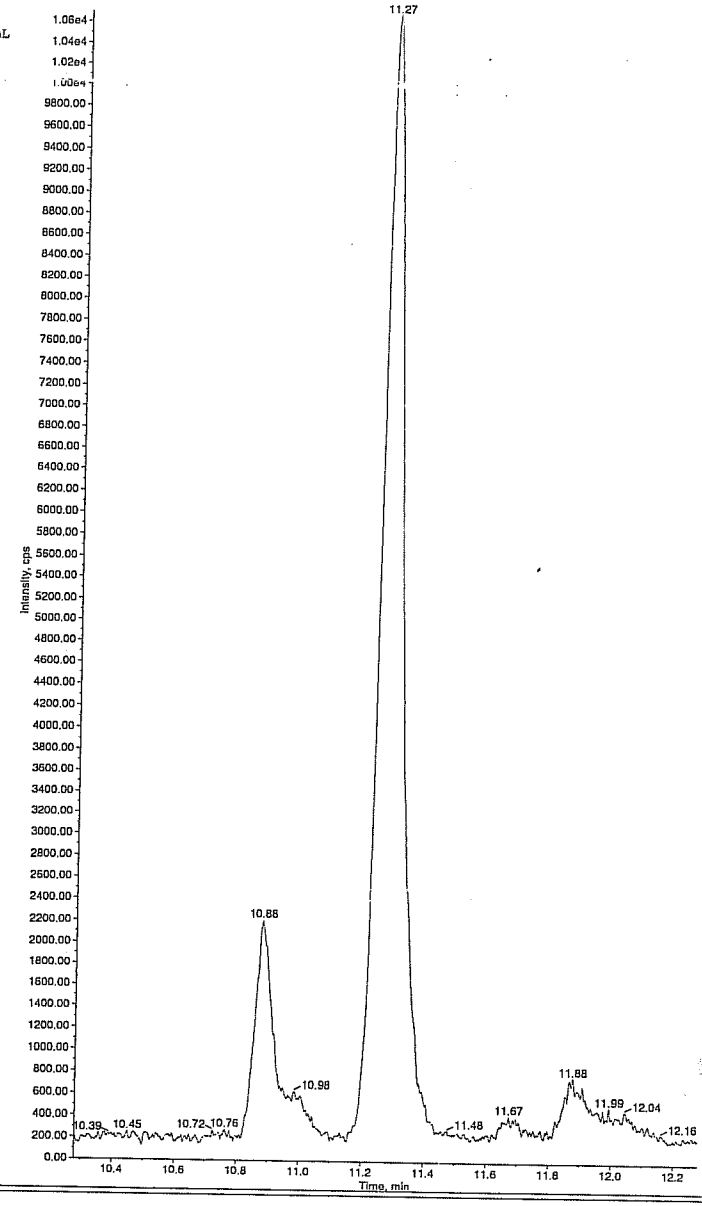
Modified: No



Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS11240001.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: "*"

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:29:24 AM

Modified: No



*GEL SOP GL-OA-E-056., Method 8321A-Modified LCMSMS#4

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 24–NOV–10 10:45

GEL Data File: EXS11240002.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	0
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

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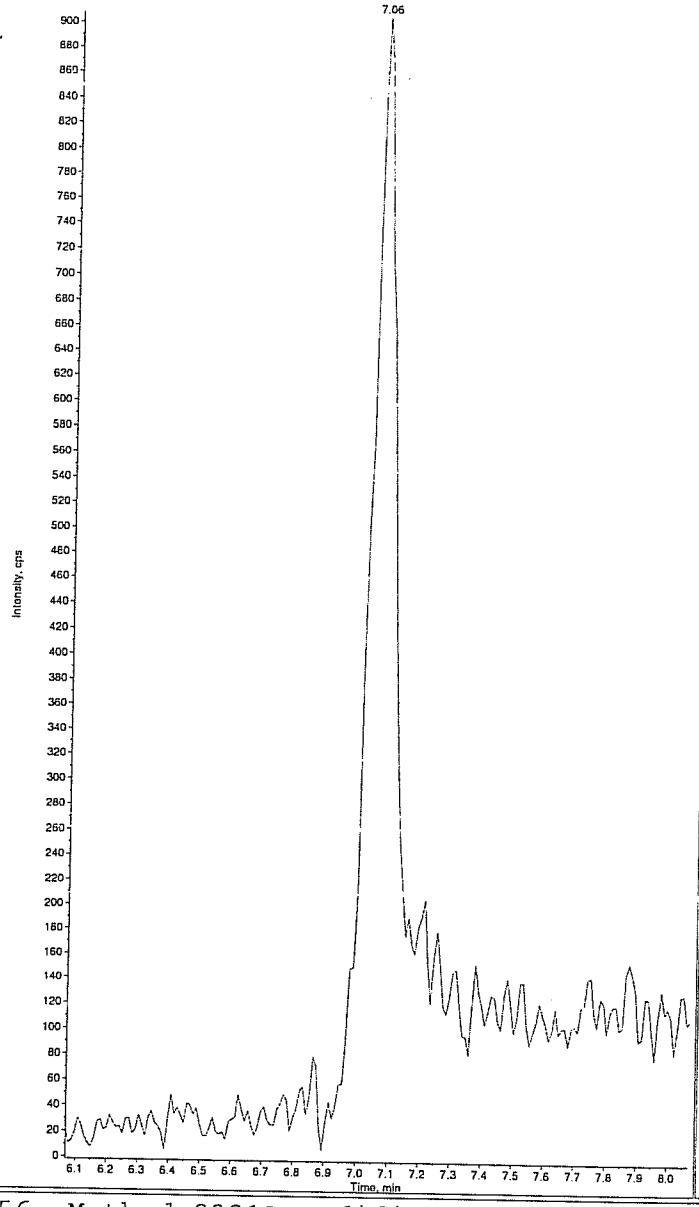
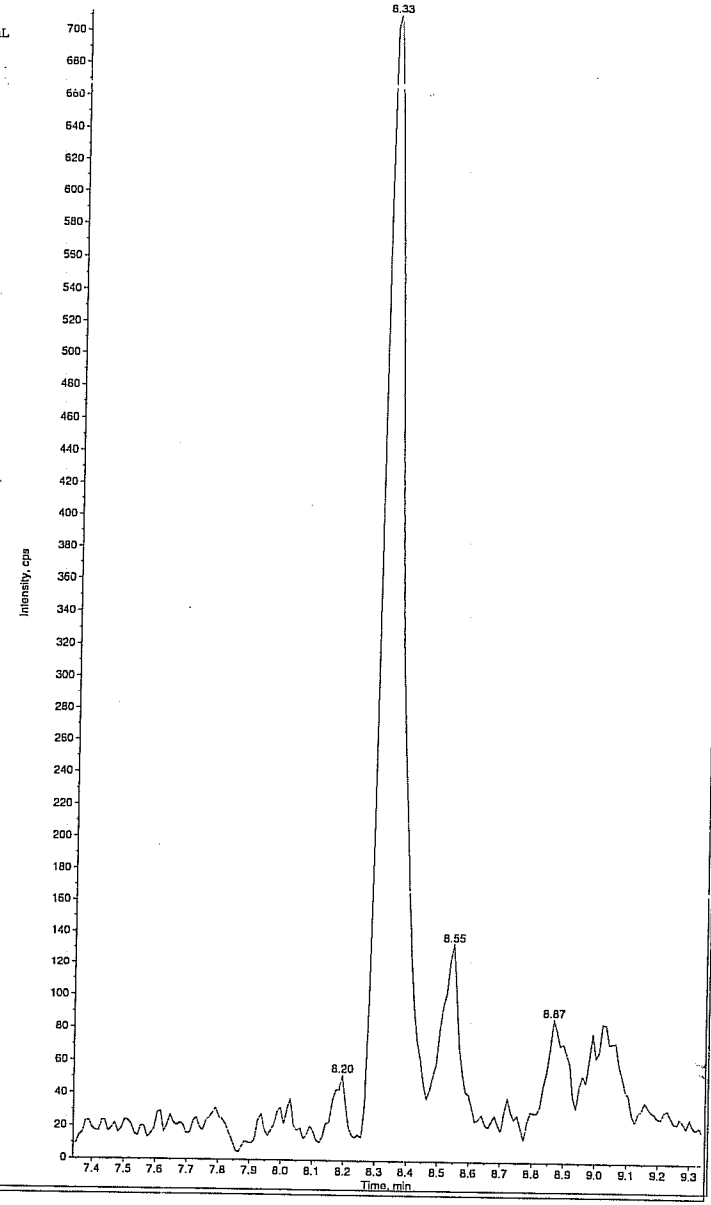
Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS11240002.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:45:11 AM
Modified: No



Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS11240002.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:45:11 AM
Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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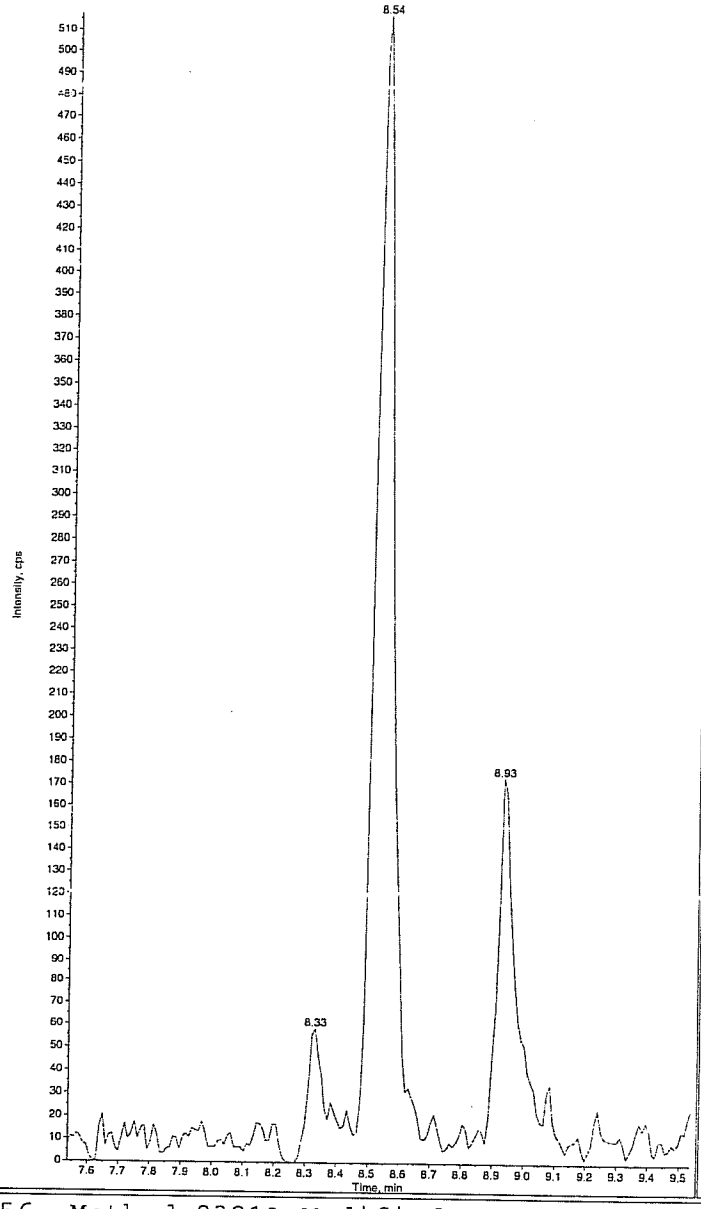
Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS11240002.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:45:11 AM

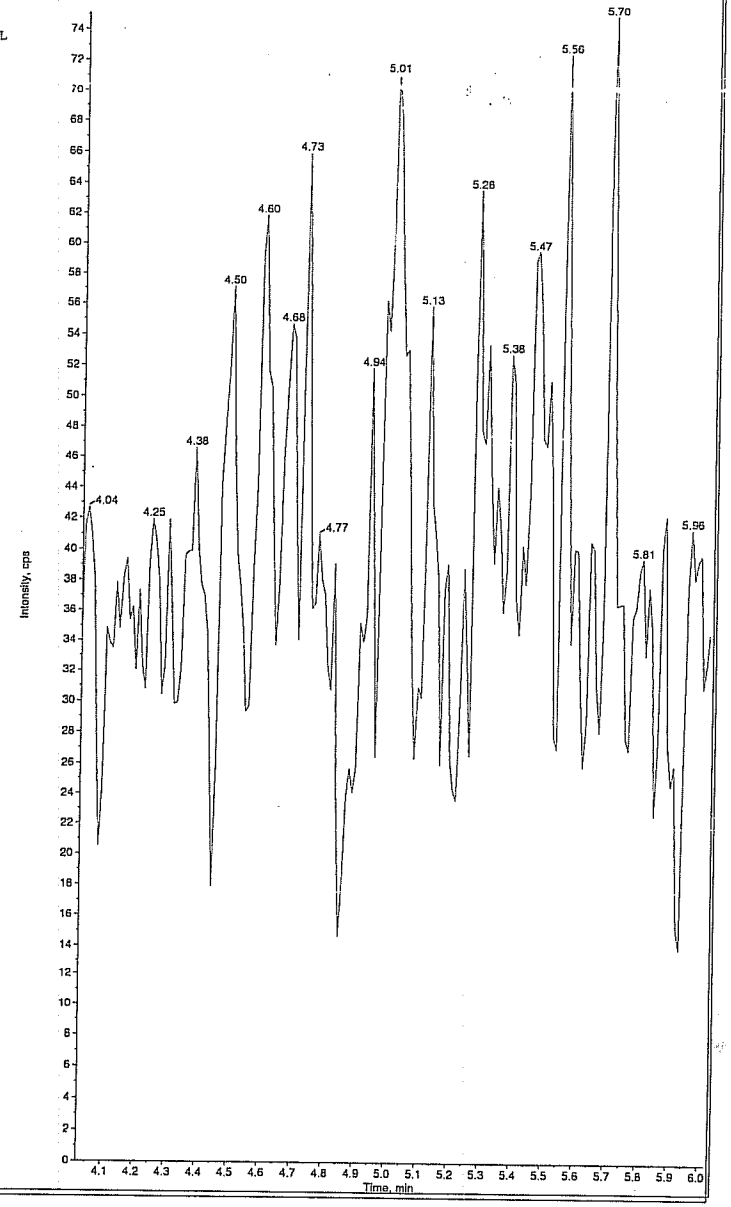
Modified: No



Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS11240002.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:45:11 AM

Modified: No



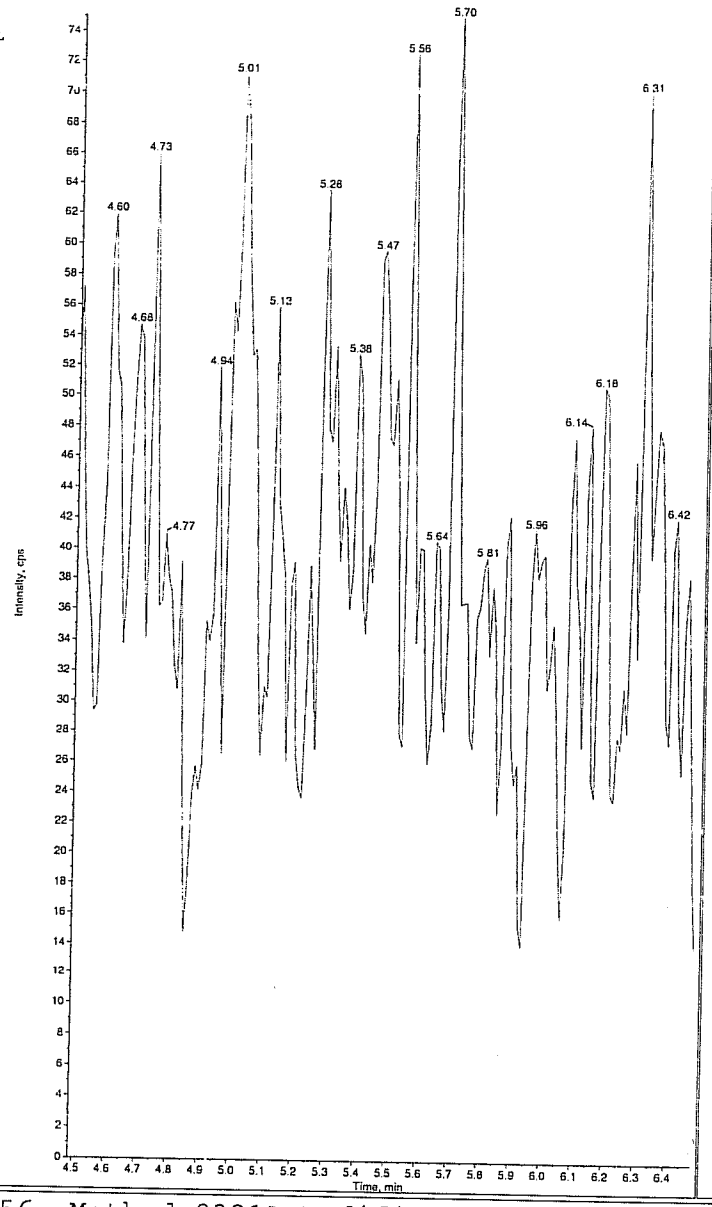
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS11240002.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:45:11 AM

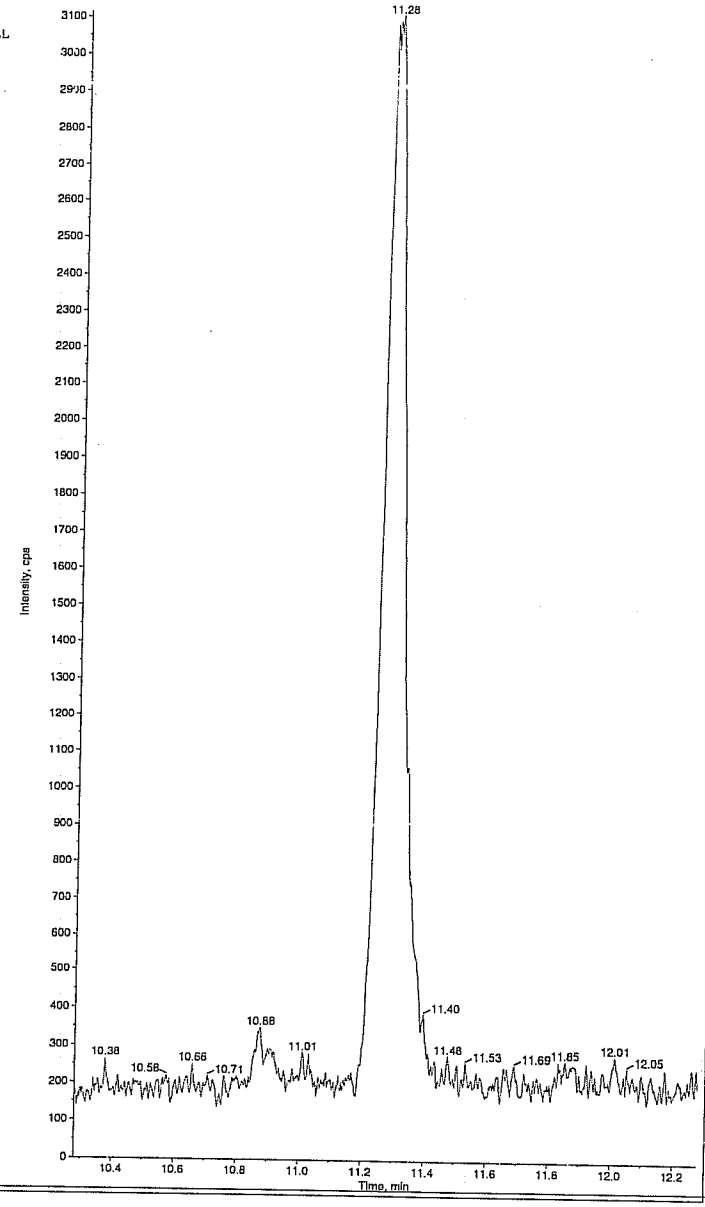
Modified: No



Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS11240002.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 10:45:11 AM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC
GEL Job No(SDG): 11–463
Lab Code: GEL
Lab Sample ID: XIBLK02
Analysis Date: 19–NOV–10 18:40
GEL Data File: EXP1119009a
Instrument ID: LCMSMS
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	574.63
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	504.46
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

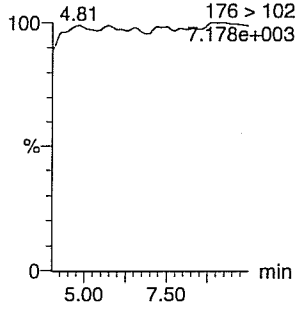
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

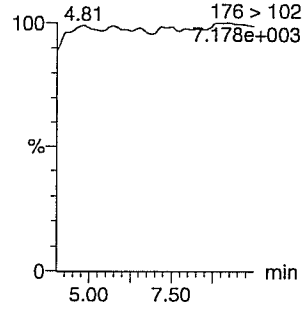
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119009a
Date: 19-Nov-2010
Time: 18:40:15
ID: XIBLK02
Vial: 1:1,A

MMP 11/22/10

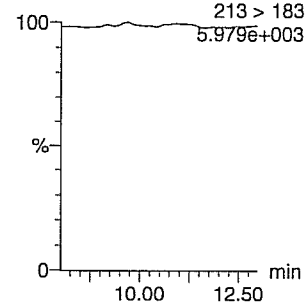
HMX
F2:MRM of 1 channel,AP-
176 > 102
7.178e+003
4.81



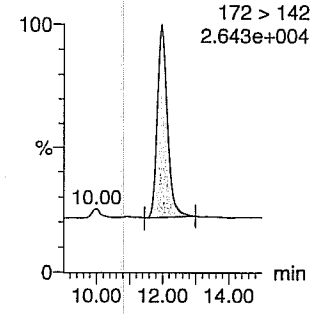
RDX
F2:MRM of 1 channel,AP-
176 > 102
7.178e+003
4.81



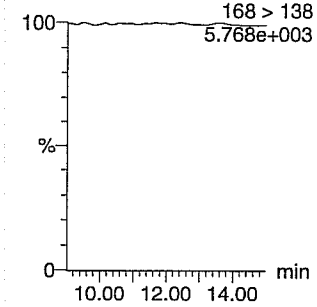
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.979e+003



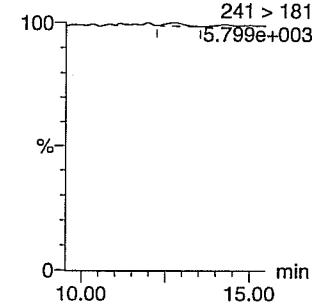
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.643e+004



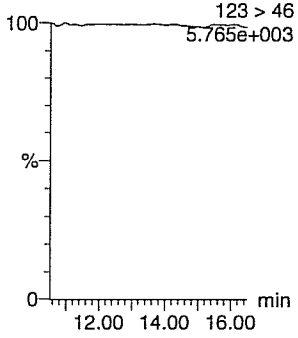
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.768e+003



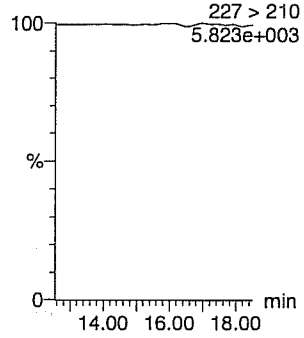
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.799e+003



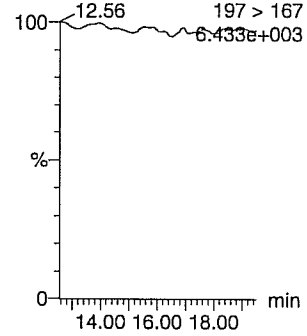
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.765e+003



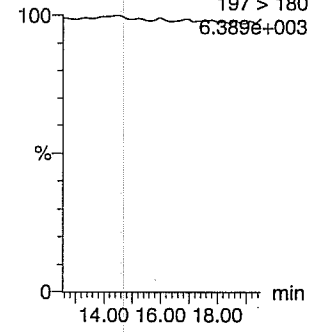
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.823e+003



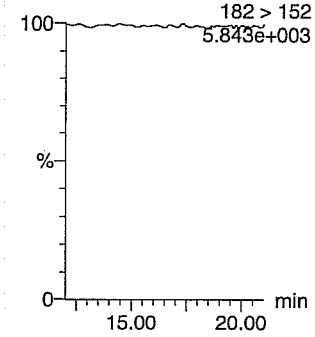
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.433e+003
12.56



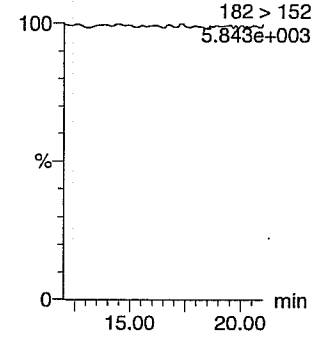
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.389e+003



34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.843e+003



26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.843e+003



11/22/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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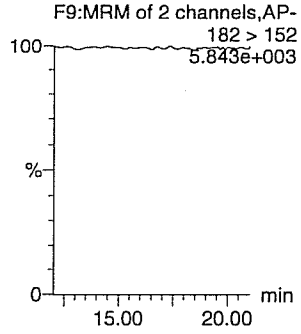
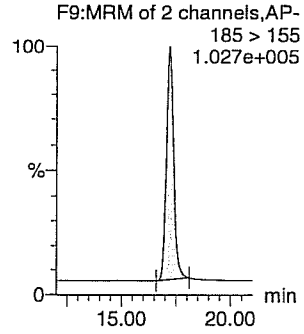
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

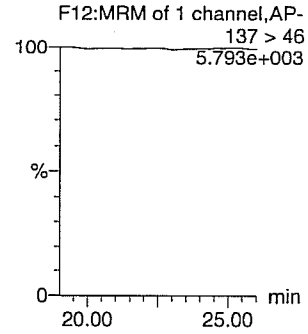
24-dinitrotoluene



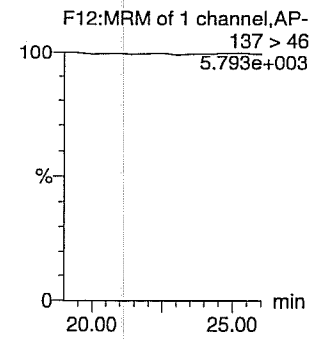
26-dinitrotoluene-d3



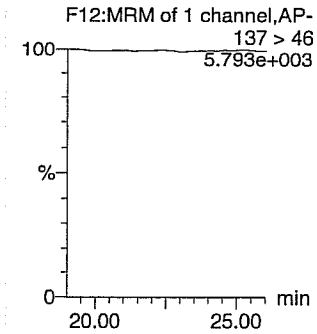
2-Nitrotoluene



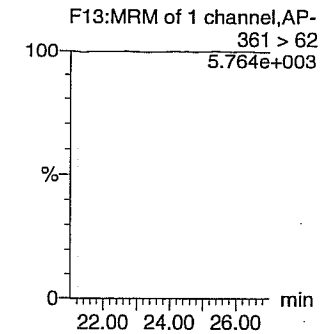
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK02	HMX	176 > 102			7372.078									
XIBLK02	RDX	176 > 102			7372.078									
XIBLK02	135-Trinitrobenzene	213 > 183			7372.078									
XIBLK02	13-Dinitrobenzene-d4	172 > 142	11.95	7372.078		7372.078	7372.078	bb			574.6295	114.9	14.9	1218.1
XIBLK02	13-Dinitrobenzene	168 > 138			7372.078									
XIBLK02	Tetryl	241 > 181			7372.078			MM-	21-Nov-10	10:44:25				
XIBLK02	Nitrobenzene	123 > 46			7372.078									
XIBLK02	246-Trinitrotoluene	227 > 210			38442.145									
XIBLK02	4-Amino-26-dinitrotoluene	197 > 167			38442.145									
XIBLK02	2-Amino-46-dinitrotoluene	197 > 180			38442.145									
XIBLK02	34-dinitrotoluene	182 > 152			38442.145									
XIBLK02	26-dinitrotoluene	182 > 152			38442.145									
XIBLK02	24-dinitrotoluene	182 > 152			38442.145									
XIBLK02	26-dinitrotoluene-d3	185 > 155	17.18	38442.145		38442.145	38442.145	bb			504.4603	100.9	0.9	2049.2
XIBLK02	2-Nitrotoluene	137 > 46			38442.145									
XIBLK02	4-Nitrotoluene	137 > 46			38442.145									
XIBLK02	3-Nitrotoluene	137 > 46			38442.145									
XIBLK02	PETN	361 > 62			38442.145									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 19–NOV–10 19:39

GEL Data File: EXP1119011a

Instrument ID: LCMSMS

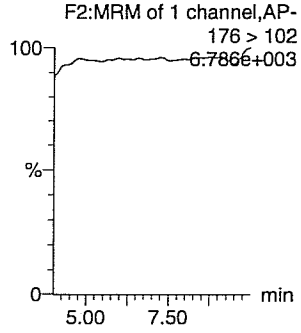
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	524.054
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	617.77

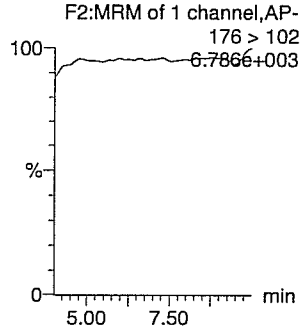
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119011a
Date: 19-Nov-2010
Time: 19:39:12
ID: XIBLK03
Vial: 1:1,A

MAP 11/22/10

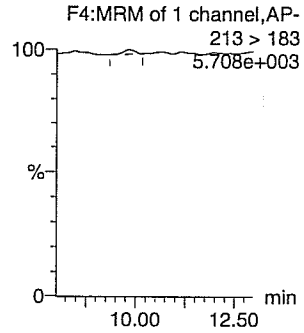
HMX



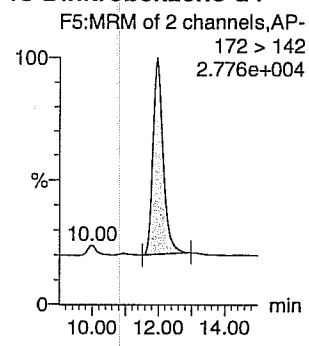
RDX



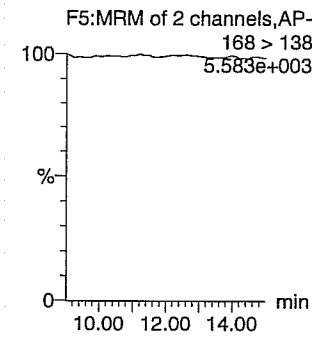
135-Trinitrobenzene



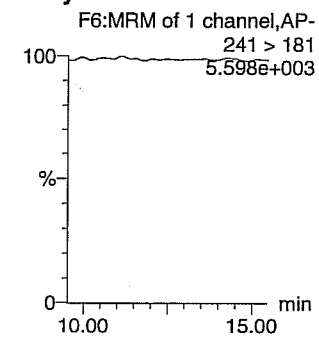
13-Dinitrobenzene-d4



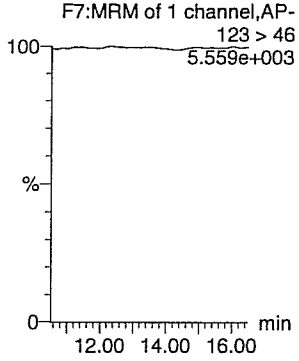
13-Dinitrobenzene



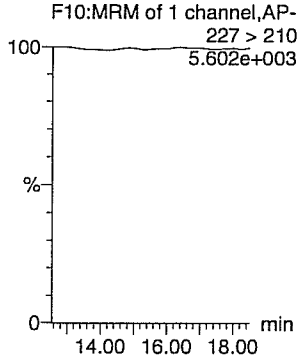
Tetryl



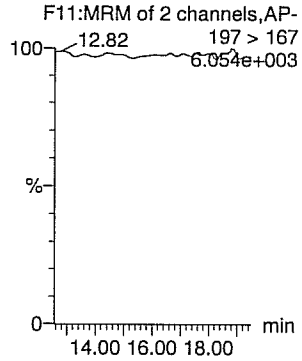
Nitrobenzene



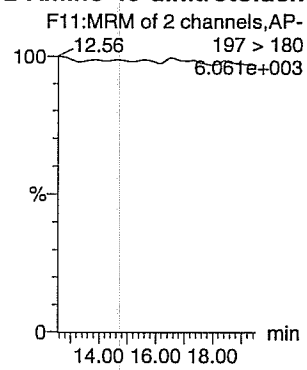
246-Trinitrotoluene



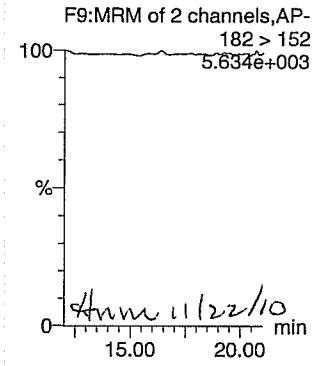
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

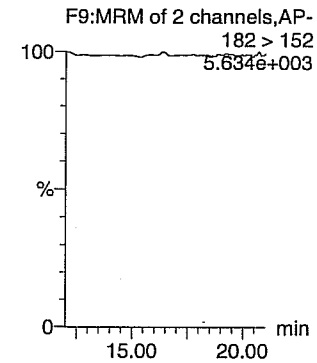


34-dinitrotoluene



Hmm 11/22/10

26-dinitrotoluene



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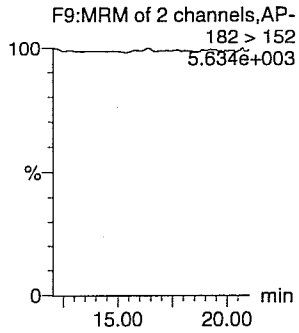
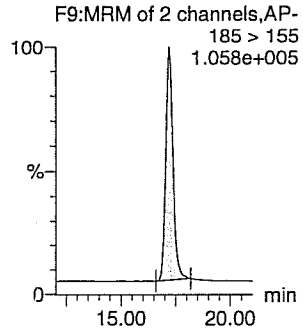
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

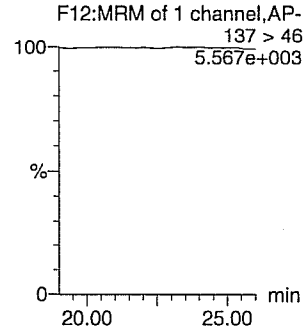
24-dinitrotoluene



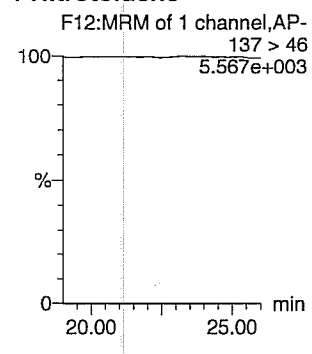
26-dinitrotoluene-d3



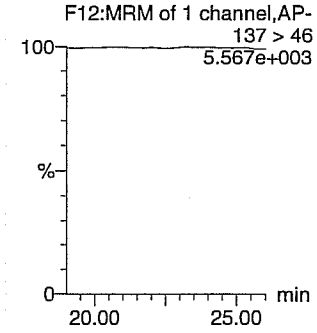
2-Nitrotoluene



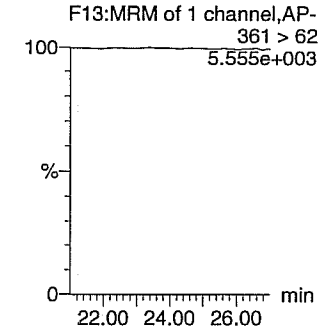
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs:Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK03	HMX	176 > 102			7925.543									
XIBLK03	RDX	176 > 102			7925.543									
XIBLK03	135-Trinitrobenzene	213 > 183			7925.543			MM-	21-Nov-10	10:40:16				
XIBLK03	13-Dinitrobenzene-d4	172 > 142	11.95	7925.543		7925.543	7925.543	bb			617.7703	123.6	23.6	873.5
XIBLK03	13-Dinitrobenzene	168 > 138			7925.543									
XIBLK03	Tetryl	241 > 181			7925.543									
XIBLK03	Nitrobenzene	123 > 46			7925.543									
XIBLK03	246-Trinitrotoluene	227 > 210			39935.242									
XIBLK03	4-Amino-26-dinitrotoluene	197 > 167			39935.242									
XIBLK03	2-Amino-46-dinitrotoluene	197 > 180			39935.242									
XIBLK03	34-dinitrotoluene	182 > 152			39935.242									
XIBLK03	26-dinitrotoluene	182 > 152			39935.242									
XIBLK03	24-dinitrotoluene	182 > 152			39935.242									
XIBLK03	26-dinitrotoluene-d3	185 > 155	17.22	39935.242		39935.242	39935.242	bb			524.0536	104.8	4.8	3322.5
XIBLK03	2-Nitrotoluene	137 > 46			39935.242									
XIBLK03	4-Nitrotoluene	137 > 46			39935.242									
XIBLK03	3-Nitrotoluene	137 > 46			39935.242									
XIBLK03	PETN	361 > 62			39935.242									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 19–NOV–10 22:06

GEL Data File: EXP1119016a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0
HMX	0	0
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	451.779
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	451.808
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0

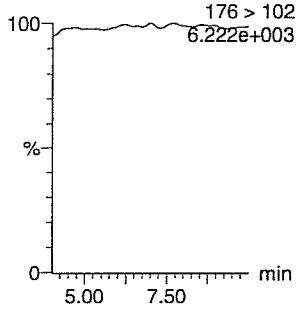
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

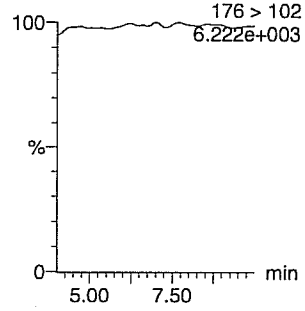
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119016a
Date: 19-Nov-2010
Time: 22:06:38
ID: XIBLK04
Vial: 1:1,F

MAP 11/22/10

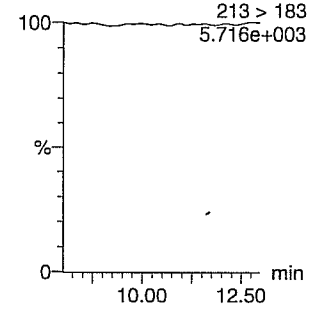
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.222e+003



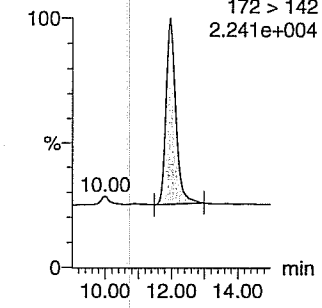
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.222e+003



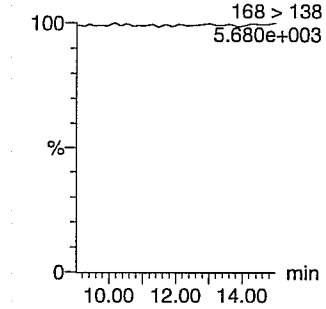
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.716e+003



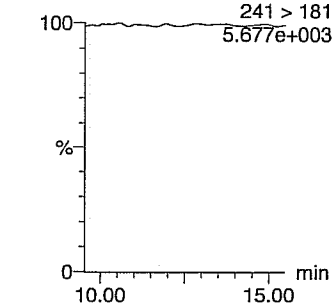
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.241e+004



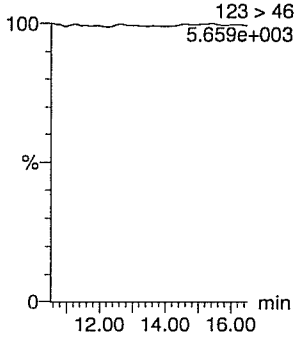
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.680e+003



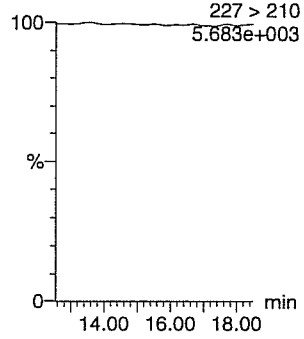
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.677e+003



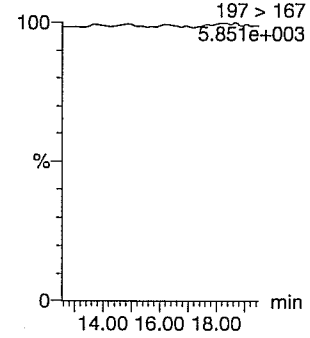
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.659e+003



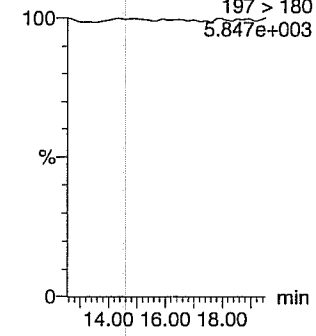
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.683e+003



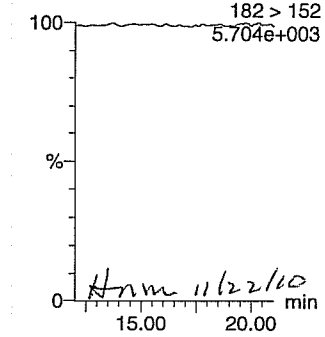
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
5.851e+003



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.847e+003

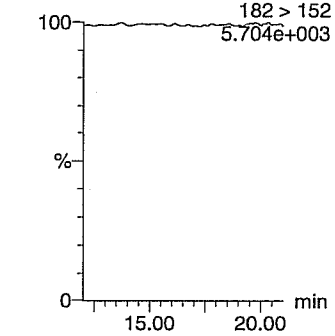


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.704e+003



HMM 11/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.704e+003



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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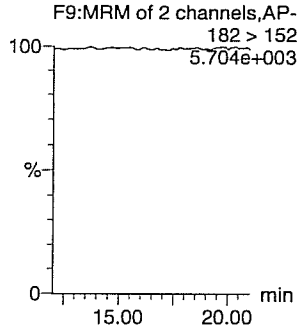
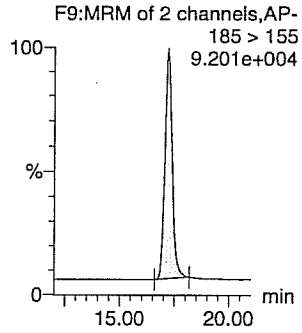
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

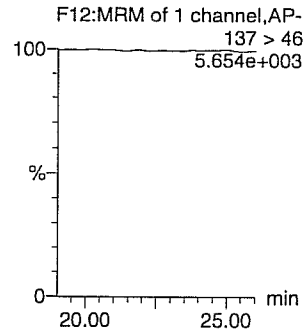
24-dinitrotoluene



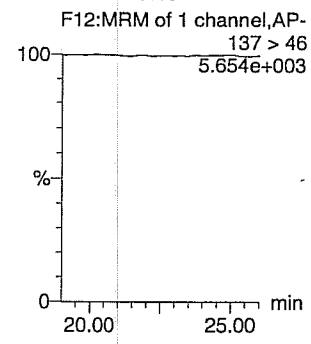
26-dinitrotoluene-d3



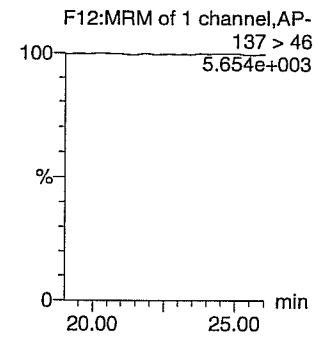
2-Nitrotoluene



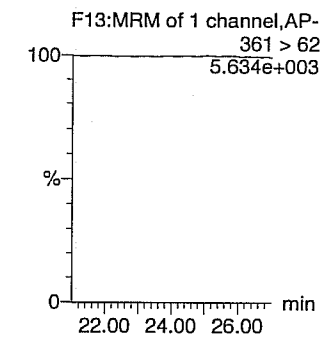
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK04	HMX	176 > 102			5795.991									
XIBLK04	RDX	176 > 102			5795.991									
XIBLK04	135-Trinitrobenzene	213 > 183			5795.991									
XIBLK04	13-Dinitrobenzene-d4	172 > 142	11.95	5795.991		5795.991	5795.991	bb			451.7787	90.4	-9.6	351.2
XIBLK04	13-Dinitrobenzene	168 > 138			5795.991									
XIBLK04	Tetryl	241 > 181			5795.991									
XIBLK04	Nitrobenzene	123 > 46			5795.991									
XIBLK04	246-Trinitrotoluene	227 > 210			34429.785									
XIBLK04	4-Amino-26-dinitrotoluene	197 > 167			34429.785									
XIBLK04	2-Amino-46-dinitrotoluene	197 > 180			34429.785									
XIBLK04	34-dinitrotoluene	182 > 152			34429.785									
XIBLK04	26-dinitrotoluene	182 > 152			34429.785									
XIBLK04	24-dinitrotoluene	182 > 152			34429.785									
XIBLK04	26-dinitrotoluene-d3	185 > 155	17.22	34429.785		34429.785	34429.785	bb			451.8078	90.4	-9.6	2207.2
XIBLK04	2-Nitrotoluene	137 > 46			34429.785									
XIBLK04	4-Nitrotoluene	137 > 46			34429.785									
XIBLK04	3-Nitrotoluene	137 > 46			34429.785									
XIBLK04	PETN	361 > 62			34429.785									

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 20–NOV–10 02:02

GEL Data File: EXP1119024a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	516.791
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	500.073
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0

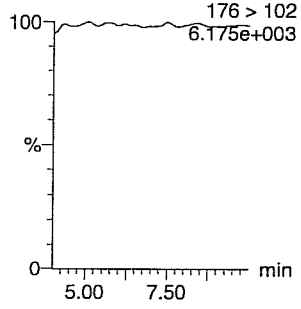
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

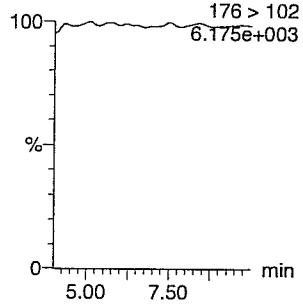
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119024a
Date: 20-Nov-2010
Time: 02:02:46
ID: XIBLK05
Vial: 1:1,A

MMT 11/22/10

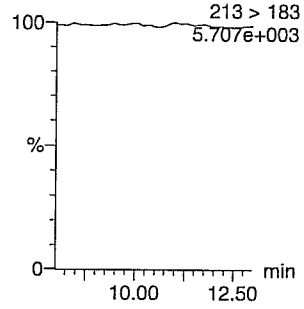
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.175e+003



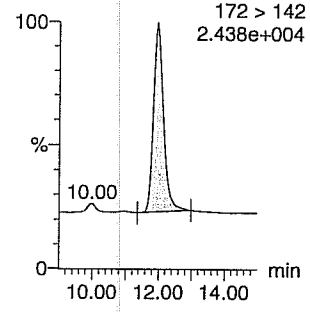
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.175e+003



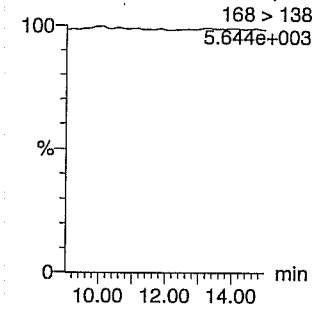
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.707e+003



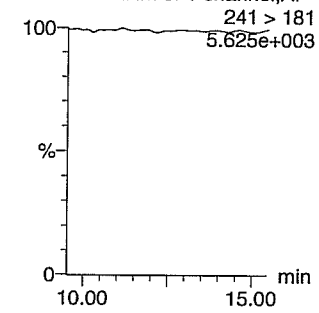
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.438e+004



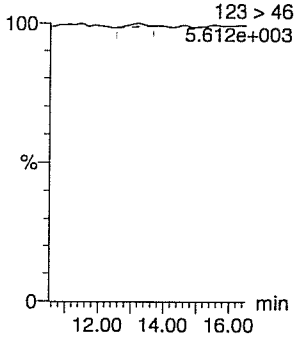
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.644e+003



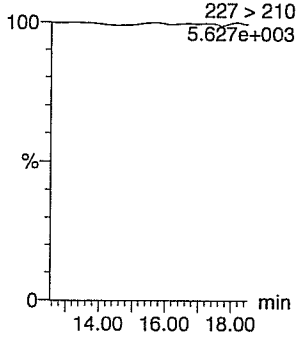
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.625e+003



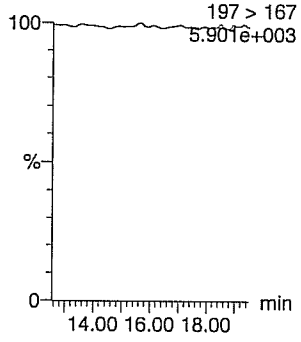
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.612e+003



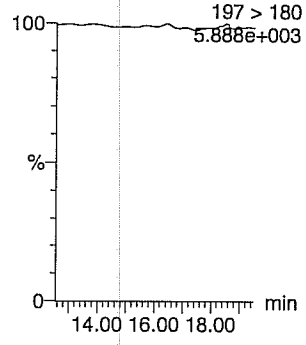
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.627e+003



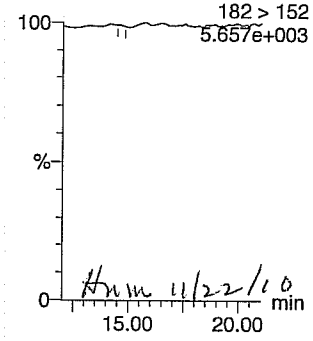
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
5.901e+003



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.888e+003

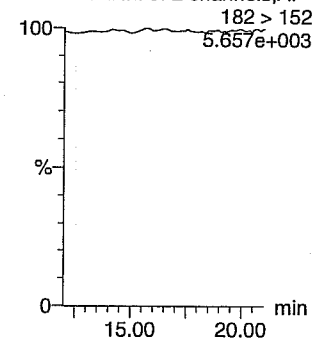


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.657e+003



HMM 11/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.657e+003



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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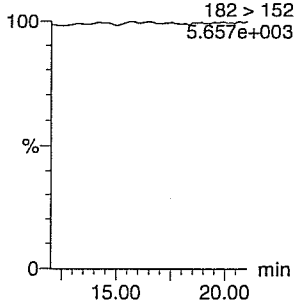
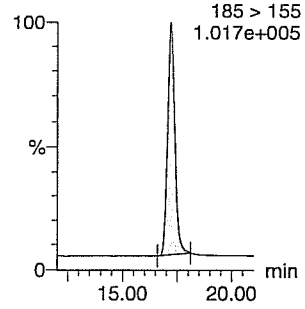
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

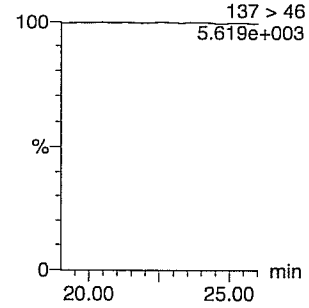
24-dinitrotoluene



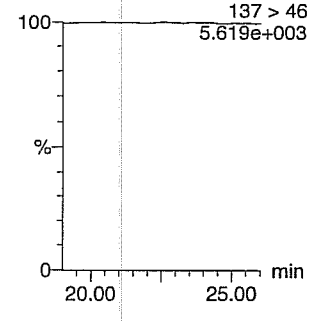
26-dinitrotoluene-d3



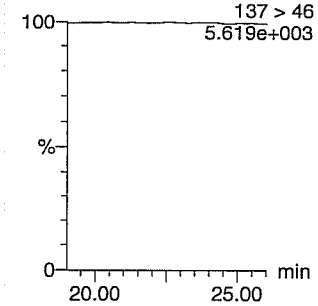
2-Nitrotoluene



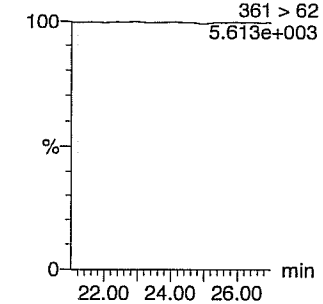
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK05	HMX	176 > 102			6630.057									
XIBLK05	RDX	176 > 102			6630.057									
XIBLK05	135-Trinitrobenzene	213 > 183			6630.057									
XIBLK05	13-Dinitrobenzene-d4	172 > 142	11.95	6630.057		6630.057	6630.057	bb			516.7914	103.4	3.4	306.5
XIBLK05	13-Dinitrobenzene	168 > 138			6630.057									
XIBLK05	Tetryl	241 > 181			6630.057									
XIBLK05	Nitrobenzene	123 > 46			6630.057			MM-	21-Nov-10	10:45:48				
XIBLK05	246-Trinitrotoluene	227 > 210			38107.840									
XIBLK05	4-Amino-26-dinitrotoluene	197 > 167			38107.840									
XIBLK05	2-Amino-46-dinitrotoluene	197 > 180			38107.840									
XIBLK05	34-dinitrotoluene	182 > 152			38107.840			MM-	21-Nov-10	10:56:24				
XIBLK05	26-dinitrotoluene	182 > 152			38107.840									
XIBLK05	24-dinitrotoluene	182 > 152			38107.840									
XIBLK05	26-dinitrotoluene-d3	185 > 155	17.18	38107.840		38107.840	38107.840	bb			500.0733	100.0	0.0	897.6
XIBLK05	2-Nitrotoluene	137 > 46			38107.840									
XIBLK05	4-Nitrotoluene	137 > 46			38107.840									
XIBLK05	3-Nitrotoluene	137 > 46			38107.840									
XIBLK05	PETN	361 > 62			38107.840									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC
GEL Job No(SDG): 11–463
Lab Code: GEL
Lab Sample ID: XIBLK06
Analysis Date: 20–NOV–10 07:56
GEL Data File: EXP1119036a
Instrument ID: LCMSMS
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	491.067
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	481.572
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

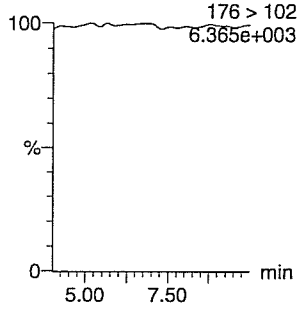
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

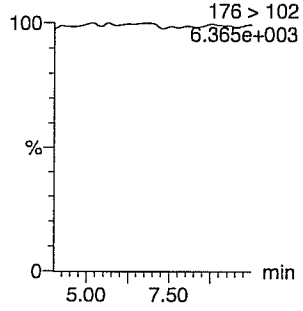
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119036a
Date: 20-Nov-2010
Time: 07:56:36
ID: XIBLK06
Vial: 1:1,A

DMT 11/22/10

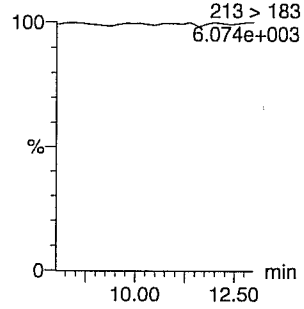
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.365e+003



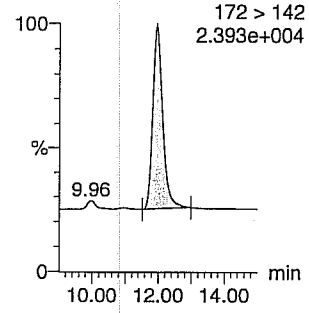
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.365e+003



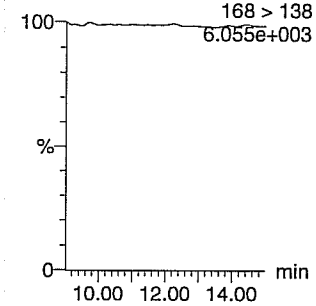
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
6.074e+003



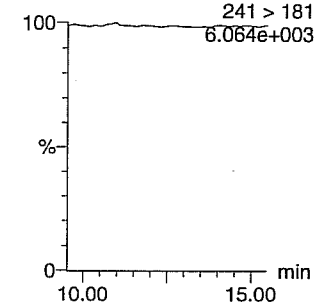
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.393e+004



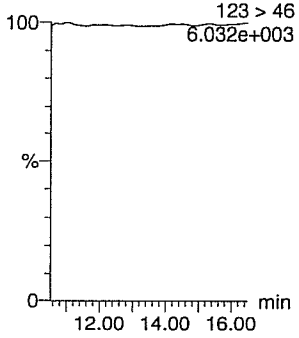
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.055e+003



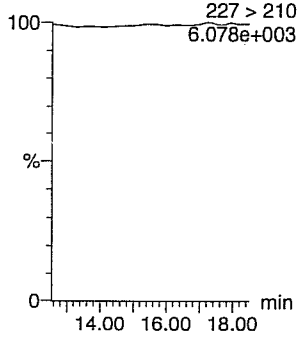
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.064e+003



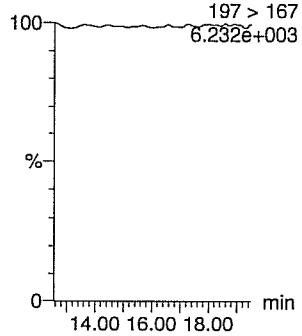
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.032e+003



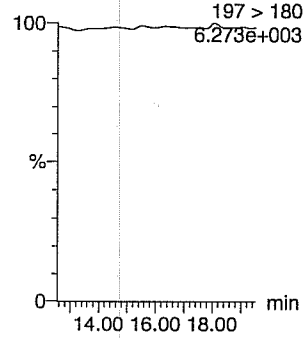
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.078e+003



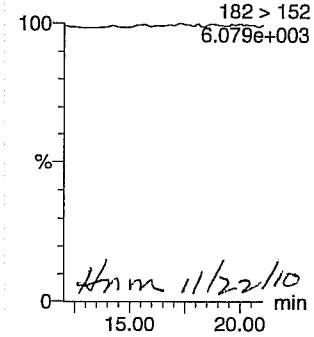
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.232e+003



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.273e+003

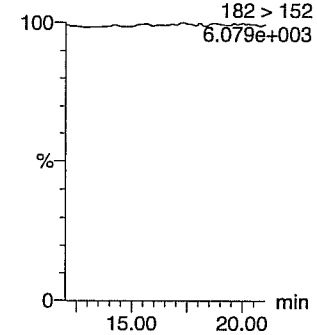


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.079e+003



HMM 11/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.079e+003



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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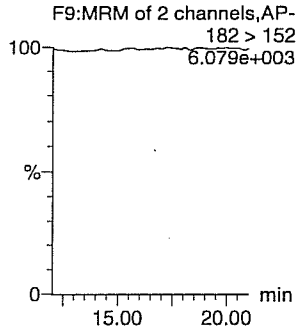
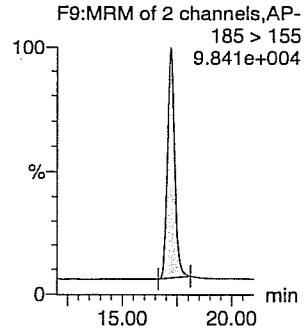
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

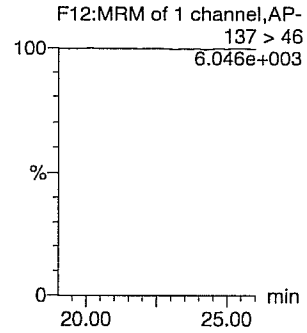
24-dinitrotoluene



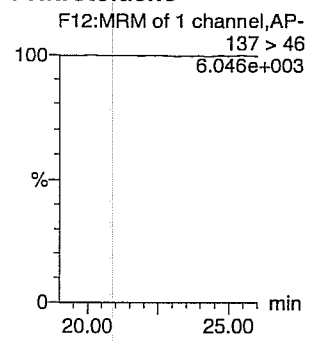
26-dinitrotoluene-d3



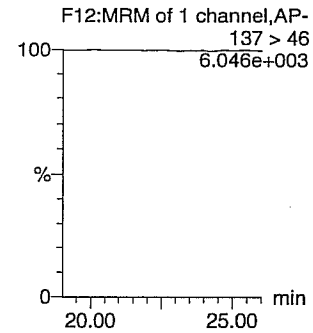
2-Nitrotoluene



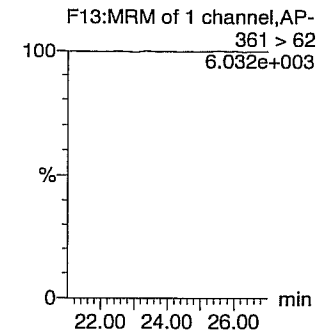
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK06	HMX	176 > 102			6300.030									
XIBLK06	RDX	176 > 102			6300.030									
XIBLK06	135-Trinitrobenzene	213 > 183			6300.030									
XIBLK06	13-Dinitrobenzene-d4	172 > 142	11.95	6300.030		6300.030	6300.030	bb			491.0669	98.2	-1.8	1027.5
XIBLK06	13-Dinitrobenzene	168 > 138			6300.030									
XIBLK06	Tetryl	241 > 181			6300.030									
XIBLK06	Nitrobenzene	123 > 46			6300.030									
XIBLK06	246-Trinitrotoluene	227 > 210			36697.922									
XIBLK06	4-Amino-26-dinitrotoluene	197 > 167			36697.922									
XIBLK06	2-Amino-46-dinitrotoluene	197 > 180			36697.922									
XIBLK06	34-dinitrotoluene	182 > 152			36697.922									
XIBLK06	26-dinitrotoluene	182 > 152			36697.922									
XIBLK06	24-dinitrotoluene	182 > 152			36697.922									
XIBLK06	26-dinitrotoluene-d3	185 > 155	17.18	36697.922		36697.922	36697.922	bb			481.5716	96.3	-3.7	2242.2
XIBLK06	2-Nitrotoluene	137 > 46			36697.922									
XIBLK06	4-Nitrotoluene	137 > 46			36697.922									
XIBLK06	3-Nitrotoluene	137 > 46			36697.922									
XIBLK06	PETN	361 > 62			36697.922									

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC
GEL Job No(SDG): 11–463
Lab Code: GEL
Lab Sample ID: XIBLK07
Analysis Date: 20–NOV–10 14:20
GEL Data File: EXP1119049a
Instrument ID: LCMSMS
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	633.925
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	649.69
2,4,6–Trinitrotoluene	0	0

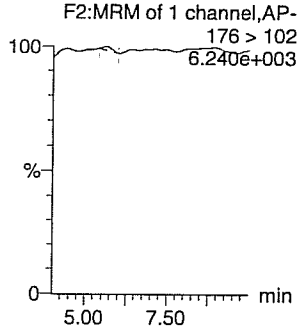
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

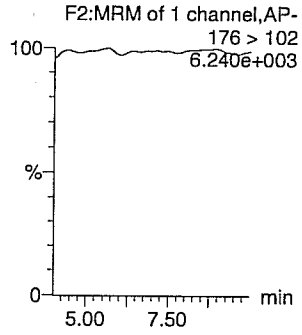
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119049a
Date: 20-Nov-2010
Time: 14:20:03
ID: XIBLK07
Vial: 1:1,A

MMM 11/22/10

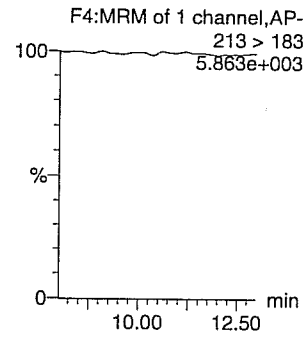
HMX



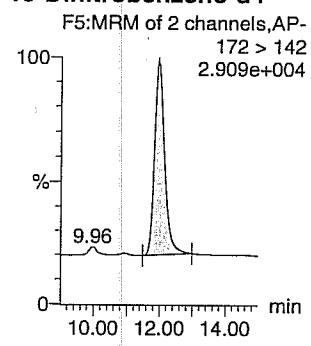
RDX



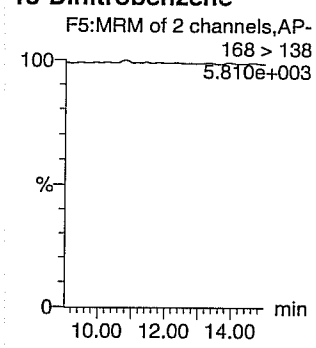
135-Trinitrobenzene



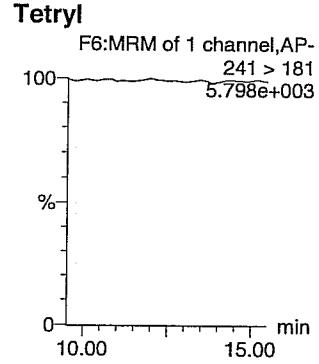
13-Dinitrobenzene-d4



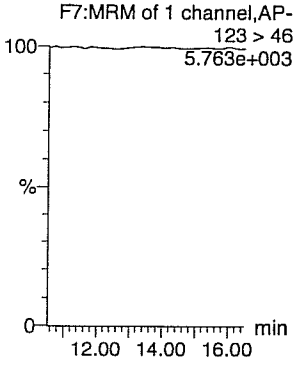
13-Dinitrobenzene



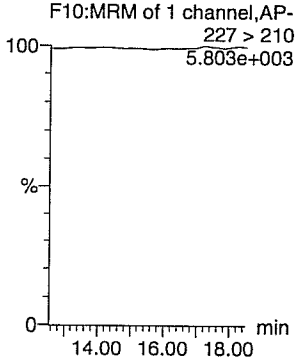
Tetryl



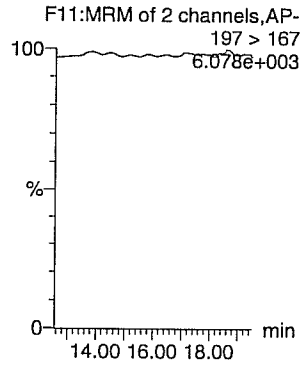
Nitrobenzene



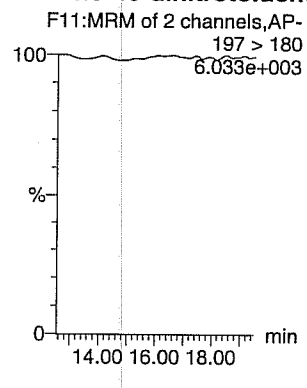
246-Trinitrotoluene



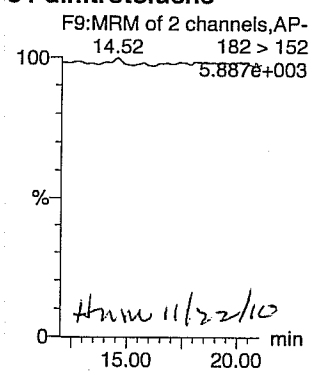
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

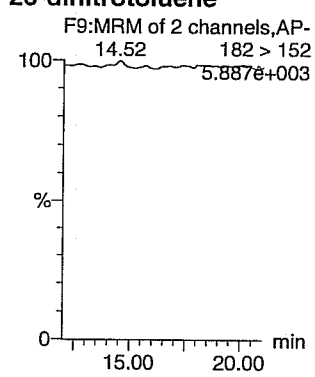


34-dinitrotoluene



HMM 11/22/10

26-dinitrotoluene



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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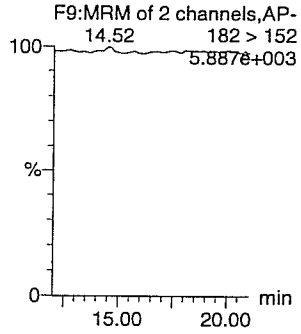
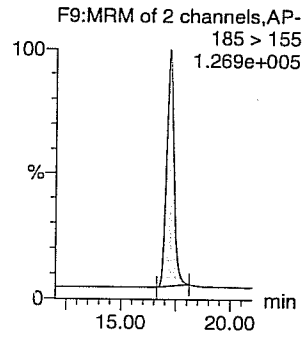
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

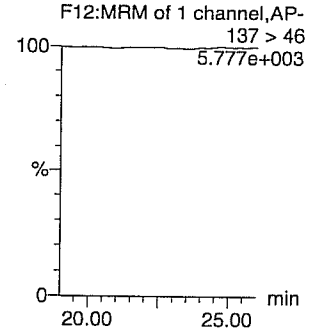
24-dinitrotoluene



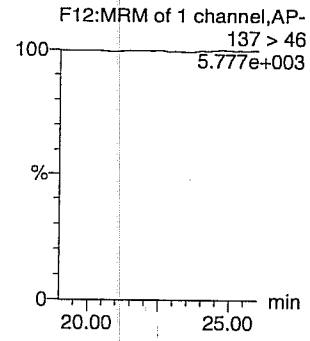
26-dinitrotoluene-d3



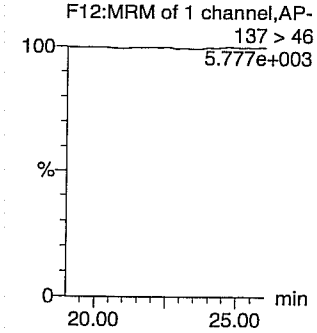
2-Nitrotoluene



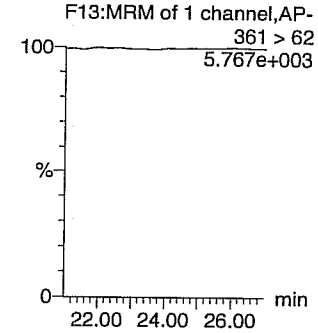
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK07	HMX	176 > 102			8335.043			MM-	21-Nov-10	10:38:36				
XIBLK07	RDX	176 > 102			8335.043									
XIBLK07	135-Trinitrobenzene	213 > 183			8335.043									
XIBLK07	13-Dinitrobenzene-d4	172 > 142	11.95	8335.043		8335.043	8335.043	bb			649.6895	129.9	29.9	758.8
XIBLK07	13-Dinitrobenzene	168 > 138			8335.043									
XIBLK07	Tetryl	241 > 181			8335.043									
XIBLK07	Nitrobenzene	123 > 46			8335.043									
XIBLK07	246-Trinitrotoluene	227 > 210			48307.906									
XIBLK07	4-Amino-26-dinitrotoluene	197 > 167			48307.906									
XIBLK07	2-Amino-46-dinitrotoluene	197 > 180			48307.906									
XIBLK07	34-dinitrotoluene	182 > 152			48307.906									
XIBLK07	26-dinitrotoluene	182 > 152			48307.906									
XIBLK07	24-dinitrotoluene	182 > 152			48307.906									
XIBLK07	26-dinitrotoluene-d3	185 > 155	17.18	48307.906		48307.906	48307.906	bb			633.9246	126.8	26.8	3890.1
XIBLK07	2-Nitrotoluene	137 > 46			48307.906									
XIBLK07	4-Nitrotoluene	137 > 46			48307.906									
XIBLK07	3-Nitrotoluene	137 > 46			48307.906									
XIBLK07	PETN	361 > 62			48307.906									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC
GEL Job No(SDG): 11–463
Lab Code: GEL
Lab Sample ID: XIBLK08
Analysis Date: 20–NOV–10 18:16
GEL Data File: EXP1119057a
Instrument ID: LCMSMS
Column: Phenomenex Ultracarb 5u ODS(20)

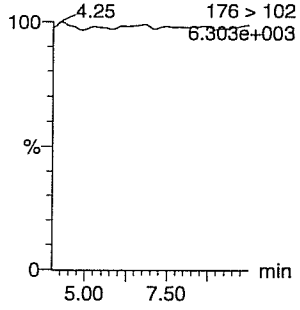
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	558.366
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	559.097
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

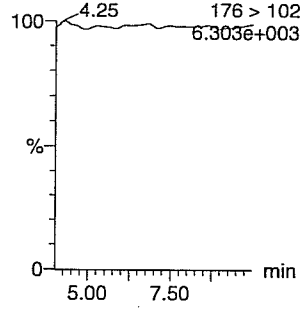
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119057a
Date: 20-Nov-2010
Time: 18:16:20
ID: XIBLK08
Vial: 1:1,A

MAP 11/22/10

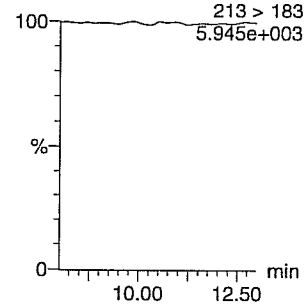
HMX
F2:MRM of 1 channel,AP-
4.25 176 > 102
6.303e+003



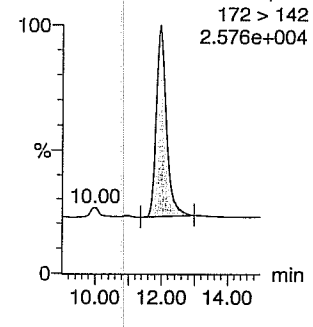
RDX
F2:MRM of 1 channel,AP-
4.25 176 > 102
6.303e+003



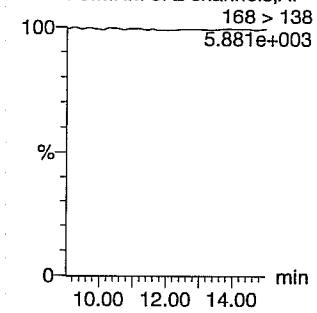
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.945e+003



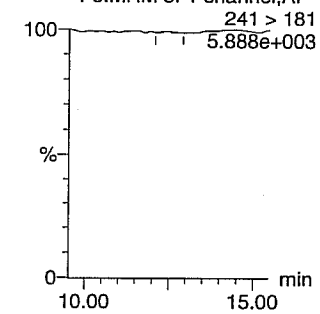
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.576e+004



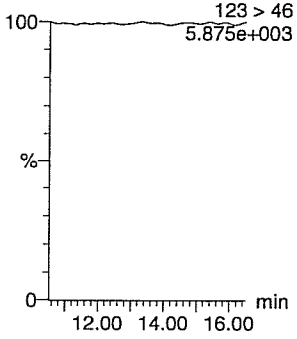
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.881e+003



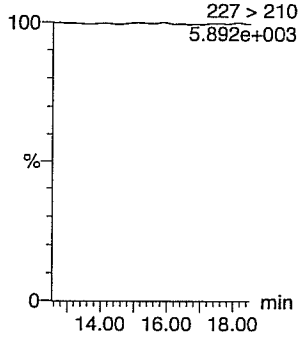
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.888e+003



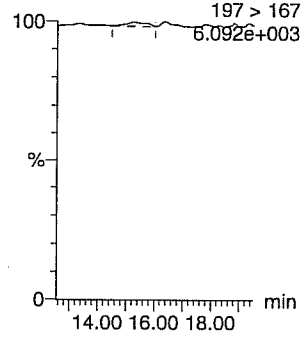
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.875e+003



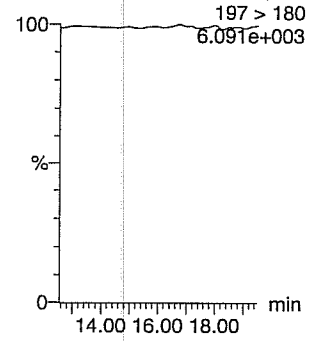
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.892e+003



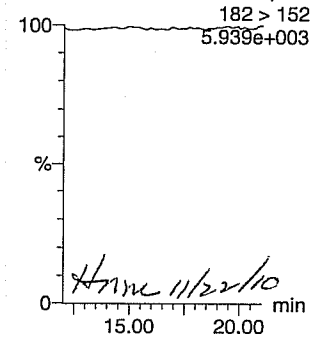
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.092e+003



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.091e+003

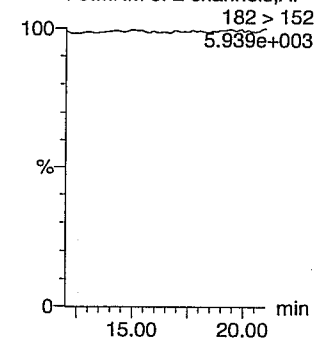


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.939e+003



HMM 11/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.939e+003



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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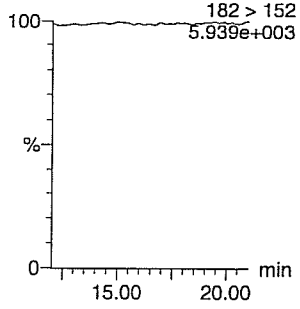
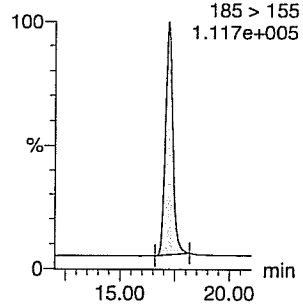
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

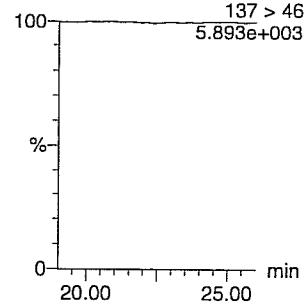
24-dinitrotoluene



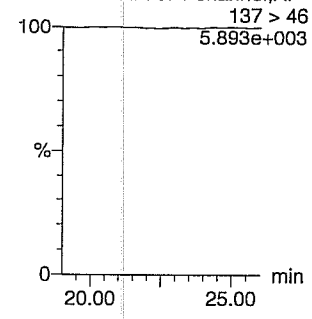
26-dinitrotoluene-d3



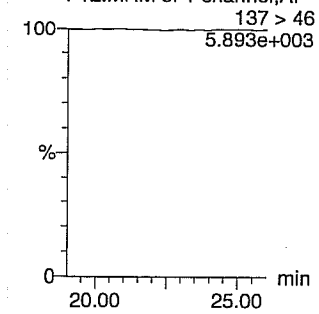
2-Nitrotoluene



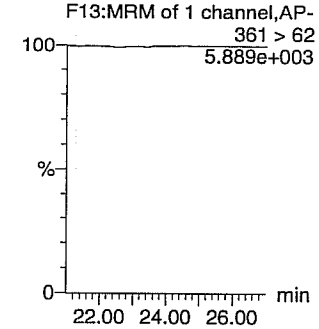
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK08	HMX	176 > 102			7163.426									
XIBLK08	RDX	176 > 102			7163.426									
XIBLK08	135-Trinitrobenzene	213 > 183			7163.426									
XIBLK08	13-Dinitrobenzene-d4	172 > 142	11.95	7163.426		7163.426	7163.426	bb			558.3658	111.7	11.7	1210.9
XIBLK08	13-Dinitrobenzene	168 > 138			7163.426									
XIBLK08	Tetryl	241 > 181			7163.426			MM-	21-Nov-10	10:44:56				
XIBLK08	Nitrobenzene	123 > 46			7163.426									
XIBLK08	246-Trinitrotoluene	227 > 210			42605.691									
XIBLK08	4-Amino-26-dinitrotoluene	197 > 167			42605.691			MM-	21-Nov-10	10:53:53				
XIBLK08	2-Amino-46-dinitrotoluene	197 > 180			42605.691									
XIBLK08	34-dinitrotoluene	182 > 152			42605.691									
XIBLK08	26-dinitrotoluene	182 > 152			42605.691									
XIBLK08	24-dinitrotoluene	182 > 152			42605.691									
XIBLK08	26-dinitrotoluene-d3	185 > 155	17.22	42605.691		42605.691	42605.691	bb			559.0968	111.8	11.8	2215.2
XIBLK08	2-Nitrotoluene	137 > 46			42605.691									
XIBLK08	4-Nitrotoluene	137 > 46			42605.691									
XIBLK08	3-Nitrotoluene	137 > 46			42605.691									
XIBLK08	PETN	361 > 62			42605.691									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

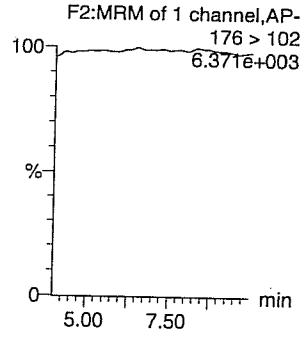
Lab Name: GEL Laboratories LLC
GEL Job No(SDG): 11–463
Lab Code: GEL
Lab Sample ID: XIBLK09
Analysis Date: 20–NOV–10 21:42
GEL Data File: EXP1119064a
Instrument ID: LCMSMS
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
p–Nitrotoluene	0	0
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	535.494
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	529.477
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0

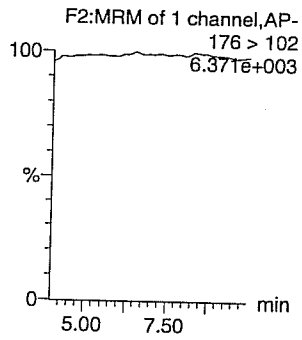
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119064a
Date: 20-Nov-2010
Time: 21:42:45
ID: XIBLK09
Vial: 1:1,A

MHT 11/22/10

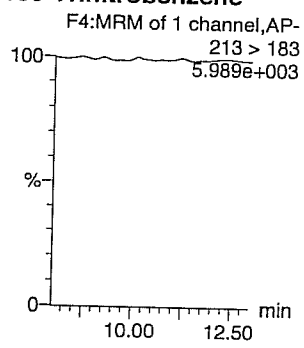
HMX



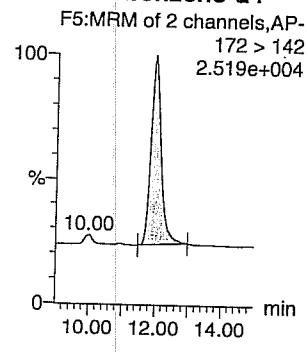
RDX



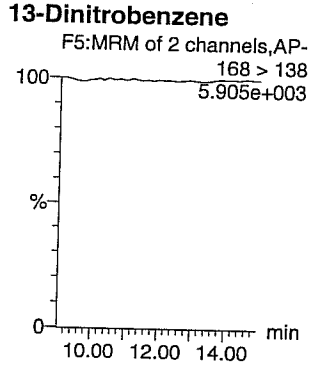
135-Trinitrobenzene



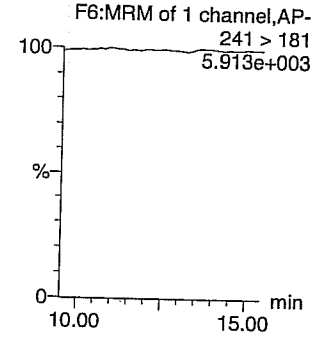
13-Dinitrobenzene-d4



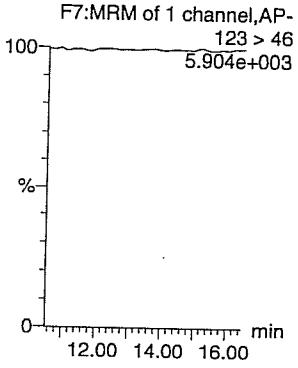
13-Dinitrobenzene



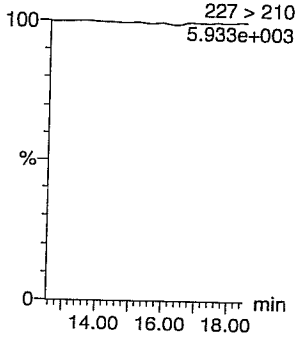
Tetryl



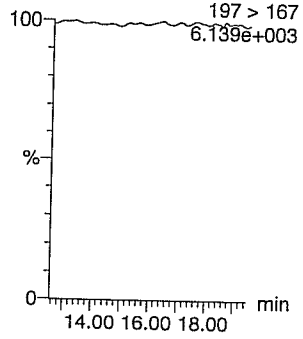
Nitrobenzene



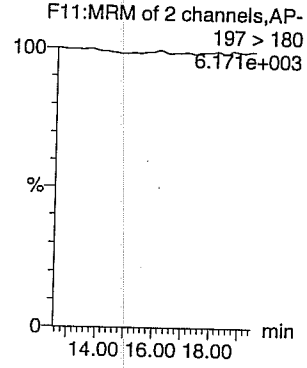
246-Trinitrotoluene



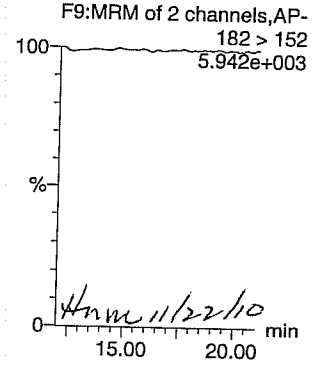
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

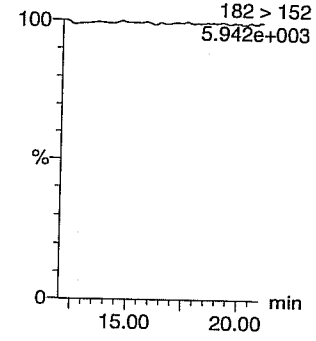


34-dinitrotoluene



HMM 11/22/10

26-dinitrotoluene



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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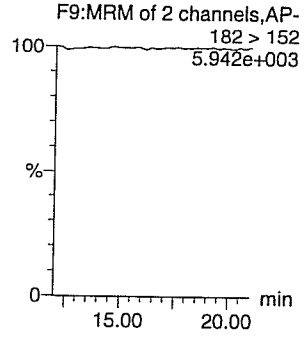
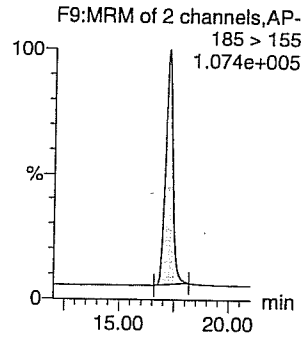
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

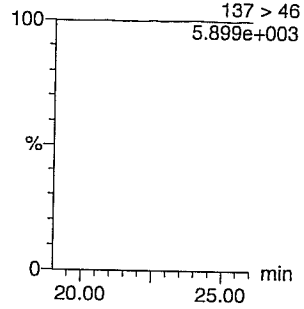
24-dinitrotoluene



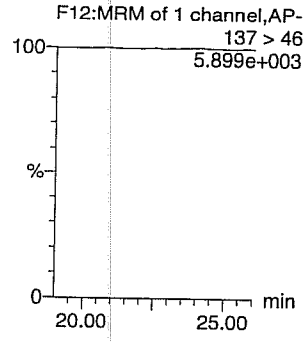
26-dinitrotoluene-d3



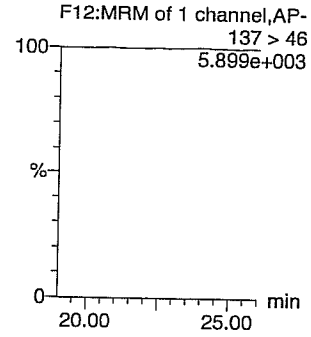
2-Nitrotoluene



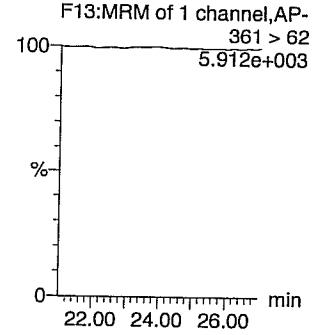
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK09	HMX	176 > 102			6869.999									
XIBLK09	RDX	176 > 102			6869.999									
XIBLK09	135-Trinitrobenzene	213 > 183			6869.999									
XIBLK09	13-Dinitrobenzene-d4	172 > 142	11.95	6869.999		6869.999	6869.999	bb			535.4941	107.1	7.1	809.5
XIBLK09	13-Dinitrobenzene	168 > 138			6869.999									
XIBLK09	Tetryl	241 > 181			6869.999									
XIBLK09	Nitrobenzene	123 > 46			6869.999									
XIBLK09	246-Trinitrotoluene	227 > 210			40348.551									
XIBLK09	4-Amino-26-dinitrotoluene	197 > 167			40348.551									
XIBLK09	2-Amino-46-dinitrotoluene	197 > 180			40348.551									
XIBLK09	34-dinitrotoluene	182 > 152			40348.551									
XIBLK09	26-dinitrotoluene	182 > 152			40348.551									
XIBLK09	24-dinitrotoluene	182 > 152			40348.551									
XIBLK09	26-dinitrotoluene-d3	185 > 155	17.22	40348.551		40348.551	40348.551	bb			529.4773	105.9	5.9	2143.0
XIBLK09	2-Nitrotoluene	137 > 46			40348.551									
XIBLK09	4-Nitrotoluene	137 > 46			40348.551									
XIBLK09	3-Nitrotoluene	137 > 46			40348.551									
XIBLK09	PETN	361 > 62			40348.551									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK10

Analysis Date: 21–NOV–10 02:37

GEL Data File: EXP1119074a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

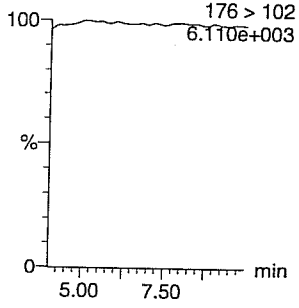
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	592.561
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	565.757
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

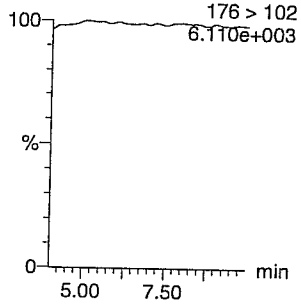
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119074a
Date: 21-Nov-2010
Time: 02:37:38
ID: XIBLK10
Vial: 1:1,A

MM 11/22/10

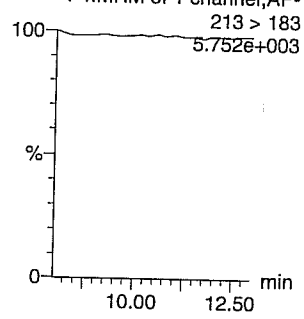
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.110e+003



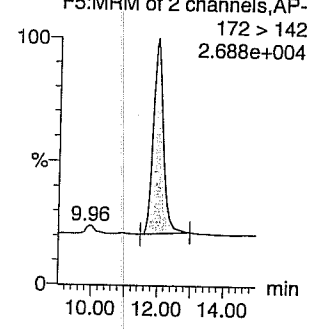
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.110e+003



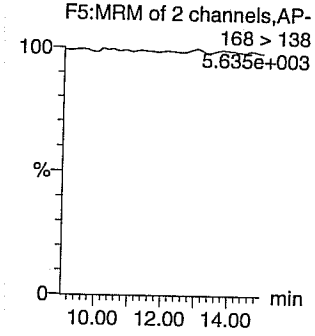
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.752e+003



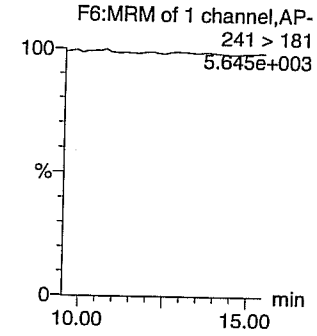
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.688e+004



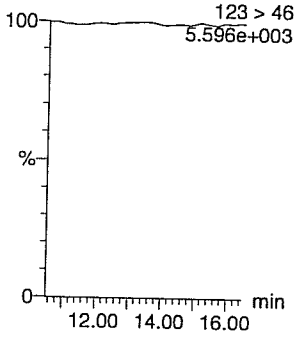
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.635e+003



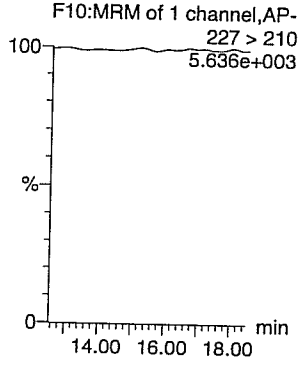
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.645e+003



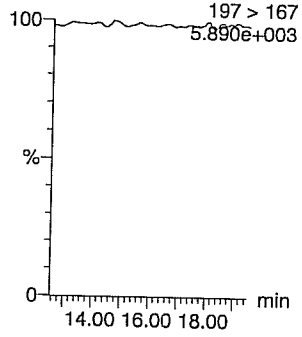
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.596e+003



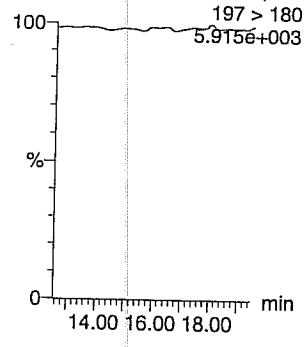
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.636e+003



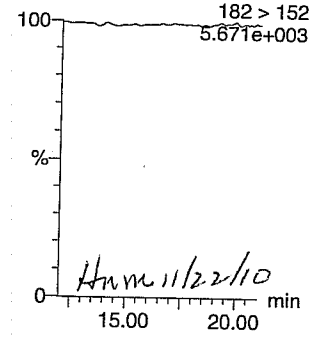
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
5.890e+003



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.915e+003

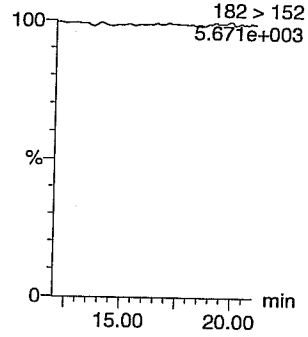


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.671e+003



Hnm 11/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.671e+003



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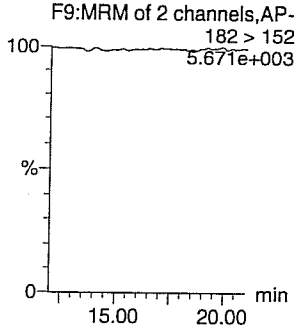
Quantify Sample Report

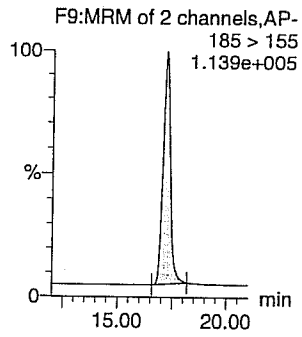
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

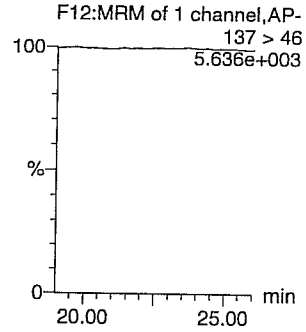
24-dinitrotoluene



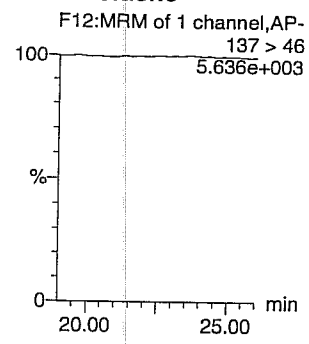
26-dinitrotoluene-d3



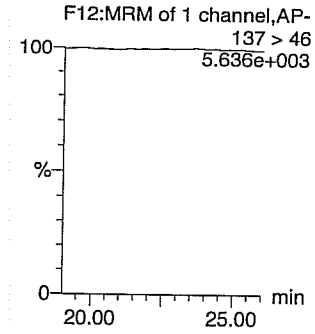
2-Nitrotoluene



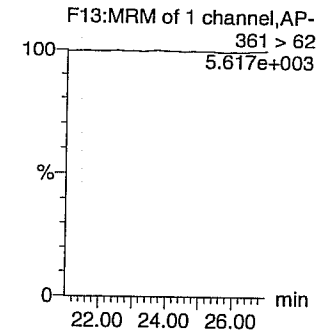
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs:Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK10	HMX	176 > 102			7602.125									
XIBLK10	RDX	176 > 102			7602.125									
XIBLK10	135-Trinitrobenzene	213 > 183			7602.125									
XIBLK10	13-Dinitrobenzene-d4	172 > 142	11.95	7602.125		7602.125	7602.125	bb			592.5609	118.5	18.5	517.8
XIBLK10	13-Dinitrobenzene	168 > 138			7602.125									
XIBLK10	Tetryl	241 > 181			7602.125									
XIBLK10	Nitrobenzene	123 > 46			7602.125									
XIBLK10	246-Trinitrotoluene	227 > 210			43113.258									
XIBLK10	4-Amino-26-dinitrotoluene	197 > 167			43113.258									
XIBLK10	2-Amino-46-dinitrotoluene	197 > 180			43113.258									
XIBLK10	34-dinitrotoluene	182 > 152			43113.258									
XIBLK10	26-dinitrotoluene	182 > 152			43113.258									
XIBLK10	24-dinitrotoluene	182 > 152			43113.258									
XIBLK10	26-dinitrotoluene-d3	185 > 155	17.18	43113.258		43113.258	43113.258	bb			565.7574	113.2	13.2	2636.1
XIBLK10	2-Nitrotoluene	137 > 46			43113.258									
XIBLK10	4-Nitrotoluene	137 > 46			43113.258									
XIBLK10	3-Nitrotoluene	137 > 46			43113.258									
XIBLK10	PETN	361 > 62			43113.258									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 23–NOV–10 18:56

GEL Data File: EXP1123009a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

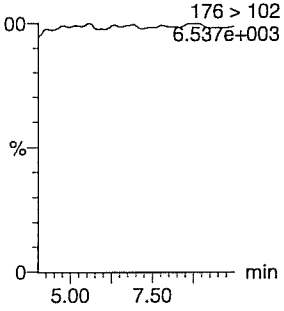
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	475.872
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	483.312
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

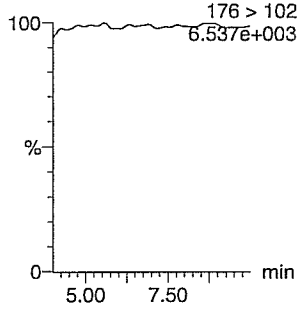
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123009a
Date: 23-Nov-2010
Time: 18:56:39
ID: XIBLK02
Vial: 1:1,A

fa 11/29/10

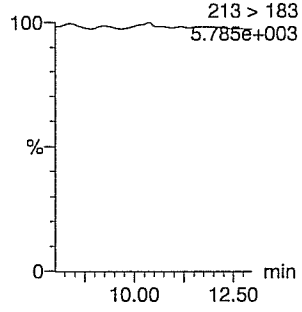
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.537e+003



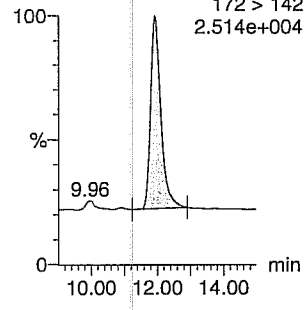
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.537e+003



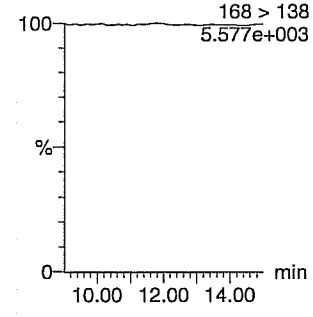
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.785e+003



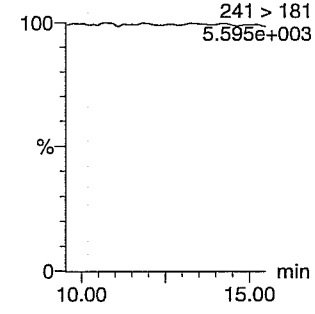
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.514e+004



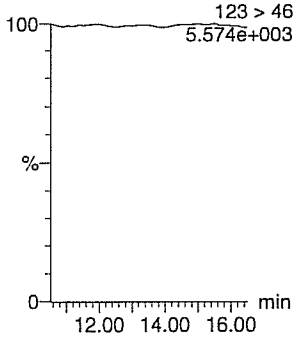
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.577e+003



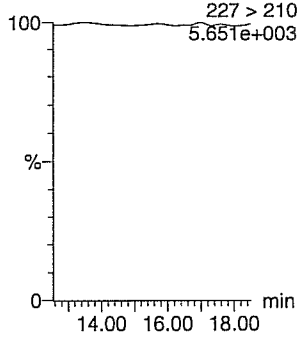
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.595e+003



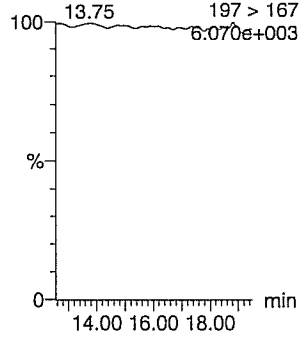
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.574e+003



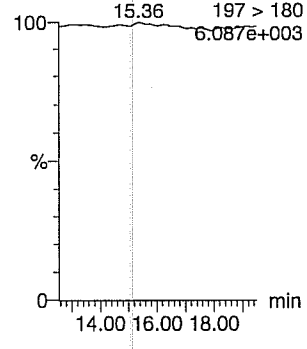
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.651e+003



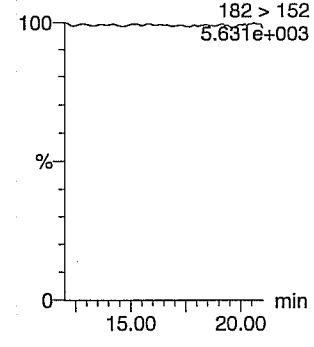
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
13.75
197 > 167
6.070e+003



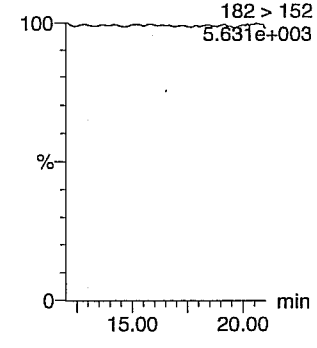
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
15.36
197 > 180
6.087e+003



34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.631e+003



26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.631e+003



Hmm 11/29/10

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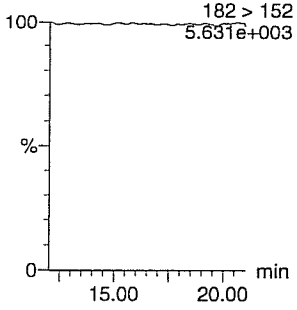
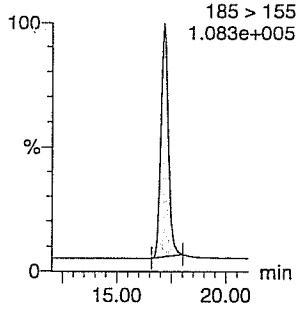
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

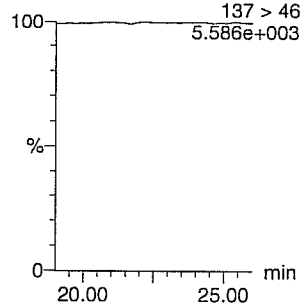
24-dinitrotoluene



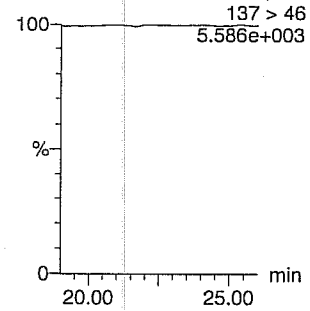
26-dinitrotoluene-d3



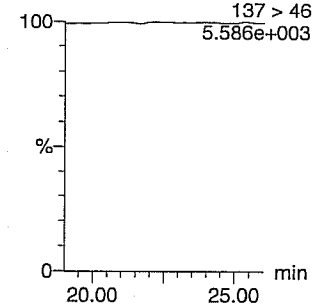
2-Nitrotoluene



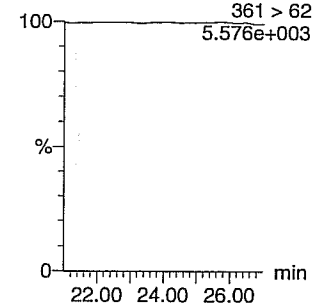
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK02	HMX	176 > 102			7096.824									
XIBLK02	RDX	176 > 102			7096.824									
XIBLK02	135-Trinitrobenzene	213 > 183			7096.824									
XIBLK02	13-Dinitrobenzene-d4	172 > 142	11.91	7096.824		7096.824	7096.824	bb			475.8716	95.2	-4.8	375.5
XIBLK02	13-Dinitrobenzene	168 > 138			7096.824									
XIBLK02	Tetryl	241 > 181			7096.824									
XIBLK02	Nitrobenzene	123 > 46			7096.824									
XIBLK02	246-Trinitrotoluene	227 > 210			41176.891									
XIBLK02	4-Amino-26-dinitrotoluene	197 > 167			41176.891									
XIBLK02	2-Amino-46-dinitrotoluene	197 > 180			41176.891									
XIBLK02	34-dinitrotoluene	182 > 152			41176.891									
XIBLK02	26-dinitrotoluene	182 > 152			41176.891									
XIBLK02	24-dinitrotoluene	182 > 152			41176.891									
XIBLK02	26-dinitrotoluene-d3	185 > 155	17.15	41176.891		41176.891	41176.891	bb			483.3117	96.7	-3.3	2691.7
XIBLK02	2-Nitrotoluene	137 > 46			41176.891									
XIBLK02	4-Nitrotoluene	137 > 46			41176.891									
XIBLK02	3-Nitrotoluene	137 > 46			41176.891									
XIBLK02	PETN	361 > 62			41176.891									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 23–NOV–10 19:55

GEL Data File: EXP1123011a

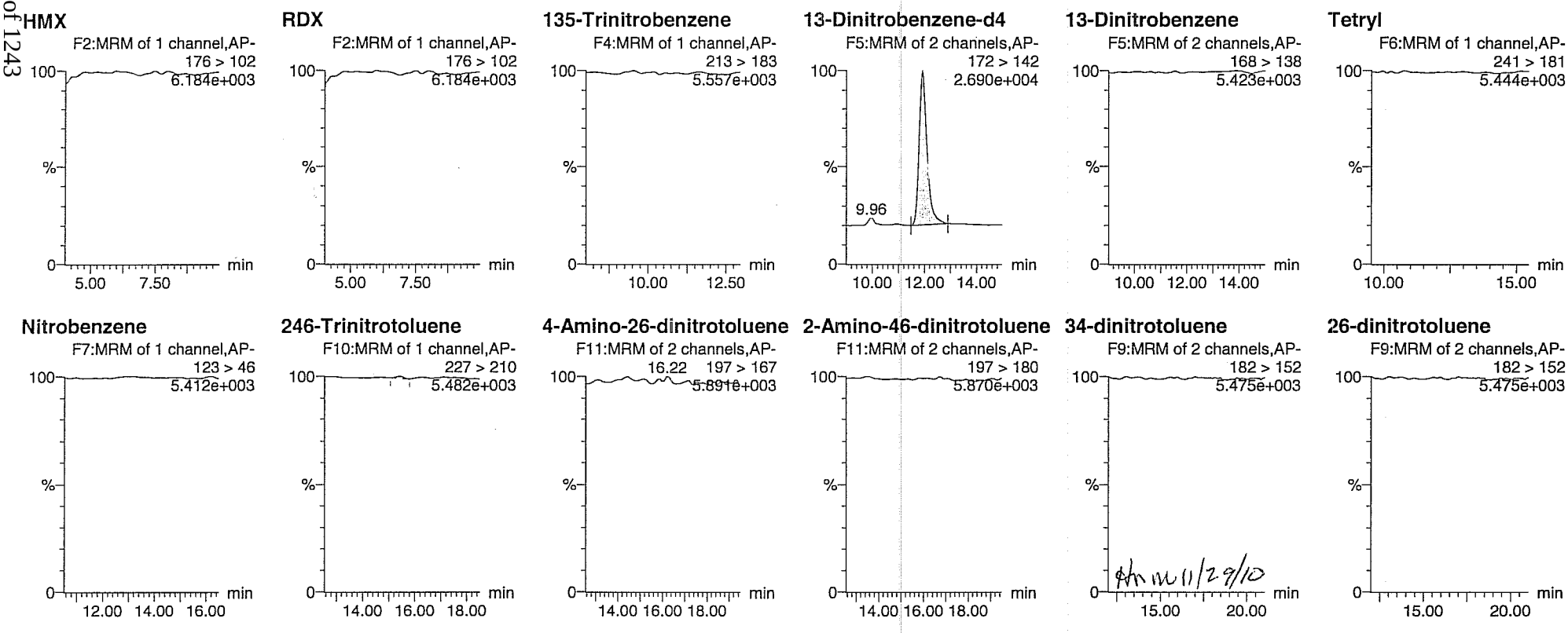
Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	513.968
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	539.956
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123011a
Date: 23-Nov-2010
Time: 19:55:36
ID: XIBLK03
Vial: 1:1,A



dhm 11/29/10

LCr 11/29/10

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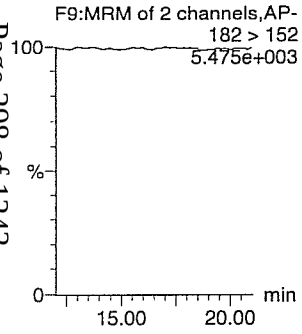
Quantify Sample Report

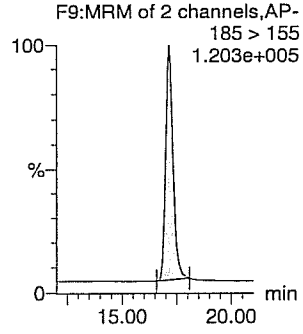
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

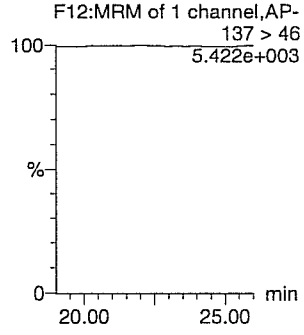
24-dinitrotoluene



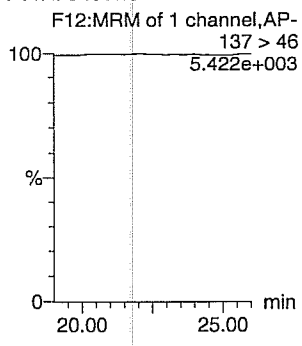
26-dinitrotoluene-d3



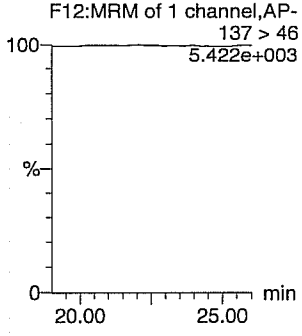
2-Nitrotoluene



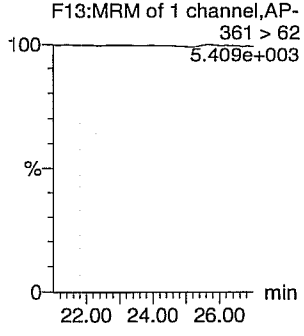
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK03	HMX	176 > 102			7664.968									
XIBLK03	RDX	176 > 102			7664.968									
XIBLK03	135-Trinitrobenzene	213 > 183			7664.968									
XIBLK03	13-Dinitrobenzene-d4	172 > 142	11.91	7664.968		7664.968	7664.968	bb			513.9680	102.8	2.8	626.1
XIBLK03	13-Dinitrobenzene	168 > 138			7664.968									
XIBLK03	Tetryl	241 > 181			7664.968									
XIBLK03	Nitrobenzene	123 > 46			7664.968									
XIBLK03	246-Trinitrotoluene	227 > 210			46002.820			MM-	26-Nov-10	13:23:29				
XIBLK03	4-Amino-26-dinitrotoluene	197 > 167			46002.820									
XIBLK03	2-Amino-46-dinitrotoluene	197 > 180			46002.820									
XIBLK03	34-dinitrotoluene	182 > 152			46002.820									
XIBLK03	26-dinitrotoluene	182 > 152			46002.820									
XIBLK03	24-dinitrotoluene	182 > 152			46002.820									
XIBLK03	26-dinitrotoluene-d3	185 > 155	17.14	46002.820		46002.820	46002.820	bb			539.9558	108.0	8.0	1813.7
XIBLK03	2-Nitrotoluene	137 > 46			46002.820									
XIBLK03	4-Nitrotoluene	137 > 46			46002.820									
XIBLK03	3-Nitrotoluene	137 > 46			46002.820									
XIBLK03	PETN	361 > 62			46002.820									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 23–NOV–10 22:52

GEL Data File: EXP1123017a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	515.829
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	533.907
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

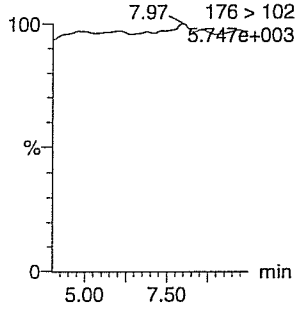
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

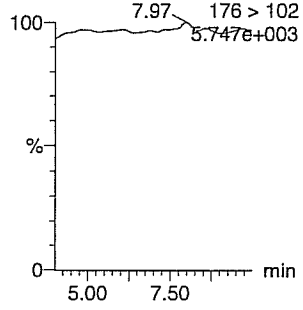
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123017a
Date: 23-Nov-2010
Time: 22:52:31
ID: XIBLK04
Vial: 1:1,F

Lcr 11/29/10

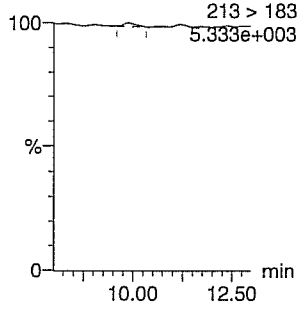
HMX
F2:MRM of 1 channel,AP-
176 > 102
5.747e+003
7.97



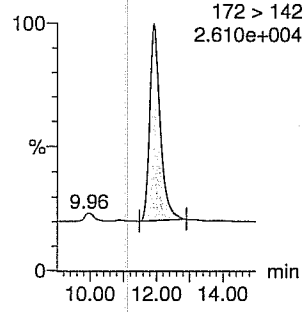
RDX
F2:MRM of 1 channel,AP-
176 > 102
5.747e+003
7.97



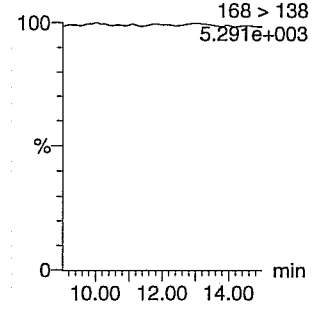
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.333e+003



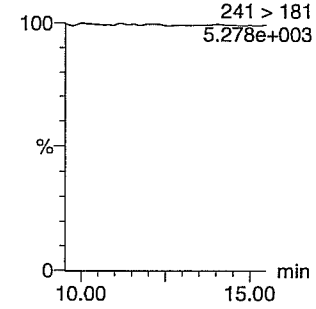
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.610e+004



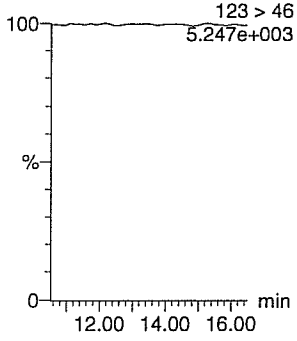
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.291e+003



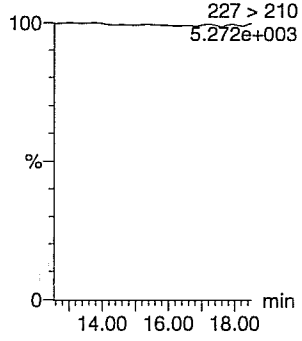
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.278e+003



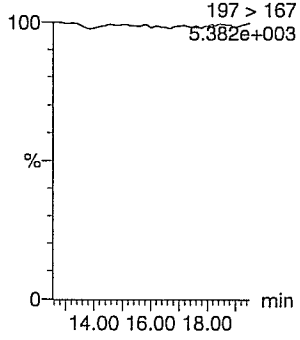
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.247e+003



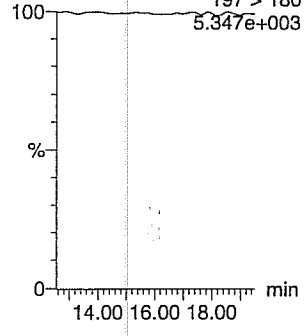
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.272e+003



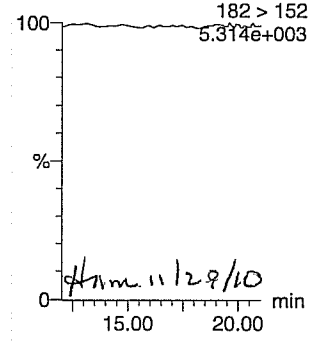
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
5.382e+003



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.347e+003

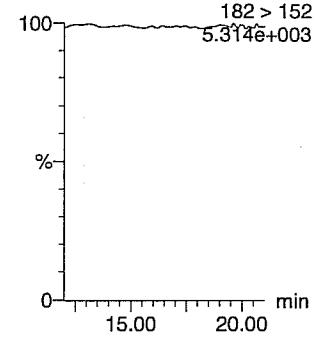


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.314e+003



Hmm. 11/29/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.314e+003



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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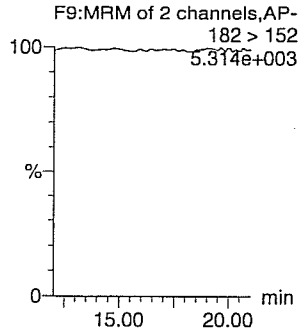
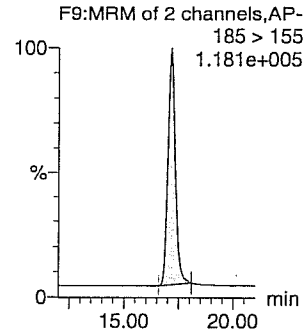
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

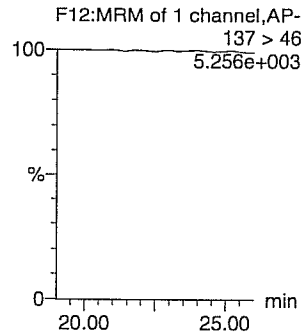
24-dinitrotoluene



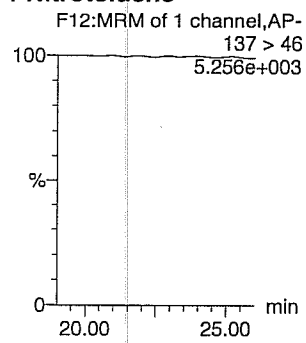
26-dinitrotoluene-d3



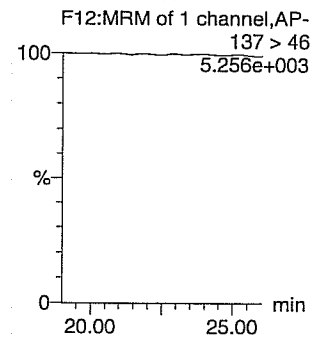
2-Nitrotoluene



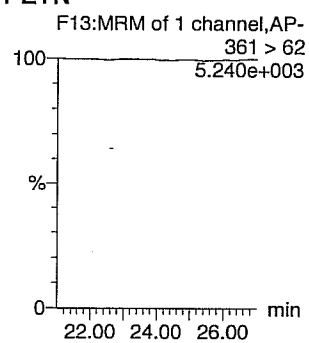
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK04	HMX	176 > 102			7692.716									
XIBLK04	RDX	176 > 102			7692.716									
XIBLK04	135-Trinitrobenzene	213 > 183			7692.716			MM-	26-Nov-10	11:17:02				
XIBLK04	13-Dinitrobenzene-d4	172 > 142	11.91	7692.716		7692.716	7692.716	bb			515.8286	103.2	3.2	328.4
XIBLK04	13-Dinitrobenzene	168 > 138			7692.716									
XIBLK04	Tetryl	241 > 181			7692.716									
XIBLK04	Nitrobenzene	123 > 46			7692.716									
XIBLK04	246-Trinitrotoluene	227 > 210			45487.445									
XIBLK04	4-Amino-26-dinitrotoluene	197 > 167			45487.445									
XIBLK04	2-Amino-46-dinitrotoluene	197 > 180			45487.445									
XIBLK04	34-dinitrotoluene	182 > 152			45487.445									
XIBLK04	26-dinitrotoluene	182 > 152			45487.445									
XIBLK04	24-dinitrotoluene	182 > 152			45487.445									
XIBLK04	26-dinitrotoluene-d3	185 > 155	17.15	45487.445		45487.445	45487.445	bb			533.9066	106.8	6.8	1918.3
XIBLK04	2-Nitrotoluene	137 > 46			45487.445									
XIBLK04	4-Nitrotoluene	137 > 46			45487.445									
XIBLK04	3-Nitrotoluene	137 > 46			45487.445									
XIBLK04	PETN	361 > 62			45487.445									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 23–NOV–10 23:51

GEL Data File: EXP1123019a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	534.012
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	553.159
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123019a
Date: 23-Nov-2010
Time: 23:51:27
ID: XIBLK05
Vial: 1:1,A

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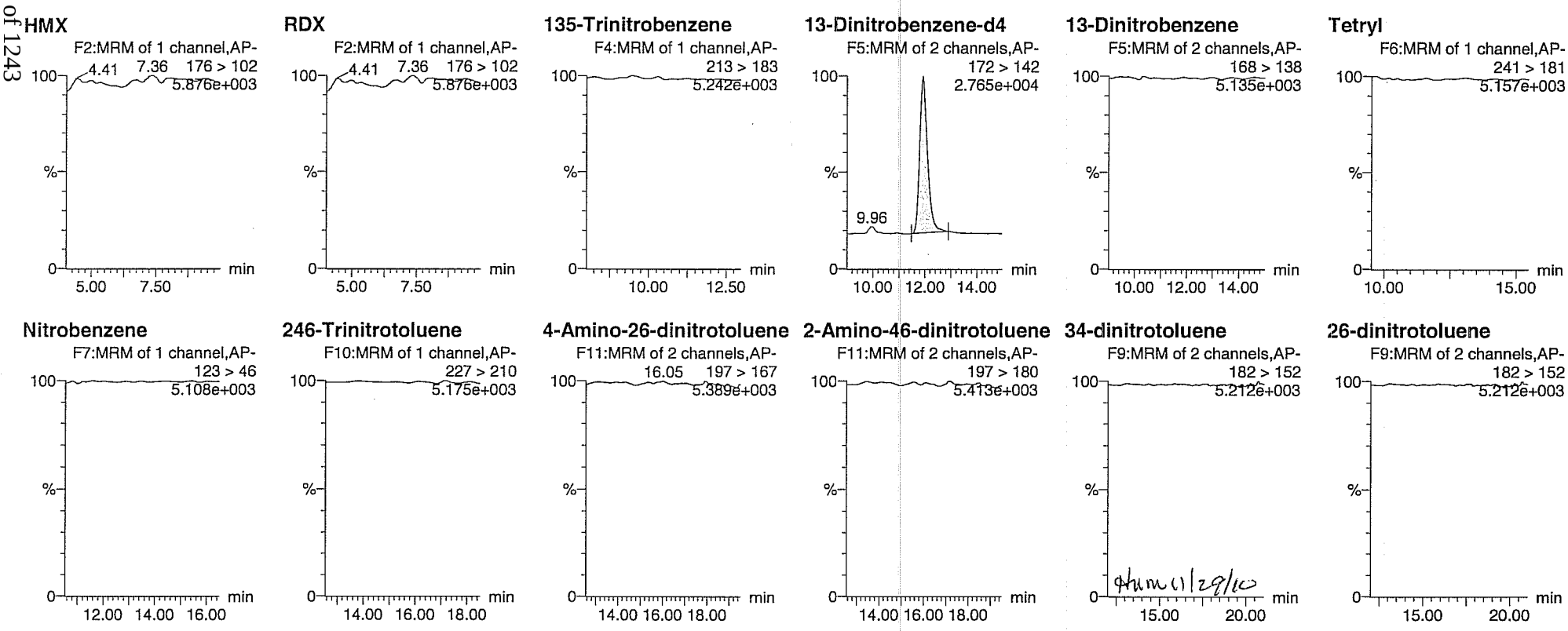
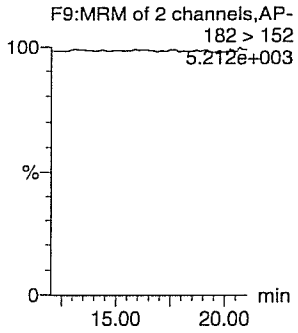


GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

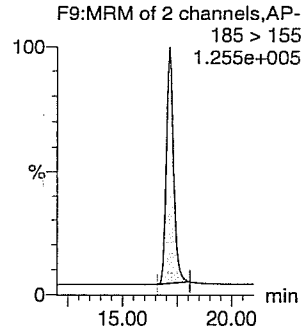
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

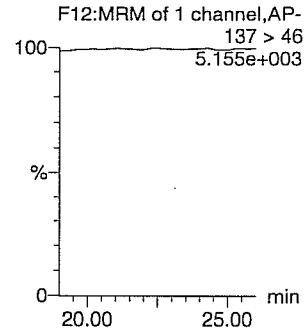
24-dinitrotoluene



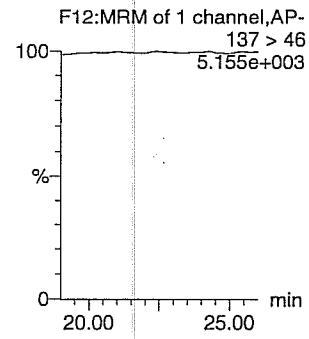
26-dinitrotoluene-d3



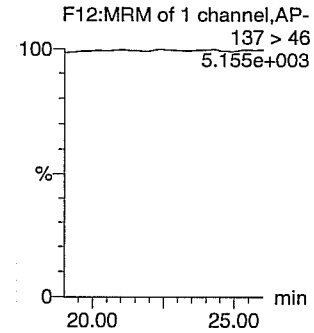
2-Nitrotoluene



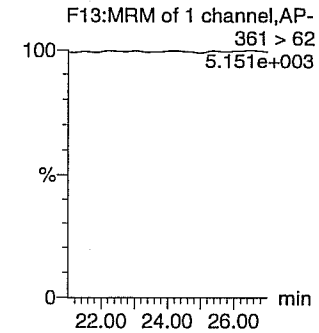
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK05	HMX	176 > 102			7963.885									
XIBLK05	RDX	176 > 102			7963.885									
XIBLK05	135-Trinitrobenzene	213 > 183			7963.885									
XIBLK05	13-Dinitrobenzene-d4	172 > 142	11.91	7963.885		7963.885	7963.885	bb			534.0116	106.8	6.8	328.8
XIBLK05	13-Dinitrobenzene	168 > 138			7963.885									
XIBLK05	Tetryl	241 > 181			7963.885									
XIBLK05	Nitrobenzene	123 > 46			7963.885									
XIBLK05	246-Trinitrotoluene	227 > 210			47127.723									
XIBLK05	4-Amino-26-dinitrotoluene	197 > 167			47127.723									
XIBLK05	2-Amino-46-dinitrotoluene	197 > 180			47127.723									
XIBLK05	34-dinitrotoluene	182 > 152			47127.723									
XIBLK05	26-dinitrotoluene	182 > 152			47127.723									
XIBLK05	24-dinitrotoluene	182 > 152			47127.723									
XIBLK05	26-dinitrotoluene-d3	185 > 155	17.15	47127.723		47127.723	47127.723	bb			553.1593	110.6	10.6	3783.7
XIBLK05	2-Nitrotoluene	137 > 46			47127.723									
XIBLK05	4-Nitrotoluene	137 > 46			47127.723									
XIBLK05	3-Nitrotoluene	137 > 46			47127.723									
XIBLK05	PETN	361 > 62			47127.723									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 24–NOV–10 12:50

GEL Data File: EXS11240010.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	2.84
tris(o–cresyl) phosphate	0	6.24
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

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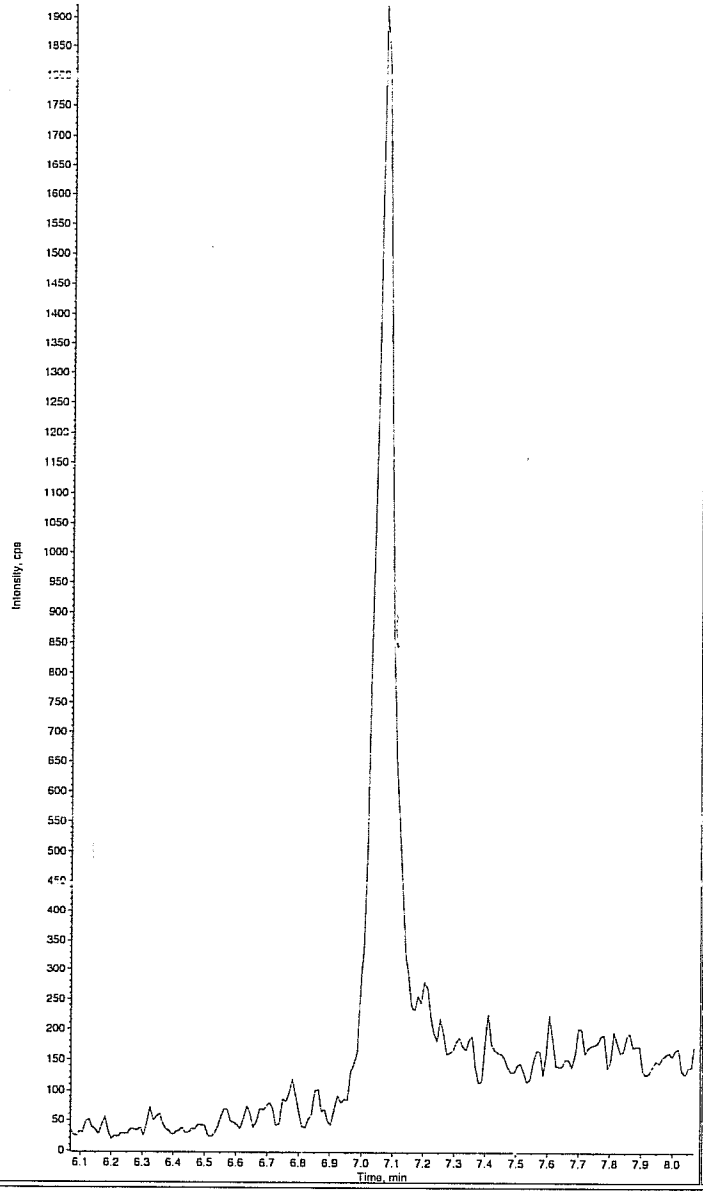
Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS11240010.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 12:50:55 PM

Modified: No

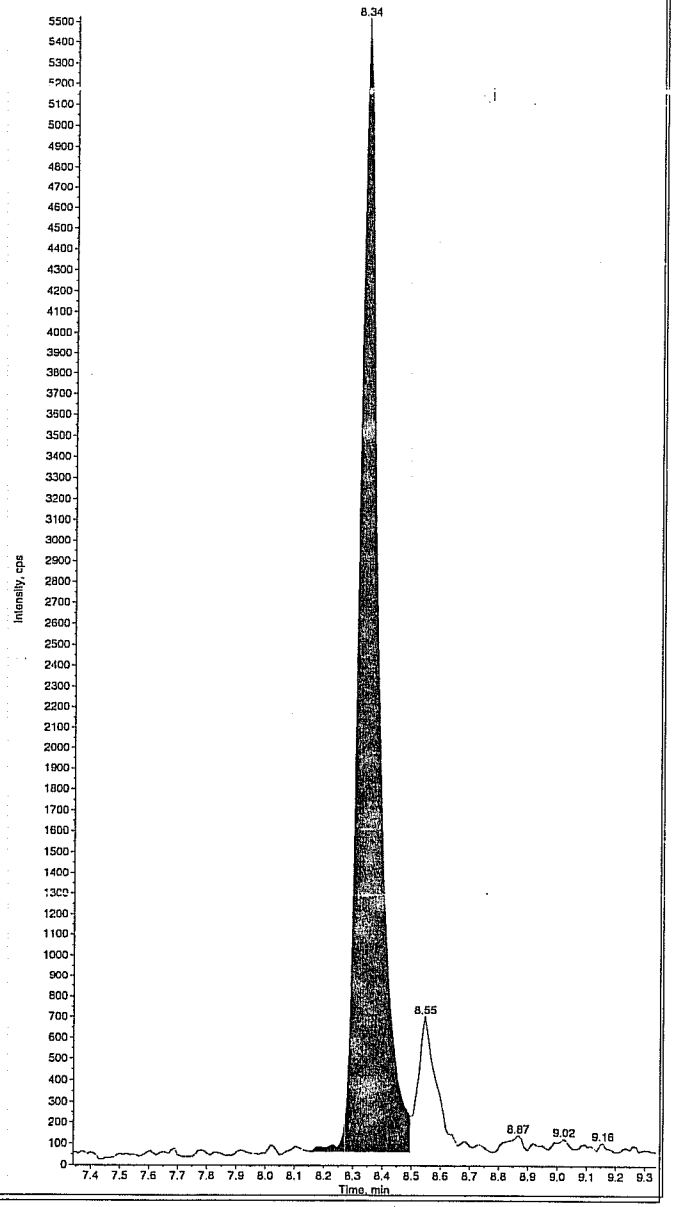


Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS11240010.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: No Intercept
Acq. Date: 11/24/2010
Acq. Time: 12:50:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.34 min
Area: 2.53e+004 counts
Height: 5459.495 cps
Start Time: 8.15 min
End Time: 8.50 min



HMM 11/29/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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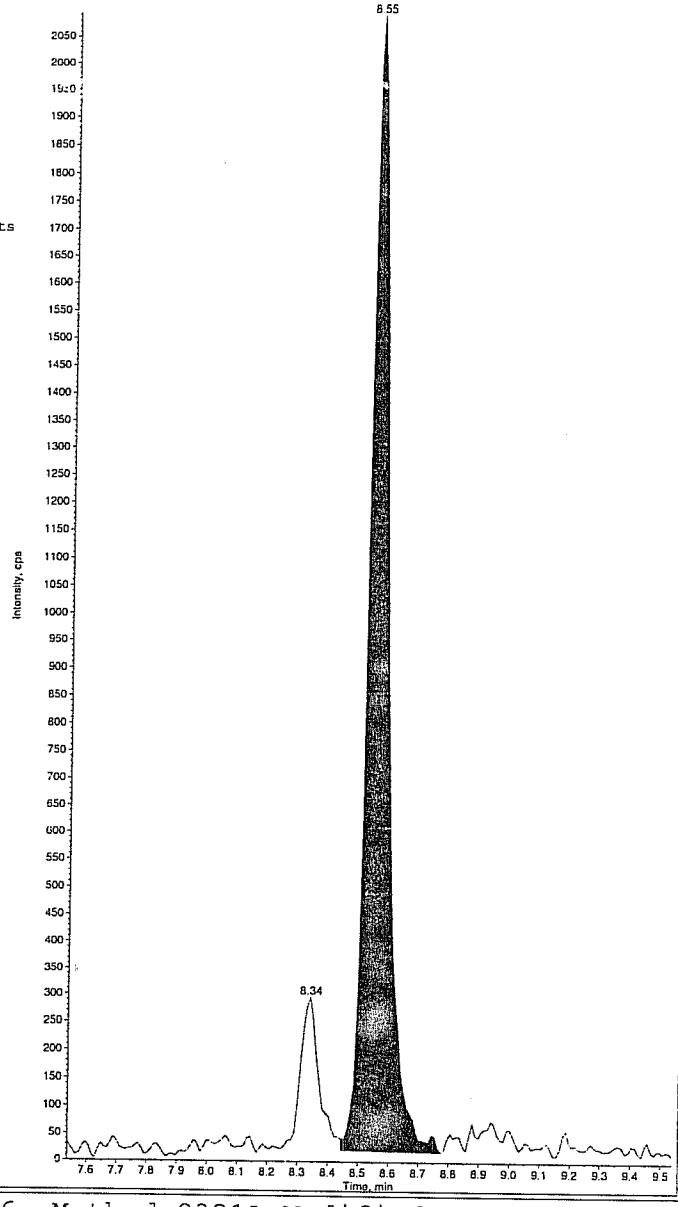
Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS11240010.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 2.84 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 12:50:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

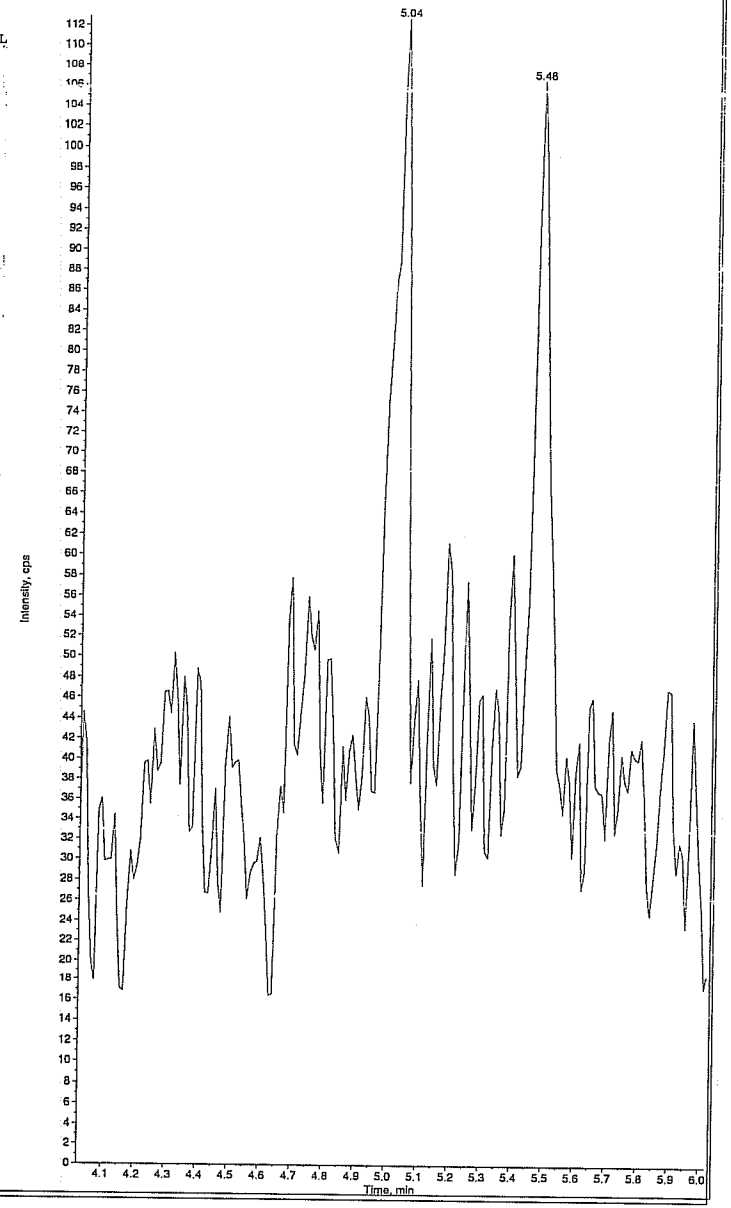
Int. Type: Valley
Retention Time: 8.55 min
Area: 9.73e+003 counts
Height: 2074.555 cps
Start Time: 8.44 min
End Time: 8.77 min



Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS11240010.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 12:50:55 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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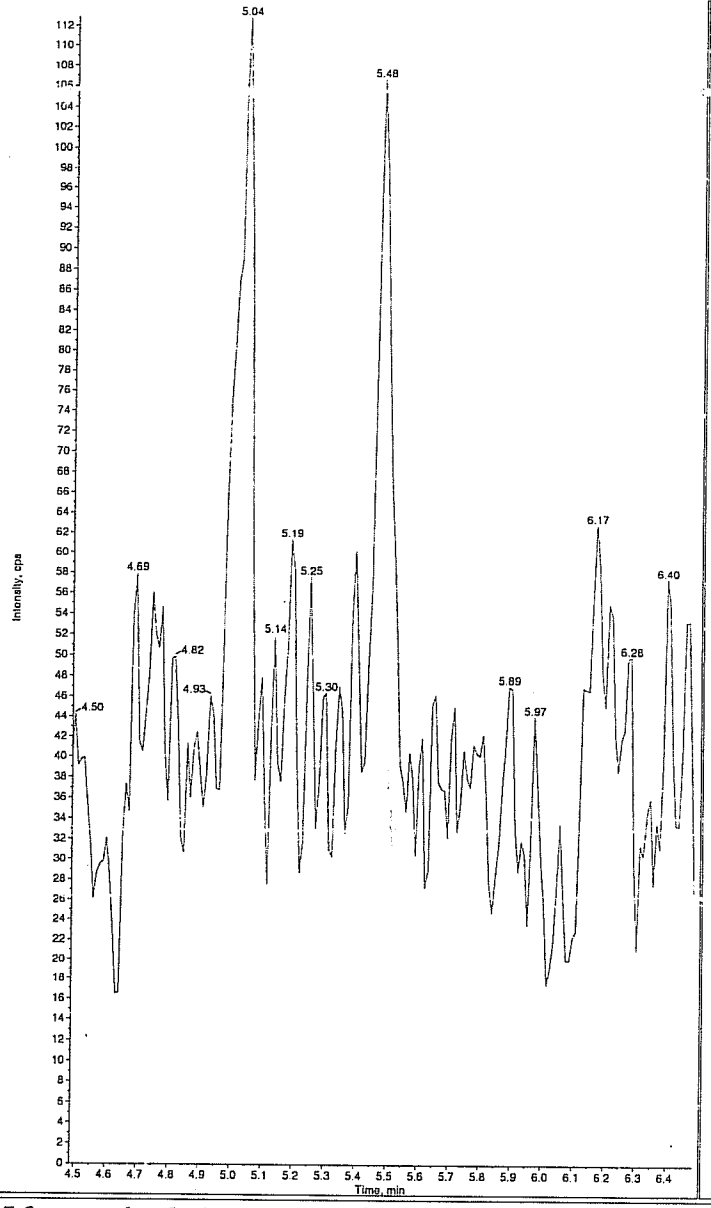
Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS11240010.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 12:50:55 PM

Modified: No

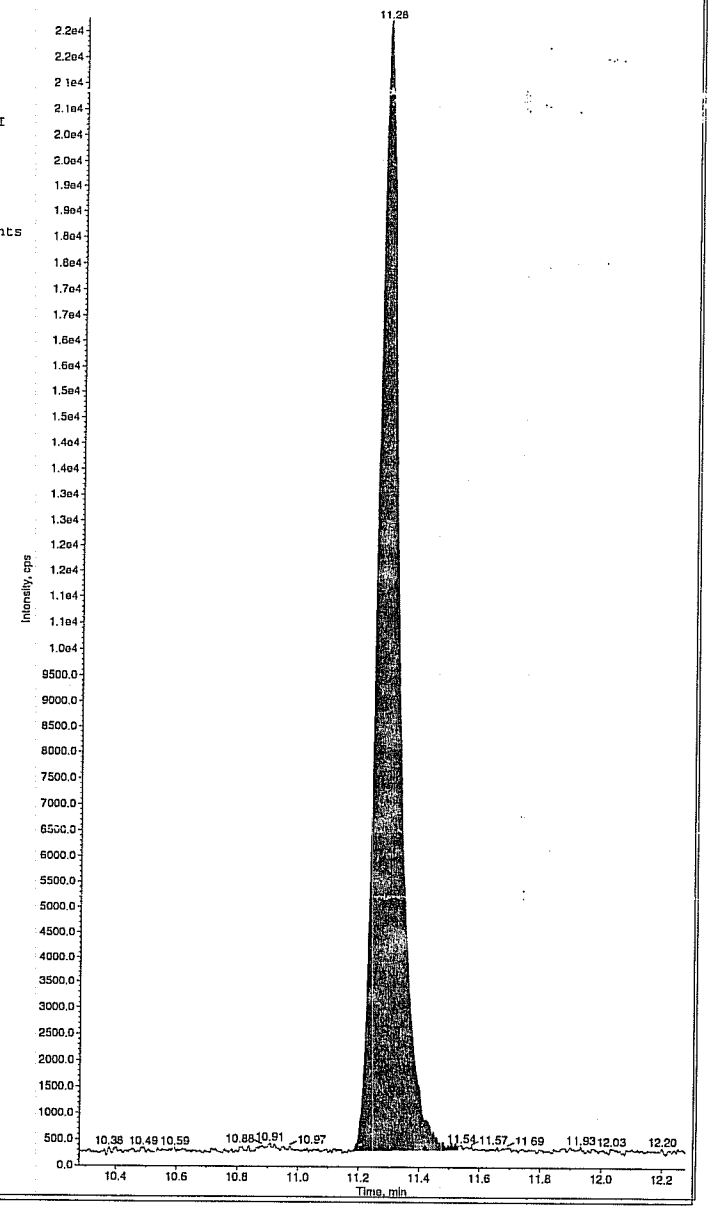


Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS11240010.wiff"
Peak Name: "Iris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 6.24 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 12:50:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: No
Min. Peak Height: 2.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 11.3 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.3 min
Area: 1.11e+005 counts
Height: 21948.779 cps
Start Time: 11.2 min
End Time: 11.5 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 24–NOV–10 13:22

GEL Data File: EXS11240012.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

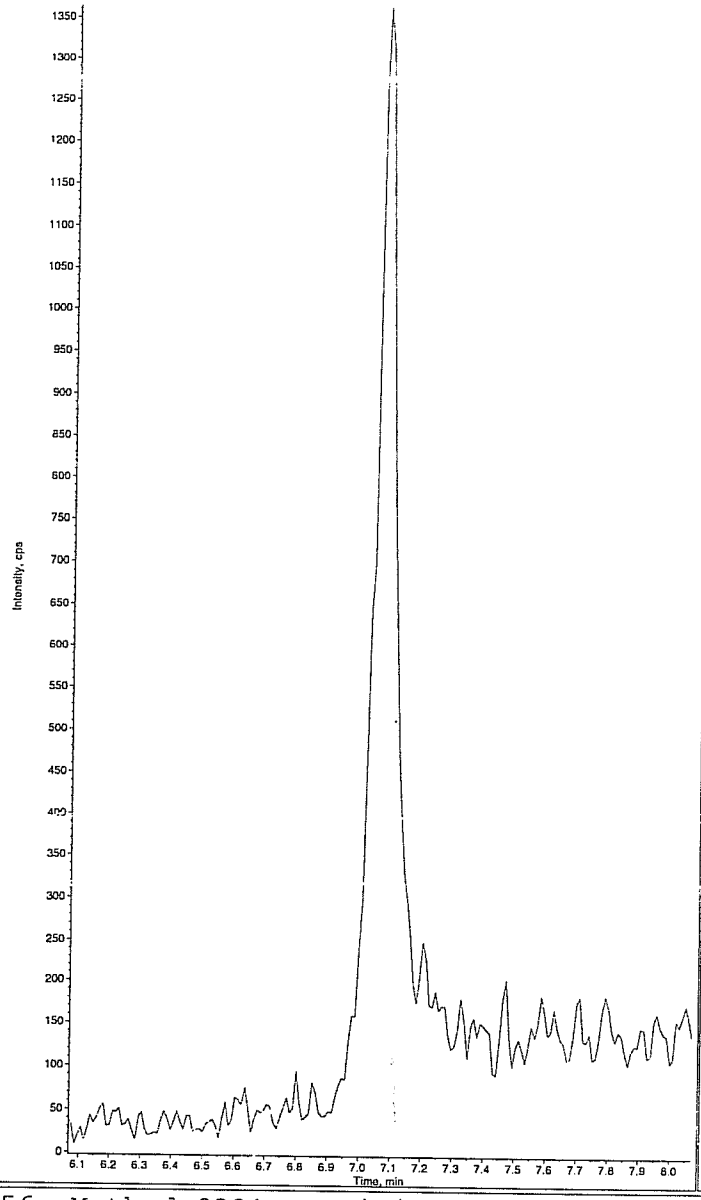
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	0
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS11240012.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:22:19 PM

Modified: No

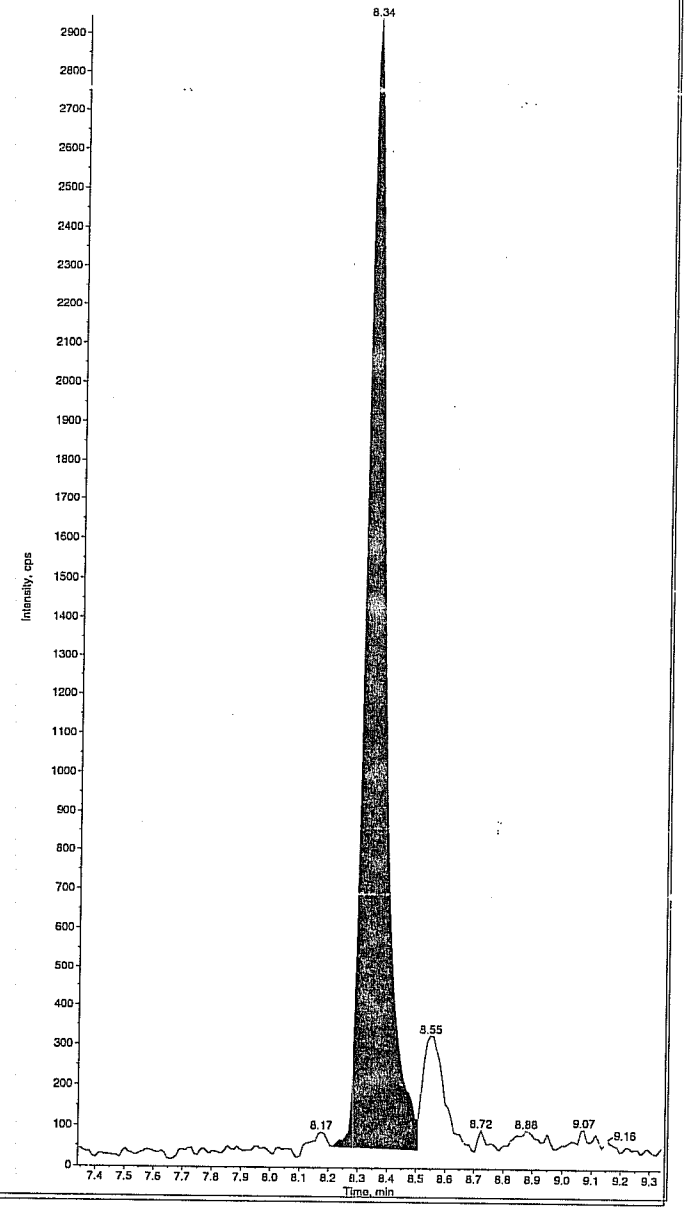


Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS11240012.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: No Intercept
Acq. Date: 11/24/2010
Acq. Time: 1:22:19 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.34 min
Area: 1.38e+004 counts
Height: 2894.619 cps
Start Time: 8.22 min
End Time: 8.51 min



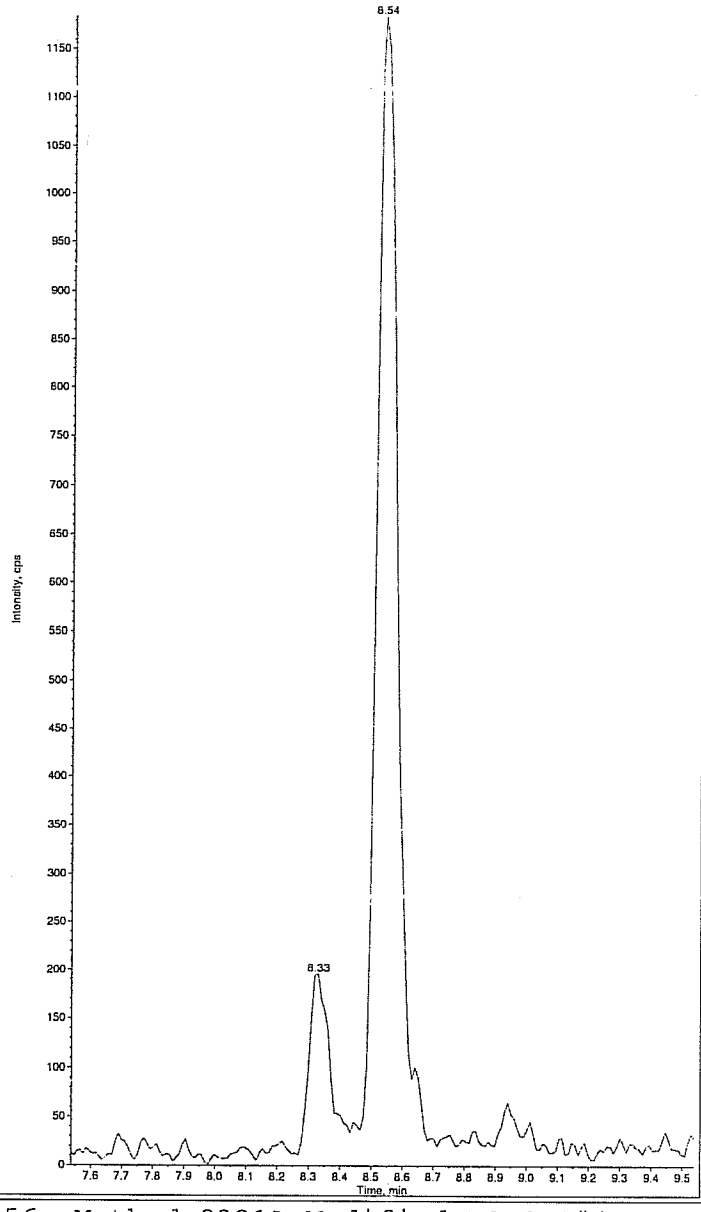
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS11240012.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:22:19 PM

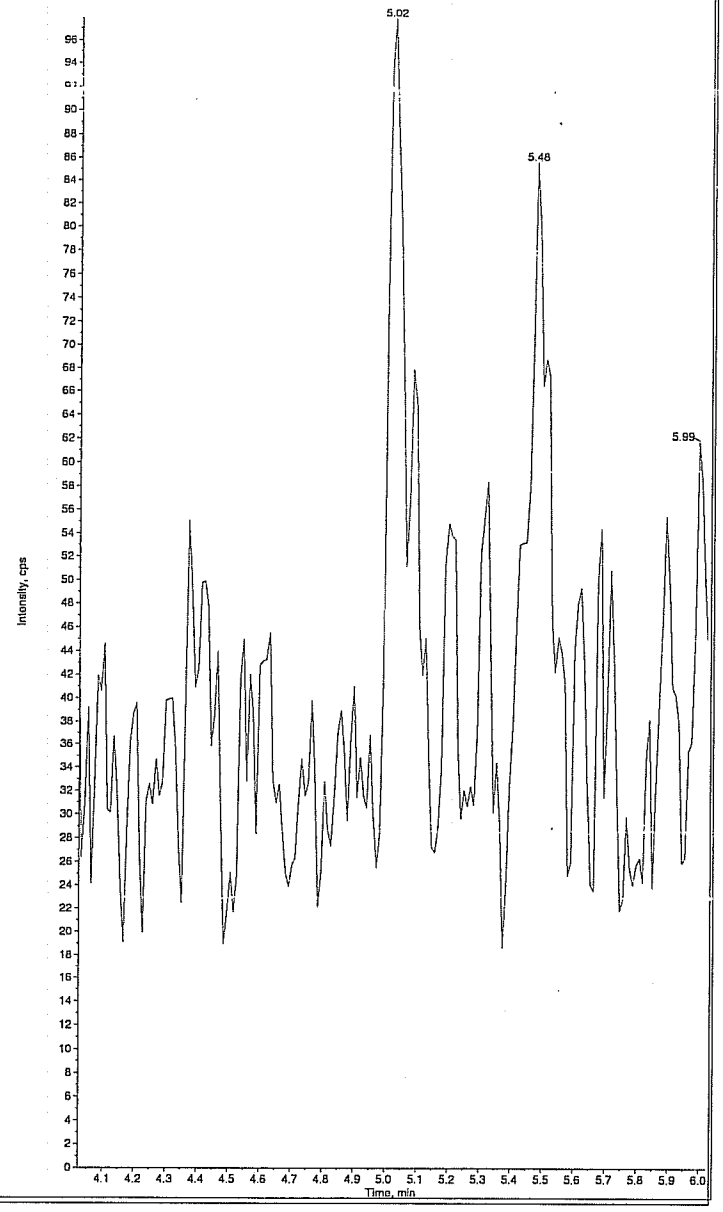
Modified: No



Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS11240012.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:23:19 PM

Modified: No



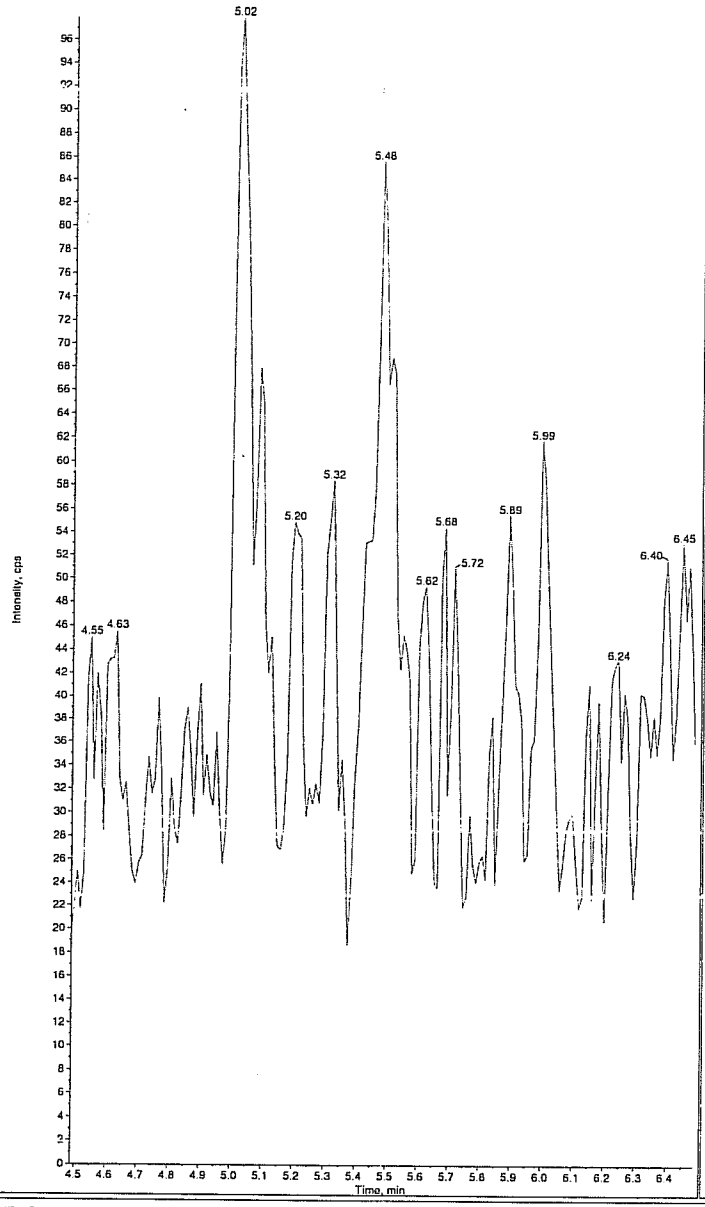
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS11240012.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:22:19 PM

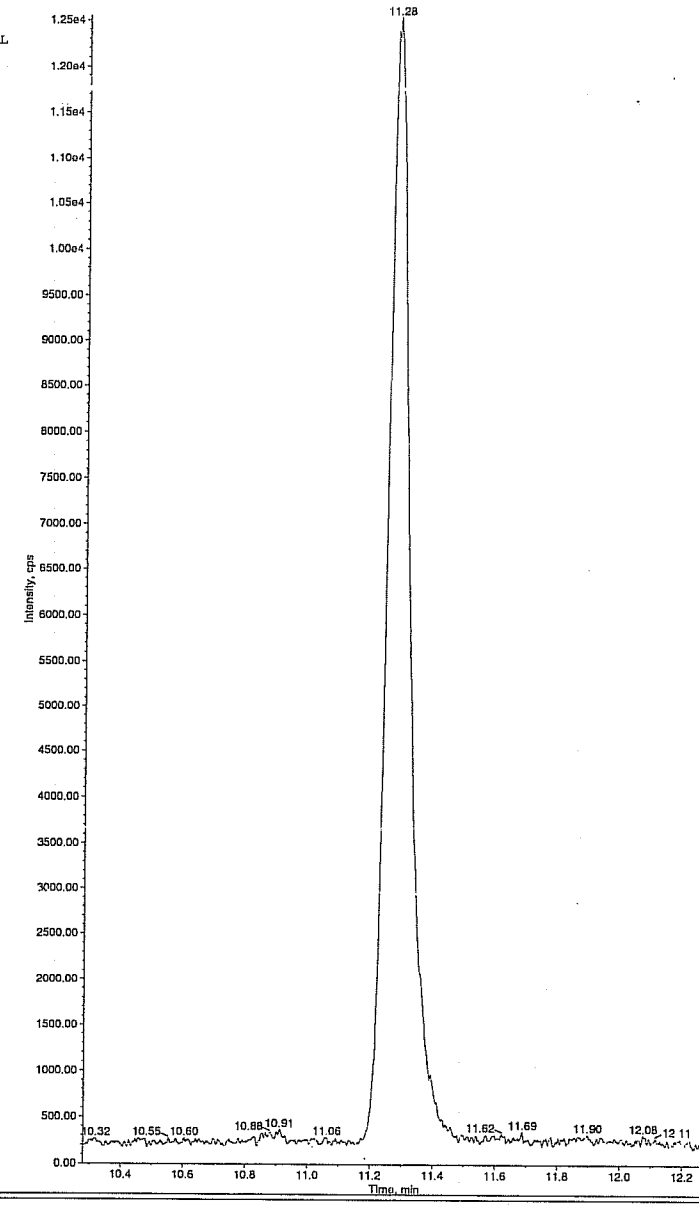
Modified: No



Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS11240012.wiff"
Peak Name: "Iris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:22:19 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 24–NOV–10 15:28

GEL Data File: EXS11240020.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	0
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

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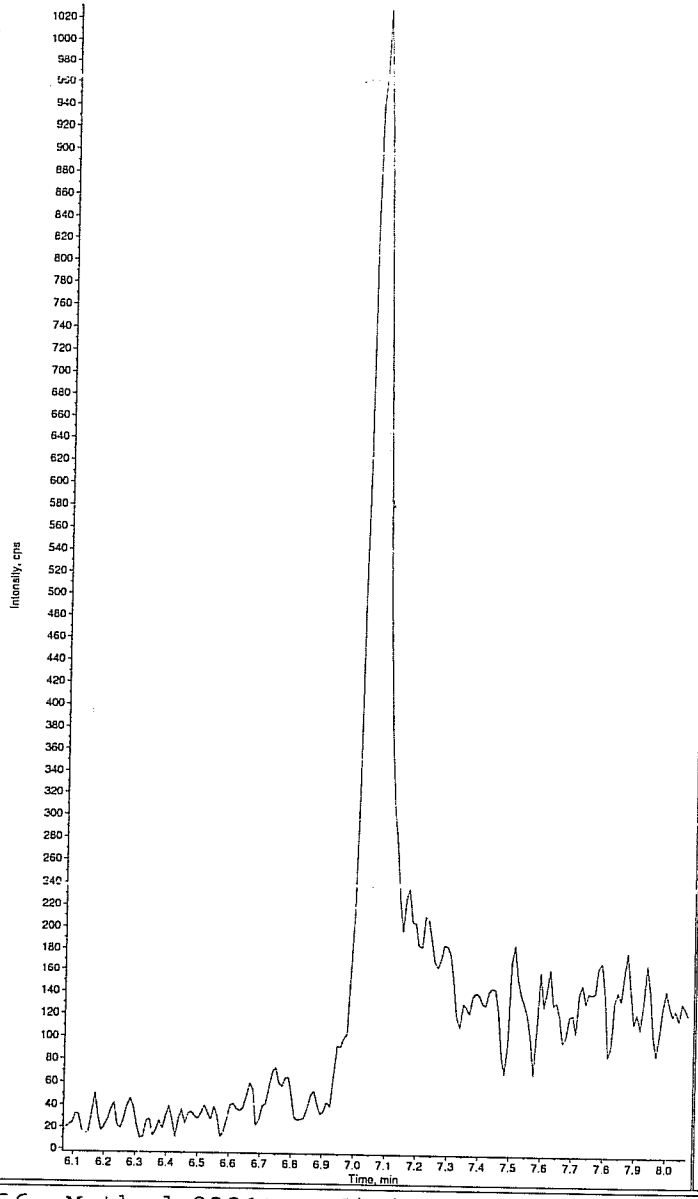
Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS11240020.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:28:02 PM

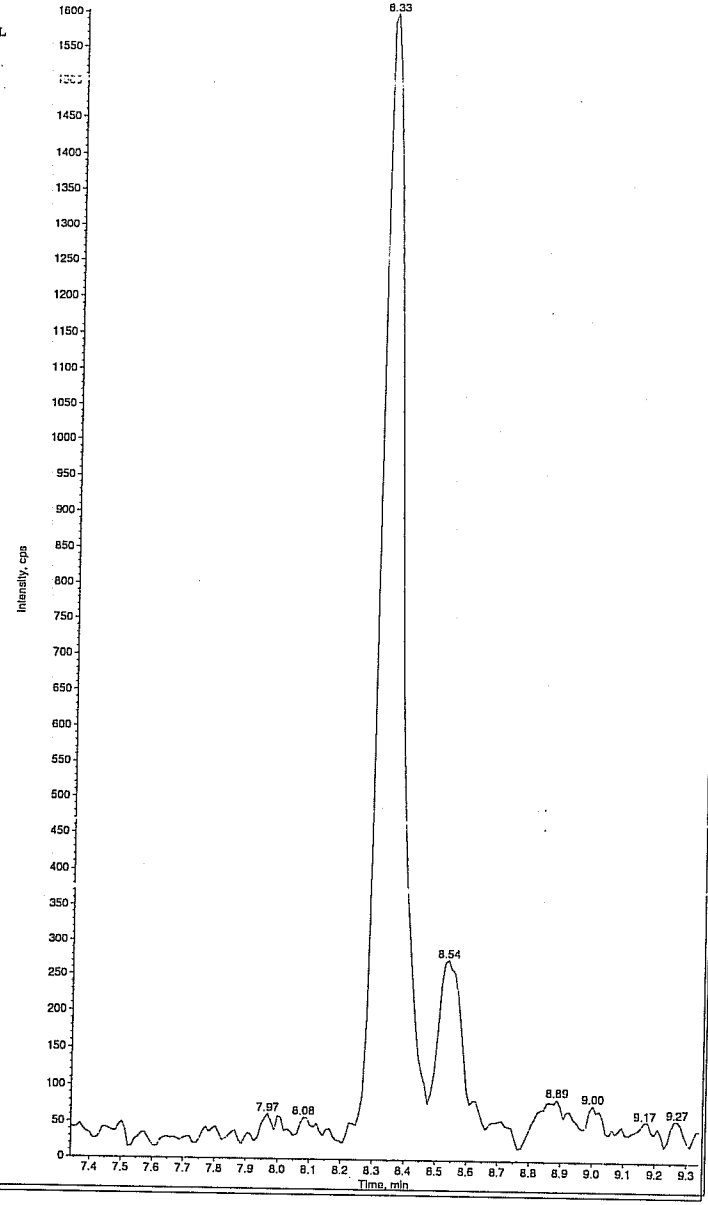
Modified: No



Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS11240020.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:28:02 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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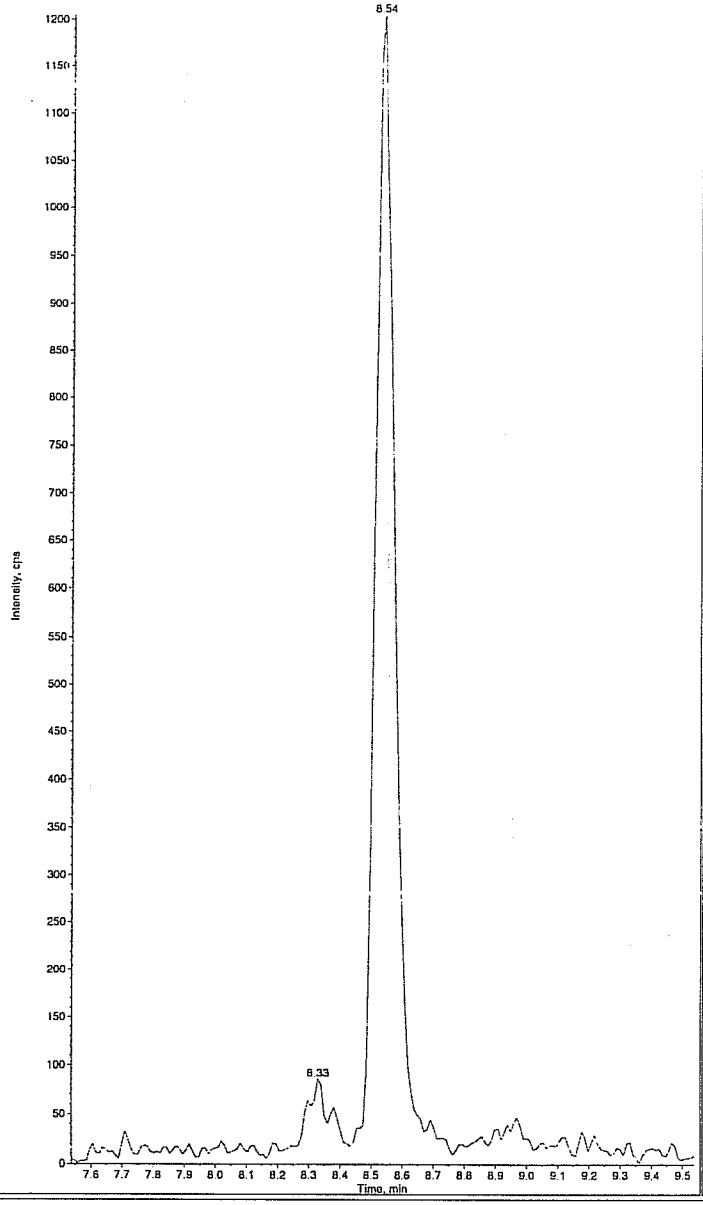
Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS11240020.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:28:02 PM

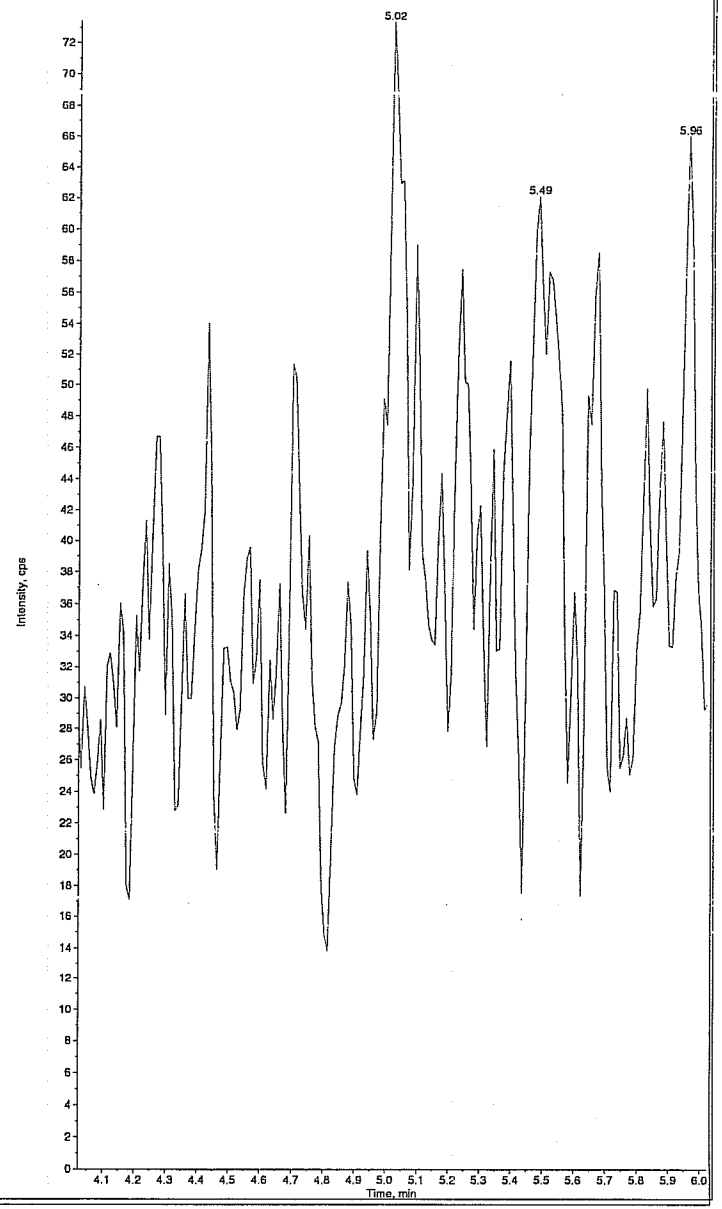
Modified: No



Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS11240020.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:28:02 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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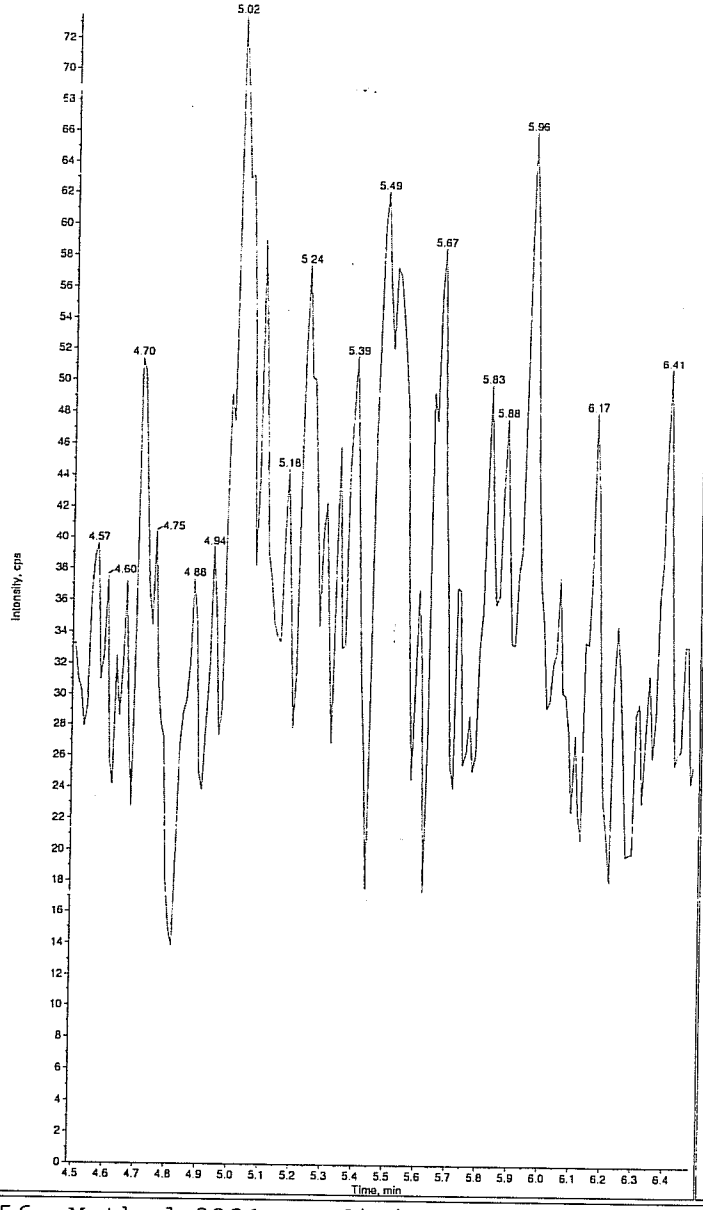
Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS11240020.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:28:02 PM

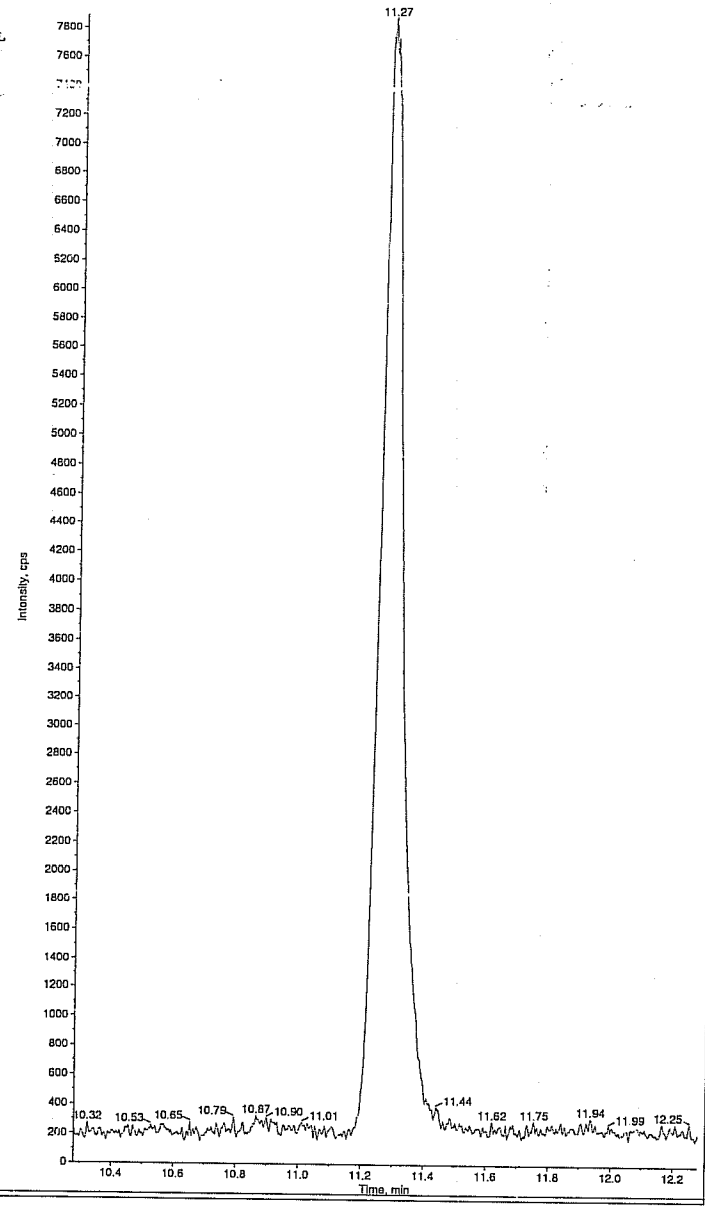
Modified: No



Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS11240020.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:28:02 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 11–463

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 24–NOV–10 18:05

GEL Data File: EXS11240030.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

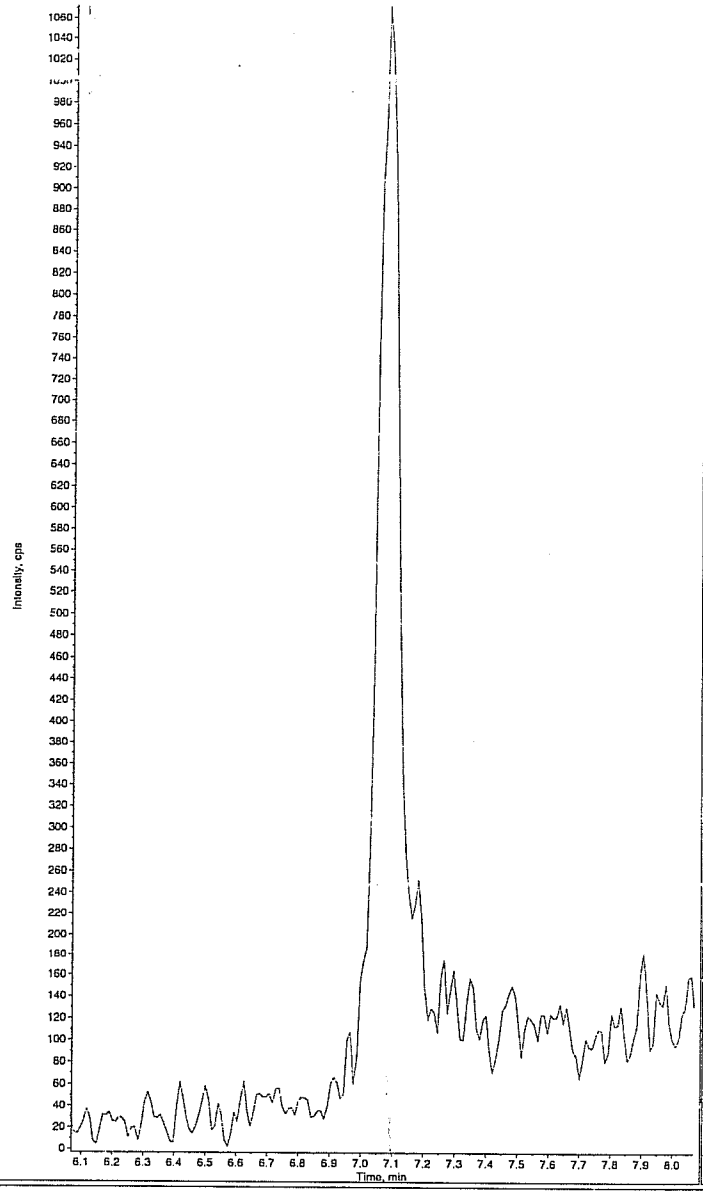
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	0
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

Lcr 11/26/10

Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS11240030.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:05:08 PM

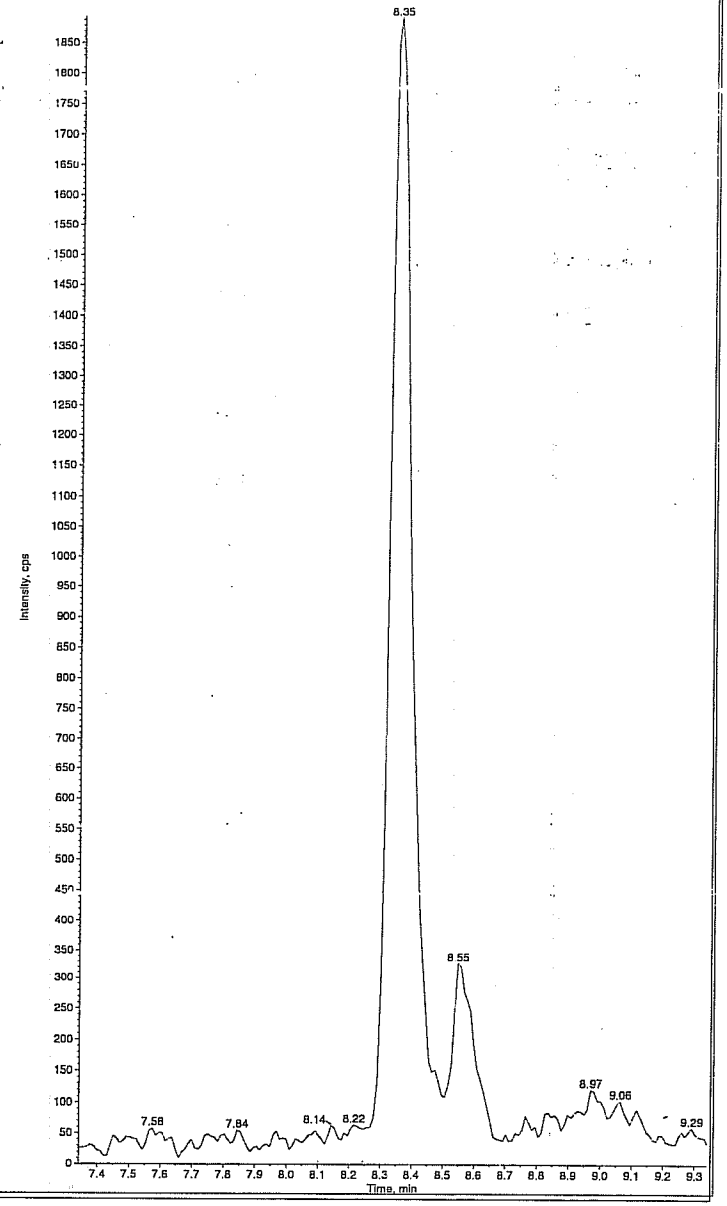
Modified: No



Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS11240030.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:05:08 PM

Modified: No



Hmc 11/29/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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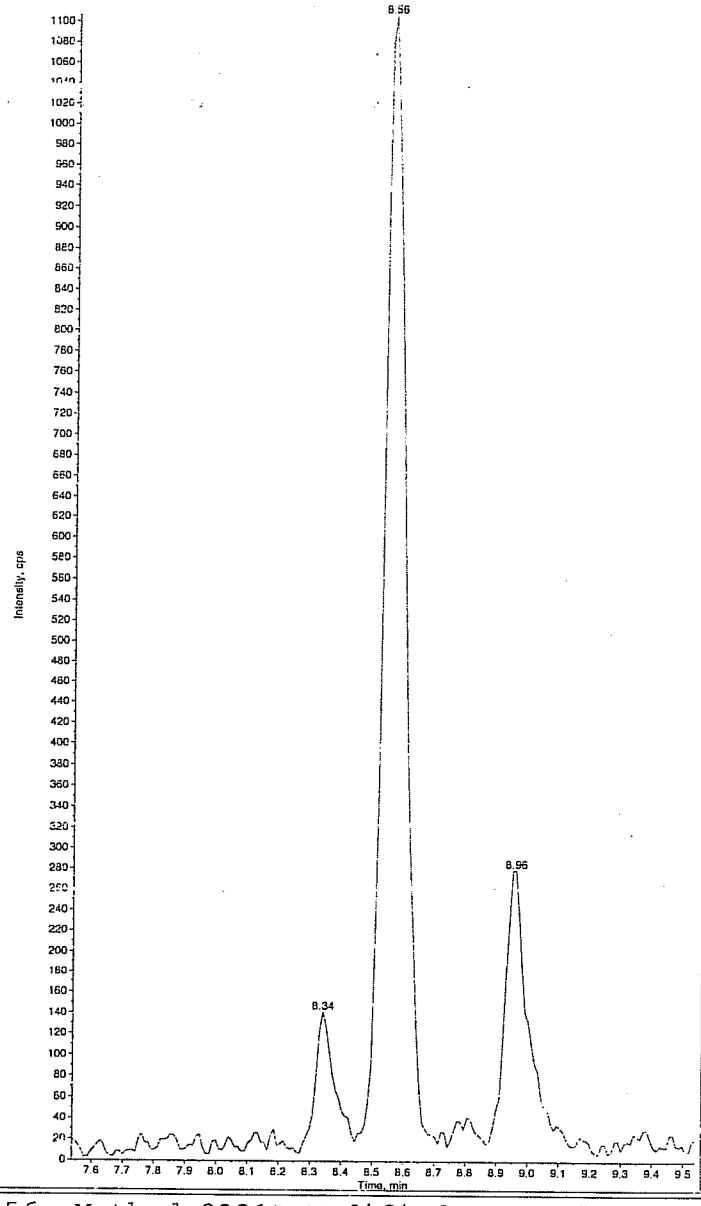
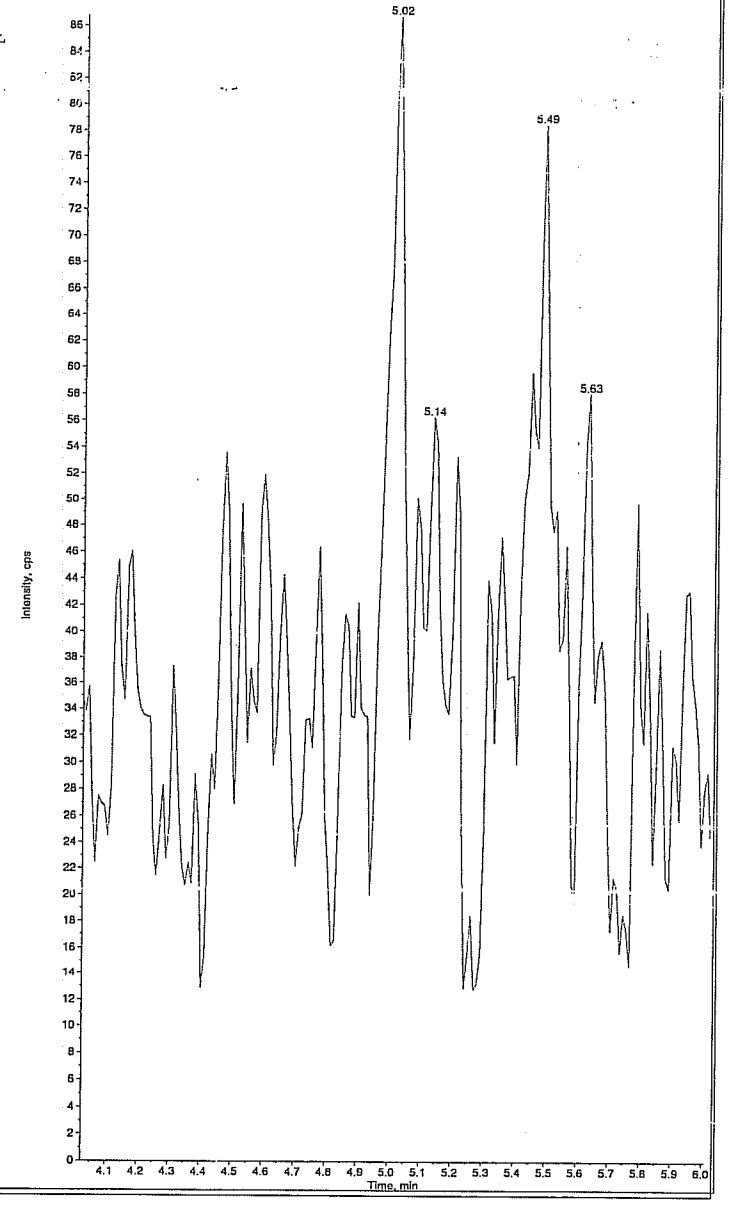
Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS11240030.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:05:08 PM

Modified: No



Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS11240030.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:05:08 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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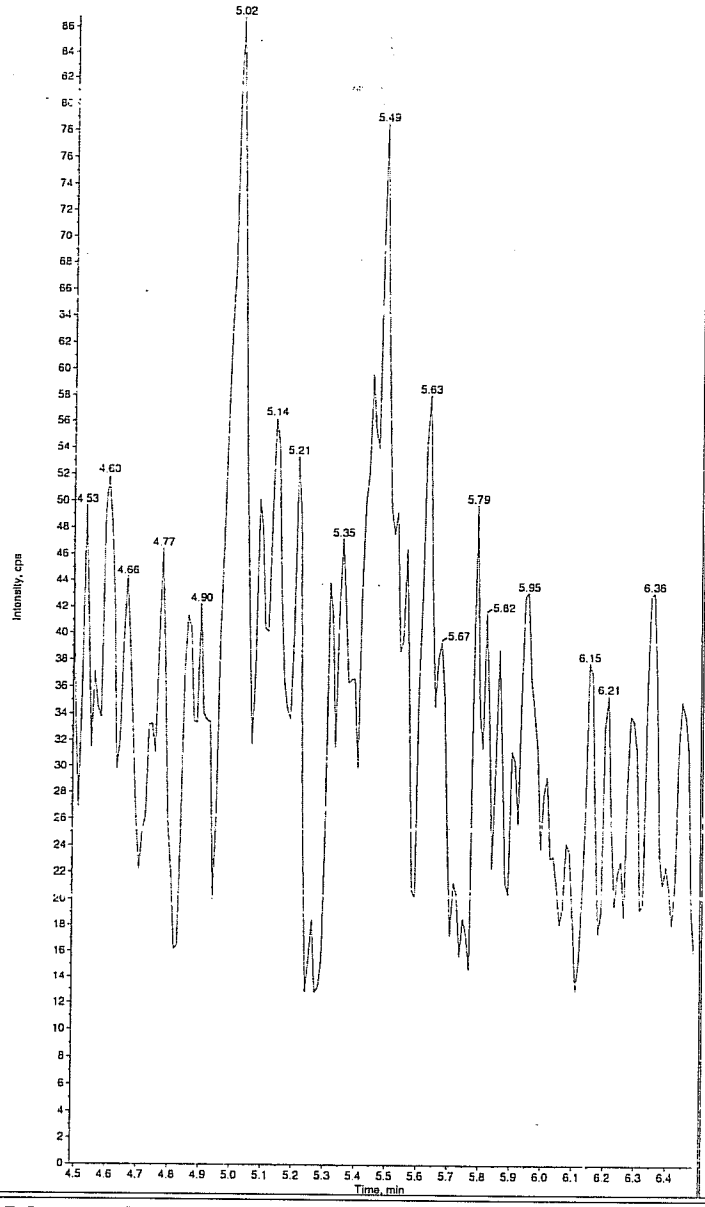
Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS11240030.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:05:06 PM

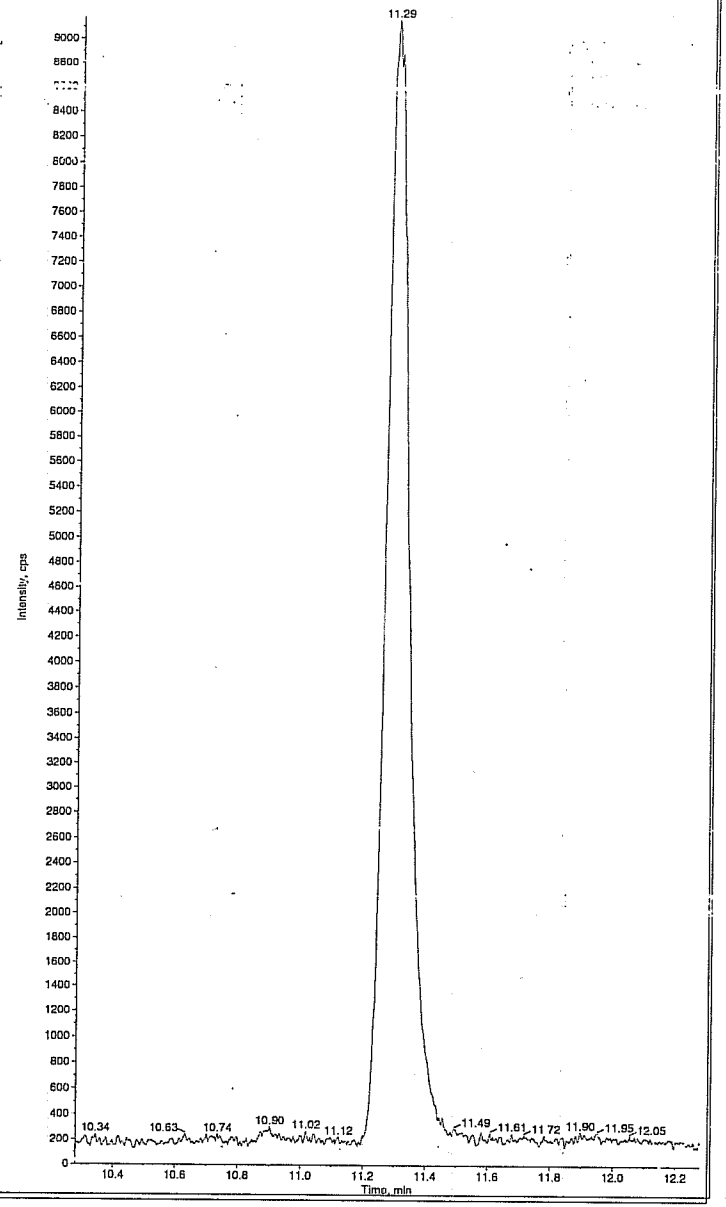
Modified: No



Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS11240030.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:05:08 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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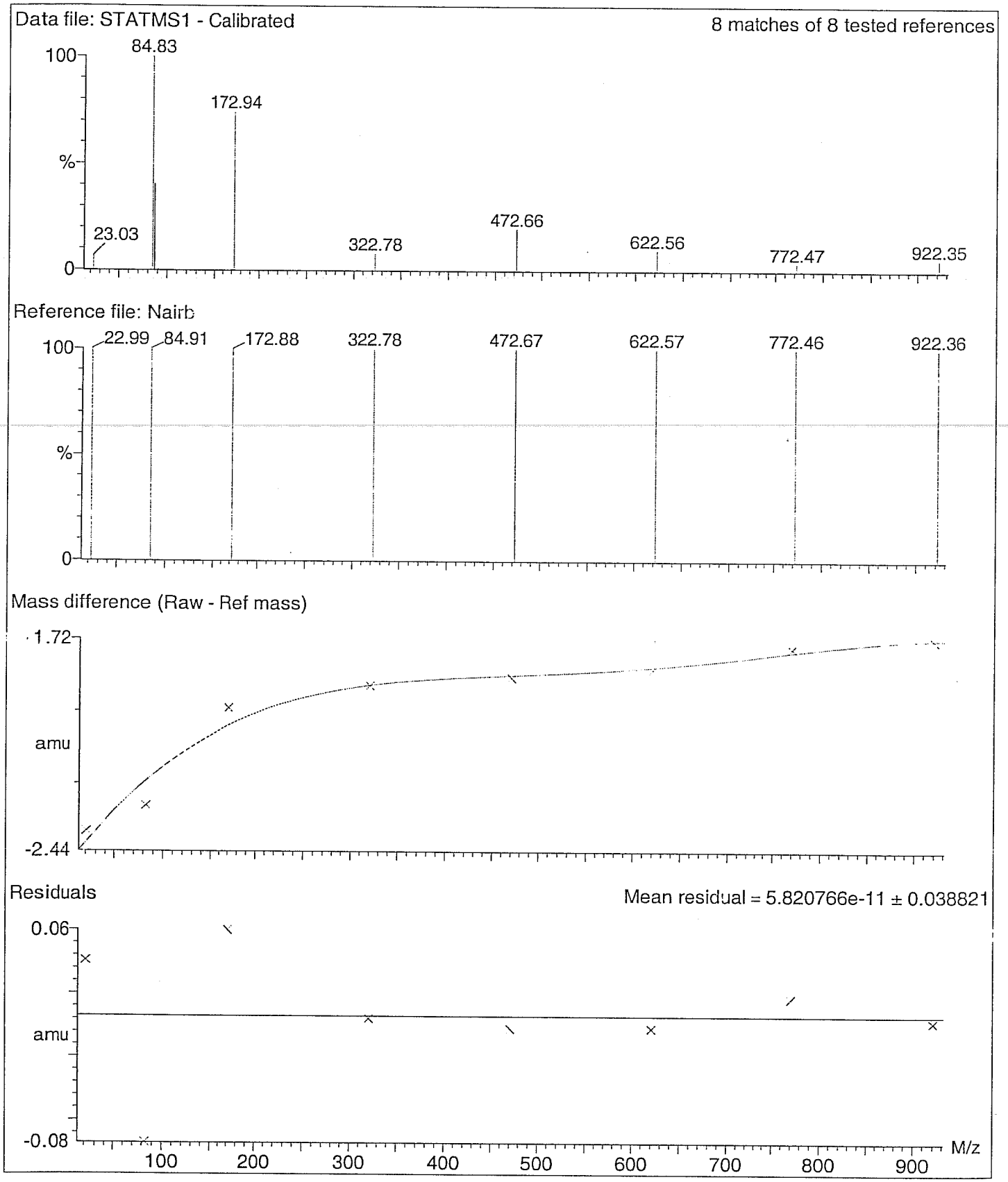
07_06_2010pos.cal

Calibration Report - MS1 Static

Printed: Tue Jul 06 10:34:32 2010



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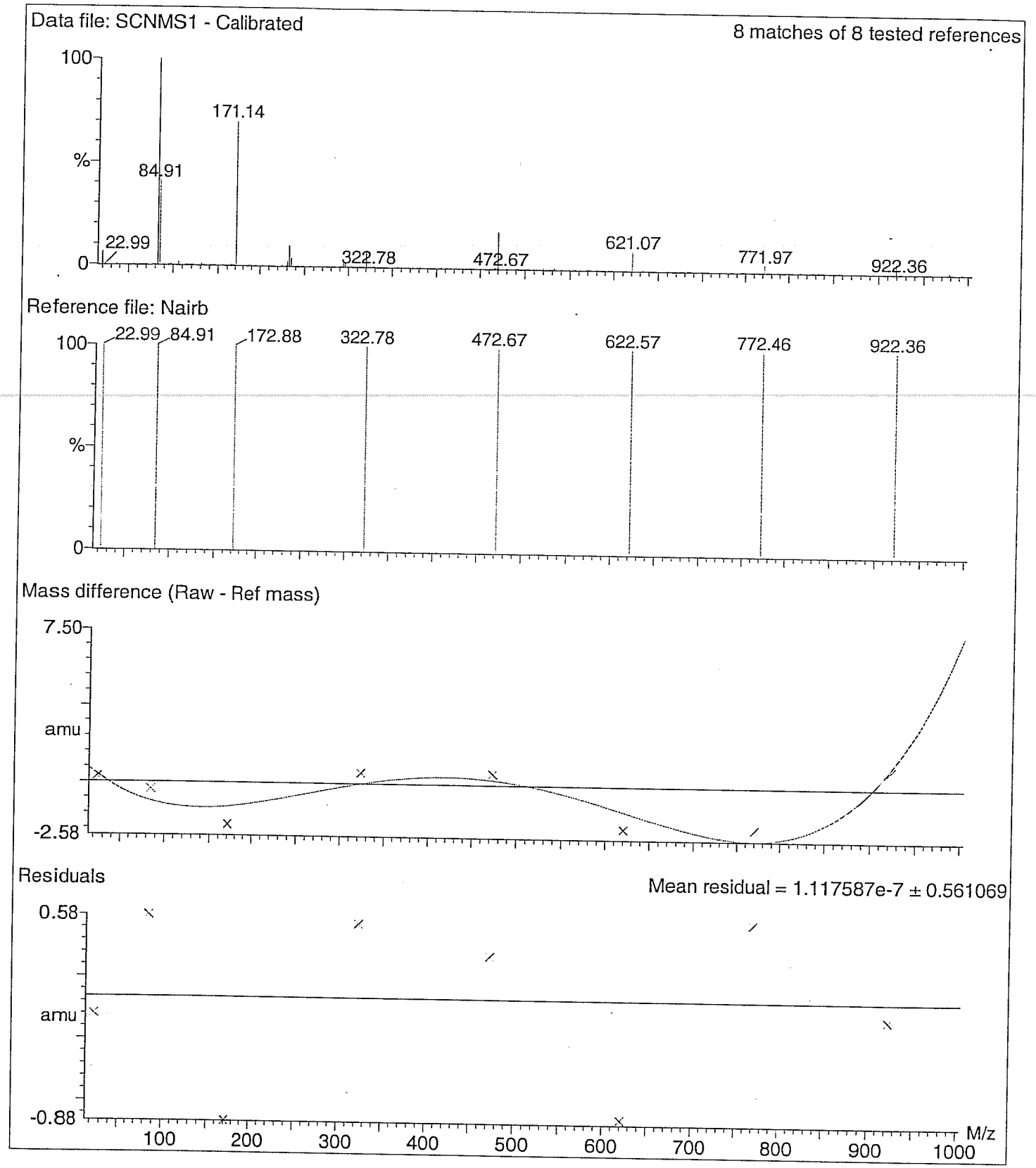
Calibration Report - MS1 Scanning

Calibration: 07_06_2010pos.cal

Printed: Tue Jul 06 10:50:40 2010



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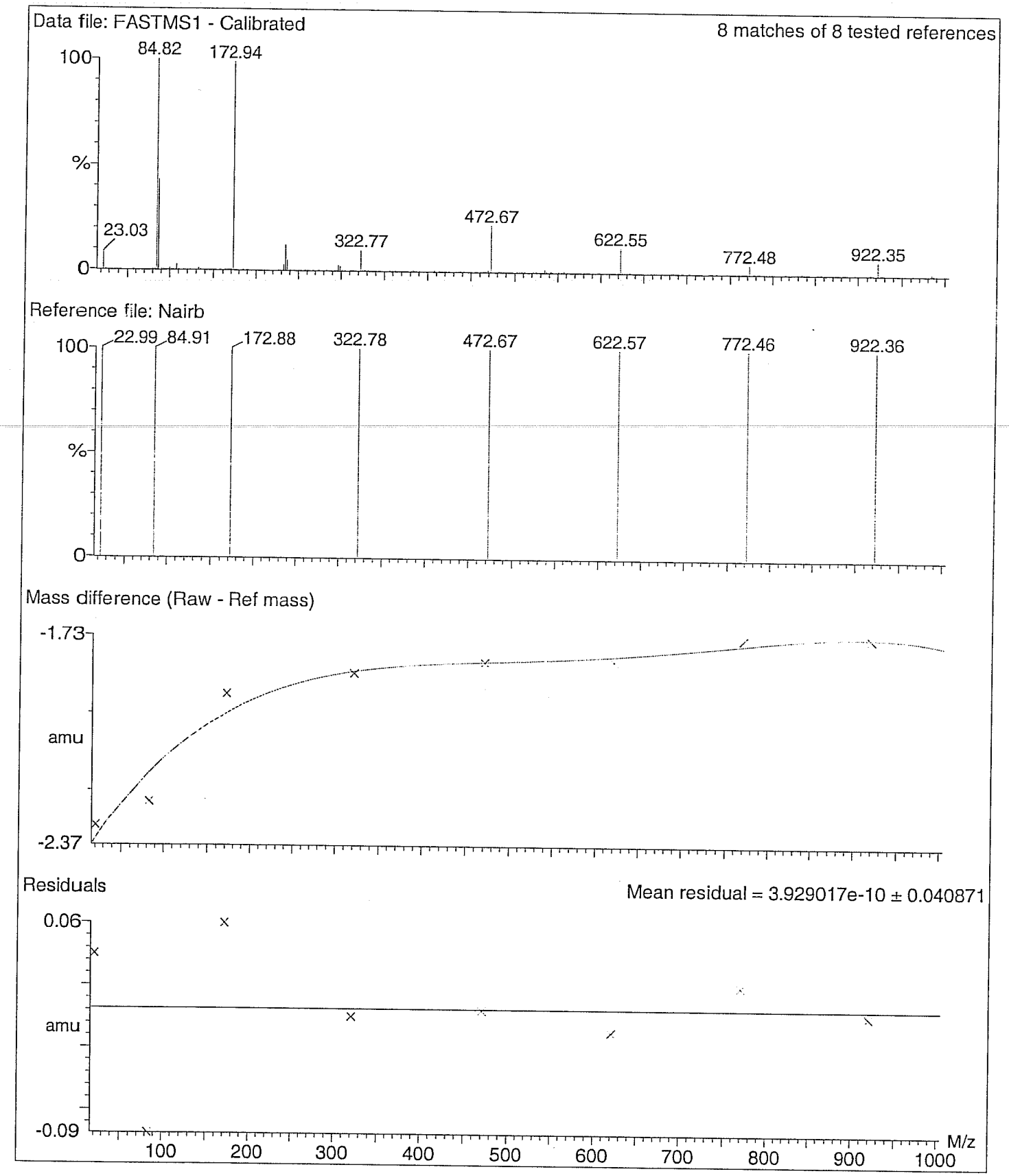
Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jul 06 10:36:32 2010



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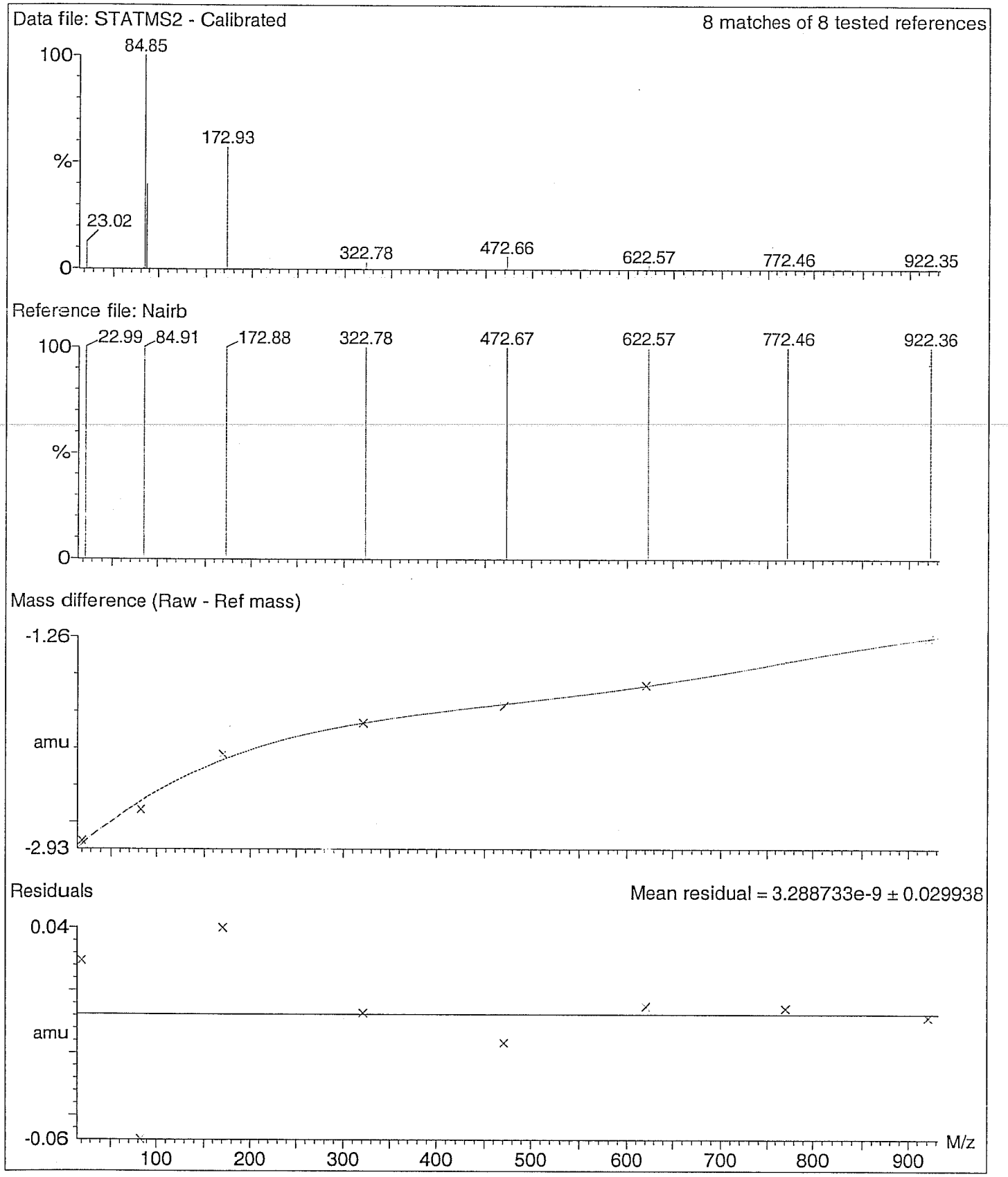
Calibration Report - MS2 Static

Printed: Tue Jul 06 10:44:24 2010



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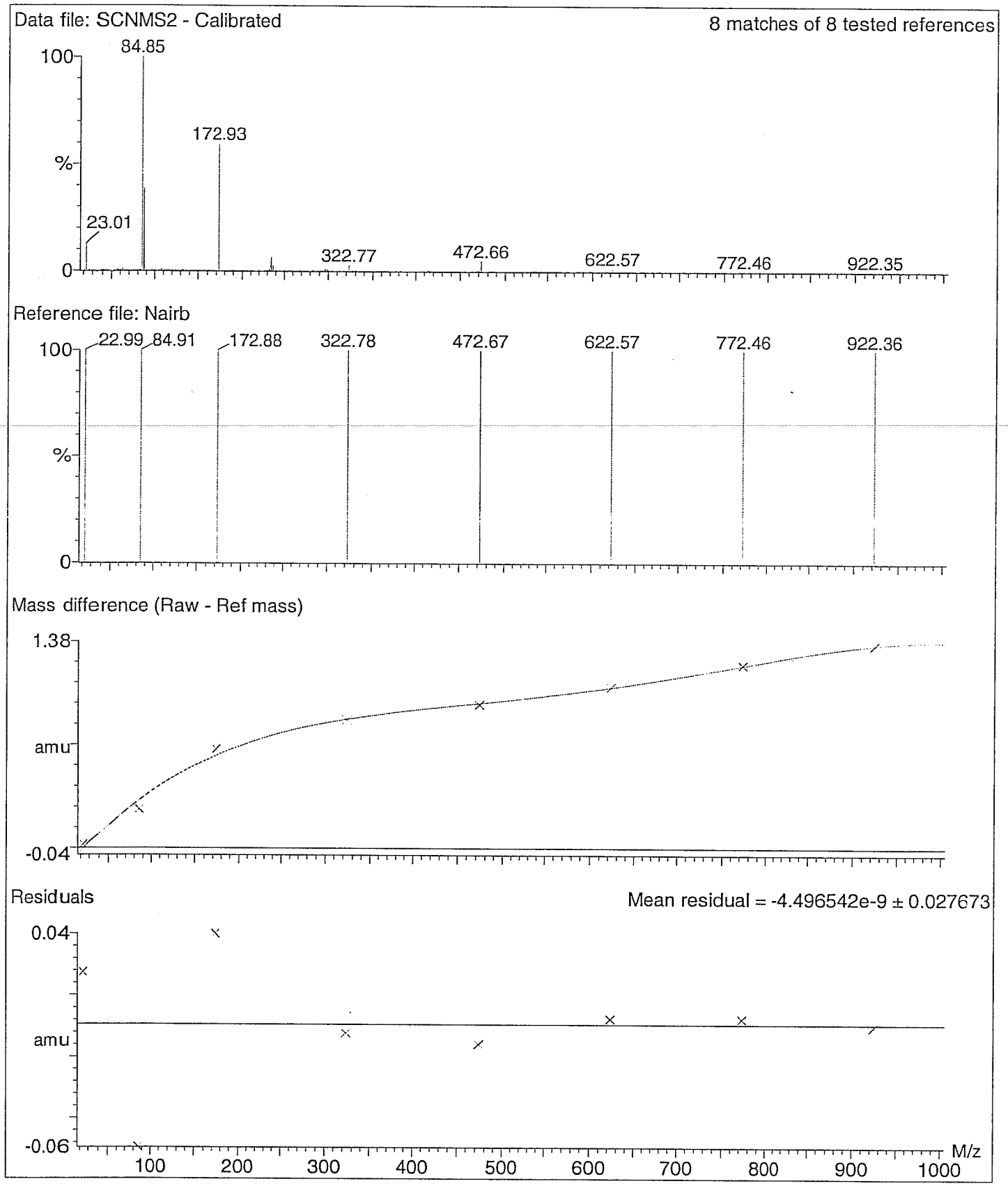
Calibration Report - MS2 Scanning

Printed: Tue Jul 06 10:45:29 2010



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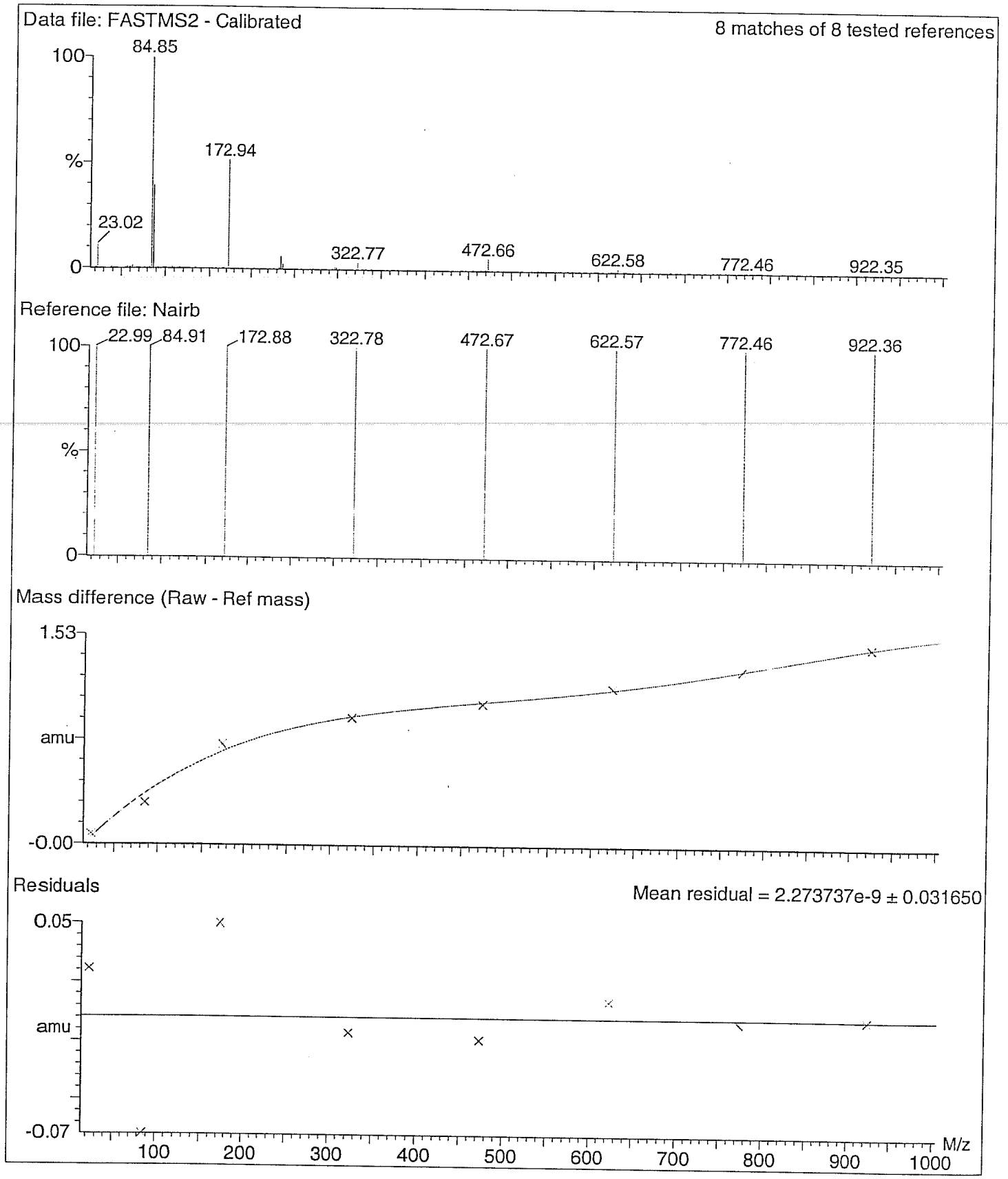
Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jul 06 10:46:24 2010



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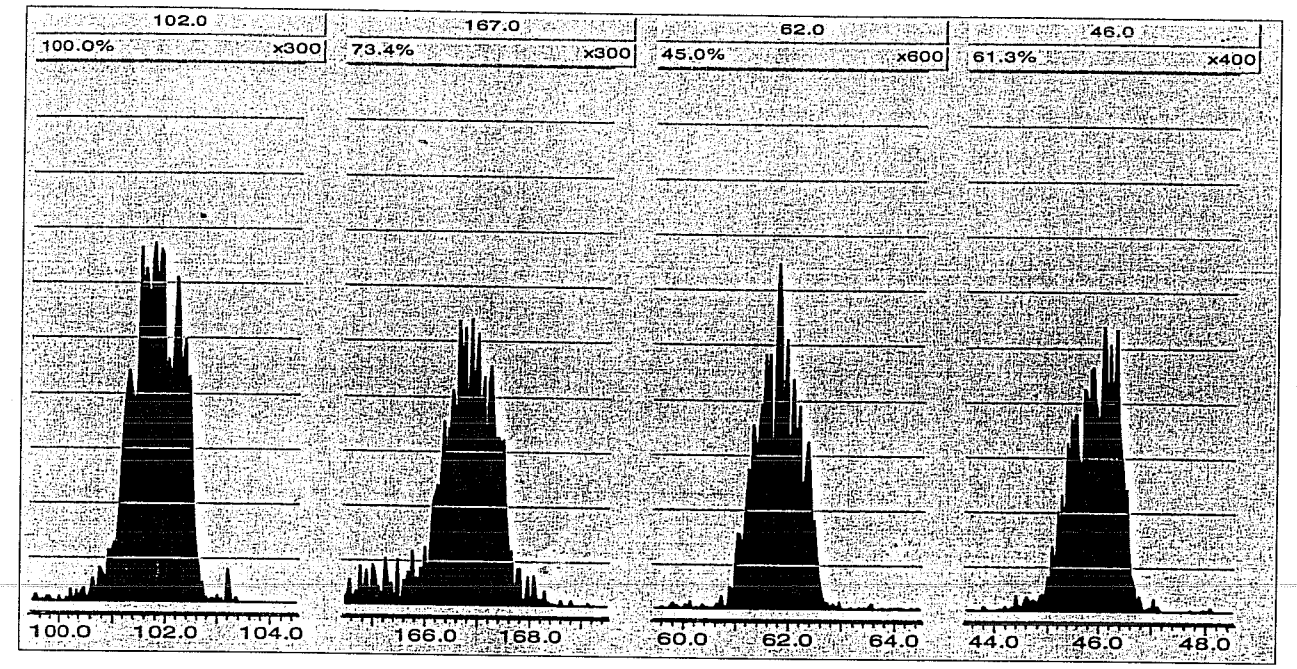
Quattro Micro Tune Parameters

Parameter File: C:\MASSLYNX\NEW_EXP.PRO\ACQUDB\explosives04.IPR

Printed : Fri Nov 19 14:42:06 2010



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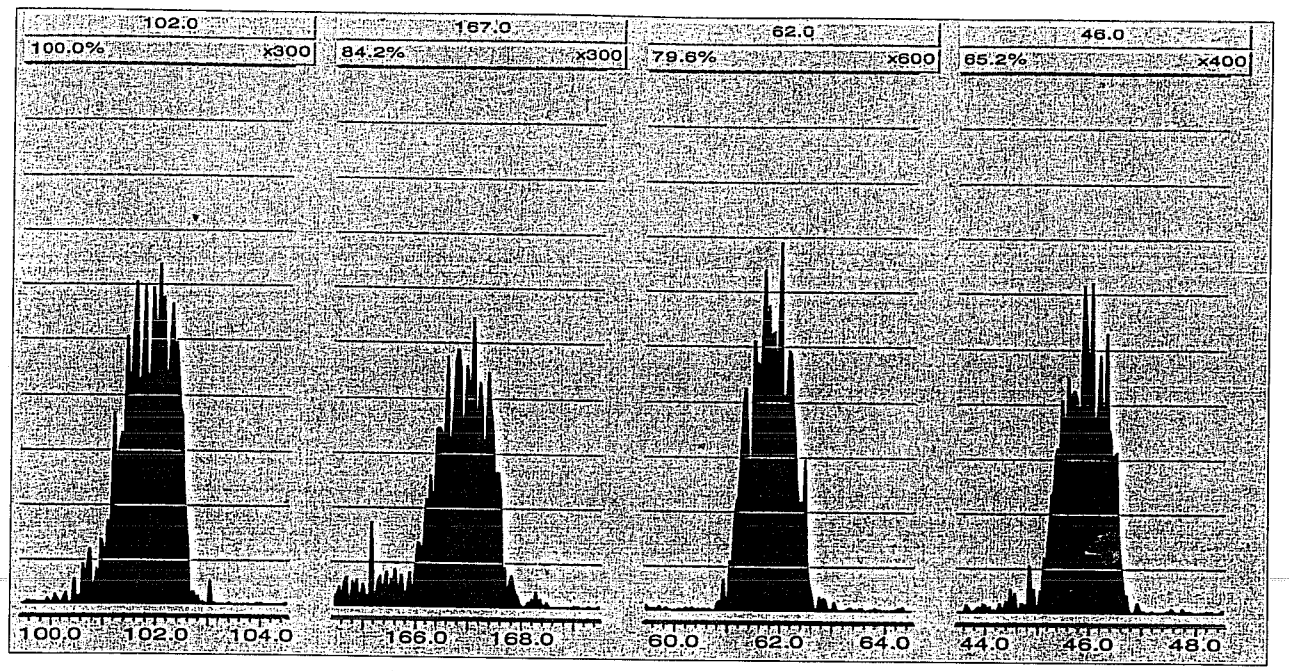
Quattro Micro Tune Parameters

Parameter File: C:\MASSLYNX\NEW_EXP.PRO\ACQUDB\explosives04.IPR

Printed : Tue Nov 23 08:08:35 2010



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High Explosives Internal Standard Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

HPLC Column: Phenomenex Ultracarb 5u ODS(20)

Instrument ID: LCMSMS

	Analysis Date/Time	GEL Data File	IS1 (DNB) (Area) #	RT (min) #	IS2 (DNT) (Area) #	RT2 (min) #
			6414.635	11.947	38102.25	17.181
Upper Limit			8339.0255	12.447	49532.925	17.681
Lower Limit			4490.2445	11.447	26671.575	16.681
MB for batch 1048167	20–nov–10 22:41	EXP1119066a	7489.22	11.947	43868.8	17.217
LCS for batch 1048167	20–nov–10 23:11	EXP1119067a	7291.54	11.946	42375.8	17.217
Buckman1–11–1944	20–nov–10 23:40	EXP1119068a	8004.8	11.947	46629	17.217
3uckman1–11–1944(266877002M	21–nov–10 00:10	EXP1119069a	8207.83	11.947	46392.4	17.181
3uckman1–11–1944(266877002M	21–nov–10 00:39	EXP1119070a	8036.11	11.947	45900.8	17.217

	Analysis Date/Time	GEL Data File	IS1 (DNB) (Area) #	RT (min) #	IS2 (DNT) (Area) #	RT2 (min) #
			7456.66	11.917	42598.717	17.151
Upper Limit			9693.658	12.417	55378.3321	17.651
Lower Limit			5219.662	11.417	29819.1019	16.651
Buckman06–11–1970	23–nov–10 21:53	EXP1123015a	8389.97	11.91	53346	17.145
Buckman08–11–2042	23–nov–10 22:23	EXP1123016a	7423.68	11.91	46523.9	17.145

IS1 (DNB) = 1,3–Dinitrobenzene–d4
IS2 (DNT) = 2,6–Dinitrotoluene–d3

Area Upper Limit = + 30% of average IS area from multipoint calibration
Area Lower Limit = – 30% of average IS area from multipoint calibration

RT Upper Limit = +0.5 of average multipoint RT
RT Lower Limit = –0.5 of average multipoint RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits

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SAMPLE
DATA

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1–11–1944

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877002

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXP1119068a

Date Analyzed: 20–NOV–10 23:40

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
118–96–7	2,4,6–Trinitrotoluene	0.325	U	0.104	0.325
118–96–7	*2,4,6–Trinitrotoluene*				
121–14–2	2,4–Dinitrotoluene	0.325	U	0.104	0.325
121–14–2	*2,4–Dinitrotoluene*				
121–82–4	RDX	0.325	U	0.104	0.325
121–82–4	*RDX*				
19406–51–0	4–Amino–2,6–dinitrotoluene	0.325	U	0.104	0.325
19406–51–0	*4–Amino–2,6–dinitrotoluene*				
2691–41–0	HMX	0.325	U	0.104	0.325
2691–41–0	*HMX*				
35572–78–2	2–Amino–4,6–dinitrotoluene	0.325	U	0.104	0.325
35572–78–2	*2–Amino–4,6–dinitrotoluene*				
606–20–2	2,6–Dinitrotoluene	0.325	U	0.0779	0.325
606–20–2	*2,6–Dinitrotoluene*				
88–72–2	o–Nitrotoluene	0.325	U	0.104	0.325
88–72–2	*o–Nitrotoluene*				
98–95–3	Nitrobenzene	0.325	U	0.104	0.325
98–95–3	*Nitrobenzene*				
99–08–1	m–Nitrotoluene	0.325	U	0.104	0.325
99–08–1	*m–Nitrotoluene*				
99–35–4	1,3,5–Trinitrobenzene	0.325	U	0.104	0.325
99–35–4	*1,3,5–Trinitrobenzene*				
99–65–0	m–Dinitrobenzene	0.325	U	0.104	0.325
99–65–0	*m–Dinitrobenzene*				
479–45–8	Tetryl	0.649	U	0.130	0.649
479–45–8	*Tetryl*				

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1-11-1944

Lab Code: GEL

GEL Job No (SDG) 11-463

Matrix: WATER

GEL Sample ID: 266877002

Sample Amount 770 mL

Date Received: 12-NOV-10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15-NOV-10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

Cas No.	Compound	Concentration*	Q	MDL	PQL
99-99-0	p-Nitrotoluene	0.649	U	0.104	0.649
99-99-0	*p-Nitrotoluene*				
78-11-5	PETN	1.30	U	0.130	1.30
78-11-5	*PETN*				

Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

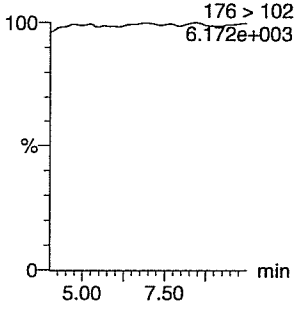
Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119068a
Date: 20-Nov-2010
Time: 23:40:42
ID: 266877002
Vial: 1:6,C

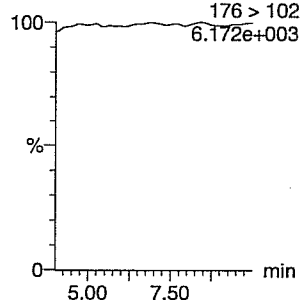
| ARSL | 1048168 | LSD | 2 |

MATT 11/22/10

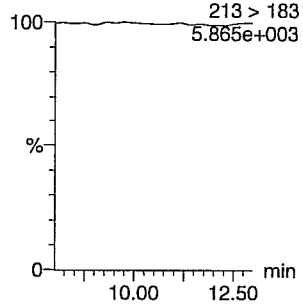
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.172e+003



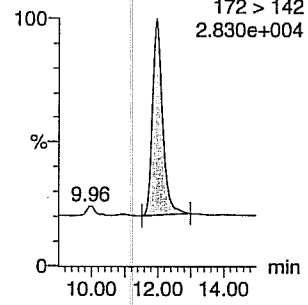
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.172e+003



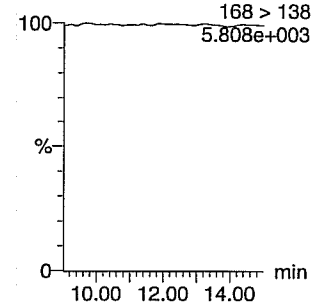
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.865e+003



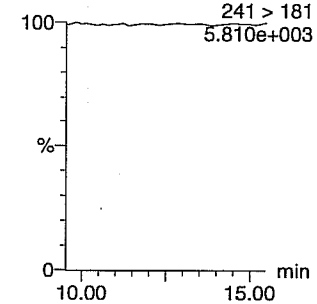
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.830e+004



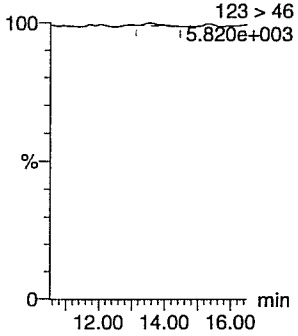
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.808e+003



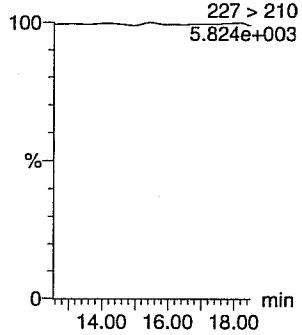
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.810e+003



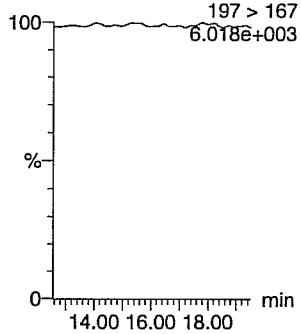
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.820e+003



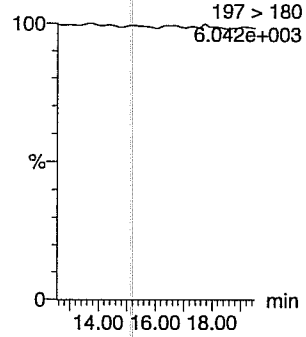
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.824e+003



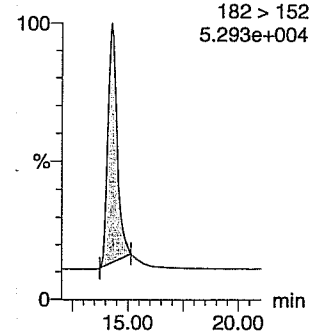
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.018e+003



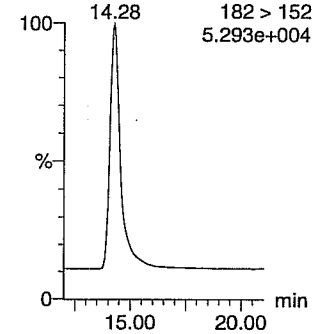
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.042e+003



34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.293e+004



26-dinitrotoluene
F9:MRM of 2 channels,AP-
14.28
182 > 152
5.293e+004



HMM 11/22/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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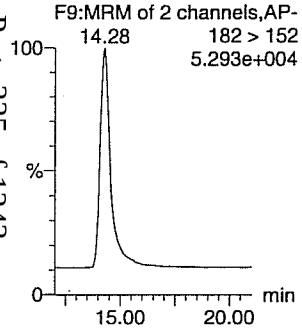
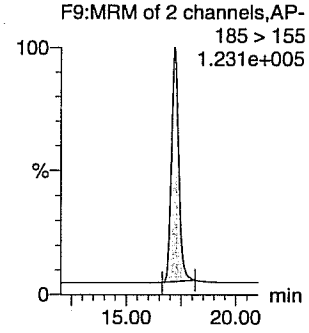
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

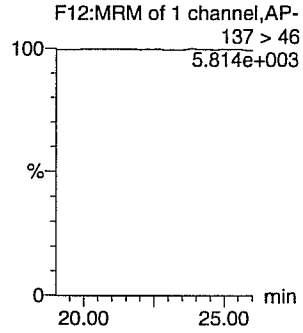
24-dinitrotoluene



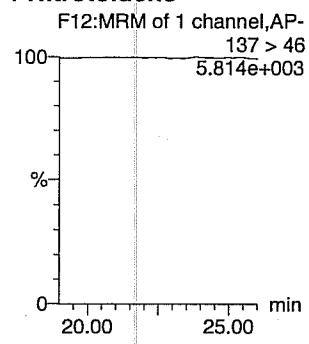
26-dinitrotoluene-d3



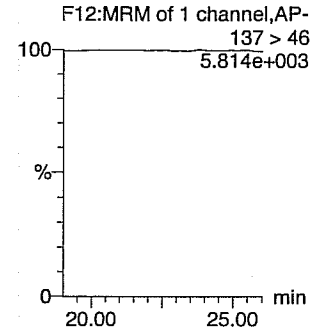
2-Nitrotoluene



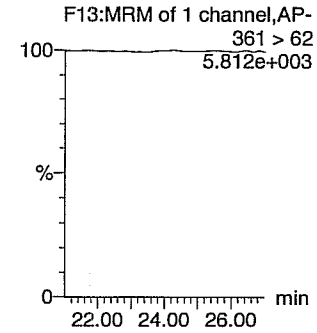
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
266877002	HMX	176 > 102			8004.795									
266877002	RDX	176 > 102			8004.795									
266877002	135-Trinitrobenzene	213 > 183			8004.795									
266877002	13-Dinitrobenzene-d4	172 > 142	11.95	8004.795		8004.795	8004.795	bb			623.9478	124.8	24.8	214.6
266877002	13-Dinitrobenzene	168 > 138			8004.795									
266877002	Tetryl	241 > 181			8004.795									
266877002	Nitrobenzene	123 > 46			8004.795			MM-	21-Nov-10	10:46:08				
266877002	246-Trinitrotoluene	227 > 210			46628.965									
266877002	4-Amino-26-dinitrotoluene	197 > 167			46628.965									
266877002	2-Amino-46-dinitrotoluene	197 > 180			46628.965									
266877002	34-dinitrotoluene	182 > 152	14.28	22657.381	46628.965	22657.381	242.954	bb			255.1269	102.1	2.1	1655.2
266877002	26-dinitrotoluene	182 > 152			46628.965									
266877002	24-dinitrotoluene	182 > 152			46628.965									
266877002	26-dinitrotoluene-d3	185 > 155	17.22	46628.965		46628.965	46628.965	bb			611.8925	122.4	22.4	3157.0
266877002	2-Nitrotoluene	137 > 46			46628.965									
266877002	4-Nitrotoluene	137 > 46			46628.965									
266877002	3-Nitrotoluene	137 > 46			46628.965									
266877002	PETN	361 > 62			46628.965									

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1-11-1944

Lab Code: GEL

GEL Job No (SDG) 11-463

Matrix: WATER

GEL Sample ID: 266877002

Sample Amount 770 mL

Date Received: 12-NOV-10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15-NOV-10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXS11240024.wiff

Date Analyzed: 24-NOV-10 16:30

Dilution Factor: 2

Concentration Units: ug/L

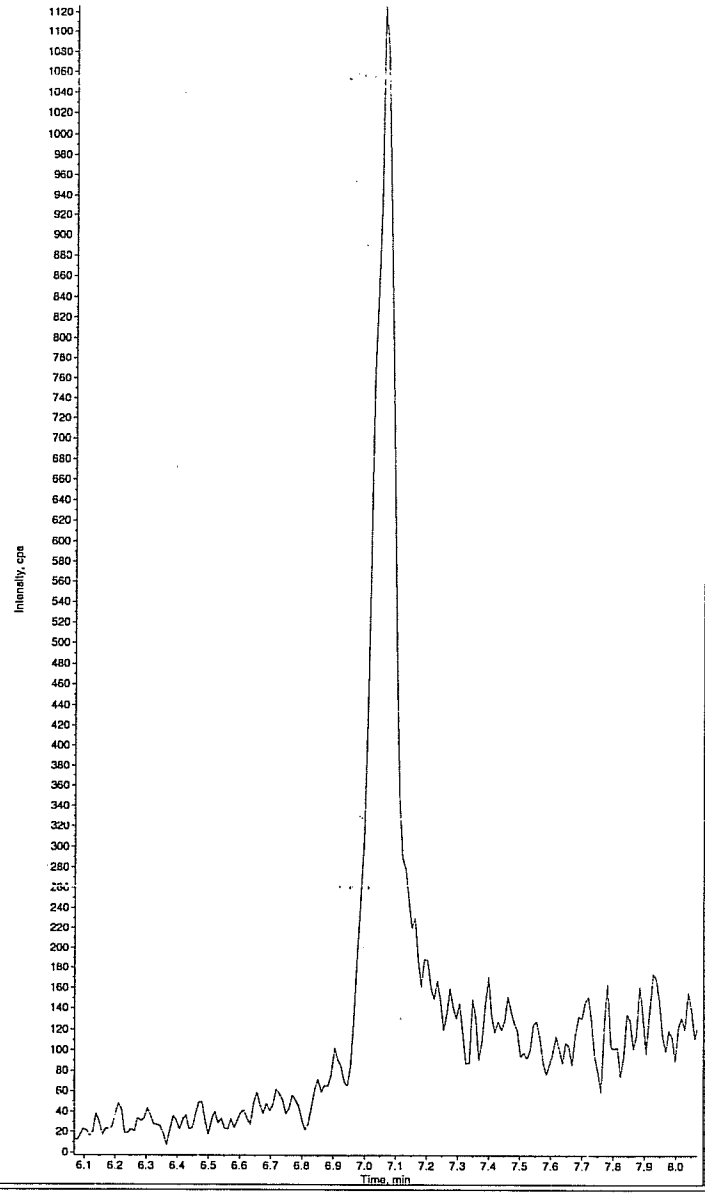
Cas No.	Compound	Concentration*	Q	MDL	PQL
3058-38-6	TATB	1.30	U	0.390	1.30
3058-38-6	*TATB*				
59229-75-3	2,6-Diamino-4-nitrotoluene	1.30	U	0.390	1.30
59229-75-3	*2,6-Diamino-4-nitrotoluene*				
618-87-1	3,5-Dinitroaniline	1.30	U	0.390	1.30
618-87-1	*3,5-Dinitroaniline*				
6629-29-4	2,4-Diamino-6-nitrotoluene	1.30	U	0.390	1.30
6629-29-4	*2,4-Diamino-6-nitrotoluene*				
78-30-8	tris(o-cresyl) phosphate	1.30	U	0.390	1.30
78-30-8	*tris(o-cresyl) phosphate*				

RCr 11/26/10

Sample Name: "266877002" Sample ID: "1048168|2|LER" File: "EXS11240024.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:30:55 PM

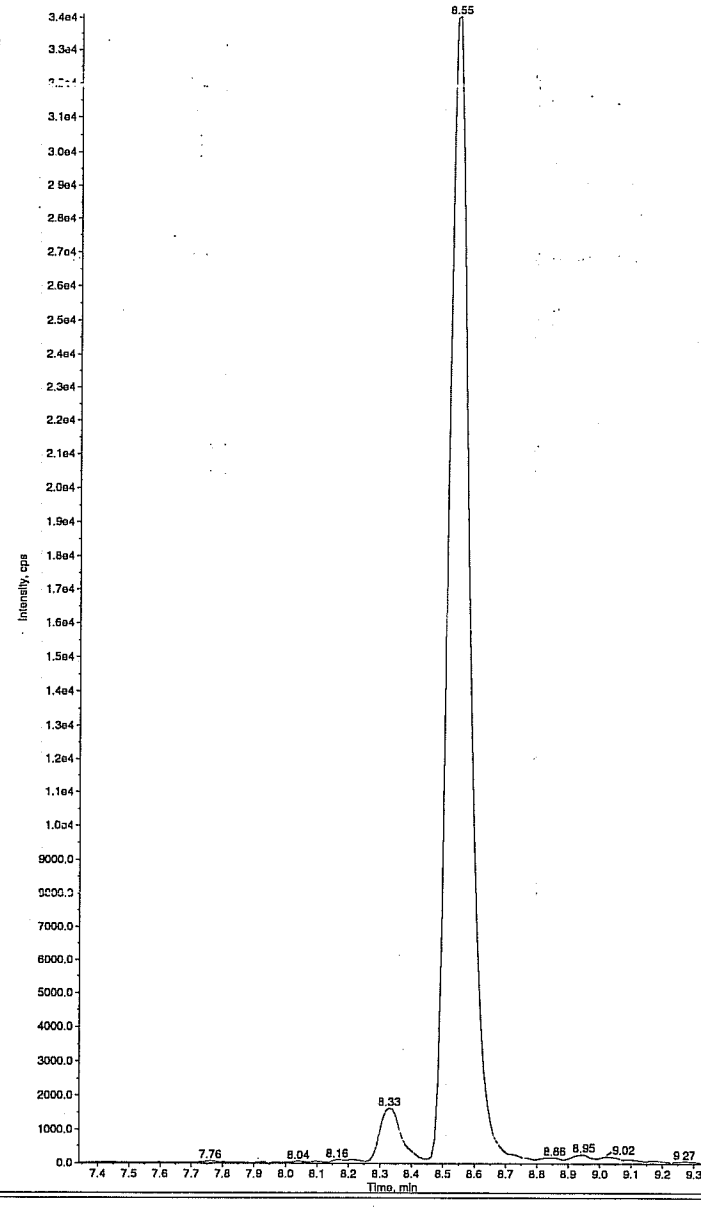
Modified: No



Sample Name: "266877002" Sample ID: "1048168|2|LER" File: "EXS11240024.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:30:55 PM

Modified: No



HM 11/29/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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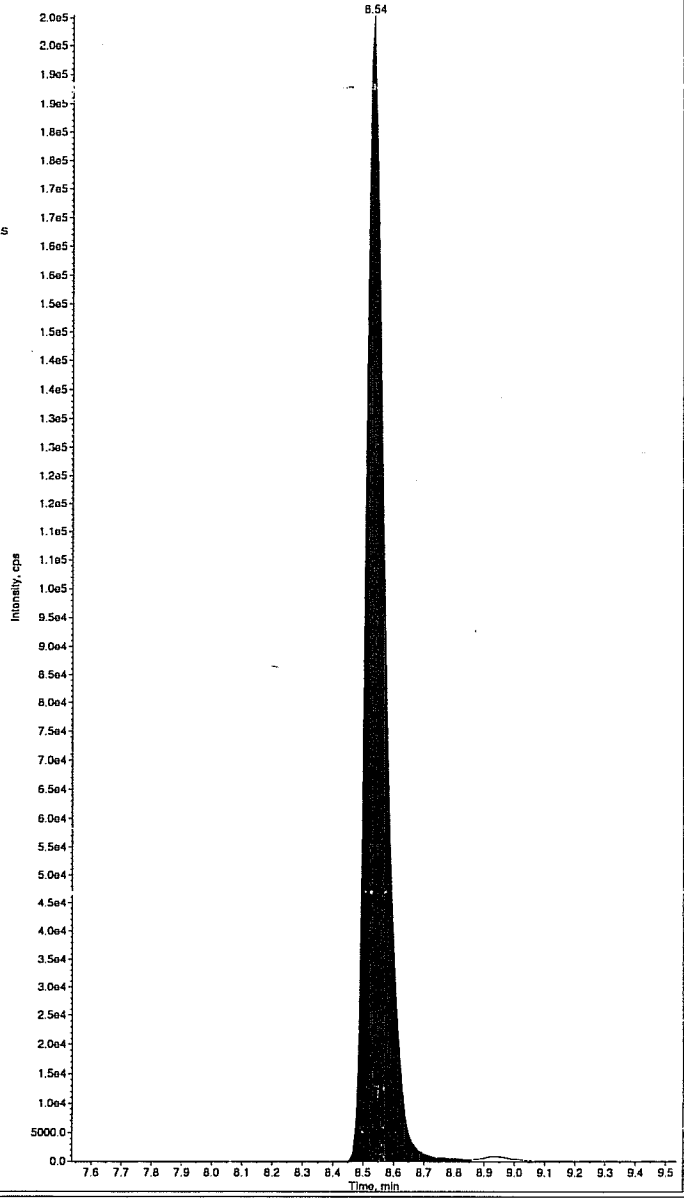
Sample Name: "266877002" Sample ID: "1048168|2|LER" File: "EXS11240024.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 208. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:30:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

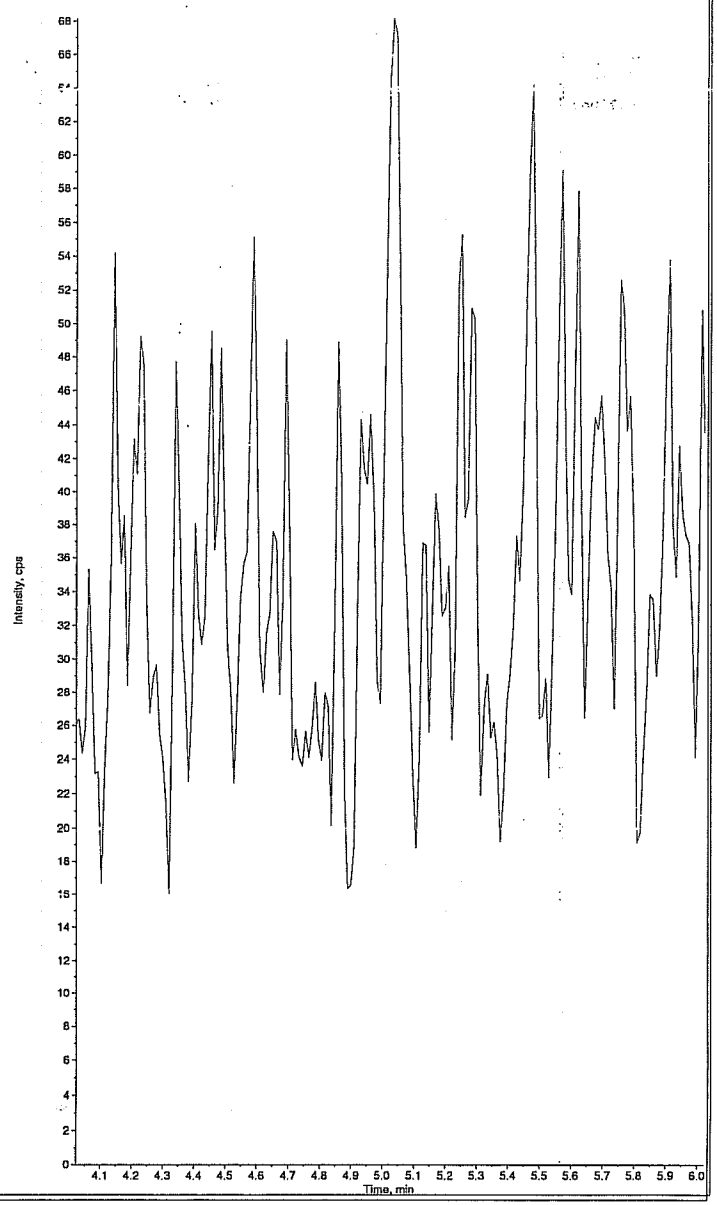
Int. Type: Valley
Retention Time: 8.54 min
Area: 9.03e+005 counts
Height: 200444.628 cps
Start Time: 8.43 min
End Time: 8.86 min



Sample Name: "266877002" Sample ID: "1048168|2|LER" File: "EXS11240024.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:30:55 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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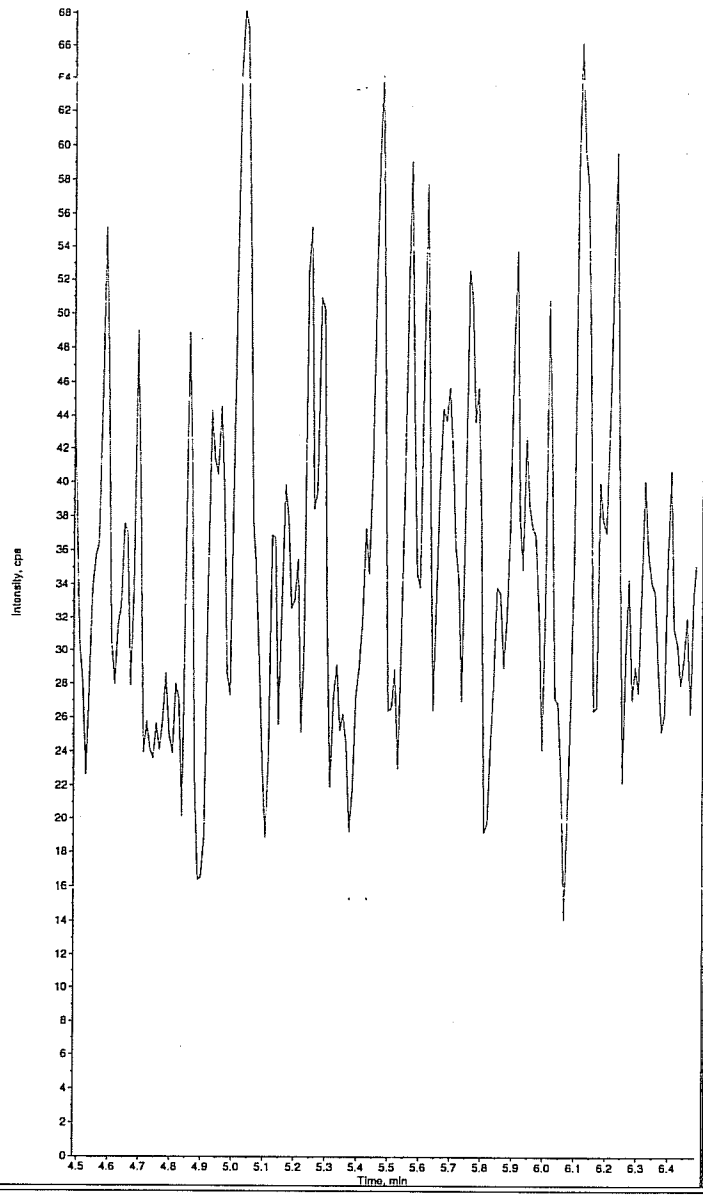
Sample Name: "266877002" Sample ID: "1048168|2|LER" File: "EXS11240024.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:30:55 PM

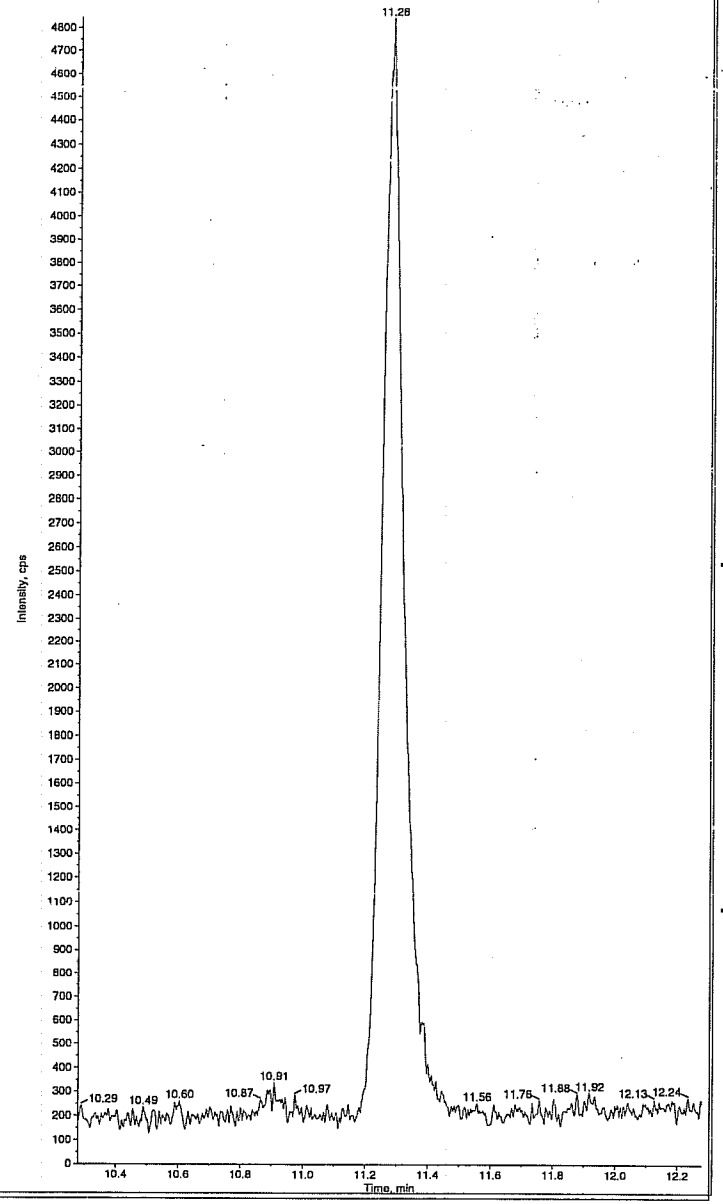
Modified: No



Sample Name: "266877002" Sample ID: "1048168|2|LER" File: "EXS11240024.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:30:55 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman06–11–1970

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877004

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXP1123015a

Date Analyzed: 23–NOV–10 21:53

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
118–96–7	2,4,6–Trinitrotoluene	0.325	U	0.104	0.325
118–96–7	*2,4,6–Trinitrotoluene*				
121–14–2	2,4–Dinitrotoluene	0.325	U	0.104	0.325
121–14–2	*2,4–Dinitrotoluene*				
121–82–4	RDX	0.325	U	0.104	0.325
121–82–4	*RDX*				
19406–51–0	4–Amino–2,6–dinitrotoluene	0.325	U	0.104	0.325
19406–51–0	*4–Amino–2,6–dinitrotoluene*				
2691–41–0	HMX	0.325	U	0.104	0.325
2691–41–0	*HMX*				
35572–78–2	2–Amino–4,6–dinitrotoluene	0.325	U	0.104	0.325
35572–78–2	*2–Amino–4,6–dinitrotoluene*				
606–20–2	2,6–Dinitrotoluene	0.325	U	0.0779	0.325
606–20–2	*2,6–Dinitrotoluene*				
88–72–2	o–Nitrotoluene	0.325	U	0.104	0.325
88–72–2	*o–Nitrotoluene*				
98–95–3	Nitrobenzene	0.325	U	0.104	0.325
98–95–3	*Nitrobenzene*				
99–08–1	m–Nitrotoluene	0.325	U	0.104	0.325
99–08–1	*m–Nitrotoluene*				
99–35–4	1,3,5–Trinitrobenzene	0.325	U	0.104	0.325
99–35–4	*1,3,5–Trinitrobenzene*				
99–65–0	m–Dinitrobenzene	0.325	U	0.104	0.325
99–65–0	*m–Dinitrobenzene*				
479–45–8	Tetryl	0.649	U	0.130	0.649
479–45–8	*Tetryl*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman06–11–1970

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877004

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

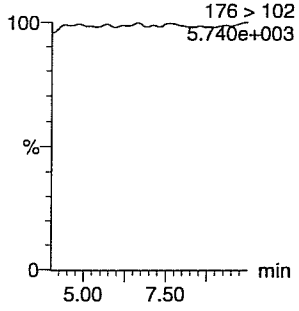
Cas No.	Compound	Concentration*	Q	MDL	PQL
99–99–0	p–Nitrotoluene	0.649	U	0.104	0.649
99–99–0	*p–Nitrotoluene*				
78–11–5	PETN	1.30	U	0.130	1.30
78–11–5	*PETN*				

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

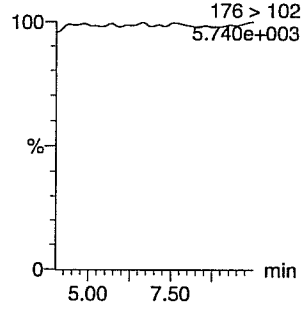
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123015a
Date: 23-Nov-2010
Time: 21:53:33
ID: 266877004 /ARSL/ 1048168 / Liquid/2
Vial: 1:4,C

Lar 11/29/10

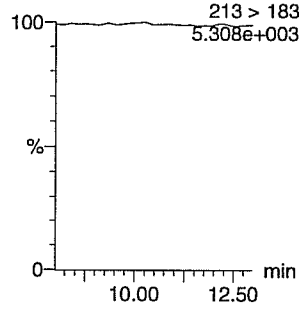
HMX
F2:MRM of 1 channel,AP-
176 > 102
5.740e+003



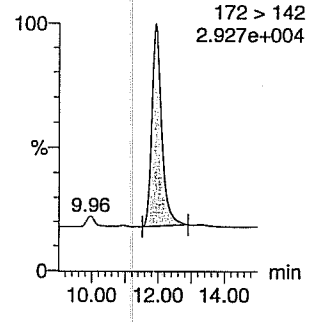
RDX
F2:MRM of 1 channel,AP-
176 > 102
5.740e+003



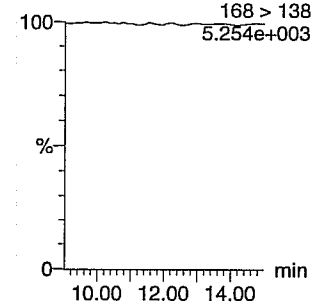
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.308e+003



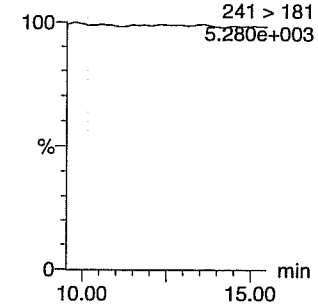
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.927e+004



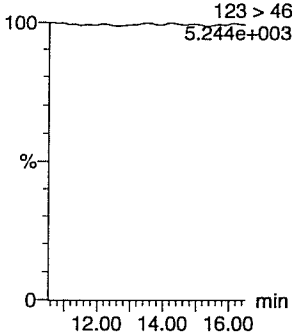
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.254e+003



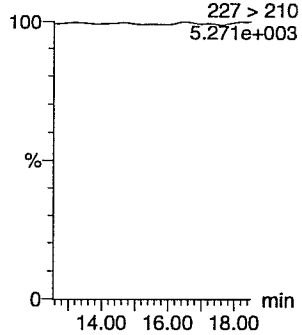
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.280e+003



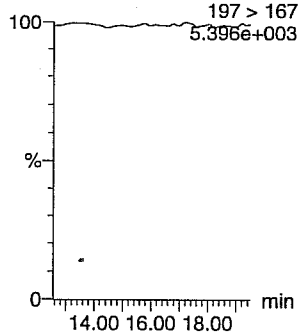
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.244e+003



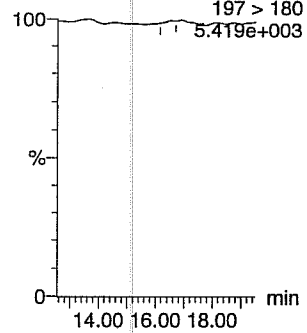
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.271e+003



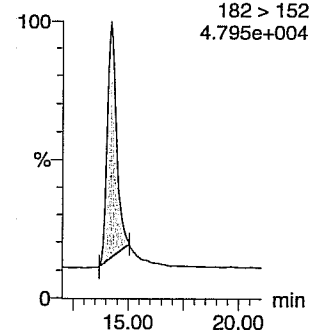
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
5.396e+003



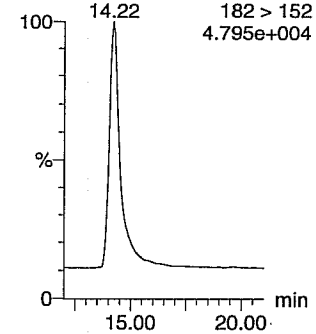
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.419e+003



34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
4.795e+004



26-dinitrotoluene
F9:MRM of 2 channels,AP-
14.22
182 > 152
4.795e+004



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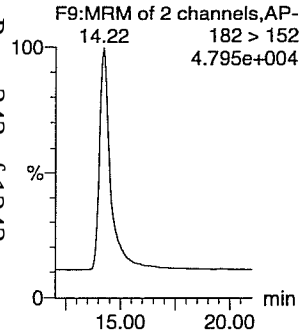
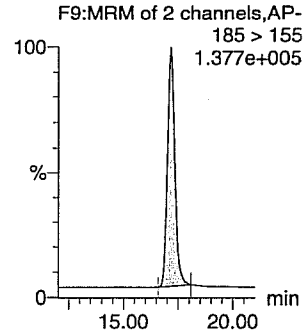
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

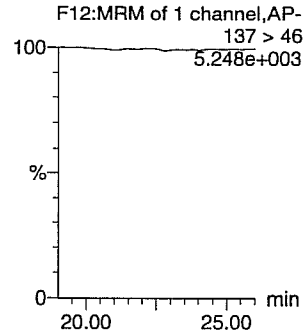
24-dinitrotoluene



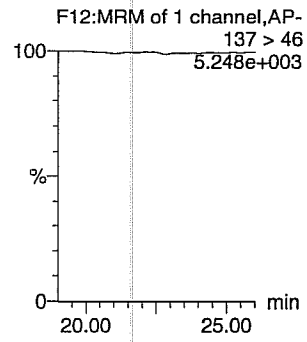
26-dinitrotoluene-d3



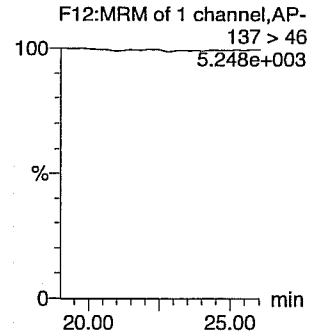
2-Nitrotoluene



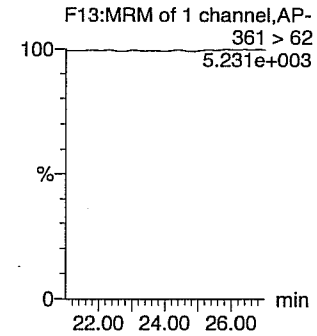
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
266877004	HMX	176 > 102			8389.971									
266877004	RDX	176 > 102			8389.971									
266877004	135-Trinitrobenzene	213 > 183			8389.971									
266877004	13-Dinitrobenzene-d4	172 > 142	11.91	8389.971		8389.971	8389.971	bb			562.5825	112.5	12.5	707.3
266877004	13-Dinitrobenzene	168 > 138			8389.971									
266877004	Tetryl	241 > 181			8389.971									
266877004	Nitrobenzene	123 > 46			8389.971									
266877004	246-Trinitrotoluene	227 > 210			53346.008									
266877004	4-Amino-26-dinitrotoluene	197 > 167			53346.008									
266877004	2-Amino-46-dinitrotoluene	197 > 180			53346.008			MM-	26-Nov-10	13:32:59				
266877004	34-dinitrotoluene	182 > 152	14.22	20148.715	53346.008	20148.715	188.849	bb			188.2446	75.3	-24.7	894.5
266877004	26-dinitrotoluene	182 > 152			53346.008									
266877004	24-dinitrotoluene	182 > 152			53346.008									
266877004	26-dinitrotoluene-d3	185 > 155	17.14	53346.008		53346.008	53346.008	bb			626.1461	125.2	25.2	3551.9
266877004	2-Nitrotoluene	137 > 46			53346.008									
266877004	4-Nitrotoluene	137 > 46			53346.008									
266877004	3-Nitrotoluene	137 > 46			53346.008									
266877004	PETN	361 > 62			53346.008									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman06–11–1970

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 266877004

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXS11240027.wiff

Date Analyzed: 24–NOV–10 17:18

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
3058–38–6	TATB	1.30	U	0.390	1.30
3058–38–6	*TATB*				
59229–75–3	2,6–Diamino–4–nitrotoluene	1.30	U	0.390	1.30
59229–75–3	*2,6–Diamino–4–nitrotoluene*				
618–87–1	3,5–Dinitroaniline	1.30	U	0.390	1.30
618–87–1	*3,5–Dinitroaniline*				
6629–29–4	2,4–Diamino–6–nitrotoluene	1.30	U	0.390	1.30
6629–29–4	*2,4–Diamino–6–nitrotoluene*				
78–30–8	tris(o–cresyl) phosphate	1.30	U	0.390	1.30
78–30–8	*tris(o–cresyl) phosphate*				

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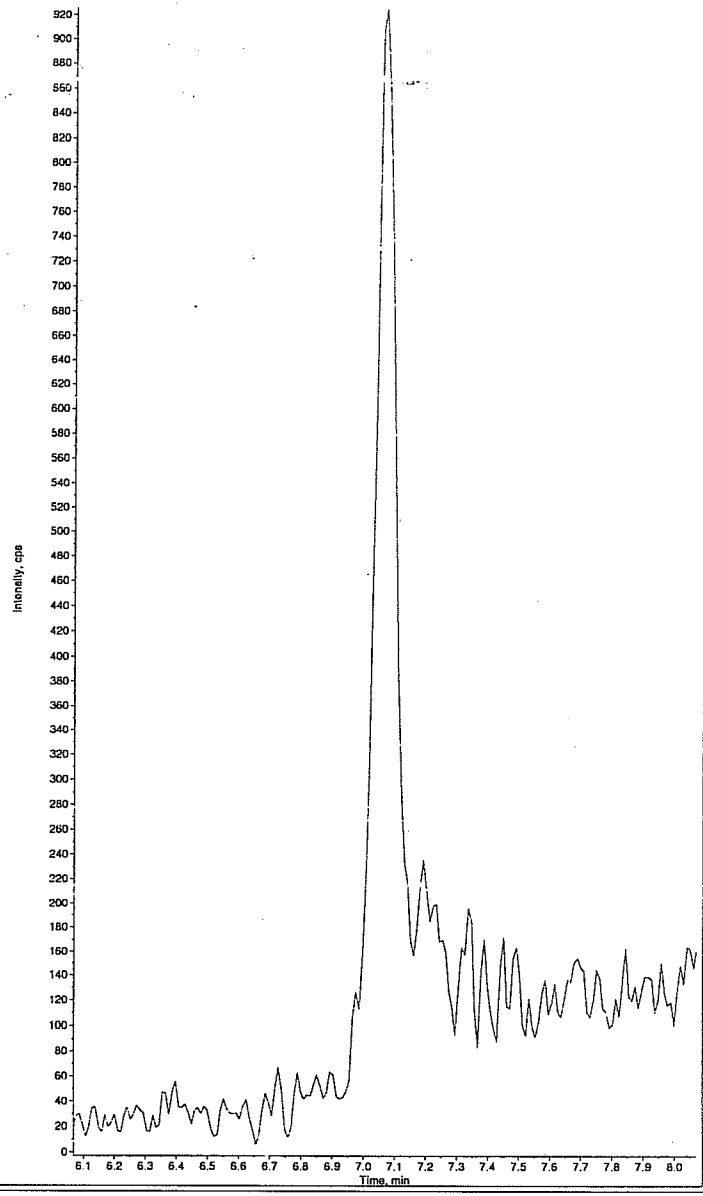
RCa 11/26/10

Sample Name: "266877004" Sample ID: "1048168|2|LER" File: "EXS11240027.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:18:02 PM

Modified: No

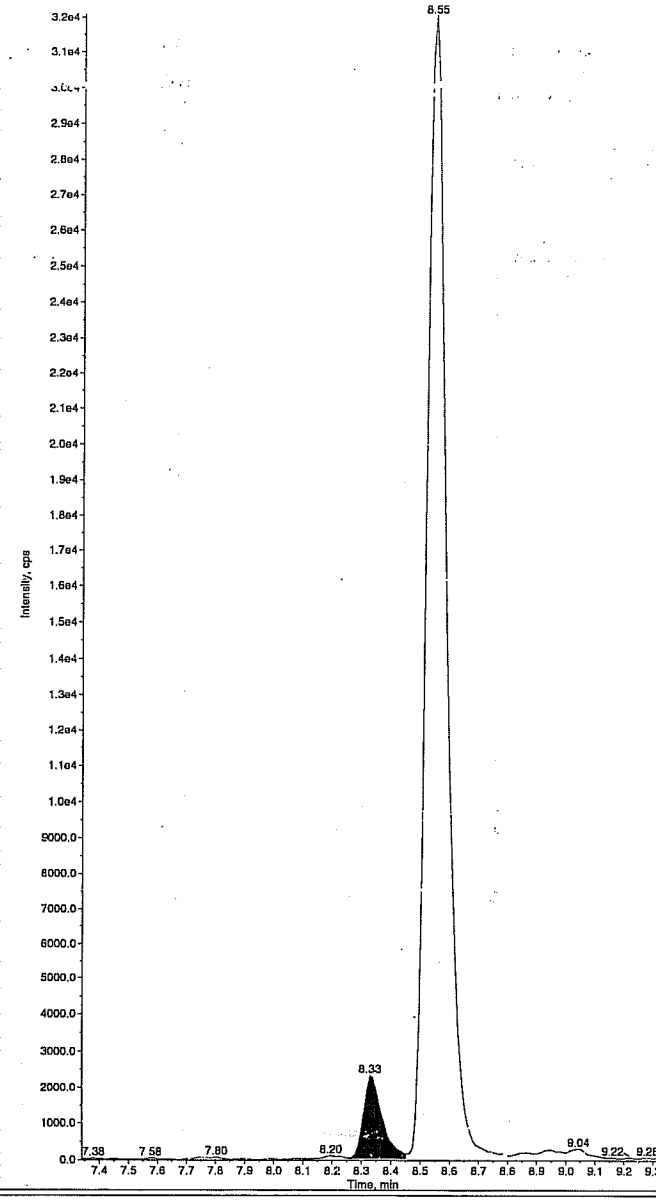


Sample Name: "266877004" Sample ID: "1048168|2|LER" File: "EXS11240027.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: No Intercept
Acq. Date: 11/24/2010
Acq. Time: 5:18:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.33 min
Area: 1.02e+004 counts
Height: 2295.598 cps
Start Time: 8.26 min
End Time: 8.45 min



Hmm 11/29/10

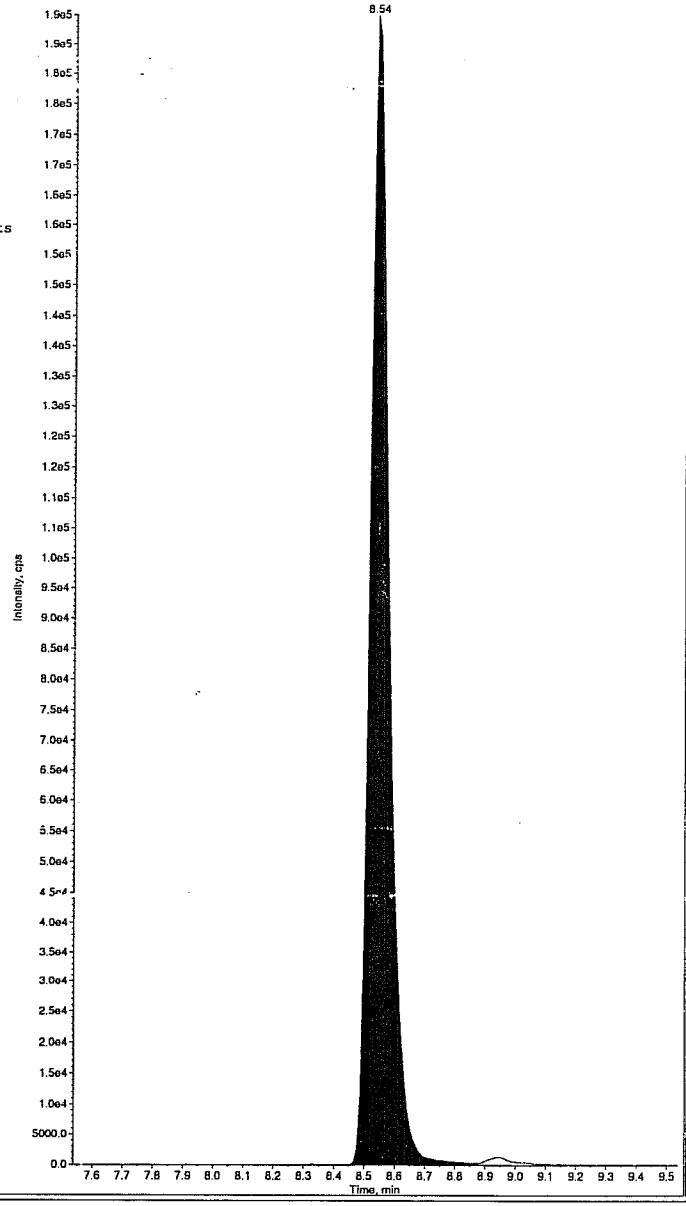
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "266877004" Sample ID: "1048168|2|LER" File: "EXS11240027.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 198. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:18:02 PM

Modified: No
Desc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Bkgr. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

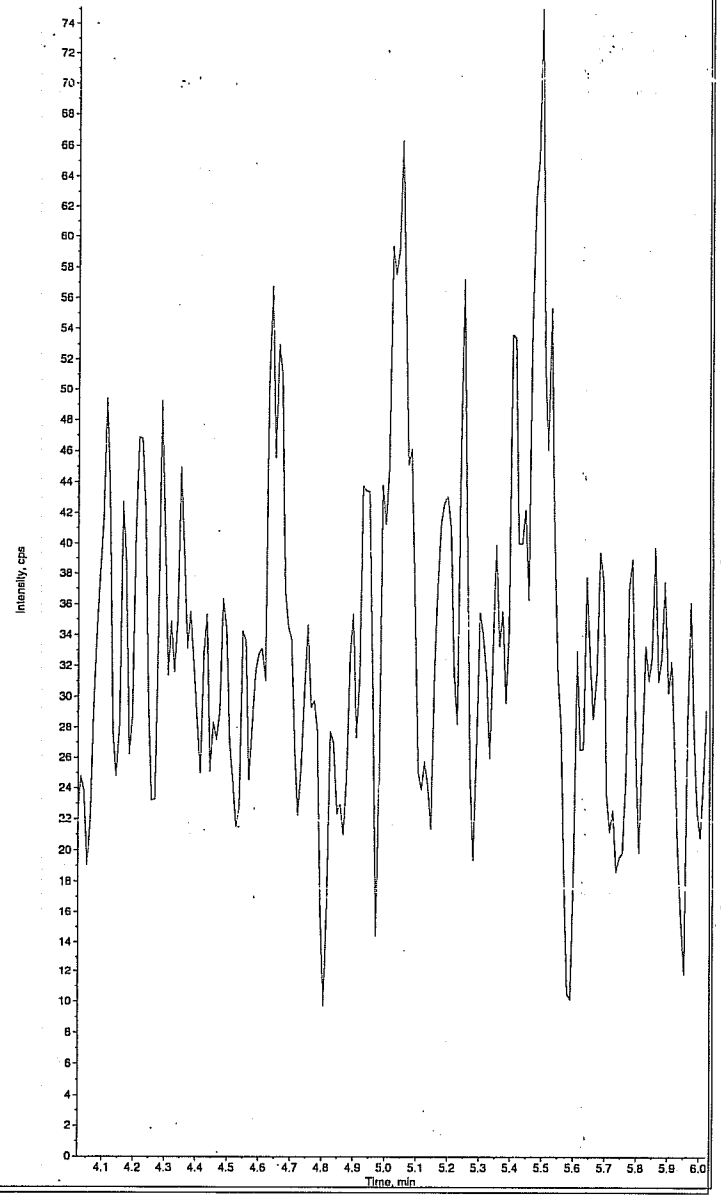
Int. Type: Valley
Retention Time: 8.54 min
Area: 8.58e+005 counts
Height: 189982.890 cps
Start Time: 8.42 min
End Time: 8.88 min



Sample Name: "266877004" Sample ID: "1048168|2|LER" File: "EXS11240027.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:18:02 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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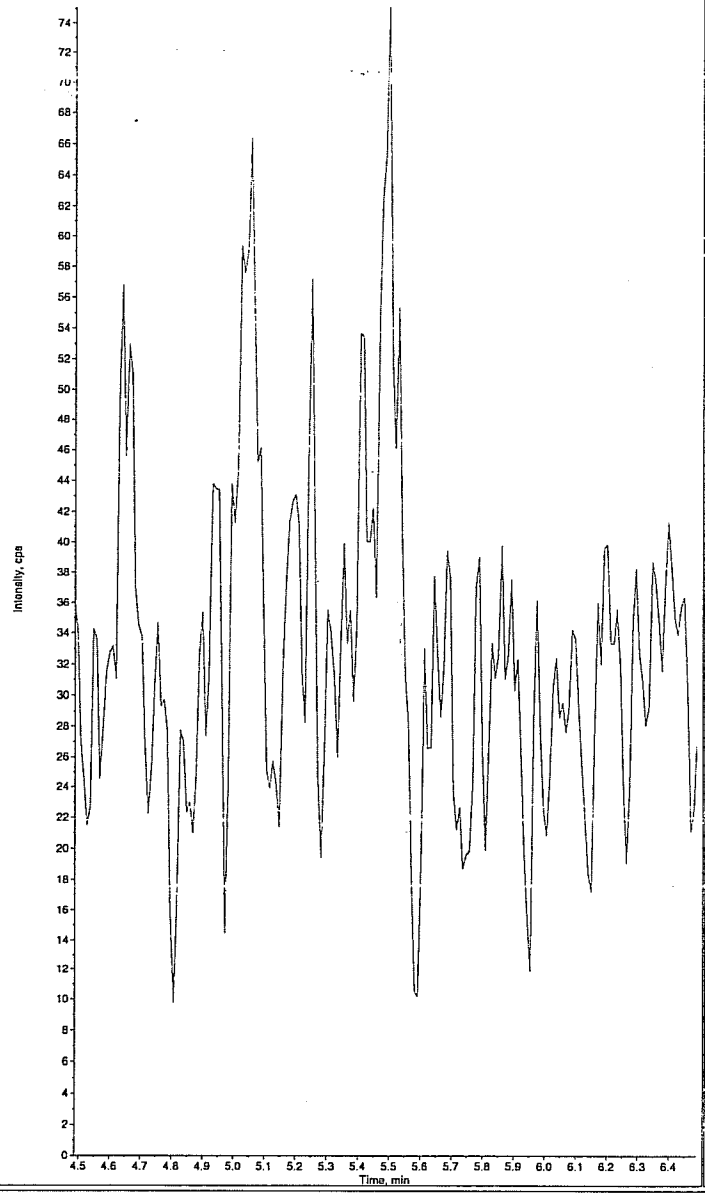
Sample Name: "266877004" Sample ID: "1048168|2|LER" File: "EXS11240027.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:18:02 PM

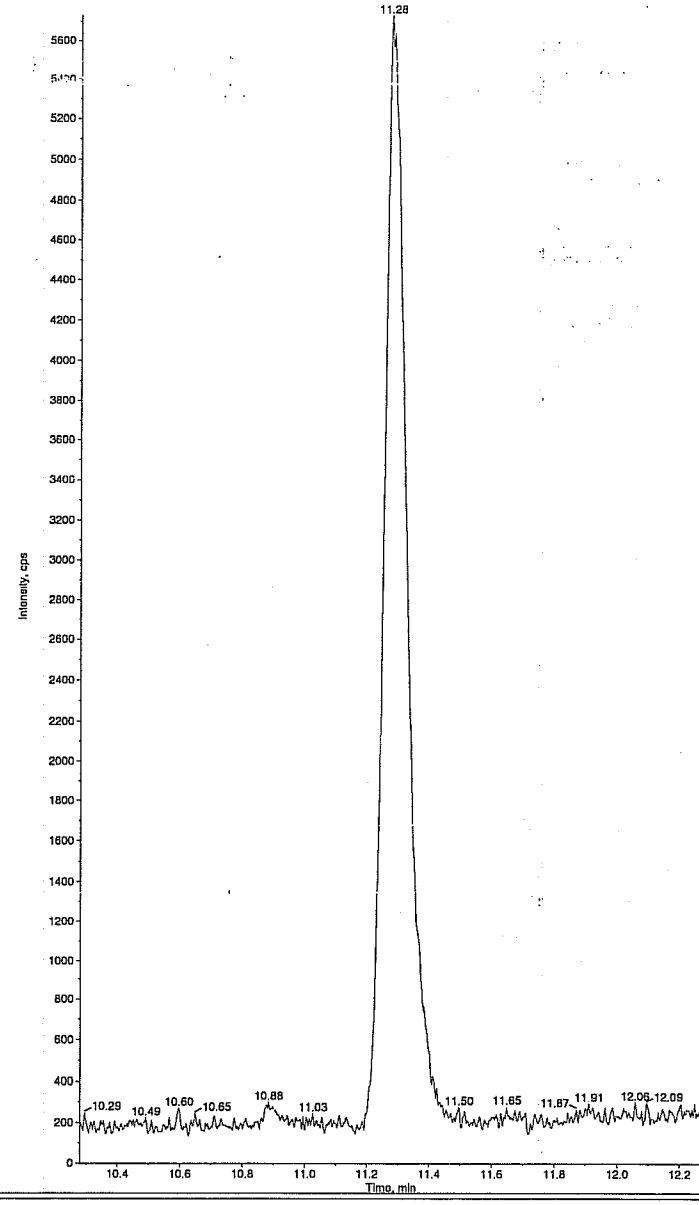
Modified: No



Sample Name: "266877004" Sample ID: "1048168|2|LER" File: "EXS11240027.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:18:02 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman08-11-2042

Lab Code: GEI

GEL Job No (SDG) 11-463

Matrix: WATER

GEL Sample ID: 266877006

Sample Amount 770 mL

Date Received: 12-NOV-10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15-NOV-10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXP1123016a

Date Analyzed: 23-NOV-10 22:23

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
118-96-7	2,4,6-Trinitrotoluene	0.325	U	0.104	0.325
118-96-7	*2,4,6-Trinitrotoluene*				
121-14-2	2,4-Dinitrotoluene	0.325	U	0.104	0.325
121-14-2	*2,4-Dinitrotoluene*				
121-82-4	RDX	0.325	U	0.104	0.325
121-82-4	*RDX*				
19406-51-0	4-Amino-2,6-dinitrotoluene	0.325	U	0.104	0.325
19406-51-0	*4-Amino-2,6-dinitrotoluene*				
2691-41-0	HMX	0.325	U	0.104	0.325
2691-41-0	*HMX*				
35572-78-2	2-Amino-4,6-dinitrotoluene	0.325	U	0.104	0.325
35572-78-2	*2-Amino-4,6-dinitrotoluene*				
606-20-2	2,6-Dinitrotoluene	0.325	U	0.0779	0.325
606-20-2	*2,6-Dinitrotoluene*				
88-72-2	o-Nitrotoluene	0.325	U	0.104	0.325
88-72-2	*o-Nitrotoluene*				
98-95-3	Nitrobenzene	0.325	U	0.104	0.325
98-95-3	*Nitrobenzene*				
99-08-1	m-Nitrotoluene	0.325	U	0.104	0.325
99-08-1	*m-Nitrotoluene*				
99-35-4	1,3,5-Trinitrobenzene	0.325	U	0.104	0.325
99-35-4	*1,3,5-Trinitrobenzene*				
99-65-0	m-Dinitrobenzene	0.325	U	0.104	0.325
99-65-0	*m-Dinitrobenzene*				
479-45-8	Tetryl	0.649	U	0.130	0.649
479-45-8	*Tetryl*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman08-11-2042

Lab Code: GEL

GEL Job No (SDG) 11-463

Matrix: WATER

GEL Sample ID: 266877006

Sample Amount 770 mL

Date Received: 12-NOV-10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15-NOV-10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

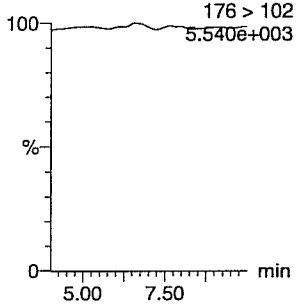
Cas No.	Compound	Concentration*	Q	MDL	PQL
99-99-0	p-Nitrotoluene	0.649	U	0.104	0.649
99-99-0	*p-Nitrotoluene*				
78-11-5	PETN	1.30	U	0.130	1.30
78-11-5	*PETN*				

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

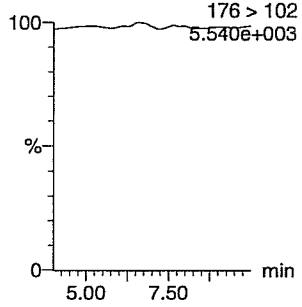
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123016a
Date: 23-Nov-2010
Time: 22:23:02
ID: 266877006 /ARSL/1048168/Liquid/2
Vial: 1:4,D

Lar 11/29/10

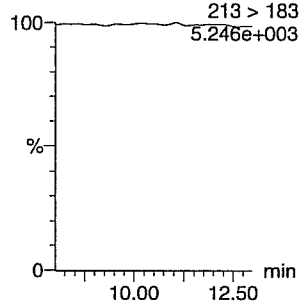
HMX
F2:MRM of 1 channel,AP-
176 > 102
5.540e+003



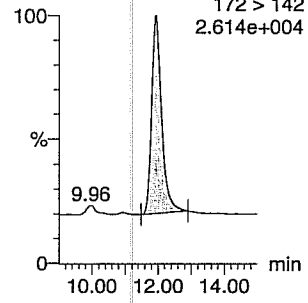
RDX
F2:MRM of 1 channel,AP-
176 > 102
5.540e+003



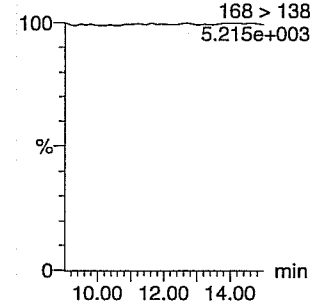
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.246e+003



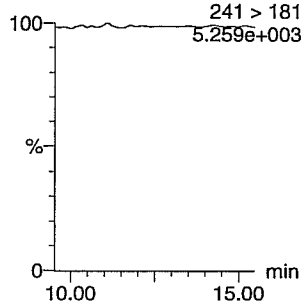
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.614e+004



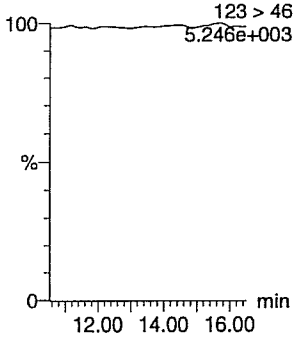
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.215e+003



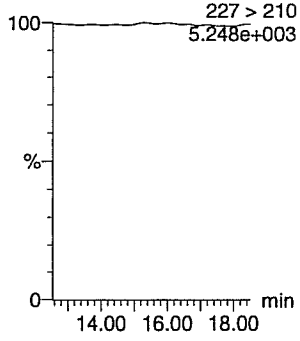
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.259e+003



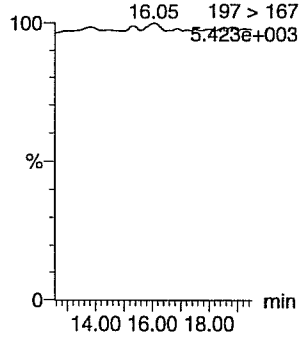
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.246e+003



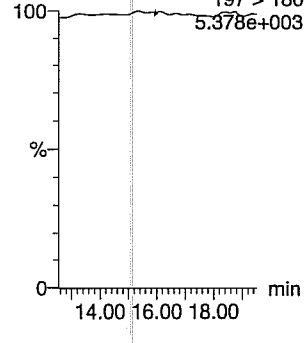
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.248e+003



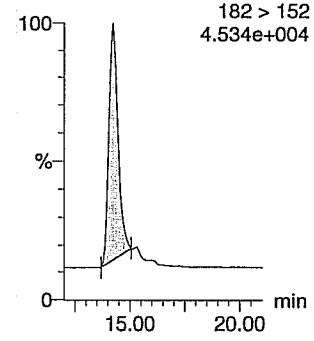
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
16.05 197 > 167
5.423e+003



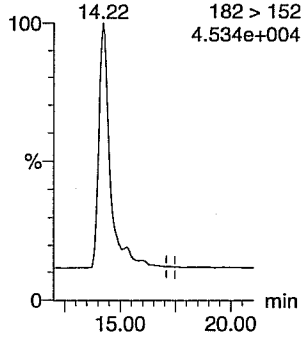
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.378e+003



34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
4.534e+004



26-dinitrotoluene
F9:MRM of 2 channels,AP-
14.22 182 > 152
4.534e+004



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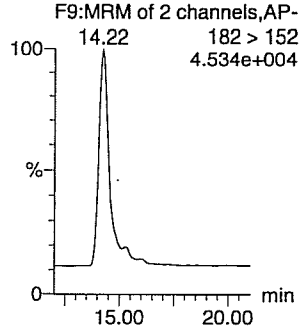
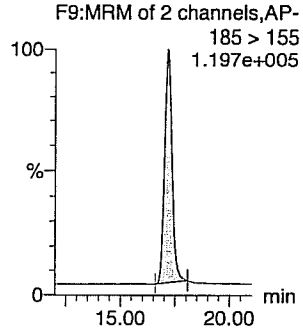
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

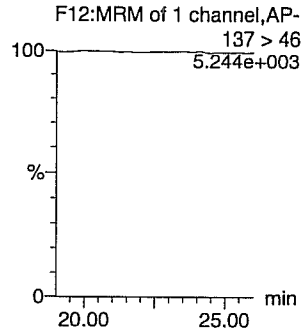
24-dinitrotoluene



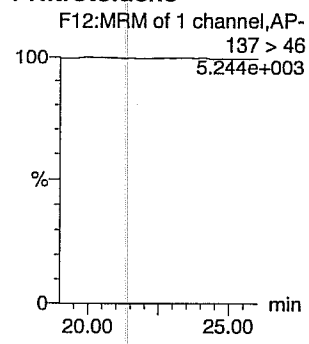
26-dinitrotoluene-d3



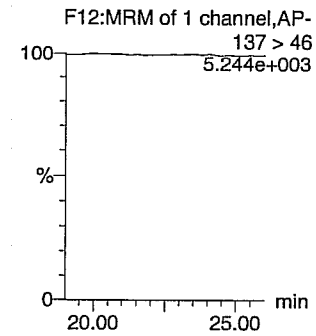
2-Nitrotoluene



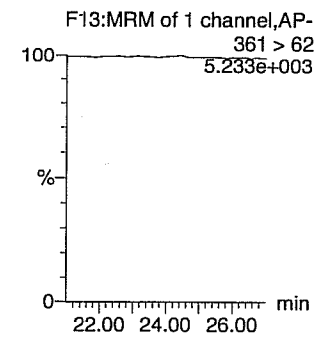
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
266877006	HMX	176 > 102			7423.679									
266877006	RDX	176 > 102			7423.679									
266877006	135-Trinitrobenzene	213 > 183			7423.679									
266877006	13-Dinitrobenzene-d4	172 > 142	11.91	7423.679		7423.679	7423.679	bb			497.7886	99.6	-0.4	303.5
266877006	13-Dinitrobenzene	168 > 138			7423.679									
266877006	Tetryl	241 > 181			7423.679									
266877006	Nitrobenzene	123 > 46			7423.679									
266877006	246-Trinitrotoluene	227 > 210			46523.879									
266877006	4-Amino-26-dinitrotoluene	197 > 167			46523.879									
266877006	2-Amino-46-dinitrotoluene	197 > 180			46523.879									
266877006	34-dinitrotoluene	182 > 152	14.22	18993.217	46523.879	18993.217	204.123	bb			203.4697	81.4	-18.6	553.8
266877006	26-dinitrotoluene	182 > 152			46523.879			MM-	26-Nov-10	13:37:43				
266877006	24-dinitrotoluene	182 > 152			46523.879									
266877006	26-dinitrotoluene-d3	185 > 155	17.15	46523.879		46523.879	46523.879	bb			546.0717	109.2	9.2	2729.4
266877006	2-Nitrotoluene	137 > 46			46523.879									
266877006	4-Nitrotoluene	137 > 46			46523.879									
266877006	3-Nitrotoluene	137 > 46			46523.879									
266877006	PETN	361 > 62			46523.879									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman08-11-2042

Lab Code: GEL

GEL Job No (SDG) 11-463

Matrix: WATER

GEL Sample ID: 266877006

Sample Amount 770 mL

Date Received: 12-NOV-10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15-NOV-10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXS11240028.wiff

Date Analyzed: 24-NOV-10 17:33

Dilution Factor: 2

Concentration Units: ug/L

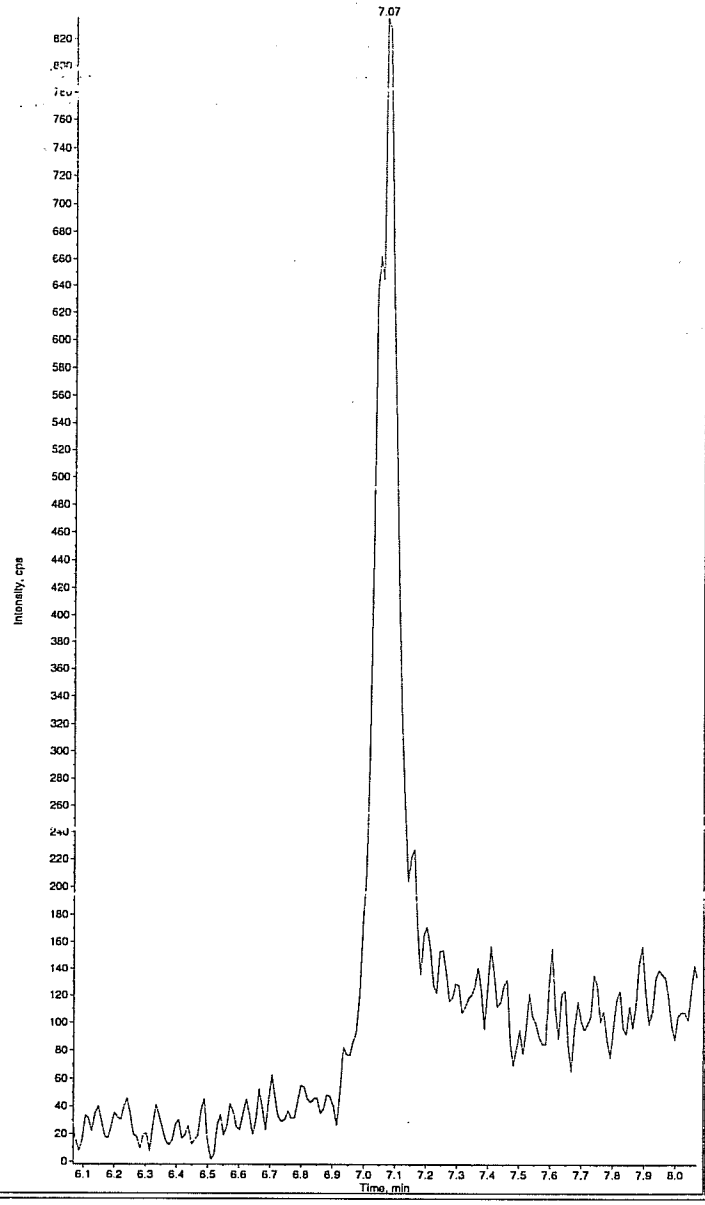
Cas No.	Compound	Concentration*	Q	MDL	PQL
3058-38-6	TATB	1.30	U	0.390	1.30
3058-38-6	*TATB*				
59229-75-3	2,6-Diamino-4-nitrotoluene	1.30	U	0.390	1.30
59229-75-3	*2,6-Diamino-4-nitrotoluene*				
618-87-1	3,5-Dinitroaniline	1.30	U	0.390	1.30
618-87-1	*3,5-Dinitroaniline*				
6629-29-4	2,4-Diamino-6-nitrotoluene	1.30	U	0.390	1.30
6629-29-4	*2,4-Diamino-6-nitrotoluene*				
78-30-8	tris(o-cresyl) phosphate	1.30	U	0.390	1.30
78-30-8	*tris(o-cresyl) phosphate*				

LCM 11/26/10

Sample Name: "266877006" Sample ID: "1048168|2|LER" File: "EXS11240028.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:33:44 PM

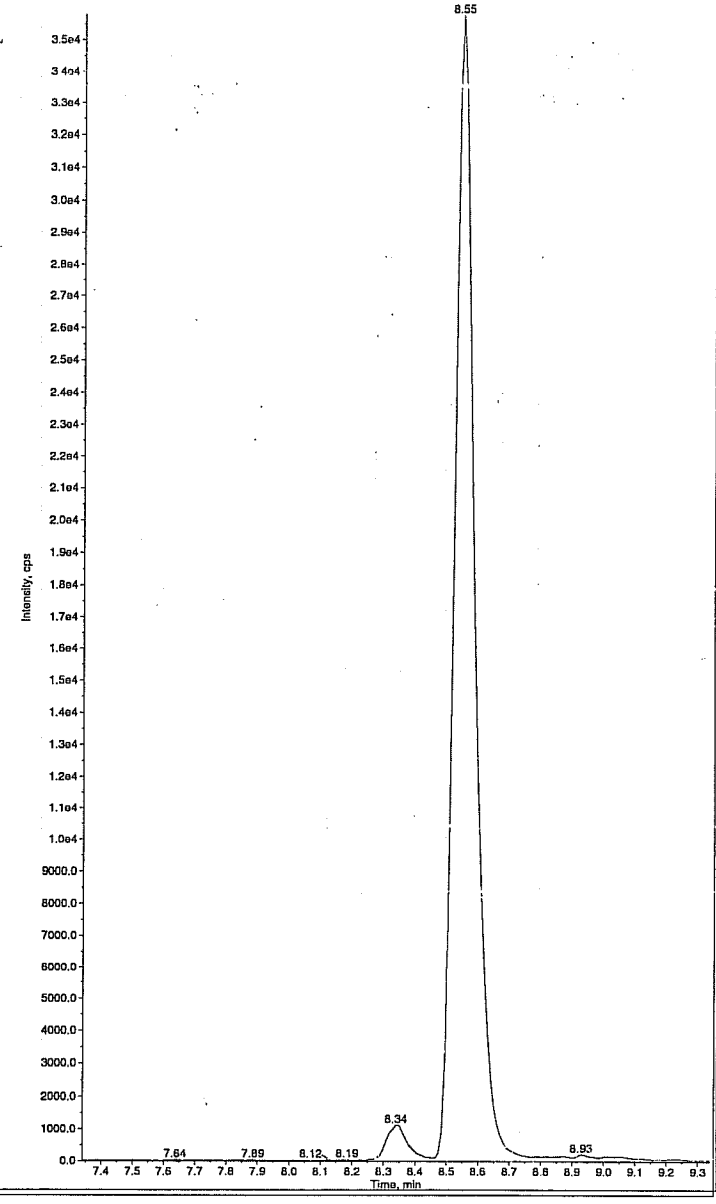
Modified: No



Sample Name: "266877006" Sample ID: "1048168|2|LER" File: "EXS11240028.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:33:44 PM

Modified: No



dhm 11/29/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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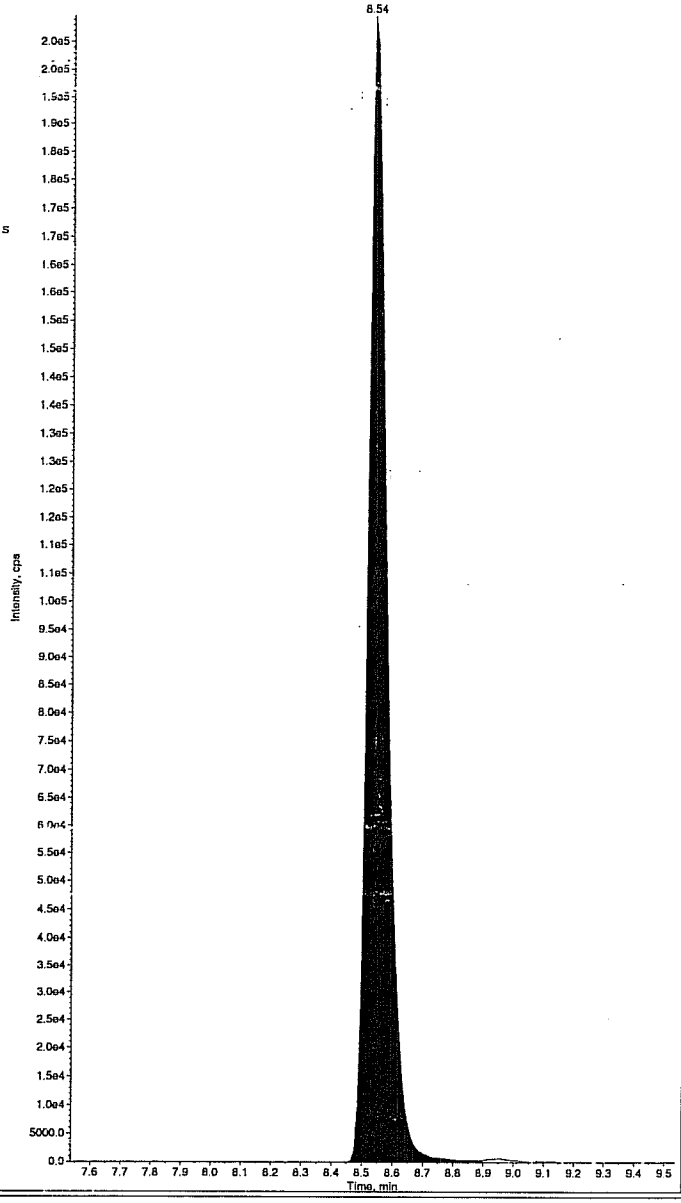
Sample Name: "266877006" Sample ID: "1048168|2|LER" File: "EXS11240028.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 211. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:33:44 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

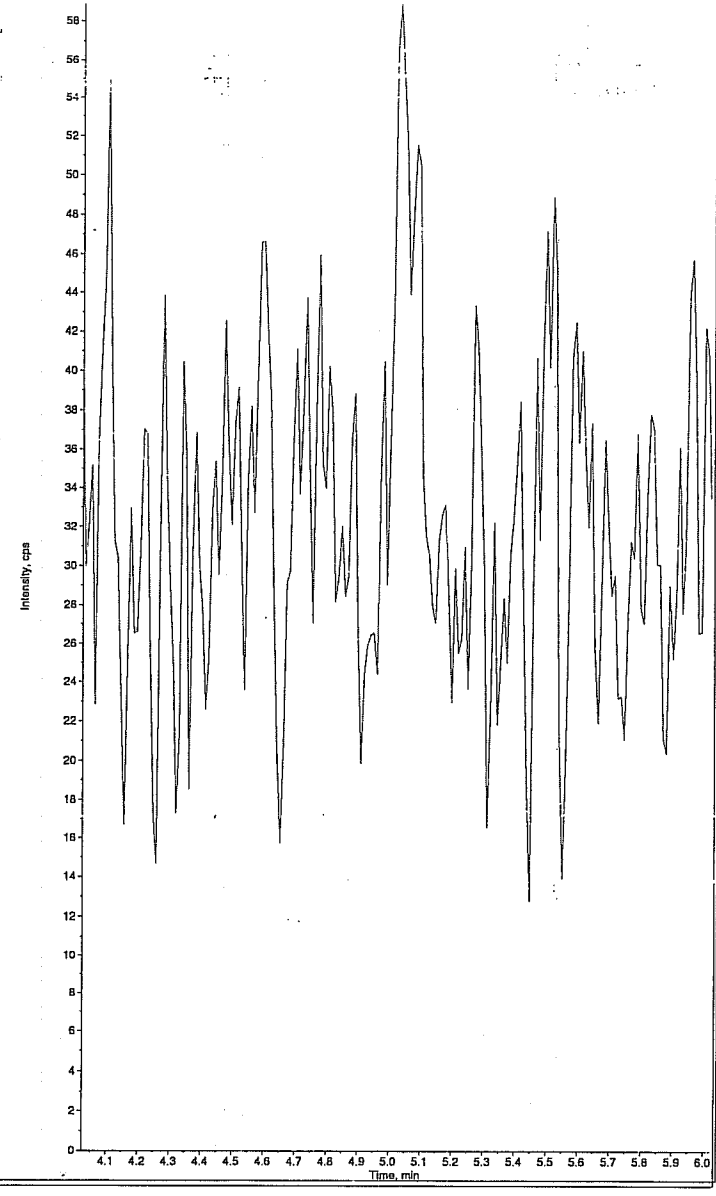
Int. Type: Valley
Retention Time: 8.54 min
Area: 9.15e+005 counts
Height: 204706.529 cps
Start Time: 8.44 min
End Time: 8.90 min



Sample Name: "266877006" Sample ID: "1048168|2|LER" File: "EXS11240028.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:33:44 PM

Modified: No

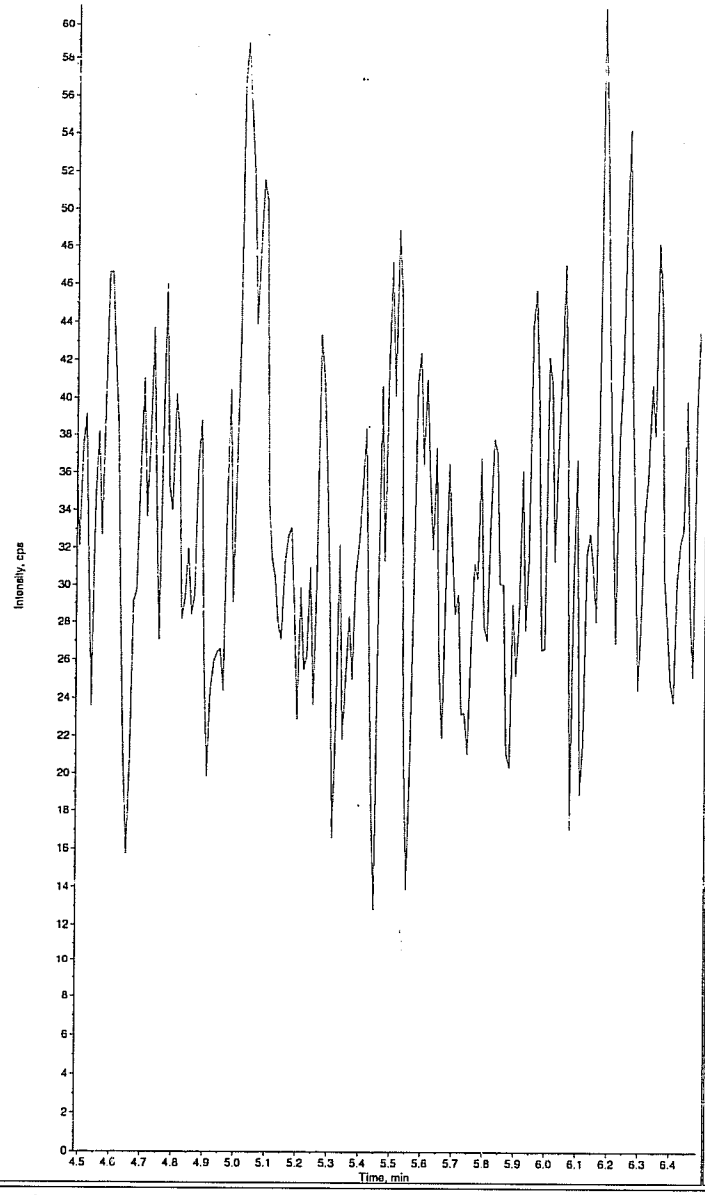


*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "266877006" Sample ID: "1048168|2|LER" File: "EXS11240028.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:33:44 PM

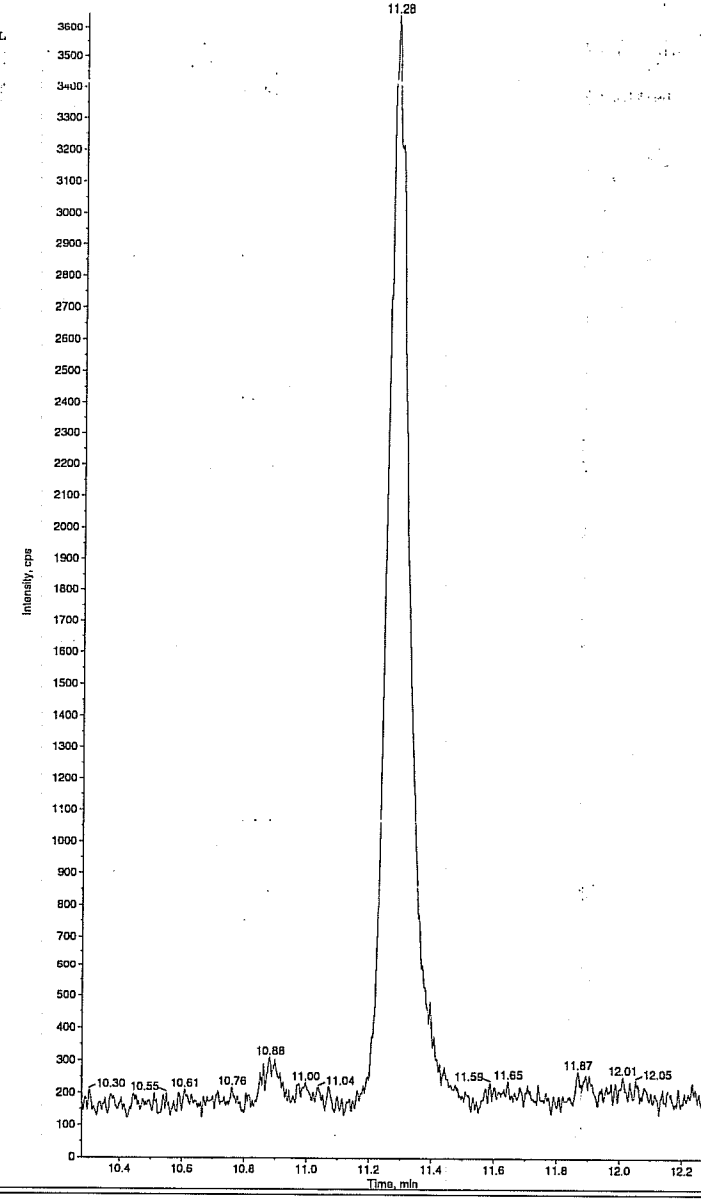
Modified: No



Sample Name: "266877006" Sample ID: "1048168|2|LER" File: "EXS11240028.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:33:44 PM

Modified: No



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STANDARDS DATA

SW846 8321A Modified-Explosives
Calibration Standard Concentration Levels

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	CCV
3,4-Dinitrotoluene (Surrogate)	12.5	25	100	200	400	500		300
Primary Analytes								
HMX	25	50	200	400	800	1000	na	600
RDX	25	50	200	400	800	1000	na	600
DNX	25	50	200	400	800	1000	na	600
MNX	25	50	200	400	800	1000	na	600
TNX	25	50	200	400	800	1000	na	600
1,3,5-Trinitrobenzene	25	50	200	400	800	1000	na	600
1,3-Dinitrobenzene	25	50	200	400	800	1000	na	600
Nitrobenzene	25	50	200	400	800	1000	na	600
Tetryl	25	50	200	400	800	1000	na	600
Nitroglycerin	50	100	200	400	800	1000	na	600
2,4,6-Trinitrotoluene	25	50	200	400	800	1000	na	600
2-Amino-4,6-dinitrotoluene	25	50	200	400	800	1000	na	600
4-Amino-2,6-dinitrotoluene	25	50	200	400	800	1000	na	600
2,4-Dinitrotoluene	25	50	200	400	800	1000	na	600
2,6-Dinitrotoluene	25	50	200	400	800	1000	na	600
2-Nitrotoluene	25	50	200	400	800	1000	na	600
4-Nitrotoluene	25	50	200	400	800	1000	an	600
3-Nitrotoluene	25	50	200	400	800	1000	na	600
PETN	25	50	200	400	800	1000	na	600
Picric Acid	200	400	1600	3200	6400	8000	na	4800
3,4-Dinitrotoluene (Surrogate)	25	50	125	250	375	500	1000	250
Secondary Analytes								
2,4-Diamino-6-nitrotoluene	50	100	250	500	750	1000	2000	500
2,6-Diamino-4-nitrotoluene	50	100	250	500	750	1000	2000	500
3,5-Dinitroaniline	50	100	250	500	750	1000	2000	500
TATB	50	100	250	500	750	1000	2000	500
tris(o-Cresyl)phosphate	50	100	250	500	750	1000	2000	500

All values are ug/L without the prep factor

Calibration Levels 8321A-Modified-EXPL.xls (08/09A)

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Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 11–463

Lab Code: GEL

Run Date: 19–NOV–10,23–NOV–10,24–NOV–10

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	Ave RF	RSD	Q
Data File:	EXP1119003a	EXP1119004a	EXP1119005a	EXP1119006a	EXP1119007a	EXP1119008a			
Parmname									
1,3,5–Trinitrobenzene	4.571	5.266	5.022	4.825	4.656	4.776	4.853	5.245	
1,3–Dinitrobenzene–d4	13.523	12.911	13.417	12.817	12.762	11.547	12.830	5.493	
2,4,6–Trinitrotoluene	.411	.478	.422	.434	.448	.446	0.440	5.362	
2,4–Dinitrotoluene	.229	.249	.275	.26	.279	.279	0.262	7.643	
2,6–Dinitrotoluene	.934	1.068	1.079	1.092	1.106	1.117	1.066	6.294	
2,6–Dinitrotoluene–d3	78.338	76.778	79.47	84.538	71.527	66.578	76.205	8.29	
2–Amino–4,6–dinitrotoluene	.382	.403	.391	.42	.421	.424	0.407	4.259	
3,4–Dinitrotoluene	.909	.927	.968	.882	1.02	1.008	0.952	5.799	
4–Amino–2,6–dinitrotoluene	.232	.282	.251	.258	.261	.262	0.258	6.396	
HMX	2.925	3.5	3.116	3.071	2.995	3.002	3.102	6.639	
Nitrobenzene	.674	.612	.5	.528	.509	.516	0.557	12.657	
PETN	.67	.785	.722	.536	.598	.561	0.645	15.078	
RDX	1.814	1.973	1.974	2.139	2.091	2.105	2.016	5.986	
Tetryl	1.143	1.391	1.265	1.246	1.135	1.178	1.226	7.856	
m–Dinitrobenzene	.997	1.345	1.169	1.191	1.209	1.223	1.189	9.471	
m–Nitrotoluene	.055	.041	.046	.05	.047	.049	0.048	9.568	
o–Nitrotoluene	.062	.071	.067	.07	.069	.069	0.068	4.643	
p–Nitrotoluene	.036	.036	.035	.035	.036	.035	0.036	1.487	

Q column used to flag RSD values outside of Limit (>20%)
* Values outside of QC Limit

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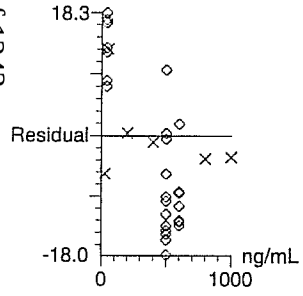
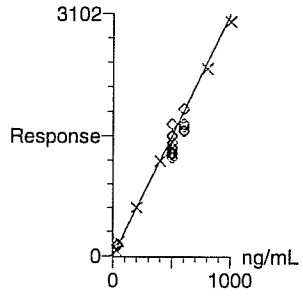
Quantify Calibration Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\111910expa.mdb, Time: Sun Nov 21 10:33:04 2010
Calibration: Untitled, Time: Sun Nov 21 11:03:17 2010

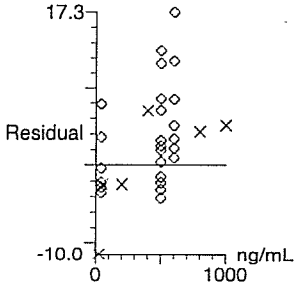
Compound name: HMX
Response Factor: 3.10161
RRF SD: 0.205925, % Relative SD: 6.63929
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

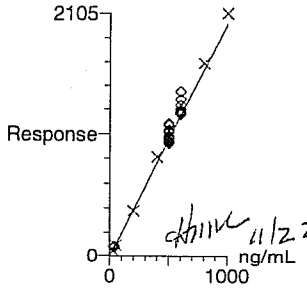




MMT 11/22/10

Compound name: RDX
Response Factor: 2.01605
RRF SD: 0.120677, % Relative SD: 5.98581
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





dhmc 11/22/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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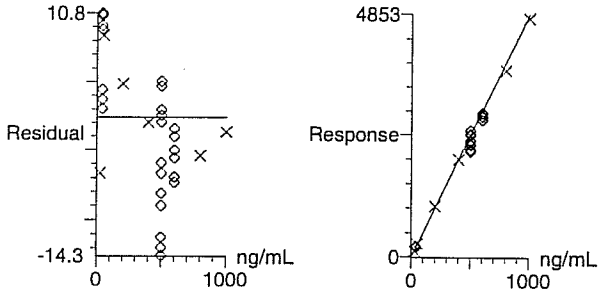
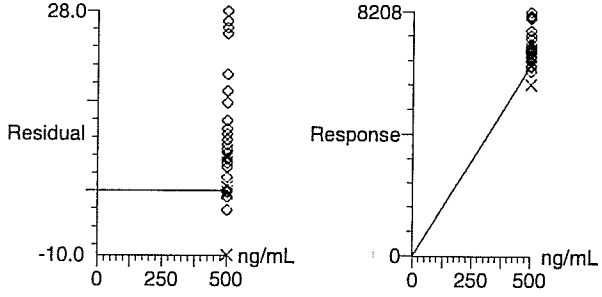
Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

Compound name: 135-Trinitrobenzene
Response Factor: 4.85267
RRF SD: 0.254501, % Relative SD: 5.24455
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13-Dinitrobenzene-d4
Response Factor: 12.8293
RRF SD: 0.70477, % Relative SD: 5.49345
Response type: External Std, Area
Curve type: RF



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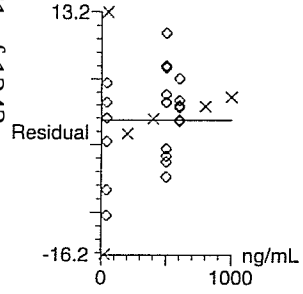
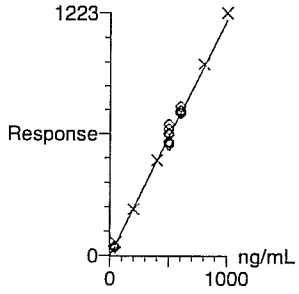
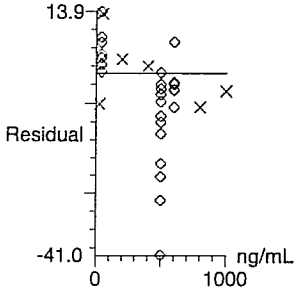
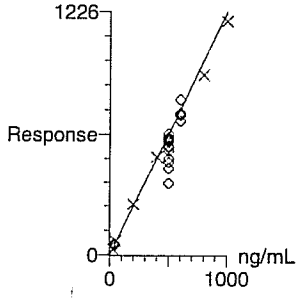
Compound name: 13-Dinitrobenzene
Response Factor: 1.18886
RRF SD: 0.112592, % Relative SD: 9.47064
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: Tetryl
Response Factor: 1.22628
RRF SD: 0.0963411, % Relative SD: 7.85638
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





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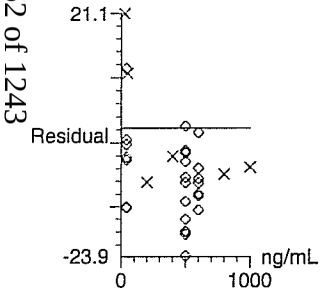
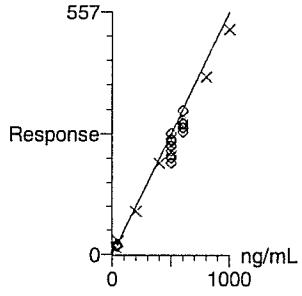
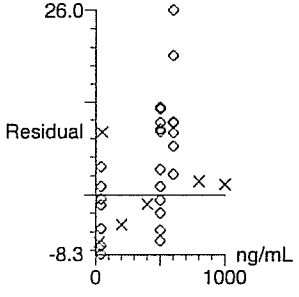
Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

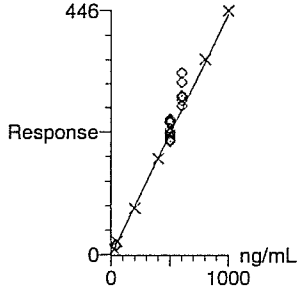
Compound name: Nitrobenzene
Response Factor: 0.556543
RRF SD: 0.0704391, % Relative SD: 12.6565
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: 246-Trinitrotoluene
Response Factor: 0.439745
RRF SD: 0.0235805, % Relative SD: 5.36231
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





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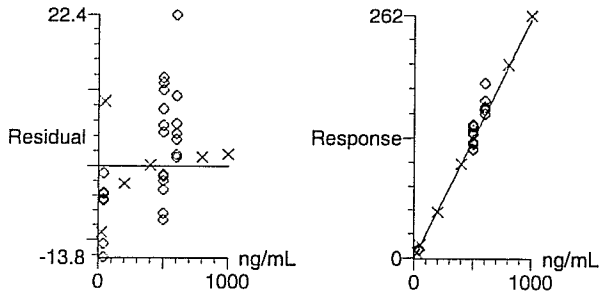
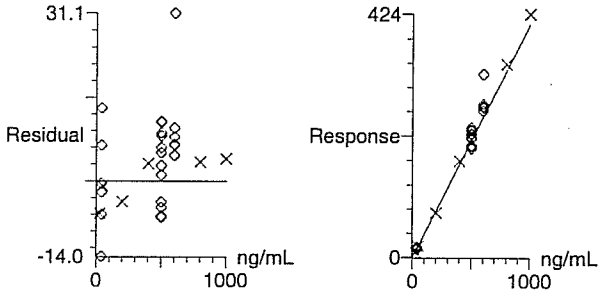
Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.257863
RRF SD: 0.0164919, % Relative SD: 6.39558
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 2-Amino-46-dinitrotoluene
Response Factor: 0.406866
RRF SD: 0.0173269, % Relative SD: 4.25862
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



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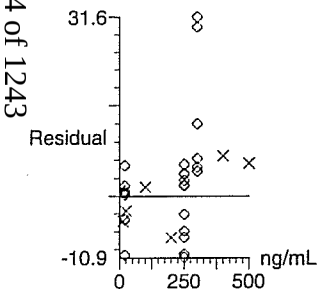
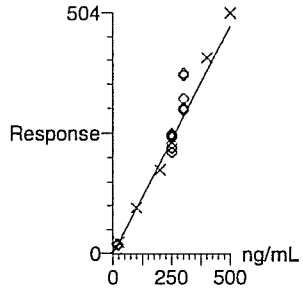
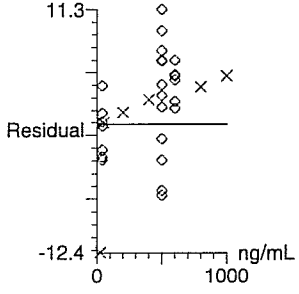
Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

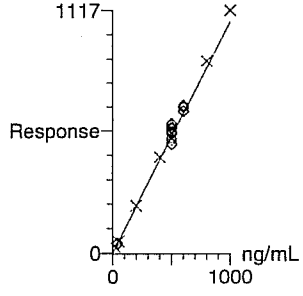
Compound name: 34-dinitrotoluene
Response Factor: 0.952287
RRF SD: 0.0552238, % Relative SD: 5.79907
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: 26-dinitrotoluene
Response Factor: 1.06613
RRF SD: 0.0671025, % Relative SD: 6.29406
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





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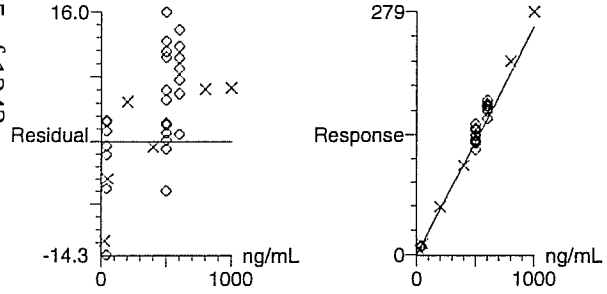
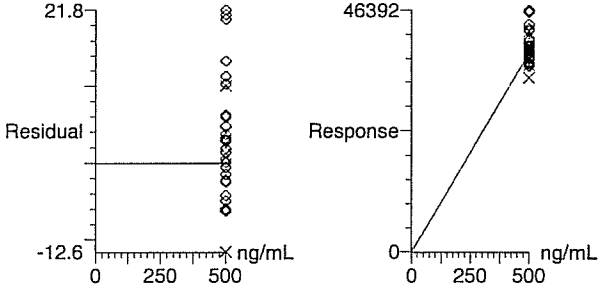
Compound name: 24-dinitrotoluene
Response Factor: 0.261574
RRF SD: 0.0199909, % Relative SD: 7.64253
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 26-dinitrotoluene-d3
Response Factor: 76.2045
RRF SD: 6.31743, % Relative SD: 8.2901
Response type: External Std, Area
Curve type: RF



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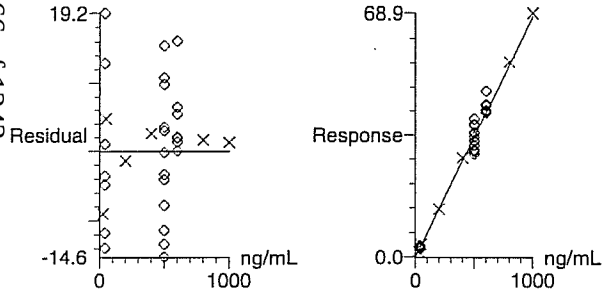
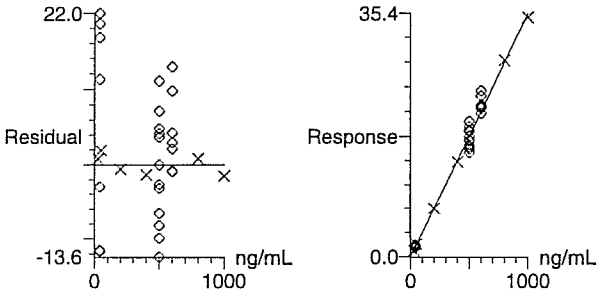
Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

Compound name: 2-Nitrotoluene
Response Factor: 0.0679837
RRF SD: 0.00315679, % Relative SD: 4.64346
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 4-Nitrotoluene
Response Factor: 0.0354422
RRF SD: 0.000527081, % Relative SD: 1.48716
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



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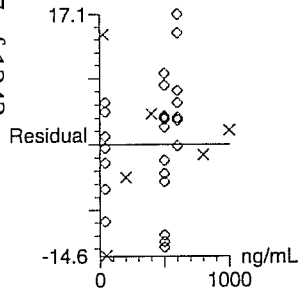
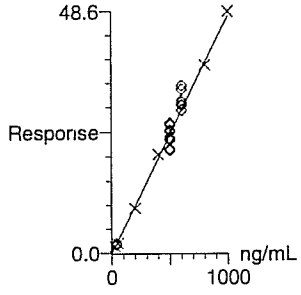
Quantify Calibration Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

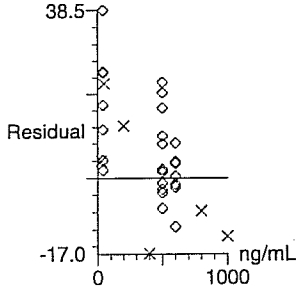
Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

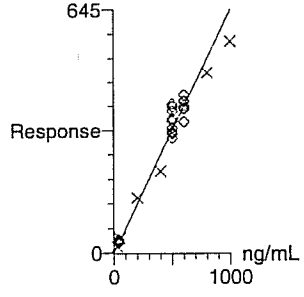
Compound name: 3-Nitrotoluene
Response Factor: 0.0477011
RRF SD: 0.00456426, % Relative SD: 9.56846
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: PETN
Response Factor: 0.645157
RRF SD: 0.0972785, % Relative SD: 15.0783
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





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7

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXP1119010a

Analysis Date: 19–NOV–10 19:09

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
m–Nitrotoluene	600	702.532	117	
o–Nitrotoluene	600	637.269	106	
p–Nitrotoluene	600	664.625	111	
1,3,5–Trinitrobenzene	600	562.713	94	
1,3–Dinitrobenzene–d4	500	518.503	104	
2,4,6–Trinitrotoluene	600	660.3	110	
2,4–Dinitrotoluene	600	662.146	110	
2,6–Dinitrotoluene	600	638.181	106	
2,6–Dinitrotoluene–d3	500	492.013	98	
2–Amino–4,6–dinitrotoluene	600	648.682	108	
3,4–Dinitrotoluene	300	319.763	107	
4–Amino–2,6–dinitrotoluene	600	637.899	106	
HMX	600	522.932	87	
Nitrobenzene	600	527.111	88	
PETN	600	587.714	98	
RDX	600	617.426	103	
Tetryl	600	579.117	97	
m–Dinitrobenzene	600	599.01	100	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

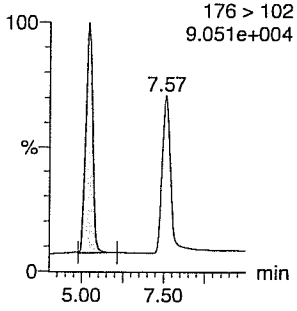
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

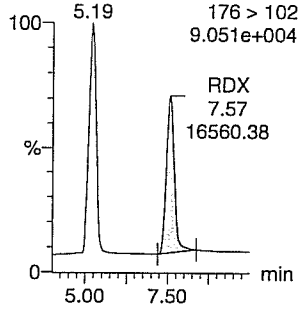
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119010a
Date: 19-Nov-2010
Time: 19:09:44
ID: WXX101119-07ICV
Vial: 1:1,B

MM 11/22/10

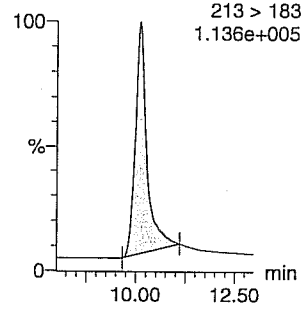
HMX
F2:MRM of 1 channel,AP-
176 > 102
9.051e+004



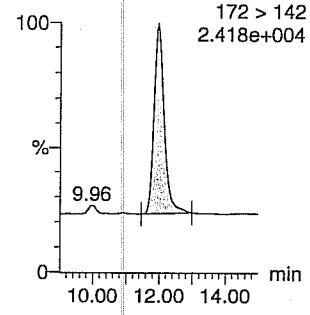
RDX
F2:MRM of 1 channel,AP-
5.19
176 > 102
9.051e+004



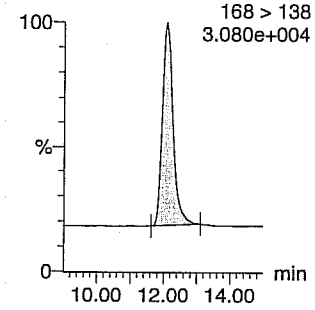
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
1.136e+005



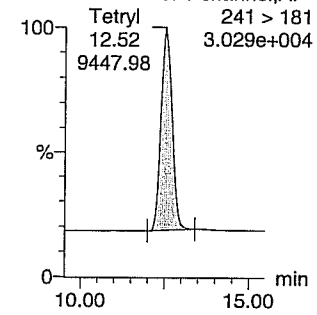
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.418e+004



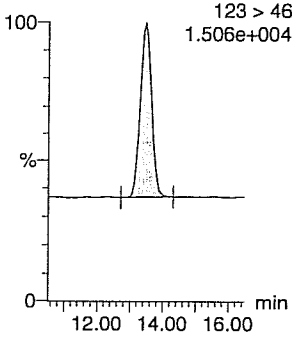
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
3.080e+004



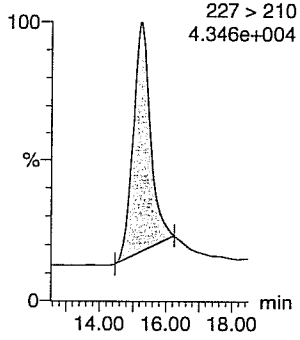
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
3.029e+004



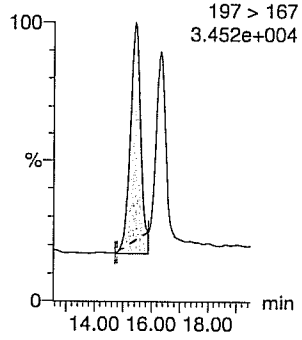
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.506e+004



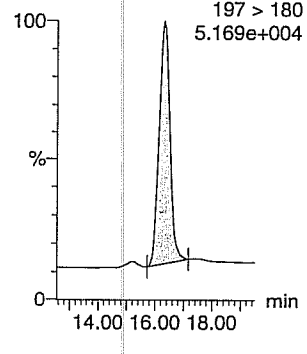
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
4.346e+004



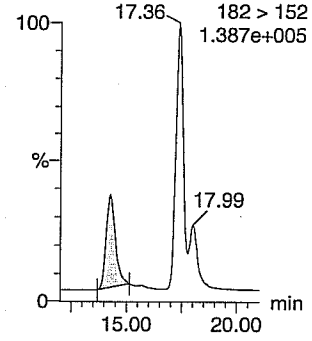
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
3.452e+004



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.169e+004

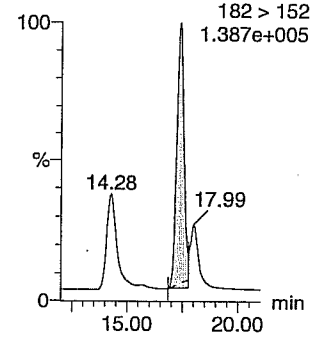


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.387e+005



HMM 11/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.387e+005



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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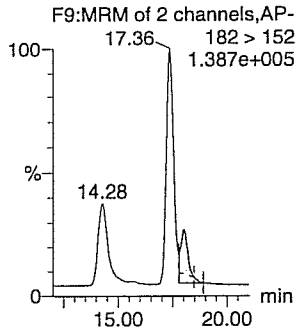
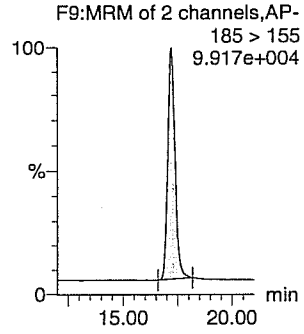
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

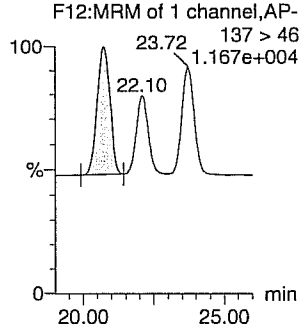
24-dinitrotoluene



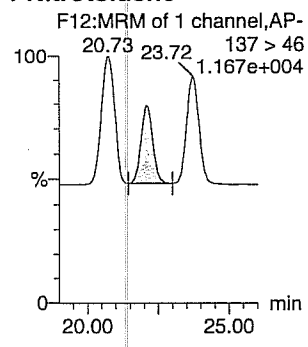
26-dinitrotoluene-d3



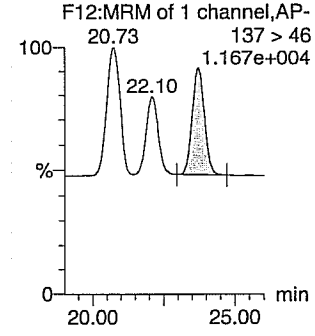
2-Nitrotoluene



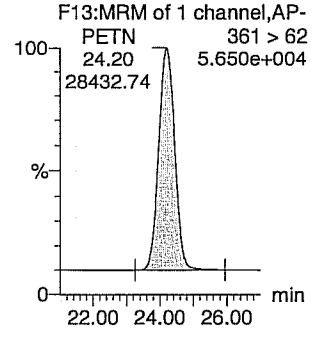
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-07ICV	HMX	176 > 102	5.19	21578.266	6652.021	21578.266	1621.933	db			522.9322	87.2	-12.8	1641.5
WXX101119-07ICV	RDX	176 > 102	7.57	16560.381	6652.021	16560.381	1244.763	bb			617.4260	102.9	2.9	1117.3
WXX101119-07ICV	135-Trinitrobenzene	213 > 183	10.11	36328.859	6652.021	36328.859	2730.663	bb			562.7130	93.8	-6.2	3550.1
WXX101119-07ICV	13-Dinitrobenzene-d4	172 > 142	11.95	6652.021		6652.021	6652.021	bb			518.5034	103.7	3.7	166.8
WXX101119-07ICV	13-Dinitrobenzene	168 > 138	12.08	9474.302	6652.021	9474.302	712.137	bb			599.0100	99.8	-0.2	827.6
WXX101119-07ICV	Tetryl	241 > 181	12.52	9447.979	6652.021	9447.979	710.159	bb			579.1166	96.5	-3.5	390.2
WXX101119-07ICV	Nitrobenzene	123 > 46	13.47	3902.869	6652.021	3902.869	293.360	bb			527.1108	87.9	-12.1	410.5
WXX101119-07ICV	246-Trinitrotoluene	227 > 210	15.25	21773.563	37493.613	21773.563	290.364	bb			660.3002	110.1	10.1	636.5
WXX101119-07ICV	4-Amino-26-dinitrotoluene	197 > 167	15.41	12334.706	37493.613	12334.706	164.491	MM	21-Nov-10	10:48:29	637.8989	106.3	6.3	287.7
WXX101119-07ICV	2-Amino-46-dinitrotoluene	197 > 180	16.30	19791.113	37493.613	19791.113	263.926	bb			648.6819	108.1	8.1	919.5
WXX101119-07ICV	34-dinitrotoluene	182 > 152	14.28	22834.035	37493.613	22834.035	304.506	bb			319.7626	106.6	6.6	579.7
WXX101119-07ICV	26-dinitrotoluene	182 > 152	17.36	51019.848	37493.613	51019.848	680.381	MM	21-Nov-10	10:57:54	638.1808	106.4	6.4	1675.7
WXX101119-07ICV	24-dinitrotoluene	182 > 152	17.99	12987.781	37493.613	12987.781	173.200	MM	21-Nov-10	11:03:30	662.1457	110.4	10.4	386.2
WXX101119-07ICV	26-dinitrotoluene-d3	185 > 155	17.22	37493.613		37493.613	37493.613	bb			492.0131	98.4	-1.6	2066.5
WXX101119-07ICV	2-Nitrotoluene	137 > 46	20.73	3248.737	37493.613	3248.737	43.324	bb			637.2686	106.2	6.2	828.9
WXX101119-07ICV	4-Nitrotoluene	137 > 46	22.10	1766.380	37493.613	1766.380	23.556	bb			664.6251	110.8	10.8	495.8
WXX101119-07ICV	3-Nitrotoluene	137 > 46	23.72	2512.937	37493.613	2512.937	33.512	bb			702.5322	117.1	17.1	690.1
WXX101119-07ICV	PETN	361 > 62	24.20	28432.736	37493.613	28432.736	379.168	bb			587.7136	98.0	-2.0	4693.8

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 11/19/10
Time of Injection: 1909
Standard Number: WXX101119-07ICV
Data File: EXP1119010a

HMX		87.2
RDX		102.9
135-TNB		93.8
13-DNB		99.8
Tetryl		96.5
Nitrobenzene		87.9
246-TNT		110.1
4A-26-DNT		106.3
2A-46-DNT		108.1
34-DNT(surr)		106.6
26-DNT		106.4
24-DNT		110.4
2-NT		106.2
4-NT		110.8
3-NT		117.1
PETN		98.0
Total		1648.1
Average		103.0

MAP 11/22/10

11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%

No single analyte > +/- 60%

Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 11–463

Lab Code: GEL

Run Date: 19–NOV–10,23–NOV–10,24–NOV–10

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	Ave RF	RSD	Q
Data File:	EXP1123003a	EXP1123004a	EXP1123005a	EXP1123006a	EXP1123007a	EXP1123008a			
Parmname									
1,3,5–Trinitrobenzene	5.035	5.395	4.77	4.739	4.602	4.692	4.872	6.04	
1,3–Dinitrobenzene–d4	13.197	15.313	14.535	15.39	16.408	14.638	14.914	7.215	
2,4,6–Trinitrotoluene	.55	.455	.45	.473	.559	.493	0.497	9.544	
2,4–Dinitrotoluene	.252	.281	.278	.263	.303	.364	0.290	13.879	
2,6–Dinitrotoluene	.986	1.119	1.134	1.14	1.118	1.134	1.105	5.357	
2,6–Dinitrotoluene–d3	77.821	88.77	85.837	89.54	86.94	82.276	85.197	5.197	
2–Amino–4,6–dinitrotoluene	.342	.366	.42	.431	.523	.432	0.419	15.027	
3,4–Dinitrotoluene	.882	.949	1	1.016	1.129	1.044	1.003	8.38	
4–Amino–2,6–dinitrotoluene	.316	.227	.249	.25	.292	.266	0.267	12.174	
HMX	3.076	3.42	3.333	3.38	3.204	3.529	3.324	4.855	
Nitrobenzene	.526	.554	.511	.494	.491	.509	0.514	4.497	
PETN	.845	.86	.803	.708	.606	.572	0.732	16.845	
RDX	1.701	2.972	2.211	2.286	2.585	2.564	2.387	18.02	
Tetryl	1.208	1.558	1.429	1.343	1.391	1.319	1.375	8.537	
m–Dinitrobenzene	1.051	1.264	1.222	1.292	1.299	1.288	1.236	7.681	
m–Nitrotoluene	.046	.052	.048	.047	.049	.043	0.048	6.19	
o–Nitrotoluene	.061	.06	.066	.064	.074	.064	0.065	7.74	
p–Nitrotoluene	.036	.044	.034	.034	.038	.033	0.037	11.881	

Q column used to flag RSD values outside of Limit (>20%)
* Values outside of QC Limit

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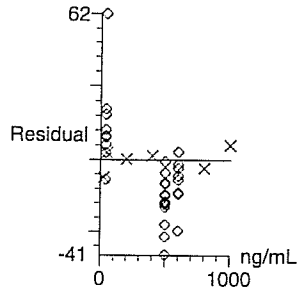
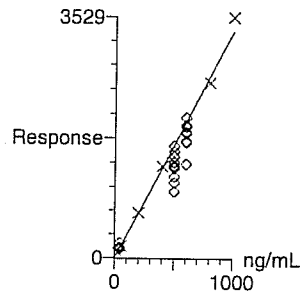
Quantify Calibration Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

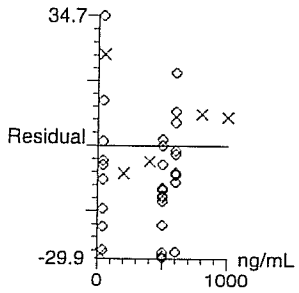
Method: C:\MASSLYNX\New_Exp.PRO\MethDB\112310expa.mdb, Time: Fri Nov 26 07:51:44 2010
Calibration: Untitled, Time: Fri Nov 26 13:46:46 2010

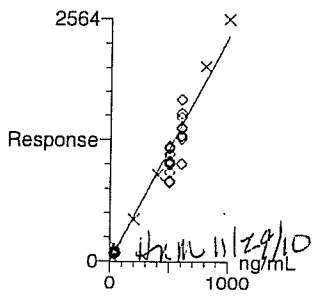
Compound name: HMX
Response Factor: 3.32356
RRF SD: 0.16136, % Relative SD: 4.85503
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: RDX
Response Factor: 2.38646
RRF SD: 0.430044, % Relative SD: 18.0202
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





LEr 11/29/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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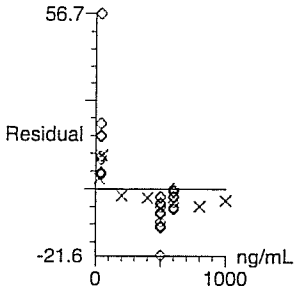
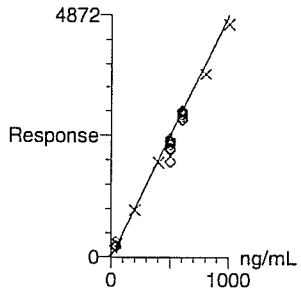
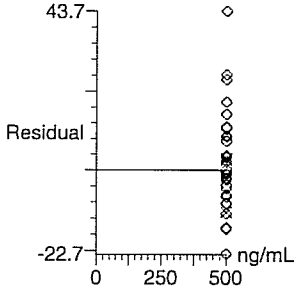
Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

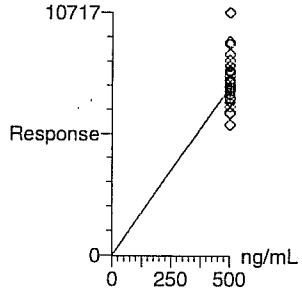
Compound name: 135-Trinitrobenzene
Response Factor: 4.87219
RRF SD: 0.294288, % Relative SD: 6.04015
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: 13-Dinitrobenzene-d4
Response Factor: 14.9133
RRF SD: 1.07595, % Relative SD: 7.21472
Response type: External Std, Area
Curve type: RF





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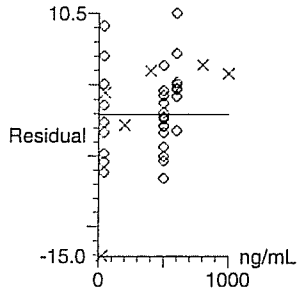
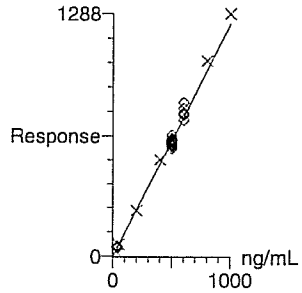
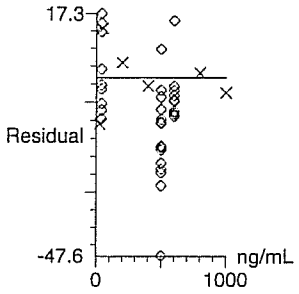
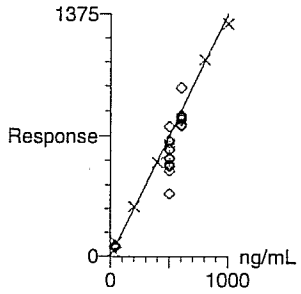
Compound name: 13-Dinitrobenzene
Response Factor: 1.2358
RRF SD: 0.0949207, % Relative SD: 7.68091
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: Tetryl
Response Factor: 1.37459
RRF SD: 0.117346, % Relative SD: 8.53679
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





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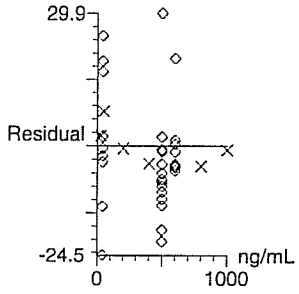
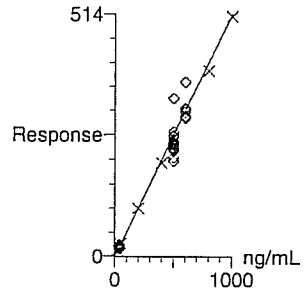
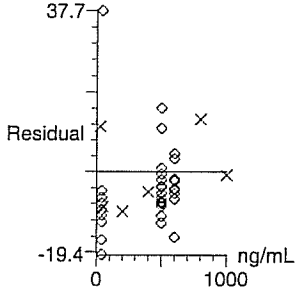
Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

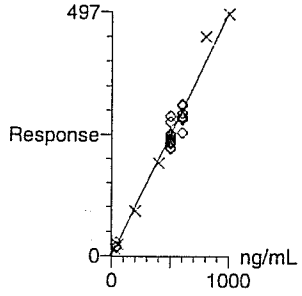
Compound name: Nitrobenzene
Response Factor: 0.514413
RRF SD: 0.0231336, % Relative SD: 4.49708
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: 246-Trinitrotoluene
Response Factor: 0.496768
RRF SD: 0.0474103, % Relative SD: 9.54375
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





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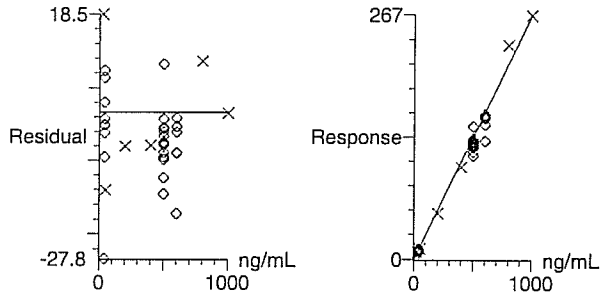
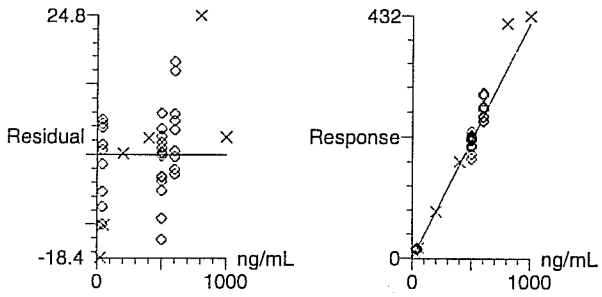
Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.266601
RRF SD: 0.0324555, % Relative SD: 12.1738
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 2-Amino-46-dinitrotoluene
Response Factor: 0.418808
RRF SD: 0.062936, % Relative SD: 15.0274
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



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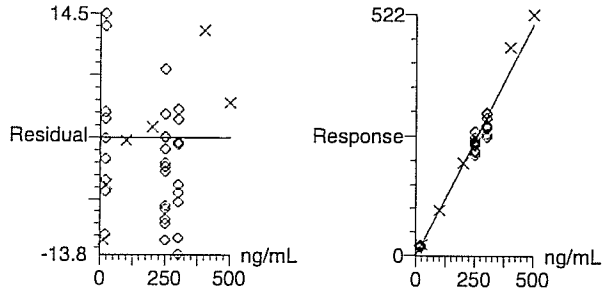
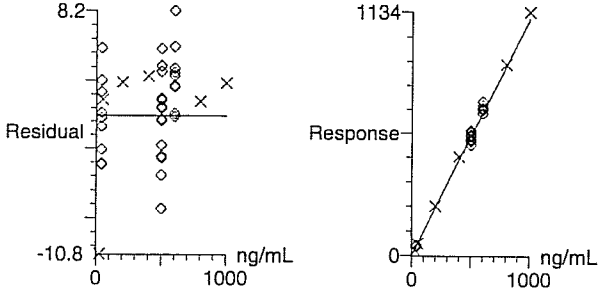
Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

Compound name: 34-dinitrotoluene
Response Factor: 1.00321
RRF SD: 0.0840728, % Relative SD: 8.38036
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 26-dinitrotoluene
Response Factor: 1.10511
RRF SD: 0.0591989, % Relative SD: 5.35682
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



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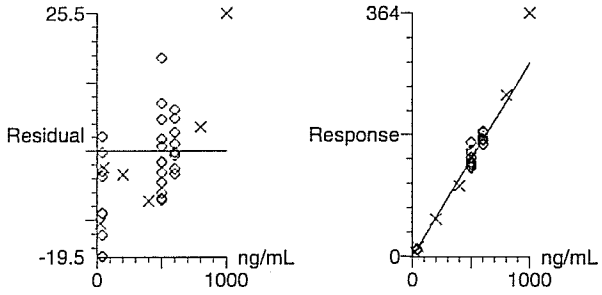
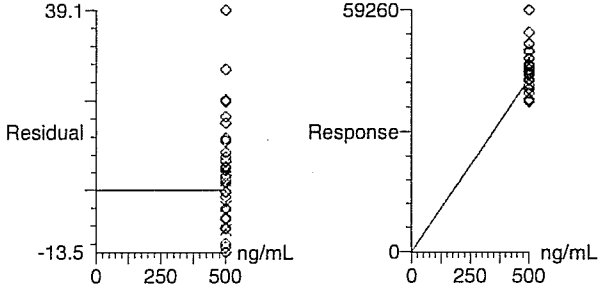
Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

Compound name: 24-dinitrotoluene
Response Factor: 0.290299
RRF SD: 0.0402907, % Relative SD: 13.879
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 26-dinitrotoluene-d3
Response Factor: 85.1974
RRF SD: 4.42755, % Relative SD: 5.19682
Response type: External Std, Area
Curve type: RF



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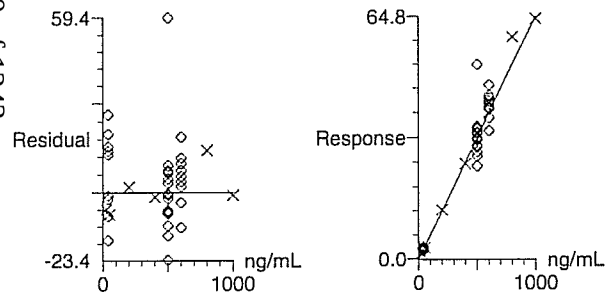
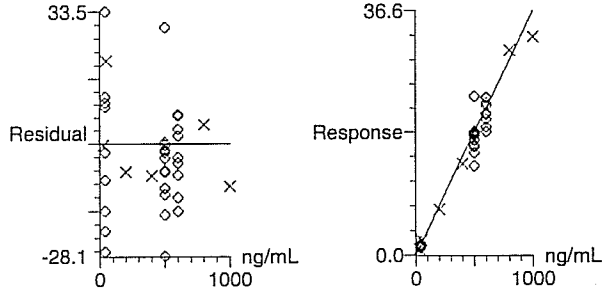
Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

Compound name: 2-Nitrotoluene
Response Factor: 0.0647769
RRF SD: 0.00501372, % Relative SD: 7.73998
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 4-Nitrotoluene
Response Factor: 0.0365997
RRF SD: 0.00434837, % Relative SD: 11.8809
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



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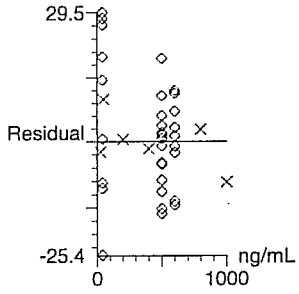
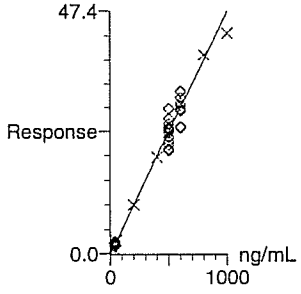
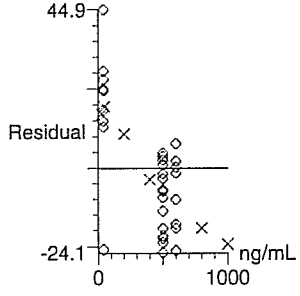
Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

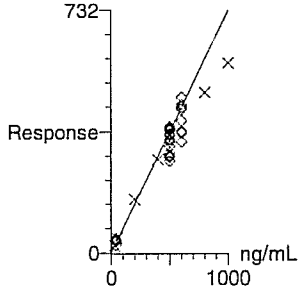
Compound name: 3-Nitrotoluene
Response Factor: 0.0473766
RRF SD: 0.00293268, % Relative SD: 6.19014
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: PETN
Response Factor: 0.732441
RRF SD: 0.12338, % Relative SD: 16.845
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF





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7

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXP1123010a

Analysis Date: 23–NOV–10 19:26

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	600	565.583	94	
1,3–Dinitrobenzene–d4	500	496.79	99	
2,4,6–Trinitrotoluene	600	625.605	104	
2,4–Dinitrotoluene	600	607.943	101	
2,6–Dinitrotoluene	600	614.341	102	
2,6–Dinitrotoluene–d3	500	536.912	107	
2–Amino–4,6–dinitrotoluene	600	642.983	107	
3,4–Dinitrotoluene	300	277.34	92	
4–Amino–2,6–dinitrotoluene	600	593.325	99	
HMX	600	620.201	103	
Nitrobenzene	600	567.54	95	
PETN	600	496.539	83	
RDX	600	653.843	109	
Tetryl	600	571.655	95	
m–Dinitrobenzene	600	618.307	103	
m–Nitrotoluene	600	515.484	86	
o–Nitrotoluene	600	527.824	88	
p–Nitrotoluene	600	499.377	83	

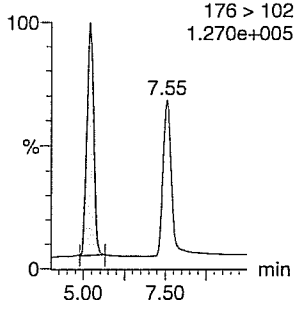
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

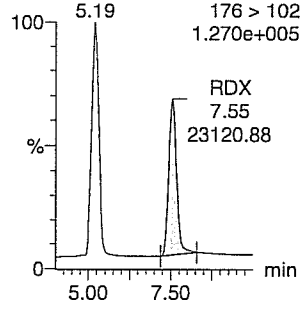
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123010a
Date: 23-Nov-2010
Time: 19:26:08
ID: WXX101123-07ICV
Vial: 1:1,B

Lan 11/29/10

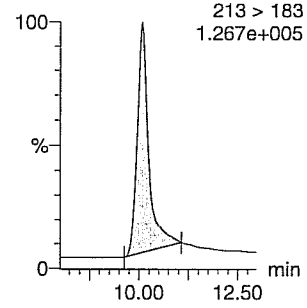
HMX
F2:MRM of 1 channel,AP-
176 > 102
1.270e+005



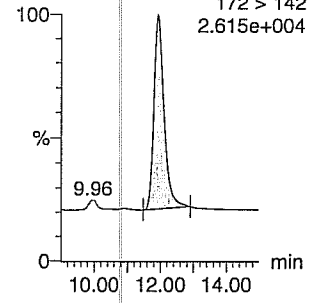
RDX
F2:MRM of 1 channel,AP-
176 > 102
1.270e+005



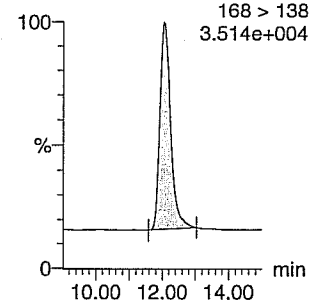
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
1.267e+005



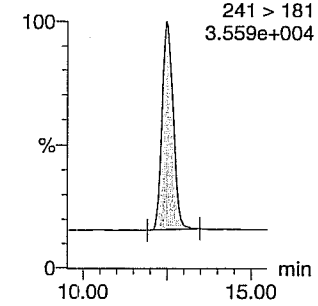
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.615e+004



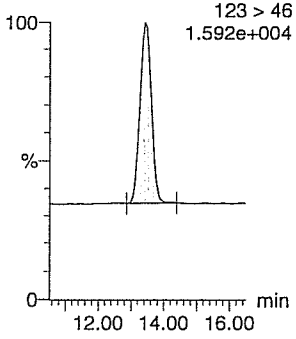
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
3.514e+004



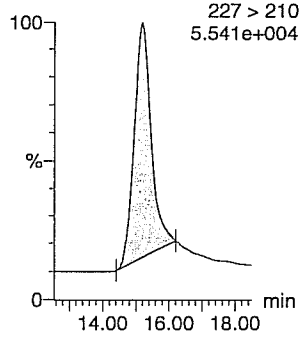
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
3.559e+004



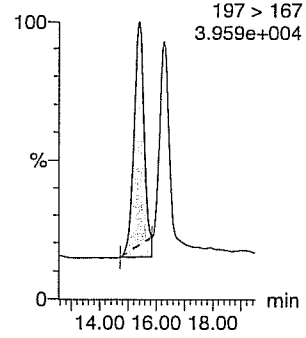
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.592e+004



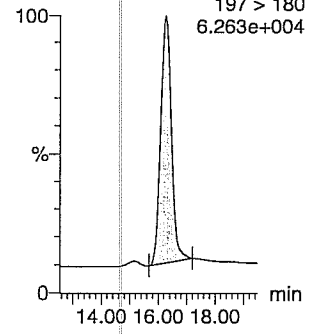
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.541e+004



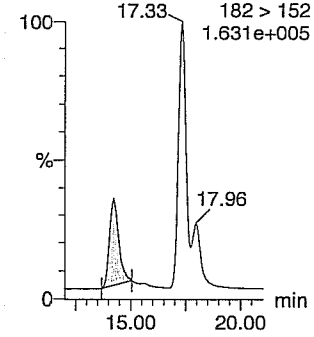
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
3.959e+004



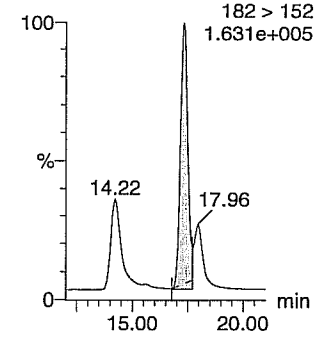
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.263e+004



34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.631e+005



26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.631e+005



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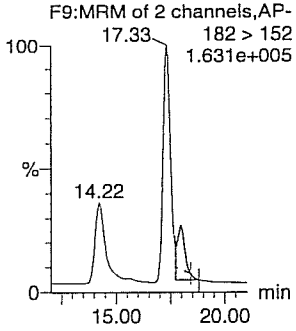
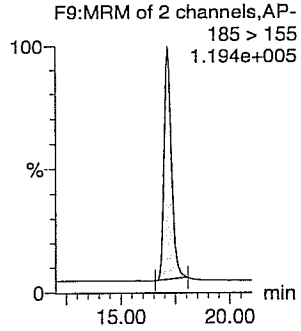
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

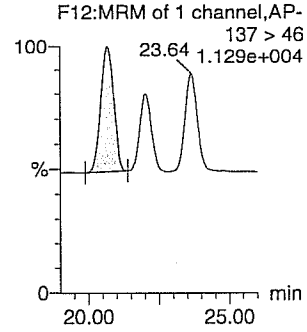
24-dinitrotoluene



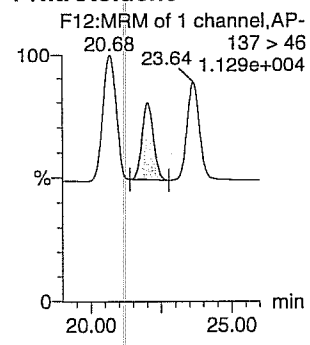
26-dinitrotoluene-d3



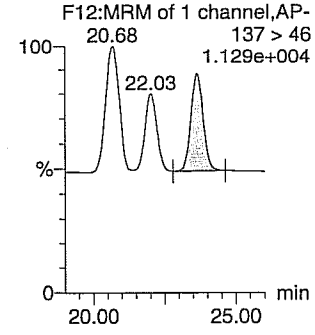
2-Nitrotoluene



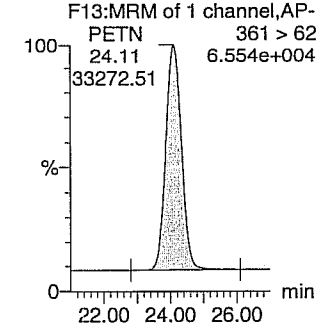
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs:Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101123-07ICV	HMX	176 > 102	5.19	30543.074	7408.789	30543.074	2061.273	db			620.2010	103.4	3.4	700.1
WXX101123-07ICV	RDX	176 > 102	7.55	23120.885	7408.789	23120.885	1560.369	bb			653.8434	109.0	9.0	466.1
WXX101123-07ICV	135-Trinitrobenzene	213 > 183	10.09	40831.727	7408.789	40831.727	2755.628	bb			565.5828	94.3	-5.7	2547.8
WXX101123-07ICV	13-Dinitrobenzene-d4	172 > 142	11.91	7408.789		7408.789	7408.789	bb			496.7901	99.4	-0.6	921.6
WXX101123-07ICV	13-Dinitrobenzene	168 > 138	12.03	11322.169	7408.789	11322.169	764.104	bb			618.3070	103.1	3.1	872.6
WXX101123-07ICV	Tetryl	241 > 181	12.47	11643.573	7408.789	11643.573	785.795	bb			571.6554	95.3	-4.7	740.8
WXX101123-07ICV	Nitrobenzene	123 > 46	13.41	4325.992	7408.789	4325.992	291.950	bb			567.5404	94.6	-5.4	391.6
WXX101123-07ICV	246-Trinitrotoluene	227 > 210	15.20	28432.346	45743.480	28432.346	310.780	bb			625.6048	104.3	4.3	741.1
WXX101123-07ICV	4-Amino-26-dinitrotoluene	197 > 167	15.41	14471.521	45743.480	14471.521	158.181	MM	26-Nov-10	13:26:23	593.3251	98.9	-1.1	266.4
WXX101123-07ICV	2-Amino-46-dinitrotoluene	197 > 180	16.26	24636.191	45743.480	24636.191	269.286	bb			642.9833	107.2	7.2	1023.4
WXX101123-07ICV	34-dinitrotoluene	182 > 152	14.22	25454.543	45743.480	25454.543	278.231	bb			277.3405	92.4	-7.6	1271.5
WXX101123-07ICV	26-dinitrotoluene	182 > 152	17.33	62111.941	45743.480	62111.941	678.916	MM	26-Nov-10	13:37:15	614.3407	102.4	2.4	3878.4
WXX101123-07ICV	24-dinitrotoluene	182 > 152	17.96	16146.126	45743.480	16146.126	176.486	MM	26-Nov-10	13:47:10	607.9433	101.3	1.3	897.9
WXX101123-07ICV	26-dinitrotoluene-d3	185 > 155	17.14	45743.480		45743.480	45743.480	bb			536.9118	107.4	7.4	2978.5
WXX101123-07ICV	2-Nitrotoluene	137 > 46	20.68	3128.014	45743.480	3128.014	34.191	bb			527.8241	88.0	-12.0	989.0
WXX101123-07ICV	4-Nitrotoluene	137 > 46	22.03	1672.114	45743.480	1672.114	18.277	bb			499.3773	83.2	-16.8	596.4
WXX101123-07ICV	3-Nitrotoluene	137 > 46	23.64	2234.281	45743.480	2234.281	24.422	bb			515.4839	85.9	-14.1	759.8
WXX101123-07ICV	PETN	361 > 62	24.11	33272.508	45743.480	33272.508	363.686	bb			496.5393	82.8	-17.2	7089.5

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 11/23/10
Time of Injection: 1926
Standard Number: WXX101123-07ICV
Data File: EXP1123010a

HMX	103.4
RDX	109.0
135-TNB	94.3
13-DNB	103.1
Tetryl	95.3
Nitrobenzene	94.6
246-TNT	104.3
4A-26-DNT	98.9
2A-46-DNT	107.2
34-DNT(surr)	92.4
26-DNT	102.4
24-DNT	101.3
2-NT	88.0
4-NT	83.2
3-NT	85.9
PETN	82.8
Total	1546.1
Average	96.6

HMC 11/29/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

11/29/10

Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 11–463

Lab Code: GEL

Run Date: 19–NOV–10,23–NOV–10,24–NOV–10

LCMSMS Instrument ID: LCMSMS4

Method: 8321A Modified

HPLC Column: YMC J–Sphere ODS–H8O

Calibration Type: 2nd Order

Calibration Level:	19	20	21	22	23	24	25	X	X^2	Intercept	COD	Q
Data File:	EXS11240003.wifl	EXS11240004.wifl	EXS11240005.wifl	EXS11240006.wifl	EXS11240007.wifl	EXS11240008.wifl	EXS11240009.wifl					
Parmname:												
2,4–Diamino–6–nitrotoluene	12200	26600	61500	135000	193000	269000	536000	–1490	264	.002	.9998	
2,6–Diamino–4–nitrotoluene	11700	25900	73300	137000	209000	298000	522000	–6680	318	–.027	.9992	
3,4–Dinitrotoluene	102000	225000	536000	1030000	1490000	2050000	3960000	–2900	4450	–.495	.9993	
3,5–Dinitroaniline	323000	675000	1600000	3160000	4420000	5710000	10600000	72700	6140	–.43	.9998	
TATB	40200	77100	184000	386000	574000	786000	1520000	–4970	793	–.015	.9999	
tris(o–cresyl) phosphate	584000	1170000	2820000	5600000	7920000	10700000	19800000	41100	11300	–.703	.9999	

Quadradic Fit: $y = Ax^2 + Bx + C$
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-4.97e+003			
a1	793			
a2	-0.0145			

Correlation coefficient 0.9999
Use Area

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	7.27e+004			
a1	6.14e+003			
a2	-0.43			

Correlation coefficient 0.9998
Use Area

Peak Name: 34-Dinitrotoluene
No Internal Standard
Q1/Q3 Masses: 182.08/151.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-2.9e+003			
a1	4.45e+003			
a2	-0.495			

Correlation coefficient 0.9993
Use Area

Peak Name: 26-Diamino-4-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-6.68e+003			
a1	318			
a2	-0.0265			

Correlation coefficient 0.9992
Use Area

Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

LCa 11/26/10

HMM 11/29/10

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Fit	Quadratic	Weighting	None	Iterate No
a0	-1.49e+003			
a1	264			
a2	0.00217			

Correlation coefficient 0.9998
Use Area

Peak Name: tris(o-cresyl) phosphate
No Internal Standard
Q1/Q3 Masses: 369.15/91.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	4.11e+004			
a1	1.13e+004			
a2	-0.703			

Correlation coefficient 0.9999
Use Area

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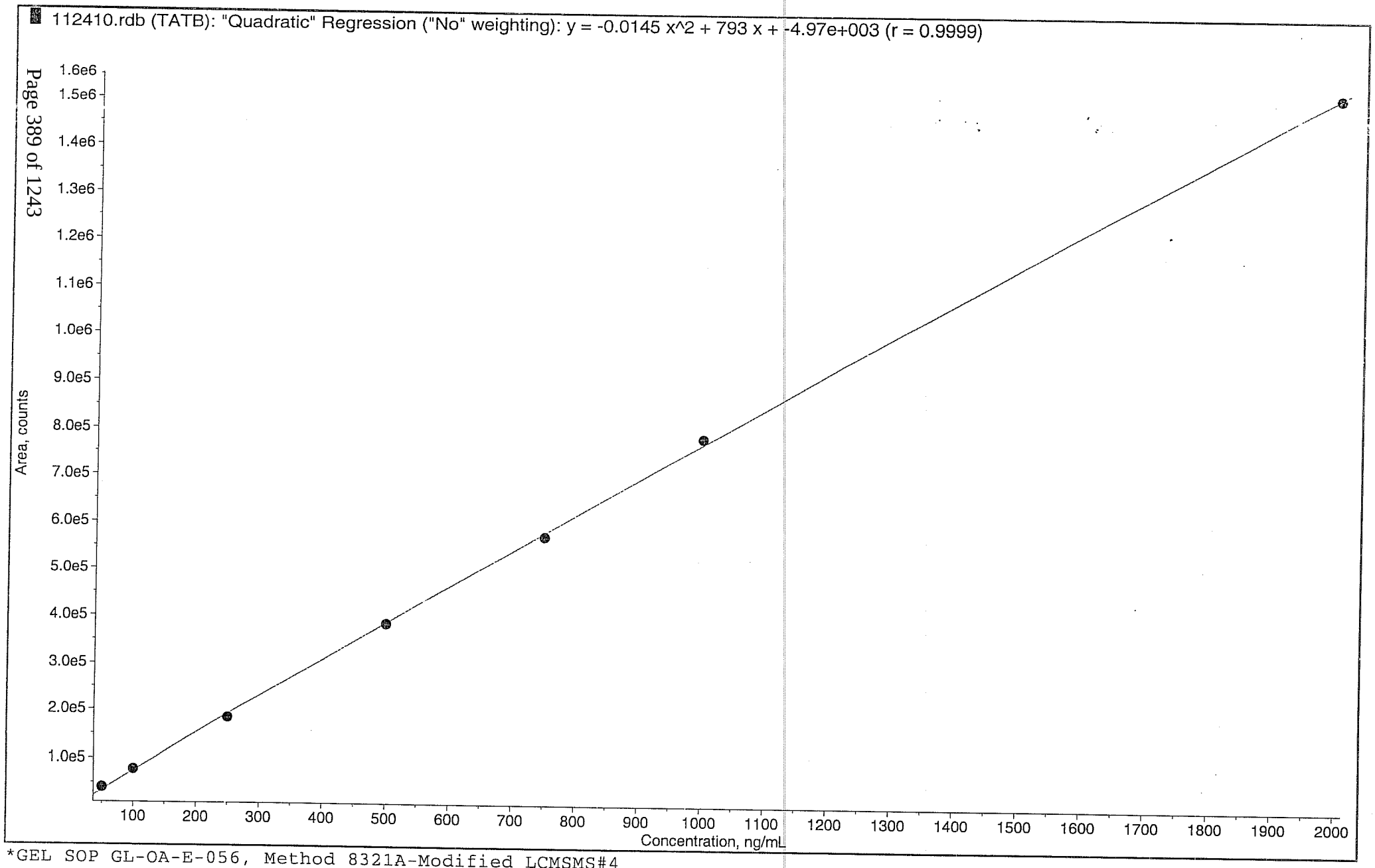

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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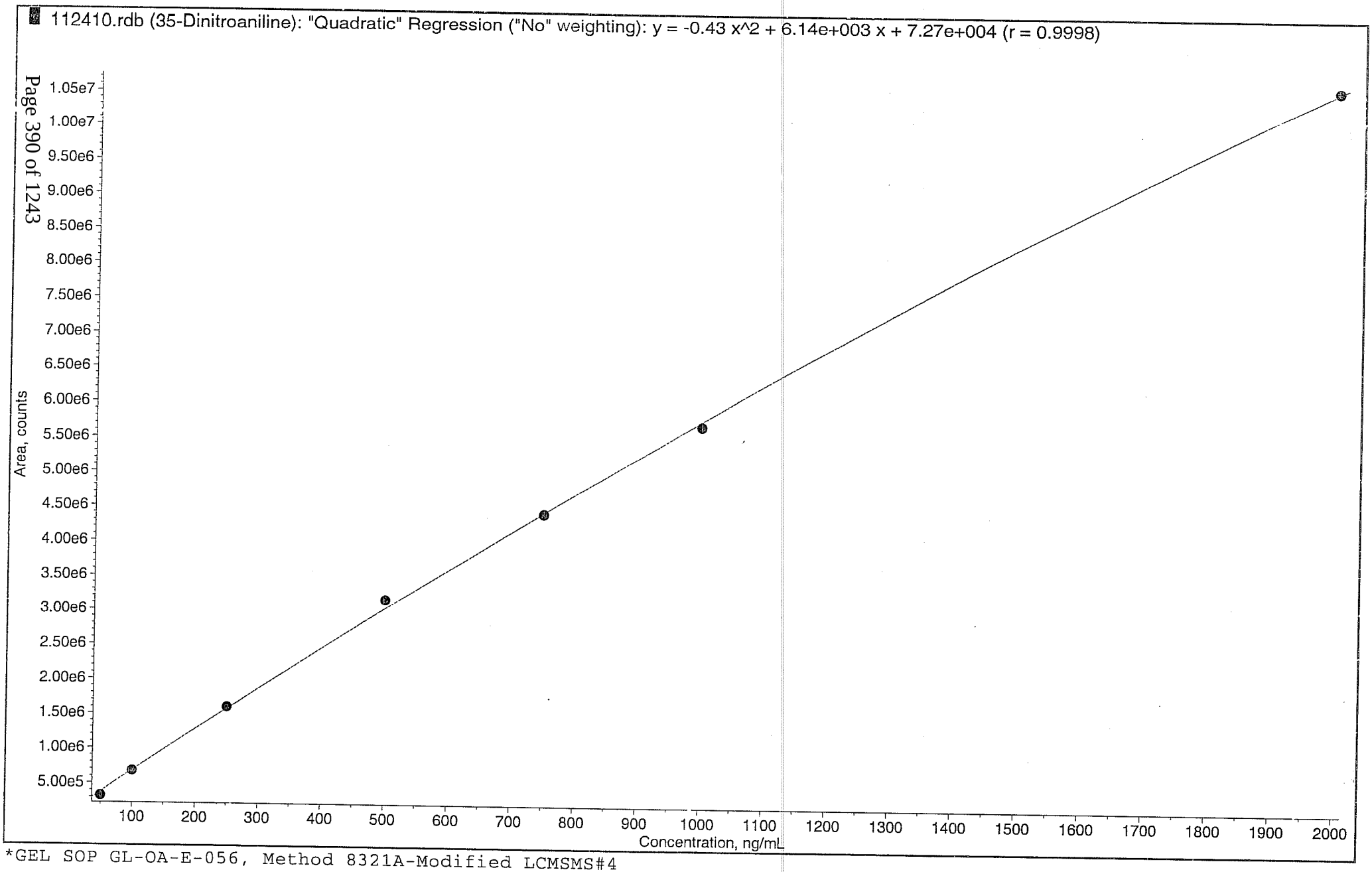

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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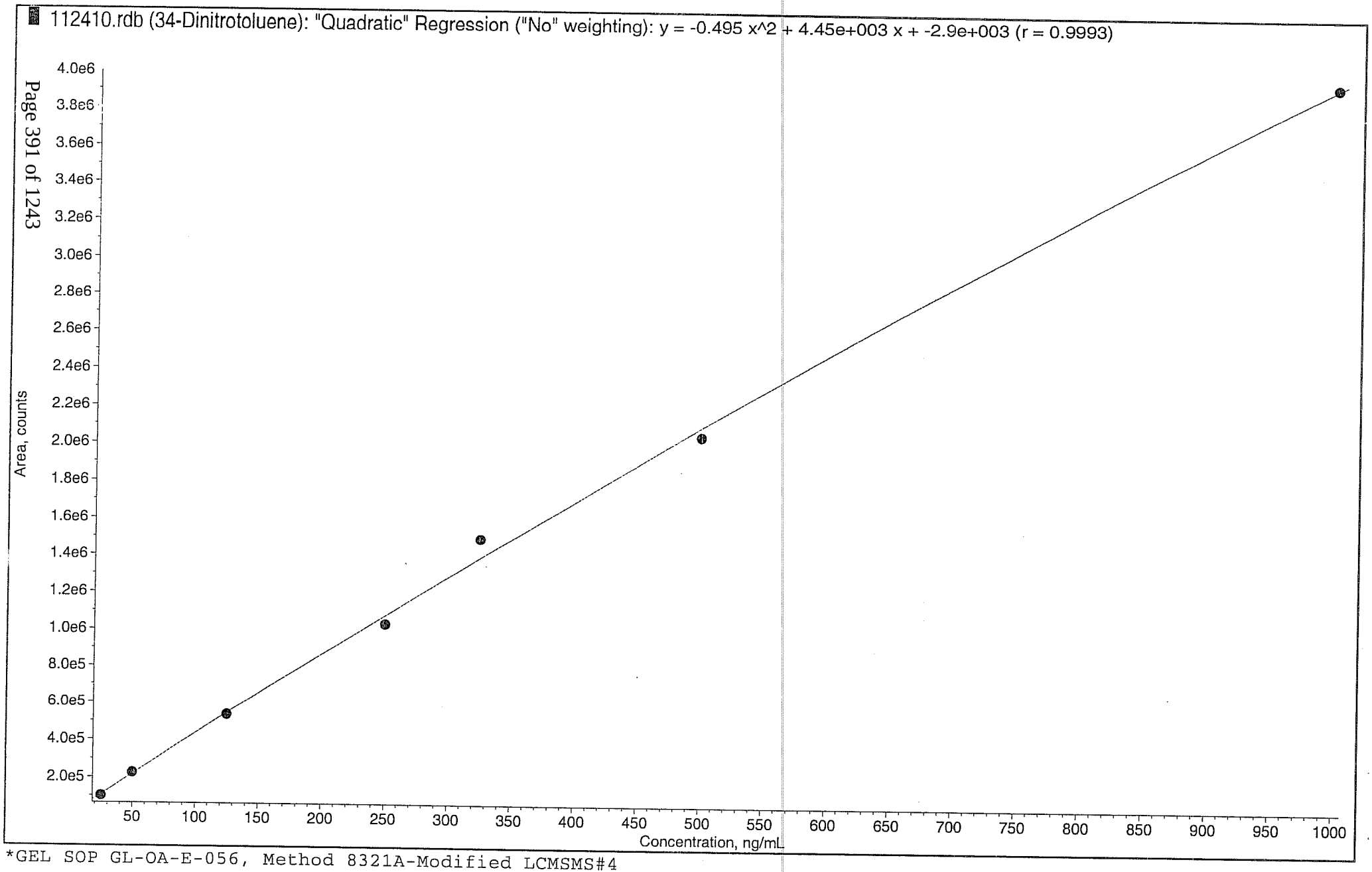

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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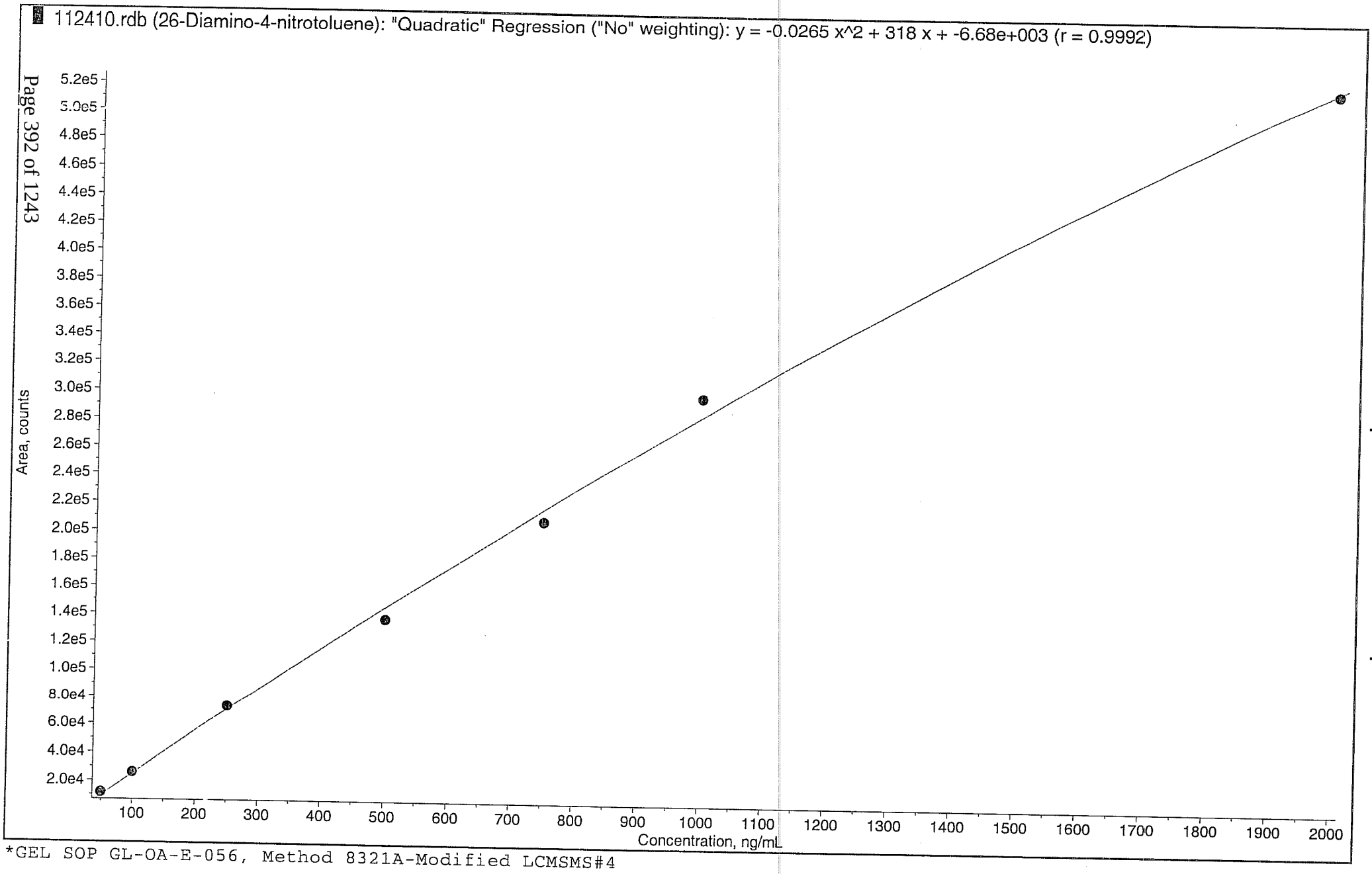

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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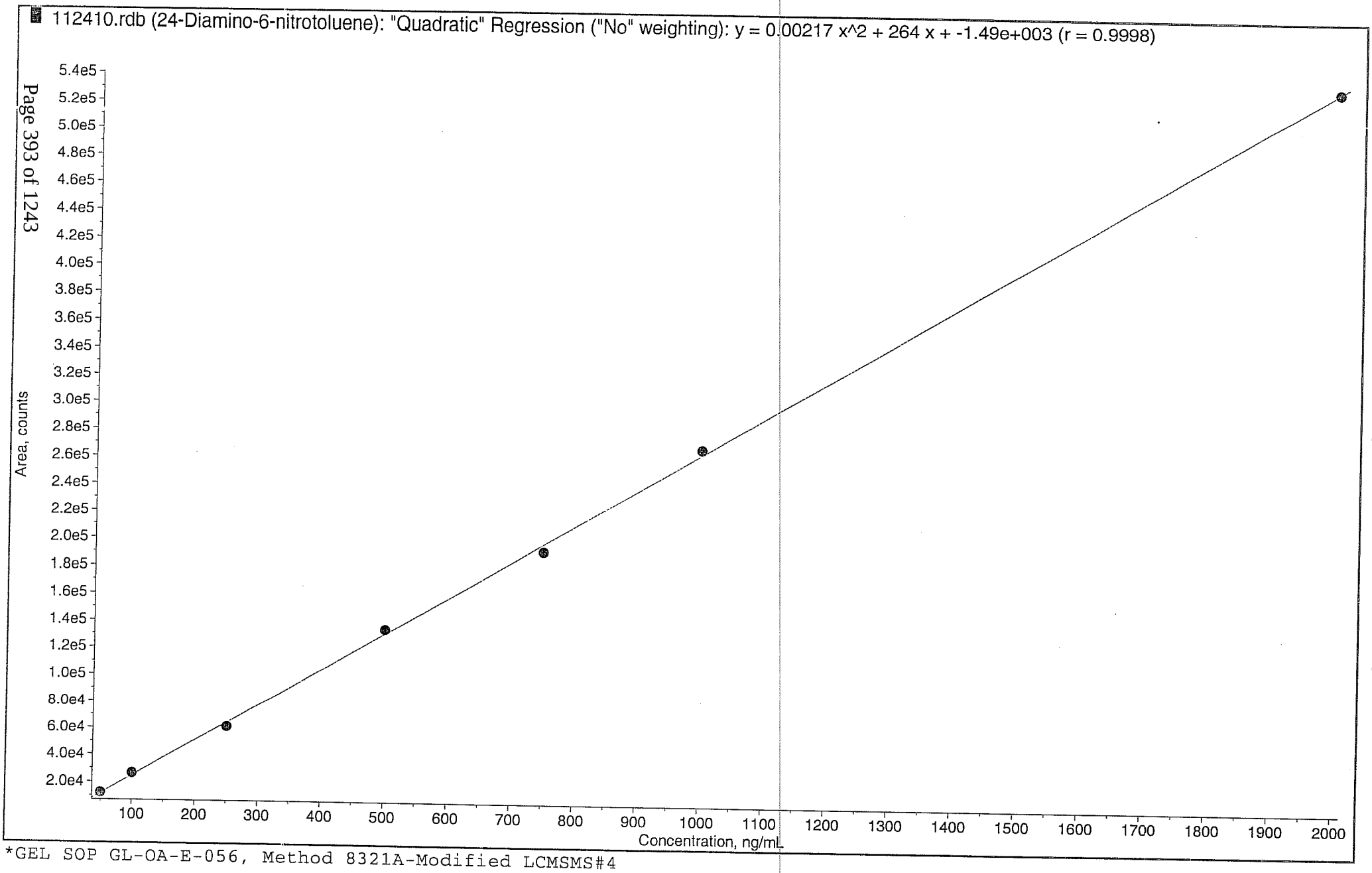

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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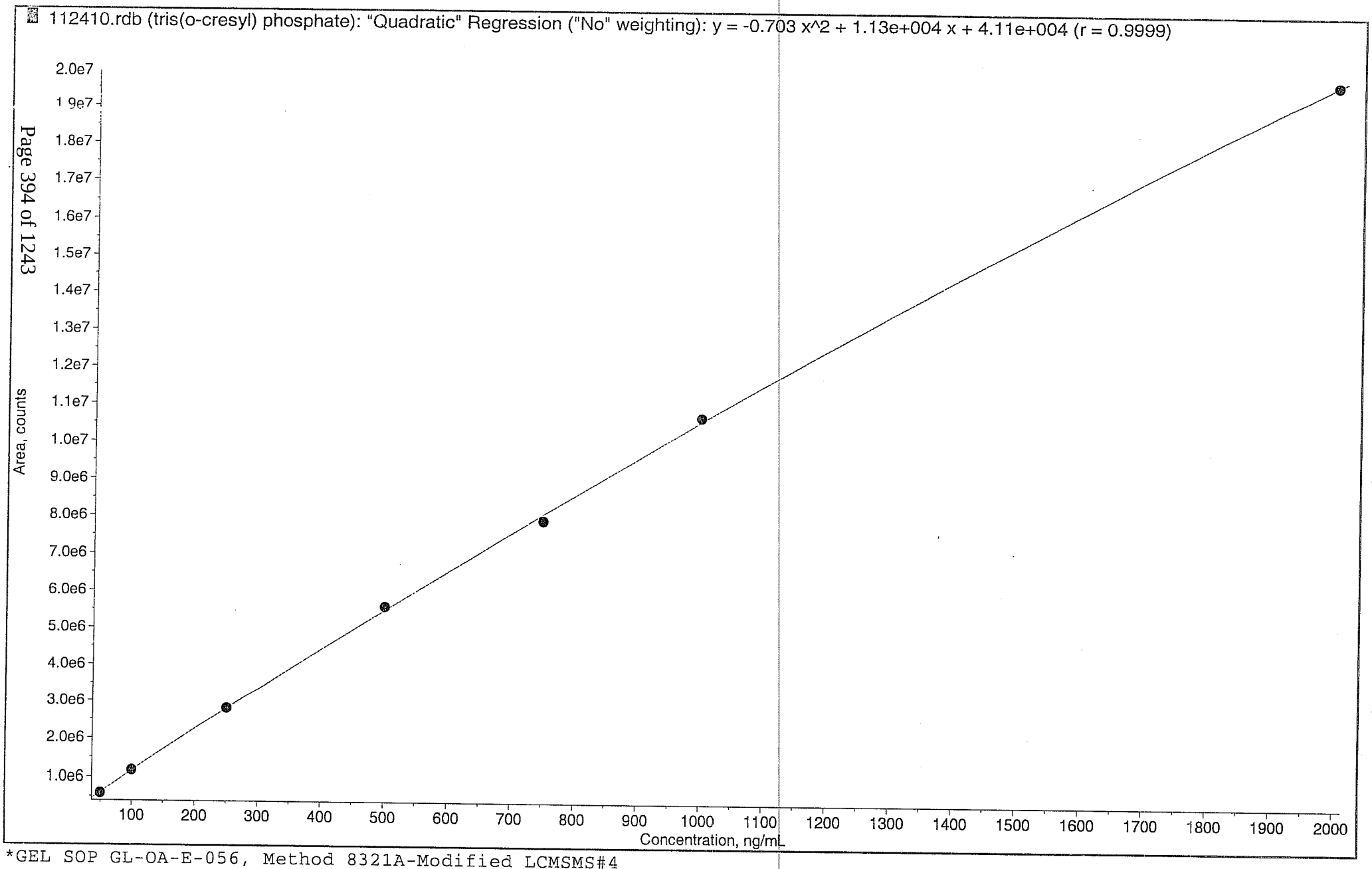

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXS11240011.wiff

Analysis Date: 24–NOV–10 13:06

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
2,4–Diamino–6–nitrotoluene	500	515	103	
2,6–Diamino–4–nitrotoluene	500	504	101	
3,4–Dinitrotoluene	250	247	99	
3,5–Dinitroaniline	500	505	101	
TATB	500	504	101	
tris(o–cresyl) phosphate	500	506	101	

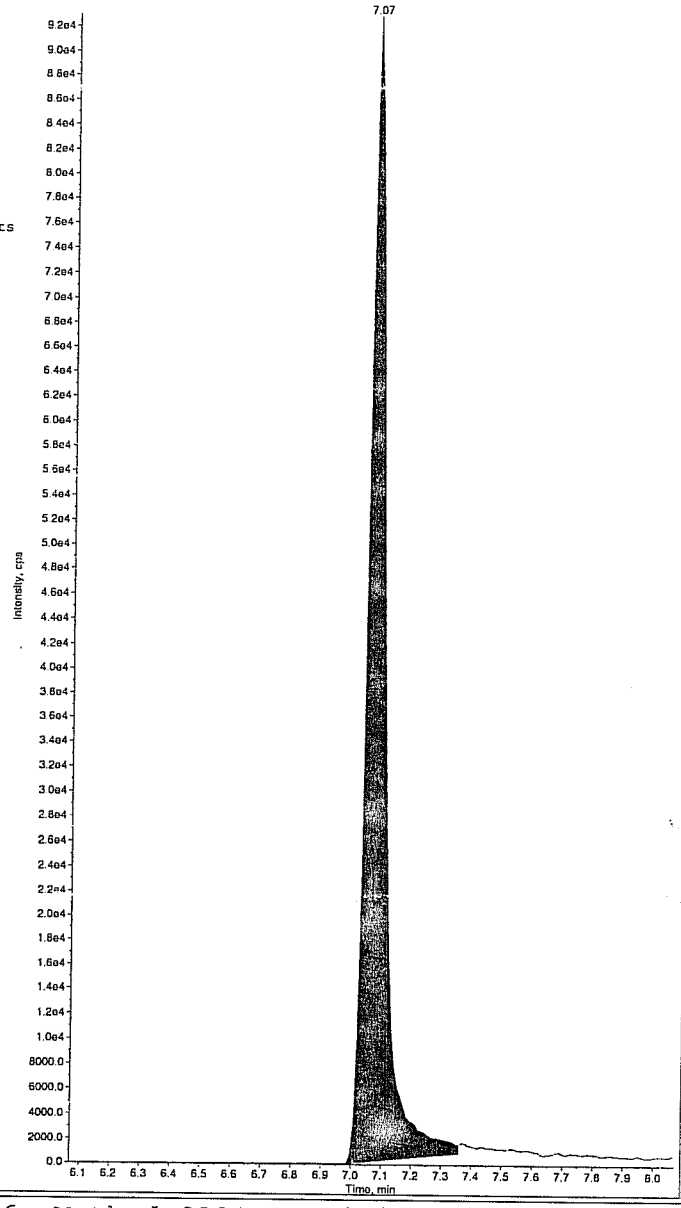
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX101124-26ICV" Sample ID: "|1|LER" File: "EXS11240011.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 504. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:06:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 0
Report Largest Peak: No
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 5 points
RT Window: 30.0 sec
Expected RT: 7.07 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.07 min
Area: 3.91e+005 counts
Height: 92725.129 cps
Start Time: 6.99 min
End Time: 7.36 min

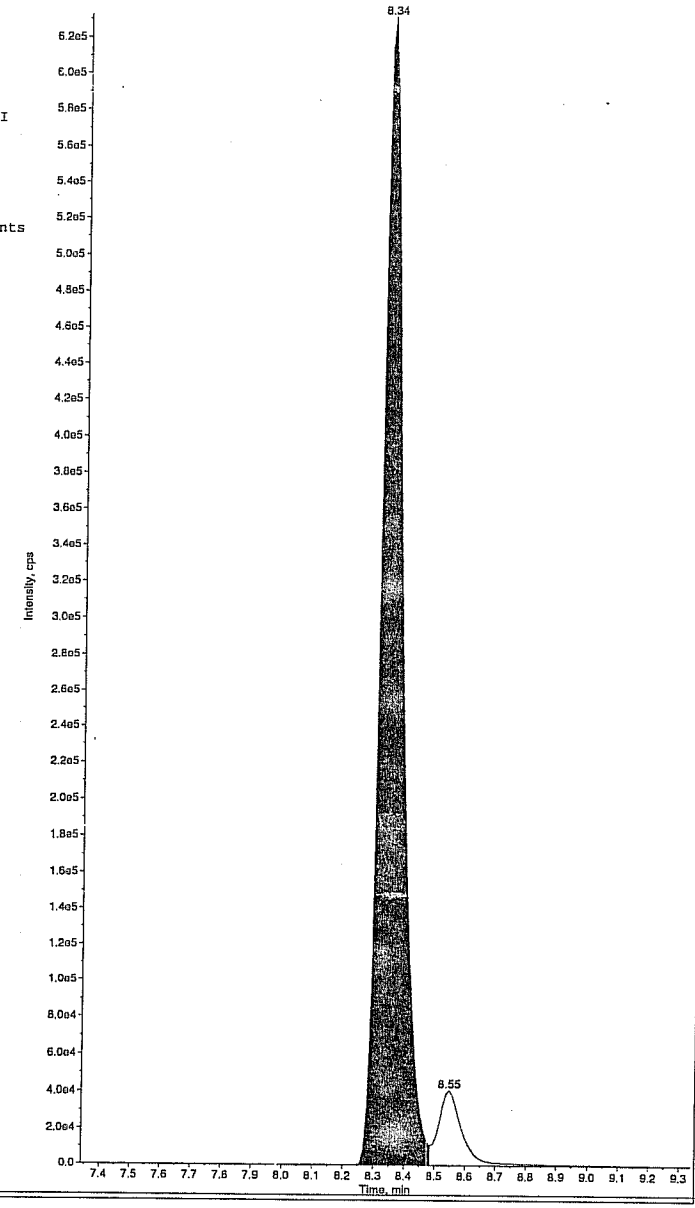


Sample Name: "WXX101124-26ICV" Sample ID: "|1|LER" File: "EXS11240011.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 505. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:06:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.34 min
Area: 3.07e+006 counts
Height: 632349.892 cps
Start Time: 8.23 min
End Time: 8.48 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

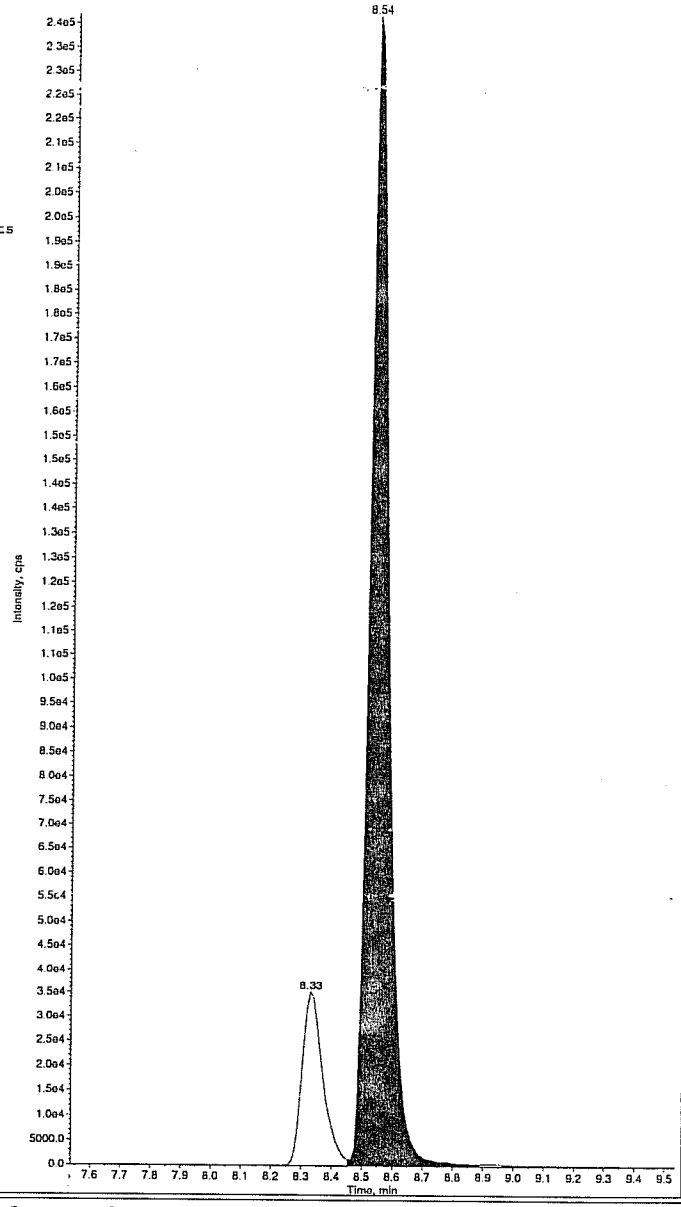
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX101124-26ICV" Sample ID: "|1|LER" File: "EXS11240011.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 247. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:06:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.54 min
Area: 1.07e+006 counts
Height: 236775.225 cps
Start Time: 8.45 min
End Time: 8.89 min

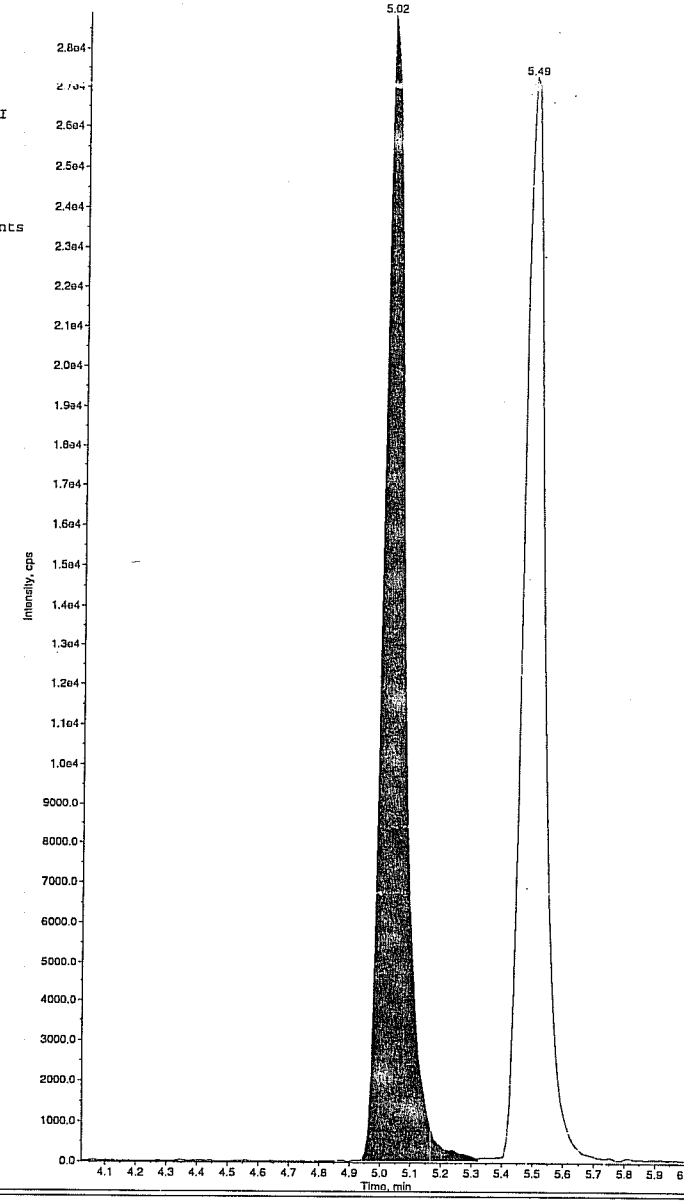


Sample Name: "WXX101124-26ICV" Sample ID: "|1|LER" File: "EXS11240011.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 504. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:06:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.02 min
Area: 1.47e+005 counts
Height: 28850.504 cps
Start Time: 4.93 min
End Time: 5.32 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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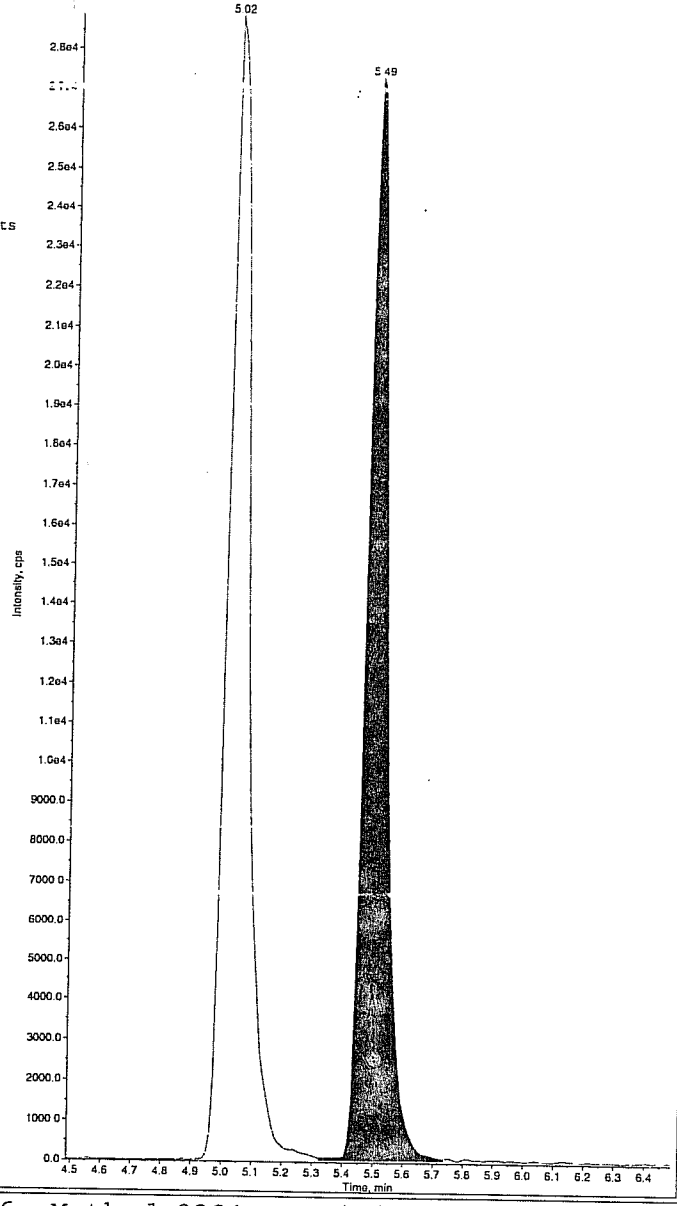
Sample Name: "WXX101124-26ICV" Sample ID: "|1|LER" File: "EXS11240011.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 515. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:06:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.49 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.49 min
Area: 1.35e+005 counts
Height: 27282.553 cps
Start Time: 5.32 min
End Time: 5.74 min

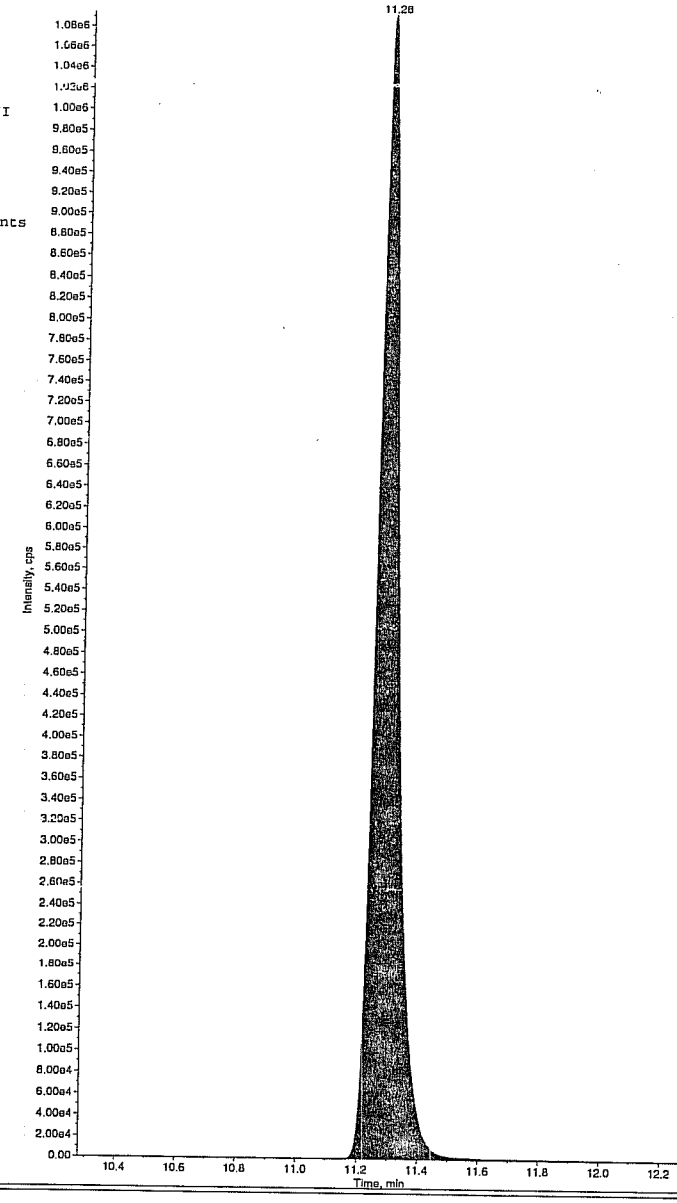


Sample Name: "WXX101124-26ICV" Sample ID: "|1|LER" File: "EXS11240011.wiff"
Peak Name: "Iris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 506. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:06:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: No
Min. Peak Height: 2.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 11.3 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.3 min
Area: 5.56e+006 counts
Height: 1094511.201 cps
Start Time: 11.1 min
End Time: 11.6 min



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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP1119012a

Analysis Date: 19–NOV–10 20:08

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	40	44.236	111	
1,3–Dinitrobenzene–d4	500	498.521	100	
2,4,6–Trinitrotoluene	40	37.152	93	
2,4–Dinitrotoluene	40	37.589	94	
2,6–Dinitrotoluene	40	38.734	97	
2,6–Dinitrotoluene–d3	500	532.504	107	
2–Amino–4,6–dinitrotoluene	40	34.384	86	
3,4–Dinitrotoluene	20	20.206	101	
4–Amino–2,6–dinitrotoluene	40	35.274	88	
HMX	40	43.263	108	
Nitrobenzene	40	38.784	97	
PETN	40	44.405	111	
RDX	40	42.713	107	
Tetryl	40	41.417	104	
m–Dinitrobenzene	40	40.097	100	
m–Nitrotoluene	40	40.42	101	
o–Nitrotoluene	40	38.155	95	
p–Nitrotoluene	40	34.899	87	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

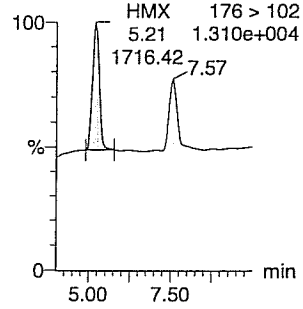
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

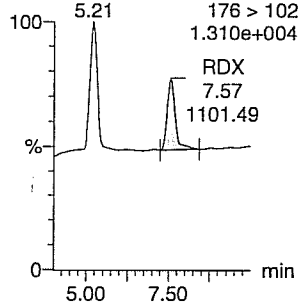
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119012a
Date: 19-Nov-2010
Time: 20:08:42
ID: WXX101119-08CRI
Vial: 1:1,C

MAP 11/22/10

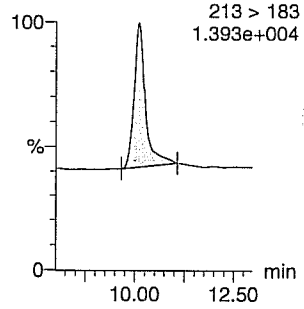
HMX
F2:MRM of 1 channel,AP-
HMX 176 > 102
5.21 1.310e+004
1716.42 7.57



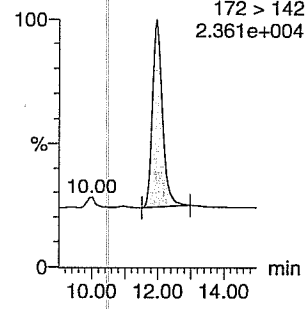
RDX
F2:MRM of 1 channel,AP-
5.21 176 > 102
1.310e+004
RDX
7.57
1101.49



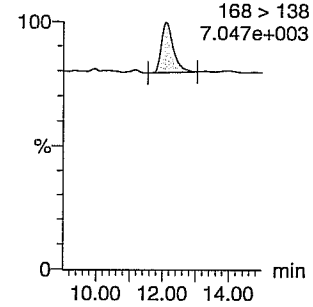
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
1.393e+004



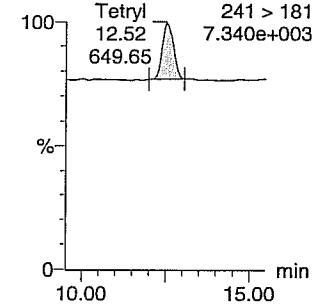
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.361e+004



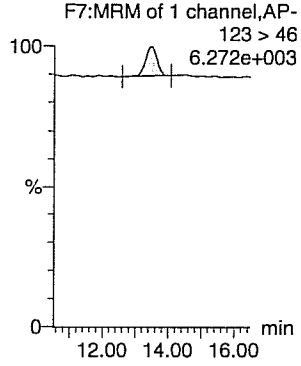
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
7.047e+003



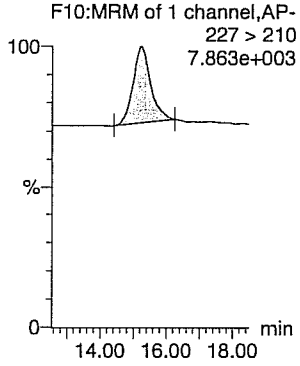
Tetryl
F6:MRM of 1 channel,AP-
Tetryl 241 > 181
12.52 7.340e+003
649.65



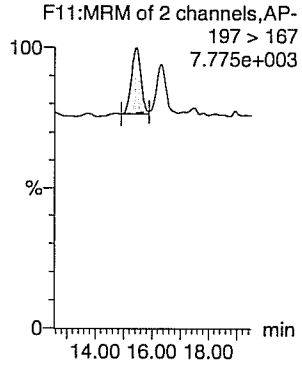
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
6.272e+003



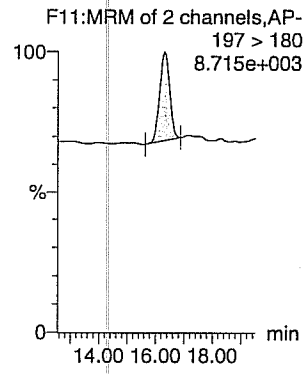
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
7.863e+003



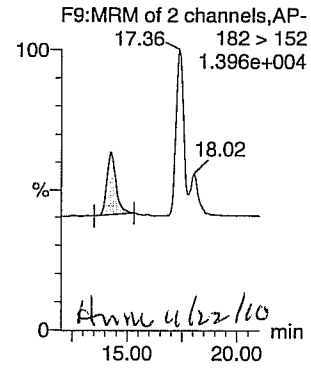
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
7.775e+003



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
8.715e+003

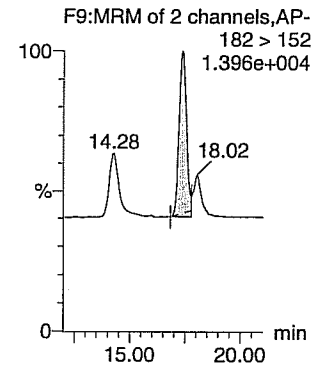


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.396e+004
17.36
18.02



Amm 11/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.396e+004
14.28
18.02



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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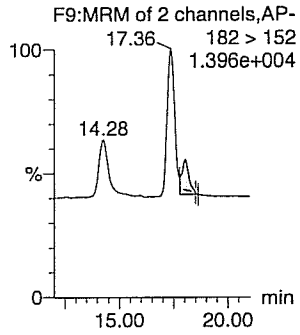
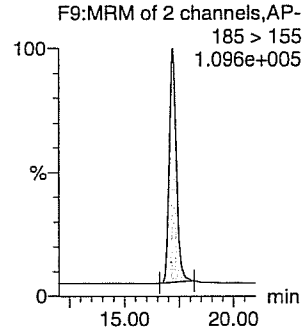
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

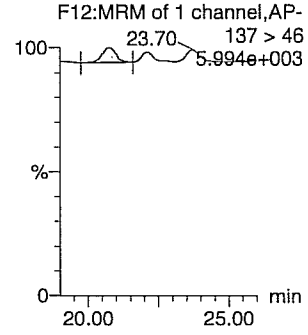
24-dinitrotoluene



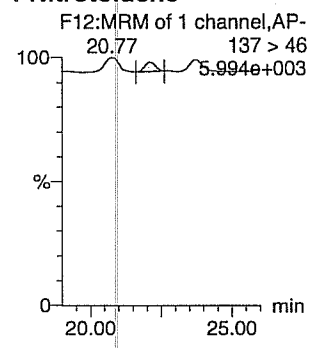
26-dinitrotoluene-d3



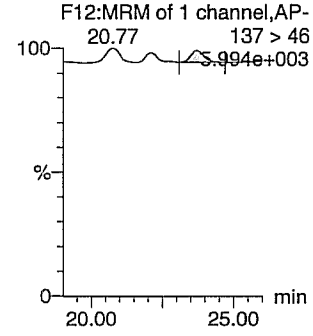
2-Nitrotoluene



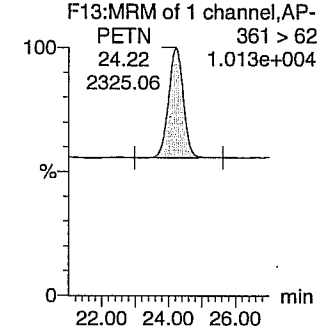
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-08CRI	HMX	176 > 102	5.21	1716.417	6395.656	1716.417	134.186	bb			43.2634	108.2	8.2	107.1
WXX101119-08CRI	RDX	176 > 102	7.57	1101.492	6395.656	1101.492	86.113	bb			42.7134	106.8	6.8	59.5
WXX101119-08CRI	135-Trinitrobenzene	213 > 183	10.11	2745.789	6395.656	2745.789	214.660	bb			44.2355	110.6	10.6	131.8
WXX101119-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	6395.656		6395.656	6395.656	bb			498.5206	99.7	-0.3	487.3
WXX101119-08CRI	13-Dinitrobenzene	168 > 138	12.08	609.763	6395.656	609.763	47.670	bb			40.0974	100.2	0.2	37.6
WXX101119-08CRI	Tetryl	241 > 181	12.52	649.655	6395.656	649.655	50.789	bb			41.4170	103.5	3.5	91.7
WXX101119-08CRI	Nitrobenzene	123 > 46	13.47	276.103	6395.656	276.103	21.585	bb			38.7844	97.0	-3.0	32.8
WXX101119-08CRI	246-Trinitrotoluene	227 > 210	15.25	1325.899	40579.184	1325.899	16.337	bb			37.1515	92.9	-7.1	98.7
WXX101119-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.45	738.203	40579.184	738.203	9.096	MM	21-Nov-10	10:48:34	35.2739	88.2	-11.8	29.1
WXX101119-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.30	1135.368	40579.184	1135.368	13.990	bb			34.3837	86.0	-14.0	86.5
WXX101119-08CRI	34-dinitrotoluene	182 > 152	14.28	1561.608	40579.184	1561.608	19.241	bb			20.2056	101.0	1.0	108.3
WXX101119-08CRI	26-dinitrotoluene	182 > 152	17.36	3351.489	40579.184	3351.489	41.296	MM	21-Nov-10	10:58:08	38.7344	96.8	-3.2	283.2
WXX101119-08CRI	24-dinitrotoluene	182 > 152	18.02	797.976	40579.184	797.976	9.832	MM	21-Nov-10	11:03:39	37.5891	94.0	-6.0	68.5
WXX101119-08CRI	26-dinitrotoluene-d3	185 > 155	17.22	40579.184		40579.184	40579.184	bb			532.5038	106.5	6.5	1931.4
WXX101119-08CRI	2-Nitrotoluene	137 > 46	20.77	210.517	40579.184	210.517	2.594	bb			38.1548	95.4	-4.6	29.8
WXX101119-08CRI	4-Nitrotoluene	137 > 46	22.10	100.383	40579.184	100.383	1.237	bb			34.8985	87.2	-12.8	18.8
WXX101119-08CRI	3-Nitrotoluene	137 > 46	23.70	156.478	40579.184	156.478	1.928	bb			40.4196	101.0	1.0	23.8
WXX101119-08CRI	PETN	361 > 62	24.22	2325.058	40579.184	2325.058	28.648	bb			44.4053	111.0	11.0	1069.4

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis: 11/19/10
Time of Injection: 2008
Standard Number: WXX101119-08CRI
Data File: EXP1119012a

HMX		108.2
RDX		106.8
135-TNB		110.6
13-DNB		100.2
Tetryl		103.5
Nitrobenzene		97.0
246-TNT		92.9
4A-26-DNT		88.2
2A-46-DNT		86.0
34-DNT(surr)		101.0
26-DNT		96.8
24-DNT		94.0
2-NT		95.4
4-NT		87.2
3-NT		101.0
PETN		111.0
Total		1579.8
Average		98.7

MMT 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

11/22/10

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP1119023a

Analysis Date: 20–NOV–10 01:33

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
o–Nitrotoluene	600	608.09	101	
p–Nitrotoluene	600	628.211	105	
1,3,5–Trinitrobenzene	600	587.582	98	
1,3–Dinitrobenzene–d4	500	498.698	100	
2,4,6–Trinitrotoluene	600	617.113	103	
2,4–Dinitrotoluene	600	654.16	109	
2,6–Dinitrotoluene	600	629.803	105	
2,6–Dinitrotoluene–d3	500	473.221	95	
2–Amino–4,6–dinitrotoluene	600	628.343	105	
3,4–Dinitrotoluene	300	313.032	104	
4–Amino–2,6–dinitrotoluene	600	607.763	101	
HMX	600	547.855	91	
Nitrobenzene	600	543.603	91	
PETN	600	619.542	103	
RDX	600	644.265	107	
Tetryl	600	587.943	98	
m–Dinitrobenzene	600	610.73	102	
m–Nitrotoluene	600	620.978	103	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

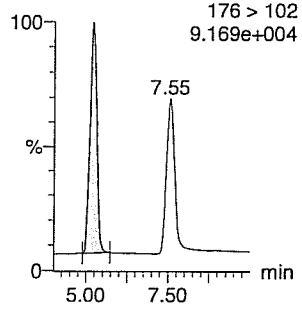
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

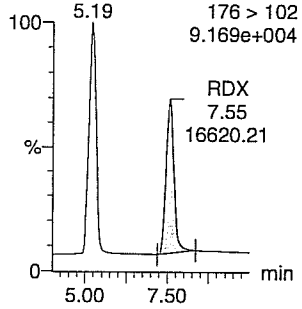
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119023a
Date: 20-Nov-2010
Time: 01:33:11
ID: WXX101119-07CCV
Vial: 1:1,B

MATT 11/22/10

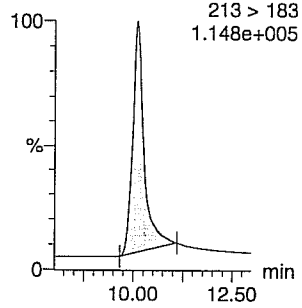
HMX
F2:MRM of 1 channel,AP-
176 > 102
9.169e+004
7.55



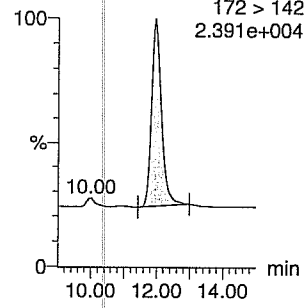
RDX
F2:MRM of 1 channel,AP-
176 > 102
9.169e+004
5.19
RDX
7.55
16620.21



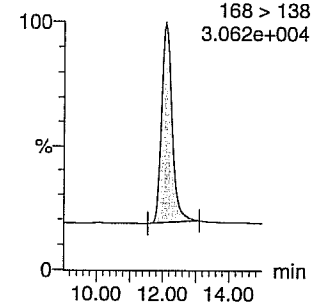
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
1.148e+005



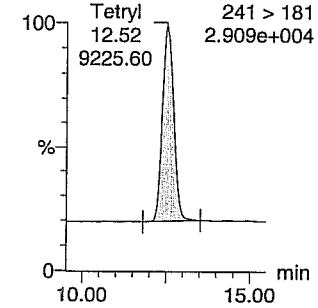
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.391e+004
10.00



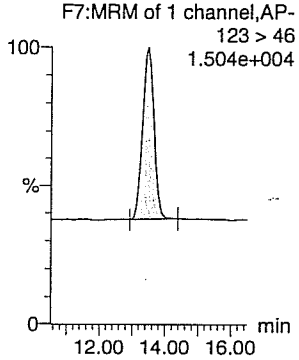
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
3.062e+004



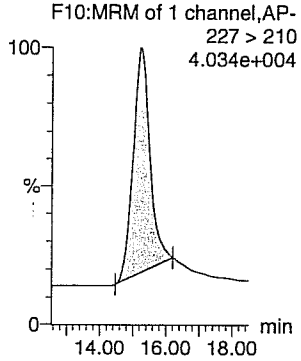
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
2.909e+004
Tetryl
12.52
9225.60



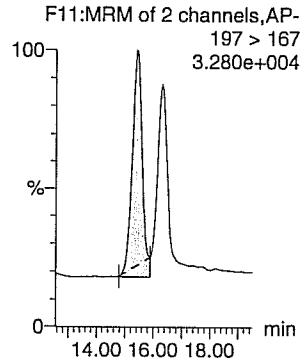
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.504e+004



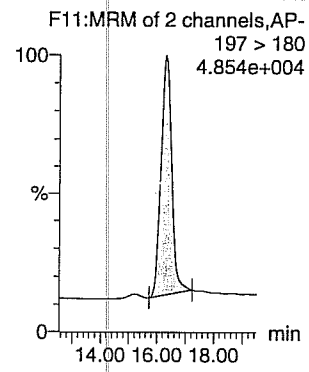
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
4.034e+004



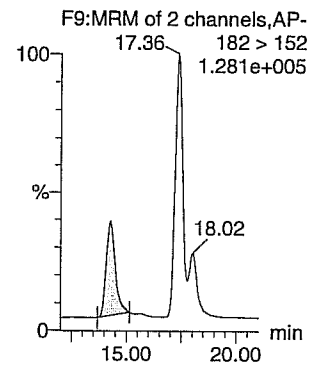
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
3.280e+004



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
4.854e+004

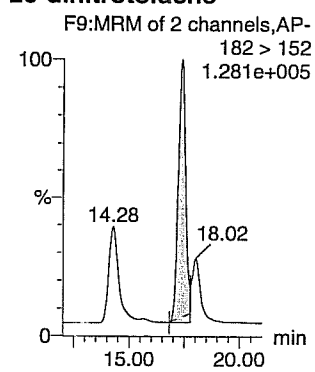


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.281e+005
17.36
18.02



HMM 11/22/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.281e+005
14.28
18.02



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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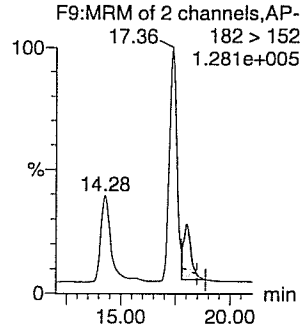
Quantify Sample Report

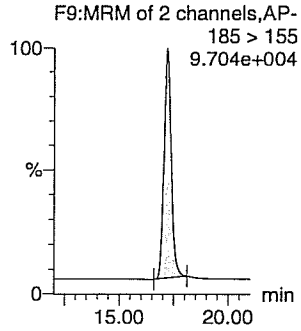
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

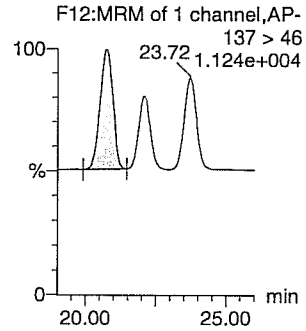
24-dinitrotoluene



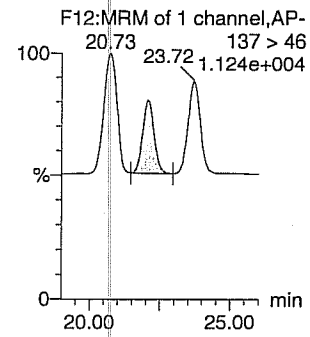
26-dinitrotoluene-d3



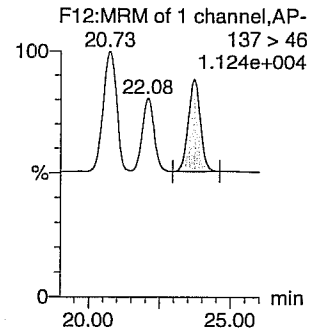
2-Nitrotoluene



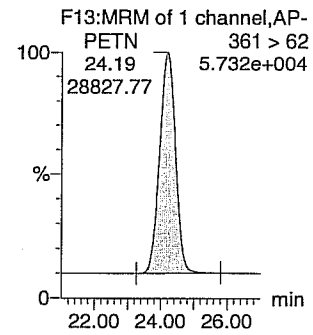
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-07CCV	HMX	176 > 102	5.19	21743.174	6397.935	21743.174	1699.234	db			547.8549	91.3	-8.7	1779.4
WXX101119-07CCV	RDX	176 > 102	7.55	16620.205	6397.935	16620.205	1298.873	bb			644.2654	107.4	7.4	1193.0
WXX101119-07CCV	135-Trinitrobenzene	213 > 183	10.09	36485.453	6397.935	36485.453	2851.346	bb			587.5823	97.9	-2.1	1150.5
WXX101119-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	6397.935		6397.935	6397.935	bb			498.6983	99.7	-0.3	1041.5
WXX101119-07CCV	13-Dinitrobenzene	168 > 138	12.08	9290.703	6397.935	9290.703	726.070	bb			610.7299	101.8	1.8	872.7
WXX101119-07CCV	Tetryl	241 > 181	12.52	9225.599	6397.935	9225.599	720.983	bb			587.9434	98.0	-2.0	629.3
WXX101119-07CCV	Nitrobenzene	123 > 46	13.47	3871.244	6397.935	3871.244	302.539	bb			543.6035	90.6	-9.4	401.1
WXX101119-07CCV	246-Trinitrotoluene	227 > 210	15.20	19572.227	36061.586	19572.227	271.372	bb			617.1129	102.9	2.9	2795.3
WXX101119-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.41	11303.137	36061.586	11303.137	156.720	MM	21-Nov-10	10:49:56	607.7634	101.3	1.3	397.5
WXX101119-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.30	18438.389	36061.586	18438.389	255.651	bb			628.3434	104.7	4.7	455.6
WXX101119-07CCV	34-dinitrotoluene	182 > 152	14.28	21499.615	36061.586	21499.615	298.096	bb			313.0316	104.3	4.3	633.9
WXX101119-07CCV	26-dinitrotoluene	182 > 152	17.36	48426.988	36061.586	48426.988	671.448	MM	21-Nov-10	10:59:05	629.8026	105.0	5.0	1767.4
WXX101119-07CCV	24-dinitrotoluene	182 > 152	18.02	12341.076	36061.586	12341.076	171.111	MM	21-Nov-10	11:05:04	654.1602	109.0	9.0	416.5
WXX101119-07CCV	26-dinitrotoluene-d3	185 > 155	17.18	36061.586		36061.586	36061.586	bb			473.2212	94.6	-5.4	2011.2
WXX101119-07CCV	2-Nitrotoluene	137 > 46	20.73	2981.589	36061.586	2981.589	41.340	bb			608.0904	101.3	1.3	1106.3
WXX101119-07CCV	4-Nitrotoluene	137 > 46	22.08	1605.834	36061.586	1605.834	22.265	bb			628.2113	104.7	4.7	673.5
WXX101119-07CCV	3-Nitrotoluene	137 > 46	23.72	2136.382	36061.586	2136.382	29.621	bb			620.9777	103.5	3.5	849.8
WXX101119-07CCV	PETN	361 > 62	24.19	28827.773	36061.586	28827.773	399.702	bb			619.5418	103.3	3.3	5024.8

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 11/20/10
Time of Injection: 0133
Standard Number: WXX101119-07CCV
Data File: EXP1119023a

HMX		91.3
RDX		107.4
135-TNB		97.9
13-DNB		101.8
Tetryl		98.0
Nitrobenzene		90.6
246-TNT		102.9
4A-26-DNT		101.3
2A-46-DNT		104.7
34-DNT(surr)		104.3
26-DNT		105.0
24-DNT		109.0
2-NT		101.3
4-NT		104.7
3-NT		103.5
PETN		103.3
Total		1627.0
Average		101.7

MJT 11/22/10

Hmm 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP1119025a

Analysis Date: 20–NOV–10 02:32

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2,4–Dinitrotoluene	40	40.533	101	
2,6–Dinitrotoluene	40	40.457	101	
2,6–Dinitrotoluene–d3	500	507.519	102	
2–Amino–4,6–dinitrotoluene	40	42.632	107	
3,4–Dinitrotoluene	20	19.17	96	
4–Amino–2,6–dinitrotoluene	40	39.586	99	
HMX	40	44.96	112	
Nitrobenzene	40	34.065	85	
PETN	40	49.698	124	
RDX	40	39.244	98	
Tetryl	40	41.691	104	
m–Dinitrobenzene	40	41.843	105	
m–Nitrotoluene	40	37.703	94	
o–Nitrotoluene	40	34.667	87	
p–Nitrotoluene	40	38.695	97	
1,3,5–Trinitrobenzene	40	41.154	103	
1,3–Dinitrobenzene–d4	500	535.991	107	
2,4,6–Trinitrotoluene	40	40.467	101	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

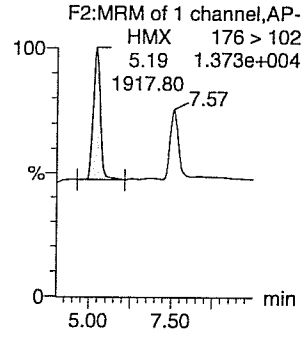
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

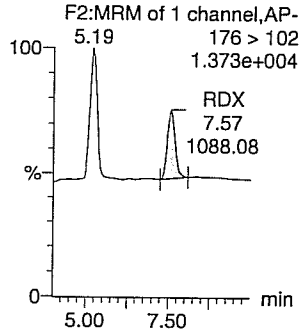
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119025a
Date: 20-Nov-2010
Time: 02:32:14
ID: WXX101119-08CRI
Vial: 1:1,C

MMT 11/22/10

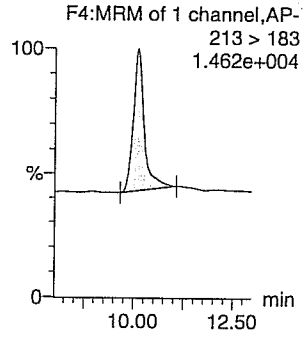
HMX



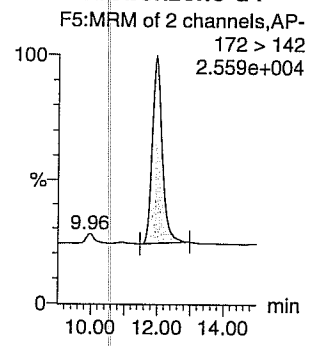
RDX



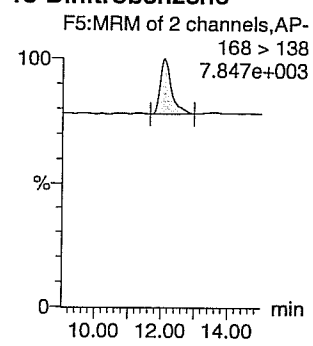
135-Trinitrobenzene



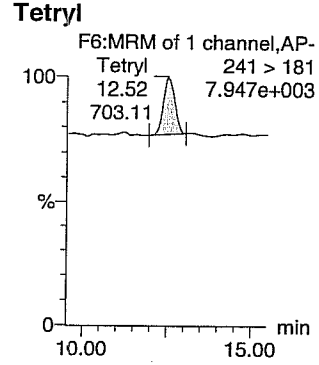
13-Dinitrobenzene-d4



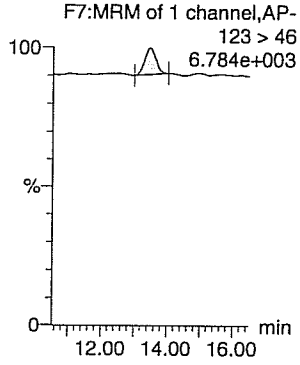
13-Dinitrobenzene



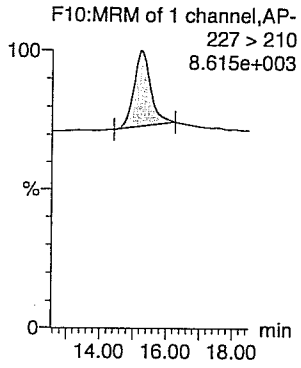
Tetryl



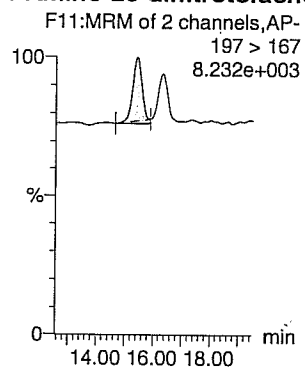
Nitrobenzene



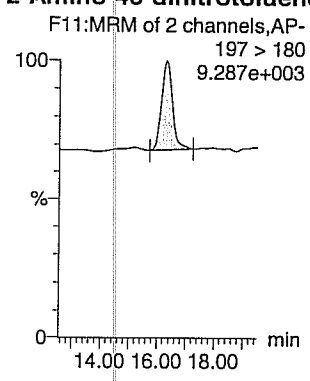
246-Trinitrotoluene



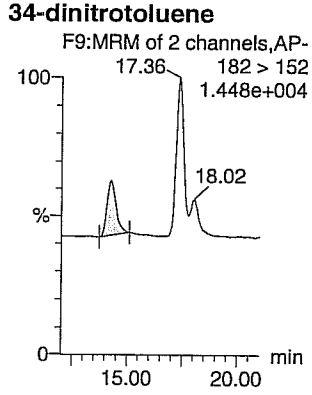
4-Amino-26-dinitrotoluene



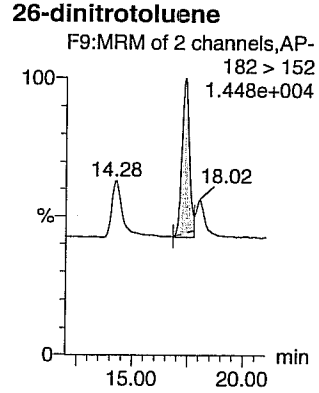
2-Amino-46-dinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



HMM 11/22/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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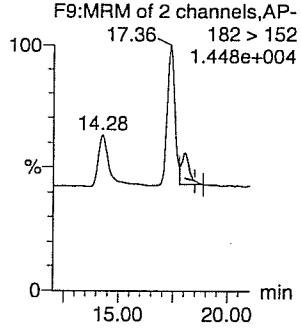
Quantify Sample Report

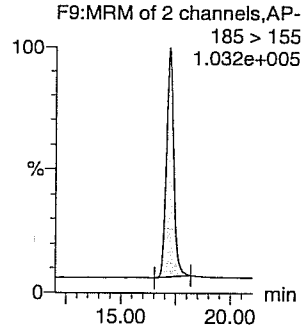
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

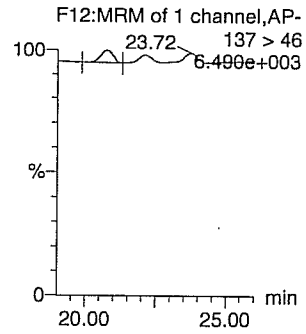
24-dinitrotoluene



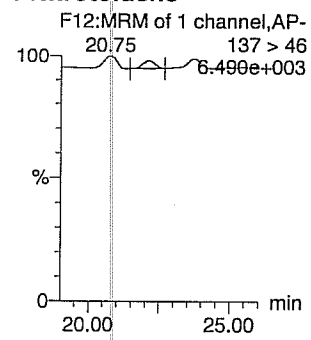
26-dinitrotoluene-d3



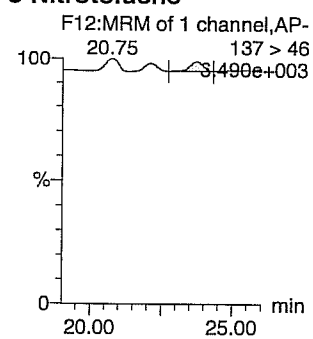
2-Nitrotoluene



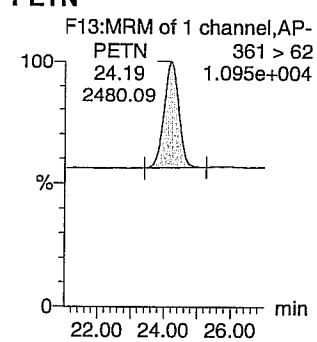
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-08CRI	HMX	176 > 102	5.19	1917.802	6876.372	1917.802	139.449	bb			44.9601	112.4	12.4	105.0
WXX101119-08CRI	RDX	176 > 102	7.57	1088.079	6876.372	1088.079	79.117	bb			39.2436	98.1	-1.9	55.0
WXX101119-08CRI	135-Trinitrobenzene	213 > 183	10.09	2746.521	6876.372	2746.521	199.707	bb			41.1540	102.9	2.9	151.7
WXX101119-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	6876.372		6876.372	6876.372	bb			535.9909	107.2	7.2	310.1
WXX101119-08CRI	13-Dinitrobenzene	168 > 138	12.08	684.139	6876.372	684.139	49.746	bb			41.8433	104.6	4.6	46.4
WXX101119-08CRI	Tetryl	241 > 181	12.52	703.109	6876.372	703.109	51.125	bb			41.6912	104.2	4.2	26.8
WXX101119-08CRI	Nitrobenzene	123 > 46	13.47	260.730	6876.372	260.730	18.958	bb			34.0646	85.2	-14.8	14.5
WXX101119-08CRI	246-Trinitrotoluene	227 > 210	15.25	1376.451	38675.270	1376.451	17.795	bb			40.4666	101.2	1.2	94.9
WXX101119-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.41	789.583	38675.270	789.583	10.208	MM	21-Nov-10	10:50:03	39.5863	99.0	-1.0	48.0
WXX101119-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.30	1341.668	38675.270	1341.668	17.345	bb			42.6315	106.6	6.6	42.9
WXX101119-08CRI	34-dinitrotoluene	182 > 152	14.28	1412.027	38675.270	1412.027	18.255	bb			19.1696	95.8	-4.2	106.0
WXX101119-08CRI	26-dinitrotoluene	182 > 152	17.36	3336.307	38675.270	3336.307	43.132	MM	21-Nov-10	10:59:15	40.4571	101.1	1.1	302.9
WXX101119-08CRI	24-dinitrotoluene	182 > 152	18.02	820.097	38675.270	820.097	10.602	MM	21-Nov-10	11:05:21	40.5329	101.3	1.3	67.1
WXX101119-08CRI	26-dinitrotoluene-d3	185 > 155	17.18	38675.270		38675.270	38675.270	bb			507.5195	101.5	1.5	1719.1
WXX101119-08CRI	2-Nitrotoluene	137 > 46	20.75	182.299	38675.270	182.299	2.357	bb			34.6670	86.7	-13.3	60.9
WXX101119-08CRI	4-Nitrotoluene	137 > 46	22.10	106.081	38675.270	106.081	1.371	bb			38.6949	96.7	-3.3	37.4
WXX101119-08CRI	3-Nitrotoluene	137 > 46	23.72	139.112	38675.270	139.112	1.798	bb			37.7028	94.3	-5.7	45.3
WXX101119-08CRI	PETN	361 > 62	24.19	2480.094	38675.270	2480.094	32.063	bb			49.6980	124.2	24.2	797.0

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis: 11/20/10
Time of Injection: 0232
Standard Number: WXX101119-08CRI
Data File: EXP1119025a

HMX		112.4
RDX		98.1
135-TNB		102.9
13-DNB		104.6
Tetryl		104.2
Nitrobenzene		85.2
246-TNT		101.2
4A-26-DNT		99.0
2A-46-DNT		106.6
34-DNT(surr)		95.8
26-DNT		101.1
24-DNT		101.3
2-NT		86.7
4-NT		96.7
3-NT		94.3
PETN		124.2
Total		1614.3
Average		100.9

MJP 11/22/10

Hmm 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP1119035a

Analysis Date: 20–NOV–10 07:27

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	600	562.905	94	
1,3–Dinitrobenzene–d4	500	510.499	102	
2,4,6–Trinitrotoluene	600	640.586	107	
2,4–Dinitrotoluene	600	682.825	114	
2,6–Dinitrotoluene	600	626.532	104	
2,6–Dinitrotoluene–d3	500	466.517	93	
2–Amino–4,6–dinitrotoluene	600	628.126	105	
3,4–Dinitrotoluene	300	313.242	104	
4–Amino–2,6–dinitrotoluene	600	610.227	102	
HMX	600	518.248	86	
Nitrobenzene	600	508.382	85	
PETN	600	646.948	108	
RDX	600	611.357	102	
Tetryl	600	555.502	93	
m–Dinitrobenzene	600	600.182	100	
m–Nitrotoluene	600	641.763	107	
o–Nitrotoluene	600	692.625	115	
p–Nitrotoluene	600	685.337	114	

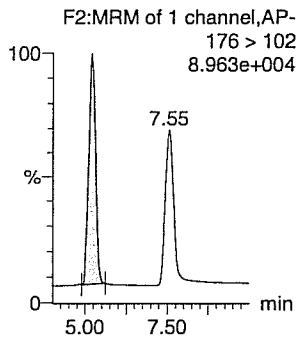
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

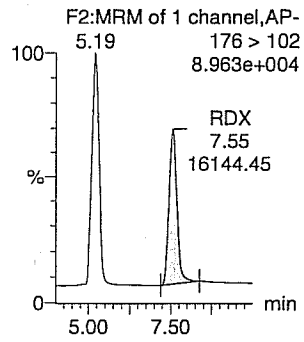
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119035a
Date: 20-Nov-2010
Time: 07:27:01
ID: WXX101119-07CCV
Vial: 1:1,B

MMT 11/22/10

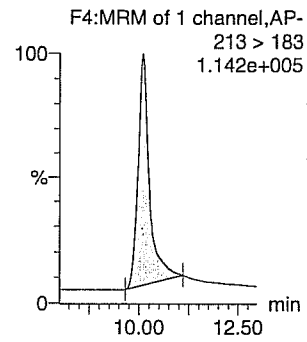
HMX



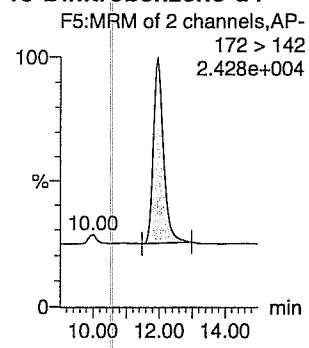
RDX



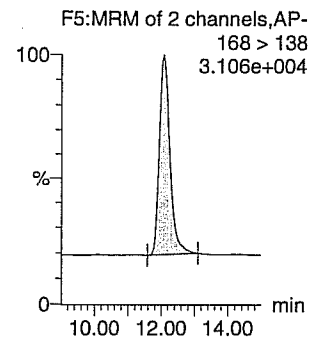
135-Trinitrobenzene



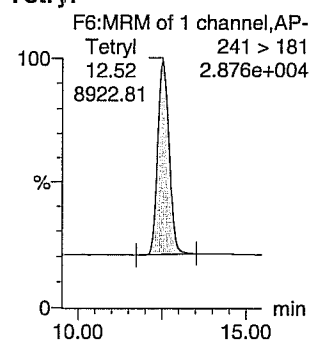
13-Dinitrobenzene-d4



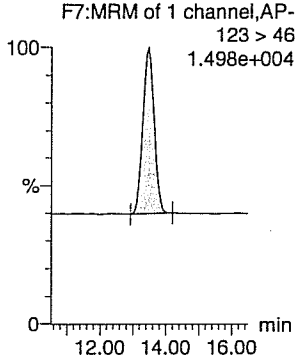
13-Dinitrobenzene



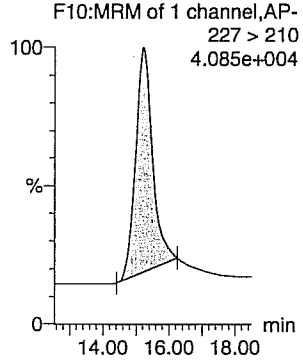
Tetryl



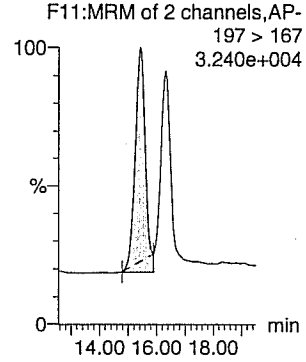
Nitrobenzene



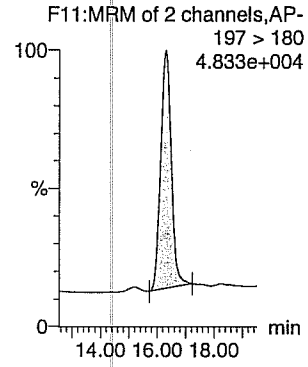
246-Trinitrotoluene



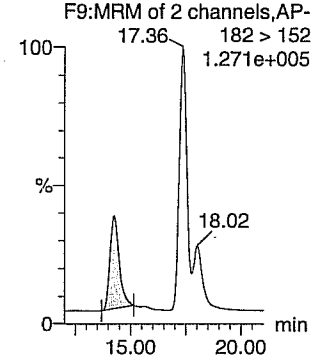
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

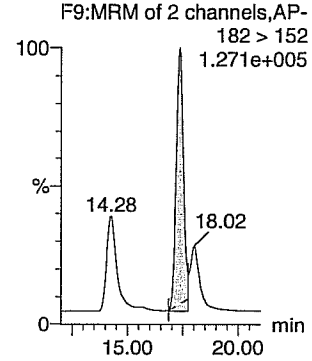


34-dinitrotoluene



tm 11/22/10

26-dinitrotoluene



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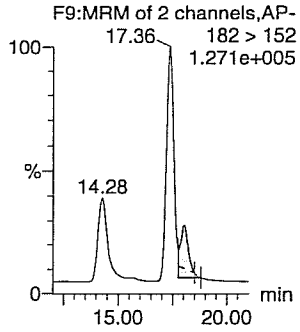
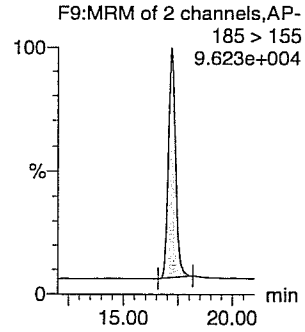
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

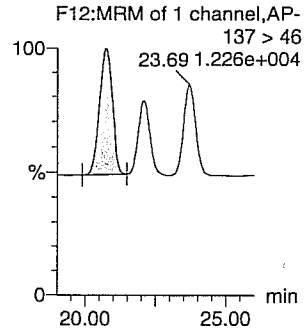
24-dinitrotoluene



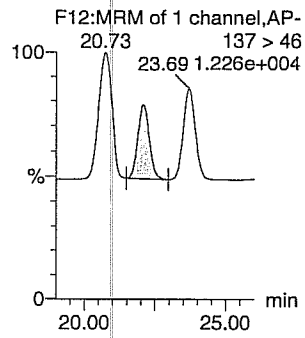
26-dinitrotoluene-d3



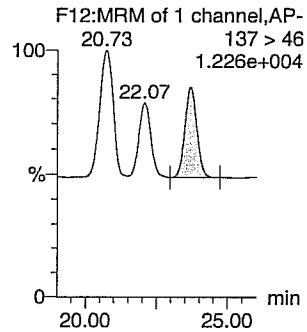
2-Nitrotoluene



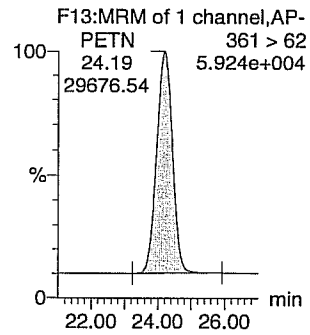
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-07CCV	HMX	176 > 102	5.19	21054.816	6549.324	21054.816	1607.404	db			518.2478	86.4	-13.6	3244.5
WXX101119-07CCV	RDX	176 > 102	7.55	16144.448	6549.324	16144.448	1232.528	bb			611.3571	101.9	1.9	2175.8
WXX101119-07CCV	135-Trinitrobenzene	213 > 183	10.09	35780.203	6549.324	35780.203	2731.595	bb			562.9050	93.8	-6.2	4265.3
WXX101119-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	6549.324		6549.324	6549.324	bb			510.4985	102.1	2.1	344.2
WXX101119-07CCV	13-Dinitrobenzene	168 > 138	12.08	9346.277	6549.324	9346.277	713.530	bb			600.1815	100.0	0.0	1662.4
WXX101119-07CCV	Tetryl	241 > 181	12.52	8922.809	6549.324	8922.809	681.201	bb			555.5023	92.6	-7.4	806.7
WXX101119-07CCV	Nitrobenzene	123 > 46	13.47	3706.085	6549.324	3706.085	282.936	bb			508.3823	84.7	-15.3	220.7
WXX101119-07CCV	246-Trinitrotoluene	227 > 210	15.20	20028.879	35550.715	20028.879	281.694	bb			640.5861	106.8	6.8	522.3
WXX101119-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.41	11188.172	35550.715	11188.172	157.355	MM	21-Nov-10	10:50:51	610.2266	101.7	1.7	250.7
WXX101119-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.30	18170.883	35550.715	18170.883	255.563	bb			628.1257	104.7	4.7	382.3
WXX101119-07CCV	34-dinitrotoluene	182 > 152	14.28	21209.252	35550.715	21209.252	298.296	bb			313.2415	104.4	4.4	482.3
WXX101119-07CCV	26-dinitrotoluene	182 > 152	17.36	47493.039	35550.715	47493.039	667.962	MM	21-Nov-10	10:59:28	626.5323	104.4	4.4	1369.5
WXX101119-07CCV	24-dinitrotoluene	182 > 152	18.02	12699.354	35550.715	12699.354	178.609	MM	21-Nov-10	11:06:18	682.8247	113.8	13.8	313.9
WXX101119-07CCV	26-dinitrotoluene-d3	185 > 155	17.18	35550.715		35550.715	35550.715	bb			466.5172	93.3	-6.7	3454.6
WXX101119-07CCV	2-Nitrotoluene	137 > 46	20.73	3347.969	35550.715	3347.969	47.087	bb			692.6252	115.4	15.4	773.5
WXX101119-07CCV	4-Nitrotoluene	137 > 46	22.07	1727.041	35550.715	1727.041	24.290	bb			685.3370	114.2	14.2	444.0
WXX101119-07CCV	3-Nitrotoluene	137 > 46	23.69	2176.612	35550.715	2176.612	30.613	bb			641.7629	107.0	7.0	549.5
WXX101119-07CCV	PETN	361 > 62	24.19	29676.545	35550.715	29676.545	417.383	bb			646.9480	107.8	7.8	8036.3

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 11/20/10
Time of Injection: 0727
Standard Number: WXX101119-07CCV
Data File: EXP1119035a

HMX		86.4
RDX		101.9
135-TNB		93.8
13-DNB		100.0
Tetryl		92.6
Nitrobenzene		84.7
246-TNT		106.8
4A-26-DNT		101.7
2A-46-DNT		104.7
34-DNT(surr)		104.4
26-DNT		104.4
24-DNT		113.8
2-NT		115.4
4-NT		114.2
3-NT		107.0
PETN		107.8
Total		1639.6
Average		102.5

MPT 11/22/10

Hsm 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEI

GEL Sample ID: WXXCRI

GEL Data File EXP1119037a

Analysis Date: 20–NOV–10 08:26

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
m–Dinitrobenzene	40	35.429	89	
m–Nitrotoluene	40	42.179	105	
o–Nitrotoluene	40	40.409	101	
p–Nitrotoluene	40	48.785	122	
1,3,5–Trinitrobenzene	40	43.803	110	
1,3–Dinitrobenzene–d4	500	524.711	105	
2,4,6–Trinitrotoluene	40	39.793	99	
2,4–Dinitrotoluene	40	39.785	99	
2,6–Dinitrotoluene	40	40.097	100	
2,6–Dinitrotoluene–d3	500	487.893	98	
2–Amino–4,6–dinitrotoluene	40	45.422	114	
3,4–Dinitrotoluene	20	20.046	100	
4–Amino–2,6–dinitrotoluene	40	38.407	96	
HMX	40	46.725	117	
Nitrobenzene	40	37.653	94	
PETN	40	55.394	138	*
RDX	40	39.048	98	
Tetryl	40	43.255	108	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

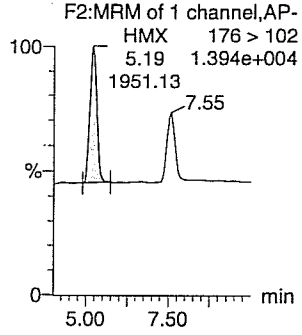
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

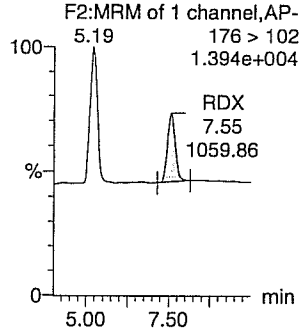
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119037a
Date: 20-Nov-2010
Time: 08:26:04
ID: WXX101119-08CRI
Vial: 1:1,C

MAP 11/22/10

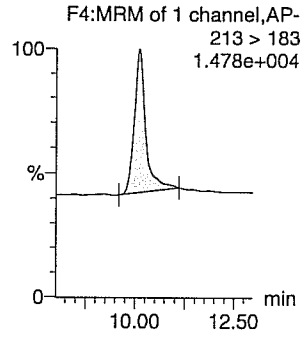
HMX



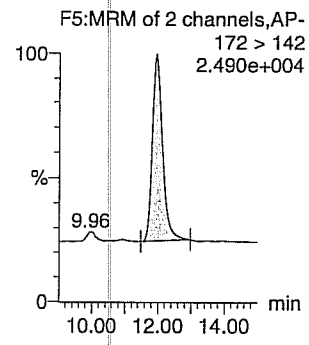
RDX



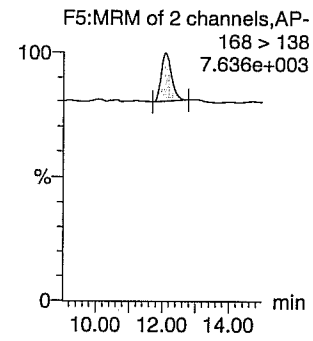
135-Trinitrobenzene



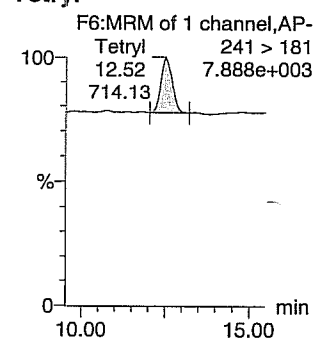
13-Dinitrobenzene-d4



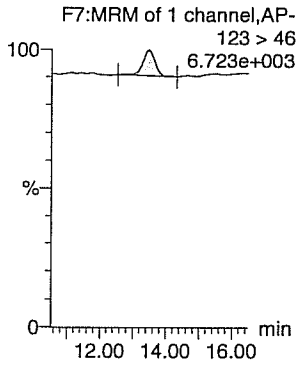
13-Dinitrobenzene



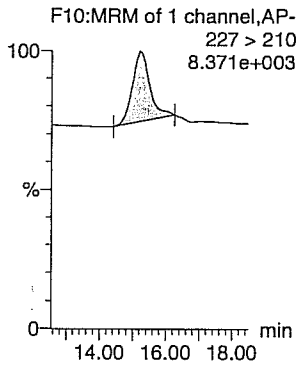
Tetryl



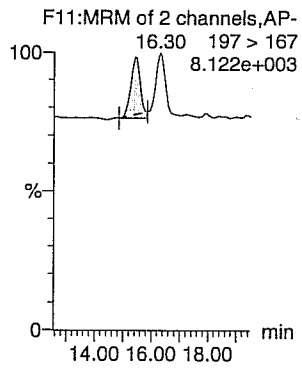
Nitrobenzene



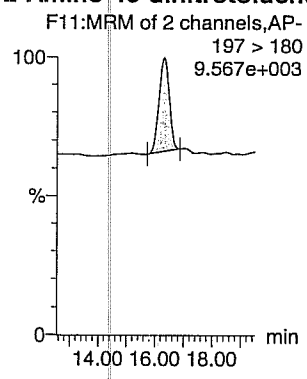
246-Trinitrotoluene



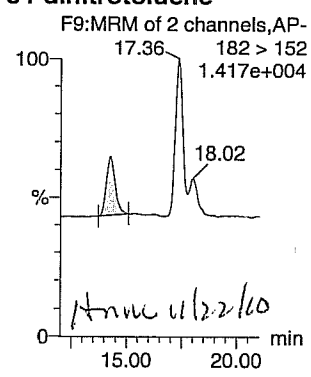
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

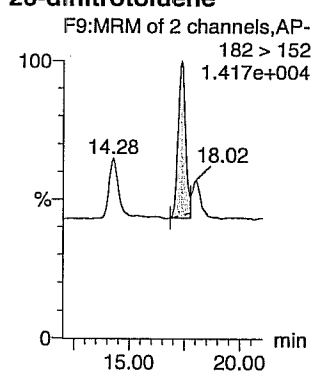


34-dinitrotoluene



Amc 11/22/10

26-dinitrotoluene



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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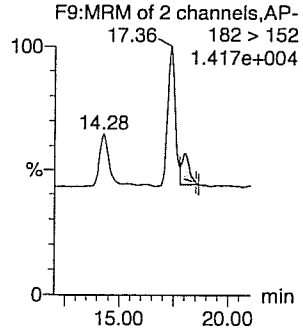
Quantify Sample Report

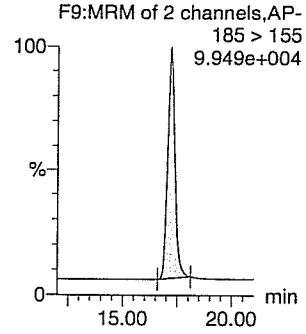
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

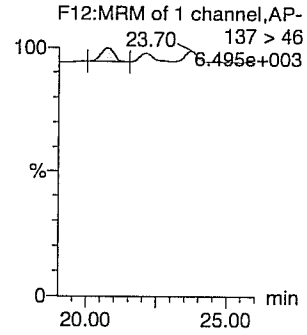
24-dinitrotoluene



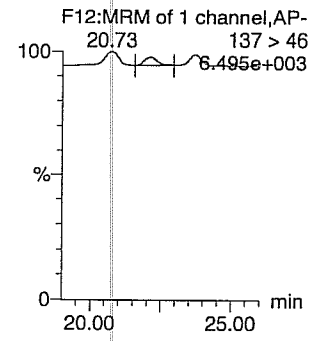
26-dinitrotoluene-d3



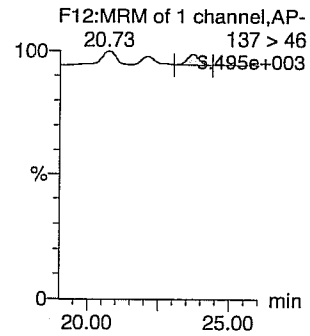
2-Nitrotoluene



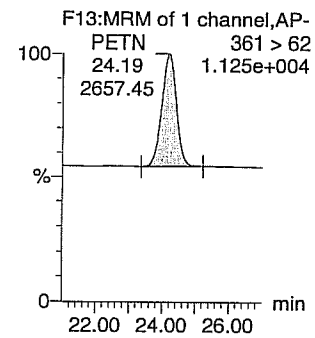
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-08CRI	HMX	176 > 102	5.19	1951.127	6731.661	1951.127	144.922	bb			46.7246	116.8	16.8	326.1
WXX101119-08CRI	RDX	176 > 102	7.55	1059.859	6731.661	1059.859	78.722	bb			39.0476	97.6	-2.4	159.6
WXX101119-08CRI	135-Trinitrobenzene	213 > 183	10.09	2861.766	6731.661	2861.766	212.560	bb			43.8027	109.5	9.5	192.8
WXX101119-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	6731.661		6731.661	6731.661	bb			524.7111	104.9	4.9	545.8
WXX101119-08CRI	13-Dinitrobenzene	168 > 138	12.08	567.073	6731.661	567.073	42.120	bb			35.4289	88.6	-11.4	65.5
WXX101119-08CRI	Tetryl	241 > 181	12.52	714.135	6731.661	714.135	53.043	bb			43.2552	108.1	8.1	87.2
WXX101119-08CRI	Nitrobenzene	123 > 46	13.47	282.131	6731.661	282.131	20.956	bb			37.6530	94.1	-5.9	21.1
WXX101119-08CRI	246-Trinitrotoluene	227 > 210	15.20	1301.204	37179.641	1301.204	17.499	bb			39.7932	99.5	-0.5	237.4
WXX101119-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.41	736.435	37179.641	736.435	9.904	MM	21-Nov-10	10:50:57	38.4069	96.0	-4.0	42.3
WXX101119-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.30	1374.192	37179.641	1374.192	18.480	bb			45.4215	113.6	13.6	101.2
WXX101119-08CRI	34-dinitrotoluene	182 > 152	14.28	1419.509	37179.641	1419.509	19.090	bb			20.0463	100.2	0.2	45.6
WXX101119-08CRI	26-dinitrotoluene	182 > 152	17.36	3178.713	37179.641	3178.713	42.748	MM	21-Nov-10	10:59:40	40.0966	100.2	0.2	121.8
WXX101119-08CRI	24-dinitrotoluene	182 > 152	18.02	773.838	37179.641	773.838	10.407	MM	21-Nov-10	11:06:05	39.7851	99.5	-0.5	28.0
WXX101119-08CRI	26-dinitrotoluene-d3	185 > 155	17.18	37179.641		37179.641	37179.641	bb			487.8930	97.6	-2.4	2449.7
WXX101119-08CRI	2-Nitrotoluene	137 > 46	20.73	204.278	37179.641	204.278	2.747	bb			40.4093	101.0	1.0	66.6
WXX101119-08CRI	4-Nitrotoluene	137 > 46	22.10	128.570	37179.641	128.570	1.729	bb			48.7848	122.0	22.0	42.2
WXX101119-08CRI	3-Nitrotoluene	137 > 46	23.70	149.608	37179.641	149.608	2.012	bb			42.1785	105.4	5.4	53.6
WXX101119-08CRI	PETN	361 > 62	24.19	2657.448	37179.641	2657.448	35.738	bb			55.3942	138.5	38.5	991.8

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis: 11/20/10
Time of Injection: 0826
Standard Number: WXX101119-08CRI
Data File: EXP1119037a

HMX		116.8
RDX		97.6
135-TNB		109.5
13-DNB		88.6
Tetryl		108.1
Nitrobenzene		94.1
246-TNT		99.5
4A-26-DNT		96.0
2A-46-DNT		113.6
34-DNT(surr)		100.2
26-DNT		100.2
24-DNT		99.5
2-NT		101.0
4-NT		122.0
3-NT		105.4
PETN		138.5
Total		1690.6
Average		105.7

MJT 11/22/10

Hmc 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP1119048a

Analysis Date: 20–NOV–10 13:50

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
4–Amino–2,6–dinitrotoluene	600	734.452	122	*
HMX	600	549.237	92	
Nitrobenzene	600	524.364	87	
PETN	600	534.485	89	
RDX	600	604.741	101	
Tetryl	600	585.431	98	
m–Dinitrobenzene	600	614.461	102	
m–Nitrotoluene	600	687.505	115	
o–Nitrotoluene	600	611.173	102	
p–Nitrotoluene	600	594.52	99	
1,3,5–Trinitrobenzene	600	559.585	93	
1,3–Dinitrobenzene–d4	500	631.846	126	*
2,4,6–Trinitrotoluene	600	756.085	126	*
2,4–Dinitrotoluene	600	645.689	108	
2,6–Dinitrotoluene	600	629.097	105	
2,6–Dinitrotoluene–d3	500	486.574	97	
2–Amino–4,6–dinitrotoluene	600	658.725	110	
3,4–Dinitrotoluene	300	394.754	132	*

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119048a
Date: 20-Nov-2010
Time: 13:50:28
ID: WXX101119-07CCV
Vial: 1:1,B

MMT 11/22/10

HMX
F2:MRM of 1 channel,AP-
176 > 102
1.149e+005
7.55

RDX
F2:MRM of 1 channel,AP-
176 > 102
1.149e+005
5.19
RDX
7.55
19765.82

135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
1.384e+005

13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.867e+004
10.00

13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
3.735e+004

Tetryl
F6:MRM of 1 channel,AP-
241 > 181
3.567e+004

Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.736e+004

246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
4.810e+004

4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
3.888e+004
16.30

2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.191e+004

34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.331e+005
17.36
18.02

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.331e+005
14.28
18.02

HMM 11/22/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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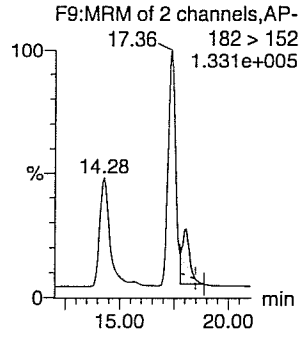
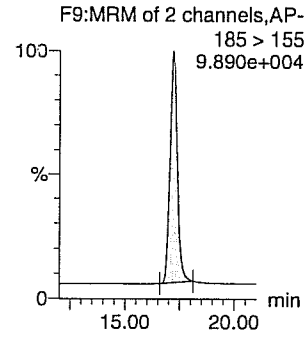
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

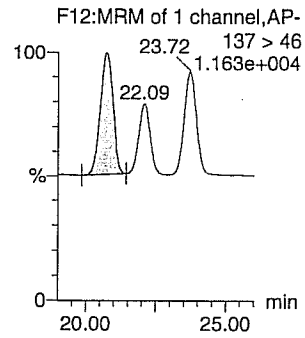
24-dinitrotoluene



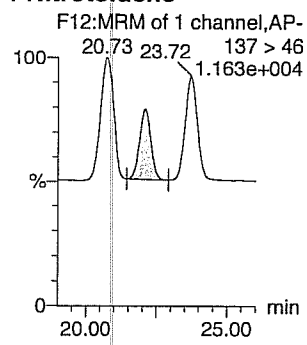
26-dinitrotoluene-d3



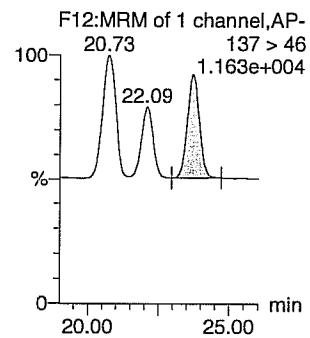
2-Nitrotoluene



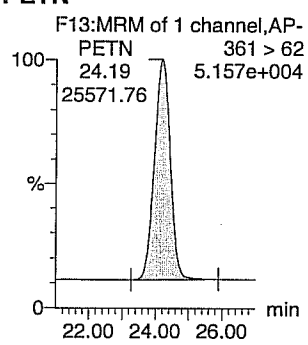
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-07CCV	HMX	176 > 102	5.19	27617.920	8106.128	27617.920	1703.521	db			549.2372	91.5	-8.5	1569.1
WXX101119-07CCV	RDX	176 > 102	7.55	19765.822	8106.128	19765.822	1219.190	bb			604.7413	100.8	0.8	976.9
WXX101119-07CCV	135-Trinitrobenzene	213 > 183	10.11	44024.105	8106.128	44024.105	2715.483	bb			559.5848	93.3	-6.7	2379.6
WXX101119-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	8106.128		8106.128	8106.128	bb			631.8463	126.4	26.4	249.0
WXX101119-07CCV	13-Dinitrobenzene	168 > 138	12.08	11843.146	8106.128	11843.146	730.506	bb			614.4607	102.4	2.4	1363.6
WXX101119-07CCV	Tetryl	241 > 181	12.52	11638.809	8106.128	11638.809	717.902	bb			585.4311	97.6	-2.4	693.7
WXX101119-07CCV	Nitrobenzene	123 > 46	13.47	4731.235	8106.128	4731.235	291.831	bb			524.3637	87.4	-12.6	447.4
WXX101119-07CCV	246-Trinitrotoluene	227 > 210	15.25	24656.451	37079.109	24656.451	332.484	bb			756.0848	126.0	26.0	1297.6
WXX101119-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.41	14044.699	37079.109	14044.699	189.388	MM	21-Nov-10	10:52:45	734.4522	122.4	22.4	393.6
WXX101119-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.30	19875.332	37079.109	19875.332	268.013	bb			658.7247	109.8	9.8	736.4
WXX101119-07CCV	34-dinitrotoluene	182 > 152	14.28	27877.508	37079.109	27877.508	375.919	bb			394.7544	131.6	31.6	932.0
WXX101119-07CCV	26-dinitrotoluene	182 > 152	17.36	49737.637	37079.109	49737.637	670.696	MM	21-Nov-10	11:00:03	629.0971	104.8	4.8	2079.7
WXX101119-07CCV	24-dinitrotoluene	182 > 152	18.02	12524.966	37079.109	12524.966	168.895	MM	21-Nov-10	11:07:04	645.6887	107.6	7.6	480.1
WXX101119-07CCV	26-dinitrotoluene-d3	185 > 155	17.18	37079.109		37079.109	37079.109	bb			486.5737	97.3	-2.7	1374.6
WXX101119-07CCV	2-Nitrotoluene	137 > 46	20.73	3081.259	37079.109	3081.259	41.550	bb			611.1730	101.9	1.9	1726.7
WXX101119-07CCV	4-Nitrotoluene	137 > 46	22.09	1562.593	37079.109	1562.593	21.071	bb			594.5200	99.1	-0.9	998.2
WXX101119-07CCV	3-Nitrotoluene	137 > 46	23.72	2432.000	37079.109	2432.000	32.795	bb			687.5055	114.6	14.6	1456.7
WXX101119-07CCV	PETN	361 > 62	24.19	25571.758	37079.109	25571.758	344.827	bb			534.4852	89.1	-10.9	8303.5

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 11/20/10
Time of Injection: 1350
Standard Number: WXX101119-07CCV
Data File: EXP1119048a

HMX		91.5
RDX		100.8
135-TNB		93.3
13-DNB		102.4
Tetryl		97.6
Nitrobenzene		87.4
246-TNT		126.0
4A-26-DNT		122.4
2A-46-DNT		109.8
34-DNT(surr)		131.6
26-DNT		104.8
24-DNT		107.6
2-NT		101.9
4-NT		99.1
3-NT		114.6
PETN		89.1
Total		1679.9
Average		105.0

MAT 11/22/10

HMM 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP1119050a

Analysis Date: 20–NOV–10 14:49

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	40	44.323	111	
1,3–Dinitrobenzene–d4	500	533.107	107	
2,4,6–Trinitrotoluene	40	36.693	92	
2,4–Dinitrotoluene	40	40.992	102	
2,6–Dinitrotoluene	40	41.549	104	
2,6–Dinitrotoluene–d3	500	534.088	107	
2–Amino–4,6–dinitrotoluene	40	39.187	98	
3,4–Dinitrotoluene	20	17.902	90	
4–Amino–2,6–dinitrotoluene	40	38.015	95	
HMX	40	46.899	117	
Nitrobenzene	40	44.345	111	
PETN	40	46.699	117	
RDX	40	42.728	107	
Tetryl	40	40.138	100	
m–Dinitrobenzene	40	38.953	97	
m–Nitrotoluene	40	39.041	98	
o–Nitrotoluene	40	44.937	112	
p–Nitrotoluene	40	47.363	118	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

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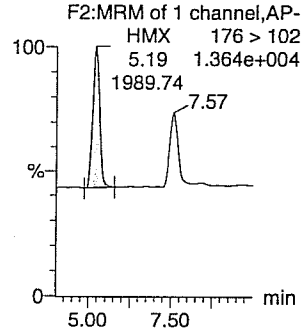
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

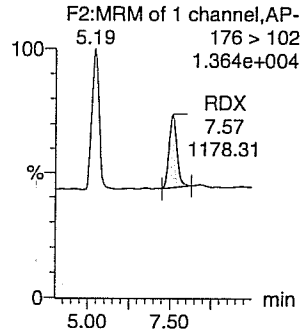
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119050a
Date: 20-Nov-2010
Time: 14:49:32
ID: WXX101119-08CRI
Vial: 1:1,C

MAT 11/22/10

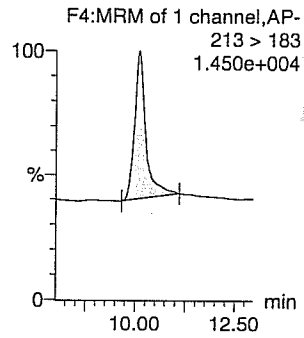
HMX



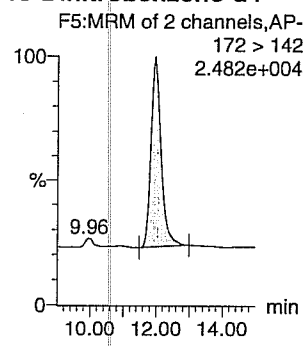
RDX



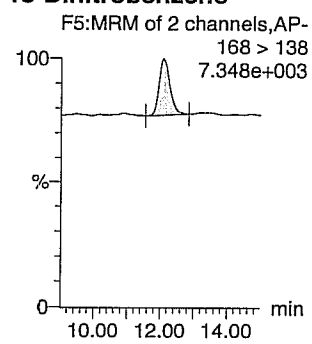
135-Trinitrobenzene



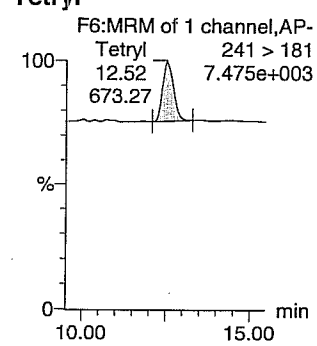
13-Dinitrobenzene-d4



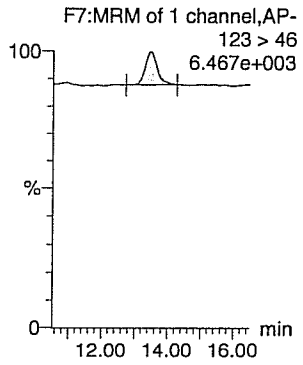
13-Dinitrobenzene



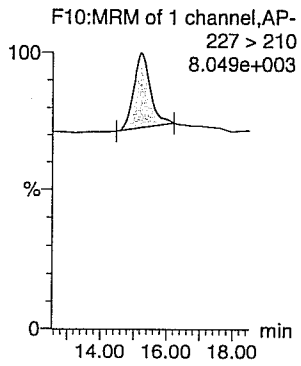
Tetryl



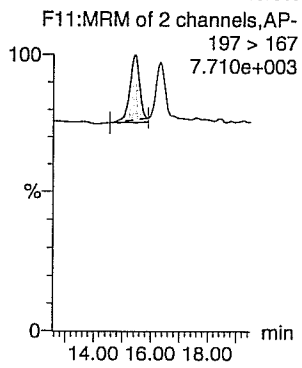
Nitrobenzene



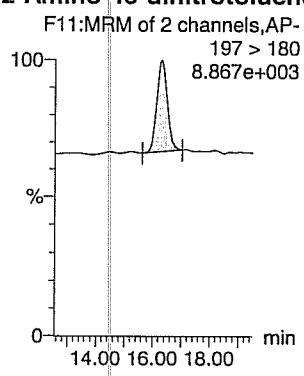
246-Trinitrotoluene



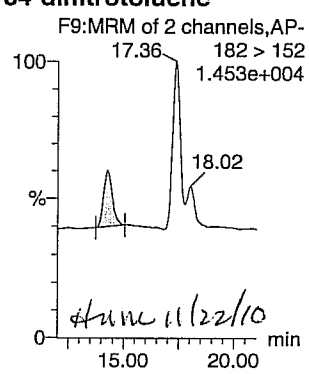
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

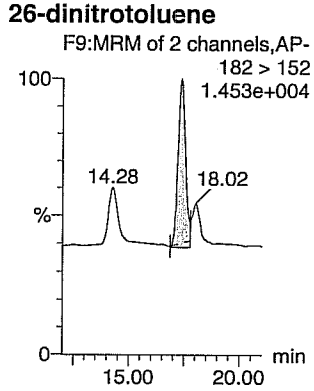


34-dinitrotoluene



dhmc 11/22/10

26-dinitrotoluene

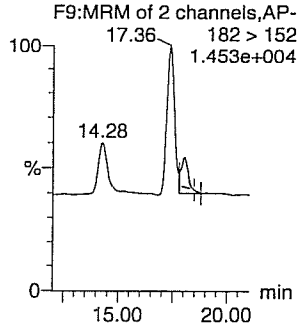


Quantify Sample Report

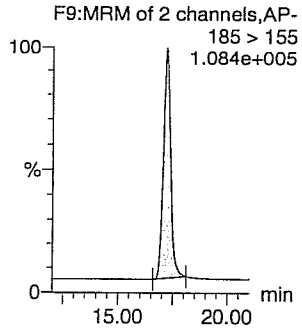
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

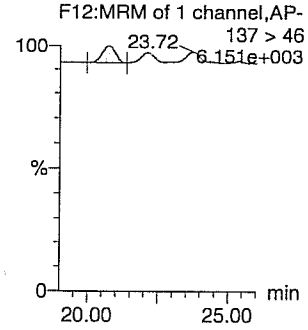
24-dinitrotoluene



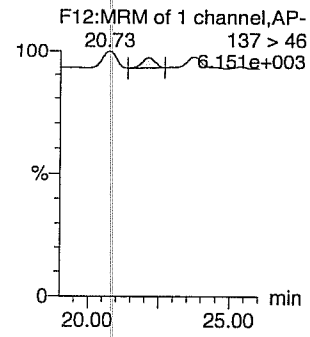
26-dinitrotoluene-d3



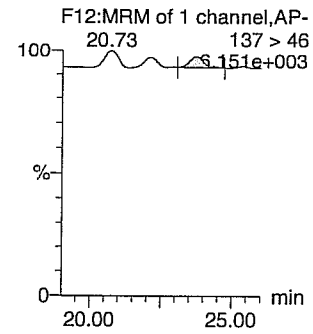
2-Nitrotoluene



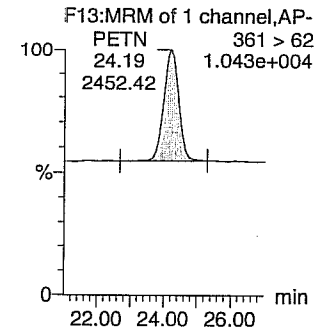
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-08CRI	HMX	176 > 102	5.19	1989.739	6839.372	1989.739	145.462	bb			46.8989	117.2	17.2	184.2
WXX101119-08CRI	RDX	176 > 102	7.57	1178.305	6839.372	1178.305	86.141	bb			42.7277	106.8	6.8	96.8
WXX101119-08CRI	135-Trinitrobenzene	213 > 183	10.09	2942.064	6839.372	2942.064	215.083	bb			44.3225	110.8	10.8	267.4
WXX101119-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	6839.372		6839.372	6839.372	bb			533.1068	106.6	6.6	674.6
WXX101119-08CRI	13-Dinitrobenzene	168 > 138	12.08	633.458	6839.372	633.458	46.310	bb			38.9531	97.4	-2.6	38.7
WXX101119-08CRI	Tetryl	241 > 181	12.52	673.269	6839.372	673.269	49.220	bb			40.1378	100.3	0.3	59.1
WXX101119-08CRI	Nitrobenzene	123 > 46	13.47	337.593	6839.372	337.593	24.680	bb			44.3454	110.9	10.9	36.8
WXX101119-08CRI	246-Trinitrotoluene	227 > 210	15.20	1313.441	40699.902	1313.441	16.136	bb			36.6933	91.7	-8.3	131.5
WXX101119-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.41	797.945	40699.902	797.945	9.803	MM	21-Nov-10	10:52:51	38.0154	95.0	-5.0	34.2
WXX101119-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.30	1297.825	40699.902	1297.825	15.944	bb			39.1870	98.0	-2.0	56.0
WXX101119-08CRI	34-dinitrotoluene	182 > 152	14.28	1387.681	40699.902	1387.681	17.048	bb			17.9019	89.5	-10.5	88.9
WXX101119-08CRI	26-dinitrotoluene	182 > 152	17.36	3605.729	40699.902	3605.729	44.297	MM	21-Nov-10	11:00:12	41.5491	103.9	3.9	269.9
WXX101119-08CRI	24-dinitrotoluene	182 > 152	18.02	872.809	40699.902	872.809	10.722	MM	21-Nov-10	11:07:15	40.9923	102.5	2.5	63.4
WXX101119-08CRI	26-dinitrotoluene-d3	185 > 155	17.18	40699.902		40699.902	40699.902	bb			534.0879	106.8	6.8	1709.6
WXX101119-08CRI	2-Nitrotoluene	137 > 46	20.73	248.676	40699.902	248.676	3.055	bb			44.9372	112.3	12.3	26.8
WXX101119-08CRI	4-Nitrotoluene	137 > 46	22.11	136.641	40699.902	136.641	1.679	bb			47.3628	118.4	18.4	15.4
WXX101119-08CRI	3-Nitrotoluene	137 > 46	23.72	151.592	40699.902	151.592	1.862	bb			39.0413	97.6	-2.4	16.2
WXX101119-08CRI	PETN	361 > 62	24.19	2452.417	40699.902	2452.417	30.128	bb			46.6988	116.7	16.7	950.7

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis: 11/20/10
Time of Injection: 1449
Standard Number: WXX101119-08CRI
Data File: EXP1119050a

HMX		117.2
RDX		106.8
135-TNB		110.8
13-DNB		97.4
Tetryl		100.3
Nitrobenzene		110.9
246-TNT		91.7
4A-26-DNT		95.0
2A-46-DNT		98.0
34-DNT(surr)		89.5
26-DNT		103.9
24-DNT		102.5
2-NT		112.3
4-NT		118.4
3-NT		97.6
PETN		116.7
Total		1669.0
Average		104.3

NOTP 11/22/10

11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP1119056a

Analysis Date: 20–NOV–10 17:46

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	600	574.33	96	
1,3–Dinitrobenzene–d4	500	500.43	100	
2,4,6–Trinitrotoluene	600	651.694	109	
2,4–Dinitrotoluene	600	670.325	112	
2,6–Dinitrotoluene	600	628.721	105	
2,6–Dinitrotoluene–d3	500	467.872	94	
2–Amino–4,6–dinitrotoluene	600	640.547	107	
3,4–Dinitrotoluene	300	315.283	105	
4–Amino–2,6–dinitrotoluene	600	629.129	105	
HMX	600	521.477	87	
Nitrobenzene	600	555.482	93	
PETN	600	602.282	100	
RDX	600	626.357	104	
Tetryl	600	577.531	96	
m–Dinitrobenzene	600	610.846	102	
m–Nitrotoluene	600	618.846	103	
o–Nitrotoluene	600	600.494	100	
p–Nitrotoluene	600	613.993	102	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119056a
Date: 20-Nov-2010
Time: 17:46:45
ID: WXX101119-07CCV
Vial: 1:1,B

MATT 11/22/10

HMX
F2:MRM of 1 channel,AP-
176 > 102
8.757e+004
7.57

RDX
F2:MRM of 1 channel,AP-
176 > 102
8.757e+004
5.19
RDX
7.57
16214.34

135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
1.136e+005

13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.385e+004
9.96

13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
3.094e+004

Tetryl
F6:MRM of 1 channel,AP-
241 > 181
2.909e+004
Tetryl
12.52
9093.68

Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.554e+004

246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
4.128e+004

4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
3.316e+004

2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
4.885e+004

34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.265e+005
17.36
18.02

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.265e+005
14.28
18.02

HMM 11/22/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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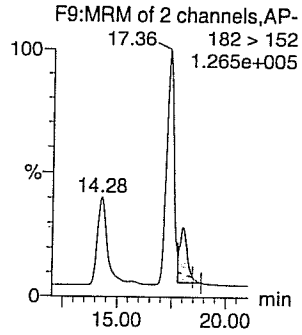
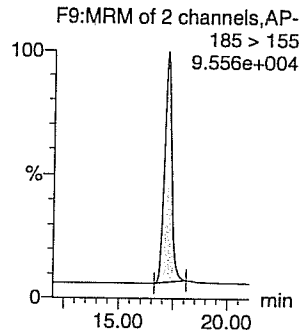
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

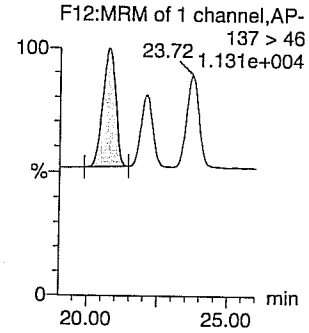
24-dinitrotoluene



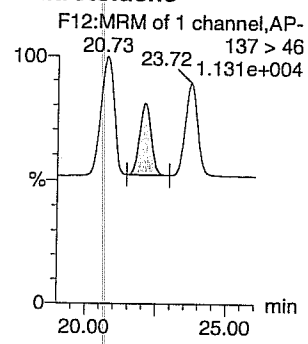
26-dinitrotoluene-d3



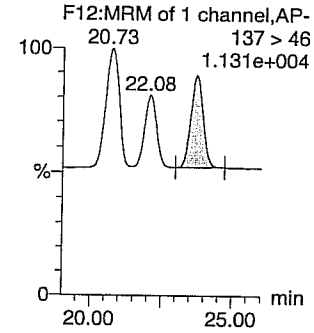
2-Nitrotoluene



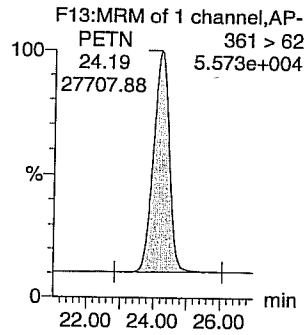
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-07CCV	HMX	176 > 102	5.19	20768.176	6420.152	20768.176	1617.421	db			521.4774	86.9	-13.1	3189.0
WXX101119-07CCV	RDX	176 > 102	7.57	16214.341	6420.152	16214.341	1262.769	bb			626.3574	104.4	4.4	2199.8
WXX101119-07CCV	135-Trinitrobenzene	213 > 183	10.11	35786.371	6420.152	35786.371	2787.035	bb			574.3296	95.7	-4.3	1547.9
WXX101119-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	6420.152		6420.152	6420.152	bb			500.4300	100.1	0.1	455.3
WXX101119-07CCV	13-Dinitrobenzene	168 > 138	12.08	9324.731	6420.152	9324.731	726.208	bb			610.8456	101.8	1.8	600.5
WXX101119-07CCV	Tetryl	241 > 181	12.52	9093.685	6420.152	9093.685	708.214	bb			577.5310	96.3	-3.7	616.5
WXX101119-07CCV	Nitrobenzene	123 > 46	13.47	3969.574	6420.152	3969.574	309.150	bb			555.4822	92.6	-7.4	357.6
WXX101119-07CCV	246-Trinitrotoluene	227 > 210	15.25	20435.334	35653.941	20435.334	286.579	bb			651.6935	108.6	8.6	670.9
WXX101119-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.41	11568.221	35653.941	11568.221	162.229	MM	21-Nov-10	10:53:47	629.1286	104.9	4.9	210.9
WXX101119-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.30	18584.031	35653.941	18584.031	260.617	bb			640.5474	106.8	6.8	1050.7
WXX101119-07CCV	34-dinitrotoluene	182 > 152	14.28	21409.490	35653.941	21409.490	300.240	bb			315.2834	105.1	5.1	393.2
WXX101119-07CCV	26-dinitrotoluene	182 > 152	17.36	47797.316	35653.941	47797.316	670.295	MM	21-Nov-10	11:00:25	628.7208	104.8	4.8	1078.6
WXX101119-07CCV	24-dinitrotoluene	182 > 152	18.02	12503.078	35653.941	12503.078	175.339	MM	21-Nov-10	11:07:32	670.3249	111.7	11.7	258.2
WXX101119-07CCV	26-dinitrotoluene-d3	185 > 155	17.18	35653.941		35653.941	35653.941	bb			467.8718	93.6	-6.4	1734.7
WXX101119-07CCV	2-Nitrotoluene	137 > 46	20.73	2911.061	35653.941	2911.061	40.824	bb			600.4944	100.1	0.1	500.6
WXX101119-07CCV	4-Nitrotoluene	137 > 46	22.08	1551.747	35653.941	1551.747	21.761	bb			613.9928	102.3	2.3	300.9
WXX101119-07CCV	3-Nitrotoluene	137 > 46	23.72	2104.981	35653.941	2104.981	29.520	bb			618.8459	103.1	3.1	386.4
WXX101119-07CCV	PETN	361 > 62	24.19	27707.881	35653.941	27707.881	388.567	bb			602.2823	100.4	0.4	7616.6

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 11/20/10
Time of Injection: 1746
Standard Number: WXX101119-07CCV
Data File: EXP1119056a

HMX	86.9
RDX	104.4
135-TNB	95.7
13-DNB	101.8
Tetryl	96.3
Nitrobenzene	92.6
246-TNT	108.6
4A-26-DNT	104.9
2A-46-DNT	106.8
34-DNT(surr)	105.1
26-DNT	104.8
24-DNT	111.7
2-NT	100.1
4-NT	102.3
3-NT	103.1
PETN	100.4
Total	1625.5
Average	101.6

NETT 11/22/10

Hmc 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP1119058a

Analysis Date: 20–NOV–10 18:45

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2–Amino–4,6–dinitrotoluene	40	39.165	98	
3,4–Dinitrotoluene	20	21.07	105	
4–Amino–2,6–dinitrotoluene	40	38.316	96	
HMX	40	42.913	107	
Nitrobenzene	40	37.846	95	
PETN	40	41.615	104	
RDX	40	38.811	97	
Tetryl	40	40.792	102	
m–Dinitrobenzene	40	40.882	102	
m–Nitrotoluene	40	39.817	100	
o–Nitrotoluene	40	47.668	119	
p–Nitrotoluene	40	48.182	120	
1,3,5–Trinitrobenzene	40	40.741	102	
1,3–Dinitrobenzene–d4	500	548.387	110	
2,4,6–Trinitrotoluene	40	38.115	95	
2,4–Dinitrotoluene	40	34.263	86	
2,6–Dinitrotoluene	40	39.926	100	
2,6–Dinitrotoluene–d3	500	526.126	105	

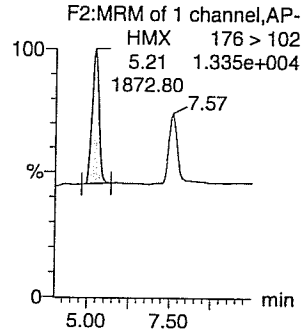
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

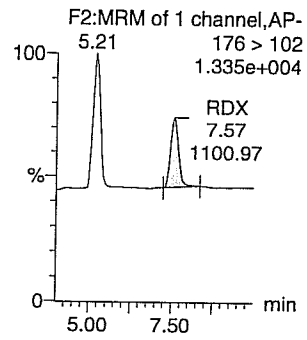
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119058a
Date: 20-Nov-2010
Time: 18:45:48
ID: WXX101119-08CRI
Vial: 1:1,C

MATT 11/22/10

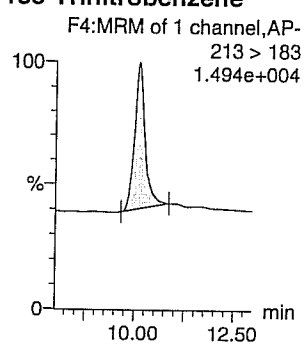
HMX



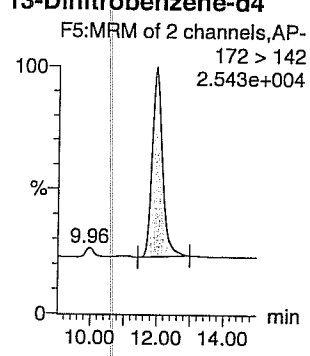
RDX



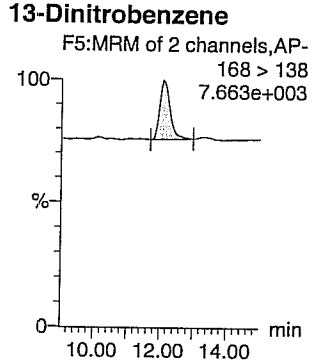
135-Trinitrobenzene



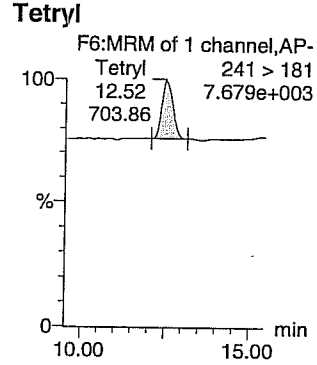
13-Dinitrobenzene-d4



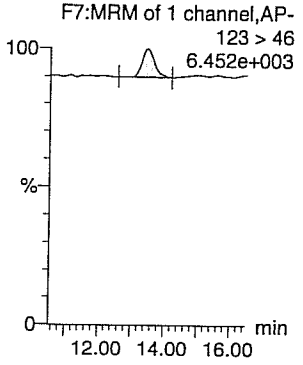
13-Dinitrobenzene



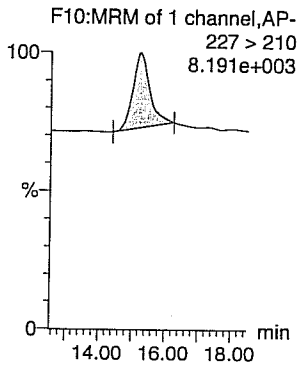
Tetryl



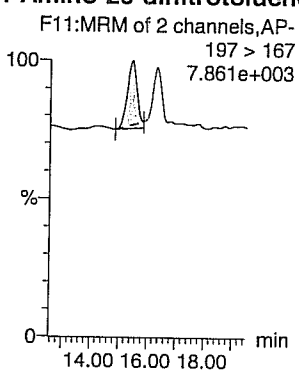
Nitrobenzene



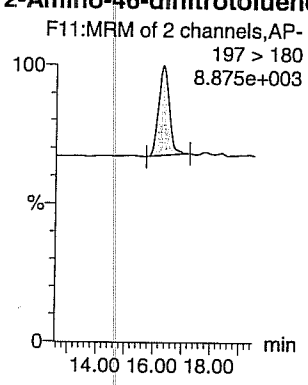
246-Trinitrotoluene



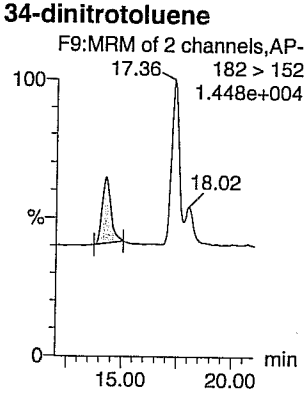
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

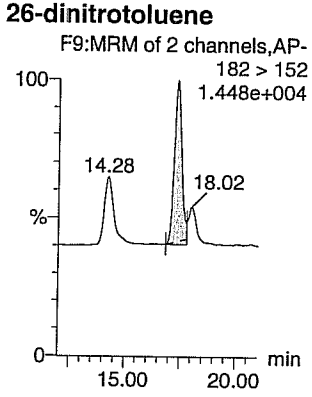


34-dinitrotoluene



HMM 11/22/10

26-dinitrotoluene



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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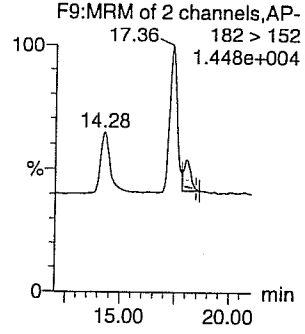
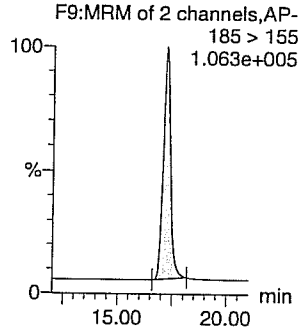
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

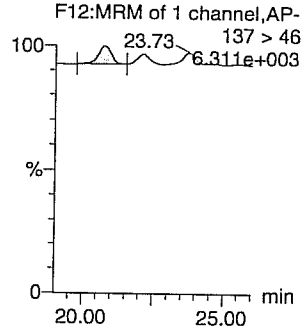
24-dinitrotoluene



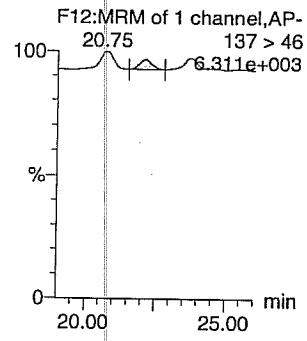
26-dinitrotoluene-d3



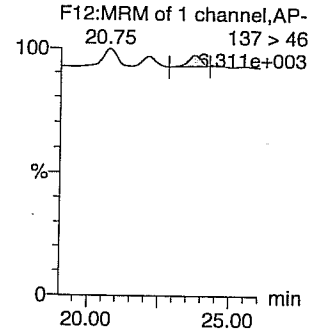
2-Nitrotoluene



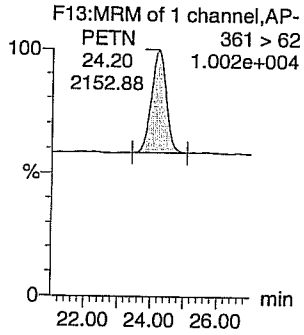
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-08CRI	HMX	176 > 102	5.21	1872.799	7035.400	1872.799	133.098	bb			42.9126	107.3	7.3	186.2
WXX101119-08CRI	RDX	176 > 102	7.57	1100.971	7035.400	1100.971	78.245	bb			38.8110	97.0	-3.0	96.5
WXX101119-08CRI	135-Trinitrobenzene	213 > 183	10.11	2781.841	7035.400	2781.841	197.703	bb			40.7411	101.9	1.9	264.3
WXX101119-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	7035.400		7035.400	7035.400	bb			548.3866	109.7	9.7	765.6
WXX101119-08CRI	13-Dinitrobenzene	168 > 138	12.08	683.880	7035.400	683.880	48.603	bb			40.8819	102.2	2.2	99.4
WXX101119-08CRI	Tetryl	241 > 181	12.52	703.860	7035.400	703.860	50.023	bb			40.7923	102.0	2.0	62.9
WXX101119-08CRI	Nitrobenzene	123 > 46	13.47	296.372	7035.400	296.372	21.063	bb			37.8460	94.6	-5.4	26.3
WXX101119-08CRI	246-Trinitrotoluene	227 > 210	15.25	1343.995	40093.184	1343.995	16.761	bb			38.1150	95.3	-4.7	60.2
WXX101119-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.45	792.265	40093.184	792.265	9.880	MM	21-Nov-10	10:53:59	38.3160	95.8	-4.2	55.8
WXX101119-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.30	1277.776	40093.184	1277.776	15.935	bb			39.1654	97.9	-2.1	107.8
WXX101119-08CRI	34-dinitrotoluene	182 > 152	14.28	1608.947	40093.184	1608.947	20.065	bb			21.0704	105.4	5.4	44.6
WXX101119-08CRI	26-dinitrotoluene	182 > 152	17.36	3413.223	40093.184	3413.223	42.566	MM	21-Nov-10	11:00:31	39.9260	99.8	-0.2	111.5
WXX101119-08CRI	24-dinitrotoluene	182 > 152	18.02	718.658	40093.184	718.658	8.962	MM	21-Nov-10	11:07:39	34.2632	85.7	-14.3	23.7
WXX101119-08CRI	26-dinitrotoluene-d3	185 > 155	17.22	40093.184		40093.184	40093.184	bb			526.1262	105.2	5.2	2694.8
WXX101119-08CRI	2-Nitrotoluene	137 > 46	20.75	259.856	40093.184	259.856	3.241	bb			47.6681	119.2	19.2	79.8
WXX101119-08CRI	4-Nitrotoluene	137 > 46	22.11	136.931	40093.184	136.931	1.708	bb			48.1816	120.5	20.5	45.8
WXX101119-08CRI	3-Nitrotoluene	137 > 46	23.73	152.299	40093.184	152.299	1.899	bb			39.8170	99.5	-0.5	51.8
WXX101119-08CRI	PETN	361 > 62	24.20	2152.877	40093.184	2152.877	26.848	bb			41.6153	104.0	4.0	708.1

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis: 11/20/10
Time of Injection: 1845
Standard Number: WXX101119-08CRI
Data File: EXP1119058a

HMX	107.3
RDX	97.0
135-TNB	101.9
13-DNB	102.2
Tetryl	102.0
Nitrobenzene	94.6
246-TNT	95.3
4A-26-DNT	95.8
2A-46-DNT	97.9
34-DNT(surr)	105.4
26-DNT	99.8
24-DNT	85.7
2-NT	119.2
4-NT	120.5
3-NT	99.5
PETN	104.0
Total	1628.1
Average	101.8

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP1119063a

Analysis Date: 20–NOV–10 21:13

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3–Dinitrobenzene–d4	500	554.896	111	
2,4,6–Trinitrotoluene	600	661.199	110	
2,4–Dinitrotoluene	600	605.633	101	
2,6–Dinitrotoluene	600	613.686	102	
2,6–Dinitrotoluene–d3	500	496.93	99	
2–Amino–4,6–dinitrotoluene	600	786.375	131	*
3,4–Dinitrotoluene	300	337.848	113	
4–Amino–2,6–dinitrotoluene	600	661.908	110	
HMX	600	536.014	89	
Nitrobenzene	600	538.826	90	
PETN	600	591.558	99	
RDX	600	670.562	112	
Tetryl	600	586.392	98	
m–Dinitrobenzene	600	609.15	102	
m–Nitrotoluene	600	598.903	100	
o–Nitrotoluene	600	611.967	102	
p–Nitrotoluene	600	594.071	99	
1,3,5–Trinitrobenzene	600	579.116	97	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

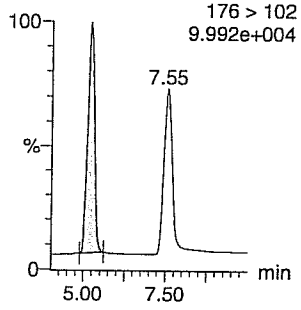
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

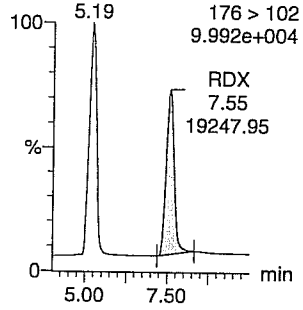
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119063a
Date: 20-Nov-2010
Time: 21:13:17
ID: WXX101119-07CCV
Vial: 1:1,B

MAP 11/22/10

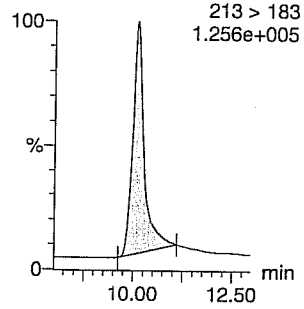
HMX
F2:MRM of 1 channel,AP-
176 > 102
9.992e+004



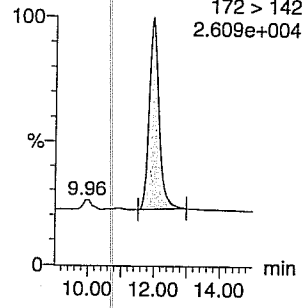
RDX
F2:MRM of 1 channel,AP-
176 > 102
9.992e+004



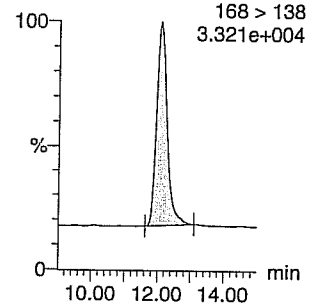
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
1.256e+005



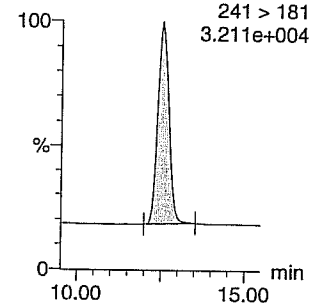
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.609e+004



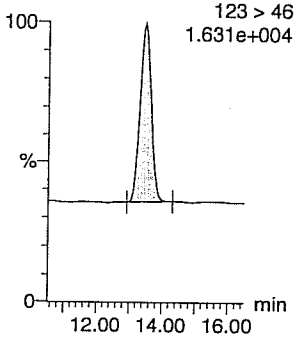
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
3.321e+004



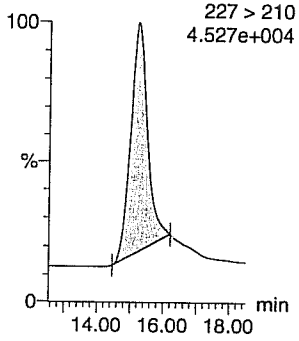
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
3.211e+004



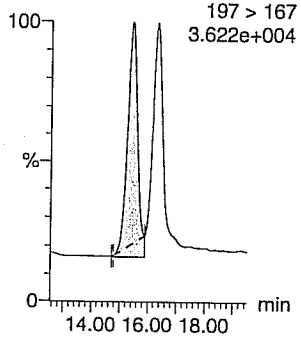
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.631e+004



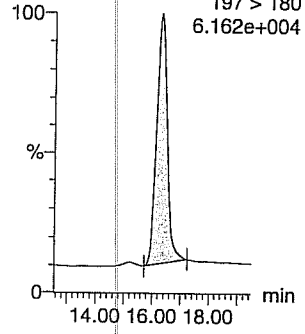
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
4.527e+004



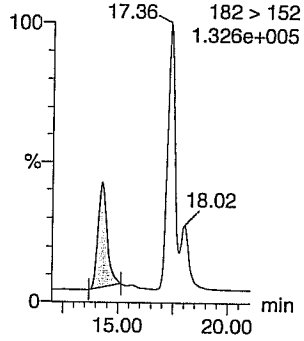
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
3.622e+004



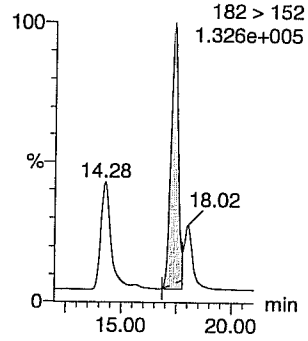
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.162e+004



34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.326e+005



26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.326e+005



HM 11/22/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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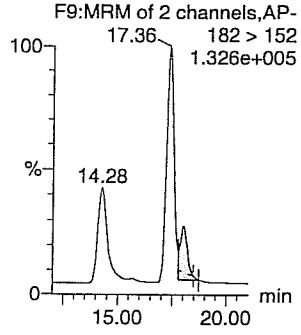
Quantify Sample Report

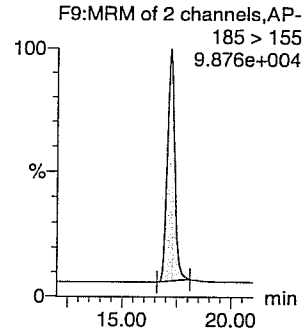
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

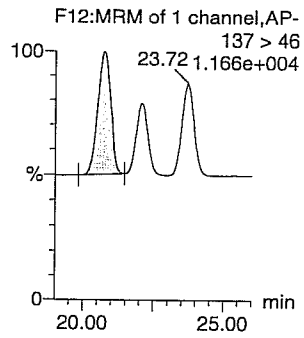
24-dinitrotoluene



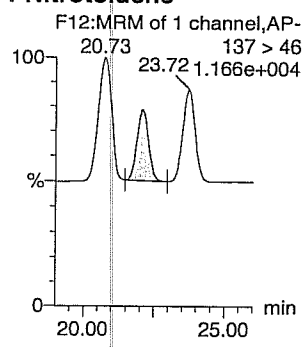
26-dinitrotoluene-d3



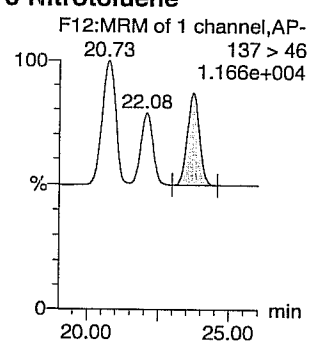
2-Nitrotoluene



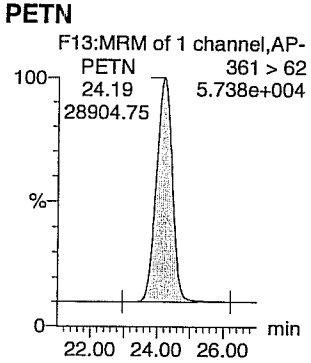
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-07CCV	HMX	176 > 102	5.19	23670.484	7118.914	23670.484	1662.507	db			536.0137	89.3	-10.7	1082.6
WXX101119-07CCV	RDX	176 > 102	7.55	19247.951	7118.914	19247.951	1351.888	bb			670.5621	111.8	11.8	771.3
WXX101119-07CCV	135-Trinitrobenzene	213 > 183	10.09	40012.051	7118.914	40012.051	2810.264	bb			579.1164	96.5	-3.5	4173.0
WXX101119-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	7118.914		7118.914	7118.914	bb			554.8962	111.0	11.0	1118.6
WXX101119-07CCV	13-Dinitrobenzene	168 > 138	12.08	10310.915	7118.914	10310.915	724.192	bb			609.1495	101.5	1.5	909.2
WXX101119-07CCV	Tetryl	241 > 181	12.52	10238.144	7118.914	10238.144	719.080	bb			586.3923	97.7	-2.3	1373.3
WXX101119-07CCV	Nitrobenzene	123 > 46	13.47	4269.632	7118.914	4269.632	299.879	bb			538.8256	89.8	-10.2	337.6
WXX101119-07CCV	246-Trinitrotoluene	227 > 210	15.20	22021.092	37868.320	22021.092	290.759	bb			661.1988	110.2	10.2	602.8
WXX101119-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.41	12926.860	37868.320	12926.860	170.682	MM	21-Nov-10	10:54:34	661.9076	110.3	10.3	439.0
WXX101119-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.30	24231.855	37868.320	24231.855	319.949	bb			786.3746	131.1	31.1	1331.1
WXX101119-07CCV	34-dinitrotoluene	182 > 152	14.28	24366.605	37868.320	24366.605	321.728	bb			337.8480	112.6	12.6	308.0
WXX101119-07CCV	26-dinitrotoluene	182 > 152	17.36	49551.926	37868.320	49551.926	654.266	MM	21-Nov-10	11:01:13	613.6862	102.3	2.3	786.4
WXX101119-07CCV	24-dinitrotoluene	182 > 152	18.02	11998.015	37868.320	11998.015	158.418	MM	21-Nov-10	11:08:23	605.6327	100.9	0.9	179.4
WXX101119-07CCV	26-dinitrotoluene-d3	185 > 155	17.18	37868.320		37868.320	37868.320	bb			496.9302	99.4	-0.6	2322.0
WXX101119-07CCV	2-Nitrotoluene	137 > 46	20.73	3150.931	37868.320	3150.931	41.604	bb			611.9671	102.0	2.0	839.0
WXX101119-07CCV	4-Nitrotoluene	137 > 46	22.08	1594.647	37868.320	1594.647	21.055	bb			594.0711	99.0	-1.0	479.5
WXX101119-07CCV	3-Nitrotoluene	137 > 46	23.72	2163.668	37868.320	2163.668	28.568	bb			598.9030	99.8	-0.2	624.3
WXX101119-07CCV	PETN	361 > 62	24.19	28904.750	37868.320	28904.750	381.648	bb			591.5583	98.6	-1.4	7912.7

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Vendor: Restek
Date of Analysis: 11/20/10
Time of Injection: 2113
Standard Number: WXX101119-07CCV
Data File: EXP1119063a

HMX	89.3
RDX	111.8
135-TNB	96.5
13-DNB	101.5
Tetryl	97.7
Nitrobenzene	89.8
246-TNT	110.2
4A-26-DNT	110.3
2A-46-DNT	131.1
34-DNT(surr)	112.6
26-DNT	102.3
24-DNT	100.9
2-NT	102.0
4-NT	99.0
3-NT	99.8
PETN	98.6
Total	1653.4
Average	103.3

MMT 11/22/10

HMK 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP1119065a

Analysis Date: 20–NOV–10 22:12

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
p–Nitrotoluene	40	34.939	87	
1,3,5–Trinitrobenzene	40	43.659	109	
1,3–Dinitrobenzene–d4	500	518.746	104	
2,4,6–Trinitrotoluene	40	39.442	99	
2,4–Dinitrotoluene	40	39.352	98	
2,6–Dinitrotoluene	40	38.626	97	
2,6–Dinitrotoluene–d3	500	515.517	103	
2–Amino–4,6–dinitrotoluene	40	37.528	94	
3,4–Dinitrotoluene	20	20.375	102	
4–Amino–2,6–dinitrotoluene	40	34.48	86	
HMX	40	45.21	113	
Nitrobenzene	40	39.124	98	
PETN	40	49.795	124	
RDX	40	39.874	100	
Tetryl	40	42.78	107	
m–Dinitrobenzene	40	36.647	92	
m–Nitrotoluene	40	41.692	104	
o–Nitrotoluene	40	35.503	89	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Quantify Sample Report

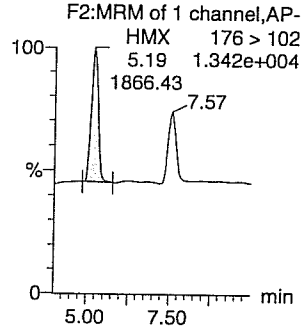
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

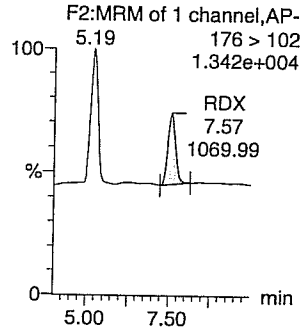
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119065a
Date: 20-Nov-2010
Time: 22:12:14
ID: WXX101119-08CRI
Vial: 1:1,C

MATT 11/22/10

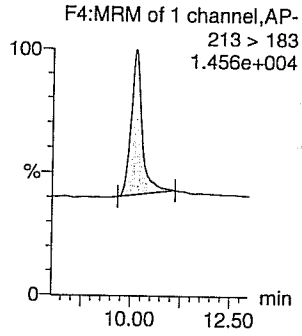
HMX



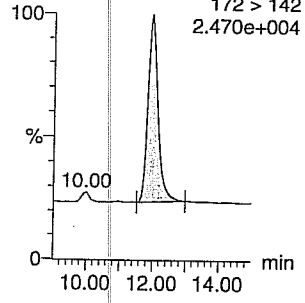
RDX



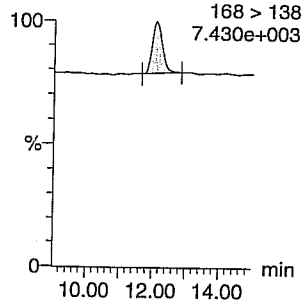
135-Trinitrobenzene



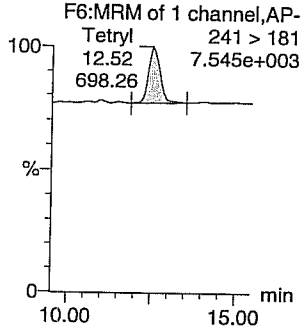
13-Dinitrobenzene-d4



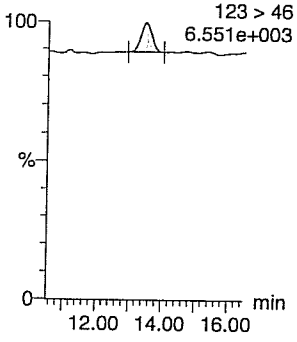
13-Dinitrobenzene



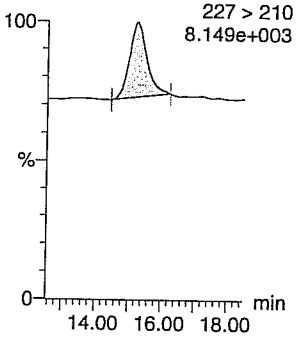
Tetryl



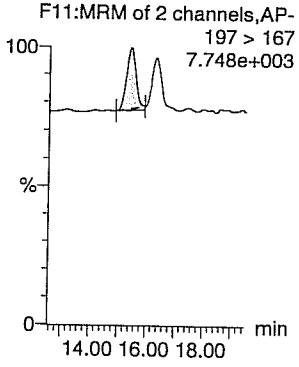
Nitrobenzene



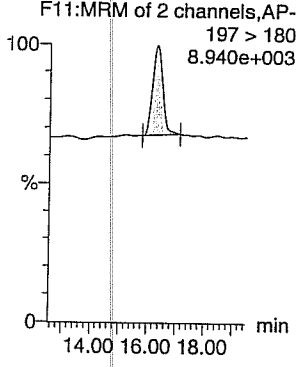
246-Trinitrotoluene



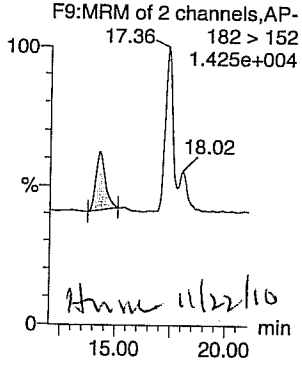
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

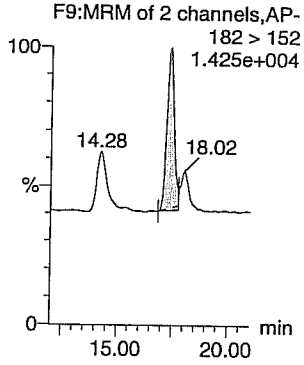


34-dinitrotoluene



Hrme 11/22/10

26-dinitrotoluene



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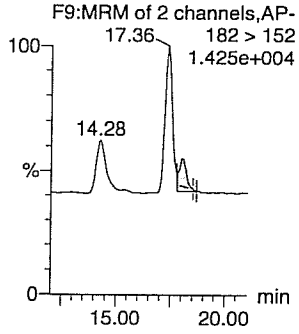
Quantify Sample Report

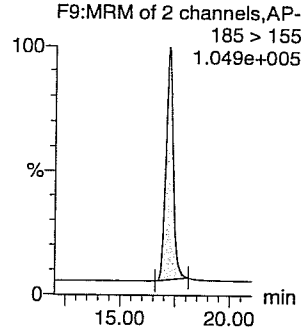
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

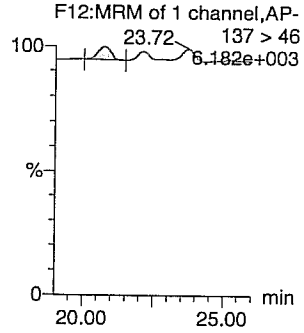
24-dinitrotoluene



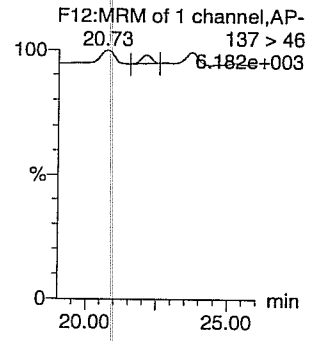
26-dinitrotoluene-d3



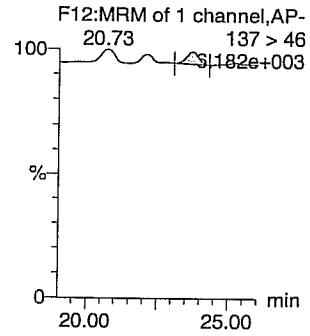
2-Nitrotoluene



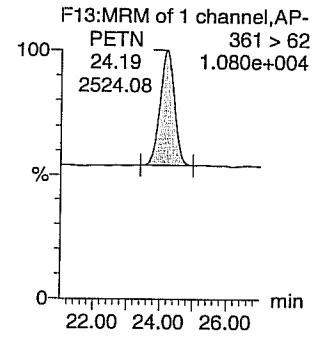
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-08CRI	HMX	176 > 102	5.19	1866.425	6655.131	1866.425	140.225	bb			45.2102	113.0	13.0	232.1
WXX101119-08CRI	RDX	176 > 102	7.57	1069.992	6655.131	1069.992	80.389	bb			39.8742	99.7	-0.3	120.3
WXX101119-08CRI	135-Trinitrobenzene	213 > 183	10.11	2819.940	6655.131	2819.940	211.862	bb			43.6588	109.1	9.1	396.3
WXX101119-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	6655.131		6655.131	6655.131	bb			518.7458	103.7	3.7	391.2
WXX101119-08CRI	13-Dinitrobenzene	168 > 138	12.08	579.895	6655.131	579.895	43.568	bb			36.6466	91.6	-8.4	66.5
WXX101119-08CRI	Tetryl	241 > 181	12.52	698.259	6655.131	698.259	52.460	bb			42.7800	106.9	6.9	77.8
WXX101119-08CRI	Nitrobenzene	123 > 46	13.47	289.820	6655.131	289.820	21.774	bb			39.1240	97.8	-2.2	30.4
WXX101119-08CRI	246-Trinitrotoluene	227 > 210	15.25	1362.750	39284.680	1362.750	17.345	bb			39.4423	98.6	-1.4	174.3
WXX101119-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.41	698.562	39284.680	698.562	8.891	MM	21-Nov-10	10:54:42	34.4796	86.2	-13.8	35.0
WXX101119-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.30	1199.649	39284.680	1199.649	15.269	bb			37.5275	93.8	-6.2	55.4
WXX101119-08CRI	34-dinitrotoluene	182 > 152	14.28	1524.444	39284.680	1524.444	19.403	bb			20.3747	101.9	1.9	77.8
WXX101119-08CRI	26-dinitrotoluene	182 > 152	17.36	3235.517	39284.680	3235.517	41.180	MM	21-Nov-10	11:01:20	38.6262	96.6	-3.4	215.8
WXX101119-08CRI	24-dinitrotoluene	182 > 152	18.02	808.754	39284.680	808.754	10.294	MM	21-Nov-10	11:08:33	39.3522	98.4	-1.6	50.2
WXX101119-08CRI	26-dinitrotoluene-d3	185 > 155	17.18	39284.680		39284.680	39284.680	bb			515.5165	103.1	3.1	2359.9
WXX101119-08CRI	2-Nitrotoluene	137 > 46	20.73	189.638	39284.680	189.638	2.414	bb			35.5032	88.8	-11.2	49.5
WXX101119-08CRI	4-Nitrotoluene	137 > 46	22.10	97.292	39284.680	97.292	1.238	bb			34.9385	87.3	-12.7	31.3
WXX101119-08CRI	3-Nitrotoluene	137 > 46	23.72	156.255	39284.680	156.255	1.989	bb			41.6920	104.2	4.2	44.0
WXX101119-08CRI	PETN	361 > 62	24.19	2524.082	39284.680	2524.082	32.126	bb			49.7949	124.5	24.5	518.8

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis: 11/20/10
Time of Injection: 2212
Standard Number: WXX101119-08CRI
Data File: EXP1119065a

HMX	113.0
RDX	99.7
135-TNB	109.1
13-DNB	91.6
Tetryl	106.9
Nitrobenzene	97.8
246-TNT	98.6
4A-26-DNT	86.2
2A-46-DNT	93.8
34-DNT(surr)	101.9
26-DNT	96.6
24-DNT	98.4
2-NT	88.8
4-NT	87.3
3-NT	104.2
PETN	124.5
Total	1598.4
Average	99.9

MATT 11/22/10

Hmm 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP1119073a

Analysis Date: 21–NOV–10 02:08

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

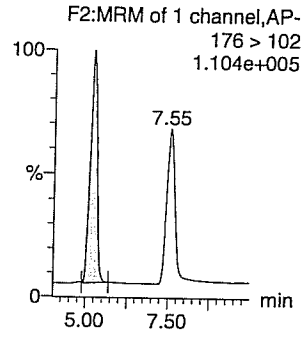
Compound	True	Found	Recovery	Q
RDX	600	703.666	117	
Tetryl	600	641.962	107	
m–Dinitrobenzene	600	630.813	105	
m–Nitrotoluene	600	632.222	105	
o–Nitrotoluene	600	631.127	105	
p–Nitrotoluene	600	619.878	103	
PETN	600	621.839	104	
1,3,5–Trinitrobenzene	600	592.675	99	
1,3–Dinitrobenzene–d4	500	544.356	109	
2,4,6–Trinitrotoluene	600	718.287	120	
2,4–Dinitrotoluene	600	635.653	106	
2,6–Dinitrotoluene	600	609.604	102	
2,6–Dinitrotoluene–d3	500	510.43	102	
2–Amino–4,6–dinitrotoluene	600	639.926	107	
3,4–Dinitrotoluene	300	389.416	130	*
4–Amino–2,6–dinitrotoluene	600	623.987	104	
HMX	600	610.533	102	
Nitrobenzene	600	594.904	99	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

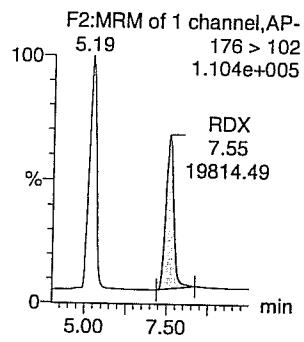
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119073a
Date: 21-Nov-2010
Time: 02:08:10
ID: WXX101119-07CCV
Vial: 1:1,B

MTP 11/22/10

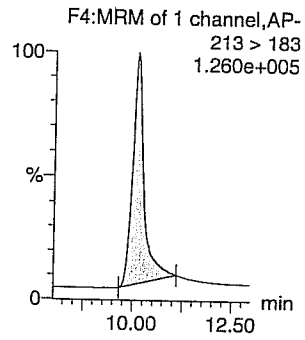
HMX



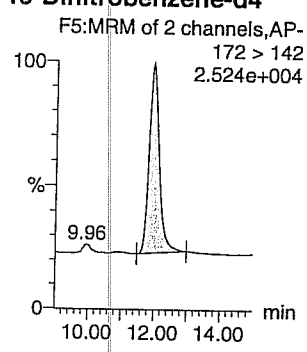
RDX



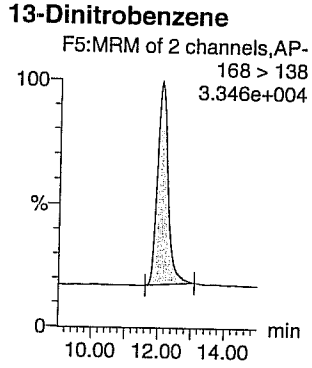
135-Trinitrobenzene



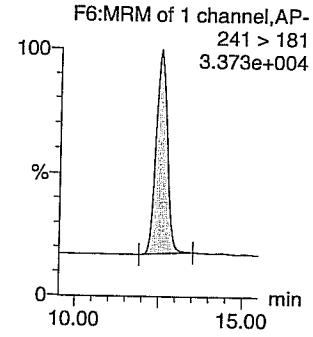
13-Dinitrobenzene-d4



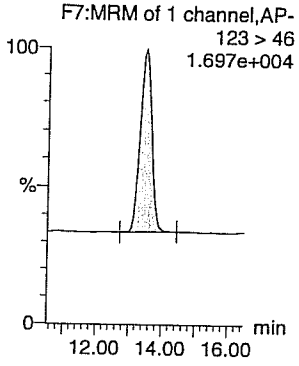
13-Dinitrobenzene



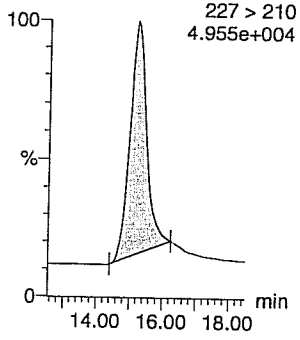
Tetryl



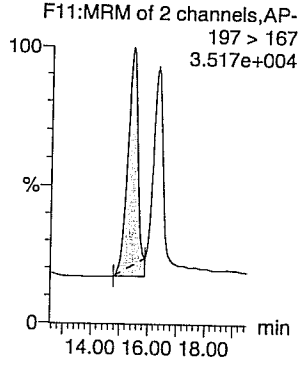
Nitrobenzene



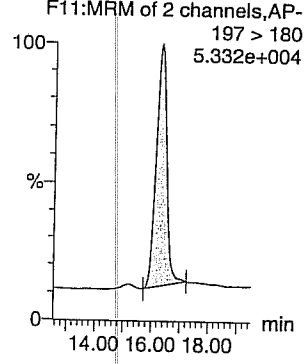
246-Trinitrotoluene



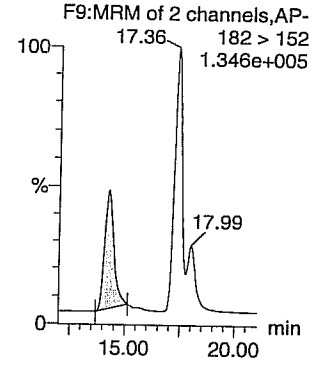
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

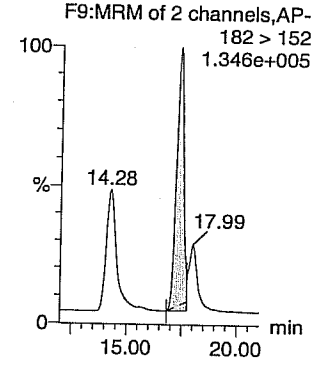


34-dinitrotoluene



HMM 11/22/10

26-dinitrotoluene



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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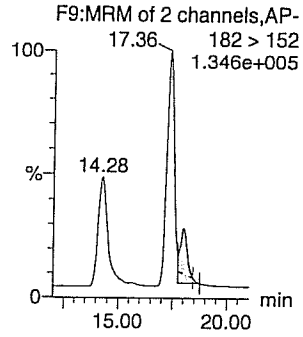
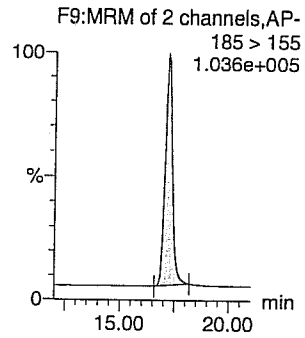
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

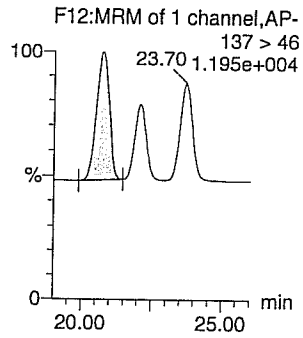
24-dinitrotoluene



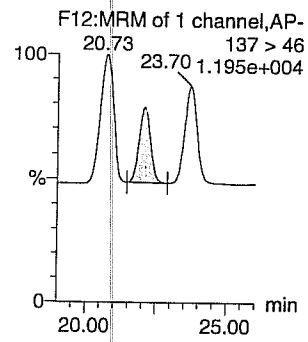
26-dinitrotoluene-d3



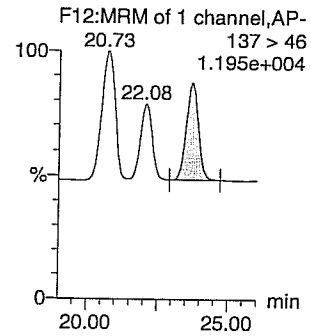
2-Nitrotoluene



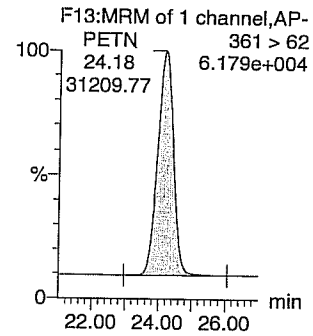
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-07CCV	HMX	176 > 102	5.19	26449.117	6983.686	26449.117	1893.636	db			610.5327	101.8	1.8	2023.5
WXX101119-07CCV	RDX	176 > 102	7.55	19814.494	6983.686	19814.494	1418.627	bb			703.6659	117.3	17.3	1333.1
WXX101119-07CCV	135-Trinitrobenzene	213 > 183	10.09	40170.984	6983.686	40170.984	2876.059	bb			592.6750	98.8	-1.2	2980.0
WXX101119-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	6983.686		6983.686	6983.686	bb			544.3556	108.9	8.9	445.3
WXX101119-07CCV	13-Dinitrobenzene	168 > 138	12.08	10474.772	6983.686	10474.772	749.946	bb			630.8126	105.1	5.1	718.0
WXX101119-07CCV	Tetryl	241 > 181	12.52	10995.456	6983.686	10995.456	787.224	bb			641.9619	107.0	7.0	578.4
WXX101119-07CCV	Nitrobenzene	123 > 46	13.47	4624.453	6983.686	4624.453	331.090	bb			594.9044	99.2	-0.8	459.1
WXX101119-07CCV	246-Trinitrotoluene	227 > 210	15.20	24572.293	38897.051	24572.293	315.863	bb			718.2874	119.7	19.7	907.1
WXX101119-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.41	12517.332	38897.051	12517.332	160.903	MM	21-Nov-10	10:55:16	623.9869	104.0	4.0	230.0
WXX101119-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.30	20254.793	38897.051	20254.793	260.364	bb			639.9264	106.7	6.7	947.0
WXX101119-07CCV	34-dinitrotoluene	182 > 152	14.28	28848.818	38897.051	28848.818	370.836	bb			389.4159	129.8	29.8	1411.2
WXX101119-07CCV	26-dinitrotoluene	182 > 152	17.36	50559.500	38897.051	50559.500	649.914	MM	21-Nov-10	11:01:53	609.6042	101.6	1.6	3102.6
WXX101119-07CCV	24-dinitrotoluene	182 > 152	17.99	12934.837	38897.051	12934.837	166.270	MM	21-Nov-10	11:09:21	635.6532	105.9	5.9	736.0
WXX101119-07CCV	26-dinitrotoluene-d3	185 > 155	17.18	38897.051		38897.051	38897.051	bb			510.4298	102.1	2.1	1561.9
WXX101119-07CCV	2-Nitrotoluene	137 > 46	20.73	3337.860	38897.051	3337.860	42.906	bb			631.1269	105.2	5.2	248.2
WXX101119-07CCV	4-Nitrotoluene	137 > 46	22.08	1709.121	38897.051	1709.121	21.970	bb			619.8777	103.3	3.3	144.5
WXX101119-07CCV	3-Nitrotoluene	137 > 46	23.70	2346.090	38897.051	2346.090	30.158	bb			632.2224	105.4	5.4	186.2
WXX101119-07CCV	PETN	361 > 62	24.18	31209.770	38897.051	31209.770	401.184	bb			621.8394	103.6	3.6	8899.8

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 11/21/10
Time of Injection: 0208
Standard Number: WXX101119-07CCV
Data File: EXP1119073a

HMX	101.8
RDX	117.3
135-TNB	98.8
13-DNB	105.1
Tetryl	107.0
Nitrobenzene	99.2
246-TNT	119.7
4A-26-DNT	104.0
2A-46-DNT	106.7
34-DNT(surr)	129.8
26-DNT	101.6
24-DNT	105.9
2-NT	105.2
4-NT	103.3
3-NT	105.4
PETN	103.6
Total	1714.4
Average	107.2

MAT 11/22/10

Hmc 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP1119075a

Analysis Date: 21–NOV–10 03:07

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	40	40.355	101	
1,3–Dinitrobenzene–d4	500	621.812	124	
2,4,6–Trinitrotoluene	40	41.559	104	
2,4–Dinitrotoluene	40	41.062	103	
2,6–Dinitrotoluene	40	38.999	97	
2,6–Dinitrotoluene–d3	500	605.252	121	
2–Amino–4,6–dinitrotoluene	40	39.834	100	
3,4–Dinitrotoluene	20	20.121	101	
4–Amino–2,6–dinitrotoluene	40	37.902	95	
HMX	40	47.318	118	
Nitrobenzene	40	34.121	85	
PETN	40	40.73	102	
RDX	40	41.255	103	
Tetryl	40	45.557	114	
m–Dinitrobenzene	40	40.08	100	
m–Nitrotoluene	40	35.976	90	
o–Nitrotoluene	40	38.635	97	
p–Nitrotoluene	40	44.966	112	

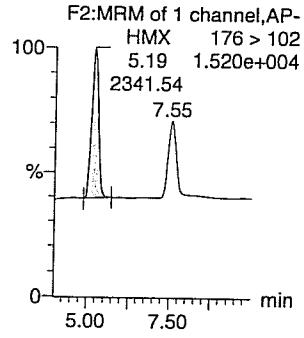
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

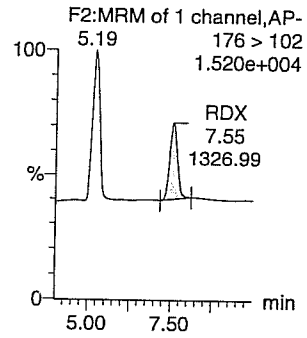
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119075a
Date: 21-Nov-2010
Time: 03:07:06
ID: WXX101119-08CRI
Vial: 1:1,C

MMT 11/22/10

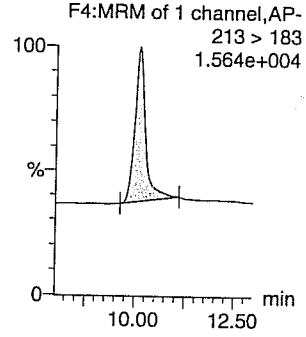
HMX



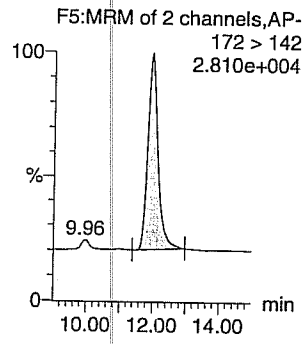
RDX



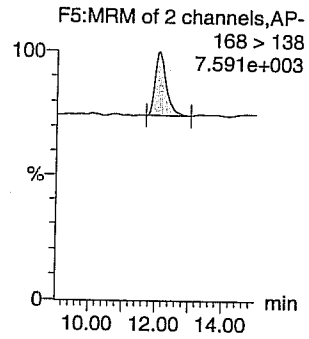
135-Trinitrobenzene



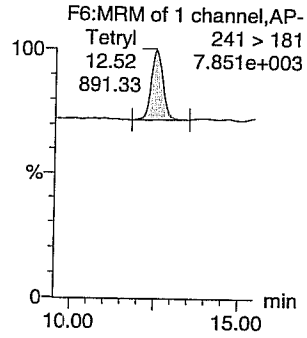
13-Dinitrobenzene-d4



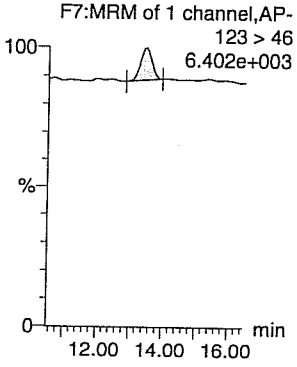
13-Dinitrobenzene



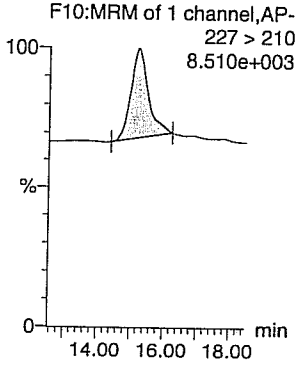
Tetryl



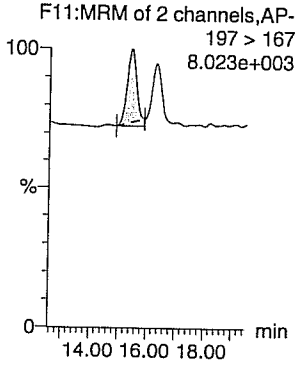
Nitrobenzene



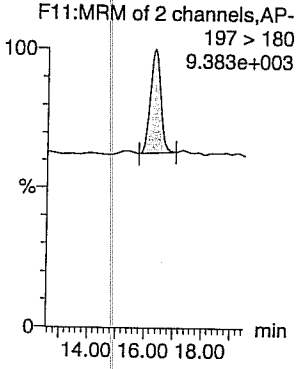
246-Trinitrotoluene



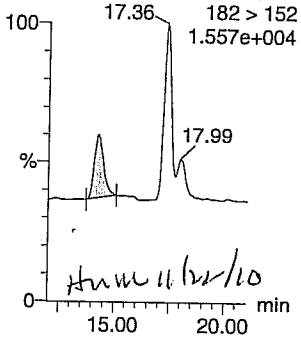
4-Amino-26-dinitrotoluene



2-Amino-46-dinitrotoluene

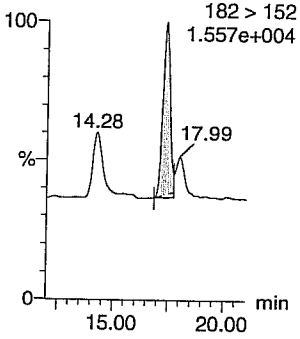


34-dinitrotoluene



Hmm 11/22/10

26-dinitrotoluene



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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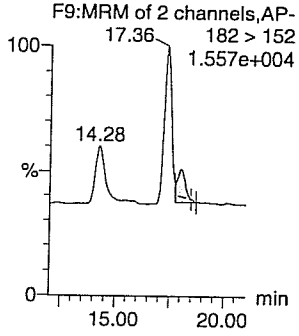
Quantify Sample Report

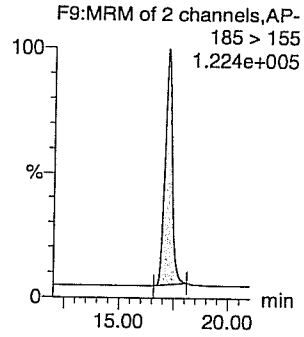
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

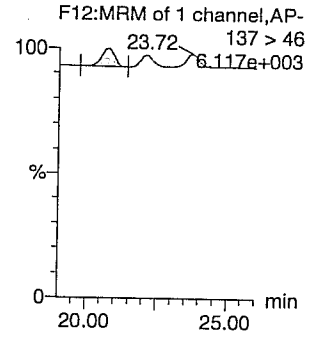
24-dinitrotoluene



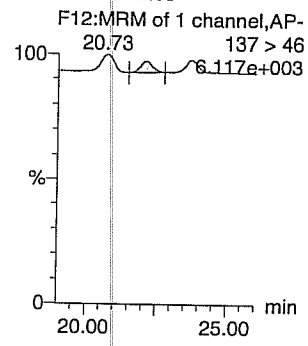
26-dinitrotoluene-d3



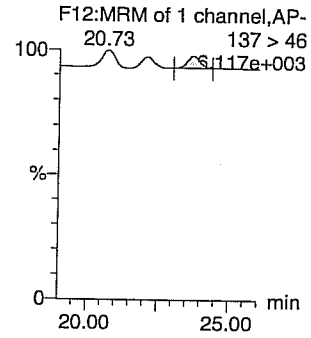
2-Nitrotoluene



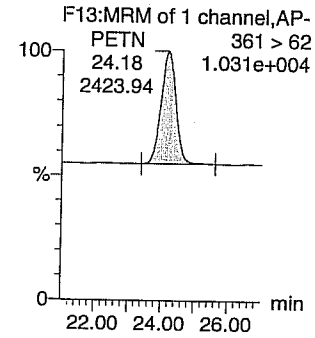
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101119-08CRI	HMX	176 > 102	5.19	2341.543	7977.389	2341.543	146.761	bb			47.3177	118.3	18.3	130.0
WXX101119-08CRI	RDX	176 > 102	7.55	1326.993	7977.389	1326.993	83.172	bb			41.2550	103.1	3.1	66.5
WXX101119-08CRI	135-Trinitrobenzene	213 > 183	10.09	3124.430	7977.389	3124.430	195.830	bb			40.3551	100.9	0.9	266.6
WXX101119-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	7977.389		7977.389	7977.389	bb			621.8116	124.4	24.4	713.3
WXX101119-08CRI	13-Dinitrobenzene	168 > 138	12.08	760.242	7977.389	760.242	47.650	bb			40.0804	100.2	0.2	71.8
WXX101119-08CRI	Tetryl	241 > 181	12.52	891.327	7977.389	891.327	55.866	bb			45.5572	113.9	13.9	99.3
WXX101119-08CRI	Nitrobenzene	123 > 46	13.47	302.980	7977.389	302.980	18.990	bb			34.1212	85.3	-14.7	40.5
WXX101119-08CRI	246-Trinitrotoluene	227 > 210	15.20	1685.810	46122.953	1685.810	18.275	bb			41.5586	103.9	3.9	61.2
WXX101119-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.41	901.557	46122.953	901.557	9.773	MM	21-Nov-10	10:55:21	37.9015	94.8	-5.2	23.7
WXX101119-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.30	1495.052	46122.953	1495.052	16.207	bb			39.8344	99.6	-0.4	74.8
WXX101119-08CRI	34-dinitrotoluene	182 > 152	14.28	1767.529	46122.953	1767.529	19.161	bb			20.1211	100.6	0.6	74.6
WXX101119-08CRI	26-dinitrotoluene	182 > 152	17.36	3835.346	46122.953	3835.346	41.577	MM	21-Nov-10	11:01:59	38.9986	97.5	-2.5	206.3
WXX101119-08CRI	24-dinitrotoluene	182 > 152	17.99	990.792	46122.953	990.792	10.741	MM	21-Nov-10	11:09:33	41.0621	102.7	2.7	45.2
WXX101119-08CRI	26-dinitrotoluene-d3	185 > 155	17.18	46122.953		46122.953	46122.953	bb			605.2523	121.1	21.1	3312.5
WXX101119-08CRI	2-Nitrotoluene	137 > 46	20.73	242.286	46122.953	242.286	2.627	bb			38.6346	96.6	-3.4	76.7
WXX101119-08CRI	4-Nitrotoluene	137 > 46	22.10	147.010	46122.953	147.010	1.594	bb			44.9655	112.4	12.4	50.8
WXX101119-08CRI	3-Nitrotoluene	137 > 46	23.72	158.303	46122.953	158.303	1.716	bb			35.9761	89.9	-10.1	55.3
WXX101119-08CRI	PETN	361 > 62	24.18	2423.937	46122.953	2423.937	26.277	bb			40.7295	101.8	1.8	589.0

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis: 11/21/10
Time of Injection: 0307
Standard Number: WXX101119-08CRI
Data File: EXP1119075a

HMX	118.3
RDX	103.1
135-TNB	100.9
13-DNB	100.2
Tetryl	113.9
Nitrobenzene	85.3
246-TNT	103.9
4A-26-DNT	94.8
2A-46-DNT	99.6
34-DNT(surr)	100.6
26-DNT	97.5
24-DNT	102.7
2-NT	96.6
4-NT	112.4
3-NT	89.9
PETN	101.8
Total	1621.5
Average	101.3

MEF 11/22/10

HMC 11/22/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP1123012a

Analysis Date: 23–NOV–10 20:25

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	40	41.815	105	
1,3–Dinitrobenzene–d4	500	547.116	109	
2,4,6–Trinitrotoluene	40	33.624	84	
2,4–Dinitrotoluene	40	35.445	89	
2,6–Dinitrotoluene	40	40.093	100	
2,6–Dinitrotoluene–d3	500	580.719	116	
2–Amino–4,6–dinitrotoluene	40	35.046	88	
3,4–Dinitrotoluene	20	17.721	89	
4–Amino–2,6–dinitrotoluene	40	28.893	72	
HMX	40	42.554	106	
Nitrobenzene	40	46.692	117	
PETN	40	50.974	127	
RDX	40	33.336	83	
Tetryl	40	35.712	89	
m–Dinitrobenzene	40	39.243	98	
m–Nitrotoluene	40	51.789	129	
o–Nitrotoluene	40	33.386	83	
p–Nitrotoluene	40	29.247	73	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

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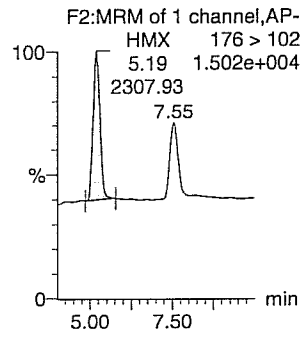
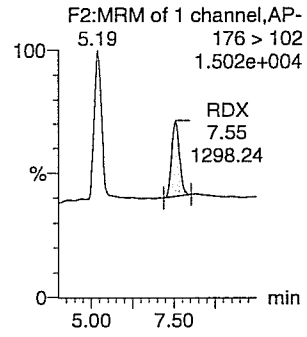
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123012a
Date: 23-Nov-2010
Time: 20:25:05
ID: WXX101123-08CRI
Vial: 1:1,C

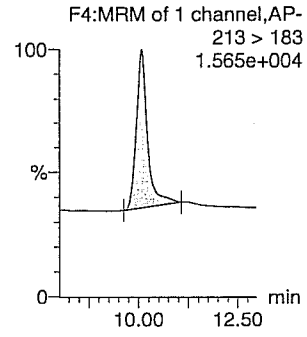
HMX



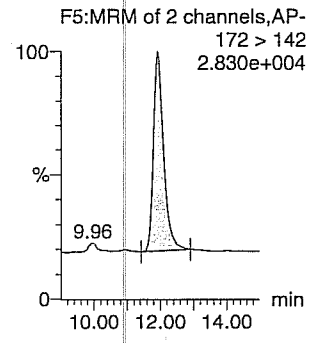
RDX



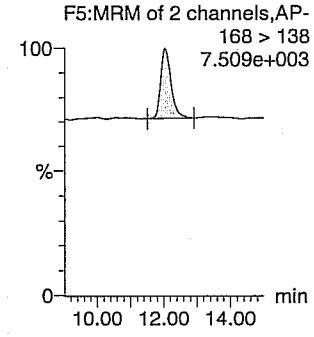
135-Trinitrobenzene



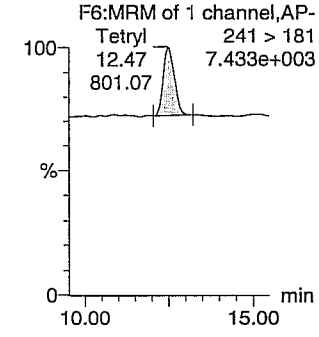
13-Dinitrobenzene-d4



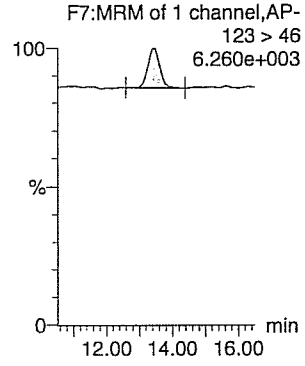
13-Dinitrobenzene



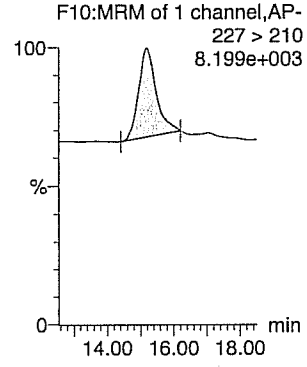
Tetryl



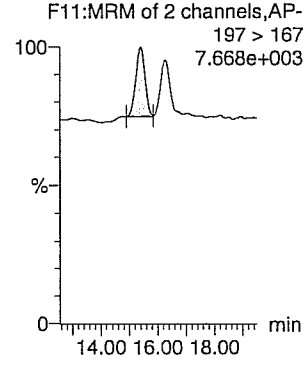
Nitrobenzene



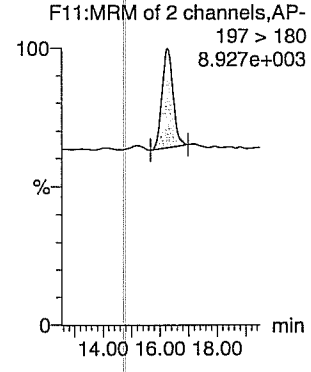
246-Trinitrotoluene



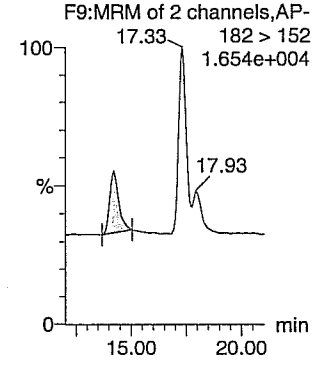
4-Amino-26-dinitrotoluene



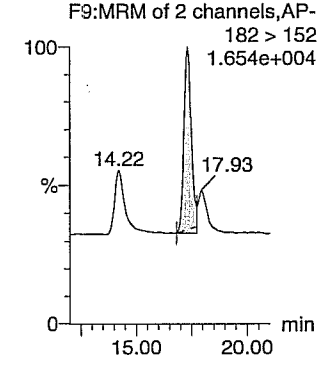
2-Amino-46-dinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



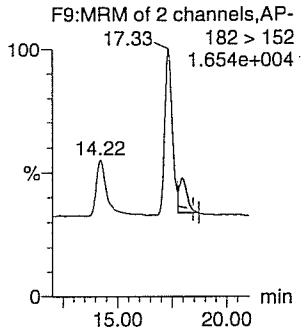
AWM 11/29/10

LC 11/29/10

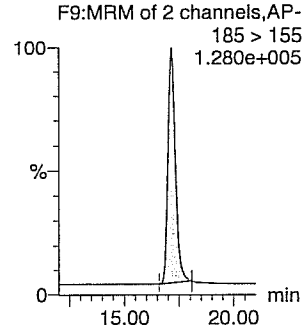
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

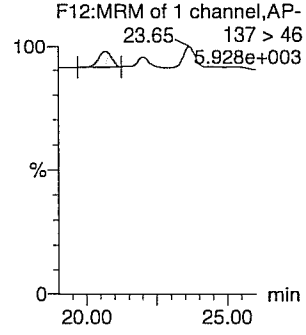
24-dinitrotoluene



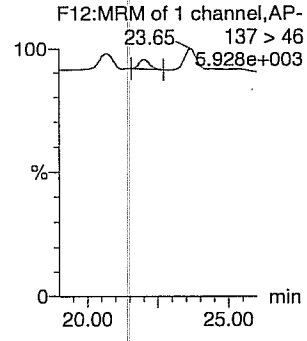
26-dinitrotoluene-d3



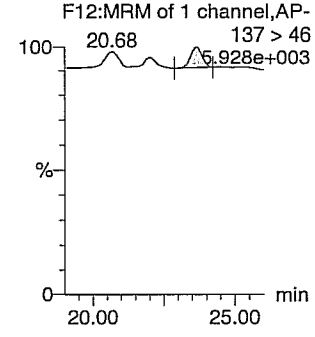
2-Nitrotoluene



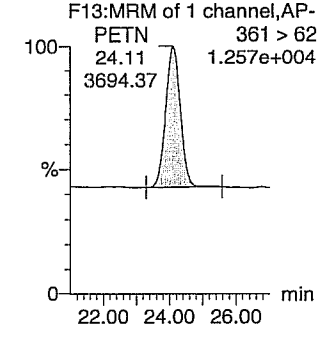
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101123-08CRI	HMX	176 > 102	5.19	2307.929	8159.316	2307.929	141.429	bb			42.5535	106.4	6.4	421.6
WXX101123-08CRI	RDX	176 > 102	7.55	1298.243	8159.316	1298.243	79.556	bb			33.3364	83.3	-16.7	214.3
WXX101123-08CRI	135-Trinitrobenzene	213 > 183	10.09	3324.613	8159.316	3324.613	203.731	bb			41.8151	104.5	4.5	488.1
WXX101123-08CRI	13-Dinitrobenzene-d4	172 > 142	11.91	8159.316		8159.316	8159.316	bb			547.1161	109.4	9.4	1797.6
WXX101123-08CRI	13-Dinitrobenzene	168 > 138	12.03	791.386	8159.316	791.386	48.496	bb			39.2425	98.1	-1.9	60.3
WXX101123-08CRI	Tetryl	241 > 181	12.47	801.070	8159.316	801.070	49.089	bb			35.7118	89.3	-10.7	41.7
WXX101123-08CRI	Nitrobenzene	123 > 46	13.41	391.952	8159.316	391.952	24.019	bb			46.6915	116.7	16.7	48.7
WXX101123-08CRI	246-Trinitrotoluene	227 > 210	15.20	1652.821	49475.715	1652.821	16.703	bb			33.6241	84.1	-15.9	154.6
WXX101123-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.41	762.202	49475.715	762.202	7.703	MM	26-Nov-10	13:26:30	28.8925	72.2	-27.8	37.7
WXX101123-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.26	1452.371	49475.715	1452.371	14.678	bb			35.0462	87.6	-12.4	71.2
WXX101123-08CRI	34-dinitrotoluene	182 > 152	14.22	1759.167	49475.715	1759.167	17.778	bb			17.7212	88.6	-11.4	97.2
WXX101123-08CRI	26-dinitrotoluene	182 > 152	17.33	4384.260	49475.715	4384.260	44.307	MM	26-Nov-10	13:37:37	40.0929	100.2	0.2	297.4
WXX101123-08CRI	24-dinitrotoluene	182 > 152	17.93	1018.172	49475.715	1018.172	10.290	MM	26-Nov-10	13:47:23	35.4448	88.6	-11.4	63.0
WXX101123-08CRI	26-dinitrotoluene-d3	185 > 155	17.15	49475.715		49475.715	49475.715	bb			580.7187	116.1	16.1	2800.7
WXX101123-08CRI	2-Nitrotoluene	137 > 46	20.68	213.997	49475.715	213.997	2.163	bb			33.3861	83.5	-16.5	76.1
WXX101123-08CRI	4-Nitrotoluene	137 > 46	22.01	105.919	49475.715	105.919	1.070	bb			29.2465	73.1	-26.9	45.7
WXX101123-08CRI	3-Nitrotoluene	137 > 46	23.65	242.786	49475.715	242.786	2.454	bb			51.7891	129.5	29.5	100.7
WXX101123-08CRI	PETN	361 > 62	24.11	3694.370	49475.715	3694.370	37.335	bb			50.9736	127.4	27.4	854.9

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis: 11/23/10
Time of Injection: 2025
Standard Number: WXX101123-08CRI
Data File: EXP1123012a

HMX		106.4
RDX		83.3
135-TNB		104.5
13-DNB		98.1
Tetryl		89.3
Nitrobenzene		116.7
246-TNT		84.1
4A-26-DNT		72.2
2A-46-DNT		87.6
34-DNT(surr)		88.6
26-DNT		100.2
24-DNT		88.6
2-NT		83.5
4-NT		73.1
3-NT		129.5
PETN		127.4
Total		1533.1
Average		95.8

dmm 11/29/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

Dan 11/29/10

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP1123018a

Analysis Date: 23–NOV–10 23:21

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	600	561.195	94	
1,3–Dinitrobenzene–d4	500	489.62	98	
2,4,6–Trinitrotoluene	600	569.256	95	
2,4–Dinitrotoluene	600	620.579	103	
2,6–Dinitrotoluene	600	599.495	100	
2,6–Dinitrotoluene–d3	500	498.66	100	
2–Amino–4,6–dinitrotoluene	600	579.624	97	
3,4–Dinitrotoluene	300	283.686	95	
4–Amino–2,6–dinitrotoluene	600	553.212	92	
HMX	600	516.944	86	
Nitrobenzene	600	575.574	96	
PETN	600	458.924	76	*
RDX	600	592.365	99	
Tetryl	600	564.455	94	
m–Dinitrobenzene	600	589.77	98	
m–Nitrotoluene	600	666.672	111	
o–Nitrotoluene	600	644.788	107	
p–Nitrotoluene	600	642.815	107	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

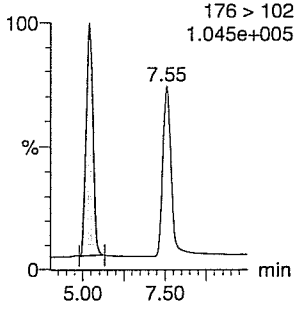
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

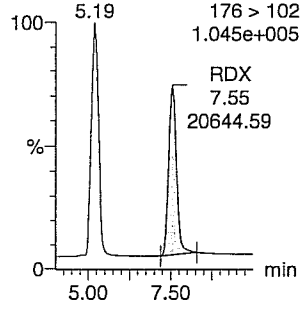
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123018a
Date: 23-Nov-2010
Time: 23:21:58
ID: WXX101123-07CCV
Vial: 1:1,B

LCM 11/29/10

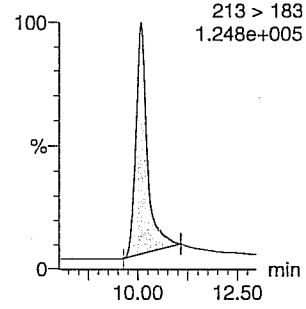
HMX
F2:MRM of 1 channel,AP-
176 > 102
1.045e+005



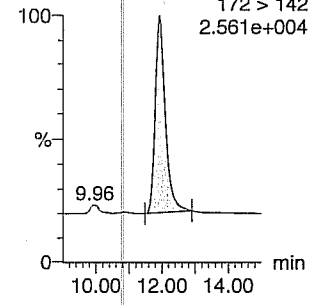
RDX
F2:MRM of 1 channel,AP-
176 > 102
1.045e+005



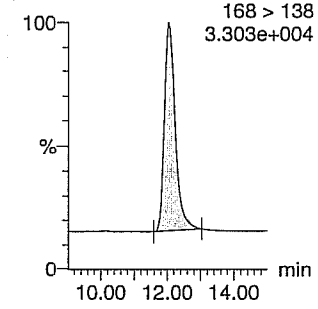
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
1.248e+005



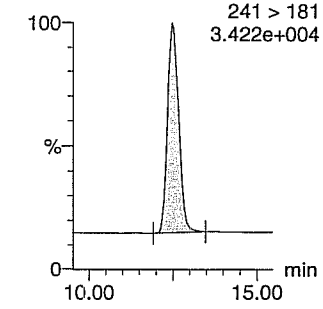
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.561e+004



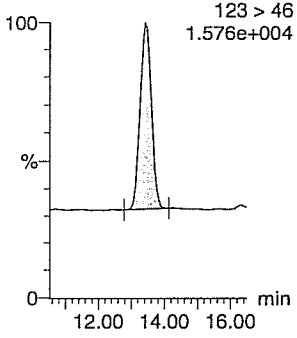
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
3.303e+004



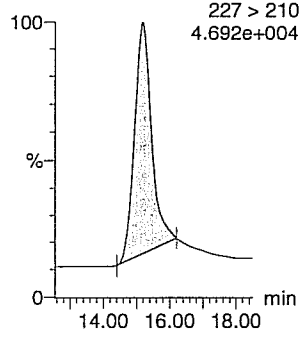
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
3.422e+004



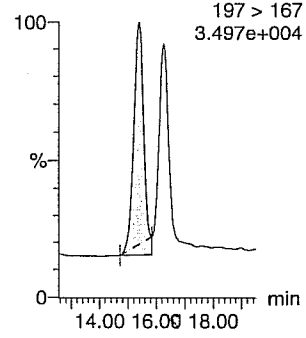
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.576e+004



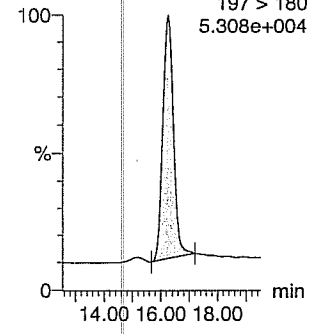
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
4.692e+004



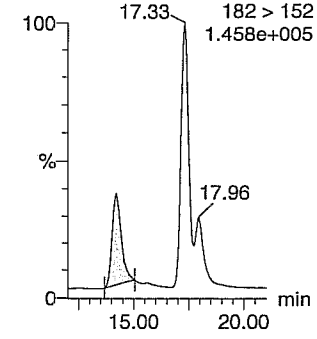
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
3.497e+004



2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.308e+004

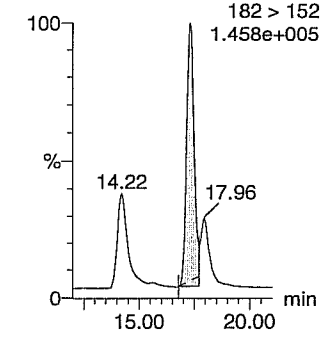


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.458e+005



atm 11/28/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
1.458e+005



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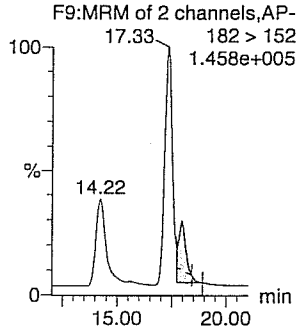
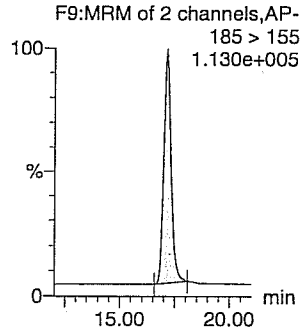
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

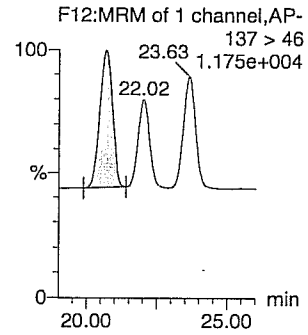
24-dinitrotoluene



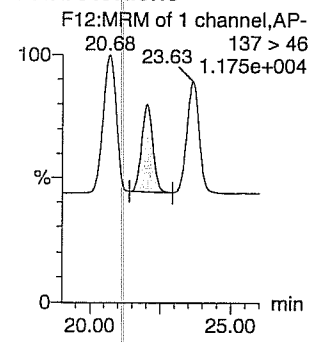
26-dinitrotoluene-d3



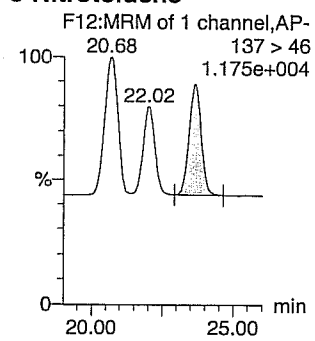
2-Nitrotoluene



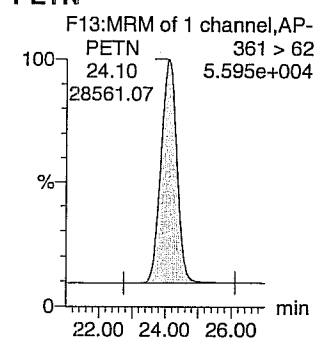
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod:Date	Mod:Time	ng/mL	%Rec	%Dev	S/N
WXX101123-07CCV	HMX	176 > 102	5.19	25090.539	7301.862	25090.539	1718.092	db			516.9438	86.2	-13.8	4114.1
WXX101123-07CCV	RDX	176 > 102	7.55	20644.586	7301.862	20644.586	1413.652	bb			592.3646	98.7	-1.3	2976.7
WXX101123-07CCV	135-Trinitrobenzene	213 > 183	10.09	39930.246	7301.862	39930.246	2734.251	bb			561.1953	93.5	-6.5	1581.3
WXX101123-07CCV	13-Dinitrobenzene-d4	172 > 142	11.91	7301.862		7301.862	7301.862	bb			489.6202	97.9	-2.1	458.3
WXX101123-07CCV	13-Dinitrobenzene	168 > 138	12.03	10643.753	7301.862	10643.753	728.838	bb			589.7703	98.3	-1.7	399.4
WXX101123-07CCV	Tetryl	241 > 181	12.47	11330.985	7301.862	11330.985	775.897	bb			564.4550	94.1	-5.9	1171.2
WXX101123-07CCV	Nitrobenzene	123 > 46	13.41	4323.911	7301.862	4323.911	296.083	bb			575.5743	95.9	-4.1	340.5
WXX101123-07CCV	246-Trinitrotoluene	227 > 210	15.20	24028.232	42484.535	24028.232	282.788	bb			569.2559	94.9	-5.1	370.1
WXX101123-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.41	12531.835	42484.535	12531.835	147.487	MM	26-Nov-10	13:26:50	553.2119	92.2	-7.8	373.6
WXX101123-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.26	20626.332	42484.535	20626.332	242.751	bb			579.6242	96.6	-3.4	334.7
WXX101123-07CCV	34-dinitrotoluene	182 > 152	14.22	24181.969	42484.535	24181.969	284.597	bb			283.6860	94.6	-5.4	920.2
WXX101123-07CCV	26-dinitrotoluene	182 > 152	17.33	56292.816	42484.535	56292.816	662.509	MM	26-Nov-10	13:37:52	599.4949	99.9	-0.1	2607.1
WXX101123-07CCV	24-dinitrotoluene	182 > 152	17.96	15307.490	42484.535	15307.490	180.154	MM	26-Nov-10	13:47:56	620.5790	103.4	3.4	669.2
WXX101123-07CCV	26-dinitrotoluene-d3	185 > 155	17.14	42484.535		42484.535	42484.535	bb			498.6601	99.7	-0.3	2443.1
WXX101123-07CCV	2-Nitrotoluene	137 > 46	20.68	3548.935	42484.535	3548.935	41.767	bb			644.7880	107.5	7.5	440.0
WXX101123-07CCV	4-Nitrotoluene	137 > 46	22.02	1999.054	42484.535	1999.054	23.527	bb			642.8147	107.1	7.1	281.5
WXX101123-07CCV	3-Nitrotoluene	137 > 46	23.63	2683.716	42484.535	2683.716	31.585	bb			666.6719	111.1	11.1	356.5
WXX101123-07CCV	PETN	361 > 62	24.10	28561.072	42484.535	28561.072	336.135	bb			458.9242	76.5	-23.5	15175.4

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 11/23/10
Time of Injection: 2321
Standard Number: WXX101123-07CCV
Data File: EXP1123018a

HMX	86.2
RDX	98.7
135-TNB	93.5
13-DNB	98.3
Tetryl	94.1
Nitrobenzene	95.9
246-TNT	94.9
4A-26-DNT	92.2
2A-46-DNT	96.6
34-DNT(surr)	94.6
26-DNT	99.9
24-DNT	103.4
2-NT	107.5
4-NT	107.1
3-NT	111.1
PETN	76.5
Total	1550.5
Average	96.9

Hmm 11/29/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

Lcn 11/29/10

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP1123020a

Analysis Date: 24–NOV–10 00:20

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2,6–Dinitrotoluene	40	42.116	105	
2,6–Dinitrotoluene–d3	500	438.192	88	
2–Amino–4,6–dinitrotoluene	40	36.307	91	
3,4–Dinitrotoluene	20	20.44	102	
4–Amino–2,6–dinitrotoluene	40	39.514	99	
HMX	40	41.251	103	
Nitrobenzene	40	30.207	76	
PETN	40	49	123	
RDX	40	28.912	72	
Tetryl	40	46.931	117	
m–Dinitrobenzene	40	37.991	95	
m–Nitrotoluene	40	50.715	127	
o–Nitrotoluene	40	50.447	126	
p–Nitrotoluene	40	44.245	111	
1,3,5–Trinitrobenzene	40	48.362	121	
1,3–Dinitrobenzene–d4	500	463.388	93	
2,4,6–Trinitrotoluene	40	55.099	138	*
2,4–Dinitrotoluene	40	41.093	103	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

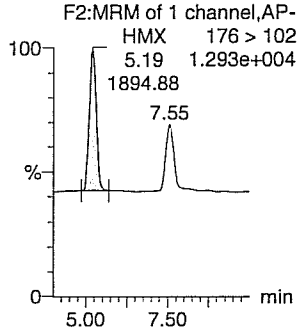
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

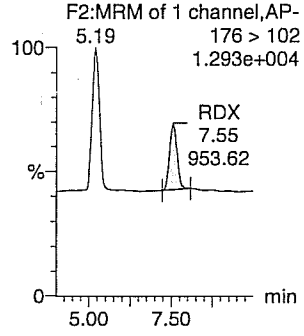
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1123020a
Date: 24-Nov-2010
Time: 00:20:56
ID: WXX101123-08CRI
Vial: 1:1,C

Lar 11/29/10

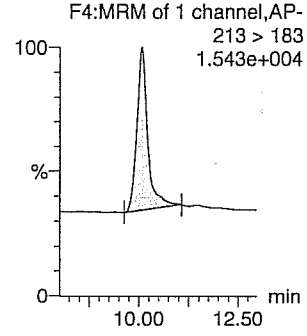
HMX



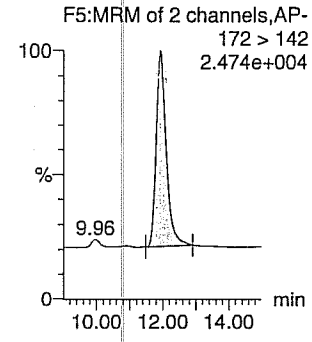
RDX



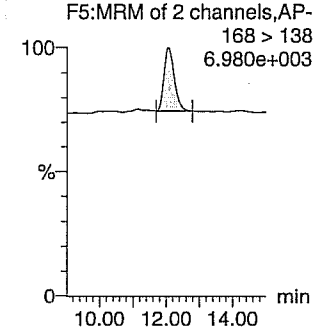
135-Trinitrobenzene



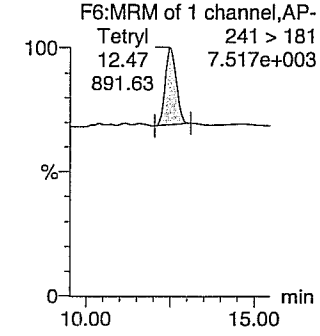
13-Dinitrobenzene-d4



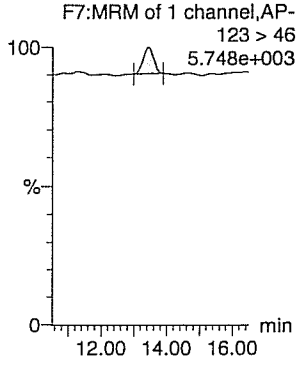
13-Dinitrobenzene



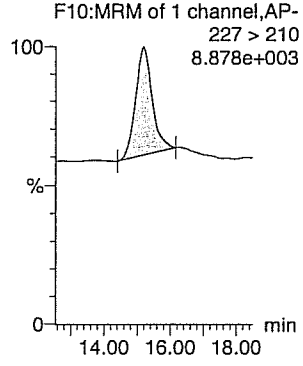
Tetryl



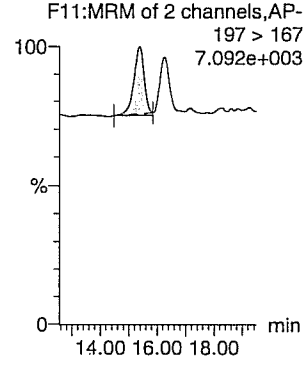
Nitrobenzene



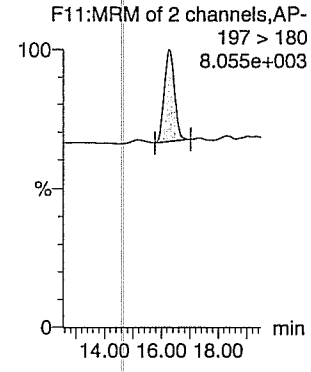
246-Trinitrotoluene



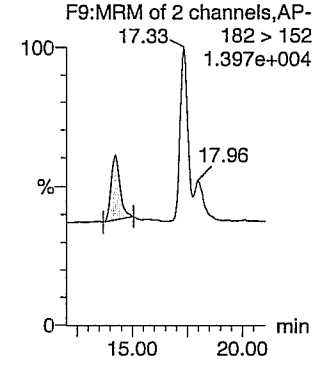
4-Amino-26-dinitrotoluene



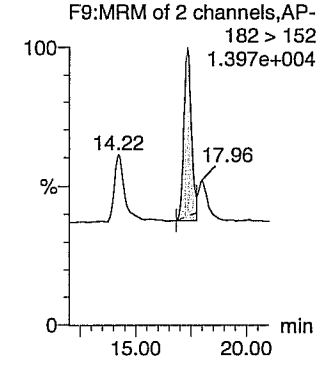
2-Amino-46-dinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



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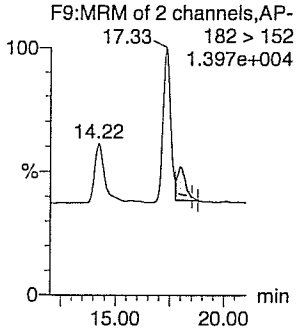
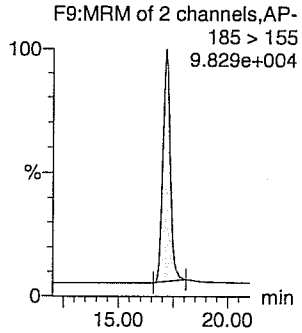
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Lynne E. Russell

Dataset: Untitled, Time: Fri Nov 26 13:58:45 2010

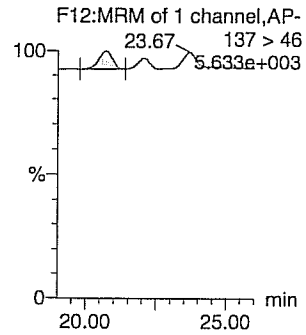
24-dinitrotoluene



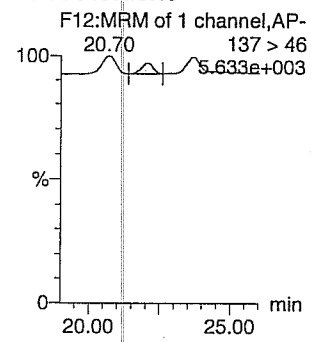
26-dinitrotoluene-d3



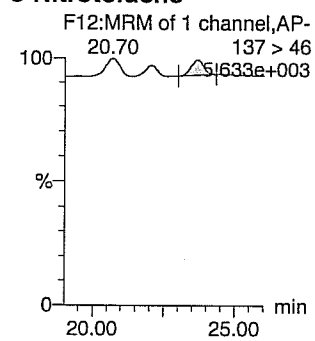
2-Nitrotoluene



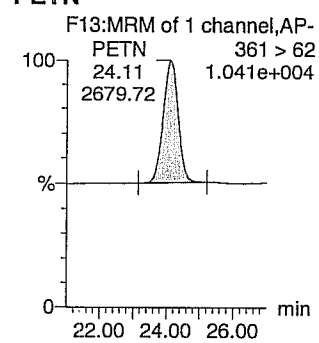
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
WXX101123-08CRI	HMX	176 > 102	5.19	1894.881	6910.648	1894.881	137.099	bb			41.2506	103.1	3.1	236.7
WXX101123-08CRI	RDX	176 > 102	7.55	953.621	6910.648	953.621	68.996	bb			28.9117	72.3	-27.7	109.9
WXX101123-08CRI	135-Trinitrobenzene	213 > 183	10.09	3256.669	6910.648	3256.669	235.627	bb			48.3616	120.9	20.9	120.5
WXX101123-08CRI	13-Dinitrobenzene-d4	172 > 142	11.91	6910.648		6910.648	6910.648	bb			463.3877	92.7	-7.3	746.3
WXX101123-08CRI	13-Dinitrobenzene	168 > 138	12.03	648.907	6910.648	648.907	46.950	bb			37.9914	95.0	-5.0	103.1
WXX101123-08CRI	Tetryl	241 > 181	12.47	891.635	6910.648	891.635	64.512	bb			46.9314	117.3	17.3	110.3
WXX101123-08CRI	Nitrobenzene	123 > 46	13.41	214.765	6910.648	214.765	15.539	bb			30.2067	75.5	-24.5	21.4
WXX101123-08CRI	246-Trinitrotoluene	227 > 210	15.20	2043.717	37332.797	2043.717	27.372	bb			55.0994	137.7	37.7	127.5
WXX101123-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.36	786.557	37332.797	786.557	10.534	MM	26-Nov-10	13:27:02	39.5137	98.8	-1.2	44.3
WXX101123-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.26	1135.351	37332.797	1135.351	15.206	bb			36.3074	90.8	-9.2	88.0
WXX101123-08CRI	34-dinitrotoluene	182 > 152	14.22	1531.089	37332.797	1531.089	20.506	bb			20.4403	102.2	2.2	62.7
WXX101123-08CRI	26-dinitrotoluene	182 > 152	17.33	3475.144	37332.797	3475.144	46.543	MM	26-Nov-10	13:38:01	42.1159	105.3	5.3	169.2
WXX101123-08CRI	24-dinitrotoluene	182 > 152	17.96	890.714	37332.797	890.714	11.929	MM	26-Nov-10	13:48:12	41.0934	102.7	2.7	36.8
WXX101123-08CRI	26-dinitrotoluene-d3	185 > 155	17.14	37332.797		37332.797	37332.797	bb			438.1918	87.6	-12.4	1773.5
WXX101123-08CRI	2-Nitrotoluene	137 > 46	20.70	243.990	37332.797	243.990	3.268	bb			50.4465	126.1	26.1	31.6
WXX101123-08CRI	4-Nitrotoluene	137 > 46	22.05	120.909	37332.797	120.909	1.619	bb			44.2446	110.6	10.6	18.5
WXX101123-08CRI	3-Nitrotoluene	137 > 46	23.67	179.399	37332.797	179.399	2.403	bb			50.7149	126.8	26.8	26.5
WXX101123-08CRI	PETN	361 > 62	24.11	2679.725	37332.797	2679.725	35.890	bb			49.0001	122.5	22.5	3580.1

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis: 11/24/10
Time of Injection: 0020
Standard Number: WXX101123-08CRI
Data File: EXP1123020a

HMX	103.1
RDX	72.3
135-TNB	120.9
13-DNB	95.0
Tetryl	117.3
Nitrobenzene	75.5
246-TNT	137.7
4A-26-DNT	98.8
2A-46-DNT	90.8
34-DNT(surr)	102.2
26-DNT	105.3
24-DNT	102.7
2-NT	126.1
4-NT	110.6
3-NT	126.8
PETN	122.5
Total	1707.6
Average	106.7

Hmw 11/29/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

Lan 11/29/10

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS11240013.wiff

Analysis Date: 24–NOV–10 13:38

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
2,4–Diamino–6–nitrotoluene	100	112	112	
2,6–Diamino–4–nitrotoluene	100	114	114	
3,4–Dinitrotoluene	50	47.7	96	
3,5–Dinitroaniline	100	92.8	93	
TATB	100	107	107	
tris(o–cresyl) phosphate	100	101	101	

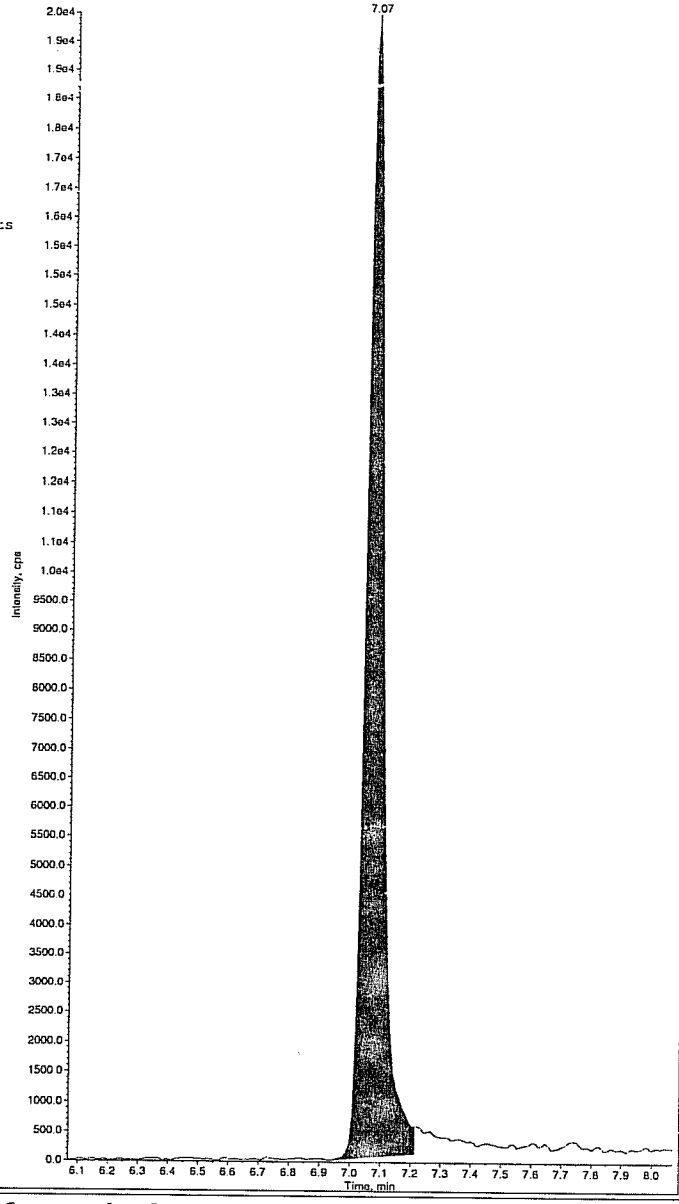
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX101124-27CRI" Sample ID: "[1]LER" File: "EXS11240013.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 107. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:38:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 0
Report Largest Peak: No
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 5 points
RT Window: 30.0 sec
Expected RT: 7.07 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.07 min
Area: 7.99e+004 counts
Height: 19420.245 cps
Start Time: 6.94 min
End Time: 7.21 min

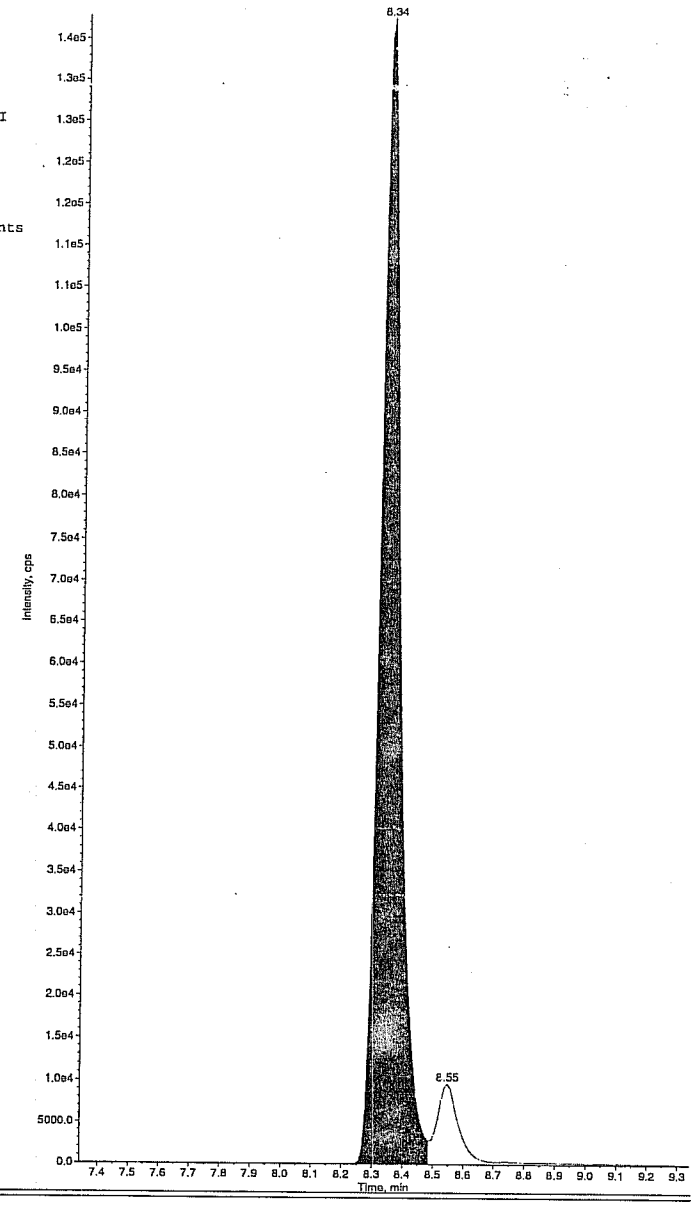


Sample Name: "WXX101124-27CRI" Sample ID: "[1]LER" File: "EXS11240013.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 92.8 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:38:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.34 min
Area: 6.39e+005 counts
Height: 137723.738 cps
Start Time: 8.23 min
End Time: 8.48 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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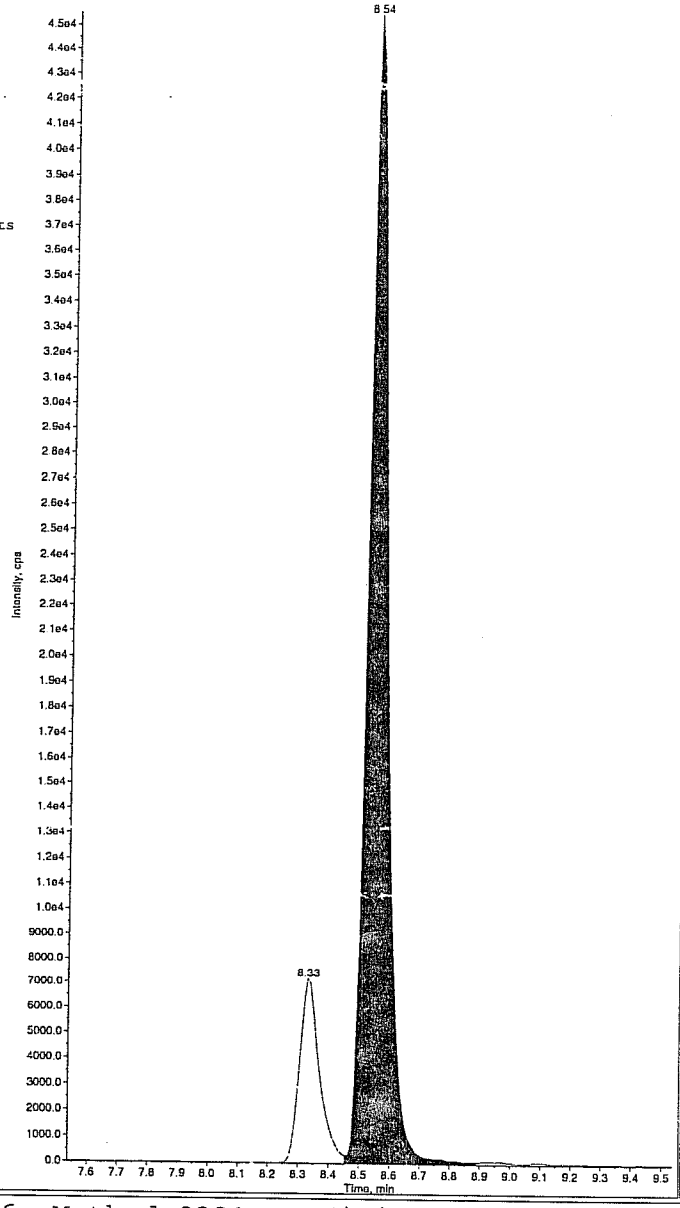
Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240013.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 47.7 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:38:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.54 min
Area: 2.09e+005 counts
Height: 45470.151 cps
Start Time: 8.45 min
End Time: 8.89 min

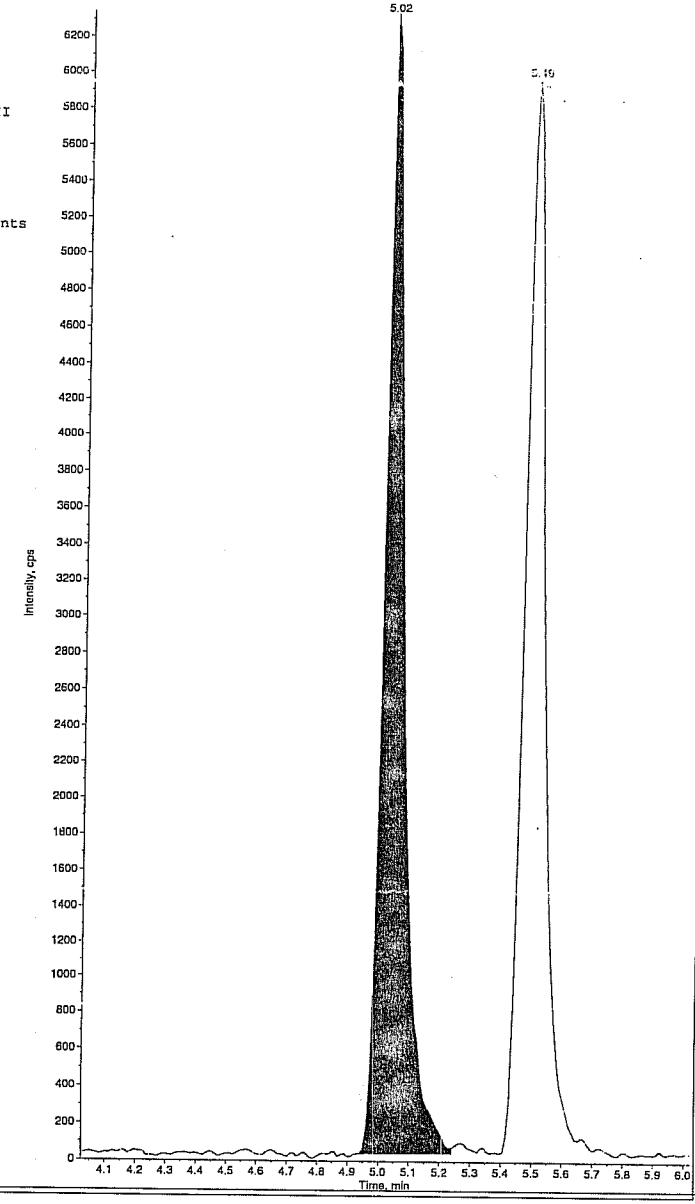


Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240013.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 114. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:38:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.02 min
Area: 2.91e+004 counts
Height: 6302.962 cps
Start Time: 4.94 min
End Time: 5.24 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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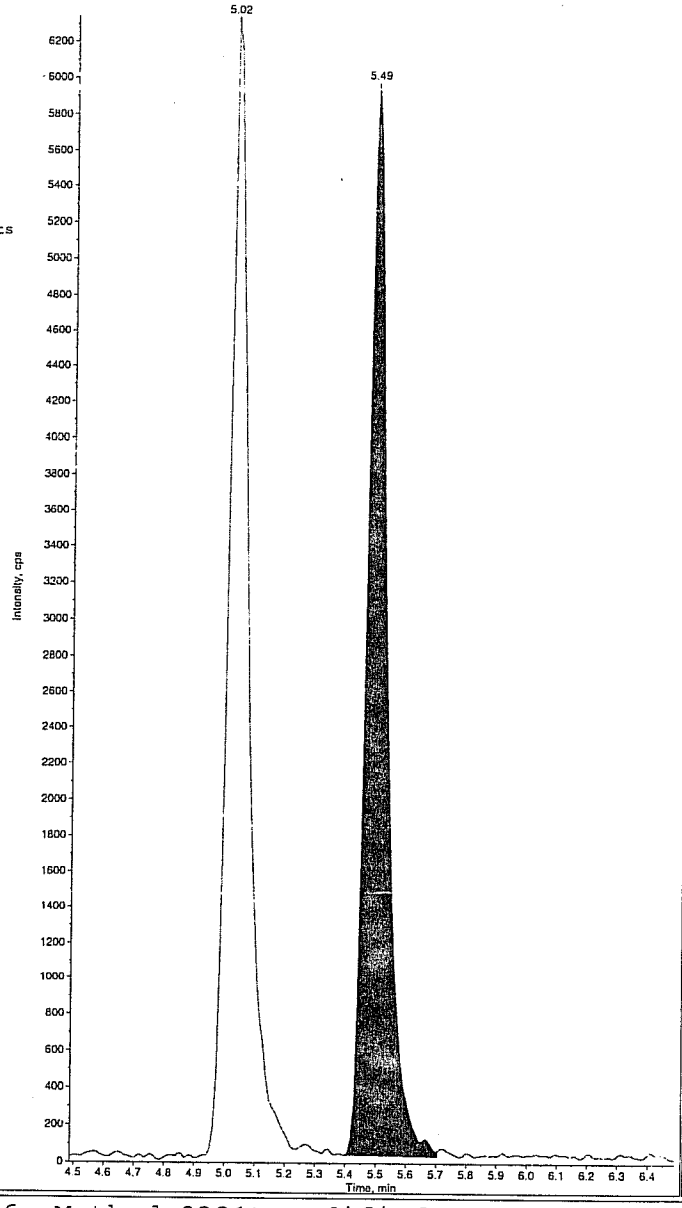
Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240013.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 112. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:38:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.49 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.49 min
Area: 2.82e+004 counts
Height: 5944.355 cps
Start Time: 5.39 min
End Time: 5.70 min

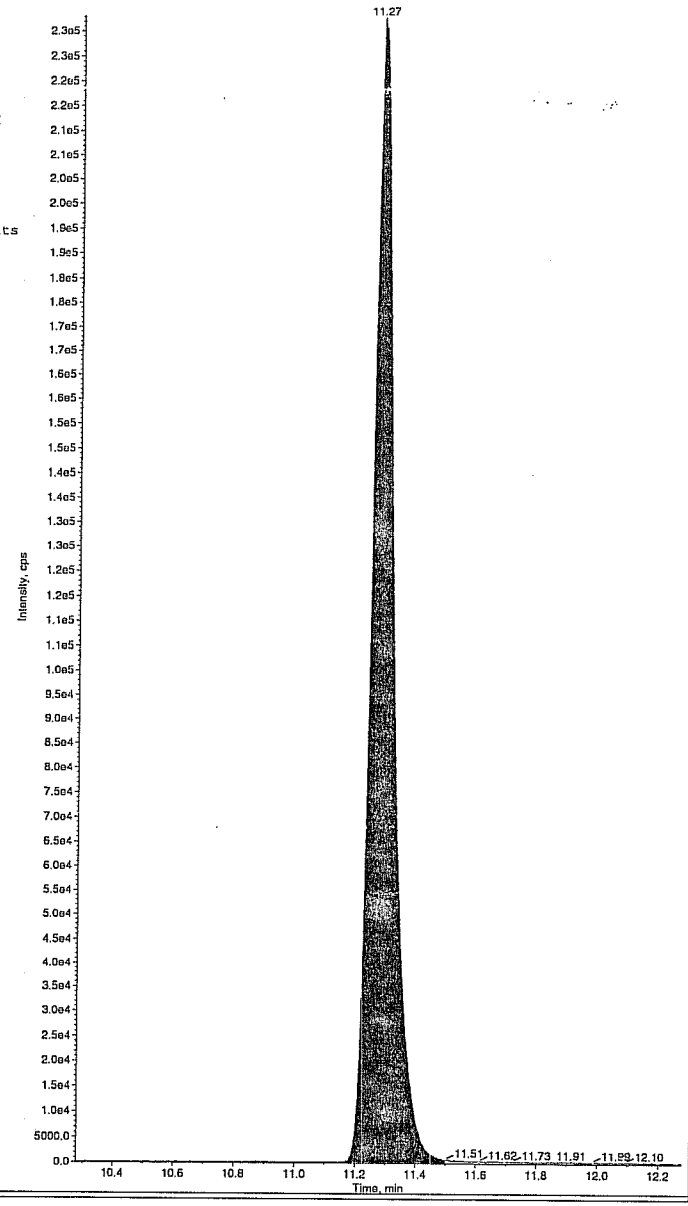


Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240013.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 101. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 1:38:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: No
Min. Peak Height: 2.00e4 cps
Min Peak Width: 0 00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 11.3 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.3 min
Area: 1.17e+006 counts
Height: 232973.021 cps
Start Time: 11.2 min
End Time: 11.5 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS11240019.wiff

Analysis Date: 24–NOV–10 15:12

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
tris(o–cresyl) phosphate	500	497	99	
TATB	500	490	98	
2,4–Diamino–6–nitrotoluene	500	493	99	
2,6–Diamino–4–nitrotoluene	500	456	91	
3,4–Dinitrotoluene	250	243	97	
3,5–Dinitroaniline	500	510	102	

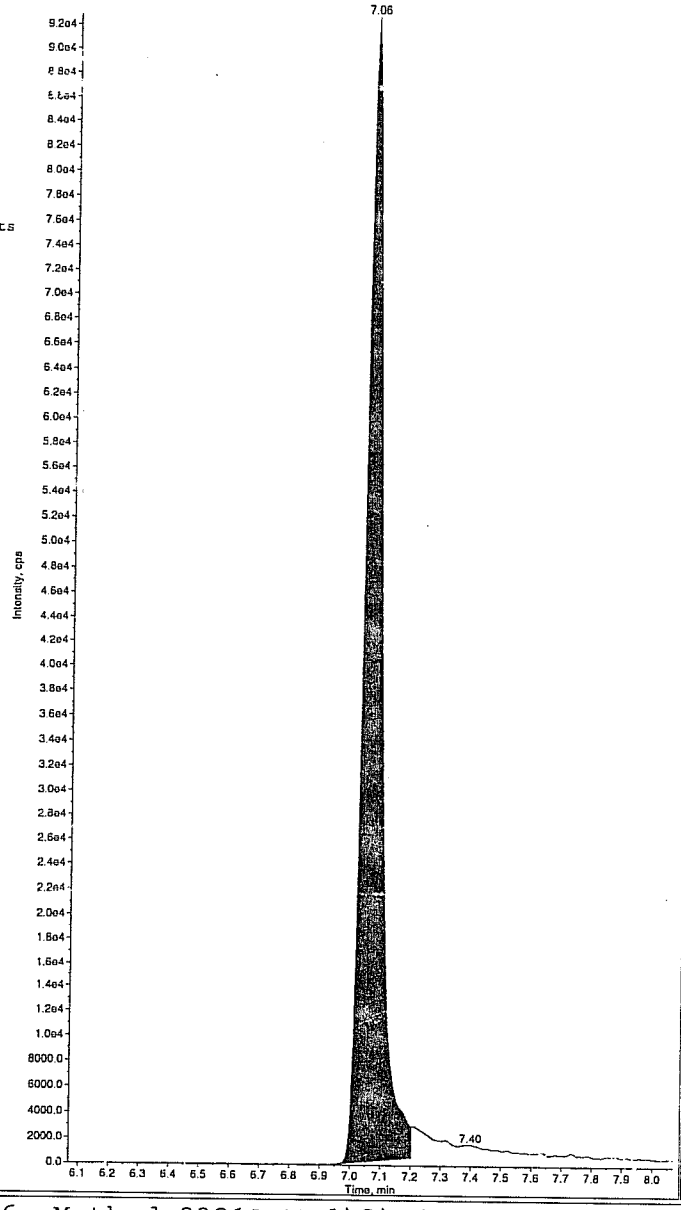
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240019.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 490. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:12:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 0
Report Largest Peak: No
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 5 points
RT Window: 30.0 sec
Expected RT: 7.07 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.06 min
Area: 3.80e+005 counts
Height: 92493.391 cps
Start Time: 6.94 min
End Time: 7.20 min

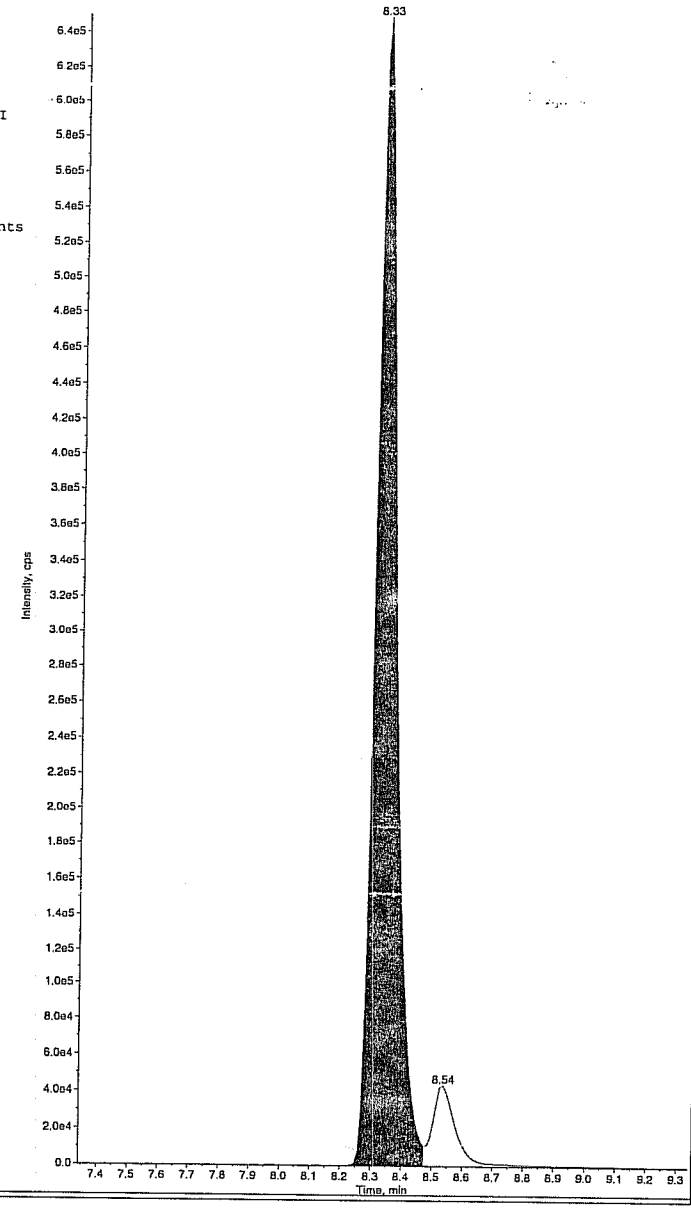


Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240019.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 510. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:12:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.33 min
Area: 3.09e+006 counts
Height: 649539.667 cps
Start Time: 8.23 min
End Time: 8.47 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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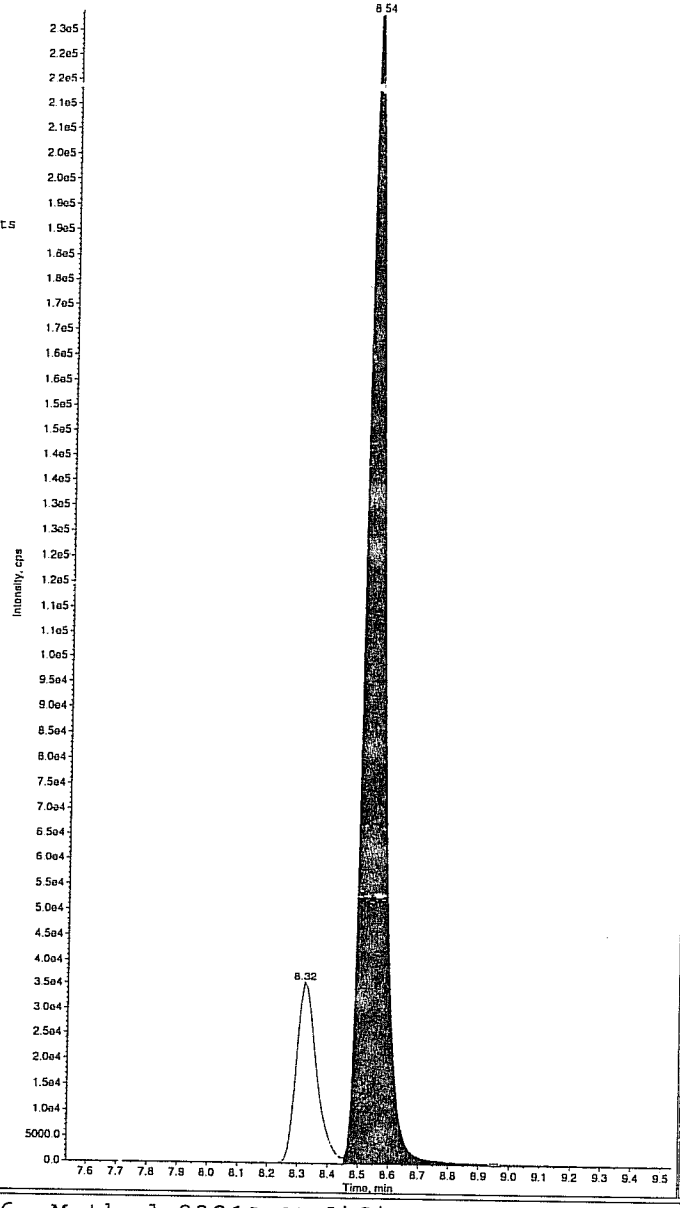
Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240019.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 243. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:12:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.54 min
Area: 1.05e+006 counts
Height: 228590.579 cps
Start Time: 8.45 min
End Time: 8.93 min

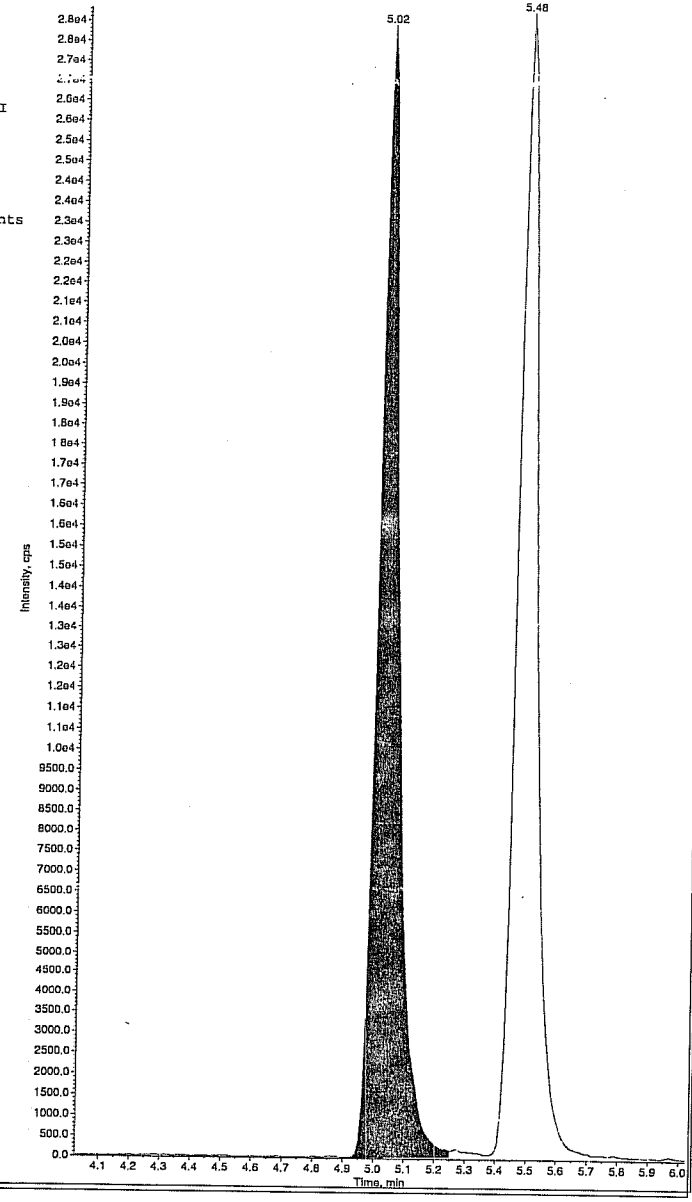


Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240019.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 456. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:12:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.02 min
Area: 1.33e+005 counts
Height: 27947.899 cps
Start Time: 4.91 min
End Time: 5.25 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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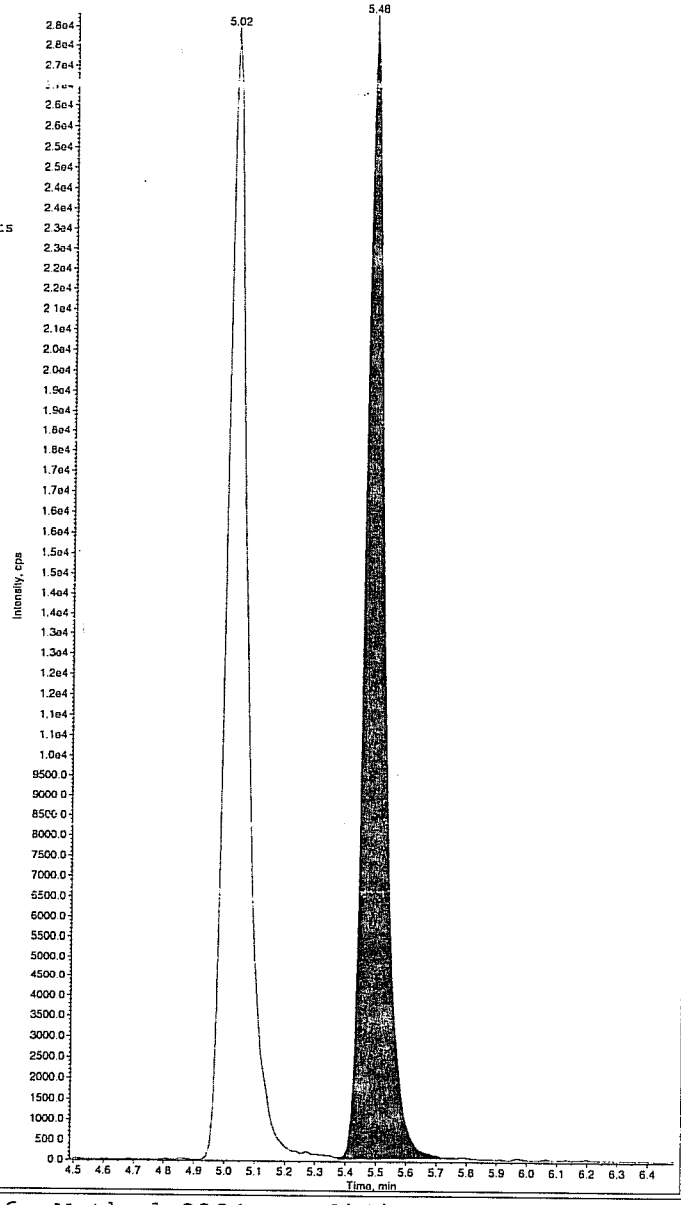
Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240019.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: "*"

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 493. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:12:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.49 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.48 min
Area: 1.29e+005 counts
Height: 28246.863 cps
Start Time: 5.37 min
End Time: 5.77 min

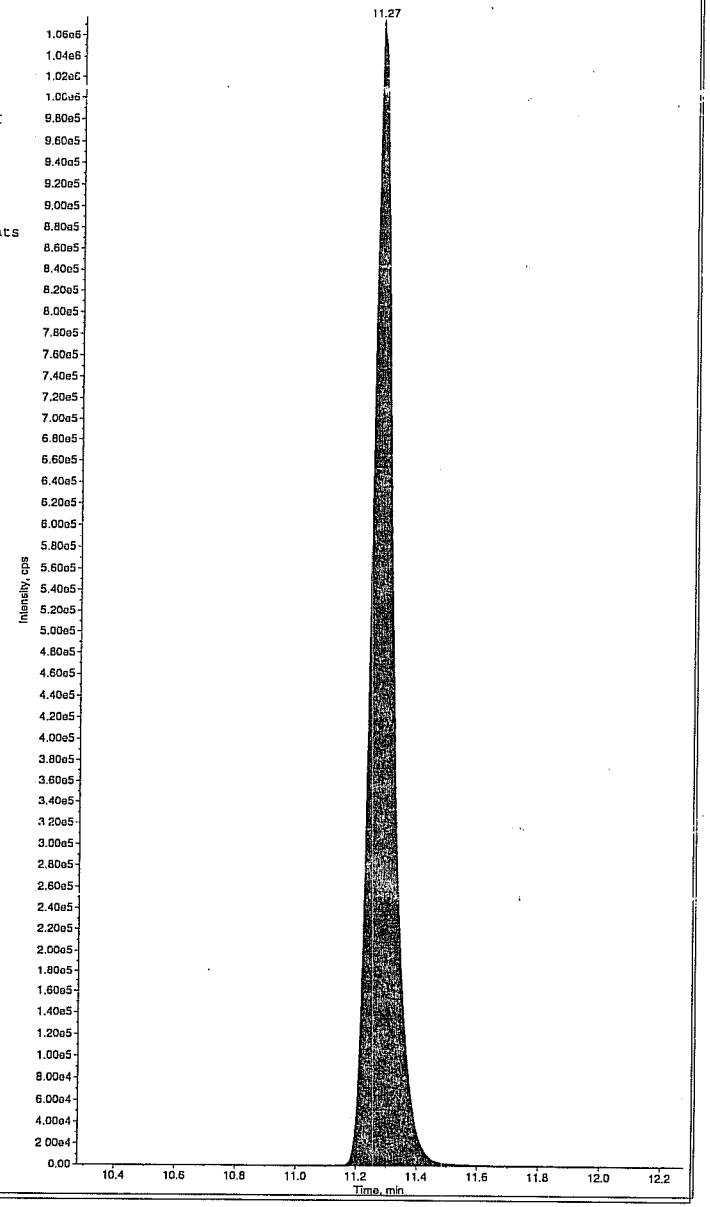


Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240019.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 497. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:12:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: No
Min. Peak Height: 2.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 11.3 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.3 min
Area: 5.46e+006 counts
Height: 1076745.439 cps
Start Time: 11.1 min
End Time: 11.6 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS11240021.wiff

Analysis Date: 24–NOV–10 15:43

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
tris(o–cresyl) phosphate	100	98.8	99	
2,4–Diamino–6–nitrotoluene	100	102	102	
2,6–Diamino–4–nitrotoluene	100	102	102	
3,4–Dinitrotoluene	50	41.4	83	
3,5–Dinitroaniline	100	77.6	78	
TATB	100	97.2	97	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

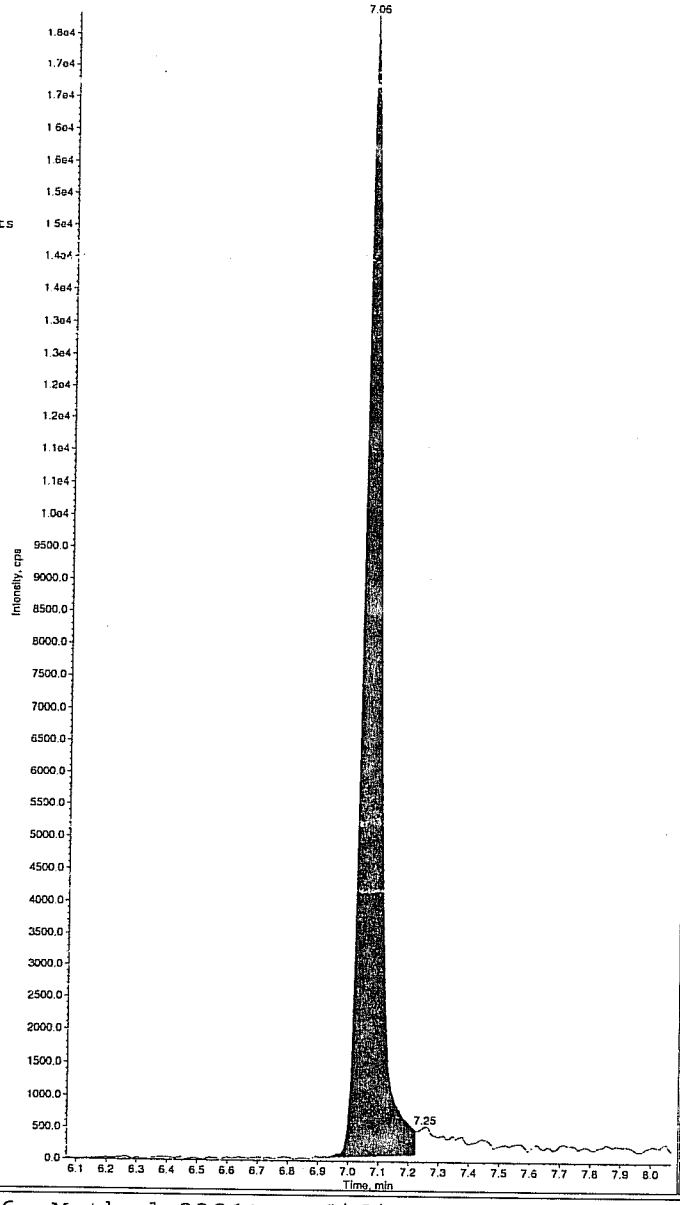
Lcr 11/26/10

Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240021.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 97.2 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:43:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 0
Report Largest Peak: No
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 5 points
RT Window: 30.0 sec
Expected RT: 7.07 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.06 min
Area: 7.20e+004 counts
Height: 17765.056 cps
Start Time: 6.93 min
End Time: 7.22 min

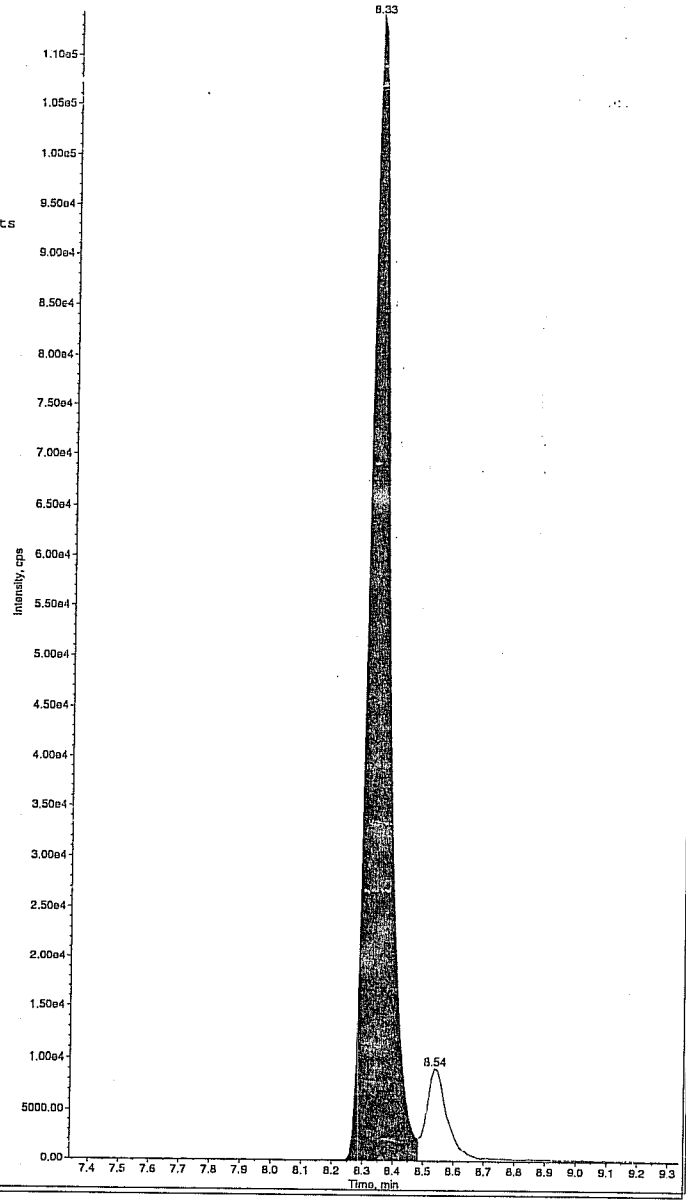


Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240021.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 77.6 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:43:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.33 min
Area: 5.47e+005 counts
Height: 114321.023 cps
Start Time: 8.20 min
End Time: 8.48 min



Hma 11/29/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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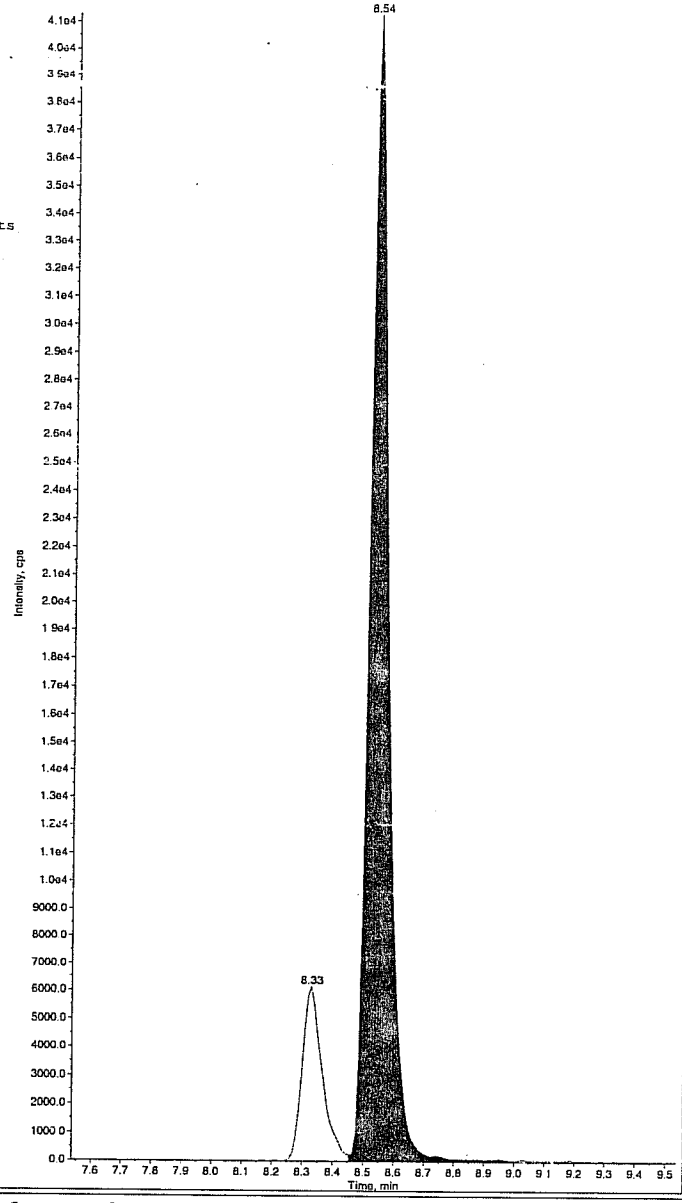
Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240021.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 41.4 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:43:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.54 min
Area: 1.81e+005 counts
Height: 41250.756 cps
Start Time: 8.45 min
End Time: 9.00 min

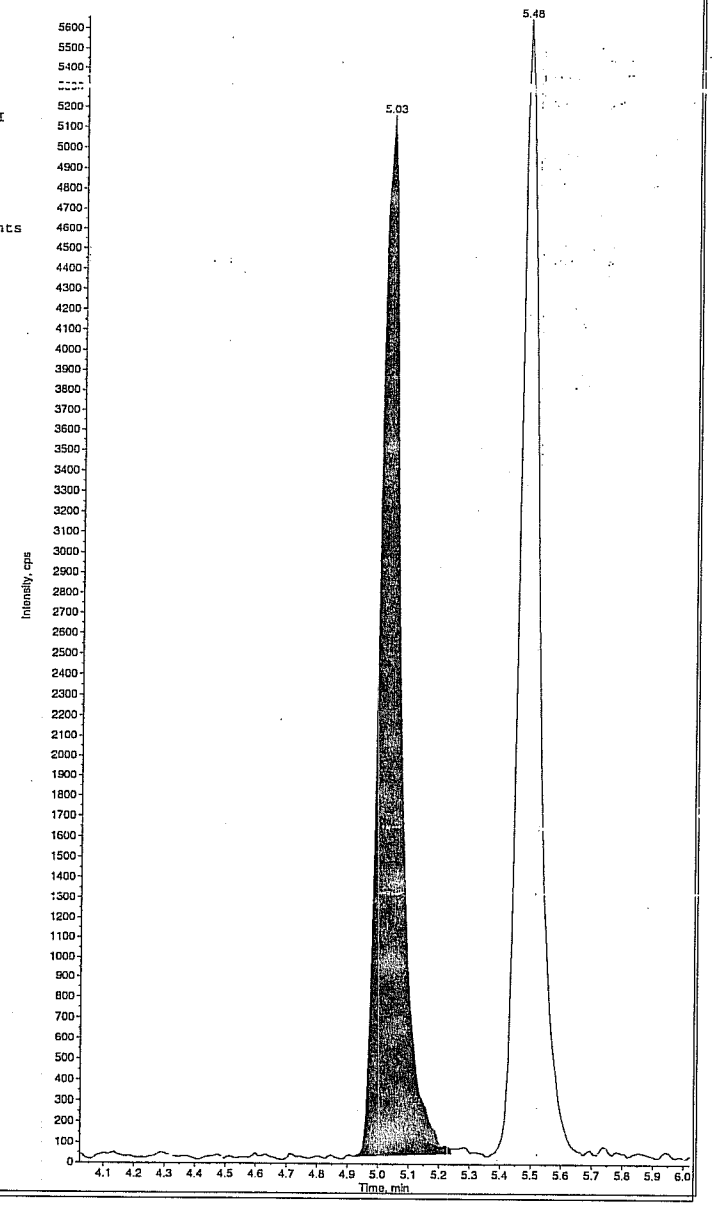


Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240021.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 102. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:43:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.03 min
Area: 2.56e+004 counts
Height: 5127.659 cps
Start Time: 4.92 min
End Time: 5.24 min



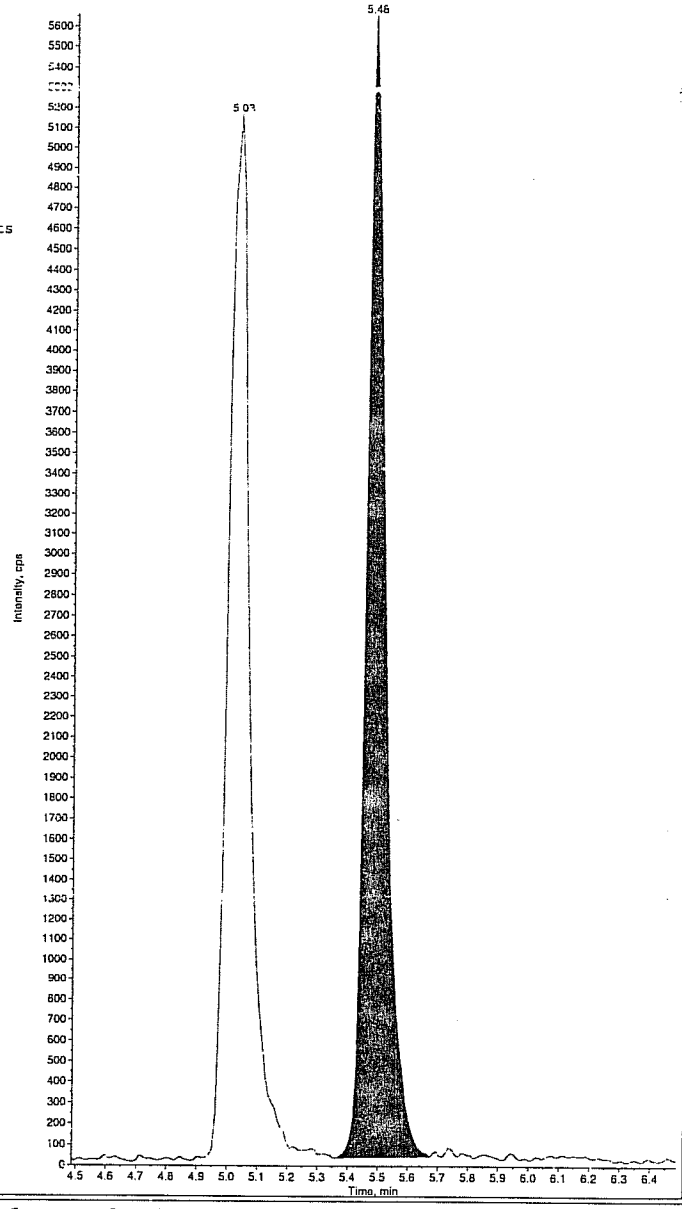
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240021.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 102. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:43:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.49 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 5.48 min
Area: 2.56e+004 counts
Height: 5616.663 cps
Start Time: 5.35 min
End Time: 5.67 min

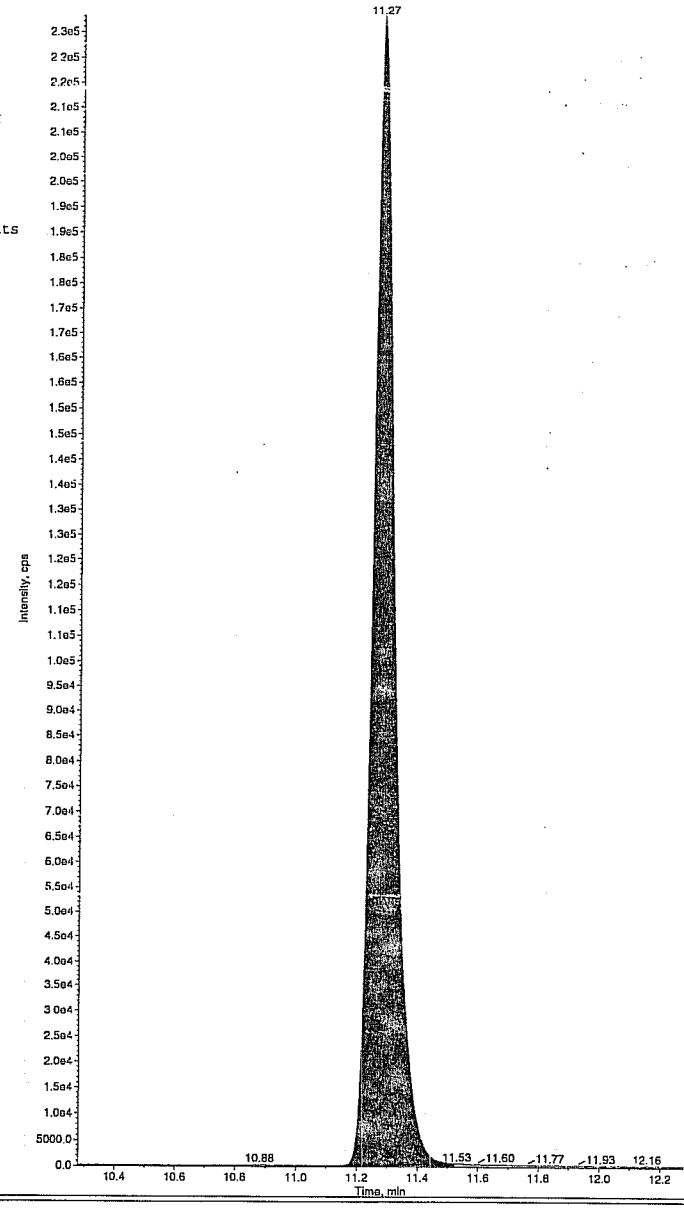


Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240021.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 98.8 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:43:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: No
Min. Peak Height: 2.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 11.3 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.3 min
Area: 1.15e+006 counts
Height: 228105.604 cps
Start Time: 11.2 min
End Time: 11.5 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS11240029.wiff

Analysis Date: 24–NOV–10 17:49

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
2,4–Diamino–6–nitrotoluene	500	474	95	
2,6–Diamino–4–nitrotoluene	500	445	89	
3,4–Dinitrotoluene	250	223	89	
3,5–Dinitroaniline	500	472	95	
TATB	500	491	98	
tris(o–cresyl) phosphate	500	507	101	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene ,
2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

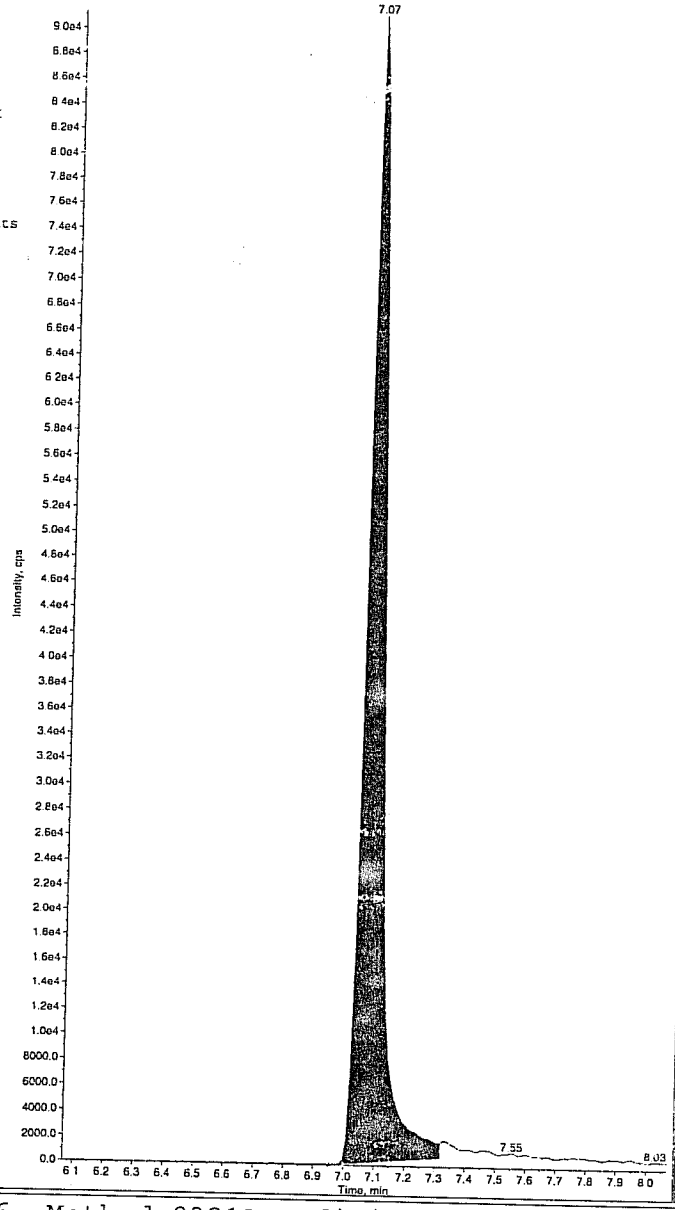
Lan 11/26/10

Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240029.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 491. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:49:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 0
Report Largest Peak: No
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 5 points
RT Window: 30.0 sec
Expected RT: 7.07 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.07 min
Area: 3.81e+005 counts
Height: 91019.349 cps
Start Time: 6.98 min
End Time: 7.32 min

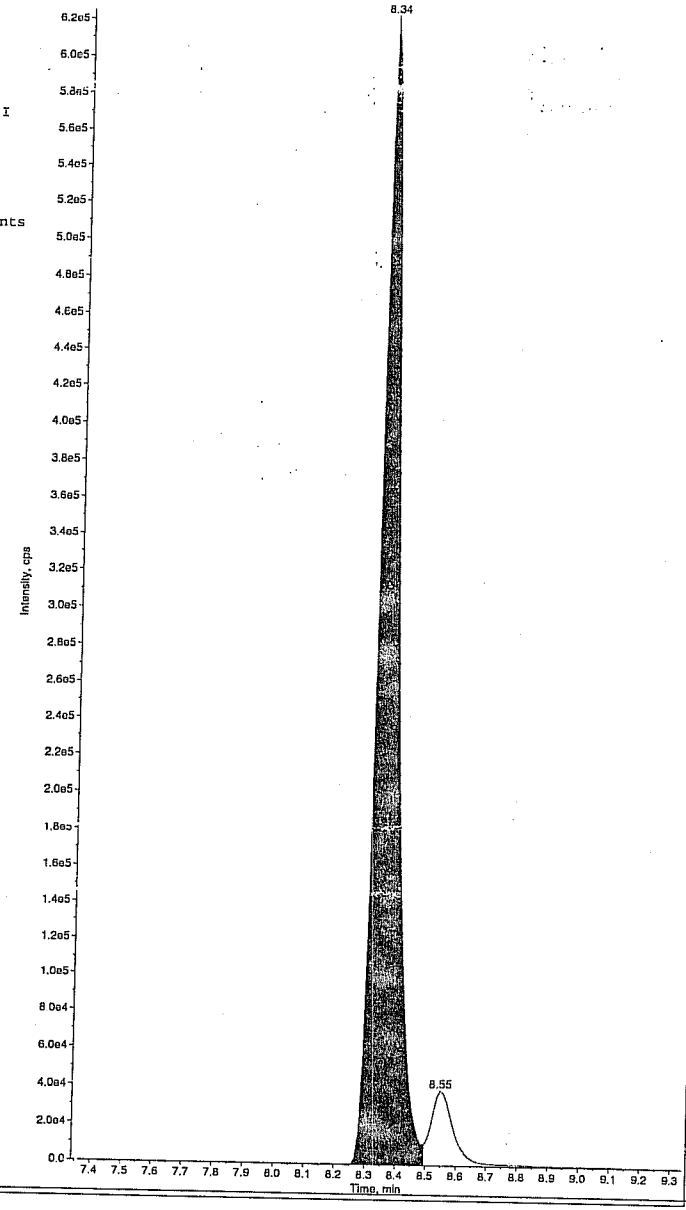


Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240029.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 472. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:49:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.34 min
Area: 2.88e+006 counts
Height: 624683.184 cps
Start Time: 8.22 min
End Time: 8.50 min



Hmm 11/29/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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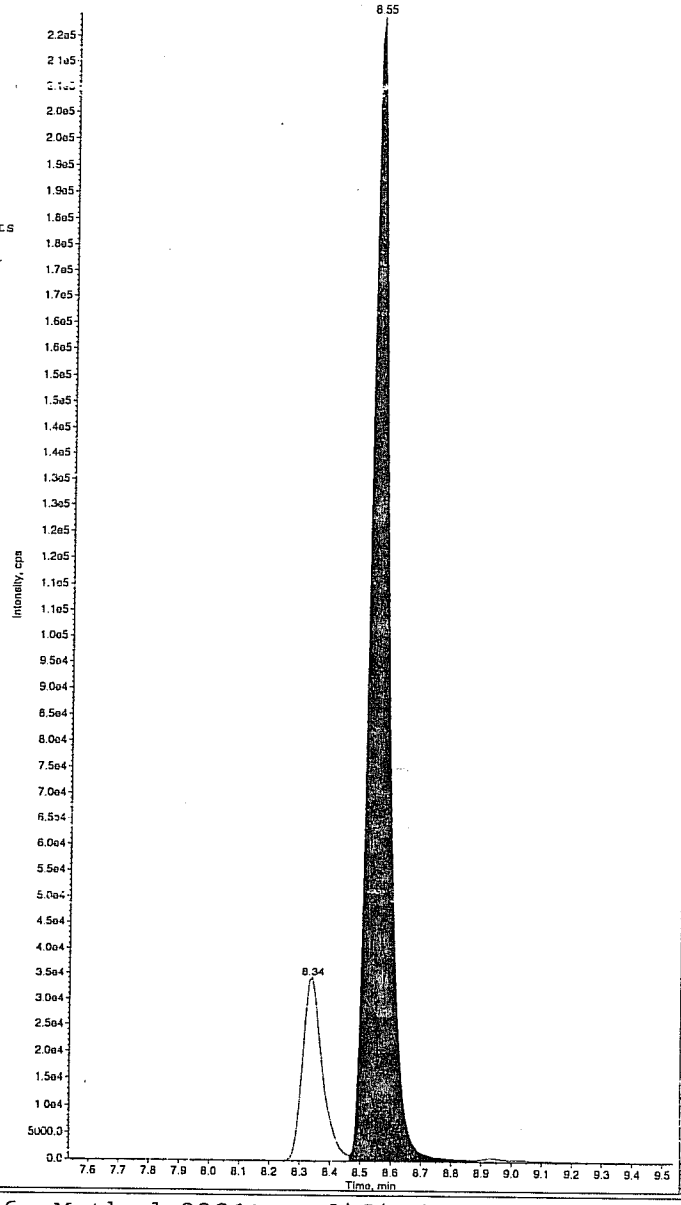
Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240029.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 224. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:49:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.55 min
Area: 9.64e-005 counts
Height: 219136.384 cps
Start Time: 8.46 min
End Time: 8.89 min

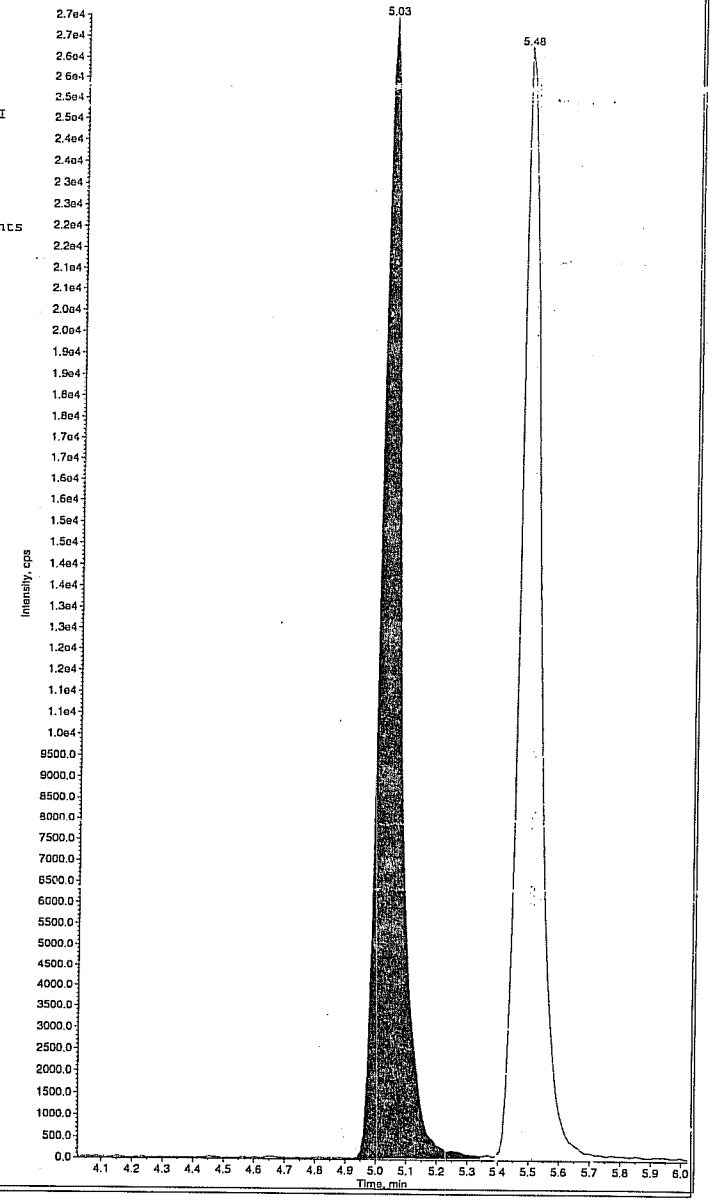


Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240029.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 445. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:49:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.03 min
Area: 1.30e+005 counts
Height: 26987.745 cps
Start Time: 4.93 min
End Time: 5.34 min



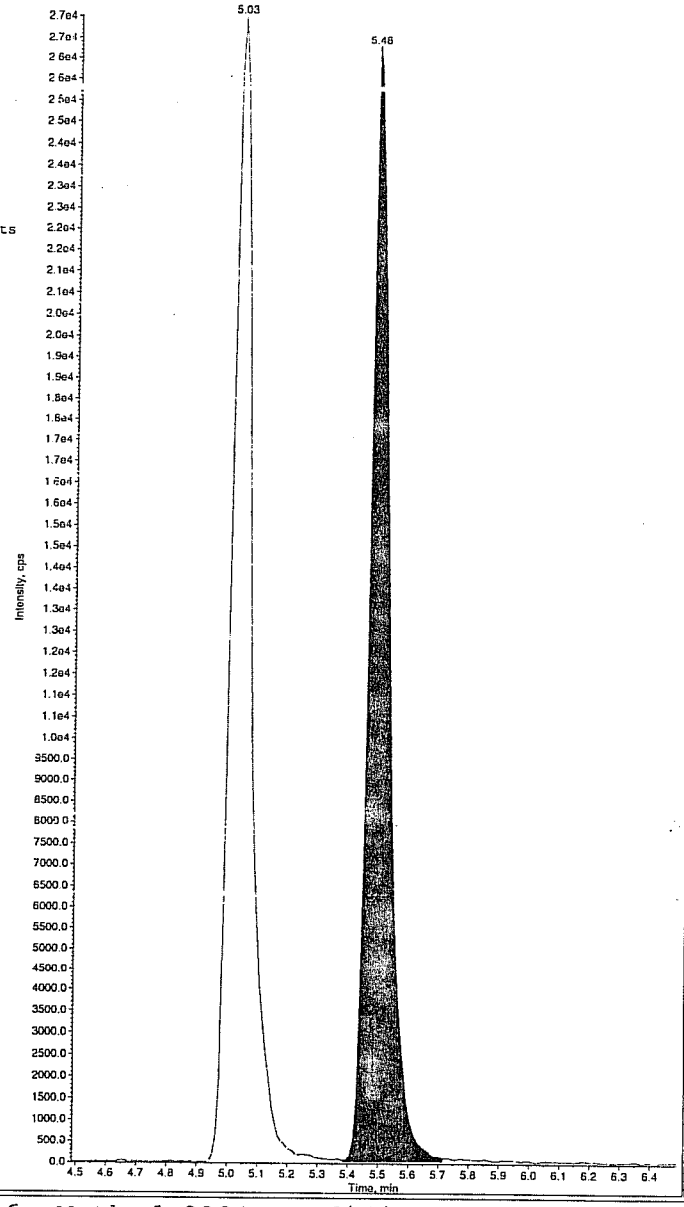
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240029.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 474. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:49:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.49 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.48 min
Area: 1.24e+005 counts
Height: 26290.293 cps
Start Time: 5.38 min
End Time: 5.72 min

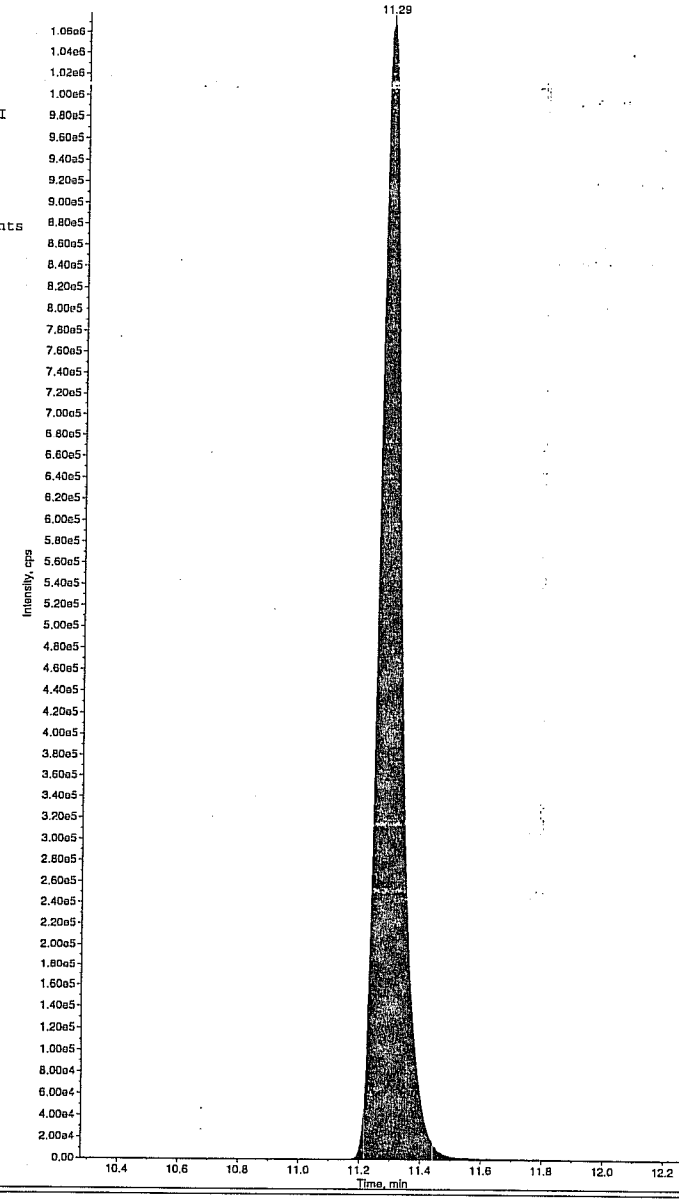


Sample Name: "WXX101124-26CCV" Sample ID: "|1|LER" File: "EXS11240029.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 507. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:49:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: No
Min. Peak Height: 2.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 11.3 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.3 min
Area: 5.57e+006 counts
Height: 1078550.336 cps
Start Time: 11.2 min
End Time: 11.6 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 11–463

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS11240031.wiff

Analysis Date: 24–NOV–10 18:20

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
2,4–Diamino–6–nitrotoluene	100	95.4	95	
2,6–Diamino–4–nitrotoluene	100	103	103	
3,4–Dinitrotoluene	50	43.5	87	
3,5–Dinitroaniline	100	86.7	87	
TATB	100	103	103	
tris(o–cresyl) phosphate	100	101	101	

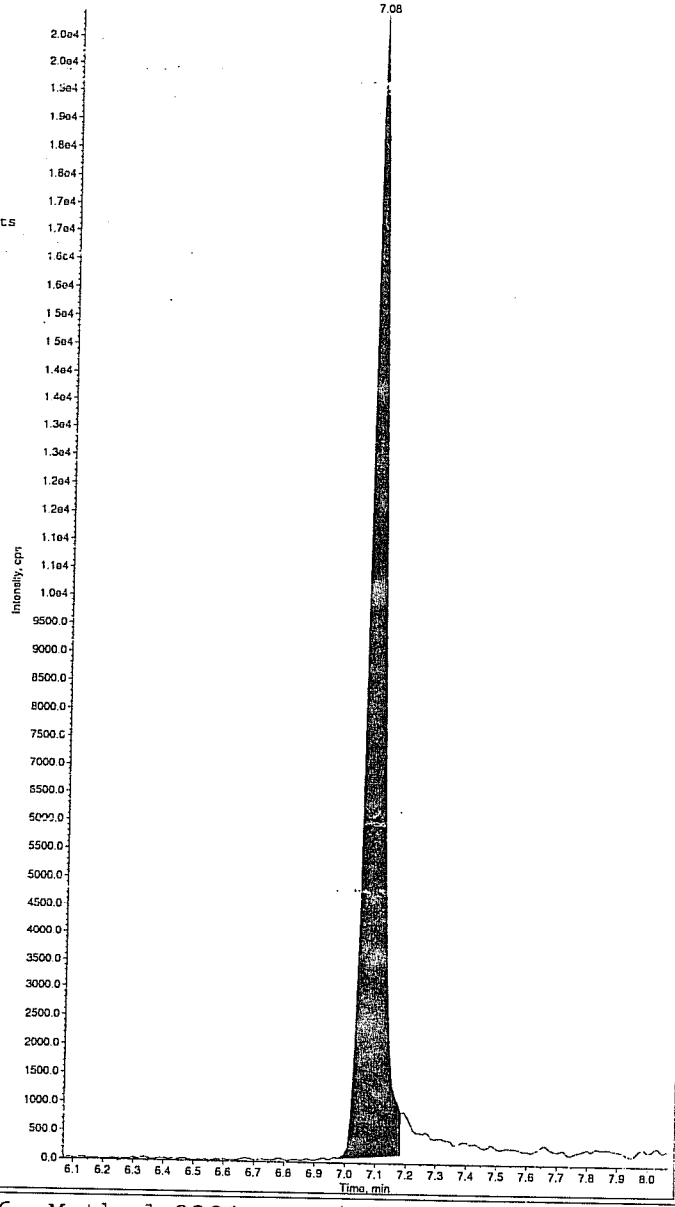
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 50–150%
OtherTarget Analytes 70–130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240031.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 103. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:20:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 0
Report Largest Peak: No
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 5 points
RT Window: 30.0 sec
Expected RT: 7.07 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.08 min
Area: 7.69e+004 counts
Height: 20333.188 cps
Start Time: 6.98 min
End Time: 7.18 min

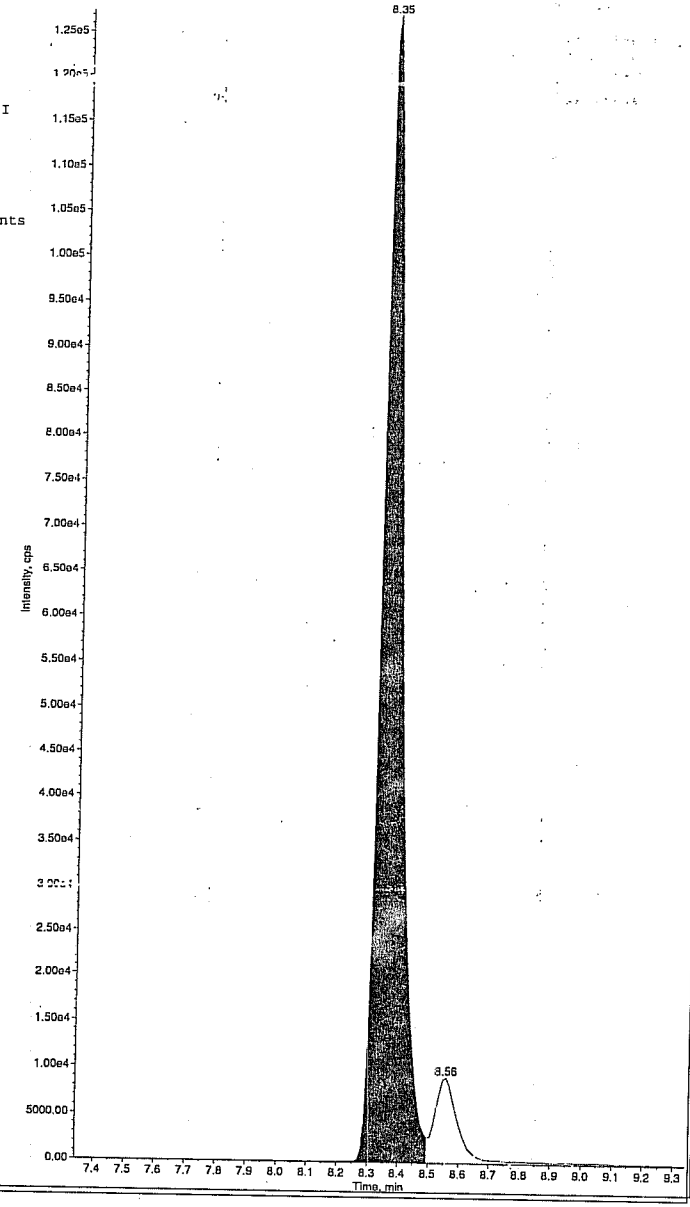


Sample Name: "WXX101124-27CRI" Sample ID: "|1|LER" File: "EXS11240031.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 86.7 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:20.51 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.35 min
Area: 6.02e+005 counts
Height: 127405.384 cps
Start Time: 8.24 min
End Time: 8.50 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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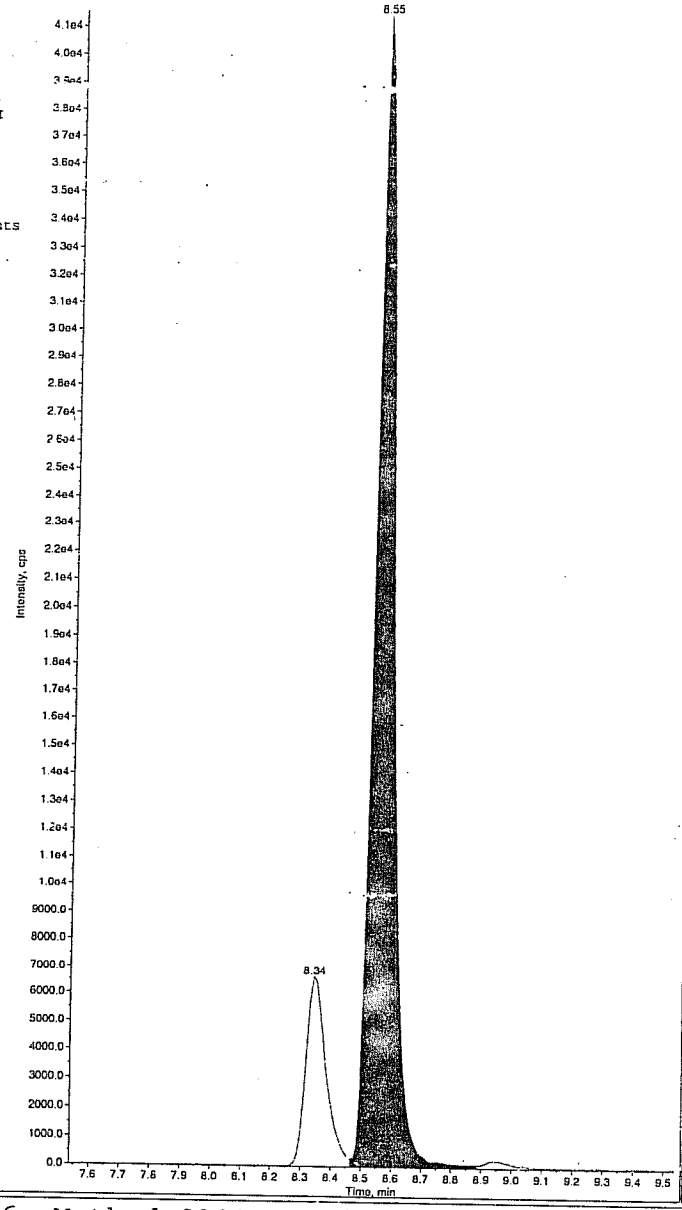
Sample Name: "WXX101124-27CRI" Sample ID: "[1]LER" File: "EXS11240031.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 43.5 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:20:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.55 min
Area: 1.90e+005 counts
Height: 41485.538 cps
Start Time: 8.46 min
End Time: 8.89 min

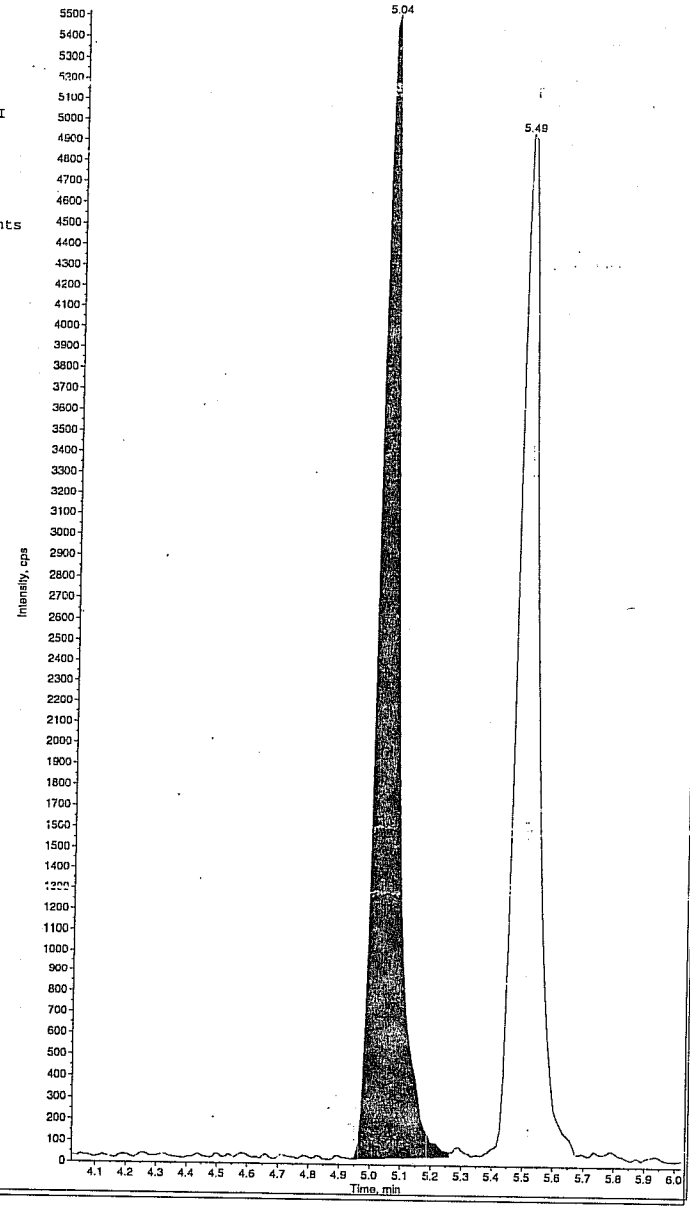


Sample Name: "WXX101124-27CRI" Sample ID: "[1]LER" File: "EXS11240031.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 103. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:20:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.04 min
Area: 2.57e+004 counts
Height: 5487.981 cps
Start Time: 4.94 min
End Time: 5.26 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

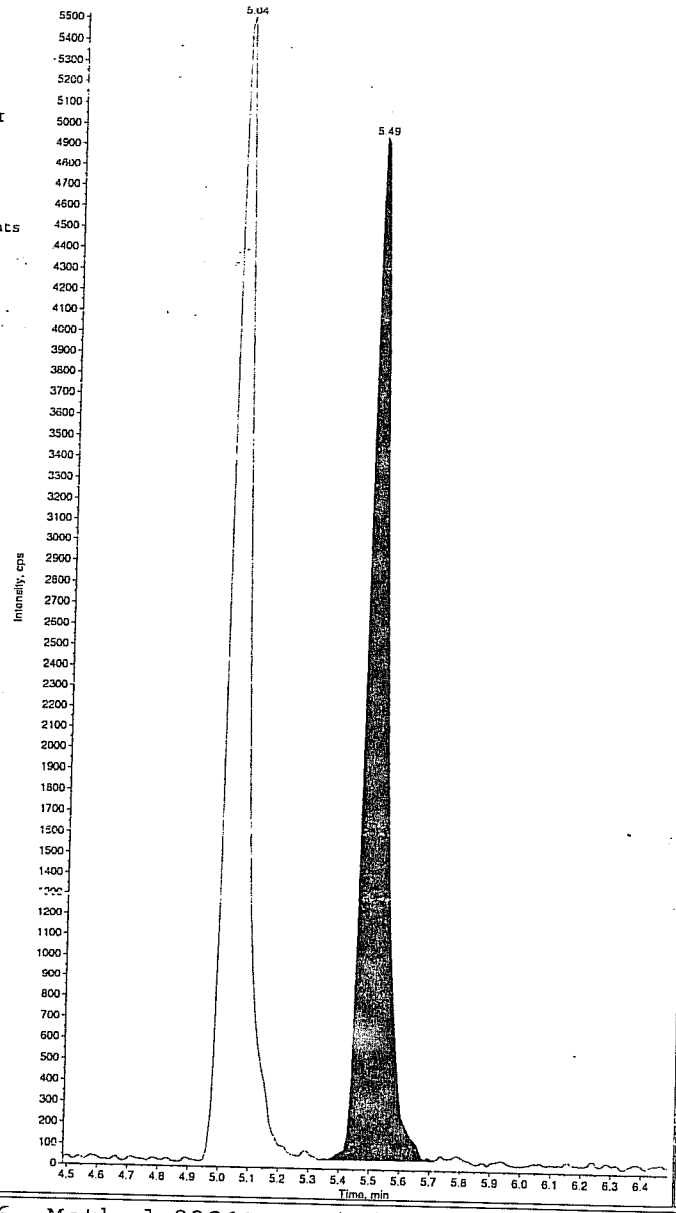
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX101124-27CRI" Sample ID: "[1]LER" File: "EXS11240031.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 95.4 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:20:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.43 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 5.49 min
Area: 2.38e+004 counts
Height: 4914.588 cps
Start Time: 5.33 min
End Time: 5.72 min

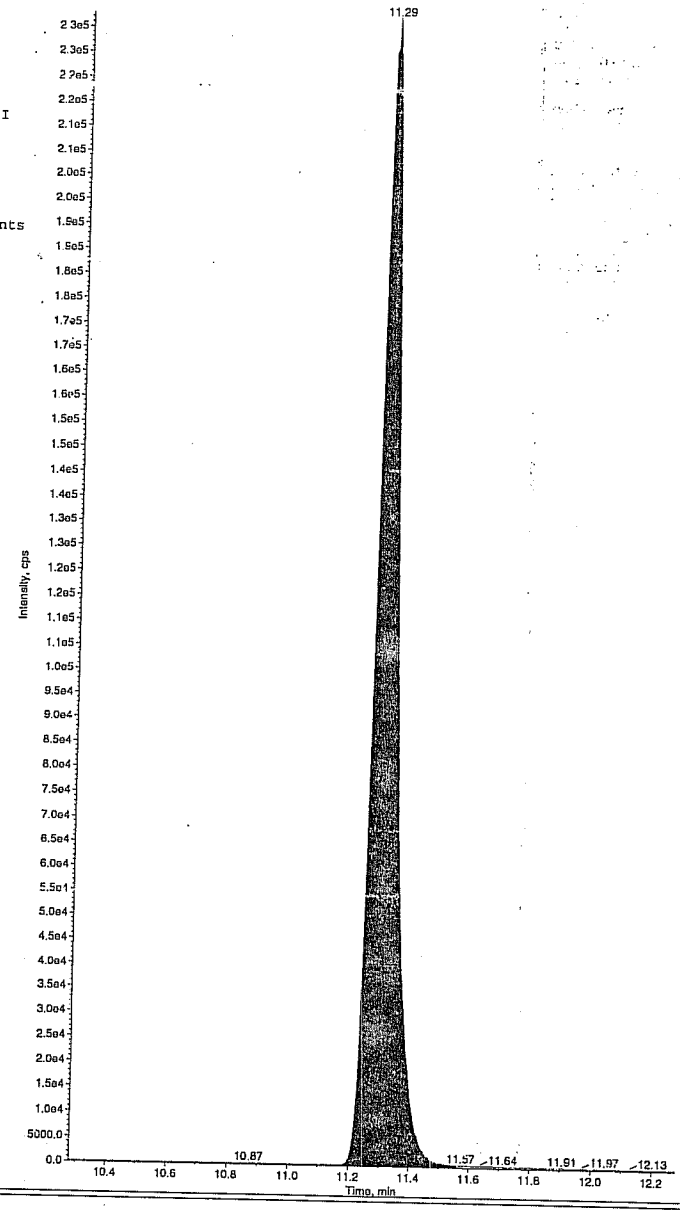


Sample Name: "WXX101124-27CRI" Sample ID: "[1]LER" File: "EXS11240031.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 101. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 6:20:51 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: No
Min. Peak Height: 2.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 11.2 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.3 min
Area: 1.17e+006 counts
Height: 232575.921 cps
Start Time: 11.2 min
End Time: 11.6 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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QUALITY CONTROL DATA

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 1048167

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 1202262546

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXP1119066a

Date Analyzed: 20–NOV–10 22:41

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
118–96–7	2,4,6–Trinitrotoluene	0.325	U	0.104	0.325
118–96–7	*2,4,6–Trinitrotoluene*				
121–14–2	2,4–Dinitrotoluene	0.325	U	0.104	0.325
121–14–2	*2,4–Dinitrotoluene*				
121–82–4	RDX	0.325	U	0.104	0.325
121–82–4	*RDX*				
19406–51–0	4–Amino–2,6–dinitrotoluene	0.325	U	0.104	0.325
19406–51–0	*4–Amino–2,6–dinitrotoluene*				
2691–41–0	HMX	0.325	U	0.104	0.325
2691–41–0	*HMX*				
35572–78–2	2–Amino–4,6–dinitrotoluene	0.325	U	0.104	0.325
35572–78–2	*2–Amino–4,6–dinitrotoluene*				
606–20–2	2,6–Dinitrotoluene	0.325	U	0.0779	0.325
606–20–2	*2,6–Dinitrotoluene*				
88–72–2	o–Nitrotoluene	0.325	U	0.104	0.325
88–72–2	*o–Nitrotoluene*				
98–95–3	Nitrobenzene	0.325	U	0.104	0.325
98–95–3	*Nitrobenzene*				
99–08–1	m–Nitrotoluene	0.325	U	0.104	0.325
99–08–1	*m–Nitrotoluene*				
99–35–4	1,3,5–Trinitrobenzene	0.325	U	0.104	0.325
99–35–4	*1,3,5–Trinitrobenzene*				
99–65–0	m–Dinitrobenzene	0.325	U	0.104	0.325
99–65–0	*m–Dinitrobenzene*				
479–45–8	Tetryl	0.649	U	0.130	0.649
479–45–8	*Tetryl*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 1048167

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 1202262546

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

Cas No.	Compound	Concentration*	Q	MDL	PQL
99–99–0	p–Nitrotoluene	0.649	U	0.104	0.649
99–99–0	*p–Nitrotoluene*				
78–11–5	PETN	1.30	U	0.130	1.30
78–11–5	*PETN*				

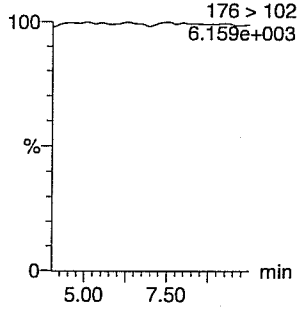
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

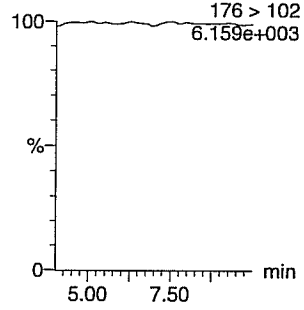
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119066a
Date: 20-Nov-2010
Time: 22:41:42
ID: 1202262546 | ARSC | 1048168 | LIQ | MB | 2 |
Vial: 1:6,A

MAP 11/22/10

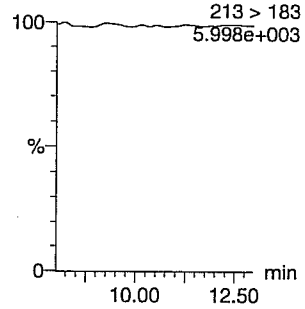
HMX
F2:MRM of 1 channel,AP-
176 > 102
6.159e+003



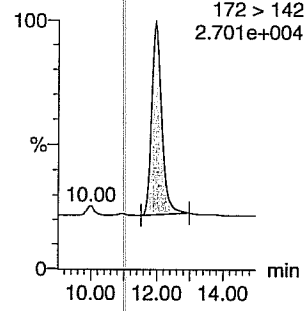
RDX
F2:MRM of 1 channel,AP-
176 > 102
6.159e+003



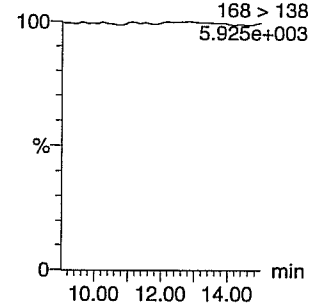
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.998e+003



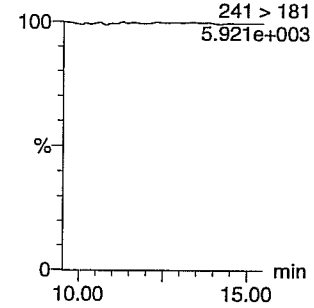
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
2.701e+004



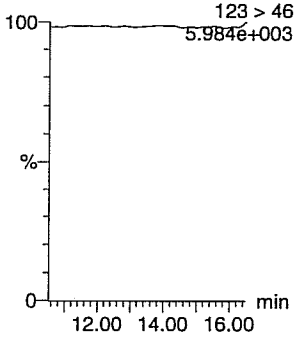
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.925e+003



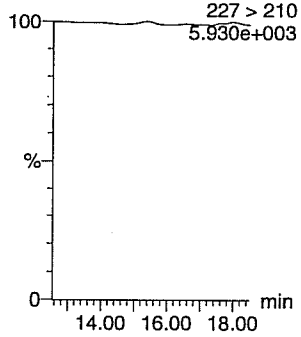
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.921e+003



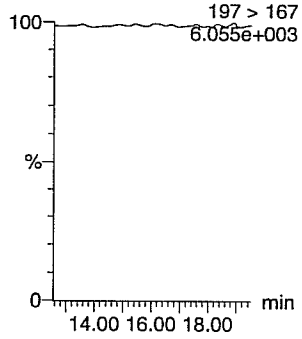
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.984e+003



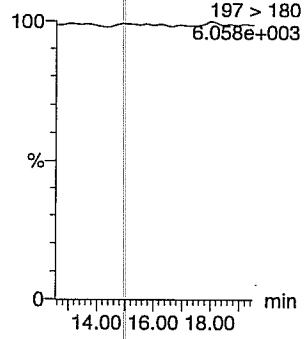
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.930e+003



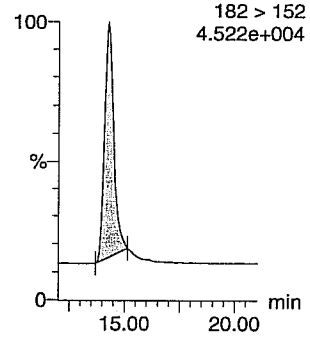
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.055e+003



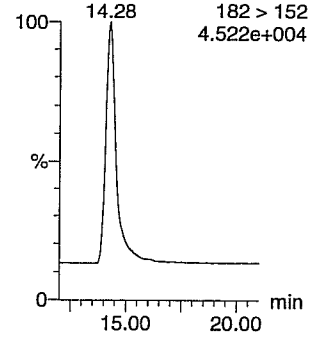
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.058e+003



34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
4.522e+004



26-dinitrotoluene
F9:MRM of 2 channels,AP-
14.28
182 > 152
4.522e+004



MM 11/22/10

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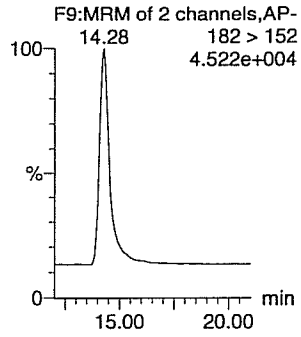
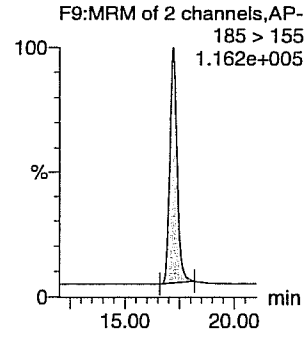
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

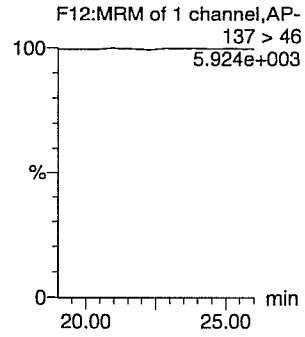
24-dinitrotoluene



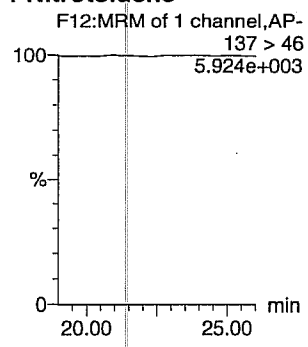
26-dinitrotoluene-d3



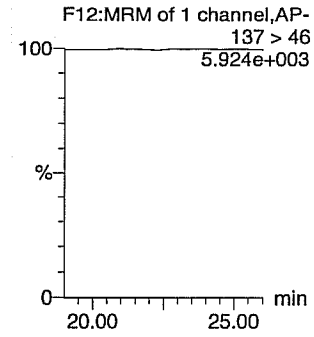
2-Nitrotoluene



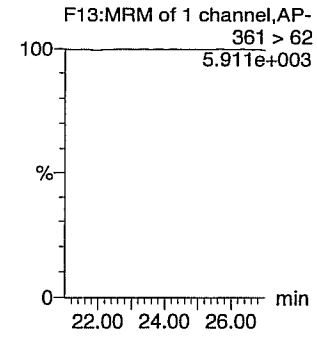
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
1202262546	HMX	176 > 102			7489.223									
1202262546	RDX	176 > 102			7489.223									
1202262546	135-Trinitrobenzene	213 > 183			7489.223									
1202262546	13-Dinitrobenzene-d4	172 > 142	11.95	7489.223		7489.223	7489.223	bb			583.7606	116.8	16.8	653.1
1202262546	13-Dinitrobenzene	168 > 138			7489.223									
1202262546	Tetryl	241 > 181			7489.223									
1202262546	Nitrobenzene	123 > 46			7489.223									
1202262546	246-Trinitrotoluene	227 > 210			43868.836									
1202262546	4-Amino-26-dinitrotoluene	197 > 167			43868.836									
1202262546	2-Amino-46-dinitrotoluene	197 > 180			43868.836									
1202262546	34-dinitrotoluene	182 > 152	14.28	18758.568	43868.836	18758.568	213.803	bb		2.91	224.5153	89.8	-10.2	947.3
1202262546	26-dinitrotoluene	182 > 152			43868.836									
1202262546	24-dinitrotoluene	182 > 152			43868.836									
1202262546	26-dinitrotoluene-d3	185 > 155	17.22	43868.836		43868.836	43868.836	bb			575.6725	115.1	15.1	2481.9
1202262546	2-Nitrotoluene	137 > 46			43868.836									
1202262546	4-Nitrotoluene	137 > 46			43868.836									
1202262546	3-Nitrotoluene	137 > 46			43868.836									
1202262546	PETN	361 > 62			43868.836									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 1048167

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 1202262546

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXS11240022.wiff

Date Analyzed: 24–NOV–10 15:59

Dilution Factor: 2

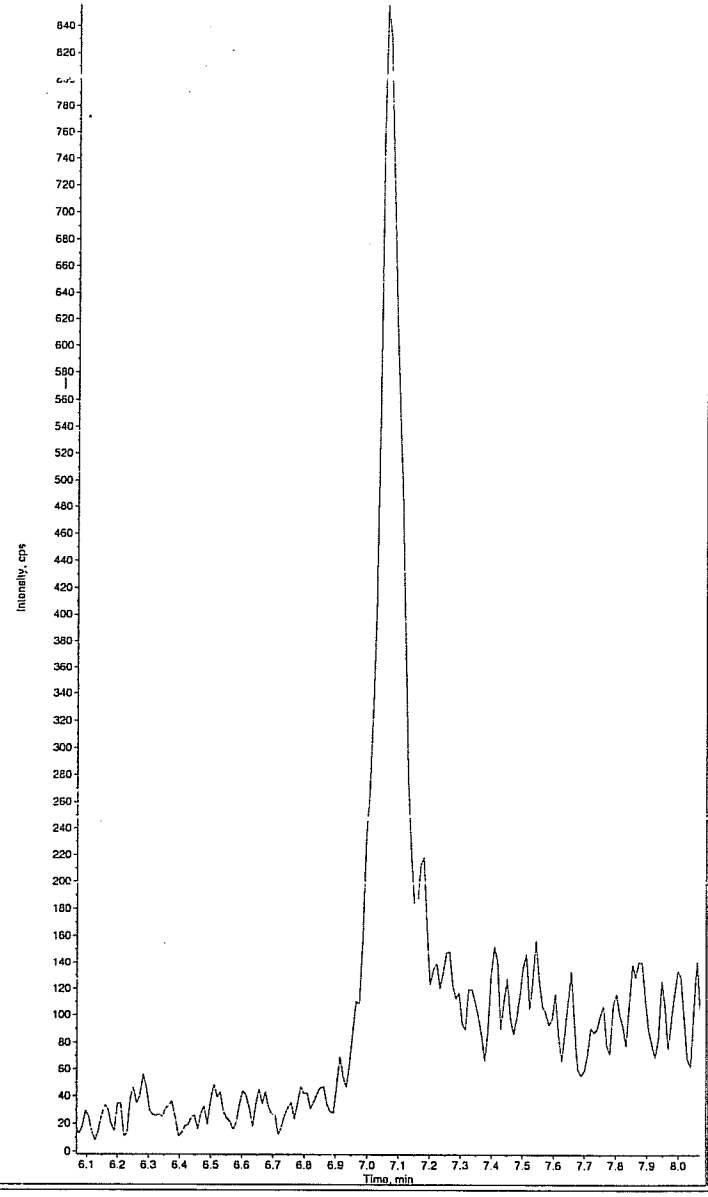
Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
3058–38–6	TATB	1.30	U	0.390	1.30
3058–38–6	*TATB*				
59229–75–3	2,6–Diamino–4–nitrotoluene	1.30	U	0.390	1.30
59229–75–3	*2,6–Diamino–4–nitrotoluene*				
618–87–1	3,5–Dinitroaniline	1.30	U	0.390	1.30
618–87–1	*3,5–Dinitroaniline*				
6629–29–4	2,4–Diamino–6–nitrotoluene	1.30	U	0.390	1.30
6629–29–4	*2,4–Diamino–6–nitrotoluene*				
78–30–8	tris(o–cresyl) phosphate	1.30	U	0.390	1.30
78–30–8	*tris(o–cresyl) phosphate*				

Sample Name: "1202262546" Sample ID: "1048168|2|LER" File: "EXS11240022.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:59:30 PM

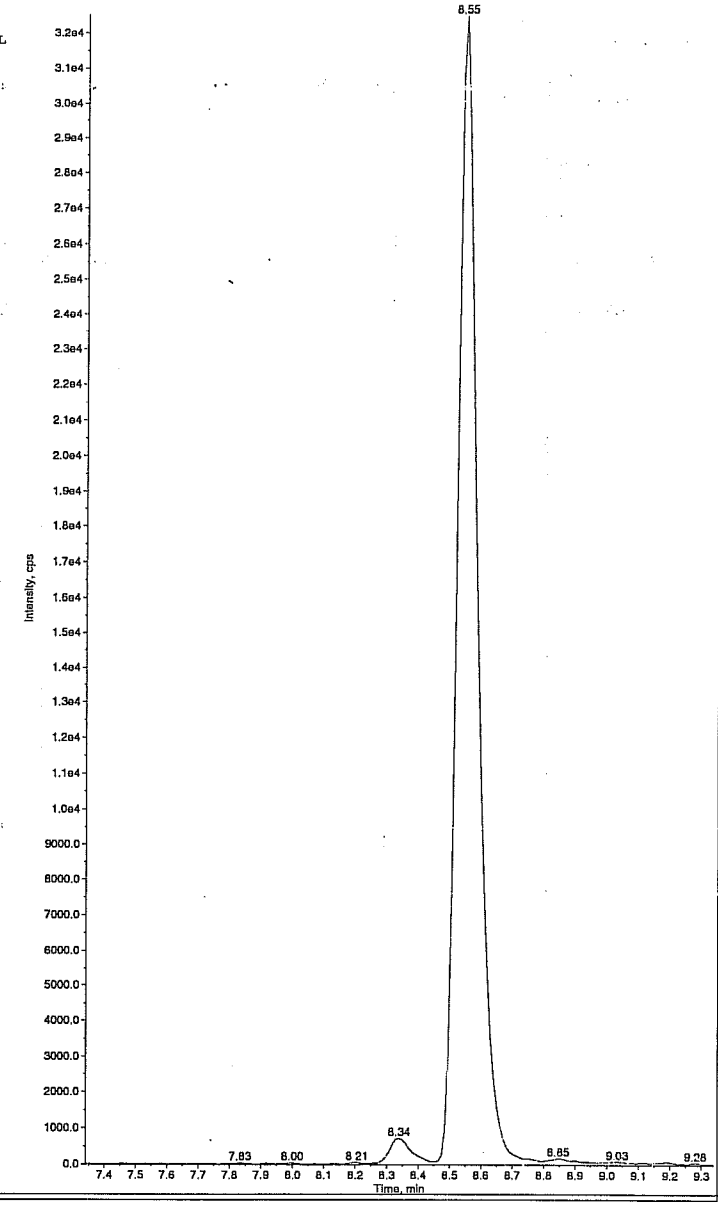
Modified: No



Sample Name: "1202262546" Sample ID: "1048168|2|LER" File: "EXS11240022.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:59:30 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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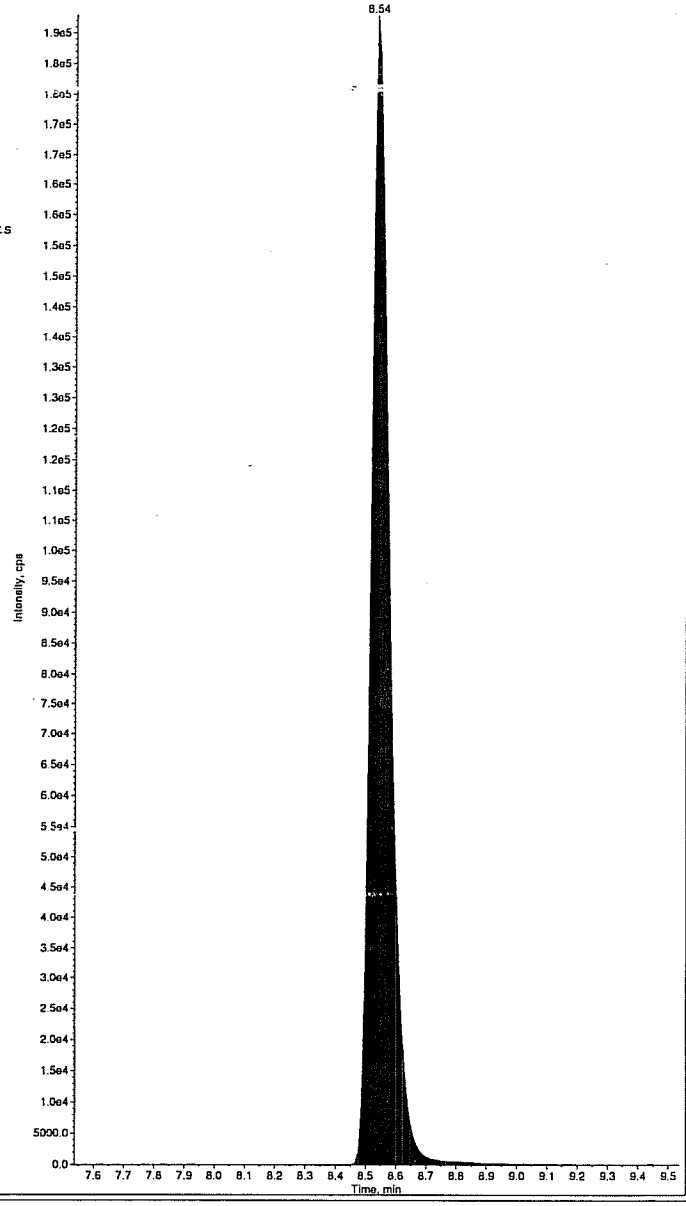
Sample Name: "1202262546" Sample ID: "1048168|2|LER" File: "EXS11240022.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 195. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:59:30 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.54 min
Area: 8.46e+005 counts
Height: 187923.559 cps
Start Time: 8.41 min
End Time: 9.07 min

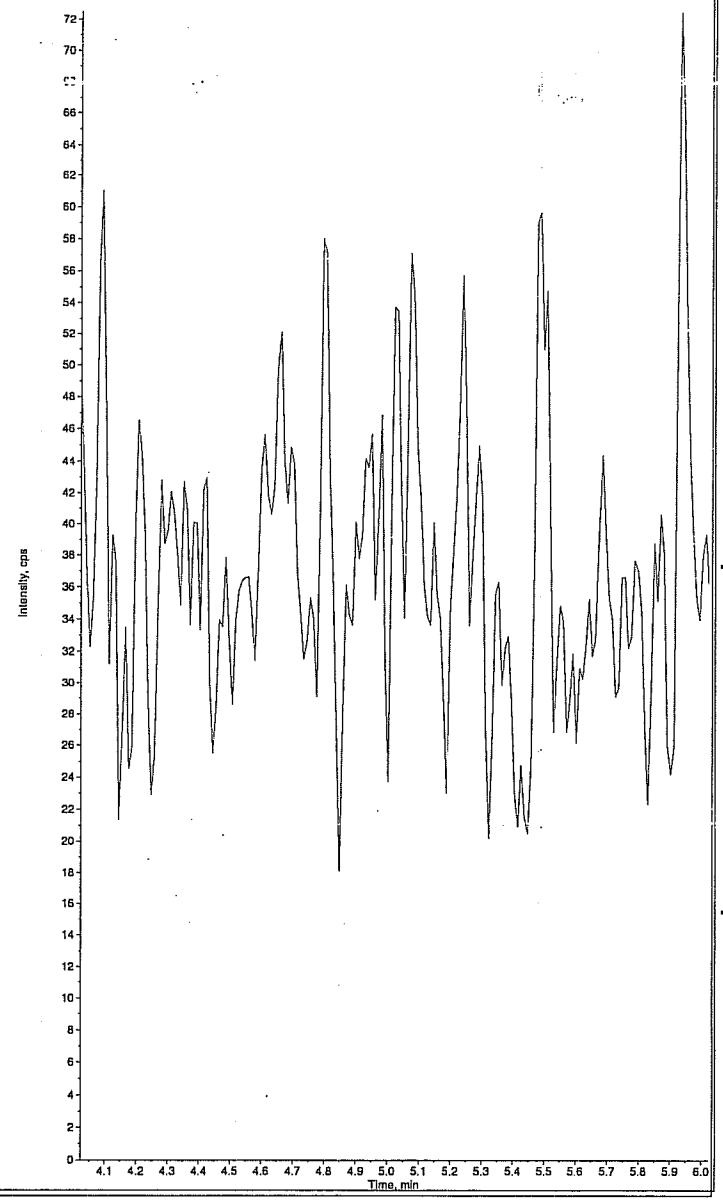
2.53



Sample Name: "1202262546" Sample ID: "1048168|2|LER" File: "EXS11240022.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:59:30 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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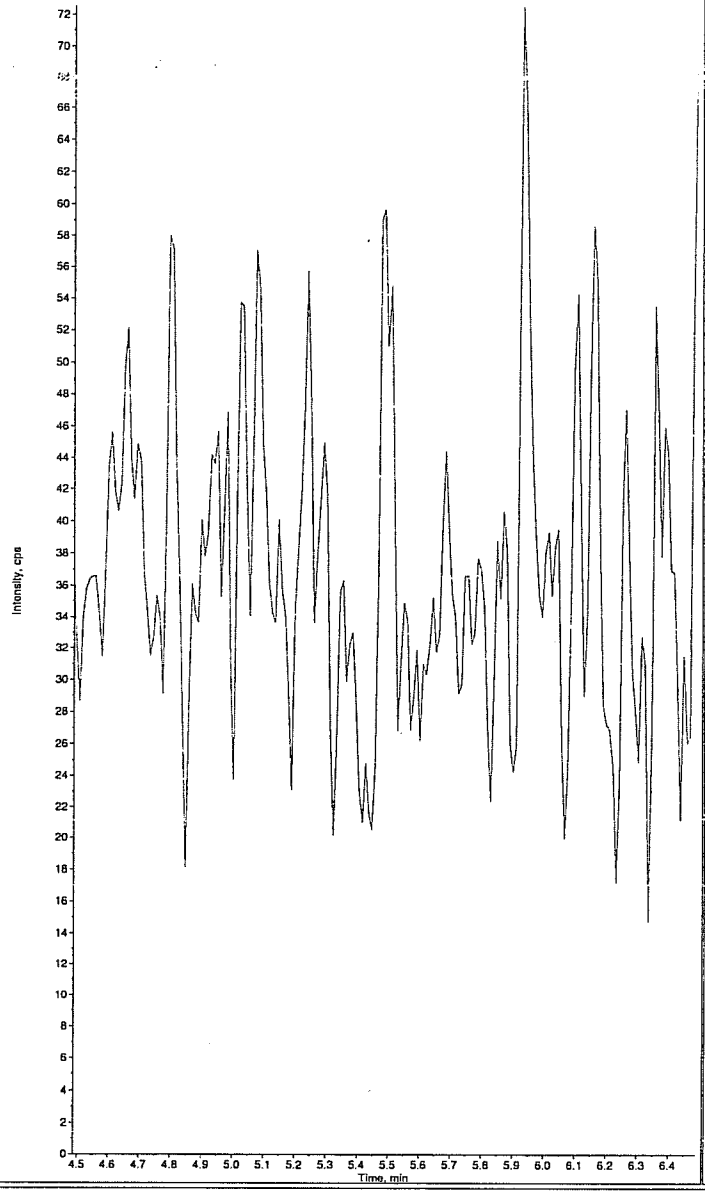
Sample Name: "1202262546" Sample ID: "1048168|2|LER" File: "EXS11240022.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:59:30 PM

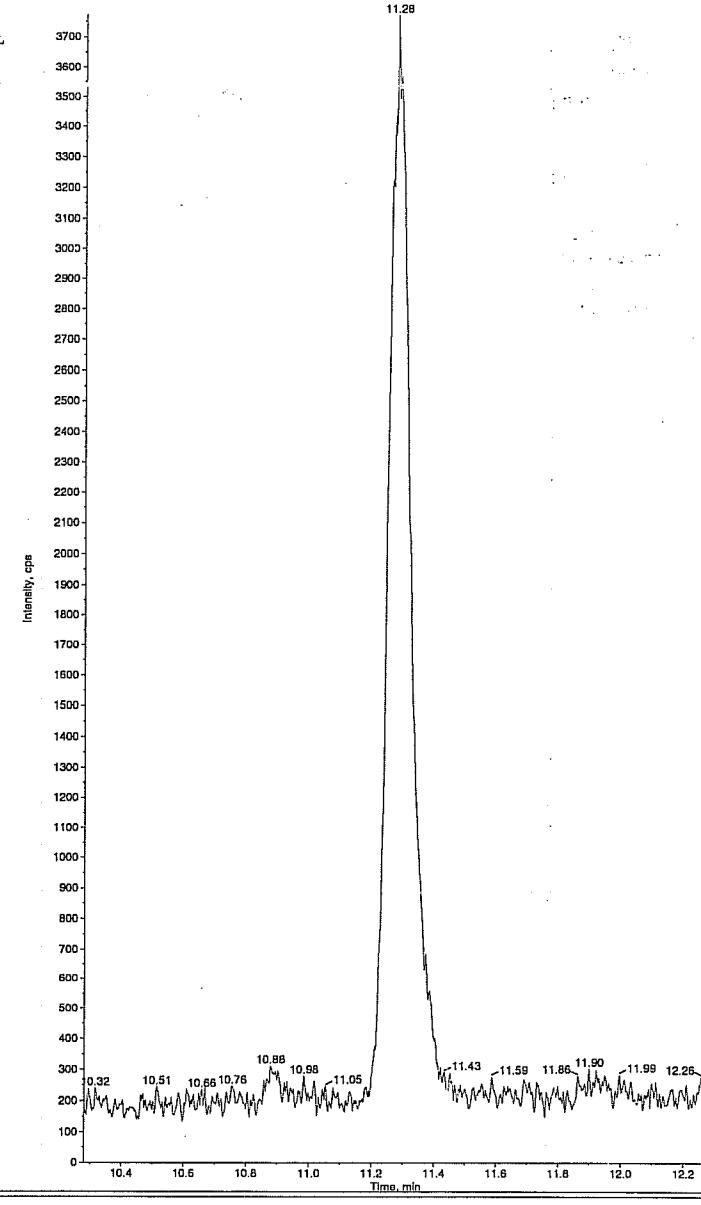
Modified: No



Sample Name: "1202262546" Sample ID: "1048168|2|LER" File: "EXS11240022.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 11/24/2010
Acq. Time: 3:59:30 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 1048167

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 1202262547

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXP1119067a

Date Analyzed: 20–NOV–10 23:11

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
98–95–3	Nitrobenzene	5.24		0.104	0.325
98–95–3	*Nitrobenzene*				
2691–41–0	HMX	5.56		0.104	0.325
2691–41–0	*HMX*				
99–08–1	m–Nitrotoluene	5.62		0.104	0.325
99–08–1	*m–Nitrotoluene*				
88–72–2	o–Nitrotoluene	5.79		0.104	0.325
88–72–2	*o–Nitrotoluene*				
479–45–8	Tetryl	5.88		0.130	0.649
479–45–8	*Tetryl*				
99–35–4	1,3,5–Trinitrobenzene	5.9		0.104	0.325
99–35–4	*1,3,5–Trinitrobenzene*				
99–99–0	p–Nitrotoluene	6.02		0.104	0.649
99–99–0	*p–Nitrotoluene*				
35572–78–2	2–Amino–4,6–dinitrotoluene	6.06		0.104	0.325
35572–78–2	*2–Amino–4,6–dinitrotoluene*				
121–14–2	2,4–Dinitrotoluene	6.08		0.104	0.325
121–14–2	*2,4–Dinitrotoluene*				
606–20–2	2,6–Dinitrotoluene	6.08		0.0779	0.325
606–20–2	*2,6–Dinitrotoluene*				
99–65–0	m–Dinitrobenzene	6.16		0.104	0.325
99–65–0	*m–Dinitrobenzene*				
19406–51–0	4–Amino–2,6–dinitrotoluene	6.26		0.104	0.325
19406–51–0	*4–Amino–2,6–dinitrotoluene*				
121–82–4	RDX	6.32		0.104	0.325
121–82–4	*RDX*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 1048167

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 1202262547

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

Cas No.	Compound	Concentration*	Q	MDL	PQL
118–96–7	2,4,6–Trinitrotoluene	6.33		0.104	0.325
118–96–7	*2,4,6–Trinitrotoluene*				
78–11–5	PETN	6.42		0.130	1.30
78–11–5	*PETN*				

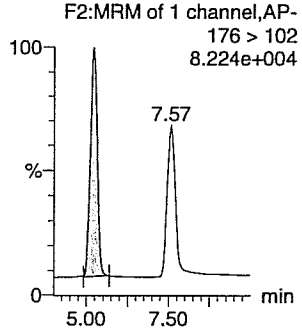
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

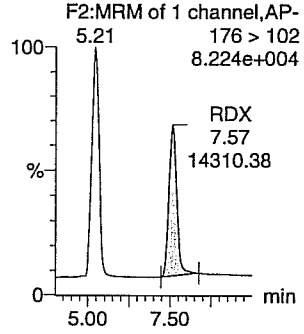
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119067a
Date: 20-Nov-2010
Time: 23:11:12
ID: 1202262547 | Area | 1048168 | Lab | 108 | 21
Vial: 1:6,B

MAP 11/22/10

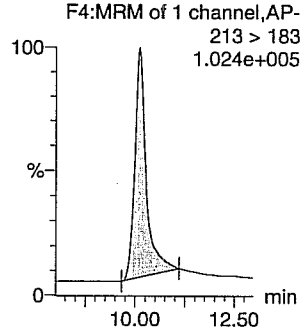
HMX



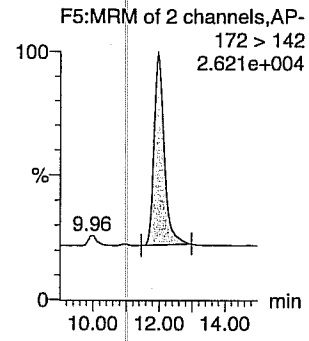
RDX



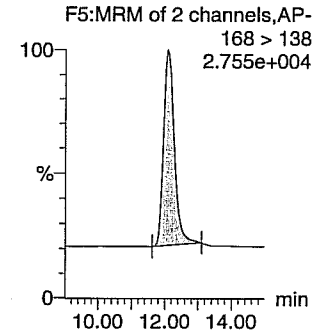
135-Trinitrobenzene



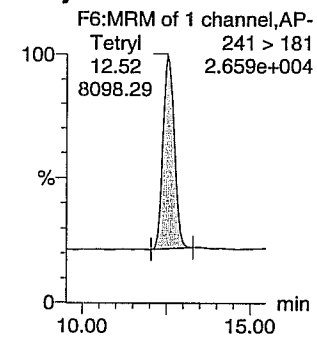
13-Dinitrobenzene-d4



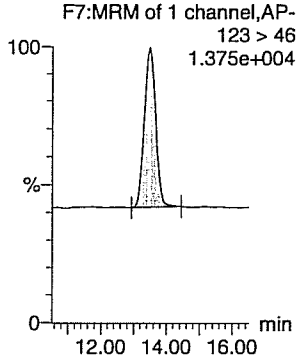
13-Dinitrobenzene



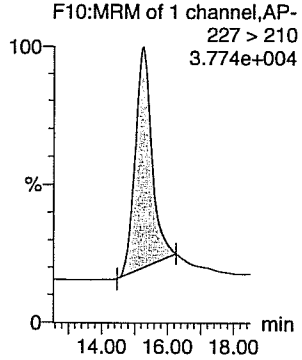
Tetryl



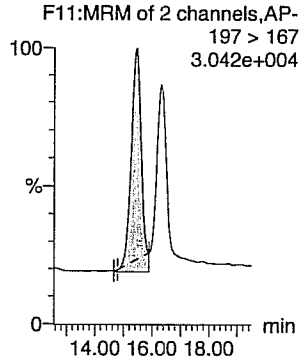
Nitrobenzene



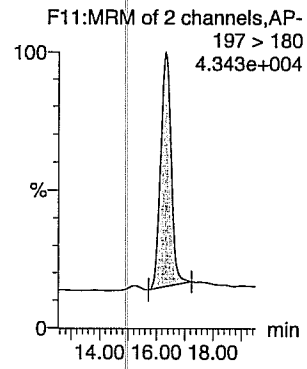
246-Trinitrotoluene



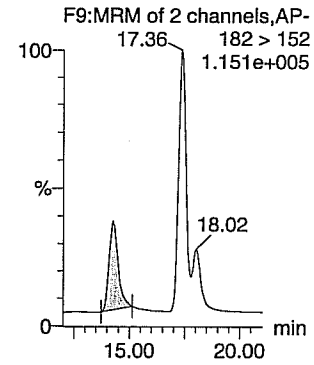
4-Amino-26-dinitrotoluene



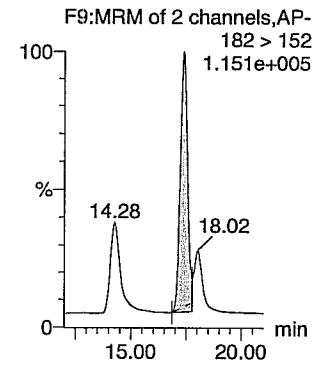
2-Amino-46-dinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



11/22/10

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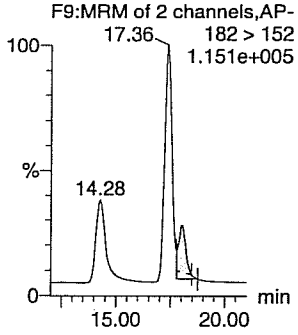
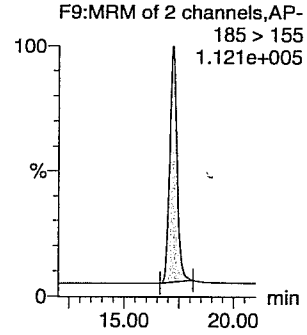
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

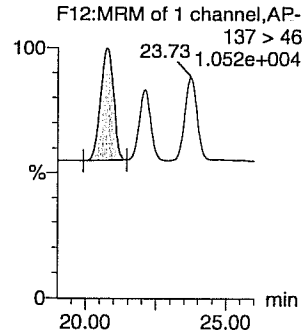
24-dinitrotoluene



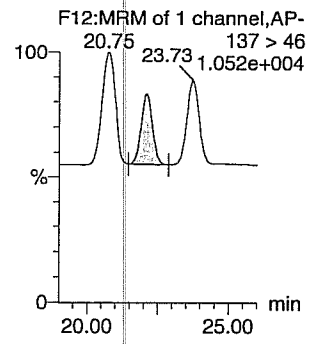
26-dinitrotoluene-d3



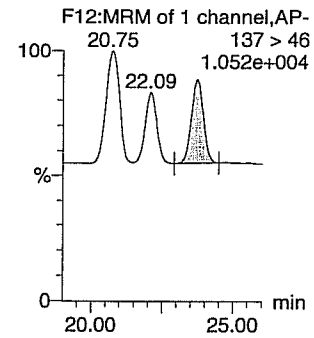
2-Nitrotoluene



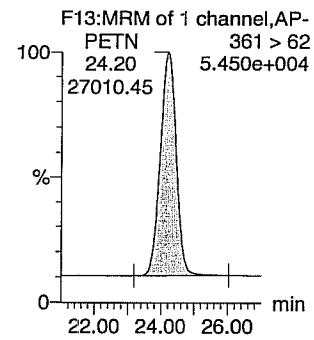
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
1202262547	HMX	176 > 102	5.21	19366.664	7291.544	19366.664	1328.022	db			428.1715	85.6	-14.4	1616.4
1202262547	RDX	176 > 102	7.57	14310.376	7291.544	14310.376	981.299	bb			486.7431	97.3	-2.7	1054.5
1202262547	135-Trinitrobenzene	213 > 183	10.11	32149.180	7291.544	32149.180	2204.552	bb			454.2963	90.9	-9.1	3982.8
1202262547	13-Dinitrobenzene-d4	172 > 142	11.95	7291.544		7291.544	7291.544	bb			568.3522	113.7	13.7	1206.0
1202262547	13-Dinitrobenzene	168 > 138	12.08	8229.709	7291.544	8229.709	564.332	bb			474.6849	94.9	-5.1	541.2
1202262547	Tetryl	241 > 181	12.52	8098.287	7291.544	8098.287	555.320	bb			452.8500	90.6	-9.4	915.3
1202262547	Nitrobenzene	123 > 46	13.47	3274.806	7291.544	3274.806	224.562	bb			403.4945	80.7	-19.3	340.4
1202262547	246-Trinitrotoluene	227 > 210	15.25	18159.680	42375.848	18159.680	214.269	bb			487.2580	97.5	-2.5	391.2
1202262547	4-Amino-26-dinitrotoluene	197 > 167	15.45	10532.334	42375.848	10532.334	124.273	MM	21-Nov-10	10:54:52	481.9329	96.4	-3.6	311.3
1202262547	2-Amino-46-dinitrotoluene	197 > 180	16.30	16079.235	42375.848	16079.235	189.722	bb			466.3005	93.3	-6.7	475.8
1202262547	34-dinitrotoluene	182 > 152	14.28	18092.031	42375.848	18092.031	213.471	bb			224.1668	89.7	-10.3	808.3
1202262547	26-dinitrotoluene	182 > 152	17.36	42277.793	42375.848	42277.793	498.843	MM	21-Nov-10	11:01:28	467.9029	93.6	-6.4	2357.1
1202262547	24-dinitrotoluene	182 > 152	18.02	10381.262	42375.848	10381.262	122.490	MM	21-Nov-10	11:08:44	468.2822	93.7	-6.3	537.2
1202262547	26-dinitrotoluene-d3	185 > 155	17.22	42375.848		42375.848	42375.848	bb			556.0806	111.2	11.2	2057.1
1202262547	2-Nitrotoluene	137 > 46	20.75	2568.084	42375.848	2568.084	30.301	bb			445.7138	89.1	-10.9	441.7
1202262547	4-Nitrotoluene	137 > 46	22.09	1393.201	42375.848	1393.201	16.439	bb			463.8155	92.8	-7.2	276.0
1202262547	3-Nitrotoluene	137 > 46	23.73	1749.115	42375.848	1749.115	20.638	bb			432.6551	86.5	-13.5	327.8
1202262547	PETN	361 > 62	24.20	27010.453	42375.848	27010.453	318.701	bb			493.9896	98.8	-1.2	13613.5

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 1048167

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 1202262547

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXS11240023.wiff

Date Analyzed: 24–NOV–10 16:15

Dilution Factor: 2

Concentration Units: ug/L

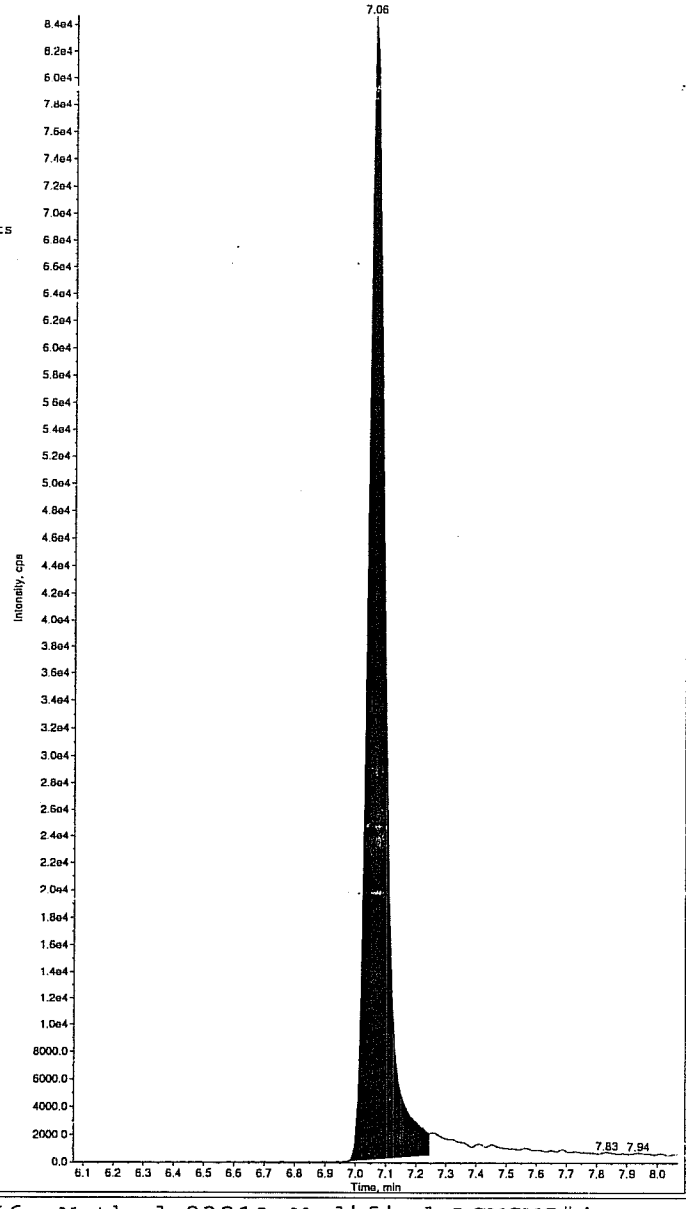
Cas No.	Compound	Concentration*	Q	MDL	PQL
78–30–8	tris(o–cresyl) phosphate	2.51		0.390	1.30
78–30–8	*tris(o–cresyl) phosphate*				
6629–29–4	2,4–Diamino–6–nitrotoluene	5.23		0.390	1.30
6629–29–4	*2,4–Diamino–6–nitrotoluene*				
59229–75–3	2,6–Diamino–4–nitrotoluene	5.49		0.390	1.30
59229–75–3	*2,6–Diamino–4–nitrotoluene*				
618–87–1	3,5–Dinitroaniline	5.69		0.390	1.30
618–87–1	*3,5–Dinitroaniline*				
3058–38–6	TATB	5.73		0.390	1.30
3058–38–6	*TATB*				

Sample Name: "1202262547" Sample ID: "1048168|2|LER" File: "EXS11240023.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 441. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:15:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 0
Report Largest Peak: No
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 5 points
RT Window: 30.0 sec
Expected RT: 7.07 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.06 min
Area: 3.42e+005 counts
Height: 84463.082 cps
Start Time: 6.98 min
End Time: 7.24 min

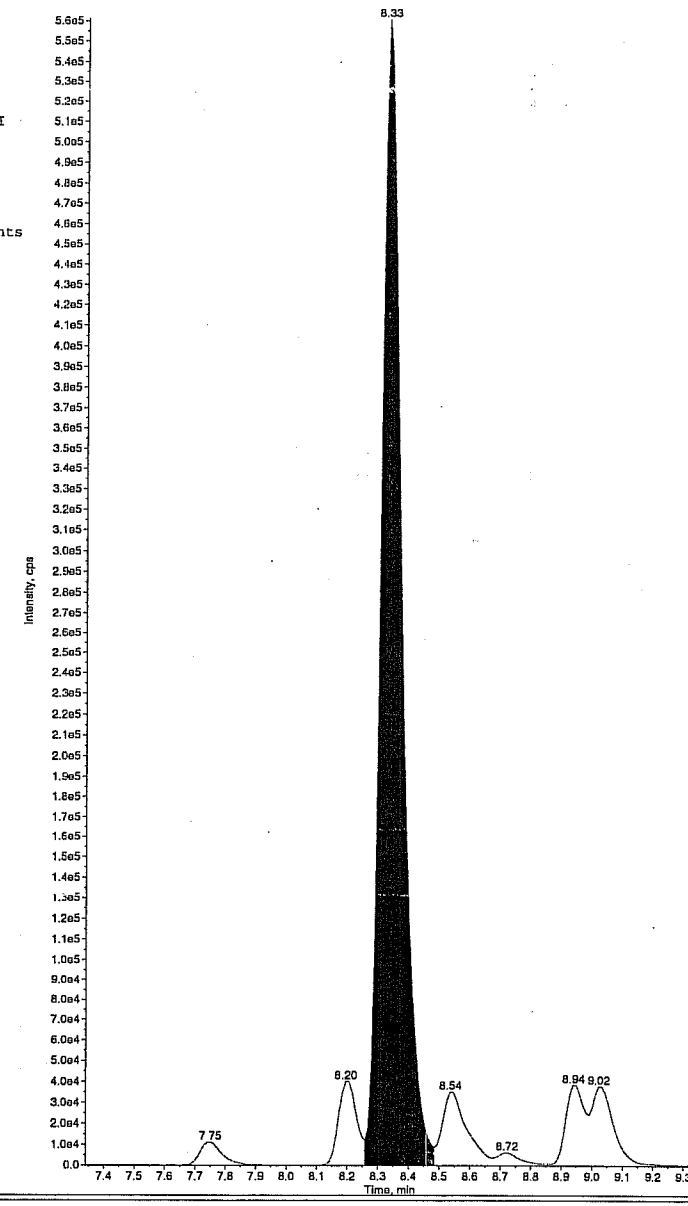


Sample Name: "1202262547" Sample ID: "1048168|2|LER" File: "EXS11240023.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 438. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:15:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.33 min
Area: 2.68e+006 counts
Height: 561029.367 cps
Start Time: 8.26 min
End Time: 8.48 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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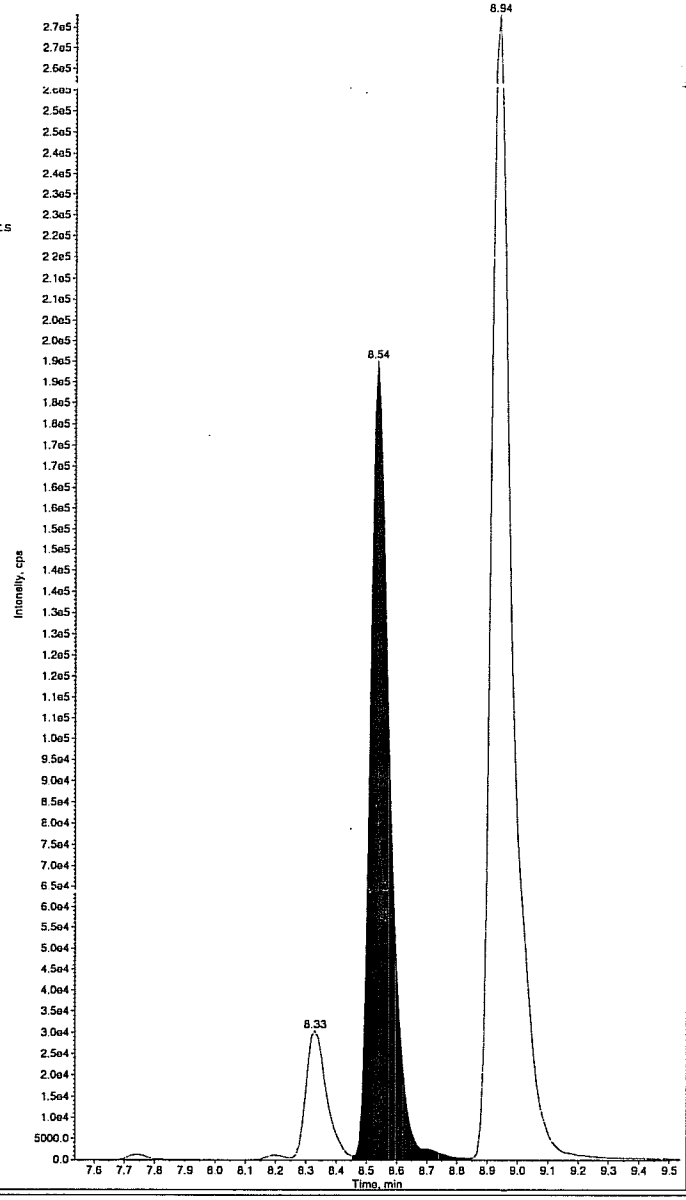
Sample Name: "1202262547" Sample ID: "1048168|2|LER" File: "EXS11240023.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 203. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:15:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.54 min
Area: 8.83e+005 counts
Height: 190070.365 cps
Start Time: 8.45 min
End Time: 8.85 min

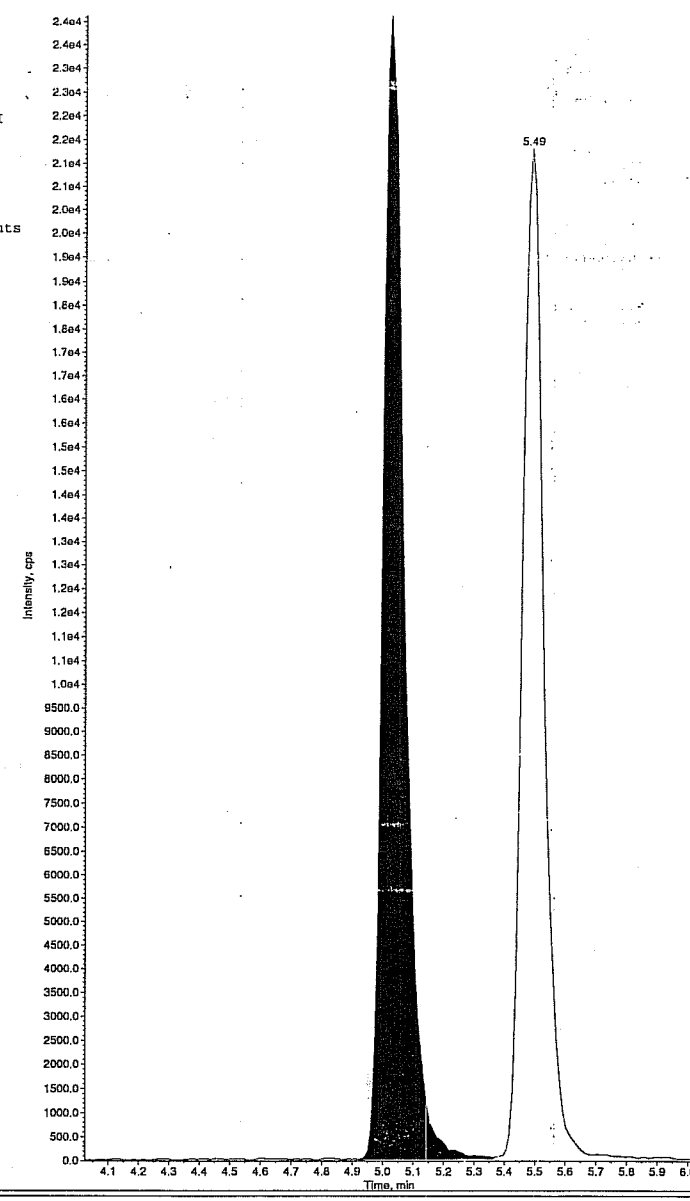


Sample Name: "1202262547" Sample ID: "1048168|2|LER" File: "EXS11240023.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 423. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:15:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.02 min
Area: 1.23e+005 counts
Height: 24099.919 cps
Start Time: 4.92 min
End Time: 5.36 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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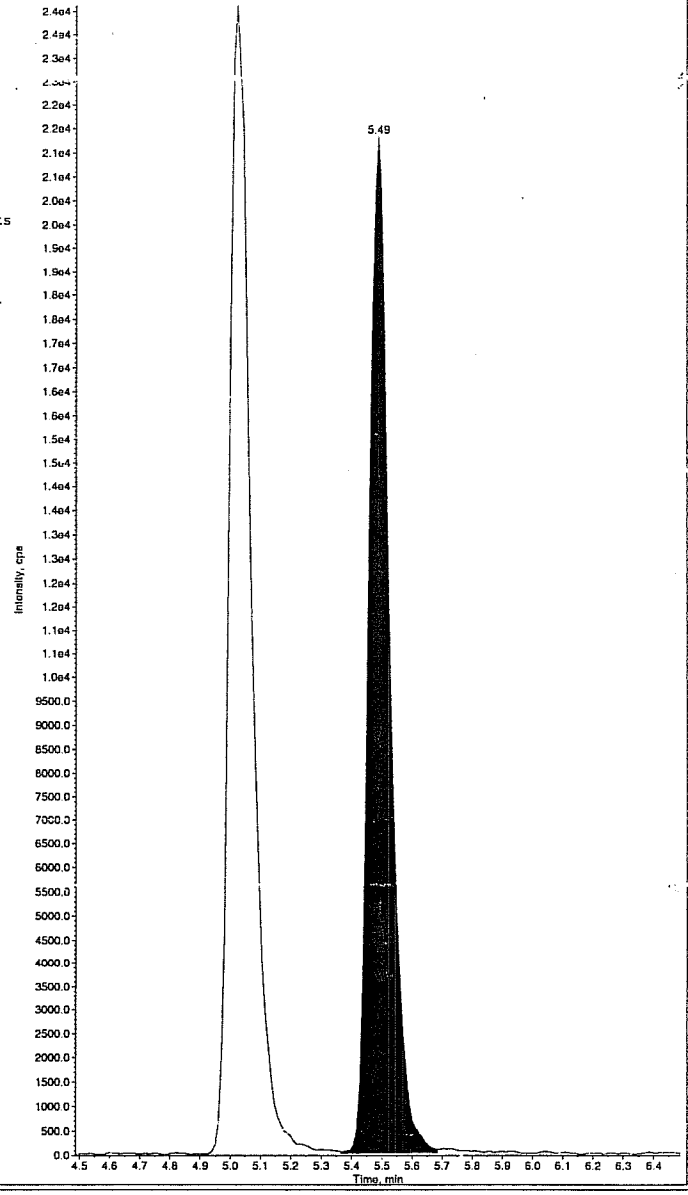
Sample Name: "1202262547" Sample ID: "1048168|2|LER" File: "EXS11240023.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 403. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:15:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.49 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.49 min
Area: 1.05e+005 counts
Height: 21299.267 cps
Start Time: 5.36 min
End Time: 5.68 min

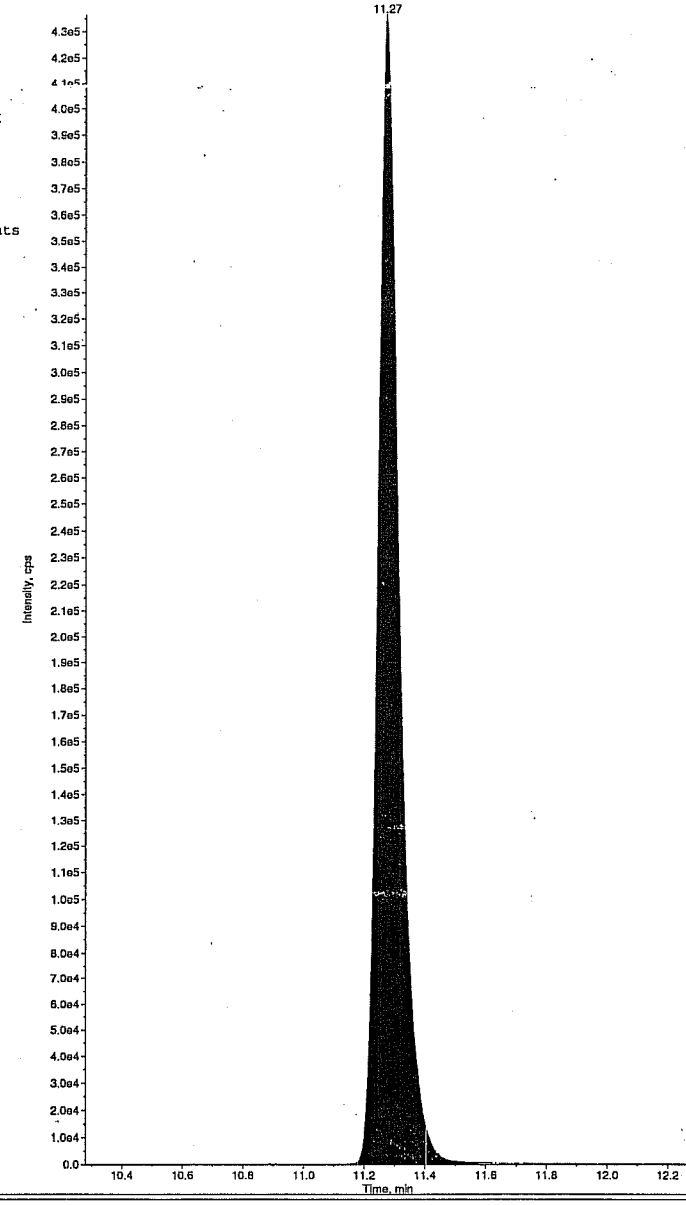


Sample Name: "1202262547" Sample ID: "1048168|2|LER" File: "EXS11240023.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 193. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:15:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: No
Min. Peak Height: 2.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 11.3 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.3 min
Area: 2.19e+006 counts
Height: 436159.154 cps
Start Time: 11.1 min
End Time: 11.6 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1–11–1944(266877002MS)MS

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 1202262548

Sample Amount 770 mL

Date Received: 12–NOV–'10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXP1119069a

Date Analyzed: 21–NOV–10 00:10

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
479–45–8	Tetryl	4.63		0.130	0.649
479–45–8	*Tetryl*				
98–95–3	Nitrobenzene	4.94		0.104	0.325
98–95–3	*Nitrobenzene*				
99–99–0	p–Nitrotoluene	5.61		0.104	0.649
99–99–0	*p–Nitrotoluene*				
99–35–4	1,3,5–Trinitrobenzene	5.62		0.104	0.325
99–35–4	*1,3,5–Trinitrobenzene*				
88–72–2	o–Nitrotoluene	5.66		0.104	0.325
88–72–2	*o–Nitrotoluene*				
99–08–1	m–Nitrotoluene	5.67		0.104	0.325
99–08–1	*m–Nitrotoluene*				
2691–41–0	HMX	5.72		0.104	0.325
2691–41–0	*HMX*				
19406–51–0	4–Amino–2,6–dinitrotoluene	6.02		0.104	0.325
19406–51–0	*4–Amino–2,6–dinitrotoluene*				
78–11–5	PETN	6.05		0.130	1.30
78–11–5	*PETN*				
35572–78–2	2–Amino–4,6–dinitrotoluene	6.18		0.104	0.325
35572–78–2	*2–Amino–4,6–dinitrotoluene*				
606–20–2	2,6–Dinitrotoluene	6.27		0.0779	0.325
606–20–2	*2,6–Dinitrotoluene*				
99–65–0	m–Dinitrobenzene	6.27		0.104	0.325
99–65–0	*m–Dinitrobenzene*				
118–96–7	2,4,6–Trinitrotoluene	6.33		0.104	0.325
118–96–7	*2,4,6–Trinitrotoluene*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1-11-1944(266877002MS)MS

Lab Code: GEL

GEL Job No (SDG) 11-463

Matrix: WATER

GEL Sample ID: 1202262548

Sample Amount 770 mL

Date Received: 12-NOV-10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15-NOV-10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

Cas No.	Compound	Concentration*	Q	MDL	PQL
121-14-2	2,4-Dinitrotoluene	6.56		0.104	0.325
121-14-2	*2,4-Dinitrotoluene*				
121-82-4	RDX	6.6		0.104	0.325
121-82-4	*RDX*				

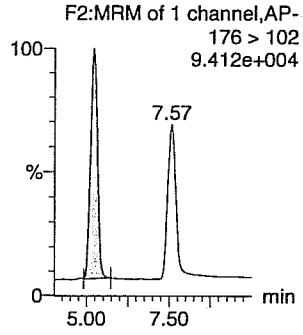
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

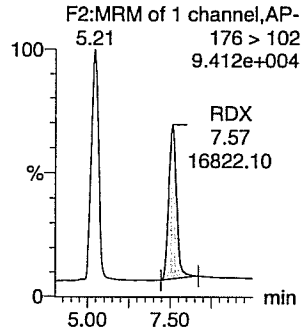
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119069a
Date: 21-Nov-2010
Time: 00:10:12
ID: 1202262548 | ARSU | 1048168 | LAB | 266877002MS | 2
Vial: 1:6,D

MAP 11/22/10

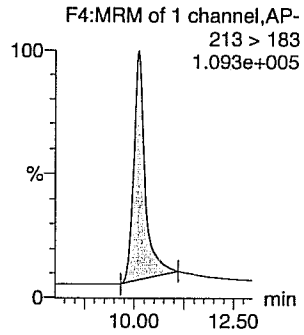
HMX



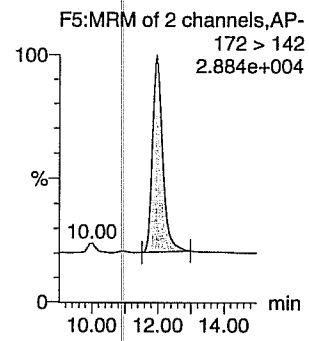
RDX



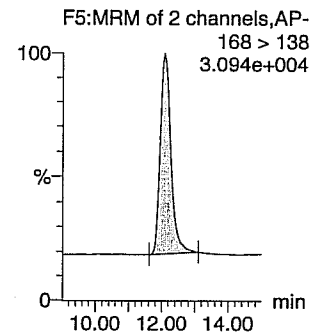
135-Trinitrobenzene



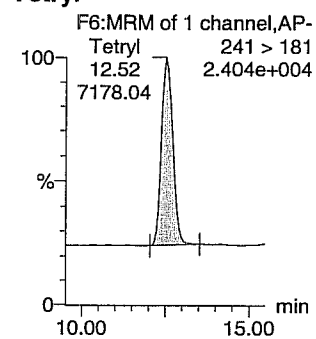
13-Dinitrobenzene-d4



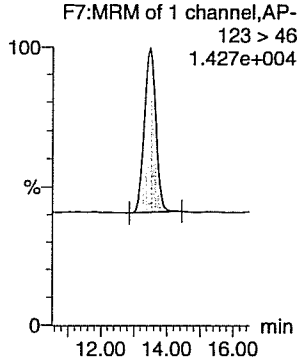
13-Dinitrobenzene



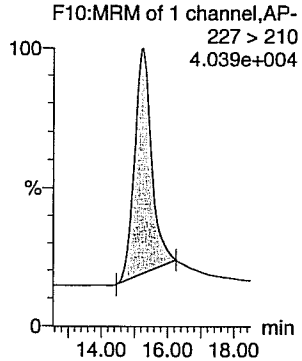
Tetryl



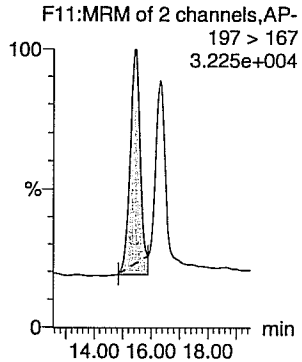
Nitrobenzene



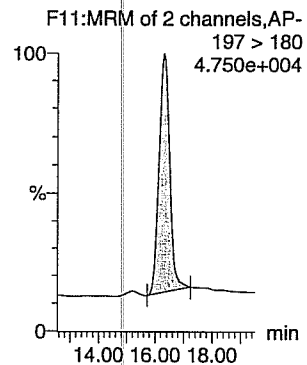
246-Trinitrotoluene



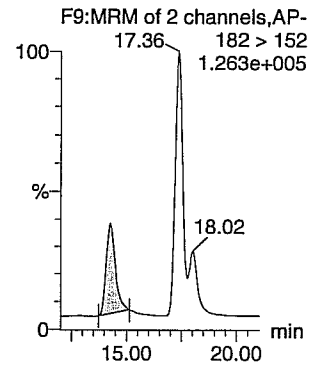
4-Amino-26-dinitrotoluene



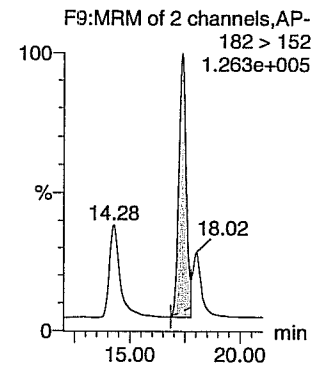
2-Amino-46-dinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



11/22/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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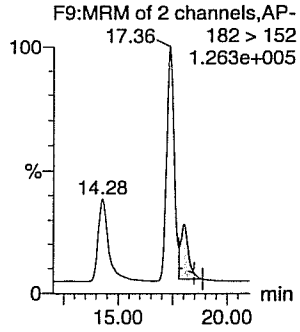
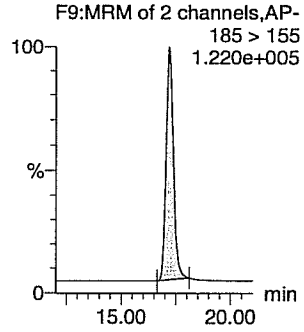
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

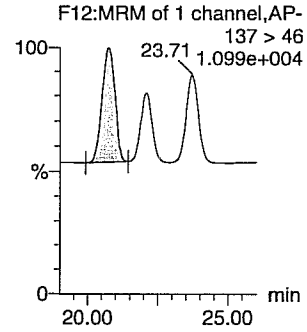
24-dinitrotoluene



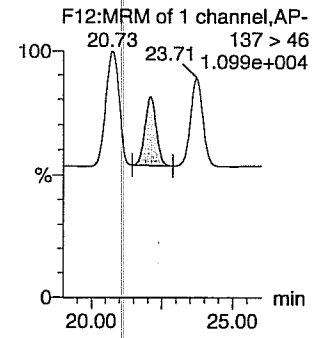
26-dinitrotoluene-d3



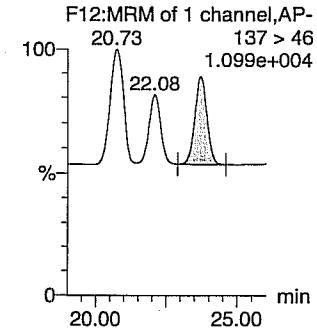
2-Nitrotoluene



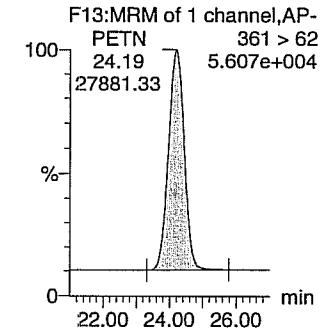
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
1202262548	HMX	176 > 102	5.21	22435.346	8207.833	22435.346	1366.703	db			440.6428	88.1	-11.9	2589.4
1202262548	RDX	176 > 102	7.57	16822.096	8207.833	16822.096	1024.759	bb			508.2997	101.7	1.7	1717.2
1202262548	135-Trinitrobenzene	213 > 183	10.11	34489.707	8207.833	34489.707	2101.024	bb			432.9620	86.6	-13.4	1645.5
1202262548	13-Dinitrobenzene-d4	172 > 142	11.95	8207.833		8207.833	8207.833	bb			639.7739	128.0	28.0	844.5
1202262548	13-Dinitrobenzene	168 > 138	12.08	9416.540	8207.833	9416.540	573.631	bb			482.5066	96.5	-3.5	427.8
1202262548	Tetryl	241 > 181	12.52	7178.039	8207.833	7178.039	437.268	bb			356.5809	71.3	-28.7	535.6
1202262548	Nitrobenzene	123 > 46	13.47	3476.417	8207.833	3476.417	211.774	bb			380.5177	76.1	-23.9	236.5
1202262548	246-Trinitrotoluene	227 > 210	15.25	19885.480	46392.422	19885.480	214.318	bb			487.3694	97.5	-2.5	276.8
1202262548	4-Amino-26-dinitrotoluene	197 > 167	15.41	11098.358	46392.422	11098.358	119.614	MM	21-Nov-10	10:54:58	463.8655	92.8	-7.2	313.3
1202262548	2-Amino-46-dinitrotoluene	197 > 180	16.30	17951.893	46392.422	17951.893	193.479	bb			475.5346	95.1	-4.9	553.9
1202262548	34-dinitrotoluene	182 > 152	14.28	20721.607	46392.422	20721.607	223.330	bb			234.5194	93.8	-6.2	965.3
1202262548	26-dinitrotoluene	182 > 152	17.36	47733.867	46392.422	47733.867	514.458	MM	21-Nov-10	11:01:35	482.5490	96.5	-3.5	2777.4
1202262548	24-dinitrotoluene	182 > 152	18.02	12264.667	46392.422	12264.667	132.184	MM	21-Nov-10	11:08:56	505.3411	101.1	1.1	658.3
1202262548	26-dinitrotoluene-d3	185 > 155	17.18	46392.422		46392.422	46392.422	bb			608.7885	121.8	21.8	3193.1
1202262548	2-Nitrotoluene	137 > 46	20.73	2749.917	46392.422	2749.917	29.638	bb			435.9511	87.2	-12.8	379.5
1202262548	4-Nitrotoluene	137 > 46	22.08	1420.726	46392.422	1420.726	15.312	bb			432.0293	86.4	-13.6	224.2
1202262548	3-Nitrotoluene	137 > 46	23.71	1931.377	46392.422	1931.377	20.816	bb			436.3771	87.3	-12.7	288.7
1202262548	PETN	361 > 62	24.19	27881.332	46392.422	27881.332	300.494	bb			465.7693	93.2	-6.8	17954.4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1–11–1944(266877002MS)MS

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 1202262548

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXS11240025.wiff

Date Analyzed: 24–NOV–10 16:46

Dilution Factor: 2

Concentration Units: ug/L

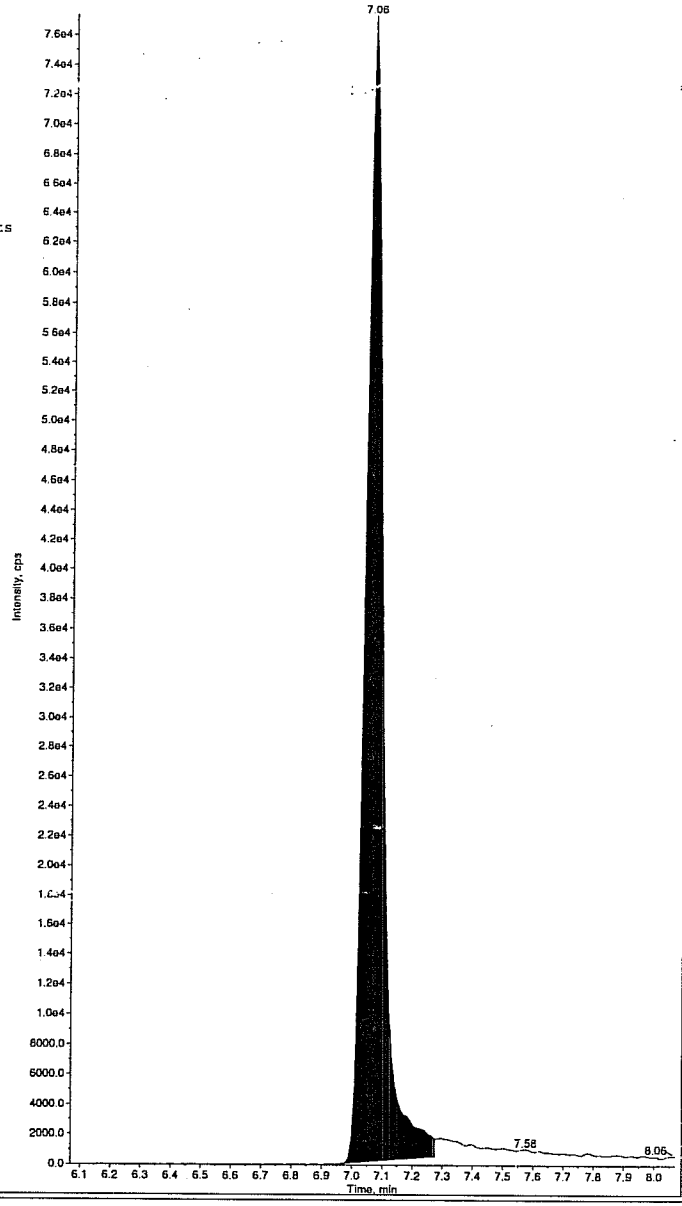
Cas No.	Compound	Concentration*	Q	MDL	PQL
78–30–8	tris(o–cresyl) phosphate	2.29		0.390	1.30
78–30–8	*tris(o–cresyl) phosphate*				
59229–75–3	2,6–Diamino–4–nitrotoluene	5.19		0.390	1.30
59229–75–3	*2,6–Diamino–4–nitrotoluene*				
6629–29–4	2,4–Diamino–6–nitrotoluene	5.32		0.390	1.30
6629–29–4	*2,4–Diamino–6–nitrotoluene*				
3058–38–6	TATB	5.4		0.390	1.30
3058–38–6	*TATB*				
618–87–1	3,5–Dinitroaniline	5.91		0.390	1.30
618–87–1	*3,5–Dinitroaniline*				

Sample Name: "1202262548" Sample ID: "1048168|2|LER" File: "EXS11240025.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 416. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:46:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 0
Report Largest Peak: No
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 5 points
RT Window: 30.0 sec
Expected RT: 7.07 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.06 min
Area: 3.22e+005 counts
Height: 77211.398 cps
Start Time: 6.96 min
End Time: 7.28 min

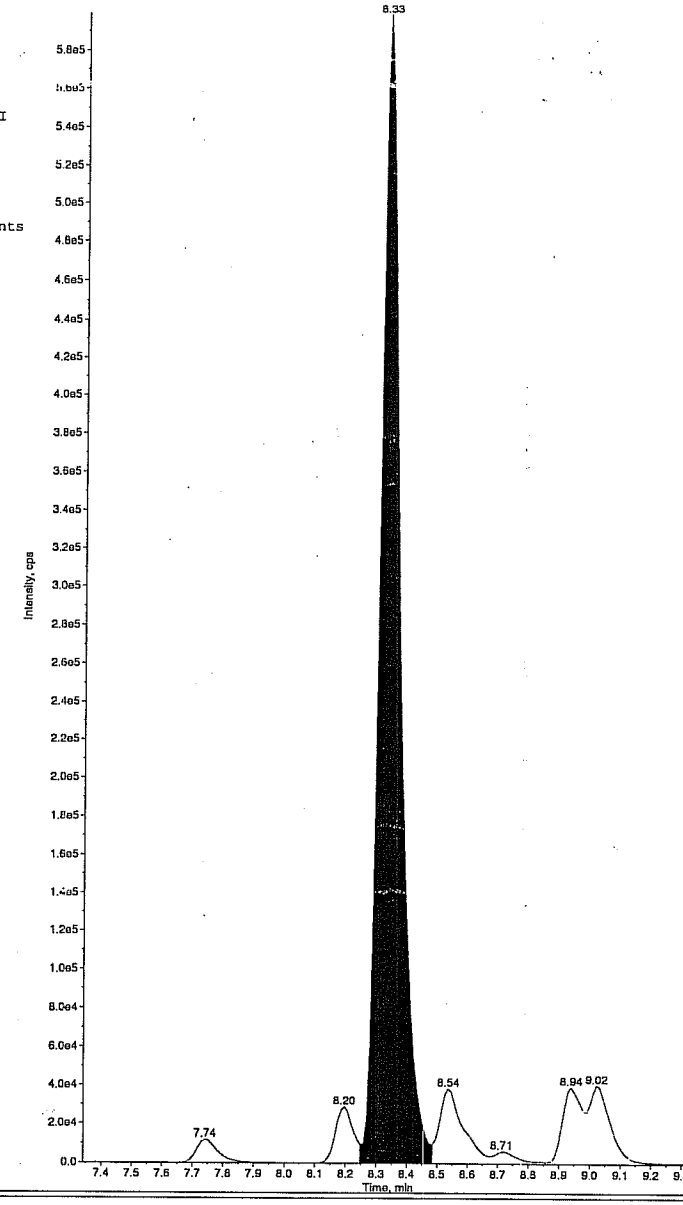


Sample Name: "1202262548" Sample ID: "1048168|2|LER" File: "EXS11240025.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 455. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:46:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.33 min
Area: 2.78e+006 counts
Height: 599442.381 cps
Start Time: 8.25 min
End Time: 8.48 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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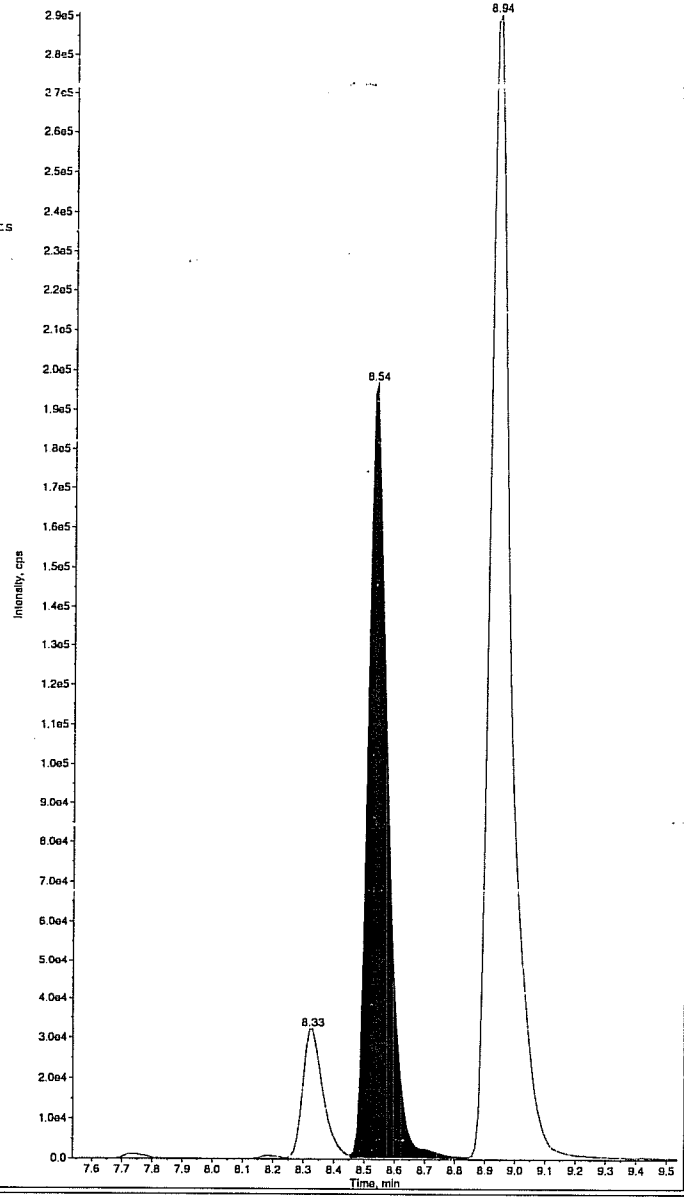
Sample Name: "1202262548" Sample ID: "1048168|2|LER" File: "EXS11240025.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 210. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:46:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.54 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.54 min
Area: 9.10e+005 counts
Height: 196702.639 cps
Start Time: 8.45 min
End Time: 8.85 min

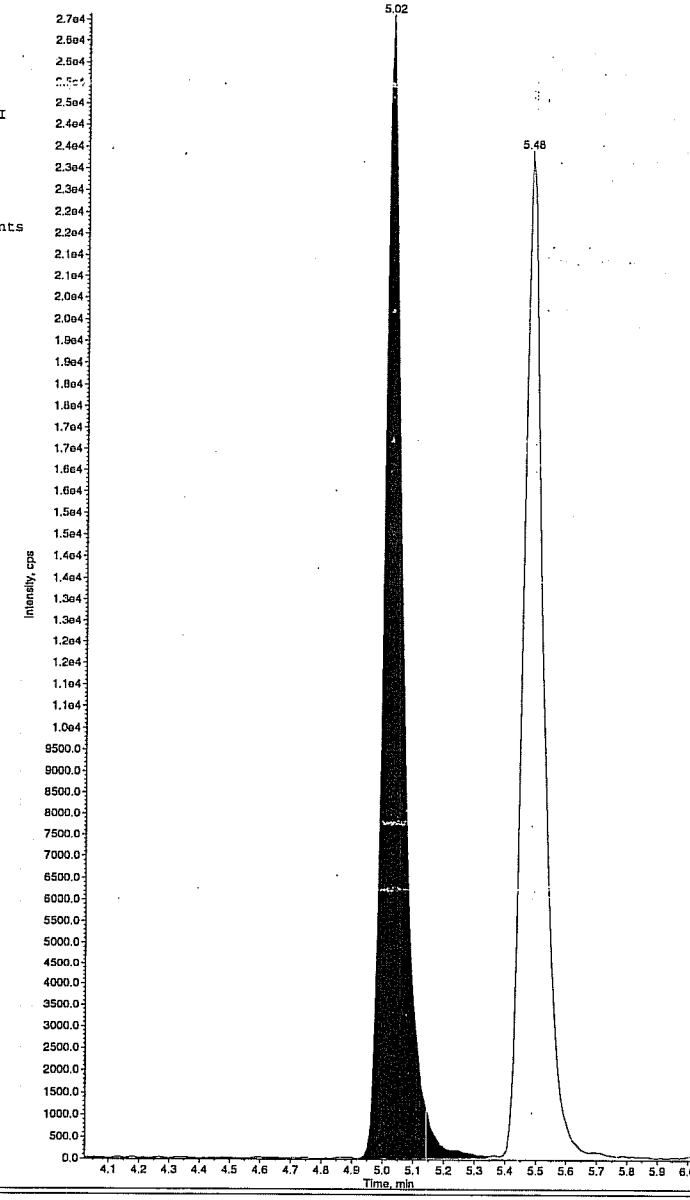


Sample Name: "1202262548" Sample ID: "1048168|2|LER" File: "EXS11240025.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 400. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:46:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.02 min
Area: 1.16e+005 counts
Height: 26613.703 cps
Start Time: 4.92 min
End Time: 5.34 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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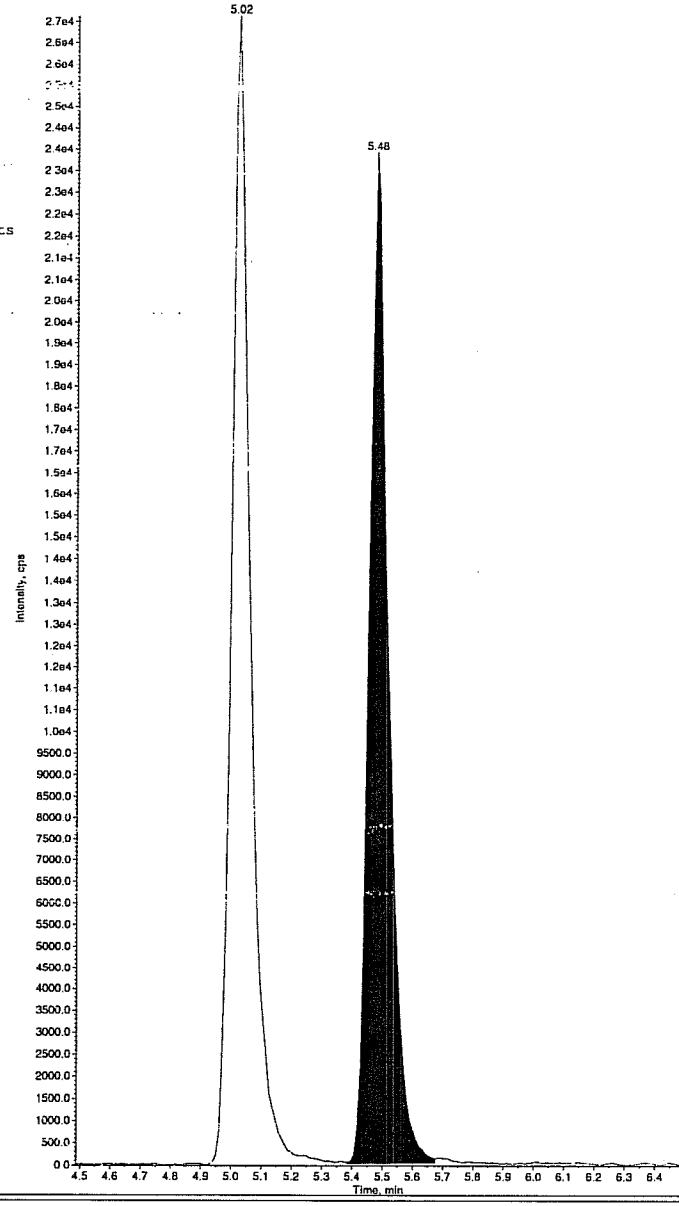
Sample Name: "1202262548" Sample ID: "1048168|2|LER" File: "EXS11240025.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 410. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:46:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.49 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.48 min
Area: 1.07e+005 counts
Height: 23383.416 cps
Start Time: 5.38 min
End Time: 5.67 min

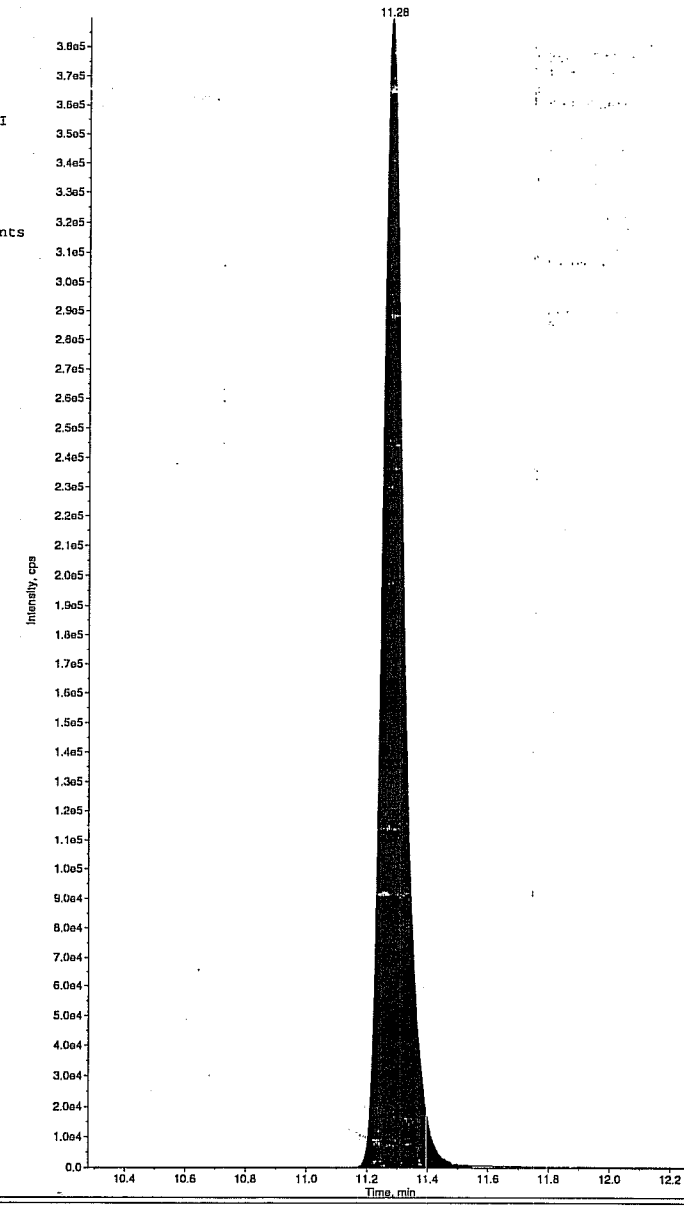


Sample Name: "1202262548" Sample ID: "1048168|2|LER" File: "EXS11240025.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 176. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 4:46:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: No
Min. Peak Height: 2.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 11.3 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.3 min
Area: 2.00e+006 counts
Height: 389681.444 cps
Start Time: 11.2 min
End Time: 11.5 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1–11–1944(266877002MSD)MSD

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 1202262549

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXP1119070a

Date Analyzed: 21–NOV–10 00:39

Dilution Factor: 2

Concentration Units: ug/L

Cas No.	Compound	Concentration*	Q	MDL	PQL
479–45–8	Tetryl	4.98		0.130	0.649
479–45–8	*Tetryl*				
98–95–3	Nitrobenzene	5.61		0.104	0.325
98–95–3	*Nitrobenzene*				
2691–41–0	HMX	5.85		0.104	0.325
2691–41–0	*HMX*				
99–08–1	m–Nitrotoluene	6.18		0.104	0.325
99–08–1	*m–Nitrotoluene*				
99–35–4	1,3,5–Trinitrobenzene	6.18		0.104	0.325
99–35–4	*1,3,5–Trinitrobenzene*				
88–72–2	o–Nitrotoluene	6.24		0.104	0.325
88–72–2	*o–Nitrotoluene*				
99–99–0	p–Nitrotoluene	6.27		0.104	0.649
99–99–0	*p–Nitrotoluene*				
19406–51–0	4–Amino–2,6–dinitrotoluene	6.39		0.104	0.325
19406–51–0	*4–Amino–2,6–dinitrotoluene*				
118–96–7	2,4,6–Trinitrotoluene	6.57		0.104	0.325
118–96–7	*2,4,6–Trinitrotoluene*				
78–11–5	PETN	6.58		0.130	1.30
78–11–5	*PETN*				
606–20–2	2,6–Dinitrotoluene	6.61		0.0779	0.325
606–20–2	*2,6–Dinitrotoluene*				
99–65–0	m–Dinitrobenzene	6.63		0.104	0.325
99–65–0	*m–Dinitrobenzene*				
35572–78–2	2–Amino–4,6–dinitrotoluene	6.68		0.104	0.325
35572–78–2	*2–Amino–4,6–dinitrotoluene*				

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1–11–1944(266877002MSD)MSD

Lab Code: GEL

GEL Job No (SDG) 11–463

Matrix: WATER

GEL Sample ID: 1202262549

Sample Amount 770 mL

Date Received: 12–NOV–10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15–NOV–10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

Cas No.	Compound	Concentration*	Q	MDL	PQL
121–82–4	RDX	6.89		0.104	0.325
121–82–4	*RDX*				
121–14–2	2,4–Dinitrotoluene	6.91		0.104	0.325
121–14–2	*2,4–Dinitrotoluene*				

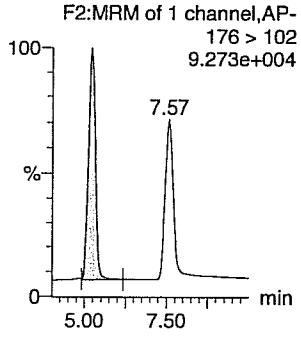
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

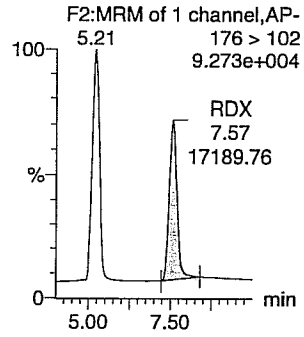
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP1119070a
Date: 21-Nov-2010
Time: 00:39:41
ID: 1202262549 | ARSC | 1048168 | LIQ | 266877002WS | 21
Vial: 1:6,E

11/22/10

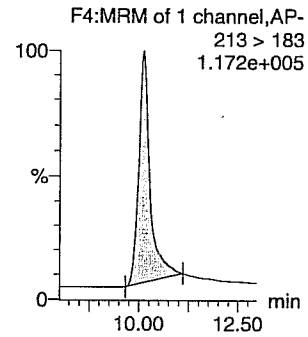
HMX



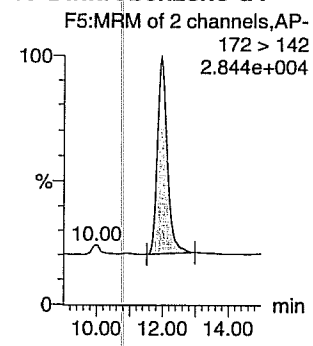
RDX



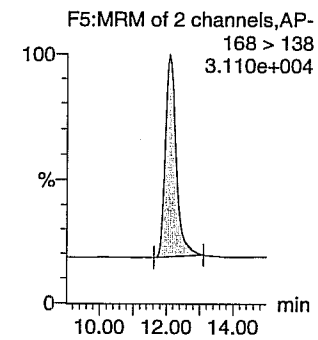
135-Trinitrobenzene



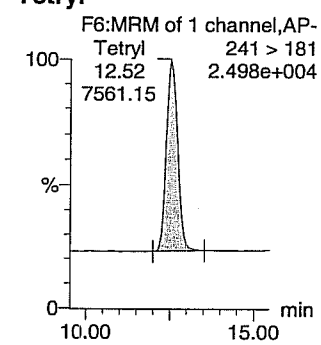
13-Dinitrobenzene-d4



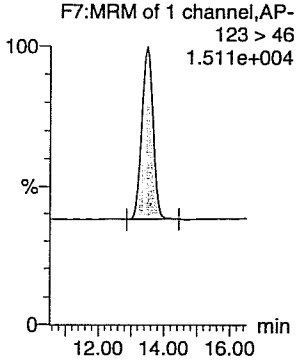
13-Dinitrobenzene



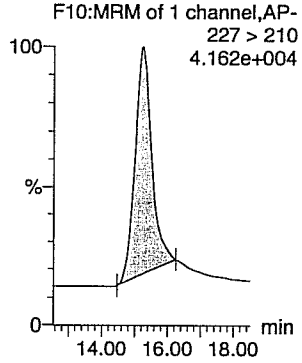
Tetryl



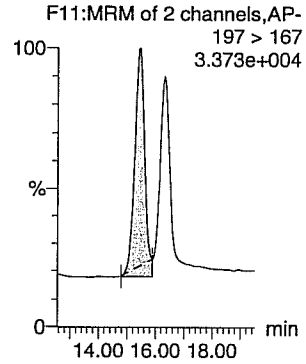
Nitrobenzene



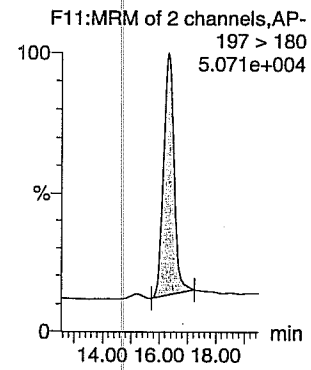
246-Trinitrotoluene



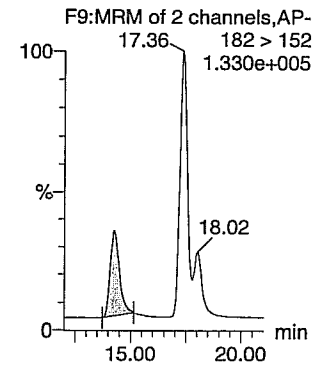
4-Amino-26-dinitrotoluene



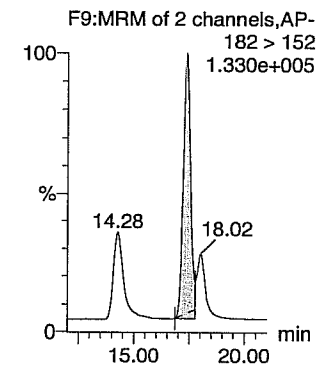
2-Amino-46-dinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



HMM 11/22/10

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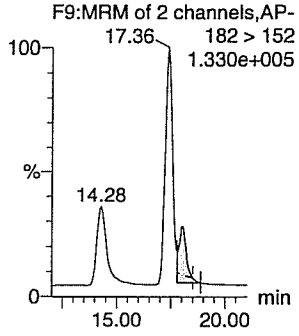
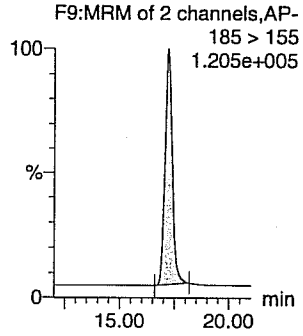
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\111910expA.qld, Time: Sun Nov 21 11:10:42 2010

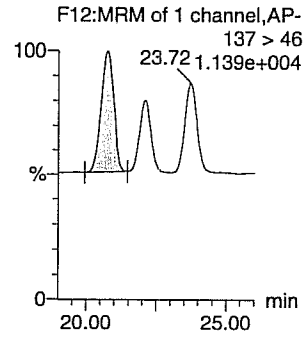
24-dinitrotoluene



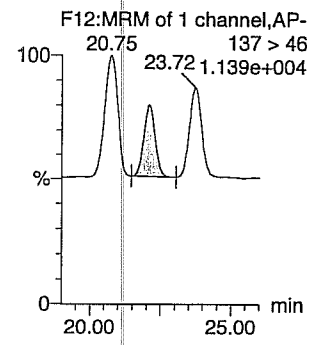
26-dinitrotoluene-d3



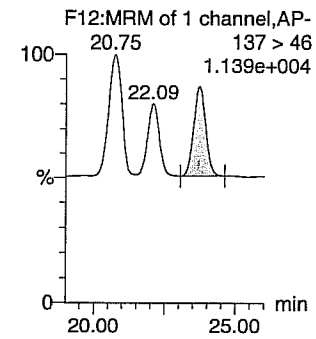
2-Nitrotoluene



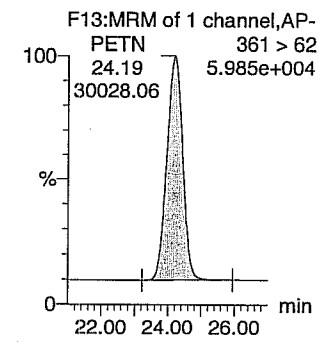
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
1202262549	HMX	176 > 102	5.21	22457.748	8036.109	22457.748	1397.302	db			450.5084	90.1	-9.9	3001.3
1202262549	RDX	176 > 102	7.57	17189.756	8036.109	17189.756	1069.532	bb			530.5082	106.1	6.1	2062.8
1202262549	135-Trinitrobenzene	213 > 183	10.11	37134.965	8036.109	37134.965	2310.507	bb			476.1305	95.2	-4.8	4013.2
1202262549	13-Dinitrobenzene-d4	172 > 142	11.95	8036.109		8036.109	8036.109	bb			626.3886	125.3	25.3	470.5
1202262549	13-Dinitrobenzene	168 > 138	12.08	9761.937	8036.109	9761.937	607.380	bb			510.8938	102.2	2.2	1232.2
1202262549	Tetryl	241 > 181	12.52	7561.146	8036.109	7561.146	470.448	bb			383.6388	76.7	-23.3	524.8
1202262549	Nitrobenzene	123 > 46	13.47	3861.010	8036.109	3861.010	240.229	bb			431.6449	86.3	-13.7	473.9
1202262549	246-Trinitrotoluene	227 > 210	15.25	20422.383	45900.844	20422.383	222.462	bb			505.8887	101.2	1.2	1767.4
1202262549	4-Amino-26-dinitrotoluene	197 > 167	15.45	11656.106	45900.844	11656.106	126.970	MM	21-Nov-10	10:55:05	492.3945	98.5	-1.5	231.1
1202262549	2-Amino-46-dinitrotoluene	197 > 180	16.30	19198.361	45900.844	19198.361	209.129	bb			513.9991	102.8	2.8	773.5
1202262549	34-dinitrotoluene	182 > 152	14.28	20246.051	45900.844	20246.051	220.541	bb			231.5912	92.6	-7.4	472.5
1202262549	26-dinitrotoluene	182 > 152	17.36	49781.109	45900.844	49781.109	542.268	MM	21-Nov-10	11:01:42	508.6344	101.7	1.7	1461.1
1202262549	24-dinitrotoluene	182 > 152	18.02	12771.573	45900.844	12771.573	139.121	MM	21-Nov-10	11:09:05	531.8628	106.4	6.4	345.8
1202262549	26-dinitrotoluene-d3	185 > 155	17.22	45900.844		45900.844	45900.844	bb			602.3377	120.5	20.5	2054.0
1202262549	2-Nitrotoluene	137 > 46	20.75	2998.977	45900.844	2998.977	32.668	bb			480.5269	96.1	-3.9	994.2
1202262549	4-Nitrotoluene	137 > 46	22.09	1570.105	45900.844	1570.105	17.103	bb			482.5673	96.5	-3.5	591.6
1202262549	3-Nitrotoluene	137 > 46	23.72	2084.458	45900.844	2084.458	22.706	bb			476.0081	95.2	-4.8	737.7
1202262549	PETN	361 > 62	24.19	30028.059	45900.844	30028.059	327.097	bb			507.0035	101.4	1.4	12135.1

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: Buckman1-11-1944(266877002MSD)MSD

Lab Code: GEL

GEL Job No (SDG) 11-463

Matrix: WATER

GEL Sample ID: 1202262549

Sample Amount 770 mL

Date Received: 12-NOV-10

Moisture:

Extraction Batch ID: 1048167

Extraction Type Sol Exchange

Date Extracted: 15-NOV-10

Concentrated Extract Volume (mL) 5

Injection Volume (uL): 50

GEL data file: EXS11240026.wiff

Date Analyzed: 24-NOV-10 17:02

Dilution Factor: 2

Concentration Units: ug/L

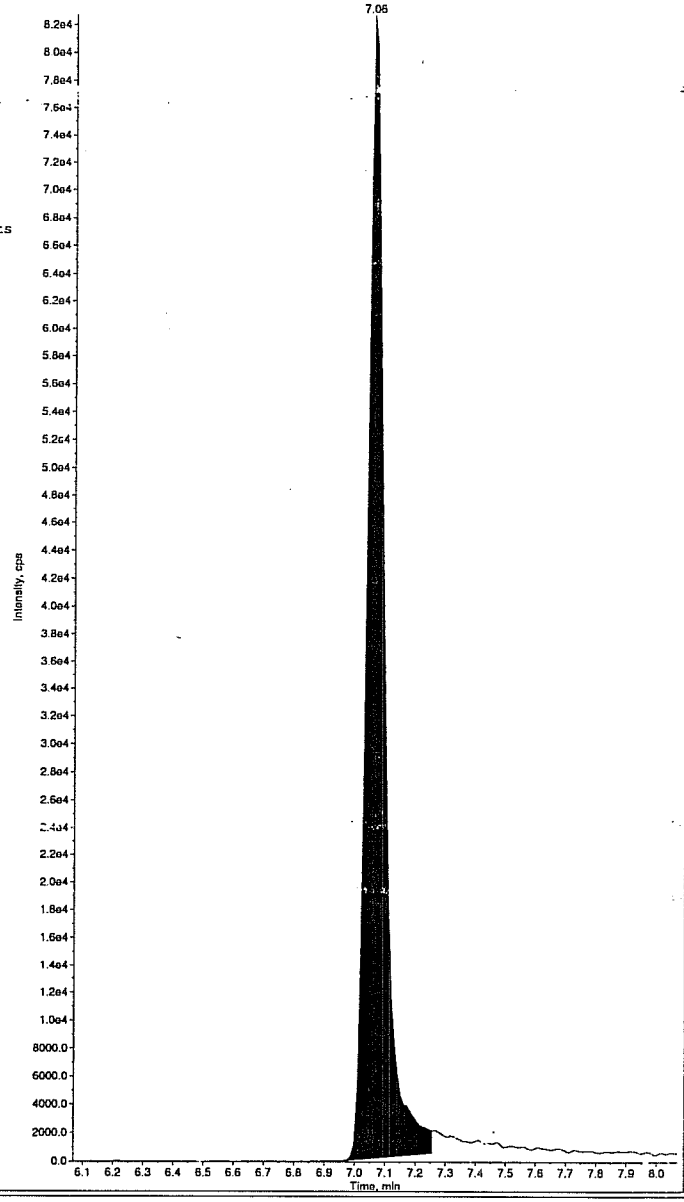
Cas No.	Compound	Concentration*	Q	MDL	PQL
78-30-8	tris(o-cresyl) phosphate	2.7		0.390	1.30
78-30-8	*tris(o-cresyl) phosphate*				
59229-75-3	2,6-Diamino-4-nitrotoluene	4.82		0.390	1.30
59229-75-3	*2,6-Diamino-4-nitrotoluene*				
6629-29-4	2,4-Diamino-6-nitrotoluene	5.6		0.390	1.30
6629-29-4	*2,4-Diamino-6-nitrotoluene*				
3058-38-6	TATB	5.66		0.390	1.30
3058-38-6	*TATB*				
618-87-1	3,5-Dinitroaniline	6.16		0.390	1.30
618-87-1	*3,5-Dinitroaniline*				

Sample Name: "1202262549" Sample ID: "1048168|2|LER" File: "EXS11240026.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 436. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:02:20 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 0
Report Largest Peak: No
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 5 points
RT Window: 30.0 sec
Expected RT: 7.07 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.06 min
Area: 3.38e+005 counts
Height: 82461.069 cps
Start Time: 6.96 min
End Time: 7.25 min

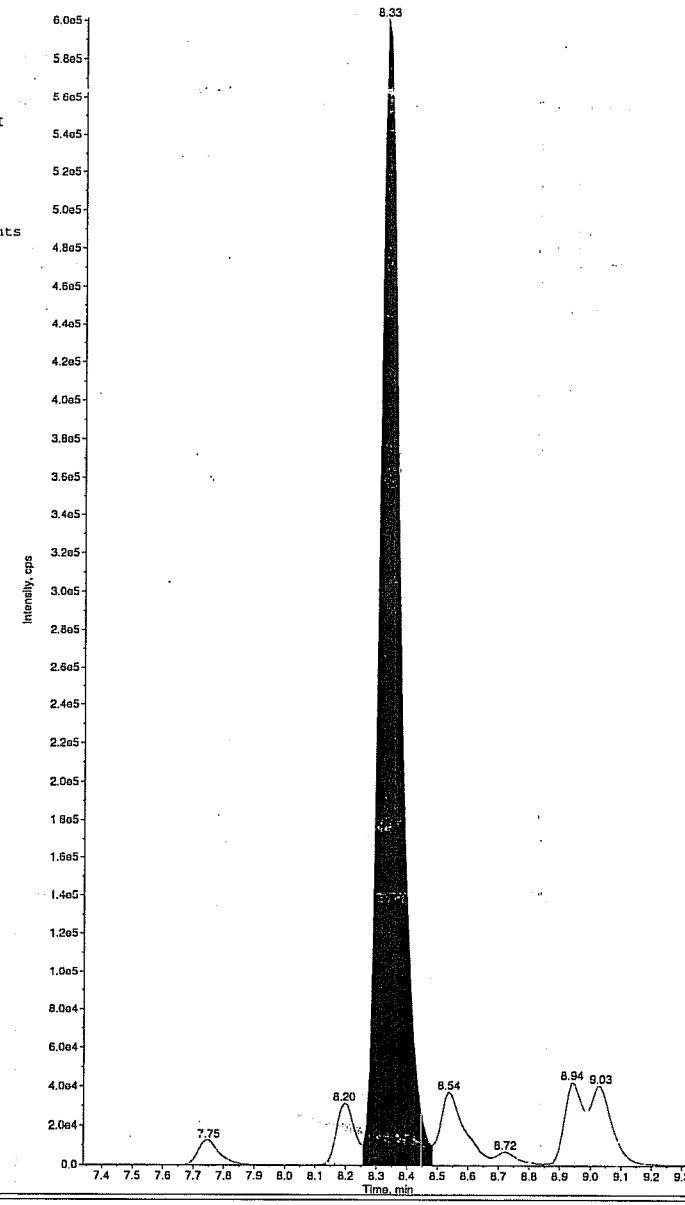


Sample Name: "1202262549" Sample ID: "1048168|2|LER" File: "EXS11240026.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 474. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:02:20 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.34 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.33 min
Area: 2.89e+006 counts
Height: 601056.494 cps
Start Time: 8.26 min
End Time: 8.48 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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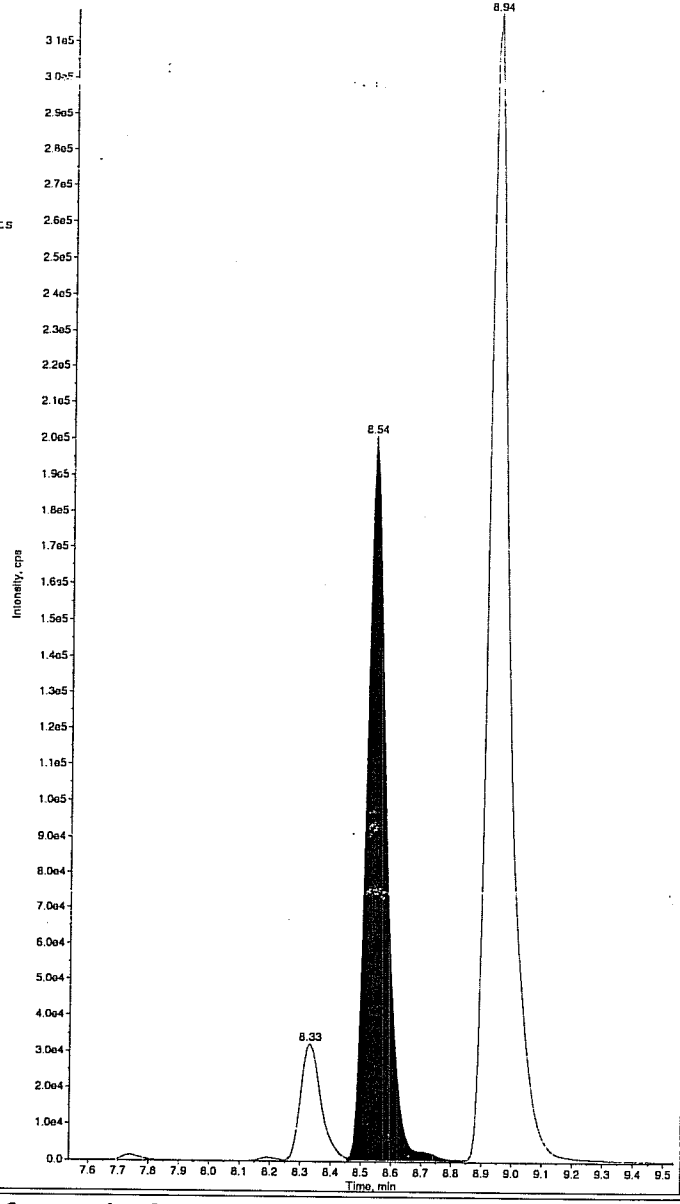
Sample Name: "1202262549" Sample ID: "1048168|2|LER" File: "EXS11240026.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 212. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:02:20 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 9.54 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.54 min
Area: 9.19e+005 counts
Height: 200755.747 cps
Start Time: 8.45 min
End Time: 8.85 min

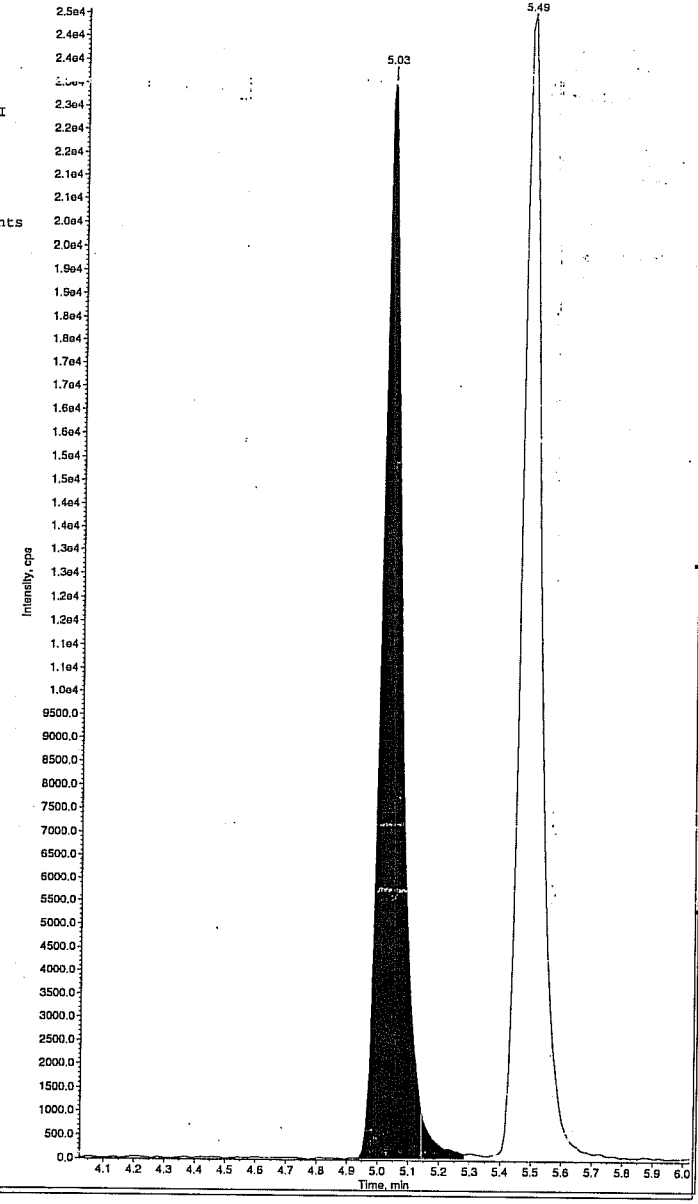


Sample Name: "1202262549" Sample ID: "1048168|2|LER" File: "EXS11240026.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 371. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:02:20 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.03 min
Area: 1.08e+005 counts
Height: 23352.556 cps
Start Time: 4.93 min
End Time: 5.28 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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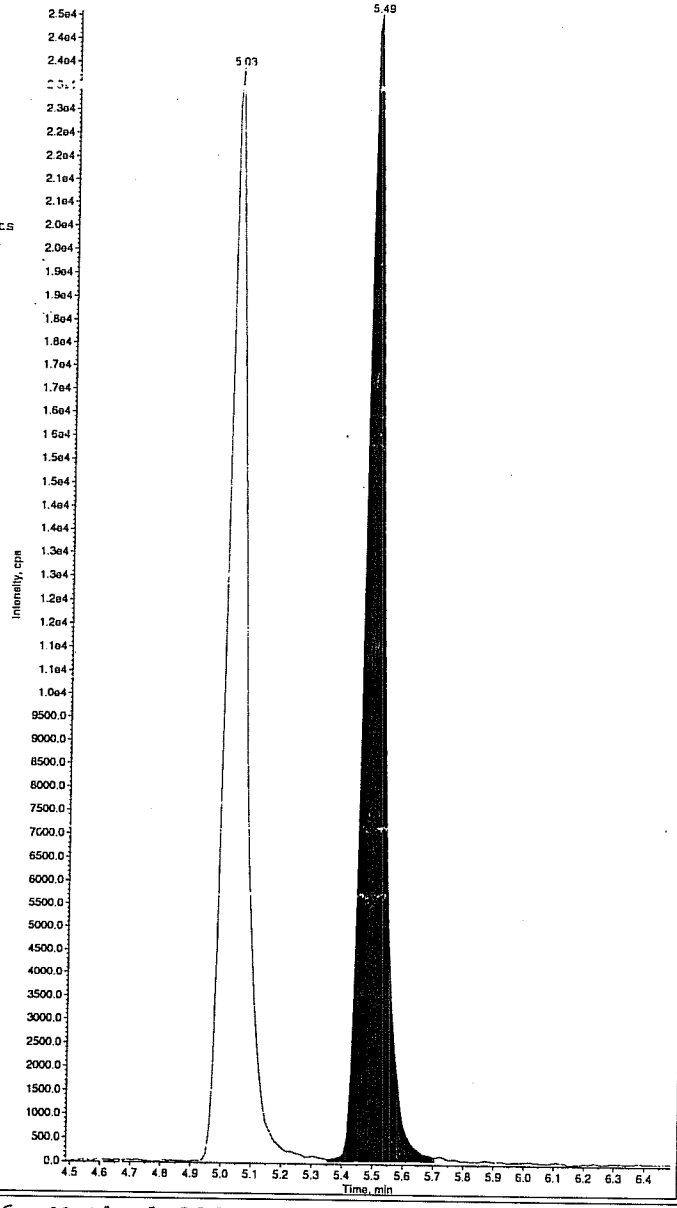
Sample Name: "1202262549" Sample ID: "1048168|2|LER" File: "EXS11240026.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 431. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:02:20 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 0.50 min
Peak-Split. Factor: 1
Report Largest Peak: No
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.49 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.49 min
Area: 1.13e+005 counts
Height: 24511.102 cps
Start Time: 5.35 min
End Time: 5.70 min

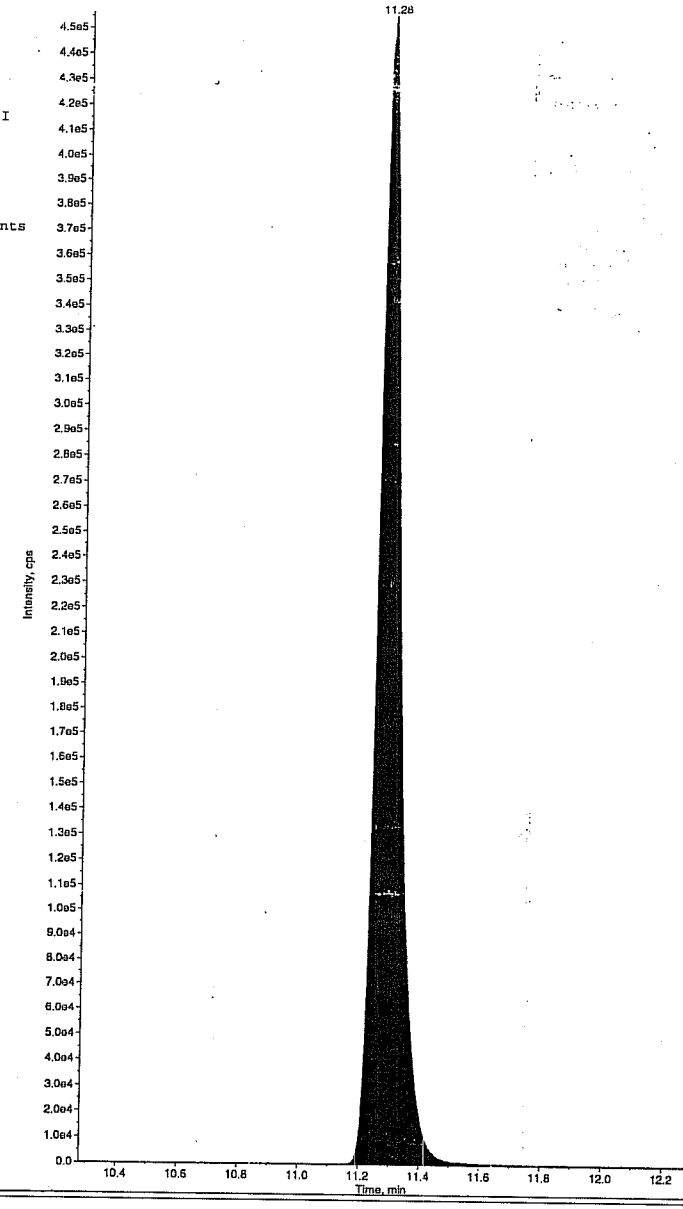


Sample Name: "1202262549" Sample ID: "1048168|2|LER" File: "EXS11240026.wiff"
Peak Name: "Iris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 208. ng/mL
Acq. Date: 11/24/2010
Acq. Time: 5:02:20 PM

Modified: No
Proc. Algorithm: IntelliQuan - MQII
Noise Percentage: 50
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: No
Min. Peak Height: 2.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 11.3 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.3 min
Area: 2.36e+006 counts
Height: 456019.909 cps
Start Time: 11.2 min
End Time: 11.7 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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MISCELLANEOUS DATA

Prep Logbook

Nitroaromatics and Nitramines by High Performance Liquid Chromatography (HPLC)

Batch ID: 1048167 **Verified by:** _____

Analyst: Sirena White

Method: SW846 Method 3535

Lab SOP: GL-OA-E-033 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Initial Volume (mL)	Ph 1	Final Volume (mL)	Prepped Factor (mL/mL)
1202262546 MB	15-NOV-2010 09:44:00	770	5	5	0.00649
1202262547 LCS	15-NOV-2010 09:44:00	770	5	5	0.00649
266877002	15-NOV-2010 09:44:00	770	7	5	0.00649
1202262548 MS (266877002)	15-NOV-2010 09:44:00	770	7	5	0.00649
1202262549 MSD (266877002)	15-NOV-2010 09:44:00	770	7	5	0.00649
266877004	15-NOV-2010 09:44:00	770	7	5	0.00649
266877006	15-NOV-2010 09:44:00	770	7	5	0.00649

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1202262547	8321 Explosives LCS	IXX101027-03	.05	mL
LCS	1202262547	8321 LANL Explosives Mix 10mg/L	UXX101008-02.02	.5	mL
MS	1202262548	8321 Explosives LCS	IXX101027-03	.05	mL
MS	1202262548	8321 LANL Explosives Mix 10mg/L	UXX101008-02.02	.5	mL
MSD	1202262549	8321 Explosives LCS	IXX101027-03	.05	mL
MSD	1202262549	8321 LANL Explosives Mix 10mg/L	UXX101008-02.02	.5	mL
SURR	All	3,4-Dinitrotoluene (8330 Surr.) 100ppm	IXP101111-02	.025	mL

Comments:

SPE Cartridge: 003430204A
Verified by: LER

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LC-MS/MS#1

Date: 11/19/10
Extr. Injection Volume: 50uL
Sequence Number: 111910expA
Initial Calibration Date: 11/19/10

Method: SW846 8321A-Modified
Int. Std.: UXX101111-01.1
Mobile Phase Lot#: 1487193, 1480102
Standard-Sample Reagent Lot#: 1489127, 1481901

Reviewed By: [illegible]
Date: 11/22/10
SOP: GL-OA-E-056 Rev.12
Alt Check Std. ID: WXX101119-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP1119001a	XIBLK01	MAP	11/19/10 14:44			1		USE	B
EXP1119002a	XIBLK01	MAP	11/19/10 15:13			1		USE	B
EXP1119003a	WXXICAL-01	MAP	11/19/10 15:43			1		USE	I
EXP1119004a	WXXICAL-02	MAP	11/19/10 16:12			1		USE	I
EXP1119005a	WXXICAL-03	MAP	11/19/10 16:42			1		USE	I
EXP1119006a	WXXICAL-04	MAP	11/19/10 17:11			1		USE	I
EXP1119007a	WXXICAL-05	MAP	11/19/10 17:41			1		USE	I
EXP1119008a	WXXICAL-06	MAP	11/19/10 18:10			1		USE	I
EXP1119009a	XIBLK02	MAP	11/19/10 18:40			1		USE	B
EXP1119010a	WXXICV	MAP	11/19/10 19:09			1		USE	C
EXP1119011a	XIBLK03	MAP	11/19/10 19:39			1		USE	B
EXP1119012a	WXXCRI	MAP	11/19/10 20:08			1		USE	C
EXP1119013a	1202257608	MAP	11/19/10 20:38	1046082	11-406	2	ARSL	USE	S
EXP1119014a	266502012	MAP	11/19/10 21:07	1046082	11-406	2	ARSL	USE	S
EXP1119015a	266496004	MAP	11/19/10 21:37	1046126	11-403	2	ARSL	USE	S
EXP1119016a	XIBLK04	MAP	11/19/10 22:06			1		USE	B
EXP1119017a	1202257814	MAP	11/19/10 22:36	1046148	11-396	2	ARSL	USE	S
EXP1119018a	1202257815	MAP	11/19/10 23:05	1046148	11-396	2	ARSL	USE	S
EXP1119019a	266488002	MAP	11/19/10 23:35	1046148	11-396	2	ARSL	USE	S
EXP1119020a	1202257816	MAP	11/20/10 0:04	1046148	11-396	2	ARSL	USE	S
EXP1119021a	1202257817	MAP	11/20/10 0:34	1046148	11-396	2	ARSL	USE	S
EXP1119022a	266488003	MAP	11/20/10 1:03	1046148	11-396	2	ARSL	USE	S
EXP1119023a	WXXCCV	MAP	11/20/10 1:33			1		USE	C
EXP1119024a	XIBLK05	MAP	11/20/10 2:02			1		USE	B
EXP1119025a	WXXCRI	MAP	11/20/10 2:32			1		USE	C
EXP1119026a	266488004	MAP	11/20/10 3:01	1046148	11-396	2	ARSL	USE	S
EXP1119027a	266488005	MAP	11/20/10 3:31	1046148	11-396	2	ARSL	USE	S
EXP1119028a	266488006	MAP	11/20/10 4:00	1046148	11-396	2	ARSL	USE	S
EXP1119029a	266488007	MAP	11/20/10 4:30	1046148	11-396	2	ARSL	USE	S

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EXP1119030a	266488008	MAP	11/20/10 4:59	1046148	11-396	2	ARSL	USE	S
EXP1119031a	266488009	MAP	11/20/10 5:29	1046148	11-396	2	ARSL	USE	S
EXP1119032a	266488010	MAP	11/20/10 5:58	1046148	11-396	2	ARSL	USE	S
EXP1119033a	266488011	MAP	11/20/10 6:28	1046148	11-396	2	ARSL	USE	S
EXP1119034a	266488012	MAP	11/20/10 6:57	1046148	11-396	2	ARSL	USE	S
EXP1119035a	WXXCCV	MAP	11/20/10 7:27			1		USE	C
EXP1119036a	XIBLK06	MAP	11/20/10 7:56			1		USE	B
EXP1119037a	WXXCRI	MAP	11/20/10 8:26			1		USE	C
EXP1119038a	1202257923	MAP	11/20/10 8:55	1046191	11-400	2	ARSL	USE	S
EXP1119039a	1202257924	MAP	11/20/10 9:25	1046191	11-400	2	ARSL	USE	S
EXP1119040a	266486002	MAP	11/20/10 9:54	1046191	11-400	2	ARSL	USE	S
EXP1119041a	1202257925	MAP	11/20/10 10:24	1046191	11-400	2	ARSL	USE	S
EXP1119042a	1202257926	MAP	11/20/10 10:53	1046191	11-400	2	ARSL	USE	S
EXP1119043a	266486003	MAP	11/20/10 11:23	1046191	11-400	2	ARSL	USE	S
EXP1119044a	266486004	MAP	11/20/10 11:52	1046191	11-400	2	ARSL	USE	S
EXP1119045a	266486005	MAP	11/20/10 12:22	1046191	11-400	2	ARSL	USE	S
EXP1119046a	266486006	MAP	11/20/10 12:51	1046191	11-400	2	ARSL	USE	S
EXP1119047a	266486007	MAP	11/20/10 13:20	1046191	11-400	2	ARSL	USE	S
EXP1119048a	WXXCCV	MAP	11/20/10 13:50			1		USE	C
EXP1119049a	XIBLK07	MAP	11/20/10 14:20			1		USE	B
EXP1119050a	WXXCRI	MAP	11/20/10 14:49			1		USE	C
EXP1119051a	266486008	MAP	11/20/10 15:19	1046191	11-400	2	ARSL	USE	S
EXP1119052a	266486009	MAP	11/20/10 15:48	1046191	11-400	2	ARSL	USE	S
EXP1119053a	266486010	MAP	11/20/10 16:17	1046191	11-400	2	ARSL	USE	S
EXP1119054a	266486011	MAP	11/20/10 16:47	1046191	11-400	2	ARSL	DUSE-RA	S
EXP1119055a	266486012	MAP	11/20/10 17:17	1046191	11-400	2	ARSL	USE	S
EXP1119056a	WXXCCV	MAP	11/20/10 17:46			1		USE	C
EXP1119057a	XIBLK08	MAP	11/20/10 18:16			1		USE	B
EXP1119058a	WXXCRI	MAP	11/20/10 18:45			1		USE	C
EXP1119059a	1202261587	MAP	11/20/10 19:15	1047797	11-445	2	ARSL	USE	S
EXP1119060a	1202261588	MAP	11/20/10 19:44	1047797	11-445	2	ARSL	USE	S
EXP1119061a	1202261589	MAP	11/20/10 20:14	1047797	11-445	2	ARSL	USE	S
EXP1119062a	266779009	MAP	11/20/10 20:43	1047797	11-445	2	ARSL	DUSE-RA	S
EXP1119063a	WXXCCV	MAP	11/20/10 21:13			1		USE	C
EXP1119064a	XIBLK09	MAP	11/20/10 21:42			1		USE	B
EXP1119065a	WXXCRI	MAP	11/20/10 22:12			1		USE	C
EXP1119066a	1202262546	MAP	11/20/10 22:41	1048168	11-463	2	ARSL	USE	S

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EXP1119067a	1202262547	MAP	11/20/10 23:11	1048168	11-463	2	ARSL	USE	S
EXP1119068a	266877002	MAP	11/20/10 23:40	1048168	11-463	2	ARSL	USE	S
EXP1119069a	1202262548	MAP	11/21/10 0:10	1048168	11-463	2	ARSL	USE	S
EXP1119070a	1202262549	MAP	11/21/10 0:39	1048168	11-463	2	ARSL	USE	S
EXP1119071a	266877004	MAP	11/21/10 1:09	1048168	11-463	2	ARSL	DUSE-RA	S
EXP1119072a	266877006	MAP	11/21/10 1:38	1048168	11-463	2	ARSL	DUSE-RA	S
EXP1119073a	WXXCCV	MAP	11/21/10 2:08			1		USE	C
EXP1119074a	XIBLK10	MAP	11/21/10 2:37			1		USE	B
EXP1119075a	WXXCRI	MAP	11/21/10 3:07			1		USE	C

GEL ORGANIC RUN LOG

INSTRUMENT ID: LC-MS/MS#1

Date: 11/23/10
Extr. Injection Volume: 50uL
Sequence Number: 112310expA
Initial Calibration Date: 11/23/10

Method: SW846 8321A-Modified
Int. Std.: UXX101111-01.1
Mobile Phase Lot#: 1487193, 1480102
Standard-Sample Reagent Lot#: 1489127, 1481901

Reviewed By: Hnm
Date: 11/29/10
SOP: GL-OA-E-056 Rev.12
Alt Check Std. ID: WXX101123-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP1123001a	XIBLK01	LER	11/23/10 15:00			1		USE	B
EXP1123002a	XIBLK01	LER	11/23/10 15:30			1		USE	B
EXP1123003a	WXXICAL-01	LER	11/23/10 15:59			1		USE	I
EXP1123004a	WXXICAL-02	LER	11/23/10 16:29			1		USE	I
EXP1123005a	WXXICAL-03	LER	11/23/10 16:58			1		USE	I
EXP1123006a	WXXICAL-04	LER	11/23/10 17:28			1		USE	I
EXP1123007a	WXXICAL-05	LER	11/23/10 17:57			1		USE	I
EXP1123008a	WXXICAL-06	LER	11/23/10 18:27			1		USE	I
EXP1123009a	XIBLK02	LER	11/23/10 18:56			1		USE	B
EXP1123010a	WXXICV	LER	11/23/10 19:26			1		USE	C
EXP1123011a	XIBLK03	LER	11/23/10 19:55			1		USE	B
EXP1123012a	WXXCRI	LER	11/23/10 20:25			1		USE	C
EXP1123013a	266486011	LER	11/23/10 20:54	1046191	11-400	2	ARSL	USE	S
EXP1123014a	266779009	LER	11/23/10 21:24	1047797	11-445	2	ARSL	USE	S
EXP1123015a	266877004	LER	11/23/10 21:53	1048168	11-463	2	ARSL	USE	S
EXP1123016a	266877006	LER	11/23/10 22:23	1048168	11-463	2	ARSL	USE	S
EXP1123017a	XIBLK04	LER	11/23/10 22:52			1		USE	B
EXP1123018a	WXXCCV	LER	11/23/10 23:21			1		USE	C
EXP1123019a	XIBLK05	LER	11/23/10 23:51			1		USE	B
EXP1123020a	WXXCRI	LER	11/24/10 0:20			1		USE	C
EXP1123021a	1202268334	LER	11/24/10 0:50	1050486	VARIOUS	2	ARSL	USE	S
EXP1123022a	1202268335	LER	11/24/10 1:20	1050486	VARIOUS	2	ARSL	USE	S
EXP1123023a	267229002	LER	11/24/10 1:49	1050486	11-545	2	ARSL	USE	S
EXP1123024a	1202268336	LER	11/24/10 2:19	1050486	11-545	2	ARSL	USE	S
EXP1123025a	1202268337	LER	11/24/10 2:48	1050486	11-545	2	ARSL	USE	S
EXP1123026a	267231002	LER	11/24/10 3:18	1050486	11-546	2	ARSL	USE	S
EXP1123027a	WXXCCV	LER	11/24/10 3:47			1		USE	C
EXP1123028a	XIBLK06	LER	11/24/10 4:17			1		USE	B
EXP1123029a	WXXCRI	LER	11/24/10 4:46			1		USE	C

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EXP1123030a	1202263756	LER	11/24/10 5:16	1048629	11-485	2	ARSL	USE	S
EXP1123031a	1202263757	LER	11/24/10 5:45	1048629	11-485	2	ARSL	USE	S
EXP1123032a	266969002	LER	11/24/10 6:15	1048629	11-485	2	ARSL	DUSE-RA	S
EXP1123033a	1202263758	LER	11/24/10 6:44	1048629	11-485	2	ARSL	USE	S
EXP1123034a	1202263759	LER	11/24/10 7:14	1048629	11-485	2	ARSL	DUSE-RA	S
EXP1123035a	266969003	LER	11/24/10 7:43	1048629	11-485	2	ARSL	USE	S
EXP1123036a	266969004	LER	11/24/10 8:12	1048629	11-485	2	ARSL	USE	S
EXP1123037a	266969005	LER	11/24/10 8:42	1048629	11-485	2	ARSL	USE	S
EXP1123038a	WXXCCV	LER	11/24/10 9:11			1		USE	C
EXP1123039a	XIBLK07	LER	11/24/10 9:41			1		USE	B
EXP1123040a	WXXCRI	LER	11/24/10 10:10			1		USE	C
EXP1123041a	266969006	LER	11/24/10 10:40	1048629	11-485	2	ARSL	USE	S
EXP1123042a	266969007	LER	11/24/10 11:09	1048629	11-485	2	ARSL	USE	S
EXP1123043a	266969008	LER	11/24/10 11:39	1048629	11-485	2	ARSL	DUSE-RA	S
EXP1123044a	266969009	LER	11/24/10 12:08	1048629	11-485	2	ARSL	DUSE-RA	S
EXP1123045a	266969010	LER	11/24/10 12:38	1048629	11-485	2	ARSL	USE	S
EXP1123046a	266969011	LER	11/24/10 13:07	1048629	11-485	2	ARSL	USE	S
EXP1123047a	266969012	LER	11/24/10 13:37	1048629	11-485	2	ARSL	USE	S
EXP1123048a	WXXCCV	LER	11/24/10 14:06			1		USE	C
EXP1123049a	XIBLK08	LER	11/24/10 14:36			1		USE	B
EXP1123050a	WXXCRI	LER	11/24/10 15:05			1		USE	C
EXP1123051a	1202263839	LER	11/24/10 15:35	1048658	11-488	2	ARSL	USE	S
EXP1123052a	1202263840	LER	11/24/10 16:04	1048658	11-488	2	ARSL	USE	S
EXP1123053a	266976002	LER	11/24/10 16:34	1048658	11-488	2	ARSL	USE	S
EXP1123054a	1202263841	LER	11/24/10 17:03	1048658	11-488	2	ARSL	USE	S
EXP1123055a	1202263842	LER	11/24/10 17:33	1048658	11-488	2	ARSL	USE	S
EXP1123056a	266976003	LER	11/24/10 18:02	1048658	11-488	2	ARSL	USE	S
EXP1123057a	266976004	LER	11/24/10 18:32	1048658	11-488	2	ARSL	USE	S
EXP1123058a	266976005	LER	11/24/10 19:01	1048658	11-488	2	ARSL	USE	S
EXP1123059a	266976006	LER	11/24/10 19:31	1048658	11-488	2	ARSL	USE	S
EXP1123060a	266976007	LER	11/24/10 20:00	1048658	11-488	2	ARSL	USE	S
EXP1123061a	WXXCCV	LER	11/24/10 20:30			1		USE	C
EXP1123062a	XIBLK09	LER	11/24/10 20:59			1		USE	B
EXP1123063a	WXXCRI	LER	11/24/10 21:29			1		USE	C
EXP1123064a	266976008	LER	11/24/10 21:58	1048658	11-488	2	ARSL	USE	S
EXP1123065a	266976009	LER	11/24/10 22:28	1048658	11-488	2	ARSL	USE	S
EXP1123066a	266976010	LER	11/24/10 22:57	1048658	11-488	2	ARSL	USE	S

EXP1123067a	266976011	LER	11/24/10 23:27	1048658	11-488	2	ARSL	USE	S
EXP1123068a	XIBLK10	LER	11/24/10 23:56			1		USE	B
EXP1123069a	1202266576	LER	11/25/10 0:26	1049778	11-539	2	ARSL	USE	S
EXP1123070a	1202266577	LER	11/25/10 0:55	1049778	11-539	2	ARSL	USE	S
EXP1123071a	267132006	LER	11/25/10 1:25	1049778	11-539	2	ARSL	USE	S
EXP1123072a	1202266578	LER	11/25/10 1:54	1049778	11-539	2	ARSL	USE	S
EXP1123073a	1202266579	LER	11/25/10 2:24	1049778	11-539	2	ARSL	USE	S
EXP1123074a	WXXCCV	LER	11/25/10 2:53			1		USE	C
EXP1123075a	XIBLK11	LER	11/25/10 3:23			1		USE	B
EXP1123076a	WXXCRI	LER	11/25/10 3:52			1		USE	C
EXP1123077a	1202267469	LER	11/25/10 4:22	1050122	11-562	2	ARSL	DUSE-RA	S
EXP1123078a	1202267470	LER	11/25/10 4:51	1050122	11-562	2	ARSL	DUSE-RA	S
EXP1123079a	1202267471	LER	11/25/10 5:21	1050122	11-562	2	ARSL	DUSE-RA	S
EXP1123080a	267222005	LER	11/25/10 5:50	1050122	11-562	2	ARSL	DUSE-RA	S
EXP1123081a	267222010	LER	11/25/10 6:20	1050122	11-562	2	ARSL	DUSE-RA	S
EXP1123082a	267222014	LER	11/25/10 6:49	1050122	11-562	2	ARSL	DUSE-RA	S
EXP1123083a	XIBLK12	LER	11/25/10 7:19			1		DUSE	B
EXP1123084a	266969002	LER	11/25/10 7:48	1048629	11-485	2	ARSL	DUSE-RA	S
EXP1123085a	1202263759	LER	11/25/10 8:18	1048629	11-485	2	ARSL	DUSE-RA	S
EXP1123086a	WXXCCV	LER	11/25/10 8:47			1		DUSE	C
EXP1123087a	XIBLK13	LER	11/25/10 9:17			1		DUSE	B
EXP1123088a	WXXCRI	LER	11/25/10 9:46			1		DUSE	C
EXP1123089a	266969008	LER	11/25/10 10:16	1048629	11-485	2	ARSL	DUSE-RA	S
EXP1123090a	266969009	LER	11/25/10 10:45	1048629	11-485	2	ARSL	DUSE-RA	S
EXP1123091a	WXXCCV	LER	11/25/10 11:15			1		DUSE	C
EXP1123092a	XIBLK14	LER	11/25/10 11:44			1		DUSE	B
EXP1123093a	WXXCRI	LER	11/25/10 12:14			1		DUSE	C

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LC-MS/MS#4

Date: 11/24/10
Extr. Injection Volume: 10uL
Sequence Number: 112410exs
Initial Calibration Date: 11/24/10

Method: 8321A-Modified
Int. Std.: N/A
Mobile Phase Lot#:1452354, 1478119
Standard-Samp Reagent Lot# :1481901, 1480766

Reviewed By: [illegible]
Date: 11/29/10
SOP: GL-OA-E-056 Rev.12
Alt Check Std. ID: WXX101124-26

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS11240001.wiff	XIBLK01	LER	11/24/2010 10:29			1		USE	B
EXS11240002.wiff	XIBLK01	LER	11/24/2010 10:45			1		USE	B
EXS11240003.wiff	WXXICAL-19	LER	11/24/2010 11:00			1		USE	I
EXS11240004.wiff	WXXICAL-20	LER	11/24/2010 11:16			1		USE	I
EXS11240005.wiff	WXXICAL-21	LER	11/24/2010 11:32			1		USE	I
EXS11240006.wiff	WXXICAL-22	LER	11/24/2010 11:48			1		USE	I
EXS11240007.wiff	WXXICAL-23	LER	11/24/2010 12:03			1		USE	I
EXS11240008.wiff	WXXICAL-24	LER	11/24/2010 12:19			1		USE	I
EXS11240009.wiff	WXXICAL-25	LER	11/24/2010 12:35			1		USE	I
EXS11240010.wiff	XIBLK02	LER	11/24/2010 12:50			1		USE	B
EXS11240011.wiff	WXXICV	LER	11/24/2010 13:06			1		USE	C
EXS11240012.wiff	XIBLK03	LER	11/24/2010 13:22			1		USE	B
EXS11240013.wiff	WXXCRI	LER	11/24/2010 13:38			1		USE	C
EXS11240014.wiff	266488008	LER	11/24/2010 13:53	1046148	11-396	2	ARSL	USE	S
EXS11240015.wiff	266488009	LER	11/24/2010 14:09	1046148	11-396	2	ARSL	USE	S
EXS11240016.wiff	266488010	LER	11/24/2010 14:25	1046148	11-396	2	ARSL	USE	S
EXS11240017.wiff	266488011	LER	11/24/2010 14:40	1046148	11-396	2	ARSL	USE	S
EXS11240018.wiff	266488012	LER	11/24/2010 14:56	1046148	11-396	2	ARSL	USE	S
EXS11240019.wiff	WXXCCV	LER	11/24/2010 15:12			1		USE	C
EXS11240020.wiff	XIBLK04	LER	11/24/2010 15:28			1		USE	B
EXS11240021.wiff	WXXCRI	LER	11/24/2010 15:43			1		USE	C
EXS11240022.wiff	1202262546	LER	11/24/2010 15:59	1048168	11-463	2	ARSL	USE	S
EXS11240023.wiff	1202262547	LER	11/24/2010 16:15	1048168	11-463	2	ARSL	USE	S
EXS11240024.wiff	266877002	LER	11/24/2010 16:30	1048168	11-463	2	ARSL	USE	S
EXS11240025.wiff	1202262548	LER	11/24/2010 16:46	1048168	11-463	2	ARSL	USE	S
EXS11240026.wiff	1202262549	LER	11/24/2010 17:02	1048168	11-463	2	ARSL	USE	S
EXS11240027.wiff	266877004	LER	11/24/2010 17:18	1048168	11-463	2	ARSL	USE	S
EXS11240028.wiff	266877006	LER	11/24/2010 17:33	1048168	11-463	2	ARSL	USE	S
EXS11240029.wiff	WXXCCV	LER	11/24/2010 17:49			1		USE	C

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EXS11240030.wiff	XIBLK05	LER	11/24/2010 18:05			1		USE	B
EXS11240031.wiff	WXXCRI	LER	11/24/2010 18:20			1		USE	C
EXS11240032.wiff	1202268334	LER	11/24/2010 18:36	1050486	VARIOUS	2	ARSL	USE	S
EXS11240033.wiff	1202268335	LER	11/24/2010 18:52	1050486	VARIOUS	2	ARSL	USE	S
EXS11240034.wiff	267229002	LER	11/24/2010 19:08	1050486	11-545	2	ARSL	USE	S
EXS11240035.wiff	1202268336	LER	11/24/2010 19:23	1050486	11-545	2	ARSL	USE	S
EXS11240036.wiff	1202268337	LER	11/24/2010 19:39	1050486	11-545	2	ARSL	USE	S
EXS11240037.wiff	267231002	LER	11/24/2010 19:55	1050486	11-546	2	ARSL	USE	S
EXS11240038.wiff	WXXCCV	LER	11/24/2010 20:10			1		USE	C
EXS11240039.wiff	XIBLK06	LER	11/24/2010 20:26			1		USE	B
EXS11240040.wiff	WXXCRI	LER	11/24/2010 20:42			1		USE	C
EXS11240041.wiff	1202263839	LER	11/24/2010 20:58	1048658	11-488	2	ARSL	USE	S
EXS11240042.wiff	1202263840	LER	11/24/2010 21:13	1048658	11-488	2	ARSL	USE	S
EXS11240043.wiff	266976002	LER	11/24/2010 21:29	1048658	11-488	2	ARSL	USE	S
EXS11240044.wiff	1202263841	LER	11/24/2010 21:45	1048658	11-488	2	ARSL	USE	S
EXS11240045.wiff	1202263842	LER	11/24/2010 22:00	1048658	11-488	2	ARSL	USE	S
EXS11240046.wiff	266976003	LER	11/24/2010 22:16	1048658	11-488	2	ARSL	USE	S
EXS11240047.wiff	266976004	LER	11/24/2010 22:32	1048658	11-488	2	ARSL	USE	S
EXS11240048.wiff	266976005	LER	11/24/2010 22:48	1048658	11-488	2	ARSL	USE	S
EXS11240049.wiff	266976006	LER	11/24/2010 23:03	1048658	11-488	2	ARSL	USE	S
EXS11240050.wiff	266976007	LER	11/24/2010 23:19	1048658	11-488	2	ARSL	USE	S
EXS11240051.wiff	WXXCCV	LER	11/24/2010 23:35			1		USE	C
EXS11240052.wiff	XIBLK07	LER	11/24/2010 23:50			1		USE	B
EXS11240053.wiff	WXXCRI	LER	11/25/2010 0:06			1		USE	C
EXS11240054.wiff	266976008	LER	11/25/2010 0:22	1048658	11-488	2	ARSL	USE	S
EXS11240055.wiff	266976009	LER	11/25/2010 0:37	1048658	11-488	2	ARSL	USE	S
EXS11240056.wiff	266976010	LER	11/25/2010 0:53	1048658	11-488	2	ARSL	USE	S
EXS11240057.wiff	266976011	LER	11/25/2010 1:09	1048658	11-488	2	ARSL	USE	S
EXS11240058.wiff	XIBLK08	LER	11/25/2010 1:25			1		USE	B
EXS11240059.wiff	1202263756	LER	11/25/2010 1:40	1048629	11-485	2	ARSL	USE	S
EXS11240060.wiff	1202263757	LER	11/25/2010 1:56	1048629	11-485	2	ARSL	USE	S
EXS11240061.wiff	266969002	LER	11/25/2010 2:12	1048629	11-485	2	ARSL	USE	S
EXS11240062.wiff	1202263758	LER	11/25/2010 2:27	1048629	11-485	2	ARSL	USE	S
EXS11240063.wiff	1202263759	LER	11/25/2010 2:43	1048629	11-485	2	ARSL	USE	S
EXS11240064.wiff	WXXCCV	LER	11/25/2010 2:59			1		USE	C
EXS11240065.wiff	XIBLK09	LER	11/25/2010 3:15			1		USE	B
EXS11240066.wiff	WXXCRI	LER	11/25/2010 3:30			1		USE	C

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EXS11240067.wiff	266969003	LER	11/25/2010 3:46	1048629	11-485	2	ARSL	USE	S
EXS11240068.wiff	266969004	LER	11/25/2010 4:02	1048629	11-485	2	ARSL	USE	S
EXS11240069.wiff	266969005	LER	11/25/2010 4:17	1048629	11-485	2	ARSL	USE	S
EXS11240070.wiff	266969006	LER	11/25/2010 4:33	1048629	11-485	2	ARSL	USE	S
EXS11240071.wiff	266969007	LER	11/25/2010 4:49	1048629	11-485	2	ARSL	USE	S
EXS11240072.wiff	266969008	LER	11/25/2010 5:04	1048629	11-485	2	ARSL	USE	S
EXS11240073.wiff	266969009	LER	11/25/2010 5:20	1048629	11-485	2	ARSL	USE	S
EXS11240074.wiff	266969010	LER	11/25/2010 5:36	1048629	11-485	2	ARSL	USE	S
EXS11240075.wiff	266969011	LER	11/25/2010 5:51	1048629	11-485	2	ARSL	USE	S
EXS11240076.wiff	266969012	LER	11/25/2010 6:07	1048629	11-485	2	ARSL	USE	S
EXS11240077.wiff	WXXCCV	LER	11/25/2010 6:23			1		USE	C
EXS11240078.wiff	XIBLK10	LER	11/25/2010 6:39			1		USE	B
EXS11240079.wiff	WXXCRI	LER	11/25/2010 6:54			1		USE	C
EXS11240080.wiff	UXX101008-02.03	LER	11/25/2010 7:10	LCSSCREEN	SOLID	2	O2SI	USE	S

GC Semivolatile PCB Analysis

PCB Case Narrative
ARS International (ARSL)
SDG 11-463

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3510C
Analytical Batch Number:	1048232
Prep Batch Number:	1048231

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202262699	Method Blank (MB)
1202262700	Laboratory Control Sample (LCS)
1202262701	266779001(CASA-11-1332) Matrix Spike (MS)
1202262702	266779001(CASA-11-1332) Matrix Spike Duplicate (MSD)

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

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 15.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear

equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements
All calibration verification standards (CVS, ICV, or CCV) requirements have been met for this SDG. All analytes were within the established retention time windows for this method.

One of the five quantified peaks did not meet the acceptance criteria in Aroclor-1260 standard analyzed for this SDG; however the average concentration of the five peaks met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
An ARSL sample of similar matrix associated with another SDG (#11-445) was selected for the matrix spike and matrix spike duplicate analysis. A Form III and QC raw data are included in the package summarizing the results.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All reported analyte detections in client and quality control samples were within the established retention time windows. Reported analyte concentrations were confirmed on dissimilar columns.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation

Data exception report (DER) is for documentation of any procedural anomalies that may deviate from referenced SOP or contractual document. A DER was not required for this SDG.

Manual Integration

Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments

The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD2A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide)
ECD2A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticide II)

Certification Statement

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

Review Validation

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

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

Reviewer: Jimmi Cao Date: 12/9/10

Roadmap for ARSL 11-463 PCB

This roadmap was analyzed by jen01212 on 11-17-2010, 10:10.
This roadmap was reviewed by jcb on 11-17-2010, 15:18.
This roadmap was packaged by yml on 12-07-2010, 15:53.
This roadmap was validated by jim01140 on 12-09-2010, 09:31.
This roadmap was validated by yml on 12-09-2010, 09:43.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd2a.i/111610.b/032f3201.d	266877001	sample	16-NOV-2010	13:49	11-463.sub	Buckman1-11-1944	1.00000	1048232	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd2a.i/111610.b/033f3301.d	266877003	sample	16-NOV-2010	14:00	11-463.sub	Buckman06-11-1970	1.00000	1048232	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd2a.i/111610.b/034f3401.d	266877005	sample	16-NOV-2010	14:11	11-463.sub	Buckman08-11-2042	1.00000	1048232	UPLOAD BOTH, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd2a.i/111610.b/032b3201.d	266877001	sample	16-NOV-2010	13:49	11-463.sub	Buckman1-11-1944	1.00000	1048232	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd2a.i/111610.b/033b3301.d	266877003	sample	16-NOV-2010	14:00	11-463.sub	Buckman06-11-1970	1.00000	1048232	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd2a.i/111610.b/034b3401.d	266877005	sample	16-NOV-2010	14:11	11-463.sub	Buckman08-11-2042	1.00000	1048232	UPLOAD BOTH, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
■	N	/chem/ecd2a.i/111610.b/020f2001.d	1202262699	mb	16-NOV-2010	11:34	11-445.sub	PBLK01	1.00000	1048232	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd2a.i/111610.b/020f2001-1.d	1202262699	mb	16-NOV-2010	11:34	11-463.sub	PBLK01	1.00000	1048232	
■	N	/chem/ecd2a.i/111610.b/020f2001-2.d	1202262699	mb	16-NOV-2010	11:34	11-472.sub	PBLK01	1.00000	1048232	
■	N	/chem/ecd2a.i/111610.b/021f2101.d	1202262700	lcs	16-NOV-2010	11:45	11-445.sub	PBLK01LCS	1.00000	1048232	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd2a.i/111610.b/021f2101-1.d	1202262700	lcs	16-NOV-2010	11:45	11-463.sub	PBLK01LCS	1.00000	1048232	
■	N	/chem/ecd2a.i/111610.b/021f2101-2.d	1202262700	lcs	16-NOV-2010	11:45	11-472.sub	PBLK01LCS	1.00000	1048232	

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
■	N	/chem/ecd2a.i/111610.b/020b2001.d	1202262699	mb	16-NOV-2010	11:34	11-445.sub	PBLK01	1.00000	1048232	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd2a.i/111610.b/020b2001-1.d	1202262699	mb	16-NOV-2010	11:34	11-463.sub	PBLK01	1.00000	1048232	
■	N	/chem/ecd2a.i/111610.b/020b2001-2.d	1202262699	mb	16-NOV-2010	11:34	11-472.sub	PBLK01	1.00000	1048232	
■	N	/chem/ecd2a.i/111610.b/021b2101.d	1202262700	lcs	16-NOV-2010	11:45	11-445.sub	PBLK01LCS	1.00000	1048232	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd2a.i/111610.b/021b2101-1.d	1202262700	lcs	16-NOV-2010	11:45	11-463.sub	PBLK01LCS	1.00000	1048232	
■	N	/chem/ecd2a.i/111610.b/021b2101-2.d	1202262700	lcs	16-NOV-2010	11:45	11-472.sub	PBLK01LCS	1.00000	1048232	

■	N	/chem/ecd2a.i/111610.b/023b2301.d	1202262701	ms	16-NOV-2010	12:08	11-445.sub	CASA-11-1332MS	1.00000	1048232	UPLOAD BOTH, USE HIGHER
■	N	/chem/ecd2a.i/111610.b/024b2401.d	1202262702	msd	16-NOV-2010	12:19	11-445.sub	CASA-11-1332MSD	1.00000	1048232	UPLOAD BOTH, USE HIGHER

Sample Data Summary

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**11−463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877003**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman06−11−1970**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL−OA−E−040**
Batch ID:	**1048232**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**11/16/2010 14:00**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/15/2010 14:38**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**033f3301.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	033b3301.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674−11−2	Aroclor−1016	U	0.100	ug/L	0.0333	0.100	1
11104−28−2	Aroclor−1221	U	0.100	ug/L	0.0333	0.100	1
11141−16−5	Aroclor−1232	U	0.100	ug/L	0.0333	0.100	1
53469−21−9	Aroclor−1242	U	0.100	ug/L	0.0333	0.100	1
12672−29−6	Aroclor−1248	U	0.100	ug/L	0.0333	0.100	1
11097−69−1	Aroclor−1254	U	0.100	ug/L	0.0333	0.100	1
11096−82−5	Aroclor−1260	U	0.100	ug/L	0.0333	0.100	1
37324−23−5	Aroclor−1262	U	0.100	ug/L	0.0333	0.100	1

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
4cmx	0.150	0.200	ug/L	74.8	(30%−111%)
Decachlorobiphenyl	0.161	0.200	ug/L	80.5	(30%−124%)

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**11−463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877005**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08−11−2042**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL−OA−E−040**
Batch ID:	**1048232**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**11/16/2010 14:11**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/15/2010 14:38**	**Aliquot:**	**980 mL**	**Final Volume:**	**1 mL**
Data File:	**034f3401.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	034b3401.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674−11−2	Aroclor−1016	U	0.102	ug/L	0.034	0.102	1
11104−28−2	Aroclor−1221	U	0.102	ug/L	0.034	0.102	1
11141−16−5	Aroclor−1232	U	0.102	ug/L	0.034	0.102	1
53469−21−9	Aroclor−1242	U	0.102	ug/L	0.034	0.102	1
12672−29−6	Aroclor−1248	U	0.102	ug/L	0.034	0.102	1
11097−69−1	Aroclor−1254	U	0.102	ug/L	0.034	0.102	1
11096−82−5	Aroclor−1260	U	0.102	ug/L	0.034	0.102	1
37324−23−5	Aroclor−1262	U	0.102	ug/L	0.034	0.102	1

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
4cmx	0.144	0.204	ug/L	70.7	(30%−111%)
Decachlorobiphenyl	0.140	0.204	ug/L	68.7	(30%−124%)

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**11−463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877001**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman1−11−1944**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL−OA−E−040**
Batch ID:	**1048232**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**11/16/2010 13:49**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/15/2010 14:38**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**032f3201.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	032b3201.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674−11−2	Aroclor−1016	U	0.100	ug/L	0.0333	0.100	1
11104−28−2	Aroclor−1221	U	0.100	ug/L	0.0333	0.100	1
11141−16−5	Aroclor−1232	U	0.100	ug/L	0.0333	0.100	1
53469−21−9	Aroclor−1242	U	0.100	ug/L	0.0333	0.100	1
12672−29−6	Aroclor−1248	U	0.100	ug/L	0.0333	0.100	1
11097−69−1	Aroclor−1254	U	0.100	ug/L	0.0333	0.100	1
11096−82−5	Aroclor−1260	U	0.100	ug/L	0.0333	0.100	1
37324−23−5	Aroclor−1262	U	0.100	ug/L	0.0333	0.100	1

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
4cmx	0.126	0.200	ug/L	63.1	(30%−111%)
Decachlorobiphenyl	0.100	0.200	ug/L	50.1	(30%−124%)

QC Summary

PCB

Surrogate Recovery Report

SDG Number: 11-463

Matrix Type: LIQUID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1202262699	MB for batch 1048231	71	69	77	73
1202262700	LCS for batch 1048231	69	65	71	67
1202262701	CASA-11-1332MS	52	51	67	63
1202262702	CASA-11-1332MSD	60	59	68	65
266877001	Buckman1-11-1944	63	58	50	45
266877003	Buckman06-11-1970	75	70	80	75
266877005	Buckman08-11-2042	71	65	69	62

Surrogate		Acceptance Limits
4CMX	= 4cmx	(30%-111%)
DCB	= Decachlorobiphenyl	(30%-124%)

* Recovery outside Acceptance Limits
\# Column to be used to flag recovery values
D Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: **11−463**
Sample Type: **Laboratory Control Sample**
Client ID: **LCS for batch 1048231**
Matrix: **WATER**
Lab Sample ID: **1202262700**
Instrument: **ECD2A.I**
Analysis Date: **11/16/2010 11:45**
Dilution: 1
Analyst: **JAOC**
Prep Batch ID: **1048231**
Inj. Vol: **1 uL**
Batch ID: **1048232**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
12674−11−2	LCS	Aroclor−1016	1.00	0.0	0.760	76	42−94
11096−82−5	LCS	Aroclor−1260	1.00	0.0	0.860	86	50−108

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: **11−463**
Client ID: **CASA−11−1332MS**
Lab Sample ID: **1202262701**
Instrument: **ECD2A.I**
Analyst: **JAOC**
Inj. Vol: **1 uL**

Sample Type: **Matrix Spike**
Matrix: **WS**
Analysis Date: **11/16/2010 12:08**
Prep Batch ID: **1048231**
Batch ID: **1048232**
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
12674−11−2	MS	Aroclor−1016	1.00	0.00	U	0.650	65	20−111
11096−82−5	MS	Aroclor−1260	1.00	0.00	U	0.740	74	28−117

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: **11−463**
Client ID: **CASA−11−1332MSD**
Lab Sample ID: **1202262702**
Instrument: **ECD2A.I**
Analyst: **JAOC**
Inj. Vol: **1 uL**

Sample Type: **Matrix Spike Duplicate**
Matrix: **WS**
Analysis Date: **11/16/2010 12:19**
Prep Batch ID: **1048231**
Batch ID: **1048232**
Dilution: 1

CAS No	Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674−11−2	MSD Aroclor−1016	1.00	0.00	U	0.730	73	20−111	12	0−20
11096−82−5	MSD Aroclor−1260	1.00	0.00	U	0.760	76	28−117	3	0−20

Method Blank Summary

SDG Number:	**11-463**	**Client:**	**ARSL001**	**Matrix:**	**WATER**
Client ID:	**MB for batch 1048231**	**Instrument ID:**	**ECD2A.I_2** **ECD2A.I_1**	**Data File:**	**020b2001-1.d** **020f2001-1.d**
Lab Sample ID:	**1202262699**				
Column:	**CLP2** **CLP1**	**Prep Date:**	**11/15/2010 14:38**	**Analyzed:**	**11/16/10 11:34**
		Level:	**LOW**		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 1048231	**1202262700**	**021f2101-1.d** **021b2101-1.d**	**11/16/10**	**1145**
02 CASA-11-1332MS	**1202262701**	**023f2301.d** **023b2301.d**	**11/16/10**	**1208**
03 CASA-11-1332MSD	**1202262702**	**024f2401.d** **024b2401.d**	**11/16/10**	**1219**
04 Buckman1-11-1944	**266877001**	**032f3201.d** **032b3201.d**	**11/16/10**	**1349**
05 Buckman06-11-1970	**266877003**	**033f3301.d** **033b3301.d**	**11/16/10**	**1400**
06 Buckman08-11-2042	**266877005**	**034f3401.d** **034b3401.d**	**11/16/10**	**1411**

Sample Data

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**11−463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877003**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman06−11−1970**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL−OA−E−040**
Batch ID:	**1048232**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**11/16/2010 14:00**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/15/2010 14:38**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**033f3301.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	033b3301.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674−11−2	Aroclor−1016	U	0.100	ug/L	0.0333	0.100	1
11104−28−2	Aroclor−1221	U	0.100	ug/L	0.0333	0.100	1
11141−16−5	Aroclor−1232	U	0.100	ug/L	0.0333	0.100	1
53469−21−9	Aroclor−1242	U	0.100	ug/L	0.0333	0.100	1
12672−29−6	Aroclor−1248	U	0.100	ug/L	0.0333	0.100	1
11097−69−1	Aroclor−1254	U	0.100	ug/L	0.0333	0.100	1
11096−82−5	Aroclor−1260	U	0.100	ug/L	0.0333	0.100	1
37324−23−5	Aroclor−1262	U	0.100	ug/L	0.0333	0.100	1

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
4cmx	0.150	0.200	ug/L	74.8	(30%−111%)
Decachlorobiphenyl	0.161	0.200	ug/L	80.5	(30%−124%)

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/033f3301.d
Lab Smp Id: 266877003 Client Smp ID: Buckman06-11-1970
Inj Date : 16-NOV-2010 14:00
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |266877003|1|
Misc Info : |ECD82P_1L|1048232|SVA|ARSL|WATER|Buckman06-11-1970|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 33
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-463.sub
Target Version: 3.50 Sample Matrix: Water

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.896	1.893	0.003	7051299	149.555	0.15	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.778	5.778	0.000	5913056	160.979	0.16	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/111610.b/033f3301.d

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Date : 16-NOV-2010 14:00

Client ID: Buckman06-11-1970

Instrument: ecd2a.i

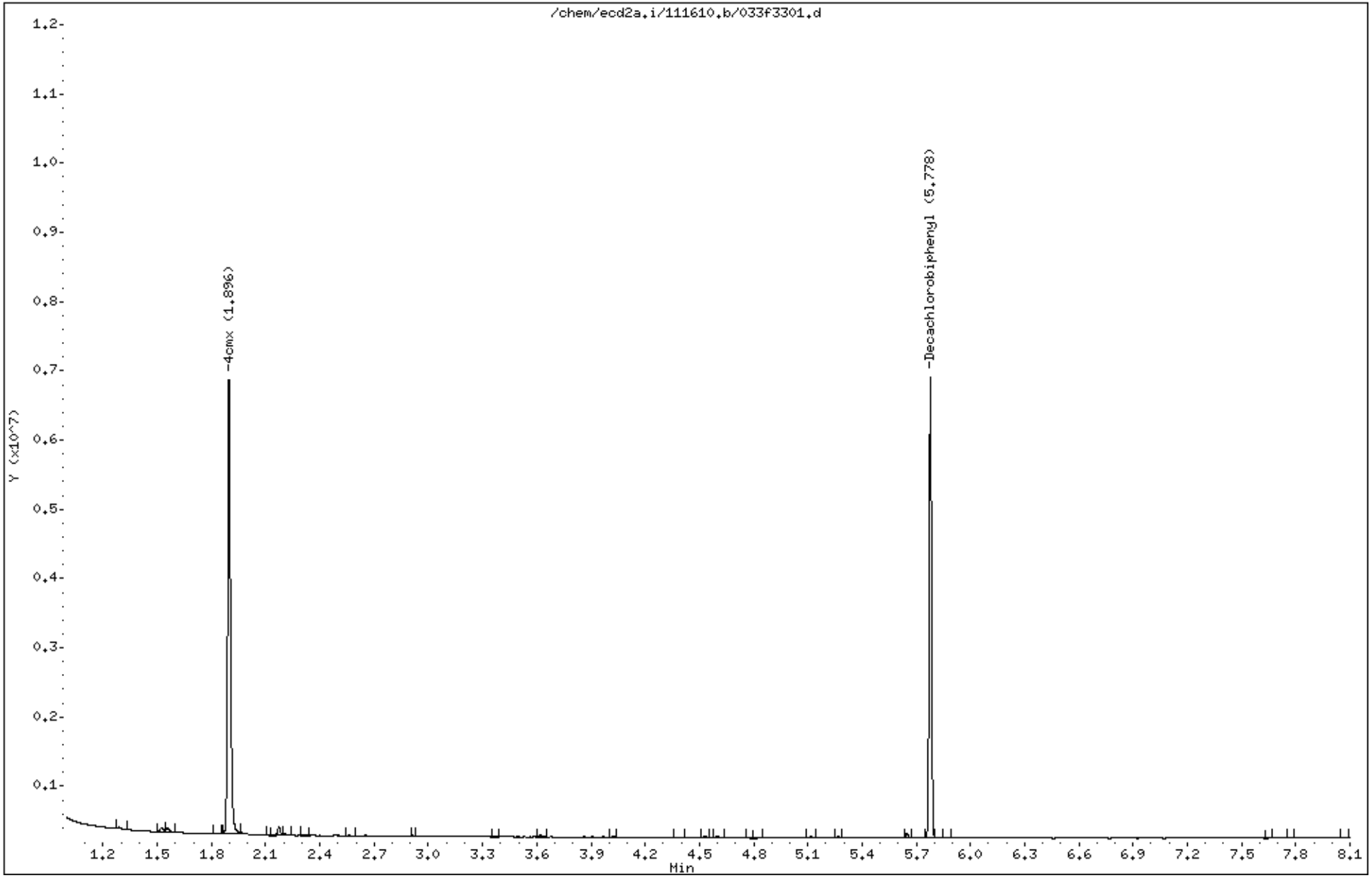
Sample Info: |2668770031|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/033b3301.d
Lab Smp Id: 266877003 Client Smp ID: Buckman06-11-1970
Inj Date : 16-NOV-2010 14:00
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |266877003|1|
Misc Info : |ECD82P_1L|1048232|SVA|ARSL|WATER|Buckman06-11-1970|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 33
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-463.sub
Target Version: 3.50 Sample Matrix: Water

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

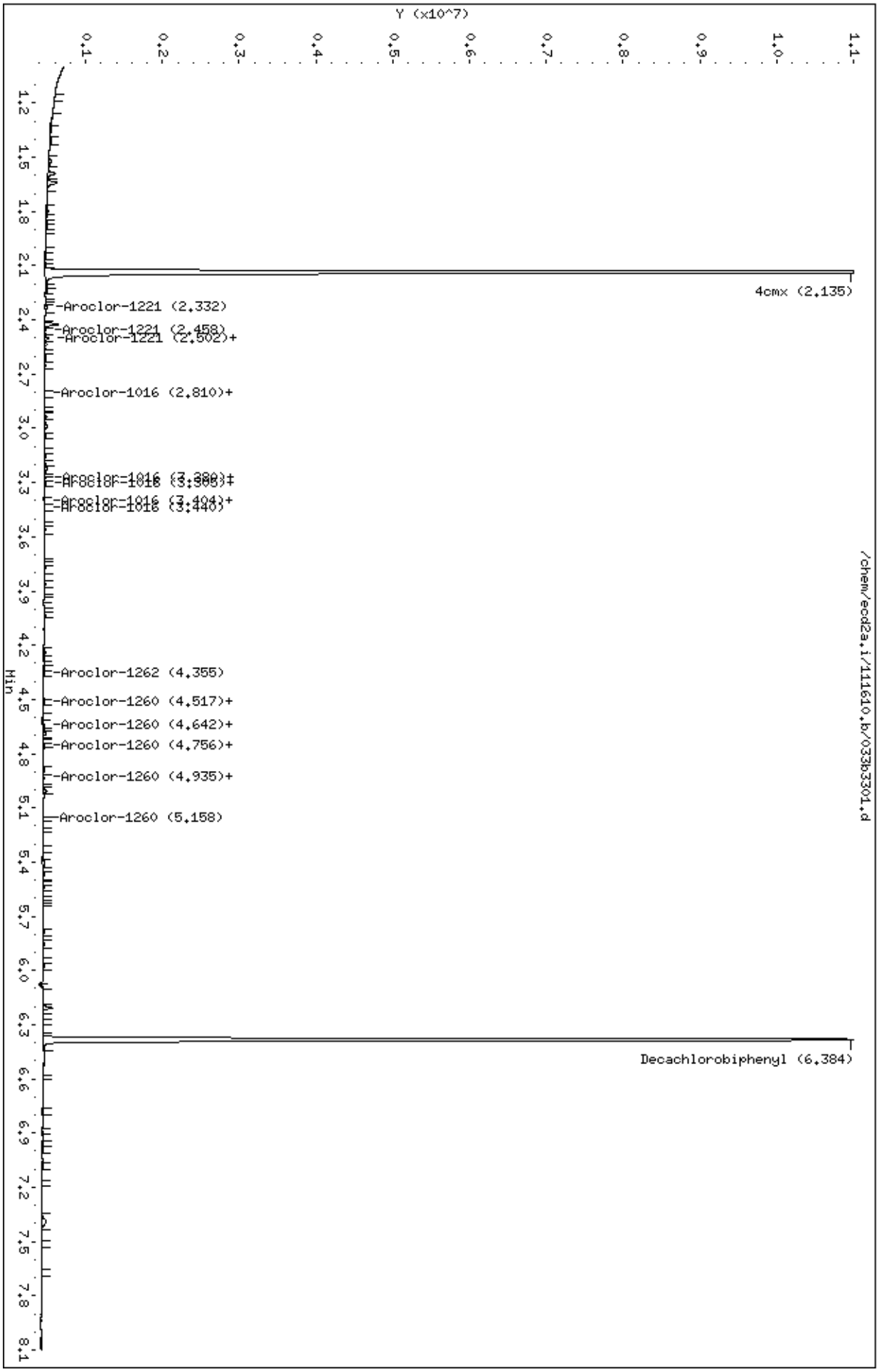
Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.135	2.132	0.003	13905243	139.729	0.14	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.384	6.383	0.001	11309041	150.861	0.15	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/111610.b/033b3301.d
Date : 16-NOV-2010 14:00
Client ID: Buckman06-11-1970
Sample Info: 1266877003111
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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PCB
Certificate of Analysis
Sample Summary

SDG Number:	**11−463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877005**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman08−11−2042**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL−OA−E−040**
Batch ID:	**1048232**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**11/16/2010 14:11**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/15/2010 14:38**	**Aliquot:**	**980 mL**	**Final Volume:**	**1 mL**
Data File:	**034f3401.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	034b3401.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674−11−2	Aroclor−1016	U	0.102	ug/L	0.034	0.102	1
11104−28−2	Aroclor−1221	U	0.102	ug/L	0.034	0.102	1
11141−16−5	Aroclor−1232	U	0.102	ug/L	0.034	0.102	1
53469−21−9	Aroclor−1242	U	0.102	ug/L	0.034	0.102	1
12672−29−6	Aroclor−1248	U	0.102	ug/L	0.034	0.102	1
11097−69−1	Aroclor−1254	U	0.102	ug/L	0.034	0.102	1
11096−82−5	Aroclor−1260	U	0.102	ug/L	0.034	0.102	1
37324−23−5	Aroclor−1262	U	0.102	ug/L	0.034	0.102	1

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
4cmx	0.144	0.204	ug/L	70.7	(30%−111%)
Decachlorobiphenyl	0.140	0.204	ug/L	68.7	(30%−124%)

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/034f3401.d
Lab Smp Id: 266877005 Client Smp ID: Buckman08-11-2042
Inj Date : 16-NOV-2010 14:11
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |266877005|1|
Misc Info : |ECD82P_1L|1048232|SVA|ARSL|WATER|Buckman08-11-2042|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 34
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-463.sub
Target Version: 3.50 Sample Matrix: Water

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (uL)
Vo	980.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.897	1.893	0.004	6665121	141.364	0.14	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.778	5.778	0.000	5044280	137.327	0.14	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/111610.b/034f3401.d

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Date : 16-NOV-2010 14:11

Client ID: Buckman08-11-2042

Instrument: ecd2a.i

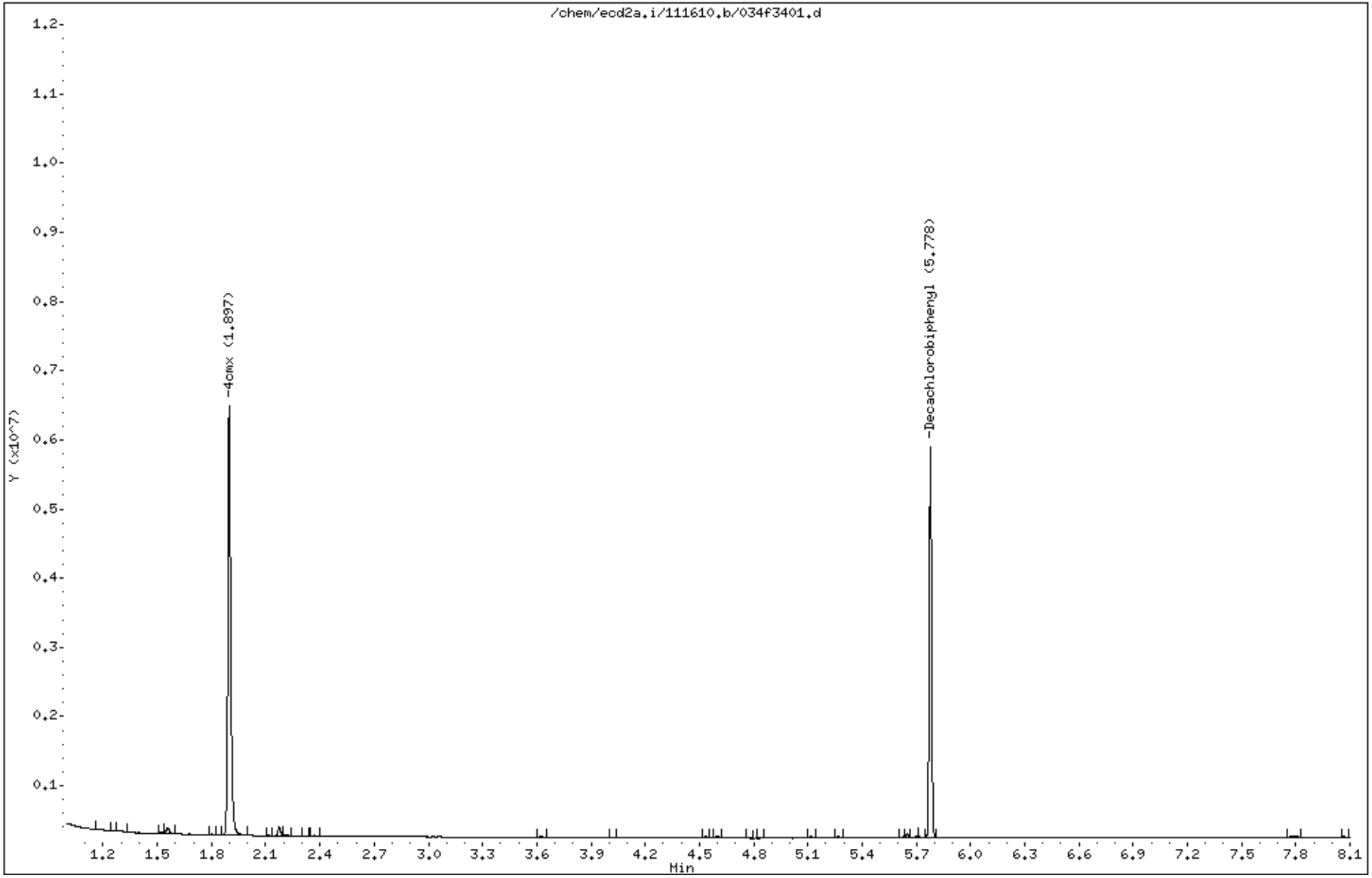
Sample Info: |2668770051|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/034b3401.d
Lab Smp Id: 266877005 Client Smp ID: Buckman08-11-2042
Inj Date : 16-NOV-2010 14:11
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |266877005|1|
Misc Info : |ECD82P_1L|1048232|SVA|ARSL|WATER|Buckman08-11-2042|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 34
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-463.sub
Target Version: 3.50 Sample Matrix: Water

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	980.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.135	2.132	0.003	13033462	130.969	0.13	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.384	6.383	0.001	9363304	124.905	0.13	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/111610.b/034b3401.d

Date : 16-NOV-2010 14:11

Client ID: Buckman08-11-2042

Sample Info: |2668770051|1|

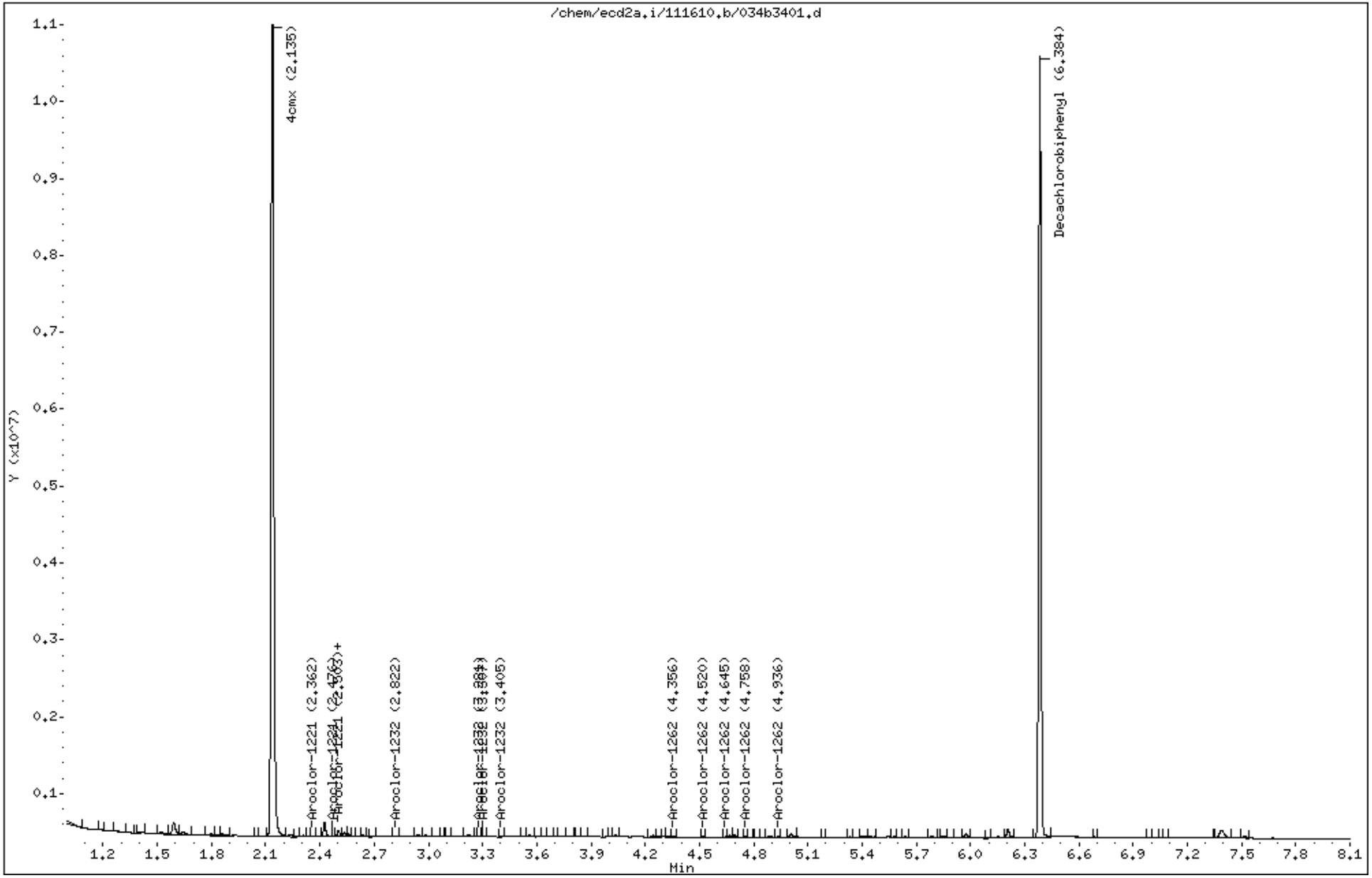
Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



PCB
Certificate of Analysis
Sample Summary

SDG Number:	**11−463**	**Date Collected:**	**11/10/2010 12:00**	**Matrix:**	**WG**
Lab Sample ID:	**266877001**	**Date Received:**	**11/12/2010 08:50**		
		Client:	**ARSL001**	**Project:**	**ESHL00210**
Client ID:	**Buckman1−11−1944**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL−OA−E−040**
Batch ID:	**1048232**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**11/16/2010 13:49**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/15/2010 14:38**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**032f3201.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	032b3201.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674−11−2	Aroclor−1016	U	0.100	ug/L	0.0333	0.100	1
11104−28−2	Aroclor−1221	U	0.100	ug/L	0.0333	0.100	1
11141−16−5	Aroclor−1232	U	0.100	ug/L	0.0333	0.100	1
53469−21−9	Aroclor−1242	U	0.100	ug/L	0.0333	0.100	1
12672−29−6	Aroclor−1248	U	0.100	ug/L	0.0333	0.100	1
11097−69−1	Aroclor−1254	U	0.100	ug/L	0.0333	0.100	1
11096−82−5	Aroclor−1260	U	0.100	ug/L	0.0333	0.100	1
37324−23−5	Aroclor−1262	U	0.100	ug/L	0.0333	0.100	1

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
4cmx	0.126	0.200	ug/L	63.1	(30%−111%)
Decachlorobiphenyl	0.100	0.200	ug/L	50.1	(30%−124%)

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/032f3201.d
Lab Smp Id: 266877001 Client Smp ID: Buckman1-11-1944
Inj Date : 16-NOV-2010 13:49
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |266877001|1|
Misc Info : |ECD82P_1L|1048232|SVA|ARSL|WATER|Buckman1-11-1944|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 32
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-463.sub
Target Version: 3.50 Sample Matrix: Water

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.896	1.893	0.003	5949696	126.190	0.13	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.778	5.778	0.000	3677563	100.119	0.10	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/111610.b/032f3201.d

Page 1

Date : 16-NOV-2010 13:49

Client ID: Buckman1-11-1944

Instrument: ecd2a.i

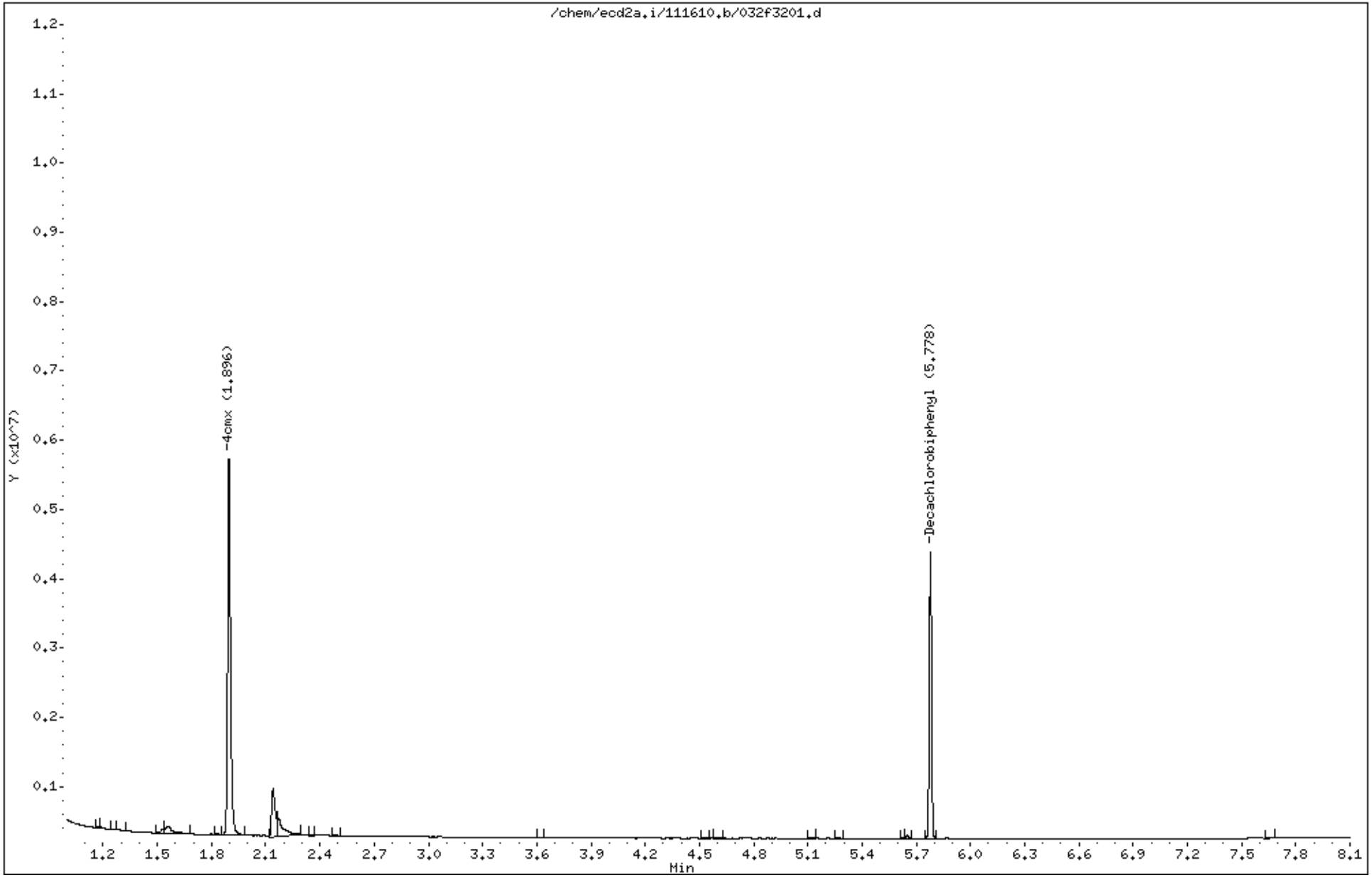
Sample Info: |2668770011|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/032b3201.d
Lab Smp Id: 266877001 Client Smp ID: Buckman1-11-1944
Inj Date : 16-NOV-2010 13:49
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |266877001|1|
Misc Info : |ECD82P_1L|1048232|SVA|ARSL|WATER|Buckman1-11-1944|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 32
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-463.sub
Target Version: 3.50 Sample Matrix: Water

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.135	2.132	0.003	11580730	116.371	0.12	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	6792524	90.6112	0.091	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/111610.b/032b3201.d

Date : 16-NOV-2010 13:49

Client ID: Buckman1-11-1944

Sample Info: |2668770011|1|

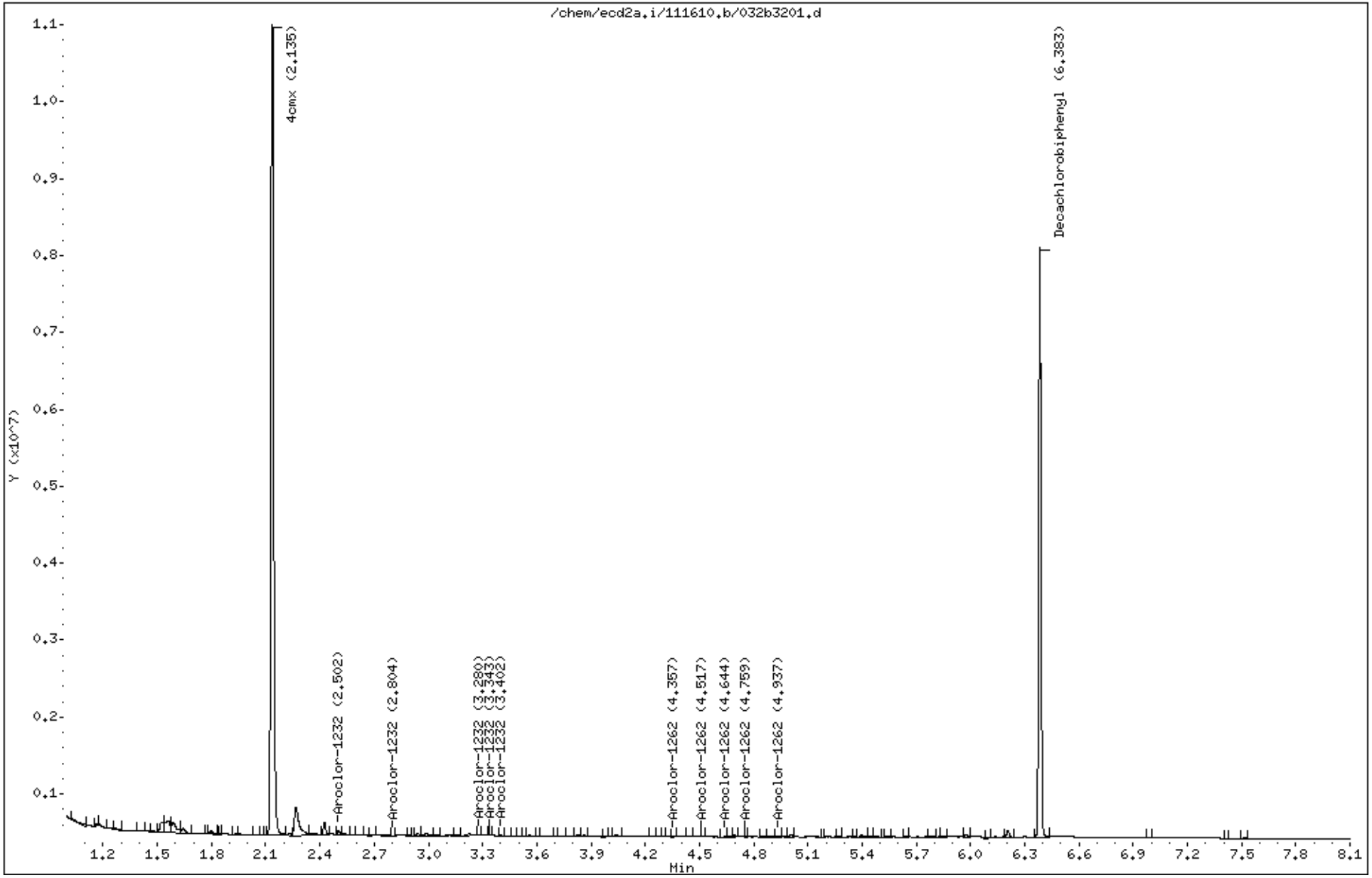
Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



Standard Data

Report Date: 17-Nov-2010 09:51

Calibration History

Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Start Cal Date: 05-OCT-2010 15:01
End Cal Date : 09-NOV-2010 11:54

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
05-OCT-2010 18:35	AR1248	/chem/ecd2a.i/100510.b/021f2101.d
09-NOV-2010 11:09	AR1242	/chem/ecd2a.i/110910.b/018f1801.d
05-OCT-2010 16:20	AR1254	/chem/ecd2a.i/100510.b/009f0901.d
09-NOV-2010 10:01	AR1660	/chem/ecd2a.i/110910.b/012f1201.d
Cal Level: 2 , Cal Amount: 250.00000		
05-OCT-2010 18:46	AR1248	/chem/ecd2a.i/100510.b/022f2201.d
09-NOV-2010 11:20	AR1242	/chem/ecd2a.i/110910.b/019f1901.d
05-OCT-2010 16:31	AR1254	/chem/ecd2a.i/100510.b/010f1001.d
09-NOV-2010 10:13	AR1660	/chem/ecd2a.i/110910.b/013f1301.d
Cal Level: 3 , Cal Amount: 500.00000		
05-OCT-2010 18:57	AR1248	/chem/ecd2a.i/100510.b/023f2301.d
09-NOV-2010 11:31	AR1242	/chem/ecd2a.i/110910.b/020f2001.d
05-OCT-2010 16:43	AR1254	/chem/ecd2a.i/100510.b/011f1101.d
09-NOV-2010 10:24	AR1660	/chem/ecd2a.i/110910.b/014f1401.d
Cal Level: 4 , Cal Amount: 1000.00000		
06-OCT-2010 13:43	DDTANALOGSTD	/chem/ecd2a.i/100610.b/010f1001.d
06-OCT-2010 13:32	AR1268	/chem/ecd2a.i/100610.b/009f0901.d
06-OCT-2010 13:21	AR1262	/chem/ecd2a.i/100610.b/008f0801.d
06-OCT-2010 13:10	AR1221	/chem/ecd2a.i/100610.b/007f0701.d
06-OCT-2010 12:58	AR1232	/chem/ecd2a.i/100610.b/006f0601.d
05-OCT-2010 19:09	AR1248	/chem/ecd2a.i/100510.b/024f2401.d
09-NOV-2010 11:42	AR1242	/chem/ecd2a.i/110910.b/021f2101.d
05-OCT-2010 16:54	AR1254	/chem/ecd2a.i/100510.b/012f1201.d
09-NOV-2010 10:35	AR1660	/chem/ecd2a.i/110910.b/015f1501.d
Cal Level: 5 , Cal Amount: 4000.00000		
05-OCT-2010 19:20	AR1248	/chem/ecd2a.i/100510.b/025f2501.d
09-NOV-2010 11:54	AR1242	/chem/ecd2a.i/110910.b/022f2201.d
05-OCT-2010 17:05	AR1254	/chem/ecd2a.i/100510.b/013f1301.d
09-NOV-2010 10:46	AR1660	/chem/ecd2a.i/110910.b/016f1601.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 16:49	AR1660	/chem/ecd2a.i/111610.b/046f4601.d
Ccal Level: 4 , Ccal Amount: 1000		

16-NOV-2010 14:34	AR1660	/chem/ecd2a.i/111610.b/036f3601.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 13:27	AR1660	/chem/ecd2a.i/111610.b/030f3001.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 11:12	AR1660	/chem/ecd2a.i/111610.b/018f1801.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 09:16	AR1268	/chem/ecd2a.i/111610.b/009f0901.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 09:05	AR1262	/chem/ecd2a.i/111610.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 08:54	AR1221	/chem/ecd2a.i/111610.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 08:43	AR1232	/chem/ecd2a.i/111610.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 08:31	AR1248	/chem/ecd2a.i/111610.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 08:20	AR1242	/chem/ecd2a.i/111610.b/004f0401.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 08:09	AR1254	/chem/ecd2a.i/111610.b/003f0301.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 07:58	AR1660	/chem/ecd2a.i/111610.b/002f0201.d

Report Date: 17-Nov-2010 09:51

Calibration History

Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Start Cal Date: 05-OCT-2010 15:01
End Cal Date : 09-NOV-2010 11:54

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
05-OCT-2010 18:35	AR1248	/chem/ecd2a.i/100510.b/021b2101.d
09-NOV-2010 11:09	AR1242	/chem/ecd2a.i/110910.b/018b1801.d
05-OCT-2010 16:20	AR1254	/chem/ecd2a.i/100510.b/009b0901.d
09-NOV-2010 10:01	AR1660	/chem/ecd2a.i/110910.b/012b1201.d
Cal Level: 2 , Cal Amount: 250.00000		
05-OCT-2010 18:46	AR1248	/chem/ecd2a.i/100510.b/022b2201.d
09-NOV-2010 11:20	AR1242	/chem/ecd2a.i/110910.b/019b1901.d
05-OCT-2010 16:31	AR1254	/chem/ecd2a.i/100510.b/010b1001.d
09-NOV-2010 10:13	AR1660	/chem/ecd2a.i/110910.b/013b1301.d
Cal Level: 3 , Cal Amount: 500.00000		
05-OCT-2010 18:57	AR1248	/chem/ecd2a.i/100510.b/023b2301.d
09-NOV-2010 11:31	AR1242	/chem/ecd2a.i/110910.b/020b2001.d
05-OCT-2010 16:43	AR1254	/chem/ecd2a.i/100510.b/011b1101.d
09-NOV-2010 10:24	AR1660	/chem/ecd2a.i/110910.b/014b1401.d
Cal Level: 4 , Cal Amount: 1000.00000		
06-OCT-2010 13:43	DDTANALOGSTD	/chem/ecd2a.i/100610.b/010b1001.d
06-OCT-2010 13:32	AR1268	/chem/ecd2a.i/100610.b/009b0901.d
06-OCT-2010 13:21	AR1262	/chem/ecd2a.i/100610.b/008b0801.d
06-OCT-2010 13:10	AR1221	/chem/ecd2a.i/100610.b/007b0701.d
06-OCT-2010 12:58	AR1232	/chem/ecd2a.i/100610.b/006b0601.d
05-OCT-2010 19:09	AR1248	/chem/ecd2a.i/100510.b/024b2401.d
09-NOV-2010 11:42	AR1242	/chem/ecd2a.i/110910.b/021b2101.d
05-OCT-2010 16:54	AR1254	/chem/ecd2a.i/100510.b/012b1201.d
09-NOV-2010 10:35	AR1660	/chem/ecd2a.i/110910.b/015b1501.d
Cal Level: 5 , Cal Amount: 4000.00000		
05-OCT-2010 19:20	AR1248	/chem/ecd2a.i/100510.b/025b2501.d
09-NOV-2010 11:54	AR1242	/chem/ecd2a.i/110910.b/022b2201.d
05-OCT-2010 17:05	AR1254	/chem/ecd2a.i/100510.b/013b1301.d
09-NOV-2010 10:46	AR1660	/chem/ecd2a.i/110910.b/016b1601.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 16:49	AR1660	/chem/ecd2a.i/111610.b/046b4601.d
Ccal Level: 4 , Ccal Amount: 1000		

16-NOV-2010 14:34	AR1660	/chem/ecd2a.i/111610.b/036b3601.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 13:27	AR1660	/chem/ecd2a.i/111610.b/030b3001.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 11:12	AR1660	/chem/ecd2a.i/111610.b/018b1801.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 09:16	AR1268	/chem/ecd2a.i/111610.b/009b0901.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 09:05	AR1262	/chem/ecd2a.i/111610.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 08:54	AR1221	/chem/ecd2a.i/111610.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 08:43	AR1232	/chem/ecd2a.i/111610.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 08:31	AR1248	/chem/ecd2a.i/111610.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 08:20	AR1242	/chem/ecd2a.i/111610.b/004b0401.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 08:09	AR1254	/chem/ecd2a.i/111610.b/003b0301.d
Ccal Level: 4 , Ccal Amount: 1000		
16-NOV-2010 07:58	AR1660	/chem/ecd2a.i/111610.b/002b0201.d

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Quant Method : ESTD Target Version : 3.50
Last Update : 17-Nov-2010 08:35 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	500.000000
Initial:End Threshold	250.000000
Initial:Area Threshold	10000.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	1.100000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.416	2.386-2.446	1.653e+03
	2.750	2.720-2.780	2.120e+03
	2.886	2.856-2.916	8.667e+02
	2.979	2.949-3.009	7.474e+02
	2.995	2.965-3.025	7.766e+02
2 Aroclor-1221	2.027	1.997-2.057	5.986e+02
	2.132	2.102-2.162	3.437e+02
	2.161	2.131-2.191	1.437e+03
3 Aroclor-1232	2.161	2.131-2.191	8.617e+02
	2.750	2.720-2.780	9.568e+02
	2.843	2.813-2.873	6.376e+02
	2.887	2.857-2.917	3.967e+02
	3.133	3.103-3.163	4.715e+02
4 Aroclor-1242	2.417	2.387-2.447	1.384e+03
	2.750	2.720-2.780	1.767e+03
	2.887	2.857-2.917	7.121e+02
	2.979	2.949-3.009	6.065e+02
	3.134	3.104-3.164	9.281e+02
5 Aroclor-1248	2.750	2.720-2.780	1.054e+03
	2.980	2.950-3.010	1.203e+03
	3.134	3.104-3.164	1.584e+03
	3.372	3.342-3.402	9.279e+02
	3.433	3.403-3.463	1.830e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	3.403	3.373-3.433	1.504e+03
		3.587	3.557-3.617	2.008e+03
		3.776	3.746-3.806	1.551e+03
		3.861	3.831-3.891	2.666e+03
		4.053	4.023-4.083	2.020e+03
	7 Aroclor-1260	3.990	3.960-4.020	2.152e+03
		4.182	4.152-4.212	3.236e+03
		4.455	4.425-4.485	1.951e+03
		4.621	4.591-4.651	2.128e+03
		4.835	4.805-4.865	4.557e+03
	8 Aroclor-1262	3.990	3.960-4.020	1.558e+03
		4.183	4.153-4.213	2.099e+03
		4.455	4.425-4.485	2.605e+03
		4.622	4.592-4.652	2.378e+03
		4.836	4.806-4.866	4.908e+03
	9 Aroclor-1268	5.054	5.024-5.084	6.104e+03
		5.079	5.049-5.109	5.575e+03
		5.213	5.183-5.243	4.499e+03
		5.454	5.424-5.484	2.213e+03
		5.649	5.619-5.679	1.378e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	1.893	1.863-1.923	4.715e+04
$	12 Decachlorobiphenyl	5.778	5.748-5.808	3.673e+04
	13 4,4'-DDT	4.404	4.384-4.424	1.464e+04
	14 4,4'-DDD	4.211	4.191-4.231	3.245e+04
	15 4,4'-DDE	3.799	3.779-3.819	3.912e+04

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Quant Method : ESTD Target Version : 3.50
Last Update : 17-Nov-2010 08:34 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	1000.000000
Initial:End Threshold	500.000000
Initial:Area Threshold	500.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	3.000000
Initial:Negative Peaks	OFF
Initial:Tension	4.000000
4.200:Tension	1.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.818	2.788-2.848	3.401e+03
	3.256	3.226-3.286	2.737e+03
	3.328	3.298-3.358	1.669e+03
	3.406	3.376-3.436	1.566e+03
	3.436	3.406-3.466	1.630e+03
2 Aroclor-1221	2.361	2.331-2.391	1.311e+03
	2.468	2.438-2.498	8.220e+02
	2.513	2.483-2.543	2.981e+03
3 Aroclor-1232	2.513	2.483-2.543	1.771e+03
	2.818	2.788-2.848	1.726e+03
	3.256	3.226-3.286	1.355e+03
	3.328	3.298-3.358	8.410e+02
	3.407	3.377-3.437	6.958e+02
4 Aroclor-1242	2.819	2.789-2.849	2.823e+03
	3.256	3.226-3.286	2.258e+03
	3.329	3.299-3.359	1.360e+03
	3.436	3.406-3.466	1.359e+03
	3.595	3.565-3.625	1.826e+03
5 Aroclor-1248	2.819	2.789-2.849	1.694e+03
	3.407	3.377-3.437	2.757e+03
	3.436	3.406-3.466	2.428e+03
	3.595	3.565-3.625	3.525e+03
	3.682	3.652-3.712	3.781e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	3.896	3.866-3.926	3.768e+03
		4.036	4.006-4.066	4.275e+03
		4.275	4.245-4.305	3.167e+03
		4.355	4.325-4.385	5.986e+03
		4.518	4.488-4.548	4.356e+03
	7 Aroclor-1260	4.493	4.463-4.523	4.281e+03
		4.643	4.613-4.673	5.197e+03
		4.756	4.726-4.786	3.567e+03
		4.954	4.924-4.984	3.924e+03
		5.155	5.125-5.185	4.129e+03
	8 Aroclor-1262	4.385	4.355-4.415	2.185e+03
		4.494	4.464-4.524	3.401e+03
		4.645	4.615-4.675	4.132e+03
		4.759	4.729-4.789	3.570e+03
		4.955	4.925-4.985	5.801e+03
	9 Aroclor-1268	5.579	5.549-5.609	1.447e+04
		5.611	5.581-5.641	1.295e+04
		5.784	5.754-5.814	1.043e+04
		5.983	5.953-6.013	5.142e+03
		6.207	6.177-6.237	3.556e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	2.132	2.102-2.162	9.952e+04
$	12 Decachlorobiphenyl	6.383	6.353-6.413	7.496e+04
	13 4,4'-DDT	4.888	4.868-4.908	4.574e+04
	14 4,4'-DDD	4.672	4.652-4.692	9.913e+04
	15 4,4'-DDE	4.269	4.249-4.289	1.038e+05

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 05-OCT-2010 15:01
End Cal Date : 09-NOV-2010 11:54
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Cal Date : 17-Nov-2010 08:35 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd2a.i/100510.b/021f2101.d
Level 2: /chem/ecd2a.i/100510.b/022f2201.d
Level 3: /chem/ecd2a.i/100510.b/023f2301.d
Level 4: /chem/ecd2a.i/100610.b/010f1001.d
Level 5: /chem/ecd2a.i/100510.b/025f2501.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	___ RRF	% RSD
1 Aroclor-1016(1)	1960	1738	1639	1538	1387	1653	13.030
(2)	2362	2119	2107	2089	1926	2120	7.363
(3)	992	897	859	814	772	867	9.744
(4)	865	790	743	686	654	747	11.213
(5)	912	804	761	724	682	777	11.331
2 Aroclor-1221(1)	+++++	+++++	+++++	599	+++++	599	0.000
(2)	+++++	+++++	+++++	344	+++++	344	0.000
(3)	+++++	+++++	+++++	1437	+++++	1437	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	862	+++++	862	0.000
(2)	+++++	+++++	+++++	957	+++++	957	0.000
(3)	+++++	+++++	+++++	638	+++++	638	0.000
(4)	+++++	+++++	+++++	397	+++++	397	0.000
(5)	+++++	+++++	+++++	471	+++++	471	0.000
4 Aroclor-1242(1)	1625	1493	1391	1300	1109	1384	14.135
(2)	2032	1861	1706	1717	1517	1767	10.885
(3)	804	760	719	677	600	712	11.001
(4)	697	641	608	583	503	607	11.863
(5)	1072	1000	921	868	781	928	12.186
5 Aroclor-1248(1)	1214	1108	1010	994	945	1054	10.154
(2)	1399	1272	1191	1127	1029	1203	11.705
(3)	1822	1653	1590	1497	1357	1584	10.954
(4)	1054	970	919	878	819	928	9.661
(5)	2043	1894	1803	1780	1629	1830	8.326
6 Aroclor-1254(1)	1728	1583	1469	1450	1290	1504	10.851
(2)	2283	2102	1968	1968	1718	2008	10.318
(3)	1767	1610	1510	1506	1360	1551	9.685
(4)	2974	2771	2628	2631	2326	2666	8.887
(5)	2265	2093	1978	1987	1779	2020	8.798

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 05-OCT-2010 15:01
End Cal Date : 09-NOV-2010 11:54
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Cal Date : 17-Nov-2010 08:35 jen01212
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
7 Aroclor-1260(1)	2429	2200	2144	2053	1935	2152	8.561
(2)	3575	3287	3241	3112	2963	3236	7.040
(3)	2209	1989	1931	1853	1773	1951	8.492
(4)	2394	2160	2115	2028	1943	2128	7.999
(5)	4929	4604	4574	4434	4242	4557	5.546
8 Aroclor-1262(1)	+++++	+++++	+++++	1558	+++++	1558	0.000
(2)	+++++	+++++	+++++	2099	+++++	2099	0.000
(3)	+++++	+++++	+++++	2605	+++++	2605	0.000
(4)	+++++	+++++	+++++	2378	+++++	2378	0.000
(5)	+++++	+++++	+++++	4908	+++++	4908	0.000
9 Aroclor-1268(1)	+++++	+++++	+++++	6104	+++++	6104	0.000
(2)	+++++	+++++	+++++	5575	+++++	5575	0.000
(3)	+++++	+++++	+++++	4499	+++++	4499	0.000
(4)	+++++	+++++	+++++	2213	+++++	2213	0.000
(5)	+++++	+++++	+++++	13779	+++++	13779	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 4,4'-DDT	+++++	+++++	+++++	14635	+++++	14635	0.000
14 4,4'-DDD	+++++	+++++	+++++	32448	+++++	32448	0.000
15 4,4'-DDE	+++++	+++++	+++++	39118	+++++	39118	0.000
$ 11 4cmx	51293	47822	47063	46091	43474	47149	6.023
$ 12 Decachlorobiphenyl	40670	37410	36508	35395	33676	36732	7.092

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 05-OCT-2010 15:01
End Cal Date : 09-NOV-2010 11:54
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Cal Date : 17-Nov-2010 08:34 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd2a.i/100510.b/021b2101.d
Level 2: /chem/ecd2a.i/100510.b/022b2201.d
Level 3: /chem/ecd2a.i/100510.b/023b2301.d
Level 4: /chem/ecd2a.i/100610.b/010b1001.d
Level 5: /chem/ecd2a.i/100510.b/025b2501.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	___ RRF	% RSD
1 Aroclor-1016(1)	3842	3519	3411	3233	2999	3401	9.274
(2)	3130	2773	2711	2597	2474	2737	9.048
(3)	1798	1688	1653	1616	1590	1669	4.844
(4)	1771	1609	1562	1487	1400	1566	8.920
(5)	1832	1681	1617	1558	1464	1630	8.468
2 Aroclor-1221(1)	+++++	+++++	+++++	1311	+++++	1311	0.000
(2)	+++++	+++++	+++++	822	+++++	822	0.000
(3)	+++++	+++++	+++++	2981	+++++	2981	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	1771	+++++	1771	0.000
(2)	+++++	+++++	+++++	1726	+++++	1726	0.000
(3)	+++++	+++++	+++++	1355	+++++	1355	0.000
(4)	+++++	+++++	+++++	841	+++++	841	0.000
(5)	+++++	+++++	+++++	696	+++++	696	0.000
4 Aroclor-1242(1)	3156	2986	2876	2727	2372	2823	10.525
(2)	2566	2341	2272	2180	1932	2258	10.248
(3)	1452	1410	1380	1337	1221	1360	6.489
(4)	1512	1424	1388	1312	1161	1359	9.731
(5)	1986	1914	1853	1783	1596	1826	8.159
5 Aroclor-1248(1)	1950	1812	1690	1589	1426	1694	11.896
(2)	3138	2901	2761	2599	2385	2757	10.415
(3)	2774	2551	2424	2288	2102	2428	10.518
(4)	3934	3680	3527	3353	3131	3525	8.694
(5)	4214	3939	3776	3612	3364	3781	8.520
6 Aroclor-1254(1)	4238	3931	3682	3647	3344	3768	8.892
(2)	4796	4452	4183	4145	3799	4275	8.709
(3)	3492	3277	3095	3102	2872	3167	7.301
(4)	6534	6164	5861	5890	5483	5986	6.521
(5)	4798	4498	4277	4262	3943	4356	7.269

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 05-OCT-2010 15:01
End Cal Date : 09-NOV-2010 11:54
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Cal Date : 17-Nov-2010 08:34 jen01212
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
7 Aroclor-1260(1)	4660	4342	4280	4126	3996	4281	5.875
(2)	5601	5256	5188	5026	4913	5197	5.068
(3)	3825	3551	3565	3469	3424	3567	4.367
(4)	4256	3963	3908	3782	3708	3924	5.389
(5)	4443	4150	4107	3999	3947	4129	4.683
8 Aroclor-1262(1)	+++++	+++++	+++++	2185	+++++	2185	0.000
(2)	+++++	+++++	+++++	3401	+++++	3401	0.000
(3)	+++++	+++++	+++++	4132	+++++	4132	0.000
(4)	+++++	+++++	+++++	3570	+++++	3570	0.000
(5)	+++++	+++++	+++++	5801	+++++	5801	0.000
9 Aroclor-1268(1)	+++++	+++++	+++++	14466	+++++	14466	0.000
(2)	+++++	+++++	+++++	12945	+++++	12945	0.000
(3)	+++++	+++++	+++++	10434	+++++	10434	0.000
(4)	+++++	+++++	+++++	5142	+++++	5142	0.000
(5)	+++++	+++++	+++++	35558	+++++	35558	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 4,4'-DDT	+++++	+++++	+++++	45742	+++++	45742	0.000
14 4,4'-DDD	+++++	+++++	+++++	99127	+++++	99127	0.000
15 4,4'-DDE	+++++	+++++	+++++	103769	+++++	103769	0.000
$ 11 4cmx	100020	97273	98624	99287	102374	99516	1.900
$ 12 Decachlorobiphenyl	79078	74887	74209	73152	73490	74963	3.196

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/110910.b/012f1201.d
Lab Smp Id: WAR101109-01 60 Client Smp ID: AR166001
Inj Date : 09-NOV-2010 10:01
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101109-01 60
Misc Info :
Comment :
Method : /chem/ecd2a.i/110910.b/ECD2-F-8082-100510.m
Meth Date : 09-Nov-2010 13:44 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:35 Cal File: 021f2101.d
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.897	1.897	0.000	512929	10.0000	10.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.784	5.782	0.002	406701	10.0000	11.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.421	2.421	0.000	196021	100.000	118	80.00- 120.00	100.00
2.754	2.754	0.000	236203	100.000	113	114.85- 154.85	120.50
2.891	2.891	0.000	99195	100.000	114	33.34- 73.34	50.60
2.983	2.983	0.000	86453	100.000	113	24.73- 64.73	44.10
2.998	2.999	-0.001	91179	100.000	118	27.15- 67.15	46.52
Average of Peak Amounts =					115		
7 Aroclor-1260					CAS #: 11096-82-5		
3.994	3.993	0.001	242880	100.000	113	80.00- 120.00	100.00
4.188	4.187	0.001	357518	100.000	110	132.73- 172.73	147.20
4.460	4.459	0.001	220895	100.000	113	70.57- 110.57	90.95
4.627	4.626	0.001	239355	100.000	113	79.75- 119.75	98.55
4.841	4.839	0.002	492934	100.000	107	199.09- 239.09	202.95
Average of Peak Amounts =					111		

Data File: /chem/ecd2a.i/110910.b/012f1201.d

Page 1

Date : 09-NOV-2010 10:01

Client ID: AR166001

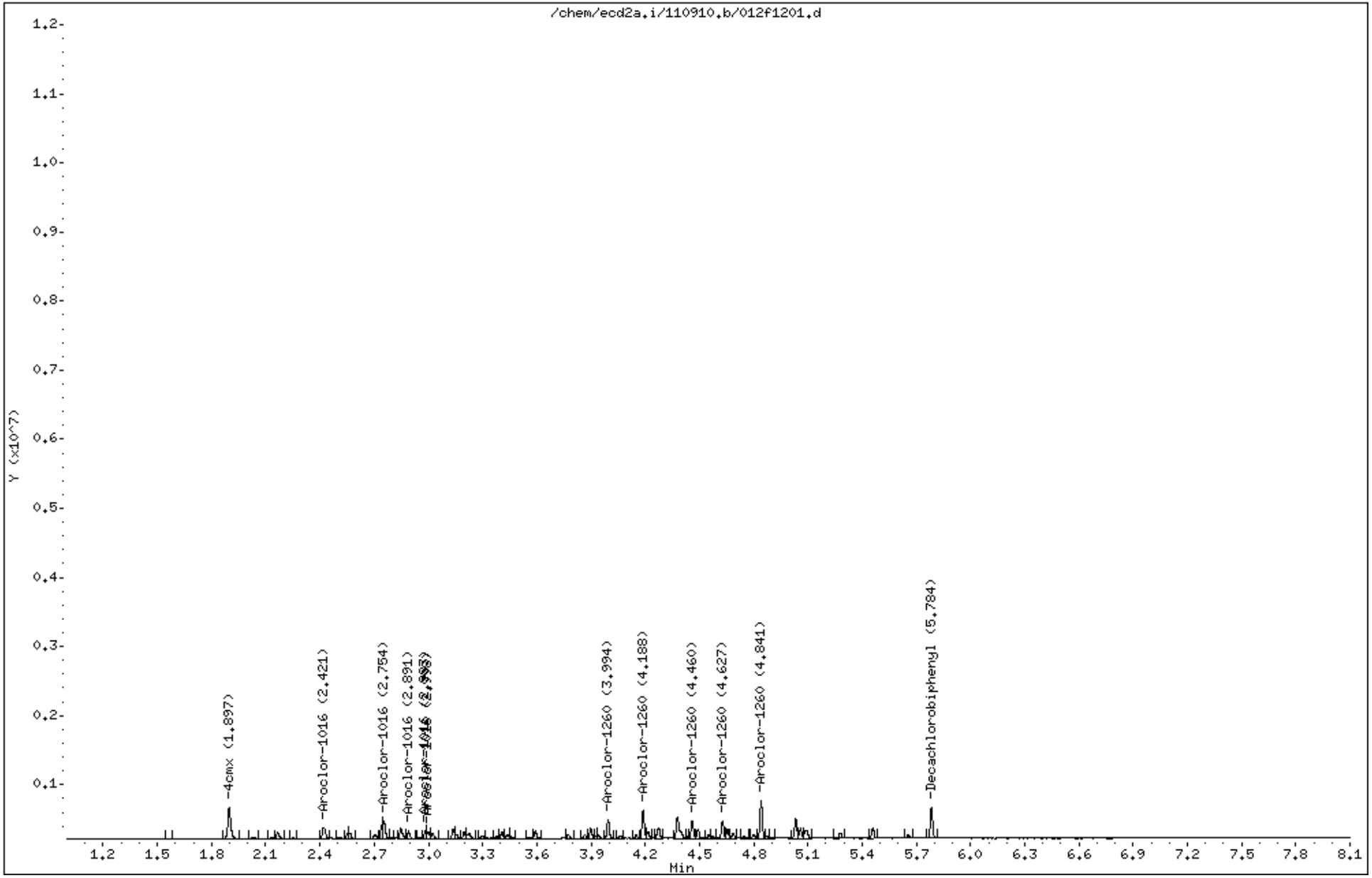
Instrument: ecd2a.i

Sample Info: IWAR101109-01 60

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

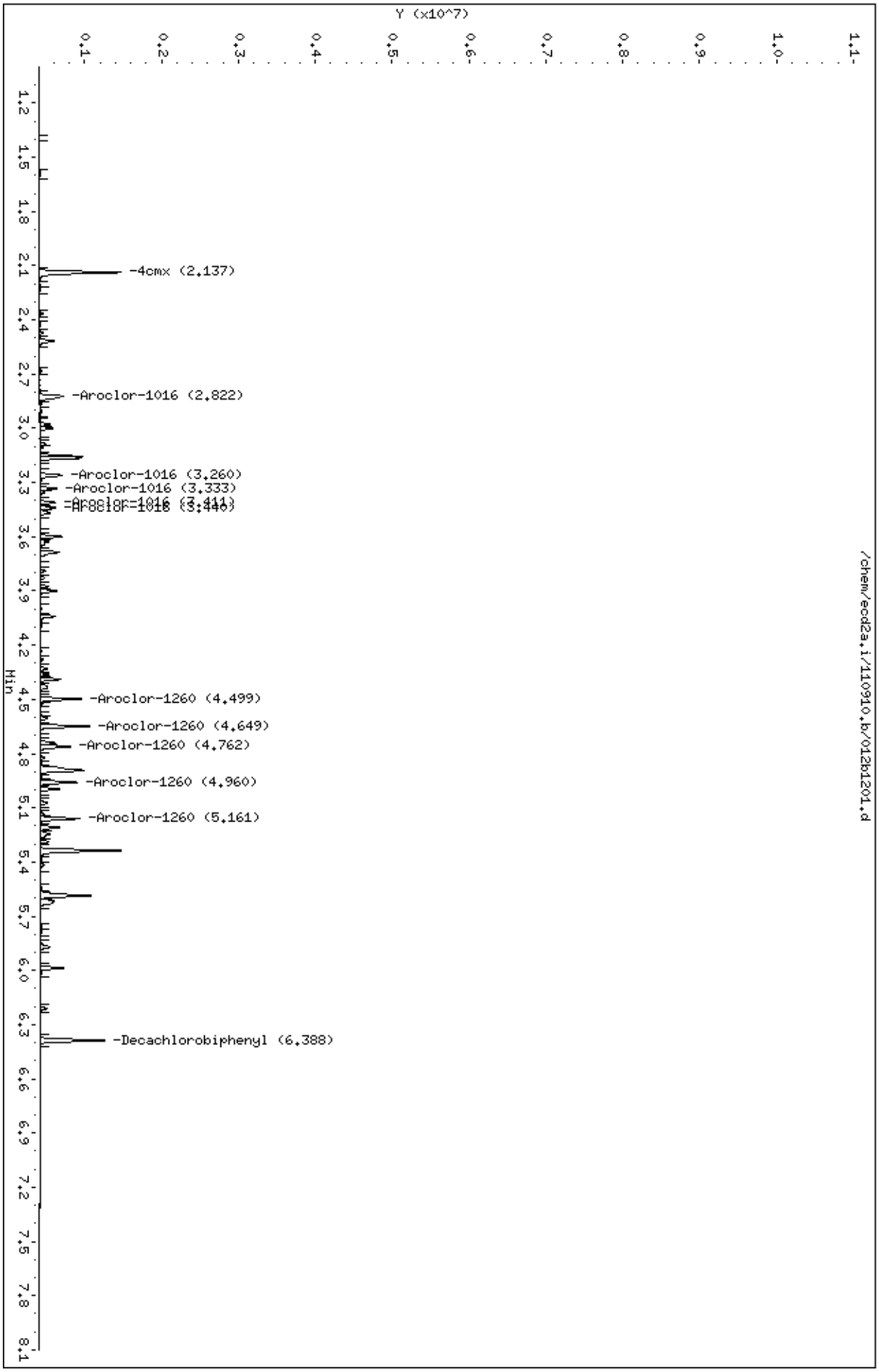
RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/110910.b/012b1201.d
Lab Smp Id: WAR101109-01 60 Client Smp ID: AR166001
Inj Date : 09-NOV-2010 10:01
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101109-01 60
Misc Info :
Comment :
Method : /chem/ecd2a.i/110910.b/ECD2-B-8082-100510.m
Meth Date : 09-Nov-2010 13:44 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:35 Cal File: 021b2101.d
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.137	2.137	0.000	1000204	10.0000	9.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.388	6.388	0.000	790784	10.0000	9.6	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.822	2.823	-0.001	384161	100.000	102	80.00- 120.00	100.00
3.260	3.260	0.000	312995	100.000	102	61.28- 101.28	81.47
3.333	3.333	0.000	179778	100.000	96.1	30.64- 70.64	46.80
3.411	3.411	0.000	177140	100.000	102	26.52- 66.52	46.11
3.440	3.440	0.000	183174	100.000	101	28.27- 68.27	47.68
Average of Peak Amounts =					101		
7 Aroclor-1260					CAS #: 11096-82-5		
4.499	4.498	0.001	466040	100.000	97.6	80.00- 120.00	100.00
4.649	4.648	0.001	560148	100.000	96.4	102.65- 142.65	120.19
4.762	4.761	0.001	382547	100.000	96.5	63.52- 103.52	82.08
4.960	4.958	0.002	425620	100.000	97.8	72.18- 112.18	91.33
5.161	5.158	0.003	444284	100.000	96.9	77.59- 117.59	95.33
Average of Peak Amounts =					97		

Data File: /chem/ecd2a.i/110910.b/012b1201.d
Date : 09-NOV-2010 10:01
Client ID: AR166001
Sample Info: IWAR101109-01 60
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



Page 1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/110910.b/013f1301.d
Lab Smp Id: WAR101109-02 60 Client Smp ID: AR166002
Inj Date : 09-NOV-2010 10:13
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101109-02 60
Misc Info :
Comment :
Method : /chem/ecd2a.i/110910.b/ECD2-F-8082-100510.m
Meth Date : 09-Nov-2010 13:44 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:46 Cal File: 022f2201.d
Als bottle: 13 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.896	1.897	-0.001	1195551	25.0000	25.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.784	5.782	0.002	935244	25.0000	25.7	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.420	2.421	-0.001	434429	250.000	264	80.00- 120.00	100.00
2.754	2.754	0.000	529683	250.000	256	114.85- 154.85	121.93
2.890	2.891	-0.001	224232	250.000	260	33.34- 73.34	51.62
2.983	2.983	0.000	197399	250.000	262	24.73- 64.73	45.44
2.999	2.999	0.000	200933	250.000	263	27.15- 67.15	46.25
Average of Peak Amounts =					261		
7 Aroclor-1260					CAS #: 11096-82-5		
3.995	3.993	0.002	550077	250.000	258	80.00- 120.00	100.00
4.187	4.187	0.000	821834	250.000	255	132.73- 172.73	149.40
4.460	4.459	0.001	497347	250.000	257	70.57- 110.57	90.41
4.627	4.626	0.001	540093	250.000	257	79.75- 119.75	98.18
4.841	4.839	0.002	1151050	250.000	253	199.09- 239.09	209.25
Average of Peak Amounts =					256		

Data File: /chem/ecd2a.i/110910.b/013f1301.d

Page 1

Date : 09-NOV-2010 10:13

Client ID: AR166002

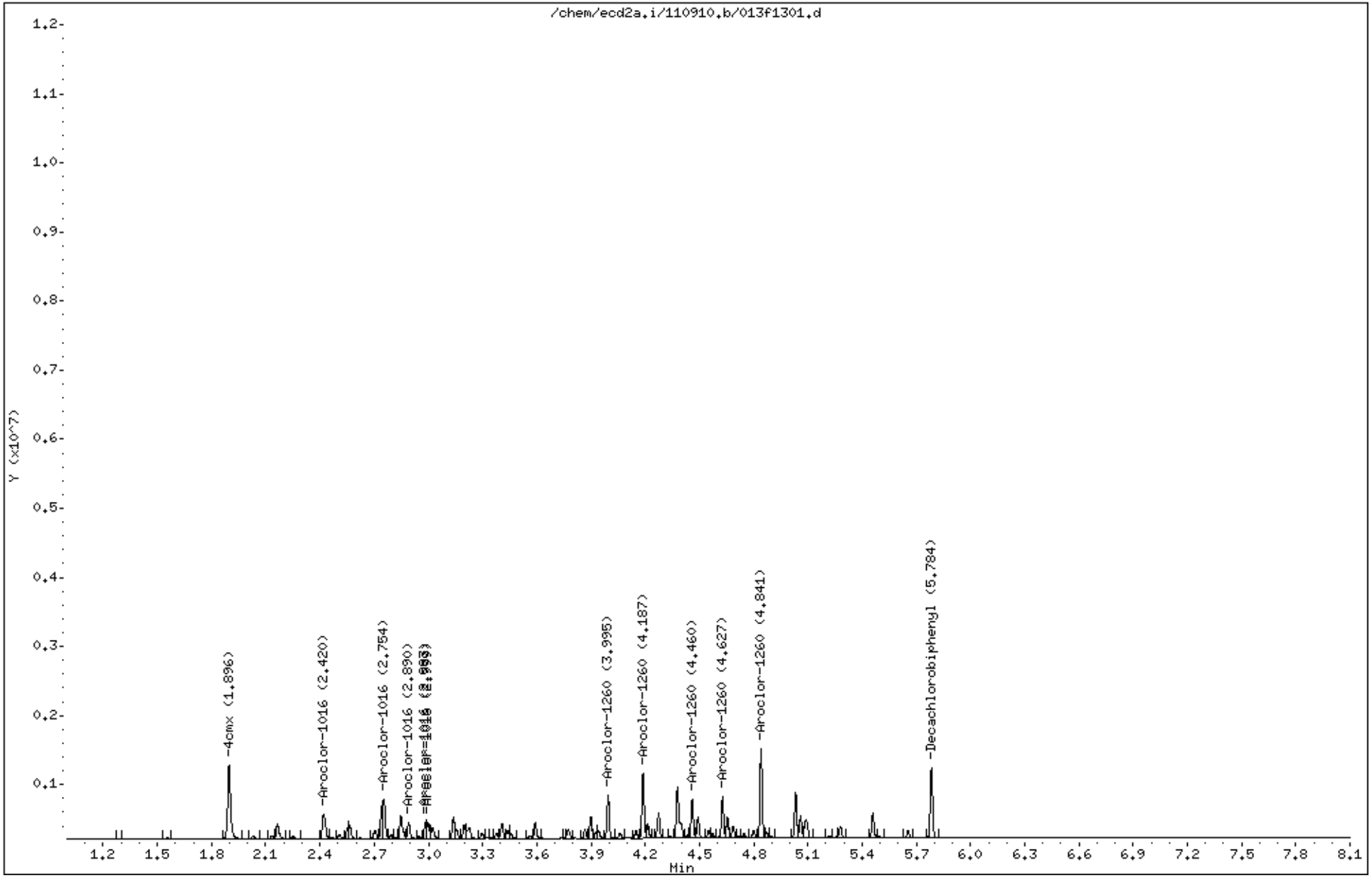
Instrument: ecd2a.i

Sample Info: IWAR101109-02 60

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/110910.b/013b1301.d
Lab Smp Id: WAR101109-02 60 Client Smp ID: AR166002
Inj Date : 09-NOV-2010 10:13
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101109-02 60
Misc Info :
Comment :
Method : /chem/ecd2a.i/110910.b/ECD2-B-8082-100510.m
Meth Date : 09-Nov-2010 13:44 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:46 Cal File: 022b2201.d
Als bottle: 13 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.136	2.137	-0.001	2431817	25.0000	22.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.389	6.388	0.001	1872187	25.0000	23.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.822	2.823	-0.001	879753	250.000	240	80.00- 120.00	100.00
3.260	3.260	0.000	693235	250.000	235	61.28- 101.28	78.80
3.333	3.333	0.000	422112	250.000	234	30.64- 70.64	47.98
3.411	3.411	0.000	402219	250.000	239	26.52- 66.52	45.72
3.440	3.440	0.000	420242	250.000	240	28.27- 68.27	47.77
Average of Peak Amounts =					238		
7 Aroclor-1260					CAS #: 11096-82-5		
4.498	4.498	0.000	1085535	250.000	235	80.00- 120.00	100.00
4.650	4.648	0.002	1313898	250.000	234	102.65- 142.65	121.04
4.762	4.761	0.001	887787	250.000	232	63.52- 103.52	81.78
4.960	4.958	0.002	990767	250.000	235	72.18- 112.18	91.27
5.161	5.158	0.003	1037608	250.000	234	77.59- 117.59	95.58
Average of Peak Amounts =					234		

Data File: /chem/ecd2a.i/110910.b/013b1301.d

Page 1

Date : 09-NOV-2010 10:13

Client ID: AR166002

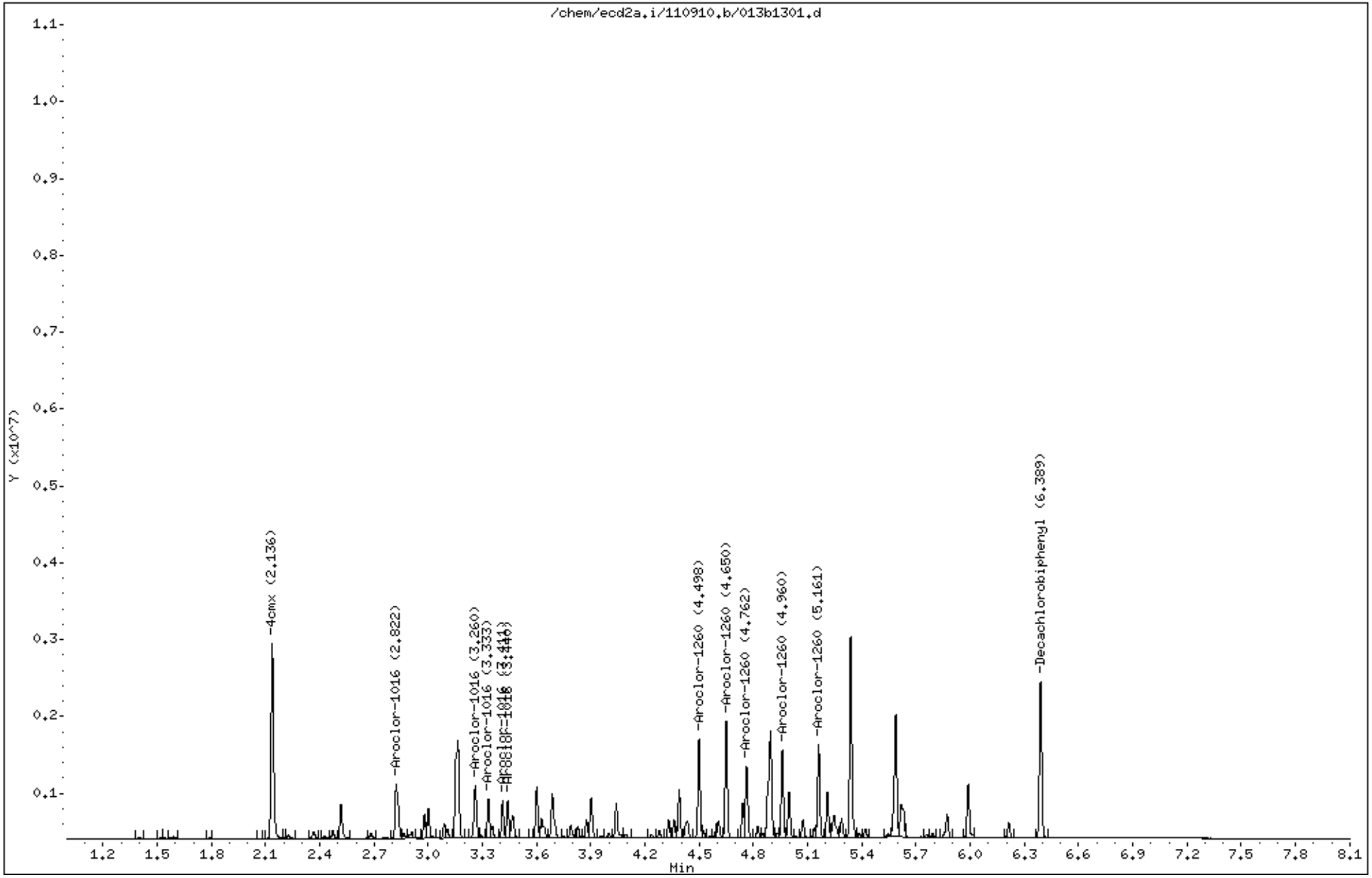
Instrument: ecd2a.i

Sample Info: IWAR101109-02 60

Operator: JAOC

Column phase: CLP2

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/110910.b/014f1401.d
Lab Smp Id: WAR101109-03 60 Client Smp ID: AR166003
Inj Date : 09-NOV-2010 10:24
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101109-03 60
Misc Info :
Comment :
Method : /chem/ecd2a.i/110910.b/ECD2-F-8082-100510.m
Meth Date : 09-Nov-2010 13:44 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023f2301.d
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.897	1.897	0.000	2353151	50.0000	50.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.782	5.782	0.000	1825414	50.0000	50.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.420	2.421	-0.001	819577	500.000	500	80.00- 120.00	100.00
2.753	2.754	-0.001	1053429	500.000	509	114.85- 154.85	128.53
2.890	2.891	-0.001	429716	500.000	499	33.34- 73.34	52.43
2.982	2.983	-0.001	371627	500.000	496	24.73- 64.73	45.34
2.998	2.999	-0.001	380616	500.000	497	27.15- 67.15	46.44
Average of Peak Amounts =					500		
7 Aroclor-1260					CAS #: 11096-82-5		
3.993	3.993	0.000	1071867	500.000	503	80.00- 120.00	100.00
4.187	4.187	0.000	1620305	500.000	504	132.73- 172.73	151.17
4.459	4.459	0.000	965648	500.000	499	70.57- 110.57	90.09
4.626	4.626	0.000	1057286	500.000	500	79.75- 119.75	98.64
4.839	4.839	0.000	2286882	500.000	505	199.09- 239.09	213.35
Average of Peak Amounts =					502		

Data File: /chem/ecd2a.i/110910.b/014f1401.d

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Date : 09-NOV-2010 10:24

Client ID: AR166003

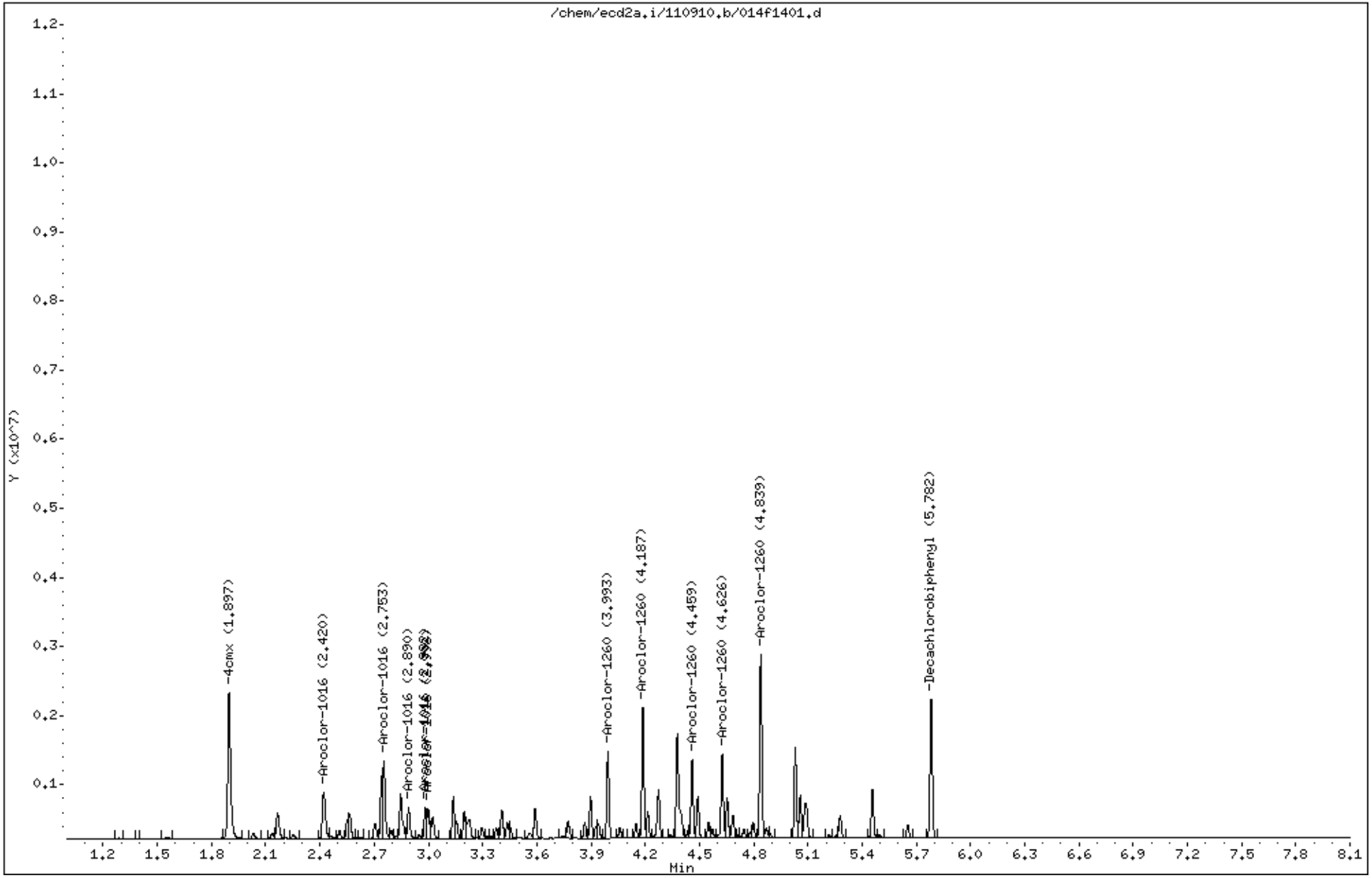
Instrument: ecd2a.i

Sample Info: IWAR101109-03 60

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/110910.b/014b1401.d
Lab Smp Id: WAR101109-03 60 Client Smp ID: AR166003
Inj Date : 09-NOV-2010 10:24
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101109-03 60
Misc Info :
Comment :
Method : /chem/ecd2a.i/110910.b/ECD2-B-8082-100510.m
Meth Date : 09-Nov-2010 13:44 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.136	2.137	-0.001	4931185	50.0000	47.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.388	6.388	0.000	3710448	50.0000	47.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.822	2.823	-0.001	1705349	500.000	480	80.00- 120.00	100.00
3.259	3.260	-0.001	1355673	500.000	474	61.28- 101.28	79.50
3.332	3.333	-0.001	826598	500.000	473	30.64- 70.64	48.47
3.410	3.411	-0.001	780996	500.000	477	26.52- 66.52	45.80
3.439	3.440	-0.001	808367	500.000	475	28.27- 68.27	47.40
Average of Peak Amounts =					476		
7 Aroclor-1260					CAS #: 11096-82-5		
4.497	4.498	-0.001	2139941	500.000	477	80.00- 120.00	100.00
4.648	4.648	0.000	2593941	500.000	476	102.65- 142.65	121.22
4.760	4.761	-0.001	1782676	500.000	478	63.52- 103.52	83.30
4.957	4.958	-0.001	1954201	500.000	477	72.18- 112.18	91.32
5.159	5.158	0.001	2053653	500.000	476	77.59- 117.59	95.97
Average of Peak Amounts =					477		

Data File: /chem/ecd2a.i/110910.b/014b1401.d

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Date : 09-NOV-2010 10:24

Client ID: AR166003

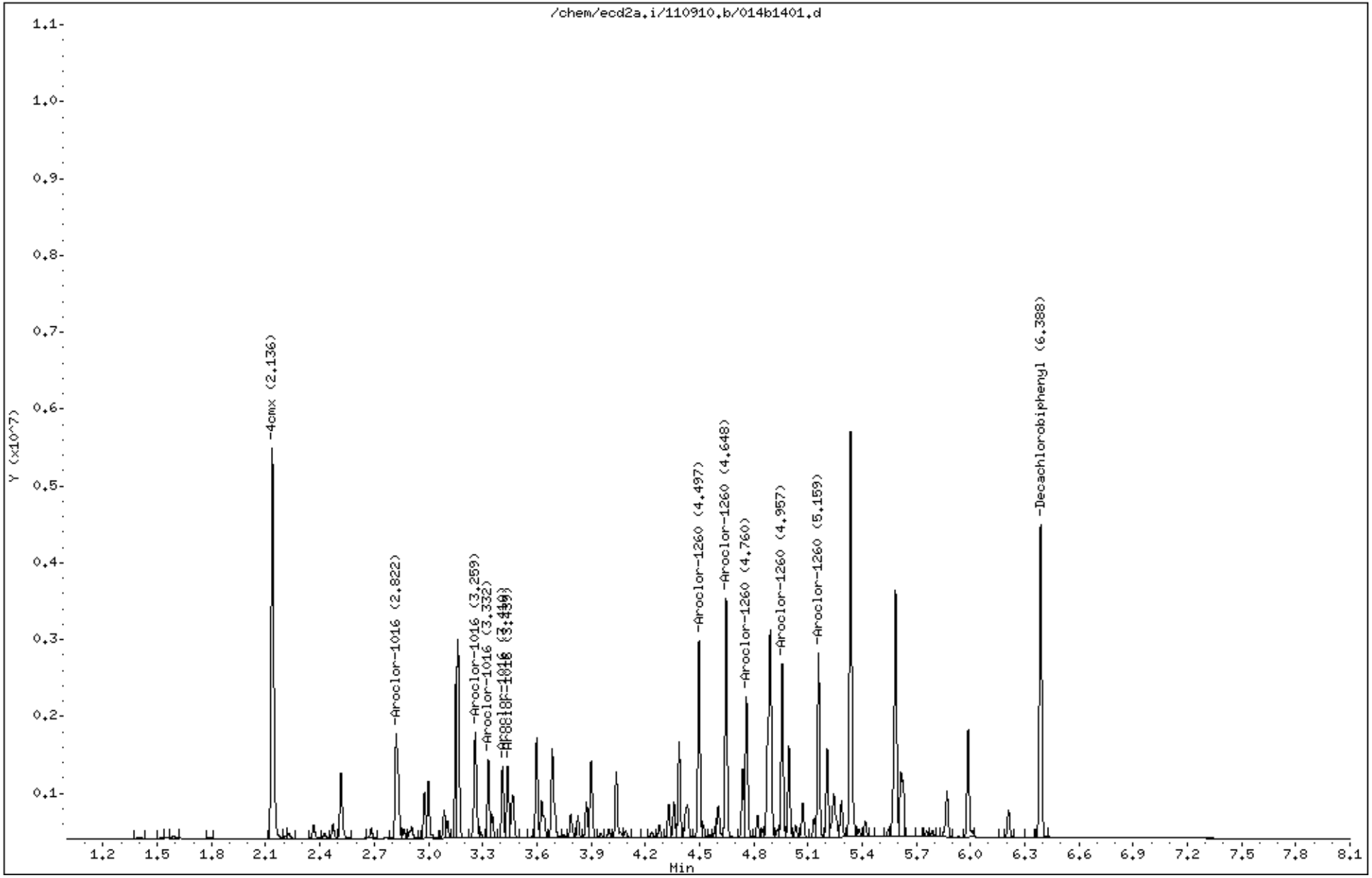
Instrument: ecd2a.i

Sample Info: IWAR101109-03 60

Operator: JAOC

Column phase: CLP2

Column diameter: 0.25



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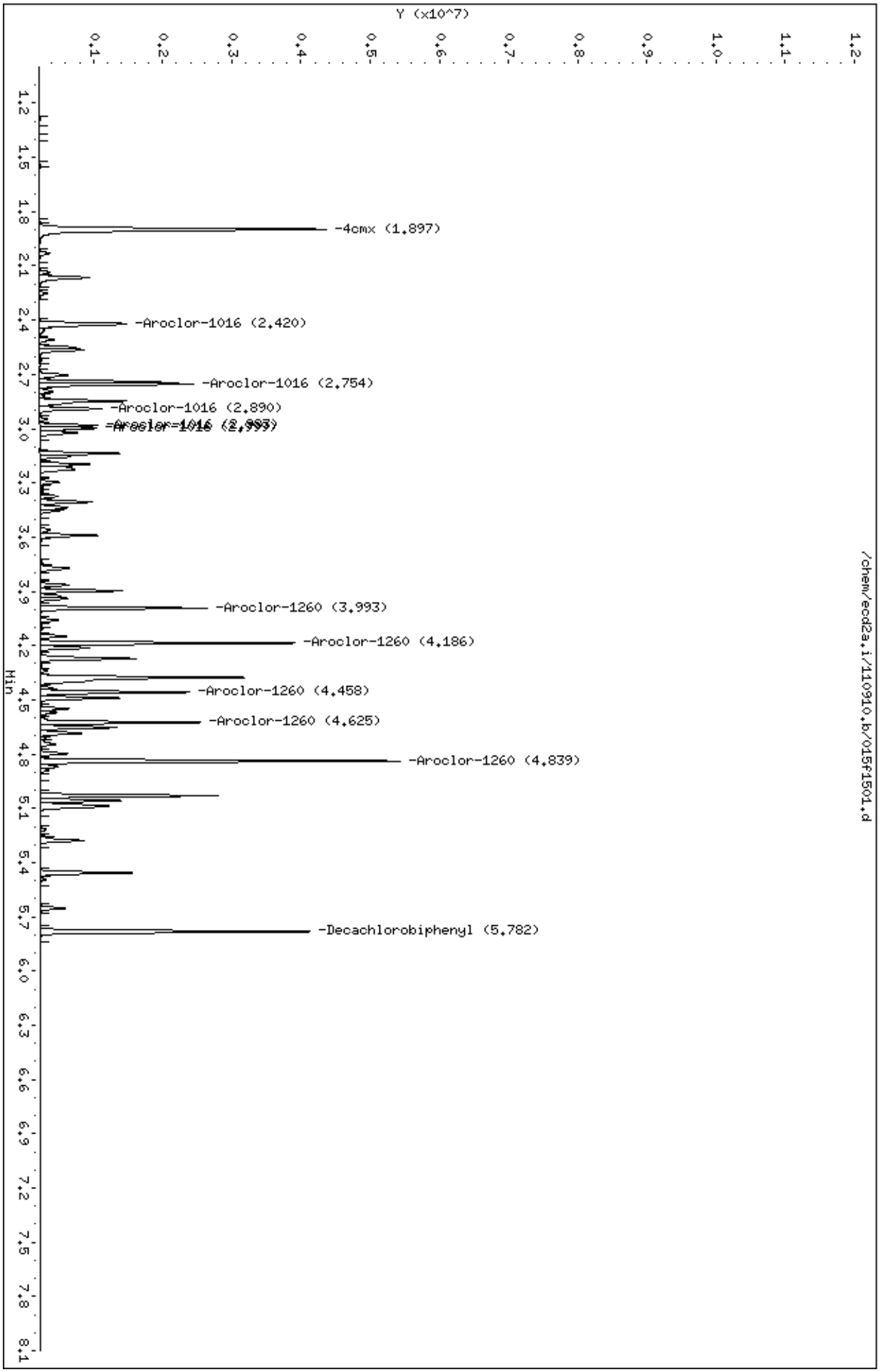
RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/110910.b/015f1501.d
Lab Smp Id: WAR101109-04 60 Client Smp ID: AR166004
Inj Date : 09-NOV-2010 10:35
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101109-04 60
Misc Info :
Comment :
Method : /chem/ecd2a.i/110910.b/ECD2-F-8082-100510.m
Meth Date : 09-Nov-2010 13:44 jen01212 Quant Type: ESTD
Cal Date : 06-OCT-2010 13:43 Cal File: 010f1001.d
Als bottle: 15 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.897	1.897	0.000	4609071	100.000	99.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.782	5.782	0.000	3539505	100.000	97.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.420	2.421	-0.001	1538115	1000.00	941	80.00- 120.00	100.00
2.754	2.754	0.000	2089189	1000.00	1000	114.85- 154.85	135.83
2.890	2.891	-0.001	813500	1000.00	949	33.34- 73.34	52.89
2.983	2.983	0.000	685570	1000.00	923	24.73- 64.73	44.57
2.999	2.999	0.000	724163	1000.00	947	27.15- 67.15	47.08
Average of Peak Amounts =					953		
7 Aroclor-1260					CAS #: 11096-82-5		
3.993	3.993	0.000	2053162	1000.00	966	80.00- 120.00	100.00
4.186	4.187	-0.001	3112043	1000.00	974	132.73- 172.73	151.57
4.458	4.459	-0.001	1853138	1000.00	962	70.57- 110.57	90.26
4.625	4.626	-0.001	2028245	1000.00	965	79.75- 119.75	98.79
4.839	4.839	0.000	4433589	1000.00	983	199.09- 239.09	215.94
Average of Peak Amounts =					970		

Data File: /chem/ecd2a.i/110910.b/015f1501.d
Date : 09-NOV-2010 10:35
Client ID: AR166004
Sample Info: IWAR101109-04 60
Column phase: CLP1

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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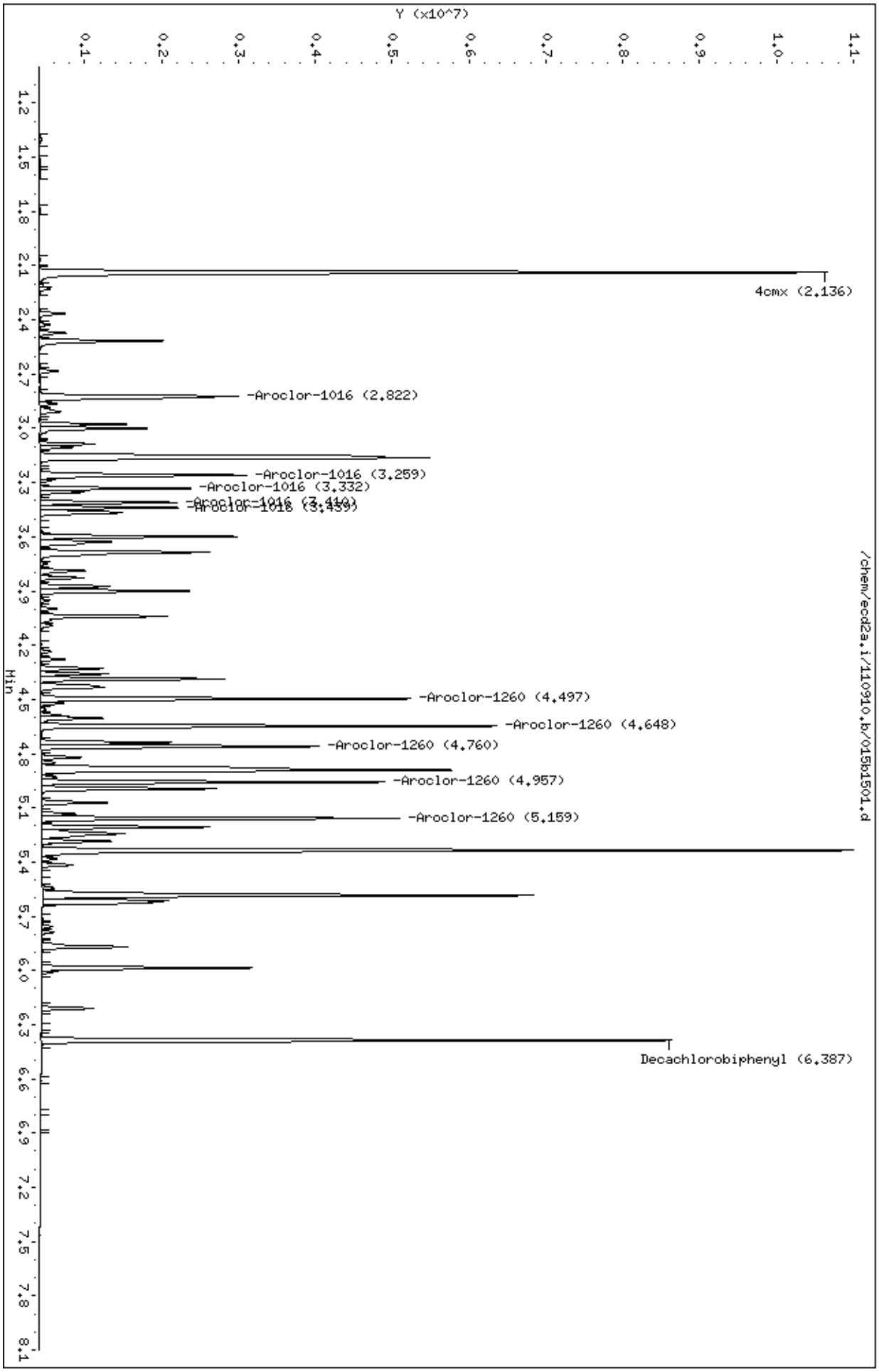
RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/110910.b/015b1501.d
Lab Smp Id: WAR101109-04 60 Client Smp ID: AR166004
Inj Date : 09-NOV-2010 10:35
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101109-04 60
Misc Info :
Comment :
Method : /chem/ecd2a.i/110910.b/ECD2-B-8082-100510.m
Meth Date : 09-Nov-2010 13:44 jen01212 Quant Type: ESTD
Cal Date : 06-OCT-2010 13:43 Cal File: 010b1001.d
Als bottle: 15 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.136	2.137	-0.001	9928707	100.000	98.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.387	6.388	-0.001	7315166	100.000	95.9	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.822	2.823	-0.001	3232704	1000.00	938	80.00- 120.00	100.00
3.259	3.260	-0.001	2596831	1000.00	936	61.28- 101.28	80.33
3.332	3.333	-0.001	1616416	1000.00	955	30.64- 70.64	50.00
3.410	3.411	-0.001	1486706	1000.00	937	26.52- 66.52	45.99
3.439	3.440	-0.001	1558180	1000.00	944	28.27- 68.27	48.20
Average of Peak Amounts =					942		
7 Aroclor-1260					CAS #: 11096-82-5		
4.497	4.498	-0.001	4125775	1000.00	950	80.00- 120.00	100.00
4.648	4.648	0.000	5025541	1000.00	952	102.65- 142.65	121.81
4.760	4.761	-0.001	3469132	1000.00	959	63.52- 103.52	84.08
4.957	4.958	-0.001	3781920	1000.00	951	72.18- 112.18	91.67
5.159	5.158	0.001	3998684	1000.00	956	77.59- 117.59	96.92
Average of Peak Amounts =					954		

Data File: /chem/ecd2a.i/110910.b/015b1501.d
Date : 09-NOV-2010 10:35
Client ID: AR166004
Sample Info: IWAR101109-04 60
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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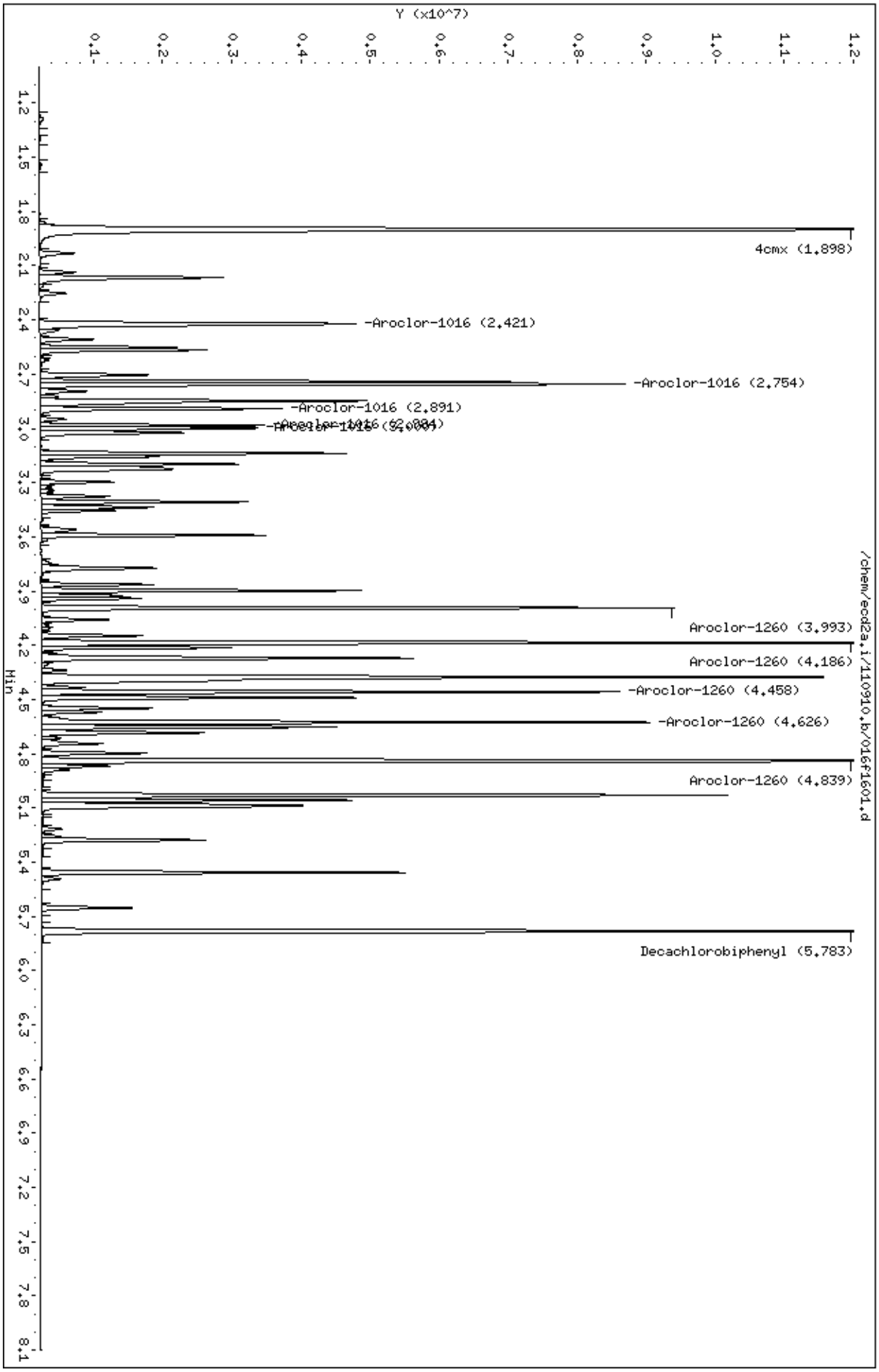
RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/110910.b/016f1601.d
Lab Smp Id: IAR100930-01 60 Client Smp ID: AR166005
Inj Date : 09-NOV-2010 10:46
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |IAR100930-01 60
Misc Info :
Comment :
Method : /chem/ecd2a.i/110910.b/ECD2-F-8082-100510.m
Meth Date : 09-Nov-2010 13:44 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 16 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.898	1.897	0.001	17389756	400.000	369	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.783	5.782	0.001	13470363	400.000	367	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.421	2.421	0.000	5549816	4000.00	3360	80.00- 120.00	100.00
2.754	2.754	0.000	7702221	4000.00	3630	114.85- 154.85	138.78
2.891	2.891	0.000	3086453	4000.00	3560	33.34- 73.34	55.61
2.984	2.983	0.001	2615380	4000.00	3500	24.73- 64.73	47.13
3.000	2.999	0.001	2727549	4000.00	3510	27.15- 67.15	49.15
Average of Peak Amounts =				3.51e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
3.993	3.993	0.000	7740823	4000.00	3600	80.00- 120.00	100.00
4.186	4.187	-0.001	11852338	4000.00	3660	132.73- 172.73	153.11
4.458	4.459	-0.001	7090294	4000.00	3630	70.57- 110.57	91.60
4.626	4.626	0.000	7772266	4000.00	3650	79.75- 119.75	100.41
4.839	4.839	0.000	16969171	4000.00	3720	199.09- 239.09	219.22
Average of Peak Amounts =				3.65e+03			

Data File: /chem/ecd2a.i/110910.b/016f1601.d
Date : 09-NOV-2010 10:46
Client ID: AR166005
Sample Info: IIAR100930-01 60
Column phase: CLP1

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/110910.b/016b1601.d
Lab Smp Id: IAR100930-01 60 Client Smp ID: AR166005
Inj Date : 09-NOV-2010 10:46
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |IAR100930-01 60
Misc Info :
Comment :
Method : /chem/ecd2a.i/110910.b/ECD2-B-8082-100510.m
Meth Date : 09-Nov-2010 13:44 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025b2501.d
Als bottle: 16 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

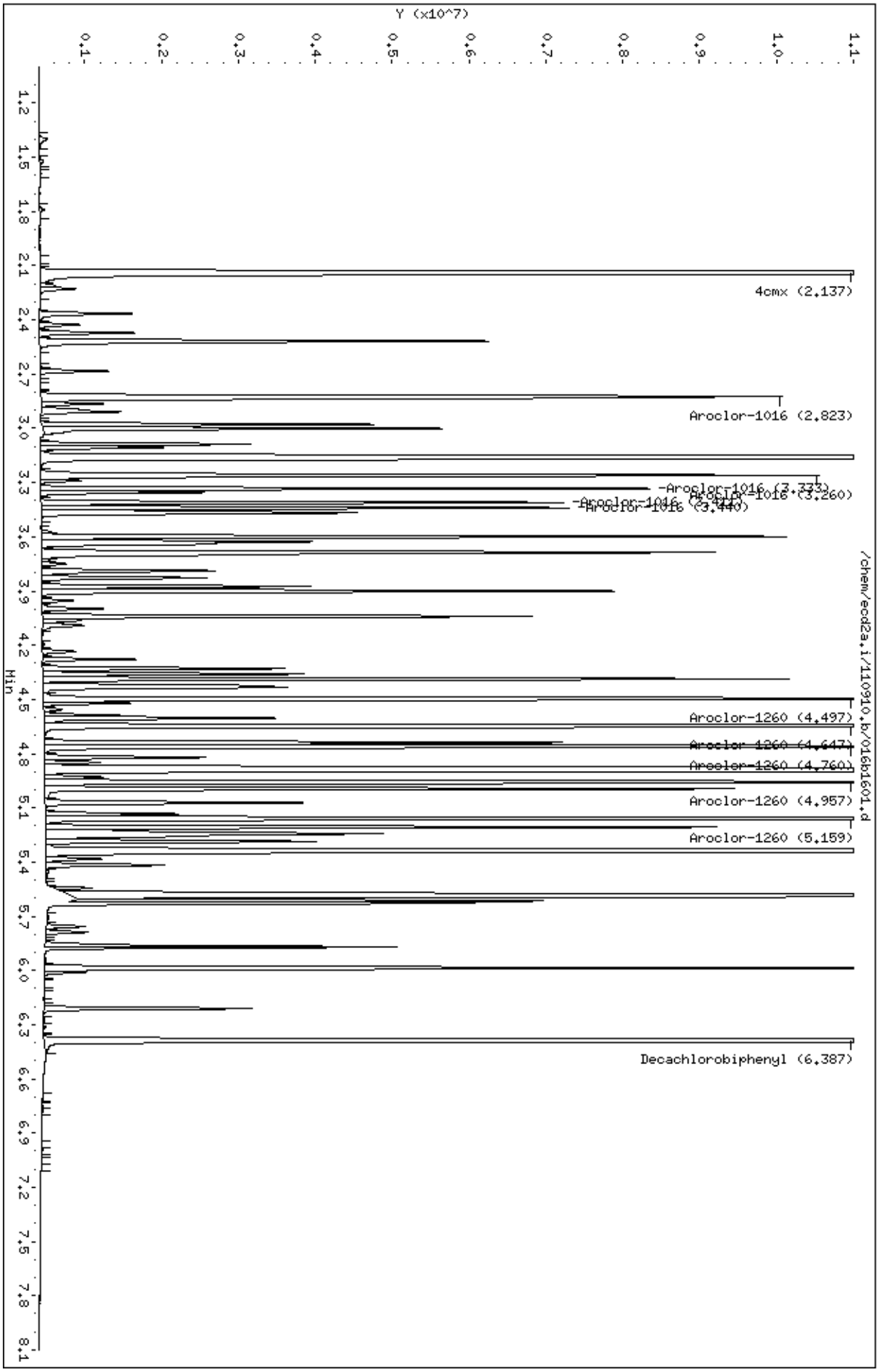
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.137	2.137	0.000	40949748	400.000	411	80.00- 120.00	100.00(A)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.387	6.388	-0.001	29396163	400.000	392	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.823	2.823	0.000	11997236	4000.00	3530	80.00- 120.00	100.00
3.260	3.260	0.000	9894968	4000.00	3620	61.28- 101.28	82.48
3.333	3.333	0.000	6361614	4000.00	3810	30.64- 70.64	53.03
3.411	3.411	0.000	5598422	4000.00	3580	26.52- 66.52	46.66
3.440	3.440	0.000	5855371	4000.00	3590	28.27- 68.27	48.81
Average of Peak Amounts =				3.62e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.497	4.498	-0.001	15983966	4000.00	3730	80.00- 120.00	100.00
4.647	4.648	-0.001	19650116	4000.00	3780	102.65- 142.65	122.94
4.760	4.761	-0.001	13696167	4000.00	3840	63.52- 103.52	85.69
4.957	4.958	-0.001	14833515	4000.00	3780	72.18- 112.18	92.80
5.159	5.158	0.001	15787562	4000.00	3820	77.59- 117.59	98.77
Average of Peak Amounts =				3.79e+03			

QC Flag Legend

A - Target compound detected but, quantitated amount
exceeded maximum amount.

Data File: /chem/ecd2a.i/110910.b/016b1601.d
Date : 09-NOV-2010 10:46
Client ID: AR166005
Sample Info: IIAR100930-01 60
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

Instrument ID: ECD2A Calibration Date: 11/16/10 Time: 0758

Lab File ID: 002F0201 Init. Calib. Date(s): 11/09/10 11/09/10

Heated Purge: (Y/N) N Init. Calib. Times: 1001 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	___ RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	1652.530	1638.546	0.01	-0.8	15.0
(2)	2120.473	2267.871	0.01	7.0	15.0
(3)	866.685	884.298	0.01	2.0	15.0
(4)	747.359	761.818	0.01	1.9	15.0
(5)	776.561	771.698	0.01	-0.6	15.0
Aroclor-1260	2152.242	2367.754	0.01	10.0	15.0
(2)	3235.651	3585.100	0.01	10.8	15.0
(3)	1951.069	2142.032	0.01	9.8	15.0
(4)	2127.961	2336.539	0.01	9.8	15.0
(5)	4556.637	5058.989	0.01	11.0	15.0
4cmx	47148.612	51738.200	0.01	9.7	15.0
Decachlorobiphenyl	36731.820	39577.050	0.01	7.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

Instrument ID: ECD2A Calibration Date: 11/16/10 Time: 0758

Lab File ID: 002B0201 Init. Calib. Date(s): 11/09/10 11/09/10

Heated Purge: (Y/N) N Init. Calib. Times: 1001 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	___ RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	3400.667	3274.432	0.01	-3.7	15.0
(2)	2736.962	2657.138	0.01	-2.9	15.0
(3)	1669.249	1650.035	0.01	-1.2	15.0
(4)	1565.716	1532.683	0.01	-2.1	15.0
(5)	1630.293	1593.980	0.01	-2.2	15.0
Aroclor-1260	4280.838	4515.214	0.01	5.5	15.0
(2)	5196.605	5509.552	0.01	6.0	15.0
(3)	3567.029	3769.764	0.01	5.7	15.0
(4)	3923.594	4161.292	0.01	6.0	15.0
(5)	4129.230	4389.830	0.01	6.3	15.0
4cmx	99515.644	106826.45	0.01	7.3	15.0
Decachlorobiphenyl	74963.382	78117.180	0.01	4.2	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

Instrument ID: ECD2A Calibration Date: 11/16/10 Time: 1112

Lab File ID: 018F1801 Init. Calib. Date(s): 11/09/10 11/09/10

Heated Purge: (Y/N) N Init. Calib. Times: 1001 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	___ RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	1652.530	1614.972	0.01	-2.3	15.0
(2)	2120.473	2244.229	0.01	5.8	15.0
(3)	866.685	884.318	0.01	2.0	15.0
(4)	747.359	746.830	0.01	-0.1	15.0
(5)	776.561	766.584	0.01	-1.3	15.0
Aroclor-1260	2152.242	2339.856	0.01	8.7	15.0
(2)	3235.651	3573.470	0.01	10.4	15.0
(3)	1951.069	2131.215	0.01	9.2	15.0
(4)	2127.961	2333.418	0.01	9.6	15.0
(5)	4556.637	5111.536	0.01	12.2	15.0
4cmx	47148.612	50898.840	0.01	8.0	15.0
Decachlorobiphenyl	36731.820	40067.940	0.01	9.1	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

Instrument ID: ECD2A Calibration Date: 11/16/10 Time: 1112

Lab File ID: 018B1801 Init. Calib. Date(s): 11/09/10 11/09/10

Heated Purge: (Y/N) N Init. Calib. Times: 1001 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	___ RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	3400.667	3249.785	0.01	-4.4	15.0
(2)	2736.962	2665.392	0.01	-2.6	15.0
(3)	1669.249	1672.956	0.01	0.2	15.0
(4)	1565.716	1523.384	0.01	-2.7	15.0
(5)	1630.293	1590.933	0.01	-2.4	15.0
Aroclor-1260	4280.838	4488.009	0.01	4.8	15.0
(2)	5196.605	5527.954	0.01	6.4	15.0
(3)	3567.029	3787.122	0.01	6.2	15.0
(4)	3923.594	4153.964	0.01	5.9	15.0
(5)	4129.230	4392.739	0.01	6.4	15.0
4cmx	99515.644	106073.20	0.01	6.6	15.0
Decachlorobiphenyl	74963.382	78279.210	0.01	4.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

Instrument ID: ECD2A Calibration Date: 11/16/10 Time: 1327

Lab File ID: 030F3001 Init. Calib. Date(s): 11/09/10 11/09/10

Heated Purge: (Y/N) N Init. Calib. Times: 1001 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	___ RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	1652.530	1616.181	0.01	-2.2	15.0
(2)	2120.473	2218.041	0.01	4.6	15.0
(3)	866.685	882.698	0.01	1.8	15.0
(4)	747.359	746.781	0.01	-0.1	15.0
(5)	776.561	764.083	0.01	-1.6	15.0
Aroclor-1260	2152.242	2342.607	0.01	8.8	15.0
(2)	3235.651	3589.812	0.01	10.9	15.0
(3)	1951.069	2136.611	0.01	9.5	15.0
(4)	2127.961	2343.324	0.01	10.1	15.0
(5)	4556.637	5185.163	0.01	13.8	15.0
4cmx	47148.612	51195.970	0.01	8.6	15.0
Decachlorobiphenyl	36731.820	40911.940	0.01	11.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

Instrument ID: ECD2A Calibration Date: 11/16/10 Time: 1327

Lab File ID: 030B3001 Init. Calib. Date(s): 11/09/10 11/09/10

Heated Purge: (Y/N) N Init. Calib. Times: 1001 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	___ RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	3400.667	3057.522	0.01	-10.1	15.0
(2)	2736.962	2512.626	0.01	-8.2	15.0
(3)	1669.249	1577.227	0.01	-5.5	15.0
(4)	1565.716	1434.135	0.01	-8.4	15.0
(5)	1630.293	1498.400	0.01	-8.1	15.0
Aroclor-1260	4280.838	4224.378	0.01	-1.3	15.0
(2)	5196.605	5206.276	0.01	0.2	15.0
(3)	3567.029	3567.196	0.01	0.0	15.0
(4)	3923.594	3912.289	0.01	-0.3	15.0
(5)	4129.230	4141.057	0.01	0.3	15.0
4cmx	99515.644	99582.880	0.01	0.1	15.0
Decachlorobiphenyl	74963.382	75209.280	0.01	0.3	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

Instrument ID: ECD2A Calibration Date: 11/16/10 Time: 1434

Lab File ID: 036F3601 Init. Calib. Date(s): 11/09/10 11/09/10

Heated Purge: (Y/N) N Init. Calib. Times: 1001 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	___ RRF	RRF 1000	MIN RRF	%D	MAX %D	
Aroclor-1016	1652.530	1634.828	0.01	-1.1	15.0	
(2)	2120.473	2333.826	0.01	10.1	15.0	
(3)	866.685	891.345	0.01	2.8	15.0	
(4)	747.359	742.464	0.01	-0.6	15.0	
(5)	776.561	780.202	0.01	0.5	15.0	
Aroclor-1260	2152.242	2377.327	0.01	10.4	15.0	
(2)	3235.651	3651.781	0.01	12.9	15.0	
(3)	1951.069	2170.308	0.01	11.2	15.0	
(4)	2127.961	2396.418	0.01	12.6	15.0	
(5)	4556.637	5284.700	0.01	16.0	15.0	<-
4cmx	47148.612	51929.380	0.01	10.1	15.0	
Decachlorobiphenyl	36731.820	41946.750	0.01	14.2	15.0	

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

Instrument ID: ECD2A Calibration Date: 11/16/10 Time: 1434

Lab File ID: 036B3601 Init. Calib. Date(s): 11/09/10 11/09/10

Heated Purge: (Y/N) N Init. Calib. Times: 1001 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	___ RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	3400.667	3103.156	0.01	-8.7	15.0
(2)	2736.962	2554.482	0.01	-6.7	15.0
(3)	1669.249	1593.423	0.01	-4.5	15.0
(4)	1565.716	1457.318	0.01	-6.9	15.0
(5)	1630.293	1511.887	0.01	-7.3	15.0
Aroclor-1260	4280.838	4287.921	0.01	0.2	15.0
(2)	5196.605	5289.980	0.01	1.8	15.0
(3)	3567.029	3608.506	0.01	1.2	15.0
(4)	3923.594	3973.043	0.01	1.3	15.0
(5)	4129.230	4217.224	0.01	2.1	15.0
4cmx	99515.644	101287.59	0.01	1.8	15.0
Decachlorobiphenyl	74963.382	76782.960	0.01	2.4	15.0

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/002f0201.d
Lab Smp Id: WAR101104-60 01 Client Smp ID: AR166001
Inj Date : 16-NOV-2010 07:58
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101104-60 01
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 12:04 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.893	1.893	0.000	5173820	100.000	110	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.778	5.778	0.000	3957705	100.000	108	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.416	2.416	0.000	1638545	1000.00	992	80.00- 120.00	100.00
2.750	2.750	0.000	2267870	1000.00	1070	118.96- 158.96	138.41
2.886	2.886	0.000	884298	1000.00	1020	34.76- 74.76	53.97
2.979	2.979	0.000	761818	1000.00	1020	26.24- 66.24	46.49
2.995	2.995	0.000	771698	1000.00	994	27.47- 67.47	47.10
Average of Peak Amounts =				1.02e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
3.990	3.990	0.000	2367754	1000.00	1100	80.00- 120.00	100.00
4.182	4.182	0.000	3585099	1000.00	1110	132.72- 172.72	151.41
4.455	4.455	0.000	2142032	1000.00	1100	71.08- 111.08	90.47
4.621	4.621	0.000	2336539	1000.00	1100	79.72- 119.72	98.68
4.835	4.835	0.000	5058988	1000.00	1110	198.46- 238.46	213.66
Average of Peak Amounts =				1.1e+03			

Data File: /chem/ecd2a.i/111610.b/002f0201.d

Page 1

Date : 16-NOV-2010 07:58

Client ID: AR166001

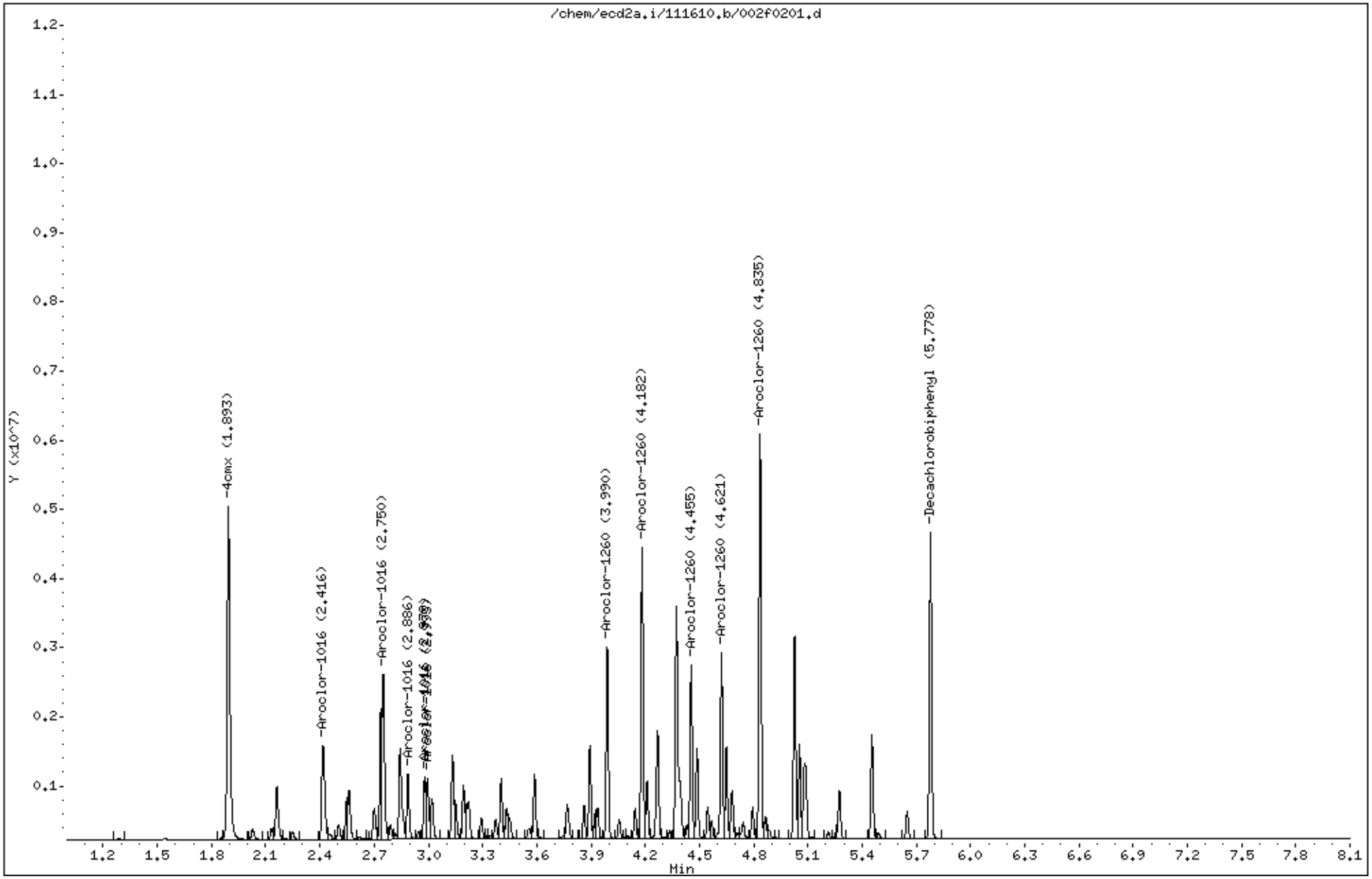
Instrument: ecd2a.i

Sample Info: IWAR101104-60 01

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

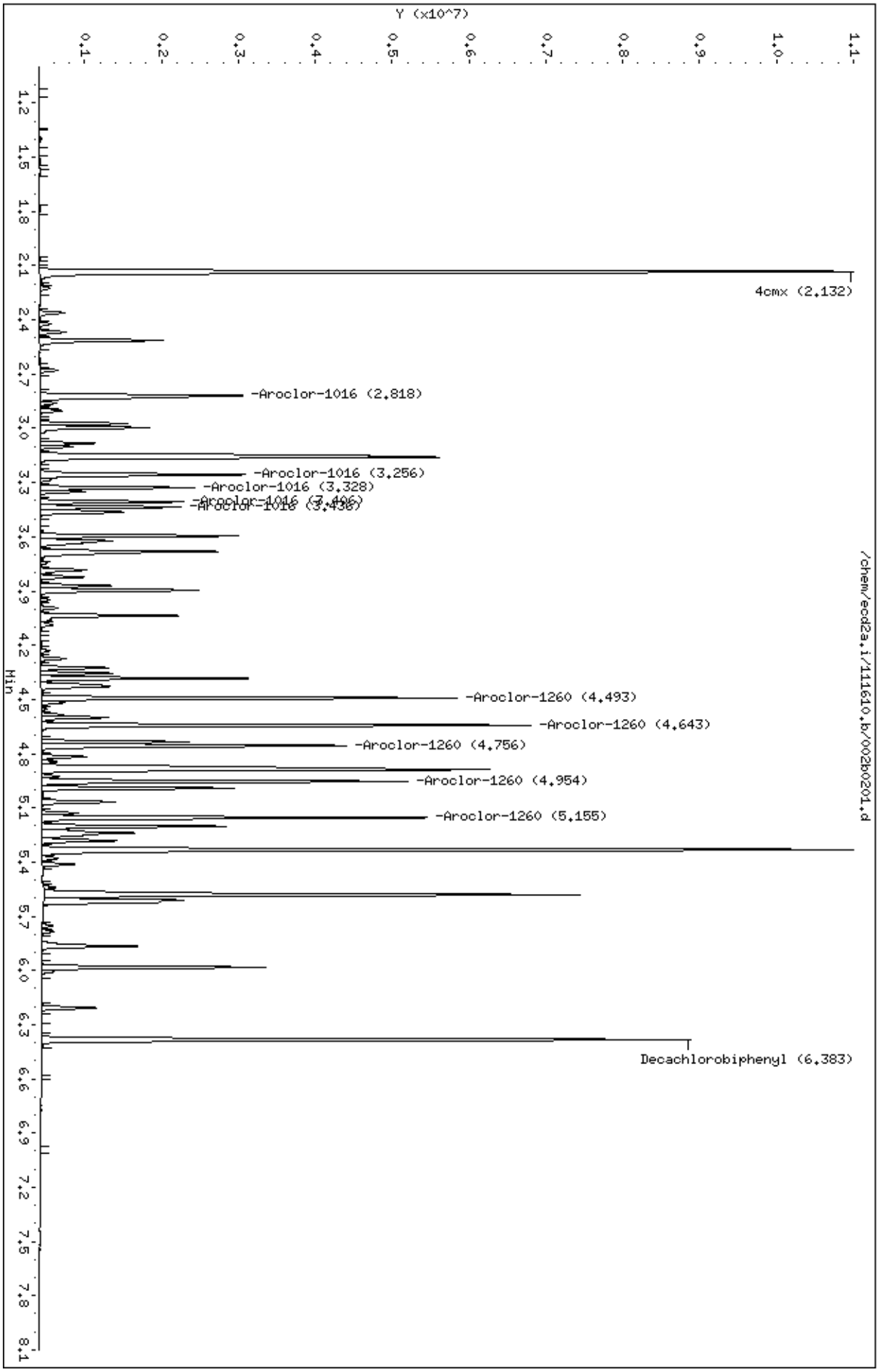
RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/002b0201.d
Lab Smp Id: WAR101104-60 01 Client Smp ID: AR166001
Inj Date : 16-NOV-2010 07:58
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101104-60 01
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 12:03 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.132	2.132	0.000	10682645	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	7811718	100.000	104	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.818	2.818	0.000	3274431	1000.00	963	80.00- 120.00	100.00
3.256	3.256	0.000	2657138	1000.00	971	62.02- 102.02	81.15
3.328	3.328	0.000	1650035	1000.00	988	31.48- 71.48	50.39
3.406	3.406	0.000	1532683	1000.00	979	26.88- 66.88	46.81
3.436	3.436	0.000	1593979	1000.00	978	28.96- 68.96	48.68
Average of Peak Amounts =					976		
7 Aroclor-1260					CAS #: 11096-82-5		
4.493	4.493	0.000	4515214	1000.00	1050	80.00- 120.00	100.00
4.643	4.643	0.000	5509551	1000.00	1060	103.17- 143.17	122.02
4.756	4.756	0.000	3769763	1000.00	1060	64.38- 104.38	83.49
4.954	4.954	0.000	4161291	1000.00	1060	72.56- 112.56	92.16
5.155	5.155	0.000	4389829	1000.00	1060	77.88- 117.88	97.22
Average of Peak Amounts =					1.06e+03		

Data File: /chem/ecd2a.i/111610.b/002b0201.d
Date : 16-NOV-2010 07:58
Client ID: AR166001
Sample Info: IWAR101104-60 01
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/003f0301.d
Lab Smp Id: WAR101028-54 Client Smp ID: AR125401
Inj Date : 16-NOV-2010 08:09
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101028-54
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 12:04 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.894	1.893	0.001	4853866	100.000	103	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.779	5.778	0.001	3733367	100.000	102	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.403	3.403	0.000	1551195	1000.00	1030	80.00- 120.00	100.00
3.587	3.587	0.000	2095729	1000.00	1040	115.10- 155.10	135.10
3.776	3.776	0.000	1625211	1000.00	1050	84.77- 124.77	104.77
3.861	3.861	0.000	2841256	1000.00	1060	163.17- 203.17	183.17
4.053	4.053	0.000	2115730	1000.00	1050	116.39- 156.39	136.39

Average of Peak Amounts = 1.05e+03

Data File: /chem/ecd2a.i/111610.b/003f0301.d

Page 1

Date : 16-NOV-2010 08:09

Client ID: AR125401

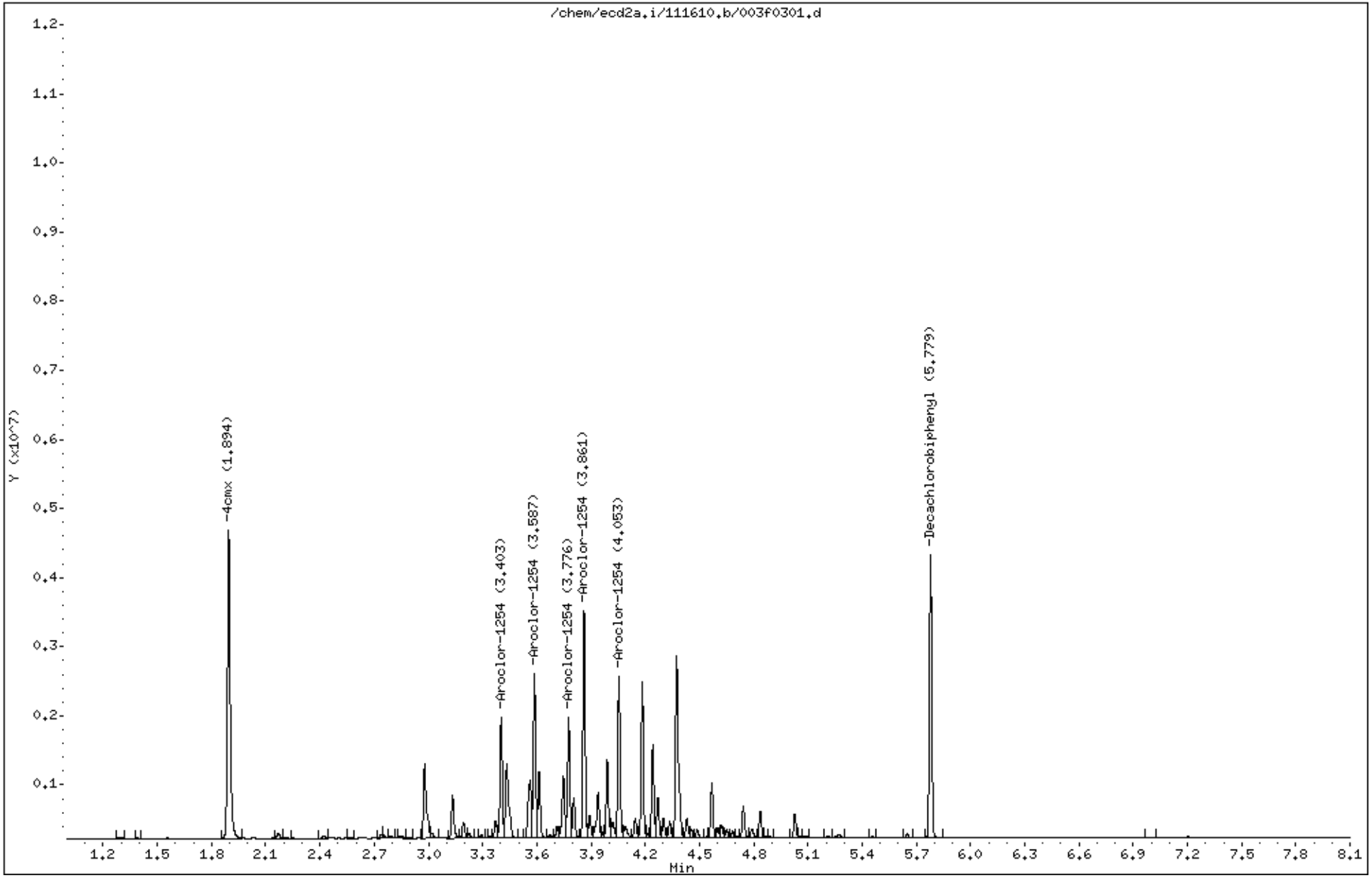
Instrument: ecd2a.i

Sample Info: IWAR101028-54

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

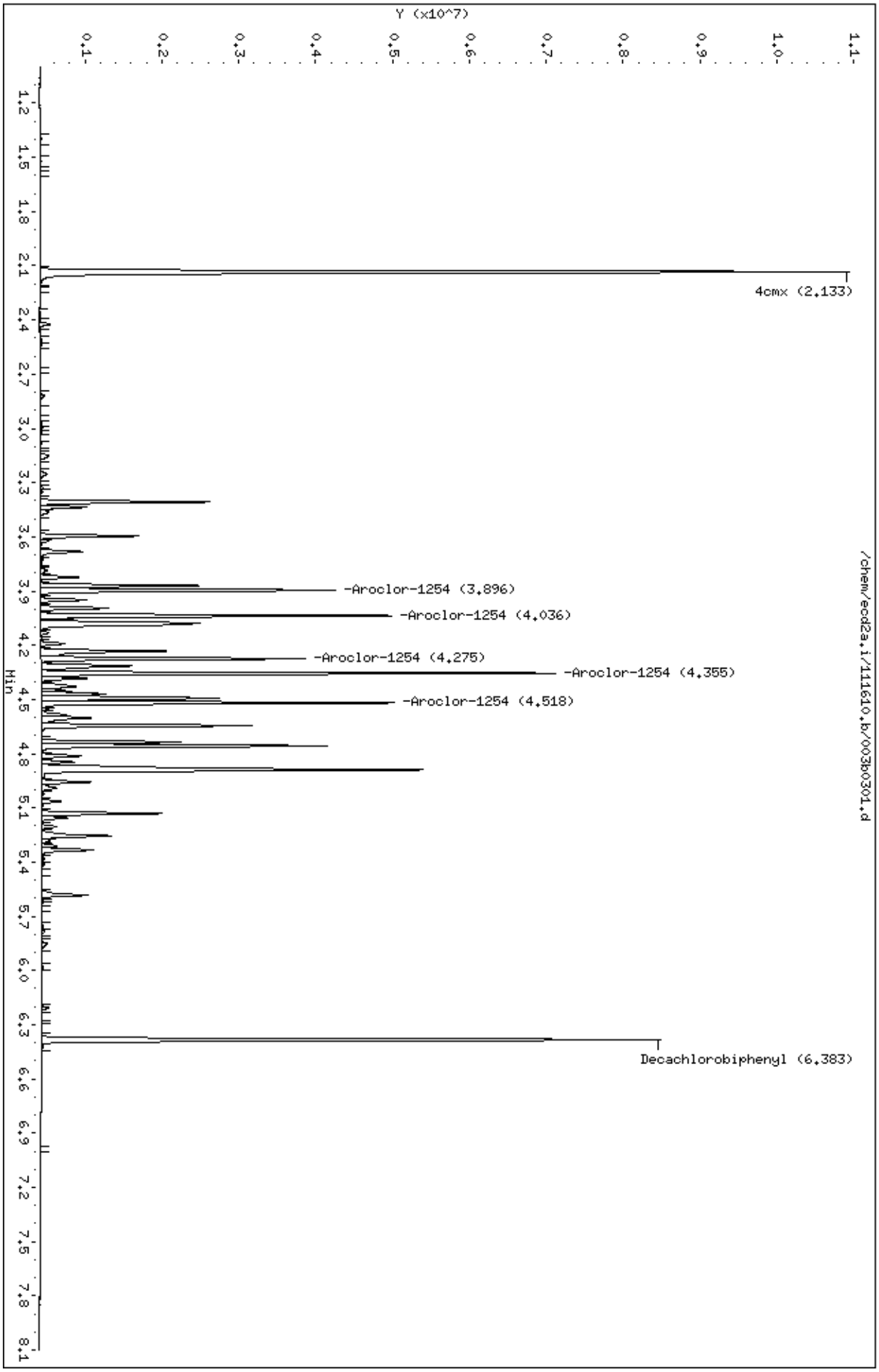
RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/003b0301.d
Lab Smp Id: WAR101028-54 Client Smp ID: AR125401
Inj Date : 16-NOV-2010 08:09
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101028-54
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 12:03 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.133	2.132	0.001	10048526	100.000	101	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	7397245	100.000	98.7	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.896	3.896	0.000	3422889	1000.00	908	80.00- 120.00	100.00
4.036	4.036	0.000	3880541	1000.00	908	93.37- 133.37	113.37
4.275	4.275	0.000	2911479	1000.00	919	65.06- 105.06	85.06
4.355	4.355	0.000	5539564	1000.00	925	141.84- 181.84	161.84
4.518	4.518	0.000	3916910	1000.00	899	94.43- 134.43	114.43
Average of Peak Amounts =					912		

Data File: /chem/ecd2a.i/111610.b/003b0301.d
Date : 16-NOV-2010 08:09
Client ID: AR125401
Sample Info: IWAR101028-54
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/004f0401.d
Lab Smp Id: WAR101028-42 Client Smp ID: AR124201
Inj Date : 16-NOV-2010 08:20
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101028-42
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 12:04 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.894	1.893	0.001	4711122	100.000	99.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.779	5.778	0.001	3603280	100.000	98.1	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.417	2.417	0.000	1316288	1000.00	951	80.00- 120.00	100.00
2.750	2.750	0.000	1788202	1000.00	1010	115.85- 155.85	135.85
2.887	2.887	0.000	694094	1000.00	975	32.73- 72.73	52.73
2.979	2.979	0.000	572993	1000.00	945	23.53- 63.53	43.53
3.134	3.134	0.000	888080	1000.00	957	47.47- 87.47	67.47
Average of Peak Amounts =					968		

Data File: /chem/ecd2a.i/111610.b/004f0401.d

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Date : 16-NOV-2010 08:20

Client ID: AR124201

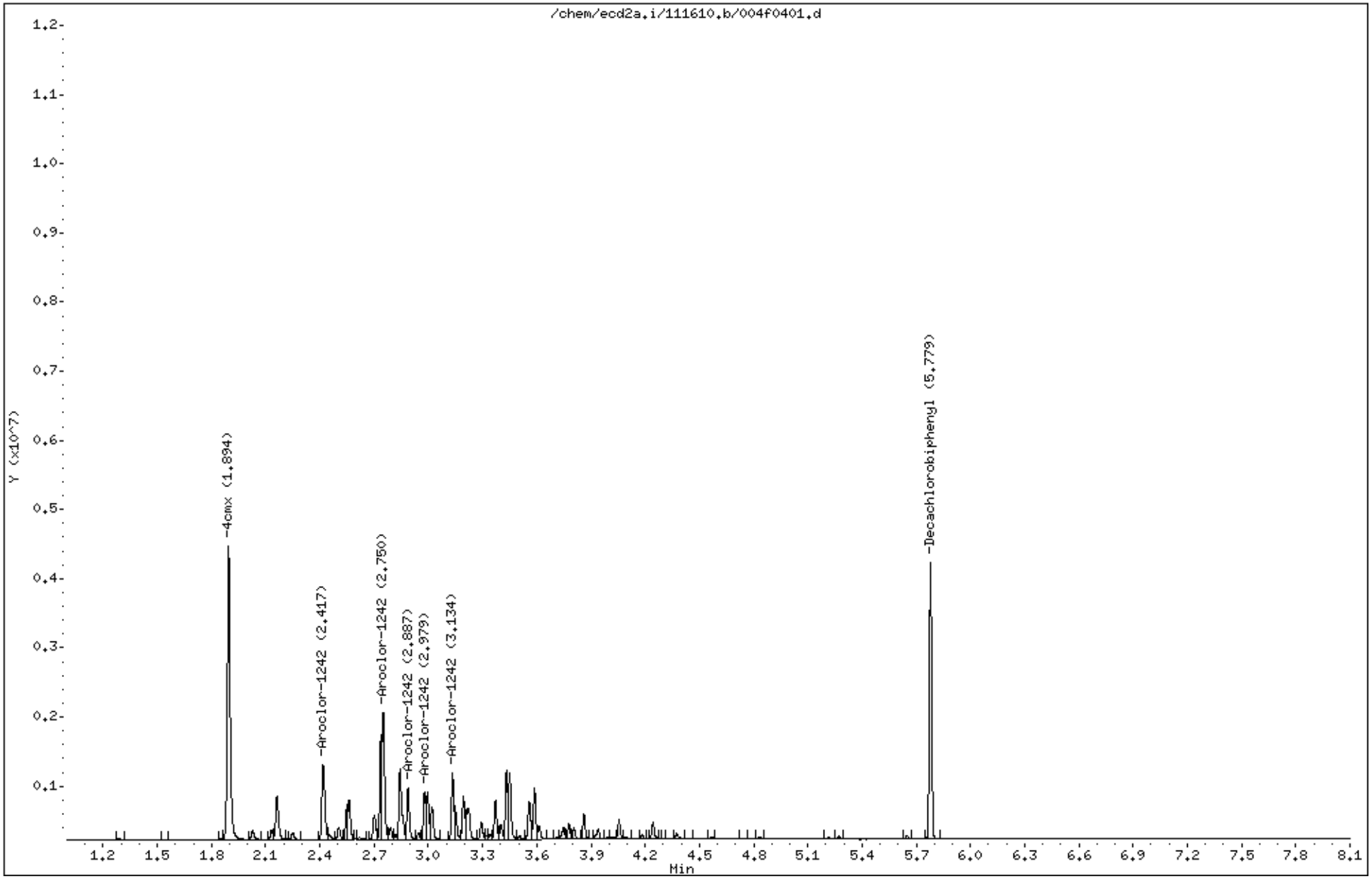
Instrument: ecd2a.i

Sample Info: IWAR101028-42

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



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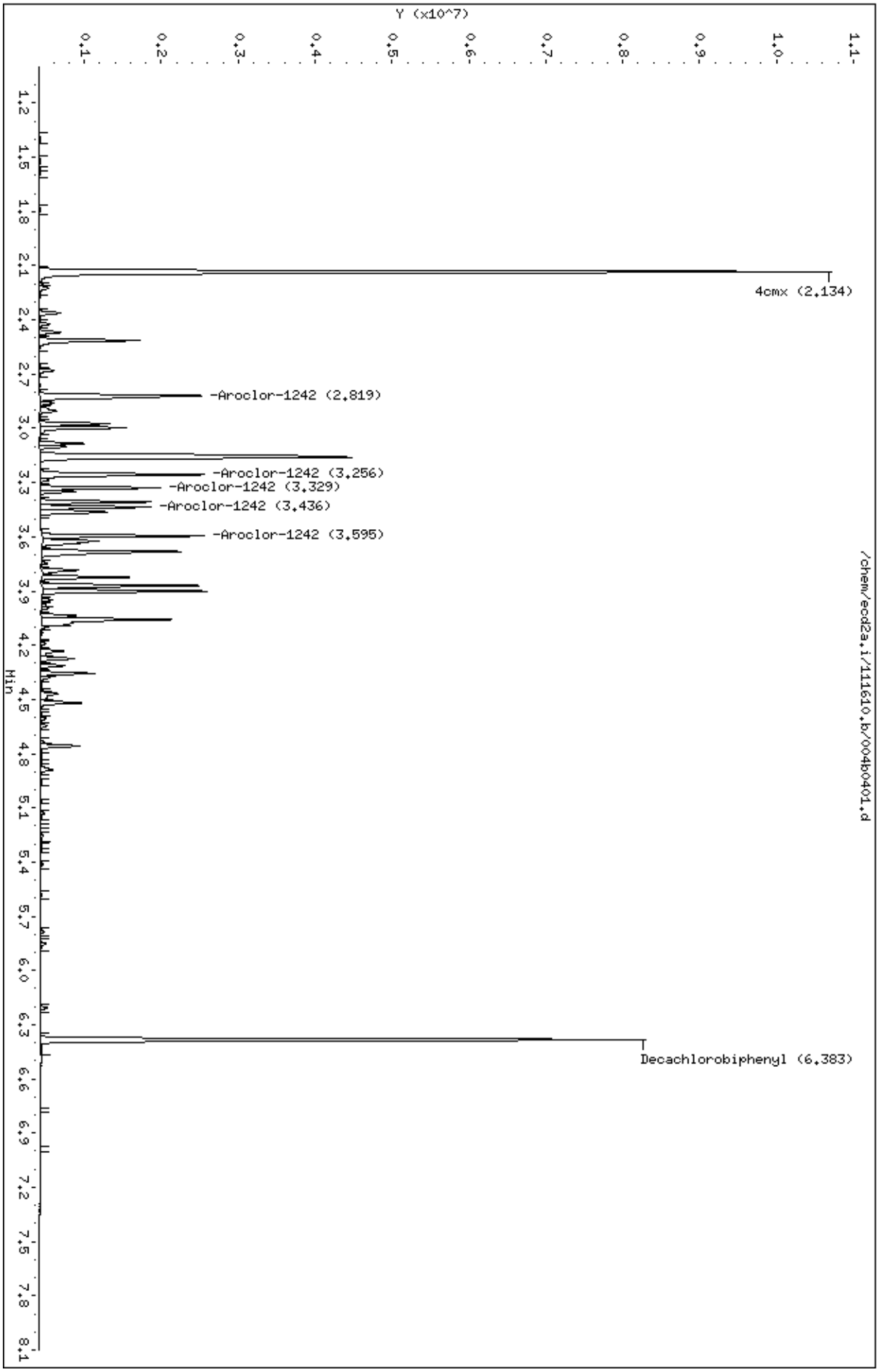
RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/004b0401.d
Lab Smp Id: WAR101028-42 Client Smp ID: AR124201
Inj Date : 16-NOV-2010 08:20
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101028-42
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 12:03 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.134	2.132	0.002	9700671	100.000	97.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	7128089	100.000	95.1	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.819	2.819	0.000	2641132	1000.00	935	80.00- 120.00	100.00
3.256	3.256	0.000	2111654	1000.00	935	59.95- 99.95	79.95
3.329	3.329	0.000	1296336	1000.00	953	29.08- 69.08	49.08
3.436	3.436	0.000	1280620	1000.00	942	28.49- 68.49	48.49
3.595	3.595	0.000	1679868	1000.00	920	43.60- 83.60	63.60
Average of Peak Amounts =					937		

Data File: /chem/ecd2a.i/111610.b/004b0401.d
Date : 16-NOV-2010 08:20
Client ID: AR124201
Sample Info: IWAR101028-42
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/005f0501.d
Lab Smp Id: WAR101028-48 Client Smp ID: AR124801
Inj Date : 16-NOV-2010 08:31
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101028-48
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 12:04 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.894	1.893	0.001	4811257	100.000	102	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.779	5.778	0.001	3734515	100.000	102	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
2.750	2.750	0.000	1061654	1000.00	1010	80.00- 120.00	100.00
2.980	2.980	0.000	1241735	1000.00	1030	96.96- 136.96	116.96
3.134	3.134	0.000	1666843	1000.00	1050	137.00- 177.00	157.00
3.372	3.372	0.000	960179	1000.00	1030	70.44- 110.44	90.44
3.433	3.433	0.000	1919194	1000.00	1050	160.77- 200.77	180.77

Average of Peak Amounts = 1.03e+03

Data File: /chem/ecd2a.i/111610.b/005f0501.d

Page 1

Date : 16-NOV-2010 08:31

Client ID: AR124801

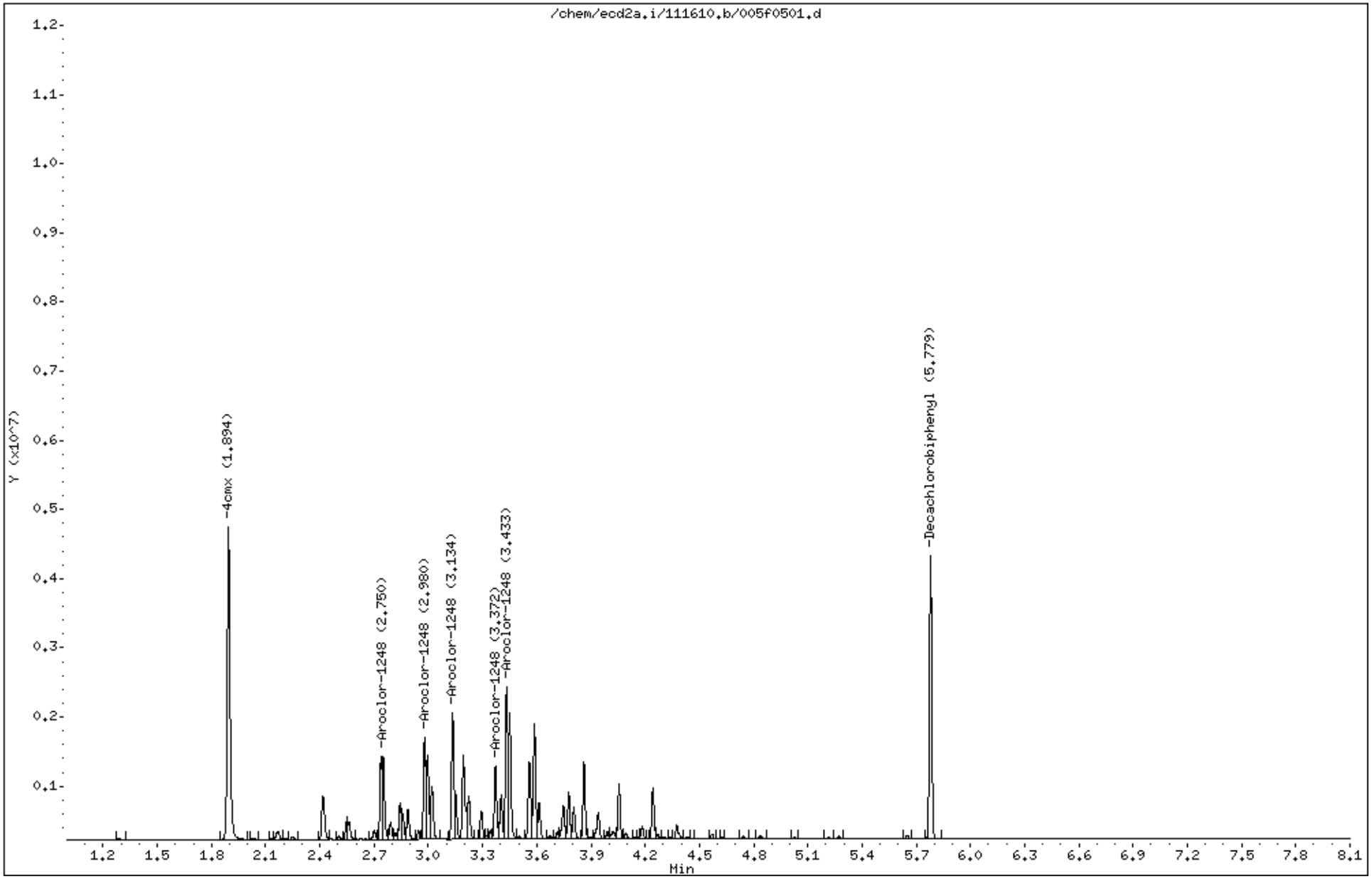
Instrument: ecd2a.i

Sample Info: IWAR101028-48

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25

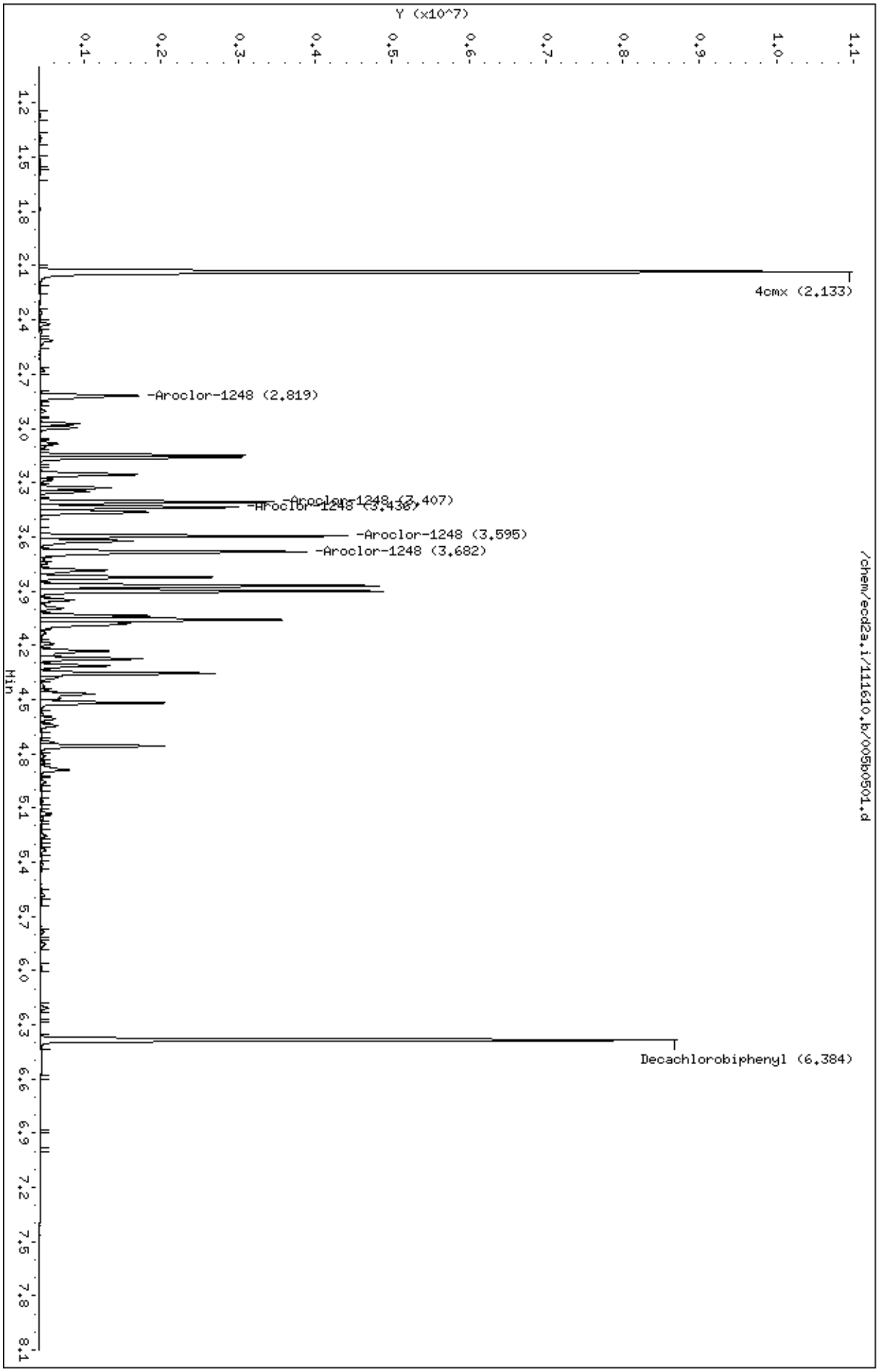


GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/005b0501.d
Lab Smp Id: WAR101028-48 Client Smp ID: AR124801
Inj Date : 16-NOV-2010 08:31
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101028-48
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 12:03 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.133	2.132	0.001	10004617	100.000	100	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.384	6.383	0.001	7382732	100.000	98.5	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
2.819	2.819	0.000	1432885	1000.00	846	80.00- 120.00	100.00
3.407	3.407	0.000	2502931	1000.00	908	154.68- 194.68	174.68
3.436	3.436	0.000	2199302	1000.00	906	133.49- 173.49	153.49
3.595	3.595	0.000	3237300	1000.00	918	205.93- 245.93	225.93
3.682	3.682	0.000	3464554	1000.00	916	221.79- 261.79	241.79
Average of Peak Amounts =					899		


Data File: /chem/ecd2a.i/111610.b/005b0501.d
Date : 16-NOV-2010 08:31
Client ID: AR124801
Sample Info: IWAR101028-48
Column phase: CLP2
Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25
/chem/ecd2a.i/111610.b/005b0501.d
Y (x10^7)
Min
4cmx (2.133)
-Aroclor-1248 (2.819)
-Aroclor-1248 (3.407)
-Aroclor-1248 (3.436)
-Aroclor-1248 (3.595)
-Aroclor-1248 (3.682)
Decachlorobiphenyl (6.384)

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

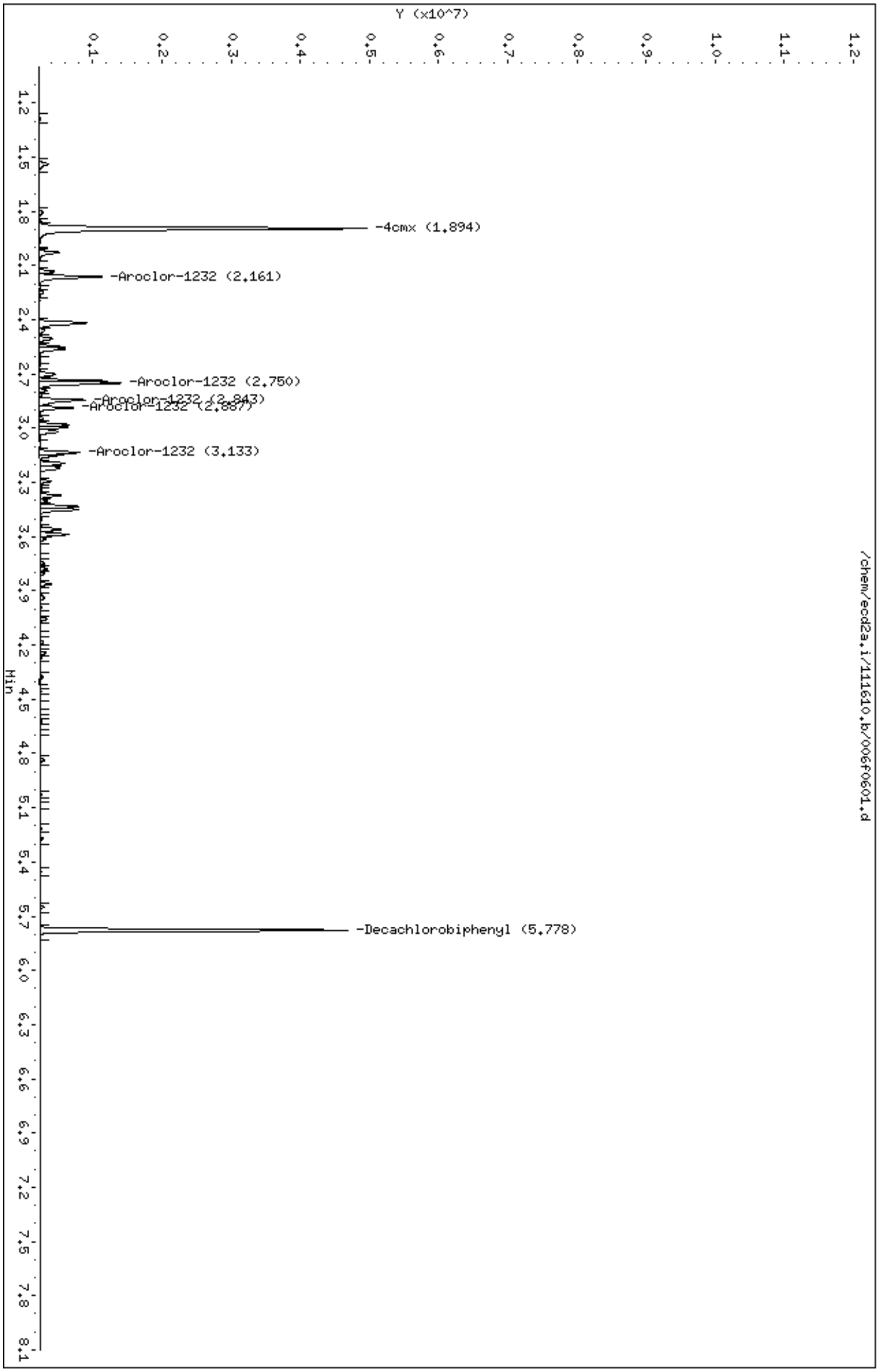
Data file : /chem/ecd2a.i/111610.b/006f0601.d
Lab Smp Id: WAR100902-32 Client Smp ID: AR123201
Inj Date : 16-NOV-2010 08:43
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100902-32
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 12:04 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.894	1.893	0.001	5135129	100.000	109	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.778	5.778	0.000	4030663	100.000	110	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.161	2.161	0.000	978316	1000.00	1140	80.00- 120.00	100.00
2.750	2.750	0.000	1140083	1000.00	1190	96.54- 136.54	116.54
2.843	2.843	0.000	736588	1000.00	1160	55.29- 95.29	75.29
2.887	2.887	0.000	463512	1000.00	1170	27.38- 67.38	47.38
3.133	3.133	0.000	553853	1000.00	1170	36.61- 76.61	56.61

Average of Peak Amounts = 1.17e+03

Data File: /chem/ecd2a.i/111610.b/006f0601.d
Date : 16-NOV-2010 08:43
Client ID: AR123201
Sample Info: IWAR100902-32
Column phase: CLP1

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

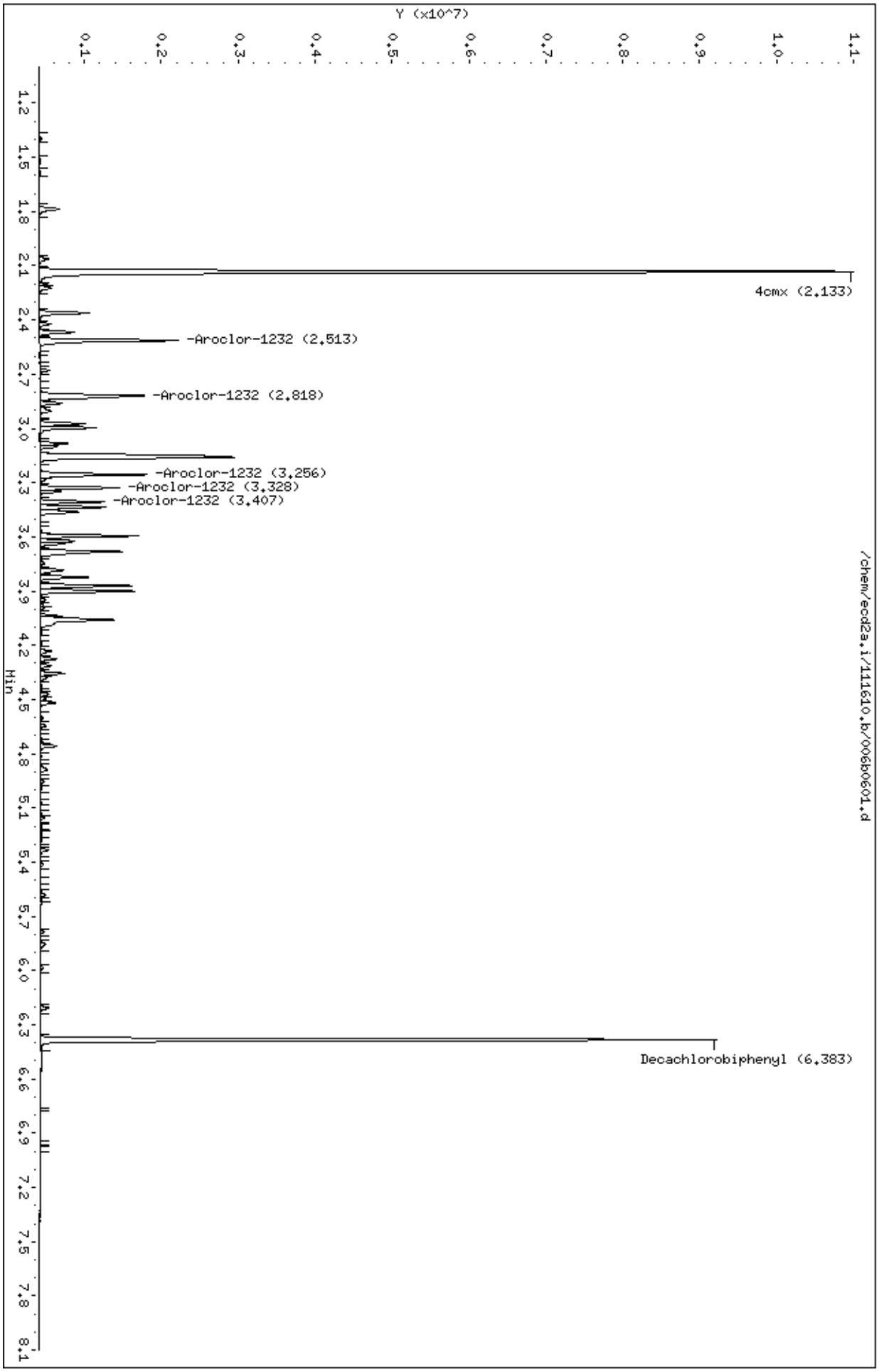
Data file : /chem/ecd2a.i/111610.b/006b0601.d
Lab Smp Id: WAR100902-32 Client Smp ID: AR123201
Inj Date : 16-NOV-2010 08:43
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100902-32
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 12:03 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.133	2.132	0.001	10667631	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	7967332	100.000	106	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.513	2.513	0.000	1796270	1000.00	1010	80.00- 120.00	100.00
2.818	2.818	0.000	1749504	1000.00	1010	77.40- 117.40	97.40
3.256	3.256	0.000	1370957	1000.00	1010	56.32- 96.32	76.32
3.328	3.328	0.000	853675	1000.00	1020	27.52- 67.52	47.52
3.407	3.407	0.000	710458	1000.00	1020	19.55- 59.55	39.55

Average of Peak Amounts = 1.02e+03

Data File: /chem/ecd2a.i/111610.b/006b0601.d
Date : 16-NOV-2010 08:43
Client ID: AR123201
Sample Info: IWAR100902-32
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/007f0701.d
Lab Smp Id: WAR100831-21 Client Smp ID: AR122101
Inj Date : 16-NOV-2010 08:54
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100831-21
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 12:04 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.893	1.893	0.000	5019008	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.778	5.778	0.000	3938475	100.000	107	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.027	2.027	0.000	557821	1000.00	932	80.00- 120.00	100.00
2.132	2.132	0.000	323935	1000.00	942	38.07- 78.07	58.07
2.161	2.161	0.000	1347603	1000.00	938	221.58- 261.58	241.58
Average of Peak Amounts =					937		

Data File: /chem/ecd2a.i/111610.b/007f0701.d

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Date : 16-NOV-2010 08:54

Client ID: AR122101

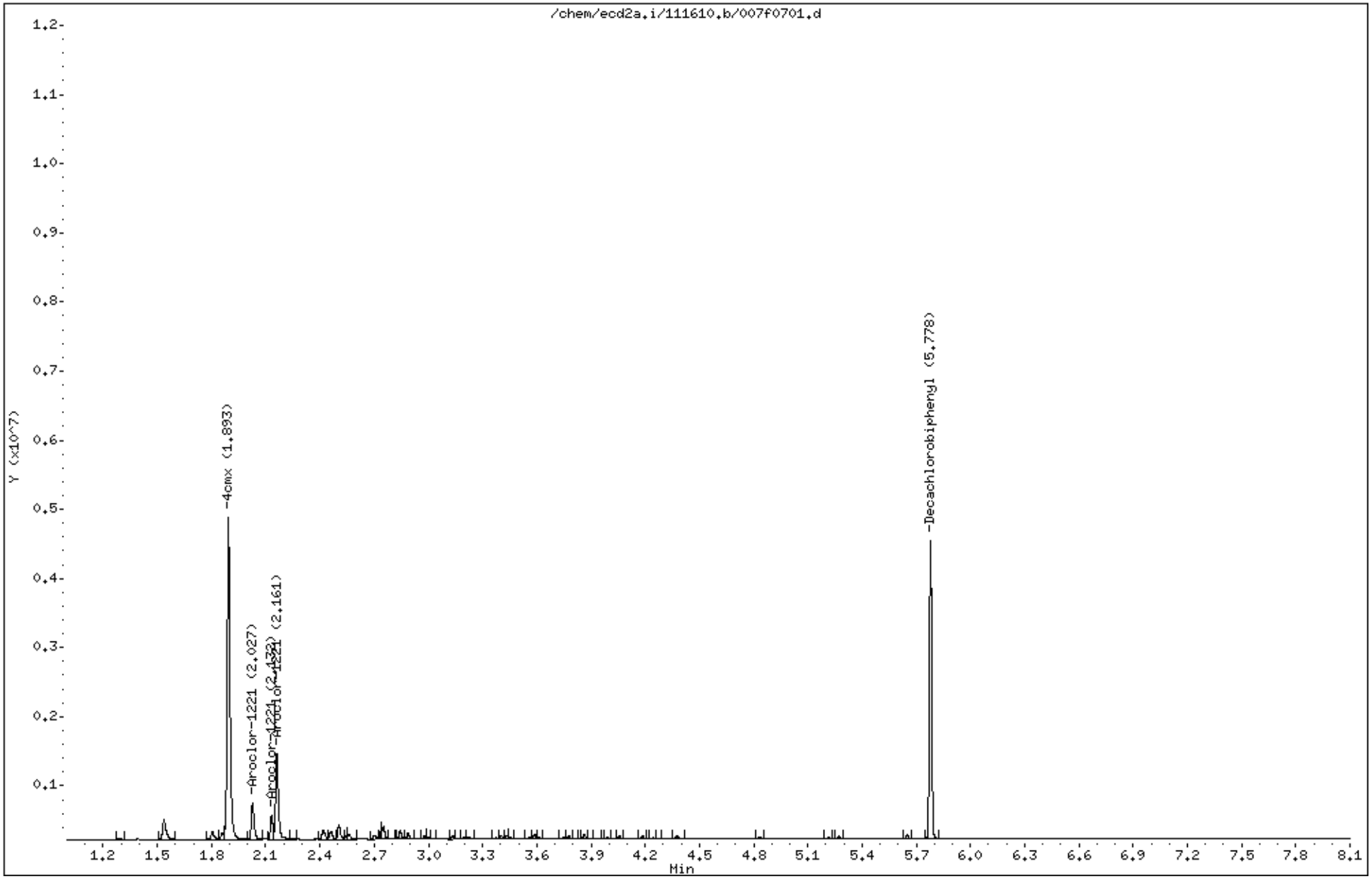
Instrument: ecd2a.i

Sample Info: IWAR100831-21

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



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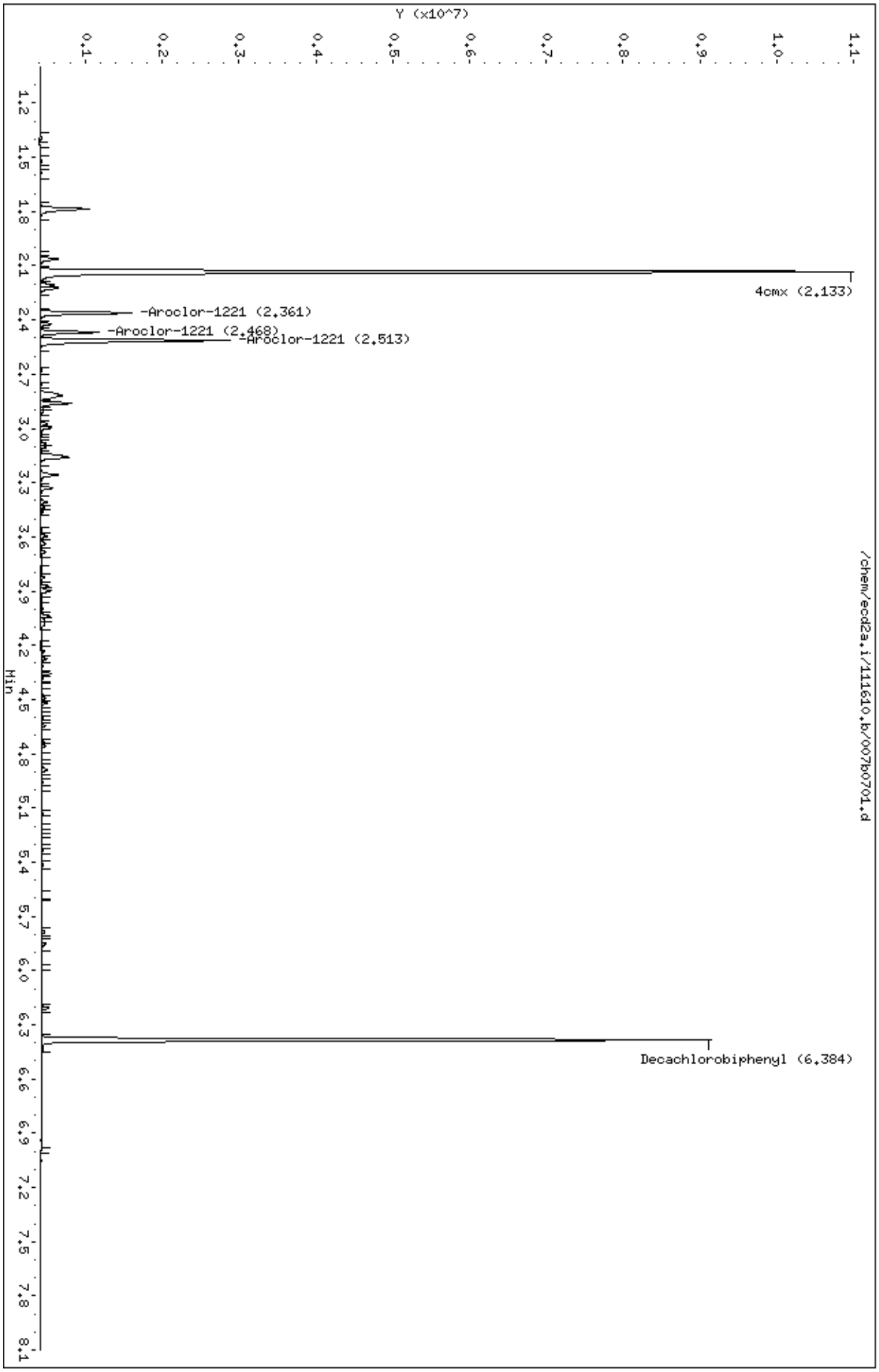
RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/007b0701.d
Lab Smp Id: WAR100831-21 Client Smp ID: AR122101
Inj Date : 16-NOV-2010 08:54
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100831-21
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 12:03 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.133	2.132	0.001	10344865	100.000	104	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.384	6.383	0.001	7790413	100.000	104	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.361	2.361	0.000	1084931	1000.00	828	80.00- 120.00	100.00
2.468	2.468	0.000	676602	1000.00	823	42.36- 82.36	62.36
2.513	2.513	0.000	2483886	1000.00	833	208.94- 248.94	228.94
Average of Peak Amounts =					828		

Data File: /chem/ecd2a.i/111610.b/007b0701.d
Date : 16-NOV-2010 08:54
Client ID: AR122101
Sample Info: IWAR100831-21
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

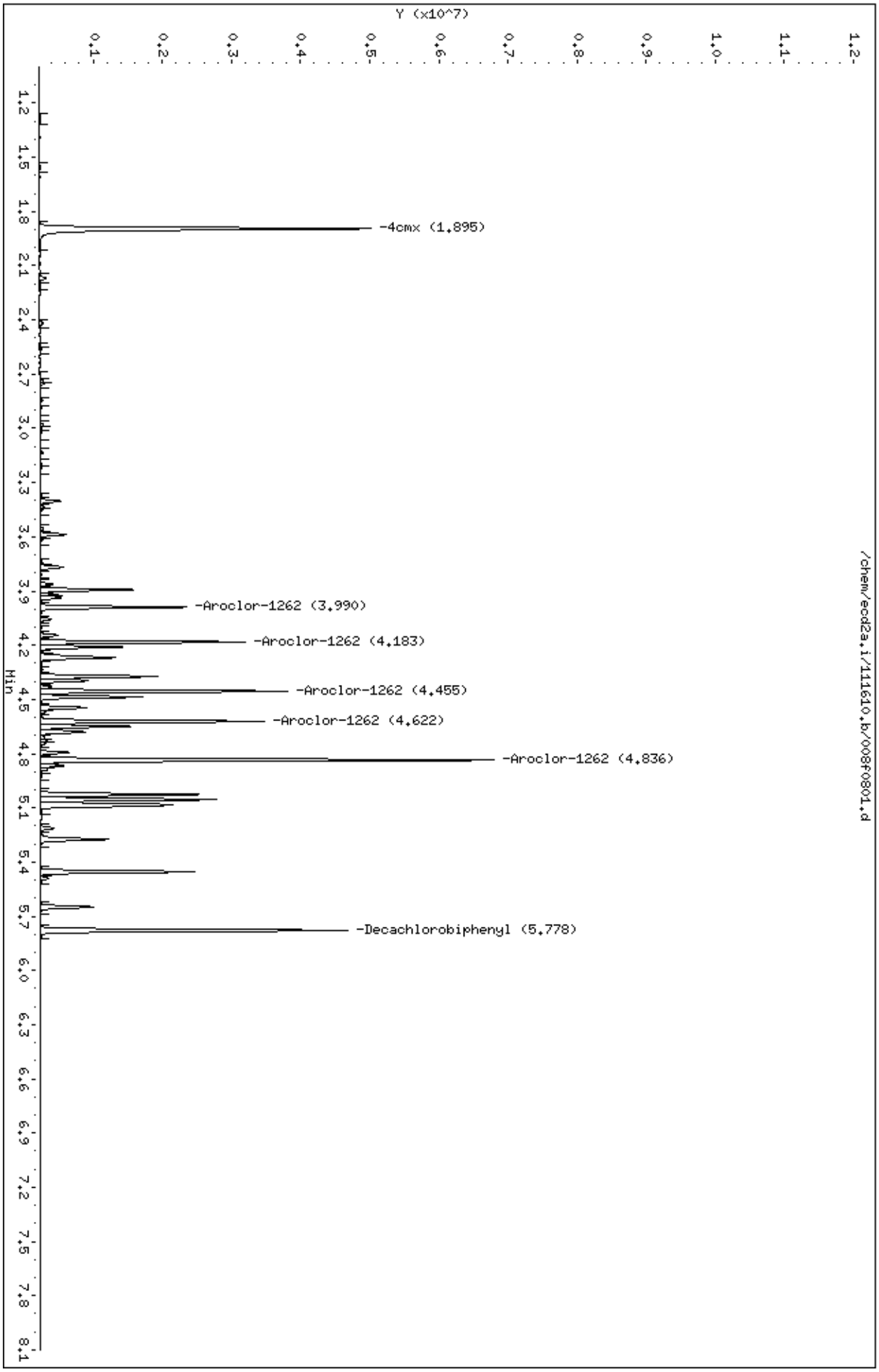
Data file : /chem/ecd2a.i/111610.b/008f0801.d
Lab Smp Id: WAR100907-62 Client Smp ID: AR126201
Inj Date : 16-NOV-2010 09:05
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100907-62
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 12:04 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 8 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1262.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.895	1.893	0.002	5073336	100.000	108	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.778	5.778	0.000	3968979	100.000	108	80.00- 120.00	100.00
8 Aroclor-1262					CAS #: 37324-23-5		
3.990	3.990	0.000	1817402	1000.00	1170	80.00- 120.00	100.00
4.183	4.183	0.000	2466749	1000.00	1180	115.73- 155.73	135.73
4.455	4.455	0.000	3075496	1000.00	1180	149.22- 189.22	169.22
4.622	4.622	0.000	2829314	1000.00	1190	135.68- 175.68	155.68
4.836	4.836	0.000	5799724	1000.00	1180	299.12- 339.12	319.12

Average of Peak Amounts = 1.18e+03

Data File: /chem/ecd2a.i/111610.b/008f0801.d
Date : 16-NOV-2010 09:05
Client ID: AR126201
Sample Info: IWAR100907-62
Column phase: CLP1

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/008b0801.d
Lab Smp Id: WAR100907-62 Client Smp ID: AR126201
Inj Date : 16-NOV-2010 09:05
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100907-62
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 12:03 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 8 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1262.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.134	2.132	0.002	10548225	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.384	6.383	0.001	7800428	100.000	104	80.00- 120.00	100.00
8 Aroclor-1262					CAS #: 37324-23-5		
4.385	4.385	0.000	2208420	1000.00	1010	80.00- 120.00	100.00
4.494	4.494	0.000	3452800	1000.00	1020	136.35- 176.35	156.35
4.645	4.645	0.000	4172073	1000.00	1010	168.92- 208.92	188.92
4.759	4.759	0.000	3611704	1000.00	1010	143.54- 183.54	163.54
4.955	4.955	0.000	5906158	1000.00	1020	247.44- 287.44	267.44

Average of Peak Amounts = 1.01e+03

Data File: /chem/ecd2a.i/111610.b/008b0801.d

Page 1

Date : 16-NOV-2010 09:05

Client ID: AR126201

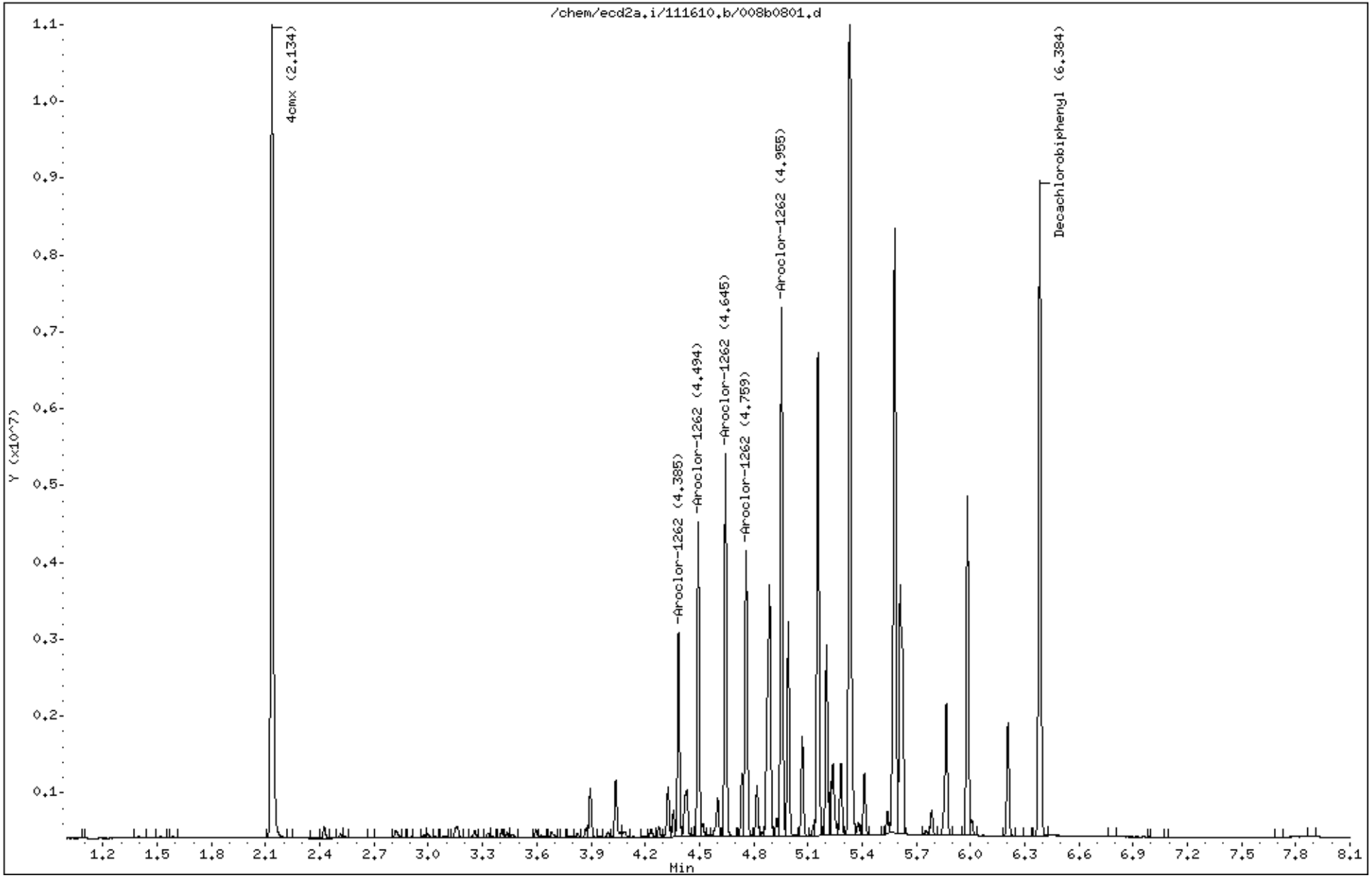
Instrument: ecd2a.i

Sample Info: IWAR100907-62

Operator: JAOC

Column phase: CLP2

Column diameter: 0.25



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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/018f1801.d
Lab Smp Id: WAR101104-60 02 Client Smp ID: AR166002
Inj Date : 16-NOV-2010 11:12
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101104-60 02
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 12:04 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.893	1.893	0.000	5089884	100.000	108	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.776	5.778	-0.002	4006794	100.000	109	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.416	2.416	0.000	1614972	1000.00	977	80.00- 120.00	100.00
2.749	2.750	-0.001	2244229	1000.00	1060	118.96- 158.96	138.96
2.886	2.886	0.000	884318	1000.00	1020	34.76- 74.76	54.76
2.977	2.979	-0.002	746829	1000.00	999	26.24- 66.24	46.24
2.993	2.995	-0.002	766583	1000.00	987	27.47- 67.47	47.47
Average of Peak Amounts =				1.01e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
3.988	3.990	-0.002	2339856	1000.00	1090	80.00- 120.00	100.00
4.181	4.182	-0.001	3573470	1000.00	1100	132.72- 172.72	152.72
4.453	4.455	-0.002	2131214	1000.00	1090	71.08- 111.08	91.08
4.621	4.621	0.000	2333418	1000.00	1100	79.72- 119.72	99.72
4.833	4.835	-0.002	5111535	1000.00	1120	198.46- 238.46	218.46
Average of Peak Amounts =				1.1e+03			

Data File: /chem/ecd2a.i/111610.b/018f1801.d

Page 1

Date : 16-NOV-2010 11:12

Client ID: AR166002

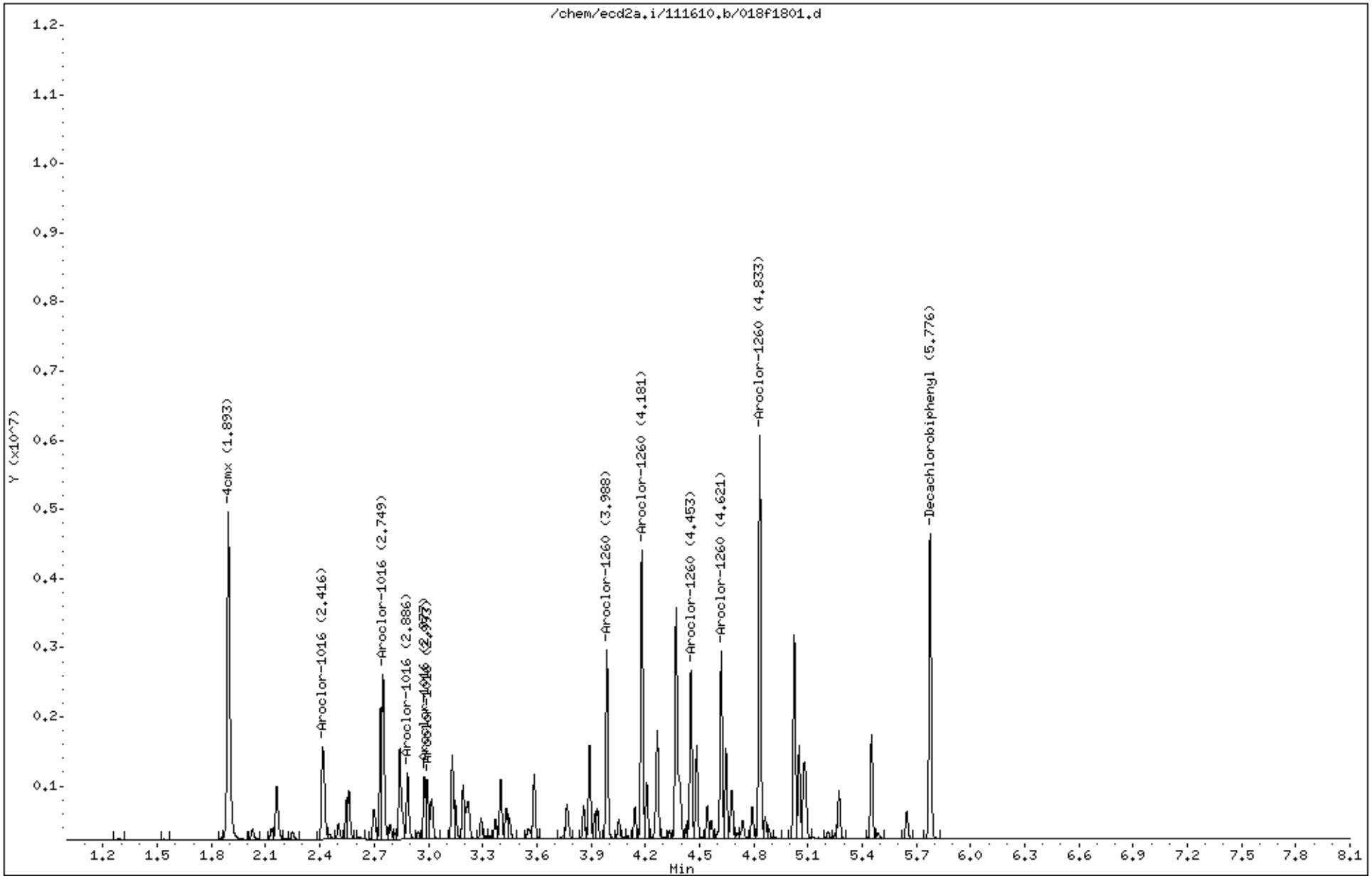
Instrument: ecd2a.i

Sample Info: IWAR101104-60 02

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



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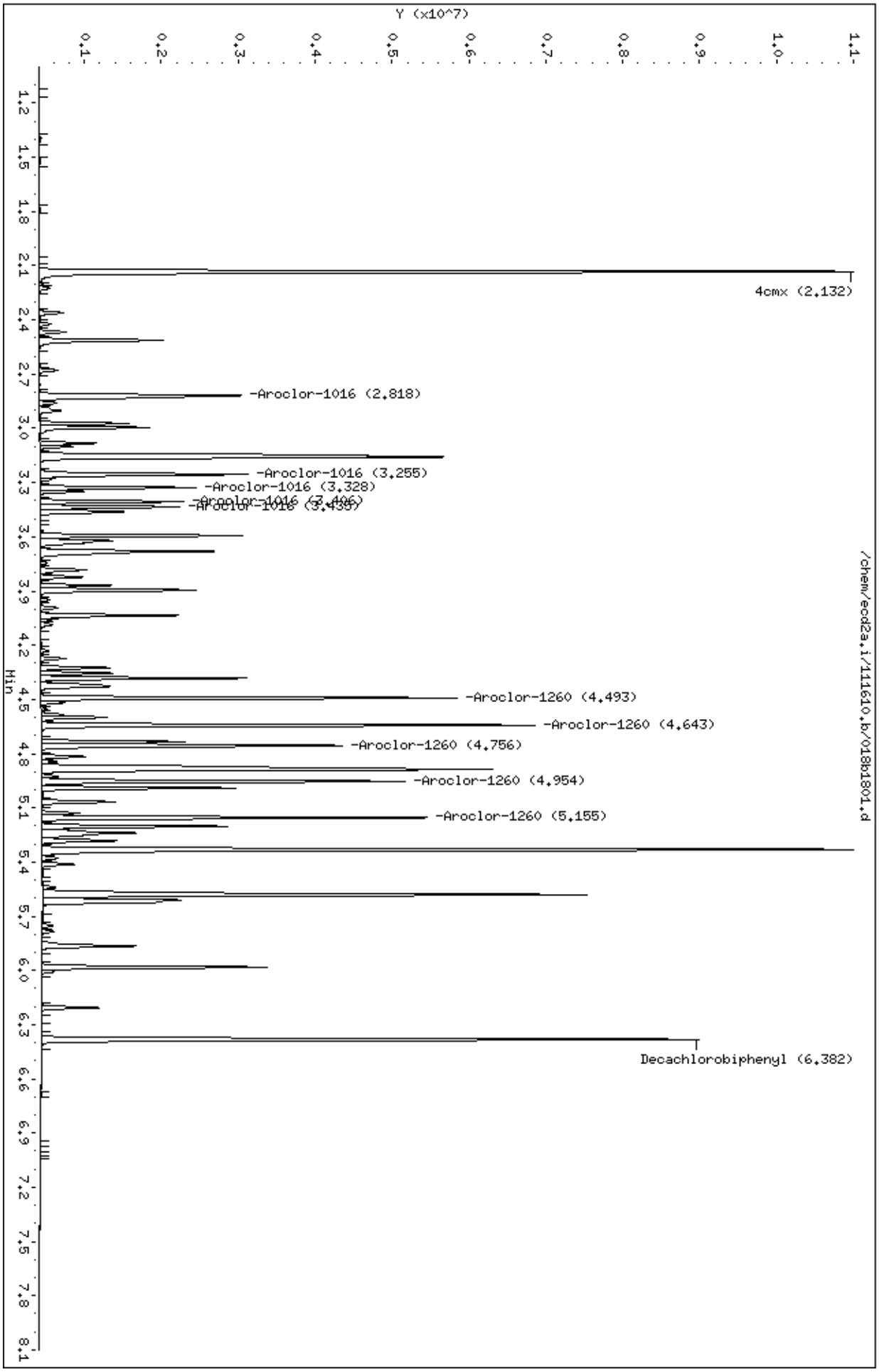
RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/018b1801.d
Lab Smp Id: WAR101104-60 02 Client Smp ID: AR166002
Inj Date : 16-NOV-2010 11:12
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101104-60 02
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 12:03 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.132	2.132	0.000	10607320	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.382	6.383	-0.001	7827921	100.000	104	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.818	2.818	0.000	3249784	1000.00	956	80.00- 120.00	100.00
3.255	3.256	-0.001	2665391	1000.00	974	62.02- 102.02	82.02
3.328	3.328	0.000	1672955	1000.00	1000	31.48- 71.48	51.48
3.406	3.406	0.000	1523383	1000.00	973	26.88- 66.88	46.88
3.435	3.436	-0.001	1590932	1000.00	976	28.96- 68.96	48.96
Average of Peak Amounts =					976		
7 Aroclor-1260					CAS #: 11096-82-5		
4.493	4.493	0.000	4488009	1000.00	1050	80.00- 120.00	100.00
4.643	4.643	0.000	5527954	1000.00	1060	103.17- 143.17	123.17
4.756	4.756	0.000	3787122	1000.00	1060	64.38- 104.38	84.38
4.954	4.954	0.000	4153963	1000.00	1060	72.56- 112.56	92.56
5.155	5.155	0.000	4392739	1000.00	1060	77.88- 117.88	97.88
Average of Peak Amounts =					1.06e+03		

Data File: /chem/ecd2a.i/111610.b/018b1801.d
Date : 16-NOV-2010 11:12
Client ID: AR166002
Sample Info: IWAR101104-60 02
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/030f3001.d
Lab Smp Id: WAR101104-60 03 Client Smp ID: AR166003
Inj Date : 16-NOV-2010 13:27
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101104-60 03
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.895	1.893	0.002	5119597	100.000	108	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.779	5.778	0.001	4091194	100.000	111	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.418	2.416	0.002	1616180	1000.00	978	80.00- 120.00	100.00
2.752	2.750	0.002	2218040	1000.00	1050	117.24- 157.24	137.24
2.888	2.886	0.002	882698	1000.00	1020	34.62- 74.62	54.62
2.980	2.979	0.001	746781	1000.00	999	26.21- 66.21	46.21
2.996	2.995	0.001	764082	1000.00	984	27.28- 67.28	47.28
Average of Peak Amounts =				1.01e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
3.990	3.990	0.000	2342606	1000.00	1090	80.00- 120.00	100.00
4.184	4.182	0.002	3589812	1000.00	1110	133.24- 173.24	153.24
4.455	4.455	0.000	2136611	1000.00	1100	71.21- 111.21	91.21
4.623	4.621	0.002	2343323	1000.00	1100	80.03- 120.03	100.03
4.835	4.835	0.000	5185163	1000.00	1140	201.34- 241.34	221.34
Average of Peak Amounts =				1.11e+03			

Data File: /chem/ecd2a.i/111610.b/030f3001.d

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Date : 16-NOV-2010 13:27

Client ID: AR166003

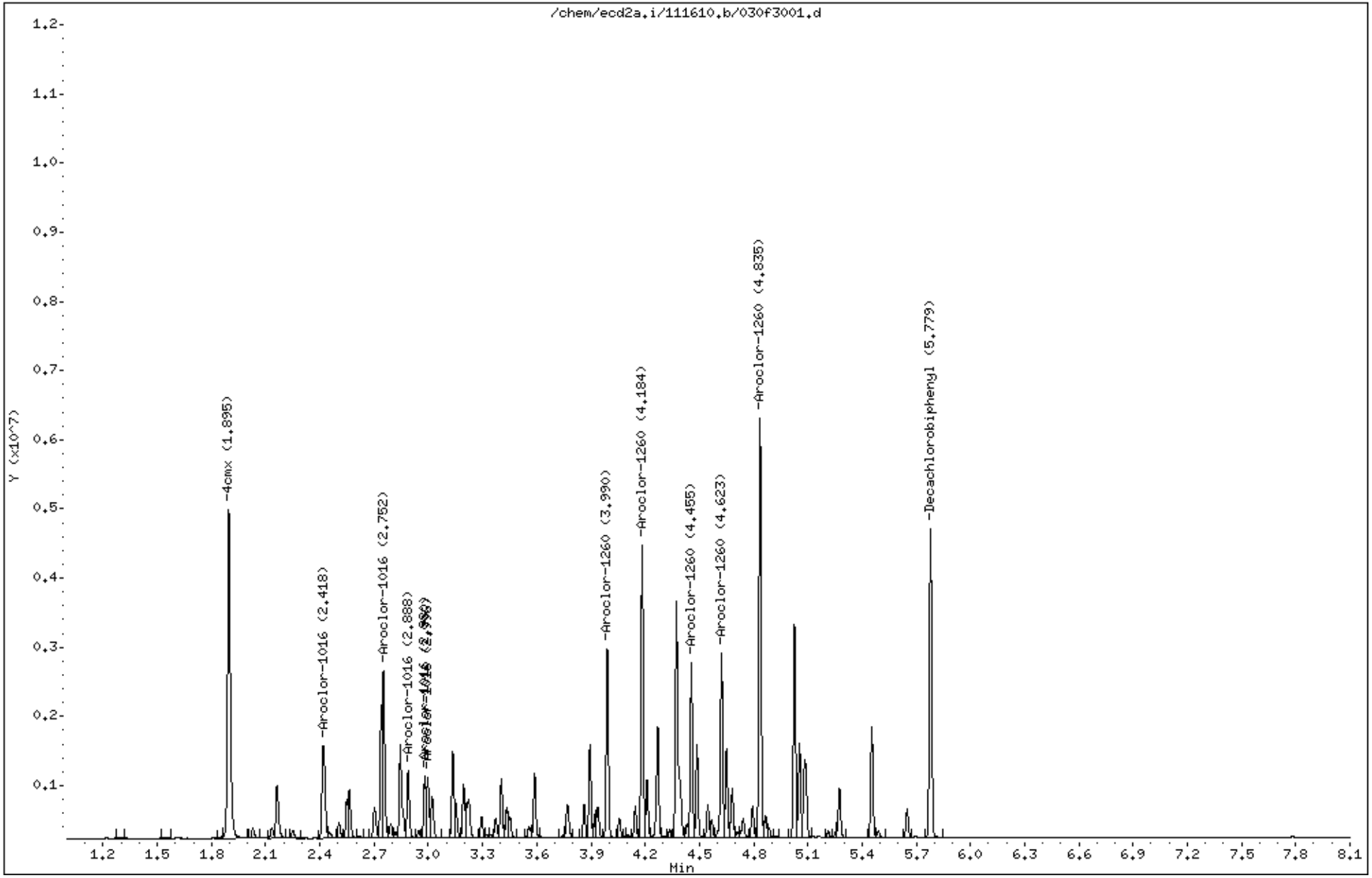
Instrument: ecd2a.i

Sample Info: IWAR101104-60 03

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

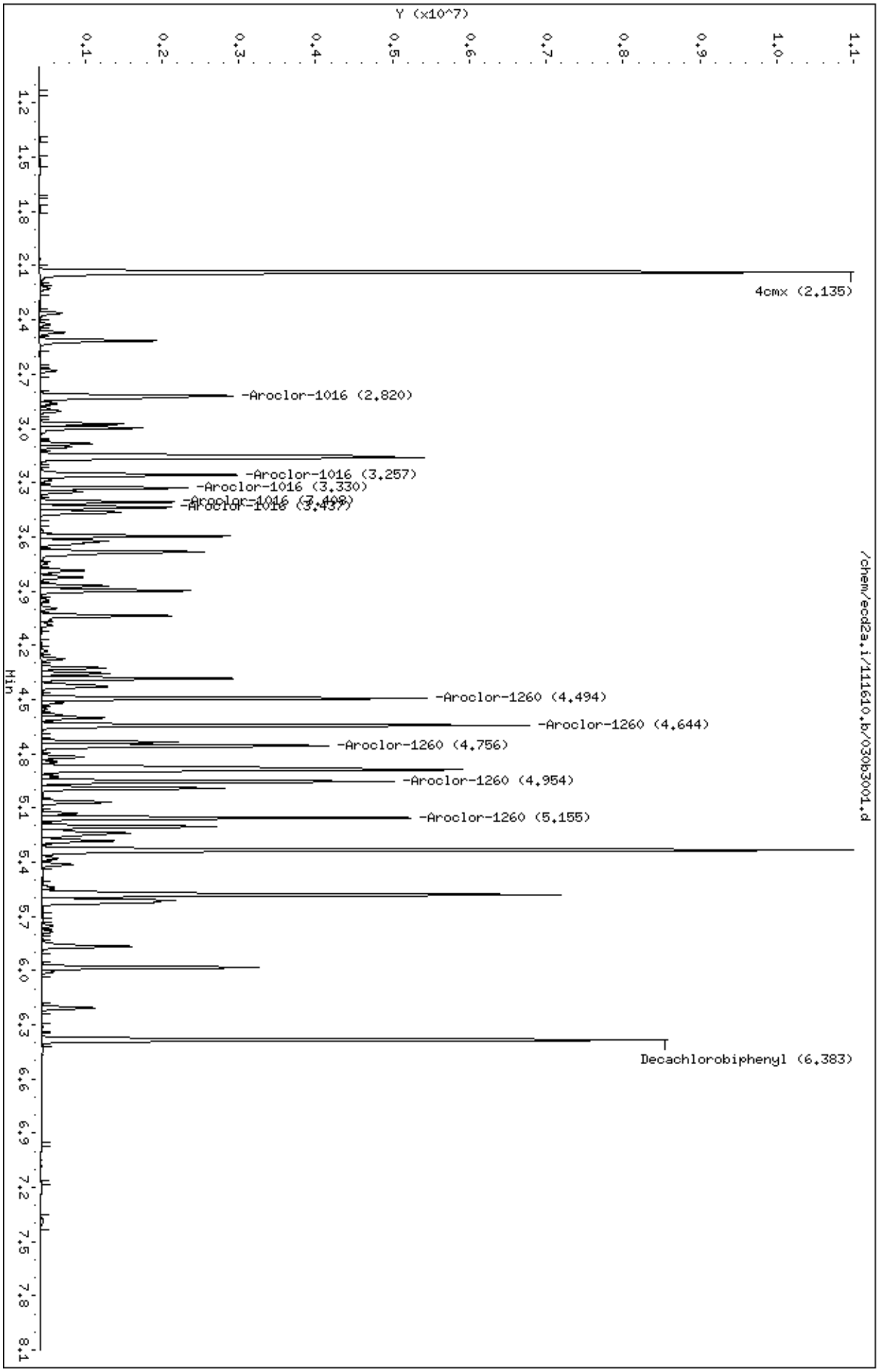
RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/030b3001.d
Lab Smp Id: WAR101104-60 03 Client Smp ID: AR166003
Inj Date : 16-NOV-2010 13:27
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101104-60 03
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.135	2.132	0.003	9958288	100.000	100	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	7520928	100.000	100	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.820	2.818	0.002	3057522	1000.00	899	80.00- 120.00	100.00
3.257	3.256	0.001	2512626	1000.00	918	62.18- 102.18	82.18
3.330	3.328	0.002	1577226	1000.00	945	31.59- 71.59	51.59
3.408	3.406	0.002	1434135	1000.00	916	26.91- 66.91	46.91
3.437	3.436	0.001	1498399	1000.00	919	29.01- 69.01	49.01
Average of Peak Amounts =					919		
7 Aroclor-1260					CAS #: 11096-82-5		
4.494	4.493	0.001	4224377	1000.00	987	80.00- 120.00	100.00
4.644	4.643	0.001	5206276	1000.00	1000	103.24- 143.24	123.24
4.756	4.756	0.000	3567196	1000.00	1000	64.44- 104.44	84.44
4.954	4.954	0.000	3912288	1000.00	997	72.61- 112.61	92.61
5.155	5.155	0.000	4141057	1000.00	1000	78.03- 118.03	98.03
Average of Peak Amounts =					998		

Data File: /chem/ecd2a.i/111610.b/030b3001.d
Date : 16-NOV-2010 13:27
Client ID: AR166003
Sample Info: IWAR101104-60 03
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/036f3601.d
Lab Smp Id: WAR101104-60 04 Client Smp ID: AR166004
Inj Date : 16-NOV-2010 14:34
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101104-60 04
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 14:52 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 36 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.893	1.893	0.000	5192938	100.000	110	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.780	5.778	0.002	4194675	100.000	114	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.417	2.416	0.001	1634828	1000.00	989	80.00- 120.00	100.00
2.751	2.750	0.001	2333826	1000.00	1100	122.76- 162.76	142.76
2.887	2.886	0.001	891344	1000.00	1030	34.52- 74.52	54.52
2.979	2.979	0.000	742463	1000.00	993	25.42- 65.42	45.42
2.996	2.995	0.001	780202	1000.00	1000	27.72- 67.72	47.72
Average of Peak Amounts =				1.02e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
3.991	3.990	0.001	2377327	1000.00	1100	80.00- 120.00	100.00
4.183	4.182	0.001	3651781	1000.00	1130	133.61- 173.61	153.61
4.456	4.455	0.001	2170308	1000.00	1110	71.29- 111.29	91.29
4.623	4.621	0.002	2396417	1000.00	1130	80.80- 120.80	100.80
4.837	4.835	0.002	5284699	1000.00	1160	202.30- 242.30	222.30
Average of Peak Amounts =				1.13e+03			

Data File: /chem/ecd2a.i/111610.b/036f3601.d

Page 1

Date : 16-NOV-2010 14:34

Client ID: AR166004

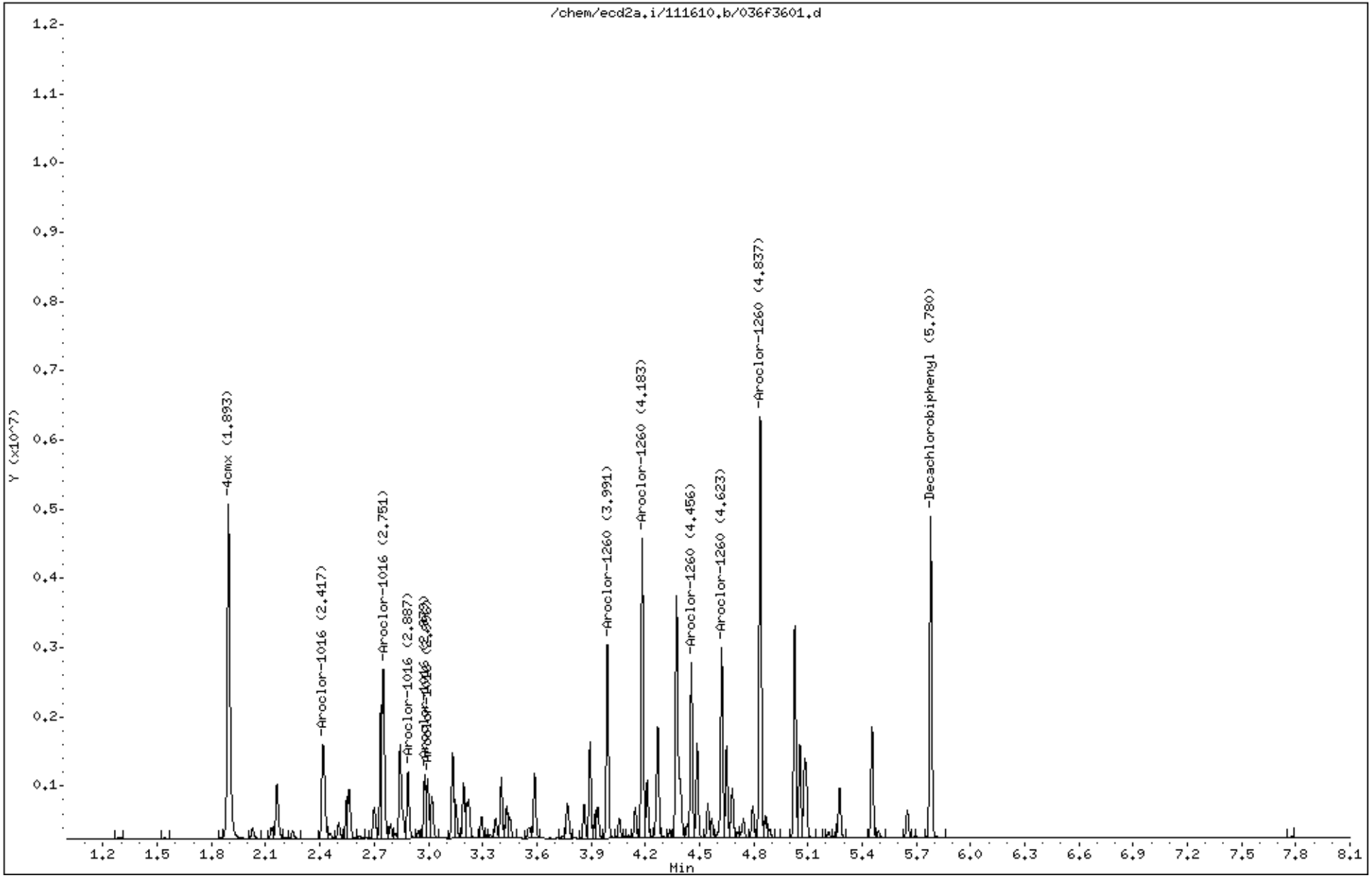
Instrument: ecd2a.i

Sample Info: IWAR101104-60 04

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

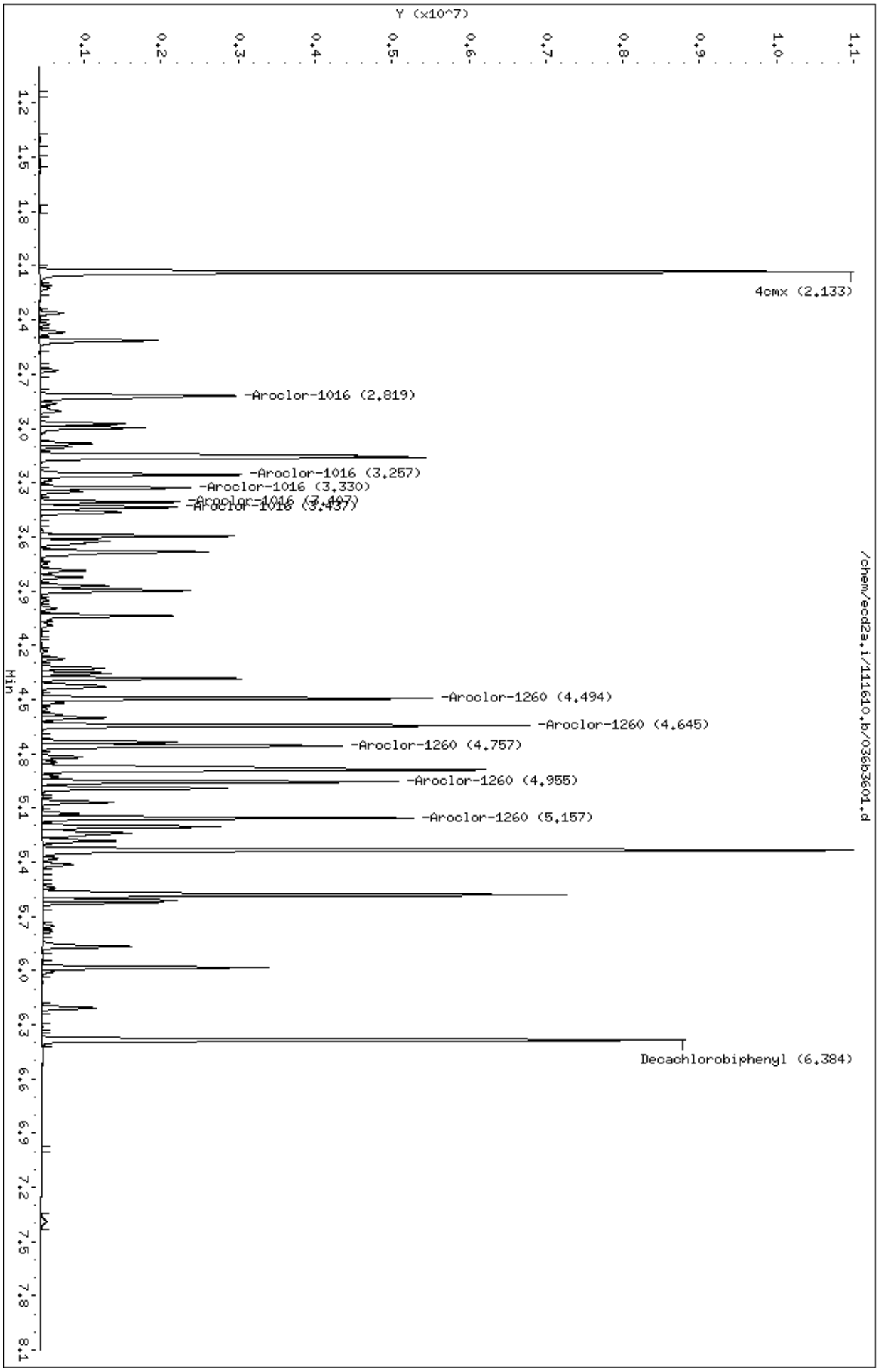
RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/036b3601.d
Lab Smp Id: WAR101104-60 04 Client Smp ID: AR166004
Inj Date : 16-NOV-2010 14:34
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101104-60 04
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 14:52 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 36 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.133	2.132	0.001	10128759	100.000	102	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.384	6.383	0.001	7678296	100.000	102	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.819	2.818	0.001	3103156	1000.00	912	80.00- 120.00	100.00
3.257	3.256	0.001	2554482	1000.00	933	62.32- 102.32	82.32
3.330	3.328	0.002	1593423	1000.00	954	31.35- 71.35	51.35
3.407	3.406	0.001	1457318	1000.00	931	26.96- 66.96	46.96
3.437	3.436	0.001	1511886	1000.00	927	28.72- 68.72	48.72
Average of Peak Amounts =					932		
7 Aroclor-1260					CAS #: 11096-82-5		
4.494	4.493	0.001	4287920	1000.00	1000	80.00- 120.00	100.00
4.645	4.643	0.002	5289979	1000.00	1020	103.37- 143.37	123.37
4.757	4.756	0.001	3608506	1000.00	1010	64.16- 104.16	84.16
4.955	4.954	0.001	3973042	1000.00	1010	72.66- 112.66	92.66
5.157	5.155	0.002	4217223	1000.00	1020	78.35- 118.35	98.35
Average of Peak Amounts =					1.01e+03		

Data File: /chem/ecd2a.i/111610.b/036b3601.d
Date : 16-NOV-2010 14:34
Client ID: AR166004
Sample Info: IWAR101104-60 04
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



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8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 11/09/10 11/09/10

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.90 DCB: 5.78

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR100930-99	11/09/10	0758	1.89	5.78
02	ZZZZZ	ZZZZZ	11/09/10	0809	1.90	5.78
03	AR125401	WAR101028-54	11/09/10	0820	1.90	5.78
04	ZZZZZ	ZZZZZ	11/09/10	0831	1.90	5.78
05	AR124801	WAR101028-48	11/09/10	0843	1.90	5.78
06	AR123201	WAR100902-32	11/09/10	0854	1.90	5.78
07	AR122101	WAR100831-21	11/09/10	0905	1.90	5.78
08	ZZZZZ	ZZZZZ	11/09/10	0916	1.90	5.78
09	AR126201	WAR100907-62	11/09/10	0928	1.90	5.78
10	AR126801	WAR100827-68	11/09/10	0939	1.90	5.78
11	ZZZZZ	ZZZZZ	11/09/10	0950	1.90	5.78
12	AR166001	WAR101109-01	11/09/10	1001	1.90	5.78
13	AR166002	WAR101109-02	11/09/10	1013	1.90	5.78
14	AR166003	WAR101109-03	11/09/10	1024	1.90	5.78
15	AR166004	WAR101109-04	11/09/10	1035	1.90	5.78
16	AR166005	IAR100930-01	11/09/10	1046	1.90	5.78
17	AR166001	WAR101104-60	11/09/10	1057	1.90	5.78
18	AR124201	WAR101109-09	11/09/10	1109	1.90	5.78
19	AR124202	WAR101109-10	11/09/10	1120	1.90	5.78
20	AR124203	WAR101109-11	11/09/10	1131	1.90	5.78
21	AR124204	WAR101109-12	11/09/10	1142	1.90	5.78
22	AR124205	IAR101026-02	11/09/10	1154	1.90	5.78
23	AR124201	WAR101028-42	11/09/10	1205	1.90	5.78
24	DDTANALOGSTD	WAR100910-DD	11/09/10	1216		
25	PIBLK02	WAR100930-99	11/09/10	1227	1.90	5.78
26	ZZZZZ	ZZZZZ	11/09/10	1238	1.90	5.78
27	ZZZZZ	ZZZZZ	11/09/10	1250	1.90	5.78
28	ZZZZZ	ZZZZZ	11/09/10	1301	1.90	5.78
29	ZZZZZ	ZZZZZ	11/09/10	1312	1.90	5.78
30	AR166002	WAR101104-60	11/09/10	1328	1.89	5.78
31	PIBLK03	WAR100930-99	11/09/10	1339	1.90	5.78
32	ZZZZZ	ZZZZZ	11/09/10	1351	1.90	5.78

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 11/09/10 11/09/10

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.14 DCB: 6.39

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR100930-99	11/09/10	0758	2.13	6.39
02	ZZZZZ	ZZZZZ	11/09/10	0809	2.14	6.39
03	AR125401	WAR101028-54	11/09/10	0820	2.14	6.39
04	ZZZZZ	ZZZZZ	11/09/10	0831	2.14	6.39
05	AR124801	WAR101028-48	11/09/10	0843	2.14	6.39
06	AR123201	WAR100902-32	11/09/10	0854	2.14	6.39
07	AR122101	WAR100831-21	11/09/10	0905	2.14	6.39
08	ZZZZZ	ZZZZZ	11/09/10	0916	2.14	6.39
09	AR126201	WAR100907-62	11/09/10	0928	2.14	6.39
10	AR126801	WAR100827-68	11/09/10	0939	2.14	6.39
11	ZZZZZ	ZZZZZ	11/09/10	0950	2.14	6.39
12	AR166001	WAR101109-01	11/09/10	1001	2.14	6.39
13	AR166002	WAR101109-02	11/09/10	1013	2.14	6.39
14	AR166003	WAR101109-03	11/09/10	1024	2.14	6.39
15	AR166004	WAR101109-04	11/09/10	1035	2.14	6.39
16	AR166005	IAR100930-01	11/09/10	1046	2.14	6.39
17	AR166001	WAR101104-60	11/09/10	1057	2.14	6.39
18	AR124201	WAR101109-09	11/09/10	1109	2.14	6.39
19	AR124202	WAR101109-10	11/09/10	1120	2.14	6.39
20	AR124203	WAR101109-11	11/09/10	1131	2.14	6.39
21	AR124204	WAR101109-12	11/09/10	1142	2.14	6.39
22	AR124205	IAR101026-02	11/09/10	1154	2.14	6.39
23	AR124201	WAR101028-42	11/09/10	1205	2.14	6.39
24	DDTANALOGSTD	WAR100910-DD	11/09/10	1216		
25	PIBLK02	WAR100930-99	11/09/10	1227	2.14	6.39
26	ZZZZZ	ZZZZZ	11/09/10	1238	2.14	6.39
27	ZZZZZ	ZZZZZ	11/09/10	1250	2.14	6.39
28	ZZZZZ	ZZZZZ	11/09/10	1301	2.14	6.39
29	ZZZZZ	ZZZZZ	11/09/10	1312	2.14	6.39
30	AR166002	WAR101104-60	11/09/10	1328	2.13	6.39
31	PIBLK03	WAR100930-99	11/09/10	1339	2.14	6.39
32	ZZZZZ	ZZZZZ	11/09/10	1351	2.14	6.39

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 11/09/10 11/09/10

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.89 DCB: 5.78

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR101029-99	11/16/10	0746	1.89	5.78
02	AR166001	WAR101104-60	11/16/10	0758	1.89	5.78
03	AR125401	WAR101028-54	11/16/10	0809	1.89	5.78
04	AR124201	WAR101028-42	11/16/10	0820	1.89	5.78
05	AR124801	WAR101028-48	11/16/10	0831	1.89	5.78
06	AR123201	WAR100902-32	11/16/10	0843	1.89	5.78
07	AR122101	WAR100831-21	11/16/10	0854	1.89	5.78
08	AR126201	WAR100907-62	11/16/10	0905	1.89	5.78
09	AR126801	WAR100827-68	11/16/10	0916	1.90	5.78
10	DDTANALOGSTD	WAR100910-DD	11/16/10	0928		
11	PIBLK02	WAR101029-99	11/16/10	0939	1.90	5.78
12	ZZZZZ	ZZZZZ	11/16/10	0950	1.89	5.78
13	ZZZZZ	ZZZZZ	11/16/10	1002	1.89	5.78
14	ZZZZZ	ZZZZZ	11/16/10	1013	1.90	5.78
15	ZZZZZ	ZZZZZ	11/16/10	1024	1.89	5.78
16	ZZZZZ	ZZZZZ	11/16/10	1040	1.89	5.78
17	ZZZZZ	ZZZZZ	11/16/10	1056	1.89	5.78
18	AR166002	WAR101104-60	11/16/10	1112	1.89	5.78
19	PIBLK03	WAR101029-99	11/16/10	1123	1.90	5.78
20	PBLK01	1202262699	11/16/10	1134	1.89	5.78
21	PBLK01LCS	1202262700	11/16/10	1145	1.90	5.78
22	ZZZZZ	ZZZZZ	11/16/10	1157	1.90	5.78
23	CASA-11-1332MS	1202262701	11/16/10	1208	1.90	5.78
24	CASA-11-1332MSD	1202262702	11/16/10	1219	1.89	5.78
25	ZZZZZ	ZZZZZ	11/16/10	1230	1.90	5.78
26	ZZZZZ	ZZZZZ	11/16/10	1242	1.90	5.78
27	ZZZZZ	ZZZZZ	11/16/10	1253	1.90	5.78
28	ZZZZZ	ZZZZZ	11/16/10	1304	1.90	5.78
29	ZZZZZ	ZZZZZ	11/16/10	1315	1.90	5.78
30	AR166003	WAR101104-60	11/16/10	1327	1.90	5.78
31	PIBLK04	WAR101029-99	11/16/10	1338	1.90	5.78
32	BUCKMAN1-11-1944	266877001	11/16/10	1349	1.90	5.78

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 11/09/10 11/09/10

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.89 DCB: 5.78

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	BUCKMAN06-11-1970	266877003	11/16/10	1400	1.90	5.78
02	BUCKMAN08-11-2042	266877005	11/16/10	1411	1.90	5.78
03	ZZZZZ	ZZZZZ	11/16/10	1422	1.90	5.78
04	AR166004	WAR101104-60	11/16/10	1434	1.89	5.78
05	PIBLK05	WAR101029-99	11/16/10	1445	1.89	5.78
06	ZZZZZ	ZZZZZ	11/16/10	1456	1.90	5.78
07	ZZZZZ	ZZZZZ	11/16/10	1507	1.90	5.78
08	ZZZZZ	ZZZZZ	11/16/10	1518	1.90	5.78
09	ZZZZZ	ZZZZZ	11/16/10	1530	1.90	5.78
10	ZZZZZ	ZZZZZ	11/16/10	1546	1.89	5.78
11	ZZZZZ	ZZZZZ	11/16/10	1601	1.89	5.78
12	ZZZZZ	ZZZZZ	11/16/10	1617	1.89	5.78
13	ZZZZZ	ZZZZZ	11/16/10	1633	1.89	5.78
14	AR166005	WAR101104-60	11/16/10	1649	1.89	5.78
15	PIBLK06	WAR101029-99	11/16/10	1700	1.89	5.78
16						
17						
18						
19						
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28						
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31						
32						

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 11/09/10 11/09/10

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.13 DCB: 6.38

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR101029-99	11/16/10	0746	2.13	6.38
02	AR166001	WAR101104-60	11/16/10	0758	2.13	6.38
03	AR125401	WAR101028-54	11/16/10	0809	2.13	6.38
04	AR124201	WAR101028-42	11/16/10	0820	2.13	6.38
05	AR124801	WAR101028-48	11/16/10	0831	2.13	6.38
06	AR123201	WAR100902-32	11/16/10	0843	2.13	6.38
07	AR122101	WAR100831-21	11/16/10	0854	2.13	6.38
08	AR126201	WAR100907-62	11/16/10	0905	2.13	6.38
09	AR126801	WAR100827-68	11/16/10	0916	2.13	6.38
10	DDTANALOGSTD	WAR100910-DD	11/16/10	0928		
11	PIBLK02	WAR101029-99	11/16/10	0939	2.13	6.38
12	ZZZZZ	ZZZZZ	11/16/10	0950	2.13	6.38
13	ZZZZZ	ZZZZZ	11/16/10	1002	2.13	6.38
14	ZZZZZ	ZZZZZ	11/16/10	1013	2.13	6.38
15	ZZZZZ	ZZZZZ	11/16/10	1024	2.13	6.37
16	ZZZZZ	ZZZZZ	11/16/10	1040	2.13	6.37
17	ZZZZZ	ZZZZZ	11/16/10	1056	2.13	6.37
18	AR166002	WAR101104-60	11/16/10	1112	2.13	6.38
19	PIBLK03	WAR101029-99	11/16/10	1123	2.13	6.38
20	PBLK01	1202262699	11/16/10	1134	2.13	6.38
21	PBLK01LCS	1202262700	11/16/10	1145	2.13	6.38
22	ZZZZZ	ZZZZZ	11/16/10	1157	2.13	6.38
23	CASA-11-1332MS	1202262701	11/16/10	1208	2.14	6.38
24	CASA-11-1332MSD	1202262702	11/16/10	1219	2.13	6.38
25	ZZZZZ	ZZZZZ	11/16/10	1230	2.14	6.38
26	ZZZZZ	ZZZZZ	11/16/10	1242	2.14	6.38
27	ZZZZZ	ZZZZZ	11/16/10	1253	2.14	6.38
28	ZZZZZ	ZZZZZ	11/16/10	1304	2.13	6.38
29	ZZZZZ	ZZZZZ	11/16/10	1315	2.14	6.38
30	AR166003	WAR101104-60	11/16/10	1327	2.13	6.38
31	PIBLK04	WAR101029-99	11/16/10	1338	2.13	6.38
32	BUCKMAN1-11-1944	266877001	11/16/10	1349	2.14	6.38

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 11-463

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 11/09/10 11/09/10

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.13 DCB: 6.38

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	BUCKMAN06-11-1970	266877003	11/16/10	1400	2.13	6.38
02	BUCKMAN08-11-2042	266877005	11/16/10	1411	2.14	6.38
03	ZZZZZ	ZZZZZ	11/16/10	1422	2.14	6.38
04	AR166004	WAR101104-60	11/16/10	1434	2.13	6.38
05	PIBLK05	WAR101029-99	11/16/10	1445	2.13	6.38
06	ZZZZZ	ZZZZZ	11/16/10	1456	2.13	6.38
07	ZZZZZ	ZZZZZ	11/16/10	1507	2.13	6.38
08	ZZZZZ	ZZZZZ	11/16/10	1518	2.13	6.38
09	ZZZZZ	ZZZZZ	11/16/10	1530	2.13	6.38
10	ZZZZZ	ZZZZZ	11/16/10	1546	2.13	6.38
11	ZZZZZ	ZZZZZ	11/16/10	1601	2.13	6.38
12	ZZZZZ	ZZZZZ	11/16/10	1617	2.13	6.38
13	ZZZZZ	ZZZZZ	11/16/10	1633	2.13	6.38
14	AR166005	WAR101104-60	11/16/10	1649	2.13	6.38
15	PIBLK06	WAR101029-99	11/16/10	1700	2.13	6.38
16						
17						
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25						
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27						
28						
29						
30						
31						
32						

QC LIMITS

S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Identification Summary

SDG Number: 11−463 **Client ID:** LCS for batch 1048231

Lab Sample ID: 1202262700

Data File:	021f2101.d	**Data File:**	021b2101.d
Inst:	ECD2A.I_1	**Inst:**	ECD2A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	16−NOV−10 11:45	**Analyzed:**	16−NOV−10 11:45

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor−1016							7.17
Column 1	1	2.42	2.39 – 2.45	.734		ug/L	
	2	2.75	2.72 – 2.78	.807		ug/L	
	3	2.89	2.86 – 2.92	.775		ug/L	
	4	2.98	2.95 – 3.01	.739		ug/L	
	5	3	2.96 – 3.02	.743		ug/L	
					.76		
Column 2	1	2.82	2.79 – 2.85	.69		ug/L	
	2	3.26	3.23 – 3.29	.707		ug/L	
	3	3.33	3.3 – 3.36	.726		ug/L	
	4	3.41	3.38 – 3.44	.712		ug/L	
	5	3.44	3.41 – 3.47	.699		ug/L	
					.707		
Aroclor−1260							8.58
Column 1	1	3.99	3.96 – 4.02	.845		ug/L	
	2	4.18	4.15 – 4.21	.867		ug/L	
	3	4.45	4.42 – 4.48	.851		ug/L	
	4	4.62	4.59 – 4.65	.866		ug/L	
	5	4.84	4.8 – 4.86	.891		ug/L	
					.864		
Column 2	1	4.49	4.46 – 4.52	.782		ug/L	
	2	4.64	4.61 – 4.67	.798		ug/L	
	3	4.76	4.73 – 4.79	.796		ug/L	
	4	4.95	4.92 – 4.98	.789		ug/L	
	5	5.16	5.12 – 5.18	.799		ug/L	
					.793		

QC Data

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**11−463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202262699**				
Client Sample:	**QC for batch 1048231**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**MB for batch 1048231**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL−OA−E−040**
Batch ID:	**1048232**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**11/16/2010 11:34**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/15/2010 14:38**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**020f2001−1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	020b2001−1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674−11−2	Aroclor−1016	U	0.100	ug/L	0.0333	0.100	1
11104−28−2	Aroclor−1221	U	0.100	ug/L	0.0333	0.100	1
11141−16−5	Aroclor−1232	U	0.100	ug/L	0.0333	0.100	1
53469−21−9	Aroclor−1242	U	0.100	ug/L	0.0333	0.100	1
12672−29−6	Aroclor−1248	U	0.100	ug/L	0.0333	0.100	1
11097−69−1	Aroclor−1254	U	0.100	ug/L	0.0333	0.100	1
11096−82−5	Aroclor−1260	U	0.100	ug/L	0.0333	0.100	1
37324−23−5	Aroclor−1262	U	0.100	ug/L	0.0333	0.100	1

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
4cmx	0.143	0.200	ug/L	71.3	(30%−111%)
Decachlorobiphenyl	0.154	0.200	ug/L	76.8	(30%−124%)

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/020f2001-1.d
Lab Smp Id: 1202262699 Client Smp ID: PBLK01
Inj Date : 16-NOV-2010 11:34
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202262699|1|
Misc Info : |ECD82P_1L|1048232|SVA|QC A|WATER|MB|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 14:56 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 20 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-463.sub
Target Version: 3.50 Sample Matrix: Water
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.895	1.893	0.002	6721301	142.556	0.14	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.779	5.778	0.001	5640618	153.562	0.15	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/111610.b/020f2001-1.d

Page 1

Date : 16-NOV-2010 11:34

Client ID: PBLK01

Instrument: ecd2a.i

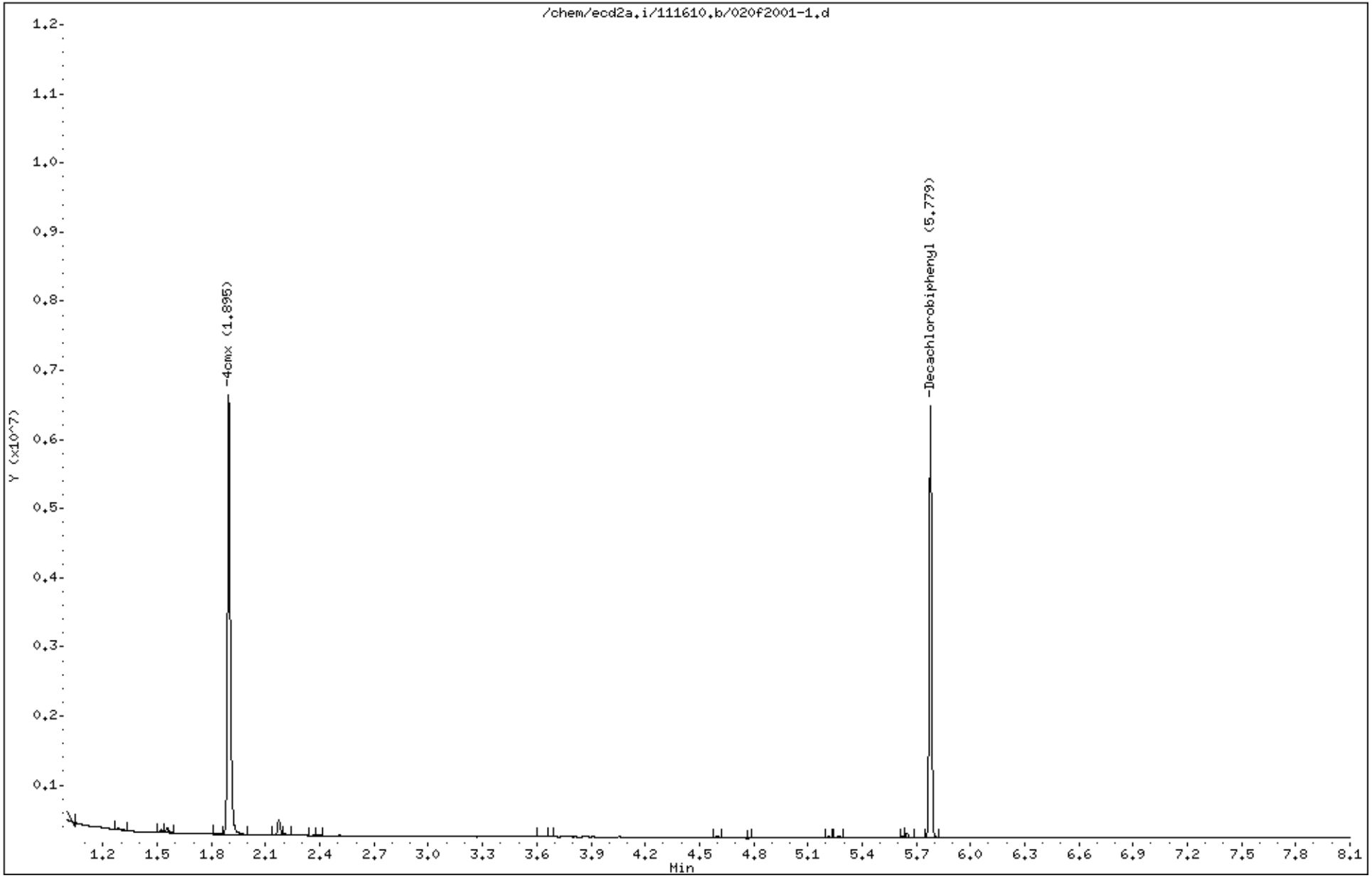
Sample Info: |1202262699|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/020b2001-1.d
Lab Smp Id: 1202262699 Client Smp ID: PBLK01
Inj Date : 16-NOV-2010 11:34
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202262699|1|
Misc Info : |ECD82P_1L|1048232|SVA|QC A|WATER|MB|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 14:55 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 20 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-463.sub
Target Version: 3.50 Sample Matrix: Water
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.135	2.132	0.003	13671338	137.379	0.14	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.384	6.383	0.001	10966006	146.285	0.15	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/111610.b/020b2001-1.d

Page 1

Date : 16-NOV-2010 11:34

Client ID: PBLK01

Instrument: ecd2a.i

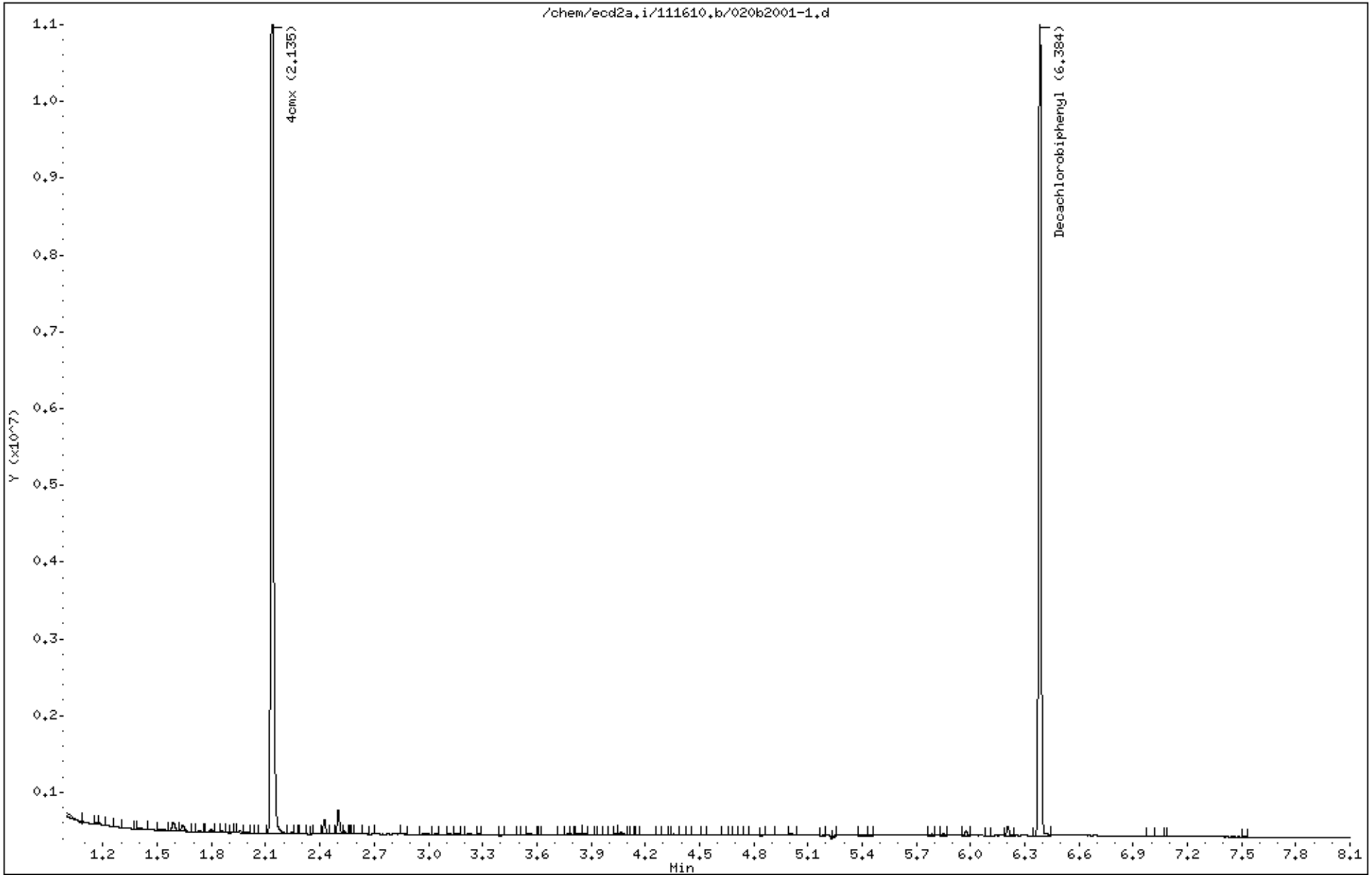
Sample Info: |1202262699|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP2

Column diameter: 0.25



PCB
Certificate of Analysis
Sample Summary

SDG Number:	**11−463**			**Matrix:**	**WATER**
Lab Sample ID:	**1202262700**				
Client Sample:	**QC for batch 1048231**	**Client:**	**ARSL001**	**Project:**	**QC**
Client ID:	**LCS for batch 1048231**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL−OA−E−040**
Batch ID:	**1048232**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**11/16/2010 11:45**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/15/2010 14:38**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**021f2101−1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	021b2101−1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674−11−2	Aroclor−1016		0.760	ug/L	0.0333	0.100	1
11104−28−2	Aroclor−1221	U	0.100	ug/L	0.0333	0.100	1
11141−16−5	Aroclor−1232	U	0.100	ug/L	0.0333	0.100	1
53469−21−9	Aroclor−1242	U	0.100	ug/L	0.0333	0.100	1
12672−29−6	Aroclor−1248	U	0.100	ug/L	0.0333	0.100	1
11097−69−1	Aroclor−1254	U	0.100	ug/L	0.0333	0.100	1
11096−82−5	Aroclor−1260		0.860	ug/L	0.0333	0.100	1
37324−23−5	Aroclor−1262	U	0.100	ug/L	0.0333	0.100	1

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
4cmx	0.137	0.200	ug/L	68.6	(30%−111%)
Decachlorobiphenyl	0.142	0.200	ug/L	71.2	(30%−124%)

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/021f2101-1.d
Lab Smp Id: 1202262700 Client Smp ID: PBLK01LCS
Inj Date : 16-NOV-2010 11:45
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202262700|1|
Misc Info : |ECD82P_1L|1048232|SVA|QC A|WATER|LCS|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 14:56 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 21 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-463.sub
Target Version: 3.50 Sample Matrix: Water
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.896	1.893	0.003	6469698	137.219	0.14	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.778	5.778	0.000	5234144	142.496	0.14	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.418	2.416	0.002	1213492	734.324	0.73	80.00- 120.00	100.00
2.751	2.750	0.001	1710947	806.871	0.81	122.76- 162.76	140.99
2.888	2.886	0.002	671271	774.527	0.77	34.52- 74.52	55.32
2.981	2.979	0.002	552426	739.171	0.74	25.42- 65.42	45.52
2.995	2.995	0.000	576856	742.834	0.74	27.72- 67.72	47.54

Average of Peak Concentrations = 0.76

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
3.990	3.990	0.000	1817666	844.545	0.84	80.00- 120.00	100.00
4.183	4.182	0.001	2804037	866.607	0.87	133.61- 173.61	154.27
4.455	4.455	0.000	1660176	850.906	0.85	71.29- 111.29	91.34
4.622	4.621	0.001	1843325	866.240	0.87	80.80- 120.80	101.41
4.835	4.835	0.000	4061647	891.369	0.89	202.30- 242.30	223.45

Average of Peak Concentrations = 0.86

Data File: /chem/ecd2a.i/111610.b/021f2101-1.d

Page 1

Date : 16-NOV-2010 11:45

Client ID: PBLK01LCS

Instrument: ecd2a.i

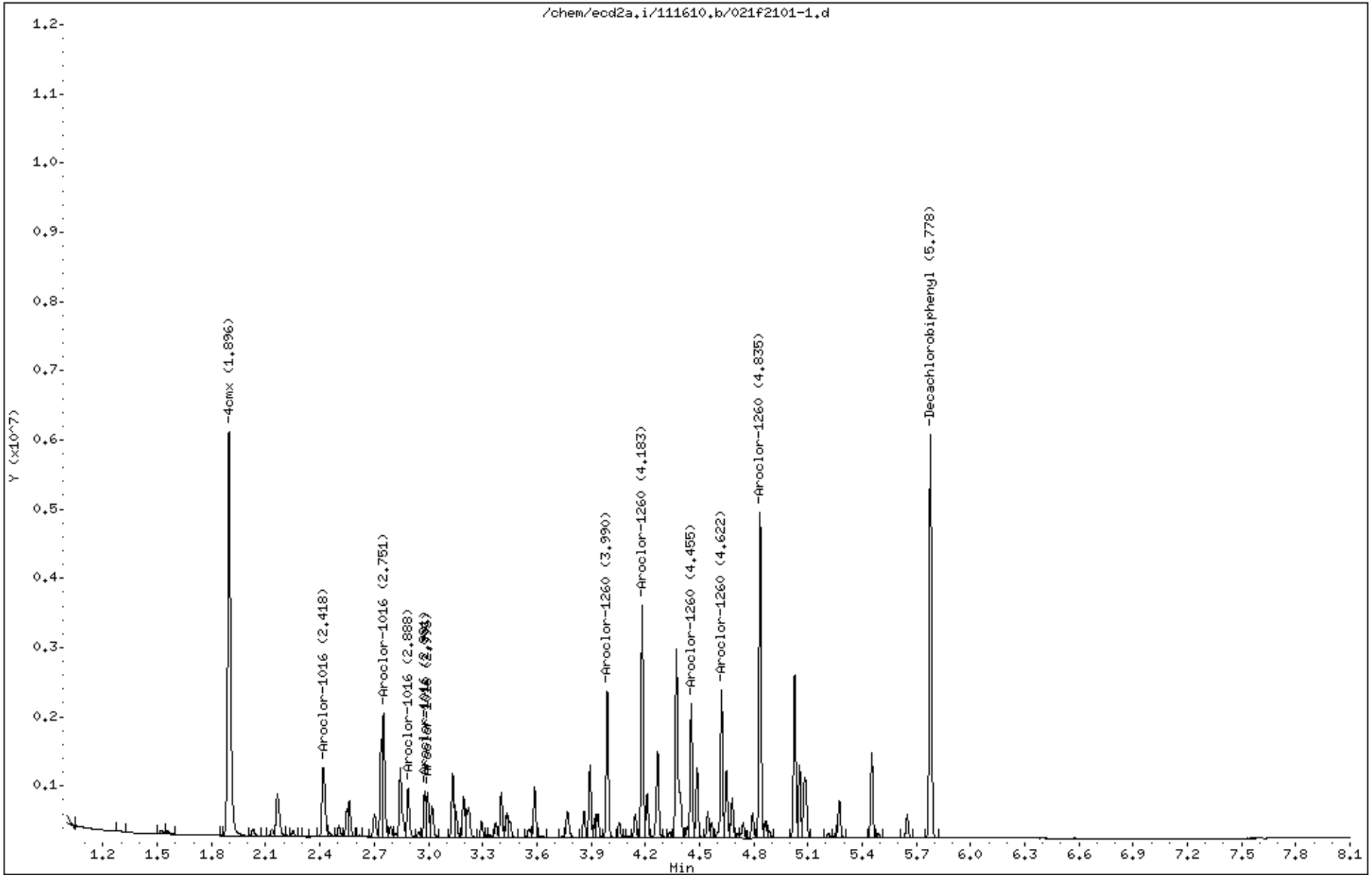
Sample Info: |1202262700|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/021b2101-1.d
Lab Smp Id: 1202262700 Client Smp ID: PBLK01LCS
Inj Date : 16-NOV-2010 11:45
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202262700|1|
Misc Info : |ECD82P_1L|1048232|SVA|QC A|WATER|LCS|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 14:55 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 21 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-463.sub
Target Version: 3.50 Sample Matrix: Water
Processing Host: hpclp1

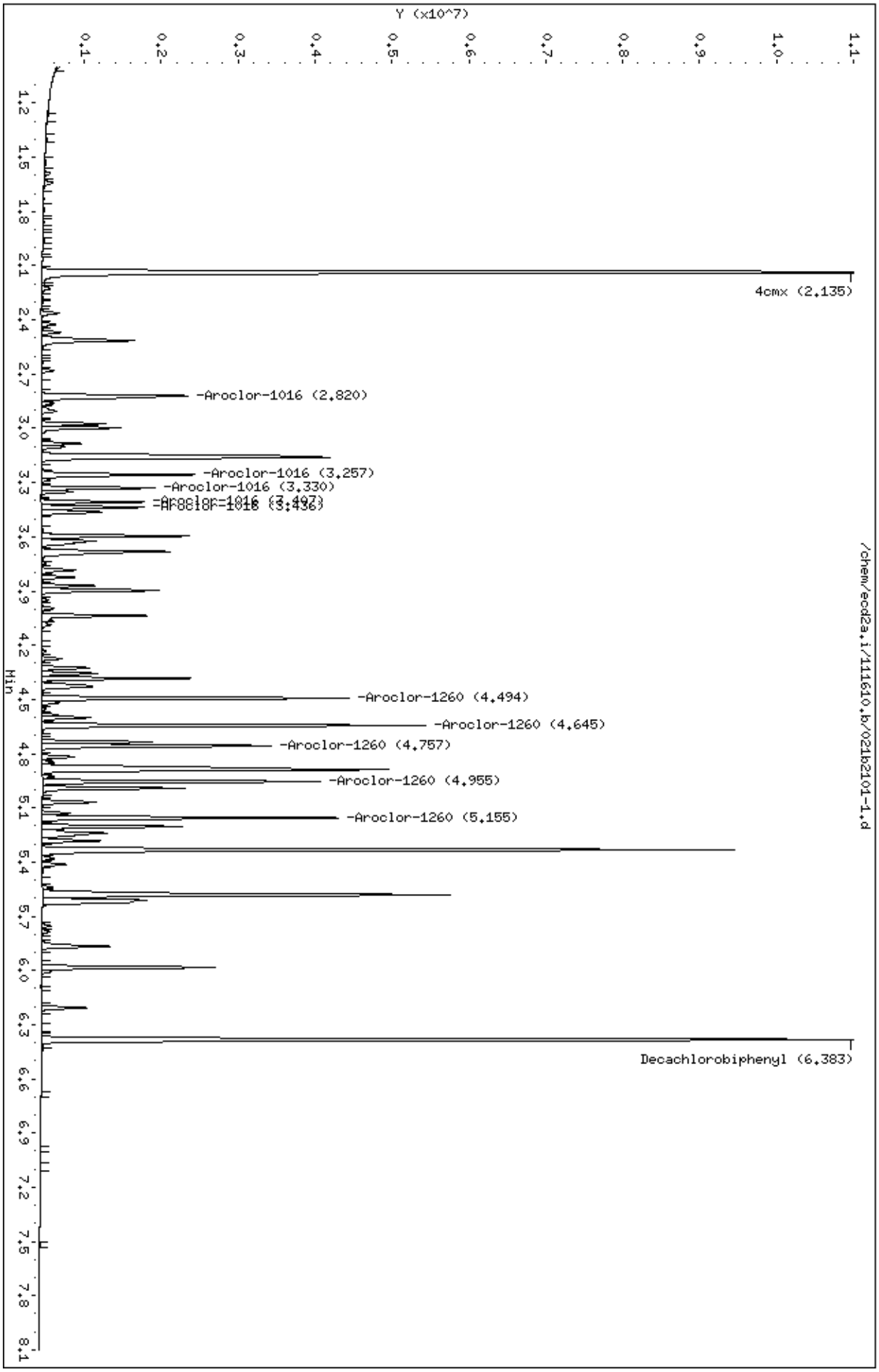
Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.135	2.132	0.003	12899274	129.621	0.13	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	10073707	134.382	0.13	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.820	2.818	0.002	2347578	690.329	0.69	80.00- 120.00	100.00
3.257	3.256	0.001	1935678	707.236	0.71	62.32- 102.32	82.45
3.330	3.328	0.002	1212212	726.202	0.73	31.35- 71.35	51.64
3.407	3.406	0.001	1114357	711.724	0.71	26.96- 66.96	47.47
3.436	3.436	0.000	1140209	699.389	0.70	28.72- 68.72	48.57
Average of Peak Concentrations =					0.71		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.494	4.493	0.001	3348351	782.172	0.78	80.00- 120.00	100.00
4.645	4.643	0.002	4148866	798.380	0.80	103.37- 143.37	123.91
4.757	4.756	0.001	2837659	795.525	0.80	64.16- 104.16	84.75
4.955	4.954	0.001	3096543	789.211	0.79	72.66- 112.66	92.48
5.155	5.155	0.000	3299282	799.006	0.80	78.35- 118.35	98.53
Average of Peak Concentrations =					0.79		


Data File: /chem/ecd2a.i/111610.b/021b2101-1.d
Date : 16-NOV-2010 11:45
Client ID: PBLK01LCS
Sample Info: 1120226270011
Volume Injected (uL): 1.0
Column phase: CLP2
Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25
Page 1
Y (x10^7)
Min
4cmx (2.135)
-Aroclor-1016 (2.820)
-Aroclor-1016 (3.257)
-Aroclor-1016 (3.330)
-Aroclor-1016 (3.497)
-Aroclor-1016 (3.496)
-Aroclor-1260 (4.494)
-Aroclor-1260 (4.645)
-Aroclor-1260 (4.757)
-Aroclor-1260 (4.955)
-Aroclor-1260 (5.155)
Decachlorobiphenyl (6.383)
/chem/ecd2a.i/111610.b/021b2101-1.d

Miscellaneous Data

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD2

DATE: 11/10/2010 METHOD: ECD2-F-8082-100510.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:DB823
ALUMINA LOT:100709-A
COPPER LOT:1350083-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: Injection Volume: 1.0 uL

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR100930-99 01	JAOC	09-NOV-2010 07:58		110910	1.0		CLEAN
002f0201.d	WAR101104-60 01	JAOC	09-NOV-2010 08:09		110910	1.0		DUSE
003f0301.d	WAR101028-54	JAOC	09-NOV-2010 08:20		110910	1.0		PASSES BOTH COLUMNS
004f0401.d	WAR101028-42	JAOC	09-NOV-2010 08:31		110910	1.0		DUSE
005f0501.d	WAR101028-48	JAOC	09-NOV-2010 08:43		110910	1.0		PASSES BOTH COLUMNS AVG 15%
006f0601.d	WAR100902-32	JAOC	09-NOV-2010 08:54		110910	1.0		PATTERN ONLY
007f0701.d	WAR100831-21	JAOC	09-NOV-2010 09:05		110910	1.0		PATTERN ONLY
008f0801.d	WAR101104-60 01	JAOC	09-NOV-2010 09:16		110910	1.0		DUSE
009f0901.d	WAR100907-62	JAOC	09-NOV-2010 09:28		110910	1.0		PATTERN ONLY
010f1001.d	WAR100827-68	JAOC	09-NOV-2010 09:39		110910	1.0		PATTERN ONLY
011f1101.d	WAR101028-42	JAOC	09-NOV-2010 09:50		110910	1.0		DUSE
012f1201.d	WAR101109-01 60	JAOC	09-NOV-2010 10:01		110910	1.0		1660 LEVEL 1
013f1301.d	WAR101109-02 60	JAOC	09-NOV-2010 10:13		110910	1.0		1660 LEVEL 2
014f1401.d	WAR101109-03 60	JAOC	09-NOV-2010 10:24		110910	1.0		1660 LEVEL 3
015f1501.d	WAR101109-04 60	JAOC	09-NOV-2010 10:35		110910	1.0		1660 LEVEL 4

Instrument Batch: /chem/ecd2a.i/110910.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	IAR100930-01 60	JAOC	09-NOV-2010 10:46		110910	1.0		1660 LEVEL 5

017f1701.d	WAR101104-60 01	JAOC	09-NOV-2010 10:57		110910		1.0	PASSES BOTH COLUMNS
018f1801.d	WAR101109-09 42	JAOC	09-NOV-2010 11:09		110910		1.0	1242 LEVEL 1
019f1901.d	WAR101109-10 42	JAOC	09-NOV-2010 11:20		110910		1.0	1242 LEVEL 2
020f2001.d	WAR101109-11 42	JAOC	09-NOV-2010 11:31		110910		1.0	1242 LEVEL 3
021f2101.d	WAR101109-12 42	JAOC	09-NOV-2010 11:42		110910		1.0	1242 LEVEL 4
022f2201.d	IAR101026-02 42	JAOC	09-NOV-2010 11:54		110910		1.0	1242 LEVEL 5
023f2301.d	WAR101028-42	JAOC	09-NOV-2010 12:05		110910		1.0	PASSES BOTH COLUMNS
024f2401.d	WAR100910-DDT	JAOC	09-NOV-2010 12:16		110910		1.0	DDT
025f2501.d	WAR100930-99 02	JAOC	09-NOV-2010 12:27		110910		1.0	CLEAN
026f2601.d	1202256504	JAOC	09-NOV-2010 12:38	1045614	11-334		1.0	QC A UPLOAD BOTH, USE HIGHER
027f2701.d	1202256505	JAOC	09-NOV-2010 12:50	1045614	11-334		1.0	QC A UPLOAD BOTH, USE HIGHER
028f2801.d	1202256506	JAOC	09-NOV-2010 13:01	1045614	11-334		1.0	QC A UPLOAD BOTH, USE HIGHER
029f2901.d	265933003	JAOC	09-NOV-2010 13:12	1045614	11-334		1.0	ARSL UPLOAD BOTH, USE HIGHER
030f3001.d	WAR101104-60 02	JAOC	09-NOV-2010 13:28		110910		1.0	PASSES BOTH COLUMNS
031f3101.d	WAR100930-99 03	JAOC	09-NOV-2010 13:39		110910		1.0	CLEAN
032f3201.d	1202256838	JAOC	09-NOV-2010 13:51	1045772	11-372		1.0	QC A UPLOAD BOTH, USE HIGHER
033f3301.d	1202256839	JAOC	09-NOV-2010 14:02	1045772	11-372		1.0	QC A UPLOAD BOTH, USE HIGHER
034f3401.d	266363004	JAOC	09-NOV-2010 14:13	1045772	11-377		1.0	ARSL UPLOAD BOTH, USE HIGHER
035f3501.d	1202258643	JAOC	09-NOV-2010 14:24	1045772	11-377		1.0	QC A UPLOAD BOTH, USE HIGHER

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	1202258644	JAOC	09-NOV-2010 14:36	1045772	11-377		1.0	QC A UPLOAD BOTH, USE HIGHER
037f3701.d	266376002	JAOC	09-NOV-2010 14:47	1045772	11-372		1.0	ARSL DUSE REPORT 5X PER CLIENT REQUEST
038f3801.d	266376002	JAOC	09-NOV-2010 15:03	1045772	11-372		5.0	ARSL UPLOAD BOTH, USE HIGHER
039f3901.d	266379003	JAOC	09-NOV-2010 15:18	1045772	11-373		1.0	ARSL SENT FOR RE: UPLOAD BOTH, USE HIGHER
040f4001.d	WAR101104-60 03	JAOC	09-NOV-2010 15:34		110910		1.0	PASSES BOTH COLUMNS
041f4101.d	WAR100930-99 04	JAOC	09-NOV-2010 15:45		110910		1.0	CLEAN

042f4201.d	1202258398	JAOC	09-NOV-2010 15:57	1046385	266327		1.0	QC A	UPLOAD BOTH, USE HIGHER
043f4301.d	1202258399	JAOC	09-NOV-2010 16:08	1046385	266327		1.0	QC A	UPLOAD BOTH, USE HIGHER
044f4401.d	266327001	JAOC	09-NOV-2010 16:19	1046385	266327		1.0	WSRB	UPLOAD BOTH, USE HIGHER
045f4501.d	266327002	JAOC	09-NOV-2010 16:35	1046385	266327		5.0	WSRB	UPLOAD BOTH, USE HIGHER
046f4601.d	266327003	JAOC	09-NOV-2010 16:51	1046385	266327		5.0	WSRB	UPLOAD BOTH, USE HIGHER
047f4701.d	1202258400	JAOC	09-NOV-2010 17:07	1046385	266327		5.0	QC A	UPLOAD BOTH, USE HIGHER
048f4801.d	1202258401	JAOC	09-NOV-2010 17:22	1046385	266327		5.0	QC A	UPLOAD BOTH, USE HIGHER
049f4901.d	266329001	JAOC	09-NOV-2010 17:38	1046385	266329		5.0	WSRB	UPLOAD BOTH, USE HIGHER
050f5001.d	266329002	JAOC	09-NOV-2010 17:54	1046385	266329		5.0	WSRB	UPLOAD BOTH, USE HIGHER
051f5101.d	WAR101104-60 04	JAOC	09-NOV-2010 18:10		110910		1.0		PASSES BOTH COLUMNS
052f5201.d	WAR100930-99 05	JAOC	09-NOV-2010 18:21		110910		1.0		CLEAN
053f5301.d	1202256842	JAOC	09-NOV-2010 18:33	1045774	10-MAC-005		1.0	QC A	UPLOAD BOTH, USE HIGHER
054f5401.d	1202256843	JAOC	09-NOV-2010 18:44	1045774	10-MAC-005		1.0	QC A	UPLOAD BOTH, USE HIGHER
055f5501.d	265852002	JAOC	09-NOV-2010 18:55	1045774	10-MAC-005		1.0	NFSR	UPLOAD BOTH, USE HIGHER

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
056f5601.d	1202256844	JAOC	09-NOV-2010 19:11	1045774	10-MAC-005		1.0	QC A	UPLOAD BOTH, USE HIGHER
057f5701.d	1202256845	JAOC	09-NOV-2010 19:27	1045774	10-MAC-005		1.0	QC A	UPLOAD BOTH, USE HIGHER
058f5801.d	266340002	JAOC	09-NOV-2010 19:43	1045774	10-MAC-006		1.0	NFSR	UPLOAD BOTH, USE HIGHER
059f5901.d	WAR101104-60 05	JAOC	09-NOV-2010 19:58		110910		1.0		PASSES BOTH COLUMNS
060f6001.d	WAR100930-99 06	JAOC	09-NOV-2010 20:10		110910		1.0		CLEAN
061f6101.d	1202258579	JAOC	09-NOV-2010 20:21	1046463	11-361		1.0	QC A	UPLOAD BOTH, USE HIGHER
062f6201.d	1202258580	JAOC	09-NOV-2010 20:32	1046463	11-361		1.0	QC A	UPLOAD BOTH, USE HIGHER
063f6301.d	266302003	JAOC	09-NOV-2010 20:43	1046463	11-361		1.0	ARSL	DUSE REPORT 5X PER CLIENT REQUEST
064f6401.d	1202258581	JAOC	09-NOV-2010 20:59	1046463	11-361		1.0	QC A	DUSE REPORT 5X PER CLIENT REQUEST
065f6501.d	1202258582	JAOC	09-NOV-2010 21:15	1046463	11-361		1.0	QC A	DUSE REPORT 5X PER CLIENT REQUEST

066f6601.d	266484004	JAOC	09-NOV-2010 21:31	1046463	11-392		1.0	ARSL	DUSE REPORT 5X PER CLIENT REQUEST
067f6701.d	266495004	JAOC	09-NOV-2010 21:47	1046463	11-394		1.0	ARSL	DUSE REPORT 5X PER CLIENT REQUEST
068f6801.d	WAR101104-60 06	JAOC	09-NOV-2010 22:03		110910		1.0		PASSES BOTH COLUMNS
069f6901.d	WAR100930-99 07	JAOC	09-NOV-2010 22:14		110910		1.0		CLEAN
070f7001.d	266302003	JAOC	09-NOV-2010 22:25	1046463	11-361		5.0	ARSL	UPLOAD BOTH, USE HIGHER
071f7101.d	1202258581	JAOC	09-NOV-2010 22:41	1046463	11-361		5.0	QC A	UPLOAD BOTH, USE HIGHER
072f7201.d	1202258582	JAOC	09-NOV-2010 22:57	1046463	11-361		5.0	QC A	UPLOAD BOTH, USE HIGHER
073f7301.d	266484004	JAOC	09-NOV-2010 23:13	1046463	11-392		5.0	ARSL	UPLOAD BOTH, USE HIGHER
074f7401.d	266495004	JAOC	09-NOV-2010 23:29	1046463	11-394		5.0	ARSL	UPLOAD BOTH, USE HIGHER
075f7501.d	WAR101104-60 07	JAOC	09-NOV-2010 23:44		110910		1.0		PASSES BOTH COLUMNS

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
076f7601.d	WAR100930-99 08	JAOC	09-NOV-2010 23:56		110910		1.0	CLEAN

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD2

DATE: 11/17/2010 METHOD: ECD2-F-8082-100510.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:DB823
ALUMINA LOT:100709-A
COPPER LOT:1350083-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number:111610 Injection Volume: 1.0 uL

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR101029-99 01	JAOC	16-NOV-2010 07:46		111610	1.0		CLEAN
002f0201.d	WAR101104-60 01	JAOC	16-NOV-2010 07:58		111610	1.0		PASSES BOTH COLUMNS
003f0301.d	WAR101028-54	JAOC	16-NOV-2010 08:09		111610	1.0		PASSES BOTH COLUMNS
004f0401.d	WAR101028-42	JAOC	16-NOV-2010 08:20		111610	1.0		PASSES BOTH COLUMNS
005f0501.d	WAR101028-48	JAOC	16-NOV-2010 08:31		111610	1.0		PASSES BOTH COLUMNS AVG
006f0601.d	WAR100902-32	JAOC	16-NOV-2010 08:43		111610	1.0		PATTERN ONLY
007f0701.d	WAR100831-21	JAOC	16-NOV-2010 08:54		111610	1.0		PATTERN ONLY
008f0801.d	WAR100907-62	JAOC	16-NOV-2010 09:05		111610	1.0		PATTERN ONLY
009f0901.d	WAR100827-68	JAOC	16-NOV-2010 09:16		111610	1.0		PATTERN ONLY
010f1001.d	WAR100910-DDT	JAOC	16-NOV-2010 09:28		111610	1.0		DDT
011f1101.d	WAR101029-99 02	JAOC	16-NOV-2010 09:39		111610	1.0		CLEAN
012f1201.d	1202262703	JAOC	16-NOV-2010 09:50	1048235	EUI-7967	1.0	QC A	UPLOAD BOTH, USE HIGHER
013f1301.d	1202262704	JAOC	16-NOV-2010 10:02	1048235	EUI-7967	1.0	QC A	UPLOAD BOTH, USE HIGHER
014f1401.d	266658001	JAOC	16-NOV-2010 10:13	1048235	EUI-7967	1.0	CARE	UPLOAD BOTH, USE HIGHER
015f1501.d	266758001	JAOC	16-NOV-2010 10:24	1048235	266758	20.0	ENGS	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd2a.i/111610.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	1202262705	JAOC	16-NOV-2010 10:40	1048235	266758	20.0	QC A	UPLOAD BOTH, USE HIGHER

017f1701.d	1202262706	JAOC	16-NOV-2010 10:56	1048235	266758		20.0	QC A	UPLOAD BOTH, USE HIGHER
018f1801.d	WAR101104-60 02	JAOC	16-NOV-2010 11:12		111610		1.0		PASSES BOTH COLUMNS
019f1901.d	WAR101029-99 03	JAOC	16-NOV-2010 11:23		111610		1.0		CLEAN
020f2001.d	1202262699	JAOC	16-NOV-2010 11:34	1048232	11-445		1.0	QC A	UPLOAD BOTH, USE HIGHER
021f2101.d	1202262700	JAOC	16-NOV-2010 11:45	1048232	11-445		1.0	QC A	UPLOAD BOTH, USE HIGHER
022f2201.d	266779001	JAOC	16-NOV-2010 11:57	1048232	11-445		1.0	ARSL	UPLOAD BOTH, USE HIGHER
023f2301.d	1202262701	JAOC	16-NOV-2010 12:08	1048232	11-445		1.0	QC A	UPLOAD BOTH, USE HIGHER
024f2401.d	1202262702	JAOC	16-NOV-2010 12:19	1048232	11-445		1.0	QC A	UPLOAD BOTH, USE HIGHER
025f2501.d	266779002	JAOC	16-NOV-2010 12:30	1048232	11-445		1.0	ARSL	UPLOAD BOTH, USE HIGHER
026f2601.d	266779003	JAOC	16-NOV-2010 12:42	1048232	11-445		1.0	ARSL	UPLOAD BOTH, USE HIGHER
027f2701.d	266779004	JAOC	16-NOV-2010 12:53	1048232	11-445		1.0	ARSL	UPLOAD BOTH, USE HIGHER
028f2801.d	266779005	JAOC	16-NOV-2010 13:04	1048232	11-445		1.0	ARSL	UPLOAD BOTH, USE HIGHER
029f2901.d	266779007	JAOC	16-NOV-2010 13:15	1048232	11-445		1.0	ARSL	UPLOAD BOTH, USE HIGHER
030f3001.d	WAR101104-60 03	JAOC	16-NOV-2010 13:27		111610		1.0		PASSES BOTH COLUMNS
031f3101.d	WAR101029-99 04	JAOC	16-NOV-2010 13:38		111610		1.0		CLEAN
032f3201.d	266877001	JAOC	16-NOV-2010 13:49	1048232	11-463		1.0	ARSL	UPLOAD BOTH, USE HIGHER
033f3301.d	266877003	JAOC	16-NOV-2010 14:00	1048232	11-463		1.0	ARSL	UPLOAD BOTH, USE HIGHER
034f3401.d	266877005	JAOC	16-NOV-2010 14:11	1048232	11-463		1.0	ARSL	UPLOAD BOTH, USE HIGHER
035f3501.d	266892002	JAOC	16-NOV-2010 14:22	1048232	11-472		1.0	ARSL	UPLOAD BOTH, USE HIGHER

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	WAR101104-60 04	JAOC	16-NOV-2010 14:34		111610		1.0	PASSES BOTH COLUMNS AVG
037f3701.d	WAR101029-99 05	JAOC	16-NOV-2010 14:45		111610		1.0	CLEAN
038f3801.d	1202264773	JAOC	16-NOV-2010 14:56	1048973	266999		1.0	QC A UPLOAD BOTH, USE FRONT
039f3901.d	1202264774	JAOC	16-NOV-2010 15:07	1048973	266999		1.0	QC A UPLOAD BOTH, USE FRONT
040f4001.d	1202264775	JAOC	16-NOV-2010 15:18	1048973	266999		1.0	QC A UPLOAD BOTH, USE FRONT
041f4101.d	266999001	JAOC	16-NOV-2010 15:30	1048973	266999		1.0	BJCO UPLOAD BOTH, USE FRONT

042f4201.d	266999002	JAOC	16-NOV-2010 15:46	1048973	266999		1.0	BJCO	UPLOAD BOTH, USE FRONT
043f4301.d	266999003	JAOC	16-NOV-2010 16:01	1048973	266999		1.0	BJCO	UPLOAD BOTH, USE FRONT
044f4401.d	266999004	JAOC	16-NOV-2010 16:17	1048973	266999		1.0	BJCO	UPLOAD BOTH, USE FRONT
045f4501.d	266999005	JAOC	16-NOV-2010 16:33	1048973	266999		1.0	BJCO	UPLOAD BOTH, USE FRONT
046f4601.d	WAR101104-60 05	JAOC	16-NOV-2010 16:49		111610		1.0		PASSES BOTH COLUMNS
047f4701.d	WAR101029-99 06	JAOC	16-NOV-2010 17:00		111610		1.0		CLEAN

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/001b0101.d
Lab Smp Id: WAR101029-99 01 Client Smp ID: PIBLK01
Inj Date : 16-NOV-2010 07:46
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101029-99 01
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 12:03 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 1 QC Sample: INSTBLK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: PCB.sub
Target Version: 3.50 Sample Matrix: None

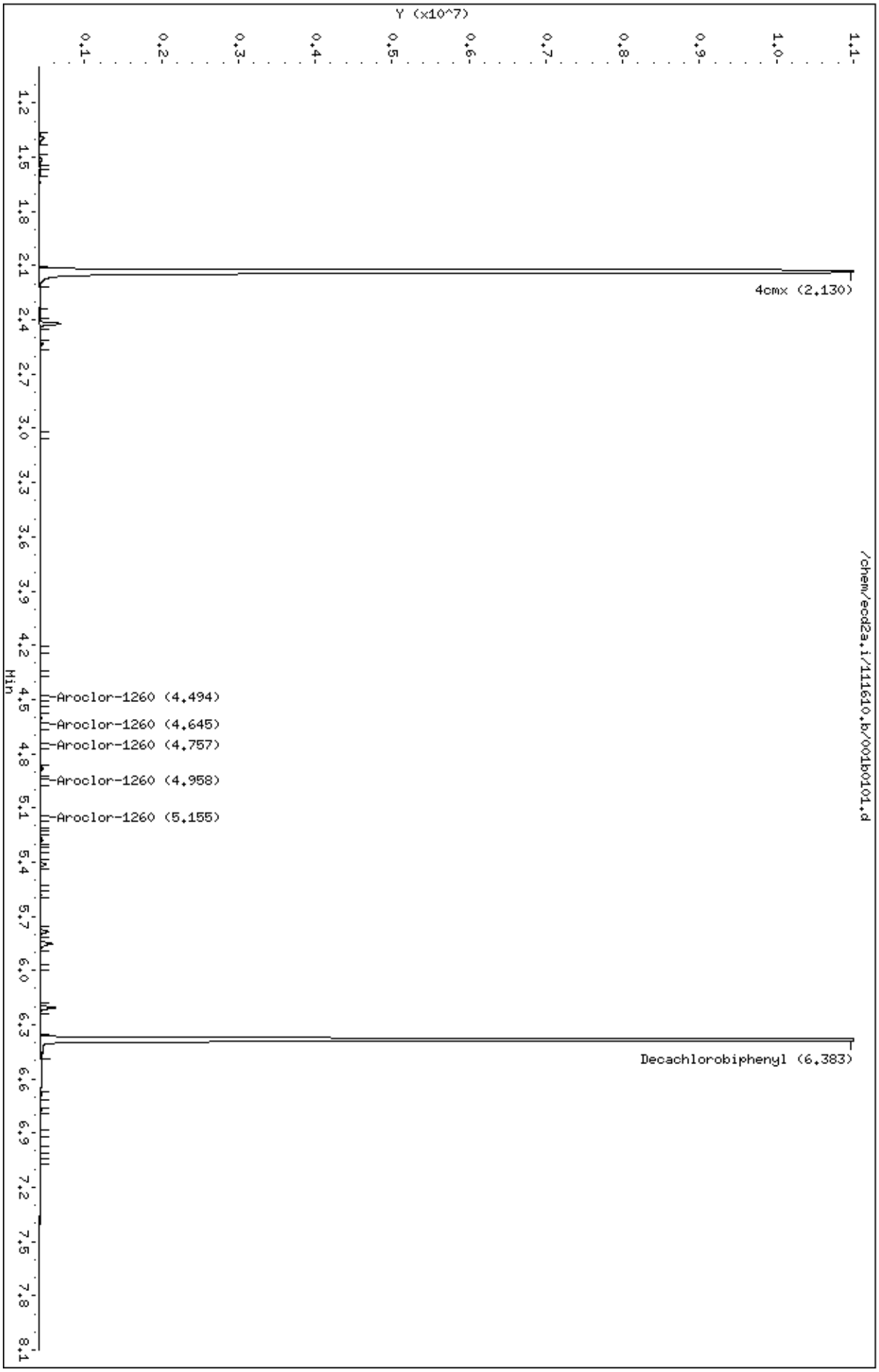
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.130	2.132	-0.002	21613520	217.187	217	80.00- 120.00	100.00(R)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	15377621	205.135	205	80.00- 120.00	100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/ecd2a.i/111610.b/001b0101.d
Date : 16-NOV-2010 07:46
Client ID: PIBLK01
Sample Info: IWAR101029-99 01
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



Page 1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/001f0101.d
Lab Smp Id: WAR101029-99 01 Client Smp ID: PIBLK01
Inj Date : 16-NOV-2010 07:46
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101029-99 01
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 12:04 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 1 QC Sample: INSTBLK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: PCB.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.890	1.893	-0.003	10222104	216.806	217	80.00- 120.00	100.00(R)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.778	5.778	0.000	7652623	208.338	208	80.00- 120.00	100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/ecd2a.i/111610.b/001f0101.d

Page 1

Date : 16-NOV-2010 07:46

Client ID: PIBLK01

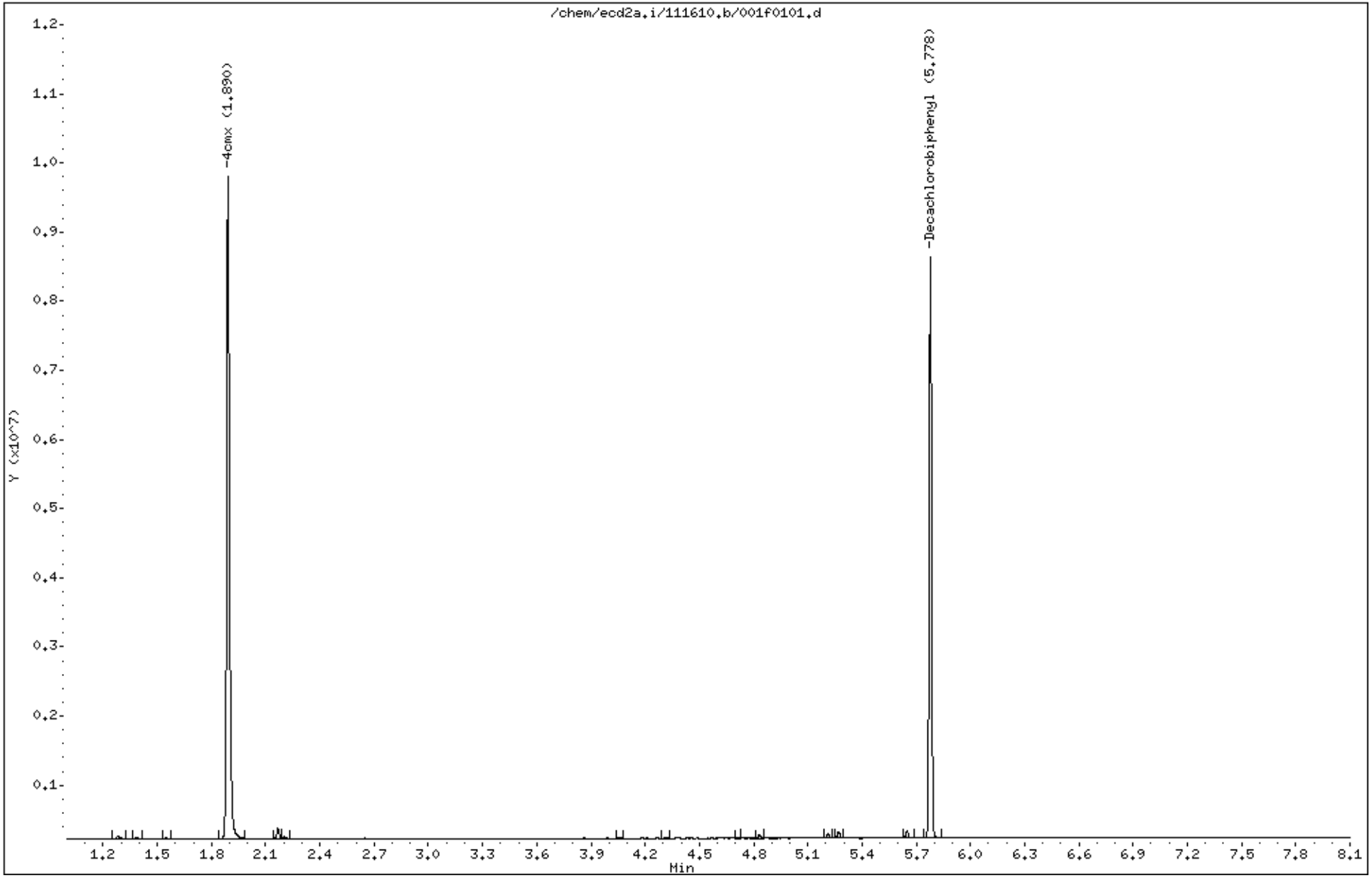
Instrument: ecd2a.i

Sample Info: IWAR101029-99 01

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/019b1901.d
Lab Smp Id: WAR101029-99 03 Client Smp ID: PIBLK03
Inj Date : 16-NOV-2010 11:23
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101029-99 03
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 12:03 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 19 QC Sample: INSTBLK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: PCB.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.135	2.132	0.003	21026195	211.285	211	80.00- 120.00	100.00(R)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.382	6.383	-0.001	15471763	206.391	206	80.00- 120.00	100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/ecd2a.i/111610.b/019b1901.d

Page 1

Date : 16-NOV-2010 11:23

Client ID: PIBLK03

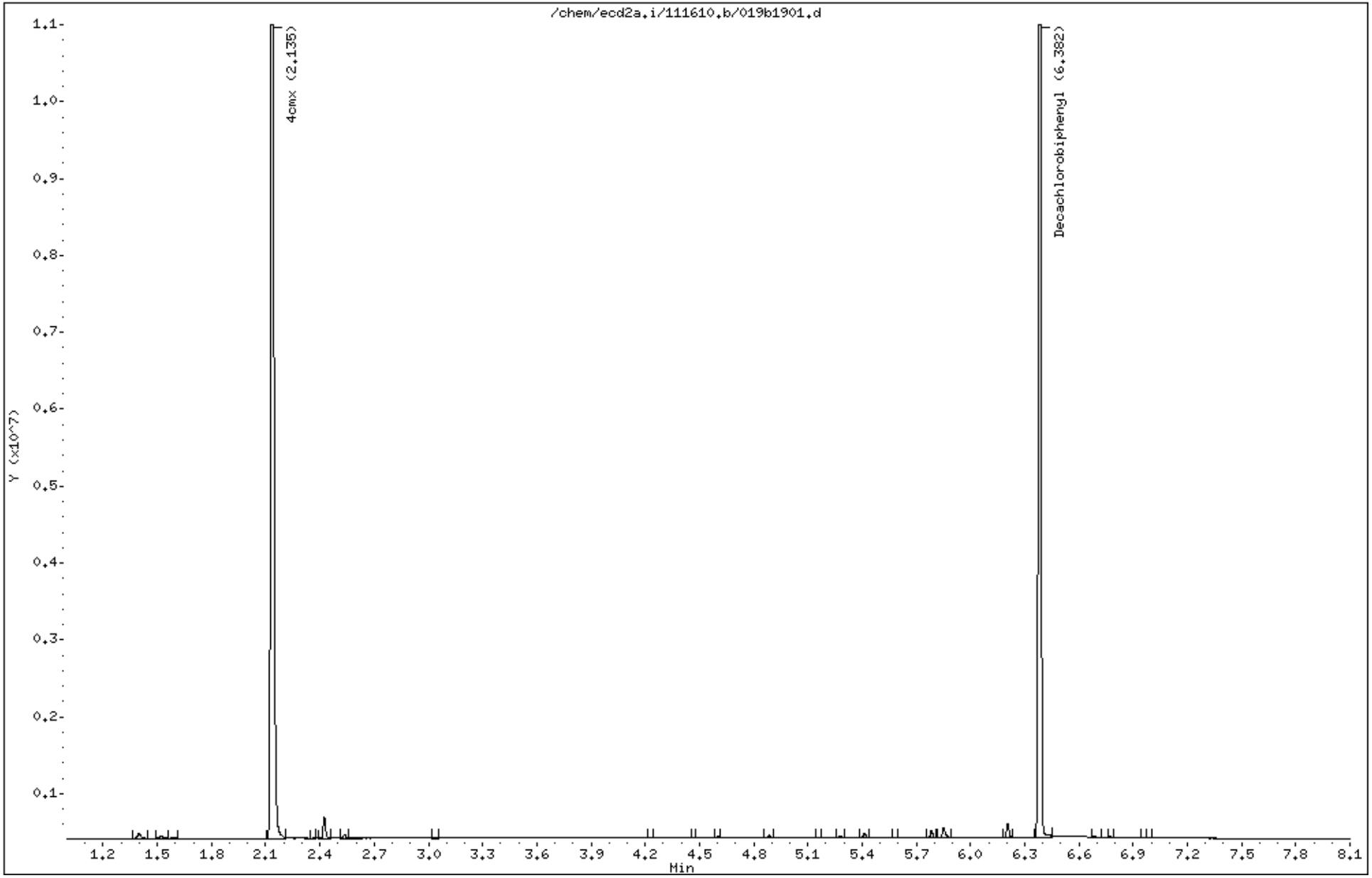
Instrument: ecd2a.i

Sample Info: IWAR101029-99 03

Operator: JAOC

Column phase: CLP2

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/019f1901.d
Lab Smp Id: WAR101029-99 03 Client Smp ID: PIBLK03
Inj Date : 16-NOV-2010 11:23
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101029-99 03
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 12:04 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 19 QC Sample: INSTBLK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: PCB.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.897	1.893	0.004	9794301	207.733	208	80.00- 120.00	100.00(R)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.777	5.778	-0.001	7720042	210.173	210	80.00- 120.00	100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/ecd2a.i/111610.b/019f1901.d

Page 1

Date : 16-NOV-2010 11:23

Client ID: PIBLK03

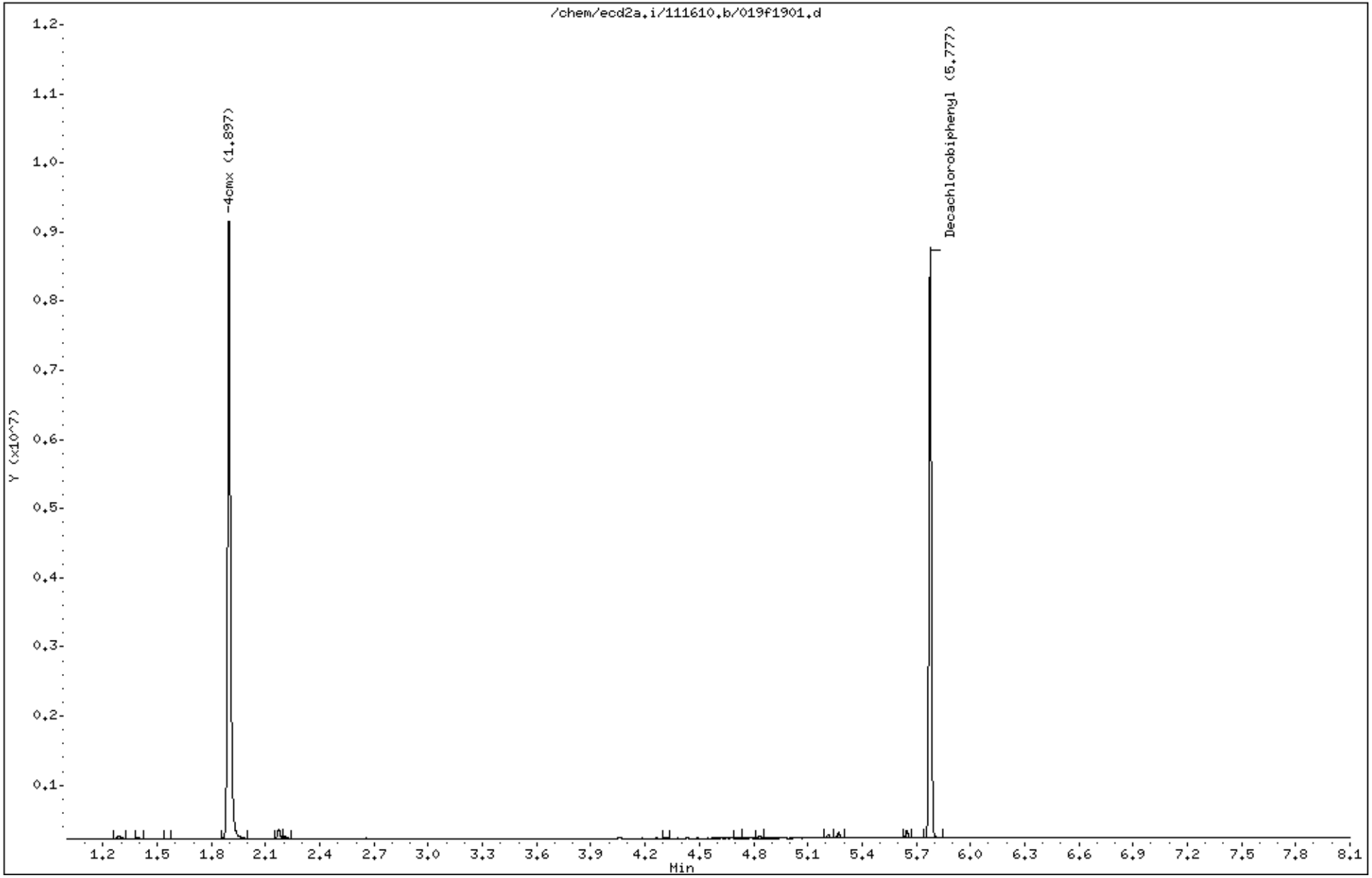
Instrument: ecd2a.i

Sample Info: IWAR101029-99 03

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/031b3101.d
Lab Smp Id: WAR101029-99 04 Client Smp ID: PIBLK04
Inj Date : 16-NOV-2010 13:38
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101029-99 04
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 31 QC Sample: INSTBLK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: PCB.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.135	2.132	0.003	20726184	208.271	208	80.00- 120.00	100.00(R)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.384	6.383	0.001	15352883	204.805	205	80.00- 120.00	100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/ecd2a.i/111610.b/031b3101.d

Page 1

Date : 16-NOV-2010 13:38

Client ID: PIBLK04

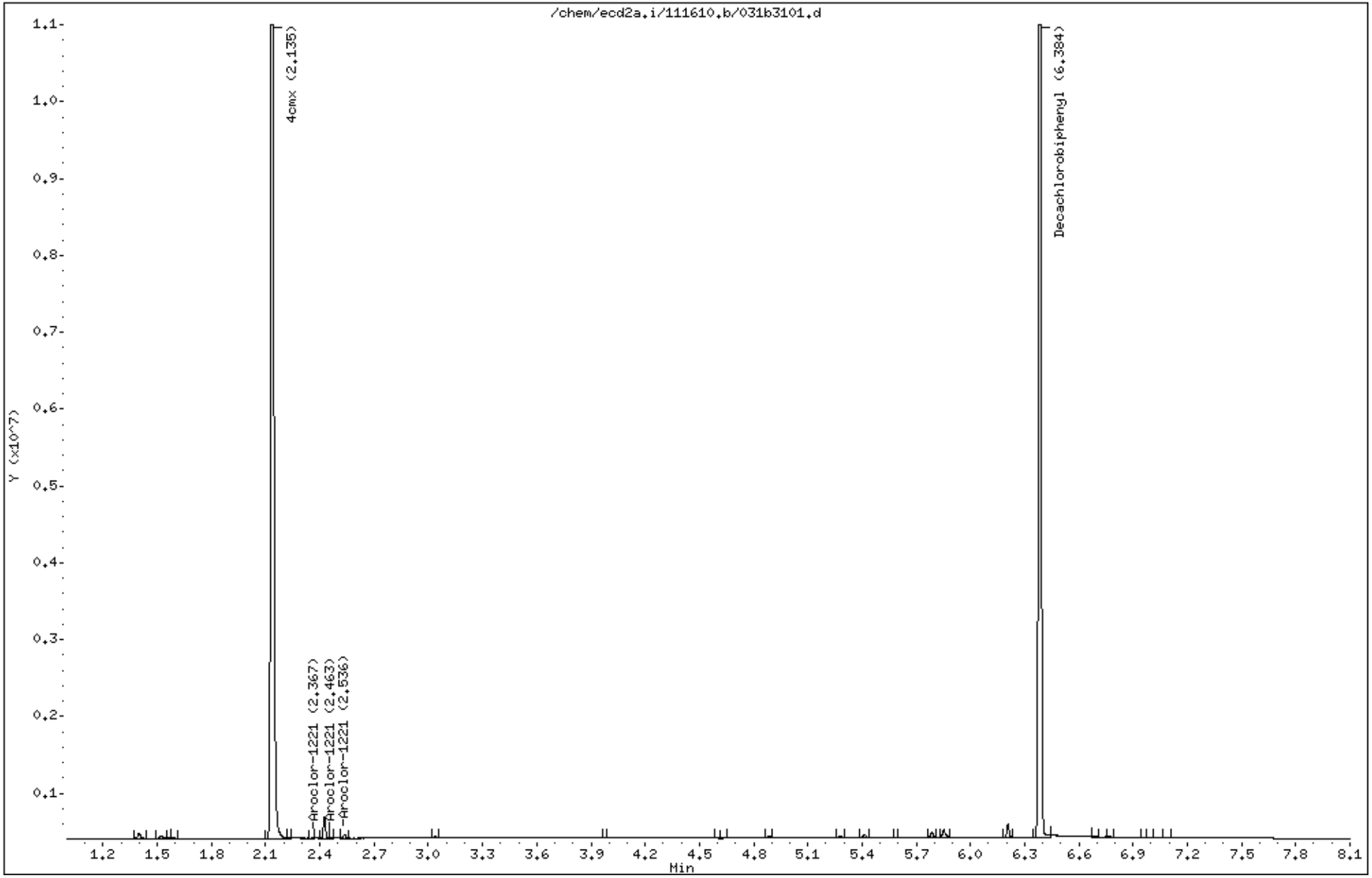
Instrument: ecd2a.i

Sample Info: IWAR101029-99 04

Operator: JAOC

Column phase: CLP2

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/031f3101.d
Lab Smp Id: WAR101029-99 04 Client Smp ID: PIBLK04
Inj Date : 16-NOV-2010 13:38
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR101029-99 04
Misc Info :
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 31 QC Sample: INSTBLK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: PCB.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.896	1.893	0.003	10214094	216.636	217	80.00- 120.00	100.00(R)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.779	5.778	0.001	8056109	219.322	219	80.00- 120.00	100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/ecd2a.i/111610.b/031f3101.d

Page 1

Date : 16-NOV-2010 13:38

Client ID: PIBLK04

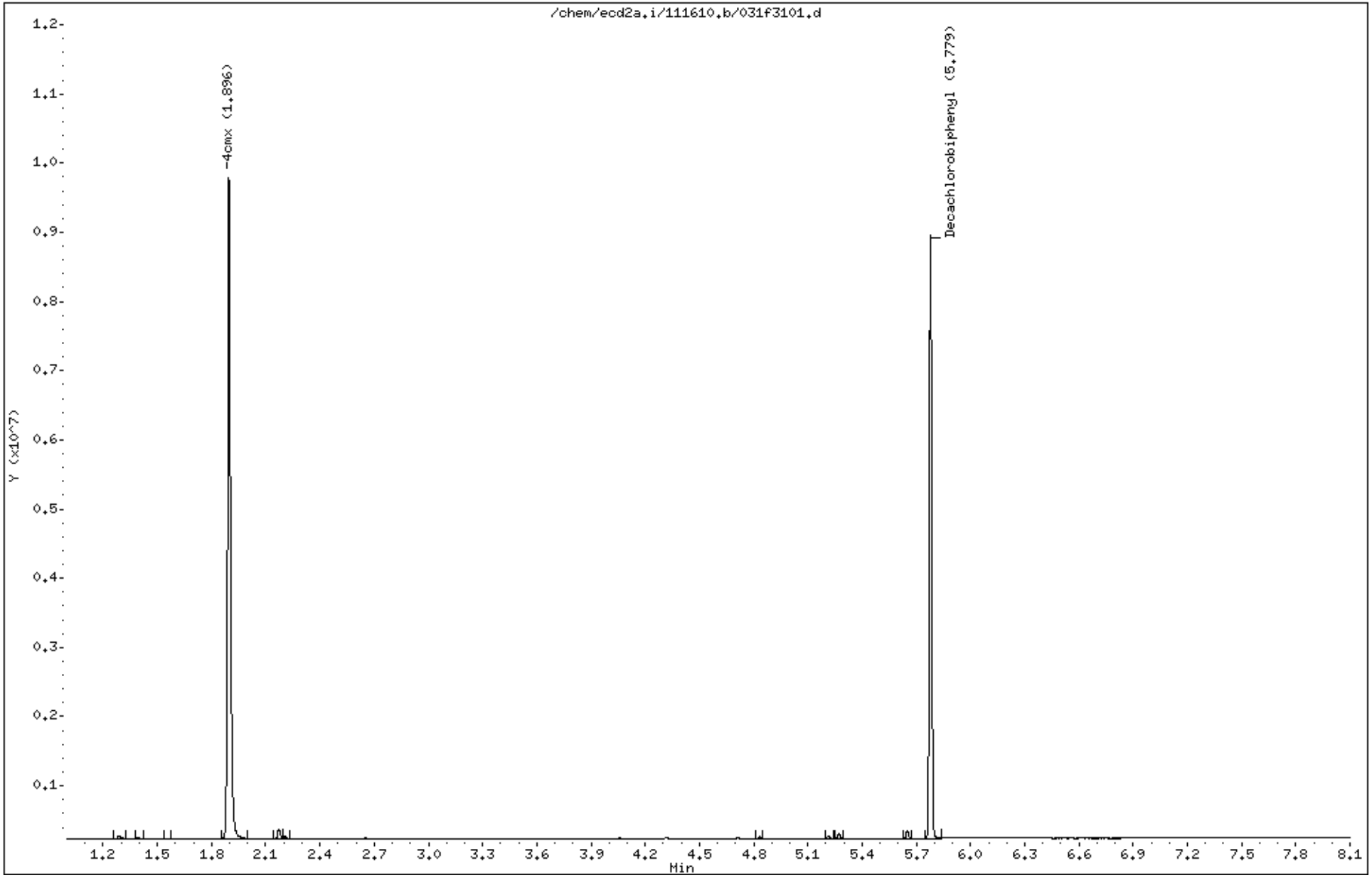
Instrument: ecd2a.i

Sample Info: IWAR101029-99 04

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/022b2201.d
Lab Smp Id: 266779001 Client Smp ID: CASA-11-1332
Inj Date : 16-NOV-2010 11:57
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |266779001|1|
Misc Info : |ECD82P_1L|1048232|SVA|ARSL|WATER|CASA-11-1332|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-445.sub
Target Version: 3.50 Sample Matrix: Water

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.135	2.132	0.003	12877661	129.403	0.13	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	8975590	119.733	0.12	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/111610.b/022b2201.d

Page 1

Date : 16-NOV-2010 11:57

Client ID: CASA-11-1332

Instrument: ecd2a.i

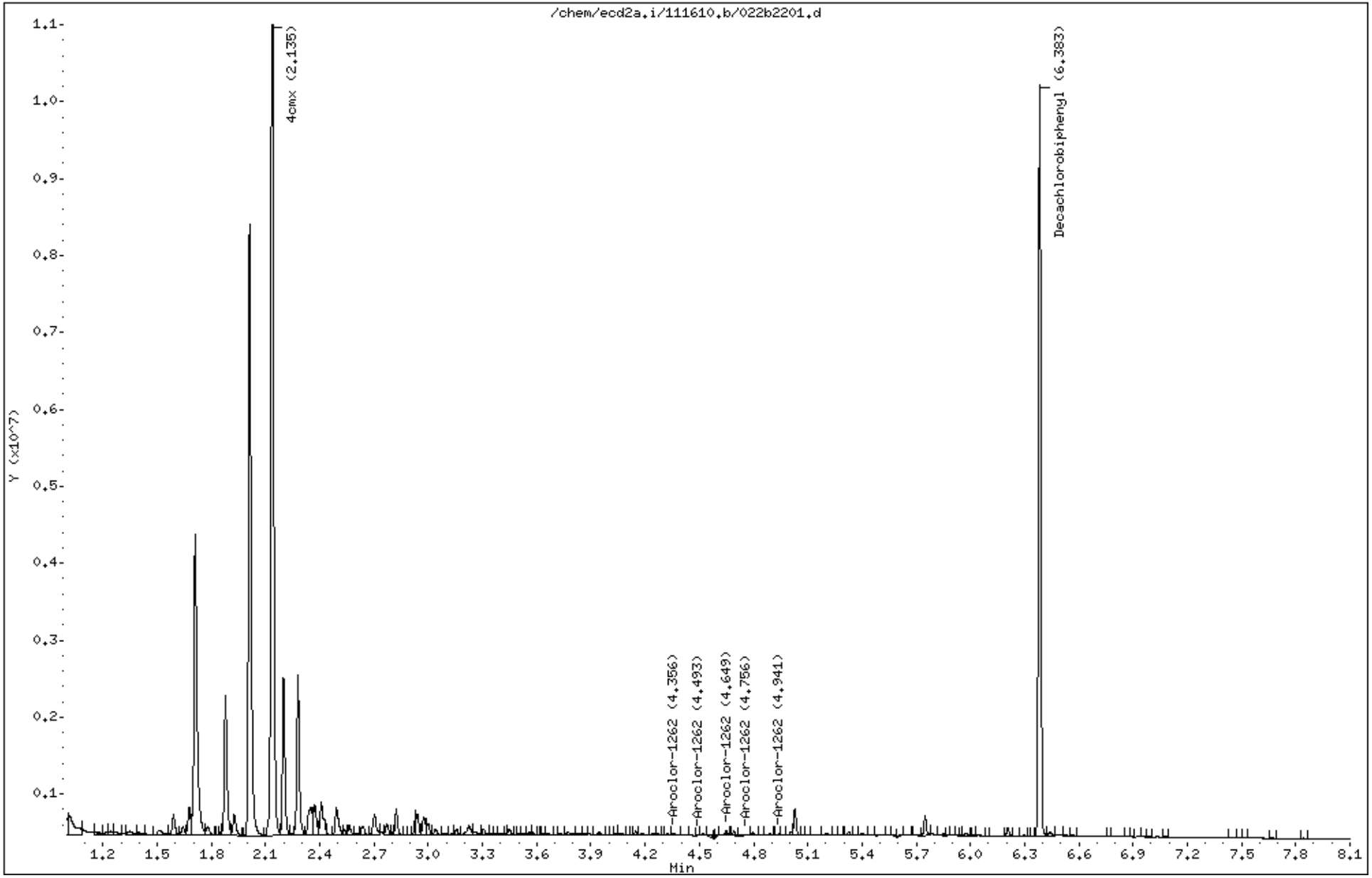
Sample Info: |2667790011|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP2

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/022f2201.d
Lab Smp Id: 266779001 Client Smp ID: CASA-11-1332
Inj Date : 16-NOV-2010 11:57
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |266779001|1|
Misc Info : |ECD82P_1L|1048232|SVA|ARSL|WATER|CASA-11-1332|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-445.sub
Target Version: 3.50 Sample Matrix: Water

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.897	1.893	0.004	6021846	127.721	0.13	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.778	5.778	0.000	4673020	127.220	0.13	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/111610.b/022f2201.d

Page 1

Date : 16-NOV-2010 11:57

Client ID: CASA-11-1332

Instrument: ecd2a.i

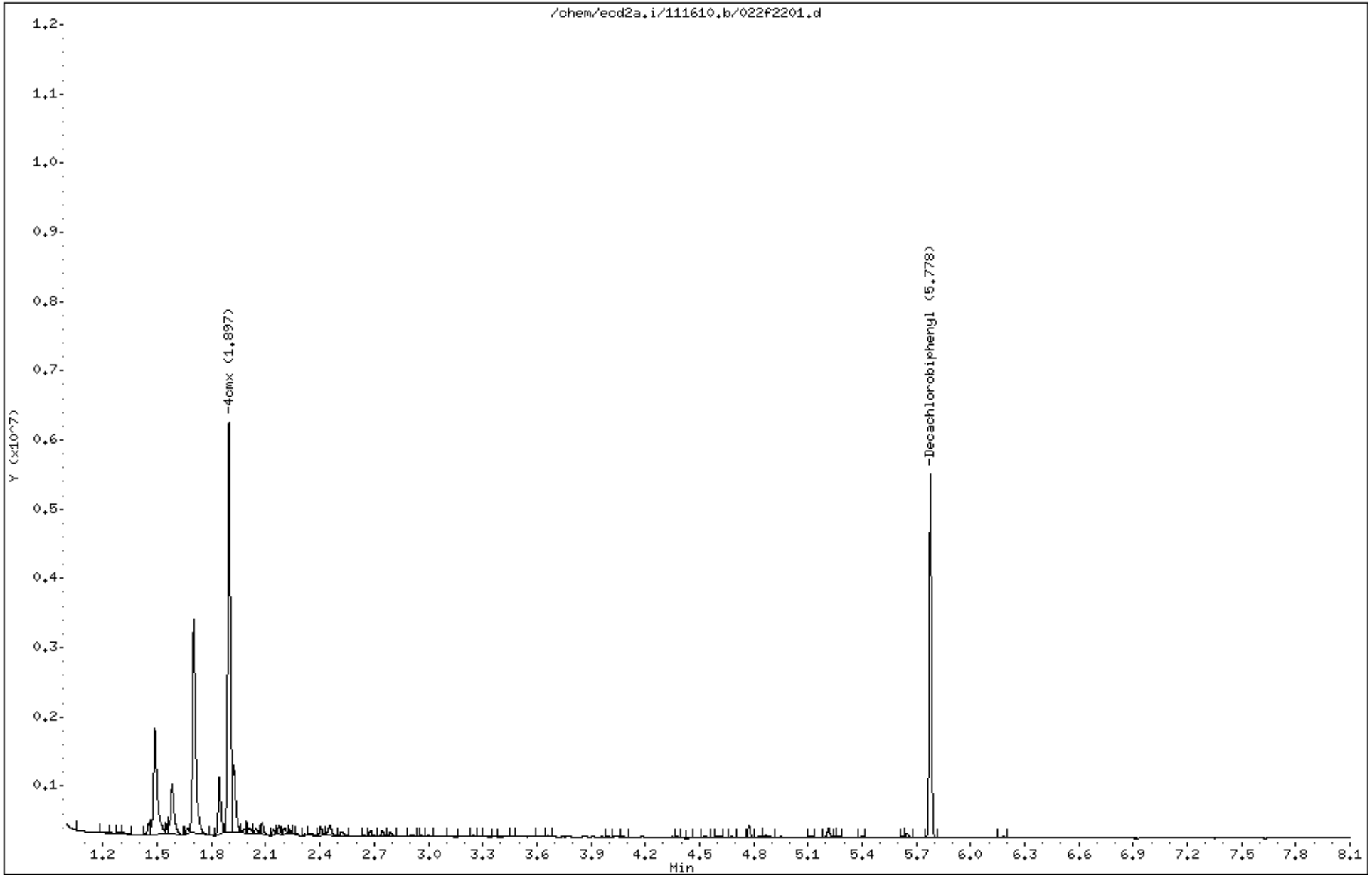
Sample Info: |2667790011|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/023b2301.d
Lab Smp Id: 1202262701 Client Smp ID: CASA-11-1332MS
Inj Date : 16-NOV-2010 12:08
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202262701|1|
Misc Info : |ECD82P_1L|1048232|SVA|QC A|WATER|MS|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 23 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-445.sub
Target Version: 3.50 Sample Matrix: Water

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	0.50000	Volume of final extract (mL)
Vo	500.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

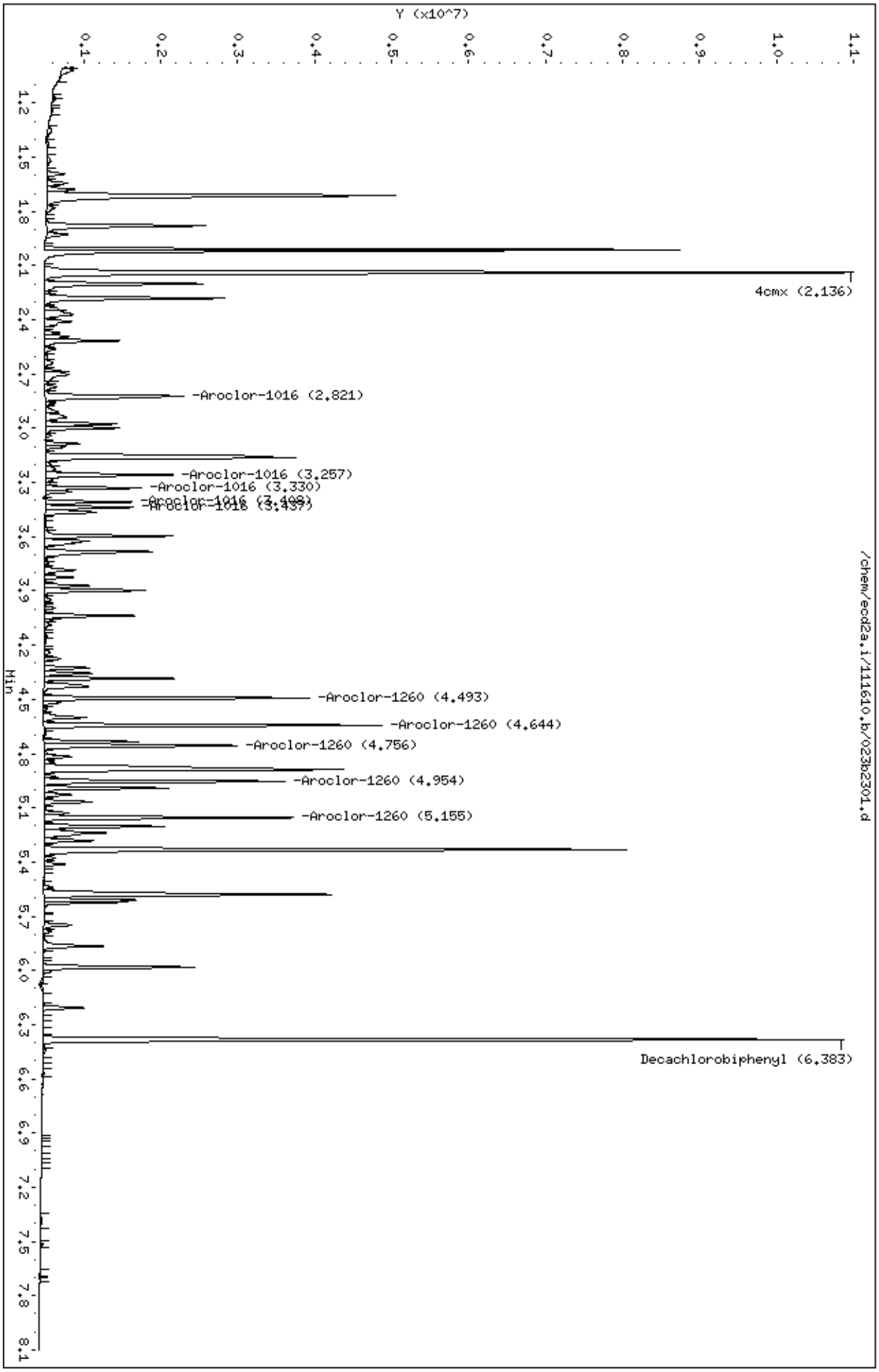
Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.136	2.132	0.004	10240447	102.903	0.10	80.00- 120.00	100.00(M)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	9401088	125.409	0.12	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.821	2.818	0.003	2168480	637.663	0.64	80.00- 120.00	100.00(M)
3.257	3.256	0.001	1656651	605.288	0.60	62.18- 102.18	76.40
3.330	3.328	0.002	1017210	609.382	0.61	31.59- 71.59	46.91
3.408	3.406	0.002	929501	593.659	0.59	26.91- 66.91	42.86
3.437	3.436	0.001	1005195	616.573	0.62	29.01- 69.01	46.35
Average of Peak Concentrations =					0.61		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.493	4.493	0.000	2892346	675.650	0.68	80.00- 120.00	100.00(M)
4.644	4.643	0.001	3610508	694.782	0.69	103.24- 143.24	124.83
4.756	4.756	0.000	2415899	677.286	0.68	64.44- 104.44	83.53
4.954	4.954	0.000	2687407	684.935	0.68	72.61- 112.61	92.91
5.155	5.155	0.000	2832388	685.936	0.68	78.03- 118.03	97.93
Average of Peak Concentrations =					0.68		

QC Flag Legend

M - Compound response manually integrated.


Data File: /chem/ecd2a.i/111610.b/023b2301.d
Date : 16-NOV-2010 12:08
Client ID: CASA-11-1332MS
Sample Info: 1120226270111
Volume Injected (uL): 1.0
Column phase: CLP2
Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25
Page 1
Y (x10^7)
Min
4cmx (2.136)
-Aroclor-1016 (2.821)
-Aroclor-1016 (3.257)
-Aroclor-1016 (3.330)
-Aroclor-1016 (3.408)
-Aroclor-1016 (3.437)
-Aroclor-1260 (4.493)
-Aroclor-1260 (4.644)
-Aroclor-1260 (4.756)
-Aroclor-1260 (4.954)
-Aroclor-1260 (5.155)
Decachlorobiphenyl (6.383)
/chem/ecd2a.i/111610.b/023b2301.d

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/023f2301.d
Lab Smp Id: 1202262701 Client Smp ID: CASA-11-1332MS
Inj Date : 16-NOV-2010 12:08
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202262701|1|
Misc Info : |ECD82P_1L|1048232|SVA|QC A|WATER|MS|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 19:20 Cal File: 025f2501.d
Als bottle: 23 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-445.sub
Target Version: 3.50 Sample Matrix: Water

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	0.50000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

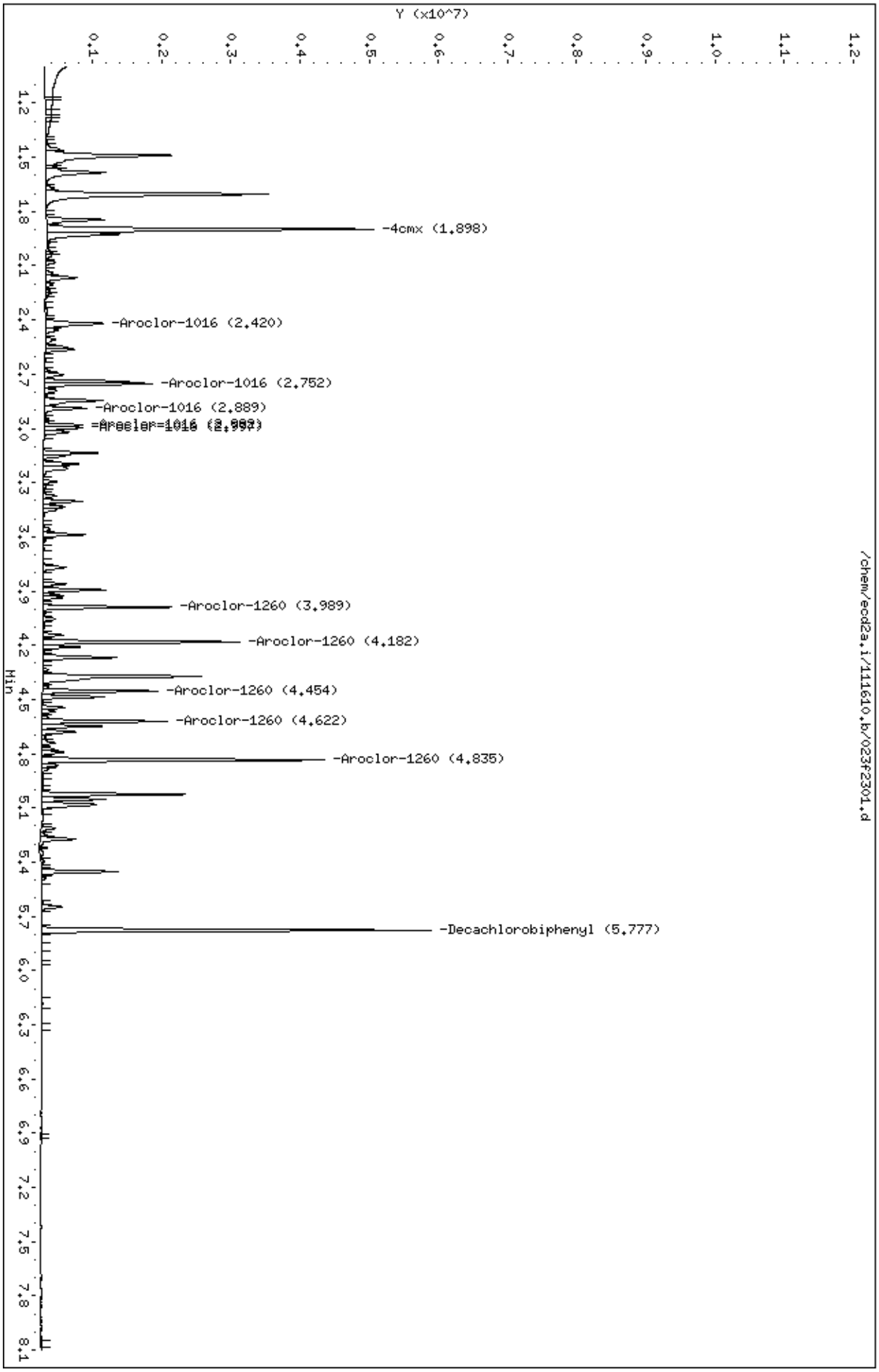
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.898	1.893	0.005	4865728	103.200	0.10	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.777	5.778	-0.001	4919884	133.941	0.13	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.420	2.416	0.004	1072867	649.227	0.65	80.00- 120.00	100.00
2.752	2.750	0.002	1423313	671.224	0.67	117.24- 157.24	132.66
2.889	2.886	0.003	573615	661.850	0.66	34.62- 74.62	53.47
2.982	2.979	0.003	462440	618.766	0.62	26.21- 66.21	43.10
2.997	2.995	0.002	493034	634.894	0.63	27.28- 67.28	45.95

Average of Peak Concentrations = 0.65

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
3.989	3.990	-0.001	1576215	732.360	0.73	80.00- 120.00	100.00
4.182	4.182	0.000	2435113	752.588	0.75	133.24- 173.24	154.49
4.454	4.455	-0.001	1423058	729.373	0.73	71.21- 111.21	90.28
4.622	4.621	0.001	1548972	727.914	0.73	80.03- 120.03	98.27
4.835	4.835	0.000	3557710	780.775	0.78	201.34- 241.34	225.71
Average of Peak Concentrations =					0.74		

Data File: /chem/ecd2a.i/111610.b/023F2301.d
Date : 16-NOV-2010 12:08
Client ID: CASA-11-1332MS
Sample Info: 1120226270111
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



Page 1

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/111610.b/024b2401.d
Lab Smp Id: 1202262702 Client Smp ID: CASA-11-1332MSD
Inj Date : 16-NOV-2010 12:19
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202262702|1|
Misc Info : |ECD82P_1L|1048232|SVA|QC A|WATER|MSD|||
Comment :
Method : /chem/ecd2a.i/111610.b/ECD2-B-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212 Quant Type: ESTD
Cal Date : 05-OCT-2010 18:57 Cal File: 023b2301.d
Als bottle: 24 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 11-445.sub
Target Version: 3.50 Sample Matrix: Water
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	0.50000	Volume of final extract (mL)
Vo	500.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.134	2.132	0.002	11652321	117.090	0.12	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.383	6.383	0.000	9675941	129.076	0.13	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.820	2.818	0.002	2435788	716.268	0.72	80.00- 120.00	100.00
3.256	3.256	0.000	1813190	662.483	0.66	62.18- 102.18	74.44
3.329	3.328	0.001	1114656	667.759	0.67	31.59- 71.59	45.76
3.407	3.406	0.001	1031130	658.568	0.66	26.91- 66.91	42.33
3.436	3.436	0.000	1096100	672.333	0.67	29.01- 69.01	45.00

Average of Peak Concentrations = 0.68

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.493	4.493	0.000	2975781	695.140	0.70	80.00- 120.00	100.00
4.644	4.643	0.001	3702606	712.505	0.71	103.24- 143.24	124.42
4.756	4.756	0.000	2472159	693.058	0.69	64.44- 104.44	83.08
4.954	4.954	0.000	2748595	700.530	0.70	72.61- 112.61	92.37
5.155	5.155	0.000	2907552	704.139	0.70	78.03- 118.03	97.71
Average of Peak Concentrations =					0.70		

Data File: /chem/ecd2a.i/111610.b/024b2401.d

Page 1

Date : 16-NOV-2010 12:19

Client ID: CASA-11-1332MSD

Instrument: ecd2a.i

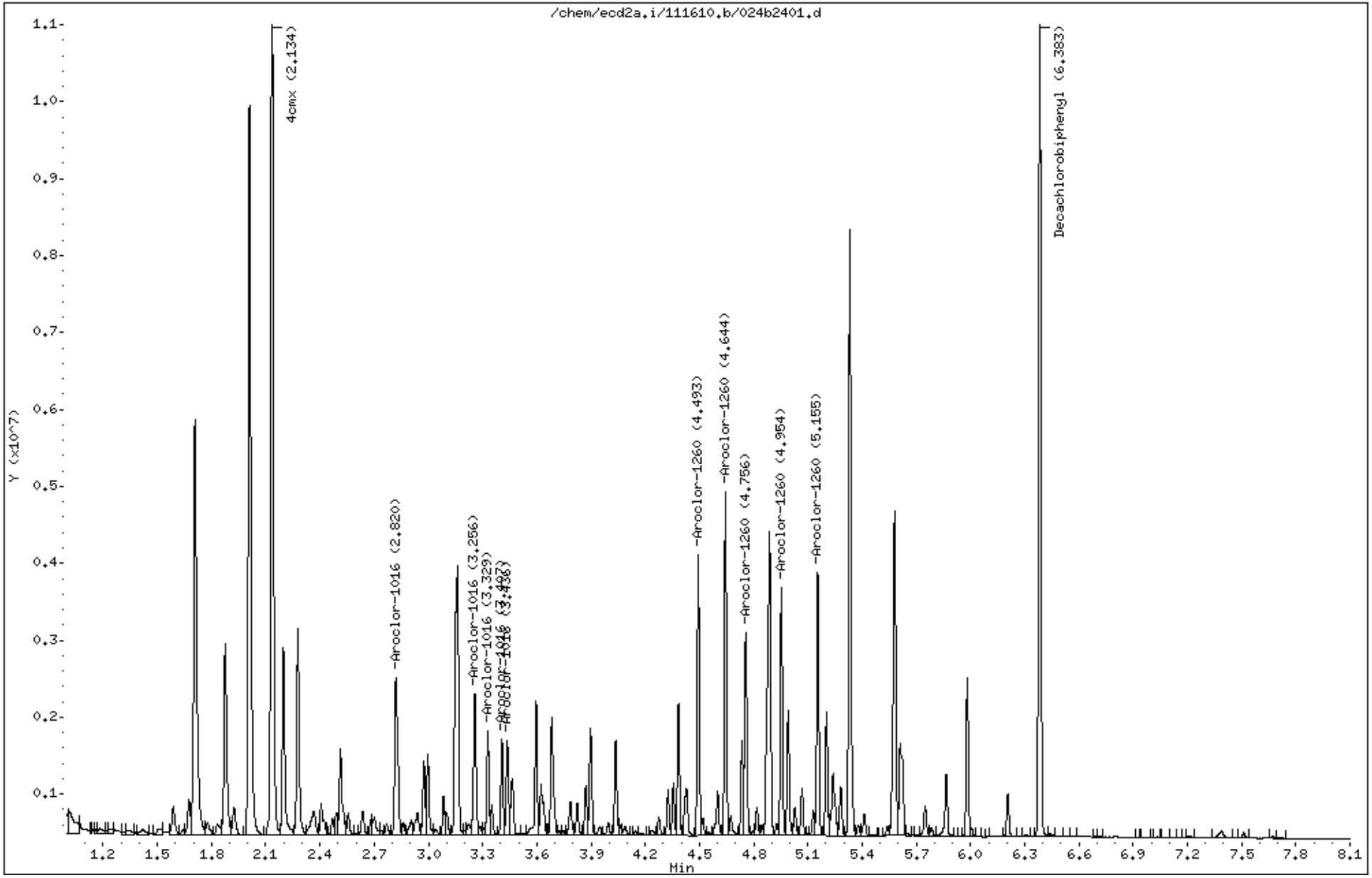
Sample Info: |1202262702|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP2

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

```
Data file : /chem/ecd2a.i/111610.b/024f2401.d
Lab Smp Id: 1202262702                    Client Smp ID: CASA-11-1332MSD
Inj Date  : 16-NOV-2010 12:19
Operator  : JAOC                          Inst ID: ecd2a.i
Smp Info  : |1202262702|1|
Misc Info : |ECD82P_1L|1048232|SVA|QC A|WATER|MSD|||
Comment   :
Method    : /chem/ecd2a.i/111610.b/ECD2-F-8082-100510.m
Meth Date : 16-Nov-2010 13:40 jen01212    Quant Type: ESTD
Cal Date  : 05-OCT-2010 19:20             Cal File: 025f2501.d
Als bottle: 24                            QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon                        Compound Sublist: 11-445.sub
Target Version:  3.50                     Sample Matrix: Water
Processing Host: hpclp1
```

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	0.50000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.895	1.893	0.002	5658023	120.004	0.12	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.777	5.778	-0.001	4987109	135.771	0.14	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 2051-24-3		
2.416	2.416	0.000	1250960	756.997	0.76	80.00- 120.00	100.00
2.751	2.750	0.001	1604029	756.449	0.76	117.24- 157.24	128.22
2.887	2.886	0.001	653301	753.793	0.75	34.62- 74.62	52.22
2.980	2.979	0.001	528965	707.779	0.71	26.21- 66.21	42.28
2.996	2.995	0.001	525624	676.861	0.68	27.28- 67.28	42.02

Average of Peak Concentrations = 0.73

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
3.988	3.990	-0.002	1619004	752.241	0.75	80.00- 120.00	100.00
4.181	4.182	-0.001	2506313	774.593	0.77	133.24- 173.24	154.81
4.453	4.455	-0.002	1453543	744.998	0.74	71.21- 111.21	89.78
4.621	4.621	0.000	1571567	738.532	0.74	80.03- 120.03	97.07
4.834	4.835	-0.001	3592957	788.511	0.79	201.34- 241.34	221.92
Average of Peak Concentrations =					0.76		

Data File: /chem/ecd2a.i/111610.b/024f2401.d

Page 1

Date : 16-NOV-2010 12:19

Client ID: CASA-11-1332MSD

Instrument: ecd2a.i

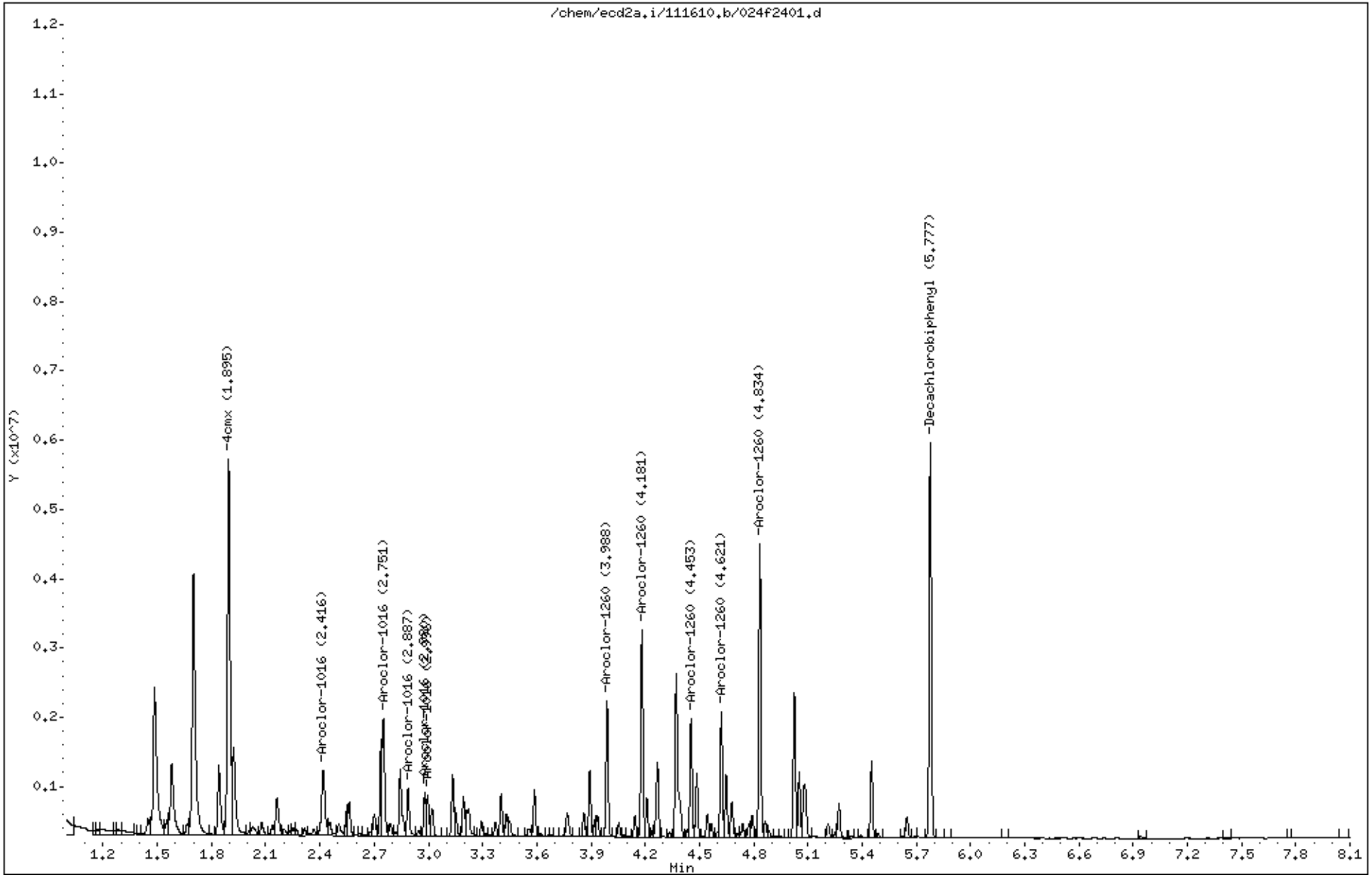
Sample Info: |1202262702|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Groundwater, Wastewater, and Other Aqueous Samples

Batch ID: 1048231 **Verified by:** _____

Analyst: Terry Allison

Method: SW846 3510C

Lab SOP: GL−OA−E−013 REV# 22

Instrument: Semi−Volatiles Manual

Sample ID	Run Date	Initial Volume (mL)	Initial pH	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1202262699 MB	15−NOV−2010 14:38:00	1000	7	H2So4/KMn2		2	8	1	0.001
1202262700 LCS	15−NOV−2010 14:38:00	1000	7	H2So4/KMn2		2	8	1	0.001
266779001	15−NOV−2010 14:38:00	1000	6	H2So4/KMn2		2	8	1	0.001
1202262701 MS (266779001)	15−NOV−2010 14:38:00	500	6	H2So4/KMn2		2	8	0.5	0.001
1202262702 MSD (266779001)	15−NOV−2010 14:38:00	500	6	H2So4/KMn2		2	8	0.5	0.001
266779002	15−NOV−2010 14:38:00	980	6	H2So4/KMn2		2	8	1	0.00102
266779003	15−NOV−2010 14:38:00	990	5	H2So4/KMn2		2	8	1	0.00101
266779004	15−NOV−2010 14:38:00	950	6	H2So4/KMn2		2	8	1	0.00105
266779005	15−NOV−2010 14:38:00	970	7	H2So4/KMn2		2	8	1	0.00103
266779007	15−NOV−2010 14:38:00	990	5	H2So4/KMn2		2	8	1	0.00101
266877001	15−NOV−2010 14:38:00	1000	6	H2So4/KMn2		2	8	1	0.001
266877003	15−NOV−2010 14:38:00	1000	6	H2So4/KMn2		2	8	1	0.001
266877005	15−NOV−2010 14:38:00	980	6	H2So4/KMn2		2	8	1	0.00102
266892002	15−NOV−2010 14:38:00	990	6	H2So4/KMn2		2	8	1	0.00101

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1202262700	PCB Laboratory Control	WE101028−06	1	mL
MS	1202262701	PCB Laboratory Control	WE101028−06	.5	mL
MSD	1202262702	PCB Laboratory Control	WE101028−06	.5	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE100722−16	.5	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE100722−16	1	mL
REGNT	All	Hexane	1440617−B4	5	mL
REGNT	All	Sulfuric Acid Sol., 1:1	1478932	5	mL
REGNT	All	Methylene Chloride	1484054−D	180	mL
REGNT	All	5% Potassium Permanganate	B1441445−F	5	mL
SOURC	All	SODIUM SULFATE	1455750	30	g

Comments:

Clean up Date: 11−15−10

Clean up Initials: TA

Verified By: SCG

Final Solvent: Hexane

Clean Up SOP: GL−OA−E−037

Radiological Analysis

Radiochemistry Case Narrative
ARS International (ARSL)
SDG 11-463
Work Order 266877

Method/Analysis Information

Product:	**Alphaspec Am241 Liquid**
Analytical Method:	DOE EML HASL-300, Am-05-RC Modified
Analytical Batch Number:	1050788

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202269109	Method Blank (MB)
1202269110	266780001(CASA-11-1478) Sample Duplicate (DUP)
1202269111	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 20.

Calibration Information:

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

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202269109 (MB) and 1202269111 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 266780001 (CASA-11-1478). The QC was from ARSL work order 266780.

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

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

Technical Information:

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

Sample Re-prep/Re-analysis
Sample 1202269109 (MB) was recounted due to poor resolution.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

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

Additional Comments
The MDCs are calculated using a blank population.

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

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Pu, Liquid**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Analytical Batch Number:	1050789

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202269112	Method Blank (MB)
1202269113	266780001(CASA-11-1478) Sample Duplicate (DUP)
1202269114	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 20.

Calibration Information:

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

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202269112 (MB) and 1202269114 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 266780001 (CASA-11-1478). The QC was from ARSL work order 266780.

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

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

Technical Information:

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

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

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

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

Additional Comments
The MDCs are calculated using a blank population.

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

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec U, Liquid**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Analytical Batch Number:	1050795

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202269120	Method Blank (MB)
1202269121	266780001(CASA-11-1478) Sample Duplicate (DUP)
1202269122	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 20.

Calibration Information:

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

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202269120 (MB) and 1202269122 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 266780001 (CASA-11-1478). The QC was from ARSL work order

266780.

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

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

Technical Information:

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

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

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

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

Additional Comments
The MDCs are calculated using a blank population.

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

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Np, Liquid**
Analytical Method:	DOE EML HASL 300
Analytical Batch Number:	1050816

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202269196	Method Blank (MB)
1202269197	266877001(Buckman1-11-1944) Sample Duplicate (DUP)
1202269198	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-032 REV# 15.

Calibration Information:

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

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202269196 (MB) and 1202269198 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 266877001 (Buckman1-11-1944). The QC was from ARSL work order 266877.

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

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

Technical Information:

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

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

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

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

Additional Comments
The MDCs are calculated using a blank population.

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

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Th, Liquid**
Analytical Method:	DOE EML HASL-300, Th-01-RC Modified
Analytical Batch Number:	1050818

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202269199	Method Blank (MB)
1202269200	266877001(Buckman1-11-1944) Sample Duplicate (DUP)
1202269201	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-038 REV# 12.

Calibration Information:

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

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202269199 (MB) and 1202269201 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 266877001 (Buckman1-11-1944). The QC was from ARSL work order

266877.

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

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

Technical Information:

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

Sample Re-prep/Re-analysis
Batch was given additional clean-up steps and recounted in order to remove suspected interferences.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DER was generated for this SDG:
DER 906251 was generated due to RDL less than MDA. 1. Sample 266877003 does not meet the detection limit for Th-230 due to the high standard deviation. 1. When a blank population is performed, the MDA is greater than the RDL due to the high standard deviation. Sample was counted 1000 minutes. Reporting results.

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

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The Th-228 blank result is greater than the decision level but less than the MDC.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Gammaspec, Gamma, Liquid**
Analytical Method:	EPA 901.1
Analytical Batch Number:	1048163

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202262532	Method Blank (MB)

1202262533 265922001(RE16-11-1719) Sample Duplicate (DUP)
1202262535 Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 19.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in February 2010, March 2010, July 2010, August 2010, September 2010, October 2010 and November 2010.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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

Quality Control (QC) Information:

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

Designated QC
The following sample was used for QC: 265922001 (RE16-11-1719). The QC was from ARSL work order 265922.

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

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

Technical Information:

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

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

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

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

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

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GFPC, Ra228, Liquid**
Analytical Method:	EPA 904.0/SW846 9320 Modified
Analytical Batch Number:	1048899

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202264553	Method Blank (MB)
1202264554	266892002(SWWS46-11-2074) Sample Duplicate (DUP)
1202264556	266892002(SWWS46-11-2074) Matrix Spike (MS)
1202264557	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-009 REV# 16.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2010.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202264553 (MB) and 1202264557 (LCS) were changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 266892002 (SWWS46-11-2074). The QC was from ARSL work order 266892.

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

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

Technical Information:

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

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

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

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

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

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GFPC, Sr90, liquid**
Analytical Method:	EPA 905.0 Modified
Analytical Batch Number:	1050902

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202269464	Method Blank (MB)
1202269465	266780001(CASA-11-1478) Sample Duplicate (DUP)
1202269466	266780001(CASA-11-1478) Matrix Spike (MS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 14.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in February 2010.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202269464 (MB) and 1202269467 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 266780001 (CASA-11-1478). The QC was from ARSL work order 266780.

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

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

Technical Information:

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

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

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Additional Comments

Additional comments were not required for this sample set.

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

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**WSP-GrossA/B**
Analytical Method:	EPA 900.0/SW846 9310
Analytical Batch Number:	1052582

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202273345	Method Blank (MB)
1202273346	266877005(Buckman08-11-2042) Sample Duplicate (DUP)
1202273347	266877005(Buckman08-11-2042) Matrix Spike (MS)
1202273348	266877005(Buckman08-11-2042) Matrix Spike Duplicate (MSD)
1202273349	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-001 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2010. The discrimination settings are calibrated in beta discriminating mode to reduce beta to alpha crosstalk.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202273345 (MB) and 1202273349 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 266877005 (Buckman08-11-2042). The QC was from ARSL work order 266877.

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

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

Technical Information:

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

Sample Re-prep/Re-analysis
Samples were recounted due to high recovery.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Gross Alpha/Beta Preparation Information
High hygroscopic salt content in evaporated samples can cause the sample mass to fluctuate due to moisture absorption. To minimize this interference, the salts are converted to oxides by heating the sample under a flame until a dull red color is obtained. The conversion to oxides stabilizes the sample weight and ensures that proper alpha/beta efficiencies are assigned for each sample. Volatile radioisotopes of carbon, hydrogen, technetium, polonium and cesium may be lost during sample heating, especially to a dull red heat. For this sample set, the prepared planchet was counted for beta activity before being flamed. After flaming, the planchet was counted for alpha activity.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

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

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

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Lucas Cell, Ra226, liquid**
Analytical Method:	EPA 903.1 Modified
Analytical Batch Number:	1048498

Sample ID	Client ID
266877001	Buckman1-11-1944
266877003	Buckman06-11-1970
266877005	Buckman08-11-2042
1202263432	Method Blank (MB)
1202263433	266877001(Buckman1-11-1944) Sample Duplicate (DUP)
1202263434	266877001(Buckman1-11-1944) Matrix Spike (MS)
1202263435	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-008 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in December 2009, February 2010, April 2010, September 2010 and November 2010.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202263432 (MB) and 1202263435 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 266877001 (Buckman1-11-1944). The QC was from ARSL work order 266877.

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

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

Technical Information:

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

Sample Re-prep/Re-analysis
Samples were degassed and recounted due to a suspected blank false positive. Recount is being reported.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

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

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

Qualifier Information

Manual qualifiers were not required.

Certification Statement

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

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Qualifier Definition Report
for

ARSL001 ARS International (63641-10)

Client SDG: 11-463 GEL Work Order: 266877

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Heather M. McCarty **Name: Heather McCarty**

Date: 09 DEC 2010 **Title: Analyst II**

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
09-DEC-10	Radiochemistry	Specifications	Process
Instrument Type: ALPHA SPECTROMETER	**Test / Method:** DOE EML HASL-300, Th-01-RC Modified	**Matrix Type:** Liquid	**Client Code:** ESHL
Batch ID: 1050818	**Sample Numbers:** See Below		

Potentially affected work order(s)(SDG): 266877(11-463)

Application Issues:

RDL less than MDA

Specification and Requirements Exception Description:	DER Disposition:
1. Sample 266877003 does not meet the detection limit for Th-230 due to the high standard deviation.	1. When a blank population is performed, the MDA is greater than the RDL due to the high standard deviation. Sample was counted 1000 minutes. Reporting results.

Originator's Name:

Jessica Downey 09-DEC-10

Data Validator/Group Leader:

Joseph Moulden 09-DEC-10

Sample Data Summary

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545

Report Date: December 9, 2010

Contact: Ms. Joylene Valdez
Project: LANL-WQH Water Samples

Client Sample ID: Buckman1-11-1944
Sample ID: 266877001
Matrix: WG
Collect Date: 10-NOV-10
Receive Date: 12-NOV-10
Collector: Client

Project: ESHL00210
Client ID: ARSL001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
Alphaspec Am241 Liquid "As Received"													
Americium-241	U	-0.000133	+/-0.00313	0.0281	+/-0.00313	0.050	pCi/L		MXA1	12/02/10	1825	1050788	1
Alphaspec Np, Liquid "As Received"													
Neptunium-237	U	0.0168	+/-0.0079	0.0203	+/-0.00799	10.0	pCi/L		MXA1	12/07/10	0803	1050816	2
Alphaspec Pu, Liquid "As Received"													
Plutonium-238	U	-0.00215	+/-0.00303	0.0247	+/-0.00304	0.050	pCi/L		MXA1	12/03/10	1437	1050789	3
Plutonium-239/240	U	-0.00429	+/-0.00372	0.0443	+/-0.00372	0.050	pCi/L						
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	0.00726	+/-0.00559	0.0298	+/-0.00562	0.050	pCi/L		MXA1	12/07/10	2051	1050818	4
Thorium-230	U	0.0191	+/-0.00846	0.0534	+/-0.00857	0.050	pCi/L						
Thorium-232	U	0.00198	+/-0.00413	0.0242	+/-0.00413	0.050	pCi/L						
Alphaspec U, Liquid "As Received"													
Uranium-234		7.90	+/-0.136	0.0492	+/-0.573	1.00	pCi/L		MXA1	12/03/10	1854	1050795	5
Uranium-235/236		0.296	+/-0.0293	0.0326	+/-0.036	1.00	pCi/L						
Uranium-238		5.29	+/-0.112	0.0326	+/-0.389	0.500	pCi/L						
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Liquid "As Received"													
Cesium-137	U	0.627	+/-3.07	5.30	+/-1.57	8.00	pCi/L		KXG3	11/26/10	0431	1048163	6
Cobalt-60	U	1.32	+/-2.78	5.10	+/-1.42	8.00	pCi/L						
Gross Gamma	U	29.5	+/-19.4	43.5	+/-19.4	120	pCi/L						
Neptunium-237	U	2.02	+/-6.10	10.5	+/-3.11	10.0	pCi/L						
Potassium-40	U	-12.8	+/-40.3	66.3	+/-20.6	10.0	pCi/L						
Sodium-22	U	-3.04	+/-3.27	4.46	+/-1.67	10.0	pCi/L						
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		0.778	+/-0.210	0.564	+/-0.233	1.00	pCi/L		AYB1	11/19/10	1250	1048899	7
GFPC, Sr90, liquid "As Received"													
Strontium-90	U	-0.235	+/-0.115	0.497	+/-0.115	0.500	pCi/L		SYS1	11/30/10	1239	1050902	8
WSP-GrossA/B "As Received"													
Beta		4.33	+/-0.959	2.39	+/-1.03	3.00	pCi/L		LYL1	12/02/10	1930	1052582	9
Alpha		4.70	+/-1.32	2.70	+/-1.41	3.00	pCi/L		LYL1	12/06/10	0928	1052582	10
Rad Radium-226													
Lucas Cell, Ra226, liquid "As Received"													
Radium-226	U	0.123	+/-0.0884	0.302	+/-0.0902	1.00	pCi/L		KSD1	12/01/10	1240	1048498	11

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545

Report Date: December 9, 2010

Contact: Ms. Joylene Valdez
Project: LANL-WQH Water Samples

Client Sample ID: Buckman1-11-1944
Sample ID: 266877001

Project: ESHL00210
Client ID: ARSL001

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

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL 300
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EPA 901.1
7	EPA 904.0/SW846 9320 Modified
8	EPA 905.0 Modified
9	EPA 900.0/SW846 9310
10	EPA 900.0/SW846 9310
11	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Liquid "As Received"	94.6	(50%-105%)
Americium-243 Tracer	Alphaspec Np, Liquid "As Received"	60.0	(50%-105%)
Plutonium-242 Tracer	Alphaspec Pu, Liquid "As Received"	79.1	(50%-105%)
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"	87.9	(50%-105%)
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"	92.5	(50%-105%)
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"	76.7	(50%-105%)
Strontium Carrier	GFPC, Sr90, liquid "As Received"	102	(50%-105%)

Notes:

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Los Alamos, New Mexico 87545

Report Date: December 9, 2010

Contact: Ms. Joylene Valdez
Project: LANL-WQH Water Samples

Client Sample ID: Buckman06-11-1970
Sample ID: 266877003
Matrix: WG
Collect Date: 10-NOV-10
Receive Date: 12-NOV-10
Collector: Client

Project: ESHL00210
Client ID: ARSL001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
Alphaspec Am241 Liquid "As Received"													
Americium-241	U	-0.00503	+/-0.00461	0.0308	+/-0.00461	0.050	pCi/L		MXA1	12/02/10	1825	1050788	1
Alphaspec Np, Liquid "As Received"													
Neptunium-237	U	-0.00295	+/-0.00884	0.0214	+/-0.00885	10.0	pCi/L		MXA1	12/07/10	0803	1050816	2
Alphaspec Pu, Liquid "As Received"													
Plutonium-238	U	0.00	+/-0.00466	0.0219	+/-0.00466	0.050	pCi/L		MXA1	12/03/10	1437	1050789	3
Plutonium-239/240	U	0.00	+/-0.0038	0.0393	+/-0.00381	0.050	pCi/L						
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	0.0142	+/-0.0105	0.0342	+/-0.0105	0.050	pCi/L		MXA1	12/07/10	2051	1050818	4
Thorium-230	U	0.0267	+/-0.00872	0.0614	+/-0.00893	0.050	pCi/L						
Thorium-232	U	0.00235	+/-0.00284	0.0278	+/-0.00284	0.050	pCi/L						
Alphaspec U, Liquid "As Received"													
Uranium-234		8.56	+/-0.156	0.0594	+/-0.634	1.00	pCi/L		MXA1	12/03/10	1854	1050795	5
Uranium-235/236		0.129	+/-0.0213	0.0393	+/-0.0232	1.00	pCi/L						
Uranium-238		1.90	+/-0.0733	0.0393	+/-0.155	0.500	pCi/L						
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Liquid "As Received"													
Cesium-137	U	-2.1	+/-4.45	8.00	+/-2.27	8.00	pCi/L		KXG3	11/26/10	0606	1048163	6
Cobalt-60	U	-0.458	+/-3.35	5.51	+/-1.71	8.00	pCi/L						
Gross Gamma	U	18.1	+/-19.5	21.4	+/-19.5	120	pCi/L						
Neptunium-237	U	1.55	+/-4.64	8.28	+/-2.37	10.0	pCi/L						
Potassium-40	U	-27.2	+/-38.2	61.4	+/-19.5	10.0	pCi/L						
Sodium-22	U	-1.59	+/-3.24	4.95	+/-1.65	10.0	pCi/L						
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		0.650	+/-0.202	0.580	+/-0.219	1.00	pCi/L		AYB1	11/19/10	1250	1048899	7
GFPC, Sr90, liquid "As Received"													
Strontium-90	U	-0.0391	+/-0.132	0.488	+/-0.132	0.500	pCi/L		SYS1	11/30/10	1239	1050902	8
WSP-GrossA/B "As Received"													
Beta		6.47	+/-1.25	2.98	+/-1.36	3.00	pCi/L		LYL1	12/02/10	1931	1052582	9
Alpha		8.56	+/-1.68	2.91	+/-1.90	3.00	pCi/L		LYL1	12/06/10	0929	1052582	10
Rad Radium-226													
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		0.268	+/-0.0899	0.236	+/-0.0966	1.00	pCi/L		KSD1	12/01/10	1240	1048498	11

The following Analytical Methods were performed

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545

Report Date: December 9, 2010

Contact: Ms. Joylene Valdez
Project: LANL-WQH Water Samples

Client Sample ID: Buckman06-11-1970
Sample ID: 266877003

Project: ESHL00210
Client ID: ARSL001

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

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL 300
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EPA 901.1
7	EPA 904.0/SW846 9320 Modified
8	EPA 905.0 Modified
9	EPA 900.0/SW846 9310
10	EPA 900.0/SW846 9310
11	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Liquid "As Received"	80.4	(50%-105%)
Americium-243 Tracer	Alphaspec Np, Liquid "As Received"	53.8	(50%-105%)
Plutonium-242 Tracer	Alphaspec Pu, Liquid "As Received"	89.1	(50%-105%)
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"	73.5	(50%-105%)
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"	77.3	(50%-105%)
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"	81.6	(50%-105%)
Strontium Carrier	GFPC, Sr90, liquid "As Received"	103	(50%-105%)

Notes:

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Certificate of Analysis

Company : Los Alamos National Laboratory
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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545

Report Date: December 9, 2010

Contact: Ms. Joylene Valdez
Project: LANL-WQH Water Samples

Client Sample ID: Buckman08-11-2042
Sample ID: 266877005
Matrix: WG
Collect Date: 10-NOV-10
Receive Date: 12-NOV-10
Collector: Client

Project: ESHL00210
Client ID: ARSL001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
Alphaspec Am241 Liquid "As Received"													
Americium-241	U	-0.00546	+/-0.00375	0.0385	+/-0.00375	0.050	pCi/L		MXA1	12/02/10	1825	1050788	1
Alphaspec Np, Liquid "As Received"													
Neptunium-237	U	0.00695	+/-0.0139	0.0252	+/-0.0139	10.0	pCi/L		MXA1	12/07/10	0803	1050816	2
Alphaspec Pu, Liquid "As Received"													
Plutonium-238	U	-0.00661	+/-0.00492	0.0253	+/-0.00493	0.050	pCi/L		MXA1	12/03/10	1437	1050789	3
Plutonium-239/240	U	-0.0022	+/-0.00381	0.0455	+/-0.00381	0.050	pCi/L						
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	-0.00749	+/-0.0114	0.0279	+/-0.0114	0.050	pCi/L		MXA1	12/07/10	2040	1050818	4
Thorium-230	U	0.0402	+/-0.0102	0.050	+/-0.0106	0.050	pCi/L						
Thorium-232	U	-0.000487	+/-0.0045	0.0227	+/-0.0045	0.050	pCi/L						
Alphaspec U, Liquid "As Received"													
Uranium-234		11.2	+/-0.170	0.0538	+/-0.816	1.00	pCi/L		MXA1	12/03/10	1854	1050795	5
Uranium-235/236		0.362	+/-0.0342	0.0356	+/-0.0427	1.00	pCi/L						
Uranium-238		6.56	+/-0.130	0.0356	+/-0.484	0.500	pCi/L						
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Liquid "As Received"													
Cesium-137	U	-0.165	+/-2.74	4.65	+/-1.40	8.00	pCi/L		KXG3	11/26/10	0607	1048163	6
Cobalt-60	U	-1.47	+/-3.05	4.55	+/-1.56	8.00	pCi/L						
Gross Gamma	U	35.2	+/-24.0	67.3	+/-24.0	120	pCi/L						
Neptunium-237	U	-1.28	+/-6.77	11.3	+/-3.45	10.0	pCi/L						
Potassium-40	U	-7.11	+/-38.0	67.1	+/-19.4	10.0	pCi/L						
Sodium-22	U	-2.6	+/-3.23	4.54	+/-1.65	10.0	pCi/L						
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		1.13	+/-0.233	0.569	+/-0.275	1.00	pCi/L		AYB1	11/19/10	1251	1048899	7
GFPC, Sr90, liquid "As Received"													
Strontium-90	U	0.404	+/-0.158	0.495	+/-0.161	0.500	pCi/L		SYS1	11/30/10	1239	1050902	8
WSP-GrossA/B "As Received"													
Beta		8.17	+/-1.18	2.54	+/-1.37	3.00	pCi/L		LYL1	12/02/10	1931	1052582	9
Alpha		8.83	+/-1.82	2.88	+/-2.04	3.00	pCi/L		LYL1	12/06/10	0929	1052582	10
Rad Radium-226													
Lucas Cell, Ra226, liquid "As Received"													
Radium-226	U	0.217	+/-0.086	0.243	+/-0.0895	1.00	pCi/L		KSD1	12/01/10	1310	1048498	11

The following Analytical Methods were performed

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545

Report Date: December 9, 2010

Contact: Ms. Joylene Valdez
Project: LANL-WQH Water Samples

Client Sample ID: Buckman08-11-2042
Sample ID: 266877005

Project: ESHL00210
Client ID: ARSL001

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

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL 300
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EPA 901.1
7	EPA 904.0/SW846 9320 Modified
8	EPA 905.0 Modified
9	EPA 900.0/SW846 9310
10	EPA 900.0/SW846 9310
11	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Liquid "As Received"	68.3	(50%-105%)
Americium-243 Tracer	Alphaspec Np, Liquid "As Received"	50.1	(50%-105%)
Plutonium-242 Tracer	Alphaspec Pu, Liquid "As Received"	75.4	(50%-105%)
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"	70.0	(50%-105%)
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"	82.5	(50%-105%)
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"	79.7	(50%-105%)
Strontium Carrier	GFPC, Sr90, liquid "As Received"	103	(50%-105%)

Notes:

Quality Control Data

QC Summary

Report Date: December 9, 2010

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

Workorder: **266877**

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 1050788										
QC1202269110 266780001 DUP										
Americium-241	U	-0.00147	U	-0.00329	pCi/L	0.201		(0-1)	MXA1	12/02/1018:25
	Uncert:	+/-0.00183		+/-0.0027						
	TPU:	+/-0.00183		+/-0.0027						
	Yield:	80.0		75.4						
QC1202269111 LCS										
Americium-241	1.42			1.17	pCi/L		82.4	(80%-120%)		12/02/1018:25
	Uncert:			+/-0.038						
	TPU:			+/-0.0784						
	Yield:			94.5						
QC1202269109 MB										
Americium-241			U	0.00396	pCi/L					12/03/1018:28
	Uncert:			+/-0.00346						
	TPU:			+/-0.00347						
	Yield:			71.3						
Batch 1050789										
QC1202269113 266780001 DUP										
Plutonium-238	U	0.00	U	1.34E-10	pCi/L	1.19E-08		(0-1)	MXA1	12/03/1014:37
	Uncert:	+/-0.00243		+/-0.00319						
	TPU:	+/-0.00244		+/-0.00319						
	Yield:	74.0		72.7						
Plutonium-239/240	U	0.00729	U	-0.00451	pCi/L	0.499		(0-1)		
	Uncert:	+/-0.00544		+/-0.00638						
	TPU:	+/-0.00545		+/-0.00638						
	Yield:	74.0		72.7						
QC1202269114 LCS										
Plutonium-238			U	0.00485	pCi/L			(80%-120%)		
	Uncert:			+/-0.00362						
	TPU:			+/-0.00363						
	Yield:			80.1						
Plutonium-239/240	1.97			1.73	pCi/L		87.8	(80%-120%)		
	Uncert:			+/-0.053						
	TPU:			+/-0.106						
	Yield:			80.1						
QC1202269112 MB										
Plutonium-238			U	1.19E-10	pCi/L					
	Uncert:			+/-0.00283						
	TPU:			+/-0.00283						
	Yield:			68.2						
Plutonium-239/240			U	-0.002	pCi/L					
	Uncert:			+/-0.00529						
	TPU:			+/-0.00529						
	Yield:			68.2						

QC Summary

Workorder: 266877

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 1050795										
QC1202269121 266780001 DUP										
Uranium-234	U	-0.00847	U	-0.00847	pCi/L	0.00		(0-1)	MXA1	12/03/1018:55
	Uncert:	+/-0.00373		+/-0.00391						
	TPU:	+/-0.00374		+/-0.00391						
	Yield:	82.3		77.8						
Uranium-235/236	U	-0.00326	U	0.00683	pCi/L	0.533		(0-1)		
	Uncert:	+/-0.00461		+/-0.00483						
	TPU:	+/-0.00462		+/-0.00486						
	Yield:	82.3		77.8						
Uranium-238	U	0.00264	U	0.00553	pCi/L	0.170		(0-1)		
	Uncert:	+/-0.00457		+/-0.00391						
	TPU:	+/-0.00457		+/-0.00393						
	Yield:	82.3		77.8						
QC1202269122 LCS										
Uranium-234				2.26	pCi/L					12/03/1018:55
	Uncert:			+/-0.0688						
	TPU:			+/-0.175						
	Yield:			82.8						
Uranium-235/236				0.114	pCi/L					
	Uncert:			+/-0.0171						
	TPU:			+/-0.019						
	Yield:			82.8						
Uranium-238	2.62			2.35	pCi/L		89.7	(80%-120%)		
	Uncert:			+/-0.0701						
	TPU:			+/-0.181						
	Yield:			82.8						
QC1202269120 MB										
Uranium-234			U	-0.00678	pCi/L					12/03/1018:55
	Uncert:			+/-0.00393						
	TPU:			+/-0.00393						
	Yield:			81.0						
Uranium-235/236			U	0.0028	pCi/L					
	Uncert:			+/-0.00485						
	TPU:			+/-0.00486						
	Yield:			81.0						
Uranium-238			U	0.00227	pCi/L					
	Uncert:			+/-0.00393						
	TPU:			+/-0.00393						
	Yield:			81.0						
Batch 1050816										
QC1202269197 266877001 DUP										
Neptunium-237	U	0.0168	U	0.00928	pCi/L	0.231		(0-1)	MXA1	12/07/1008:03
	Uncert:	+/-0.0079		+/-0.00818						
	TPU:	+/-0.00799		+/-0.00821						
	Yield:	60.0		57.8						
QC1202269198 LCS										
Neptunium-237	3.94			4.30	pCi/L		109	(80%-120%)		12/07/1008:03
	Uncert:			+/-0.082						

QC Summary

Workorder: 266877

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 1050816										
	TPU:			+/-0.295						
	Yield:			82.9						
QC1202269196 MB										
Neptunium-237			U	0.00156	pCi/L					12/07/1008:03
	Uncert:			+/-0.00414						
	TPU:			+/-0.00414						
	Yield:			86.6						
Batch 1050818										
QC1202269200 266877001 DUP										
Thorium-228	U	0.00726	U	0.00375	pCi/L	0.127		(0-1)	MXA1	12/07/1020:40
	Uncert:	+/-0.00559		+/-0.00817						
	TPU:	+/-0.00562		+/-0.00818						
	Yield:	87.9		85.5						
Thorium-230	U	0.0191		0.051	pCi/L	0.814		(0-1)		
	Uncert:	+/-0.00846		+/-0.0105						
	TPU:	+/-0.00857		+/-0.011						
	Yield:	87.9		85.5						
Thorium-232	U	0.00198	U	0.00151	pCi/L	0.0315		(0-1)		
	Uncert:	+/-0.00413		+/-0.00332						
	TPU:	+/-0.00413		+/-0.00332						
	Yield:	87.9		85.5						
QC1202269201 LCS										
Thorium-228			U	-0.00779	pCi/L					
	Uncert:			+/-0.00778						
	TPU:			+/-0.00778						
	Yield:			87.5						
Thorium-230	2.14			1.89	pCi/L		88.1	(80%-120%)		
	Uncert:			+/-0.0532						
	TPU:			+/-0.137						
	Yield:			87.5						
Thorium-232			U	0.00408	pCi/L			(75%-125%)		
	Uncert:			+/-0.00324						
	TPU:			+/-0.00326						
	Yield:			87.5						
QC1202269199 MB										
Thorium-228			U	0.00823	pCi/L					
	Uncert:			+/-0.010						
	TPU:			+/-0.0101						
	Yield:			82.4						
Thorium-230			U	0.00647	pCi/L					
	Uncert:			+/-0.00531						
	TPU:			+/-0.00533						
	Yield:			82.4						
Thorium-232			U	-0.00377	pCi/L					
	Uncert:			+/-0.00406						
	TPU:			+/-0.00406						
	Yield:			82.4						
Rad Gamma Spec										

QC Summary

Workorder: 266877

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 1048163										
QC1202262533 265922001 DUP										
Cesium-137	U	-0.709	U	-0.824	pCi/L	0.0207		(0-1)	KXG3	11/26/1006:18
	Uncert:	+/-2.26		+/-3.18						
	TPU:	+/-1.15		+/-1.62						
Cobalt-60	U	-0.168	U	-0.126	pCi/L	0.00848		(0-1)		
	Uncert:	+/-2.74		+/-2.21						
	TPU:	+/-1.40		+/-1.13						
Gross Gamma	U	17.5	U	11.4	pCi/L	0.072		(0-1)		
	Uncert:	+/-10.7		+/-31.7						
	TPU:	+/-10.7		+/-31.7						
Neptunium-237	U	3.05	U	6.62	pCi/L	0.336		(0-1)		
	Uncert:	+/-5.11		+/-5.32						
	TPU:	+/-2.61		+/-2.72						
Potassium-40	U	0.272	U	27.7	pCi/L	0.353		(0-1)		
	Uncert:	+/-34.4		+/-41.7						
	TPU:	+/-17.5		+/-21.3						
Sodium-22	U	-1.4	U	-1.18	pCi/L	0.0461		(0-1)		
	Uncert:	+/-2.24		+/-2.31						
	TPU:	+/-1.14		+/-1.18						
QC1202262535 LCS										
Americium-241	1230			1380	pCi/L		112	(80%-120%)		11/26/1006:26
	Uncert:			+/-206						
	TPU:			+/-105						
Cesium-137	425			428	pCi/L		101	(80%-120%)		
	Uncert:			+/-47.4						
	TPU:			+/-24.2						
Cobalt-60	450			499	pCi/L		111	(80%-120%)		
	Uncert:			+/-59.8						
	TPU:			+/-30.5						
Gross Gamma				1890	pCi/L					
	Uncert:			+/-334						
	TPU:			+/-334						
Neptunium-237			U	-1.76	pCi/L					
	Uncert:			+/-16.3						
	TPU:			+/-8.30						
Potassium-40			U	4.36	pCi/L					
	Uncert:			+/-48.0						
	TPU:			+/-24.5						
Sodium-22			U	-2.81	pCi/L					
	Uncert:			+/-6.67						
	TPU:			+/-3.40						
QC1202262532 MB										
Cesium-137			U	0.131	pCi/L					11/26/1006:09
	Uncert:			+/-2.60						
	TPU:			+/-1.33						
Cobalt-60			U	1.19	pCi/L					
	Uncert:			+/-2.13						
	TPU:			+/-1.08						
Gross Gamma			U	5.72	pCi/L					

QC Summary

Workorder: 266877

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 1048163										
	Uncert:			+/-8.26						
	TPU:			+/-8.26						
Neptunium-237			U	0.168	pCi/L					
	Uncert:			+/-4.81						
	TPU:			+/-2.45						
Potassium-40			U	-14.4	pCi/L					
	Uncert:			+/-28.4						
	TPU:			+/-14.5						
Sodium-22			U	0.130	pCi/L					
	Uncert:			+/-1.94						
	TPU:			+/-0.991						
Rad Gas Flow										
Batch 1048899										
QC1202264554 266892002 DUP										
Radium-228	U	0.097		1.03	pCi/L	0.996		(0-1)	AYB1	11/19/1012:51
	Uncert:	+/-0.196		+/-0.239						
	TPU:	+/-0.196		+/-0.275						
	Yield:	75.3		63.7						
QC1202264557 LCS										
Radium-228	9.87			10.3	pCi/L		104	(80%-120%)		11/19/1012:51
	Uncert:			+/-0.575						
	TPU:			+/-1.46						
	Yield:			73.6						
QC1202264553 MB										
Radium-228			U	-0.0273	pCi/L					11/19/1012:51
	Uncert:			+/-0.127						
	TPU:			+/-0.128						
	Yield:			81.3						
QC1202264556 266892002 MS										
Radium-228	39.5 U	0.097		43.5	pCi/L		110	(75%-125%)		11/19/1012:51
	Uncert:	+/-0.196		+/-2.28						
	TPU:	+/-0.196		+/-6.10						
	Yield:	75.3		80.8						
Batch 1050902										
QC1202269465 266780001 DUP										
Strontium-90	U	-0.166	U	0.235	pCi/L	0.894		(0-1)	SYS1	11/30/1012:41
	Uncert:	+/-0.0781		+/-0.144						
	TPU:	+/-0.0781		+/-0.146						
	Yield:	102		102						
QC1202269467 LCS										
Strontium-90	24.9			23.6	pCi/L		94.7	(80%-120%)		11/30/1012:41
	Uncert:			+/-0.608						
	TPU:			+/-1.96						
	Yield:			100						
QC1202269464 MB										
Strontium-90			U	0.0464	pCi/L					11/30/1012:41
	Uncert:			+/-0.0688						
	TPU:			+/-0.0689						

QC Summary

Workorder: 266877

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 1050902										
Yield:				102						
QC1202269466 266780001 MS										
Strontium-90	249 U	-0.166		241	pCi/L		96.7	(75%-125%)		11/30/1012:41
Uncert:		+/-0.0781		+/-6.07						
TPU:		+/-0.0781		+/-20.0						
Yield:		102		100						
Batch 1052582										
QC1202273346 266877005 DUP										
Alpha		8.83		14.9	pCi/L	0.658		(0-1)	LYL1	12/06/1010:19
Uncert:		+/-1.82		+/-2.13						
TPU:		+/-2.04		+/-2.59						
Beta		8.17		8.53	pCi/L	0.065		(0-1)		12/02/1019:32
Uncert:		+/-1.18		+/-1.20						
TPU:		+/-1.37		+/-1.40						
QC1202273349 LCS										
Alpha	12.7			14.9	pCi/L		117	(80%-120%)		12/06/1010:18
Uncert:				+/-0.727						
TPU:				+/-1.85						
Beta	49.7			49.1	pCi/L		98.6	(80%-120%)		12/02/1019:33
Uncert:				+/-0.891						
TPU:				+/-4.16						
QC1202273345 MB										
Alpha			U	-0.156	pCi/L					12/06/1010:17
Uncert:				+/-0.0513						
TPU:				+/-0.0514						
Beta			U	0.136	pCi/L					12/02/1019:32
Uncert:				+/-0.108						
TPU:				+/-0.108						
QC1202273347 266877005 MS										
Alpha	254	8.83		254	pCi/L		96.3	(75%-125%)		12/06/1010:18
Uncert:		+/-1.82		+/-14.8						
TPU:		+/-2.04		+/-29.1						
Beta	995	8.17		1070	pCi/L		107	(75%-125%)		12/02/1019:32
Uncert:		+/-1.18		+/-19.8						
TPU:		+/-1.37		+/-90.8						
QC1202273348 266877005 MSD										
Alpha	254	8.83		291	pCi/L	0.293	111	(0-1)		12/06/1009:23
Uncert:		+/-1.82		+/-14.9						
TPU:		+/-2.04		+/-34.7						
Beta	995	8.17		1110	pCi/L	0.106	111	(0-1)		12/02/1019:33
Uncert:		+/-1.18		+/-20.4						
TPU:		+/-1.37		+/-94.3						
Rad Ra-226										
Batch 1048498										
QC1202263433 266877001 DUP										
Radium-226	U	0.123	U	0.00	pCi/L	0.455		(0-1)	KSD1	12/01/1013:10
Uncert:		+/-0.0884		+/-0.0445						
TPU:		+/-0.0902		+/-0.0447						
QC1202263435 LCS										

QC Summary

Workorder: 266877

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Ra-226										
Batch 1048498										
Radium-226	12.4			10.4	pCi/L		84.4	(80%-120%)		
	Uncert:			+/-0.318						
	TPU:			+/-1.54						
QC1202263432 MB										
Radium-226			U	0.0586	pCi/L					
	Uncert:			+/-0.0423						
	TPU:			+/-0.043						
QC1202263434 266877001 MS										
Radium-226	124 U	0.123		113	pCi/L		91.2	(75%-125%)		
	Uncert:	+/-0.0884		+/-3.19						
	TPU:	+/-0.0902		+/-14.2						

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

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
JNX	Non Calibrated Compound
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
UJ	Gamma Spectroscopy--Uncertain identification
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.

QC Summary

Workorder: **266877**

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

X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

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

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

Alpha Spectroscopy Raw Data

Radiochemistry Batch Checklist

07-Dec-2010

Batch# 1050789 Product: PU Date: 12/8/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
Samples have been blank corrected (if required). Blank correction reported included (if required).	✓		
If activity less than 10x MDA/MDC, error is less than or equal to 150% of sample activity. If greater than 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are: Less than 5* MDA/ MDC, then RPD is 100% or less, If greater 5* MDA/ MDC, then RPD 20% or less, If below the MDA/ MDC, the RPD is 0%, Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. (Or meets the client's contract acceptance criteria).	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% (or meets the client's contract acceptance criteria).	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			
Client Special requirements page has been checked.			
Raw Data and/ or spectrum are included and properly statused.			
MS, LCS, and Duplicate RPD/RER values uploaded to LIMS and values verified			
Hit notification complete (if necessary)			
Batch entered into Case Narrative.			
Batch Data Exception Reports (DER) completed, if applicable.	✓		DER# 905819
Batch Data Exception Reports (DER) second reviewed. Disposition verified to be completed.	✓		DER# 905819
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

Primary Review Performed By: [signature] 12/8/10

Secondary Review Performed By: [signature] 12/8/10

11/28-12/9

ARSL

Plutonium Que Sheet

19-NOV-10

Batch #: 1050789 **Analyst:** MXA1 **First Client Due Date:** 09-DEC-10 **Internal Due Date:** 28-NOV-10

Tracer Isotope(s): Pu-242/Pu-236 **Tracer Code:** 1488-A **Expiration Date:** 11/2/11 **Vol:** 0.1ml

LCS Isotope(s): Pu-239/Pu-238 **LCS Code:** 0338-CC **Expiration Date:** 3/9/11 **Vol:** 0.1ml

Spike Isotope(s): Pu-239/Pu-238 **Spike Code:** N/A **Expiration Date:** N/A **Vol:** N/A

Prep Date: 12/1/10 **Initials:** MDA **Pipet ID:** 4075157 **Balance ID:** 16750207 **Witness:** DJK 12-1-10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet Dry Aliquot (g l f)	Pu Det #
266780001-1	CASA-11-1478	SAMPLE		.05 pCi/L	WATER	ARSL001	09-NOV-10	1	1	0.800	74
~~266780002-1~~	~~CASA-11-1340~~	~~SAMPLE~~		~~.05 pCi/L~~	~~WATER~~	~~ARSL001~~	~~09-NOV-10~~	~~2~~	~~2~~	~~0.800~~	~~75~~ ESS 12/5/10
~~266780003-1~~	~~CASA-11-1337~~	~~SAMPLE~~		~~.05 pCi/L~~	~~WATER~~	~~ARSL001~~	~~09-NOV-10~~	~~3~~	~~3~~	~~0.800~~	~~76~~ DGS 12/5/10
266780004-1	CASA-11-1332	SAMPLE		.05 pCi/L	WATER	ARSL001	09-NOV-10	4	4	0.800	78
~~266780005-1~~	~~CASA-11-1342~~	~~SAMPLE~~		~~.05 pCi/L~~	~~WATER~~	~~ARSL001~~	~~09-NOV-10~~	~~5~~	~~5~~	~~0.800~~	~~79~~ ESS 12/5/10
266877001-1	Buckman1-11-1944	SAMPLE		.05 pCi/L	WATER	ARSL001	10-NOV-10	6	6	0.800	80
266877003-1	Buckman06-11-1970	SAMPLE		.05 pCi/L	WATER	ARSL001	10-NOV-10	7	7	0.800	81
266877005-1	Buckman08-11-2042	SAMPLE		.05 pCi/L	WATER	ARSL001	10-NOV-10	8	8	0.800	82
~~266880001-1~~	~~WST39-11-2059~~	~~SAMPLE~~		~~.05 pCi/L~~	~~WATER~~	~~ARSL001~~	~~10-NOV-10~~	~~9~~	~~9~~	~~0.100~~	~~84~~ ESS 12/5/10
266988001-1	CAMO-11-1240	SAMPLE		.05 pCi/L	WATER	ARSL001	11-NOV-10	10	10	0.800	85
266989003-1	CASA-11-1334	SAMPLE		.05 pCi/L	WATER	ARSL001	11-NOV-10	11	11	0.800	209 ~~86~~ 12/8/10
267028001-1	CAWR-10-23736	SAMPLE		.05 pCi/L	WATER	ARSL001	12-NOV-10	12	12	0.800	219 ~~87~~ 12/8/10
267227001-1	CAMO-11-1312	SAMPLE		.05 pCi/L	WATER	ARSL001	16-NOV-10	13	13	0.800	88
267227004-1	CAMO-11-1316	SAMPLE		.05 pCi/L	WATER	ARSL001	16-NOV-10	14	14	0.800	90
267227005-1	CAMO-11-1317	SAMPLE		.05 pCi/L	WATER	ARSL001	16-NOV-10	15	15	0.800	91
267349003-1	CAMO-11-1305	SAMPLE		.05 pCi/L	WATER	ARSL001	17-NOV-10	16	16	0.800	92
267349005-1	CAMO-11-1308	SAMPLE		.05 pCi/L	WATER	ARSL001	17-NOV-10	17	17	0.800	93
267352001-1	CASA-11-1356	SAMPLE		.05 pCi/L	WATER	ARSL001	17-NOV-10	18	18	0.800	94
267352004-1	CASA-11-1359	SAMPLE		.05 pCi/L	WATER	ARSL001	17-NOV-10	19	19	0.800	210 ~~95~~ 12/8/10
1202269112-1	MB for batch 1050789	MB		.05 pCi/L	WATER	QC ACCOUNT		20	20	~~0.800~~ 1.0	96
1202269113-1	CASA-11-1478(266780001DUP)	DUP		.05 pCi/L	WATER	QC ACCOUNT	09-NOV-10	21	21	0.800	97
1202269114-1	LCS for batch 1050789	LCS		.05 pCi/L	WATER	QC ACCOUNT		22	22	~~0.800~~ 1.0	98

MDA 12/1/10

Choose SOP Used: GL-RAD-A-011, GL-RAD-A-036, GL-RAD-A-045, GL-RAD-A-043

Solid Sample Dissolution by: ~~LEACH or DIGESTION~~ N/A ESS 12/5/10
Circle One

Data Reviewed By: 12/8/10

12/8/10

GEL Laboratories LLC, , Radiochemistry Division

Blank Correction Report

Batch ID 1050789

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202269113	DUP	Plutonium-238	0.800 L	1.34E-10	0.00319	0.0259	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	-0.00451	0.00638	0.0466	-.0025	pCi/L	NO
1202269114	LCS	Plutonium-238	1.00 L	0.00485	0.00363	0.0186	.000000000	pCi/L	NO
		Plutonium-239/240	1.00 L	1.73	0.106	0.0334	-.002	pCi/L	NO
1202269112	MB	Plutonium-238	1.00 L	1.19E-10	0.00283	0.023	.000000000	pCi/L	YES
		Plutonium-239/240	1.00 L	-0.002	0.00529	0.0413	-.002	pCi/L	NO
266780001	CASA-11-1478	Plutonium-238	0.800 L	0.00	0.00244	0.028	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	0.00729	0.00545	0.0502	-.0025	pCi/L	NO
266780004	CASA-11-1332	Plutonium-238	0.800 L	-0.00248	0.00429	0.0285	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	0.00	0.0035	0.0511	-.0025	pCi/L	NO
266877001	Buckman1-11-1944	Plutonium-238	0.800 L	-0.00215	0.00304	0.0247	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	-0.00429	0.00372	0.0443	-.0025	pCi/L	NO
266877003	Buckman06-11-1970	Plutonium-238	0.800 L	0.00	0.00466	0.0219	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	0.00	0.00381	0.0393	-.0025	pCi/L	NO
266877005	Buckman08-11-2042	Plutonium-238	0.800 L	-0.00661	0.00493	0.0253	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	-0.0022	0.00381	0.0455	-.0025	pCi/L	NO
266988001	CAMO-11-1240	Plutonium-238	0.800 L	0.00	0.00361	0.0293	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	-0.00764	0.0051	0.0526	-.0025	pCi/L	NO
266989003	CASA-11-1334	Plutonium-238	0.800 L	-0.000402	0.00331	0.0253	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	-0.0121	0.00896	0.0458	-.0025	pCi/L	NO
267028001	CAWR-10-23736	Plutonium-238	0.800 L	0.00	0.00129	0.016	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	-0.0185	0.00683	0.0291	-.0025	pCi/L	YES
267227001	CAMO-11-1312	Plutonium-238	0.800 L	0.00	0.00475	0.0273	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	0.00237	0.00712	0.0491	-.0025	pCi/L	NO
267227004	CAMO-11-1316	Plutonium-238	0.800 L	0.00	0.00223	0.0255	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	2.65E-10	0.00444	0.0459	-.0025	pCi/L	NO
267227005	CAMO-11-1317	Plutonium-238	0.800 L	-0.00453	0.00392	0.026	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	0.00453	0.00453	0.0468	-.0025	pCi/L	NO
267349003	CAMO-11-1305	Plutonium-238	0.800 L	0.00226	0.00226	0.026	.000000000	pCi/L	NO
		Plutonium-239/240	0.800 L	-0.00452	0.00392	0.0467	-.0025	pCi/L	NO
267349005	CAMO-11-1308	Plutonium-238	0.800 L	-0.00436	0.00378	0.0251	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	-0.00218	0.00488	0.0451	-.0025	pCi/L	NO
267352001	CASA-11-1356	Plutonium-238	0.800 L	0.00234	0.00234	0.0269	.000000000	pCi/L	NO
		Plutonium-239/240	0.800 L	0.00	0.00234	0.0483	-.0025	pCi/L	NO
267352004	CASA-11-1359	Plutonium-238	0.800 L	0.00	0.00176	0.0209	.000000000	pCi/L	YES
		Plutonium-239/240	0.800 L	-0.0233	0.00744	0.0377	-.0025	pCi/L	YES

12/8/10

Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050789	CHAMBER : 074	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0266780001_PU	DETECTOR S/N : 83296	BKG FILE : B074.CNF;1209
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 31.3468	BKG DATE : 28-NOV-2010
SAMPLE DATE : 9-NOV-2010 00:00:00.	COUNT DATE : 3-DEC-2010 14:37:12	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W074.CNF;354
% YIELD : 74.0		CAL DATE : 11-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1488-A	ID : 0338-CC	ID : 0338-CC
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.4249E+00 dpm	NOMINAL : 2.4599E+00 pCi/L	NOMINAL : 2.4599E+00 pCi/L
RESULTS : 2.5329E+00 dpm		

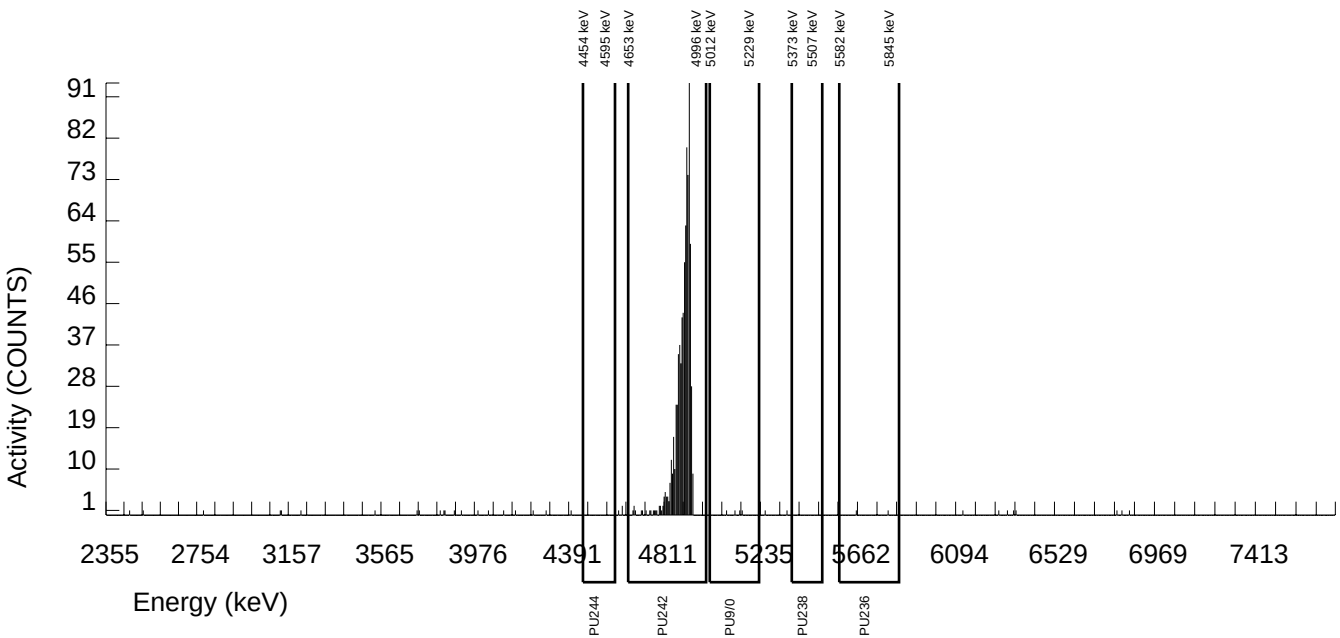
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
PU-236	5749.000	5731.991	134.036	2.000	-1.000	3.000	2.0158	100.0000	-2.47E-03	5.52E-03	1.14E-02	2.94E-02	5.52E-03
PU-238	5499.000	5439.798	0.000	0.000	0.000	0.000	1.8887	99.90000	0.00E+00	2.44E-03	1.07E-02	2.80E-02	2.43E-03
PU-9/0	5155.000	5132.234	69.500	4.000	3.000	1.000	3.8592	99.90000	7.29E-03	5.45E-03	2.18E-02	5.02E-02	5.44E-03
PU242	4890.000	4899.810	30.197	797.000	794.000	3.000	1.7321	100.0000	1.93E+00	1.27E-01	9.79E-03	2.62E-02	6.87E-02
PU-244	4589.000	4524.753	0.000	0.000	0.000	0.000	4.5976	99.90000	0.00E+00	2.43E-03	2.60E-02	5.86E-02	2.43E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of PU242 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050789	CHAMBER : 080	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0266877001_PU	DETECTOR S/N : 78197	BKG FILE : B080.CNF;1103
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 33.2097	BKG DATE : 28-NOV-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 3-DEC-2010 14:37:14	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W080.CNF;295
% YIELD : 79.1		CAL DATE : 11-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1488-A	ID : 0338-CC	ID : 0338-CC
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.4249E+00 dpm	NOMINAL : 2.4599E+00 pCi/L	NOMINAL : 2.4599E+00 pCi/L
RESULTS : 2.7100E+00 dpm		

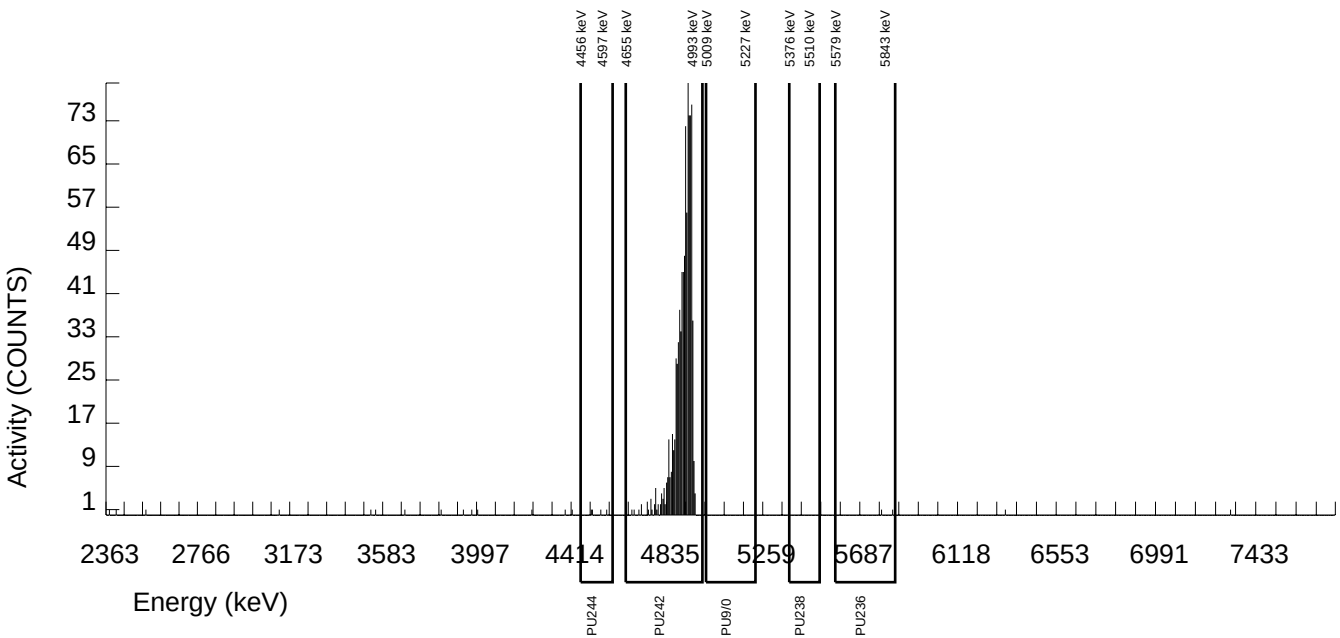
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
PU-236	5749.000	5812.934	50.166	2.000	-2.000	4.000	2.0158	100.0000	-4.35E-03	5.33E-03	1.00E-02	2.59E-02	5.33E-03
PU-238	5499.000	5442.849	0.000	0.000	-1.000	1.000	1.8887	99.90000	-2.15E-03	3.04E-03	9.42E-03	2.47E-02	3.03E-03
PU-9/0	5155.000	5117.855	0.000	0.000	-2.000	2.000	3.8592	99.90000	-4.29E-03	3.72E-03	1.93E-02	4.43E-02	3.72E-03
PU242	4890.000	4914.502	46.536	900.000	900.000	0.000	0.0000	100.0000	1.93E+00	1.22E-01	0.00E+00	5.81E-03	6.43E-02
PU-244	4589.000	4536.981	69.606	4.000	3.000	1.000	4.5976	99.90000	6.43E-03	4.81E-03	2.29E-02	5.17E-02	4.80E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of PU242 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050789	CHAMBER : 081	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0266877003_PU	DETECTOR S/N : 79996	BKG FILE : B081.CNF;1110
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 33.2493	BKG DATE : 28-NOV-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 3-DEC-2010 14:37:14	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W081.CNF;293
% YIELD : 89.1		CAL DATE : 11-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1488-A	ID : 0338-CC	ID : 0338-CC
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.4249E+00 dpm	NOMINAL : 2.4599E+00 pCi/L	NOMINAL : 2.4599E+00 pCi/L
RESULTS : 3.0527E+00 dpm		

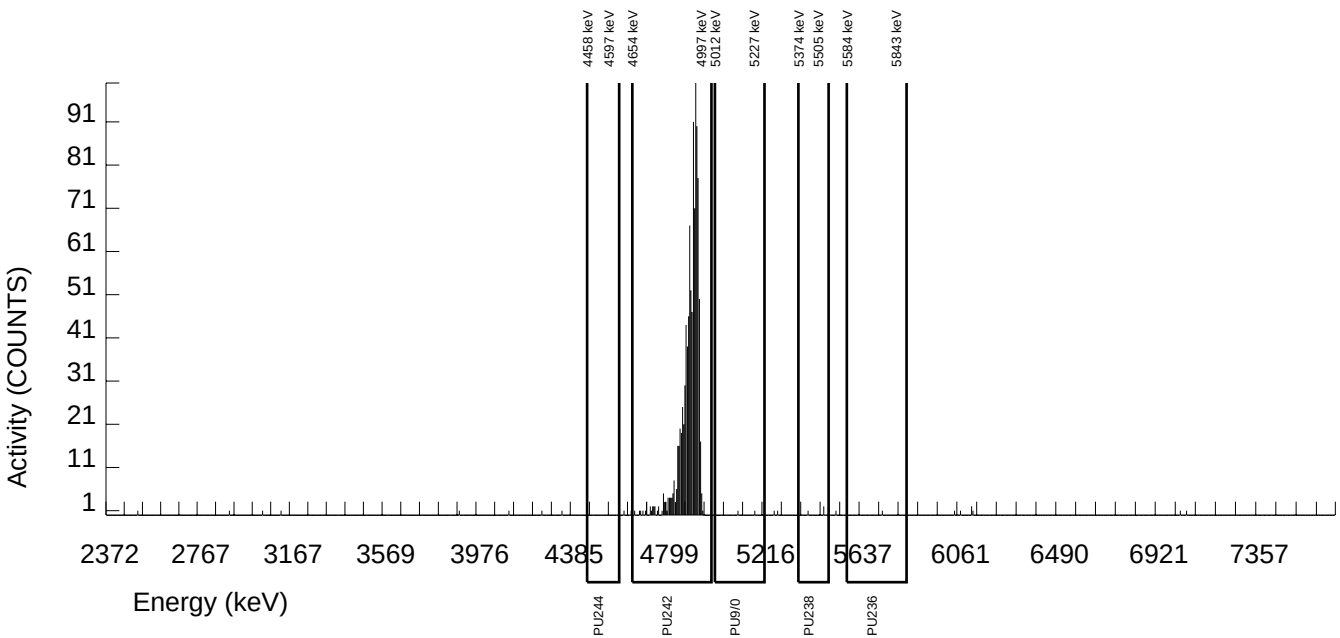
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
PU-236	5749.000	5742.802	4.920	1.000	-1.000	2.000	2.0158	100.0000	-1.93E-03	3.35E-03	8.91E-03	2.30E-02	3.34E-03
PU-238	5499.000	5466.513	4.920	3.000	0.000	3.000	1.8887	99.90000	0.00E+00	4.66E-03	8.36E-03	2.19E-02	4.66E-03
PU-9/0	5155.000	5153.401	73.793	2.000	0.000	2.000	3.8592	99.90000	0.00E+00	3.81E-03	1.71E-02	3.93E-02	3.80E-03
PU242	4890.000	4908.903	43.102	1017.000	1015.000	2.000	1.4142	100.0000	1.93E+00	1.18E-01	6.25E-03	1.77E-02	6.06E-02
PU-244	4589.000	4527.210	0.000	0.000	0.000	0.000	4.5976	99.90000	0.00E+00	1.90E-03	2.03E-02	4.58E-02	1.90E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of PU242 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050789	CHAMBER : 082	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0266877005_PU	DETECTOR S/N : 79997	BKG FILE : B082.CNF;1100
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 33.9631	BKG DATE : 28-NOV-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 3-DEC-2010 14:37:14	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W082.CNF;276
% YIELD : 75.4		CAL DATE : 11-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1488-A	ID : 0338-CC	ID : 0338-CC
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.4249E+00 dpm	NOMINAL : 2.4599E+00 pCi/L	NOMINAL : 2.4599E+00 pCi/L
RESULTS : 2.5822E+00 dpm		

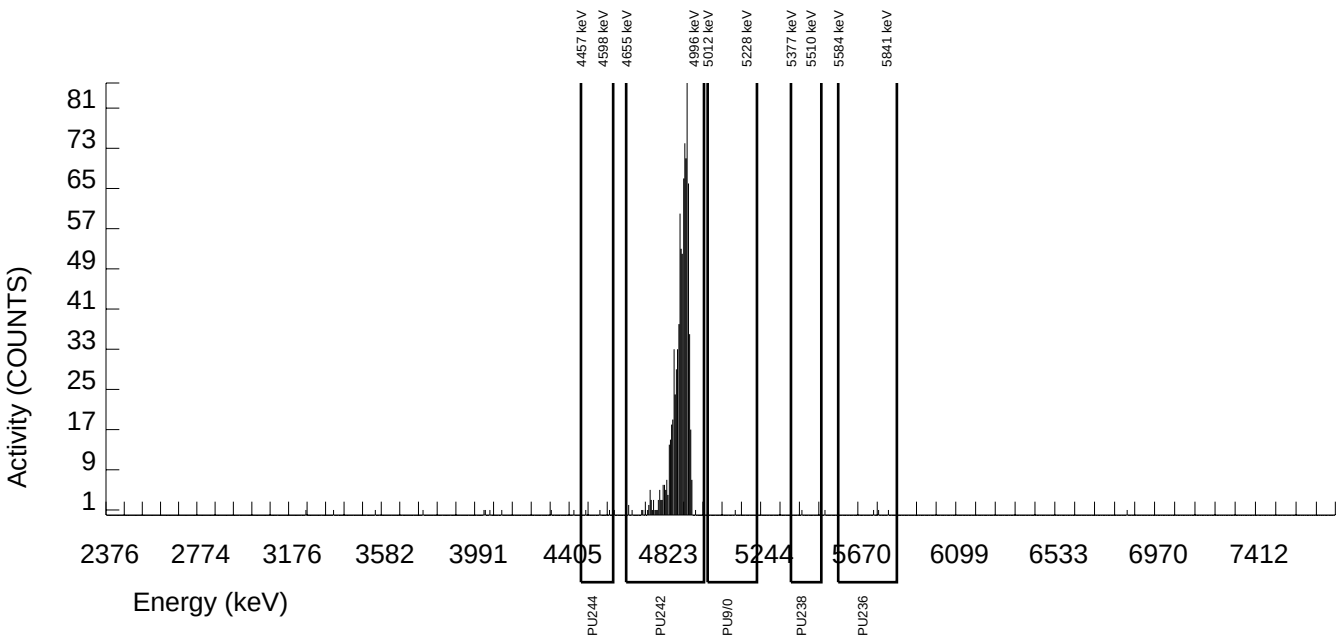
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
PU-236	5749.000	5773.261	64.304	3.000	1.000	2.000	2.0158	100.0000	2.23E-03	5.00E-03	1.03E-02	2.66E-02	5.00E-03
PU-238	5499.000	5429.930	4.946	1.000	-3.000	4.000	1.8887	99.90000	-6.61E-03	4.93E-03	9.67E-03	2.53E-02	4.92E-03
PU-9/0	5155.000	5138.447	4.946	1.000	-1.000	2.000	3.8592	99.90000	-2.20E-03	3.81E-03	1.98E-02	4.55E-02	3.81E-03
PU242	4890.000	4898.251	42.222	879.000	877.000	2.000	1.4142	100.0000	1.93E+00	1.23E-01	7.23E-03	2.04E-02	6.53E-02
PU-244	4589.000	4538.532	103.876	3.000	3.000	0.000	4.5976	99.90000	6.60E-03	3.83E-03	2.35E-02	5.31E-02	3.81E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of PU242 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050789	CHAMBER : 096	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S1202269112_PU	DETECTOR S/N : 80016	BKG FILE : B096.CNF;766
SAMPLE QTY : 1.000 L	AVERAGE %EFFICIENCY : 33.0542	BKG DATE : 28-NOV-2010
SAMPLE DATE : 1-DEC-2010 00:00:00.	COUNT DATE : 3-DEC-2010 14:37:20	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W096.CNF;197
% YIELD : 68.2		CAL DATE : 12-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1488-A	ID : 0338-CC	ID : 0338-CC
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.4249E+00 dpm	NOMINAL : 1.9679E+00 pCi/L	NOMINAL : 1.9679E+00 pCi/L
RESULTS : 2.3356E+00 dpm		

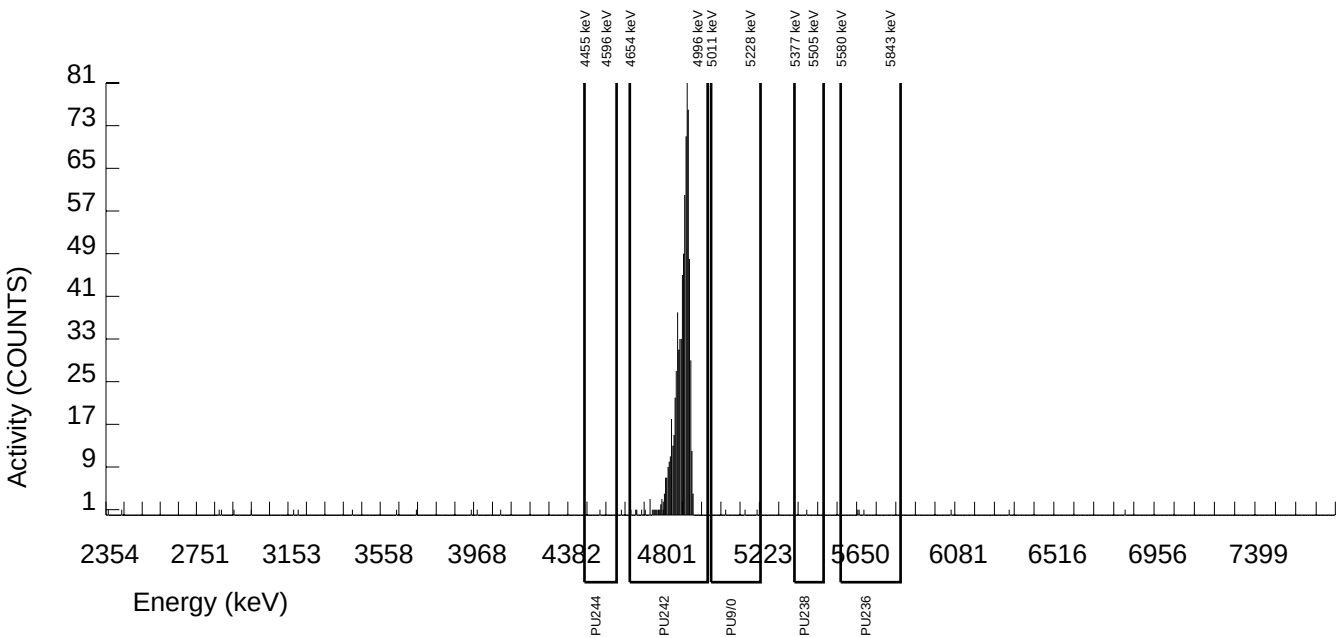
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
PU-236	5749.000	5671.389	29.007	3.000	-1.000	4.000	2.0158	100.0000	-2.00E-03	5.30E-03	9.37E-03	2.42E-02	5.30E-03
PU-238	5499.000	5436.023	4.937	1.000	0.000	1.000	1.8887	99.90000	1.19E-10	2.83E-03	8.79E-03	2.30E-02	2.83E-03
PU-9/0	5155.000	5154.215	133.309	3.000	-1.000	4.000	3.8592	99.90000	-2.00E-03	5.29E-03	1.80E-02	4.13E-02	5.29E-03
PU242	4890.000	4887.226	33.355	775.000	772.000	3.000	1.7321	100.0000	1.54E+00	1.02E-01	8.05E-03	2.15E-02	5.57E-02
PU-244	4589.000	4528.239	4.937	1.000	0.000	1.000	4.5976	99.90000	1.19E-10	2.83E-03	2.14E-02	4.82E-02	2.83E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of PU242 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050789	CHAMBER : 097	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S1202269113_PU	DETECTOR S/N : 83288	BKG FILE : B097.CNF;763
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 34.4013	BKG DATE : 28-NOV-2010
SAMPLE DATE : 9-NOV-2010 00:00:00.	COUNT DATE : 3-DEC-2010 14:37:20	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W097.CNF;218
% YIELD : 72.7		CAL DATE : 12-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1488-A	ID : 0338-CC	ID : 0338-CC
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.4249E+00 dpm	NOMINAL : 2.4599E+00 pCi/L	NOMINAL : 2.4599E+00 pCi/L
RESULTS : 2.4883E+00 dpm		

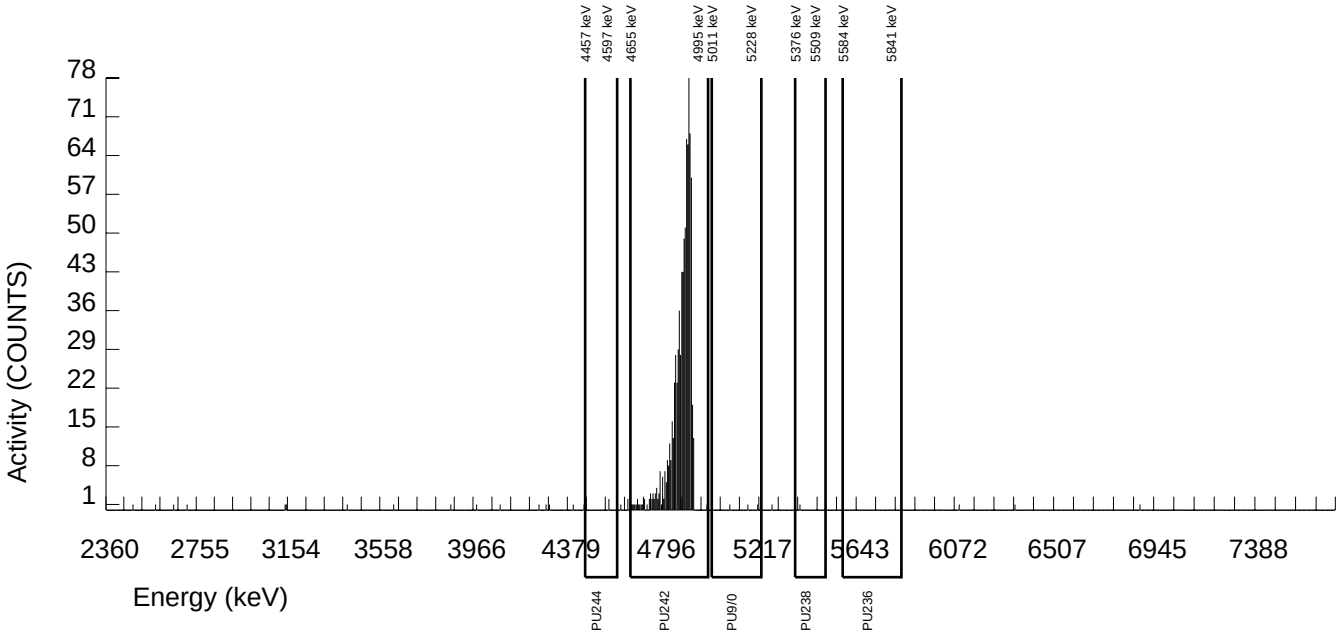
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
PU-236	5749.000	5712.063	0.000	0.000	-3.000	3.000	2.0158	100.0000	-6.87E-03	4.58E-03	1.06E-02	2.72E-02	4.58E-03
PU-238	5499.000	5402.612	4.912	1.000	0.000	1.000	1.8887	99.90000	1.34E-10	3.19E-03	9.91E-03	2.59E-02	3.19E-03
PU-9/0	5155.000	5162.331	117.886	3.000	-2.000	5.000	3.8592	99.90000	-4.51E-03	6.38E-03	2.02E-02	4.66E-02	6.38E-03
PU242	4890.000	4884.628	43.116	859.000	856.000	3.000	1.7321	100.0000	1.93E+00	1.24E-01	9.08E-03	2.43E-02	6.61E-02
PU-244	4589.000	4529.542	4.912	3.000	2.000	1.000	4.5976	99.90000	4.51E-03	4.52E-03	2.41E-02	5.44E-02	4.51E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of PU242 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050789	CHAMBER : 098	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S1202269114_PU	DETECTOR S/N : 80017	BKG FILE : B098.CNF;767
SAMPLE QTY : 1.000 L	AVERAGE %EFFICIENCY : 34.7991	BKG DATE : 28-NOV-2010
SAMPLE DATE : 1-DEC-2010 00:00:00.	COUNT DATE : 3-DEC-2010 14:37:20	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W098.CNF;216
% YIELD : 80.1		CAL DATE : 12-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1488-A	ID : 0338-CC	ID : 0338-CC
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.4249E+00 dpm	NOMINAL : 1.9679E+00 pCi/L	NOMINAL : 1.9679E+00 pCi/L
RESULTS : 2.7443E+00 dpm		

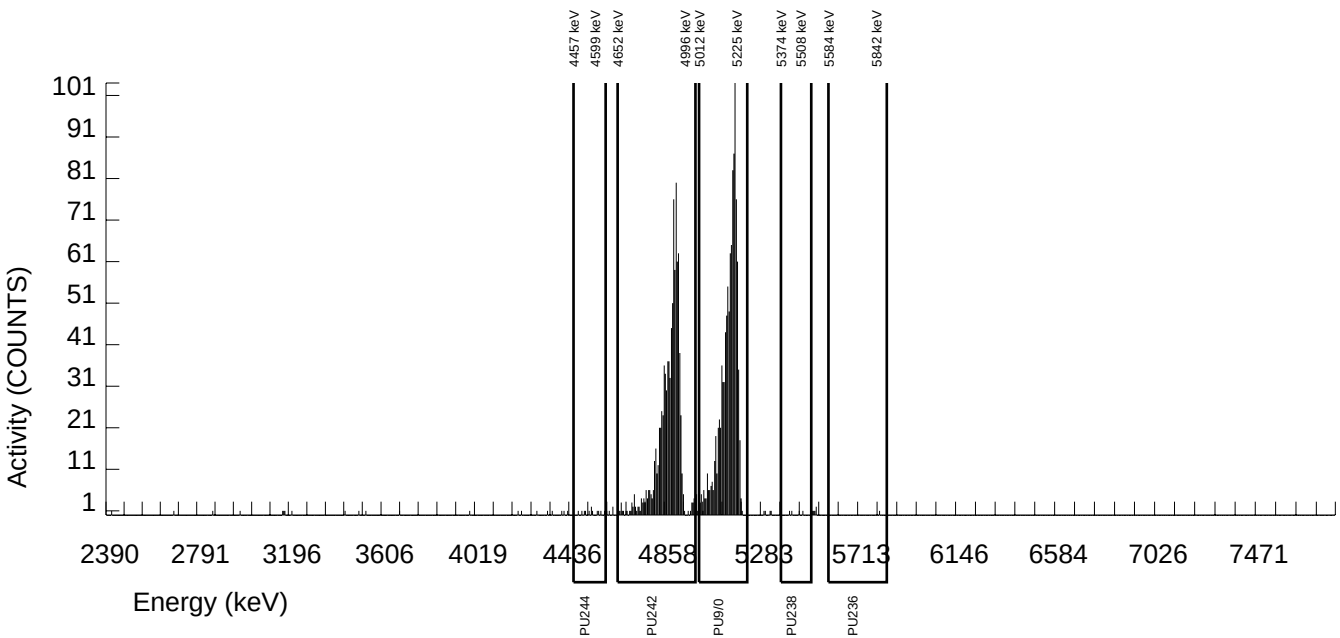
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
PU-236	5749.000	5815.435	4.989	1.000	0.000	1.000	2.0158	100.0000	9.65E-11	2.29E-03	7.58E-03	1.95E-02	2.29E-03
PU-238	5499.000	5445.243	59.872	4.000	3.000	1.000	1.8887	99.90000	4.85E-03	3.63E-03	7.11E-03	1.86E-02	3.62E-03
PU-9/0	5155.000	5148.037	43.628	1071.000	1068.000	3.000	3.8592	99.90000	1.73E+00	1.06E-01	1.45E-02	3.34E-02	5.30E-02
PU242	4890.000	4884.109	36.793	956.000	955.000	1.000	1.0000	100.0000	1.54E+00	9.59E-02	3.76E-03	1.19E-02	5.00E-02
PU-244	4589.000	4534.898	7.328	13.000	12.000	1.000	4.5976	99.90000	1.94E-02	6.14E-03	1.73E-02	3.90E-02	6.05E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of PU242 calculated as sqrt(BKG AREA).



DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
08-DEC-10	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ALPHA SPECTROMETER	DOE EML HASL-300, Pu-11-RC Modified	Liquid	ESHL
Batch ID:	**Sample Numbers:**		
1050789	See Below		

Potentially affected work order(s)(SDG): 266780(11-447),266877(11-463),266880(11-466),266988(11-495),266989(11-496),267028(11-505),267227(11-563),267349(11-585),267352(11-590)

Application Issues:

Result is more negative than the three sigma TPU

Specification and Requirements Exception Description:	DER Disposition:
1. The Pu-239/240 result for sample 267352004 is more negative than three sigma TPU.	1. The sample has been counted twice and there was no Pu-239/240 activity present in either of the count. Reporting results.

Originator's Name:
Jessica Downey 08-DEC-10

Data Validator/Group Leader:
Joseph Moulden 08-DEC-10

Radiochemistry Batch Checklist

07-Dec-2010

Batch# 1050795 Product: U Date: 12/7/10

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

Primary Review Performed By: [signature] 12/7/10

Secondary Review Performed By: [signature] 12/7/10

12/9

ARSL

Uranium Que Sheet

P

23-NOV-10

Batch #: 1050795 **Analyst:** MXA1 **First Client Due Date:** 09-DEC-10 **Internal Due Date:** 28-NOV-10

Tracer Isotope: U-232/U-236 **Tracer Code:** 1444-C **Expiration Date:** 5/3/11 **Vol:** 0.1ml

LCS Isotope: U-238 **LCS Code:** 1476-B **Expiration Date:** 6/11/11 **Vol:** 0.1ml

Spike Isotope: U-238 **Spike Code:** N/A **Expiration Date:** N/A **Vol:** N/A

Prep Date: 12/1/10 **Initials:** MDA **Pipet ID:** 4075157 **Balance ID:** 16750207

~~**Analyzed Sequentially with Pu**~~ N/A MDA 12/1/10

Pu-236 ID:

~~**Vol.:**~~

Witness: DJM 12-1-10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/L/f)	U Det #
266780001-1	CASA-11-1478	SAMPLE		.5 pCi/L	WATER	ARSL001	09-NOV-10	1	1	0.800	113
266780002-1	CASA-11-1340	SAMPLE		.5 pCi/L	WATER	ARSL001	09-NOV-10	2	2	0.800	114
266780003-1	CASA-11-1337	SAMPLE		.5 pCi/L	WATER	ARSL001	09-NOV-10	3	3	0.800	115
266780004-1	CASA-11-1332	SAMPLE		.5 pCi/L	WATER	ARSL001	09-NOV-10	4	4	0.800	116
266780005-1	CASA-11-1342	SAMPLE		.5 pCi/L	WATER	ARSL001	09-NOV-10	5	5	0.800	117
266877001-1	Buckman1-11-1944	SAMPLE		.5 pCi/L	WATER	ARSL001	10-NOV-10	6	6	0.800	120
266877003-1	Buckman06-11-1970	SAMPLE		.5 pCi/L	WATER	ARSL001	10-NOV-10	7	7	0.800	121
266877005-1	Buckman08-11-2042	SAMPLE		.5 pCi/L	WATER	ARSL001	10-NOV-10	8	8	0.800	122
266880001-1	WST39-11-2059	SAMPLE		.5 pCi/L	WATER	ARSL001	10-NOV-10	9	9	0.100	123
266988001-1	CAMO-11-1240	SAMPLE		.5 pCi/L	WATER	ARSL001	11-NOV-10	10	10	0.800	124
266989003-1	CASA-11-1334	SAMPLE		.5 pCi/L	WATER	ARSL001	11-NOV-10	11	11	0.800	125
267028001-1	CAWR-10-23736	SAMPLE		.5 pCi/L	WATER	ARSL001	12-NOV-10	12	12	0.800	126
267227001-1	CAMO-11-1312	SAMPLE		.5 pCi/L	WATER	ARSL001	16-NOV-10	13	13	0.800	127
267227004-1	CAMO-11-1316	SAMPLE		.5 pCi/L	WATER	ARSL001	16-NOV-10	14	14	0.800	128
267227005-1	CAMO-11-1317	SAMPLE		.5 pCi/L	WATER	ARSL001	16-NOV-10	15	15	0.800	129
267349003-1	CAMO-11-1305	SAMPLE		.5 pCi/L	WATER	ARSL001	17-NOV-10	16	16	0.800	130
267349005-1	CAMO-11-1308	SAMPLE		.5 pCi/L	WATER	ARSL001	17-NOV-10	17	17	0.800	131
267352001-1	CASA-11-1356	SAMPLE		.5 pCi/L	WATER	ARSL001	17-NOV-10	18	18	0.800	132
267352004-1	CASA-11-1359	SAMPLE		.5 pCi/L	WATER	ARSL001	17-NOV-10	19	19	0.800	133
1202269120-1	MB for batch 1050795	MB		.5 pCi/L	WATER	QC ACCOUNT		20	20	~~0.800~~	134
1202269121-1	CASA-11-1478(266780001DUP)	DUP		.5 pCi/L	WATER	QC ACCOUNT	09-NOV-10	21	21	0.800	137
1202269122-1	LCS for batch 1050795	LCS		.5 pCi/L	WATER	QC ACCOUNT		22	22	~~0.800~~	138

MDA 12/1/10

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: ~~LEACH or DIGESTION~~ N/A ES 12/5/10

Circle One

Data Reviewed By: JdM 12/7/10

Blank Correction Report

Batch ID 1050795

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202269121	DUP	Uranium-233/234	0.800 L	-0.00847	0.00391	0.0579	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.00683	0.00486	0.0383	.0035	pCi/L	YES
		Uranium-238	0.800 L	0.00553	0.00393	0.0384	.0028375	pCi/L	YES
1202269122	LCS	Uranium-233/234	1.00 L	2.26	0.175	0.0438	-.00678	pCi/L	NO
		Uranium-235/236	1.00 L	0.114	0.019	0.029	.0028	pCi/L	NO
		Uranium-238	1.00 L	2.35	0.181	0.029	.00227	pCi/L	NO
1202269120	MB	Uranium-233/234	1.00 L	-0.00678	0.00393	0.0475	-.00678	pCi/L	NO
		Uranium-235/236	1.00 L	0.0028	0.00486	0.0315	.0028	pCi/L	YES
		Uranium-238	1.00 L	0.00227	0.00393	0.0315	.00227	pCi/L	YES
266780001	CASA-11-1478	Uranium-233/234	0.800 L	-0.00847	0.00374	0.0553	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	-0.00326	0.00462	0.0366	.0035	pCi/L	YES
		Uranium-238	0.800 L	0.00264	0.00457	0.0367	.0028375	pCi/L	YES
266780002	CASA-11-1340	Uranium-233/234	0.800 L	0.495	0.0501	0.0525	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0402	0.0131	0.0347	.0035	pCi/L	NO
		Uranium-238	0.800 L	0.245	0.0303	0.0348	.0028375	pCi/L	NO
266780003	CASA-11-1337	Uranium-233/234	0.800 L	0.564	0.0557	0.0551	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0195	0.0104	0.0364	.0035	pCi/L	NO
		Uranium-238	0.800 L	0.265	0.0327	0.0365	.0028375	pCi/L	NO
266780004	CASA-11-1332	Uranium-233/234	0.800 L	0.732	0.0722	0.066	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0273	0.0105	0.0437	.0035	pCi/L	NO
		Uranium-238	0.800 L	0.428	0.0485	0.0438	.0028375	pCi/L	NO
266780005	CASA-11-1342	Uranium-233/234	0.800 L	1.07	0.0997	0.0738	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0174	0.00879	0.0488	.0035	pCi/L	YES
		Uranium-238	0.800 L	0.535	0.0587	0.0489	.0028375	pCi/L	NO
266877001	Buckman1-11-1944	Uranium-233/234	0.800 L	7.90	0.573	0.0492	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.296	0.036	0.0326	.0035	pCi/L	NO
		Uranium-238	0.800 L	5.29	0.389	0.0326	.0028375	pCi/L	NO
266877003	Buckman06-11-1970	Uranium-233/234	0.800 L	8.56	0.634	0.0594	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.129	0.0232	0.0393	.0035	pCi/L	NO
		Uranium-238	0.800 L	1.90	0.155	0.0393	.0028375	pCi/L	NO
266877005	Buckman08-11-2042	Uranium-233/234	0.800 L	11.2	0.816	0.0538	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.362	0.0427	0.0356	.0035	pCi/L	NO
		Uranium-238	0.800 L	6.56	0.484	0.0356	.0028375	pCi/L	NO
266880001	WST39-11-2059	Uranium-233/234	0.100 L	0.170	0.0756	0.454	-.0678	pCi/L	NO
		Uranium-235/236	0.100 L	0.0803	0.0467	0.301	.028	pCi/L	YES
		Uranium-238	0.100 L	2.77	0.317	0.301	.0227	pCi/L	NO
266988001	CAMO-11-1240	Uranium-233/234	0.800 L	0.112	0.020	0.0573	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.00676	0.0048	0.0379	.0035	pCi/L	YES
		Uranium-238	0.800 L	0.159	0.024	0.038	.0028375	pCi/L	NO
266989003	CASA-11-1334	Uranium-233/234	0.800 L	0.813	0.0741	0.055	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0195	0.00806	0.0364	.0035	pCi/L	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
266989003	CASA-11-1334	Uranium-238	0.800 L	0.386	0.0422	0.0364	.0028375	pCi/L	NO
267028001	CAWR-10-23736	Uranium-233/234	0.800 L	16.2	1.18	0.0588	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.576	0.0608	0.0389	.0035	pCi/L	NO
		Uranium-238	0.800 L	11.1	0.812	0.039	.0028375	pCi/L	NO
267227001	CAMO-11-1312	Uranium-233/234	0.800 L	0.416	0.046	0.0586	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0138	0.00698	0.0388	.0035	pCi/L	YES
		Uranium-238	0.800 L	0.210	0.0287	0.0388	.0028375	pCi/L	NO
267227004	CAMO-11-1316	Uranium-233/234	0.800 L	0.599	0.0573	0.0515	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0182	0.00755	0.0341	.0035	pCi/L	NO
		Uranium-238	0.800 L	0.251	0.0307	0.0341	.0028375	pCi/L	NO
267227005	CAMO-11-1317	Uranium-233/234	0.800 L	0.602	0.0586	0.0547	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0258	0.0093	0.0362	.0035	pCi/L	NO
		Uranium-238	0.800 L	0.279	0.0335	0.0362	.0028375	pCi/L	NO
267349003	CAMO-11-1305	Uranium-233/234	0.800 L	0.673	0.0638	0.0547	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0258	0.00931	0.0362	.0035	pCi/L	NO
		Uranium-238	0.800 L	0.464	0.048	0.0362	.0028375	pCi/L	NO
267349005	CAMO-11-1308	Uranium-233/234	0.800 L	0.676	0.0644	0.0559	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0362	0.0112	0.037	.0035	pCi/L	NO
		Uranium-238	0.800 L	0.424	0.0452	0.037	.0028375	pCi/L	NO
267352001	CASA-11-1356	Uranium-233/234	0.800 L	0.481	0.049	0.0534	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0283	0.00966	0.0353	.0035	pCi/L	NO
		Uranium-238	0.800 L	0.224	0.0294	0.0354	.0028375	pCi/L	NO
267352004	CASA-11-1359	Uranium-233/234	0.800 L	0.319	0.0396	0.0642	-.008475	pCi/L	NO
		Uranium-235/236	0.800 L	0.0113	0.0066	0.0425	.0035	pCi/L	YES
		Uranium-238	0.800 L	0.196	0.0283	0.0425	.0028375	pCi/L	NO

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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050795	CHAMBER : 113	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S0266780001_UU	DETECTOR S/N : 80009	BKG FILE : B113.CNF;533
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 25.9195	BKG DATE : 28-NOV-2010
SAMPLE DATE : 9-NOV-2010 00:00:00.	COUNT DATE : 3-DEC-2010 18:54:26	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W113.CNF;149
% YIELD : 82.3		CAL DATE : 16-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1444-C	ID : 1476-B	ID : 1476-B
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.9710E+00 dpm	NOMINAL : 3.2695E+00 pCi/L	NOMINAL : 3.2695E+00 pCi/L
RESULTS : 4.0924E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

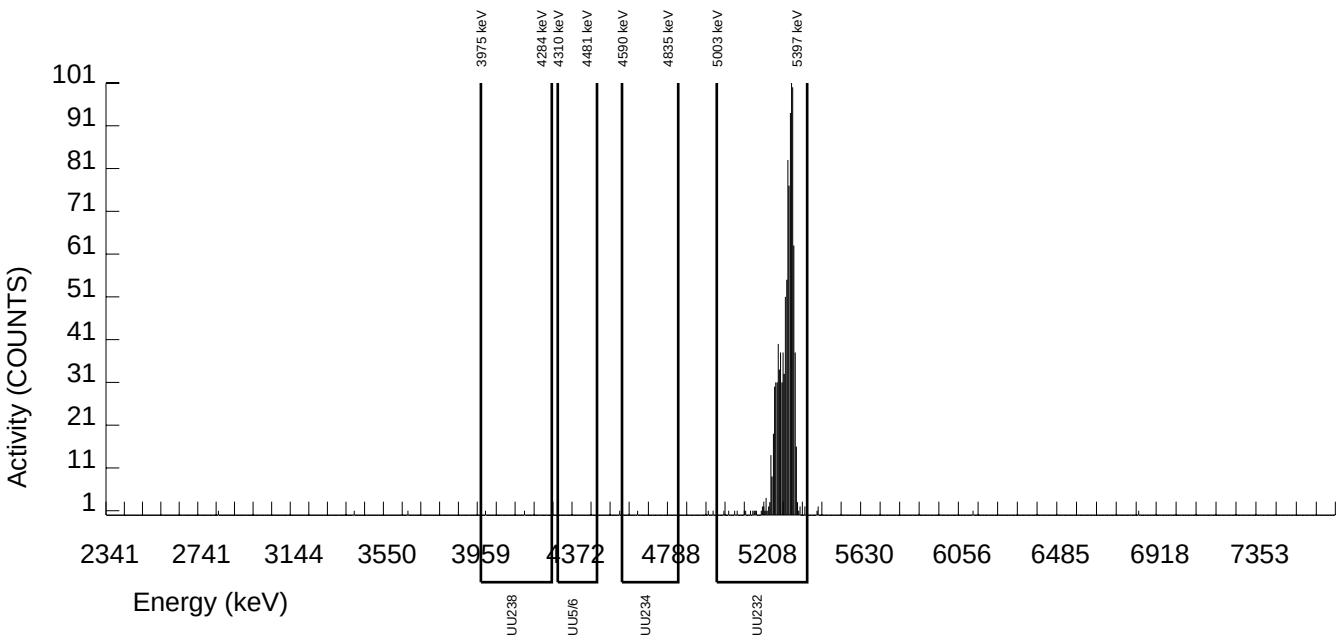
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
U232	5302.100	5309.313	37.320	1061.000	1060.000	1.000	1.0000	100.0000	2.80E+00	2.17E-01	6.14E-03	1.94E-02	8.61E-02
U-3/4	4763.020	4663.120	4.975	1.000	-3.211	1.000	3.9237	100.0000	-8.47E-03	3.74E-03	2.41E-02	5.53E-02	3.73E-03
U-235	4391.000	4395.538	0.000	0.000	-1.000	1.000	1.8300	80.90000	-3.26E-03	4.62E-03	1.39E-02	3.66E-02	4.61E-03
U-238	4184.730	4085.500	169.164	2.000	1.000	1.000	2.4028	100.0000	2.64E-03	4.57E-03	1.48E-02	3.67E-02	4.57E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4



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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050795	CHAMBER : 120	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S0266877001_UU	DETECTOR S/N : 74430	BKG FILE : B120.CNF;551
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 25.9313	BKG DATE : 28-NOV-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 3-DEC-2010 18:54:38	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W120.CNF;146
% YIELD : 92.5		CAL DATE : 16-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1444-C	ID : 1476-B	ID : 1476-B
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.9709E+00 dpm	NOMINAL : 3.2695E+00 pCi/L	NOMINAL : 3.2695E+00 pCi/L
RESULTS : 4.5960E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

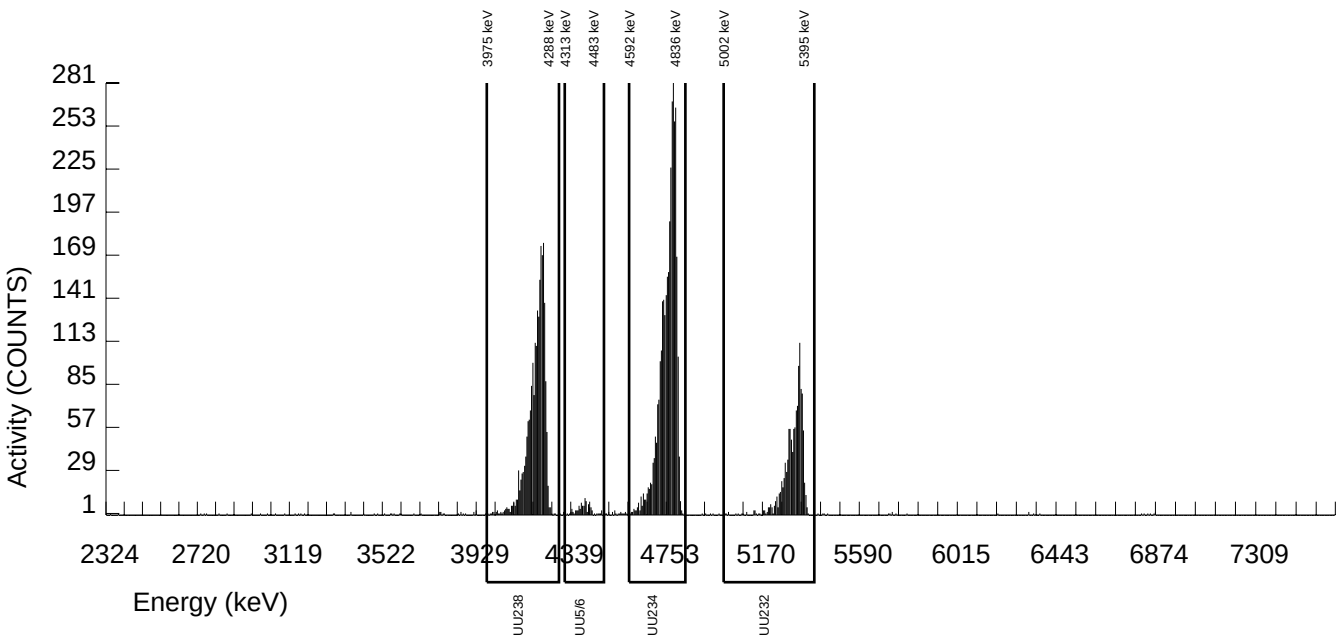
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
U232	5302.100	5308.370	37.603	1193.000	1191.000	2.000	1.4142	100.0000	2.80E+00	2.13E-01	7.73E-03	2.18E-02	8.12E-02
U-3/4	4763.020	4765.020	47.241	3372.000	3364.392	4.000	3.9237	100.0000	7.90E+00	5.73E-01	2.14E-02	4.92E-02	1.36E-01
U-235	4391.000	4399.939	43.598	102.000	102.000	0.000	1.8300	80.90000	2.96E-01	3.60E-02	1.24E-02	3.26E-02	2.93E-02
U-238	4184.730	4193.018	56.953	2255.000	2254.000	1.000	2.4028	100.0000	5.29E+00	3.89E-01	1.31E-02	3.26E-02	1.12E-01

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4



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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050795	CHAMBER : 121	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S0266877003_UU	DETECTOR S/N : 75545	BKG FILE : B121.CNF;531
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 25.7321	BKG DATE : 28-NOV-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 3-DEC-2010 18:54:39	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W121.CNF;137
% YIELD : 77.3		CAL DATE : 16-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1444-C	ID : 1476-B	ID : 1476-B
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.9709E+00 dpm	NOMINAL : 3.2695E+00 pCi/L	NOMINAL : 3.2695E+00 pCi/L
RESULTS : 3.8421E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

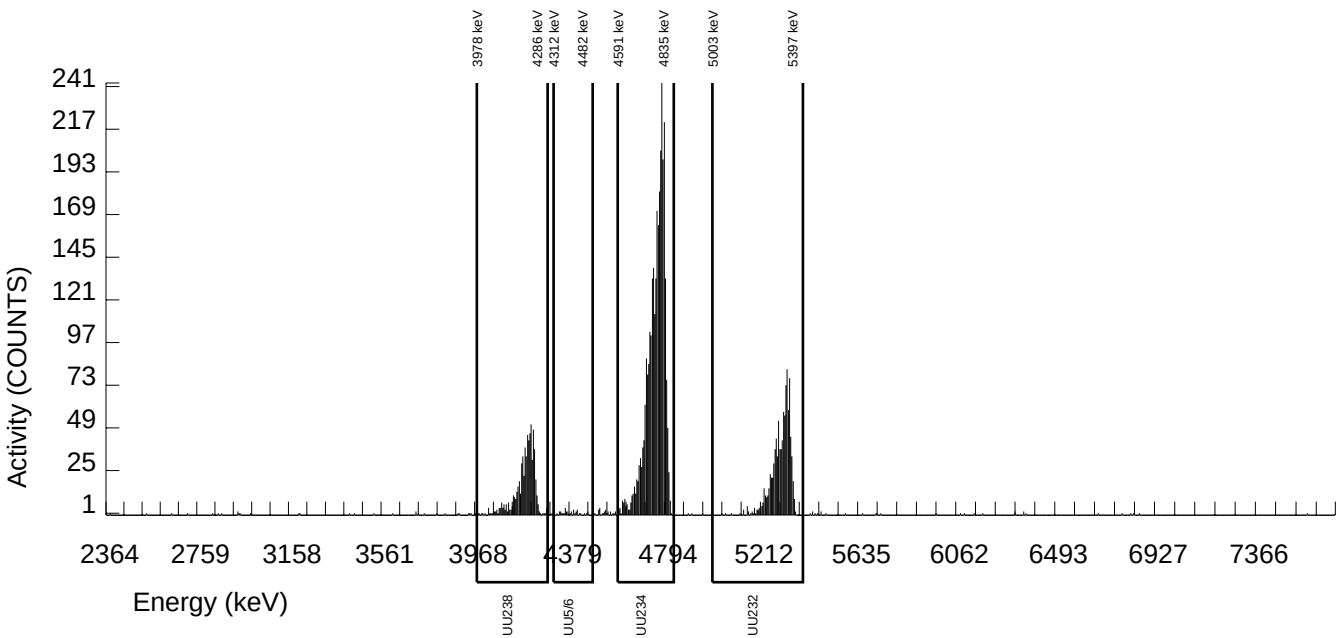
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
U232	5302.100	5306.161	61.454	996.000	988.000	8.000	2.8284	100.0000	2.80E+00	2.20E-01	1.86E-02	4.49E-02	8.98E-02
U-3/4	4763.020	4761.337	56.800	3027.000	3024.007	0.000	3.9237	100.0000	8.56E+00	6.34E-01	2.58E-02	5.94E-02	1.56E-01
U-235	4391.000	4386.864	54.007	37.000	37.000	0.000	1.8300	80.90000	1.29E-01	2.32E-02	1.49E-02	3.93E-02	2.13E-02
U-238	4184.730	4189.960	58.058	671.000	671.000	0.000	2.4028	100.0000	1.90E+00	1.55E-01	1.58E-02	3.93E-02	7.33E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4



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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050795	CHAMBER : 122	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S0266877005_UU	DETECTOR S/N : 75546	BKG FILE : B122.CNF;533
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 26.5925	BKG DATE : 28-NOV-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 3-DEC-2010 18:54:41	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W122.CNF;140
% YIELD : 82.5		CAL DATE : 16-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1444-C	ID : 1476-B	ID : 1476-B
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.9709E+00 dpm	NOMINAL : 3.2695E+00 pCi/L	NOMINAL : 3.2695E+00 pCi/L
RESULTS : 4.1016E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

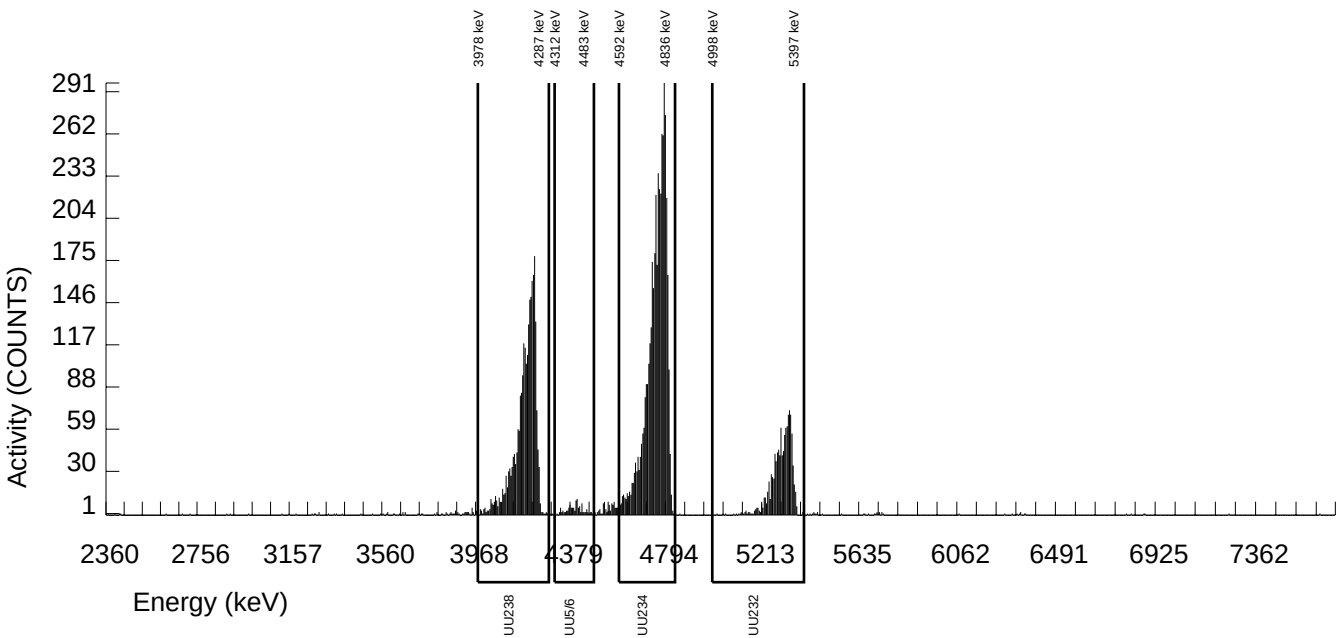
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
U232	5302.100	5303.440	75.301	1094.000	1090.000	4.000	2.0000	100.0000	2.80E+00	2.16E-01	1.19E-02	3.08E-02	8.51E-02
U-3/4	4763.020	4758.810	68.149	4382.000	4378.698	0.000	3.9237	100.0000	1.12E+01	8.16E-01	2.34E-02	5.38E-02	1.70E-01
U-235	4391.000	4404.226	54.360	115.000	114.000	1.000	1.8300	80.90000	3.62E-01	4.27E-02	1.35E-02	3.56E-02	3.42E-02
U-238	4184.730	4187.293	60.166	2559.000	2557.000	2.000	2.4028	100.0000	6.56E+00	4.84E-01	1.43E-02	3.56E-02	1.30E-01

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4



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effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050795	CHAMBER : 134	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S1202269120_UU	DETECTOR S/N : 76230	BKG FILE : B134.CNF;516
SAMPLE QTY : 1.000 L	AVERAGE %EFFICIENCY : 24.5376	BKG DATE : 28-NOV-2010
SAMPLE DATE : 1-DEC-2010 00:00:00.	COUNT DATE : 3-DEC-2010 18:55:09	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W134.CNF;147
% YIELD : 81.0		CAL DATE : 16-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1444-C	ID : 1476-B	ID : 1476-B
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.9680E+00 dpm	NOMINAL : 2.6156E+00 pCi/L	NOMINAL : 2.6156E+00 pCi/L
RESULTS : 4.0227E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

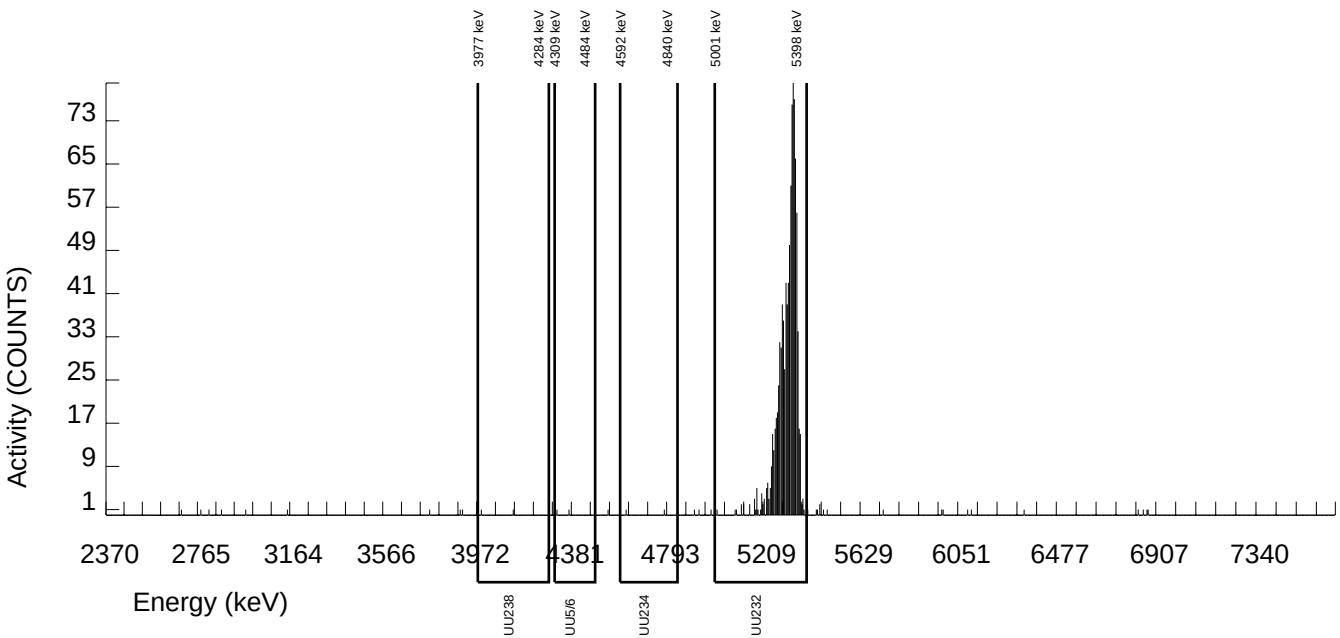
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
U232	5302.100	5320.279	48.798	988.000	987.000	1.000	1.0000	100.0000	2.24E+00	1.76E-01	5.27E-03	1.67E-02	7.13E-02
U-3/4	4763.020	4705.563	162.434	2.000	-2.990	2.000	3.9237	100.0000	-6.78E-03	3.93E-03	2.07E-02	4.75E-02	3.93E-03
U-235	4391.000	4350.220	54.145	2.000	1.000	1.000	1.8300	80.90000	2.80E-03	4.86E-03	1.19E-02	3.15E-02	4.85E-03
U-238	4184.730	4066.232	137.823	2.000	1.000	1.000	2.4028	100.0000	2.27E-03	3.93E-03	1.27E-02	3.15E-02	3.93E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4



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effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050795	CHAMBER : 137	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S1202269121_UU	DETECTOR S/N : 80051	BKG FILE : B137.CNF;479
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 26.1752	BKG DATE : 28-NOV-2010
SAMPLE DATE : 9-NOV-2010 00:00:00.	COUNT DATE : 3-DEC-2010 18:55:11	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W137.CNF;141
% YIELD : 77.8		CAL DATE : 17-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1444-C	ID : 1476-B	ID : 1476-B
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.9710E+00 dpm	NOMINAL : 3.2695E+00 pCi/L	NOMINAL : 3.2695E+00 pCi/L
RESULTS : 3.8689E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

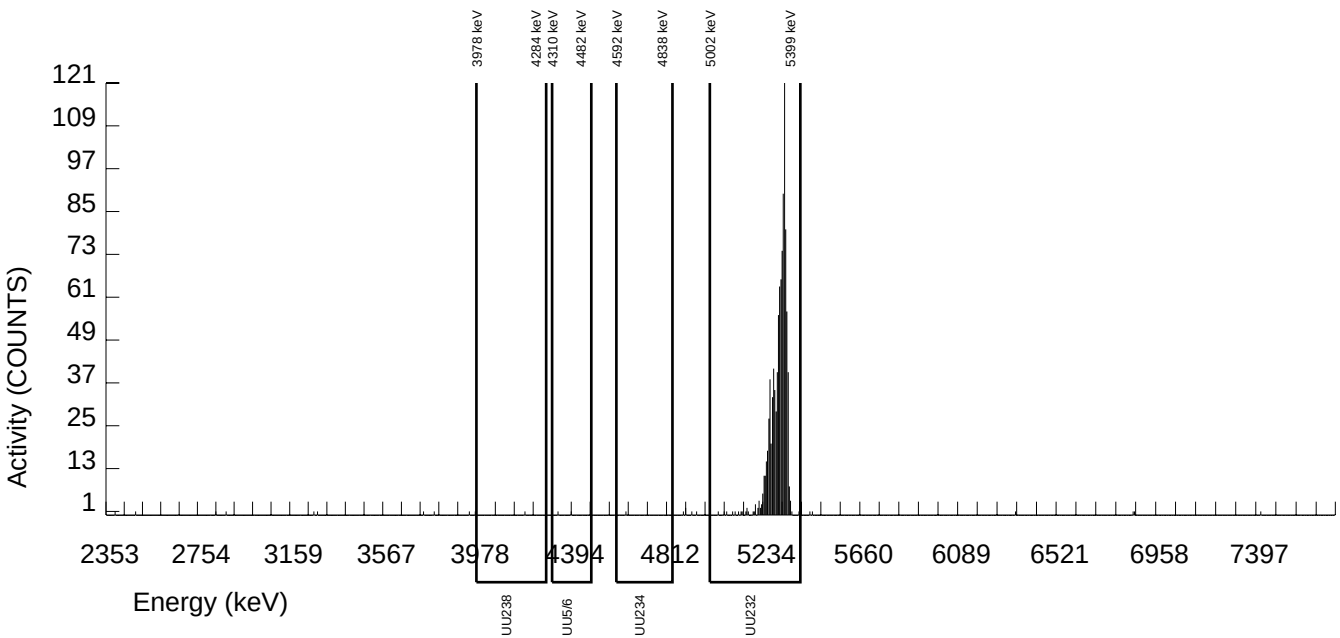
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
U232	5302.100	5309.868	31.304	1014.000	1012.000	2.000	1.4142	100.0000	2.80E+00	2.19E-01	9.09E-03	2.57E-02	8.82E-02
U-3/4	4763.020	4639.057	4.992	1.000	-3.065	1.000	3.9237	100.0000	-8.47E-03	3.91E-03	2.52E-02	5.79E-02	3.91E-03
U-235	4391.000	4370.108	59.905	2.000	2.000	0.000	1.8300	80.90000	6.83E-03	4.86E-03	1.45E-02	3.83E-02	4.83E-03
U-238	4184.730	4087.067	0.000	2.000	2.000	0.000	2.4028	100.0000	5.53E-03	3.93E-03	1.54E-02	3.84E-02	3.91E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4



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effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050795	CHAMBER : 138	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S1202269122_UU	DETECTOR S/N : 70324	BKG FILE : B138.CNF;486
SAMPLE QTY : 1.000 L	AVERAGE %EFFICIENCY : 26.0226	BKG DATE : 28-NOV-2010
SAMPLE DATE : 1-DEC-2010 00:00:00.	COUNT DATE : 3-DEC-2010 18:55:12	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W138.CNF;128
% YIELD : 82.8		CAL DATE : 17-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1444-C	ID : 1476-B	ID : 1476-B
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.9680E+00 dpm	NOMINAL : 2.6156E+00 pCi/L	NOMINAL : 2.6156E+00 pCi/L
RESULTS : 4.1122E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

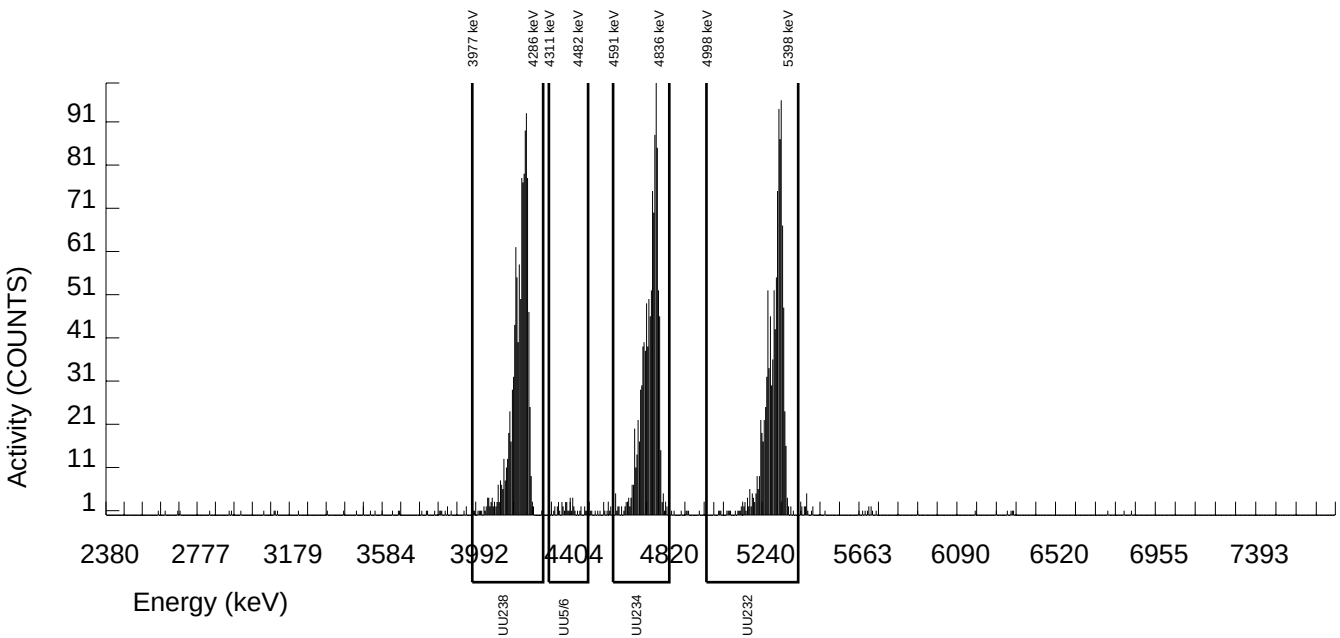
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
U232	5302.100	5296.459	64.962	1078.000	1070.000	8.000	2.8284	100.0000	2.24E+00	1.74E-01	1.38E-02	3.32E-02	6.89E-02
U-3/4	4763.020	4755.864	32.943	1086.000	1081.759	1.000	3.9237	100.0000	2.26E+00	1.75E-01	1.91E-02	4.38E-02	6.88E-02
U-235	4391.000	4400.560	69.253	44.000	44.000	0.000	1.8300	80.90000	1.14E-01	1.90E-02	1.10E-02	2.90E-02	1.71E-02
U-238	4184.730	4186.438	58.586	1123.000	1123.000	0.000	2.4028	100.0000	2.35E+00	1.81E-01	1.17E-02	2.90E-02	7.01E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4



Radiochemistry Batch Checklist

06-Dec-2010

Batch# 1050788 Product: Am Date: 12/6/10

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

Primary Review Performed By: Denise Green 12/6/10

Secondary Review Performed By: [illegible] 12/7/10

12/9
ARSC

Am/Cm Que Sheet

19-NOV-10

Batch #: 1050788 | Analyst: MXA1 | First Client Due Date: 09-DEC-10 | Internal Due Date28-NOV-10 | Comments:

Tracer(s): Am243/Cm244 | Tracer Code: 445-96-2-WW | Expiration Date: 3/23/11 | Vol: 0.1 mL

LCS Isotope(s): Am241/Cm244 | LCS Code(s): 0533-S / N/A | Expiration Date: 11/9/11 / N/A | Vol(s): 0.1 mL / N/A

Spike Isotope(s): Am241/Cm244 | Spike Code(s): N/A / N/A | Expiration Date: N/A / N/A | Vol(s): N/A / N/A

Prep Date: 12/1/10 | Initials: MDA | Pipet ID: 4075157 | Balance ID: 167560207 | Witness: DJM 12-1-10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g / f)	Am/Cm Det #
266780001-1	CASA-11-1478	SAMPLE		.05 pCi/L	WATER	ARSL001	09-NOV-10	1	1	0.800	225
266780002-1	CASA-11-1340	SAMPLE		.05 pCi/L	WATER	ARSL001	09-NOV-10	2	2	0.800	226
266780003-1	CASA-11-1337	SAMPLE		.05 pCi/L	WATER	ARSL001	09-NOV-10	3	3	0.800	227
266780004-1	CASA-11-1332	SAMPLE		.05 pCi/L	WATER	ARSL001	09-NOV-10	4	4	0.800	228
266780005-1	CASA-11-1342	SAMPLE		.05 pCi/L	WATER	ARSL001	09-NOV-10	5	5	0.800	229
266877001-1	Buckman1-11-1944	SAMPLE		.05 pCi/L	WATER	ARSL001	10-NOV-10	6	6	0.800	230
266877003-1	Buckman06-11-1970	SAMPLE		.05 pCi/L	WATER	ARSL001	10-NOV-10	7	7	0.800	231
266877005-1	Buckman08-11-2042	SAMPLE		.05 pCi/L	WATER	ARSL001	10-NOV-10	8	8	0.800	232
266988001-1	CAMO-11-1240	SAMPLE		.05 pCi/L	WATER	ARSL001	11-NOV-10	9	10	0.800	233
266989003-1	CASA-11-1334	SAMPLE		.05 pCi/L	WATER	ARSL001	11-NOV-10	10	11	~~0.800~~ 0.800	234
267028001-1	CAWR-10-23736	SAMPLE		.05 pCi/L	WATER	ARSL001	12-NOV-10 12/7/10	11	12	0.800	235
267227001-1	CAMO-11-1312	SAMPLE		.05 pCi/L	WATER	ARSL001	16-NOV-10	12	13	0.800	236
267227004-1	CAMO-11-1316	SAMPLE		.05 pCi/L	WATER	ARSL001	16-NOV-10	13	14	0.800	237
267227005-1	CAMO-11-1317	SAMPLE		.05 pCi/L	WATER	ARSL001	16-NOV-10	14	15	0.800	238
267349003-1	CAMO-11-1305	SAMPLE		.05 pCi/L	WATER	ARSL001	17-NOV-10	15	16	0.800	239
267349005-1	CAMO-11-1308	SAMPLE		.05 pCi/L	WATER	ARSL001	17-NOV-10	16	17	0.800	240
267352001-1	CASA-11-1356	SAMPLE		.05 pCi/L	WATER	ARSL001	17-NOV-10	17	18	0.800	241
267352004-1	CASA-11-1359	SAMPLE		.05 pCi/L	WATER	ARSL001	17-NOV-10	18	19	0.800	242
1202269109-1	MB for batch 1050788	MB		.05 pCi/L	WATER	QC ACCOUNT		19	20	~~0.800~~ 1	224 ~~243~~ DG 12/6/10
1202269110-1	CASA-11-1478(266780001DUP)	DUP		.05 pCi/L	WATER	QC ACCOUNT	09-NOV-10	20	21	0.800	244
1202269111-1	LCS for batch 1050788	LCS		.05 pCi/L	WATER	QC ACCOUNT		21	22	~~0.800~~ 1	247

MDA 12/1/10

Choose SOP Used: GL-RAD-A-011 / GL-RAD-A-036

Solid Sample Dissolution by: ~~LEACH or DIGESTION~~ N/A (Circle One)

Data Reviewed By: 12/6/10

GEL Laboratories LLC, Radiochemistry Division

12/7/10

Blank Correction Report

Batch ID 1050788

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202269110	DUP	Americium-241	0.800 L	-0.00329	0.0027	0.034	.00495	pCi/L	YES
1202269111	LCS	Americium-241	1.00 L	1.17	0.0784	0.0216	.00396	pCi/L	NO
1202269109	MB	Americium-241	1.00 L	0.00396	0.00347	0.0293	.00396	pCi/L	YES
266780001	CASA-11-1478	Americium-241	0.800 L	-0.00147	0.00183	0.0325	.00495	pCi/L	YES
266780002	CASA-11-1340	Americium-241	0.800 L	-0.00668	0.0048	0.0301	.00495	pCi/L	YES
266780003	CASA-11-1337	Americium-241	0.800 L	-0.00167	0.0023	0.0289	.00495	pCi/L	YES
266780004	CASA-11-1332	Americium-241	0.800 L	-0.00168	0.0028	0.0288	.00495	pCi/L	YES
266780005	CASA-11-1342	Americium-241	0.800 L	-0.00592	0.00525	0.0467	.00495	pCi/L	YES
266877001	Buckman1-11-1944	Americium-241	0.800 L	-0.000133	0.00313	0.0281	.00495	pCi/L	YES
266877003	Buckman06-11-1970	Americium-241	0.800 L	-0.00503	0.00461	0.0308	.00495	pCi/L	YES
266877005	Buckman08-11-2042	Americium-241	0.800 L	-0.00546	0.00375	0.0385	.00495	pCi/L	YES
266988001	CAMO-11-1240	Americium-241	0.800 L	-0.0052	0.00381	0.0339	.00495	pCi/L	YES
266989003	CASA-11-1334	Americium-241	0.800 L	-0.0016	0.00296	0.0302	.00495	pCi/L	YES
267028001	CAWR-10-23736	Americium-241	0.800 L	0.000139	0.00172	0.0306	.00495	pCi/L	YES
267227001	CAMO-11-1312	Americium-241	0.800 L	0.00178	0.00296	0.0301	.00495	pCi/L	YES
267227004	CAMO-11-1316	Americium-241	0.800 L	-0.00662	0.00372	0.0296	.00495	pCi/L	YES
267227005	CAMO-11-1317	Americium-241	0.800 L	-0.00329	0.00478	0.0272	.00495	pCi/L	YES
267349003	CAMO-11-1305	Americium-241	0.800 L	-0.005	0.00242	0.0305	.00495	pCi/L	YES
267349005	CAMO-11-1308	Americium-241	0.800 L	-0.0066	0.00406	0.0295	.00495	pCi/L	YES
267352001	CASA-11-1356	Americium-241	0.800 L	-6.26E-05	0.00229	0.0288	.00495	pCi/L	YES
267352004	CASA-11-1359	Americium-241	0.800 L	-0.00554	0.00389	0.0399	.00495	pCi/L	YES

12/7/10

Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050788	CHAMBER : 225	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0266780001_AM	DETECTOR S/N : 79418	BKG FILE : B225.CNF;165
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 38.5825	BKG DATE : 28-NOV-2010
SAMPLE DATE : 9-NOV-2010 00:00:00.	COUNT DATE : 2-DEC-2010 18:25:00	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W225.CNF;49
% YIELD : 80.0		CAL DATE : 28-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-WW	ID : 0533-S	ID : 0533-S
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 3.3714E+00 dpm	NOMINAL : 1.7773E+00 pCi/L	NOMINAL : 1.7773E+00 pCi/L
RESULTS : 2.6963E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

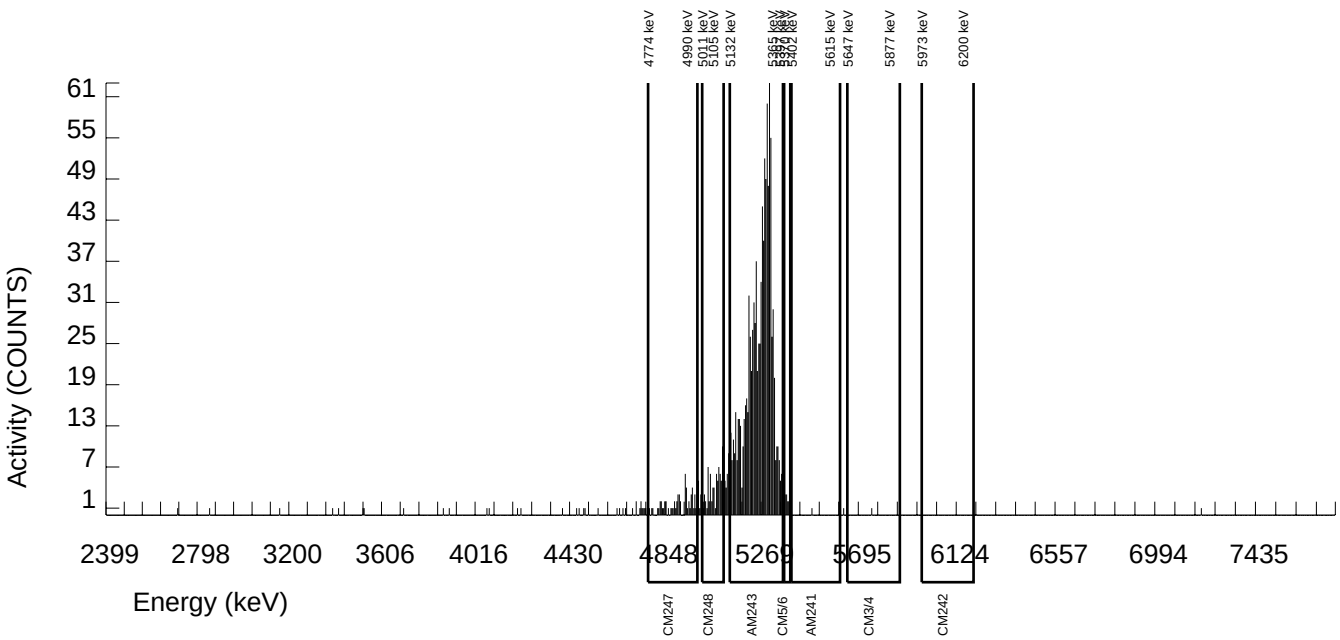
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AM-241	5479.150	5497.483	4.955	1.000	-0.804	0.000	3.2449	99.94000	-1.47E-03	1.83E-03	1.38E-02	3.25E-02	1.83E-03
AM243	5270.000	5264.796	93.298	1046.000	1038.000	8.000	2.8284	99.78000	1.90E+00	1.28E-01	1.20E-02	2.90E-02	5.94E-02
CM-242	6102.000	6086.337	0.000	0.000	0.000	0.000	2.0669	100.0000	0.00E+00	2.03E-03	8.77E-03	2.25E-02	2.02E-03
CM-3/4	5795.020	5758.889	4.955	1.000	1.000	0.000	3.3055	100.0000	1.83E-03	1.83E-03	1.40E-02	3.30E-02	1.83E-03
CM-5/6	5386.000	5383.621	0.000	14.000	14.000	0.000	8.2668	86.09000	2.97E-02	8.13E-03	4.08E-02	8.73E-02	7.93E-03
CM-247	4946.000	4908.453	33.552	59.000	56.000	3.000	24.2271	79.30000	1.29E-01	1.97E-02	1.30E-01	2.66E-01	1.81E-02
CM-248	5078.600	5067.290	0.000	80.000	78.000	2.000	26.9076	91.00000	1.56E-01	2.04E-02	1.26E-01	2.56E-01	1.82E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
AM-241



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050788	CHAMBER : 230	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0266877001_AM	DETECTOR S/N : 79423	BKG FILE : B230.CNF;165
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 37.6961	BKG DATE : 28-NOV-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 2-DEC-2010 18:25:11	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W230.CNF;49
% YIELD : 94.6		CAL DATE : 28-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-WW	ID : 0533-S	ID : 0533-S
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 3.3714E+00 dpm	NOMINAL : 1.7773E+00 pCi/L	NOMINAL : 1.7773E+00 pCi/L
RESULTS : 3.1877E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

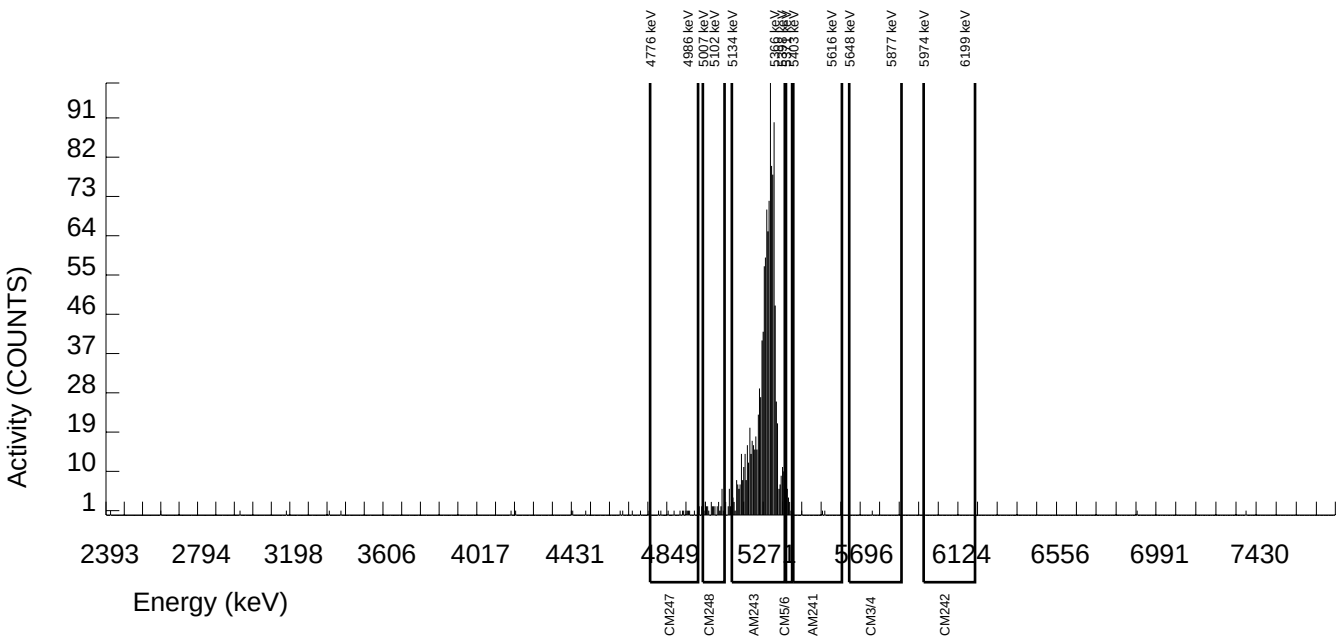
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AM-241	5479.150	5482.913	0.000	4.000	-0.084	2.000	3.2449	99.94000	-1.33E-04	3.13E-03	1.19E-02	2.81E-02	3.13E-03
AM243	5270.000	5284.501	47.176	1209.000	1199.000	10.000	3.1623	99.78000	1.90E+00	1.24E-01	1.16E-02	2.76E-02	5.53E-02
CM-242	6102.000	6086.479	0.000	0.000	0.000	0.000	2.0669	100.0000	0.00E+00	1.75E-03	7.60E-03	1.95E-02	1.74E-03
CM-3/4	5795.020	5754.471	4.989	1.000	-1.000	2.000	3.3055	100.0000	-1.58E-03	2.74E-03	1.21E-02	2.86E-02	2.74E-03
CM-5/6	5386.000	5381.252	0.000	25.000	25.000	0.000	8.2668	86.09000	4.59E-02	9.56E-03	3.53E-02	7.56E-02	9.18E-03
CM-247	4946.000	4899.522	0.000	13.000	9.000	4.000	24.2271	79.30000	1.79E-02	8.28E-03	1.12E-01	2.30E-01	8.21E-03
CM-248	5078.600	5056.560	6.720	38.000	37.000	1.000	26.9076	91.00000	6.42E-02	1.15E-02	1.09E-01	2.22E-01	1.08E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
AM-241



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050788	CHAMBER : 231	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0266877003_AM	DETECTOR S/N : 79424	BKG FILE : B231.CNF;165
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 40.4656	BKG DATE : 28-NOV-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 2-DEC-2010 18:25:14	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W231.CNF;49
% YIELD : 80.4		CAL DATE : 28-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-WW	ID : 0533-S	ID : 0533-S
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 3.3714E+00 dpm	NOMINAL : 1.7773E+00 pCi/L	NOMINAL : 1.7773E+00 pCi/L
RESULTS : 2.7120E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

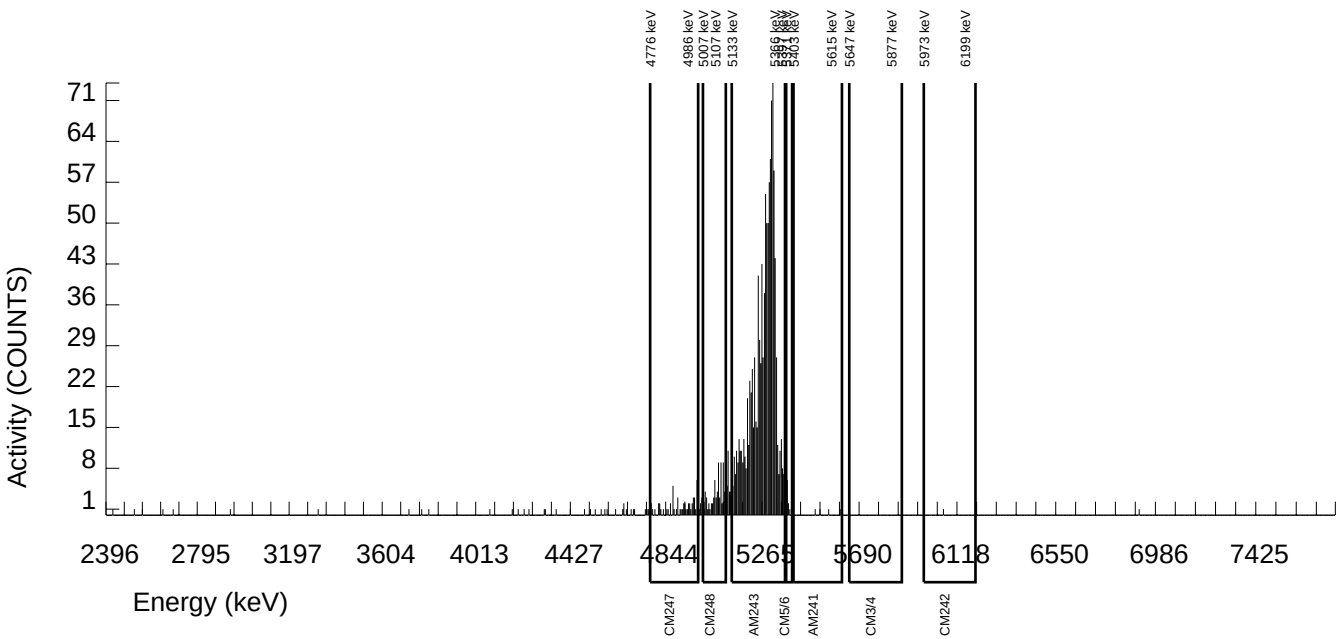
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AM-241	5479.150	5551.270	0.000	4.000	-2.903	5.000	3.2449	99.94000	-5.03E-03	4.61E-03	1.31E-02	3.08E-02	4.61E-03
AM243	5270.000	5275.318	72.019	1111.000	1095.000	16.000	4.0000	99.78000	1.90E+00	1.27E-01	1.61E-02	3.70E-02	5.82E-02
CM-242	6102.000	6064.206	4.961	1.000	1.000	0.000	2.0669	100.0000	1.91E-03	1.91E-03	8.32E-03	2.13E-02	1.91E-03
CM-3/4	5795.020	5761.679	0.000	0.000	-1.000	1.000	3.3055	100.0000	-1.73E-03	2.45E-03	1.33E-02	3.13E-02	2.45E-03
CM-5/6	5386.000	5378.667	0.000	17.000	16.000	1.000	8.2668	86.09000	3.21E-02	8.74E-03	3.86E-02	8.27E-02	8.52E-03
CM-247	4946.000	4907.853	0.000	54.000	52.000	2.000	24.2271	79.30000	1.13E-01	1.77E-02	1.23E-01	2.52E-01	1.63E-02
CM-248	5078.600	5068.582	41.658	73.000	73.000	0.000	26.9076	91.00000	1.39E-01	1.82E-02	1.19E-01	2.43E-01	1.62E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
AM-241



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050788	CHAMBER : 232	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0266877005_AM	DETECTOR S/N : 79425	BKG FILE : B232.CNF;169
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 38.1075	BKG DATE : 28-NOV-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 2-DEC-2010 18:25:16	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W232.CNF;49
% YIELD : 68.3		CAL DATE : 28-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-WW	ID : 0533-S	ID : 0533-S
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 3.3714E+00 dpm	NOMINAL : 1.7773E+00 pCi/L	NOMINAL : 1.7773E+00 pCi/L
RESULTS : 2.3038E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

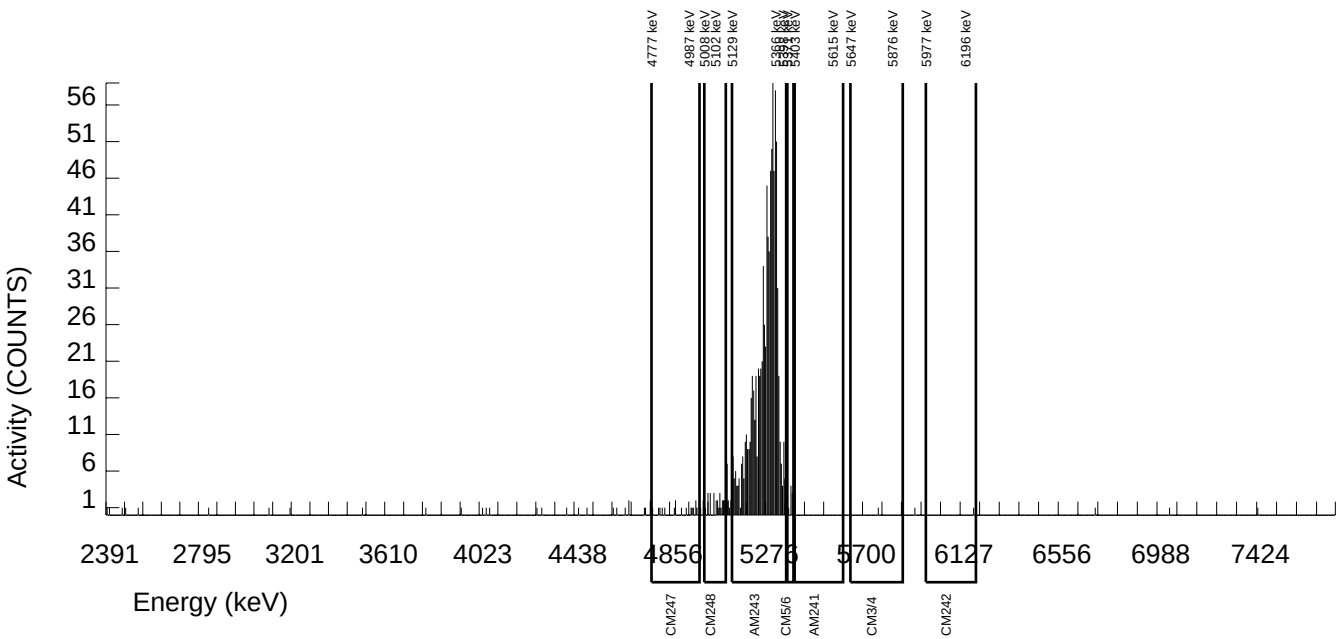
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AM-241	5479.150	5509.074	0.000	1.000	-2.523	2.000	3.2449	99.94000	-5.46E-03	3.75E-03	1.63E-02	3.85E-02	3.75E-03
AM243	5270.000	5280.873	62.660	879.000	876.000	3.000	1.7321	99.78000	1.90E+00	1.33E-01	8.73E-03	2.33E-02	6.44E-02
CM-242	6102.000	6190.873	5.026	1.000	1.000	0.000	2.0669	100.0000	2.39E-03	2.39E-03	1.04E-02	2.67E-02	2.39E-03
CM-3/4	5795.020	5774.526	5.026	1.000	0.000	1.000	3.3055	100.0000	0.00E+00	3.07E-03	1.66E-02	3.91E-02	3.07E-03
CM-5/6	5386.000	5383.708	0.000	16.000	16.000	0.000	8.2668	86.09000	4.02E-02	1.03E-02	4.83E-02	1.03E-01	1.00E-02
CM-247	4946.000	4886.769	0.000	18.000	16.000	2.000	24.2271	79.30000	4.36E-02	1.25E-02	1.54E-01	3.15E-01	1.22E-02
CM-248	5078.600	5060.007	0.000	28.000	28.000	0.000	26.9076	91.00000	6.65E-02	1.32E-02	1.49E-01	3.04E-01	1.26E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
AM-241



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050788	CHAMBER : 224	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S1202269109_AM	DETECTOR S/N : 79417	BKG FILE : B224.CNF;165
SAMPLE QTY : 1.000 L	AVERAGE %EFFICIENCY : 38.3436	BKG DATE : 28-NOV-2010
SAMPLE DATE : 1-DEC-2010 00:00:00.	COUNT DATE : 3-DEC-2010 18:28:22	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W224.CNF;49
% YIELD : 71.3		CAL DATE : 28-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-WW	ID : 0533-S	ID : 0533-S
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 3.3714E+00 dpm	NOMINAL : 1.4217E+00 pCi/L	NOMINAL : 1.4217E+00 pCi/L
RESULTS : 2.4046E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

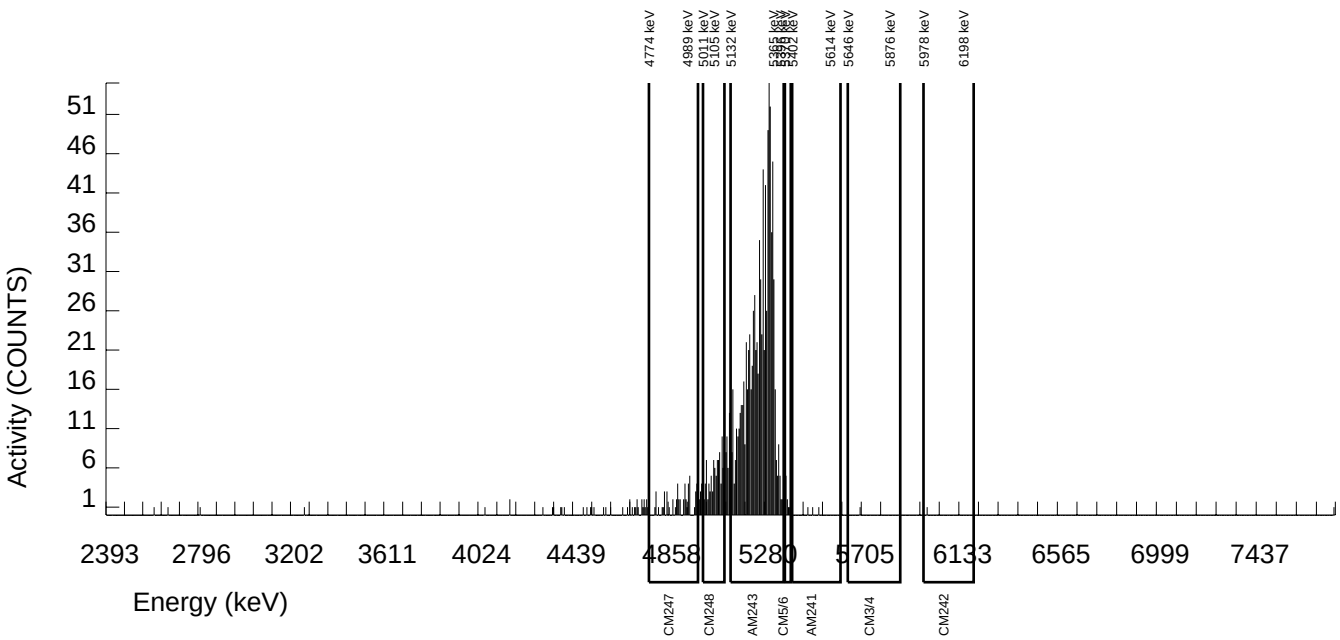
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AM-241	5479.150	5460.147	0.000	5.000	2.401	1.000	3.2449	99.94000	3.96E-03	3.47E-03	1.24E-02	2.93E-02	3.46E-03
AM243	5270.000	5261.959	82.209	921.000	920.000	1.000	1.0000	99.78000	1.52E+00	1.05E-01	3.84E-03	1.22E-02	5.01E-02
CM-242	6102.000	5999.024	5.015	1.000	1.000	0.000	2.0669	100.0000	1.67E-03	1.67E-03	7.92E-03	2.03E-02	1.67E-03
CM-3/4	5795.020	5704.949	5.015	1.000	0.000	1.000	3.3055	100.0000	0.00E+00	2.33E-03	1.27E-02	2.98E-02	2.33E-03
CM-5/6	5386.000	5378.891	0.000	16.000	16.000	0.000	8.2668	86.09000	3.06E-02	7.88E-03	3.68E-02	7.88E-02	7.65E-03
CM-247	4946.000	4908.071	0.000	55.000	52.000	3.000	24.2271	79.30000	1.08E-01	1.71E-02	1.17E-01	2.40E-01	1.58E-02
CM-248	5078.600	5065.259	0.000	98.000	96.000	2.000	26.9076	91.00000	1.74E-01	2.10E-02	1.13E-01	2.32E-01	1.81E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
AM-241



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050788	CHAMBER : 244	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S1202269110_AM	DETECTOR S/N : 79437	BKG FILE : B244.CNF;165
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 39.1059	BKG DATE : 28-NOV-2010
SAMPLE DATE : 9-NOV-2010 00:00:00.	COUNT DATE : 2-DEC-2010 18:25:42	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W244.CNF;49
% YIELD : 75.4		CAL DATE : 28-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-WW	ID : 0533-S	ID : 0533-S
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 3.3714E+00 dpm	NOMINAL : 1.7773E+00 pCi/L	NOMINAL : 1.7773E+00 pCi/L
RESULTS : 2.5423E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

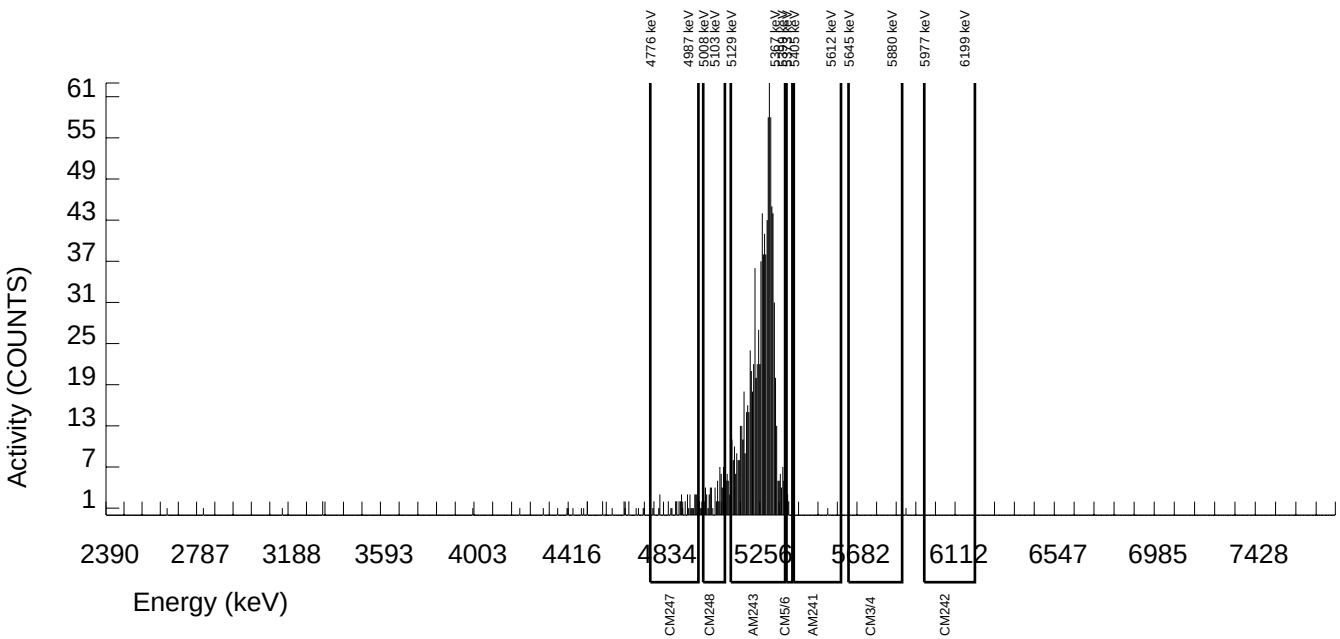
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AM-241	5479.150	5559.069	4.935	1.000	-1.724	1.000	3.2449	99.94000	-3.29E-03	2.70E-03	1.44E-02	3.40E-02	2.70E-03
AM243	5270.000	5266.817	80.353	993.000	992.000	1.000	1.0000	99.78000	1.90E+00	1.29E-01	4.45E-03	1.41E-02	6.03E-02
CM-242	6102.000	6087.877	0.000	0.000	0.000	0.000	2.0669	100.0000	0.00E+00	2.12E-03	9.18E-03	2.35E-02	2.12E-03
CM-3/4	5795.020	5762.329	0.000	0.000	0.000	0.000	3.3055	100.0000	0.00E+00	1.92E-03	1.47E-02	3.45E-02	1.91E-03
CM-5/6	5386.000	5378.444	0.000	12.000	12.000	0.000	8.2668	86.09000	2.66E-02	7.85E-03	4.27E-02	9.13E-02	7.68E-03
CM-247	4946.000	4913.778	0.000	45.000	40.000	5.000	24.2271	79.30000	9.63E-02	1.80E-02	1.36E-01	2.78E-01	1.70E-02
CM-248	5078.600	5062.061	0.000	66.000	65.000	1.000	26.9076	91.00000	1.36E-01	1.90E-02	1.31E-01	2.68E-01	1.72E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
AM-241



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050788	CHAMBER : 247	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S1202269111_AM	DETECTOR S/N : 79440	BKG FILE : B247.CNF;166
SAMPLE QTY : 1.000 L	AVERAGE %EFFICIENCY : 39.2679	BKG DATE : 28-NOV-2010
SAMPLE DATE : 1-DEC-2010 00:00:00.	COUNT DATE : 2-DEC-2010 18:25:44	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W247.CNF;50
% YIELD : 94.5		CAL DATE : 28-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-WW	ID : 0533-S	ID : 0533-S
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 3.3714E+00 dpm	NOMINAL : 1.4217E+00 pCi/L	NOMINAL : 1.4217E+00 pCi/L
RESULTS : 3.1852E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

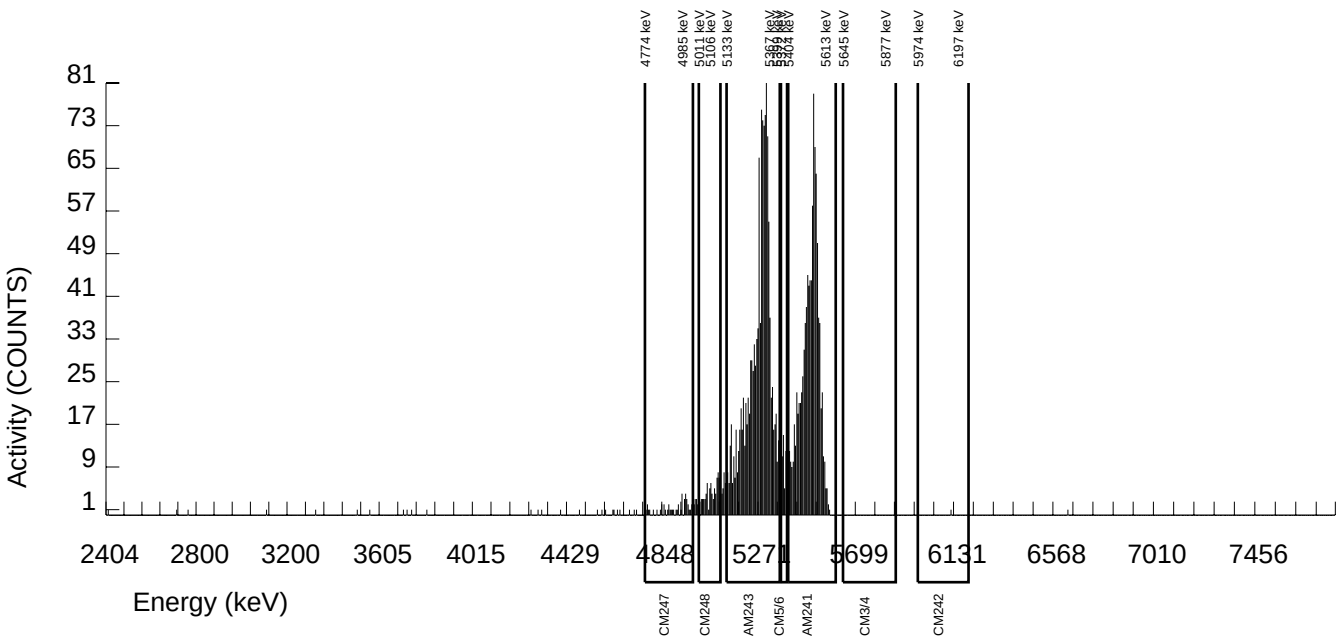
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AM-241	5479.150	5504.107	47.624	973.000	961.831	9.000	3.2449	99.94000	1.17E+00	7.84E-02	9.17E-03	2.16E-02	3.80E-02
AM243	5270.000	5276.775	47.370	1269.000	1248.000	21.000	4.5826	99.78000	1.52E+00	9.92E-02	1.30E-02	2.92E-02	4.37E-02
CM-242	6102.000	6125.856	4.920	1.000	1.000	0.000	2.0669	100.0000	1.23E-03	1.23E-03	5.84E-03	1.50E-02	1.23E-03
CM-3/4	5795.020	5760.749	0.000	0.000	-3.000	3.000	3.3055	100.0000	-3.64E-03	2.43E-03	9.34E-03	2.20E-02	2.43E-03
CM-5/6	5386.000	5384.983	0.000	66.000	66.000	0.000	8.2668	86.09000	9.31E-02	1.27E-02	2.71E-02	5.81E-02	1.15E-02
CM-247	4946.000	4904.730	27.821	46.000	43.000	3.000	24.2271	79.30000	6.58E-02	1.14E-02	8.63E-02	1.77E-01	1.07E-02
CM-248	5078.600	5071.665	0.000	74.000	72.000	2.000	26.9076	91.00000	9.61E-02	1.29E-02	8.35E-02	1.71E-01	1.16E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
AM-241



Batch# 1050816 Product: Np Date: 12/8/10

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

Primary Review Performed By: JadMLI - 12/8/10

Secondary Review Performed By: [signature] 12/8/10

12/10
ARSL

P

Neptunium Que Sheet

19-NOV-10

Batch #: 1050816 Analyst: MXA1 First Client Due Date:10-DEC-10 Internal Due Date:29-NOV-10 Routine #: 3

Tracer Isotope: Am-243 (Np-239) Tracer Code: 445-96-2-04 Expiration Date: 5/25/11 Vol: 0.1ml REF #: 92-95

LCS Isotope: Np-237 LCS Code: 0518-K Expiration Date: 7/13/11 Vol: 0.1ml BKG #: 91

Spike Isotope: Np-237 Spike Code: N/A Expiration Date: N/A Vol: N/A Np Separation Date/Time: 12/2/10 AT 12:35 PM

Prep Date: 12/1/10 Initials: MDA Pipet ID: 4075157 Balance ID: 16750207 Witness: DJH 12-1-10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/ml)	GFPC	Np Det #
266877001-1	Buckman1-11-1944	SAMPLE		10 pCi/L	WATER	ARSL001	10-NOV-10	1	1	0.800	29	90
266877003-1	Buckman06-11-1970	SAMPLE		10 pCi/L	WATER	ARSL001	10-NOV-10	2	2	0.800	30	91
266877005-1	Buckman08-11-2042	SAMPLE		10 pCi/L	WATER	ARSL001	10-NOV-10	3	3	0.800	31	92
1202269196-1	MB for batch 1050816	MB		10 pCi/L	WATER	QC ACCOUNT		4	4	~~0.800~~ 1	32	93
1202269197-1	Buckman1-11-1944(266877001D	DUP		10 pCi/L	WATER	QC ACCOUNT	10-NOV-10	5	5	0.800	33	94
1202269198-1	LCS for batch 1050816	LCS		10 pCi/L	WATER	QC ACCOUNT		6	6	~~0.800~~ 1	34	100

MDA 12/1/10

Solid Sample Dissolution by: ~~LEACH or DIGESTION~~ N/A ES 12/8/10
Circle One

Data Reviewed By: JolMLI 12/8/10

Blank Correction Report

Batch ID 1050816

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202269197	DUP	Neptunium-237	0.800 L	0.00928	0.00821	0.0224	.00195	pCi/L	YES
1202269198	LCS	Neptunium-237	1.00 L	4.30	0.295	0.0113	.00156	pCi/L	NO
1202269196	MB	Neptunium-237	1.00 L	0.00156	0.00414	0.0113	.00156	pCi/L	YES
266877001	Buckman1-11-1944	Neptunium-237	0.800 L	0.0168	0.00799	0.0203	.00195	pCi/L	NO
266877003	Buckman06-11-1970	Neptunium-237	0.800 L	-0.00295	0.00885	0.0214	.00195	pCi/L	YES
266877005	Buckman08-11-2042	Neptunium-237	0.800 L	0.00695	0.0139	0.0252	.00195	pCi/L	YES

BKG	19			Bkg Upper Limit (CPM)=	2.000000			Reference	Tracer
Ref Std Np-239 Beta Cts=	3232	Efficiency=	0.5020	Efficiency Error=	0.0176		S/N=	445-96-2-GG	445-96-2-UU
Ref Std Np-239 Beta Cts=	3218	Efficiency=	0.4997	Efficiency Error=	0.0176		DPM=	429.239	437.817
Ref Std Np-239 Beta Cts=	3206	Efficiency=	0.4980	Efficiency Error=	0.0177		Exp. Date=	9/30/2009	6/4/2010
Ref Std Np-239 Beta Cts=	3145	Efficiency=	0.4885	Efficiency Error=	0.0178		Reference Limits (CPM)		
Average Counts=	**3200**	Avg Efficiency=	**0.4971**	Avg Efficiency Error=	**0.0177**		Lower	206	Filename :
Am-243 Correction Factor=	1.15						Upper	228	NP237Yields.xls
Half-life of Np-239 (days)=	2.356								
									File type :
Sample ID	Net Beta Cts	Count time	Count Date/Time	Separation Date/Time	Decay Corr Counts	% NP Yield	Delta T (min)	Gross Counts	Excel
266877001.1	564	15	12/6/2010 17:58	12/2/2010 12:35	1957.56	59.97%	6083.3	583	Version # :
266877003.1	508	15	12/6/2010 17:42	12/2/2010 12:35	1757.68	53.85%	6067.9	527	1.2.2
266877005.1	474	15	12/6/2010 17:27	12/2/2010 12:35	1634.91	50.08%	6052.6	493	
1202269196.1	822	15	12/6/2010 17:12	12/2/2010 12:35	2826.35	86.58%	6037.3	841	
1202269197.1	550	15	12/6/2010 16:56	12/2/2010 12:35	1885.19	57.75%	6021.9	569	
1202269198.1	792	15	12/6/2010 16:41	12/2/2010 12:35	2706.17	82.90%	6006.6	811	
BKG	0	15	12/6/2010 13:52	12/2/2010 12:35	0.00	0.00%	5837.3		
Sample ID	Carrier	Alpha	Beta	Count time	Voltage	Date/Time			
REF	92	1907	3739	15	1545	12/6/10 14:08			
REF	93	1827	3722	15	1545	12/6/10 14:23			
REF	94	1787	3709	15	1545	12/6/10 14:38			
REF	95	1913	3639	15	1545	12/6/10 14:54			
266877001.1	29	1	583	15	1545	12/6/10 17:58			
266877003.1	30	1	527	15	1545	12/6/10 17:42			
266877005.1	31	0	493	15	1545	12/6/10 17:27			
1202269196.1	32	5	841	15	1545	12/6/10 17:12			
1202269197.1	33	1	569	15	1545	12/6/10 16:56			
1202269198.1	34	26	811	15	1545	12/6/10 16:41			
BKG	91	0	19	15	1545	12/6/10 13:52			

12/8/10

Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050816	CHAMBER : 090	LIB FILE : ENV_ALPHA_NP
SAMPLE ID : S0266877001_NP	DETECTOR S/N : 78263	BKG FILE : B090.CNF;814
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 33.6110	BKG DATE : 5-DEC-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 7-DEC-2010 08:03:38	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W090.CNF;219
% YIELD : 60.0		CAL DATE : 12-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-UU	ID : 0518-K	ID : 0518-K
NUCLIDE : AM243 BETA %EFF. : 49.70574	NUCLIDE : NP-237	NUCLIDE : NP-237
NOMINAL : 4.3801E+02 dpm	NOMINAL : 4.9206E+00 pCi/L	NOMINAL : 4.9206E+00 pCi/L
RESULTS : 2.6366E+02 dpm		

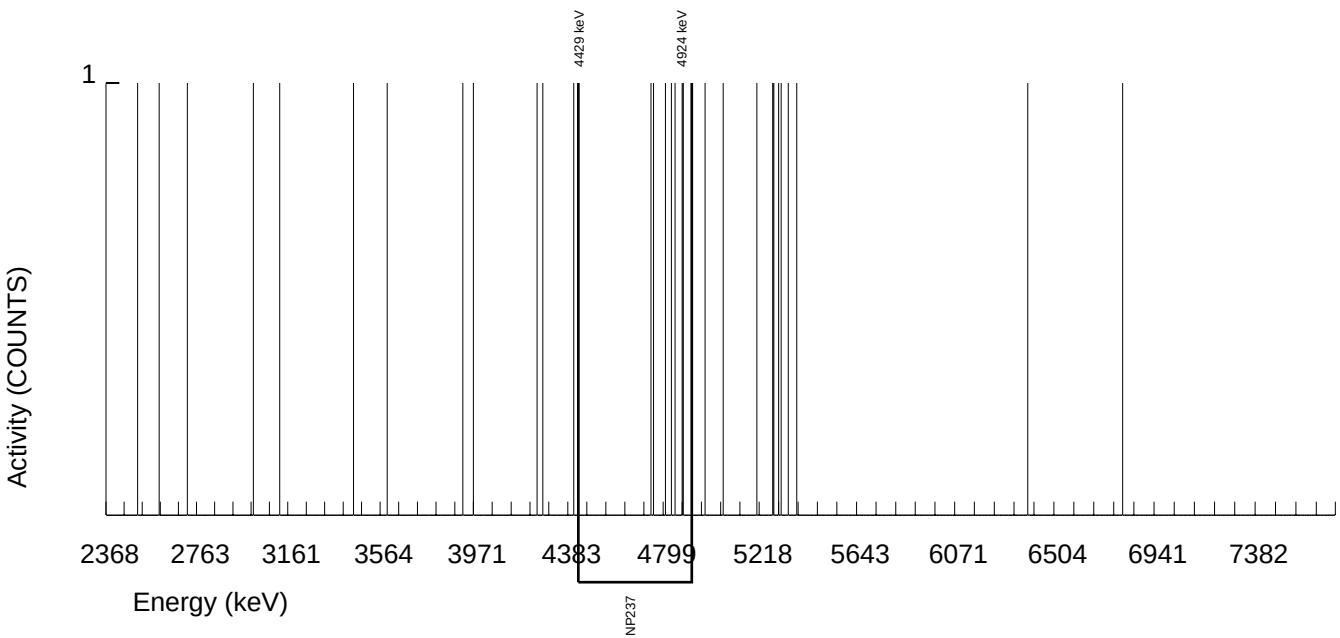
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
NP-237	4788.000	4829.166	137.274	7.000	6.000	1.000	0.9772	100.0000	1.68E-02	7.99E-03	6.35E-03	2.03E-02	7.90E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050816	CHAMBER : 091	LIB FILE : ENV_ALPHA_NP
SAMPLE ID : S0266877003_NP	DETECTOR S/N : 78259	BKG FILE : B091.CNF;812
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 35.4727	BKG DATE : 5-DEC-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 7-DEC-2010 08:03:38	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W091.CNF;210
% YIELD : 53.8		CAL DATE : 12-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-UU	ID : 0518-K	ID : 0518-K
NUCLIDE : AM243 BETA %EFF. : 49.70574	NUCLIDE : NP-237	NUCLIDE : NP-237
NOMINAL : 4.3801E+02 dpm	NOMINAL : 4.9206E+00 pCi/L	NOMINAL : 4.9206E+00 pCi/L
RESULTS : 2.3674E+02 dpm		

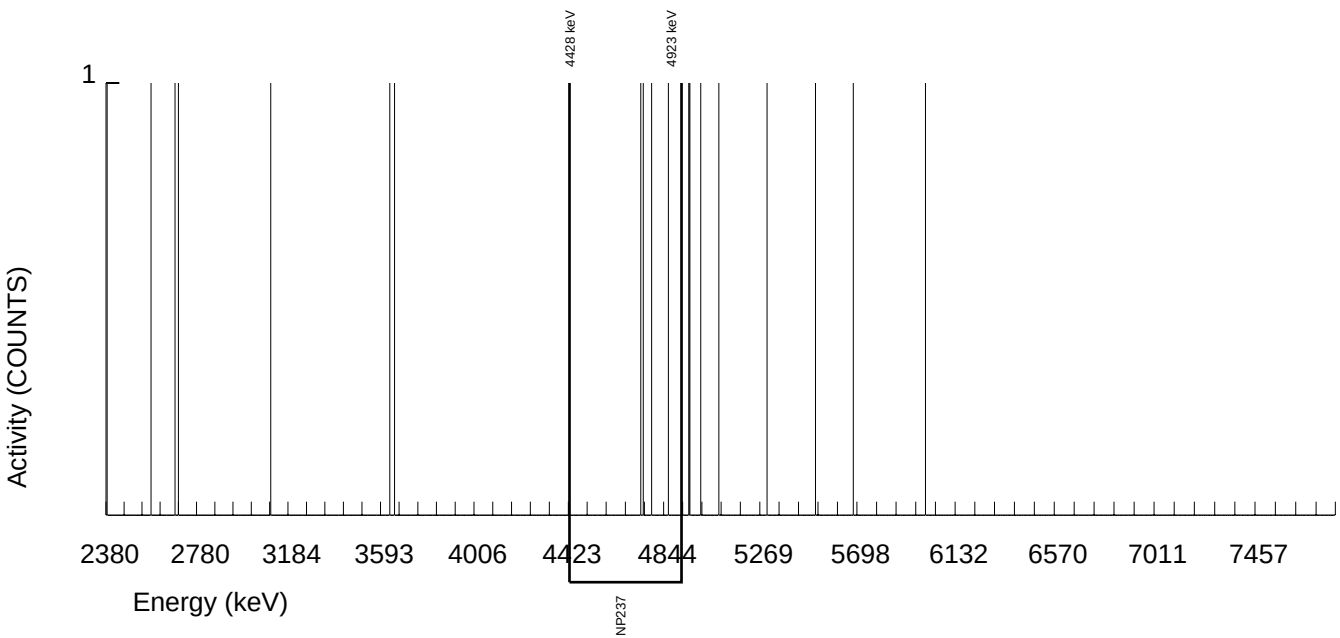
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
NP-237	4788.000	4793.371	119.418	4.000	-1.000	5.000	0.9772	100.0000	-2.95E-03	8.85E-03	6.70E-03	2.14E-02	8.84E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050816	CHAMBER : 092	LIB FILE : ENV_ALPHA_NP
SAMPLE ID : S0266877005_NP	DETECTOR S/N : 80063	BKG FILE : B092.CNF;817
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 32.3713	BKG DATE : 5-DEC-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 7-DEC-2010 08:03:38	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W092.CNF;255
% YIELD : 50.1		CAL DATE : 12-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-UU	ID : 0518-K	ID : 0518-K
NUCLIDE : AM243 BETA %EFF. : 49.70574	NUCLIDE : NP-237	NUCLIDE : NP-237
NOMINAL : 4.3801E+02 dpm	NOMINAL : 4.9206E+00 pCi/L	NOMINAL : 4.9206E+00 pCi/L
RESULTS : 2.2020E+02 dpm		

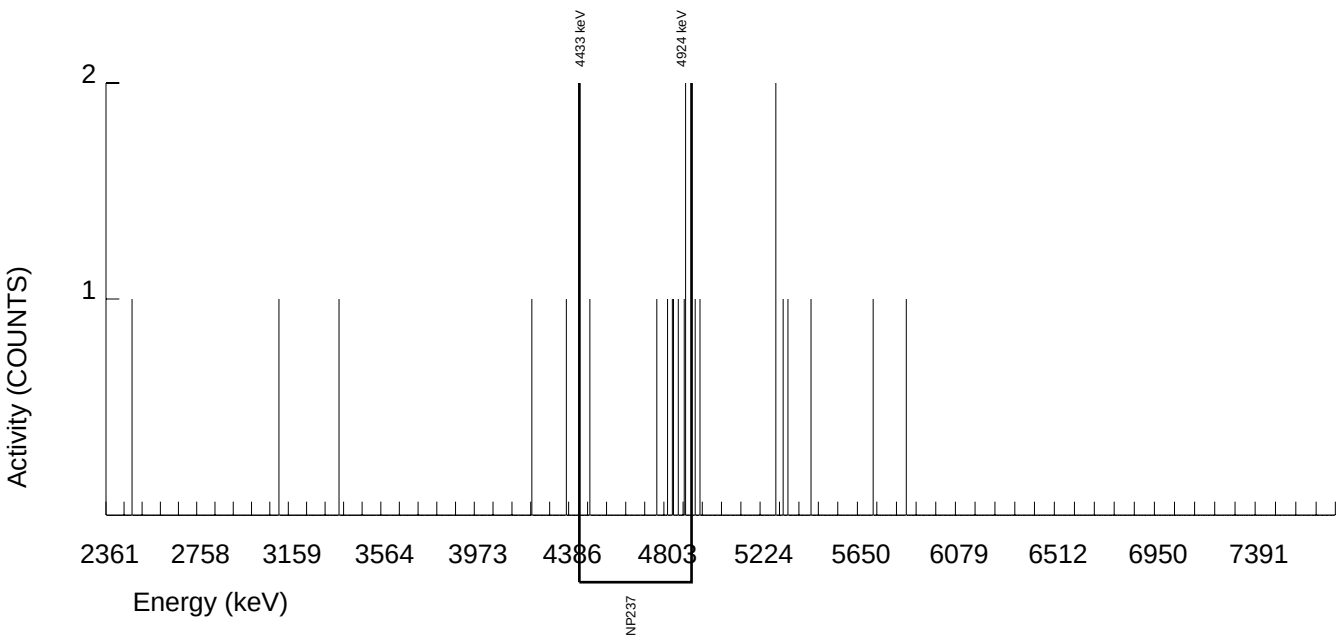
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
NP-237	4788.000	4817.122	7.249	9.000	2.000	7.000	0.9772	100.0000	6.95E-03	1.39E-02	7.90E-03	2.52E-02	1.39E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050816	CHAMBER : 093	LIB FILE : ENV_ALPHA_NP
SAMPLE ID : S1202269196_NP	DETECTOR S/N : 33206	BKG FILE : B093.CNF;803
SAMPLE QTY : 1.000 L	AVERAGE %EFFICIENCY : 33.2626	BKG DATE : 5-DEC-2010
SAMPLE DATE : 1-DEC-2010 00:00:00.	COUNT DATE : 7-DEC-2010 08:03:38	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W093.CNF;219
% YIELD : 86.6		CAL DATE : 12-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-UU	ID : 0518-K	ID : 0518-K
NUCLIDE : AM243 BETA %EFF. : 49.70574	NUCLIDE : NP-237	NUCLIDE : NP-237
NOMINAL : 4.3801E+02 dpm	NOMINAL : 3.9365E+00 pCi/L	NOMINAL : 3.9365E+00 pCi/L
RESULTS : 3.8066E+02 dpm		

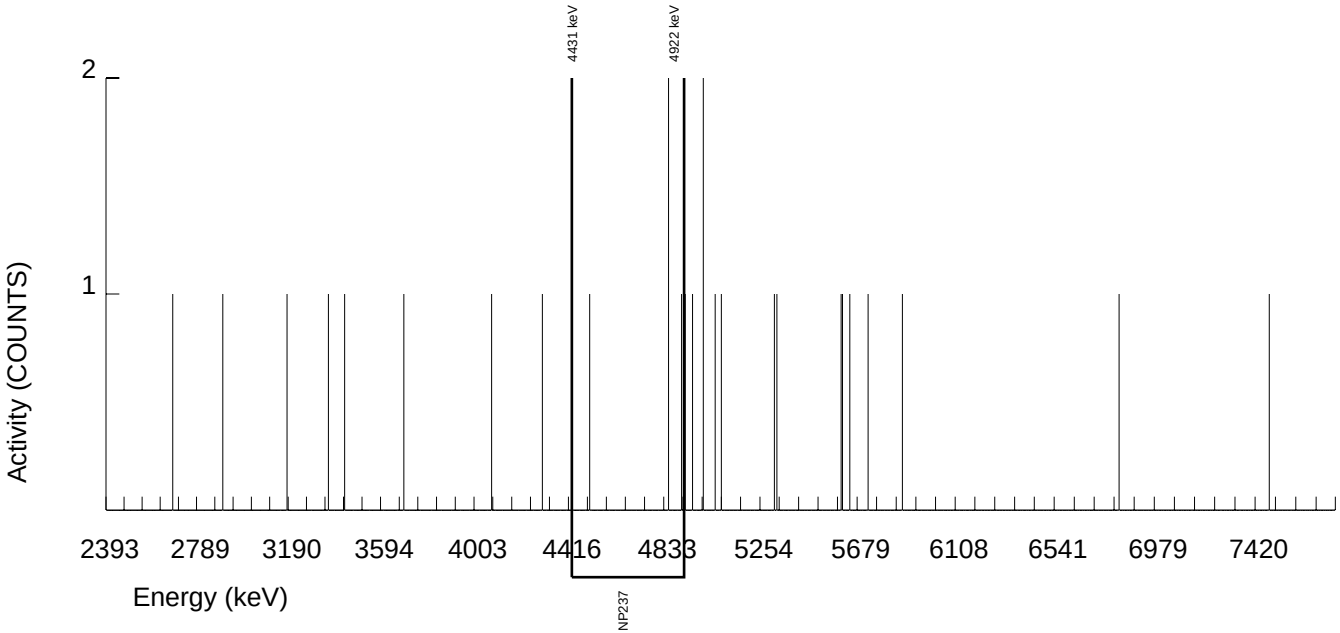
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
NP-237	4788.000	4786.855	4.928	4.000	1.000	3.000	0.9772	100.0000	1.56E-03	4.14E-03	3.56E-03	1.13E-02	4.14E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050816	CHAMBER : 094	LIB FILE : ENV_ALPHA_NP
SAMPLE ID : S1202269197_NP	DETECTOR S/N : 78267	BKG FILE : B094.CNF;804
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 31.5242	BKG DATE : 5-DEC-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 7-DEC-2010 08:03:38	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W094.CNF;211
% YIELD : 57.8		CAL DATE : 12-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-UU	ID : 0518-K	ID : 0518-K
NUCLIDE : AM243 BETA %EFF. : 49.70574	NUCLIDE : NP-237	NUCLIDE : NP-237
NOMINAL : 4.3801E+02 dpm	NOMINAL : 4.9206E+00 pCi/L	NOMINAL : 4.9206E+00 pCi/L
RESULTS : 2.5390E+02 dpm		

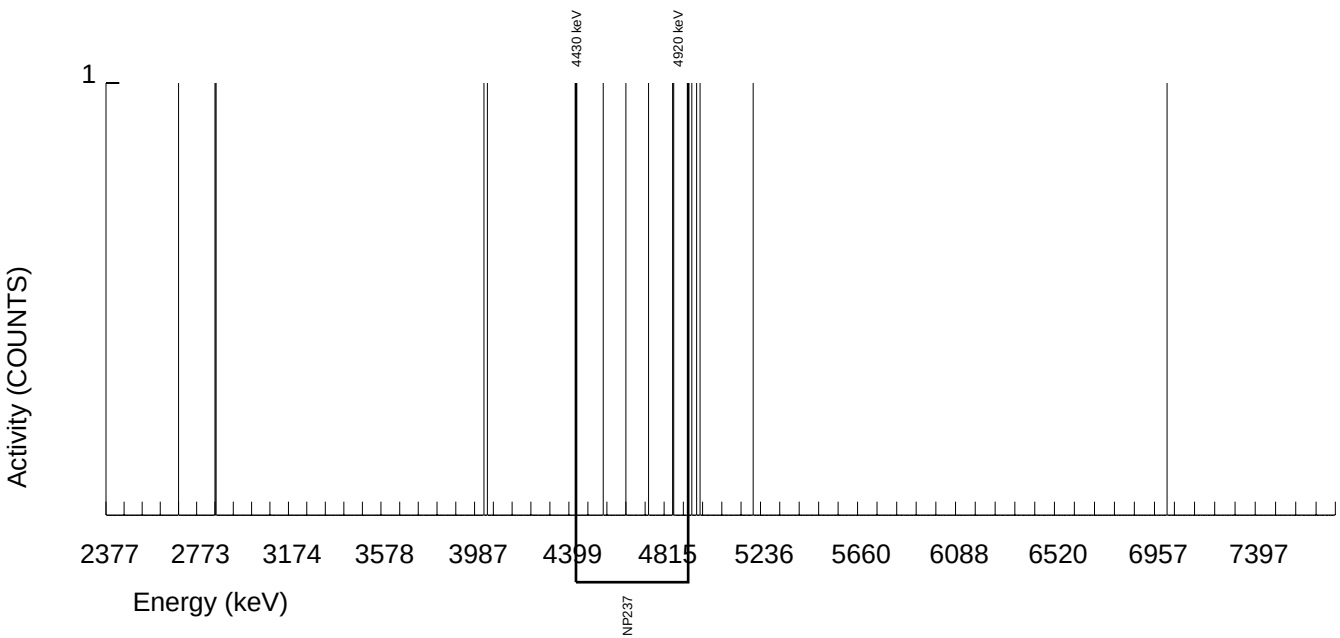
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
NP-237	4788.000	4735.819	295.772	5.000	3.000	2.000	0.9772	100.0000	9.28E-03	8.21E-03	7.03E-03	2.24E-02	8.18E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050816	CHAMBER : 100	LIB FILE : ENV_ALPHA_NP
SAMPLE ID : S1202269198_NP	DETECTOR S/N : 79456	BKG FILE : B100.CNF;767
SAMPLE QTY : 1.000 L	AVERAGE %EFFICIENCY : 34.7927	BKG DATE : 5-DEC-2010
SAMPLE DATE : 1-DEC-2010 00:00:00.	COUNT DATE : 7-DEC-2010 08:03:39	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W100.CNF;219
% YIELD : 82.9		CAL DATE : 12-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-UU	ID : 0518-K	ID : 0518-K
NUCLIDE : AM243 BETA %EFF. : 49.70574	NUCLIDE : NP-237	NUCLIDE : NP-237
NOMINAL : 4.3801E+02 dpm	NOMINAL : 3.9365E+00 pCi/L	NOMINAL : 3.9365E+00 pCi/L
RESULTS : 3.6447E+02 dpm		

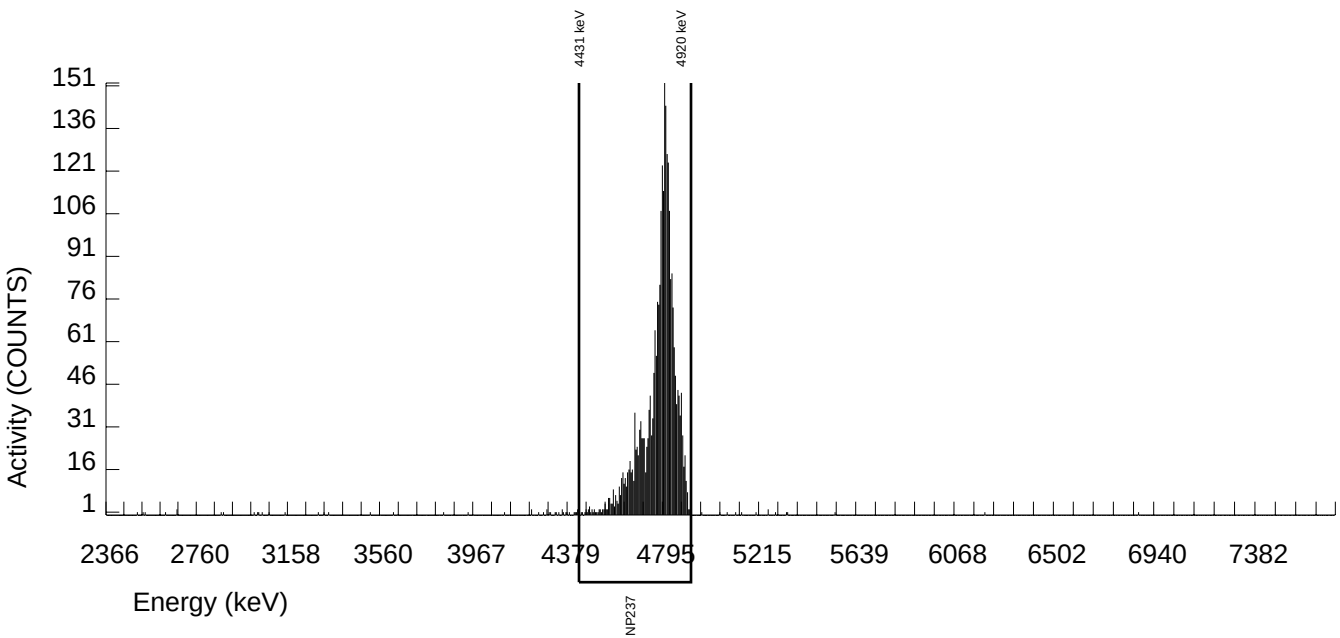
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
NP-237	4788.000	4785.181	54.765	2755.000	2753.000	2.000	0.9772	100.0000	4.30E+00	2.95E-01	3.55E-03	1.13E-02	8.20E-02

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of AM243 calculated as sqrt(BKG AREA).



Radiochemistry Batch Checklist

08-Dec-2010

Batch# 1050818 Product: Th Date: 12/9/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
Samples have been blank corrected (if required). Blank correction reported included (if required).	✓		
If activity less than 10x MDA/MDC, error is less than or equal to 150% of sample activity. If greater than 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.		✓	DER# 906251
If duplicate activities are: Less than 5* MDA/ MDC, then RPD is 100% or less, If greater 5* MDA/ MDC, then RPD 20% or less, If below the MDA/ MDC, the RPD is 0%, Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. (Or meets the client's contract acceptance criteria).	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		Case narrative
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% (or meets the client's contract acceptance criteria).	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
MS, LCS, and Duplicate RPD/RER values uploaded to LIMS and values verified	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.	✓		DER# 906251
Batch Data Exception Reports (DER) second reviewed. Disposition verified to be completed.	✓		DER# 906251
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

Primary Review Performed By: [signature] 12/9/10

Secondary Review Performed By: [signature] 12/9/10

11/29 - 12/10

ANSL

Thorium Que Sheet

P

19-NOV-10

Batch #: 1050818 **Analyst:** MXA1 **First Client Due Date:** 10-DEC-10 **Internal Due Date** 29-NOV-10

Tracer Isotope: Th-229 **Tracer Code:** 0934-M **Expiration Date:** 6/11/11 **Vol:** 0.1 ml
LCS Isotope: Th-230 **LCS Code:** A2796-J **Expiration Date:** 3/29/11 **Vol:** 0.1 ml
Spike Isotope: Th-230 **Spike Code:** N/A **Expiration Date:** N/A **Vol:** N/A
Prep Date: 12/1/10 **Initials:** NDA **Pipet ID:** 4075157 **Balance ID:** 16750207 **Witness:** DJH 12-1-10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/L/f)	Th Det #	
266877001-1	Buckman1-11-1944	SAMPLE		.05 pCi/L	WATER	ARSL001	10-NOV-10	1	1	0.800	~~188~~	194
266877003-1	Buckman06-11-1970	SAMPLE		.05 pCi/L	WATER	ARSL001	10-NOV-10	2	2	0.800	~~189~~	196
266877005-1	Buckman08-11-2042	SAMPLE		.05 pCi/L	WATER	ARSL001	10-NOV-10	3	3	0.800	~~190~~	20
1202269199-1	MB for batch 1050818	MB		.05 pCi/L	WATER	QC ACCOUNT		4	4	~~0.800~~ 1.0	~~191~~	22
1202269200-1	Buckman1-11-1944(266877001DUP)	DUP		.05 pCi/L	WATER	QC ACCOUNT	10-NOV-10	5	5	0.800	~~192~~	23
1202269201-1	LCS for batch 1050818	LCS		.05 pCi/L	WATER	QC ACCOUNT		6	6	~~0.800~~ 1.0	~~193~~	24

NDA 12/1/10 NO 12/9/10

Data Reviewed By: 12/9/10
GEL Laboratories LLC, Radiochemistry Division
12/9/10

Solid Sample Dissolution by: ~~LEACH or DIGESTION~~ N/A
Circle One

Choose SOP Used: GL-RAD-A-032, GL-RAD-A-038, GL-RAD-A-043

Blank Correction Report

Batch ID 1050818

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202269200	DUP	Thorium-228	0.800 L	0.00375	0.00818	0.0241	.0102875	pCi/L	YES
		Thorium-230	0.800 L	0.051	0.011	0.0432	.0080875	pCi/L	NO
		Thorium-232	0.800 L	0.00151	0.00332	0.0196	-.0047125	pCi/L	NO
1202269201	LCS	Thorium-228	1.00 L	-0.00779	0.00778	0.018	.00823	pCi/L	YES
		Thorium-230	1.00 L	1.89	0.137	0.0322	.00647	pCi/L	NO
		Thorium-232	1.00 L	0.00408	0.00326	0.0146	-.00377	pCi/L	NO
1202269199	MB	Thorium-228	1.00 L	0.00823	0.0101	0.0204	.00823	pCi/L	YES
		Thorium-230	1.00 L	0.00647	0.00533	0.0365	.00647	pCi/L	YES
		Thorium-232	1.00 L	-0.00377	0.00406	0.0166	-.00377	pCi/L	NO
266877001	Buckman1-11-1944	Thorium-228	0.800 L	0.00726	0.00562	0.0298	.0102875	pCi/L	YES
		Thorium-230	0.800 L	0.0191	0.00857	0.0534	.0080875	pCi/L	YES
		Thorium-232	0.800 L	0.00198	0.00413	0.0242	-.0047125	pCi/L	NO
266877003	Buckman06-11-1970	Thorium-228	0.800 L	0.0142	0.0105	0.0342	.0102875	pCi/L	YES
		Thorium-230	0.800 L	0.0267	0.00893	0.0614	.0080875	pCi/L	YES
		Thorium-232	0.800 L	0.00235	0.00284	0.0278	-.0047125	pCi/L	NO
266877005	Buckman08-11-2042	Thorium-228	0.800 L	-0.00749	0.0114	0.0279	.0102875	pCi/L	YES
		Thorium-230	0.800 L	0.0402	0.0106	0.050	.0080875	pCi/L	YES
		Thorium-232	0.800 L	-0.000487	0.0045	0.0227	-.0047125	pCi/L	NO

DM 12/9/10

Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050818	CHAMBER : 194	LIB FILE : ENV_ALPHA_TH
SAMPLE ID : S0266877001_TH	DETECTOR S/N : 68635	BKG FILE : B194.CNF;239
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 25.9656	BKG DATE : 5-DEC-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 7-DEC-2010 20:51:52	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W194.CNF;73
% YIELD : 87.9		CAL DATE : 21-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 0934-M	ID : A2796-J	ID : A2796-J
NUCLIDE : TH229	NUCLIDE : TH-230	NUCLIDE : TH-230
NOMINAL : 2.2273E+00 dpm	NOMINAL : 2.6752E+00 pCi/L	NOMINAL : 2.6752E+00 pCi/L
RESULTS : 1.9581E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

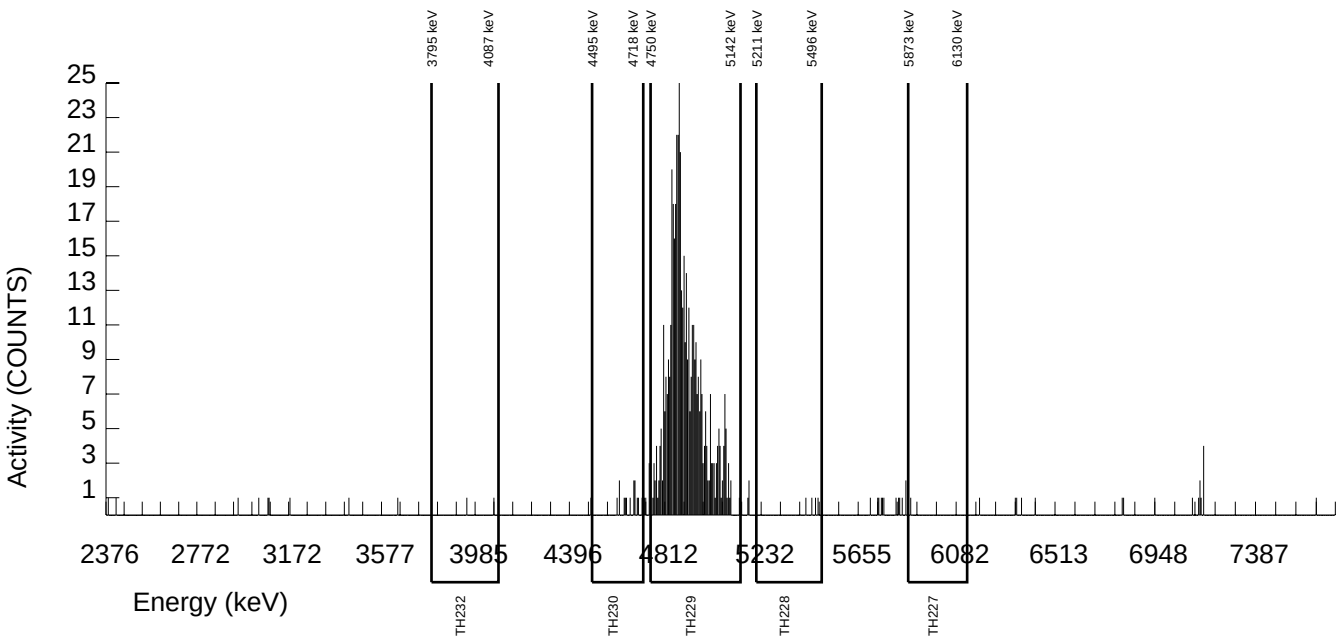
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AC-227	5994.040	5881.398	4.931	4.000	1.000	3.000	3.4115	57.44000	1.22E-02	3.24E-02	3.41E-02	7.98E-02	3.24E-02
TH-228	5363.000	5462.639	54.245	4.000	2.858	1.000	2.0102	99.94000	7.26E-03	5.62E-03	1.15E-02	2.98E-02	5.59E-03
TH229	4900.000	4908.218	64.751	507.000	506.000	1.000	1.0000	99.52000	1.25E+00	1.04E-01	5.77E-03	1.82E-02	5.59E-02
TH-230	4671.390	4653.352	69.039	15.000	7.707	2.000	4.0533	99.70000	1.91E-02	8.57E-03	2.33E-02	5.34E-02	8.46E-03
TH-232	3972.000	4012.806	118.352	2.000	0.802	1.000	1.5276	100.0000	1.98E-03	4.13E-03	8.77E-03	2.42E-02	4.13E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of TH229 calculated as sqrt(BKG AREA).

* Corrections made to the following net areas due to tracer impurity:
TH-228 , TH-230, TH-232



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050818	CHAMBER : 196	LIB FILE : ENV_ALPHA_TH
SAMPLE ID : S0266877003_TH	DETECTOR S/N : 68637	BKG FILE : B196.CNF;240
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 27.0068	BKG DATE : 5-DEC-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 7-DEC-2010 20:51:54	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W196.CNF;73
% YIELD : 73.5		CAL DATE : 21-NOV-2010

TRACER	MS/MSD	LCS/LCSD
ID : 0934-M	ID : A2796-J	ID : A2796-J
NUCLIDE : TH229	NUCLIDE : TH-230	NUCLIDE : TH-230
NOMINAL : 2.2273E+00 dpm	NOMINAL : 2.6752E+00 pCi/L	NOMINAL : 2.6752E+00 pCi/L
RESULTS : 1.6371E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

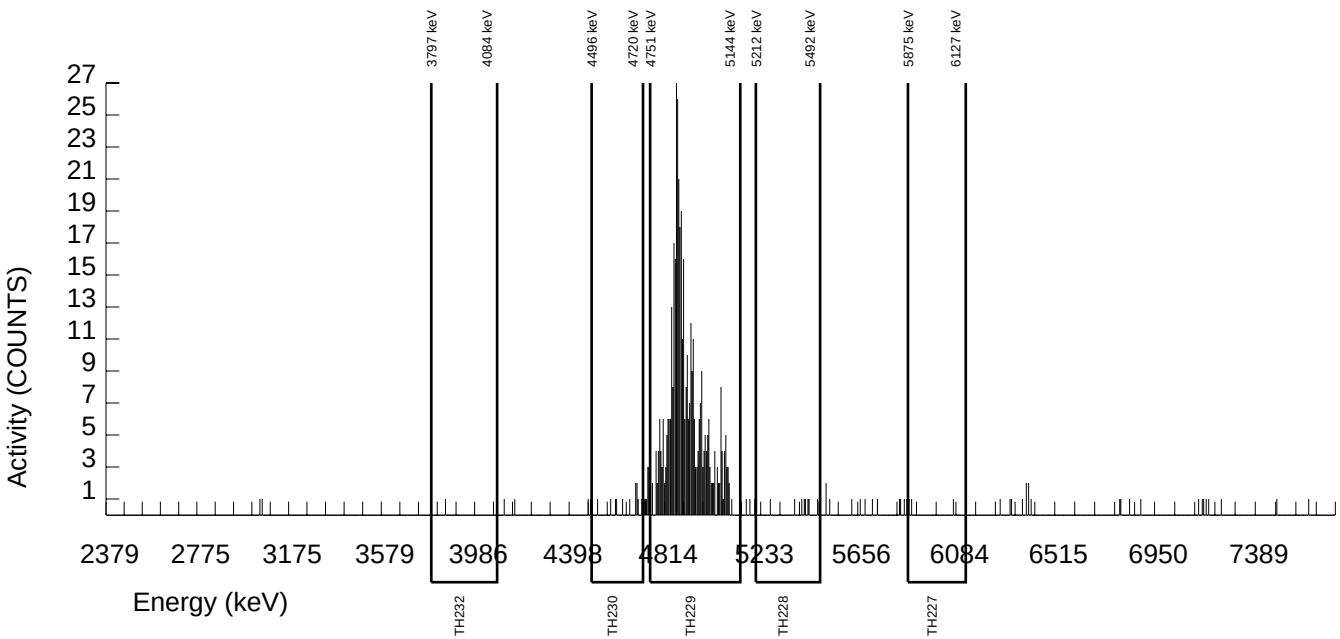
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AC-227	5994.040	5915.938	9.846	6.000	4.000	2.000	3.4115	57.44000	5.63E-02	4.00E-02	3.92E-02	9.18E-02	3.98E-02
TH-228	5363.000	5393.109	0.000	9.000	4.877	4.000	2.0102	99.94000	1.42E-02	1.05E-02	1.33E-02	3.42E-02	1.05E-02
TH229	4900.000	4912.561	41.989	440.000	440.000	0.000	0.0000	99.52000	1.25E+00	1.09E-01	0.00E+00	7.72E-03	5.98E-02
TH-230	4671.390	4631.270	11.385	14.000	9.397	0.000	4.0533	99.70000	2.67E-02	8.93E-03	2.68E-02	6.14E-02	8.72E-03
TH-232	3972.000	3863.689	4.923	1.000	0.828	0.000	1.5276	100.0000	2.35E-03	2.84E-03	1.01E-02	2.78E-02	2.84E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of TH229 calculated as sqrt(BKG AREA).

* Corrections made to the following net areas due to tracer impurity:
TH-228 , TH-230, TH-232



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050818	CHAMBER : 020	LIB FILE : ENV_ALPHA_TH
SAMPLE ID : S0266877005_TH	DETECTOR S/N : 78787	BKG FILE : B020.CNF;1184
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 34.7959	BKG DATE : 5-DEC-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 7-DEC-2010 20:40:49	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W020.CNF;342
% YIELD : 70.0		CAL DATE : 5-DEC-2010

TRACER	MS/MSD	LCS/LCSD
ID : 0934-M	ID : A2796-J	ID : A2796-J
NUCLIDE : TH229	NUCLIDE : TH-230	NUCLIDE : TH-230
NOMINAL : 2.2273E+00 dpm	NOMINAL : 2.6752E+00 pCi/L	NOMINAL : 2.6752E+00 pCi/L
RESULTS : 1.5594E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

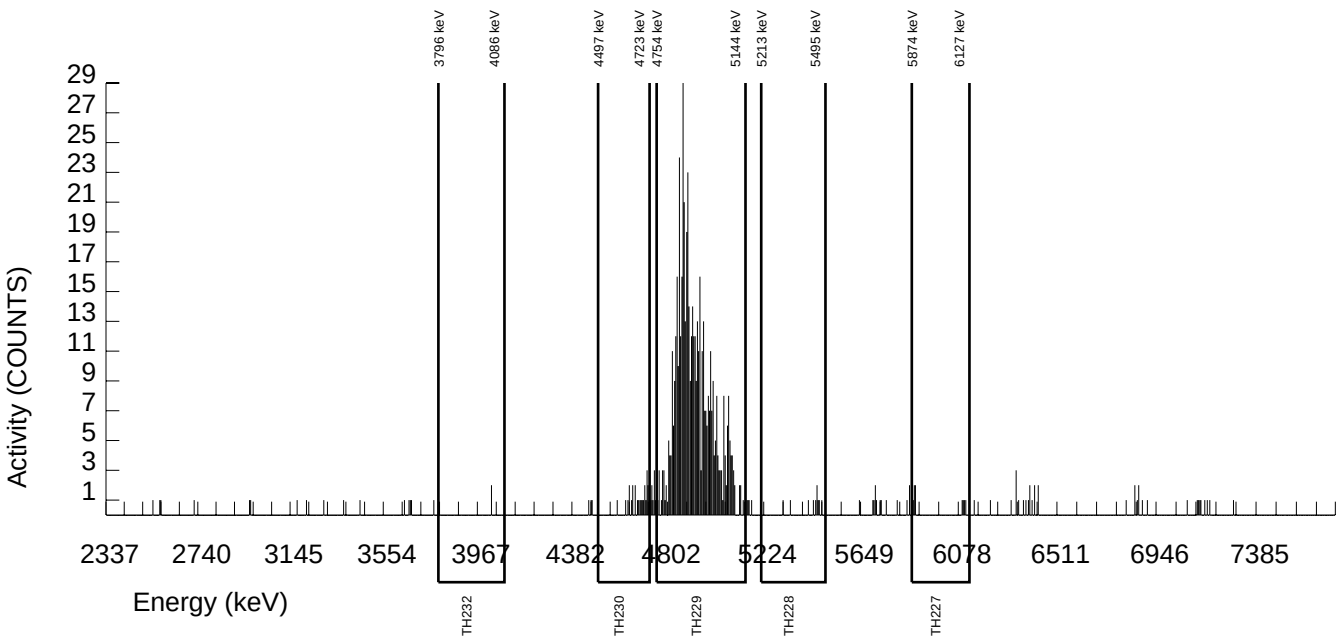
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AC-227	5994.040	5987.623	12.054	9.000	0.000	9.000	3.4115	57.44000	0.00E+00	4.86E-02	3.19E-02	7.48E-02	4.86E-02
TH-228	5363.000	5434.130	10.019	10.000	-3.151	13.000	2.0102	99.94000	-7.49E-03	1.14E-02	1.08E-02	2.79E-02	1.14E-02
TH229	4900.000	4924.802	97.516	542.000	540.000	2.000	1.4142	99.52000	1.25E+00	1.02E-01	7.64E-03	2.16E-02	5.42E-02
TH-230	4671.390	4677.644	0.000	24.000	17.351	1.000	4.0533	99.70000	4.02E-02	1.06E-02	2.19E-02	5.00E-02	1.02E-02
TH-232	3972.000	4034.105	5.010	2.000	-0.211	2.000	1.5276	100.0000	-4.87E-04	4.50E-03	8.21E-03	2.27E-02	4.50E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of TH229 calculated as sqrt(BKG AREA).

* Corrections made to the following net areas due to tracer impurity:
TH-228 , TH-230, TH-232



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050818	CHAMBER : 022	LIB FILE : ENV_ALPHA_TH
SAMPLE ID : S1202269199_TH	DETECTOR S/N : 72530	BKG FILE : B022.CNF;1194
SAMPLE QTY : 1.000 L	AVERAGE %EFFICIENCY : 32.3715	BKG DATE : 5-DEC-2010
SAMPLE DATE : 1-DEC-2010 00:00:00.	COUNT DATE : 7-DEC-2010 20:40:49	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W022.CNF;340
% YIELD : 82.4		CAL DATE : 5-DEC-2010

TRACER	MS/MSD	LCS/LCSD
ID : 0934-M	ID : A2796-J	ID : A2796-J
NUCLIDE : TH229	NUCLIDE : TH-230	NUCLIDE : TH-230
NOMINAL : 2.2273E+00 dpm	NOMINAL : 2.1402E+00 pCi/L	NOMINAL : 2.1402E+00 pCi/L
RESULTS : 1.8345E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

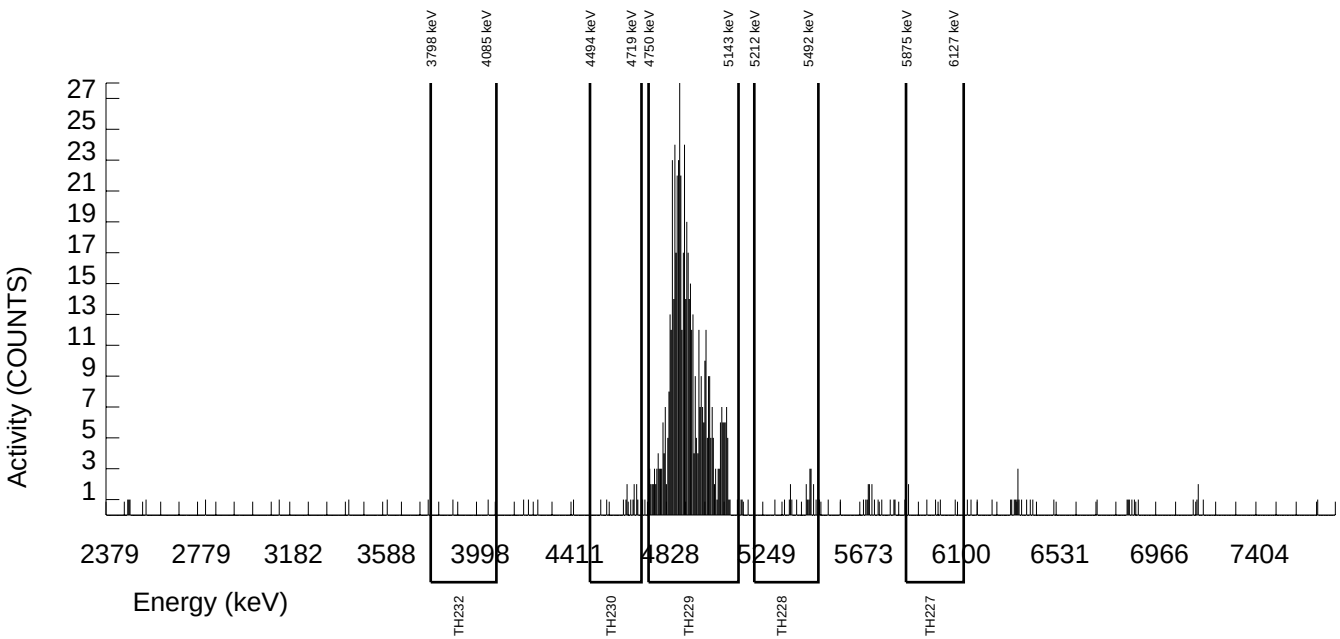
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AC-227	5994.040	5947.308	17.239	9.000	-2.000	11.000	3.4115	57.44000	-7.69E-03	1.72E-02	2.33E-02	5.47E-02	1.72E-02
TH-228	5363.000	5428.561	97.222	20.000	4.835	15.000	2.0102	99.94000	8.23E-03	1.01E-02	7.91E-03	2.04E-02	1.00E-02
TH229	4900.000	4926.217	80.258	601.000	591.000	10.000	3.1623	99.52000	1.00E+00	8.05E-02	1.25E-02	2.96E-02	4.20E-02
TH-230	4671.390	4661.895	49.491	13.000	3.817	3.000	4.0533	99.70000	6.47E-03	5.33E-03	1.60E-02	3.65E-02	5.31E-03
TH-232	3972.000	3977.297	154.064	2.000	-2.231	4.000	1.5276	100.0000	-3.77E-03	4.06E-03	6.00E-03	1.66E-02	4.06E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of TH229 calculated as sqrt(BKG AREA).

* Corrections made to the following net areas due to tracer impurity:
TH-228 , TH-230, TH-232



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050818	CHAMBER : 023	LIB FILE : ENV_ALPHA_TH
SAMPLE ID : S1202269200_TH	DETECTOR S/N : 78264	BKG FILE : B023.CNF;1194
SAMPLE QTY : 0.800 L	AVERAGE %EFFICIENCY : 32.9715	BKG DATE : 5-DEC-2010
SAMPLE DATE : 10-NOV-2010 00:00:00	COUNT DATE : 7-DEC-2010 20:40:49	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W023.CNF;323
% YIELD : 85.5		CAL DATE : 5-DEC-2010

TRACER	MS/MSD	LCS/LCSD
ID : 0934-M	ID : A2796-J	ID : A2796-J
NUCLIDE : TH229	NUCLIDE : TH-230	NUCLIDE : TH-230
NOMINAL : 2.2273E+00 dpm	NOMINAL : 2.6752E+00 pCi/L	NOMINAL : 2.6752E+00 pCi/L
RESULTS : 1.9047E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

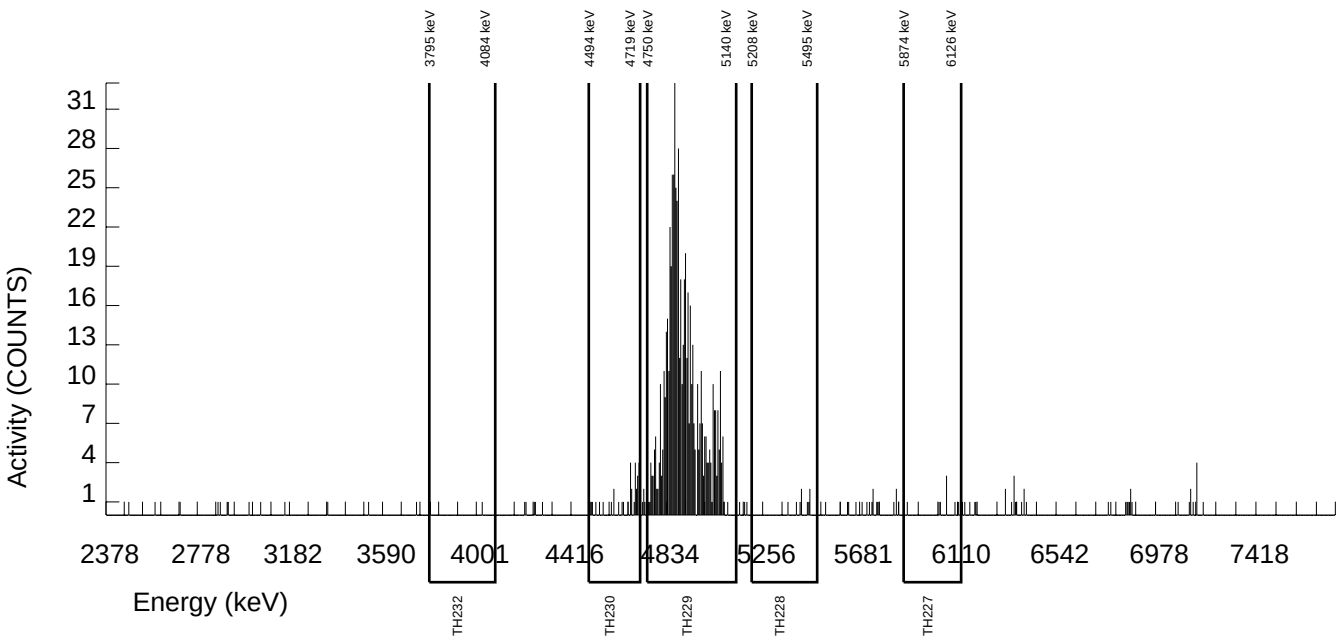
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AC-227	5994.040	6049.595	4.985	8.000	1.000	7.000	3.4115	57.44000	9.90E-03	3.84E-02	2.76E-02	6.46E-02	3.84E-02
TH-228	5363.000	5436.305	42.215	9.000	1.825	7.000	2.0102	99.94000	3.75E-03	8.18E-03	9.34E-03	2.41E-02	8.17E-03
TH229	4900.000	4913.250	77.511	634.000	625.000	9.000	3.0000	99.52000	1.25E+00	9.90E-02	1.40E-02	3.34E-02	5.09E-02
TH-230	4671.390	4655.395	0.000	33.000	25.462	1.000	4.0533	99.70000	5.10E-02	1.10E-02	1.89E-02	4.32E-02	1.05E-02
TH-232	3972.000	3918.740	224.318	2.000	0.756	1.000	1.5276	100.0000	1.51E-03	3.32E-03	7.10E-03	1.96E-02	3.32E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of TH229 calculated as sqrt(BKG AREA).

* Corrections made to the following net areas due to tracer impurity:
TH-228 , TH-230, TH-232



Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 1050818	CHAMBER : 024	LIB FILE : ENV_ALPHA_TH
SAMPLE ID : S1202269201_TH	DETECTOR S/N : 76542	BKG FILE : B024.CNF;1187
SAMPLE QTY : 1.000 L	AVERAGE %EFFICIENCY : 34.5263	BKG DATE : 5-DEC-2010
SAMPLE DATE : 1-DEC-2010 00:00:00.	COUNT DATE : 7-DEC-2010 20:40:49	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXA1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W024.CNF;325
% YIELD : 87.5		CAL DATE : 5-DEC-2010

TRACER	MS/MSD	LCS/LCSD
ID : 0934-M	ID : A2796-J	ID : A2796-J
NUCLIDE : TH229	NUCLIDE : TH-230	NUCLIDE : TH-230
NOMINAL : 2.2273E+00 dpm	NOMINAL : 2.1402E+00 pCi/L	NOMINAL : 2.1402E+00 pCi/L
RESULTS : 1.9499E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

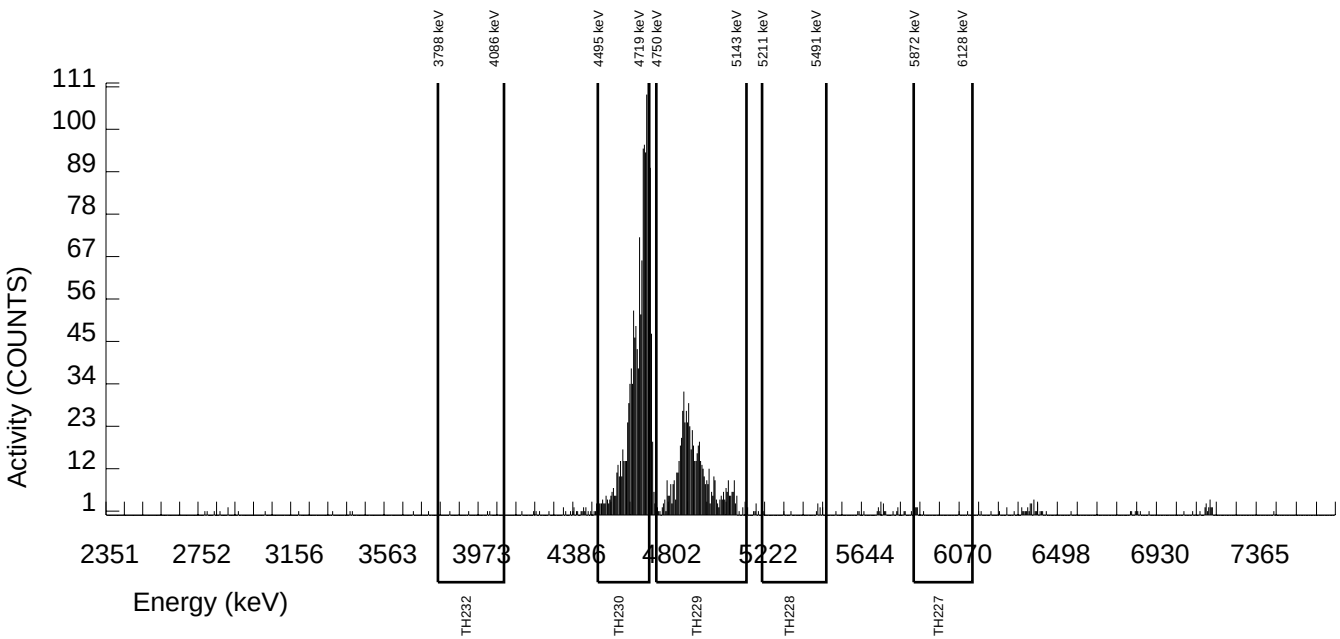
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/L	TPU 1-SIGMA	DLC pCi/L	MDC pCi/L	UNC pCi/L
AC-227	5994.040	5931.566	16.993	10.000	-1.000	11.000	3.4115	57.44000	-3.39E-03	1.55E-02	2.06E-02	4.82E-02	1.55E-02
TH-228	5363.000	5418.552	24.882	11.000	-5.187	16.000	2.0102	99.94000	-7.79E-03	7.78E-03	6.97E-03	1.80E-02	7.78E-03
TH229	4900.000	4924.087	85.212	681.000	670.000	11.000	3.3166	99.52000	1.00E+00	7.79E-02	1.16E-02	2.72E-02	3.94E-02
TH-230	4671.390	4670.565	0.000	1272.000	1261.991	3.000	4.0533	99.70000	1.89E+00	1.37E-01	1.41E-02	3.22E-02	5.32E-02
TH-232	3972.000	3959.990	174.610	4.000	2.738	1.000	1.5276	100.0000	4.08E-03	3.26E-03	5.30E-03	1.46E-02	3.24E-03

NOTES:

* BKG Sg calculated via blank population.
(Sg updated 1-DEC-2010)

* BKG Sg of TH229 calculated as sqrt(BKG AREA).

* Corrections made to the following net areas due to tracer impurity:
TH-228 , TH-230, TH-232



Gamma Spectroscopy Raw Data

Radiochemistry Batch Checklist

29-Nov-2010

Batch# 1048163 Product: 6L Date: 11/29/10

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

Primary Review Performed By: SEuland 11/29/10

Secondary Review Performed By: Ryan S. Wilson 11/30/10

ARSL, LANL
12/1/10

Gamma Spec Que Sheet

11/12/2010

Batch #: 1048163 **Analyst:** KXG3 **First Client DueDate** 12/01/2010 **Internal Due Date:** 11/20/2010

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

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/2/10 **Vol:** 1.0mL **Nominal Concentration:** SEE LIMS

Initials: YKXD **Prep Date:** 11/12/10 **Library:** LIQCID **Witness:** NA

Sample ID	Client Description / Container ID	Type	Hazard Code	Client	Matrix	Collect Date		Geometry	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)	
265922001-1	RE16-11-1719	SAMPLE		ARSL001	WATER	02-NOV-10 12:00:00	1	2LmB	2.0	11		RF
266238003-1	CAWA-11-1631	SAMPLE		ARSL001	WATER	02-NOV-10 12:00:00	2		2.0	8		RF
~~266515001-1~~	~~IDW-102910~~	~~SAMPLE~~		~~LANC001~~	~~WATER~~	~~29-OCT-10 17:30:00~~	~~3~~		2.0	12		RF
~~266515002-1~~	~~IDW-N-102910~~	~~SAMPLE~~		~~LANC001~~	~~WATER~~	~~29-OCT-10 17:50:00~~	~~4~~		2.0	19		RF
266780001-1	CASA-11-1478	SAMPLE		ARSL001	WATER	09-NOV-10 12:00:00	5		2.0	6 ~~4~~	RF 11/26/10	RF
266780002-1	CASA-11-1340	SAMPLE		ARSL001	WATER	09-NOV-10 12:00:00	6		2.0	2		RF
266780003-1	CASA-11-1337	SAMPLE		ARSL001	WATER	09-NOV-10 12:00:00	7		2.0	17		RF
266780004-1	CASA-11-1332	SAMPLE		ARSL001	WATER	09-NOV-10 12:00:00	8		2.0	7		RF
266780005-1	CASA-11-1342	SAMPLE		ARSL001	WATER	09-NOV-10 12:00:00	9		2.0	10		RF
266877001-1	Buckman1-11-1944	SAMPLE		ARSL001	WATER	10-NOV-10 12:00:00	10		2.0	9		RF
266877003-1	Buckman06-11-1970	SAMPLE		ARSL001	WATER	10-NOV-10 12:00:00	11		2.0	25		RF
266877005-1	Buckman08-11-2042	SAMPLE		ARSL001	WATER	10-NOV-10 12:00:00	12		2.0	28		RF
266880001-1	WST39-11-2059	SAMPLE		ARSL001	WATER	10-NOV-10 12:00:00	13		2.0	29		RF
1202262532-1	MB	MB		QC ACCOUNT	WATER	11-12-10	14		2.0	20		RF
1202262533-1	DUP RE16-11-1719(265922001)	DUP		QC ACCOUNT	WATER	02-NOV-10 12:00:00			2.0	12 ~~11~~	RF 11/26/10	RF
~~1202262536-1~~	~~DUP IDW-102910(266515001)~~	~~DUP~~		~~QC ACCOUNT~~	~~WATER~~	~~29-OCT-10 17:30:00~~			2.0	11 ~~12~~		RF
1202262535-1	LCS	LCS		QC ACCOUNT	WATER	11-12-10			2.0	~~8~~		RF

11/29/10

11/30/10

11/30/10

11/30/10

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: 11/29/10

Page 1 of 1

11/30/10

Gamma Review Report based on Result > MDA for Batch:1048163

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
265922001	02-NOV-10 12:00	26-NOV-10 04:08	23.7	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266238003	02-NOV-10 12:00	26-NOV-10 04:21	23.7	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Gross Gamma	**11.58**	7.879	pCi/L	**8.213**	**120**		0				☐	
Thallium-208 HE	**6.243**	2.574	pCi/L	**5.393**	N	583.7	1	1.429	IDENTIFIED	40.99	☐	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266515001	29-OCT-10 17:30	26-NOV-10 04:08	27.4	SAMPLE	LOAD	1	LANC	LANC00109|GEL	Y	RGSP

MSE 11/29/10

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Annihilation Rad. HE	**8.279**	5.61	pCi/L	**3.808**	N	511.1	1	2.265	IDENTIFIED	34.31	☐	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266780001	09-NOV-10 12:00	26-NOV-10 05:17	16.7	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266780002	09-NOV-10 12:00	26-NOV-10 06:05	16.8	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Thorium-232 HE	**7546**	29160	pCi/L	**3154**	N	64	3	4.388	IDENTIFIED	36.3	☐	
Thorium-234 HE	**530.3**	198.8	pCi/L	**227.7**	N	64	3	4.388	IDENTIFIED	36.3	☐	
Uranium-238 HE	**530.3**	198.8	pCi/L	**227.7**	N	64	3	4.388	IDENTIFIED	36.3	☐	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266780003	09-NOV-10 12:00	26-NOV-10 04:21	16.7	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Thorium-230 HE	**830.8**	443.7	pCi/L	**819**	N	66.53	1	1.883	IDENTIFIED	53.18	☐	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266780004	09-NOV-10 12:00	26-NOV-10 06:05	16.8	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266780005	09-NOV-10 12:00	26-NOV-10 04:22	16.7	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Gross Gamma	**17.99**	8.315	pCi/L	**12.24**	**120**		0				☐	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266877001	10-NOV-10 12:00	26-NOV-10 04:31	15.7	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266877003	10-NOV-10 12:00	26-NOV-10 06:06	15.8	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Bismuth-211 HE	**28.18**	891.4	pCi/L	**23.82**	N	352.2	1	1.39	IDENTIFIED	54.67	☐	
Thorium-230 HE	**752.9**	319.6	pCi/L	**732.3**	N	66.18	1	1.132	IDENTIFIED	42.03	☐	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266877005	10-NOV-10 12:00	26-NOV-10 06:07	15.8	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Bismuth-214 NW	**23.11**	4.858	pCi/L	**10.07**	N	609.7	1	1.744	IDENTIFIED	20.44	☐	
Radium-226 HE	**130.7**	82.87	pCi/L	**109.6**	N	185.5	1	1.353	IDENTIFIED	53.68	☐	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
266880001	10-NOV-10 12:00	26-NOV-10 06:07	15.8	SAMPLE	LOAD	1	ARSL	ESHL00210|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Thallium-208 HE	**9.275**	3.457	pCi/L	**5.391**	N	583.6	1	1.295	IDENTIFIED	37	☐	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202262532		26-NOV-10 06:09	0	MB	LOAD	1		GEL	N	RGSP

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202262533	02-NOV-10 12:00	26-NOV-10 06:18	23.8	DUP	LOAD	1		ESHL00210|GEL	N	RGSP

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202262535		26-NOV-10 06:26	0	LCS	LOAD	1		GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Americium-241 ✓	**1379**	105.2	pCi/L	**121.2**	**25.0**	59.56	1	1.036	IDENTIFIED	5.187	☐	
Barium-137m	**405.3**	22.86	pCi/L	**14.92**	N	662	2	1.537	IDENTIFIED	3.892	☐	
Cadmium-109	**1678**	222.5	pCi/L	**347.7**	N	88.06	2	0.8887	IDENTIFIED	11.97	☐	
Cesium-137 ✓	**428.1**	24.18	pCi/L	**15.76**	**8.00**	662	2	1.537	IDENTIFIED	3.892	☐	
Cobalt-60 ✓	**499.3**	30.53	pCi/L	**9.131**	**8.00**	1333	1	2.072	IDENTIFIED	3.891	☐	
Gross Gamma	**1894**	333.7	pCi/L	**195**	**120**		0				☐	
Tin-126	**164.2**	21.78	pCi/L	**34.29**	N	88.06	2	0.8887	IDENTIFIED	11.97	☐	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202262536	29-OCT-10 17:30	26-NOV-10 06:18	27.5	DUP	LOAD	1		LANC00109|GEL	N	RGSP

MGN 11/30/10

Result Greater Than DL

BW 11/30/10

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertanty	Units	DL	RDL
1048163	266877005	SAMPLE	26-NOV-10	Lead-214	11.36	5.886	pCi/L	8.229	N
				Protactinium-234m	360.6	183.3	pCi/L	338.9	N
				Radium-224	97.99	42.31	pCi/L	66.53	N
				Radium-226	130.7	82.87	pCi/L	54.84	N
				Technetium-99m	2.03E+19	0	pCi/L	0	N
				Tellurium-125m	2111	649.7	pCi/L	1126	N
1048163	266880001	SAMPLE	26-NOV-10	Actinium-228	95.68	13.9	pCi/L	22.82	N
				Americium-241	20.98	11.83	pCi/L	18.21	25.0
				Bismuth-212	57.69	25.25	pCi/L	46.1	N
				Cerium-143	7290	8946	pCi/L	0	N
				Gross Gamma	76.32	42.54	pCi/L	45.52	120
				Lead-212	27.93	6.685	pCi/L	8.677	N
				Niobium-95m	15.51	7.612	pCi/L	11.92	N
				Potassium-40	35.94	27.09	pCi/L	27.22	10.0
				Protactinium-231	139.3	75.07	pCi/L	131.5	N
				Radium-224	250	43.82	pCi/L	74.24	N
				Radium-228	95.68	13.9	pCi/L	22.82	N
				Technetium-99m	3.11E+19	0	pCi/L	0	N
				Thorium-228	27.93	6.685	pCi/L	8.677	N
				Thorium-232	3149	12220	pCi/L	2104	N
				Thorium-234	221.3	117	pCi/L	153.4	N
				Uranium-238	221.3	117	pCi/L	153.4	N
1048163	1202262532	MB	26-NOV-10	Cerium-143	4027	3017	pCi/L	0	N
				Iodine-133	1.33E+05	93390	pCi/L	0	N
				Iodine-135	2.99E+16	0	pCi/L	0	N
				Protactinium-234	20.1	7.911	pCi/L	15.91	N
				Protactinium-234m	311.9	128.7	pCi/L	256.2	N
				Radium-223	45.79	1311	pCi/L	40.71	N
				Sodium-24	1.45E+07	7.46E+06	pCi/L	0	N
1048163	1202262533	DUP	26-NOV-10	Antimony-126	19.43	9.937	pCi/L	18.29	N
				Beryllium-7	28.64	11.42	pCi/L	21.84	Y
				Cerium-143	6.44E+05	4.25E+05	pCi/L	0	N
				Gross Gamma	11.42	31.65	pCi/L	9.722	120
				Iodine-133	3.08E+08	2.42E+08	pCi/L	0	N
				Neptunium-237	6.616	2.715	pCi/L	4.943	10.0
				Niobium-95	4.345	1.867	pCi/L	3.498	Y
				Promethium-146	3.437	1.877	pCi/L	3.319	Y

BW 11/30/10

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 06:09:03.10

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G265922001.CNF;1
Sample date      : 2-NOV-2010 12:00:00. Acquisition date : 26-NOV-2010 04:08:35
Sample ID        : G265922001           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM11                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.64  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	63.51*	29	83	1.06	125.80	122	14	4.04E-03	60.2	2.77E+00
2	3	65.87	43	78	1.06	130.53	122	14	5.92E-03	38.5	
3	0	139.92	26	111	0.86	278.77	276	8	3.56E-03	73.6	
4	0	238.83*	16	77	0.76	476.80	473	9	2.22E-03	111.2	
5	0	802.18	27	3	0.70	1604.44	1598	13	3.71E-03	23.8	

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

VMS Nuclide Identification Report V3.1 Generated 26-NOV-2010 06:09:06

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G265922001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : KXG3
Sample date : 2-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 04:08:35
Sample ID : G265922001 Sample quantity : 2.0000 LITER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA11 Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.64 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
TH-232	+	63.81	*	1.540E+03	1.199E+04	2.021E+03	1.555E+04	0.762
	+	140.88		8.618E+03	1.271E+04	1.446E+04	1.221E+03	0.596

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7		477.60	*	1.123E+01	2.306E+01	4.085E+01	3.655E+00	0.275
NA-22		1274.54	*	-1.397E+00	2.289E+00	3.068E+00	2.606E-01	-0.455
NA-24		1368.63	*	-3.102E+05	2.289E+00	Half-Life too short		
K-40		1460.82	*	2.720E-01	3.505E+01	5.318E+01	4.770E+00	0.005
SC-46		889.28	*	1.048E+00	3.118E+00	5.472E+00	4.880E-01	0.191
		1120.55		-5.730E-01	3.341E+00	5.310E+00	4.428E-01	-0.108
V-48		944.13		9.284E+00	8.038E+01	1.366E+02	1.214E+01	0.068
		983.53	*	1.020E+00	5.687E+00	9.791E+00	8.621E-01	0.104
		1312.11		-3.718E+00	6.684E+00	9.140E+00	7.881E-01	-0.407
CR-51		320.08	*	-5.287E+00	3.553E+01	5.549E+01	5.180E+00	-0.095
MN-54		834.85	*	6.958E-01	2.254E+00	3.981E+00	3.496E-01	0.175
CO-56		846.77	*	-1.721E+00	2.774E+00	4.156E+00	3.663E-01	-0.414
		1037.84		-1.470E+01	2.002E+01	2.770E+01	2.522E+00	-0.531
		1238.28		-1.459E-01	3.806E+00	6.127E+00	5.270E-01	-0.024
		1771.35		-8.687E+00	2.359E+01	3.543E+01	2.938E+00	-0.245
CO-57		122.06	*	5.940E-01	1.943E+00	3.351E+00	2.882E-01	0.177
		136.47		-8.059E-01	1.885E+01	2.825E+01	2.572E+00	-0.029
CO-58		810.76	*	1.751E-02	2.932E+00	4.947E+00	4.319E-01	0.004
FE-59		1099.25	*	3.766E+00	5.624E+00	1.052E+01	9.626E-01	0.358
		1291.59		7.298E+00	1.053E+01	1.911E+01	1.858E+00	0.382
CO-60		1173.23		-1.570E+00	2.136E+00	2.771E+00	2.238E-01	-0.567
		1332.49	*	-1.683E-01	2.800E+00	4.466E+00	3.883E-01	-0.038
ZN-65		1115.54	*	1.073E+00	5.768E+00	9.787E+00	8.193E-01	0.110
SE-75		121.12		5.799E+00	1.074E+01	1.879E+01	2.083E+00	0.309
		136.00		1.723E+00	3.549E+00	5.600E+00	4.771E-01	0.308
		264.66	*	-5.057E-01	3.152E+00	4.980E+00	4.564E-01	-0.102
		279.54		-5.463E+00	8.834E+00	1.320E+01	1.251E+00	-0.414

Sample ID : G265922001 Acquisition date : 26-NOV-2010 04:08:35

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		400.66		2.890E+00	1.841E+01	3.153E+01	3.348E+00	0.092
SR-85		514.00	*	-1.014E+01	4.198E+00	5.127E+00	4.261E-01	-1.977
Y-88		898.04		2.059E+00	3.156E+00	5.774E+00	5.184E-01	0.357
		1836.06	*	-1.647E+00	3.081E+00	4.276E+00	3.474E-01	-0.385
Y-91		1204.77	*	5.446E+02	1.553E+03	2.686E+03	2.204E+02	0.203
NB-94		702.65	*	1.089E+00	2.120E+00	3.712E+00	3.087E-01	0.293
		871.09		1.546E-01	2.456E+00	4.156E+00	3.689E-01	0.037
NB-95		765.80	*	4.077E+00	3.458E+00	6.434E+00	5.509E-01	0.634
NB-95M		235.69	*	1.954E+00	1.049E+01	1.556E+01	1.589E+00	0.126
ZR-95		724.19		-4.804E+00	7.751E+00	1.128E+01	1.032E+00	-0.426
		756.73	*	1.906E-01	4.002E+00	6.489E+00	6.125E-01	0.029
MO-99	+	140.51		1.512E-02	4.002E+00	Half-Life too short		
		181.07		5.160E-04	4.002E+00	Half-Life too short		
		366.42		8.825E-03	4.002E+00	Half-Life too short		
		739.50	*	1.151E-03	4.002E+00	Half-Life too short		
		777.92		-2.229E-02	4.002E+00	Half-Life too short		
TC-99M	+	140.51	*	5.570E+22	4.002E+00	Half-Life too short		
RU-103		497.08	*	-4.319E+00	3.748E+00	5.228E+00	7.196E-01	-0.826
		610.33		1.383E+01	7.744E+01	1.249E+02	2.018E+01	0.111
RH-106		621.93	*	-1.336E+01	2.272E+01	3.344E+01	4.352E+00	-0.400
		1050.41		1.131E+02	1.515E+02	2.854E+02	2.459E+01	0.396
RU-106		621.93	*	-1.336E+01	2.268E+01	3.344E+01	2.757E+00	-0.400
		1050.41		1.131E+02	1.515E+02	2.854E+02	2.459E+01	0.396
AG-108M		433.94	*	-4.941E-01	2.012E+00	3.262E+00	2.751E-01	-0.151
		614.28		-5.918E-01	2.583E+00	4.075E+00	3.486E-01	-0.145
		722.91		1.156E+00	2.454E+00	4.254E+00	3.694E-01	0.272
CD-109		88.03	*	-3.109E+01	5.662E+01	9.322E+01	9.990E+00	-0.334
AG-110M		657.76	*	5.894E-01	2.473E+00	4.160E+00	3.502E-01	0.142
		677.62		-8.331E+00	2.179E+01	3.292E+01	2.788E+00	-0.253
		706.68		-1.035E+01	1.477E+01	2.083E+01	1.789E+00	-0.497
		763.94		-1.645E+00	1.275E+01	2.002E+01	1.761E+00	-0.082
		884.68		2.324E+00	3.376E+00	6.256E+00	5.740E-01	0.371
		937.49		4.018E+00	6.668E+00	1.231E+01	1.132E+00	0.326
		1384.29		-7.540E+00	1.026E+01	1.285E+01	1.151E+00	-0.587
SN-113		391.70	*	-7.964E-01	3.037E+00	4.952E+00	4.087E-01	-0.161
CD-115		260.90		-2.442E-03	3.037E+00	Half-Life too short		
		492.35		-2.609E-02	3.037E+00	Half-Life too short		
		527.90	*	-9.567E-03	3.037E+00	Half-Life too short		
SN-117M		156.02		-2.252E+02	2.751E+02	4.274E+02	3.624E+01	-0.527
		158.56	*	3.981E+00	6.724E+00	1.166E+01	9.903E-01	0.341
TE-123M		159.00	*	1.580E+00	2.416E+00	4.203E+00	3.593E-01	0.376
SB-124		602.73		-1.422E+00	3.136E+00	4.794E+00	3.971E-01	-0.297
		645.85		-1.259E+01	3.845E+01	5.914E+01	5.148E+00	-0.213
		722.78		1.505E+01	2.756E+01	4.825E+01	4.150E+00	0.312
		1690.97	*	1.687E+00	6.745E+00	1.189E+01	1.051E+00	0.142
SB-125		427.87	*	-2.501E+00	6.579E+00	1.052E+01	8.718E-01	-0.238
		463.37		-2.925E+00	1.790E+01	2.917E+01	2.597E+00	-0.100
		600.60		1.010E-01	1.385E+01	2.266E+01	2.027E+00	0.004
		635.95		7.475E+00	1.757E+01	3.056E+01	2.733E+00	0.245

Sample ID : G265922001 Acquisition date : 26-NOV-2010 04:08:35

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
TE-125M		109.28	*	2.352E+02	8.367E+02	1.446E+03	1.563E+02	0.163
I-126		388.63		-5.355E+00	1.741E+01	2.826E+01	2.266E+00	-0.189
		666.33	*	-1.412E+00	2.161E+01	3.461E+01	2.823E+00	-0.041
		753.82		-1.950E+01	1.678E+02	2.626E+02	2.236E+01	-0.074
SB-126		414.70		2.530E+00	7.911E+00	1.380E+01	1.113E+00	0.183
		666.50		-1.529E+00	7.859E+00	1.230E+01	1.004E+00	-0.124
		695.00		5.830E-01	9.371E+00	1.527E+01	1.265E+00	0.038
		697.00		1.917E+01	3.262E+01	5.697E+01	4.724E+00	0.336
		720.70	*	4.347E+00	1.513E+01	2.557E+01	2.145E+00	0.170
		856.80		-2.927E+01	4.760E+01	7.110E+01	6.285E+00	-0.412
SN-126	+	64.28		4.171E+01	5.062E+01	7.456E+01	1.143E+01	0.559
		86.94		2.558E+00	2.347E+01	4.045E+01	1.691E+01	0.063
		87.57	*	-2.389E+00	5.608E+00	9.329E+00	9.950E-01	-0.256
SB-127		252.40		6.457E+02	1.539E+03	2.553E+03	1.085E+03	0.253
		473.00		-3.262E+02	4.934E+02	7.370E+02	1.116E+02	-0.443
		685.70	*	-1.363E+02	4.047E+02	6.140E+02	8.589E+01	-0.222
		783.70		4.331E+02	1.192E+03	2.014E+03	3.024E+02	0.215
I-131		80.19		8.628E+02	6.950E+02	1.188E+03	1.194E+02	0.726
		284.31		-1.706E+01	2.465E+02	3.923E+02	3.779E+01	-0.043
		364.49	*	-1.184E+00	1.757E+01	2.955E+01	2.642E+00	-0.040
		636.99		-1.280E+02	2.181E+02	3.178E+02	2.798E+01	-0.403
TE-132		49.72		1.375E+03	7.989E+03	1.290E+04	1.804E+03	0.107
		111.76		8.667E+02	1.640E+04	2.788E+04	3.878E+03	0.031
		116.30		4.784E+03	1.422E+04	2.459E+04	3.397E+03	0.195
		228.16	*	2.264E+02	3.305E+02	5.694E+02	1.025E+02	0.398
BA-133		81.00		4.209E+00	6.872E+00	1.119E+01	1.828E+00	0.376
		276.40		5.913E+00	2.516E+01	4.144E+01	5.988E+00	0.143
		302.85		-3.770E+00	1.034E+01	1.578E+01	2.106E+00	-0.239
		356.01	*	9.642E-01	3.165E+00	5.520E+00	7.106E-01	0.175
		383.85		1.543E+01	1.910E+01	3.505E+01	4.229E+00	0.440
I-133		529.87	*	4.003E+01	1.910E+01	Half-Life too short		
		875.33		2.352E+03	1.910E+01	Half-Life too short		
		1298.22		-3.477E+03	1.910E+01	Half-Life too short		
CS-134		563.25		-4.132E+00	2.326E+01	3.712E+01	3.121E+00	-0.111
		569.33		9.932E+00	1.312E+01	2.381E+01	2.010E+00	0.417
		604.72		-9.094E-01	2.433E+00	3.764E+00	3.124E-01	-0.242
		795.86	*	1.920E+00	3.098E+00	5.023E+00	4.383E-01	0.382
	+	801.95		5.997E+01	2.905E+01	5.319E+01	4.644E+00	1.128
		1365.19		6.273E+01	8.253E+01	1.566E+02	1.427E+01	0.400
CS-135		268.22	*	7.658E+00	1.110E+01	1.912E+01	1.992E+00	0.400
I-135		546.56		1.330E+21	1.110E+01	Half-Life too short		
		836.80		-3.208E+20	1.110E+01	Half-Life too short		
		1038.76		-4.247E+20	1.110E+01	Half-Life too short		
		1131.51		1.057E+20	1.110E+01	Half-Life too short		
		1260.41	*	1.671E+20	1.110E+01	Half-Life too short		
		1457.56		-3.105E+20	1.110E+01	Half-Life too short		
		1678.03		-1.241E+21	1.110E+01	Half-Life too short		
		1791.20		-1.905E+21	1.110E+01	Half-Life too short		
CS-136		153.25		-2.566E+00	1.063E+02	1.767E+02	1.794E+01	-0.015

Sample ID : G265922001 Acquisition date : 26-NOV-2010 04:08:35

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		176.60		-3.575E+01	6.549E+01	1.036E+02	9.839E+00	-0.345
		273.65		-1.140E+01	5.603E+01	8.799E+01	8.672E+00	-0.130
		340.55		-1.084E+01	1.540E+01	2.199E+01	1.984E+00	-0.493
		818.51		-1.654E+00	7.252E+00	1.173E+01	1.027E+00	-0.141
		1048.07	*	3.965E+00	9.949E+00	1.770E+01	1.592E+00	0.224
		1235.36		5.284E+00	3.214E+01	5.484E+01	6.342E+00	0.096
BA-137M		661.66	*	-6.711E-01	2.185E+00	3.343E+00	2.720E-01	-0.201
CS-137		661.66	*	-7.089E-01	2.309E+00	3.532E+00	2.879E-01	-0.201
CE-139		165.86	*	1.759E+00	2.522E+00	4.391E+00	3.751E-01	0.401
BA-140		162.66		-6.888E+01	1.050E+02	1.653E+02	1.505E+01	-0.417
		304.85		-7.054E+01	1.702E+02	2.570E+02	7.554E+01	-0.274
		423.72		9.808E+01	2.356E+02	4.089E+02	1.340E+02	0.240
		537.26	*	-1.093E+01	2.884E+01	4.442E+01	1.503E+01	-0.246
LA-140		328.76		-1.438E+01	3.604E+01	5.445E+01	5.062E+00	-0.264
		487.02		4.586E+00	1.647E+01	2.824E+01	2.494E+00	0.162
		815.77		-1.707E+01	3.238E+01	4.940E+01	4.804E+00	-0.346
		1596.21	*	-2.581E+00	9.974E+00	1.556E+01	1.343E+00	-0.166
CE-141		145.44	*	-2.182E+00	5.965E+00	9.690E+00	8.342E-01	-0.225
CE-143		57.36		-4.815E+00	5.965E+00	Half-Life too short		
		293.27	*	-2.745E-01	5.965E+00	Half-Life too short		
		664.57		-3.309E-01	5.965E+00	Half-Life too short		
		721.93		4.977E+00	5.965E+00	Half-Life too short		
CE-144		80.12		2.248E+02	1.831E+02	3.128E+02	3.104E+01	0.718
		133.52	*	3.492E+00	1.537E+01	2.621E+01	3.985E+00	0.133
PM-144		476.78		3.983E+00	3.992E+00	7.535E+00	6.807E-01	0.529
		618.01		1.786E-01	2.301E+00	3.793E+00	3.227E-01	0.047
		696.49	*	9.639E-01	2.655E+00	4.505E+00	3.738E-01	0.214
PR-144		696.51	*	7.354E+01	1.997E+02	3.392E+02	2.812E+01	0.217
		1489.16		1.512E+02	9.735E+02	1.686E+03	1.470E+02	0.090
PM-146		453.88	*	-1.963E+00	3.154E+00	4.853E+00	4.976E-01	-0.404
		633.25		1.974E+01	9.086E+01	1.527E+02	5.820E+01	0.129
		735.93		-1.744E+00	8.411E+00	1.290E+01	3.608E+00	-0.135
		747.24		-3.876E+00	6.293E+00	8.814E+00	1.279E+00	-0.440
ND-147		91.11		-1.408E+02	4.259E+01	5.685E+01	6.215E+00	-2.477
		319.41		1.502E+02	4.387E+02	7.251E+02	6.458E+01	0.207
		531.02	*	4.443E+01	6.566E+01	1.179E+02	1.742E+01	0.377
PM-149		285.90	*	-2.154E-02	6.566E+01	Half-Life too short		
EU-152		121.78		1.722E+00	5.552E+00	9.574E+00	9.464E-01	0.180
		244.70		1.151E+01	2.429E+01	4.109E+01	3.714E+00	0.280
		344.28	*	1.644E+00	7.377E+00	1.198E+01	1.097E+00	0.137
		778.90		-5.256E+00	1.797E+01	2.718E+01	2.339E+00	-0.193
		964.08		-7.314E+00	1.624E+01	2.472E+01	2.186E+00	-0.296
		1085.87		-1.896E+01	2.327E+01	3.120E+01	2.648E+00	-0.608
		1112.07		-1.190E+01	1.688E+01	2.307E+01	1.933E+00	-0.516
		1408.01		5.897E+00	1.116E+01	2.038E+01	1.779E+00	0.289
GD-153		69.67		4.433E+01	1.356E+02	2.021E+02	1.851E+01	0.219
		97.43	*	-2.031E+00	6.678E+00	1.114E+01	1.081E+00	-0.182
		103.18		-1.224E+00	8.131E+00	1.366E+01	1.271E+00	-0.090
EU-154		123.07		-3.430E+00	4.010E+00	6.280E+00	7.107E-01	-0.546

Sample ID : G265922001 Acquisition date : 26-NOV-2010 04:08:35

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		723.31		-1.151E+00	1.199E+01	1.899E+01	1.765E+00	-0.061
		873.19		8.149E-01	1.969E+01	3.320E+01	4.013E+00	0.025
		996.26		-2.723E+00	2.336E+01	3.791E+01	6.652E+00	-0.072
		1004.73		-7.447E+00	1.276E+01	1.854E+01	2.176E+00	-0.402
		1274.44	*	-3.122E+00	6.236E+00	8.643E+00	9.746E-01	-0.361
EU-155		86.55		5.340E+00	6.800E+00	1.219E+01	1.295E+00	0.438
		105.31	*	-4.210E+00	7.877E+00	1.282E+01	1.189E+00	-0.328
TA-182		67.75		5.849E+00	9.397E+00	1.443E+01	1.305E+00	0.405
		100.11		7.747E+00	1.403E+01	2.478E+01	2.355E+00	0.313
		152.43		-5.736E-01	2.914E+01	4.849E+01	4.104E+00	-0.012
		222.11		2.581E+01	2.863E+01	5.015E+01	4.468E+00	0.515
		1121.30		-1.390E+00	9.119E+00	1.455E+01	1.213E+00	-0.096
		1189.05		-9.679E+00	1.741E+01	2.468E+01	2.009E+00	-0.392
		1221.41	*	-1.202E+01	1.052E+01	1.185E+01	9.802E-01	-1.015
		1231.02		-1.714E+01	1.937E+01	2.187E+01	1.818E+00	-0.784
IR-192		295.96		4.871E+00	9.197E+00	1.522E+01	1.391E+00	0.320
		308.46		-1.718E+00	8.667E+00	1.352E+01	1.222E+00	-0.127
		316.51	*	-2.586E+00	3.104E+00	4.449E+00	3.980E-01	-0.581
		468.07		-1.735E+00	5.032E+00	7.997E+00	7.110E-01	-0.217
HG-203		70.83		-4.538E+01	1.054E+02	1.572E+02	2.577E+01	-0.289
		72.87		-1.588E+01	6.606E+01	1.008E+02	1.608E+01	-0.158
		279.20	*	-2.068E+00	3.355E+00	5.016E+00	4.704E-01	-0.412
BI-207		72.81		-3.636E+00	1.343E+01	2.044E+01	1.912E+00	-0.178
		74.97		8.246E+00	7.394E+00	1.256E+01	1.194E+00	0.657
		569.70		1.531E+00	2.022E+00	3.671E+00	3.053E-01	0.417
		1063.66	*	-1.027E-01	2.819E+00	4.609E+00	3.951E-01	-0.022
		1770.23		-3.971E+01	5.056E+01	6.920E+01	5.740E+00	-0.574
TL-208		277.37		8.212E+00	2.840E+01	4.701E+01	6.068E+00	0.175
		583.19	*	-2.194E+00	3.021E+00	4.619E+00	4.127E-01	-0.475
		860.56		9.997E+00	1.782E+01	3.259E+01	3.085E+00	0.307
PB-210		46.54	*	-2.166E+02	2.967E+02	4.438E+02	4.247E+01	-0.488
BI-211		72.87		-5.627E+01	5.349E+03	3.572E+02	3.392E+04	-0.158
		351.06	*	-1.230E+01	1.169E+03	2.651E+01	2.517E+03	-0.464
PB-211		404.85	*	-3.363E+00	3.233E+02	8.435E+01	8.010E+03	-0.040
		427.09		3.464E+01	3.291E+03	1.932E+02	1.835E+04	0.179
		832.01		1.521E+01	1.446E+03	1.108E+02	1.053E+04	0.137
BI-212		727.33	*	1.728E+01	3.741E+01	6.433E+01	7.924E+00	0.269
		785.37		5.715E+01	2.239E+02	3.734E+02	3.221E+01	0.153
		1620.50		4.243E+01	1.758E+02	3.091E+02	2.656E+01	0.137
PB-212		74.82		3.052E+01	2.660E+01	4.501E+01	6.117E+00	0.678
		77.11		-6.391E+00	1.537E+01	2.298E+01	2.222E+00	-0.278
	+	238.63	*	3.139E+00	6.987E+00	8.943E+00	9.040E-01	0.351
		300.09		-1.684E+01	5.994E+01	9.266E+01	1.010E+01	-0.182
BI-214		609.32	*	3.181E+00	6.658E+00	1.108E+01	1.087E+00	0.287
		1120.29		4.647E-01	1.844E+01	3.041E+01	3.254E+00	0.015
		1764.49		2.240E+00	2.217E+01	3.731E+01	3.100E+00	0.060
PB-214		74.82		5.284E+01	4.595E+01	7.792E+01	9.638E+00	0.678
		77.11		-1.101E+01	2.648E+01	3.957E+01	5.029E+00	-0.278
		242.00		-1.703E+00	2.816E+01	4.038E+01	4.331E+00	-0.042

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		295.22		-7.594E+00	1.177E+01	1.723E+01	1.926E+00	-0.441
		351.93	*	-3.908E+00	6.239E+00	9.804E+00	1.034E+00	-0.399
RN-219		271.23		-7.548E+00	7.169E+02	2.464E+01	2.339E+03	-0.306
		401.81	*	9.524E-01	9.478E+01	4.788E+01	4.547E+03	0.020
RA-223		81.07		8.489E+00	8.062E+02	2.511E+01	2.384E+03	0.338
		83.79		5.994E-01	5.752E+01	1.439E+01	1.366E+03	0.042
		94.56		-3.142E+01	2.983E+03	3.815E+01	3.623E+03	-0.823
		144.24		4.908E+01	4.661E+03	9.777E+01	9.284E+03	0.502
		154.21		9.927E+00	9.431E+02	5.087E+01	4.831E+03	0.195
		269.46		2.510E+00	2.387E+02	2.098E+01	1.993E+03	0.120
		323.87	*	5.077E+00	4.850E+02	8.416E+01	7.992E+03	0.060
		338.28		-7.345E+00	6.999E+02	9.005E+01	8.551E+03	-0.082
RA-224		240.99	*	7.033E+00	5.164E+01	7.598E+01	6.854E+00	0.093
RA-226		186.21	*	-3.159E+01	6.475E+01	1.038E+02	7.000E+01	-0.304
AC-227		79.69		6.471E+01	9.268E+01	1.516E+02	2.713E+01	0.427
		235.96		2.078E+00	1.137E+01	1.686E+01	1.797E+00	0.123
		256.23	*	7.843E+00	1.979E+01	3.316E+01	4.110E+00	0.237
		299.98		-2.024E+01	6.433E+01	9.899E+01	1.287E+01	-0.204
		304.50		-5.452E+01	1.269E+02	1.922E+02	3.217E+01	-0.284
		334.37		-1.124E+01	1.102E+02	1.721E+02	2.696E+01	-0.065
TH-227		79.69		6.471E+01	6.146E+03	1.516E+02	1.439E+04	0.427
		235.96		2.078E+00	1.977E+02	1.686E+01	1.601E+03	0.123
		256.23	*	7.843E+00	7.450E+02	3.316E+01	3.149E+03	0.237
		299.98		-2.024E+01	1.923E+03	9.899E+01	9.400E+03	-0.204
		304.50		-5.452E+01	5.179E+03	1.922E+02	1.825E+04	-0.284
		334.37		-1.124E+01	1.073E+03	1.721E+02	1.634E+04	-0.065
AC-228		338.32		-2.158E+00	1.468E+01	2.269E+01	9.472E+00	-0.095
		911.20	*	1.636E-01	1.108E+01	1.765E+01	2.086E+00	0.009
		968.97		7.427E+00	1.688E+01	2.981E+01	7.286E+00	0.249
RA-228		338.32		-2.158E+00	1.468E+01	2.269E+01	9.472E+00	-0.095
		911.20	*	1.636E-01	1.108E+01	1.765E+01	2.086E+00	0.009
		968.97		7.427E+00	1.688E+01	2.981E+01	7.286E+00	0.249
TH-228		74.82		3.052E+01	2.643E+01	4.501E+01	4.304E+00	0.678
		77.11		-6.391E+00	1.537E+01	2.298E+01	2.222E+00	-0.278
	+	238.63	*	3.139E+00	6.987E+00	8.943E+00	9.040E-01	0.351
		300.09		-1.684E+01	6.080E+01	9.266E+01	5.678E+01	-0.182
TH-229		85.43		1.061E+01	1.445E+01	2.584E+01	2.697E+00	0.410
		88.47		-2.208E+00	8.129E+00	1.365E+01	1.455E+00	-0.162
		193.51	*	-1.721E+00	4.009E+01	6.566E+01	5.721E+00	-0.026
		210.85		-8.871E+00	6.246E+01	1.008E+02	8.904E+00	-0.088
TH-230		67.67	*	5.848E+02	8.873E+02	1.367E+03	1.236E+02	0.428
PA-231		283.69	*	5.229E+00	1.095E+02	1.765E+02	2.630E+01	0.030
		301.36		1.546E+01	3.363E+01	5.650E+01	6.631E+00	0.274
TH-231		84.21	*	1.202E+00	3.198E+01	5.500E+01	1.008E+01	0.022
PA-233		94.65		-4.607E+01	2.130E+01	3.064E+01	3.084E+00	-1.504
		98.43		2.704E+00	1.069E+01	1.851E+01	1.858E+00	0.146
		300.13		-7.841E+00	2.919E+01	4.517E+01	6.814E+00	-0.174
		311.90	*	3.045E+00	5.207E+00	8.806E+00	8.104E-01	0.346
		340.48		-2.981E+01	4.237E+01	5.966E+01	1.437E+01	-0.500

Sample ID : G265922001 Acquisition date : 26-NOV-2010 04:08:35

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
PA-234		94.67		-3.111E+01	1.458E+01	2.057E+01	2.748E+00	-1.512
		98.44		1.855E+00	7.189E+00	1.233E+01	6.899E+00	0.150
		111.00		-6.427E+00	1.413E+01	2.310E+01	2.842E+00	-0.278
		131.20		-1.829E+00	7.740E+00	1.276E+01	1.082E+00	-0.143
		569.50		1.358E+01	1.794E+01	3.257E+01	2.709E+00	0.417
		733.00		1.725E+01	2.214E+01	4.028E+01	8.913E+00	0.428
		880.51		-5.988E+00	1.904E+01	3.018E+01	2.686E+00	-0.198
		883.24		6.981E+00	2.017E+01	3.469E+01	2.333E+01	0.201
		926.36		1.445E+00	1.063E+01	1.817E+01	4.610E+00	0.080
		946.00	*	2.238E+00	1.889E+01	3.211E+01	6.064E+00	0.070
		949.00		1.382E+00	2.549E+01	4.289E+01	3.806E+00	0.032
PA-234M		766.42		8.746E+02	9.449E+02	1.535E+03	7.787E+02	0.570
		1001.03	*	4.534E+01	3.280E+02	5.442E+02	5.491E+01	0.083
TH-234	+	63.29	*	1.082E+02	1.318E+02	2.025E+02	3.740E+01	0.534
		92.59		-3.359E+01	6.429E+01	1.095E+02	2.489E+01	-0.307
U-235		89.96		-1.172E+02	6.903E+01	9.378E+01	2.374E+01	-1.250
		93.35		-3.426E+01	4.766E+01	7.981E+01	1.890E+01	-0.429
		143.76	*	2.054E+01	1.866E+01	2.965E+01	5.000E+00	0.693
		163.33		-6.219E+00	3.456E+01	5.654E+01	1.012E+01	-0.110
		185.72		-6.694E-02	3.858E+00	6.749E+00	5.844E-01	-0.010
		205.31		-5.230E-01	3.682E+01	6.023E+01	1.098E+01	-0.009
NP-237		94.67		-3.111E+01	1.431E+01	2.057E+01	2.047E+00	-1.512
		98.43		2.704E+00	1.069E+01	1.851E+01	1.782E+00	0.146
		300.13		-7.841E+00	2.918E+01	4.517E+01	5.782E+00	-0.174
		311.90	*	3.045E+00	5.211E+00	8.806E+00	9.884E-01	0.346
		340.48		-2.981E+01	4.184E+01	5.966E+01	5.184E+00	-0.500
U-238	+	63.29	*	1.082E+02	1.318E+02	2.025E+02	3.740E+01	0.534
		92.59		-3.359E+01	6.393E+01	1.095E+02	1.112E+01	-0.307
NP-239		99.53		9.404E+00	1.283E+01	2.287E+01	2.182E+00	0.411
		103.37		-6.064E-01	7.255E+00	1.225E+01	1.138E+00	-0.049
		106.12		-2.367E+00	6.253E+00	1.031E+01	9.421E-01	-0.230
		116.74	*	8.413E+00	2.062E+01	3.585E+01	3.127E+00	0.235
		228.18		1.034E+01	1.524E+01	2.639E+01	2.361E+00	0.392
		277.60		5.169E+00	1.240E+01	2.081E+01	1.907E+00	0.248
AM-241		59.54	*	7.346E+00	1.185E+01	1.840E+01	1.710E+00	0.399
CM-247		278.00		4.731E+00	5.344E+01	8.665E+01	7.943E+00	0.055
		287.50		6.690E+01	9.613E+01	1.648E+02	1.505E+01	0.406
		402.40	*	7.175E-01	2.606E+00	4.517E+00	3.620E-01	0.159
CF-249		252.80		-2.230E+01	7.511E+01	1.177E+02	1.069E+01	-0.189
		333.37		-2.454E+00	1.224E+01	1.889E+01	1.656E+00	-0.130
		388.16	*	-5.893E-01	2.621E+00	4.301E+00	3.451E-01	-0.137
CF-251		177.52	*	-4.072E+00	1.096E+01	1.759E+01	1.514E+00	-0.231
		227.38		1.558E+01	2.574E+01	4.422E+01	3.954E+00	0.352
		285.41		-1.036E+02	1.754E+02	2.629E+02	2.403E+01	-0.394
ANH-511		511.00	*	-7.963E+00	3.998E+00	6.948E+00	5.773E-01	-1.146

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29407                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G265922001   *
* Acquisition date : 26-NOV-2010 04:08:35 Detector SN#    :             *
* Detector ID      : GAM11                Sensitivity     : 5.000      *
* Geometry         : 2LMB                 Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:00.64     Half life ratio :  8.000     *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date      :  2-NOV-2010 12:00:00 Nuclide Library : LIQUI       *
* Sample ID        : G265922001           Analyst initials: KXG3        *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
* Standard Weight  :   0.00000                                          *
* CALIB. DATE/TIME : 16-NOV-2010 15:19:58 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	
TH-232	1.540E+03	1.175E+04	2.021E+03	0.000E+00

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	
BE-7	1.123E+01		2.260E+01	4.085E+01	0.000E+00 NOT IDENT.
NA-22	-1.397E+00		2.243E+00	3.068E+00	0.000E+00 NOT IDENT.
NA-24	0.000E+00		6.067E+11	0.000E+00	0.000E+00 SHORT HLIF
K-40	2.720E-01		3.435E+01	5.318E+01	0.000E+00 NOT IDENT.
SC-46	1.048E+00		3.055E+00	5.472E+00	0.000E+00 NOT IDENT.
V-48	1.020E+00		5.574E+00	9.791E+00	0.000E+00 NOT IDENT.
CR-51	-5.287E+00		3.482E+01	5.549E+01	0.000E+00 NOT IDENT.
MN-54	6.958E-01		2.209E+00	3.981E+00	0.000E+00 NOT IDENT.
CO-56	-1.721E+00		2.719E+00	4.156E+00	0.000E+00 NOT IDENT.
CO-57	5.940E-01		1.905E+00	3.351E+00	0.000E+00 NOT IDENT.
CO-58	1.751E-02		2.874E+00	4.947E+00	0.000E+00 NOT IDENT.
FE-59	3.766E+00		5.512E+00	1.052E+01	0.000E+00 NOT IDENT.
CO-60	-1.683E-01		2.744E+00	4.466E+00	0.000E+00 NOT IDENT.
ZN-65	1.073E+00		5.653E+00	9.787E+00	0.000E+00 NOT IDENT.
SE-75	-5.057E-01		3.089E+00	4.980E+00	0.000E+00 NOT IDENT.
SR-85	-1.014E+01		4.114E+00	5.127E+00	0.000E+00 NOT IDENT.
Y-88	-1.647E+00		3.020E+00	4.276E+00	0.000E+00 NOT IDENT.
Y-91	5.446E+02		1.522E+03	2.686E+03	0.000E+00 NOT IDENT.
NB-94	1.089E+00		2.077E+00	3.712E+00	0.000E+00 NOT IDENT.
NB-95	4.077E+00		3.389E+00	6.434E+00	0.000E+00 NOT IDENT.
NB-95M	1.954E+00		1.028E+01	1.556E+01	0.000E+00 NOT IDENT.
ZR-95	1.906E-01		3.922E+00	6.489E+00	0.000E+00 NOT IDENT.
MO-99	0.000E+00		6.472E+03	0.000E+00	0.000E+00 SHORT HLIF
TC-99M	0.000E+00		8.392E+28	0.000E+00	0.000E+00 SHORT HLIF
RU-103	-4.319E+00		3.673E+00	5.228E+00	0.000E+00 NOT IDENT.
RH-106	-1.336E+01		2.226E+01	3.344E+01	0.000E+00 NOT IDENT.

RU-106	-1.336E+01	2.222E+01	3.344E+01	0.000E+00	NOT IDENT.
AG-108M	-4.941E-01	1.972E+00	3.262E+00	0.000E+00	NOT IDENT.
CD-109	-3.109E+01	5.549E+01	9.322E+01	0.000E+00	NOT IDENT.
AG-110M	5.894E-01	2.424E+00	4.160E+00	0.000E+00	NOT IDENT.
SN-113	-7.964E-01	2.976E+00	4.952E+00	0.000E+00	NOT IDENT.
CD-115	0.000E+00	1.205E+04	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	3.981E+00	6.589E+00	1.166E+01	0.000E+00	NOT IDENT.
TE-123M	1.580E+00	2.368E+00	4.203E+00	0.000E+00	NOT IDENT.
SB-124	1.687E+00	6.610E+00	1.189E+01	0.000E+00	NOT IDENT.
SB-125	-2.501E+00	6.447E+00	1.052E+01	0.000E+00	NOT IDENT.
TE-125M	2.352E+02	8.199E+02	1.446E+03	0.000E+00	NOT IDENT.
I-126	-1.412E+00	2.118E+01	3.461E+01	0.000E+00	NOT IDENT.
SB-126	4.347E+00	1.483E+01	2.557E+01	0.000E+00	NOT IDENT.
SN-126	-2.389E+00	5.496E+00	9.329E+00	0.000E+00	FAIL ABUN
SB-127	-1.363E+02	3.966E+02	6.140E+02	0.000E+00	NOT IDENT.
I-131	-1.184E+00	1.722E+01	2.955E+01	0.000E+00	NOT IDENT.
TE-132	2.264E+02	3.239E+02	5.694E+02	0.000E+00	NOT IDENT.
BA-133	9.642E-01	3.102E+00	5.520E+00	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.017E+08	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.920E+00	3.036E+00	5.023E+00	0.000E+00	FAIL ABUN
CS-135	7.658E+00	1.087E+01	1.912E+01	0.000E+00	NOT IDENT.
I-135	0.000E+00	8.809E+26	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.965E+00	9.750E+00	1.770E+01	0.000E+00	NOT IDENT.
BA-137M	-6.711E-01	2.142E+00	3.343E+00	0.000E+00	NOT IDENT.
CS-137	-7.089E-01	2.262E+00	3.532E+00	0.000E+00	NOT IDENT.
CE-139	1.759E+00	2.472E+00	4.391E+00	0.000E+00	NOT IDENT.
BA-140	-1.093E+01	2.826E+01	4.442E+01	0.000E+00	NOT IDENT.
LA-140	-2.581E+00	9.775E+00	1.556E+01	0.000E+00	NOT IDENT.
CE-141	-2.182E+00	5.845E+00	9.690E+00	0.000E+00	NOT IDENT.
CE-143	0.000E+00	6.602E+05	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.492E+00	1.506E+01	2.621E+01	0.000E+00	NOT IDENT.
PM-144	9.639E-01	2.602E+00	4.505E+00	0.000E+00	NOT IDENT.
PR-144	7.354E+01	1.958E+02	3.392E+02	0.000E+00	NOT IDENT.
PM-146	-1.963E+00	3.091E+00	4.853E+00	0.000E+00	NOT IDENT.
ND-147	4.443E+01	6.435E+01	1.179E+02	0.000E+00	NOT IDENT.
PM-149	0.000E+00	1.065E+05	0.000E+00	0.000E+00	SHORT HLIF
EU-152	1.644E+00	7.229E+00	1.198E+01	0.000E+00	NOT IDENT.
GD-153	-2.031E+00	6.545E+00	1.114E+01	0.000E+00	NOT IDENT.
EU-154	-3.122E+00	6.111E+00	8.643E+00	0.000E+00	NOT IDENT.
EU-155	-4.210E+00	7.720E+00	1.282E+01	0.000E+00	NOT IDENT.
TA-182	-1.202E+01	1.031E+01	1.185E+01	0.000E+00	NOT IDENT.
IR-192	-2.586E+00	3.041E+00	4.449E+00	0.000E+00	NOT IDENT.
HG-203	-2.068E+00	3.288E+00	5.016E+00	0.000E+00	NOT IDENT.
BI-207	-1.027E-01	2.762E+00	4.609E+00	0.000E+00	NOT IDENT.
TL-208	-2.194E+00	2.961E+00	4.619E+00	0.000E+00	NOT IDENT.
PB-210	-2.166E+02	2.908E+02	4.438E+02	0.000E+00	NOT IDENT.
BI-211	-1.230E+01	1.145E+03	2.651E+01	0.000E+00	NOT IDENT.
PB-211	-3.363E+00	3.168E+02	8.435E+01	0.000E+00	NOT IDENT.
BI-212	1.728E+01	3.666E+01	6.433E+01	0.000E+00	NOT IDENT.
PB-212	3.139E+00	6.847E+00	8.943E+00	0.000E+00	FAIL ABUN
BI-214	3.181E+00	6.525E+00	1.108E+01	0.000E+00	NOT IDENT.
PB-214	-3.908E+00	6.115E+00	9.804E+00	0.000E+00	NOT IDENT.
RN-219	9.524E-01	9.288E+01	4.788E+01	0.000E+00	NOT IDENT.
RA-223	5.077E+00	4.753E+02	8.416E+01	0.000E+00	NOT IDENT.
RA-224	7.033E+00	5.061E+01	7.598E+01	0.000E+00	NOT IDENT.
RA-226	-3.159E+01	6.345E+01	1.038E+02	0.000E+00	NOT IDENT.
AC-227	7.843E+00	1.940E+01	3.316E+01	0.000E+00	NOT IDENT.
TH-227	7.843E+00	7.301E+02	3.316E+01	0.000E+00	NOT IDENT.
AC-228	1.636E-01	1.086E+01	1.765E+01	0.000E+00	NOT IDENT.
RA-228	1.636E-01	1.086E+01	1.765E+01	0.000E+00	NOT IDENT.
TH-228	3.139E+00	6.847E+00	8.943E+00	0.000E+00	FAIL ABUN
TH-229	-1.721E+00	3.929E+01	6.566E+01	0.000E+00	NOT IDENT.
TH-230	5.848E+02	8.695E+02	1.367E+03	0.000E+00	NOT IDENT.
PA-231	5.229E+00	1.073E+02	1.765E+02	0.000E+00	NOT IDENT.
TH-231	1.202E+00	3.134E+01	5.500E+01	0.000E+00	NOT IDENT.
PA-233	3.045E+00	5.103E+00	8.806E+00	0.000E+00	NOT IDENT.
PA-234	2.238E+00	1.851E+01	3.211E+01	0.000E+00	NOT IDENT.
PA-234M	4.534E+01	3.215E+02	5.442E+02	0.000E+00	NOT IDENT.
TH-234	1.082E+02	1.292E+02	2.025E+02	0.000E+00	FAIL ABUN
U-235	2.054E+01	1.828E+01	2.965E+01	0.000E+00	NOT IDENT.
NP-237	3.045E+00	5.107E+00	8.806E+00	0.000E+00	NOT IDENT.
U-238	1.082E+02	1.292E+02	2.025E+02	0.000E+00	FAIL ABUN
NP-239	8.413E+00	2.021E+01	3.585E+01	0.000E+00	NOT IDENT.
AM-241	7.346E+00	1.161E+01	1.840E+01	0.000E+00	NOT IDENT.
CM-247	7.175E-01	2.554E+00	4.517E+00	0.000E+00	NOT IDENT.
CF-249	-5.893E-01	2.569E+00	4.301E+00	0.000E+00	NOT IDENT.
CF-251	-4.072E+00	1.074E+01	1.759E+01	0.000E+00	NOT IDENT.
ANH-511	-7.963E+00	3.918E+00	6.948E+00	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 06:09:01.45

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G265922001.CNF;1
Sample date      : 2-NOV-2010 12:00:00. Acquisition date : 26-NOV-2010 04:08:35
Sample ID        : G265922001           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM11                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.64  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	63.51	72	83	1.06	125.80	122	14	1.01E-02	22.7	2.77E+00
2	3	65.87	43	78	1.06	130.53	122	14	5.92E-03	38.5	
3	0	92.75	90	127	1.04	184.34	181	8	1.24E-02	24.3	
4	0	139.92	26	111	0.86	278.77	276	8	3.56E-03	73.6	
5	0	185.42	57	104	0.90	369.87	366	9	7.86E-03	35.1	
6	0	238.83	44	77	0.76	476.80	473	9	6.05E-03	39.3	
7	0	511.11	101	48	2.82	1021.84	1016	17	1.40E-02	18.5	
8	0	802.18	27	3	0.70	1604.44	1598	13	3.71E-03	23.8	

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 06:09:04.71

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G265922001.CNF;1
Sample date      : 2-NOV-2010 12:00:00. Acquisition date : 26-NOV-2010 04:08:35
Sample ID        : G265922001           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM11                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.64  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/LITER	Decay Corr pCi/LITER	2-Sigma %Error
TH-232	63.81	29	0.26*	1.365E+00	1.540E+03	1.540E+03	778.64
	140.88	26	0.02	2.795E+00	8.618E+03	8.618E+03	147.46

Flag: "*" = Keyline

Sample ID : G265922001 Acquisition date : 26-NOV-2010 04:08:35

Total number of lines in spectrum	5	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	4	80.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/LITER	Decay Corr pCi/LITER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-232	1.41E+10Y	1.00	1.540E+03	1.540E+03	11.99E+03	778.64	
			---	---			
Total Activity :			1.540E+03	1.540E+03			
Grand Total Activity :			1.540E+03	1.540E+03			

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

Sample ID : G265922001 Acquisition date : 26-NOV-2010 04:08:35

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	65.87	43	78	1.06	130.53	122	14	5.92E-03	77.0	1.50E+00	
0	238.83	16	77	0.76	476.80	473	9	2.22E-03	****	2.24E+00	T
0	802.18	27	3	0.70	1604.44	1598	13	3.71E-03	47.6	9.84E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 06:09:08.41

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G265922001.CNF;1  *
* Acquisition date : 26-NOV-2010 04:08:35  Detector SN#    :                *
* Detector ID      : GAM11                 Sensitivity     : 5.00000        *
* Geometry         : 2LMB                  Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:00.64         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 2-NOV-2010 12:00:00.  Nuclide Library : LIQUID          *
* Sample ID        : G265922001            Analyst initials: KXG3           *
* Batch Number     : 1048163               Sample Quantity : 2.00000E+00 LITER *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 16-NOV-2010 15:19:58.4MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
TH-232	1.540E+03	1.199E+04	2.021E+03	1.555E+04	0.762

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7	1.123E+01		2.306E+01	4.085E+01	3.655E+00	0.275
NA-22	-1.397E+00		2.289E+00	3.068E+00	2.606E-01	-0.455
NA-24	-3.102E+05		3.095E+05	Half-Life too short		
K-40	2.720E-01		3.505E+01	5.318E+01	4.770E+00	0.005
SC-46	1.048E+00		3.118E+00	5.472E+00	4.880E-01	0.191
V-48	1.020E+00		5.687E+00	9.791E+00	8.621E-01	0.104
CR-51	-5.287E+00		3.553E+01	5.549E+01	5.180E+00	-0.095
MN-54	6.958E-01		2.254E+00	3.981E+00	3.496E-01	0.175
CO-56	-1.721E+00		2.774E+00	4.156E+00	3.663E-01	-0.414
CO-57	5.940E-01		1.943E+00	3.351E+00	2.882E-01	0.177
CO-58	1.751E-02		2.932E+00	4.947E+00	4.319E-01	0.004

Sample ID : G265922001 Acquisition date : 26-NOV-2010 04:08:35

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
FE-59	3.766E+00		5.624E+00	1.052E+01	9.626E-01	0.358
CO-60	-1.683E-01		2.800E+00	4.466E+00	3.883E-01	-0.038
ZN-65	1.073E+00		5.768E+00	9.787E+00	8.193E-01	0.110
SE-75	-5.057E-01		3.152E+00	4.980E+00	4.564E-01	-0.102
SR-85	-1.014E+01		4.198E+00	5.127E+00	4.261E-01	-1.977
Y-88	-1.647E+00		3.081E+00	4.276E+00	3.474E-01	-0.385
Y-91	5.446E+02		1.553E+03	2.686E+03	2.204E+02	0.203
NB-94	1.089E+00		2.120E+00	3.712E+00	3.087E-01	0.293
NB-95	4.077E+00		3.458E+00	6.434E+00	5.509E-01	0.634
NB-95M	1.954E+00		1.049E+01	1.556E+01	1.589E+00	0.126
ZR-95	1.906E-01		4.002E+00	6.489E+00	6.125E-01	0.029
MO-99	1.151E-03		3.302E-03	Half-Life too short		
TC-99M	5.570E+22	+	4.282E+22	Half-Life too short		
RU-103	-4.319E+00		3.748E+00	5.228E+00	7.196E-01	-0.826
RH-106	-1.336E+01		2.272E+01	3.344E+01	4.352E+00	-0.400
RU-106	-1.336E+01		2.268E+01	3.344E+01	2.757E+00	-0.400
AG-108M	-4.941E-01		2.012E+00	3.262E+00	2.751E-01	-0.151
CD-109	-3.109E+01		5.662E+01	9.322E+01	9.990E+00	-0.334
AG-110M	5.894E-01		2.473E+00	4.160E+00	3.502E-01	0.142
SN-113	-7.964E-01		3.037E+00	4.952E+00	4.087E-01	-0.161
CD-115	-9.567E-03		6.148E-03	Half-Life too short		
SN-117M	3.981E+00		6.724E+00	1.166E+01	9.903E-01	0.341
TE-123M	1.580E+00		2.416E+00	4.203E+00	3.593E-01	0.376
SB-124	1.687E+00		6.745E+00	1.189E+01	1.051E+00	0.142
SB-125	-2.501E+00		6.579E+00	1.052E+01	8.718E-01	-0.238
TE-125M	2.352E+02		8.367E+02	1.446E+03	1.563E+02	0.163
I-126	-1.412E+00		2.161E+01	3.461E+01	2.823E+00	-0.041
SB-126	4.347E+00		1.513E+01	2.557E+01	2.145E+00	0.170
SN-126	-2.389E+00		5.608E+00	9.329E+00	9.950E-01	-0.256
SB-127	-1.363E+02		4.047E+02	6.140E+02	8.589E+01	-0.222
I-131	-1.184E+00		1.757E+01	2.955E+01	2.642E+00	-0.040
TE-132	2.264E+02		3.305E+02	5.694E+02	1.025E+02	0.398
BA-133	9.642E-01		3.165E+00	5.520E+00	7.106E-01	0.175
I-133	4.003E+01		2.050E+02	Half-Life too short		
CS-134	1.920E+00		3.098E+00	5.023E+00	4.383E-01	0.382
CS-135	7.658E+00		1.110E+01	1.912E+01	1.992E+00	0.400
I-135	1.671E+20		4.494E+20	Half-Life too short		
CS-136	3.965E+00		9.949E+00	1.770E+01	1.592E+00	0.224
BA-137M	-6.711E-01		2.185E+00	3.343E+00	2.720E-01	-0.201
CS-137	-7.089E-01		2.309E+00	3.532E+00	2.879E-01	-0.201
CE-139	1.759E+00		2.522E+00	4.391E+00	3.751E-01	0.401
BA-140	-1.093E+01		2.884E+01	4.442E+01	1.503E+01	-0.246
LA-140	-2.581E+00		9.974E+00	1.556E+01	1.343E+00	-0.166
CE-141	-2.182E+00		5.965E+00	9.690E+00	8.342E-01	-0.225
CE-143	-2.745E-01		3.368E-01	Half-Life too short		
CE-144	3.492E+00		1.537E+01	2.621E+01	3.985E+00	0.133
PM-144	9.639E-01		2.655E+00	4.505E+00	3.738E-01	0.214
PR-144	7.354E+01		1.997E+02	3.392E+02	2.812E+01	0.217

Sample ID : G265922001 Acquisition date : 26-NOV-2010 04:08:35

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
PM-146	-1.963E+00		3.154E+00	4.853E+00	4.976E-01	-0.404
ND-147	4.443E+01		6.566E+01	1.179E+02	1.742E+01	0.377
PM-149	-2.154E-02		5.435E-02	Half-Life too short		
EU-152	1.644E+00		7.377E+00	1.198E+01	1.097E+00	0.137
GD-153	-2.031E+00		6.678E+00	1.114E+01	1.081E+00	-0.182
EU-154	-3.122E+00		6.236E+00	8.643E+00	9.746E-01	-0.361
EU-155	-4.210E+00		7.877E+00	1.282E+01	1.189E+00	-0.328
TA-182	-1.202E+01		1.052E+01	1.185E+01	9.802E-01	-1.015
IR-192	-2.586E+00		3.104E+00	4.449E+00	3.980E-01	-0.581
HG-203	-2.068E+00		3.355E+00	5.016E+00	4.704E-01	-0.412
BI-207	-1.027E-01		2.819E+00	4.609E+00	3.951E-01	-0.022
TL-208	-2.194E+00		3.021E+00	4.619E+00	4.127E-01	-0.475
PB-210	-2.166E+02		2.967E+02	4.438E+02	4.247E+01	-0.488
BI-211	-1.230E+01		1.169E+03	2.651E+01	2.517E+03	-0.464
PB-211	-3.363E+00		3.233E+02	8.435E+01	8.010E+03	-0.040
BI-212	1.728E+01		3.741E+01	6.433E+01	7.924E+00	0.269
PB-212	3.139E+00	+	6.987E+00	8.943E+00	9.040E-01	0.351
BI-214	3.181E+00		6.658E+00	1.108E+01	1.087E+00	0.287
PB-214	-3.908E+00		6.239E+00	9.804E+00	1.034E+00	-0.399
RN-219	9.524E-01		9.478E+01	4.788E+01	4.547E+03	0.020
RA-223	5.077E+00		4.850E+02	8.416E+01	7.992E+03	0.060
RA-224	7.033E+00		5.164E+01	7.598E+01	6.854E+00	0.093
RA-226	-3.159E+01		6.475E+01	1.038E+02	7.000E+01	-0.304
AC-227	7.843E+00		1.979E+01	3.316E+01	4.110E+00	0.237
TH-227	7.843E+00		7.450E+02	3.316E+01	3.149E+03	0.237
AC-228	1.636E-01		1.108E+01	1.765E+01	2.086E+00	0.009
RA-228	1.636E-01		1.108E+01	1.765E+01	2.086E+00	0.009
TH-228	3.139E+00	+	6.987E+00	8.943E+00	9.040E-01	0.351
TH-229	-1.721E+00		4.009E+01	6.566E+01	5.721E+00	-0.026
TH-230	5.848E+02		8.873E+02	1.367E+03	1.236E+02	0.428
PA-231	5.229E+00		1.095E+02	1.765E+02	2.630E+01	0.030
TH-231	1.202E+00		3.198E+01	5.500E+01	1.008E+01	0.022
PA-233	3.045E+00		5.207E+00	8.806E+00	8.104E-01	0.346
PA-234	2.238E+00		1.889E+01	3.211E+01	6.064E+00	0.070
PA-234M	4.534E+01		3.280E+02	5.442E+02	5.491E+01	0.083
TH-234	1.082E+02	+	1.318E+02	2.025E+02	3.740E+01	0.534
U-235	2.054E+01		1.866E+01	2.965E+01	5.000E+00	0.693
NP-237	3.045E+00		5.211E+00	8.806E+00	9.884E-01	0.346
U-238	1.082E+02	+	1.318E+02	2.025E+02	3.740E+01	0.534
NP-239	8.413E+00		2.062E+01	3.585E+01	3.127E+00	0.235
AM-241	7.346E+00		1.185E+01	1.840E+01	1.710E+00	0.399
CM-247	7.175E-01		2.606E+00	4.517E+00	3.620E-01	0.159
CF-249	-5.893E-01		2.621E+00	4.301E+00	3.451E-01	-0.137
CF-251	-4.072E+00		1.096E+01	1.759E+01	1.514E+00	-0.231
ANH-511	-7.963E+00		3.998E+00	6.948E+00	5.773E-01	-1.146

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G265922001            *
* Acquisition date : 26-NOV-2010 04:08:35 Detector SN#    :                 *
* Detector ID      : GAM11                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:00.64     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      :  2-NOV-2010 12:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G265922001           Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 16-NOV-2010 15:19:58 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act Error	DLC (pCi/LITER)	TPU
TH-232	1.540E+03	1.175E+04	1.011E+03	5.996E+03

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L Act error	DLC (pCi/LITER)	TPU	
BE-7	1.123E+01	2.260E+01	2.044E+01	1.153E+01	NOT IDENT.
NA-22	-1.397E+00	2.243E+00	1.535E+00	1.144E+00	NOT IDENT.
NA-24	-3.102E+11	6.067E+11	0.000E+00	3.095E+11	SHORT HLIF
K-40	2.720E-01	3.435E+01	2.660E+01	1.753E+01	NOT IDENT.
SC-46	1.048E+00	3.055E+00	2.738E+00	1.559E+00	NOT IDENT.
V-48	1.020E+00	5.574E+00	4.899E+00	2.844E+00	NOT IDENT.
CR-51	-5.287E+00	3.482E+01	2.776E+01	1.777E+01	NOT IDENT.
MN-54	6.958E-01	2.209E+00	1.992E+00	1.127E+00	NOT IDENT.
CO-56	-1.721E+00	2.719E+00	2.079E+00	1.387E+00	NOT IDENT.
CO-57	5.940E-01	1.905E+00	1.677E+00	9.717E-01	NOT IDENT.
CO-58	1.751E-02	2.874E+00	2.475E+00	1.466E+00	NOT IDENT.
FE-59	3.766E+00	5.512E+00	5.265E+00	2.812E+00	NOT IDENT.
CO-60	-1.683E-01	2.744E+00	2.234E+00	1.400E+00	NOT IDENT.
ZN-65	1.073E+00	5.653E+00	4.896E+00	2.884E+00	NOT IDENT.
SE-75	-5.057E-01	3.089E+00	2.491E+00	1.576E+00	NOT IDENT.
SR-85	-1.014E+01	4.114E+00	2.565E+00	2.099E+00	NOT IDENT.
Y-88	-1.647E+00	3.020E+00	2.139E+00	1.541E+00	NOT IDENT.
Y-91	5.446E+02	1.522E+03	1.344E+03	7.764E+02	NOT IDENT.
NB-94	1.089E+00	2.077E+00	1.857E+00	1.060E+00	NOT IDENT.
NB-95	4.077E+00	3.389E+00	3.219E+00	1.729E+00	NOT IDENT.
NB-95M	1.954E+00	1.028E+01	7.787E+00	5.247E+00	NOT IDENT.
ZR-95	1.906E-01	3.922E+00	3.246E+00	2.001E+00	NOT IDENT.
MO-99	1.151E+03	6.472E+03	0.000E+00	3.302E+03	SHORT HLIF
TC-99M	5.570E+28	8.392E+28	0.000E+00	0.000E+00	SHORT HLIF
RU-103	-4.319E+00	3.673E+00	2.615E+00	1.874E+00	NOT IDENT.
RH-106	-1.336E+01	2.226E+01	1.673E+01	1.136E+01	NOT IDENT.

RU-106	-1.336E+01	2.222E+01	1.673E+01	1.134E+01	NOT IDENT.
AG-108M	-4.941E-01	1.972E+00	1.632E+00	1.006E+00	NOT IDENT.
CD-109	-3.109E+01	5.549E+01	4.664E+01	2.831E+01	NOT IDENT.
AG-110M	5.894E-01	2.424E+00	2.081E+00	1.237E+00	NOT IDENT.
SN-113	-7.964E-01	2.976E+00	2.478E+00	1.518E+00	NOT IDENT.
CD-115	-9.567E+03	1.205E+04	0.000E+00	6.148E+03	SHORT HLIF
SN-117M	3.981E+00	6.589E+00	5.833E+00	3.362E+00	NOT IDENT.
TE-123M	1.580E+00	2.368E+00	2.103E+00	1.208E+00	NOT IDENT.
SB-124	1.687E+00	6.610E+00	5.948E+00	3.373E+00	NOT IDENT.
SB-125	-2.501E+00	6.447E+00	5.262E+00	3.289E+00	NOT IDENT.
TE-125M	2.352E+02	8.199E+02	7.232E+02	4.183E+02	NOT IDENT.
I-126	-1.412E+00	2.118E+01	1.731E+01	1.081E+01	NOT IDENT.
SB-126	4.347E+00	1.483E+01	1.279E+01	7.567E+00	NOT IDENT.
SN-126	-2.389E+00	5.496E+00	4.667E+00	2.804E+00	FAIL ABUN
SB-127	-1.363E+02	3.966E+02	3.072E+02	2.024E+02	NOT IDENT.
I-131	-1.184E+00	1.722E+01	1.478E+01	8.786E+00	NOT IDENT.
TE-132	2.264E+02	3.239E+02	2.849E+02	1.653E+02	NOT IDENT.
BA-133	9.642E-01	3.102E+00	2.762E+00	1.583E+00	NOT IDENT.
I-133	4.003E+07	4.017E+08	0.000E+00	2.050E+08	SHORT HLIF
CS-134	1.920E+00	3.036E+00	2.513E+00	1.549E+00	FAIL ABUN
CS-135	7.658E+00	1.087E+01	9.568E+00	5.548E+00	NOT IDENT.
I-135	1.671E+26	8.809E+26	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.965E+00	9.750E+00	8.853E+00	4.975E+00	NOT IDENT.
BA-137M	-6.711E-01	2.142E+00	1.672E+00	1.093E+00	NOT IDENT.
CS-137	-7.089E-01	2.262E+00	1.767E+00	1.154E+00	NOT IDENT.
CE-139	1.759E+00	2.472E+00	2.197E+00	1.261E+00	NOT IDENT.
BA-140	-1.093E+01	2.826E+01	2.222E+01	1.442E+01	NOT IDENT.
LA-140	-2.581E+00	9.775E+00	7.785E+00	4.987E+00	NOT IDENT.
CE-141	-2.182E+00	5.845E+00	4.848E+00	2.982E+00	NOT IDENT.
CE-143	-2.745E+05	6.602E+05	0.000E+00	3.368E+05	SHORT HLIF
CE-144	3.492E+00	1.506E+01	1.312E+01	7.683E+00	NOT IDENT.
PM-144	9.639E-01	2.602E+00	2.254E+00	1.328E+00	NOT IDENT.
PR-144	7.354E+01	1.958E+02	1.697E+02	9.987E+01	NOT IDENT.
PM-146	-1.963E+00	3.091E+00	2.428E+00	1.577E+00	NOT IDENT.
ND-147	4.443E+01	6.435E+01	5.897E+01	3.283E+01	NOT IDENT.
PM-149	-2.154E+04	1.065E+05	0.000E+00	5.435E+04	SHORT HLIF
EU-152	1.644E+00	7.229E+00	5.995E+00	3.688E+00	NOT IDENT.
GD-153	-2.031E+00	6.545E+00	5.571E+00	3.339E+00	NOT IDENT.
EU-154	-3.122E+00	6.111E+00	4.324E+00	3.118E+00	NOT IDENT.
EU-155	-4.210E+00	7.720E+00	6.415E+00	3.939E+00	NOT IDENT.
TA-182	-1.202E+01	1.031E+01	5.926E+00	5.260E+00	NOT IDENT.
IR-192	-2.586E+00	3.041E+00	2.226E+00	1.552E+00	NOT IDENT.
HG-203	-2.068E+00	3.288E+00	2.510E+00	1.678E+00	NOT IDENT.
BI-207	-1.027E-01	2.762E+00	2.306E+00	1.409E+00	NOT IDENT.
TL-208	-2.194E+00	2.961E+00	2.311E+00	1.511E+00	NOT IDENT.
PB-210	-2.166E+02	2.908E+02	2.220E+02	1.484E+02	NOT IDENT.
BI-211	-1.230E+01	1.145E+03	1.326E+01	5.843E+02	NOT IDENT.
PB-211	-3.363E+00	3.168E+02	4.220E+01	1.617E+02	NOT IDENT.
BI-212	1.728E+01	3.666E+01	3.218E+01	1.870E+01	NOT IDENT.
PB-212	3.139E+00	6.847E+00	4.474E+00	3.493E+00	FAIL ABUN
BI-214	3.181E+00	6.525E+00	5.545E+00	3.329E+00	NOT IDENT.
PB-214	-3.908E+00	6.115E+00	4.905E+00	3.120E+00	NOT IDENT.
RN-219	9.524E-01	9.288E+01	2.395E+01	4.739E+01	NOT IDENT.
RA-223	5.077E+00	4.753E+02	4.211E+01	2.425E+02	NOT IDENT.
RA-224	7.033E+00	5.061E+01	3.801E+01	2.582E+01	NOT IDENT.
RA-226	-3.159E+01	6.345E+01	5.195E+01	3.237E+01	NOT IDENT.
AC-227	7.843E+00	1.940E+01	1.659E+01	9.896E+00	NOT IDENT.
TH-227	7.843E+00	7.301E+02	1.659E+01	3.725E+02	NOT IDENT.
AC-228	1.636E-01	1.086E+01	8.829E+00	5.540E+00	NOT IDENT.
RA-228	1.636E-01	1.086E+01	8.829E+00	5.540E+00	NOT IDENT.
TH-228	3.139E+00	6.847E+00	4.474E+00	3.493E+00	FAIL ABUN
TH-229	-1.721E+00	3.929E+01	3.285E+01	2.005E+01	NOT IDENT.
TH-230	5.848E+02	8.695E+02	6.837E+02	4.436E+02	NOT IDENT.
PA-231	5.229E+00	1.073E+02	8.829E+01	5.474E+01	NOT IDENT.
TH-231	1.202E+00	3.134E+01	2.751E+01	1.599E+01	NOT IDENT.
PA-233	3.045E+00	5.103E+00	4.405E+00	2.604E+00	NOT IDENT.
PA-234	2.238E+00	1.851E+01	1.607E+01	9.444E+00	NOT IDENT.
PA-234M	4.534E+01	3.215E+02	2.723E+02	1.640E+02	NOT IDENT.
TH-234	1.082E+02	1.292E+02	1.013E+02	6.590E+01	FAIL ABUN
U-235	2.054E+01	1.828E+01	1.483E+01	9.329E+00	NOT IDENT.
NP-237	3.045E+00	5.107E+00	4.405E+00	2.606E+00	NOT IDENT.
U-238	1.082E+02	1.292E+02	1.013E+02	6.590E+01	FAIL ABUN
NP-239	8.413E+00	2.021E+01	1.794E+01	1.031E+01	NOT IDENT.
AM-241	7.346E+00	1.161E+01	9.206E+00	5.925E+00	NOT IDENT.
CM-247	7.175E-01	2.554E+00	2.260E+00	1.303E+00	NOT IDENT.
CF-249	-5.893E-01	2.569E+00	2.152E+00	1.311E+00	NOT IDENT.
CF-251	-4.072E+00	1.074E+01	8.802E+00	5.481E+00	NOT IDENT.
ANH-511	-7.963E+00	3.918E+00	3.476E+00	1.999E+00	NOT IDENT.

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

ENERGY	MDA COUNTS
46.54	69.1504
49.72	53.8385
57.36	0.0000
59.54	58.2126
63.29	69.1589
63.29	69.1589
63.81	69.2568
64.28	69.3453
67.67	70.7771
67.75	70.7919
69.67	69.5277
70.83	77.8418
72.81	92.8975
72.87	92.9111
72.87	92.9111
74.82	68.7905
74.82	68.7905
74.82	68.7905
74.97	68.8157
77.11	91.4059
77.11	91.4059
77.11	91.4059
79.69	75.8088
79.69	75.8088
80.12	64.6886
80.19	64.6993
81.00	73.5470
81.07	73.5587
83.79	83.6349
84.21	89.5743
85.43	83.1037
86.55	79.9446
86.94	92.6469
87.57	100.3657
88.03	97.9340
88.47	88.7321
89.96	136.4948
91.11	111.3348
92.59	90.3708
92.59	90.3708
93.35	87.0996
94.56	130.1233
94.65	155.8342
94.67	155.8407
94.67	155.8407
97.43	88.6969
98.43	81.9740
98.43	81.9740
98.44	81.9755
99.53	75.2369
100.11	70.9955
103.18	72.2978
103.37	72.3248
105.31	82.2189
106.12	80.5945
109.28	78.4350
111.00	85.7601
111.76	80.5688
116.30	74.0958
116.74	73.2606
121.12	69.3281
121.78	70.3094
122.06	68.5399
123.07	87.6314
131.20	76.0183
133.52	72.6304
136.00	70.6145

136.47	84.5238
140.51	0.0000
140.51	0.0000
140.88	85.5808
143.76	58.8677
144.24	64.5219
145.44	89.9346
152.43	84.2578
153.25	84.3601
154.21	74.0375
156.02	91.3643
158.56	72.5968
159.00	74.5540
162.66	93.1981
163.33	82.7080
165.86	73.3498
176.60	93.0344
177.52	92.1679
181.07	0.0000
185.72	63.4258
186.21	69.4154
193.51	70.0563
205.31	71.0674
210.85	63.3573
222.11	54.8611
227.38	49.9775
228.16	45.8521
228.18	45.8530
235.69	55.1585
235.96	53.5981
235.96	53.5981
238.63	56.9125
238.63	56.9125
240.99	57.0547
242.00	57.1157
244.70	51.9738
252.40	48.1110
252.80	59.8953
256.23	51.5176
256.23	51.5176
260.90	0.0000
264.66	41.1280
268.22	40.1850
269.46	44.5827
271.23	49.0164
273.65	48.0382
276.40	43.7858
277.37	44.9222
277.60	41.6437
278.00	46.0452
279.20	58.1704
279.54	58.1887
283.69	47.3934
284.31	52.9346
285.41	59.6129
285.90	0.0000
287.50	43.1371
293.27	0.0000
295.22	53.4668
295.96	37.8979
299.98	50.3394
299.98	50.3394
300.09	50.3448
300.09	50.3448
300.13	50.3467
300.13	50.3467
301.36	36.9612
302.85	48.2254
304.50	52.7880
304.50	52.7880
304.85	53.9277
308.46	54.0996
311.90	42.9564
311.90	42.9564
316.51	57.8813
319.41	39.8215
320.08	45.5355
323.87	49.1081

328.76	49.3093
333.37	36.8353
334.37	32.2576
334.37	32.2576
338.28	30.0493
338.32	30.0503
338.32	30.0503
340.48	42.8385
340.48	42.8385
340.55	42.8407
344.28	38.3248
351.06	44.6624
351.93	44.6927
356.01	41.3194
364.49	38.9371
366.42	0.0000
383.85	23.3455
388.16	32.4272
388.63	33.3393
391.70	31.6077
400.66	31.8117
401.81	33.6572
402.40	31.8512
404.85	35.5532
414.70	25.7018
423.72	33.2512
427.09	31.4755
427.87	36.1233
433.94	30.6913
453.88	38.6346
463.37	28.4415
468.07	31.3791
473.00	28.6148
476.78	14.3410
477.60	20.0877
487.02	28.8634
492.35	0.0000
497.08	44.5281
511.00	25.3769
514.00	90.9310
527.90	0.0000
529.87	0.0000
531.02	18.7605
537.26	25.7635
546.56	0.0000
563.25	22.1161
569.33	17.1458
569.50	17.1473
569.70	17.1494
583.19	27.4342
600.60	30.7608
602.73	31.8202
604.72	30.8258
609.32	23.6886
610.33	23.7009
614.28	28.9109
618.01	22.7587
621.93	26.9498
621.93	26.9498
633.25	16.6782
635.95	15.6569
636.99	22.9749
645.85	24.1237
657.76	20.0431
661.66	19.0234
661.66	19.0234
664.57	0.0000
666.33	18.0065
666.50	20.1266
677.62	22.3618
685.70	20.3087
695.00	24.6895
696.49	23.6321
696.51	23.6321
697.00	21.4886
702.65	15.0809
706.68	24.8214
720.70	16.2897

721.93	0.0000
722.78	16.3046
722.91	16.3055
723.31	22.8322
724.19	31.5426
727.33	19.6051
733.00	9.8270
735.93	14.2128
739.50	0.0000
747.24	19.7765
753.82	14.3235
756.73	9.9286
763.94	26.5576
765.80	16.6113
766.42	17.7236
777.92	0.0000
778.90	20.0440
783.70	18.9683
785.37	17.8647
795.86	10.7651
801.95	14.6143
810.76	18.9538
815.77	18.0874
818.51	16.2967
832.01	15.4743
834.85	13.6688
836.80	0.0000
846.77	20.1416
856.80	19.3009
860.56	11.9656
871.09	18.4829
873.19	17.5727
875.33	0.0000
880.51	18.5488
883.24	14.8543
884.68	12.0755
889.28	17.6794
898.04	14.9367
911.20	13.1329
911.20	13.1329
926.36	12.2624
937.49	9.4705
944.13	13.2901
946.00	13.2990
949.00	11.4111
964.08	17.2077
968.97	15.3219
968.97	15.3219
983.53	9.6245
996.26	15.4664
1001.03	9.6821
1004.73	15.5105
1037.84	15.6828
1038.76	0.0000
1048.07	9.8345
1050.41	7.8734
1050.41	7.8734
1063.66	9.8843
1085.87	15.9273
1099.25	6.9976
1112.07	14.0513
1115.54	14.0663
1120.29	15.0930
1120.55	16.1008
1121.30	16.1039
1131.51	0.0000
1173.23	11.2465
1189.05	13.3536
1204.77	14.4464
1221.41	15.5530
1231.02	9.3573
1235.36	5.2048
1238.28	7.2929
1260.41	0.0000
1274.44	9.4720
1274.54	10.5244
1291.59	11.6311
1298.22	0.0000

1312.11	10.6328
1332.49	11.7600
1365.19	5.3916
1368.63	0.0000
1384.29	10.8369
1408.01	5.4514
1457.56	0.0000
1460.82	13.8092
1489.16	8.3430
1596.21	9.5056
1620.50	6.6904
1678.03	0.0000
1690.97	5.8245
1764.49	11.8325
1770.23	16.7828
1771.35	10.8617
1791.20	0.0000
1836.06	9.0055

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID     : 1048163                  SAMPLE ID  : G265922001         *
*   ANALYST      : KXG3                     DETECTOR   : GAM11              *
*   SAMPLE DATE  :  2-NOV-2010 12:00:00.00  COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE: 26-NOV-2010 04:08:35.57  SAMPLE ALQT:    2.000 LITER     *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/LITER ) : 1.751E+01
GROSS GAMMA ERROR  (pCi/LITER )   : 1.067E+01
GROSS GAMMA MDA    (pCi/LITER )   : 2.159E+01
GROSS GAMMA DLC    (pCi/LITER )   : 9.980E+00
```

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 06:32:08.45

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877001.CNF;1
Sample date      : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 04:31:25
Sample ID        : G266877001           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM09                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.59  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	62.82*	22	116	1.21	125.76	121	16	3.05E-03	88.3	2.09E+00
2	3	65.78*	35	109	1.38	131.68	121	16	4.86E-03	61.2	
3	0	91.76*	27	196	1.18	183.65	178	13	3.77E-03	118.6	
4	0	198.58	57	120	1.01	397.27	392	11	7.85E-03	40.5	
5	0	608.72*	37	17	1.32	1217.47	1212	10	5.17E-03	31.7	
6	0	931.57	17	6	3.70	1863.15	1857	11	2.29E-03	36.9	

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

VMS Nuclide Identification Report V3.1 Generated 26-NOV-2010 06:32:10

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : KXG3
Sample date : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 04:31:25
Sample ID : G266877001 Sample quantity : 2.0000 LITER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA9 Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.59 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
TH-232	+	63.81	*	1.953E+03	1.541E+04	4.001E+03	3.078E+04	0.488
		140.88		3.907E+03	1.258E+04	2.030E+04	1.802E+03	0.192
TH-234	+	63.29	*	1.372E+02	2.437E+02	2.895E+02	5.326E+01	0.474
	+	92.59		6.045E+01	1.440E+02	1.105E+02	2.477E+01	0.547
U-238	+	63.29	*	1.372E+02	2.437E+02	2.895E+02	5.326E+01	0.474
	+	92.59		6.045E+01	1.435E+02	1.105E+02	1.044E+01	0.547

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7		477.60	*	-2.840E+00	2.658E+01	4.415E+01	4.071E+00	-0.064
NA-22		1274.54	*	-3.042E+00	3.337E+00	4.462E+00	3.819E-01	-0.682
NA-24		1368.63	*	-6.664E+01	3.337E+00	Half-Life too short		
K-40		1460.82	*	-1.284E+01	4.111E+01	6.633E+01	5.966E+00	-0.194
SC-46		889.28	*	-6.259E-02	3.599E+00	5.789E+00	5.688E-01	-0.011
		1120.55		3.795E+00	3.462E+00	6.718E+00	5.862E-01	0.565
V-48		944.13		-9.207E+00	7.061E+01	1.106E+02	1.076E+01	-0.083
		983.53	*	-1.305E+00	4.912E+00	7.820E+00	7.479E-01	-0.167
		1312.11		-2.459E+00	4.998E+00	7.110E+00	6.133E-01	-0.346
CR-51		320.08	*	3.895E+01	3.694E+01	6.565E+01	6.259E+00	0.593
MN-54		834.85	*	4.972E-02	3.088E+00	5.017E+00	4.726E-01	0.010
CO-56		846.77	*	-1.262E+00	3.831E+00	5.908E+00	5.619E-01	-0.214
		1037.84		-1.503E-01	2.304E+01	3.841E+01	3.726E+00	-0.004
		1238.28		2.496E+00	5.940E+00	1.045E+01	9.113E-01	0.239
		1771.35		-5.731E-02	2.404E+01	3.996E+01	3.384E+00	-0.001
CO-57		122.06	*	-3.098E+00	2.642E+00	3.755E+00	3.409E-01	-0.825
		136.47		-1.838E+01	2.533E+01	3.794E+01	3.606E+00	-0.485
CO-58		810.76	*	-2.647E+00	3.242E+00	4.510E+00	4.176E-01	-0.587
FE-59		1099.25	*	-6.869E-01	6.041E+00	9.820E+00	9.391E-01	-0.070
		1291.59		9.567E-01	9.004E+00	1.509E+01	1.472E+00	0.063
CO-60		1173.23		-2.796E+00	2.718E+00	3.408E+00	2.829E-01	-0.820
		1332.49	*	1.324E+00	2.835E+00	5.101E+00	4.420E-01	0.260
ZN-65		1115.54	*	-1.979E+00	6.871E+00	1.088E+01	9.545E-01	-0.182

Sample ID : G266877001 Acquisition date : 26-NOV-2010 04:31:25

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
SE-75		121.12		3.547E+00	1.339E+01	2.175E+01	2.485E+00	0.163
		136.00		-2.177E+00	4.761E+00	7.283E+00	6.517E-01	-0.299
		264.66	*	-1.777E+00	4.615E+00	7.363E+00	6.874E-01	-0.241
		279.54		5.960E-01	1.047E+01	1.729E+01	1.657E+00	0.034
		400.66		1.892E+01	2.357E+01	4.111E+01	4.490E+00	0.460
SR-85		514.00	*	-9.801E+00	4.713E+00	6.421E+00	5.489E-01	-1.526
Y-88		898.04		-2.416E+00	3.233E+00	4.440E+00	4.407E-01	-0.544
		1836.06	*	-2.501E-01	4.006E+00	6.557E+00	5.462E-01	-0.038
Y-91		1204.77	*	-2.735E+02	1.172E+03	1.830E+03	1.535E+02	-0.149
NB-94		702.65	*	4.715E-01	2.911E+00	4.877E+00	4.105E-01	0.097
		871.09		-9.150E-01	2.898E+00	4.431E+00	4.294E-01	-0.207
NB-95		765.80	*	1.964E+00	3.096E+00	5.529E+00	4.921E-01	0.355
NB-95M		235.69	*	-4.963E-01	1.233E+01	2.039E+01	2.132E+00	-0.024
ZR-95		724.19		3.398E+00	6.497E+00	1.149E+01	1.070E+00	0.296
		756.73	*	3.976E+00	5.101E+00	9.375E+00	9.107E-01	0.424
MO-99		140.51		-3.941E+01	3.098E+03	4.789E+03	1.142E+03	-0.008
		181.07		-2.581E+03	2.266E+03	3.446E+03	6.550E+02	-0.749
		366.42		-3.898E+02	9.895E+03	1.593E+04	1.385E+03	-0.024
		739.50	*	1.938E+01	1.156E+03	1.895E+03	2.995E+02	0.010
		777.92		-2.336E+03	3.264E+03	4.652E+03	4.184E+02	-0.502
TC-99M		140.51	*	-2.849E+11	3.264E+03	Half-Life too short		
RU-103		497.08	*	-6.877E-01	3.401E+00	5.569E+00	7.755E-01	-0.123
		610.33		1.303E+02	8.612E+01	1.457E+02	2.359E+01	0.895
RH-106		621.93	*	-9.017E+00	2.610E+01	4.109E+01	5.359E+00	-0.219
		1050.41		1.004E+02	1.675E+02	3.094E+02	2.848E+01	0.325
RU-106		621.93	*	-9.017E+00	2.609E+01	4.109E+01	3.405E+00	-0.219
		1050.41		1.004E+02	1.675E+02	3.094E+02	2.848E+01	0.325
AG-108M		433.94	*	3.139E+00	2.885E+00	5.148E+00	4.519E-01	0.610
		614.28		-1.884E+00	3.344E+00	4.552E+00	3.920E-01	-0.414
		722.91		1.134E+00	2.762E+00	4.801E+00	4.249E-01	0.236
CD-109		88.03	*	6.332E+01	9.550E+01	1.452E+02	1.432E+01	0.436
AG-110M		657.76	*	-2.249E-01	2.933E+00	4.784E+00	4.015E-01	-0.047
		677.62		-4.653E+00	2.396E+01	3.822E+01	3.243E+00	-0.122
		706.68		5.448E+00	1.932E+01	3.278E+01	2.852E+00	0.166
		763.94		1.182E+00	1.190E+01	1.971E+01	1.797E+00	0.060
		884.68		-3.487E+00	4.240E+00	5.819E+00	5.840E-01	-0.599
		937.49		-1.025E+00	8.246E+00	1.293E+01	1.297E+00	-0.079
		1384.29		-1.476E+01	1.329E+01	1.581E+01	1.414E+00	-0.934
SN-113		391.70	*	-2.602E+00	4.188E+00	6.250E+00	5.404E-01	-0.416
CD-115		260.90		-3.320E+03	1.639E+04	2.657E+04	2.471E+03	-0.125
		492.35		-1.210E+03	4.134E+03	6.715E+03	5.745E+02	-0.180
		527.90	*	-2.683E+02	1.089E+03	1.761E+03	1.503E+02	-0.152
SN-117M		156.02		-6.755E+01	2.377E+02	3.947E+02	3.531E+01	-0.171
		158.56	*	-2.931E+00	5.782E+00	9.445E+00	8.470E-01	-0.310
TE-123M		159.00	*	-1.418E+00	2.931E+00	4.795E+00	4.326E-01	-0.296
SB-124		602.73		4.034E-01	3.559E+00	5.228E+00	4.371E-01	0.077
		645.85		4.239E+00	3.746E+01	6.286E+01	5.470E+00	0.067
		722.78		1.259E+01	2.810E+01	4.908E+01	4.304E+00	0.256
		1690.97	*	-1.395E+00	6.645E+00	1.047E+01	9.393E-01	-0.133

Sample ID : G266877001 Acquisition date : 26-NOV-2010 04:31:25

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
SB-125		427.87	*	3.600E+00	8.077E+00	1.363E+01	1.179E+00	0.264
		463.37		2.019E+01	2.075E+01	3.867E+01	3.556E+00	0.522
		600.60		-4.474E+00	1.535E+01	2.453E+01	2.213E+00	-0.182
		635.95		1.166E+01	2.144E+01	3.806E+01	3.409E+00	0.306
TE-125M		109.28	*	5.180E+02	1.140E+03	1.877E+03	2.013E+02	0.276
I-126		388.63		-7.342E+00	1.553E+01	2.361E+01	1.987E+00	-0.311
		666.33	*	-3.801E+00	1.789E+01	2.855E+01	2.323E+00	-0.133
		753.82		-1.246E+02	1.534E+02	2.173E+02	1.914E+01	-0.573
SB-126		414.70		-1.763E-01	6.969E+00	1.115E+01	9.422E-01	-0.016
		666.50		-1.307E+00	6.150E+00	9.814E+00	7.987E-01	-0.133
		695.00		2.724E+00	6.710E+00	1.161E+01	9.700E-01	0.235
		697.00		7.818E+00	2.156E+01	3.720E+01	3.115E+00	0.210
		720.70	*	6.969E+00	1.106E+01	1.982E+01	1.696E+00	0.352
		856.80		-2.210E+01	3.655E+01	5.236E+01	5.018E+00	-0.422
SN-126	+	64.28		5.289E+01	9.375E+01	1.306E+02	1.992E+01	0.405
		86.94		1.820E+01	4.018E+01	5.911E+01	2.460E+01	0.308
		87.57	*	5.724E+00	9.227E+00	1.400E+01	1.376E+00	0.409
SB-127		252.40		1.054E+02	4.539E+02	7.609E+02	3.174E+02	0.139
		473.00		-3.894E+01	1.510E+02	2.464E+02	3.171E+01	-0.158
		685.70	*	-1.850E+01	1.258E+02	2.025E+02	2.287E+01	-0.091
		783.70		1.667E+02	3.110E+02	5.454E+02	6.981E+01	0.306
I-131		80.19		5.384E+02	5.318E+02	9.153E+02	8.592E+01	0.588
		284.31		2.085E+01	1.404E+02	2.336E+02	2.262E+01	0.089
		364.49	*	5.540E+00	1.011E+01	1.740E+01	1.597E+00	0.318
		636.99		2.339E+01	1.313E+02	2.223E+02	1.944E+01	0.105
TE-132		49.72		-1.589E+03	3.630E+03	5.750E+03	7.033E+02	-0.276
		111.76		1.557E+03	4.325E+03	7.076E+03	8.063E+02	0.220
		116.30		3.466E+01	3.648E+03	5.817E+03	6.648E+02	0.006
		228.16	*	1.606E+01	7.989E+01	1.346E+02	2.192E+01	0.119
BA-133		81.00		7.340E-01	1.025E+01	1.666E+01	2.657E+00	0.044
		276.40		2.555E+00	3.396E+01	5.619E+01	8.162E+00	0.045
		302.85		-1.736E+00	1.259E+01	2.031E+01	2.734E+00	-0.085
		356.01	*	-6.990E-01	3.857E+00	6.126E+00	8.011E-01	-0.114
		383.85		-6.619E+00	2.703E+01	4.236E+01	5.222E+00	-0.156
I-133		529.87	*	-2.423E-01	2.703E+01	Half-Life too short		
		875.33		-1.395E+01	2.703E+01	Half-Life too short		
		1298.22		3.472E+00	2.703E+01	Half-Life too short		
CS-134		563.25		-1.173E+00	2.816E+01	4.662E+01	3.990E+00	-0.025
		569.33		-8.531E+00	1.573E+01	2.423E+01	2.079E+00	-0.352
		604.72		1.513E+00	2.716E+00	4.335E+00	3.631E-01	0.349
		795.86	*	3.780E+00	3.541E+00	6.652E+00	6.111E-01	0.568
		801.95		9.912E+00	3.481E+01	5.887E+01	5.428E+00	0.168
		1365.19		-1.012E+01	9.430E+01	1.503E+02	1.366E+01	-0.067
CS-135		268.22	*	5.143E+00	1.536E+01	2.596E+01	2.740E+00	0.198
I-135		546.56		-3.092E+12	1.536E+01	Half-Life too short		
		836.80		7.347E+12	1.536E+01	Half-Life too short		
		1038.76		5.398E+12	1.536E+01	Half-Life too short		
		1131.51		-1.076E+11	1.536E+01	Half-Life too short		
		1260.41	*	1.379E+11	1.536E+01	Half-Life too short		

Sample ID : G266877001 Acquisition date : 26-NOV-2010 04:31:25

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		1457.56		3.713E+12	1.536E+01	Half-Life too short		
		1678.03		2.512E+12	1.536E+01	Half-Life too short		
		1791.20		3.698E+12	1.536E+01	Half-Life too short		
CS-136		153.25		4.209E+01	9.053E+01	1.572E+02	1.655E+01	0.268
		176.60		-6.191E-01	5.082E+01	8.538E+01	8.467E+00	-0.007
		273.65		-4.685E+01	5.053E+01	7.607E+01	7.585E+00	-0.616
		340.55		-2.452E+00	1.340E+01	2.137E+01	1.981E+00	-0.115
		818.51		-5.852E-01	5.614E+00	8.936E+00	8.316E-01	-0.065
		1048.07	*	2.899E+00	7.223E+00	1.293E+01	1.236E+00	0.224
		1235.36		1.788E+01	4.184E+01	7.339E+01	8.549E+00	0.244
BA-137M		661.66	*	5.935E-01	2.968E+00	5.019E+00	4.066E-01	0.118
CS-137		661.66	*	6.270E-01	3.135E+00	5.302E+00	4.304E-01	0.118
CE-139		165.86	*	2.264E-01	3.048E+00	5.164E+00	4.673E-01	0.044
BA-140		162.66		2.088E+01	8.757E+01	1.499E+02	1.434E+01	0.139
		304.85		1.017E+02	1.332E+02	2.274E+02	6.695E+01	0.447
		423.72		-2.358E+00	1.802E+02	2.883E+02	9.474E+01	-0.008
		537.26	*	-4.457E+00	2.285E+01	3.715E+01	1.259E+01	-0.120
LA-140		328.76		-1.176E+00	2.997E+01	4.861E+01	4.626E+00	-0.024
		487.02		8.582E+00	1.279E+01	2.296E+01	2.088E+00	0.374
		815.77		6.405E+00	2.613E+01	4.415E+01	4.514E+00	0.145
		1596.21	*	5.399E+00	7.706E+00	1.437E+01	1.253E+00	0.376
CE-141		145.44	*	3.996E+00	6.293E+00	1.107E+01	1.000E+00	0.361
CE-143		57.36		-3.737E-02	6.293E+00	Half-Life too short		
		293.27	*	6.458E-03	6.293E+00	Half-Life too short		
		664.57		-2.564E-02	6.293E+00	Half-Life too short		
		721.93		2.557E-02	6.293E+00	Half-Life too short		
CE-144		80.12		2.789E+02	2.743E+02	4.723E+02	4.406E+01	0.591
		133.52	*	-5.727E+00	2.290E+01	3.558E+01	5.497E+00	-0.161
PM-144		476.78		-5.925E-01	5.231E+00	8.682E+00	8.076E-01	-0.068
		618.01		6.940E-01	2.752E+00	4.698E+00	4.018E-01	0.148
		696.49	*	1.743E+00	2.734E+00	4.874E+00	4.081E-01	0.358
PR-144		696.51	*	1.281E+02	2.043E+02	3.639E+02	3.045E+01	0.352
		1489.16		4.529E+02	1.199E+03	2.100E+03	1.839E+02	0.216
PM-146		453.88	*	-6.690E-01	3.523E+00	5.471E+00	5.755E-01	-0.122
		633.25		-1.733E+01	1.186E+02	1.918E+02	7.311E+01	-0.090
		735.93		9.898E+00	1.142E+01	2.055E+01	5.764E+00	0.482
		747.24		4.326E+00	8.026E+00	1.409E+01	2.067E+00	0.307
ND-147	+	91.11		2.474E+01	5.872E+01	6.299E+01	6.436E+00	0.393
		319.41		2.195E+02	3.452E+02	5.943E+02	5.415E+01	0.369
		531.02	*	3.239E+00	4.915E+01	8.280E+01	1.234E+01	0.039
PM-149		285.90	*	-5.204E+02	9.984E+03	1.630E+04	2.594E+03	-0.032
EU-152		121.78		-5.416E+00	7.494E+00	1.115E+01	1.148E+00	-0.486
		244.70		-2.176E+00	2.917E+01	4.797E+01	4.454E+00	-0.045
		344.28	*	6.472E-01	8.185E+00	1.341E+01	1.262E+00	0.048
		778.90		-8.148E+00	1.976E+01	2.988E+01	2.689E+00	-0.273
		964.08		-8.382E+00	2.056E+01	3.234E+01	3.121E+00	-0.259
		1085.87		-5.934E-01	2.983E+01	4.947E+01	4.440E+00	-0.012
		1112.07		6.333E+00	2.144E+01	3.740E+01	3.288E+00	0.169
		1408.01		-4.970E+00	1.371E+01	2.038E+01	1.780E+00	-0.244

Sample ID : G266877001 Acquisition date : 26-NOV-2010 04:31:25

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
GD-153		69.67		-5.001E+01	2.313E+02	3.287E+02	2.925E+01	-0.152
		97.43	*	3.755E+00	1.092E+01	1.610E+01	1.476E+00	0.233
		103.18		-1.062E+01	1.297E+01	1.948E+01	1.749E+00	-0.545
EU-154		123.07		-3.547E+00	5.248E+00	7.835E+00	9.152E-01	-0.453
		723.31		1.010E+00	1.278E+01	2.118E+01	2.002E+00	0.048
		873.19		4.298E+00	2.318E+01	3.859E+01	4.902E+00	0.111
		996.26		-2.526E+01	2.708E+01	3.714E+01	6.656E+00	-0.680
		1004.73		-1.417E+01	1.772E+01	2.579E+01	3.165E+00	-0.549
		1274.44	*	-8.615E+00	9.472E+00	1.264E+01	1.431E+00	-0.682
EU-155		86.55		9.644E+00	1.138E+01	1.758E+01	1.728E+00	0.549
		105.31	*	-2.575E+00	1.254E+01	1.977E+01	1.788E+00	-0.130
TA-182		67.75		9.397E-01	1.516E+01	2.217E+01	1.960E+00	0.042
		100.11		-9.588E+00	2.079E+01	3.220E+01	2.918E+00	-0.298
		152.43		1.051E+01	3.667E+01	6.309E+01	5.626E+00	0.167
		222.11		-3.007E-01	3.454E+01	5.741E+01	5.300E+00	-0.005
		1121.30		7.305E+00	9.850E+00	1.823E+01	1.590E+00	0.401
		1189.05		-4.740E+00	2.062E+01	3.259E+01	2.719E+00	-0.145
		1221.41	*	-4.634E+00	1.240E+01	1.894E+01	1.596E+00	-0.245
		1231.02		1.538E+01	3.594E+01	6.298E+01	5.322E+00	0.244
IR-192		295.96		9.007E+00	1.030E+01	1.803E+01	1.675E+00	0.499
		308.46		-2.640E+00	9.484E+00	1.509E+01	1.390E+00	-0.175
		316.51	*	-3.642E+00	3.364E+00	4.856E+00	4.442E-01	-0.750
		468.07		-2.954E+00	5.320E+00	8.340E+00	7.654E-01	-0.354
HG-203		70.83		5.971E+00	1.666E+02	2.588E+02	4.200E+01	0.023
		72.87		6.598E+01	8.851E+01	1.501E+02	2.365E+01	0.439
		279.20	*	2.098E+00	3.558E+00	6.140E+00	5.824E-01	0.342
BI-207		72.81		1.466E+01	2.019E+01	3.436E+01	3.092E+00	0.427
		74.97		-1.905E+00	1.125E+01	1.802E+01	1.637E+00	-0.106
		569.70		-4.473E-01	2.389E+00	3.874E+00	3.277E-01	-0.115
		1063.66	*	5.762E-01	3.776E+00	6.457E+00	5.890E-01	0.089
		1770.23		-1.009E+01	4.937E+01	7.849E+01	6.649E+00	-0.129
TL-208		277.37		3.324E+01	3.702E+01	6.497E+01	8.442E+00	0.512
		583.19	*	1.705E+00	3.697E+00	6.226E+00	5.630E-01	0.274
		860.56		1.138E+01	2.249E+01	3.932E+01	4.003E+00	0.290
PB-210		46.54	*	-5.352E+02	7.093E+02	1.051E+03	1.092E+02	-0.509
BI-211		72.87		2.631E+02	1.658E+04	5.987E+02	3.771E+04	0.439
		351.06	*	3.594E+01	2.264E+03	3.972E+01	2.502E+03	0.905
PB-211		404.85	*	-1.639E+01	1.035E+03	1.132E+02	7.130E+03	-0.145
		427.09		3.297E+01	2.081E+03	2.245E+02	1.414E+04	0.147
		832.01		-1.748E+01	1.104E+03	1.280E+02	8.063E+03	-0.137
BI-212		727.33	*	9.518E+00	3.742E+01	6.367E+01	7.927E+00	0.149
		785.37		1.493E+02	2.690E+02	4.716E+02	4.268E+01	0.317
		1620.50		5.783E+01	2.092E+02	3.599E+02	3.130E+01	0.161
PB-212		74.82		-3.123E+00	4.006E+01	6.464E+01	8.599E+00	-0.048
		77.11		-1.785E+01	2.229E+01	3.390E+01	3.109E+00	-0.527
		238.63	*	-9.285E-01	6.465E+00	1.021E+01	1.056E+00	-0.091
		300.09		-8.876E+01	7.436E+01	1.065E+02	1.174E+01	-0.834
BI-214	+	609.32	*	1.395E+01	8.950E+00	1.474E+01	1.454E+00	0.946
		1120.29		2.275E+01	2.110E+01	4.059E+01	4.467E+00	0.561

Sample ID : G266877001 Acquisition date : 26-NOV-2010 04:31:25

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		1764.49		5.416E+00	2.848E+01	4.829E+01	4.096E+00	0.112
PB-214		74.82		-5.449E+00	6.991E+01	1.128E+02	1.359E+01	-0.048
		77.11		-3.098E+01	3.878E+01	5.883E+01	7.257E+00	-0.527
		242.00		-2.400E+01	3.216E+01	4.982E+01	5.451E+00	-0.482
		295.22		9.787E+00	1.432E+01	2.468E+01	2.788E+00	0.397
		351.93	*	7.889E+00	8.085E+00	1.364E+01	1.471E+00	0.578
RN-219		271.23		9.193E+00	5.795E+02	3.823E+01	2.408E+03	0.240
		401.81	*	3.596E+01	2.266E+03	6.932E+01	4.366E+03	0.519
RA-223		81.07		3.818E-01	3.337E+01	3.747E+01	2.360E+03	0.010
		83.79		-6.494E+00	4.092E+02	2.040E+01	1.285E+03	-0.318
		94.56		-1.298E+01	8.184E+02	5.092E+01	3.207E+03	-0.255
		144.24		-5.865E+01	3.695E+03	1.171E+02	7.377E+03	-0.501
		154.21		1.484E+01	9.358E+02	6.791E+01	4.278E+03	0.219
		269.46		4.669E+00	2.946E+02	3.026E+01	1.906E+03	0.154
		323.87	*	-3.821E+01	2.408E+03	9.777E+01	6.158E+03	-0.391
		338.28		1.800E+01	1.137E+03	1.448E+02	9.119E+03	0.124
RA-224		240.99	*	-8.751E+01	6.116E+01	8.884E+01	8.245E+00	-0.985
RA-226		186.21	*	5.385E+01	9.012E+01	1.454E+02	9.810E+01	0.370
AC-227		79.69		1.267E+02	1.353E+02	2.302E+02	4.049E+01	0.550
		235.96		6.164E+00	1.446E+01	2.467E+01	2.687E+00	0.250
		256.23	*	6.094E+00	2.450E+01	4.125E+01	5.175E+00	0.148
		299.98		-9.068E+01	8.128E+01	1.173E+02	1.538E+01	-0.773
		304.50		1.577E+02	1.525E+02	2.689E+02	4.527E+01	0.587
		334.37		1.363E+02	1.759E+02	3.032E+02	4.790E+01	0.450
TH-227		79.69		1.267E+02	7.982E+03	2.302E+02	1.450E+04	0.550
		235.96		6.164E+00	3.885E+02	2.467E+01	1.554E+03	0.250
		256.23	*	6.094E+00	3.846E+02	4.125E+01	2.599E+03	0.148
		299.98		-9.068E+01	5.713E+03	1.173E+02	7.388E+03	-0.773
		304.50		1.577E+02	9.937E+03	2.689E+02	1.694E+04	0.587
		334.37		1.363E+02	8.586E+03	3.032E+02	1.910E+04	0.450
AC-228		338.32		2.440E+00	2.233E+01	3.664E+01	1.531E+01	0.067
		911.20	*	-1.287E+00	1.213E+01	1.832E+01	2.296E+00	-0.070
		968.97		2.077E+00	1.770E+01	3.023E+01	7.478E+00	0.069
RA-228		338.32		2.440E+00	2.233E+01	3.664E+01	1.531E+01	0.067
		911.20	*	-1.287E+00	1.213E+01	1.832E+01	2.296E+00	-0.070
		968.97		2.077E+00	1.770E+01	3.023E+01	7.478E+00	0.069
TH-228		74.82		-3.123E+00	4.006E+01	6.464E+01	5.913E+00	-0.048
		77.11		-1.785E+01	2.229E+01	3.390E+01	3.109E+00	-0.527
		238.63	*	-9.285E-01	6.465E+00	1.021E+01	1.056E+00	-0.091
		300.09		-8.876E+01	9.162E+01	1.065E+02	6.527E+01	-0.834
TH-229		85.43		4.185E+00	2.158E+01	3.530E+01	3.413E+00	0.119
		88.47		8.475E+00	1.432E+01	2.164E+01	2.124E+00	0.392
		193.51	*	2.748E+01	5.684E+01	8.769E+01	8.001E+00	0.313
		210.85		7.070E+01	8.369E+01	1.472E+02	1.354E+01	0.480
TH-230		67.67	*	1.661E+02	1.504E+03	2.210E+03	1.954E+02	0.075
PA-231		283.69	*	4.301E+01	1.286E+02	2.176E+02	3.259E+01	0.198
		301.36		-5.551E+01	4.452E+01	6.297E+01	7.468E+00	-0.882
TH-231		84.21	*	-3.351E+01	5.020E+01	7.664E+01	1.374E+01	-0.437
PA-233		94.65		-1.279E+01	3.004E+01	4.122E+01	3.890E+00	-0.310

Sample ID : G266877001 Acquisition date : 26-NOV-2010 04:31:25

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		98.43		4.432E+00	1.581E+01	2.587E+01	2.472E+00	0.171
		300.13		-4.441E+01	3.667E+01	5.187E+01	7.875E+00	-0.856
		311.90	*	2.024E+00	6.220E+00	1.046E+01	9.819E-01	0.194
		340.48		-8.319E+00	5.570E+01	8.909E+01	2.155E+01	-0.093
PA-234		94.67		-8.926E+00	2.020E+01	2.765E+01	3.565E+00	-0.323
		98.44		2.962E+00	1.064E+01	1.722E+01	9.618E+00	0.172
		111.00		-7.641E-01	2.156E+01	3.434E+01	4.223E+00	-0.022
		131.20		-1.130E+00	1.201E+01	1.891E+01	1.688E+00	-0.060
		569.50		-1.080E+01	2.180E+01	3.383E+01	2.862E+00	-0.319
		733.00		-6.926E+00	3.017E+01	4.757E+01	1.056E+01	-0.146
		880.51		-1.604E+00	2.479E+01	3.961E+01	3.866E+00	-0.041
		883.24		-1.415E+01	2.652E+01	3.603E+01	2.428E+01	-0.393
		926.36		4.667E+00	1.262E+01	1.943E+01	4.995E+00	0.240
		946.00	*	1.946E+01	2.371E+01	4.297E+01	8.292E+00	0.453
		949.00		1.191E+00	3.553E+01	5.737E+01	5.572E+00	0.021
PA-234M		766.42		2.311E+02	8.585E+02	1.443E+03	7.330E+02	0.160
		1001.03	*	2.400E+02	3.410E+02	6.306E+02	6.758E+01	0.381
U-235		89.96		-5.953E-01	1.022E+02	1.466E+02	3.665E+01	-0.004
		93.35		-4.520E+01	6.635E+01	1.087E+02	2.544E+01	-0.416
		143.76	*	-2.950E+01	2.348E+01	3.466E+01	5.922E+00	-0.851
		163.33		-1.231E+01	4.576E+01	7.584E+01	1.376E+01	-0.162
		185.72		4.097E+00	5.236E+00	9.259E+00	8.420E-01	0.443
		205.31		4.612E+01	4.621E+01	8.115E+01	1.494E+01	0.568
NP-237		94.67		-8.926E+00	2.018E+01	2.765E+01	2.575E+00	-0.323
		98.43		4.432E+00	1.581E+01	2.587E+01	2.361E+00	0.171
		300.13		-4.441E+01	3.649E+01	5.187E+01	6.699E+00	-0.856
		311.90	*	2.024E+00	6.221E+00	1.046E+01	1.190E+00	0.194
		340.48		-8.319E+00	5.567E+01	8.909E+01	7.974E+00	-0.093
NP-239		99.53		9.769E+00	1.857E+01	3.088E+01	2.804E+00	0.316
		103.37		-7.666E+00	1.177E+01	1.793E+01	1.610E+00	-0.427
		106.12		6.119E+00	9.881E+00	1.646E+01	1.470E+00	0.372
		116.74	*	-2.926E+00	2.991E+01	4.731E+01	4.240E+00	-0.062
		228.18		4.335E+00	2.091E+01	3.527E+01	3.262E+00	0.123
		277.60		1.300E+01	1.643E+01	2.873E+01	2.667E+00	0.452
AM-241		59.54	*	1.132E+01	2.525E+01	3.844E+01	3.491E+00	0.295
CM-247		278.00		5.583E+01	6.885E+01	1.207E+02	1.120E+01	0.463
		287.50		-6.391E+01	1.179E+02	1.834E+02	1.698E+01	-0.348
		402.40	*	1.864E+00	3.713E+00	6.274E+00	5.277E-01	0.297
CF-249		252.80		-2.691E+00	9.177E+01	1.512E+02	1.406E+01	-0.018
		333.37		3.572E+00	1.844E+01	3.050E+01	2.748E+00	0.117
		388.16	*	-1.281E+00	3.646E+00	5.633E+00	4.744E-01	-0.227
CF-251		177.52	*	2.036E+00	1.267E+01	2.152E+01	1.952E+00	0.095
		227.38		1.214E+01	3.399E+01	5.794E+01	5.359E+00	0.210
		285.41		1.432E+01	2.000E+02	3.304E+02	3.061E+01	0.043
ANH-511		511.00	*	-6.687E+00	4.864E+00	8.709E+00	7.446E-01	-0.768

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877001       *
* Acquisition date : 26-NOV-2010 04:31:25 Detector SN#    :                 *
* Detector ID      : GAM09                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:00.59     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 10-NOV-2010 12:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G266877001           Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 24-MAR-2010 09:38:18 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	
TH-232	1.953E+03	1.510E+04	4.001E+03	0.000E+00
TH-234	1.372E+02	2.388E+02	2.895E+02	0.000E+00
U-238	1.372E+02	2.388E+02	2.895E+02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)		
BE-7	-2.840E+00		2.605E+01	4.415E+01	0.000E+00	NOT IDENT.
NA-22	-3.042E+00		3.270E+00	4.462E+00	0.000E+00	NOT IDENT.
NA-24	0.000E+00		1.135E+08	0.000E+00	0.000E+00	SHORT HLIF
K-40	-1.284E+01		4.029E+01	6.633E+01	0.000E+00	NOT IDENT.
SC-46	-6.259E-02		3.527E+00	5.789E+00	0.000E+00	NOT IDENT.
V-48	-1.305E+00		4.814E+00	7.820E+00	0.000E+00	NOT IDENT.
CR-51	3.895E+01		3.620E+01	6.565E+01	0.000E+00	NOT IDENT.
MN-54	4.972E-02		3.026E+00	5.017E+00	0.000E+00	NOT IDENT.
CO-56	-1.262E+00		3.754E+00	5.908E+00	0.000E+00	NOT IDENT.
CO-57	-3.098E+00		2.589E+00	3.755E+00	0.000E+00	NOT IDENT.
CO-58	-2.647E+00		3.177E+00	4.510E+00	0.000E+00	NOT IDENT.
FE-59	-6.869E-01		5.920E+00	9.820E+00	0.000E+00	NOT IDENT.
CO-60	1.324E+00		2.778E+00	5.101E+00	0.000E+00	NOT IDENT.
ZN-65	-1.979E+00		6.733E+00	1.088E+01	0.000E+00	NOT IDENT.
SE-75	-1.777E+00		4.523E+00	7.363E+00	0.000E+00	NOT IDENT.
SR-85	-9.801E+00		4.619E+00	6.421E+00	0.000E+00	NOT IDENT.
Y-88	-2.501E-01		3.926E+00	6.557E+00	0.000E+00	NOT IDENT.
Y-91	-2.735E+02		1.148E+03	1.830E+03	0.000E+00	NOT IDENT.
NB-94	4.715E-01		2.853E+00	4.877E+00	0.000E+00	NOT IDENT.
NB-95	1.964E+00		3.034E+00	5.529E+00	0.000E+00	NOT IDENT.
NB-95M	-4.963E-01		1.208E+01	2.039E+01	0.000E+00	NOT IDENT.
ZR-95	3.976E+00		4.999E+00	9.375E+00	0.000E+00	NOT IDENT.
MO-99	1.938E+01		1.133E+03	1.895E+03	0.000E+00	NOT IDENT.
TC-99M	0.000E+00		2.195E+19	0.000E+00	0.000E+00	SHORT HLIF

RU-103	-6.877E-01	3.333E+00	5.569E+00	0.000E+00	NOT IDENT.
RH-106	-9.017E+00	2.558E+01	4.109E+01	0.000E+00	NOT IDENT.
RU-106	-9.017E+00	2.556E+01	4.109E+01	0.000E+00	NOT IDENT.
AG-108M	3.139E+00	2.828E+00	5.148E+00	0.000E+00	NOT IDENT.
CD-109	6.332E+01	9.359E+01	1.452E+02	0.000E+00	NOT IDENT.
AG-110M	-2.249E-01	2.874E+00	4.784E+00	0.000E+00	NOT IDENT.
SN-113	-2.602E+00	4.104E+00	6.250E+00	0.000E+00	NOT IDENT.
CD-115	-2.683E+02	1.067E+03	1.761E+03	0.000E+00	NOT IDENT.
SN-117M	-2.931E+00	5.667E+00	9.445E+00	0.000E+00	NOT IDENT.
TE-123M	-1.418E+00	2.872E+00	4.795E+00	0.000E+00	NOT IDENT.
SB-124	-1.395E+00	6.512E+00	1.047E+01	0.000E+00	NOT IDENT.
SB-125	3.600E+00	7.915E+00	1.363E+01	0.000E+00	NOT IDENT.
TE-125M	5.180E+02	1.117E+03	1.877E+03	0.000E+00	NOT IDENT.
I-126	-3.801E+00	1.753E+01	2.855E+01	0.000E+00	NOT IDENT.
SB-126	6.969E+00	1.084E+01	1.982E+01	0.000E+00	NOT IDENT.
SN-126	5.724E+00	9.042E+00	1.400E+01	0.000E+00	FAIL ABUN
SB-127	-1.850E+01	1.233E+02	2.025E+02	0.000E+00	NOT IDENT.
I-131	5.540E+00	9.904E+00	1.740E+01	0.000E+00	NOT IDENT.
TE-132	1.606E+01	7.829E+01	1.346E+02	0.000E+00	NOT IDENT.
BA-133	-6.990E-01	3.780E+00	6.126E+00	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.790E+05	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.780E+00	3.470E+00	6.652E+00	0.000E+00	NOT IDENT.
CS-135	5.143E+00	1.506E+01	2.596E+01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.801E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.899E+00	7.078E+00	1.293E+01	0.000E+00	NOT IDENT.
BA-137M	5.935E-01	2.909E+00	5.019E+00	0.000E+00	NOT IDENT.
CS-137	6.270E-01	3.073E+00	5.302E+00	0.000E+00	NOT IDENT.
CE-139	2.264E-01	2.987E+00	5.164E+00	0.000E+00	NOT IDENT.
BA-140	-4.457E+00	2.240E+01	3.715E+01	0.000E+00	NOT IDENT.
LA-140	5.399E+00	7.552E+00	1.437E+01	0.000E+00	NOT IDENT.
CE-141	3.996E+00	6.167E+00	1.107E+01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.659E+04	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-5.727E+00	2.245E+01	3.558E+01	0.000E+00	NOT IDENT.
PM-144	1.743E+00	2.679E+00	4.874E+00	0.000E+00	NOT IDENT.
PR-144	1.281E+02	2.002E+02	3.639E+02	0.000E+00	NOT IDENT.
PM-146	-6.690E-01	3.453E+00	5.471E+00	0.000E+00	NOT IDENT.
ND-147	3.239E+00	4.816E+01	8.280E+01	0.000E+00	FAIL ABUN
PM-149	-5.204E+02	9.784E+03	1.630E+04	0.000E+00	NOT IDENT.
EU-152	6.472E-01	8.021E+00	1.341E+01	0.000E+00	NOT IDENT.
GD-153	3.755E+00	1.070E+01	1.610E+01	0.000E+00	NOT IDENT.
EU-154	-8.615E+00	9.283E+00	1.264E+01	0.000E+00	NOT IDENT.
EU-155	-2.575E+00	1.229E+01	1.977E+01	0.000E+00	NOT IDENT.
TA-182	-4.634E+00	1.215E+01	1.894E+01	0.000E+00	NOT IDENT.
IR-192	-3.642E+00	3.296E+00	4.856E+00	0.000E+00	NOT IDENT.
HG-203	2.098E+00	3.487E+00	6.140E+00	0.000E+00	NOT IDENT.
BI-207	5.762E-01	3.701E+00	6.457E+00	0.000E+00	NOT IDENT.
TL-208	1.705E+00	3.623E+00	6.226E+00	0.000E+00	NOT IDENT.
PB-210	-5.352E+02	6.951E+02	1.051E+03	0.000E+00	NOT IDENT.
BI-211	3.594E+01	2.219E+03	3.972E+01	0.000E+00	NOT IDENT.
PB-211	-1.639E+01	1.014E+03	1.132E+02	0.000E+00	NOT IDENT.
BI-212	9.518E+00	3.667E+01	6.367E+01	0.000E+00	NOT IDENT.
PB-212	-9.285E-01	6.336E+00	1.021E+01	0.000E+00	NOT IDENT.
BI-214	1.395E+01	8.771E+00	1.474E+01	0.000E+00	FAIL ABUN
PB-214	7.889E+00	7.923E+00	1.364E+01	0.000E+00	NOT IDENT.
RN-219	3.596E+01	2.220E+03	6.932E+01	0.000E+00	NOT IDENT.
RA-223	-3.821E+01	2.360E+03	9.777E+01	0.000E+00	NOT IDENT.
RA-224	-8.751E+01	5.993E+01	8.884E+01	0.000E+00	NOT IDENT.
RA-226	5.385E+01	8.832E+01	1.454E+02	0.000E+00	NOT IDENT.
AC-227	6.094E+00	2.401E+01	4.125E+01	0.000E+00	NOT IDENT.
TH-227	6.094E+00	3.769E+02	4.125E+01	0.000E+00	NOT IDENT.
AC-228	-1.287E+00	1.189E+01	1.832E+01	0.000E+00	NOT IDENT.
RA-228	-1.287E+00	1.189E+01	1.832E+01	0.000E+00	NOT IDENT.
TH-228	-9.285E-01	6.336E+00	1.021E+01	0.000E+00	NOT IDENT.
TH-229	2.748E+01	5.570E+01	8.769E+01	0.000E+00	NOT IDENT.
TH-230	1.661E+02	1.474E+03	2.210E+03	0.000E+00	NOT IDENT.
PA-231	4.301E+01	1.261E+02	2.176E+02	0.000E+00	NOT IDENT.
TH-231	-3.351E+01	4.919E+01	7.664E+01	0.000E+00	NOT IDENT.
PA-233	2.024E+00	6.095E+00	1.046E+01	0.000E+00	NOT IDENT.
PA-234	1.946E+01	2.323E+01	4.297E+01	0.000E+00	NOT IDENT.
PA-234M	2.400E+02	3.342E+02	6.306E+02	0.000E+00	NOT IDENT.
U-235	-2.950E+01	2.301E+01	3.466E+01	0.000E+00	NOT IDENT.
NP-237	2.024E+00	6.097E+00	1.046E+01	0.000E+00	NOT IDENT.
NP-239	-2.926E+00	2.931E+01	4.731E+01	0.000E+00	NOT IDENT.
AM-241	1.132E+01	2.475E+01	3.844E+01	0.000E+00	NOT IDENT.
CM-247	1.864E+00	3.638E+00	6.274E+00	0.000E+00	NOT IDENT.
CF-249	-1.281E+00	3.573E+00	5.633E+00	0.000E+00	NOT IDENT.
CF-251	2.036E+00	1.241E+01	2.152E+01	0.000E+00	NOT IDENT.
ANH-511	-6.687E+00	4.766E+00	8.709E+00	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 06:32:06.95

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877001.CNF;1
Sample date      : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 04:31:25
Sample ID        : G266877001           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM09                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.59  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	62.82	68	116	1.21	125.76	121	16	9.49E-03	27.5	2.09E+00
2	3	65.78	60	109	1.38	131.68	121	16	8.29E-03	34.0	
3	0	91.76	139	196	1.18	183.65	178	13	1.94E-02	22.3	
4	0	198.58	57	120	1.01	397.27	392	11	7.85E-03	40.5	
5	0	510.56	122	71	3.39	1021.17	1013	17	1.69E-02	18.3	
6	0	608.72	55	17	1.32	1217.47	1212	10	7.57E-03	19.7	
7	0	931.57	17	6	3.70	1863.15	1857	11	2.29E-03	36.9	

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 06:32:09.26

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877001.CNF;1
Sample date      : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 04:31:25
Sample ID        : G266877001           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM09                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.59  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/LITER	Decay Corr pCi/LITER	2-Sigma %Error
TH-232	63.81	22	0.26*	8.119E-01	1.953E+03	1.953E+03	789.29
	140.88	------	0.02	2.455E+00	------	Line Not Found	------
TH-234	63.29	22	3.70*	8.119E-01	1.372E+02	1.372E+02	177.57
	92.59	27	4.23	1.992E+00	6.045E+01	6.045E+01	238.18
U-238	63.29	22	3.70*	8.119E-01	1.372E+02	1.372E+02	177.57
	92.59	27	4.23	1.992E+00	6.045E+01	6.045E+01	237.31

Flag: "*" = Keyline

Sample ID : G266877001 Acquisition date : 26-NOV-2010 04:31:25

Total number of lines in spectrum	6	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	3	50.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/LITER	Decay Corr pCi/LITER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-232	1.41E+10Y	1.00	1.953E+03	1.953E+03	15.41E+03	789.29	
TH-234	4.47E+09Y	1.00	1.372E+02	1.372E+02	2.437E+02	177.57	
U-238	4.47E+09Y	1.00	1.372E+02	1.372E+02	2.437E+02	177.57	
			---	---			
	Total Activity :		2.227E+03	2.227E+03			
	Grand Total Activity :		2.227E+03	2.227E+03			

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

Sample ID : G266877001 Acquisition date : 26-NOV-2010 04:31:25

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	65.78	35	109	1.38	131.68	121	16	4.86E-03	****	9.56E-01	
0	198.58	57	120	1.01	397.27	392	11	7.85E-03	81.1	2.20E+00	
0	608.72	37	17	1.32	1217.47	1212	10	5.17E-03	63.4	1.10E+00	T
0	931.57	17	6	3.70	1863.15	1857	11	2.29E-03	73.9	8.02E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 06:32:11.95

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877001.CNF;1  *
* Acquisition date : 26-NOV-2010 04:31:25  Detector SN#    :                *
* Detector ID      : GAM09                 Sensitivity     : 5.00000        *
* Geometry         : 2LMB                  Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:00.59         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 10-NOV-2010 12:00:00  Nuclide Library : LIQUID          *
* Sample ID        : G266877001            Analyst initials: KXG3           *
* Batch Number     : 1048163               Sample Quantity : 2.00000E+00 LITER *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 24-MAR-2010 09:38:18.1MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
TH-232	1.953E+03	1.541E+04	4.001E+03	3.078E+04	0.488
TH-234	1.372E+02	2.437E+02	2.895E+02	5.326E+01	0.474
U-238	1.372E+02	2.437E+02	2.895E+02	5.326E+01	0.474

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7	-2.840E+00		2.658E+01	4.415E+01	4.071E+00	-0.064
NA-22	-3.042E+00		3.337E+00	4.462E+00	3.819E-01	-0.682
NA-24	-6.664E+01		5.789E+01	Half-Life too short		
K-40	-1.284E+01		4.111E+01	6.633E+01	5.966E+00	-0.194
SC-46	-6.259E-02		3.599E+00	5.789E+00	5.688E-01	-0.011
V-48	-1.305E+00		4.912E+00	7.820E+00	7.479E-01	-0.167
CR-51	3.895E+01		3.694E+01	6.565E+01	6.259E+00	0.593
MN-54	4.972E-02		3.088E+00	5.017E+00	4.726E-01	0.010
CO-56	-1.262E+00		3.831E+00	5.908E+00	5.619E-01	-0.214

Sample ID : G266877001 Acquisition date : 26-NOV-2010 04:31:25

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
CO-57	-3.098E+00		2.642E+00	3.755E+00	3.409E-01	-0.825
CO-58	-2.647E+00		3.242E+00	4.510E+00	4.176E-01	-0.587
FE-59	-6.869E-01		6.041E+00	9.820E+00	9.391E-01	-0.070
CO-60	1.324E+00		2.835E+00	5.101E+00	4.420E-01	0.260
ZN-65	-1.979E+00		6.871E+00	1.088E+01	9.545E-01	-0.182
SE-75	-1.777E+00		4.615E+00	7.363E+00	6.874E-01	-0.241
SR-85	-9.801E+00		4.713E+00	6.421E+00	5.489E-01	-1.526
Y-88	-2.501E-01		4.006E+00	6.557E+00	5.462E-01	-0.038
Y-91	-2.735E+02		1.172E+03	1.830E+03	1.535E+02	-0.149
NB-94	4.715E-01		2.911E+00	4.877E+00	4.105E-01	0.097
NB-95	1.964E+00		3.096E+00	5.529E+00	4.921E-01	0.355
NB-95M	-4.963E-01		1.233E+01	2.039E+01	2.132E+00	-0.024
ZR-95	3.976E+00		5.101E+00	9.375E+00	9.107E-01	0.424
MO-99	1.938E+01		1.156E+03	1.895E+03	2.995E+02	0.010
TC-99M	-2.849E+11		1.120E+13	Half-Life too short		
RU-103	-6.877E-01		3.401E+00	5.569E+00	7.755E-01	-0.123
RH-106	-9.017E+00		2.610E+01	4.109E+01	5.359E+00	-0.219
RU-106	-9.017E+00		2.609E+01	4.109E+01	3.405E+00	-0.219
AG-108M	3.139E+00		2.885E+00	5.148E+00	4.519E-01	0.610
CD-109	6.332E+01		9.550E+01	1.452E+02	1.432E+01	0.436
AG-110M	-2.249E-01		2.933E+00	4.784E+00	4.015E-01	-0.047
SN-113	-2.602E+00		4.188E+00	6.250E+00	5.404E-01	-0.416
CD-115	-2.683E+02		1.089E+03	1.761E+03	1.503E+02	-0.152
SN-117M	-2.931E+00		5.782E+00	9.445E+00	8.470E-01	-0.310
TE-123M	-1.418E+00		2.931E+00	4.795E+00	4.326E-01	-0.296
SB-124	-1.395E+00		6.645E+00	1.047E+01	9.393E-01	-0.133
SB-125	3.600E+00		8.077E+00	1.363E+01	1.179E+00	0.264
TE-125M	5.180E+02		1.140E+03	1.877E+03	2.013E+02	0.276
I-126	-3.801E+00		1.789E+01	2.855E+01	2.323E+00	-0.133
SB-126	6.969E+00		1.106E+01	1.982E+01	1.696E+00	0.352
SN-126	5.724E+00		9.227E+00	1.400E+01	1.376E+00	0.409
SB-127	-1.850E+01		1.258E+02	2.025E+02	2.287E+01	-0.091
I-131	5.540E+00		1.011E+01	1.740E+01	1.597E+00	0.318
TE-132	1.606E+01		7.989E+01	1.346E+02	2.192E+01	0.119
BA-133	-6.990E-01		3.857E+00	6.126E+00	8.011E-01	-0.114
I-133	-2.423E-01		3.974E-01	Half-Life too short		
CS-134	3.780E+00		3.541E+00	6.652E+00	6.111E-01	0.568
CS-135	5.143E+00		1.536E+01	2.596E+01	2.740E+00	0.198
I-135	1.379E+11		9.189E+11	Half-Life too short		
CS-136	2.899E+00		7.223E+00	1.293E+01	1.236E+00	0.224
BA-137M	5.935E-01		2.968E+00	5.019E+00	4.066E-01	0.118
CS-137	6.270E-01		3.135E+00	5.302E+00	4.304E-01	0.118
CE-139	2.264E-01		3.048E+00	5.164E+00	4.673E-01	0.044
BA-140	-4.457E+00		2.285E+01	3.715E+01	1.259E+01	-0.120
LA-140	5.399E+00		7.706E+00	1.437E+01	1.253E+00	0.376
CE-141	3.996E+00		6.293E+00	1.107E+01	1.000E+00	0.361
CE-143	6.458E-03		8.466E-03	Half-Life too short		
CE-144	-5.727E+00		2.290E+01	3.558E+01	5.497E+00	-0.161

Sample ID : G266877001 Acquisition date : 26-NOV-2010 04:31:25

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
PM-144	1.743E+00		2.734E+00	4.874E+00	4.081E-01	0.358
PR-144	1.281E+02		2.043E+02	3.639E+02	3.045E+01	0.352
PM-146	-6.690E-01		3.523E+00	5.471E+00	5.755E-01	-0.122
ND-147	3.239E+00		4.915E+01	8.280E+01	1.234E+01	0.039
PM-149	-5.204E+02		9.984E+03	1.630E+04	2.594E+03	-0.032
EU-152	6.472E-01		8.185E+00	1.341E+01	1.262E+00	0.048
GD-153	3.755E+00		1.092E+01	1.610E+01	1.476E+00	0.233
EU-154	-8.615E+00		9.472E+00	1.264E+01	1.431E+00	-0.682
EU-155	-2.575E+00		1.254E+01	1.977E+01	1.788E+00	-0.130
TA-182	-4.634E+00		1.240E+01	1.894E+01	1.596E+00	-0.245
IR-192	-3.642E+00		3.364E+00	4.856E+00	4.442E-01	-0.750
HG-203	2.098E+00		3.558E+00	6.140E+00	5.824E-01	0.342
BI-207	5.762E-01		3.776E+00	6.457E+00	5.890E-01	0.089
TL-208	1.705E+00		3.697E+00	6.226E+00	5.630E-01	0.274
PB-210	-5.352E+02		7.093E+02	1.051E+03	1.092E+02	-0.509
BI-211	3.594E+01		2.264E+03	3.972E+01	2.502E+03	0.905
PB-211	-1.639E+01		1.035E+03	1.132E+02	7.130E+03	-0.145
BI-212	9.518E+00		3.742E+01	6.367E+01	7.927E+00	0.149
PB-212	-9.285E-01		6.465E+00	1.021E+01	1.056E+00	-0.091
BI-214	1.395E+01	+	8.950E+00	1.474E+01	1.454E+00	0.946
PB-214	7.889E+00		8.085E+00	1.364E+01	1.471E+00	0.578
RN-219	3.596E+01		2.266E+03	6.932E+01	4.366E+03	0.519
RA-223	-3.821E+01		2.408E+03	9.777E+01	6.158E+03	-0.391
RA-224	-8.751E+01		6.116E+01	8.884E+01	8.245E+00	-0.985
RA-226	5.385E+01		9.012E+01	1.454E+02	9.810E+01	0.370
AC-227	6.094E+00		2.450E+01	4.125E+01	5.175E+00	0.148
TH-227	6.094E+00		3.846E+02	4.125E+01	2.599E+03	0.148
AC-228	-1.287E+00		1.213E+01	1.832E+01	2.296E+00	-0.070
RA-228	-1.287E+00		1.213E+01	1.832E+01	2.296E+00	-0.070
TH-228	-9.285E-01		6.465E+00	1.021E+01	1.056E+00	-0.091
TH-229	2.748E+01		5.684E+01	8.769E+01	8.001E+00	0.313
TH-230	1.661E+02		1.504E+03	2.210E+03	1.954E+02	0.075
PA-231	4.301E+01		1.286E+02	2.176E+02	3.259E+01	0.198
TH-231	-3.351E+01		5.020E+01	7.664E+01	1.374E+01	-0.437
PA-233	2.024E+00		6.220E+00	1.046E+01	9.819E-01	0.194
PA-234	1.946E+01		2.371E+01	4.297E+01	8.292E+00	0.453
PA-234M	2.400E+02		3.410E+02	6.306E+02	6.758E+01	0.381
U-235	-2.950E+01		2.348E+01	3.466E+01	5.922E+00	-0.851
NP-237	2.024E+00		6.221E+00	1.046E+01	1.190E+00	0.194
NP-239	-2.926E+00		2.991E+01	4.731E+01	4.240E+00	-0.062
AM-241	1.132E+01		2.525E+01	3.844E+01	3.491E+00	0.295
CM-247	1.864E+00		3.713E+00	6.274E+00	5.277E-01	0.297
CF-249	-1.281E+00		3.646E+00	5.633E+00	4.744E-01	-0.227
CF-251	2.036E+00		1.267E+01	2.152E+01	1.952E+00	0.095
ANH-511	-6.687E+00		4.864E+00	8.709E+00	7.446E-01	-0.768

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29407                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G266877001       *
* Acquisition date : 26-NOV-2010 04:31:25 Detector SN#    :            *
* Detector ID      : GAM09                Sensitivity     : 5.000      *
* Geometry         : 2LMB                 Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:00.59     Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                               SAMPLE DATA                             *
*                                                                       *
* Sample date      : 10-NOV-2010 12:00:00 Nuclide Library : LIQUI       *
* Sample ID        : G266877001           Analyst initials: KXG3        *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                 QC DATA                               *
*                                                                       *
* CALIB. DATE/TIME : 24-MAR-2010 09:38:18 MS Isotope      :            *
* MSD DPM          :    0.000             MSD Isotope     :            *
* LCS DPM          :    0.000             LCS Isotope     :            *
* LCSD DPM         :    0.000             LCSD Isotope    :            *
*************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act Error	DLC (pCi/LITER)	TPU
TH-232	1.953E+03	1.510E+04	2.002E+03	7.706E+03
TH-234	1.372E+02	2.388E+02	1.448E+02	1.218E+02
U-238	1.372E+02	2.388E+02	1.448E+02	1.218E+02

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L Act error	DLC (pCi/LITER)	TPU	
BE-7	-2.840E+00	2.605E+01	2.209E+01	1.329E+01	NOT IDENT.
NA-22	-3.042E+00	3.270E+00	2.232E+00	1.668E+00	NOT IDENT.
NA-24	-6.664E+07	1.135E+08	0.000E+00	5.789E+07	SHORT HLIF
K-40	-1.284E+01	4.029E+01	3.318E+01	2.055E+01	NOT IDENT.
SC-46	-6.259E-02	3.527E+00	2.896E+00	1.799E+00	NOT IDENT.
V-48	-1.305E+00	4.814E+00	3.912E+00	2.456E+00	NOT IDENT.
CR-51	3.895E+01	3.620E+01	3.284E+01	1.847E+01	NOT IDENT.
MN-54	4.972E-02	3.026E+00	2.510E+00	1.544E+00	NOT IDENT.
CO-56	-1.262E+00	3.754E+00	2.956E+00	1.915E+00	NOT IDENT.
CO-57	-3.098E+00	2.589E+00	1.879E+00	1.321E+00	NOT IDENT.
CO-58	-2.647E+00	3.177E+00	2.256E+00	1.621E+00	NOT IDENT.
FE-59	-6.869E-01	5.920E+00	4.913E+00	3.021E+00	NOT IDENT.
CO-60	1.324E+00	2.778E+00	2.552E+00	1.418E+00	NOT IDENT.
ZN-65	-1.979E+00	6.733E+00	5.443E+00	3.435E+00	NOT IDENT.
SE-75	-1.777E+00	4.523E+00	3.684E+00	2.307E+00	NOT IDENT.
SR-85	-9.801E+00	4.619E+00	3.212E+00	2.356E+00	NOT IDENT.
Y-88	-2.501E-01	3.926E+00	3.281E+00	2.003E+00	NOT IDENT.
Y-91	-2.735E+02	1.148E+03	9.157E+02	5.859E+02	NOT IDENT.
NB-94	4.715E-01	2.853E+00	2.440E+00	1.456E+00	NOT IDENT.
NB-95	1.964E+00	3.034E+00	2.766E+00	1.548E+00	NOT IDENT.
NB-95M	-4.963E-01	1.208E+01	1.020E+01	6.165E+00	NOT IDENT.
ZR-95	3.976E+00	4.999E+00	4.690E+00	2.551E+00	NOT IDENT.
MO-99	1.938E+01	1.133E+03	9.483E+02	5.782E+02	NOT IDENT.
TC-99M	-2.849E+17	2.195E+19	0.000E+00	0.000E+00	SHORT HLIF

RU-103	-6.877E-01	3.333E+00	2.786E+00	1.700E+00	NOT IDENT.
RH-106	-9.017E+00	2.558E+01	2.056E+01	1.305E+01	NOT IDENT.
RU-106	-9.017E+00	2.556E+01	2.056E+01	1.304E+01	NOT IDENT.
AG-108M	3.139E+00	2.828E+00	2.575E+00	1.443E+00	NOT IDENT.
CD-109	6.332E+01	9.359E+01	7.264E+01	4.775E+01	NOT IDENT.
AG-110M	-2.249E-01	2.874E+00	2.393E+00	1.466E+00	NOT IDENT.
SN-113	-2.602E+00	4.104E+00	3.127E+00	2.094E+00	NOT IDENT.
CD-115	-2.683E+02	1.067E+03	8.810E+02	5.443E+02	NOT IDENT.
SN-117M	-2.931E+00	5.667E+00	4.725E+00	2.891E+00	NOT IDENT.
TE-123M	-1.418E+00	2.872E+00	2.399E+00	1.466E+00	NOT IDENT.
SB-124	-1.395E+00	6.512E+00	5.237E+00	3.323E+00	NOT IDENT.
SB-125	3.600E+00	7.915E+00	6.820E+00	4.038E+00	NOT IDENT.
TE-125M	5.180E+02	1.117E+03	9.392E+02	5.700E+02	NOT IDENT.
I-126	-3.801E+00	1.753E+01	1.428E+01	8.946E+00	NOT IDENT.
SB-126	6.969E+00	1.084E+01	9.916E+00	5.530E+00	NOT IDENT.
SN-126	5.724E+00	9.042E+00	7.003E+00	4.613E+00	FAIL ABUN
SB-127	-1.850E+01	1.233E+02	1.013E+02	6.289E+01	NOT IDENT.
I-131	5.540E+00	9.904E+00	8.703E+00	5.053E+00	NOT IDENT.
TE-132	1.606E+01	7.829E+01	6.735E+01	3.995E+01	NOT IDENT.
BA-133	-6.990E-01	3.780E+00	3.065E+00	1.928E+00	NOT IDENT.
I-133	-2.423E+05	7.790E+05	0.000E+00	3.974E+05	SHORT HLIF
CS-134	3.780E+00	3.470E+00	3.328E+00	1.770E+00	NOT IDENT.
CS-135	5.143E+00	1.506E+01	1.299E+01	7.682E+00	NOT IDENT.
I-135	1.379E+17	1.801E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.899E+00	7.078E+00	6.471E+00	3.611E+00	NOT IDENT.
BA-137M	5.935E-01	2.909E+00	2.511E+00	1.484E+00	NOT IDENT.
CS-137	6.270E-01	3.073E+00	2.653E+00	1.568E+00	NOT IDENT.
CE-139	2.264E-01	2.987E+00	2.583E+00	1.524E+00	NOT IDENT.
BA-140	-4.457E+00	2.240E+01	1.859E+01	1.143E+01	NOT IDENT.
LA-140	5.399E+00	7.552E+00	7.191E+00	3.853E+00	NOT IDENT.
CE-141	3.996E+00	6.167E+00	5.537E+00	3.147E+00	NOT IDENT.
CE-143	6.458E+03	1.659E+04	0.000E+00	8.466E+03	SHORT HLIF
CE-144	-5.727E+00	2.245E+01	1.780E+01	1.145E+01	NOT IDENT.
PM-144	1.743E+00	2.679E+00	2.438E+00	1.367E+00	NOT IDENT.
PR-144	1.281E+02	2.002E+02	1.820E+02	1.021E+02	NOT IDENT.
PM-146	-6.690E-01	3.453E+00	2.737E+00	1.762E+00	NOT IDENT.
ND-147	3.239E+00	4.816E+01	4.142E+01	2.457E+01	FAIL ABUN
PM-149	-5.204E+02	9.784E+03	8.156E+03	4.992E+03	NOT IDENT.
EU-152	6.472E-01	8.021E+00	6.707E+00	4.092E+00	NOT IDENT.
GD-153	3.755E+00	1.070E+01	8.057E+00	5.458E+00	NOT IDENT.
EU-154	-8.615E+00	9.283E+00	6.322E+00	4.736E+00	NOT IDENT.
EU-155	-2.575E+00	1.229E+01	9.893E+00	6.269E+00	NOT IDENT.
TA-182	-4.634E+00	1.215E+01	9.476E+00	6.199E+00	NOT IDENT.
IR-192	-3.642E+00	3.296E+00	2.430E+00	1.682E+00	NOT IDENT.
HG-203	2.098E+00	3.487E+00	3.072E+00	1.779E+00	NOT IDENT.
BI-207	5.762E-01	3.701E+00	3.230E+00	1.888E+00	NOT IDENT.
TL-208	1.705E+00	3.623E+00	3.115E+00	1.848E+00	NOT IDENT.
PB-210	-5.352E+02	6.951E+02	5.258E+02	3.547E+02	NOT IDENT.
BI-211	3.594E+01	2.219E+03	1.987E+01	1.132E+03	NOT IDENT.
PB-211	-1.639E+01	1.014E+03	5.663E+01	5.175E+02	NOT IDENT.
BI-212	9.518E+00	3.667E+01	3.185E+01	1.871E+01	NOT IDENT.
PB-212	-9.285E-01	6.336E+00	5.106E+00	3.233E+00	NOT IDENT.
BI-214	1.395E+01	8.771E+00	7.376E+00	4.475E+00	FAIL ABUN
PB-214	7.889E+00	7.923E+00	6.823E+00	4.042E+00	NOT IDENT.
RN-219	3.596E+01	2.220E+03	3.468E+01	1.133E+03	NOT IDENT.
RA-223	-3.821E+01	2.360E+03	4.891E+01	1.204E+03	NOT IDENT.
RA-224	-8.751E+01	5.993E+01	4.445E+01	3.058E+01	NOT IDENT.
RA-226	5.385E+01	8.832E+01	7.274E+01	4.506E+01	NOT IDENT.
AC-227	6.094E+00	2.401E+01	2.064E+01	1.225E+01	NOT IDENT.
TH-227	6.094E+00	3.769E+02	2.064E+01	1.923E+02	NOT IDENT.
AC-228	-1.287E+00	1.189E+01	9.163E+00	6.067E+00	NOT IDENT.
RA-228	-1.287E+00	1.189E+01	9.163E+00	6.067E+00	NOT IDENT.
TH-228	-9.285E-01	6.336E+00	5.106E+00	3.233E+00	NOT IDENT.
TH-229	2.748E+01	5.570E+01	4.387E+01	2.842E+01	NOT IDENT.
TH-230	1.661E+02	1.474E+03	1.106E+03	7.522E+02	NOT IDENT.
PA-231	4.301E+01	1.261E+02	1.089E+02	6.432E+01	NOT IDENT.
TH-231	-3.351E+01	4.919E+01	3.834E+01	2.510E+01	NOT IDENT.
PA-233	2.024E+00	6.095E+00	5.233E+00	3.110E+00	NOT IDENT.
PA-234	1.946E+01	2.323E+01	2.150E+01	1.185E+01	NOT IDENT.
PA-234M	2.400E+02	3.342E+02	3.155E+02	1.705E+02	NOT IDENT.
U-235	-2.950E+01	2.301E+01	1.734E+01	1.174E+01	NOT IDENT.
NP-237	2.024E+00	6.097E+00	5.233E+00	3.110E+00	NOT IDENT.
NP-239	-2.926E+00	2.931E+01	2.367E+01	1.495E+01	NOT IDENT.
AM-241	1.132E+01	2.475E+01	1.923E+01	1.263E+01	NOT IDENT.
CM-247	1.864E+00	3.638E+00	3.139E+00	1.856E+00	NOT IDENT.
CF-249	-1.281E+00	3.573E+00	2.818E+00	1.823E+00	NOT IDENT.
CF-251	2.036E+00	1.241E+01	1.077E+01	6.333E+00	NOT IDENT.
ANH-511	-6.687E+00	4.766E+00	4.357E+00	2.432E+00	NOT IDENT.

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

ENERGY	MDA COUNTS
46.54	76.1809
49.72	82.7845
57.36	0.0000
59.54	93.3969
63.29	104.9709
63.29	104.9709
63.81	105.0876
64.28	105.1927
67.67	98.1496
67.75	98.1655
69.67	106.3719
70.83	106.6189
72.81	96.5432
72.87	96.5544
72.87	96.5544
74.82	109.5627
74.82	109.5627
74.82	109.5627
74.97	109.5939
77.11	117.4486
77.11	117.4486
77.11	117.4486
79.69	93.5622
79.69	93.5622
80.12	97.8923
80.19	97.9049
81.00	110.8401
81.07	110.8539
83.79	115.6855
84.21	124.3480
85.43	108.5030
86.55	98.4911
86.94	108.2524
87.57	101.9016
88.03	105.2203
88.47	106.9207
89.96	128.3087
91.11	116.0837
92.59	116.3733
92.59	116.3733
93.35	116.5213
94.56	121.1206
94.65	121.1381
94.67	121.1426
94.67	121.1426
97.43	106.8906
98.43	107.6122
98.43	107.6122
98.44	107.6142
99.53	100.1024
100.11	121.1148
103.18	127.2342
103.37	125.0582
105.31	123.2146
106.12	108.9196
109.28	110.5598
111.00	119.8014
111.76	109.8487
116.30	107.1944
116.74	109.5207
121.12	82.9370
121.78	98.9339
122.06	106.9362
123.07	96.8334
131.20	120.9459
133.52	122.4730
136.00	134.4613

136.47	144.9827
140.51	120.0860
140.51	0.0000
140.88	120.1415
143.76	122.9198
144.24	107.1800
145.44	96.7821
152.43	113.5830
153.25	106.5894
154.21	104.0433
156.02	114.9615
158.56	116.1988
159.00	116.2583
162.66	110.4656
163.33	118.6391
165.86	105.4609
176.60	98.5152
177.52	93.1348
181.07	141.1522
185.72	96.7144
186.21	95.8425
193.51	83.1968
205.31	75.1624
210.85	79.3447
222.11	86.8732
227.38	76.7419
228.16	79.6761
228.18	79.6774
235.69	97.6126
235.96	87.0021
235.96	87.0021
238.63	81.3936
238.63	81.3936
240.99	103.8946
242.00	85.5212
244.70	69.1615
252.40	65.6955
252.80	70.6223
256.23	67.8745
256.23	67.8745
260.90	75.0514
264.66	82.2173
268.22	70.5341
269.46	73.5879
271.23	66.7219
273.65	82.8151
276.40	68.9968
277.37	57.0409
277.60	57.0513
278.00	55.0671
279.20	55.1192
279.54	66.1601
283.69	51.2903
284.31	54.3329
285.41	57.4010
285.90	57.4227
287.50	68.5883
293.27	0.0000
295.22	66.9638
295.96	59.8949
299.98	74.3311
299.98	74.3311
300.09	74.3367
300.09	74.3367
300.13	74.3389
300.13	74.3389
301.36	72.3683
302.85	57.1425
304.50	45.9743
304.50	45.9743
304.85	50.0737
308.46	63.5269
311.90	54.4411
311.90	54.4411
316.51	68.0212
319.41	53.7036
320.08	47.5294
323.87	68.3777

328.76	63.4154
333.37	64.6612
334.37	57.4002
334.37	57.4002
338.28	53.3688
338.32	55.4633
338.32	55.4633
340.48	56.5930
340.48	56.5930
340.55	56.5955
344.28	40.9781
351.06	36.9429
351.93	43.3010
356.01	49.7718
364.49	31.9455
366.42	40.5147
383.85	46.3548
388.16	46.4788
388.63	46.4926
391.70	50.9128
400.66	35.9432
401.81	39.2377
402.40	45.7933
404.85	54.5967
414.70	39.5398
423.72	38.6444
427.09	35.4009
427.87	33.2030
433.94	33.3183
453.88	32.5688
463.37	22.5778
468.07	35.3109
473.00	35.4042
476.78	31.8371
477.60	32.7608
487.02	31.0943
492.35	39.4343
497.08	34.0145
511.00	45.3660
514.00	106.6312
527.90	28.9429
529.87	0.0000
531.02	29.9219
537.26	30.9512
546.56	0.0000
563.25	26.5877
569.33	31.4249
569.50	31.4273
569.70	27.6201
583.19	26.8331
600.60	34.7713
602.73	27.3919
604.72	19.3525
609.32	21.0081
610.33	30.7173
614.28	36.0919
618.01	27.2521
621.93	29.2485
621.93	29.2485
633.25	27.4319
635.95	19.6167
636.99	22.5693
645.85	20.6837
657.76	27.7163
661.66	25.7778
661.66	25.7778
664.57	0.0000
666.33	25.8273
666.50	25.8292
677.62	22.9528
685.70	28.0335
695.00	24.1184
696.49	20.1104
696.51	20.1108
697.00	21.1205
702.65	28.2235
706.68	29.2775
720.70	16.2414

721.93	0.0000
722.78	18.2865
722.91	18.2874
723.31	21.3384
724.19	16.2633
727.33	18.3182
733.00	24.4775
735.93	14.2946
739.50	22.4931
747.24	19.4829
753.82	28.7820
756.73	12.3486
763.94	19.6040
765.80	16.5199
766.42	20.6548
777.92	24.8906
778.90	21.7870
783.70	18.7071
785.37	20.7979
795.86	13.5697
801.95	23.0141
810.76	26.2341
815.77	16.8195
818.51	16.8355
832.01	23.2574
834.85	23.2805
836.80	0.0000
846.77	30.8132
856.80	21.3228
860.56	16.0126
871.09	22.4966
873.19	18.2240
875.33	0.0000
880.51	22.5668
883.24	24.7385
884.68	25.8264
889.28	23.7096
898.04	21.6157
911.20	14.1102
911.20	14.1102
926.36	9.0889
937.49	16.4176
944.13	17.5484
946.00	12.0715
949.00	17.5750
964.08	22.9914
968.97	16.5784
968.97	16.5784
983.53	14.8018
996.26	22.2881
1001.03	13.0199
1004.73	26.0683
1037.84	15.9818
1038.76	0.0000
1048.07	10.3716
1050.41	9.4352
1050.41	9.4352
1063.66	14.2065
1085.87	17.1548
1099.25	13.3922
1112.07	13.4395
1115.54	21.1388
1120.29	10.5833
1120.55	9.6220
1121.30	12.5107
1131.51	0.0000
1173.23	16.5891
1189.05	15.6777
1204.77	10.8223
1221.41	15.8086
1231.02	17.8279
1235.36	16.8561
1238.28	14.8840
1260.41	0.0000
1274.44	20.0244
1274.54	20.0244
1291.59	12.0649
1298.22	0.0000

1312.11	10.1038
1332.49	8.1224
1365.19	10.2311
1368.63	0.0000
1384.29	17.4697
1408.01	11.3652
1457.56	0.0000
1460.82	13.5909
1489.16	9.4673
1596.21	6.4548
1620.50	7.5680
1678.03	0.0000
1690.97	7.5176
1764.49	8.5769
1770.23	11.4484
1771.35	9.5421
1791.20	0.0000
1836.06	11.5882

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID     : 1048163                  SAMPLE ID  : G266877001         *
*   ANALYST      : KXG3                     DETECTOR   : GAM09              *
*   SAMPLE DATE  : 10-NOV-2010 12:00:00.00  COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE: 26-NOV-2010 04:31:25.12  SAMPLE ALQT:    2.000 LITER     *
*                                                                           *
*****************************************************************************


         GROSS GAMMA ACTIVITY (pCi/LITER ) : 2.953E+01
         GROSS GAMMA ERROR  (pCi/LITER )   : 1.937E+01
         GROSS GAMMA MDA    (pCi/LITER )   : 4.353E+01
         GROSS GAMMA DLC    (pCi/LITER )   : 2.041E+01
```

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:07:24.51

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877003.CNF;1
Sample date      : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 06:06:23
Sample ID        : G266877003           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM25                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.99  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	6	63.34*	21	133	1.35	126.14	122	13	2.98E-03	111.6	1.74E+00
2	6	66.18	44	93	1.13	131.83	122	13	6.07E-03	42.0	
3	0	92.80*	57	163	1.12	185.05	181	11	7.97E-03	51.2	
4	0	186.58*	2	99	0.96	372.64	367	10	3.19E-04	922.5	
5	0	198.55	62	79	1.36	396.59	392	9	8.56E-03	29.2	
6	0	238.57*	20	75	1.24	476.63	472	8	2.71E-03	89.7	
7	0	352.21*	32	55	1.39	703.95	697	13	4.49E-03	54.7	

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

VMS Nuclide Identification Report V3.1 Generated 26-NOV-2010 08:07:26

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : KXG3
Sample date : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 06:06:23
Sample ID : G266877003 Sample quantity : 2.0000 LITER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA25 Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.99 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BI-211		72.87		-1.785E+02	1.129E+04	2.197E+02	1.390E+04	-0.813
	+	351.06	*	2.818E+01	1.783E+03	2.382E+01	1.507E+03	1.183
RA-226	+	186.21	*	4.787E+00	8.839E+01	8.689E+01	5.851E+01	0.055
TH-230	+	67.67	*	7.529E+02	6.392E+02	7.323E+02	8.623E+01	1.028
TH-232	+	63.81	*	5.484E+02	4.393E+03	1.084E+03	8.342E+03	0.506
		140.88		2.501E+03	9.275E+03	1.577E+04	1.549E+03	0.159
TH-234	+	63.29	*	3.854E+01	8.640E+01	7.635E+01	1.551E+01	0.505
	+	92.59		8.418E+01	8.831E+01	6.628E+01	1.515E+01	1.270
U-238	+	63.29	*	3.854E+01	8.640E+01	7.635E+01	1.551E+01	0.505
	+	92.59		8.418E+01	8.664E+01	6.628E+01	6.934E+00	1.270

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7		477.60	*	-6.655E+00	2.721E+01	4.322E+01	4.561E+00	-0.154
NA-22		1274.54	*	-1.589E+00	3.301E+00	4.952E+00	4.143E-01	-0.321
NA-24		1368.63	*	-7.971E+00	3.301E+00	Half-Life too short		
K-40		1460.82	*	-2.716E+01	3.896E+01	6.136E+01	5.318E+00	-0.443
SC-46		889.28	*	-4.724E+00	3.208E+00	3.635E+00	3.025E-01	-1.300
		1120.55		-1.438E-01	4.024E+00	6.424E+00	5.419E-01	-0.022
V-48		944.13		-2.688E+00	6.368E+01	1.031E+02	8.630E+00	-0.026
		983.53	*	-3.981E-01	6.230E+00	1.002E+01	8.438E-01	-0.040
		1312.11		1.976E+00	6.826E+00	1.192E+01	9.919E-01	0.166
CR-51		320.08	*	-5.562E+00	2.897E+01	4.811E+01	4.412E+00	-0.116
MN-54		834.85	*	-1.077E+00	3.163E+00	4.953E+00	4.203E-01	-0.217
CO-56		846.77	*	2.430E+00	3.247E+00	5.964E+00	5.044E-01	0.407
		1037.84		1.009E+01	2.490E+01	4.330E+01	3.859E+00	0.233
		1238.28		4.458E+00	5.250E+00	1.009E+01	8.710E-01	0.442
		1771.35		-3.344E+01	2.754E+01	3.202E+01	2.666E+00	-1.044
CO-57		122.06	*	1.574E+00	2.024E+00	3.579E+00	3.992E-01	0.440
		136.47		1.642E+00	1.748E+01	2.945E+01	3.146E+00	0.056
CO-58		810.76	*	-2.036E+00	2.821E+00	4.004E+00	3.427E-01	-0.508
FE-59		1099.25	*	2.050E+00	7.467E+00	1.263E+01	1.157E+00	0.162

Sample ID : G266877003 Acquisition date : 26-NOV-2010 06:06:23

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

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
	1291.59		1.784E+00	8.002E+00	1.395E+01	1.331E+00	0.128
CO-60	1173.23		1.241E+00	3.692E+00	6.493E+00	5.442E-01	0.191
	1332.49	*	-4.578E-01	3.420E+00	5.511E+00	4.574E-01	-0.083
ZN-65	1115.54	*	-7.068E+00	6.830E+00	8.452E+00	7.140E-01	-0.836
SE-75	121.12		2.180E+00	1.076E+01	1.840E+01	2.414E+00	0.119
	136.00		2.944E+00	3.343E+00	5.906E+00	6.037E-01	0.498
	264.66	*	-2.686E+00	3.942E+00	5.861E+00	4.765E-01	-0.458
	279.54		-2.918E+00	9.196E+00	1.414E+01	1.188E+00	-0.206
	400.66		1.954E+00	1.968E+01	3.311E+01	4.015E+00	0.059
SR-85	514.00	*	-9.846E+00	4.505E+00	5.574E+00	5.499E-01	-1.766
Y-88	898.04		5.888E-01	3.290E+00	5.567E+00	4.638E-01	0.106
	1836.06	*	1.241E+00	3.728E+00	6.690E+00	5.524E-01	0.186
Y-91	1204.77	*	1.212E+02	1.371E+03	2.330E+03	1.954E+02	0.052
NB-94	702.65	*	7.706E-01	2.439E+00	4.279E+00	3.672E-01	0.180
	871.09		2.350E+00	3.367E+00	6.053E+00	5.075E-01	0.388
NB-95	765.80	*	-4.920E-01	3.167E+00	5.146E+00	4.421E-01	-0.096
NB-95M	235.69	*	5.324E+00	1.063E+01	1.618E+01	1.528E+00	0.329
ZR-95	724.19		4.655E+00	7.730E+00	1.390E+01	1.296E+00	0.335
	756.73	*	2.214E-01	5.053E+00	8.483E+00	8.060E-01	0.026
MO-99	140.51		6.655E+02	2.225E+03	3.783E+03	9.160E+02	0.176
	181.07		-3.903E+01	1.881E+03	2.759E+03	5.109E+02	-0.014
	366.42		9.383E+03	9.741E+03	1.776E+04	1.684E+03	0.528
	739.50	*	-3.652E+02	1.134E+03	1.795E+03	2.827E+02	-0.203
	777.92		-1.571E+03	3.954E+03	6.215E+03	5.334E+02	-0.253
TC-99M	140.51	*	5.678E+12	3.954E+03	Half-Life too short		
RU-103	497.08	*	-9.899E-02	3.703E+00	6.034E+00	8.936E-01	-0.016
	610.33		-1.488E+01	8.796E+01	1.401E+02	2.330E+01	-0.106
RH-106	621.93	*	2.092E+00	2.857E+01	4.626E+01	6.257E+00	0.045
	1050.41		5.638E+01	1.761E+02	3.043E+02	2.573E+01	0.185
RU-106	621.93	*	2.092E+00	2.857E+01	4.626E+01	4.177E+00	0.045
	1050.41		5.638E+01	1.761E+02	3.043E+02	2.573E+01	0.185
AG-108M	433.94	*	-1.305E+00	2.286E+00	3.492E+00	3.572E-01	-0.374
	614.28		1.272E-01	3.243E+00	5.230E+00	4.907E-01	0.024
	722.91		1.361E+00	3.030E+00	5.370E+00	4.766E-01	0.253
CD-109	88.03	*	-2.328E+00	5.238E+01	8.089E+01	8.430E+00	-0.029
AG-110M	657.76	*	-6.658E+00	3.670E+00	4.810E+00	4.250E-01	-1.384
	677.62		8.316E+00	2.385E+01	4.208E+01	3.704E+00	0.198
	706.68		9.719E-01	1.539E+01	2.604E+01	2.301E+00	0.037
	763.94		5.001E+00	1.098E+01	1.963E+01	1.734E+00	0.255
	884.68		2.079E+00	4.171E+00	7.396E+00	6.378E-01	0.281
	937.49		3.179E+00	8.033E+00	1.411E+01	1.225E+00	0.225
	1384.29		1.591E+00	1.191E+01	2.026E+01	1.742E+00	0.079
SN-113	391.70	*	1.346E+00	3.299E+00	5.755E+00	5.824E-01	0.234
CD-115	260.90		4.328E+03	1.423E+04	2.345E+04	1.898E+03	0.185
	492.35		-2.401E+03	3.887E+03	5.810E+03	5.775E+02	-0.413
	527.90	*	4.593E+02	1.147E+03	1.966E+03	1.927E+02	0.234
SN-117M	156.02		-1.282E+01	1.798E+02	2.969E+02	2.588E+01	-0.043
	158.56	*	-3.503E+00	4.489E+00	6.964E+00	5.936E-01	-0.503
TE-123M	159.00	*	-1.949E+00	2.295E+00	3.539E+00	3.023E-01	-0.551

Sample ID : G266877003 Acquisition date : 26-NOV-2010 06:06:23

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
SB-124		602.73		-2.181E+00	3.576E+00	5.261E+00	4.858E-01	-0.415
		645.85		-1.699E+01	4.076E+01	6.043E+01	5.576E+00	-0.281
		722.78		1.318E+01	3.057E+01	5.407E+01	4.756E+00	0.244
		1690.97	*	3.899E+00	1.030E+01	1.791E+01	1.570E+00	0.218
SB-125		427.87	*	-3.413E+00	7.800E+00	1.225E+01	1.240E+00	-0.279
		463.37		-1.337E+01	2.243E+01	3.408E+01	3.598E+00	-0.392
		600.60		-1.722E+01	1.758E+01	2.449E+01	2.413E+00	-0.703
		635.95		3.635E+00	2.399E+01	3.925E+01	3.745E+00	0.093
TE-125M		109.28	*	1.017E+02	7.007E+02	1.201E+03	1.479E+02	0.085
I-126		388.63		-1.216E+01	1.344E+01	1.993E+01	1.961E+00	-0.610
		666.33	*	-2.242E+01	2.333E+01	3.499E+01	2.986E+00	-0.641
		753.82		1.561E+02	1.376E+02	2.675E+02	2.300E+01	0.583
SB-126		414.70		-3.420E-01	6.188E+00	1.020E+01	1.016E+00	-0.034
		666.50		-7.084E+00	8.090E+00	1.229E+01	1.049E+00	-0.576
		695.00		-1.384E+00	6.410E+00	1.043E+01	8.946E-01	-0.133
		697.00		5.546E+00	2.144E+01	3.727E+01	3.197E+00	0.149
		720.70	*	-2.300E+00	1.241E+01	2.024E+01	1.739E+00	-0.114
		856.80		-1.713E+01	3.323E+01	4.896E+01	4.126E+00	-0.350
SN-126	+	64.28		1.485E+01	3.326E+01	3.915E+01	6.817E+00	0.379
		86.94		1.377E+01	2.156E+01	3.398E+01	1.420E+01	0.405
		87.57	*	-2.220E-01	5.234E+00	8.088E+00	8.447E-01	-0.027
SB-127		252.40		3.495E+01	3.861E+02	6.247E+02	2.591E+02	0.056
		473.00		3.809E+01	1.425E+02	2.419E+02	3.358E+01	0.157
		685.70	*	5.086E+01	1.081E+02	1.941E+02	2.236E+01	0.262
		783.70		7.149E+01	3.567E+02	6.080E+02	7.599E+01	0.118
I-131		80.19		-8.852E+01	2.554E+02	3.854E+02	4.194E+01	-0.230
		284.31		3.646E+01	1.324E+02	2.164E+02	1.861E+01	0.168
		364.49	*	-3.408E+00	1.051E+01	1.704E+01	1.684E+00	-0.200
		636.99		-6.181E+00	1.459E+02	2.318E+02	2.164E+01	-0.027
TE-132		49.72		-1.168E+02	3.702E+02	5.751E+02	8.043E+01	-0.203
		111.76		-1.067E+03	2.774E+03	4.566E+03	5.924E+02	-0.234
		116.30		-7.541E+01	2.615E+03	4.413E+03	5.772E+02	-0.017
		228.16	*	8.411E+00	6.764E+01	1.106E+02	1.733E+01	0.076
BA-133		81.00		2.745E+00	4.789E+00	7.822E+00	1.315E+00	0.351
		276.40		9.034E+00	2.872E+01	4.718E+01	6.498E+00	0.191
		302.85		-4.897E+00	1.179E+01	1.775E+01	2.298E+00	-0.276
		356.01	*	-2.359E+00	3.862E+00	5.187E+00	6.963E-01	-0.455
		383.85		1.077E+01	2.430E+01	4.233E+01	5.606E+00	0.254
I-133		529.87	*	-4.072E-01	2.430E+01	Half-Life too short		
		875.33		5.095E+00	2.430E+01	Half-Life too short		
		1298.22		-4.850E+01	2.430E+01	Half-Life too short		
CS-134		563.25		-7.716E+00	3.271E+01	5.123E+01	4.946E+00	-0.151
		569.33		-1.652E+01	2.001E+01	2.852E+01	2.749E+00	-0.579
		604.72		-1.547E-01	3.187E+00	5.090E+00	4.700E-01	-0.030
		795.86	*	2.821E-01	3.354E+00	5.642E+00	4.866E-01	0.050
		801.95		-2.658E+01	3.463E+01	4.925E+01	4.236E+00	-0.540
		1365.19		3.287E+01	8.784E+01	1.583E+02	1.385E+01	0.208
CS-135		268.22	*	4.189E+00	1.287E+01	2.120E+01	2.014E+00	0.198
I-135		546.56		1.534E+12	1.287E+01	Half-Life too short		

Sample ID : G266877003 Acquisition date : 26-NOV-2010 06:06:23

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		836.80		5.460E+10	1.287E+01	Half-Life too short		
		1038.76		-1.872E+11	1.287E+01	Half-Life too short		
		1131.51		2.973E+11	1.287E+01	Half-Life too short		
		1260.41	*	1.542E+12	1.287E+01	Half-Life too short		
		1457.56		-2.214E+12	1.287E+01	Half-Life too short		
		1678.03		-2.983E+11	1.287E+01	Half-Life too short		
		1791.20		-5.345E+12	1.287E+01	Half-Life too short		
CS-136		153.25		4.662E+00	6.701E+01	1.120E+02	1.179E+01	0.042
		176.60		2.398E+00	4.125E+01	6.825E+01	6.104E+00	0.035
		273.65		3.939E-01	4.170E+01	6.654E+01	5.881E+00	0.006
		340.55		-2.834E+00	1.089E+01	1.786E+01	1.674E+00	-0.159
		818.51		-7.586E+00	5.892E+00	7.194E+00	6.137E-01	-1.055
		1048.07	*	1.414E+00	7.034E+00	1.191E+01	1.052E+00	0.119
		1235.36		-3.248E+00	3.634E+01	5.953E+01	6.900E+00	-0.055
BA-137M		661.66	*	-1.985E+00	4.295E+00	7.571E+00	6.453E-01	-0.262
CS-137		661.66	*	-2.097E+00	4.537E+00	7.998E+00	6.830E-01	-0.262
CE-139		165.86	*	1.004E-01	2.548E+00	4.226E+00	3.363E-01	0.024
BA-140		162.66		6.368E+01	7.414E+01	1.296E+02	1.142E+01	0.491
		304.85		-4.040E+01	1.097E+02	1.646E+02	4.812E+01	-0.245
		423.72		3.655E+01	1.686E+02	2.852E+02	9.492E+01	0.128
		537.26	*	-9.185E+00	2.276E+01	3.442E+01	1.178E+01	-0.267
LA-140		328.76		-5.594E+00	2.272E+01	3.743E+01	3.499E+00	-0.149
		487.02		4.694E+00	1.061E+01	1.844E+01	1.921E+00	0.255
		815.77		1.066E+00	2.216E+01	3.703E+01	3.536E+00	0.029
		1596.21	*	3.932E+00	9.199E+00	1.627E+01	1.374E+00	0.242
CE-141		145.44	*	-5.141E-01	5.351E+00	8.865E+00	8.546E-01	-0.058
CE-143		57.36		8.038E-03	5.351E+00	Half-Life too short		
		293.27	*	-1.519E-02	5.351E+00	Half-Life too short		
		664.57		-9.365E-02	5.351E+00	Half-Life too short		
		721.93		-1.767E-03	5.351E+00	Half-Life too short		
CE-144		80.12		-4.531E+01	1.308E+02	1.973E+02	2.139E+01	-0.230
		133.52	*	3.430E+00	1.661E+01	2.822E+01	4.606E+00	0.122
PM-144		476.78		-2.203E+00	5.410E+00	8.399E+00	8.925E-01	-0.262
		618.01		-1.769E+00	2.849E+00	4.129E+00	3.840E-01	-0.429
		696.49	*	4.022E-01	2.663E+00	4.564E+00	3.916E-01	0.088
PR-144		696.51	*	2.766E+01	1.990E+02	3.405E+02	2.920E+01	0.081
		1489.16		1.110E+02	1.126E+03	1.888E+03	1.591E+02	0.059
PM-146		453.88	*	-1.577E+00	3.504E+00	5.442E+00	6.389E-01	-0.290
		633.25		5.146E+01	1.331E+02	2.222E+02	8.500E+01	0.232
		735.93		-1.171E+01	1.262E+01	1.737E+01	4.866E+00	-0.674
		747.24		-3.332E+00	7.326E+00	1.127E+01	1.643E+00	-0.296
ND-147		91.11		3.648E+01	1.964E+01	3.390E+01	3.744E+00	1.076
		319.41		2.766E+01	2.636E+02	4.507E+02	3.927E+01	0.061
		531.02	*	-2.816E+01	4.754E+01	7.008E+01	1.097E+01	-0.402
PM-149		285.90	*	-9.326E+03	9.783E+03	1.375E+04	2.103E+03	-0.678
EU-152		121.78		3.197E+00	5.906E+00	1.030E+01	1.252E+00	0.310
		244.70		-1.882E+01	2.663E+01	3.980E+01	3.228E+00	-0.473
		344.28	*	3.892E+00	6.803E+00	1.214E+01	1.166E+00	0.321
		778.90		-1.613E+01	2.425E+01	3.652E+01	3.133E+00	-0.442

Sample ID : G266877003 Acquisition date : 26-NOV-2010 06:06:23

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		964.08		1.994E+01	2.211E+01	4.099E+01	3.442E+00	0.486
		1085.87		-2.035E+01	3.339E+01	4.742E+01	4.008E+00	-0.429
		1112.07		-7.019E+00	2.193E+01	3.276E+01	2.765E+00	-0.214
		1408.01		-1.551E+00	1.663E+01	2.687E+01	2.252E+00	-0.058
GD-153		69.67		2.961E+01	8.771E+01	1.311E+02	1.520E+01	0.226
		97.43	*	3.957E-01	5.961E+00	9.005E+00	9.481E-01	0.044
		103.18		-5.026E+00	7.988E+00	1.298E+01	1.381E+00	-0.387
EU-154		123.07		2.148E-01	4.090E+00	6.918E+00	9.209E-01	0.031
		723.31		6.580E+00	1.407E+01	2.495E+01	2.363E+00	0.264
		873.19		-6.349E+00	2.564E+01	4.053E+01	4.751E+00	-0.157
		996.26		1.121E+01	2.986E+01	5.158E+01	8.962E+00	0.217
		1004.73		-3.759E+00	1.313E+01	1.978E+01	2.275E+00	-0.190
		1274.44	*	-4.126E+00	9.427E+00	1.429E+01	1.598E+00	-0.289
EU-155		86.55		3.132E+00	6.047E+00	9.769E+00	1.032E+00	0.321
		105.31	*	3.266E+00	7.745E+00	1.352E+01	1.456E+00	0.242
TA-182		67.75		-5.851E-01	5.086E+00	7.281E+00	8.569E-01	-0.080
		100.11		-6.046E-01	1.152E+01	1.957E+01	2.070E+00	-0.031
		152.43		-7.097E+00	2.714E+01	4.421E+01	3.972E+00	-0.161
		222.11		5.913E+00	2.905E+01	4.788E+01	3.880E+00	0.123
		1121.30		2.771E+00	1.132E+01	1.896E+01	1.599E+00	0.146
		1189.05		1.056E+01	2.086E+01	3.802E+01	3.188E+00	0.278
		1221.41	*	-3.155E+00	1.232E+01	1.950E+01	1.634E+00	-0.162
		1231.02		-1.129E+01	2.733E+01	4.140E+01	3.469E+00	-0.273
IR-192		295.96		1.056E+01	9.697E+00	1.682E+01	1.411E+00	0.628
		308.46		-2.838E+00	7.211E+00	1.175E+01	1.008E+00	-0.241
		316.51	*	8.155E-01	2.669E+00	4.652E+00	4.039E-01	0.175
		468.07		2.946E+00	5.073E+00	8.950E+00	9.428E-01	0.329
HG-203		70.83		3.446E+01	6.381E+01	1.042E+02	1.851E+01	0.331
		72.87		-4.481E+01	3.969E+01	5.514E+01	9.478E+00	-0.813
		279.20	*	-2.659E-01	3.154E+00	4.975E+00	4.119E-01	-0.053
BI-207		72.81		-1.230E+01	9.143E+00	1.256E+01	1.423E+00	-0.980
		74.97		-1.395E+00	5.901E+00	8.997E+00	1.005E+00	-0.155
		569.70		-3.349E+00	3.150E+00	4.326E+00	4.123E-01	-0.774
		1063.66	*	3.326E-02	3.904E+00	6.317E+00	5.342E-01	0.005
		1770.23		-7.811E+01	5.591E+01	6.098E+01	5.079E+00	-1.281
TL-208		277.37		8.462E+00	3.118E+01	5.103E+01	6.197E+00	0.166
		583.19	*	8.103E-01	3.423E+00	5.681E+00	5.669E-01	0.143
		860.56		1.527E+01	2.292E+01	4.166E+01	3.776E+00	0.367
PB-210		46.54	*	-5.703E+01	5.965E+01	1.012E+02	1.265E+01	-0.563
PB-211		404.85	*	4.850E+01	3.069E+03	1.049E+02	6.636E+03	0.462
		427.09		-4.987E+01	3.157E+03	2.052E+02	1.298E+04	-0.243
		832.01		6.213E+01	3.931E+03	1.492E+02	9.441E+03	0.416
BI-212		727.33	*	-1.452E+00	4.788E+01	7.977E+01	9.926E+00	-0.018
		785.37		2.438E+02	2.741E+02	5.080E+02	4.355E+01	0.480
		1620.50		-1.089E+01	2.204E+02	3.532E+02	2.979E+01	-0.031
PB-212		74.82		-6.608E+00	2.071E+01	3.135E+01	4.648E+00	-0.211
		77.11		8.830E-01	1.211E+01	1.896E+01	2.091E+00	0.047
	+	238.63	*	3.906E+00	7.019E+00	9.364E+00	8.727E-01	0.417
		300.09		-4.624E+01	7.304E+01	1.079E+02	1.117E+01	-0.429

Sample ID : G266877003 Acquisition date : 26-NOV-2010 06:06:23

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BI-214		609.32	*	1.164E+00	8.484E+00	1.393E+01	1.473E+00	0.084
		1120.29		1.201E+00	2.400E+01	3.891E+01	4.192E+00	0.031
		1764.49		1.960E+01	2.057E+01	4.156E+01	3.464E+00	0.472
PB-214		74.82		-1.153E+01	3.614E+01	5.471E+01	7.502E+00	-0.211
		77.11		1.532E+00	2.102E+01	3.291E+01	4.532E+00	0.047
		242.00		2.398E+01	2.837E+01	4.502E+01	4.488E+00	0.533
		295.22		1.010E+01	1.321E+01	2.231E+01	2.356E+00	0.453
	+	351.93	*	1.021E+01	1.122E+01	1.362E+01	1.515E+00	0.750
RN-219		271.23		-6.903E+00	4.370E+02	2.792E+01	1.766E+03	-0.247
		401.81	*	-3.535E+01	2.236E+03	4.886E+01	3.091E+03	-0.723
RA-223		81.07		6.347E+00	4.016E+02	1.778E+01	1.125E+03	0.357
		83.79		-2.793E-01	1.901E+01	1.086E+01	6.869E+02	-0.026
		94.56		1.169E+01	7.396E+02	3.514E+01	2.223E+03	0.333
		144.24		3.869E+00	2.526E+02	1.003E+02	6.342E+03	0.039
		154.21		-1.805E+01	1.142E+03	4.772E+01	3.018E+03	-0.378
		269.46		9.644E-01	6.261E+01	2.265E+01	1.433E+03	0.043
		323.87	*	-2.641E+01	1.671E+03	7.960E+01	5.035E+03	-0.332
		338.28		6.948E+01	4.395E+03	1.370E+02	8.668E+03	0.507
RA-224		240.99	*	2.686E+01	5.310E+01	8.099E+01	6.571E+00	0.332
AC-227		79.69		-5.941E+01	6.865E+01	9.744E+01	1.799E+01	-0.610
		235.96		7.045E+00	1.278E+01	1.955E+01	1.940E+00	0.360
		256.23	*	-3.254E+00	1.883E+01	2.959E+01	3.457E+00	-0.110
		299.98		-4.719E+01	7.948E+01	1.179E+02	1.479E+01	-0.400
		304.50		-2.293E+01	1.263E+02	1.952E+02	3.210E+01	-0.117
		334.37		-6.348E+01	1.364E+02	2.192E+02	3.459E+01	-0.290
TH-227		79.69		-5.941E+01	3.758E+03	9.744E+01	6.163E+03	-0.610
		235.96		7.045E+00	4.458E+02	1.955E+01	1.237E+03	0.360
		256.23	*	-3.254E+00	2.067E+02	2.959E+01	1.871E+03	-0.110
		299.98		-4.719E+01	2.986E+03	1.179E+02	7.457E+03	-0.400
		304.50		-2.293E+01	1.456E+03	1.952E+02	1.234E+04	-0.117
		334.37		-6.348E+01	4.018E+03	2.192E+02	1.387E+04	-0.290
AC-228		338.32		1.560E+01	2.023E+01	3.460E+01	1.447E+01	0.451
		911.20	*	5.785E+00	1.320E+01	2.297E+01	2.611E+00	0.252
		968.97		2.133E+00	1.710E+01	2.854E+01	6.931E+00	0.075
RA-228		338.32		1.560E+01	2.023E+01	3.460E+01	1.447E+01	0.451
		911.20	*	5.785E+00	1.320E+01	2.297E+01	2.611E+00	0.252
		968.97		2.133E+00	1.710E+01	2.854E+01	6.931E+00	0.075
TH-228		74.82		-6.608E+00	2.070E+01	3.135E+01	3.526E+00	-0.211
		77.11		8.830E-01	1.211E+01	1.896E+01	2.091E+00	0.047
	+	238.63	*	3.906E+00	7.019E+00	9.364E+00	8.727E-01	0.417
		300.09		-4.624E+01	7.819E+01	1.079E+02	6.603E+01	-0.429
TH-229		85.43		-8.210E-01	1.273E+01	1.967E+01	2.075E+00	-0.042
		88.47		1.808E+00	7.747E+00	1.223E+01	1.275E+00	0.148
		193.51	*	1.695E+01	4.684E+01	7.120E+01	5.726E+00	0.238
		210.85		-2.691E+01	7.144E+01	1.124E+02	9.087E+00	-0.239
PA-231		283.69	*	6.154E+01	1.233E+02	2.054E+02	2.936E+01	0.300
		301.36		3.432E+01	4.015E+01	6.887E+01	7.751E+00	0.498
TH-231		84.21	*	8.481E+00	2.693E+01	4.292E+01	7.938E+00	0.198
PA-233		94.65		7.260E+00	1.612E+01	2.830E+01	2.999E+00	0.257

Sample ID : G266877003 Acquisition date : 26-NOV-2010 06:06:23

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		98.43		-1.010E+01	9.816E+00	1.401E+01	1.530E+00	-0.721
		300.13		-2.314E+01	3.584E+01	5.274E+01	7.751E+00	-0.439
		311.90	*	1.549E+00	4.736E+00	8.284E+00	7.319E-01	0.187
		340.48		-9.972E+00	4.518E+01	7.432E+01	1.801E+01	-0.134
PA-234		94.67		4.536E+00	1.082E+01	1.896E+01	2.610E+00	0.239
		98.44		-6.721E+00	7.507E+00	9.319E+00	5.230E+00	-0.721
		111.00		5.662E+00	1.335E+01	2.326E+01	3.197E+00	0.243
		131.20		-2.015E+00	8.021E+00	1.321E+01	1.388E+00	-0.153
		569.50		-2.430E+01	2.740E+01	3.864E+01	3.683E+00	-0.629
		733.00		-1.447E+01	3.323E+01	5.197E+01	1.153E+01	-0.278
		880.51		-1.480E+01	2.503E+01	3.707E+01	3.096E+00	-0.399
		883.24		2.272E+01	2.891E+01	4.607E+01	3.096E+01	0.493
		926.36		-2.508E+00	1.130E+01	1.751E+01	4.409E+00	-0.143
		946.00	*	2.014E+00	2.167E+01	3.604E+01	6.722E+00	0.056
		949.00		-5.121E+00	3.416E+01	5.417E+01	4.538E+00	-0.095
PA-234M		766.42		-3.082E+02	8.392E+02	1.291E+03	6.549E+02	-0.239
		1001.03	*	-1.960E+02	3.258E+02	4.584E+02	4.494E+01	-0.428
U-235		89.96		-1.866E+01	5.518E+01	8.270E+01	2.093E+01	-0.226
	+	93.35		6.359E+01	6.685E+01	7.682E+01	1.832E+01	0.828
		143.76	*	9.125E+00	1.885E+01	3.082E+01	5.388E+00	0.296
		163.33		3.100E+01	3.869E+01	6.691E+01	1.187E+01	0.463
	+	185.72		3.005E-01	5.544E+00	6.619E+00	5.308E-01	0.045
		205.31		-1.124E+01	3.994E+01	6.349E+01	1.136E+01	-0.177
NP-237		94.67		4.536E+00	1.082E+01	1.896E+01	1.988E+00	0.239
		98.43		-1.010E+01	9.812E+00	1.401E+01	1.477E+00	-0.721
		300.13		-2.314E+01	3.579E+01	5.274E+01	6.509E+00	-0.439
		311.90	*	1.549E+00	4.737E+00	8.284E+00	9.050E-01	0.187
		340.48		-9.972E+00	4.512E+01	7.432E+01	6.733E+00	-0.134
NP-239		99.53		-1.387E+01	1.144E+01	1.677E+01	1.772E+00	-0.827
		103.37		-1.389E+00	7.173E+00	1.205E+01	1.282E+00	-0.115
		106.12		3.062E+00	6.075E+00	1.066E+01	1.141E+00	0.287
		116.74	*	-5.438E+00	2.106E+01	3.496E+01	3.839E+00	-0.156
		228.18		2.140E+00	1.745E+01	2.852E+01	2.313E+00	0.075
		277.60		4.717E+00	1.412E+01	2.325E+01	1.872E+00	0.203
AM-241		59.54	*	1.874E+00	5.413E+00	8.194E+00	1.077E+00	0.229
CM-247		278.00		6.739E+00	6.250E+01	1.006E+02	8.095E+00	0.067
		287.50		1.796E+01	1.025E+02	1.658E+02	1.357E+01	0.108
		402.40	*	-4.484E+00	3.103E+00	4.229E+00	4.197E-01	-1.060
CF-249		252.80		-3.283E+01	7.664E+01	1.173E+02	9.511E+00	-0.280
		333.37		-1.560E+01	1.460E+01	2.198E+01	1.966E+00	-0.710
		388.16	*	-2.096E+00	3.023E+00	4.612E+00	4.535E-01	-0.455
CF-251		177.52	*	-5.484E+00	1.061E+01	1.671E+01	1.336E+00	-0.328
		227.38		6.054E+00	2.826E+01	4.659E+01	3.777E+00	0.130
		285.41		-1.444E+02	1.932E+02	2.822E+02	2.299E+01	-0.512
ANH-511		511.00	*	-8.423E+00	4.512E+00	7.850E+00	7.755E-01	-1.073

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877003       *
* Acquisition date : 26-NOV-2010 06:06:23 Detector SN#    :                 *
* Detector ID      : GAM25                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:00.99     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 10-NOV-2010 12:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G266877003           Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-AUG-2010 10:35:55 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	
BI-211	2.818E+01	1.747E+03	2.382E+01	0.000E+00
RA-226	4.787E+00	8.662E+01	8.689E+01	0.000E+00
TH-230	7.529E+02	6.264E+02	7.323E+02	0.000E+00
TH-232	5.484E+02	4.305E+03	1.084E+03	0.000E+00
TH-234	3.854E+01	8.467E+01	7.635E+01	0.000E+00
U-238	3.854E+01	8.467E+01	7.635E+01	0.000E+00

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)		
BE-7	-6.655E+00		2.666E+01	4.322E+01	0.000E+00	NOT IDENT.
NA-22	-1.589E+00		3.235E+00	4.952E+00	0.000E+00	NOT IDENT.
NA-24	0.000E+00		1.125E+08	0.000E+00	0.000E+00	SHORT HLIF
K-40	-2.716E+01		3.818E+01	6.136E+01	0.000E+00	NOT IDENT.
SC-46	-4.724E+00		3.144E+00	3.635E+00	0.000E+00	NOT IDENT.
V-48	-3.981E-01		6.105E+00	1.002E+01	0.000E+00	NOT IDENT.
CR-51	-5.562E+00		2.839E+01	4.811E+01	0.000E+00	NOT IDENT.
MN-54	-1.077E+00		3.100E+00	4.953E+00	0.000E+00	NOT IDENT.
CO-56	2.430E+00		3.182E+00	5.964E+00	0.000E+00	NOT IDENT.
CO-57	1.574E+00		1.983E+00	3.579E+00	0.000E+00	NOT IDENT.
CO-58	-2.036E+00		2.764E+00	4.004E+00	0.000E+00	NOT IDENT.
FE-59	2.050E+00		7.318E+00	1.263E+01	0.000E+00	NOT IDENT.
CO-60	-4.578E-01		3.351E+00	5.511E+00	0.000E+00	NOT IDENT.
ZN-65	-7.068E+00		6.694E+00	8.452E+00	0.000E+00	NOT IDENT.
SE-75	-2.686E+00		3.863E+00	5.861E+00	0.000E+00	NOT IDENT.
SR-85	-9.846E+00		4.414E+00	5.574E+00	0.000E+00	NOT IDENT.
Y-88	1.241E+00		3.654E+00	6.690E+00	0.000E+00	NOT IDENT.
Y-91	1.212E+02		1.344E+03	2.330E+03	0.000E+00	NOT IDENT.
NB-94	7.706E-01		2.390E+00	4.279E+00	0.000E+00	NOT IDENT.
NB-95	-4.920E-01		3.104E+00	5.146E+00	0.000E+00	NOT IDENT.
NB-95M	5.324E+00		1.042E+01	1.618E+01	0.000E+00	NOT IDENT.

ZR-95	2.214E-01	4.952E+00	8.483E+00	0.000E+00	NOT IDENT.
MO-99	-3.652E+02	1.111E+03	1.795E+03	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.863E+19	0.000E+00	0.000E+00	SHORT HLIF
RU-103	-9.899E-02	3.629E+00	6.034E+00	0.000E+00	NOT IDENT.
RH-106	2.092E+00	2.800E+01	4.626E+01	0.000E+00	NOT IDENT.
RU-106	2.092E+00	2.799E+01	4.626E+01	0.000E+00	NOT IDENT.
AG-108M	-1.305E+00	2.240E+00	3.492E+00	0.000E+00	NOT IDENT.
CD-109	-2.328E+00	5.133E+01	8.089E+01	0.000E+00	NOT IDENT.
AG-110M	-6.658E+00	3.597E+00	4.810E+00	0.000E+00	NOT IDENT.
SN-113	1.346E+00	3.233E+00	5.755E+00	0.000E+00	NOT IDENT.
CD-115	4.593E+02	1.124E+03	1.966E+03	0.000E+00	NOT IDENT.
SN-117M	-3.503E+00	4.399E+00	6.964E+00	0.000E+00	NOT IDENT.
TE-123M	-1.949E+00	2.249E+00	3.539E+00	0.000E+00	NOT IDENT.
SB-124	3.899E+00	1.009E+01	1.791E+01	0.000E+00	NOT IDENT.
SB-125	-3.413E+00	7.644E+00	1.225E+01	0.000E+00	NOT IDENT.
TE-125M	1.017E+02	6.867E+02	1.201E+03	0.000E+00	NOT IDENT.
I-126	-2.242E+01	2.287E+01	3.499E+01	0.000E+00	NOT IDENT.
SB-126	-2.300E+00	1.217E+01	2.024E+01	0.000E+00	NOT IDENT.
SN-126	-2.220E-01	5.130E+00	8.088E+00	0.000E+00	FAIL ABUN
SB-127	5.086E+01	1.060E+02	1.941E+02	0.000E+00	NOT IDENT.
I-131	-3.408E+00	1.030E+01	1.704E+01	0.000E+00	NOT IDENT.
TE-132	8.411E+00	6.629E+01	1.106E+02	0.000E+00	NOT IDENT.
BA-133	-2.359E+00	3.785E+00	5.187E+00	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.683E+05	0.000E+00	0.000E+00	SHORT HLIF
CS-134	2.821E-01	3.287E+00	5.642E+00	0.000E+00	NOT IDENT.
CS-135	4.189E+00	1.261E+01	2.120E+01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.924E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.414E+00	6.893E+00	1.191E+01	0.000E+00	NOT IDENT.
BA-137M	-1.985E+00	4.209E+00	7.571E+00	0.000E+00	NOT IDENT.
CS-137	-2.097E+00	4.446E+00	7.998E+00	0.000E+00	NOT IDENT.
CE-139	1.004E-01	2.497E+00	4.226E+00	0.000E+00	NOT IDENT.
BA-140	-9.185E+00	2.231E+01	3.442E+01	0.000E+00	NOT IDENT.
LA-140	3.932E+00	9.015E+00	1.627E+01	0.000E+00	NOT IDENT.
CE-141	-5.141E-01	5.244E+00	8.865E+00	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.528E+04	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.430E+00	1.628E+01	2.822E+01	0.000E+00	NOT IDENT.
PM-144	4.022E-01	2.610E+00	4.564E+00	0.000E+00	NOT IDENT.
PR-144	2.766E+01	1.950E+02	3.405E+02	0.000E+00	NOT IDENT.
PM-146	-1.577E+00	3.434E+00	5.442E+00	0.000E+00	NOT IDENT.
ND-147	-2.816E+01	4.659E+01	7.008E+01	0.000E+00	NOT IDENT.
PM-149	-9.326E+03	9.588E+03	1.375E+04	0.000E+00	NOT IDENT.
EU-152	3.892E+00	6.667E+00	1.214E+01	0.000E+00	NOT IDENT.
GD-153	3.957E-01	5.841E+00	9.005E+00	0.000E+00	NOT IDENT.
EU-154	-4.126E+00	9.239E+00	1.429E+01	0.000E+00	NOT IDENT.
EU-155	3.266E+00	7.590E+00	1.352E+01	0.000E+00	NOT IDENT.
TA-182	-3.155E+00	1.208E+01	1.950E+01	0.000E+00	NOT IDENT.
IR-192	8.155E-01	2.616E+00	4.652E+00	0.000E+00	NOT IDENT.
HG-203	-2.659E-01	3.091E+00	4.975E+00	0.000E+00	NOT IDENT.
BI-207	3.326E-02	3.826E+00	6.317E+00	0.000E+00	NOT IDENT.
TL-208	8.103E-01	3.354E+00	5.681E+00	0.000E+00	NOT IDENT.
PB-210	-5.703E+01	5.846E+01	1.012E+02	0.000E+00	NOT IDENT.
PB-211	4.850E+01	3.007E+03	1.049E+02	0.000E+00	NOT IDENT.
BI-212	-1.452E+00	4.692E+01	7.977E+01	0.000E+00	NOT IDENT.
PB-212	3.906E+00	6.878E+00	9.364E+00	0.000E+00	FAIL ABUN
BI-214	1.164E+00	8.314E+00	1.393E+01	0.000E+00	NOT IDENT.
PB-214	1.021E+01	1.100E+01	1.362E+01	0.000E+00	FAIL ABUN
RN-219	-3.535E+01	2.192E+03	4.886E+01	0.000E+00	NOT IDENT.
RA-223	-2.641E+01	1.638E+03	7.960E+01	0.000E+00	NOT IDENT.
RA-224	2.686E+01	5.204E+01	8.099E+01	0.000E+00	NOT IDENT.
AC-227	-3.254E+00	1.846E+01	2.959E+01	0.000E+00	NOT IDENT.
TH-227	-3.254E+00	2.025E+02	2.959E+01	0.000E+00	NOT IDENT.
AC-228	5.785E+00	1.294E+01	2.297E+01	0.000E+00	NOT IDENT.
RA-228	5.785E+00	1.294E+01	2.297E+01	0.000E+00	NOT IDENT.
TH-228	3.906E+00	6.878E+00	9.364E+00	0.000E+00	FAIL ABUN
TH-229	1.695E+01	4.591E+01	7.120E+01	0.000E+00	NOT IDENT.
PA-231	6.154E+01	1.208E+02	2.054E+02	0.000E+00	NOT IDENT.
TH-231	8.481E+00	2.639E+01	4.292E+01	0.000E+00	NOT IDENT.
PA-233	1.549E+00	4.641E+00	8.284E+00	0.000E+00	NOT IDENT.
PA-234	2.014E+00	2.124E+01	3.604E+01	0.000E+00	NOT IDENT.
PA-234M	-1.960E+02	3.193E+02	4.584E+02	0.000E+00	NOT IDENT.
U-235	9.125E+00	1.847E+01	3.082E+01	0.000E+00	FAIL ABUN
NP-237	1.549E+00	4.642E+00	8.284E+00	0.000E+00	NOT IDENT.
NP-239	-5.438E+00	2.064E+01	3.496E+01	0.000E+00	NOT IDENT.
AM-241	1.874E+00	5.305E+00	8.194E+00	0.000E+00	NOT IDENT.
CM-247	-4.484E+00	3.041E+00	4.229E+00	0.000E+00	NOT IDENT.
CF-249	-2.096E+00	2.963E+00	4.612E+00	0.000E+00	NOT IDENT.
CF-251	-5.484E+00	1.039E+01	1.671E+01	0.000E+00	NOT IDENT.
ANH-511	-8.423E+00	4.421E+00	7.850E+00	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:07:22.89

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877003.CNF;1
Sample date      : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 06:06:23
Sample ID        : G266877003           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM25                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.99  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.66	93	148	1.16	92.78	89	10	1.29E-02	26.5	
2	6	63.34	128	133	1.35	126.14	122	13	1.77E-02	17.6	1.74E+00
3	6	66.18	44	93	1.13	131.83	122	13	6.07E-03	42.0	
4	0	92.80	186	163	1.12	185.05	181	11	2.59E-02	15.2	
5	0	186.58	59	99	0.96	372.64	367	10	8.14E-03	34.4	
6	0	198.55	62	79	1.36	396.59	392	9	8.56E-03	29.2	
7	0	238.57	43	75	1.24	476.63	472	8	5.93E-03	38.5	
8	0	352.21	58	55	1.39	703.95	697	13	8.08E-03	29.4	
9	0	510.88	106	35	1.97	1021.33	1014	14	1.47E-02	15.3	
10	0	662.06	33	28	1.14	1323.74	1319	10	4.54E-03	34.9	

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:07:25.43

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877003.CNF;1
Sample date      : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 06:06:23
Sample ID        : G266877003           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM25                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.99  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/LITER	Decay Corr pCi/LITER	2-Sigma %Error
BI-211	72.87	------	1.23	2.946E+00	------	Line Not Found	------
	351.06	32	12.92*	1.668E+00	2.814E+01	2.818E+01	6326.24
RA-226	186.21	2	3.59*	2.510E+00	4.787E+00	4.787E+00	1846.32
TH-230	67.67	44	0.38*	2.869E+00	7.529E+02	7.529E+02	84.90
TH-232	63.81	21	0.26*	2.826E+00	5.484E+02	5.484E+02	801.07
	140.88	------	0.02	2.819E+00	------	Line Not Found	------
TH-234	63.29	21	3.70*	2.826E+00	3.854E+01	3.854E+01	224.19
	92.59	57	4.23	3.025E+00	8.418E+01	8.418E+01	104.91
U-238	63.29	21	3.70*	2.826E+00	3.854E+01	3.854E+01	224.19
	92.59	57	4.23	3.025E+00	8.418E+01	8.418E+01	102.92

Flag: "*" = Keyline

Sample ID : G266877003 Acquisition date : 26-NOV-2010 06:06:23

Total number of lines in spectrum	7	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	6	85.71%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/LITER	Decay Corr pCi/LITER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BI-211	21.77Y	1.00	2.814E+01	2.818E+01	178.3E+01	6326.24	
RA-226	1600.00Y	1.00	4.787E+00	4.787E+00	88.39E+00	1846.32	
TH-230	7.54E+04Y	1.00	7.529E+02	7.529E+02	6.392E+02	84.90	
TH-232	1.41E+10Y	1.00	5.484E+02	5.484E+02	43.93E+02	801.07	
TH-234	4.47E+09Y	1.00	3.854E+01	3.854E+01	8.640E+01	224.19	
U-238	4.47E+09Y	1.00	3.854E+01	3.854E+01	8.640E+01	224.19	
			---	---			
		Total Activity :	1.411E+03	1.411E+03			
		Grand Total Activity :	1.411E+03	1.411E+03			

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

Sample ID : G266877003 Acquisition date : 26-NOV-2010 06:06:23

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	198.55	62	79	1.36	396.59	392	9	8.56E-03	58.3	2.43E+00	
0	238.57	20	75	1.24	476.63	472	8	2.71E-03	****	2.19E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:07:28.34

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877003.CNF;1  *
* Acquisition date : 26-NOV-2010 06:06:23  Detector SN#    :                *
* Detector ID      : GAM25                 Sensitivity     : 5.00000        *
* Geometry         : 2LMB                  Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:00.99         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 10-NOV-2010 12:00:00  Nuclide Library : LIQUID          *
* Sample ID        : G266877003            Analyst initials: KXG3           *
* Batch Number     : 1048163               Sample Quantity : 2.00000E+00 LITER *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 2-AUG-2010 10:35:55.00MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BI-211	2.818E+01	1.783E+03	2.382E+01	1.507E+03	1.183
RA-226	4.787E+00	8.839E+01	8.689E+01	5.851E+01	0.055
TH-230	7.529E+02	6.392E+02	7.323E+02	8.623E+01	1.028
TH-232	5.484E+02	4.393E+03	1.084E+03	8.342E+03	0.506
TH-234	3.854E+01	8.640E+01	7.635E+01	1.551E+01	0.505
U-238	3.854E+01	8.640E+01	7.635E+01	1.551E+01	0.505

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7	-6.655E+00		2.721E+01	4.322E+01	4.561E+00	-0.154
NA-22	-1.589E+00		3.301E+00	4.952E+00	4.143E-01	-0.321
NA-24	-7.971E+00		5.738E+01	Half-Life too short		
K-40	-2.716E+01		3.896E+01	6.136E+01	5.318E+00	-0.443
SC-46	-4.724E+00		3.208E+00	3.635E+00	3.025E-01	-1.300
V-48	-3.981E-01		6.230E+00	1.002E+01	8.438E-01	-0.040

Sample ID : G266877003 Acquisition date : 26-NOV-2010 06:06:23

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
CR-51	-5.562E+00		2.897E+01	4.811E+01	4.412E+00	-0.116
MN-54	-1.077E+00		3.163E+00	4.953E+00	4.203E-01	-0.217
CO-56	2.430E+00		3.247E+00	5.964E+00	5.044E-01	0.407
CO-57	1.574E+00		2.024E+00	3.579E+00	3.992E-01	0.440
CO-58	-2.036E+00		2.821E+00	4.004E+00	3.427E-01	-0.508
FE-59	2.050E+00		7.467E+00	1.263E+01	1.157E+00	0.162
CO-60	-4.578E-01		3.420E+00	5.511E+00	4.574E-01	-0.083
ZN-65	-7.068E+00		6.830E+00	8.452E+00	7.140E-01	-0.836
SE-75	-2.686E+00		3.942E+00	5.861E+00	4.765E-01	-0.458
SR-85	-9.846E+00		4.505E+00	5.574E+00	5.499E-01	-1.766
Y-88	1.241E+00		3.728E+00	6.690E+00	5.524E-01	0.186
Y-91	1.212E+02		1.371E+03	2.330E+03	1.954E+02	0.052
NB-94	7.706E-01		2.439E+00	4.279E+00	3.672E-01	0.180
NB-95	-4.920E-01		3.167E+00	5.146E+00	4.421E-01	-0.096
NB-95M	5.324E+00		1.063E+01	1.618E+01	1.528E+00	0.329
ZR-95	2.214E-01		5.053E+00	8.483E+00	8.060E-01	0.026
MO-99	-3.652E+02		1.134E+03	1.795E+03	2.827E+02	-0.203
TC-99M	5.678E+12		9.505E+12	Half-Life too short		
RU-103	-9.899E-02		3.703E+00	6.034E+00	8.936E-01	-0.016
RH-106	2.092E+00		2.857E+01	4.626E+01	6.257E+00	0.045
RU-106	2.092E+00		2.857E+01	4.626E+01	4.177E+00	0.045
AG-108M	-1.305E+00		2.286E+00	3.492E+00	3.572E-01	-0.374
CD-109	-2.328E+00		5.238E+01	8.089E+01	8.430E+00	-0.029
AG-110M	-6.658E+00		3.670E+00	4.810E+00	4.250E-01	-1.384
SN-113	1.346E+00		3.299E+00	5.755E+00	5.824E-01	0.234
CD-115	4.593E+02		1.147E+03	1.966E+03	1.927E+02	0.234
SN-117M	-3.503E+00		4.489E+00	6.964E+00	5.936E-01	-0.503
TE-123M	-1.949E+00		2.295E+00	3.539E+00	3.023E-01	-0.551
SB-124	3.899E+00		1.030E+01	1.791E+01	1.570E+00	0.218
SB-125	-3.413E+00		7.800E+00	1.225E+01	1.240E+00	-0.279
TE-125M	1.017E+02		7.007E+02	1.201E+03	1.479E+02	0.085
I-126	-2.242E+01		2.333E+01	3.499E+01	2.986E+00	-0.641
SB-126	-2.300E+00		1.241E+01	2.024E+01	1.739E+00	-0.114
SN-126	-2.220E-01		5.234E+00	8.088E+00	8.447E-01	-0.027
SB-127	5.086E+01		1.081E+02	1.941E+02	2.236E+01	0.262
I-131	-3.408E+00		1.051E+01	1.704E+01	1.684E+00	-0.200
TE-132	8.411E+00		6.764E+01	1.106E+02	1.733E+01	0.076
BA-133	-2.359E+00		3.862E+00	5.187E+00	6.963E-01	-0.455
I-133	-4.072E-01		3.920E-01	Half-Life too short		
CS-134	2.821E-01		3.354E+00	5.642E+00	4.866E-01	0.050
CS-135	4.189E+00		1.287E+01	2.120E+01	2.014E+00	0.198
I-135	1.542E+12		9.816E+11	Half-Life too short		
CS-136	1.414E+00		7.034E+00	1.191E+01	1.052E+00	0.119
BA-137M	-1.985E+00		4.295E+00	7.571E+00	6.453E-01	-0.262
CS-137	-2.097E+00		4.537E+00	7.998E+00	6.830E-01	-0.262
CE-139	1.004E-01		2.548E+00	4.226E+00	3.363E-01	0.024
BA-140	-9.185E+00		2.276E+01	3.442E+01	1.178E+01	-0.267
LA-140	3.932E+00		9.199E+00	1.627E+01	1.374E+00	0.242

Sample ID : G266877003 Acquisition date : 26-NOV-2010 06:06:23

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
CE-141	-5.141E-01		5.351E+00	8.865E+00	8.546E-01	-0.058
CE-143	-1.519E-02		7.796E-03	Half-Life too short		
CE-144	3.430E+00		1.661E+01	2.822E+01	4.606E+00	0.122
PM-144	4.022E-01		2.663E+00	4.564E+00	3.916E-01	0.088
PR-144	2.766E+01		1.990E+02	3.405E+02	2.920E+01	0.081
PM-146	-1.577E+00		3.504E+00	5.442E+00	6.389E-01	-0.290
ND-147	-2.816E+01		4.754E+01	7.008E+01	1.097E+01	-0.402
PM-149	-9.326E+03		9.783E+03	1.375E+04	2.103E+03	-0.678
EU-152	3.892E+00		6.803E+00	1.214E+01	1.166E+00	0.321
GD-153	3.957E-01		5.961E+00	9.005E+00	9.481E-01	0.044
EU-154	-4.126E+00		9.427E+00	1.429E+01	1.598E+00	-0.289
EU-155	3.266E+00		7.745E+00	1.352E+01	1.456E+00	0.242
TA-182	-3.155E+00		1.232E+01	1.950E+01	1.634E+00	-0.162
IR-192	8.155E-01		2.669E+00	4.652E+00	4.039E-01	0.175
HG-203	-2.659E-01		3.154E+00	4.975E+00	4.119E-01	-0.053
BI-207	3.326E-02		3.904E+00	6.317E+00	5.342E-01	0.005
TL-208	8.103E-01		3.423E+00	5.681E+00	5.669E-01	0.143
PB-210	-5.703E+01		5.965E+01	1.012E+02	1.265E+01	-0.563
PB-211	4.850E+01		3.069E+03	1.049E+02	6.636E+03	0.462
BI-212	-1.452E+00		4.788E+01	7.977E+01	9.926E+00	-0.018
PB-212	3.906E+00	+	7.019E+00	9.364E+00	8.727E-01	0.417
BI-214	1.164E+00		8.484E+00	1.393E+01	1.473E+00	0.084
PB-214	1.021E+01	+	1.122E+01	1.362E+01	1.515E+00	0.750
RN-219	-3.535E+01		2.236E+03	4.886E+01	3.091E+03	-0.723
RA-223	-2.641E+01		1.671E+03	7.960E+01	5.035E+03	-0.332
RA-224	2.686E+01		5.310E+01	8.099E+01	6.571E+00	0.332
AC-227	-3.254E+00		1.883E+01	2.959E+01	3.457E+00	-0.110
TH-227	-3.254E+00		2.067E+02	2.959E+01	1.871E+03	-0.110
AC-228	5.785E+00		1.320E+01	2.297E+01	2.611E+00	0.252
RA-228	5.785E+00		1.320E+01	2.297E+01	2.611E+00	0.252
TH-228	3.906E+00	+	7.019E+00	9.364E+00	8.727E-01	0.417
TH-229	1.695E+01		4.684E+01	7.120E+01	5.726E+00	0.238
PA-231	6.154E+01		1.233E+02	2.054E+02	2.936E+01	0.300
TH-231	8.481E+00		2.693E+01	4.292E+01	7.938E+00	0.198
PA-233	1.549E+00		4.736E+00	8.284E+00	7.319E-01	0.187
PA-234	2.014E+00		2.167E+01	3.604E+01	6.722E+00	0.056
PA-234M	-1.960E+02		3.258E+02	4.584E+02	4.494E+01	-0.428
U-235	9.125E+00		1.885E+01	3.082E+01	5.388E+00	0.296
NP-237	1.549E+00		4.737E+00	8.284E+00	9.050E-01	0.187
NP-239	-5.438E+00		2.106E+01	3.496E+01	3.839E+00	-0.156
AM-241	1.874E+00		5.413E+00	8.194E+00	1.077E+00	0.229
CM-247	-4.484E+00		3.103E+00	4.229E+00	4.197E-01	-1.060
CF-249	-2.096E+00		3.023E+00	4.612E+00	4.535E-01	-0.455
CF-251	-5.484E+00		1.061E+01	1.671E+01	1.336E+00	-0.328
ANH-511	-8.423E+00		4.512E+00	7.850E+00	7.755E-01	-1.073

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G266877003            *
* Acquisition date : 26-NOV-2010 06:06:23 Detector SN#    :                 *
* Detector ID      : GAM25                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:00.99     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 10-NOV-2010 12:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G266877003           Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  2-AUG-2010 10:35:55 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act Error	DLC (pCi/LITER)	TPU
BI-211	2.818E+01	1.747E+03	1.192E+01	8.914E+02
RA-226	4.787E+00	8.662E+01	4.347E+01	4.420E+01
TH-230	7.529E+02	6.264E+02	3.663E+02	3.196E+02
TH-232	5.484E+02	4.305E+03	5.425E+02	2.197E+03
TH-234	3.854E+01	8.467E+01	3.820E+01	4.320E+01
U-238	3.854E+01	8.467E+01	3.820E+01	4.320E+01

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L Act error	DLC (pCi/LITER)	TPU	
BE-7	-6.655E+00	2.666E+01	2.162E+01	1.360E+01	NOT IDENT.
NA-22	-1.589E+00	3.235E+00	2.477E+00	1.650E+00	NOT IDENT.
NA-24	-7.971E+06	1.125E+08	0.000E+00	5.738E+07	SHORT HLIF
K-40	-2.716E+01	3.818E+01	3.070E+01	1.948E+01	NOT IDENT.
SC-46	-4.724E+00	3.144E+00	1.819E+00	1.604E+00	NOT IDENT.
V-48	-3.981E-01	6.105E+00	5.015E+00	3.115E+00	NOT IDENT.
CR-51	-5.562E+00	2.839E+01	2.407E+01	1.449E+01	NOT IDENT.
MN-54	-1.077E+00	3.100E+00	2.478E+00	1.581E+00	NOT IDENT.
CO-56	2.430E+00	3.182E+00	2.984E+00	1.623E+00	NOT IDENT.
CO-57	1.574E+00	1.983E+00	1.791E+00	1.012E+00	NOT IDENT.
CO-58	-2.036E+00	2.764E+00	2.003E+00	1.410E+00	NOT IDENT.
FE-59	2.050E+00	7.318E+00	6.319E+00	3.734E+00	NOT IDENT.
CO-60	-4.578E-01	3.351E+00	2.757E+00	1.710E+00	NOT IDENT.
ZN-65	-7.068E+00	6.694E+00	4.228E+00	3.415E+00	NOT IDENT.
SE-75	-2.686E+00	3.863E+00	2.932E+00	1.971E+00	NOT IDENT.
SR-85	-9.846E+00	4.414E+00	2.789E+00	2.252E+00	NOT IDENT.
Y-88	1.241E+00	3.654E+00	3.347E+00	1.864E+00	NOT IDENT.
Y-91	1.212E+02	1.344E+03	1.166E+03	6.856E+02	NOT IDENT.
NB-94	7.706E-01	2.390E+00	2.141E+00	1.219E+00	NOT IDENT.
NB-95	-4.920E-01	3.104E+00	2.574E+00	1.584E+00	NOT IDENT.
NB-95M	5.324E+00	1.042E+01	8.094E+00	5.314E+00	NOT IDENT.

ZR-95	2.214E-01	4.952E+00	4.244E+00	2.526E+00	NOT IDENT.
MO-99	-3.652E+02	1.111E+03	8.983E+02	5.670E+02	NOT IDENT.
TC-99M	5.678E+18	1.863E+19	0.000E+00	0.000E+00	SHORT HLIF
RU-103	-9.899E-02	3.629E+00	3.019E+00	1.851E+00	NOT IDENT.
RH-106	2.092E+00	2.800E+01	2.315E+01	1.428E+01	NOT IDENT.
RU-106	2.092E+00	2.799E+01	2.315E+01	1.428E+01	NOT IDENT.
AG-108M	-1.305E+00	2.240E+00	1.747E+00	1.143E+00	NOT IDENT.
CD-109	-2.328E+00	5.133E+01	4.047E+01	2.619E+01	NOT IDENT.
AG-110M	-6.658E+00	3.597E+00	2.406E+00	1.835E+00	NOT IDENT.
SN-113	1.346E+00	3.233E+00	2.879E+00	1.650E+00	NOT IDENT.
CD-115	4.593E+02	1.124E+03	9.837E+02	5.735E+02	NOT IDENT.
SN-117M	-3.503E+00	4.399E+00	3.484E+00	2.245E+00	NOT IDENT.
TE-123M	-1.949E+00	2.249E+00	1.770E+00	1.147E+00	NOT IDENT.
SB-124	3.899E+00	1.009E+01	8.959E+00	5.148E+00	NOT IDENT.
SB-125	-3.413E+00	7.644E+00	6.131E+00	3.900E+00	NOT IDENT.
TE-125M	1.017E+02	6.867E+02	6.008E+02	3.503E+02	NOT IDENT.
I-126	-2.242E+01	2.287E+01	1.751E+01	1.167E+01	NOT IDENT.
SB-126	-2.300E+00	1.217E+01	1.012E+01	6.207E+00	NOT IDENT.
SN-126	-2.220E-01	5.130E+00	4.047E+00	2.617E+00	FAIL ABUN
SB-127	5.086E+01	1.060E+02	9.713E+01	5.407E+01	NOT IDENT.
I-131	-3.408E+00	1.030E+01	8.525E+00	5.254E+00	NOT IDENT.
TE-132	8.411E+00	6.629E+01	5.532E+01	3.382E+01	NOT IDENT.
BA-133	-2.359E+00	3.785E+00	2.595E+00	1.931E+00	NOT IDENT.
I-133	-4.072E+05	7.683E+05	0.000E+00	3.920E+05	SHORT HLIF
CS-134	2.821E-01	3.287E+00	2.823E+00	1.677E+00	NOT IDENT.
CS-135	4.189E+00	1.261E+01	1.061E+01	6.435E+00	NOT IDENT.
I-135	1.542E+18	1.924E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.414E+00	6.893E+00	5.961E+00	3.517E+00	NOT IDENT.
BA-137M	-1.985E+00	4.209E+00	3.788E+00	2.147E+00	NOT IDENT.
CS-137	-2.097E+00	4.446E+00	4.001E+00	2.268E+00	NOT IDENT.
CE-139	1.004E-01	2.497E+00	2.114E+00	1.274E+00	NOT IDENT.
BA-140	-9.185E+00	2.231E+01	1.722E+01	1.138E+01	NOT IDENT.
LA-140	3.932E+00	9.015E+00	8.141E+00	4.600E+00	NOT IDENT.
CE-141	-5.141E-01	5.244E+00	4.435E+00	2.675E+00	NOT IDENT.
CE-143	-1.519E+04	1.528E+04	0.000E+00	7.796E+03	SHORT HLIF
CE-144	3.430E+00	1.628E+01	1.412E+01	8.304E+00	NOT IDENT.
PM-144	4.022E-01	2.610E+00	2.283E+00	1.332E+00	NOT IDENT.
PR-144	2.766E+01	1.950E+02	1.703E+02	9.951E+01	NOT IDENT.
PM-146	-1.577E+00	3.434E+00	2.723E+00	1.752E+00	NOT IDENT.
ND-147	-2.816E+01	4.659E+01	3.506E+01	2.377E+01	NOT IDENT.
PM-149	-9.326E+03	9.588E+03	6.878E+03	4.892E+03	NOT IDENT.
EU-152	3.892E+00	6.667E+00	6.075E+00	3.402E+00	NOT IDENT.
GD-153	3.957E-01	5.841E+00	4.505E+00	2.980E+00	NOT IDENT.
EU-154	-4.126E+00	9.239E+00	7.150E+00	4.714E+00	NOT IDENT.
EU-155	3.266E+00	7.590E+00	6.766E+00	3.873E+00	NOT IDENT.
TA-182	-3.155E+00	1.208E+01	9.756E+00	6.162E+00	NOT IDENT.
IR-192	8.155E-01	2.616E+00	2.327E+00	1.335E+00	NOT IDENT.
HG-203	-2.659E-01	3.091E+00	2.489E+00	1.577E+00	NOT IDENT.
BI-207	3.326E-02	3.826E+00	3.160E+00	1.952E+00	NOT IDENT.
TL-208	8.103E-01	3.354E+00	2.842E+00	1.711E+00	NOT IDENT.
PB-210	-5.703E+01	5.846E+01	5.064E+01	2.983E+01	NOT IDENT.
PB-211	4.850E+01	3.007E+03	5.249E+01	1.534E+03	NOT IDENT.
BI-212	-1.452E+00	4.692E+01	3.991E+01	2.394E+01	NOT IDENT.
PB-212	3.906E+00	6.878E+00	4.685E+00	3.509E+00	FAIL ABUN
BI-214	1.164E+00	8.314E+00	6.970E+00	4.242E+00	NOT IDENT.
PB-214	1.021E+01	1.100E+01	6.814E+00	5.612E+00	FAIL ABUN
RN-219	-3.535E+01	2.192E+03	2.445E+01	1.118E+03	NOT IDENT.
RA-223	-2.641E+01	1.638E+03	3.982E+01	8.355E+02	NOT IDENT.
RA-224	2.686E+01	5.204E+01	4.052E+01	2.655E+01	NOT IDENT.
AC-227	-3.254E+00	1.846E+01	1.480E+01	9.416E+00	NOT IDENT.
TH-227	-3.254E+00	2.025E+02	1.480E+01	1.033E+02	NOT IDENT.
AC-228	5.785E+00	1.294E+01	1.149E+01	6.602E+00	NOT IDENT.
RA-228	5.785E+00	1.294E+01	1.149E+01	6.602E+00	NOT IDENT.
TH-228	3.906E+00	6.878E+00	4.685E+00	3.509E+00	FAIL ABUN
TH-229	1.695E+01	4.591E+01	3.562E+01	2.342E+01	NOT IDENT.
PA-231	6.154E+01	1.208E+02	1.028E+02	6.163E+01	NOT IDENT.
TH-231	8.481E+00	2.639E+01	2.147E+01	1.346E+01	NOT IDENT.
PA-233	1.549E+00	4.641E+00	4.144E+00	2.368E+00	NOT IDENT.
PA-234	2.014E+00	2.124E+01	1.803E+01	1.083E+01	NOT IDENT.
PA-234M	-1.960E+02	3.193E+02	2.293E+02	1.629E+02	NOT IDENT.
U-235	9.125E+00	1.847E+01	1.542E+01	9.423E+00	FAIL ABUN
NP-237	1.549E+00	4.642E+00	4.144E+00	2.368E+00	NOT IDENT.
NP-239	-5.438E+00	2.064E+01	1.749E+01	1.053E+01	NOT IDENT.
AM-241	1.874E+00	5.305E+00	4.099E+00	2.707E+00	NOT IDENT.
CM-247	-4.484E+00	3.041E+00	2.116E+00	1.551E+00	NOT IDENT.
CF-249	-2.096E+00	2.963E+00	2.307E+00	1.512E+00	NOT IDENT.
CF-251	-5.484E+00	1.039E+01	8.362E+00	5.303E+00	NOT IDENT.
ANH-511	-8.423E+00	4.421E+00	3.927E+00	2.256E+00	NOT IDENT.

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

ENERGY	MDA COUNTS
46.54	68.7993
49.72	73.0078
57.36	0.0000
59.54	76.4768
63.29	83.6565
63.29	83.6565
63.81	83.8012
64.28	83.9316
67.67	84.8573
67.75	84.8787
69.67	91.7189
70.83	88.0805
72.81	123.3396
72.87	117.3739
72.87	117.3739
74.82	108.4213
74.82	108.4213
74.82	108.4213
74.97	108.4694
77.11	97.0221
77.11	97.0221
77.11	97.0221
79.69	102.6275
79.69	102.6275
80.12	88.0730
80.19	88.0900
81.00	68.6704
81.07	68.6837
83.79	86.5008
84.21	86.5996
85.43	101.7799
86.55	90.8807
86.94	89.7286
87.57	108.6026
88.03	103.7348
88.47	96.3475
89.96	109.2830
91.11	85.6698
92.59	94.4237
92.59	94.4237
93.35	94.6054
94.56	94.8925
94.65	94.9136
94.67	94.9181
94.67	94.9181
97.43	61.4354
98.43	83.1397
98.43	83.1397
98.44	83.1417
99.53	85.7615
100.11	76.4341
103.18	97.7519
103.37	90.0066
105.31	84.3269
106.12	80.1289
109.28	80.7040
111.00	77.4915
111.76	88.2065
116.30	92.6430
116.74	95.4052
121.12	89.0886
121.78	83.8035
122.06	77.5408
123.07	86.7368
131.20	85.4042
133.52	92.2465
136.00	81.5627

136.47	94.6227
140.51	97.2122
140.51	0.0000
140.88	96.3435
143.76	83.6892
144.24	89.4094
145.44	98.0925
152.43	83.0821
153.25	75.5500
154.21	87.1704
156.02	77.8326
158.56	88.7862
159.00	91.7491
162.66	85.5096
163.33	85.6045
165.86	88.8922
176.60	75.5207
177.52	85.5801
181.07	81.0453
185.72	80.6087
186.21	80.6681
193.51	68.7978
205.31	82.9118
210.85	81.4539
222.11	67.8405
227.38	61.8988
228.16	64.0973
228.18	64.0985
235.69	59.8534
235.96	59.8738
235.96	59.8738
238.63	63.3185
238.63	63.3185
240.99	53.7318
242.00	45.6470
244.70	71.9653
252.40	53.9202
252.80	59.4503
256.23	48.6353
256.23	48.6353
260.90	55.5654
264.66	70.3123
268.22	54.9077
269.46	51.6171
271.23	56.2164
273.65	54.1123
276.40	52.0139
277.37	50.9372
277.60	50.9500
278.00	57.7682
279.20	54.4414
279.54	60.1339
283.69	50.1463
284.31	51.3199
285.41	67.3653
285.90	66.2577
287.50	50.3495
293.27	0.0000
295.22	61.1411
295.96	55.4150
299.98	71.8754
299.98	71.8754
300.09	71.8830
300.09	71.8830
300.13	71.8855
300.13	71.8855
301.36	44.1145
302.85	56.9703
304.50	45.4199
304.50	45.4199
304.85	47.7658
308.46	47.3546
311.90	38.7182
311.90	38.7182
316.51	41.5460
319.41	42.5500
320.08	47.0131
323.87	51.6368

328.76	46.5125
333.37	61.9869
334.37	53.9529
334.37	53.9529
338.28	40.6123
338.32	42.4188
338.32	42.4188
340.48	46.1215
340.48	46.1215
340.55	46.1238
344.28	29.9475
351.06	34.6978
351.93	34.7251
356.01	49.8935
364.49	49.8983
366.42	35.1727
383.85	37.5781
388.16	40.5421
388.63	44.3307
391.70	29.3137
400.66	34.2911
401.81	49.5776
402.40	53.4169
404.85	31.5397
414.70	35.6399
423.72	35.8912
427.09	41.8196
427.87	42.8177
433.94	35.1947
453.88	37.7043
463.37	39.9615
468.07	23.0551
473.00	26.1531
476.78	35.2996
477.60	34.3108
487.02	21.3307
492.35	34.6620
497.08	36.8185
511.00	23.7426
514.00	93.0899
527.90	24.0051
529.87	0.0000
531.02	30.3284
537.26	29.3988
546.56	0.0000
563.25	34.1445
569.33	38.5543
569.50	38.5587
569.70	41.7767
583.19	32.3959
600.60	45.8170
602.73	38.2278
604.72	37.1782
609.32	33.9867
610.33	36.2005
614.28	31.8834
618.01	31.9506
621.93	27.6047
621.93	27.6047
633.25	25.5563
635.95	24.4814
636.99	25.6090
645.85	24.6137
657.76	56.7508
661.66	28.8852
661.66	28.8852
664.57	0.0000
666.33	47.9601
666.50	47.9640
677.62	18.2056
685.70	15.5395
695.00	24.7983
696.49	21.1402
696.51	21.1402
697.00	20.2265
702.65	17.5184
706.68	18.4775
720.70	25.1194

721.93	0.0000
722.78	20.4886
722.91	20.4902
723.31	21.4255
724.19	21.4350
727.33	30.8021
733.00	29.0148
735.93	29.0564
739.50	21.5951
747.24	20.7335
753.82	10.3992
756.73	15.1469
763.94	13.2986
765.80	20.9161
766.42	21.8736
777.92	29.6392
778.90	31.5659
783.70	24.9253
785.37	17.2692
795.86	16.3878
801.95	20.2997
810.76	18.4392
815.77	11.6716
818.51	23.3719
832.01	14.6942
834.85	24.5209
836.80	0.0000
846.77	13.8024
856.80	15.8422
860.56	13.8838
871.09	19.9224
873.19	22.9309
875.33	0.0000
880.51	24.0012
883.24	13.0152
884.68	15.0264
889.28	25.0916
898.04	15.1091
911.20	20.2534
911.20	20.2534
926.36	11.2073
937.49	11.2567
944.13	12.3120
946.00	12.3211
949.00	15.4193
964.08	13.4415
968.97	12.4307
968.97	12.4307
983.53	17.7081
996.26	14.6528
1001.03	15.7273
1004.73	10.4993
1037.84	12.7523
1038.76	0.0000
1048.07	8.5328
1050.41	9.6073
1050.41	9.6073
1063.66	12.8701
1085.87	20.5363
1099.25	14.1159
1112.07	14.1781
1115.54	20.7460
1120.29	17.4984
1120.55	17.5000
1121.30	16.4099
1131.51	0.0000
1173.23	16.6934
1189.05	10.2534
1204.77	11.2417
1221.41	13.1842
1231.02	12.2790
1235.36	13.2412
1238.28	7.5732
1260.41	0.0000
1274.44	15.3145
1274.54	15.3145
1291.59	7.6963
1298.22	0.0000

1312.11	11.6147
1332.49	13.6309
1365.19	5.8967
1368.63	0.0000
1384.29	7.9046
1408.01	12.9296
1457.56	0.0000
1460.82	13.1158
1489.16	8.1318
1596.21	9.4003
1620.50	8.4056
1678.03	0.0000
1690.97	10.6848
1764.49	3.7257
1770.23	17.7197
1771.35	15.8586
1791.20	0.0000
1836.06	6.6240

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID     : 1048163                  SAMPLE ID  : G266877003         *
*   ANALYST      : KXG3                     DETECTOR   : GAM25              *
*   SAMPLE DATE  : 10-NOV-2010 12:00:00.00  COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE: 26-NOV-2010 06:06:23.42  SAMPLE ALQT:    2.000 LITER     *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/LITER ) : 1.809E+01
        GROSS GAMMA ERROR  (pCi/LITER )   : 1.946E+01
        GROSS GAMMA MDA    (pCi/LITER )   : 2.140E+01
        GROSS GAMMA DLC    (pCi/LITER )   : 9.967E+00
```

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:08:03.42

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877005.CNF;1
Sample date      : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 06:07:08
Sample ID        : G266877005           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM28                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.72  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	185.53*	63	201	1.35	370.46	363	15	8.82E-03	53.7	
2	0	238.90*	7	118	1.45	477.18	473	8	9.85E-04	304.0	
3	0	352.19*	39	77	1.06	703.77	699	10	5.42E-03	51.5	
4	0	609.70*	71	25	1.74	1218.79	1214	10	9.88E-03	20.4	
5	0	1016.10	26	15	3.86	2031.67	2019	21	3.65E-03	42.3	
6	0	1121.07*	12	15	1.29	2241.66	2236	11	1.61E-03	80.2	
7	0	1463.34	24	10	1.06	2926.32	2918	16	3.27E-03	38.5	

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

VMS Nuclide Identification Report V3.1 Generated 26-NOV-2010 08:08:05

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877005.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : KXG3
Sample date : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 06:07:08
Sample ID : G266877005 Sample quantity : 2.0000 LITER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA28 Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.72 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BI-211		72.87		-3.262E+02	2.064E+04	6.089E+02	3.852E+04	-0.536
	+	351.06	*	3.135E+01	1.983E+03	3.473E+01	2.197E+03	0.903
BI-214	+	609.32	*	2.311E+01	9.717E+00	1.007E+01	9.842E-01	2.295
	+	1120.29		1.844E+01	2.966E+01	3.430E+01	3.741E+00	0.538
		1764.49		-1.642E+01	2.755E+01	4.878E+01	4.196E+00	-0.337
RA-226	+	186.21	*	1.307E+02	1.657E+02	1.096E+02	7.390E+01	1.193

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7		477.60	*	-4.045E+00	3.139E+01	5.050E+01	4.546E+00	-0.080
NA-22		1274.54	*	-2.603E+00	3.296E+00	4.542E+00	4.159E-01	-0.573
NA-24		1368.63	*	-1.065E+02	3.296E+00	Half-Life too short		
K-40		1460.82	*	-7.114E+00	3.875E+01	6.711E+01	6.573E+00	-0.106
SC-46		889.28	*	4.768E-01	3.182E+00	5.366E+00	5.183E-01	0.089
	+	1120.55		3.135E+00	5.039E+00	7.665E+00	6.595E-01	0.409
V-48		944.13		-5.063E+01	7.178E+01	1.053E+02	1.008E+01	-0.481
		983.53	*	-6.354E+00	5.313E+00	6.803E+00	6.403E-01	-0.934
		1312.11		2.363E+00	5.811E+00	1.012E+01	9.618E-01	0.234
CR-51		320.08	*	-1.583E+01	3.766E+01	6.035E+01	6.175E+00	-0.262
MN-54		834.85	*	-2.401E-01	2.837E+00	4.653E+00	4.322E-01	-0.052
CO-56		846.77	*	1.492E+00	3.273E+00	5.730E+00	5.370E-01	0.260
		1037.84		-2.130E+01	2.652E+01	3.819E+01	3.653E+00	-0.558
		1238.28		1.981E+00	5.701E+00	9.828E+00	8.891E-01	0.202
		1771.35		-3.598E+01	2.775E+01	3.359E+01	2.879E+00	-1.071
CO-57		122.06	*	2.022E+00	3.238E+00	5.414E+00	5.291E-01	0.373
		136.47		-3.453E+01	2.880E+01	4.326E+01	4.222E+00	-0.798
CO-58		810.76	*	1.257E-01	3.012E+00	5.033E+00	4.601E-01	0.025
FE-59		1099.25	*	1.382E-02	7.295E+00	1.192E+01	1.126E+00	0.001
		1291.59		-1.807E+00	1.039E+01	1.633E+01	1.698E+00	-0.111
CO-60		1173.23		-7.601E-01	3.108E+00	4.846E+00	3.967E-01	-0.157
		1332.49	*	-1.465E+00	3.113E+00	4.552E+00	4.418E-01	-0.322
ZN-65		1115.54	*	-1.918E+00	8.113E+00	1.076E+01	9.305E-01	-0.178

Sample ID : G266877005 Acquisition date : 26-NOV-2010 06:07:08

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
SE-75		121.12		2.014E+01	1.731E+01	2.951E+01	3.537E+00	0.682
		136.00		-5.897E+00	5.494E+00	8.326E+00	7.686E-01	-0.708
		264.66	*	3.287E+00	4.724E+00	8.217E+00	8.415E-01	0.400
		279.54		6.006E+00	1.209E+01	2.073E+01	2.230E+00	0.290
		400.66		-1.588E+01	2.411E+01	3.710E+01	3.977E+00	-0.428
SR-85		514.00	*	-1.485E+00	4.965E+00	7.892E+00	6.581E-01	-0.188
Y-88		898.04		-4.025E-01	2.776E+00	4.475E+00	4.365E-01	-0.090
		1836.06	*	-5.251E-03	3.613E+00	5.939E+00	4.905E-01	-0.001
Y-91		1204.77	*	-1.349E+01	1.522E+03	2.469E+03	2.095E+02	-0.005
NB-94		702.65	*	-7.110E-01	2.768E+00	4.497E+00	3.758E-01	-0.158
		871.09		-1.339E-01	2.869E+00	4.720E+00	4.501E-01	-0.028
NB-95		765.80	*	-1.127E+00	3.436E+00	5.503E+00	4.847E-01	-0.205
NB-95M		235.69	*	4.014E+00	1.437E+01	2.145E+01	2.313E+00	0.187
ZR-95		724.19		-1.556E+00	7.059E+00	1.148E+01	1.061E+00	-0.136
		756.73	*	-3.154E+00	5.660E+00	8.734E+00	8.415E-01	-0.361
MO-99		140.51		2.376E+03	3.575E+03	5.882E+03	1.406E+03	0.404
		181.07		-1.699E+03	2.927E+03	3.861E+03	7.256E+02	-0.440
		366.42		1.548E+03	1.148E+04	1.913E+04	1.683E+03	0.081
		739.50	*	7.543E+02	1.220E+03	2.169E+03	3.418E+02	0.348
		777.92		-1.130E+03	3.291E+03	5.228E+03	4.650E+02	-0.216
TC-99M		140.51	*	2.030E+13	3.291E+03	Half-Life too short		
RU-103		497.08	*	4.380E-01	3.745E+00	6.165E+00	8.501E-01	0.071
	+	610.33		2.412E+02	1.061E+02	1.760E+02	2.841E+01	1.371
RH-106		621.93	*	3.730E+00	2.969E+01	4.843E+01	6.287E+00	0.077
		1050.41		-1.497E+01	1.775E+02	2.865E+02	2.597E+01	-0.052
RU-106		621.93	*	3.730E+00	2.968E+01	4.843E+01	3.967E+00	0.077
		1050.41		-1.497E+01	1.775E+02	2.865E+02	2.597E+01	-0.052
AG-108M		433.94	*	8.129E-02	2.876E+00	4.719E+00	4.025E-01	0.017
		614.28		1.253E+00	3.298E+00	4.877E+00	4.150E-01	0.257
		722.91		1.049E+00	2.813E+00	4.909E+00	4.312E-01	0.214
CD-109		88.03	*	-7.864E+00	1.000E+02	1.628E+02	1.727E+01	-0.048
AG-110M		657.76	*	-1.008E+00	2.664E+00	4.264E+00	3.560E-01	-0.236
		677.62		-6.397E+00	2.549E+01	4.147E+01	3.499E+00	-0.154
		706.68		-4.981E+00	1.772E+01	2.869E+01	2.479E+00	-0.174
		763.94		-1.270E+01	1.343E+01	1.975E+01	1.782E+00	-0.643
		884.68		4.787E+00	4.220E+00	7.904E+00	7.806E-01	0.606
		937.49		3.589E+00	8.773E+00	1.526E+01	1.507E+00	0.235
		1384.29		-3.099E+00	1.312E+01	2.108E+01	2.083E+00	-0.147
SN-113		391.70	*	-3.049E+00	4.559E+00	7.058E+00	5.921E-01	-0.432
CD-115		260.90		-5.009E+03	1.784E+04	2.924E+04	2.963E+03	-0.171
		492.35		-2.180E+03	4.494E+03	6.941E+03	5.781E+02	-0.314
		527.90	*	9.138E+01	1.247E+03	2.038E+03	1.699E+02	0.045
SN-117M		156.02		-1.149E+02	2.745E+02	4.298E+02	3.705E+01	-0.267
		158.56	*	3.704E+00	6.866E+00	1.136E+01	9.726E-01	0.326
TE-123M		159.00	*	1.528E+00	3.489E+00	5.741E+00	4.940E-01	0.266
SB-124		602.73		-4.015E-01	3.866E+00	5.783E+00	4.766E-01	-0.069
		645.85		-1.186E+01	4.591E+01	7.139E+01	6.169E+00	-0.166
		722.78		1.271E+01	2.786E+01	4.911E+01	4.274E+00	0.259
		1690.97	*	1.029E+00	7.273E+00	1.238E+01	1.148E+00	0.083

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
SB-125		427.87	*	-5.741E+00	9.564E+00	1.483E+01	1.244E+00	-0.387
		463.37		1.379E+01	2.351E+01	4.057E+01	3.639E+00	0.340
		600.60		-1.975E+01	1.817E+01	2.578E+01	2.297E+00	-0.766
		635.95		-5.306E+00	2.418E+01	3.778E+01	3.357E+00	-0.140
TE-125M		109.28	*	2.111E+03	1.299E+03	2.251E+03	2.550E+02	0.938
I-126		388.63		1.554E+01	1.802E+01	3.154E+01	2.585E+00	0.493
		666.33	*	-8.792E+00	1.669E+01	2.609E+01	2.112E+00	-0.337
		753.82		-3.262E+00	1.336E+02	2.220E+02	1.936E+01	-0.015
SB-126		414.70		1.301E+00	7.782E+00	1.294E+01	1.060E+00	0.100
		666.50		-2.763E+00	5.771E+00	9.090E+00	7.359E-01	-0.304
		695.00		4.056E+00	6.427E+00	1.150E+01	9.546E-01	0.353
		697.00		-1.687E-01	2.389E+01	3.997E+01	3.324E+00	-0.004
		720.70	*	-3.069E+00	1.194E+01	1.934E+01	1.642E+00	-0.159
		856.80		6.533E+00	3.799E+01	6.435E+01	6.075E+00	0.102
SN-126		64.28		2.583E+01	7.528E+01	1.222E+02	1.960E+01	0.211
		86.94		-3.882E+00	4.074E+01	6.621E+01	2.768E+01	-0.059
		87.57	*	1.143E-02	9.674E+00	1.581E+01	1.672E+00	0.001
SB-127		252.40		1.680E+01	5.311E+02	8.899E+02	3.727E+02	0.019
		473.00		4.261E+01	1.676E+02	2.800E+02	3.565E+01	0.152
		685.70	*	2.584E+01	1.098E+02	1.892E+02	2.134E+01	0.137
		783.70		-2.578E+02	3.047E+02	4.463E+02	5.688E+01	-0.578
I-131		80.19		-7.330E+02	6.019E+02	9.139E+02	9.310E+01	-0.802
		284.31		3.423E+01	1.714E+02	2.891E+02	3.120E+01	0.118
		364.49	*	2.481E+00	1.237E+01	2.072E+01	1.929E+00	0.120
		636.99		-5.686E+01	1.471E+02	2.246E+02	1.948E+01	-0.253
TE-132		49.72		-3.927E+03	3.820E+03	5.885E+03	7.725E+02	-0.667
		111.76		-1.485E+03	5.158E+03	8.092E+03	9.696E+02	-0.184
		116.30		-2.384E+02	4.091E+03	6.612E+03	7.941E+02	-0.036
		228.16	*	6.401E+01	9.186E+01	1.592E+02	2.615E+01	0.402
BA-133		81.00		-1.897E+01	1.208E+01	1.743E+01	2.865E+00	-1.088
		276.40		1.304E+01	3.651E+01	6.218E+01	9.506E+00	0.210
		302.85		-1.355E+01	1.477E+01	2.276E+01	3.212E+00	-0.595
		356.01	*	-1.013E+00	4.691E+00	6.536E+00	8.659E-01	-0.155
		383.85		-4.841E+00	2.914E+01	4.726E+01	5.779E+00	-0.102
I-133		529.87	*	3.865E-01	2.914E+01	Half-Life too short		
		875.33		-7.359E+00	2.914E+01	Half-Life too short		
		1298.22		2.007E+01	2.914E+01	Half-Life too short		
CS-134		563.25		-3.925E+00	2.815E+01	4.468E+01	3.751E+00	-0.088
		569.33		1.110E+01	1.673E+01	2.905E+01	2.448E+00	0.382
		604.72		5.734E-01	3.420E+00	4.873E+00	4.025E-01	0.118
		795.86	*	-1.091E+00	3.587E+00	5.728E+00	5.201E-01	-0.190
		801.95		1.445E+01	3.098E+01	5.451E+01	4.964E+00	0.265
		1365.19		-7.914E+01	1.087E+02	1.494E+02	1.500E+01	-0.530
CS-135		268.22	*	9.846E+00	1.542E+01	2.676E+01	3.058E+00	0.368
I-135		546.56		-2.241E+12	1.542E+01	Half-Life too short		
		836.80		1.470E+12	1.542E+01	Half-Life too short		
		1038.76		-3.761E+12	1.542E+01	Half-Life too short		
		1131.51		-1.180E+12	1.542E+01	Half-Life too short		
		1260.41	*	-6.349E+11	1.542E+01	Half-Life too short		

Sample ID : G266877005 Acquisition date : 26-NOV-2010 06:07:08

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		1457.56		3.151E+12	1.542E+01	Half-Life too short		
		1678.03		1.486E+12	1.542E+01	Half-Life too short		
		1791.20		3.436E+12	1.542E+01	Half-Life too short		
CS-136		153.25		7.782E+00	9.899E+01	1.600E+02	1.651E+01	0.049
		176.60		3.112E+01	6.256E+01	1.029E+02	9.732E+00	0.302
		273.65		-3.826E+01	5.205E+01	8.210E+01	9.027E+00	-0.466
		340.55		-7.980E+00	1.425E+01	2.250E+01	2.186E+00	-0.355
		818.51		2.350E+00	6.581E+00	1.139E+01	1.046E+00	0.206
		1048.07	*	-4.401E+00	8.580E+00	1.289E+01	1.215E+00	-0.341
		1235.36		-2.244E+01	3.626E+01	5.205E+01	6.183E+00	-0.431
BA-137M		661.66	*	-1.559E-01	2.642E+00	4.402E+00	3.548E-01	-0.035
CS-137		661.66	*	-1.647E-01	2.791E+00	4.650E+00	3.756E-01	-0.035
CE-139		165.86	*	-2.792E+00	3.819E+00	5.860E+00	4.926E-01	-0.476
BA-140		162.66		-8.762E+01	1.059E+02	1.614E+02	1.463E+01	-0.543
		304.85		3.421E+01	1.500E+02	2.523E+02	7.505E+01	0.136
		423.72		1.844E+02	2.143E+02	3.619E+02	1.187E+02	0.509
		537.26	*	6.338E+00	2.832E+01	4.676E+01	1.582E+01	0.136
LA-140		328.76		-1.815E+01	3.074E+01	4.856E+01	4.907E+00	-0.374
		487.02		1.388E+00	1.243E+01	2.048E+01	1.817E+00	0.068
		815.77		2.067E+01	2.845E+01	5.125E+01	5.184E+00	0.403
		1596.21	*	3.310E+00	6.382E+00	1.177E+01	1.089E+00	0.281
CE-141		145.44	*	3.640E+00	7.826E+00	1.292E+01	1.168E+00	0.282
CE-143		57.36		-1.429E-01	7.826E+00	Half-Life too short		
		293.27	*	1.323E-02	7.826E+00	Half-Life too short		
		664.57		4.271E-02	7.826E+00	Half-Life too short		
		721.93		2.959E-02	7.826E+00	Half-Life too short		
CE-144		80.12		-3.715E+02	3.088E+02	4.694E+02	4.756E+01	-0.791
		133.52	*	2.822E-01	2.528E+01	4.086E+01	6.398E+00	0.007
PM-144		476.78		-2.918E+00	6.250E+00	9.701E+00	8.813E-01	-0.301
		618.01		-1.804E+00	2.917E+00	4.334E+00	3.665E-01	-0.416
		696.49	*	-1.357E-01	2.837E+00	4.725E+00	3.929E-01	-0.029
PR-144		696.51	*	-6.624E+00	2.128E+02	3.551E+02	2.952E+01	-0.019
		1489.16		-8.420E+02	1.062E+03	1.466E+03	1.396E+02	-0.574
PM-146		453.88	*	-3.382E+00	3.817E+00	5.620E+00	5.798E-01	-0.602
		633.25		3.129E+00	1.292E+02	2.083E+02	7.934E+01	0.015
		735.93		-8.135E+00	1.331E+01	2.036E+01	5.705E+00	-0.400
		747.24		2.609E+00	7.988E+00	1.382E+01	2.021E+00	0.189
ND-147		91.11		4.198E+01	3.461E+01	5.927E+01	6.472E+00	0.708
		319.41		-2.805E+02	3.592E+02	5.586E+02	5.501E+01	-0.502
		531.02	*	-3.309E+01	5.553E+01	8.379E+01	1.239E+01	-0.395
PM-149		285.90	*	1.655E+03	1.201E+04	2.017E+04	3.347E+03	0.082
EU-152		121.78		3.498E+00	9.485E+00	1.566E+01	1.708E+00	0.223
		244.70		8.754E+00	3.786E+01	6.081E+01	5.969E+00	0.144
		344.28	*	-6.662E+00	9.500E+00	1.476E+01	1.447E+00	-0.451
		778.90		4.772E+00	1.933E+01	3.323E+01	2.957E+00	0.144
		964.08		1.268E+01	2.082E+01	3.696E+01	3.509E+00	0.343
		1085.87		-3.393E+00	2.852E+01	4.571E+01	4.044E+00	-0.074
		1112.07		-2.736E+00	2.396E+01	3.753E+01	3.252E+00	-0.073
		1408.01		-9.210E+00	1.542E+01	2.309E+01	2.228E+00	-0.399

Sample ID : G266877005 Acquisition date : 26-NOV-2010 06:07:08

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
GD-153		69.67		-1.139E+02	2.281E+02	3.644E+02	3.616E+01	-0.312
		97.43	*	-1.002E+00	1.111E+01	1.802E+01	1.786E+00	-0.056
		103.18		1.875E+00	1.335E+01	2.189E+01	2.126E+00	0.086
EU-154		123.07		1.717E+00	6.637E+00	1.089E+01	1.329E+00	0.158
		723.31		1.122E+01	1.264E+01	2.326E+01	2.185E+00	0.482
		873.19		-1.699E+01	2.238E+01	3.271E+01	4.117E+00	-0.519
		996.26		1.050E+00	2.921E+01	4.823E+01	8.606E+00	0.022
		1004.73		-4.468E+00	1.915E+01	2.791E+01	3.394E+00	-0.160
		1274.44	*	-7.823E+00	9.285E+00	1.258E+01	1.482E+00	-0.622
EU-155		86.55		5.402E+00	1.186E+01	1.981E+01	2.095E+00	0.273
		105.31	*	-5.178E+00	1.326E+01	2.107E+01	2.056E+00	-0.246
TA-182		67.75		5.111E+00	1.554E+01	2.597E+01	2.583E+00	0.197
		100.11		-7.100E+00	2.214E+01	3.539E+01	3.467E+00	-0.201
		152.43		-1.127E+00	3.932E+01	6.313E+01	5.496E+00	-0.018
		222.11		3.734E+01	3.960E+01	6.961E+01	6.525E+00	0.536
	+	1121.30		8.674E+00	1.394E+01	2.069E+01	1.779E+00	0.419
		1189.05		8.347E+00	2.052E+01	3.560E+01	2.967E+00	0.234
		1221.41	*	3.710E+00	1.346E+01	2.280E+01	1.970E+00	0.163
		1231.02		8.965E+00	2.860E+01	4.894E+01	4.273E+00	0.183
IR-192		295.96		1.474E+01	1.211E+01	2.097E+01	2.161E+00	0.703
		308.46		1.180E+01	1.045E+01	1.854E+01	1.869E+00	0.637
		316.51	*	6.474E-01	3.498E+00	5.880E+00	5.832E-01	0.110
		468.07		-1.804E+00	6.157E+00	9.738E+00	8.718E-01	-0.185
HG-203		70.83		4.332E+01	1.706E+02	2.837E+02	4.765E+01	0.153
		72.87		-8.188E+01	9.841E+01	1.528E+02	2.491E+01	-0.536
		279.20	*	2.457E+00	4.228E+00	7.286E+00	7.774E-01	0.337
BI-207		72.81		-1.906E+01	2.242E+01	3.500E+01	3.475E+00	-0.545
		74.97		-6.109E+00	1.399E+01	2.089E+01	2.081E+00	-0.292
		569.70		1.320E+00	2.621E+00	4.476E+00	3.716E-01	0.295
		1063.66	*	4.505E+00	4.223E+00	7.892E+00	7.093E-01	0.571
		1770.23		-7.930E+01	5.441E+01	6.226E+01	5.340E+00	-1.274
TL-208		277.37		4.995E+00	4.092E+01	6.873E+01	9.521E+00	0.073
		583.19	*	1.295E+00	4.012E+00	6.701E+00	5.972E-01	0.193
		860.56		-5.675E+00	2.361E+01	3.786E+01	3.803E+00	-0.150
PB-210		46.54	*	-3.328E+02	7.128E+02	1.108E+03	1.203E+02	-0.300
PB-211		404.85	*	-2.676E+00	1.817E+02	1.081E+02	6.839E+03	-0.025
		427.09		-8.874E+01	5.616E+03	2.486E+02	1.572E+04	-0.357
		832.01		1.617E+01	1.026E+03	1.394E+02	8.816E+03	0.116
BI-212		727.33	*	3.237E+00	3.821E+01	6.450E+01	7.998E+00	0.050
		785.37		-2.225E+01	2.509E+02	4.128E+02	3.693E+01	-0.054
		1620.50		1.464E+02	2.101E+02	3.926E+02	3.602E+01	0.373
PB-212		74.82		5.988E+00	4.408E+01	7.281E+01	1.014E+01	0.082
		77.11		-4.324E+00	2.809E+01	4.266E+01	4.274E+00	-0.101
	+	238.63	*	1.374E+00	8.356E+00	1.246E+01	1.336E+00	0.110
		300.09		-7.096E+01	8.381E+01	1.305E+02	1.546E+01	-0.544
PB-214		74.82		1.045E+01	7.691E+01	1.270E+02	1.617E+01	0.082
		77.11		-7.505E+00	4.876E+01	7.403E+01	9.606E+00	-0.101
		242.00		1.543E+01	4.476E+01	6.696E+01	7.601E+00	0.230
		295.22		1.575E+01	1.628E+01	2.783E+01	3.383E+00	0.566

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
	+	351.93	*	1.136E+01	1.177E+01	1.645E+01	1.817E+00	0.691
RN-219		271.23		-8.907E+00	5.639E+02	3.664E+01	2.318E+03	-0.243
		401.81	*	1.817E-01	3.861E+01	6.056E+01	3.831E+03	0.003
RA-223		81.07		-4.606E+01	2.914E+03	3.945E+01	2.496E+03	-1.168
		83.79		-2.362E-01	2.132E+01	2.487E+01	1.573E+03	-0.009
		94.56		5.012E+01	3.171E+03	6.808E+01	4.306E+03	0.736
		144.24		-6.285E+01	3.977E+03	1.369E+02	8.663E+03	-0.459
		154.21		-8.417E+00	5.342E+02	6.946E+01	4.393E+03	-0.121
		269.46		-7.816E+00	4.947E+02	2.914E+01	1.844E+03	-0.268
		323.87	*	3.945E+01	2.496E+03	1.180E+02	7.465E+03	0.334
		338.28		1.003E+02	6.343E+03	1.596E+02	1.010E+04	0.628
RA-224		240.99	*	9.799E+01	8.462E+01	1.330E+02	1.296E+01	0.737
AC-227		79.69		-8.445E+01	1.509E+02	2.385E+02	4.300E+01	-0.354
		235.96		1.221E+01	1.725E+01	2.655E+01	2.976E+00	0.460
		256.23	*	1.144E+01	2.651E+01	4.545E+01	5.957E+00	0.252
		299.98		-7.485E+01	9.113E+01	1.419E+02	1.961E+01	-0.527
		304.50		-2.060E+01	1.759E+02	2.898E+02	5.029E+01	-0.071
		334.37		-5.338E+01	1.631E+02	2.626E+02	4.232E+01	-0.203
TH-227		79.69		-8.445E+01	5.344E+03	2.385E+02	1.509E+04	-0.354
		235.96		1.221E+01	7.725E+02	2.655E+01	1.680E+03	0.460
		256.23	*	1.144E+01	7.243E+02	4.545E+01	2.875E+03	0.252
		299.98		-7.485E+01	4.736E+03	1.419E+02	8.979E+03	-0.527
		304.50		-2.060E+01	1.315E+03	2.898E+02	1.833E+04	-0.071
		334.37		-5.338E+01	3.381E+03	2.626E+02	1.661E+04	-0.203
AC-228		338.32		2.530E+01	2.487E+01	4.036E+01	1.691E+01	0.627
		911.20	*	-6.276E-01	1.347E+01	2.243E+01	2.782E+00	-0.028
		968.97		1.551E+00	1.834E+01	3.054E+01	7.537E+00	0.051
RA-228		338.32		2.530E+01	2.487E+01	4.036E+01	1.691E+01	0.627
		911.20	*	-6.276E-01	1.347E+01	2.243E+01	2.782E+00	-0.028
		968.97		1.551E+00	1.834E+01	3.054E+01	7.537E+00	0.051
TH-228		74.82		5.988E+00	4.407E+01	7.281E+01	7.301E+00	0.082
		77.11		-4.324E+00	2.809E+01	4.266E+01	4.274E+00	-0.101
	+	238.63	*	1.374E+00	8.356E+00	1.246E+01	1.336E+00	0.110
		300.09		-7.096E+01	9.410E+01	1.305E+02	8.018E+01	-0.544
TH-229		85.43		2.417E+01	2.514E+01	4.288E+01	4.471E+00	0.564
		88.47		5.107E+00	1.491E+01	2.476E+01	2.615E+00	0.206
		193.51	*	5.052E+01	6.364E+01	1.061E+02	9.376E+00	0.476
		210.85		-5.084E+01	9.266E+01	1.510E+02	1.383E+01	-0.337
TH-230		67.67	*	5.240E+02	1.537E+03	2.570E+03	2.557E+02	0.204
PA-231		283.69	*	2.136E+01	1.616E+02	2.713E+02	4.266E+01	0.079
		301.36		-3.475E+01	5.017E+01	7.904E+01	9.973E+00	-0.440
TH-231		84.21	*	1.272E+01	5.628E+01	9.305E+01	1.707E+01	0.137
TH-232		63.81	*	-1.509E+03	1.196E+04	4.484E+03	3.449E+04	-0.337
		140.88		9.135E+03	1.486E+04	2.465E+04	2.222E+03	0.371
PA-233		94.65		3.323E+01	3.235E+01	5.507E+01	5.600E+00	0.603
		98.43		6.841E+00	1.699E+01	2.828E+01	2.902E+00	0.242
		300.13		-3.512E+01	4.121E+01	6.385E+01	1.008E+01	-0.550
		311.90	*	-1.284E+00	6.904E+00	1.130E+01	1.153E+00	-0.114
		340.48		-1.612E+01	5.807E+01	9.373E+01	2.284E+01	-0.172

Sample ID : G266877005 Acquisition date : 26-NOV-2010 06:07:08

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
PA-234		94.67		2.144E+01	2.178E+01	3.689E+01	4.958E+00	0.581
		98.44		4.533E+00	1.158E+01	1.881E+01	1.053E+01	0.241
		111.00		1.619E+01	2.429E+01	4.067E+01	5.217E+00	0.398
		131.20		8.431E-01	1.298E+01	2.106E+01	1.969E+00	0.040
		569.50		1.223E+01	2.333E+01	3.991E+01	3.314E+00	0.306
		733.00		1.382E+01	3.122E+01	5.450E+01	1.209E+01	0.254
		880.51		6.367E+00	2.258E+01	3.876E+01	3.721E+00	0.164
		883.24		1.079E+01	2.599E+01	4.348E+01	2.928E+01	0.248
		926.36		-1.755E+00	1.353E+01	2.188E+01	5.609E+00	-0.080
		946.00	*	-3.473E+00	2.161E+01	3.467E+01	6.662E+00	-0.100
		949.00		7.228E+00	2.978E+01	5.101E+01	4.874E+00	0.142
PA-234M		766.42		-1.487E+02	9.123E+02	1.486E+03	7.546E+02	-0.100
		1001.03	*	3.606E+02	3.665E+02	6.774E+02	7.171E+01	0.532
TH-234		63.29	*	-7.039E+01	2.063E+02	3.234E+02	6.175E+01	-0.218
		92.59		-6.680E+01	9.055E+01	1.421E+02	3.233E+01	-0.470
U-235		89.96		-2.222E+02	1.210E+02	1.568E+02	3.968E+01	-1.417
		93.35		-4.330E+01	6.924E+01	1.097E+02	2.600E+01	-0.395
		143.76	*	-2.053E+01	2.803E+01	4.172E+01	7.141E+00	-0.492
		163.33		-3.019E+01	5.475E+01	8.468E+01	1.514E+01	-0.357
	+	185.72		8.205E+00	8.838E+00	9.279E+00	8.078E-01	0.884
		205.31		3.427E+01	5.171E+01	8.953E+01	1.644E+01	0.383
NP-237		94.67		2.144E+01	2.170E+01	3.689E+01	3.710E+00	0.581
		98.43		6.841E+00	1.699E+01	2.828E+01	2.789E+00	0.242
		300.13		-3.512E+01	4.112E+01	6.385E+01	8.699E+00	-0.550
		311.90	*	-1.284E+00	6.905E+00	1.130E+01	1.363E+00	-0.114
		340.48		-1.612E+01	5.796E+01	9.373E+01	8.826E+00	-0.172
U-238		63.29	*	-7.039E+01	2.063E+02	3.234E+02	6.175E+01	-0.218
		92.59		-6.680E+01	8.952E+01	1.421E+02	1.449E+01	-0.470
NP-239		99.53		5.354E+00	2.017E+01	3.333E+01	3.273E+00	0.161
		103.37		1.961E+00	1.212E+01	1.990E+01	1.932E+00	0.099
		106.12		-4.035E+00	1.087E+01	1.731E+01	1.672E+00	-0.233
		116.74	*	-4.888E+00	3.331E+01	5.356E+01	5.179E+00	-0.091
		228.18		1.683E+01	2.362E+01	4.112E+01	3.903E+00	0.409
		277.60		7.834E-01	1.878E+01	3.139E+01	3.283E+00	0.025
AM-241		59.54	*	-3.589E+01	2.261E+01	3.319E+01	3.580E+00	-1.081
CM-247		278.00		1.797E+01	8.020E+01	1.355E+02	1.418E+01	0.133
		287.50		-1.294E+02	1.315E+02	2.029E+02	2.105E+01	-0.638
		402.40	*	-1.116E+00	3.448E+00	5.491E+00	4.473E-01	-0.203
CF-249		252.80		3.034E+00	1.044E+02	1.748E+02	1.744E+01	0.017
		333.37		-1.343E+01	1.780E+01	2.766E+01	2.647E+00	-0.486
		388.16	*	4.836E+00	4.139E+00	7.390E+00	6.067E-01	0.654
CF-251		177.52	*	6.911E+00	1.650E+01	2.614E+01	2.240E+00	0.264
		227.38		-1.122E+01	3.912E+01	6.458E+01	6.120E+00	-0.174
		285.41		2.728E+01	2.367E+02	3.970E+02	4.131E+01	0.069
ANH-511		511.00	*	-5.764E+00	4.918E+00	8.684E+00	7.240E-01	-0.664

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877005       *
* Acquisition date : 26-NOV-2010 06:07:08 Detector SN#    :                 *
* Detector ID      : GAM28                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:00.72     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 10-NOV-2010 12:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G266877005           Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  8-OCT-2010 13:53:54 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	
BI-211	3.135E+01	1.944E+03	3.473E+01	0.000E+00
BI-214	2.311E+01	9.522E+00	1.007E+01	0.000E+00
RA-226	1.307E+02	1.624E+02	1.096E+02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)		
BE-7	-4.045E+00		3.076E+01	5.050E+01	0.000E+00	NOT IDENT.
NA-22	-2.603E+00		3.230E+00	4.542E+00	0.000E+00	NOT IDENT.
NA-24	0.000E+00		1.233E+08	0.000E+00	0.000E+00	SHORT HLIF
K-40	-7.114E+00		3.797E+01	6.711E+01	0.000E+00	NOT IDENT.
SC-46	4.768E-01		3.118E+00	5.366E+00	0.000E+00	FAIL ABUN
V-48	-6.354E+00		5.207E+00	6.803E+00	0.000E+00	NOT IDENT.
CR-51	-1.583E+01		3.690E+01	6.035E+01	0.000E+00	NOT IDENT.
MN-54	-2.401E-01		2.780E+00	4.653E+00	0.000E+00	NOT IDENT.
CO-56	1.492E+00		3.208E+00	5.730E+00	0.000E+00	NOT IDENT.
CO-57	2.022E+00		3.173E+00	5.414E+00	0.000E+00	NOT IDENT.
CO-58	1.257E-01		2.952E+00	5.033E+00	0.000E+00	NOT IDENT.
FE-59	1.382E-02		7.150E+00	1.192E+01	0.000E+00	NOT IDENT.
CO-60	-1.465E+00		3.051E+00	4.552E+00	0.000E+00	NOT IDENT.
ZN-65	-1.918E+00		7.951E+00	1.076E+01	0.000E+00	NOT IDENT.
SE-75	3.287E+00		4.629E+00	8.217E+00	0.000E+00	NOT IDENT.
SR-85	-1.485E+00		4.865E+00	7.892E+00	0.000E+00	NOT IDENT.
Y-88	-5.251E-03		3.541E+00	5.939E+00	0.000E+00	NOT IDENT.
Y-91	-1.349E+01		1.492E+03	2.469E+03	0.000E+00	NOT IDENT.
NB-94	-7.110E-01		2.712E+00	4.497E+00	0.000E+00	NOT IDENT.
NB-95	-1.127E+00		3.367E+00	5.503E+00	0.000E+00	NOT IDENT.
NB-95M	4.014E+00		1.408E+01	2.145E+01	0.000E+00	NOT IDENT.
ZR-95	-3.154E+00		5.547E+00	8.734E+00	0.000E+00	NOT IDENT.
MO-99	7.543E+02		1.196E+03	2.169E+03	0.000E+00	NOT IDENT.
TC-99M	0.000E+00		3.016E+19	0.000E+00	0.000E+00	SHORT HLIF

RU-103	4.380E-01	3.670E+00	6.165E+00	0.000E+00	FAIL ABUN
RH-106	3.730E+00	2.909E+01	4.843E+01	0.000E+00	NOT IDENT.
RU-106	3.730E+00	2.909E+01	4.843E+01	0.000E+00	NOT IDENT.
AG-108M	8.129E-02	2.818E+00	4.719E+00	0.000E+00	NOT IDENT.
CD-109	-7.864E+00	9.801E+01	1.628E+02	0.000E+00	NOT IDENT.
AG-110M	-1.008E+00	2.611E+00	4.264E+00	0.000E+00	NOT IDENT.
SN-113	-3.049E+00	4.467E+00	7.058E+00	0.000E+00	NOT IDENT.
CD-115	9.138E+01	1.222E+03	2.038E+03	0.000E+00	NOT IDENT.
SN-117M	3.704E+00	6.729E+00	1.136E+01	0.000E+00	NOT IDENT.
TE-123M	1.528E+00	3.420E+00	5.741E+00	0.000E+00	NOT IDENT.
SB-124	1.029E+00	7.128E+00	1.238E+01	0.000E+00	NOT IDENT.
SB-125	-5.741E+00	9.373E+00	1.483E+01	0.000E+00	NOT IDENT.
TE-125M	2.111E+03	1.273E+03	2.251E+03	0.000E+00	NOT IDENT.
I-126	-8.792E+00	1.635E+01	2.609E+01	0.000E+00	NOT IDENT.
SB-126	-3.069E+00	1.170E+01	1.934E+01	0.000E+00	NOT IDENT.
SN-126	1.143E-02	9.480E+00	1.581E+01	0.000E+00	NOT IDENT.
SB-127	2.584E+01	1.076E+02	1.892E+02	0.000E+00	NOT IDENT.
I-131	2.481E+00	1.212E+01	2.072E+01	0.000E+00	NOT IDENT.
TE-132	6.401E+01	9.002E+01	1.592E+02	0.000E+00	NOT IDENT.
BA-133	-1.013E+00	4.597E+00	6.536E+00	0.000E+00	NOT IDENT.
I-133	0.000E+00	8.526E+05	0.000E+00	0.000E+00	SHORT HLIF
CS-134	-1.091E+00	3.515E+00	5.728E+00	0.000E+00	NOT IDENT.
CS-135	9.846E+00	1.511E+01	2.676E+01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.130E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.401E+00	8.408E+00	1.289E+01	0.000E+00	NOT IDENT.
BA-137M	-1.559E-01	2.589E+00	4.402E+00	0.000E+00	NOT IDENT.
CS-137	-1.647E-01	2.735E+00	4.650E+00	0.000E+00	NOT IDENT.
CE-139	-2.792E+00	3.742E+00	5.860E+00	0.000E+00	NOT IDENT.
BA-140	6.338E+00	2.775E+01	4.676E+01	0.000E+00	NOT IDENT.
LA-140	3.310E+00	6.255E+00	1.177E+01	0.000E+00	NOT IDENT.
CE-141	3.640E+00	7.669E+00	1.292E+01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.813E+04	0.000E+00	0.000E+00	SHORT HLIF
CE-144	2.822E-01	2.478E+01	4.086E+01	0.000E+00	NOT IDENT.
PM-144	-1.357E-01	2.780E+00	4.725E+00	0.000E+00	NOT IDENT.
PR-144	-6.624E+00	2.086E+02	3.551E+02	0.000E+00	NOT IDENT.
PM-146	-3.382E+00	3.740E+00	5.620E+00	0.000E+00	NOT IDENT.
ND-147	-3.309E+01	5.442E+01	8.379E+01	0.000E+00	NOT IDENT.
PM-149	1.655E+03	1.177E+04	2.017E+04	0.000E+00	NOT IDENT.
EU-152	-6.662E+00	9.310E+00	1.476E+01	0.000E+00	NOT IDENT.
GD-153	-1.002E+00	1.089E+01	1.802E+01	0.000E+00	NOT IDENT.
EU-154	-7.823E+00	9.099E+00	1.258E+01	0.000E+00	NOT IDENT.
EU-155	-5.178E+00	1.299E+01	2.107E+01	0.000E+00	NOT IDENT.
TA-182	3.710E+00	1.319E+01	2.280E+01	0.000E+00	FAIL ABUN
IR-192	6.474E-01	3.428E+00	5.880E+00	0.000E+00	NOT IDENT.
HG-203	2.457E+00	4.144E+00	7.286E+00	0.000E+00	NOT IDENT.
BI-207	4.505E+00	4.139E+00	7.892E+00	0.000E+00	NOT IDENT.
TL-208	1.295E+00	3.932E+00	6.701E+00	0.000E+00	NOT IDENT.
PB-210	-3.328E+02	6.985E+02	1.108E+03	0.000E+00	NOT IDENT.
PB-211	-2.676E+00	1.781E+02	1.081E+02	0.000E+00	NOT IDENT.
BI-212	3.237E+00	3.744E+01	6.450E+01	0.000E+00	NOT IDENT.
PB-212	1.374E+00	8.189E+00	1.246E+01	0.000E+00	FAIL ABUN
PB-214	1.136E+01	1.154E+01	1.645E+01	0.000E+00	FAIL ABUN
RN-219	1.817E-01	3.784E+01	6.056E+01	0.000E+00	NOT IDENT.
RA-223	3.945E+01	2.446E+03	1.180E+02	0.000E+00	NOT IDENT.
RA-224	9.799E+01	8.293E+01	1.330E+02	0.000E+00	NOT IDENT.
AC-227	1.144E+01	2.598E+01	4.545E+01	0.000E+00	NOT IDENT.
TH-227	1.144E+01	7.098E+02	4.545E+01	0.000E+00	NOT IDENT.
AC-228	-6.276E-01	1.320E+01	2.243E+01	0.000E+00	NOT IDENT.
RA-228	-6.276E-01	1.320E+01	2.243E+01	0.000E+00	NOT IDENT.
TH-228	1.374E+00	8.189E+00	1.246E+01	0.000E+00	FAIL ABUN
TH-229	5.052E+01	6.237E+01	1.061E+02	0.000E+00	NOT IDENT.
TH-230	5.240E+02	1.507E+03	2.570E+03	0.000E+00	NOT IDENT.
PA-231	2.136E+01	1.584E+02	2.713E+02	0.000E+00	NOT IDENT.
TH-231	1.272E+01	5.515E+01	9.305E+01	0.000E+00	NOT IDENT.
TH-232	-1.509E+03	1.172E+04	4.484E+03	0.000E+00	NOT IDENT.
PA-233	-1.284E+00	6.766E+00	1.130E+01	0.000E+00	NOT IDENT.
PA-234	-3.473E+00	2.118E+01	3.467E+01	0.000E+00	NOT IDENT.
PA-234M	3.606E+02	3.592E+02	6.774E+02	0.000E+00	NOT IDENT.
TH-234	-7.039E+01	2.022E+02	3.234E+02	0.000E+00	NOT IDENT.
U-235	-2.053E+01	2.747E+01	4.172E+01	0.000E+00	FAIL ABUN
NP-237	-1.284E+00	6.766E+00	1.130E+01	0.000E+00	NOT IDENT.
U-238	-7.039E+01	2.022E+02	3.234E+02	0.000E+00	NOT IDENT.
NP-239	-4.888E+00	3.264E+01	5.356E+01	0.000E+00	NOT IDENT.
AM-241	-3.589E+01	2.216E+01	3.319E+01	0.000E+00	NOT IDENT.
CM-247	-1.116E+00	3.379E+00	5.491E+00	0.000E+00	NOT IDENT.
CF-249	4.836E+00	4.056E+00	7.390E+00	0.000E+00	NOT IDENT.
CF-251	6.911E+00	1.617E+01	2.614E+01	0.000E+00	NOT IDENT.
ANH-511	-5.764E+00	4.820E+00	8.684E+00	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:08:01.94

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877005.CNF;1
Sample date      : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 06:07:08
Sample ID        : G266877005           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM28                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.72  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	93.38	54	230	1.15	186.17	181	10	7.50E-03	54.3	
2	0	185.53	133	201	1.35	370.46	363	15	1.85E-02	24.9	
3	0	238.90	54	118	1.45	477.18	473	8	7.52E-03	37.3	
4	0	352.19	70	77	1.06	703.77	699	10	9.73E-03	26.8	
5	0	511.20	140	91	1.35	1021.79	1015	15	1.94E-02	17.3	
6	0	609.70	97	25	1.74	1218.79	1214	10	1.35E-02	14.0	
7	0	1016.10	26	15	3.86	2031.67	2019	21	3.65E-03	42.3	
8	0	1121.07	20	15	1.29	2241.66	2236	11	2.84E-03	43.8	
9	0	1463.34	24	10	1.06	2926.32	2918	16	3.27E-03	38.5	

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:08:04.35

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877005.CNF;1
Sample date      : 10-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 06:07:08
Sample ID        : G266877005           Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM28                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.72  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/LITER	Decay Corr pCi/LITER	2-Sigma %Error
BI-211	72.87	------	1.23	1.513E+00	------	Line Not Found	------
	351.06	39	12.92*	1.810E+00	3.131E+01	3.135E+01	6326.34
BI-214	609.32	71	45.49*	1.270E+00	2.311E+01	2.311E+01	42.04
	1120.29	12	14.92	7.930E-01	1.844E+01	1.844E+01	160.87
	1764.49	------	15.30	5.784E-01	------	Line Not Found	------
RA-226	186.21	63	3.59*	2.539E+00	1.307E+02	1.307E+02	126.78

Flag: "*" = Keyline

Sample ID : G266877005 Acquisition date : 26-NOV-2010 06:07:08

Total number of lines in spectrum	7	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	5	71.43%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/LITER	Decay Corr pCi/LITER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BI-211	21.77Y	1.00	3.131E+01	3.135E+01	198.3E+01	6326.34	
BI-214	1600.00Y	1.00	2.311E+01	2.311E+01	0.972E+01	42.04	
RA-226	1600.00Y	1.00	1.307E+02	1.307E+02	1.657E+02	126.78	
			---	---			
	Total Activity :		1.852E+02	1.852E+02			
	Grand Total Activity :		1.852E+02	1.852E+02			

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

Sample ID : G266877005 Acquisition date : 26-NOV-2010 06:07:08

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	238.90	7	118	1.45	477.18	473	8	9.85E-04	****	2.26E+00	T
0	1016.10	26	15	3.86	2031.67	2019	21	3.65E-03	84.6	8.59E-01	
0	1463.34	24	10	1.06	2926.32	2918	16	3.27E-03	76.9	6.47E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:08:07.04

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G266877005.CNF;1  *
* Acquisition date : 26-NOV-2010 06:07:08  Detector SN#    :                *
* Detector ID      : GAM28                 Sensitivity     : 5.00000        *
* Geometry         : 2LMB                  Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:00.72         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 10-NOV-2010 12:00:00  Nuclide Library : LIQUID          *
* Sample ID        : G266877005            Analyst initials: KXG3           *
* Batch Number     : 1048163               Sample Quantity : 2.00000E+00 LITER *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 8-OCT-2010 13:53:54.10MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BI-211	3.135E+01	1.983E+03	3.473E+01	2.197E+03	0.903
BI-214	2.311E+01	9.717E+00	1.007E+01	9.842E-01	2.295
RA-226	1.307E+02	1.657E+02	1.096E+02	7.390E+01	1.193

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7	-4.045E+00		3.139E+01	5.050E+01	4.546E+00	-0.080
NA-22	-2.603E+00		3.296E+00	4.542E+00	4.159E-01	-0.573
NA-24	-1.065E+02		6.292E+01	Half-Life too short		
K-40	-7.114E+00		3.875E+01	6.711E+01	6.573E+00	-0.106
SC-46	4.768E-01		3.182E+00	5.366E+00	5.183E-01	0.089
V-48	-6.354E+00		5.313E+00	6.803E+00	6.403E-01	-0.934
CR-51	-1.583E+01		3.766E+01	6.035E+01	6.175E+00	-0.262
MN-54	-2.401E-01		2.837E+00	4.653E+00	4.322E-01	-0.052
CO-56	1.492E+00		3.273E+00	5.730E+00	5.370E-01	0.260

Sample ID : G266877005 Acquisition date : 26-NOV-2010 06:07:08

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
CO-57	2.022E+00		3.238E+00	5.414E+00	5.291E-01	0.373
CO-58	1.257E-01		3.012E+00	5.033E+00	4.601E-01	0.025
FE-59	1.382E-02		7.295E+00	1.192E+01	1.126E+00	0.001
CO-60	-1.465E+00		3.113E+00	4.552E+00	4.418E-01	-0.322
ZN-65	-1.918E+00		8.113E+00	1.076E+01	9.305E-01	-0.178
SE-75	3.287E+00		4.724E+00	8.217E+00	8.415E-01	0.400
SR-85	-1.485E+00		4.965E+00	7.892E+00	6.581E-01	-0.188
Y-88	-5.251E-03		3.613E+00	5.939E+00	4.905E-01	-0.001
Y-91	-1.349E+01		1.522E+03	2.469E+03	2.095E+02	-0.005
NB-94	-7.110E-01		2.768E+00	4.497E+00	3.758E-01	-0.158
NB-95	-1.127E+00		3.436E+00	5.503E+00	4.847E-01	-0.205
NB-95M	4.014E+00		1.437E+01	2.145E+01	2.313E+00	0.187
ZR-95	-3.154E+00		5.660E+00	8.734E+00	8.415E-01	-0.361
MO-99	7.543E+02		1.220E+03	2.169E+03	3.418E+02	0.348
TC-99M	2.030E+13		1.539E+13	Half-Life too short		
RU-103	4.380E-01		3.745E+00	6.165E+00	8.501E-01	0.071
RH-106	3.730E+00		2.969E+01	4.843E+01	6.287E+00	0.077
RU-106	3.730E+00		2.968E+01	4.843E+01	3.967E+00	0.077
AG-108M	8.129E-02		2.876E+00	4.719E+00	4.025E-01	0.017
CD-109	-7.864E+00		1.000E+02	1.628E+02	1.727E+01	-0.048
AG-110M	-1.008E+00		2.664E+00	4.264E+00	3.560E-01	-0.236
SN-113	-3.049E+00		4.559E+00	7.058E+00	5.921E-01	-0.432
CD-115	9.138E+01		1.247E+03	2.038E+03	1.699E+02	0.045
SN-117M	3.704E+00		6.866E+00	1.136E+01	9.726E-01	0.326
TE-123M	1.528E+00		3.489E+00	5.741E+00	4.940E-01	0.266
SB-124	1.029E+00		7.273E+00	1.238E+01	1.148E+00	0.083
SB-125	-5.741E+00		9.564E+00	1.483E+01	1.244E+00	-0.387
TE-125M	2.111E+03		1.299E+03	2.251E+03	2.550E+02	0.938
I-126	-8.792E+00		1.669E+01	2.609E+01	2.112E+00	-0.337
SB-126	-3.069E+00		1.194E+01	1.934E+01	1.642E+00	-0.159
SN-126	1.143E-02		9.674E+00	1.581E+01	1.672E+00	0.001
SB-127	2.584E+01		1.098E+02	1.892E+02	2.134E+01	0.137
I-131	2.481E+00		1.237E+01	2.072E+01	1.929E+00	0.120
TE-132	6.401E+01		9.186E+01	1.592E+02	2.615E+01	0.402
BA-133	-1.013E+00		4.691E+00	6.536E+00	8.659E-01	-0.155
I-133	3.865E-01		4.350E-01	Half-Life too short		
CS-134	-1.091E+00		3.587E+00	5.728E+00	5.201E-01	-0.190
CS-135	9.846E+00		1.542E+01	2.676E+01	3.058E+00	0.368
I-135	-6.349E+11		1.087E+12	Half-Life too short		
CS-136	-4.401E+00		8.580E+00	1.289E+01	1.215E+00	-0.341
BA-137M	-1.559E-01		2.642E+00	4.402E+00	3.548E-01	-0.035
CS-137	-1.647E-01		2.791E+00	4.650E+00	3.756E-01	-0.035
CE-139	-2.792E+00		3.819E+00	5.860E+00	4.926E-01	-0.476
BA-140	6.338E+00		2.832E+01	4.676E+01	1.582E+01	0.136
LA-140	3.310E+00		6.382E+00	1.177E+01	1.089E+00	0.281
CE-141	3.640E+00		7.826E+00	1.292E+01	1.168E+00	0.282
CE-143	1.323E-02		9.251E-03	Half-Life too short		
CE-144	2.822E-01		2.528E+01	4.086E+01	6.398E+00	0.007

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
PM-144	-1.357E-01		2.837E+00	4.725E+00	3.929E-01	-0.029
PR-144	-6.624E+00		2.128E+02	3.551E+02	2.952E+01	-0.019
PM-146	-3.382E+00		3.817E+00	5.620E+00	5.798E-01	-0.602
ND-147	-3.309E+01		5.553E+01	8.379E+01	1.239E+01	-0.395
PM-149	1.655E+03		1.201E+04	2.017E+04	3.347E+03	0.082
EU-152	-6.662E+00		9.500E+00	1.476E+01	1.447E+00	-0.451
GD-153	-1.002E+00		1.111E+01	1.802E+01	1.786E+00	-0.056
EU-154	-7.823E+00		9.285E+00	1.258E+01	1.482E+00	-0.622
EU-155	-5.178E+00		1.326E+01	2.107E+01	2.056E+00	-0.246
TA-182	3.710E+00		1.346E+01	2.280E+01	1.970E+00	0.163
IR-192	6.474E-01		3.498E+00	5.880E+00	5.832E-01	0.110
HG-203	2.457E+00		4.228E+00	7.286E+00	7.774E-01	0.337
BI-207	4.505E+00		4.223E+00	7.892E+00	7.093E-01	0.571
TL-208	1.295E+00		4.012E+00	6.701E+00	5.972E-01	0.193
PB-210	-3.328E+02		7.128E+02	1.108E+03	1.203E+02	-0.300
PB-211	-2.676E+00		1.817E+02	1.081E+02	6.839E+03	-0.025
BI-212	3.237E+00		3.821E+01	6.450E+01	7.998E+00	0.050
PB-212	1.374E+00	+	8.356E+00	1.246E+01	1.336E+00	0.110
PB-214	1.136E+01	+	1.177E+01	1.645E+01	1.817E+00	0.691
RN-219	1.817E-01		3.861E+01	6.056E+01	3.831E+03	0.003
RA-223	3.945E+01		2.496E+03	1.180E+02	7.465E+03	0.334
RA-224	9.799E+01		8.462E+01	1.330E+02	1.296E+01	0.737
AC-227	1.144E+01		2.651E+01	4.545E+01	5.957E+00	0.252
TH-227	1.144E+01		7.243E+02	4.545E+01	2.875E+03	0.252
AC-228	-6.276E-01		1.347E+01	2.243E+01	2.782E+00	-0.028
RA-228	-6.276E-01		1.347E+01	2.243E+01	2.782E+00	-0.028
TH-228	1.374E+00	+	8.356E+00	1.246E+01	1.336E+00	0.110
TH-229	5.052E+01		6.364E+01	1.061E+02	9.376E+00	0.476
TH-230	5.240E+02		1.537E+03	2.570E+03	2.557E+02	0.204
PA-231	2.136E+01		1.616E+02	2.713E+02	4.266E+01	0.079
TH-231	1.272E+01		5.628E+01	9.305E+01	1.707E+01	0.137
TH-232	-1.509E+03		1.196E+04	4.484E+03	3.449E+04	-0.337
PA-233	-1.284E+00		6.904E+00	1.130E+01	1.153E+00	-0.114
PA-234	-3.473E+00		2.161E+01	3.467E+01	6.662E+00	-0.100
PA-234M	3.606E+02		3.665E+02	6.774E+02	7.171E+01	0.532
TH-234	-7.039E+01		2.063E+02	3.234E+02	6.175E+01	-0.218
U-235	-2.053E+01		2.803E+01	4.172E+01	7.141E+00	-0.492
NP-237	-1.284E+00		6.905E+00	1.130E+01	1.363E+00	-0.114
U-238	-7.039E+01		2.063E+02	3.234E+02	6.175E+01	-0.218
NP-239	-4.888E+00		3.331E+01	5.356E+01	5.179E+00	-0.091
AM-241	-3.589E+01		2.261E+01	3.319E+01	3.580E+00	-1.081
CM-247	-1.116E+00		3.448E+00	5.491E+00	4.473E-01	-0.203
CF-249	4.836E+00		4.139E+00	7.390E+00	6.067E-01	0.654
CF-251	6.911E+00		1.650E+01	2.614E+01	2.240E+00	0.264
ANH-511	-5.764E+00		4.918E+00	8.684E+00	7.240E-01	-0.664

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G266877005            *
* Acquisition date : 26-NOV-2010 06:07:08 Detector SN#    :                 *
* Detector ID      : GAM28                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:00.72     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 10-NOV-2010 12:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G266877005           Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  8-OCT-2010 13:53:54 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act Error	DLC (pCi/LITER)	TPU
BI-211	3.135E+01	1.944E+03	1.738E+01	9.917E+02
BI-214	2.311E+01	9.522E+00	5.039E+00	4.858E+00
RA-226	1.307E+02	1.624E+02	5.484E+01	8.287E+01

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L Act error	DLC (pCi/LITER)	TPU	
BE-7	-4.045E+00	3.076E+01	2.526E+01	1.569E+01	NOT IDENT.
NA-22	-2.603E+00	3.230E+00	2.273E+00	1.648E+00	NOT IDENT.
NA-24	-1.065E+08	1.233E+08	0.000E+00	6.292E+07	SHORT HLIF
K-40	-7.114E+00	3.797E+01	3.357E+01	1.937E+01	NOT IDENT.
SC-46	4.768E-01	3.118E+00	2.685E+00	1.591E+00	FAIL ABUN
V-48	-6.354E+00	5.207E+00	3.403E+00	2.657E+00	NOT IDENT.
CR-51	-1.583E+01	3.690E+01	3.020E+01	1.883E+01	NOT IDENT.
MN-54	-2.401E-01	2.780E+00	2.328E+00	1.419E+00	NOT IDENT.
CO-56	1.492E+00	3.208E+00	2.867E+00	1.637E+00	NOT IDENT.
CO-57	2.022E+00	3.173E+00	2.709E+00	1.619E+00	NOT IDENT.
CO-58	1.257E-01	2.952E+00	2.518E+00	1.506E+00	NOT IDENT.
FE-59	1.382E-02	7.150E+00	5.963E+00	3.648E+00	NOT IDENT.
CO-60	-1.465E+00	3.051E+00	2.278E+00	1.556E+00	NOT IDENT.
ZN-65	-1.918E+00	7.951E+00	5.382E+00	4.057E+00	NOT IDENT.
SE-75	3.287E+00	4.629E+00	4.111E+00	2.362E+00	NOT IDENT.
SR-85	-1.485E+00	4.865E+00	3.948E+00	2.482E+00	NOT IDENT.
Y-88	-5.251E-03	3.541E+00	2.971E+00	1.806E+00	NOT IDENT.
Y-91	-1.349E+01	1.492E+03	1.235E+03	7.610E+02	NOT IDENT.
NB-94	-7.110E-01	2.712E+00	2.250E+00	1.384E+00	NOT IDENT.
NB-95	-1.127E+00	3.367E+00	2.753E+00	1.718E+00	NOT IDENT.
NB-95M	4.014E+00	1.408E+01	1.073E+01	7.185E+00	NOT IDENT.
ZR-95	-3.154E+00	5.547E+00	4.370E+00	2.830E+00	NOT IDENT.
MO-99	7.543E+02	1.196E+03	1.085E+03	6.100E+02	NOT IDENT.
TC-99M	2.030E+19	3.016E+19	0.000E+00	0.000E+00	SHORT HLIF

RU-103	4.380E-01	3.670E+00	3.084E+00	1.873E+00	FAIL ABUN
RH-106	3.730E+00	2.909E+01	2.423E+01	1.484E+01	NOT IDENT.
RU-106	3.730E+00	2.909E+01	2.423E+01	1.484E+01	NOT IDENT.
AG-108M	8.129E-02	2.818E+00	2.361E+00	1.438E+00	NOT IDENT.
CD-109	-7.864E+00	9.801E+01	8.143E+01	5.001E+01	NOT IDENT.
AG-110M	-1.008E+00	2.611E+00	2.133E+00	1.332E+00	NOT IDENT.
SN-113	-3.049E+00	4.467E+00	3.531E+00	2.279E+00	NOT IDENT.
CD-115	9.138E+01	1.222E+03	1.020E+03	6.233E+02	NOT IDENT.
SN-117M	3.704E+00	6.729E+00	5.684E+00	3.433E+00	NOT IDENT.
TE-123M	1.528E+00	3.420E+00	2.872E+00	1.745E+00	NOT IDENT.
SB-124	1.029E+00	7.128E+00	6.195E+00	3.637E+00	NOT IDENT.
SB-125	-5.741E+00	9.373E+00	7.419E+00	4.782E+00	NOT IDENT.
TE-125M	2.111E+03	1.273E+03	1.126E+03	6.497E+02	NOT IDENT.
I-126	-8.792E+00	1.635E+01	1.305E+01	8.344E+00	NOT IDENT.
SB-126	-3.069E+00	1.170E+01	9.676E+00	5.971E+00	NOT IDENT.
SN-126	1.143E-02	9.480E+00	7.909E+00	4.837E+00	NOT IDENT.
SB-127	2.584E+01	1.076E+02	9.467E+01	5.488E+01	NOT IDENT.
I-131	2.481E+00	1.212E+01	1.037E+01	6.185E+00	NOT IDENT.
TE-132	6.401E+01	9.002E+01	7.963E+01	4.593E+01	NOT IDENT.
BA-133	-1.013E+00	4.597E+00	3.270E+00	2.345E+00	NOT IDENT.
I-133	3.865E+05	8.526E+05	0.000E+00	4.350E+05	SHORT HLIF
CS-134	-1.091E+00	3.515E+00	2.866E+00	1.793E+00	NOT IDENT.
CS-135	9.846E+00	1.511E+01	1.339E+01	7.710E+00	NOT IDENT.
I-135	-6.349E+17	2.130E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.401E+00	8.408E+00	6.449E+00	4.290E+00	NOT IDENT.
BA-137M	-1.559E-01	2.589E+00	2.202E+00	1.321E+00	NOT IDENT.
CS-137	-1.647E-01	2.735E+00	2.326E+00	1.395E+00	NOT IDENT.
CE-139	-2.792E+00	3.742E+00	2.932E+00	1.909E+00	NOT IDENT.
BA-140	6.338E+00	2.775E+01	2.339E+01	1.416E+01	NOT IDENT.
LA-140	3.310E+00	6.255E+00	5.889E+00	3.191E+00	NOT IDENT.
CE-141	3.640E+00	7.669E+00	6.463E+00	3.913E+00	NOT IDENT.
CE-143	1.323E+04	1.813E+04	0.000E+00	9.251E+03	SHORT HLIF
CE-144	2.822E-01	2.478E+01	2.044E+01	1.264E+01	NOT IDENT.
PM-144	-1.357E-01	2.780E+00	2.364E+00	1.419E+00	NOT IDENT.
PR-144	-6.624E+00	2.086E+02	1.776E+02	1.064E+02	NOT IDENT.
PM-146	-3.382E+00	3.740E+00	2.812E+00	1.908E+00	NOT IDENT.
ND-147	-3.309E+01	5.442E+01	4.192E+01	2.777E+01	NOT IDENT.
PM-149	1.655E+03	1.177E+04	1.009E+04	6.003E+03	NOT IDENT.
EU-152	-6.662E+00	9.310E+00	7.385E+00	4.750E+00	NOT IDENT.
GD-153	-1.002E+00	1.089E+01	9.018E+00	5.557E+00	NOT IDENT.
EU-154	-7.823E+00	9.099E+00	6.293E+00	4.642E+00	NOT IDENT.
EU-155	-5.178E+00	1.299E+01	1.054E+01	6.628E+00	NOT IDENT.
TA-182	3.710E+00	1.319E+01	1.141E+01	6.732E+00	FAIL ABUN
IR-192	6.474E-01	3.428E+00	2.942E+00	1.749E+00	NOT IDENT.
HG-203	2.457E+00	4.144E+00	3.645E+00	2.114E+00	NOT IDENT.
BI-207	4.505E+00	4.139E+00	3.948E+00	2.111E+00	NOT IDENT.
TL-208	1.295E+00	3.932E+00	3.352E+00	2.006E+00	NOT IDENT.
PB-210	-3.328E+02	6.985E+02	5.544E+02	3.564E+02	NOT IDENT.
PB-211	-2.676E+00	1.781E+02	5.409E+01	9.086E+01	NOT IDENT.
BI-212	3.237E+00	3.744E+01	3.227E+01	1.910E+01	NOT IDENT.
PB-212	1.374E+00	8.189E+00	6.231E+00	4.178E+00	FAIL ABUN
PB-214	1.136E+01	1.154E+01	8.229E+00	5.886E+00	FAIL ABUN
RN-219	1.817E-01	3.784E+01	3.030E+01	1.930E+01	NOT IDENT.
RA-223	3.945E+01	2.446E+03	5.904E+01	1.248E+03	NOT IDENT.
RA-224	9.799E+01	8.293E+01	6.653E+01	4.231E+01	NOT IDENT.
AC-227	1.144E+01	2.598E+01	2.274E+01	1.325E+01	NOT IDENT.
TH-227	1.144E+01	7.098E+02	2.274E+01	3.621E+02	NOT IDENT.
AC-228	-6.276E-01	1.320E+01	1.122E+01	6.736E+00	NOT IDENT.
RA-228	-6.276E-01	1.320E+01	1.122E+01	6.736E+00	NOT IDENT.
TH-228	1.374E+00	8.189E+00	6.231E+00	4.178E+00	FAIL ABUN
TH-229	5.052E+01	6.237E+01	5.306E+01	3.182E+01	NOT IDENT.
TH-230	5.240E+02	1.507E+03	1.286E+03	7.686E+02	NOT IDENT.
PA-231	2.136E+01	1.584E+02	1.357E+02	8.080E+01	NOT IDENT.
TH-231	1.272E+01	5.515E+01	4.655E+01	2.814E+01	NOT IDENT.
TH-232	-1.509E+03	1.172E+04	2.243E+03	5.981E+03	NOT IDENT.
PA-233	-1.284E+00	6.766E+00	5.655E+00	3.452E+00	NOT IDENT.
PA-234	-3.473E+00	2.118E+01	1.735E+01	1.081E+01	NOT IDENT.
PA-234M	3.606E+02	3.592E+02	3.389E+02	1.833E+02	NOT IDENT.
TH-234	-7.039E+01	2.022E+02	1.618E+02	1.032E+02	NOT IDENT.
U-235	-2.053E+01	2.747E+01	2.087E+01	1.401E+01	FAIL ABUN
NP-237	-1.284E+00	6.766E+00	5.655E+00	3.452E+00	NOT IDENT.
U-238	-7.039E+01	2.022E+02	1.618E+02	1.032E+02	NOT IDENT.
NP-239	-4.888E+00	3.264E+01	2.680E+01	1.665E+01	NOT IDENT.
AM-241	-3.589E+01	2.216E+01	1.661E+01	1.131E+01	NOT IDENT.
CM-247	-1.116E+00	3.379E+00	2.747E+00	1.724E+00	NOT IDENT.
CF-249	4.836E+00	4.056E+00	3.697E+00	2.069E+00	NOT IDENT.
CF-251	6.911E+00	1.617E+01	1.308E+01	8.251E+00	NOT IDENT.
ANH-511	-5.764E+00	4.820E+00	4.345E+00	2.459E+00	NOT IDENT.

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

ENERGY	MDA COUNTS
46.54	141.5308
49.72	169.5369
57.36	0.0000
59.54	179.9509
63.29	171.9481
63.29	171.9481
63.81	180.0271
64.28	156.2559
67.67	181.9597
67.75	181.9785
69.67	189.4521
70.83	169.6569
72.81	200.2769
72.87	200.2920
72.87	200.2920
74.82	178.5833
74.82	178.5833
74.82	178.5833
74.97	178.6171
77.11	175.0399
77.11	175.0399
77.11	175.0399
79.69	193.8540
79.69	193.8540
80.12	215.2785
80.19	215.2963
81.00	226.6851
81.07	230.7703
83.79	194.7917
84.21	188.7643
85.43	178.8118
86.55	189.2710
86.94	203.6846
87.57	200.7567
88.03	209.0598
88.47	198.9099
89.96	276.2672
91.11	190.2400
92.59	178.1891
92.59	178.1891
93.35	188.6451
94.56	190.9570
94.65	195.1045
94.67	195.1088
94.67	195.1088
97.43	189.4727
98.43	158.5785
98.43	158.5785
98.44	158.5803
99.53	158.7618
100.11	172.3558
103.18	154.1539
103.37	154.1838
105.31	178.4964
106.12	190.1341
109.28	156.1498
111.00	178.4590
111.76	184.8952
116.30	167.7675
116.74	173.1151
121.12	157.9294
121.78	176.0558
122.06	164.4321
123.07	175.2030
131.20	176.4908
133.52	184.3536
136.00	236.3097

136.47	242.8528
140.51	208.1091
140.51	0.0000
140.88	209.2525
143.76	215.1663
144.24	203.3530
145.44	173.2397
152.43	151.3631
153.25	149.2835
154.21	154.8510
156.02	170.3632
158.56	159.7632
159.00	164.1964
162.66	199.7936
163.33	192.2087
165.86	200.2858
176.60	157.5280
177.52	162.3918
181.07	185.1979
185.72	130.6520
186.21	130.6976
193.51	149.3328
205.31	134.0112
210.85	153.5884
222.11	129.9910
227.38	145.1191
228.16	124.0543
228.18	124.0560
235.69	126.1706
235.96	120.0358
235.96	120.0358
238.63	161.8494
238.63	161.8494
240.99	143.5566
242.00	142.0991
244.70	131.1132
252.40	121.2204
252.80	119.3828
256.23	102.7997
256.23	102.7997
260.90	113.3843
264.66	96.7234
268.22	90.3316
269.46	108.2842
271.23	101.7945
273.65	111.3697
276.40	102.0858
277.37	109.7072
277.60	115.3951
278.00	113.5298
279.20	106.9762
279.54	110.7844
283.69	113.8813
284.31	107.2741
285.41	107.3390
285.90	103.5660
287.50	117.9196
293.27	0.0000
295.22	92.6236
295.96	87.8829
299.98	117.7449
299.98	117.7449
300.09	117.7509
300.09	117.7509
300.13	117.7539
300.13	117.7539
301.36	112.0812
302.85	115.0444
304.50	107.4664
304.50	107.4664
304.85	100.7677
308.46	81.7253
311.90	99.2067
311.90	99.2067
316.51	81.0951
319.41	98.6170
320.08	88.9779
323.87	89.1463

328.76	97.1326
333.37	94.4317
334.37	82.7899
334.37	82.7899
338.28	64.4056
338.32	64.4064
338.32	64.4064
340.48	84.9875
340.48	84.9875
340.55	90.8521
344.28	85.1425
351.06	86.7256
351.93	80.5406
356.01	75.4463
364.49	72.1200
366.42	70.2061
383.85	72.7523
388.16	61.9077
388.63	66.9141
391.70	82.0050
400.66	70.2769
401.81	58.2584
402.40	64.3016
404.85	61.3515
414.70	65.6483
423.72	58.8001
427.09	78.1712
427.87	79.2121
433.94	60.0659
453.88	59.5229
463.37	43.2638
468.07	54.6951
473.00	47.5616
476.78	60.0561
477.60	56.9678
487.02	42.6191
492.35	57.2867
497.08	47.9968
511.00	57.6832
514.00	118.6417
527.90	42.2080
529.87	0.0000
531.02	53.8750
537.26	53.9945
546.56	0.0000
563.25	34.1859
569.33	33.1857
569.50	35.3292
569.70	35.3316
583.19	41.9450
600.60	68.1480
602.73	50.0643
604.72	43.3262
609.32	44.4764
610.33	37.9796
614.28	32.5957
618.01	46.7761
621.93	42.4782
621.93	42.4782
633.25	39.3513
635.95	39.3847
636.99	40.4922
645.85	42.7991
657.76	33.9611
661.66	30.3259
661.66	30.3259
664.57	0.0000
666.33	33.1296
666.50	33.1318
677.62	36.0134
685.70	25.9179
695.00	28.7743
696.49	37.1444
696.51	37.1444
697.00	39.9363
702.65	39.0717
706.68	39.1178
720.70	34.6009

721.93	0.0000
722.78	25.2647
722.91	27.1374
723.31	22.4609
724.19	33.6995
727.33	28.1085
733.00	30.0306
735.93	44.1438
739.50	28.2056
747.24	29.2095
753.82	24.5432
756.73	33.0653
763.94	43.5443
765.80	37.8841
766.42	36.9434
777.92	30.4082
778.90	23.7625
783.70	35.2144
785.37	30.4694
795.86	31.5109
801.95	23.9105
810.76	24.9251
815.77	23.9980
818.51	27.8577
832.01	28.9203
834.85	27.9769
836.80	0.0000
846.77	25.1595
856.80	25.2240
860.56	31.0749
871.09	28.2365
873.19	30.1996
875.33	0.0000
880.51	23.4233
883.24	26.3688
884.68	19.5394
889.28	24.4522
898.04	18.6239
911.20	24.5839
911.20	24.5839
926.36	23.6875
937.49	21.7713
944.13	28.7439
946.00	20.8235
949.00	15.8770
964.08	21.9082
968.97	22.9298
968.97	22.9298
983.53	27.0088
996.26	25.0809
1001.03	18.0780
1004.73	28.1447
1037.84	32.4049
1038.76	0.0000
1048.07	25.3733
1050.41	18.2783
1050.41	18.2783
1063.66	16.2943
1085.87	20.4655
1099.25	23.6027
1112.07	23.5728
1115.54	26.4791
1120.29	21.6460
1120.55	21.6469
1121.30	23.7122
1131.51	0.0000
1173.23	20.8407
1189.05	15.6805
1204.77	20.9725
1221.41	18.9375
1231.02	14.7571
1235.36	22.1536
1238.28	9.4999
1260.41	0.0000
1274.44	23.3840
1274.54	23.3848
1291.59	22.3937
1298.22	0.0000

1312.11	11.7752
1332.49	18.2666
1365.19	20.5377
1368.63	0.0000
1384.29	17.6641
1408.01	20.5398
1457.56	0.0000
1460.82	9.8936
1489.16	16.0958
1596.21	6.7456
1620.50	8.7068
1678.03	0.0000
1690.97	9.7813
1764.49	10.8795
1770.23	24.7471
1771.35	23.7614
1791.20	0.0000
1836.06	11.9937

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID     : 1048163                  SAMPLE ID  : G266877005         *
*   ANALYST      : KXG3                     DETECTOR   : GAM28              *
*   SAMPLE DATE  : 10-NOV-2010 12:00:00.00  COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE: 26-NOV-2010 06:07:08.59  SAMPLE ALQT:    2.000 LITER     *
*                                                                           *
*****************************************************************************


         GROSS GAMMA ACTIVITY (pCi/LITER ) : 3.517E+01
         GROSS GAMMA ERROR  (pCi/LITER )   : 2.401E+01
         GROSS GAMMA MDA    (pCi/LITER )   : 6.733E+01
         GROSS GAMMA DLC    (pCi/LITER )   : 3.212E+01
```

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:10:23.57

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262532.CNF;1
Sample date      : 12-NOV-2010 00:00:00 Acquisition date : 26-NOV-2010 06:09:24
Sample ID        : G1202262532          Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM20                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:29.46  0.4%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.78*	17	71	1.15	93.88	90	8	2.29E-03	102.8	
2	0	92.80*	13	91	1.06	185.83	182	10	1.74E-03	185.6	

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

VMS Nuclide Identification Report V3.1 Generated 26-NOV-2010 08:10:25

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262532.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : KXG3
Sample date : 12-NOV-2010 00:00:00 Acquisition date : 26-NOV-2010 06:09:24
Sample ID : G1202262532 Sample quantity : 2.0000 LITER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA20 Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:29.46 0.4%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
PB-210	+	46.54	*	1.141E+02	2.349E+02	2.686E+02	2.696E+01	0.425

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7		477.60	*	1.140E+01	2.162E+01	3.727E+01	3.338E+00	0.306
NA-22		1274.54	*	1.295E-01	1.983E+00	3.252E+00	2.950E-01	0.040
NA-24		1368.63	*	1.451E+01	1.983E+00	Half-Life too short		
K-40		1460.82	*	-1.441E+01	2.899E+01	4.938E+01	4.795E+00	-0.292
SC-46		889.28	*	6.457E-01	2.692E+00	4.601E+00	4.308E-01	0.140
		1120.55		8.105E-01	2.645E+00	4.562E+00	3.854E-01	0.178
V-48		944.13		-3.944E+01	5.039E+01	6.856E+01	6.363E+00	-0.575
		983.53	*	2.225E+00	3.909E+00	7.103E+00	6.497E-01	0.313
		1312.11		3.605E+00	3.479E+00	7.181E+00	6.773E-01	0.502
CR-51		320.08	*	-5.888E+00	2.588E+01	4.127E+01	3.698E+00	-0.143
MN-54		834.85	*	4.125E-01	2.302E+00	3.912E+00	3.568E-01	0.105
CO-56		846.77	*	-2.467E+00	2.585E+00	3.513E+00	3.223E-01	-0.702
		1037.84		2.157E+01	1.931E+01	3.749E+01	3.505E+00	0.576
		1238.28		-1.037E+00	4.855E+00	7.501E+00	6.719E-01	-0.138
		1771.35		1.126E+01	2.055E+01	3.790E+01	3.223E+00	0.297
CO-57		122.06	*	-3.891E-01	1.806E+00	3.004E+00	2.745E-01	-0.130
		136.47		-5.049E+00	1.458E+01	2.390E+01	2.265E+00	-0.211
CO-58		810.76	*	-9.958E-01	2.402E+00	3.675E+00	3.316E-01	-0.271
FE-59		1099.25	*	-7.087E-01	4.618E+00	7.230E+00	6.711E-01	-0.098
		1291.59		2.678E+00	4.917E+00	9.243E+00	9.545E-01	0.290
CO-60		1173.23		-2.826E+00	2.522E+00	2.958E+00	2.391E-01	-0.956
		1332.49	*	1.186E+00	2.168E+00	3.966E+00	3.821E-01	0.299
ZN-65		1115.54	*	2.746E+00	5.265E+00	9.365E+00	7.950E-01	0.293
SE-75		121.12		-7.450E-02	9.219E+00	1.559E+01	1.792E+00	-0.005
		136.00		-8.900E-01	2.802E+00	4.604E+00	4.109E-01	-0.193
		264.66	*	-2.073E-01	3.314E+00	5.432E+00	4.727E-01	-0.038
		279.54		-1.317E+00	7.096E+00	1.144E+01	1.022E+00	-0.115
		400.66		2.982E+00	1.823E+01	3.012E+01	3.199E+00	0.099

Sample ID : G1202262532 Acquisition date : 26-NOV-2010 06:09:24

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
SR-85		514.00	*	-1.018E+01	4.495E+00	5.609E+00	4.671E-01	-1.814
Y-88		898.04		4.671E-01	2.462E+00	4.192E+00	3.957E-01	0.111
		1836.06	*	2.210E+00	2.748E+00	5.396E+00	4.428E-01	0.410
Y-91		1204.77	*	-4.724E+02	1.082E+03	1.565E+03	1.312E+02	-0.302
NB-94		702.65	*	-6.563E-01	2.404E+00	3.862E+00	3.257E-01	-0.170
		871.09		-2.746E-01	1.835E+00	2.927E+00	2.717E-01	-0.094
NB-95		765.80	*	5.371E-01	2.218E+00	3.836E+00	3.367E-01	0.140
NB-95M		235.69	*	-7.542E+00	8.805E+00	1.344E+01	1.338E+00	-0.561
ZR-95		724.19		6.992E+00	5.518E+00	1.077E+01	9.997E-01	0.649
		756.73	*	6.117E-01	4.459E+00	7.565E+00	7.278E-01	0.081
MO-99		140.51		-2.107E+02	1.237E+03	2.055E+03	4.892E+02	-0.103
		181.07		-7.402E+02	1.051E+03	1.641E+03	3.083E+02	-0.451
		366.42		-2.340E+03	5.085E+03	7.741E+03	6.353E+02	-0.302
		739.50	*	-2.817E+02	6.703E+02	1.040E+03	1.640E+02	-0.271
		777.92		-1.836E+02	1.718E+03	2.794E+03	2.470E+02	-0.066
TC-99M		140.51	*	-4.181E+10	1.718E+03	Half-Life too short		
RU-103		497.08	*	5.713E-01	2.617E+00	4.333E+00	5.968E-01	0.132
		610.33		3.654E+00	5.675E+01	9.315E+01	1.507E+01	0.039
RH-106		621.93	*	8.545E+00	2.199E+01	3.866E+01	5.043E+00	0.221
		1050.41		9.337E+01	1.491E+02	2.722E+02	2.410E+01	0.343
RU-106		621.93	*	8.545E+00	2.198E+01	3.866E+01	3.205E+00	0.221
		1050.41		9.337E+01	1.491E+02	2.722E+02	2.410E+01	0.343
AG-108M		433.94	*	2.901E-02	1.777E+00	2.876E+00	2.427E-01	0.010
		614.28		-1.461E+00	2.381E+00	3.661E+00	3.147E-01	-0.399
		722.91		1.692E+00	2.369E+00	4.334E+00	3.825E-01	0.390
CD-109		88.03	*	7.704E+00	5.806E+01	8.319E+01	8.840E+00	0.093
AG-110M		657.76	*	1.841E+00	2.587E+00	4.688E+00	3.973E-01	0.393
		677.62		7.891E+00	1.942E+01	3.436E+01	2.936E+00	0.230
		706.68		4.788E+00	1.500E+01	2.603E+01	2.267E+00	0.184
		763.94		2.241E+00	8.729E+00	1.513E+01	1.362E+00	0.148
		884.68		-2.008E+00	3.312E+00	4.850E+00	4.656E-01	-0.414
		937.49		6.759E-01	5.780E+00	9.721E+00	9.323E-01	0.070
		1384.29		-4.476E-01	8.635E+00	1.429E+01	1.401E+00	-0.031
SN-113		391.70	*	1.242E+00	2.974E+00	5.077E+00	4.191E-01	0.245
CD-115		260.90		-1.526E+03	7.676E+03	1.242E+04	1.076E+03	-0.123
		492.35		-7.262E+02	1.882E+03	2.826E+03	2.344E+02	-0.257
		527.90	*	2.338E+02	5.782E+02	9.821E+02	8.190E+01	0.238
SN-117M		156.02		-5.333E+01	1.427E+02	2.317E+02	2.006E+01	-0.230
		158.56	*	-9.311E-01	3.462E+00	5.674E+00	4.900E-01	-0.164
TE-123M		159.00	*	-7.941E-01	1.956E+00	3.170E+00	2.753E-01	-0.251
SB-124		602.73		-1.139E+00	2.834E+00	4.533E+00	3.772E-01	-0.251
		645.85		2.251E+01	3.101E+01	5.709E+01	4.998E+00	0.394
		722.78		1.629E+01	2.347E+01	4.286E+01	3.749E+00	0.380
		1690.97	*	3.275E+00	6.234E+00	1.156E+01	1.063E+00	0.283
SB-125		427.87	*	3.618E+00	6.448E+00	1.114E+01	9.240E-01	0.325
		463.37		-1.384E+01	1.727E+01	2.420E+01	2.156E+00	-0.572
		600.60		1.284E+01	1.362E+01	2.511E+01	2.255E+00	0.511
		635.95		-1.050E+01	1.744E+01	2.649E+01	2.380E+00	-0.396
TE-125M		109.28	*	-1.181E+02	7.085E+02	1.187E+03	1.318E+02	-0.099

Sample ID : G1202262532 Acquisition date : 26-NOV-2010 06:09:24

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
I-126		388.63		2.817E+00	1.147E+01	1.916E+01	1.533E+00	0.147
		666.33	*	-4.466E+00	1.354E+01	2.154E+01	1.771E+00	-0.207
		753.82		1.223E+01	1.125E+02	1.899E+02	1.655E+01	0.064
SB-126		414.70		-1.696E-01	4.499E+00	7.238E+00	5.842E-01	-0.023
		666.50		-1.769E+00	4.603E+00	7.250E+00	5.962E-01	-0.244
		695.00		4.524E+00	5.769E+00	1.047E+01	8.780E-01	0.432
		697.00		-9.581E+00	2.045E+01	3.216E+01	2.701E+00	-0.298
		720.70	*	-1.030E+01	9.140E+00	1.240E+01	1.058E+00	-0.831
		856.80		-1.758E+01	2.918E+01	4.301E+01	3.966E+00	-0.409
SN-126		64.28		-8.410E+00	3.687E+01	6.080E+01	9.487E+00	-0.138
		86.94		-1.438E+01	2.241E+01	3.224E+01	1.347E+01	-0.446
		87.57	*	-1.495E+00	5.363E+00	7.862E+00	8.320E-01	-0.190
SB-127		252.40		9.688E+00	2.613E+02	4.331E+02	1.796E+02	0.022
		473.00		-2.126E+01	1.020E+02	1.593E+02	1.959E+01	-0.133
		685.70	*	6.274E+01	7.968E+01	1.461E+02	1.593E+01	0.429
		783.70		-4.362E+01	1.848E+02	2.942E+02	3.620E+01	-0.148
I-131		80.19		6.931E+01	2.704E+02	4.398E+02	4.397E+01	0.158
		284.31		-1.582E+01	9.613E+01	1.553E+02	1.404E+01	-0.102
		364.49	*	1.832E+00	7.163E+00	1.203E+01	1.047E+00	0.152
		636.99		-9.085E+00	9.274E+01	1.531E+02	1.342E+01	-0.059
TE-132		49.72		-2.603E+02	9.282E+02	1.285E+03	1.469E+02	-0.203
		111.76		1.725E+03	2.085E+03	3.719E+03	4.211E+02	0.464
		116.30		7.804E+00	1.671E+03	2.831E+03	3.182E+02	0.003
		228.16	*	-3.848E+00	4.116E+01	6.764E+01	1.062E+01	-0.057
BA-133		81.00		-1.278E+00	6.001E+00	9.366E+00	1.530E+00	-0.136
		276.40		1.296E+01	2.301E+01	3.998E+01	5.643E+00	0.324
		302.85		6.856E+00	9.535E+00	1.675E+01	2.182E+00	0.409
		356.01	*	-1.709E+00	3.078E+00	4.677E+00	5.957E-01	-0.365
		383.85		2.825E+00	2.019E+01	3.334E+01	4.013E+00	0.085
I-133		529.87	*	1.325E-01	2.019E+01	Half-Life too short		
		875.33		-2.517E-02	2.019E+01	Half-Life too short		
		1298.22		-5.739E+00	2.019E+01	Half-Life too short		
CS-134		563.25		-2.769E+00	2.236E+01	3.703E+01	3.123E+00	-0.075
		569.33		6.040E+00	1.290E+01	2.300E+01	1.948E+00	0.263
		604.72		-1.186E+00	2.423E+00	3.827E+00	3.191E-01	-0.310
		795.86	*	-1.363E+00	2.726E+00	4.107E+00	3.692E-01	-0.332
		801.95		-2.674E+01	2.665E+01	3.635E+01	3.274E+00	-0.736
		1365.19		-5.953E+01	7.915E+01	1.088E+02	1.085E+01	-0.547
CS-135		268.22	*	3.564E+00	1.164E+01	1.971E+01	1.970E+00	0.181
I-135		546.56		3.025E+10	1.164E+01	Half-Life too short		
		836.80		-2.364E+10	1.164E+01	Half-Life too short		
		1038.76		8.957E+10	1.164E+01	Half-Life too short		
		1131.51		2.834E+08	1.164E+01	Half-Life too short		
		1260.41	*	2.992E+10	1.164E+01	Half-Life too short		
		1457.56		1.909E+10	1.164E+01	Half-Life too short		
		1678.03		6.990E+09	1.164E+01	Half-Life too short		
		1791.20		6.384E+10	1.164E+01	Half-Life too short		
CS-136		153.25		2.882E+01	5.578E+01	9.744E+01	1.005E+01	0.296
		176.60		1.469E+00	3.501E+01	5.876E+01	5.579E+00	0.025

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		273.65		1.368E+01	3.351E+01	5.734E+01	5.368E+00	0.239
		340.55		-1.875E+00	9.815E+00	1.569E+01	1.369E+00	-0.120
		818.51		-2.509E+00	4.208E+00	6.139E+00	5.555E-01	-0.409
		1048.07	*	-7.155E-01	6.100E+00	9.703E+00	8.942E-01	-0.074
		1235.36		1.671E+01	2.787E+01	5.019E+01	5.927E+00	0.333
BA-137M		661.66	*	1.242E-01	2.511E+00	4.225E+00	3.462E-01	0.029
CS-137		661.66	*	1.312E-01	2.652E+00	4.463E+00	3.665E-01	0.029
CE-139		165.86	*	7.883E-01	2.196E+00	3.779E+00	3.246E-01	0.209
BA-140		162.66		-1.156E+01	5.574E+01	9.194E+01	8.448E+00	-0.126
		304.85		-8.721E+00	9.000E+01	1.460E+02	4.270E+01	-0.060
		423.72		-6.416E+01	1.259E+02	1.858E+02	6.086E+01	-0.345
		537.26	*	-1.006E+01	1.595E+01	2.191E+01	7.417E+00	-0.459
LA-140		328.76		-1.522E+01	1.847E+01	2.704E+01	2.423E+00	-0.563
		487.02		-2.180E+00	8.517E+00	1.311E+01	1.159E+00	-0.166
		815.77		5.557E+00	1.836E+01	3.200E+01	3.199E+00	0.174
		1596.21	*	-5.060E+00	4.763E+00	4.965E+00	4.551E-01	-1.019
CE-141		145.44	*	-1.992E+00	4.196E+00	6.781E+00	6.039E-01	-0.294
CE-143		57.36		5.063E-03	4.196E+00	Half-Life too short		
		293.27	*	4.027E-03	4.196E+00	Half-Life too short		
		664.57		-1.884E-02	4.196E+00	Half-Life too short		
		721.93		-1.135E-02	4.196E+00	Half-Life too short		
CE-144		80.12		4.281E+01	1.573E+02	2.562E+02	2.549E+01	0.167
		133.52	*	1.123E+01	1.364E+01	2.431E+01	3.755E+00	0.462
PM-144		476.78		2.818E+00	4.459E+00	7.777E+00	7.029E-01	0.362
		618.01		1.546E+00	2.198E+00	4.007E+00	3.424E-01	0.386
		696.49	*	-9.946E-01	2.702E+00	4.303E+00	3.614E-01	-0.231
PR-144		696.51	*	-7.592E+01	2.019E+02	3.212E+02	2.698E+01	-0.236
		1489.16		-1.843E+02	5.899E+02	8.715E+02	8.222E+01	-0.211
PM-146		453.88	*	-6.858E-01	2.883E+00	4.485E+00	4.600E-01	-0.153
		633.25		-8.244E+01	1.011E+02	1.408E+02	5.366E+01	-0.586
		735.93		2.089E-01	8.867E+00	1.480E+01	4.148E+00	0.014
		747.24		-4.967E+00	6.102E+00	8.633E+00	1.262E+00	-0.575
ND-147		91.11		5.928E+01	2.253E+01	3.785E+01	4.140E+00	1.566
		319.41		-2.483E+01	2.239E+02	3.618E+02	3.078E+01	-0.069
		531.02	*	-3.886E+00	3.243E+01	5.072E+01	7.502E+00	-0.077
PM-149		285.90	*	6.463E+02	4.725E+03	7.881E+03	1.224E+03	0.082
EU-152		121.78		6.124E-01	5.128E+00	8.755E+00	9.066E-01	0.070
		244.70		-1.069E+01	2.110E+01	3.304E+01	2.873E+00	-0.324
		344.28	*	5.614E+00	7.074E+00	1.249E+01	1.111E+00	0.450
		778.90		4.947E+00	1.561E+01	2.723E+01	2.409E+00	0.182
		964.08		5.182E+00	1.633E+01	2.822E+01	2.601E+00	0.184
		1085.87		1.208E+01	2.241E+01	4.034E+01	3.493E+00	0.299
		1112.07		-7.315E+00	1.824E+01	2.715E+01	2.309E+00	-0.269
		1408.01		1.046E+00	1.099E+01	1.880E+01	1.798E+00	0.056
GD-153		69.67		-3.243E+01	1.118E+02	1.742E+02	1.639E+01	-0.186
		97.43	*	-2.005E-02	6.043E+00	9.566E+00	9.444E-01	-0.002
		103.18		-1.148E+00	7.782E+00	1.212E+01	1.161E+00	-0.095
EU-154		123.07		-1.482E+00	3.606E+00	5.889E+00	6.905E-01	-0.252
		723.31		9.465E+00	1.054E+01	1.973E+01	1.861E+00	0.480

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		873.19		7.124E+00	1.577E+01	2.820E+01	3.494E+00	0.253
		996.26		-1.327E+01	2.135E+01	3.009E+01	5.328E+00	-0.441
		1004.73		-6.783E+00	1.181E+01	1.675E+01	2.005E+00	-0.405
		1274.44	*	3.671E-01	5.620E+00	9.219E+00	1.080E+00	0.040
EU-155		86.55		-2.052E+00	6.258E+00	9.645E+00	1.018E+00	-0.213
		105.31	*	-4.407E+00	7.475E+00	1.108E+01	1.063E+00	-0.398
TA-182		67.75		-5.023E+00	7.088E+00	1.061E+01	9.932E-01	-0.474
		100.11		9.893E+00	1.222E+01	2.077E+01	2.020E+00	0.476
		152.43		2.475E+00	2.347E+01	3.978E+01	3.455E+00	0.062
		222.11		-2.985E+00	2.248E+01	3.683E+01	3.202E+00	-0.081
		1121.30		7.401E-01	7.032E+00	1.168E+01	9.860E-01	0.063
		1189.05		-1.780E+00	1.607E+01	2.534E+01	2.087E+00	-0.070
		1221.41	*	6.554E+00	1.217E+01	2.145E+01	1.833E+00	0.306
		1231.02		-5.170E+00	2.518E+01	3.886E+01	3.357E+00	-0.133
IR-192		295.96		2.376E+00	7.669E+00	1.295E+01	1.120E+00	0.183
		308.46		2.108E+00	6.877E+00	1.163E+01	9.995E-01	0.181
		316.51	*	-1.646E+00	2.549E+00	3.871E+00	3.305E-01	-0.425
		468.07		5.864E-01	4.441E+00	7.278E+00	6.475E-01	0.081
HG-203		70.83		1.635E+01	8.456E+01	1.371E+02	2.265E+01	0.119
		72.87		1.644E+01	5.107E+01	8.343E+01	1.339E+01	0.197
		279.20	*	-1.314E+00	2.529E+00	3.920E+00	3.462E-01	-0.335
BI-207		72.81		3.448E+00	1.192E+01	1.945E+01	1.852E+00	0.177
		74.97		-6.140E-01	7.011E+00	1.110E+01	1.068E+00	-0.055
		569.70		1.504E+00	2.016E+00	3.704E+00	3.091E-01	0.406
		1063.66	*	5.365E-01	3.178E+00	5.345E+00	4.695E-01	0.100
		1770.23		1.412E+01	4.303E+01	7.588E+01	6.456E+00	0.186
TL-208		277.37		-4.027E+00	2.617E+01	4.237E+01	5.308E+00	-0.095
		583.19	*	-6.496E-01	2.927E+00	4.797E+00	4.300E-01	-0.135
		860.56		1.191E+01	1.692E+01	3.122E+01	3.069E+00	0.381
BI-211		72.87		6.695E+01	3.839E+03	3.398E+02	1.946E+04	0.197
		351.06	*	2.261E+00	1.304E+02	2.494E+01	1.428E+03	0.091
PB-211		404.85	*	-4.476E-01	5.982E+01	8.745E+01	5.007E+03	-0.005
		427.09		9.281E+01	5.315E+03	1.883E+02	1.078E+04	0.493
		832.01		-2.399E+01	1.375E+03	9.636E+01	5.517E+03	-0.249
BI-212		727.33	*	-8.764E+00	3.227E+01	5.141E+01	6.387E+00	-0.170
		785.37		5.689E+00	2.100E+02	3.495E+02	3.102E+01	0.016
		1620.50		8.862E+01	1.462E+02	2.807E+02	2.551E+01	0.316
PB-212		74.82		1.039E+00	2.454E+01	3.926E+01	5.370E+00	0.026
		77.11		-1.035E+01	1.431E+01	2.142E+01	2.088E+00	-0.483
		238.63	*	6.687E-01	4.951E+00	8.323E+00	8.185E-01	0.080
		300.09		-1.690E+01	5.631E+01	8.946E+01	9.393E+00	-0.189
BI-214		609.32	*	-1.366E+00	5.576E+00	8.827E+00	8.688E-01	-0.155
		1120.29		4.337E+00	1.633E+01	2.789E+01	3.008E+00	0.155
		1764.49		-2.425E+01	1.977E+01	2.638E+01	2.252E+00	-0.919
PB-214		74.82		1.816E+00	4.287E+01	6.860E+01	8.551E+00	0.026
		77.11		-1.799E+01	2.491E+01	3.723E+01	4.754E+00	-0.483
		242.00		-1.142E+01	2.602E+01	4.137E+01	4.324E+00	-0.276
		295.22		7.729E-02	1.052E+01	1.728E+01	1.862E+00	0.004
		351.93	*	5.830E-01	5.601E+00	8.871E+00	9.193E-01	0.066

Sample ID : G1202262532 Acquisition date : 26-NOV-2010 06:09:24

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
RN-219		271.23		1.617E-01	1.914E+01	2.763E+01	1.582E+03	0.006
		401.81	*	-2.518E+00	1.473E+02	4.829E+01	2.765E+03	-0.052
RA-223		81.07		-3.631E+00	2.084E+02	2.105E+01	1.205E+03	-0.173
		83.79		-5.947E+00	3.406E+02	1.174E+01	6.723E+02	-0.506
		94.56		4.543E+01	2.601E+03	3.848E+01	2.203E+03	1.181
		144.24		-4.996E+01	2.861E+03	7.806E+01	4.469E+03	-0.640
		154.21		1.438E+01	8.235E+02	4.513E+01	2.584E+03	0.319
		269.46		2.184E+00	1.257E+02	2.202E+01	1.261E+03	0.099
		323.87	*	4.579E+01	2.622E+03	8.136E+01	4.659E+03	0.563
		338.28		1.036E+01	5.972E+02	1.112E+02	6.368E+03	0.093
RA-224		240.99	*	-2.049E+01	4.818E+01	7.685E+01	6.684E+00	-0.267
RA-226		186.21	*	-4.748E+00	6.223E+01	1.072E+02	7.227E+01	-0.044
AC-227		79.69		4.598E+01	7.884E+01	1.311E+02	2.349E+01	0.351
		235.96		-2.864E+00	1.037E+01	1.676E+01	1.744E+00	-0.171
		256.23	*	-7.193E+00	1.812E+01	2.871E+01	3.472E+00	-0.251
		299.98		-1.970E+01	6.101E+01	9.665E+01	1.225E+01	-0.204
		304.50		8.214E+00	1.119E+02	1.849E+02	3.051E+01	0.044
		334.37		9.049E+01	1.195E+02	2.097E+02	3.247E+01	0.431
TH-227		79.69		4.598E+01	2.634E+03	1.311E+02	7.506E+03	0.351
		235.96		-2.864E+00	1.643E+02	1.676E+01	9.595E+02	-0.171
		256.23	*	-7.193E+00	4.122E+02	2.871E+01	1.644E+03	-0.251
		299.98		-1.970E+01	1.130E+03	9.665E+01	5.534E+03	-0.204
		304.50		8.214E+00	4.834E+02	1.849E+02	1.059E+04	0.044
		334.37		9.049E+01	5.183E+03	2.097E+02	1.201E+04	0.431
AC-228		338.32		2.621E+00	1.698E+01	2.813E+01	1.172E+01	0.093
		911.20	*	5.224E+00	9.707E+00	1.655E+01	2.013E+00	0.316
		968.97		1.066E+01	1.645E+01	2.939E+01	7.221E+00	0.363
RA-228		338.32		2.621E+00	1.698E+01	2.813E+01	1.172E+01	0.093
		911.20	*	5.224E+00	9.707E+00	1.655E+01	2.013E+00	0.316
		968.97		1.066E+01	1.645E+01	2.939E+01	7.221E+00	0.363
TH-228		74.82		1.039E+00	2.454E+01	3.926E+01	3.802E+00	0.026
		77.11		-1.035E+01	1.431E+01	2.142E+01	2.088E+00	-0.483
		238.63	*	6.687E-01	4.951E+00	8.323E+00	8.185E-01	0.080
		300.09		-1.690E+01	5.723E+01	8.946E+01	5.476E+01	-0.189
TH-229		85.43		-3.115E-02	1.343E+01	2.017E+01	2.094E+00	-0.002
		88.47		4.915E+00	8.415E+00	1.267E+01	1.341E+00	0.388
		193.51	*	-4.836E+00	3.629E+01	5.982E+01	5.171E+00	-0.081
		210.85		4.312E+01	5.981E+01	1.053E+02	9.139E+00	0.409
TH-230		67.67	*	-4.962E+02	7.065E+02	1.058E+03	9.904E+01	-0.469
PA-231		283.69	*	5.182E+01	9.456E+01	1.643E+02	2.394E+01	0.315
		301.36		-8.058E+00	3.421E+01	5.473E+01	6.225E+00	-0.147
TH-231		84.21	*	-2.272E+01	3.177E+01	4.426E+01	8.103E+00	-0.513
TH-232		63.81	*	-1.130E+03	8.808E+03	2.230E+03	1.716E+04	-0.507
		140.88		2.870E+03	7.309E+03	1.269E+04	1.117E+03	0.226
PA-233		94.65		3.218E+01	1.818E+01	3.038E+01	3.088E+00	1.059
		98.43		-1.535E+00	9.790E+00	1.526E+01	1.559E+00	-0.101
		300.13		-8.070E+00	2.767E+01	4.398E+01	6.510E+00	-0.183
		311.90	*	1.683E-01	4.905E+00	8.063E+00	7.084E-01	0.021
		340.48		-7.743E+00	4.392E+01	7.026E+01	1.686E+01	-0.110

Sample ID : G1202262532 Acquisition date : 26-NOV-2010 06:09:24

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
PA-234		94.67		2.088E+01	1.230E+01	2.025E+01	2.721E+00	1.031
		98.44		-1.011E+00	6.538E+00	1.016E+01	5.687E+00	-0.100
		111.00		1.473E+01	1.393E+01	2.511E+01	3.163E+00	0.586
		131.20		-8.315E+00	7.393E+00	1.128E+01	1.008E+00	-0.737
		569.50		9.641E+00	1.798E+01	3.229E+01	2.695E+00	0.299
		733.00		-1.931E+00	2.205E+01	3.613E+01	8.018E+00	-0.053
		880.51		1.291E+01	1.753E+01	3.243E+01	3.024E+00	0.398
		883.24		-8.529E+00	1.895E+01	2.709E+01	1.824E+01	-0.315
		926.36		-1.962E+00	1.035E+01	1.634E+01	4.170E+00	-0.120
		946.00	*	2.010E+01	1.582E+01	3.179E+01	6.064E+00	0.632
		949.00		1.227E+01	2.450E+01	4.416E+01	4.092E+00	0.278
PA-234M		766.42		-3.030E+02	6.256E+02	9.141E+02	4.640E+02	-0.331
		1001.03	*	3.119E+02	2.574E+02	5.121E+02	5.307E+01	0.609
TH-234		63.29	*	-9.866E+01	1.025E+02	1.578E+02	2.954E+01	-0.625
	+	92.59		2.075E+01	7.718E+01	1.084E+02	2.466E+01	0.191
U-235		89.96		-1.318E+01	6.165E+01	8.463E+01	2.142E+01	-0.156
	+	93.35		1.567E+01	5.830E+01	8.275E+01	1.962E+01	0.189
		143.76	*	-1.097E+01	1.548E+01	2.372E+01	4.039E+00	-0.462
		163.33		2.668E+01	3.237E+01	5.705E+01	1.024E+01	0.468
		185.72		-1.651E+00	3.928E+00	6.636E+00	5.724E-01	-0.249
		205.31		-1.881E+00	3.571E+01	5.919E+01	1.075E+01	-0.032
NP-237		94.67		2.088E+01	1.216E+01	2.025E+01	2.036E+00	1.031
		98.43		-1.535E+00	9.790E+00	1.526E+01	1.498E+00	-0.101
		300.13		-8.070E+00	2.766E+01	4.398E+01	5.483E+00	-0.183
		311.90	*	1.683E-01	4.905E+00	8.063E+00	8.776E-01	0.021
		340.48		-7.743E+00	4.389E+01	7.026E+01	5.898E+00	-0.110
U-238		63.29	*	-9.866E+01	1.025E+02	1.578E+02	2.954E+01	-0.625
	+	92.59		2.075E+01	7.706E+01	1.084E+02	1.107E+01	0.191
NP-239		99.53		5.866E+00	1.162E+01	1.924E+01	1.877E+00	0.305
		103.37		-1.046E+00	7.094E+00	1.105E+01	1.058E+00	-0.095
		106.12		-2.169E+00	5.487E+00	9.010E+00	8.531E-01	-0.241
		116.74	*	4.899E+00	1.858E+01	3.210E+01	2.953E+00	0.153
		228.18		1.546E+00	1.445E+01	2.419E+01	2.104E+00	0.064
		277.60		-3.227E+00	1.165E+01	1.861E+01	1.604E+00	-0.173
AM-241		59.54	*	7.741E-01	8.890E+00	1.437E+01	1.441E+00	0.054
CM-247		278.00		-1.701E+01	4.920E+01	7.791E+01	6.714E+00	-0.218
		287.50		-4.372E+01	8.708E+01	1.353E+02	1.164E+01	-0.323
		402.40	*	-6.275E-01	2.792E+00	4.400E+00	3.528E-01	-0.143
CF-249		252.80		-1.889E+01	6.825E+01	1.097E+02	9.524E+00	-0.172
		333.37		6.887E+00	1.220E+01	2.116E+01	1.785E+00	0.326
		388.16	*	-2.619E-01	2.844E+00	4.561E+00	3.652E-01	-0.057
CF-251		177.52	*	-2.639E-01	9.498E+00	1.585E+01	1.364E+00	-0.017
		227.38		-1.620E+01	2.398E+01	3.710E+01	3.226E+00	-0.437
		285.41		-8.695E+01	1.506E+02	2.317E+02	1.994E+01	-0.375
ANH-511		511.00	*	-6.389E+00	4.293E+00	7.729E+00	6.433E-01	-0.827

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262532      *
* Acquisition date : 26-NOV-2010 06:09:24 Detector SN#    :                 *
* Detector ID      : GAM20                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:29.46     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-NOV-2010 00:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G1202262532          Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 27-JUL-2010 08:37:39 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	
PB-210	1.141E+02	2.302E+02	2.686E+02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	
BE-7	1.140E+01		2.118E+01	3.727E+01	0.000E+00 NOT IDENT.
NA-22	1.295E-01		1.943E+00	3.252E+00	0.000E+00 NOT IDENT.
NA-24	0.000E+00		1.461E+07	0.000E+00	0.000E+00 SHORT HLIF
K-40	-1.441E+01		2.841E+01	4.938E+01	0.000E+00 NOT IDENT.
SC-46	6.457E-01		2.639E+00	4.601E+00	0.000E+00 NOT IDENT.
V-48	2.225E+00		3.831E+00	7.103E+00	0.000E+00 NOT IDENT.
CR-51	-5.888E+00		2.537E+01	4.127E+01	0.000E+00 NOT IDENT.
MN-54	4.125E-01		2.256E+00	3.912E+00	0.000E+00 NOT IDENT.
CO-56	-2.467E+00		2.533E+00	3.513E+00	0.000E+00 NOT IDENT.
CO-57	-3.891E-01		1.770E+00	3.004E+00	0.000E+00 NOT IDENT.
CO-58	-9.958E-01		2.354E+00	3.675E+00	0.000E+00 NOT IDENT.
FE-59	-7.087E-01		4.525E+00	7.230E+00	0.000E+00 NOT IDENT.
CO-60	1.186E+00		2.125E+00	3.966E+00	0.000E+00 NOT IDENT.
ZN-65	2.746E+00		5.160E+00	9.365E+00	0.000E+00 NOT IDENT.
SE-75	-2.073E-01		3.248E+00	5.432E+00	0.000E+00 NOT IDENT.
SR-85	-1.018E+01		4.405E+00	5.609E+00	0.000E+00 NOT IDENT.
Y-88	2.210E+00		2.693E+00	5.396E+00	0.000E+00 NOT IDENT.
Y-91	-4.724E+02		1.060E+03	1.565E+03	0.000E+00 NOT IDENT.
NB-94	-6.563E-01		2.356E+00	3.862E+00	0.000E+00 NOT IDENT.
NB-95	5.371E-01		2.174E+00	3.836E+00	0.000E+00 NOT IDENT.
NB-95M	-7.542E+00		8.629E+00	1.344E+01	0.000E+00 NOT IDENT.
ZR-95	6.117E-01		4.370E+00	7.565E+00	0.000E+00 NOT IDENT.
MO-99	-2.817E+02		6.569E+02	1.040E+03	0.000E+00 NOT IDENT.
TC-99M	0.000E+00		2.407E+17	0.000E+00	0.000E+00 SHORT HLIF
RU-103	5.713E-01		2.565E+00	4.333E+00	0.000E+00 NOT IDENT.
RH-106	8.545E+00		2.155E+01	3.866E+01	0.000E+00 NOT IDENT.

RU-106	8.545E+00	2.154E+01	3.866E+01	0.000E+00	NOT IDENT.
AG-108M	2.901E-02	1.742E+00	2.876E+00	0.000E+00	NOT IDENT.
CD-109	7.704E+00	5.690E+01	8.319E+01	0.000E+00	NOT IDENT.
AG-110M	1.841E+00	2.535E+00	4.688E+00	0.000E+00	NOT IDENT.
SN-113	1.242E+00	2.915E+00	5.077E+00	0.000E+00	NOT IDENT.
CD-115	2.338E+02	5.666E+02	9.821E+02	0.000E+00	NOT IDENT.
SN-117M	-9.311E-01	3.393E+00	5.674E+00	0.000E+00	NOT IDENT.
TE-123M	-7.941E-01	1.917E+00	3.170E+00	0.000E+00	NOT IDENT.
SB-124	3.275E+00	6.110E+00	1.156E+01	0.000E+00	NOT IDENT.
SB-125	3.618E+00	6.319E+00	1.114E+01	0.000E+00	NOT IDENT.
TE-125M	-1.181E+02	6.944E+02	1.187E+03	0.000E+00	NOT IDENT.
I-126	-4.466E+00	1.327E+01	2.154E+01	0.000E+00	NOT IDENT.
SB-126	-1.030E+01	8.957E+00	1.240E+01	0.000E+00	NOT IDENT.
SN-126	-1.495E+00	5.256E+00	7.862E+00	0.000E+00	NOT IDENT.
SB-127	6.274E+01	7.809E+01	1.461E+02	0.000E+00	NOT IDENT.
I-131	1.832E+00	7.020E+00	1.203E+01	0.000E+00	NOT IDENT.
TE-132	-3.848E+00	4.034E+01	6.764E+01	0.000E+00	NOT IDENT.
BA-133	-1.709E+00	3.017E+00	4.677E+00	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.830E+05	0.000E+00	0.000E+00	SHORT HLIF
CS-134	-1.363E+00	2.671E+00	4.107E+00	0.000E+00	NOT IDENT.
CS-135	3.564E+00	1.141E+01	1.971E+01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.765E+16	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.155E-01	5.978E+00	9.703E+00	0.000E+00	NOT IDENT.
BA-137M	1.242E-01	2.461E+00	4.225E+00	0.000E+00	NOT IDENT.
CS-137	1.312E-01	2.599E+00	4.463E+00	0.000E+00	NOT IDENT.
CE-139	7.883E-01	2.152E+00	3.779E+00	0.000E+00	NOT IDENT.
BA-140	-1.006E+01	1.563E+01	2.191E+01	0.000E+00	NOT IDENT.
LA-140	-5.060E+00	4.668E+00	4.965E+00	0.000E+00	NOT IDENT.
CE-141	-1.992E+00	4.112E+00	6.781E+00	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.914E+03	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.123E+01	1.337E+01	2.431E+01	0.000E+00	NOT IDENT.
PM-144	-9.946E-01	2.648E+00	4.303E+00	0.000E+00	NOT IDENT.
PR-144	-7.592E+01	1.979E+02	3.212E+02	0.000E+00	NOT IDENT.
PM-146	-6.858E-01	2.826E+00	4.485E+00	0.000E+00	NOT IDENT.
ND-147	-3.886E+00	3.178E+01	5.072E+01	0.000E+00	NOT IDENT.
PM-149	6.463E+02	4.631E+03	7.881E+03	0.000E+00	NOT IDENT.
EU-152	5.614E+00	6.932E+00	1.249E+01	0.000E+00	NOT IDENT.
GD-153	-2.005E-02	5.922E+00	9.566E+00	0.000E+00	NOT IDENT.
EU-154	3.671E-01	5.508E+00	9.219E+00	0.000E+00	NOT IDENT.
EU-155	-4.407E+00	7.325E+00	1.108E+01	0.000E+00	NOT IDENT.
TA-182	6.554E+00	1.193E+01	2.145E+01	0.000E+00	NOT IDENT.
IR-192	-1.646E+00	2.498E+00	3.871E+00	0.000E+00	NOT IDENT.
HG-203	-1.314E+00	2.478E+00	3.920E+00	0.000E+00	NOT IDENT.
BI-207	5.365E-01	3.114E+00	5.345E+00	0.000E+00	NOT IDENT.
TL-208	-6.496E-01	2.869E+00	4.797E+00	0.000E+00	NOT IDENT.
BI-211	2.261E+00	1.278E+02	2.494E+01	0.000E+00	NOT IDENT.
PB-211	-4.476E-01	5.862E+01	8.745E+01	0.000E+00	NOT IDENT.
BI-212	-8.764E+00	3.163E+01	5.141E+01	0.000E+00	NOT IDENT.
PB-212	6.687E-01	4.852E+00	8.323E+00	0.000E+00	NOT IDENT.
BI-214	-1.366E+00	5.465E+00	8.827E+00	0.000E+00	NOT IDENT.
PB-214	5.830E-01	5.489E+00	8.871E+00	0.000E+00	NOT IDENT.
RN-219	-2.518E+00	1.443E+02	4.829E+01	0.000E+00	NOT IDENT.
RA-223	4.579E+01	2.570E+03	8.136E+01	0.000E+00	NOT IDENT.
RA-224	-2.049E+01	4.721E+01	7.685E+01	0.000E+00	NOT IDENT.
RA-226	-4.748E+00	6.098E+01	1.072E+02	0.000E+00	NOT IDENT.
AC-227	-7.193E+00	1.776E+01	2.871E+01	0.000E+00	NOT IDENT.
TH-227	-7.193E+00	4.040E+02	2.871E+01	0.000E+00	NOT IDENT.
AC-228	5.224E+00	9.513E+00	1.655E+01	0.000E+00	NOT IDENT.
RA-228	5.224E+00	9.513E+00	1.655E+01	0.000E+00	NOT IDENT.
TH-228	6.687E-01	4.852E+00	8.323E+00	0.000E+00	NOT IDENT.
TH-229	-4.836E+00	3.557E+01	5.982E+01	0.000E+00	NOT IDENT.
TH-230	-4.962E+02	6.923E+02	1.058E+03	0.000E+00	NOT IDENT.
PA-231	5.182E+01	9.267E+01	1.643E+02	0.000E+00	NOT IDENT.
TH-231	-2.272E+01	3.113E+01	4.426E+01	0.000E+00	NOT IDENT.
TH-232	-1.130E+03	8.632E+03	2.230E+03	0.000E+00	NOT IDENT.
PA-233	1.683E-01	4.807E+00	8.063E+00	0.000E+00	NOT IDENT.
PA-234	2.010E+01	1.551E+01	3.179E+01	0.000E+00	NOT IDENT.
PA-234M	3.119E+02	2.523E+02	5.121E+02	0.000E+00	NOT IDENT.
TH-234	-9.866E+01	1.004E+02	1.578E+02	0.000E+00	FAIL ABUN
U-235	-1.097E+01	1.517E+01	2.372E+01	0.000E+00	FAIL ABUN
NP-237	1.683E-01	4.807E+00	8.063E+00	0.000E+00	NOT IDENT.
U-238	-9.866E+01	1.004E+02	1.578E+02	0.000E+00	FAIL ABUN
NP-239	4.899E+00	1.821E+01	3.210E+01	0.000E+00	NOT IDENT.
AM-241	7.741E-01	8.712E+00	1.437E+01	0.000E+00	NOT IDENT.
CM-247	-6.275E-01	2.736E+00	4.400E+00	0.000E+00	NOT IDENT.
CF-249	-2.619E-01	2.787E+00	4.561E+00	0.000E+00	NOT IDENT.
CF-251	-2.639E-01	9.308E+00	1.585E+01	0.000E+00	NOT IDENT.
ANH-511	-6.389E+00	4.207E+00	7.729E+00	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:10:21.99

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262532.CNF;1
Sample date      : 12-NOV-2010 00:00:00 Acquisition date : 26-NOV-2010 06:09:24
Sample ID        : G1202262532          Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM20                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:29.46  0.4%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.78	44	71	1.15	93.88	90	8	6.11E-03	36.3	
2	0	63.59	42	92	1.26	127.47	124	8	5.77E-03	42.9	
3	0	92.80	138	91	1.06	185.83	182	10	1.92E-02	15.6	
4	0	185.73	56	89	0.94	371.55	367	9	7.71E-03	33.6	
5	0	511.54	158	59	2.49	1022.82	1013	23	2.19E-02	15.7	

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:10:24.38

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262532.CNF;1
Sample date      : 12-NOV-2010 00:00:00 Acquisition date : 26-NOV-2010 06:09:24
Sample ID        : G1202262532          Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM20                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:29.46  0.4%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/LITER	Decay Corr pCi/LITER	2-Sigma %Error
PB-210	46.54	17	4.25*	6.398E-01	1.139E+02	1.141E+02	205.88

Flag: "*" = Keyline

Sample ID : G1202262532 Acquisition date : 26-NOV-2010 06:09:24

Total number of lines in spectrum	2	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	2	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/LITER	Decay Corr pCi/LITER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
PB-210	22.20Y	1.00	1.139E+02	1.141E+02	2.349E+02	205.88	
		Total Activity :	1.139E+02	1.141E+02			
		Grand Total Activity :	1.139E+02	1.141E+02			

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

Sample ID : G1202262532 Acquisition date : 26-NOV-2010 06:09:24

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	92.80	13	91	1.06	185.83	182	10	1.74E-03	****	2.68E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:10:26.93

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262532.CNF;1  *
* Acquisition date : 26-NOV-2010 06:09:24  Detector SN#    :                *
* Detector ID      : GAM20                 Sensitivity     : 5.00000        *
* Geometry         : 2LMB                  Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:29.46         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                 SAMPLE DATA                               *
*                                                                           *
* Sample date      : 12-NOV-2010 00:00:00  Nuclide Library : LIQUID          *
* Sample ID        : G1202262532           Analyst initials: KXG3           *
* Batch Number     : 1048163               Sample Quantity : 2.00000E+00 LITER *
*****************************************************************************
*                                                                           *
*                                   QC DATA                                 *
*                                                                           *
* CALIB. DATE/TIME : 27-JUL-2010 08:37:39.2MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
PB-210	1.141E+02	2.349E+02	2.686E+02	2.696E+01	0.425

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7	1.140E+01		2.162E+01	3.727E+01	3.338E+00	0.306
NA-22	1.295E-01		1.983E+00	3.252E+00	2.950E-01	0.040
NA-24	1.451E+01		7.456E+00	Half-Life too short		
K-40	-1.441E+01		2.899E+01	4.938E+01	4.795E+00	-0.292
SC-46	6.457E-01		2.692E+00	4.601E+00	4.308E-01	0.140
V-48	2.225E+00		3.909E+00	7.103E+00	6.497E-01	0.313
CR-51	-5.888E+00		2.588E+01	4.127E+01	3.698E+00	-0.143
MN-54	4.125E-01		2.302E+00	3.912E+00	3.568E-01	0.105
CO-56	-2.467E+00		2.585E+00	3.513E+00	3.223E-01	-0.702
CO-57	-3.891E-01		1.806E+00	3.004E+00	2.745E-01	-0.130
CO-58	-9.958E-01		2.402E+00	3.675E+00	3.316E-01	-0.271

Sample ID : G1202262532 Acquisition date : 26-NOV-2010 06:09:24

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
FE-59	-7.087E-01		4.618E+00	7.230E+00	6.711E-01	-0.098
CO-60	1.186E+00		2.168E+00	3.966E+00	3.821E-01	0.299
ZN-65	2.746E+00		5.265E+00	9.365E+00	7.950E-01	0.293
SE-75	-2.073E-01		3.314E+00	5.432E+00	4.727E-01	-0.038
SR-85	-1.018E+01		4.495E+00	5.609E+00	4.671E-01	-1.814
Y-88	2.210E+00		2.748E+00	5.396E+00	4.428E-01	0.410
Y-91	-4.724E+02		1.082E+03	1.565E+03	1.312E+02	-0.302
NB-94	-6.563E-01		2.404E+00	3.862E+00	3.257E-01	-0.170
NB-95	5.371E-01		2.218E+00	3.836E+00	3.367E-01	0.140
NB-95M	-7.542E+00		8.805E+00	1.344E+01	1.338E+00	-0.561
ZR-95	6.117E-01		4.459E+00	7.565E+00	7.278E-01	0.081
MO-99	-2.817E+02		6.703E+02	1.040E+03	1.640E+02	-0.271
TC-99M	-4.181E+10		1.228E+11	Half-Life too short		
RU-103	5.713E-01		2.617E+00	4.333E+00	5.968E-01	0.132
RH-106	8.545E+00		2.199E+01	3.866E+01	5.043E+00	0.221
RU-106	8.545E+00		2.198E+01	3.866E+01	3.205E+00	0.221
AG-108M	2.901E-02		1.777E+00	2.876E+00	2.427E-01	0.010
CD-109	7.704E+00		5.806E+01	8.319E+01	8.840E+00	0.093
AG-110M	1.841E+00		2.587E+00	4.688E+00	3.973E-01	0.393
SN-113	1.242E+00		2.974E+00	5.077E+00	4.191E-01	0.245
CD-115	2.338E+02		5.782E+02	9.821E+02	8.190E+01	0.238
SN-117M	-9.311E-01		3.462E+00	5.674E+00	4.900E-01	-0.164
TE-123M	-7.941E-01		1.956E+00	3.170E+00	2.753E-01	-0.251
SB-124	3.275E+00		6.234E+00	1.156E+01	1.063E+00	0.283
SB-125	3.618E+00		6.448E+00	1.114E+01	9.240E-01	0.325
TE-125M	-1.181E+02		7.085E+02	1.187E+03	1.318E+02	-0.099
I-126	-4.466E+00		1.354E+01	2.154E+01	1.771E+00	-0.207
SB-126	-1.030E+01		9.140E+00	1.240E+01	1.058E+00	-0.831
SN-126	-1.495E+00		5.363E+00	7.862E+00	8.320E-01	-0.190
SB-127	6.274E+01		7.968E+01	1.461E+02	1.593E+01	0.429
I-131	1.832E+00		7.163E+00	1.203E+01	1.047E+00	0.152
TE-132	-3.848E+00		4.116E+01	6.764E+01	1.062E+01	-0.057
BA-133	-1.709E+00		3.078E+00	4.677E+00	5.957E-01	-0.365
I-133	1.325E-01		9.339E-02	Half-Life too short		
CS-134	-1.363E+00		2.726E+00	4.107E+00	3.692E-01	-0.332
CS-135	3.564E+00		1.164E+01	1.971E+01	1.970E+00	0.181
I-135	2.992E+10		1.921E+10	Half-Life too short		
CS-136	-7.155E-01		6.100E+00	9.703E+00	8.942E-01	-0.074
BA-137M	1.242E-01		2.511E+00	4.225E+00	3.462E-01	0.029
CS-137	1.312E-01		2.652E+00	4.463E+00	3.665E-01	0.029
CE-139	7.883E-01		2.196E+00	3.779E+00	3.246E-01	0.209
BA-140	-1.006E+01		1.595E+01	2.191E+01	7.417E+00	-0.459
LA-140	-5.060E+00		4.763E+00	4.965E+00	4.551E-01	-1.019
CE-141	-1.992E+00		4.196E+00	6.781E+00	6.039E-01	-0.294
CE-143	4.027E-03		3.017E-03	Half-Life too short		
CE-144	1.123E+01		1.364E+01	2.431E+01	3.755E+00	0.462
PM-144	-9.946E-01		2.702E+00	4.303E+00	3.614E-01	-0.231
PR-144	-7.592E+01		2.019E+02	3.212E+02	2.698E+01	-0.236

Sample ID : G1202262532 Acquisition date : 26-NOV-2010 06:09:24

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
PM-146	-6.858E-01		2.883E+00	4.485E+00	4.600E-01	-0.153
ND-147	-3.886E+00		3.243E+01	5.072E+01	7.502E+00	-0.077
PM-149	6.463E+02		4.725E+03	7.881E+03	1.224E+03	0.082
EU-152	5.614E+00		7.074E+00	1.249E+01	1.111E+00	0.450
GD-153	-2.005E-02		6.043E+00	9.566E+00	9.444E-01	-0.002
EU-154	3.671E-01		5.620E+00	9.219E+00	1.080E+00	0.040
EU-155	-4.407E+00		7.475E+00	1.108E+01	1.063E+00	-0.398
TA-182	6.554E+00		1.217E+01	2.145E+01	1.833E+00	0.306
IR-192	-1.646E+00		2.549E+00	3.871E+00	3.305E-01	-0.425
HG-203	-1.314E+00		2.529E+00	3.920E+00	3.462E-01	-0.335
BI-207	5.365E-01		3.178E+00	5.345E+00	4.695E-01	0.100
TL-208	-6.496E-01		2.927E+00	4.797E+00	4.300E-01	-0.135
BI-211	2.261E+00		1.304E+02	2.494E+01	1.428E+03	0.091
PB-211	-4.476E-01		5.982E+01	8.745E+01	5.007E+03	-0.005
BI-212	-8.764E+00		3.227E+01	5.141E+01	6.387E+00	-0.170
PB-212	6.687E-01		4.951E+00	8.323E+00	8.185E-01	0.080
BI-214	-1.366E+00		5.576E+00	8.827E+00	8.688E-01	-0.155
PB-214	5.830E-01		5.601E+00	8.871E+00	9.193E-01	0.066
RN-219	-2.518E+00		1.473E+02	4.829E+01	2.765E+03	-0.052
RA-223	4.579E+01		2.622E+03	8.136E+01	4.659E+03	0.563
RA-224	-2.049E+01		4.818E+01	7.685E+01	6.684E+00	-0.267
RA-226	-4.748E+00		6.223E+01	1.072E+02	7.227E+01	-0.044
AC-227	-7.193E+00		1.812E+01	2.871E+01	3.472E+00	-0.251
TH-227	-7.193E+00		4.122E+02	2.871E+01	1.644E+03	-0.251
AC-228	5.224E+00		9.707E+00	1.655E+01	2.013E+00	0.316
RA-228	5.224E+00		9.707E+00	1.655E+01	2.013E+00	0.316
TH-228	6.687E-01		4.951E+00	8.323E+00	8.185E-01	0.080
TH-229	-4.836E+00		3.629E+01	5.982E+01	5.171E+00	-0.081
TH-230	-4.962E+02		7.065E+02	1.058E+03	9.904E+01	-0.469
PA-231	5.182E+01		9.456E+01	1.643E+02	2.394E+01	0.315
TH-231	-2.272E+01		3.177E+01	4.426E+01	8.103E+00	-0.513
TH-232	-1.130E+03		8.808E+03	2.230E+03	1.716E+04	-0.507
PA-233	1.683E-01		4.905E+00	8.063E+00	7.084E-01	0.021
PA-234	2.010E+01		1.582E+01	3.179E+01	6.064E+00	0.632
PA-234M	3.119E+02		2.574E+02	5.121E+02	5.307E+01	0.609
TH-234	-9.866E+01		1.025E+02	1.578E+02	2.954E+01	-0.625
U-235	-1.097E+01		1.548E+01	2.372E+01	4.039E+00	-0.462
NP-237	1.683E-01		4.905E+00	8.063E+00	8.776E-01	0.021
U-238	-9.866E+01		1.025E+02	1.578E+02	2.954E+01	-0.625
NP-239	4.899E+00		1.858E+01	3.210E+01	2.953E+00	0.153
AM-241	7.741E-01		8.890E+00	1.437E+01	1.441E+00	0.054
CM-247	-6.275E-01		2.792E+00	4.400E+00	3.528E-01	-0.143
CF-249	-2.619E-01		2.844E+00	4.561E+00	3.652E-01	-0.057
CF-251	-2.639E-01		9.498E+00	1.585E+01	1.364E+00	-0.017
ANH-511	-6.389E+00		4.293E+00	7.729E+00	6.433E-01	-0.827

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202262532           *
* Acquisition date : 26-NOV-2010 06:09:24 Detector SN#    :                 *
* Detector ID      : GAM20                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:29.46     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-NOV-2010 00:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G1202262532          Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 27-JUL-2010 08:37:39 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act Error	DLC (pCi/LITER)	TPU
PB-210	1.141E+02	2.302E+02	1.344E+02	1.174E+02

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L Act error	DLC (pCi/LITER)	TPU	
BE-7	1.140E+01	2.118E+01	1.865E+01	1.081E+01	NOT IDENT.
NA-22	1.295E-01	1.943E+00	1.627E+00	9.914E-01	NOT IDENT.
NA-24	1.451E+07	1.461E+07	0.000E+00	7.456E+06	SHORT HLIF
K-40	-1.441E+01	2.841E+01	2.471E+01	1.450E+01	NOT IDENT.
SC-46	6.457E-01	2.639E+00	2.302E+00	1.346E+00	NOT IDENT.
V-48	2.225E+00	3.831E+00	3.554E+00	1.955E+00	NOT IDENT.
CR-51	-5.888E+00	2.537E+01	2.065E+01	1.294E+01	NOT IDENT.
MN-54	4.125E-01	2.256E+00	1.957E+00	1.151E+00	NOT IDENT.
CO-56	-2.467E+00	2.533E+00	1.757E+00	1.292E+00	NOT IDENT.
CO-57	-3.891E-01	1.770E+00	1.503E+00	9.032E-01	NOT IDENT.
CO-58	-9.958E-01	2.354E+00	1.838E+00	1.201E+00	NOT IDENT.
FE-59	-7.087E-01	4.525E+00	3.617E+00	2.309E+00	NOT IDENT.
CO-60	1.186E+00	2.125E+00	1.984E+00	1.084E+00	NOT IDENT.
ZN-65	2.746E+00	5.160E+00	4.685E+00	2.632E+00	NOT IDENT.
SE-75	-2.073E-01	3.248E+00	2.717E+00	1.657E+00	NOT IDENT.
SR-85	-1.018E+01	4.405E+00	2.806E+00	2.247E+00	NOT IDENT.
Y-88	2.210E+00	2.693E+00	2.700E+00	1.374E+00	NOT IDENT.
Y-91	-4.724E+02	1.060E+03	7.830E+02	5.409E+02	NOT IDENT.
NB-94	-6.563E-01	2.356E+00	1.932E+00	1.202E+00	NOT IDENT.
NB-95	5.371E-01	2.174E+00	1.919E+00	1.109E+00	NOT IDENT.
NB-95M	-7.542E+00	8.629E+00	6.723E+00	4.402E+00	NOT IDENT.
ZR-95	6.117E-01	4.370E+00	3.785E+00	2.230E+00	NOT IDENT.
MO-99	-2.817E+02	6.569E+02	5.203E+02	3.352E+02	NOT IDENT.
TC-99M	-4.181E+16	2.407E+17	0.000E+00	0.000E+00	SHORT HLIF
RU-103	5.713E-01	2.565E+00	2.168E+00	1.309E+00	NOT IDENT.
RH-106	8.545E+00	2.155E+01	1.934E+01	1.100E+01	NOT IDENT.

RU-106	8.545E+00	2.154E+01	1.934E+01	1.099E+01	NOT IDENT.
AG-108M	2.901E-02	1.742E+00	1.439E+00	8.886E-01	NOT IDENT.
CD-109	7.704E+00	5.690E+01	4.162E+01	2.903E+01	NOT IDENT.
AG-110M	1.841E+00	2.535E+00	2.345E+00	1.294E+00	NOT IDENT.
SN-113	1.242E+00	2.915E+00	2.540E+00	1.487E+00	NOT IDENT.
CD-115	2.338E+02	5.666E+02	4.913E+02	2.891E+02	NOT IDENT.
SN-117M	-9.311E-01	3.393E+00	2.838E+00	1.731E+00	NOT IDENT.
TE-123M	-7.941E-01	1.917E+00	1.586E+00	9.781E-01	NOT IDENT.
SB-124	3.275E+00	6.110E+00	5.785E+00	3.117E+00	NOT IDENT.
SB-125	3.618E+00	6.319E+00	5.575E+00	3.224E+00	NOT IDENT.
TE-125M	-1.181E+02	6.944E+02	5.941E+02	3.543E+02	NOT IDENT.
I-126	-4.466E+00	1.327E+01	1.077E+01	6.772E+00	NOT IDENT.
SB-126	-1.030E+01	8.957E+00	6.204E+00	4.570E+00	NOT IDENT.
SN-126	-1.495E+00	5.256E+00	3.934E+00	2.682E+00	NOT IDENT.
SB-127	6.274E+01	7.809E+01	7.309E+01	3.984E+01	NOT IDENT.
I-131	1.832E+00	7.020E+00	6.018E+00	3.582E+00	NOT IDENT.
TE-132	-3.848E+00	4.034E+01	3.384E+01	2.058E+01	NOT IDENT.
BA-133	-1.709E+00	3.017E+00	2.340E+00	1.539E+00	NOT IDENT.
I-133	1.325E+05	1.830E+05	0.000E+00	9.339E+04	SHORT HLIF
CS-134	-1.363E+00	2.671E+00	2.055E+00	1.363E+00	NOT IDENT.
CS-135	3.564E+00	1.141E+01	9.863E+00	5.822E+00	NOT IDENT.
I-135	2.992E+16	3.765E+16	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.155E-01	5.978E+00	4.855E+00	3.050E+00	NOT IDENT.
BA-137M	1.242E-01	2.461E+00	2.114E+00	1.255E+00	NOT IDENT.
CS-137	1.312E-01	2.599E+00	2.233E+00	1.326E+00	NOT IDENT.
CE-139	7.883E-01	2.152E+00	1.891E+00	1.098E+00	NOT IDENT.
BA-140	-1.006E+01	1.563E+01	1.096E+01	7.973E+00	NOT IDENT.
LA-140	-5.060E+00	4.668E+00	2.484E+00	2.382E+00	NOT IDENT.
CE-141	-1.992E+00	4.112E+00	3.392E+00	2.098E+00	NOT IDENT.
CE-143	4.027E+03	5.914E+03	0.000E+00	3.017E+03	SHORT HLIF
CE-144	1.123E+01	1.337E+01	1.216E+01	6.821E+00	NOT IDENT.
PM-144	-9.946E-01	2.648E+00	2.153E+00	1.351E+00	NOT IDENT.
PR-144	-7.592E+01	1.979E+02	1.607E+02	1.010E+02	NOT IDENT.
PM-146	-6.858E-01	2.826E+00	2.244E+00	1.442E+00	NOT IDENT.
ND-147	-3.886E+00	3.178E+01	2.537E+01	1.621E+01	NOT IDENT.
PM-149	6.463E+02	4.631E+03	3.943E+03	2.363E+03	NOT IDENT.
EU-152	5.614E+00	6.932E+00	6.247E+00	3.537E+00	NOT IDENT.
GD-153	-2.005E-02	5.922E+00	4.786E+00	3.022E+00	NOT IDENT.
EU-154	3.671E-01	5.508E+00	4.612E+00	2.810E+00	NOT IDENT.
EU-155	-4.407E+00	7.325E+00	5.544E+00	3.737E+00	NOT IDENT.
TA-182	6.554E+00	1.193E+01	1.073E+01	6.085E+00	NOT IDENT.
IR-192	-1.646E+00	2.498E+00	1.937E+00	1.275E+00	NOT IDENT.
HG-203	-1.314E+00	2.478E+00	1.961E+00	1.264E+00	NOT IDENT.
BI-207	5.365E-01	3.114E+00	2.674E+00	1.589E+00	NOT IDENT.
TL-208	-6.496E-01	2.869E+00	2.400E+00	1.464E+00	NOT IDENT.
BI-211	2.261E+00	1.278E+02	1.248E+01	6.520E+01	NOT IDENT.
PB-211	-4.476E-01	5.862E+01	4.375E+01	2.991E+01	NOT IDENT.
BI-212	-8.764E+00	3.163E+01	2.572E+01	1.614E+01	NOT IDENT.
PB-212	6.687E-01	4.852E+00	4.164E+00	2.475E+00	NOT IDENT.
BI-214	-1.366E+00	5.465E+00	4.416E+00	2.788E+00	NOT IDENT.
PB-214	5.830E-01	5.489E+00	4.438E+00	2.800E+00	NOT IDENT.
RN-219	-2.518E+00	1.443E+02	2.416E+01	7.363E+01	NOT IDENT.
RA-223	4.579E+01	2.570E+03	4.071E+01	1.311E+03	NOT IDENT.
RA-224	-2.049E+01	4.721E+01	3.845E+01	2.409E+01	NOT IDENT.
RA-226	-4.748E+00	6.098E+01	5.364E+01	3.111E+01	NOT IDENT.
AC-227	-7.193E+00	1.776E+01	1.436E+01	9.061E+00	NOT IDENT.
TH-227	-7.193E+00	4.040E+02	1.436E+01	2.061E+02	NOT IDENT.
AC-228	5.224E+00	9.513E+00	8.280E+00	4.853E+00	NOT IDENT.
RA-228	5.224E+00	9.513E+00	8.280E+00	4.853E+00	NOT IDENT.
TH-228	6.687E-01	4.852E+00	4.164E+00	2.475E+00	NOT IDENT.
TH-229	-4.836E+00	3.557E+01	2.993E+01	1.815E+01	NOT IDENT.
TH-230	-4.962E+02	6.923E+02	5.293E+02	3.532E+02	NOT IDENT.
PA-231	5.182E+01	9.267E+01	8.218E+01	4.728E+01	NOT IDENT.
TH-231	-2.272E+01	3.113E+01	2.214E+01	1.588E+01	NOT IDENT.
TH-232	-1.130E+03	8.632E+03	1.116E+03	4.404E+03	NOT IDENT.
PA-233	1.683E-01	4.807E+00	4.034E+00	2.453E+00	NOT IDENT.
PA-234	2.010E+01	1.551E+01	1.591E+01	7.911E+00	NOT IDENT.
PA-234M	3.119E+02	2.523E+02	2.562E+02	1.287E+02	NOT IDENT.
TH-234	-9.866E+01	1.004E+02	7.897E+01	5.125E+01	FAIL ABUN
U-235	-1.097E+01	1.517E+01	1.187E+01	7.738E+00	FAIL ABUN
NP-237	1.683E-01	4.807E+00	4.034E+00	2.453E+00	NOT IDENT.
U-238	-9.866E+01	1.004E+02	7.897E+01	5.125E+01	FAIL ABUN
NP-239	4.899E+00	1.821E+01	1.606E+01	9.290E+00	NOT IDENT.
AM-241	7.741E-01	8.712E+00	7.190E+00	4.445E+00	NOT IDENT.
CM-247	-6.275E-01	2.736E+00	2.201E+00	1.396E+00	NOT IDENT.
CF-249	-2.619E-01	2.787E+00	2.282E+00	1.422E+00	NOT IDENT.
CF-251	-2.639E-01	9.308E+00	7.930E+00	4.749E+00	NOT IDENT.
ANH-511	-6.389E+00	4.207E+00	3.867E+00	2.146E+00	NOT IDENT.

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

ENERGY	MDA COUNTS
46.54	66.9010
49.72	73.2265
57.36	0.0000
59.54	67.1995
63.29	88.6138
63.29	88.6138
63.81	85.3542
64.28	72.1004
67.67	91.3896
67.75	91.3996
69.67	89.4047
70.83	82.8284
72.81	90.9025
72.87	90.9099
72.87	90.9099
74.82	96.7679
74.82	96.7679
74.82	96.7679
74.97	100.1630
77.11	108.3384
77.11	108.3384
77.11	108.3384
79.69	71.3291
79.69	71.3291
80.12	75.8984
80.19	75.9053
81.00	81.6519
81.07	81.6588
83.79	75.1037
84.21	77.4190
85.43	61.5699
86.55	82.2030
86.94	87.9523
87.57	80.9309
88.03	75.4850
88.47	65.2252
89.96	84.2524
91.11	74.0344
92.59	80.4839
92.59	80.4839
93.35	80.5537
94.56	50.1270
94.65	50.1318
94.67	50.1331
94.67	50.1331
97.43	70.5185
98.43	70.5964
98.43	70.5964
98.44	70.5970
99.53	61.4117
100.11	54.4939
103.18	66.3075
103.37	66.3211
105.31	71.1214
106.12	68.2649
109.28	82.5390
111.00	68.6109
111.76	72.1851
116.30	68.9781
116.74	65.4693
121.12	67.5278
121.78	66.6819
122.06	72.9252
123.07	72.1057
131.20	84.3204
133.52	55.7339
136.00	73.8783

136.47	73.9096
140.51	72.3676
140.51	0.0000
140.88	60.6273
143.76	66.2236
144.24	69.8817
145.44	72.6794
152.43	63.9742
153.25	60.3604
154.21	55.8323
156.02	65.0826
158.56	62.4634
159.00	69.8369
162.66	73.7311
163.33	63.6273
165.86	69.3003
176.60	70.8151
177.52	70.8650
181.07	82.2751
185.72	72.2410
186.21	64.7591
193.51	63.2184
205.31	73.2631
210.85	53.4861
222.11	51.0049
227.38	60.8380
228.16	55.0718
228.18	51.2079
235.69	77.6685
235.96	67.0006
235.96	67.0006
238.63	56.4145
238.63	56.4145
240.99	76.9544
242.00	72.1296
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252.40	51.0114
252.80	54.9485
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256.23	56.0459
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271.23	53.5682
273.65	45.6961
276.40	37.8087
277.37	47.7847
277.60	47.7913
278.00	47.8022
279.20	48.8318
279.54	43.8570
283.69	34.9685
284.31	46.9742
285.41	50.0031
285.90	41.0138
287.50	51.0630
293.27	0.0000
295.22	55.3030
295.96	51.3019
299.98	51.4148
299.98	51.4148
300.09	51.4179
300.09	51.4179
300.13	51.4187
300.13	51.4187
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302.85	36.3488
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304.50	42.4448
304.85	45.4848
308.46	41.5218
311.90	48.7002
311.90	48.7002
316.51	51.8692
319.41	42.7806
320.08	44.8332
323.87	32.6699

328.76	45.0339
333.37	34.8809
334.37	34.8986
334.37	34.8986
338.28	43.1946
338.32	43.1952
338.32	43.1952
340.48	48.3899
340.48	48.3899
340.55	48.3913
344.28	35.0713
351.06	33.1187
351.93	32.0974
356.01	46.6857
364.49	30.2089
366.42	33.3643
383.85	32.5860
388.16	36.8633
388.63	34.7644
391.70	28.4832
400.66	34.9537
401.81	39.2106
402.40	41.3411
404.85	40.3246
414.70	26.6445
423.72	33.1688
427.09	23.5731
427.87	27.8686
433.94	22.5672
453.88	30.3409
463.37	31.5462
468.07	26.1566
473.00	32.7603
476.78	22.9668
477.60	22.9742
487.02	25.2556
492.35	25.3082
497.08	23.1498
511.00	39.8966
514.00	120.9352
527.90	20.0748
529.87	0.0000
531.02	20.0978
537.26	23.5013
546.56	0.0000
563.25	23.4958
569.33	21.7348
569.50	21.7359
569.70	19.9262
583.19	26.3896
600.60	26.5468
602.73	36.6426
604.72	36.6670
609.32	24.7885
610.33	22.0418
614.28	31.2666
618.01	20.2565
621.93	23.0487
621.93	23.0487
633.25	29.6117
635.95	25.0066
636.99	21.3093
645.85	15.7956
657.76	23.3167
661.66	26.1475
661.66	26.1475
664.57	0.0000
666.33	24.3153
666.50	24.3166
677.62	16.8930
685.70	18.8169
695.00	25.4753
696.49	35.8699
696.51	35.8708
697.00	37.7637
702.65	29.3176
706.68	23.6719
720.70	29.4765

721.93	0.0000
722.78	16.1745
722.91	16.1749
723.31	14.2738
724.19	11.4220
727.33	21.9123
733.00	17.1773
735.93	17.1923
739.50	23.9032
747.24	22.9986
753.82	19.2017
756.73	17.2960
763.94	13.4801
765.80	13.4873
766.42	18.3074
777.92	16.4335
778.90	14.5042
783.70	19.3652
785.37	20.3427
795.86	19.4307
801.95	17.5170
810.76	18.5347
815.77	12.6991
818.51	17.5961
832.01	19.6226
834.85	16.6920
836.80	0.0000
846.77	23.6396
856.80	21.7271
860.56	10.8743
871.09	11.8954
873.19	9.9182
875.33	0.0000
880.51	10.9307
883.24	17.8989
884.68	20.8898
889.28	16.9307
898.04	12.9759
911.20	9.0132
911.20	9.0132
926.36	14.0735
937.49	10.0801
944.13	17.1639
946.00	4.0404
949.00	9.0976
964.08	14.2037
968.97	14.2205
968.97	14.2205
983.53	9.1734
996.26	16.3574
1001.03	6.1409
1004.73	14.3411
1037.84	8.2578
1038.76	0.0000
1048.07	13.4500
1050.41	9.3164
1050.41	9.3164
1063.66	12.4588
1085.87	9.3902
1099.25	10.4644
1112.07	15.7405
1115.54	11.5516
1120.29	11.5634
1120.55	10.5127
1121.30	10.5146
1131.51	0.0000
1173.23	18.0725
1189.05	11.7321
1204.77	12.8402
1221.41	13.9572
1231.02	13.9839
1235.36	9.6899
1238.28	16.1591
1260.41	0.0000
1274.44	6.5101
1274.54	6.5101
1291.59	3.2659
1298.22	0.0000

1312.11	2.1858
1332.49	5.4858
1365.19	12.8789
1368.63	0.0000
1384.29	7.3854
1408.01	8.3448
1457.56	0.0000
1460.82	7.4880
1489.16	4.7034
1596.21	9.5789
1620.50	3.8468
1678.03	0.0000
1690.97	5.8357
1764.49	9.8381
1770.23	8.8619
1771.35	6.8938
1791.20	0.0000
1836.06	3.9779

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID     : 1048163                  SAMPLE ID  : G1202262532        *
*   ANALYST      : KXG3                     DETECTOR   : GAM20              *
*   SAMPLE DATE  : 12-NOV-2010 00:00:00.00  COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE: 26-NOV-2010 06:09:24.17  SAMPLE ALQT:    2.000 LITER     *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/LITER ) : 5.720E+00
GROSS GAMMA ERROR  (pCi/LITER )   : 8.264E+00
GROSS GAMMA MDA    (pCi/LITER )   : 1.493E+01
GROSS GAMMA DLC    (pCi/LITER )   : 6.978E+00
```

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:18:28.74

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262533.CNF;1
Sample date      : 2-NOV-2010 12:00:00. Acquisition date : 26-NOV-2010 06:18:02
Sample ID        : G1202262533          Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM12                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.57  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.14*	14	133	1.12	125.49	121	9	1.92E-03	167.2	
2	0	66.68	29	184	1.21	132.57	130	10	4.09E-03	87.9	
3	0	92.74*	46	161	1.20	184.72	179	12	6.32E-03	65.3	
4	0	185.47*	1	99	1.43	370.21	366	10	1.02E-04	*****	
5	0	238.60*	10	57	0.98	476.49	473	8	1.36E-03	160.7	

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

VMS Nuclide Identification Report V3.1 Generated 26-NOV-2010 08:18:30

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262533.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : KXG3
Sample date : 2-NOV-2010 12:00:00 Acquisition date : 26-NOV-2010 06:18:02
Sample ID : G1202262533 Sample quantity : 2.0000 LITER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA12 Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.57 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
RA-226	+	186.21	*	1.588E+00	9.510E+01	8.936E+01	6.026E+01	0.018
TH-230	+	67.67	*	1.141E+03	2.008E+03	1.856E+03	1.603E+02	0.615
TH-232	+	63.81	*	9.157E+02	7.681E+03	3.019E+03	2.323E+04	0.303
		140.88		7.921E+03	1.131E+04	1.891E+04	1.642E+03	0.419
TH-234	+	63.29	*	6.435E+01	2.155E+02	1.818E+02	3.327E+01	0.354
	+	92.59		8.938E+01	1.184E+02	9.500E+01	2.134E+01	0.941
U-238	+	63.29	*	6.435E+01	2.155E+02	1.818E+02	3.327E+01	0.354
	+	92.59		8.938E+01	1.170E+02	9.500E+01	9.063E+00	0.941

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7		477.60	*	2.864E+01	2.284E+01	4.366E+01	4.002E+00	0.656
NA-22		1274.54	*	-1.183E+00	2.356E+00	3.351E+00	2.868E-01	-0.353
NA-24		1368.63	*	-8.165E+05	2.356E+00	Half-Life too short		
K-40		1460.82	*	2.767E+01	4.250E+01	7.967E+01	7.244E+00	0.347
SC-46		889.28	*	-7.765E-01	2.920E+00	4.471E+00	3.885E-01	-0.174
		1120.55		5.297E+00	4.198E+00	8.127E+00	6.711E-01	0.652
V-48		944.13		-1.224E+01	9.318E+01	1.462E+02	1.267E+01	-0.084
		983.53	*	2.323E+00	6.592E+00	1.176E+01	1.014E+00	0.198
		1312.11		-1.109E+00	8.472E+00	1.353E+01	1.182E+00	-0.082
CR-51		320.08	*	1.812E+01	4.230E+01	7.209E+01	6.745E+00	0.251
MN-54		834.85	*	2.553E+00	2.836E+00	5.226E+00	4.493E-01	0.489
CO-56		846.77	*	9.620E-01	3.218E+00	5.482E+00	4.726E-01	0.175
		1037.84		2.160E+00	1.968E+01	3.364E+01	3.015E+00	0.064
		1238.28		-2.373E+00	5.542E+00	8.037E+00	6.936E-01	-0.295
		1771.35		-1.598E+01	2.258E+01	3.023E+01	2.542E+00	-0.529
CO-57		122.06	*	-8.474E-01	2.624E+00	4.115E+00	3.659E-01	-0.206
		136.47		-1.701E+01	2.041E+01	3.035E+01	2.833E+00	-0.561
CO-58		810.76	*	1.697E+00	3.365E+00	5.899E+00	5.055E-01	0.288
FE-59		1099.25	*	-3.045E+00	7.548E+00	1.168E+01	1.058E+00	-0.261
		1291.59		2.326E+00	7.957E+00	1.399E+01	1.370E+00	0.166
CO-60		1173.23		-1.870E+00	2.337E+00	3.075E+00	2.474E-01	-0.608

Sample ID : G1202262533 Acquisition date : 26-NOV-2010 06:18:02

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		1332.49	*	-1.255E-01	2.250E+00	3.632E+00	3.206E-01	-0.035
ZN-65		1115.54	*	-6.300E+00	7.236E+00	1.036E+01	8.584E-01	-0.608
SE-75		121.12		1.690E+01	1.344E+01	2.345E+01	2.646E+00	0.721
		136.00		-2.430E+00	3.978E+00	6.040E+00	5.295E-01	-0.402
		264.66	*	2.438E+00	3.882E+00	6.793E+00	6.183E-01	0.359
		279.54		4.961E+00	9.113E+00	1.583E+01	1.483E+00	0.313
		400.66		1.132E+00	2.230E+01	3.630E+01	3.939E+00	0.031
SR-85		514.00	*	-1.169E+01	4.843E+00	6.329E+00	5.380E-01	-1.847
Y-88		898.04		1.677E+00	3.536E+00	6.144E+00	5.371E-01	0.273
		1836.06	*	1.976E+00	3.269E+00	6.201E+00	5.108E-01	0.319
Y-91		1204.77	*	-9.323E+02	1.557E+03	2.280E+03	1.871E+02	-0.409
NB-94		702.65	*	-1.450E+00	3.086E+00	4.789E+00	3.944E-01	-0.303
		871.09		-2.890E+00	3.177E+00	4.406E+00	3.817E-01	-0.656
NB-95		765.80	*	4.345E+00	3.733E+00	6.993E+00	5.898E-01	0.621
NB-95M		235.69	*	4.402E+00	1.200E+01	1.837E+01	1.881E+00	0.240
ZR-95		724.19		-4.032E+00	8.079E+00	1.233E+01	1.117E+00	-0.327
		756.73	*	2.935E+00	5.594E+00	9.918E+00	9.255E-01	0.296
MO-99		140.51		2.260E-02	5.594E+00	Half-Life too short		
		181.07		-7.123E-03	5.594E+00	Half-Life too short		
		366.42		-4.636E-03	5.594E+00	Half-Life too short		
		739.50	*	-2.259E-03	5.594E+00	Half-Life too short		
		777.92		-1.302E-03	5.594E+00	Half-Life too short		
TC-99M		140.51	*	1.043E+23	5.594E+00	Half-Life too short		
RU-103		497.08	*	-2.921E+00	3.751E+00	5.692E+00	7.909E-01	-0.513
		610.33		-3.548E+01	8.481E+01	1.290E+02	2.088E+01	-0.275
RH-106		621.93	*	-6.512E+00	2.259E+01	3.584E+01	4.669E+00	-0.182
		1050.41		1.680E+02	1.941E+02	3.659E+02	3.102E+01	0.459
RU-106		621.93	*	-6.512E+00	2.258E+01	3.584E+01	2.963E+00	-0.182
		1050.41		1.680E+02	1.941E+02	3.659E+02	3.102E+01	0.459
AG-108M		433.94	*	1.474E+00	2.184E+00	3.833E+00	3.336E-01	0.385
		614.28		-1.301E+00	2.857E+00	4.471E+00	3.840E-01	-0.291
		722.91		1.161E+00	2.896E+00	5.019E+00	4.313E-01	0.231
CD-109		88.03	*	-1.230E+01	7.967E+01	1.144E+02	1.138E+01	-0.108
AG-110M		657.76	*	-8.945E-01	3.165E+00	5.053E+00	4.233E-01	-0.177
		677.62		-9.113E+00	2.527E+01	3.954E+01	3.325E+00	-0.230
		706.68		2.336E+01	1.884E+01	3.540E+01	3.012E+00	0.660
		763.94		1.488E+00	1.386E+01	2.301E+01	1.995E+00	0.065
		884.68		1.453E+00	3.428E+00	5.991E+00	5.366E-01	0.242
		937.49		4.205E+00	7.895E+00	1.396E+01	1.254E+00	0.301
		1384.29		-8.327E+00	1.144E+01	1.508E+01	1.369E+00	-0.552
SN-113		391.70	*	-2.805E+00	3.816E+00	5.603E+00	4.794E-01	-0.501
CD-115		260.90		4.796E-02	3.816E+00	Half-Life too short		
		492.35		-4.355E-03	3.816E+00	Half-Life too short		
		527.90	*	-3.659E-03	3.816E+00	Half-Life too short		
SN-117M		156.02		-2.026E+02	3.229E+02	4.847E+02	4.222E+01	-0.418
		158.56	*	2.357E+00	7.748E+00	1.260E+01	1.099E+00	0.187
TE-123M		159.00	*	2.535E-01	2.790E+00	4.458E+00	3.914E-01	0.057
SB-124		602.73		-3.499E-01	3.587E+00	5.903E+00	4.922E-01	-0.059
		645.85		-2.151E+01	4.224E+01	6.474E+01	5.623E+00	-0.332

Sample ID : G1202262533 Acquisition date : 26-NOV-2010 06:18:02

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		722.78		1.229E+01	3.205E+01	5.543E+01	4.717E+00	0.222
		1690.97	*	-3.575E-01	7.371E+00	1.216E+01	1.089E+00	-0.029
SB-125		427.87	*	-6.335E+00	7.642E+00	1.094E+01	9.372E-01	-0.579
		463.37		-1.607E+01	2.481E+01	3.656E+01	3.340E+00	-0.440
		600.60		-1.281E+01	1.635E+01	2.473E+01	2.226E+00	-0.518
		635.95		7.213E+00	1.993E+01	3.476E+01	3.107E+00	0.208
TE-125M		109.28	*	8.476E+01	1.127E+03	1.831E+03	1.963E+02	0.046
I-126		388.63		1.152E+01	2.126E+01	3.663E+01	3.046E+00	0.314
		666.33	*	-1.396E+01	2.823E+01	4.346E+01	3.521E+00	-0.321
		753.82		-5.970E+01	2.237E+02	3.514E+02	2.952E+01	-0.170
SB-126		414.70		-1.007E+00	1.031E+01	1.645E+01	1.376E+00	-0.061
		666.50		-5.124E+00	9.873E+00	1.514E+01	1.227E+00	-0.338
		695.00		-1.190E+00	1.099E+01	1.786E+01	1.467E+00	-0.067
		697.00		-2.477E+00	3.921E+01	6.410E+01	5.267E+00	-0.039
		720.70	*	1.943E+01	1.987E+01	3.655E+01	3.033E+00	0.532
		856.80		-9.813E+00	5.399E+01	8.467E+01	7.315E+00	-0.116
SN-126	+	64.28		2.480E+01	8.303E+01	9.598E+01	1.452E+01	0.258
		86.94		-1.890E+01	3.149E+01	4.499E+01	1.873E+01	-0.420
		87.57	*	-3.653E+00	7.816E+00	1.087E+01	1.078E+00	-0.336
SB-127		252.40		2.677E+02	1.786E+03	3.005E+03	1.277E+03	0.089
		473.00		-3.924E+02	5.680E+02	8.023E+02	1.228E+02	-0.489
		685.70	*	-2.346E+02	4.819E+02	7.347E+02	1.027E+02	-0.319
		783.70		4.137E+02	1.202E+03	2.067E+03	3.093E+02	0.200
I-131		80.19		-2.528E+02	7.886E+02	1.259E+03	1.189E+02	-0.201
		284.31		8.922E+01	2.631E+02	4.484E+02	4.278E+01	0.199
		364.49	*	1.610E+00	2.028E+01	3.331E+01	3.040E+00	0.048
		636.99		1.815E+02	2.560E+02	4.638E+02	4.082E+01	0.391
TE-132		49.72		8.247E+03	1.249E+04	2.179E+04	3.059E+03	0.378
		111.76		1.478E+04	2.175E+04	3.665E+04	5.103E+03	0.403
		116.30		-1.211E+03	1.830E+04	2.934E+04	4.083E+03	-0.041
		228.16	*	1.040E+02	3.861E+02	6.597E+02	1.190E+02	0.158
BA-133		81.00		-3.041E+00	7.607E+00	1.204E+01	1.920E+00	-0.253
		276.40		-2.224E-01	2.809E+01	4.649E+01	6.687E+00	-0.005
		302.85		7.833E-01	1.250E+01	2.071E+01	2.758E+00	0.038
		356.01	*	-4.545E+00	4.112E+00	5.903E+00	7.663E-01	-0.770
		383.85		1.253E+01	2.660E+01	4.521E+01	5.541E+00	0.277
I-133		529.87	*	3.081E+02	2.660E+01	Half-Life too short		
		875.33		1.355E+04	2.660E+01	Half-Life too short		
		1298.22		2.123E+03	2.660E+01	Half-Life too short		
CS-134		563.25		-1.744E+01	2.934E+01	4.533E+01	3.865E+00	-0.385
		569.33		-8.526E+00	1.668E+01	2.614E+01	2.235E+00	-0.326
		604.72		1.056E-02	2.984E+00	4.969E+00	4.150E-01	0.002
		795.86	*	1.400E+00	3.036E+00	5.347E+00	4.585E-01	0.262
		801.95		2.133E+01	3.023E+01	5.454E+01	4.678E+00	0.391
		1365.19		8.371E+01	9.839E+01	1.876E+02	1.732E+01	0.446
CS-135		268.22	*	5.189E+00	1.274E+01	2.188E+01	2.264E+00	0.237
I-135		546.56		-9.566E+20	1.274E+01	Half-Life too short		
		836.80		4.186E+21	1.274E+01	Half-Life too short		
		1038.76		-1.442E+21	1.274E+01	Half-Life too short		

Sample ID : G1202262533 Acquisition date : 26-NOV-2010 06:18:02

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		1131.51		-2.840E+20	1.274E+01	Half-Life too short		
		1260.41	*	-1.897E+21	1.274E+01	Half-Life too short		
		1457.56		2.747E+21	1.274E+01	Half-Life too short		
		1678.03		3.656E+20	1.274E+01	Half-Life too short		
		1791.20		-2.371E+21	1.274E+01	Half-Life too short		
CS-136		153.25		7.816E+01	1.213E+02	2.024E+02	2.094E+01	0.386
		176.60		-5.186E+01	7.034E+01	1.129E+02	1.094E+01	-0.459
		273.65		-3.044E+01	6.544E+01	1.037E+02	1.013E+01	-0.294
		340.55		2.491E+00	1.794E+01	2.975E+01	2.714E+00	0.084
		818.51		2.947E+00	9.357E+00	1.597E+01	1.371E+00	0.184
		1048.07	*	8.389E+00	1.254E+01	2.309E+01	2.046E+00	0.363
		1235.36		-2.070E+00	4.342E+01	7.086E+01	8.208E+00	-0.029
BA-137M		661.66	*	-7.798E-01	3.067E+00	4.890E+00	3.954E-01	-0.159
CS-137		661.66	*	-8.238E-01	3.240E+00	5.166E+00	4.186E-01	-0.159
CE-139		165.86	*	-1.030E+00	2.935E+00	4.506E+00	3.954E-01	-0.229
BA-140		162.66		8.781E+01	1.228E+02	2.052E+02	1.913E+01	0.428
		304.85		1.328E+01	1.968E+02	3.259E+02	9.574E+01	0.041
		423.72		2.291E+02	2.828E+02	4.808E+02	1.579E+02	0.477
		537.26	*	-4.004E+00	3.105E+01	5.113E+01	1.732E+01	-0.078
LA-140		328.76		-3.614E+01	4.263E+01	6.394E+01	5.978E+00	-0.565
		487.02		9.263E+00	2.007E+01	3.382E+01	3.057E+00	0.274
		815.77		1.563E+01	4.400E+01	7.535E+01	7.215E+00	0.207
		1596.21	*	-1.434E+01	1.042E+01	8.343E+00	7.300E-01	-1.719
CE-141		145.44	*	3.499E+00	7.165E+00	1.184E+01	1.046E+00	0.296
CE-143		57.36		2.565E+00	7.165E+00	Half-Life too short		
		293.27	*	6.435E-01	7.165E+00	Half-Life too short		
		664.57		6.140E+00	7.165E+00	Half-Life too short		
		721.93		7.035E+00	7.165E+00	Half-Life too short		
CE-144		80.12		-1.579E+02	2.143E+02	3.306E+02	3.077E+01	-0.478
		133.52	*	3.629E+00	1.883E+01	3.060E+01	4.696E+00	0.119
PM-144		476.78		-2.004E-01	4.503E+00	7.147E+00	6.612E-01	-0.028
		618.01		-1.676E+00	2.328E+00	3.430E+00	2.928E-01	-0.489
		696.49	*	-4.048E-01	3.162E+00	5.130E+00	4.218E-01	-0.079
PR-144		696.51	*	-2.986E+01	2.378E+02	3.859E+02	3.170E+01	-0.077
		1489.16		4.379E+02	1.179E+03	2.064E+03	1.826E+02	0.212
PM-146		453.88	*	3.437E+00	3.753E+00	6.633E+00	6.940E-01	0.518
		633.25		-4.685E+01	1.057E+02	1.611E+02	6.138E+01	-0.291
		735.93		1.117E+00	1.067E+01	1.778E+01	4.969E+00	0.063
		747.24		-2.946E+00	7.997E+00	1.238E+01	1.788E+00	-0.238
ND-147		91.11		9.007E+01	4.929E+01	8.107E+01	8.355E+00	1.111
		319.41		6.159E+02	5.289E+02	9.535E+02	8.512E+01	0.646
		531.02	*	1.736E+00	7.807E+01	1.314E+02	1.955E+01	0.013
PM-149		285.90	*	8.218E-02	7.807E+01	Half-Life too short		
EU-152		121.78		2.778E+00	7.203E+00	1.191E+01	1.207E+00	0.233
		244.70		2.344E+01	2.731E+01	4.851E+01	4.386E+00	0.483
		344.28	*	-1.024E+00	7.721E+00	1.243E+01	1.151E+00	-0.082
		778.90		-3.434E+00	1.807E+01	2.854E+01	2.417E+00	-0.120
		964.08		-8.799E+00	2.080E+01	3.095E+01	2.675E+00	-0.284
		1085.87		-1.128E+01	3.008E+01	4.706E+01	3.941E+00	-0.240

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		1112.07		-5.236E+00	2.055E+01	3.259E+01	2.701E+00	-0.161
		1408.01		2.480E+00	1.277E+01	2.178E+01	1.929E+00	0.114
GD-153		69.67		1.002E+02	1.835E+02	2.839E+02	2.475E+01	0.353
		97.43	*	3.649E+00	8.606E+00	1.302E+01	1.203E+00	0.280
		103.18		2.607E+00	1.037E+01	1.714E+01	1.544E+00	0.152
EU-154		123.07		-8.407E+00	5.387E+00	7.462E+00	8.610E-01	-1.127
		723.31		-2.485E+00	1.388E+01	2.224E+01	2.049E+00	-0.112
		873.19		-2.261E+00	2.483E+01	3.965E+01	4.729E+00	-0.057
		996.26		-5.652E-01	2.562E+01	4.283E+01	7.477E+00	-0.013
		1004.73		3.012E+00	1.405E+01	2.443E+01	2.835E+00	0.123
		1274.44	*	-3.337E+00	6.649E+00	9.452E+00	1.070E+00	-0.353
EU-155		86.55		-6.936E+00	8.477E+00	1.296E+01	1.283E+00	-0.535
		105.31	*	-6.366E+00	1.038E+01	1.600E+01	1.448E+00	-0.398
TA-182	+	67.75		1.215E+01	2.139E+01	2.105E+01	1.819E+00	0.577
		100.11		1.455E+00	1.710E+01	2.793E+01	2.546E+00	0.052
		152.43		2.479E+01	3.292E+01	5.544E+01	4.821E+00	0.447
		222.11		1.112E+01	3.149E+01	5.417E+01	4.864E+00	0.205
		1121.30		1.407E+01	1.161E+01	2.231E+01	1.842E+00	0.631
		1189.05		-3.032E+00	2.253E+01	3.642E+01	2.959E+00	-0.083
		1221.41	*	7.795E-02	1.255E+01	2.075E+01	1.720E+00	0.004
		1231.02		4.221E-02	2.875E+01	4.746E+01	3.956E+00	0.001
IR-192		295.96		-5.008E+00	1.038E+01	1.601E+01	1.454E+00	-0.313
		308.46		-1.236E-01	9.045E+00	1.486E+01	1.340E+00	-0.008
		316.51	*	-2.985E+00	3.586E+00	5.419E+00	4.854E-01	-0.551
		468.07		1.063E+00	6.200E+00	1.014E+01	9.248E-01	0.105
HG-203		70.83		1.542E+02	1.538E+02	2.444E+02	3.945E+01	0.631
		72.87		-9.435E+01	8.720E+01	1.229E+02	1.926E+01	-0.768
		279.20	*	2.348E+00	3.511E+00	6.156E+00	5.703E-01	0.381
BI-207		72.81		-1.874E+01	1.760E+01	2.514E+01	2.228E+00	-0.746
		74.97		1.686E+00	9.291E+00	1.545E+01	1.387E+00	0.109
		569.70		-1.432E+00	2.593E+00	4.043E+00	3.407E-01	-0.354
		1063.66	*	-1.040E+00	4.111E+00	6.587E+00	5.560E-01	-0.158
		1770.23		-4.448E+01	4.229E+01	4.923E+01	4.141E+00	-0.903
TL-208		277.37		-3.306E+00	3.114E+01	5.104E+01	6.550E+00	-0.065
		583.19	*	-1.671E+00	3.439E+00	5.580E+00	5.032E-01	-0.300
		860.56		2.998E+00	2.041E+01	3.396E+01	3.150E+00	0.088
PB-210		46.54	*	-1.348E+02	3.647E+02	5.914E+02	5.690E+01	-0.228
BI-211		72.87		-3.339E+02	3.183E+04	4.349E+02	4.146E+04	-0.768
		351.06	*	6.203E+00	5.916E+02	3.508E+01	3.344E+03	0.177
PB-211		404.85	*	5.681E+00	5.448E+02	9.666E+01	9.213E+03	0.059
		427.09		3.571E+01	3.406E+03	2.045E+02	1.949E+04	0.175
		832.01		-5.975E+01	5.696E+03	1.098E+02	1.046E+04	-0.544
BI-212		727.33	*	-5.880E+00	3.731E+01	5.976E+01	7.323E+00	-0.098
		785.37		-2.497E+01	2.518E+02	4.050E+02	3.437E+01	-0.062
		1620.50		8.831E+01	1.709E+02	3.155E+02	2.750E+01	0.280
PB-212		74.82		6.350E+00	3.314E+01	5.514E+01	7.297E+00	0.115
		77.11		7.292E+00	1.835E+01	3.092E+01	2.816E+00	0.236
	+	238.63	*	2.046E+00	6.577E+00	9.264E+00	9.381E-01	0.221
		300.09		-6.107E+00	6.991E+01	1.143E+02	1.241E+01	-0.053

Sample ID : G1202262533 Acquisition date : 26-NOV-2010 06:18:02

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BI-214		609.32	*	-2.762E+00	6.913E+00	1.053E+01	1.037E+00	-0.262
		1120.29		3.189E+01	2.314E+01	4.517E+01	4.805E+00	0.706
		1764.49		-1.422E+01	2.153E+01	3.484E+01	2.936E+00	-0.408
PB-214		74.82		1.099E+01	5.737E+01	9.544E+01	1.143E+01	0.115
		77.11		1.255E+01	3.161E+01	5.324E+01	6.542E+00	0.236
		242.00		-1.071E+01	3.170E+01	4.464E+01	4.792E+00	-0.240
		295.22		-9.724E+00	1.329E+01	2.001E+01	2.227E+00	-0.486
		351.93	*	2.941E+00	7.537E+00	1.274E+01	1.359E+00	0.231
RN-219		271.23		8.393E+00	8.002E+02	3.317E+01	3.162E+03	0.253
		401.81	*	-1.796E+00	1.747E+02	5.610E+01	5.347E+03	-0.032
RA-223		81.07		-6.797E+00	6.481E+02	2.730E+01	2.602E+03	-0.249
		83.79		1.442E+00	1.380E+02	1.814E+01	1.729E+03	0.080
		94.56		2.475E+01	2.360E+03	4.985E+01	4.752E+03	0.497
		144.24		2.150E+01	2.051E+03	1.113E+02	1.061E+04	0.193
		154.21		4.332E-01	5.441E+01	5.636E+01	5.372E+03	0.008
		269.46		3.139E+00	2.996E+02	2.526E+01	2.407E+03	0.124
		323.87	*	-1.760E+01	1.678E+03	9.262E+01	8.828E+03	-0.190
		338.28		5.501E+01	5.244E+03	1.325E+02	1.263E+04	0.415
RA-224		240.99	*	-6.732E+01	6.085E+01	7.720E+01	6.974E+00	-0.872
AC-227		79.69		-4.765E+01	1.041E+02	1.641E+02	2.883E+01	-0.290
		235.96		3.834E+00	1.310E+01	1.991E+01	2.126E+00	0.193
		256.23	*	-1.499E+01	2.232E+01	3.485E+01	4.310E+00	-0.430
		299.98		-7.257E+00	7.518E+01	1.228E+02	1.593E+01	-0.059
		304.50		6.855E+00	1.470E+02	2.431E+02	4.066E+01	0.028
		334.37		-7.884E+01	1.438E+02	2.211E+02	3.473E+01	-0.357
TH-227		79.69		-4.765E+01	4.544E+03	1.641E+02	1.564E+04	-0.290
		235.96		3.834E+00	3.657E+02	1.991E+01	1.898E+03	0.193
		256.23	*	-1.499E+01	1.429E+03	3.485E+01	3.321E+03	-0.430
		299.98		-7.257E+00	6.958E+02	1.228E+02	1.171E+04	-0.059
		304.50		6.855E+00	6.698E+02	2.431E+02	2.317E+04	0.028
		334.37		-7.884E+01	7.517E+03	2.211E+02	2.108E+04	-0.357
AC-228		338.32		1.426E+01	2.006E+01	3.370E+01	1.407E+01	0.423
		911.20	*	3.573E+00	1.187E+01	2.051E+01	2.389E+00	0.174
		968.97		1.026E+01	1.878E+01	3.266E+01	7.959E+00	0.314
RA-228		338.32		1.426E+01	2.006E+01	3.370E+01	1.407E+01	0.423
		911.20	*	3.573E+00	1.187E+01	2.051E+01	2.389E+00	0.174
		968.97		1.026E+01	1.878E+01	3.266E+01	7.959E+00	0.314
TH-228		74.82		6.350E+00	3.314E+01	5.514E+01	4.989E+00	0.115
		77.11		7.292E+00	1.835E+01	3.092E+01	2.816E+00	0.236
	+	238.63	*	2.046E+00	6.577E+00	9.264E+00	9.381E-01	0.221
		300.09		-6.107E+00	7.001E+01	1.143E+02	7.003E+01	-0.053
TH-229		85.43		-6.967E+00	1.894E+01	2.914E+01	2.834E+00	-0.239
		88.47		6.285E+00	1.114E+01	1.711E+01	1.695E+00	0.367
		193.51	*	2.017E+01	4.593E+01	7.983E+01	7.076E+00	0.253
		210.85		-5.138E+01	7.559E+01	1.205E+02	1.077E+01	-0.426
PA-231		283.69	*	6.302E+00	1.188E+02	1.975E+02	2.930E+01	0.032
		301.36		-3.339E-02	4.225E+01	6.960E+01	8.145E+00	0.000
TH-231		84.21	*	6.233E+00	4.228E+01	6.751E+01	1.212E+01	0.092
PA-233		94.65		2.890E+01	2.474E+01	3.960E+01	3.769E+00	0.730

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		98.43		-9.488E+00	1.356E+01	1.961E+01	1.886E+00	-0.484
		300.13		1.371E-01	3.372E+01	5.559E+01	8.370E+00	0.002
		311.90	*	6.616E+00	5.413E+00	9.880E+00	9.087E-01	0.670
		340.48		6.394E+00	4.853E+01	8.041E+01	1.940E+01	0.080
PA-234		94.67		1.858E+01	1.665E+01	2.645E+01	3.427E+00	0.703
		98.44		-6.325E+00	9.670E+00	1.305E+01	7.289E+00	-0.485
		111.00		5.376E+00	1.898E+01	3.125E+01	3.832E+00	0.172
		131.20		4.407E+00	9.529E+00	1.582E+01	1.383E+00	0.279
		569.50		-1.270E+01	2.301E+01	3.587E+01	3.023E+00	-0.354
		733.00		3.255E+00	2.701E+01	4.516E+01	9.975E+00	0.072
		880.51		-1.883E+01	2.177E+01	2.939E+01	2.550E+00	-0.641
		883.24		1.152E+00	2.029E+01	3.317E+01	2.230E+01	0.035
		926.36		-7.154E-01	1.408E+01	2.250E+01	5.693E+00	-0.032
		946.00	*	1.026E+01	2.113E+01	3.697E+01	6.946E+00	0.277
		949.00		1.036E+01	3.134E+01	5.357E+01	4.641E+00	0.193
PA-234M		766.42		1.154E+03	1.068E+03	1.704E+03	8.639E+02	0.677
		1001.03	*	1.078E+02	3.325E+02	5.853E+02	5.815E+01	0.184
U-235		89.96		3.595E+01	8.008E+01	1.208E+02	3.024E+01	0.298
	+	93.35		6.751E+01	8.956E+01	1.021E+02	2.393E+01	0.661
		143.76	*	-2.757E+00	2.121E+01	3.304E+01	5.612E+00	-0.083
		163.33		2.320E+00	4.210E+01	6.698E+01	1.207E+01	0.035
	+	185.72		9.967E-02	5.968E+00	7.801E+00	6.889E-01	0.013
		205.31		-1.236E+01	4.226E+01	6.955E+01	1.272E+01	-0.178
NP-237		94.67		1.858E+01	1.657E+01	2.645E+01	2.485E+00	0.703
		98.43		-9.488E+00	1.356E+01	1.961E+01	1.802E+00	-0.484
		300.13		1.371E-01	3.372E+01	5.559E+01	7.097E+00	0.002
		311.90	*	6.616E+00	5.430E+00	9.880E+00	1.108E+00	0.670
		340.48		6.394E+00	4.851E+01	8.041E+01	7.067E+00	0.080
NP-239		99.53		-1.274E+01	1.557E+01	2.358E+01	2.155E+00	-0.540
		103.37		9.304E-01	9.314E+00	1.521E+01	1.369E+00	0.061
		106.12		1.600E+00	8.151E+00	1.338E+01	1.196E+00	0.120
		116.74	*	-9.516E+00	2.563E+01	4.008E+01	3.546E+00	-0.237
		228.18		4.764E+00	1.757E+01	3.005E+01	2.704E+00	0.159
		277.60		-2.428E+00	1.407E+01	2.291E+01	2.075E+00	-0.106
AM-241		59.54	*	-4.226E+00	1.530E+01	2.201E+01	1.973E+00	-0.192
CM-247		278.00		7.779E+00	6.101E+01	1.022E+02	9.251E+00	0.076
		287.50		1.769E+01	1.051E+02	1.763E+02	1.594E+01	0.100
		402.40	*	-1.036E+00	3.183E+00	4.951E+00	4.120E-01	-0.209
CF-249		252.80		-4.003E+00	8.329E+01	1.381E+02	1.250E+01	-0.029
		333.37		9.979E+00	1.506E+01	2.622E+01	2.317E+00	0.381
		388.16	*	7.518E-02	3.363E+00	5.468E+00	4.550E-01	0.014
CF-251		177.52	*	5.273E+00	1.150E+01	2.008E+01	1.768E+00	0.263
		227.38		-2.920E+00	2.936E+01	4.875E+01	4.386E+00	-0.060
		285.41		9.133E+01	1.860E+02	3.208E+02	2.901E+01	0.285
ANH-511		511.00	*	-6.175E+00	4.562E+00	8.182E+00	6.956E-01	-0.755

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262533      *
* Acquisition date : 26-NOV-2010 06:18:02 Detector SN#    :                 *
* Detector ID      : GAM12                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:00.57     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      :  2-NOV-2010 12:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G1202262533          Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 26-FEB-2010 21:23:48 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	
RA-226	1.588E+00	9.320E+01	8.936E+01	0.000E+00
TH-230	1.141E+03	1.967E+03	1.856E+03	0.000E+00
TH-232	9.157E+02	7.528E+03	3.019E+03	0.000E+00
TH-234	6.435E+01	2.112E+02	1.818E+02	0.000E+00
U-238	6.435E+01	2.112E+02	1.818E+02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)		
BE-7	2.864E+01		2.238E+01	4.366E+01	0.000E+00	NOT IDENT.
NA-22	-1.183E+00		2.308E+00	3.351E+00	0.000E+00	NOT IDENT.
NA-24	0.000E+00		9.683E+11	0.000E+00	0.000E+00	SHORT HLIF
K-40	2.767E+01		4.165E+01	7.967E+01	0.000E+00	NOT IDENT.
SC-46	-7.765E-01		2.862E+00	4.471E+00	0.000E+00	NOT IDENT.
V-48	2.323E+00		6.460E+00	1.176E+01	0.000E+00	NOT IDENT.
CR-51	1.812E+01		4.145E+01	7.209E+01	0.000E+00	NOT IDENT.
MN-54	2.553E+00		2.779E+00	5.226E+00	0.000E+00	NOT IDENT.
CO-56	9.620E-01		3.153E+00	5.482E+00	0.000E+00	NOT IDENT.
CO-57	-8.474E-01		2.571E+00	4.115E+00	0.000E+00	NOT IDENT.
CO-58	1.697E+00		3.297E+00	5.899E+00	0.000E+00	NOT IDENT.
FE-59	-3.045E+00		7.397E+00	1.168E+01	0.000E+00	NOT IDENT.
CO-60	-1.255E-01		2.205E+00	3.632E+00	0.000E+00	NOT IDENT.
ZN-65	-6.300E+00		7.092E+00	1.036E+01	0.000E+00	NOT IDENT.
SE-75	2.438E+00		3.805E+00	6.793E+00	0.000E+00	NOT IDENT.
SR-85	-1.169E+01		4.746E+00	6.329E+00	0.000E+00	NOT IDENT.
Y-88	1.976E+00		3.204E+00	6.201E+00	0.000E+00	NOT IDENT.
Y-91	-9.323E+02		1.526E+03	2.280E+03	0.000E+00	NOT IDENT.
NB-94	-1.450E+00		3.024E+00	4.789E+00	0.000E+00	NOT IDENT.
NB-95	4.345E+00		3.658E+00	6.993E+00	0.000E+00	NOT IDENT.
NB-95M	4.402E+00		1.176E+01	1.837E+01	0.000E+00	NOT IDENT.
ZR-95	2.935E+00		5.482E+00	9.918E+00	0.000E+00	NOT IDENT.

MO-99	0.000E+00	7.345E+03	0.000E+00	0.000E+00	SHORT HLIF
TC-99M	0.000E+00	1.009E+29	0.000E+00	0.000E+00	SHORT HLIF
RU-103	-2.921E+00	3.676E+00	5.692E+00	0.000E+00	NOT IDENT.
RH-106	-6.512E+00	2.213E+01	3.584E+01	0.000E+00	NOT IDENT.
RU-106	-6.512E+00	2.212E+01	3.584E+01	0.000E+00	NOT IDENT.
AG-108M	1.474E+00	2.140E+00	3.833E+00	0.000E+00	NOT IDENT.
CD-109	-1.230E+01	7.808E+01	1.144E+02	0.000E+00	NOT IDENT.
AG-110M	-8.945E-01	3.102E+00	5.053E+00	0.000E+00	NOT IDENT.
SN-113	-2.805E+00	3.740E+00	5.603E+00	0.000E+00	NOT IDENT.
CD-115	0.000E+00	1.236E+04	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	2.357E+00	7.593E+00	1.260E+01	0.000E+00	NOT IDENT.
TE-123M	2.535E-01	2.734E+00	4.458E+00	0.000E+00	NOT IDENT.
SB-124	-3.575E-01	7.223E+00	1.216E+01	0.000E+00	NOT IDENT.
SB-125	-6.335E+00	7.489E+00	1.094E+01	0.000E+00	NOT IDENT.
TE-125M	8.476E+01	1.104E+03	1.831E+03	0.000E+00	NOT IDENT.
I-126	-1.396E+01	2.766E+01	4.346E+01	0.000E+00	NOT IDENT.
SB-126	1.943E+01	1.948E+01	3.655E+01	0.000E+00	NOT IDENT.
SN-126	-3.653E+00	7.660E+00	1.087E+01	0.000E+00	FAIL ABUN
SB-127	-2.346E+02	4.722E+02	7.347E+02	0.000E+00	NOT IDENT.
I-131	1.610E+00	1.987E+01	3.331E+01	0.000E+00	NOT IDENT.
TE-132	1.040E+02	3.784E+02	6.597E+02	0.000E+00	NOT IDENT.
BA-133	-4.545E+00	4.030E+00	5.903E+00	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.736E+08	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.400E+00	2.976E+00	5.347E+00	0.000E+00	NOT IDENT.
CS-135	5.189E+00	1.249E+01	2.188E+01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.413E+27	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.389E+00	1.229E+01	2.309E+01	0.000E+00	NOT IDENT.
BA-137M	-7.798E-01	3.005E+00	4.890E+00	0.000E+00	NOT IDENT.
CS-137	-8.238E-01	3.175E+00	5.166E+00	0.000E+00	NOT IDENT.
CE-139	-1.030E+00	2.876E+00	4.506E+00	0.000E+00	NOT IDENT.
BA-140	-4.004E+00	3.043E+01	5.113E+01	0.000E+00	NOT IDENT.
LA-140	-1.434E+01	1.022E+01	8.343E+00	0.000E+00	NOT IDENT.
CE-141	3.499E+00	7.021E+00	1.184E+01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.323E+05	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.629E+00	1.846E+01	3.060E+01	0.000E+00	NOT IDENT.
PM-144	-4.048E-01	3.099E+00	5.130E+00	0.000E+00	NOT IDENT.
PR-144	-2.986E+01	2.331E+02	3.859E+02	0.000E+00	NOT IDENT.
PM-146	3.437E+00	3.678E+00	6.633E+00	0.000E+00	NOT IDENT.
ND-147	1.736E+00	7.651E+01	1.314E+02	0.000E+00	NOT IDENT.
PM-149	0.000E+00	1.135E+05	0.000E+00	0.000E+00	SHORT HLIF
EU-152	-1.024E+00	7.566E+00	1.243E+01	0.000E+00	NOT IDENT.
GD-153	3.649E+00	8.434E+00	1.302E+01	0.000E+00	NOT IDENT.
EU-154	-3.337E+00	6.516E+00	9.452E+00	0.000E+00	NOT IDENT.
EU-155	-6.366E+00	1.017E+01	1.600E+01	0.000E+00	NOT IDENT.
TA-182	7.795E-02	1.230E+01	2.075E+01	0.000E+00	FAIL ABUN
IR-192	-2.985E+00	3.514E+00	5.419E+00	0.000E+00	NOT IDENT.
HG-203	2.348E+00	3.441E+00	6.156E+00	0.000E+00	NOT IDENT.
BI-207	-1.040E+00	4.028E+00	6.587E+00	0.000E+00	NOT IDENT.
TL-208	-1.671E+00	3.370E+00	5.580E+00	0.000E+00	NOT IDENT.
PB-210	-1.348E+02	3.574E+02	5.914E+02	0.000E+00	NOT IDENT.
BI-211	6.203E+00	5.798E+02	3.508E+01	0.000E+00	NOT IDENT.
PB-211	5.681E+00	5.339E+02	9.666E+01	0.000E+00	NOT IDENT.
BI-212	-5.880E+00	3.657E+01	5.976E+01	0.000E+00	NOT IDENT.
PB-212	2.046E+00	6.445E+00	9.264E+00	0.000E+00	FAIL ABUN
BI-214	-2.762E+00	6.775E+00	1.053E+01	0.000E+00	NOT IDENT.
PB-214	2.941E+00	7.387E+00	1.274E+01	0.000E+00	NOT IDENT.
RN-219	-1.796E+00	1.712E+02	5.610E+01	0.000E+00	NOT IDENT.
RA-223	-1.760E+01	1.645E+03	9.262E+01	0.000E+00	NOT IDENT.
RA-224	-6.732E+01	5.963E+01	7.720E+01	0.000E+00	NOT IDENT.
AC-227	-1.499E+01	2.187E+01	3.485E+01	0.000E+00	NOT IDENT.
TH-227	-1.499E+01	1.400E+03	3.485E+01	0.000E+00	NOT IDENT.
AC-228	3.573E+00	1.163E+01	2.051E+01	0.000E+00	NOT IDENT.
RA-228	3.573E+00	1.163E+01	2.051E+01	0.000E+00	NOT IDENT.
TH-228	2.046E+00	6.445E+00	9.264E+00	0.000E+00	FAIL ABUN
TH-229	2.017E+01	4.501E+01	7.983E+01	0.000E+00	NOT IDENT.
PA-231	6.302E+00	1.164E+02	1.975E+02	0.000E+00	NOT IDENT.
TH-231	6.233E+00	4.143E+01	6.751E+01	0.000E+00	NOT IDENT.
PA-233	6.616E+00	5.305E+00	9.880E+00	0.000E+00	NOT IDENT.
PA-234	1.026E+01	2.070E+01	3.697E+01	0.000E+00	NOT IDENT.
PA-234M	1.078E+02	3.259E+02	5.853E+02	0.000E+00	NOT IDENT.
U-235	-2.757E+00	2.079E+01	3.304E+01	0.000E+00	FAIL ABUN
NP-237	6.616E+00	5.321E+00	9.880E+00	0.000E+00	NOT IDENT.
NP-239	-9.516E+00	2.512E+01	4.008E+01	0.000E+00	NOT IDENT.
AM-241	-4.226E+00	1.500E+01	2.201E+01	0.000E+00	NOT IDENT.
CM-247	-1.036E+00	3.119E+00	4.951E+00	0.000E+00	NOT IDENT.
CF-249	7.518E-02	3.296E+00	5.468E+00	0.000E+00	NOT IDENT.
CF-251	5.273E+00	1.127E+01	2.008E+01	0.000E+00	NOT IDENT.
ANH-511	-6.175E+00	4.471E+00	8.182E+00	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:18:26.93

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262533.CNF;1
Sample date      : 2-NOV-2010 12:00:00. Acquisition date : 26-NOV-2010 06:18:02
Sample ID        : G1202262533          Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM12                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.57  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.14	64	133	1.12	125.49	121	9	8.83E-03	35.0	
2	0	66.68	29	184	1.21	132.57	130	10	4.09E-03	87.9	
3	0	92.74	159	161	1.20	184.72	179	12	2.21E-02	17.9	
4	0	185.47	83	99	1.43	370.21	366	10	1.15E-02	25.0	
5	0	238.60	39	57	0.98	476.49	473	8	5.37E-03	38.3	
6	0	510.93	108	53	1.86	1021.19	1016	12	1.50E-02	16.7	

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:18:29.42

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262533.CNF;1
Sample date      : 2-NOV-2010 12:00:00. Acquisition date : 26-NOV-2010 06:18:02
Sample ID        : G1202262533          Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM12                Detector geometry: 2LMB
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:00.57  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/LITER	Decay Corr pCi/LITER	2-Sigma %Error
RA-226	186.21	1	3.59*	2.411E+00	1.588E+00	1.588E+00	5988.42
TH-230	67.67	29	0.38*	1.274E+00	1.141E+03	1.141E+03	175.98
TH-232	63.81	14	0.26*	1.092E+00	9.157E+02	9.157E+02	838.83
	140.88	------	0.02	2.617E+00	------	Line Not Found	------
TH-234	63.29	14	3.70*	1.092E+00	6.435E+01	6.435E+01	334.94
	92.59	46	4.23	2.261E+00	8.938E+01	8.938E+01	132.49
U-238	63.29	14	3.70*	1.092E+00	6.435E+01	6.435E+01	334.94
	92.59	46	4.23	2.261E+00	8.938E+01	8.938E+01	130.92

Flag: "*" = Keyline

Sample ID : G1202262533 Acquisition date : 26-NOV-2010 06:18:02

Total number of lines in spectrum	5	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	5	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/LITER	Decay Corr pCi/LITER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	1.588E+00	1.588E+00	95.10E+00	5988.42	
TH-230	7.54E+04Y	1.00	1.141E+03	1.141E+03	2.008E+03	175.98	
TH-232	1.41E+10Y	1.00	9.157E+02	9.157E+02	76.81E+02	838.83	
TH-234	4.47E+09Y	1.00	6.435E+01	6.435E+01	21.55E+01	334.94	
U-238	4.47E+09Y	1.00	6.435E+01	6.435E+01	21.55E+01	334.94	
			---	---			
	Total Activity :		2.187E+03	2.187E+03			
	Grand Total Activity :		2.187E+03	2.187E+03			

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

Sample ID : G1202262533 Acquisition date : 26-NOV-2010 06:18:02

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	238.60	10	57	0.98	476.49	473	8	1.36E-03	****	2.12E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 08:18:33.26

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262533.CNF;1  *
* Acquisition date : 26-NOV-2010 06:18:02  Detector SN#    :                *
* Detector ID      : GAM12                 Sensitivity     : 5.00000        *
* Geometry         : 2LMB                  Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:00.57         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 2-NOV-2010 12:00:00.  Nuclide Library : LIQUID         *
* Sample ID        : G1202262533           Analyst initials: KXG3           *
* Batch Number     : 1048163               Sample Quantity : 2.00000E+00 LITER *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 26-FEB-2010 21:23:48.6MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
RA-226	1.588E+00	9.510E+01	8.936E+01	6.026E+01	0.018
TH-230	1.141E+03	2.008E+03	1.856E+03	1.603E+02	0.615
TH-232	9.157E+02	7.681E+03	3.019E+03	2.323E+04	0.303
TH-234	6.435E+01	2.155E+02	1.818E+02	3.327E+01	0.354
U-238	6.435E+01	2.155E+02	1.818E+02	3.327E+01	0.354

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7	2.864E+01		2.284E+01	4.366E+01	4.002E+00	0.656
NA-22	-1.183E+00		2.356E+00	3.351E+00	2.868E-01	-0.353
NA-24	-8.165E+05		4.940E+05	Half-Life too short		
K-40	2.767E+01		4.250E+01	7.967E+01	7.244E+00	0.347
SC-46	-7.765E-01		2.920E+00	4.471E+00	3.885E-01	-0.174
V-48	2.323E+00		6.592E+00	1.176E+01	1.014E+00	0.198
CR-51	1.812E+01		4.230E+01	7.209E+01	6.745E+00	0.251

Sample ID : G1202262533 Acquisition date : 26-NOV-2010 06:18:02

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
MN-54	2.553E+00		2.836E+00	5.226E+00	4.493E-01	0.489
CO-56	9.620E-01		3.218E+00	5.482E+00	4.726E-01	0.175
CO-57	-8.474E-01		2.624E+00	4.115E+00	3.659E-01	-0.206
CO-58	1.697E+00		3.365E+00	5.899E+00	5.055E-01	0.288
FE-59	-3.045E+00		7.548E+00	1.168E+01	1.058E+00	-0.261
CO-60	-1.255E-01		2.250E+00	3.632E+00	3.206E-01	-0.035
ZN-65	-6.300E+00		7.236E+00	1.036E+01	8.584E-01	-0.608
SE-75	2.438E+00		3.882E+00	6.793E+00	6.183E-01	0.359
SR-85	-1.169E+01		4.843E+00	6.329E+00	5.380E-01	-1.847
Y-88	1.976E+00		3.269E+00	6.201E+00	5.108E-01	0.319
Y-91	-9.323E+02		1.557E+03	2.280E+03	1.871E+02	-0.409
NB-94	-1.450E+00		3.086E+00	4.789E+00	3.944E-01	-0.303
NB-95	4.345E+00		3.733E+00	6.993E+00	5.898E-01	0.621
NB-95M	4.402E+00		1.200E+01	1.837E+01	1.881E+00	0.240
ZR-95	2.935E+00		5.594E+00	9.918E+00	9.255E-01	0.296
MO-99	-2.259E-03		3.747E-03	Half-Life too short		
TC-99M	1.043E+23		5.150E+22	Half-Life too short		
RU-103	-2.921E+00		3.751E+00	5.692E+00	7.909E-01	-0.513
RH-106	-6.512E+00		2.259E+01	3.584E+01	4.669E+00	-0.182
RU-106	-6.512E+00		2.258E+01	3.584E+01	2.963E+00	-0.182
AG-108M	1.474E+00		2.184E+00	3.833E+00	3.336E-01	0.385
CD-109	-1.230E+01		7.967E+01	1.144E+02	1.138E+01	-0.108
AG-110M	-8.945E-01		3.165E+00	5.053E+00	4.233E-01	-0.177
SN-113	-2.805E+00		3.816E+00	5.603E+00	4.794E-01	-0.501
CD-115	-3.659E-03		6.304E-03	Half-Life too short		
SN-117M	2.357E+00		7.748E+00	1.260E+01	1.099E+00	0.187
TE-123M	2.535E-01		2.790E+00	4.458E+00	3.914E-01	0.057
SB-124	-3.575E-01		7.371E+00	1.216E+01	1.089E+00	-0.029
SB-125	-6.335E+00		7.642E+00	1.094E+01	9.372E-01	-0.579
TE-125M	8.476E+01		1.127E+03	1.831E+03	1.963E+02	0.046
I-126	-1.396E+01		2.823E+01	4.346E+01	3.521E+00	-0.321
SB-126	1.943E+01		1.987E+01	3.655E+01	3.033E+00	0.532
SN-126	-3.653E+00		7.816E+00	1.087E+01	1.078E+00	-0.336
SB-127	-2.346E+02		4.819E+02	7.347E+02	1.027E+02	-0.319
I-131	1.610E+00		2.028E+01	3.331E+01	3.040E+00	0.048
TE-132	1.040E+02		3.861E+02	6.597E+02	1.190E+02	0.158
BA-133	-4.545E+00		4.112E+00	5.903E+00	7.663E-01	-0.770
I-133	3.081E+02		2.416E+02	Half-Life too short		
CS-134	1.400E+00		3.036E+00	5.347E+00	4.585E-01	0.262
CS-135	5.189E+00		1.274E+01	2.188E+01	2.264E+00	0.237
I-135	-1.897E+21		7.207E+20	Half-Life too short		
CS-136	8.389E+00		1.254E+01	2.309E+01	2.046E+00	0.363
BA-137M	-7.798E-01		3.067E+00	4.890E+00	3.954E-01	-0.159
CS-137	-8.238E-01		3.240E+00	5.166E+00	4.186E-01	-0.159
CE-139	-1.030E+00		2.935E+00	4.506E+00	3.954E-01	-0.229
BA-140	-4.004E+00		3.105E+01	5.113E+01	1.732E+01	-0.078
LA-140	-1.434E+01		1.042E+01	8.343E+00	7.300E-01	-1.719
CE-141	3.499E+00		7.165E+00	1.184E+01	1.046E+00	0.296

Sample ID : G1202262533 Acquisition date : 26-NOV-2010 06:18:02

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
CE-143	6.435E-01		4.246E-01	Half-Life too short		
CE-144	3.629E+00		1.883E+01	3.060E+01	4.696E+00	0.119
PM-144	-4.048E-01		3.162E+00	5.130E+00	4.218E-01	-0.079
PR-144	-2.986E+01		2.378E+02	3.859E+02	3.170E+01	-0.077
PM-146	3.437E+00		3.753E+00	6.633E+00	6.940E-01	0.518
ND-147	1.736E+00		7.807E+01	1.314E+02	1.955E+01	0.013
PM-149	8.218E-02		5.790E-02	Half-Life too short		
EU-152	-1.024E+00		7.721E+00	1.243E+01	1.151E+00	-0.082
GD-153	3.649E+00		8.606E+00	1.302E+01	1.203E+00	0.280
EU-154	-3.337E+00		6.649E+00	9.452E+00	1.070E+00	-0.353
EU-155	-6.366E+00		1.038E+01	1.600E+01	1.448E+00	-0.398
TA-182	7.795E-02		1.255E+01	2.075E+01	1.720E+00	0.004
IR-192	-2.985E+00		3.586E+00	5.419E+00	4.854E-01	-0.551
HG-203	2.348E+00		3.511E+00	6.156E+00	5.703E-01	0.381
BI-207	-1.040E+00		4.111E+00	6.587E+00	5.560E-01	-0.158
TL-208	-1.671E+00		3.439E+00	5.580E+00	5.032E-01	-0.300
PB-210	-1.348E+02		3.647E+02	5.914E+02	5.690E+01	-0.228
BI-211	6.203E+00		5.916E+02	3.508E+01	3.344E+03	0.177
PB-211	5.681E+00		5.448E+02	9.666E+01	9.213E+03	0.059
BI-212	-5.880E+00		3.731E+01	5.976E+01	7.323E+00	-0.098
PB-212	2.046E+00	+	6.577E+00	9.264E+00	9.381E-01	0.221
BI-214	-2.762E+00		6.913E+00	1.053E+01	1.037E+00	-0.262
PB-214	2.941E+00		7.537E+00	1.274E+01	1.359E+00	0.231
RN-219	-1.796E+00		1.747E+02	5.610E+01	5.347E+03	-0.032
RA-223	-1.760E+01		1.678E+03	9.262E+01	8.828E+03	-0.190
RA-224	-6.732E+01		6.085E+01	7.720E+01	6.974E+00	-0.872
AC-227	-1.499E+01		2.232E+01	3.485E+01	4.310E+00	-0.430
TH-227	-1.499E+01		1.429E+03	3.485E+01	3.321E+03	-0.430
AC-228	3.573E+00		1.187E+01	2.051E+01	2.389E+00	0.174
RA-228	3.573E+00		1.187E+01	2.051E+01	2.389E+00	0.174
TH-228	2.046E+00	+	6.577E+00	9.264E+00	9.381E-01	0.221
TH-229	2.017E+01		4.593E+01	7.983E+01	7.076E+00	0.253
PA-231	6.302E+00		1.188E+02	1.975E+02	2.930E+01	0.032
TH-231	6.233E+00		4.228E+01	6.751E+01	1.212E+01	0.092
PA-233	6.616E+00		5.413E+00	9.880E+00	9.087E-01	0.670
PA-234	1.026E+01		2.113E+01	3.697E+01	6.946E+00	0.277
PA-234M	1.078E+02		3.325E+02	5.853E+02	5.815E+01	0.184
U-235	-2.757E+00		2.121E+01	3.304E+01	5.612E+00	-0.083
NP-237	6.616E+00		5.430E+00	9.880E+00	1.108E+00	0.670
NP-239	-9.516E+00		2.563E+01	4.008E+01	3.546E+00	-0.237
AM-241	-4.226E+00		1.530E+01	2.201E+01	1.973E+00	-0.192
CM-247	-1.036E+00		3.183E+00	4.951E+00	4.120E-01	-0.209
CF-249	7.518E-02		3.363E+00	5.468E+00	4.550E-01	0.014
CF-251	5.273E+00		1.150E+01	2.008E+01	1.768E+00	0.263
ANH-511	-6.175E+00		4.562E+00	8.182E+00	6.956E-01	-0.755

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202262533           *
* Acquisition date : 26-NOV-2010 06:18:02 Detector SN#    :                 *
* Detector ID      : GAM12                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:00.57     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      :  2-NOV-2010 12:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G1202262533          Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 26-FEB-2010 21:23:48 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act Error	DLC (pCi/LITER)	TPU
RA-226	1.588E+00	9.320E+01	4.471E+01	4.755E+01
TH-230	1.141E+03	1.967E+03	9.284E+02	1.004E+03
TH-232	9.157E+02	7.528E+03	1.511E+03	3.841E+03
TH-234	6.435E+01	2.112E+02	9.095E+01	1.078E+02
U-238	6.435E+01	2.112E+02	9.095E+01	1.078E+02

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L Act error	DLC (pCi/LITER)	TPU	
BE-7	2.864E+01	2.238E+01	2.184E+01	1.142E+01	NOT IDENT.
NA-22	-1.183E+00	2.308E+00	1.676E+00	1.178E+00	NOT IDENT.
NA-24	-8.165E+11	9.683E+11	0.000E+00	4.940E+11	SHORT HLIF
K-40	2.767E+01	4.165E+01	3.986E+01	2.125E+01	NOT IDENT.
SC-46	-7.765E-01	2.862E+00	2.237E+00	1.460E+00	NOT IDENT.
V-48	2.323E+00	6.460E+00	5.885E+00	3.296E+00	NOT IDENT.
CR-51	1.812E+01	4.145E+01	3.606E+01	2.115E+01	NOT IDENT.
MN-54	2.553E+00	2.779E+00	2.614E+00	1.418E+00	NOT IDENT.
CO-56	9.620E-01	3.153E+00	2.742E+00	1.609E+00	NOT IDENT.
CO-57	-8.474E-01	2.571E+00	2.059E+00	1.312E+00	NOT IDENT.
CO-58	1.697E+00	3.297E+00	2.951E+00	1.682E+00	NOT IDENT.
FE-59	-3.045E+00	7.397E+00	5.845E+00	3.774E+00	NOT IDENT.
CO-60	-1.255E-01	2.205E+00	1.817E+00	1.125E+00	NOT IDENT.
ZN-65	-6.300E+00	7.092E+00	5.183E+00	3.618E+00	NOT IDENT.
SE-75	2.438E+00	3.805E+00	3.399E+00	1.941E+00	NOT IDENT.
SR-85	-1.169E+01	4.746E+00	3.166E+00	2.421E+00	NOT IDENT.
Y-88	1.976E+00	3.204E+00	3.102E+00	1.634E+00	NOT IDENT.
Y-91	-9.323E+02	1.526E+03	1.141E+03	7.785E+02	NOT IDENT.
NB-94	-1.450E+00	3.024E+00	2.396E+00	1.543E+00	NOT IDENT.
NB-95	4.345E+00	3.658E+00	3.498E+00	1.867E+00	NOT IDENT.
NB-95M	4.402E+00	1.176E+01	9.192E+00	6.002E+00	NOT IDENT.
ZR-95	2.935E+00	5.482E+00	4.962E+00	2.797E+00	NOT IDENT.

MO-99	-2.259E+03	7.345E+03	0.000E+00	3.747E+03	SHORT HLIF
TC-99M	1.043E+29	1.009E+29	0.000E+00	0.000E+00	SHORT HLIF
RU-103	-2.921E+00	3.676E+00	2.848E+00	1.875E+00	NOT IDENT.
RH-106	-6.512E+00	2.213E+01	1.793E+01	1.129E+01	NOT IDENT.
RU-106	-6.512E+00	2.212E+01	1.793E+01	1.129E+01	NOT IDENT.
AG-108M	1.474E+00	2.140E+00	1.918E+00	1.092E+00	NOT IDENT.
CD-109	-1.230E+01	7.808E+01	5.723E+01	3.984E+01	NOT IDENT.
AG-110M	-8.945E-01	3.102E+00	2.528E+00	1.583E+00	NOT IDENT.
SN-113	-2.805E+00	3.740E+00	2.803E+00	1.908E+00	NOT IDENT.
CD-115	-3.659E+03	1.236E+04	0.000E+00	6.304E+03	SHORT HLIF
SN-117M	2.357E+00	7.593E+00	6.305E+00	3.874E+00	NOT IDENT.
TE-123M	2.535E-01	2.734E+00	2.231E+00	1.395E+00	NOT IDENT.
SB-124	-3.575E-01	7.223E+00	6.082E+00	3.685E+00	NOT IDENT.
SB-125	-6.335E+00	7.489E+00	5.472E+00	3.821E+00	NOT IDENT.
TE-125M	8.476E+01	1.104E+03	9.159E+02	5.634E+02	NOT IDENT.
I-126	-1.396E+01	2.766E+01	2.174E+01	1.411E+01	NOT IDENT.
SB-126	1.943E+01	1.948E+01	1.829E+01	9.937E+00	NOT IDENT.
SN-126	-3.653E+00	7.660E+00	5.438E+00	3.908E+00	FAIL ABUN
SB-127	-2.346E+02	4.722E+02	3.676E+02	2.409E+02	NOT IDENT.
I-131	1.610E+00	1.987E+01	1.667E+01	1.014E+01	NOT IDENT.
TE-132	1.040E+02	3.784E+02	3.300E+02	1.931E+02	NOT IDENT.
BA-133	-4.545E+00	4.030E+00	2.953E+00	2.056E+00	NOT IDENT.
I-133	3.081E+08	4.736E+08	0.000E+00	2.416E+08	SHORT HLIF
CS-134	1.400E+00	2.976E+00	2.675E+00	1.518E+00	NOT IDENT.
CS-135	5.189E+00	1.249E+01	1.094E+01	6.370E+00	NOT IDENT.
I-135	-1.897E+27	1.413E+27	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.389E+00	1.229E+01	1.155E+01	6.271E+00	NOT IDENT.
BA-137M	-7.798E-01	3.005E+00	2.447E+00	1.533E+00	NOT IDENT.
CS-137	-8.238E-01	3.175E+00	2.585E+00	1.620E+00	NOT IDENT.
CE-139	-1.030E+00	2.876E+00	2.254E+00	1.467E+00	NOT IDENT.
BA-140	-4.004E+00	3.043E+01	2.558E+01	1.552E+01	NOT IDENT.
LA-140	-1.434E+01	1.022E+01	4.174E+00	5.212E+00	NOT IDENT.
CE-141	3.499E+00	7.021E+00	5.922E+00	3.582E+00	NOT IDENT.
CE-143	6.435E+05	8.323E+05	0.000E+00	4.246E+05	SHORT HLIF
CE-144	3.629E+00	1.846E+01	1.531E+01	9.417E+00	NOT IDENT.
PM-144	-4.048E-01	3.099E+00	2.567E+00	1.581E+00	NOT IDENT.
PR-144	-2.986E+01	2.331E+02	1.931E+02	1.189E+02	NOT IDENT.
PM-146	3.437E+00	3.678E+00	3.319E+00	1.877E+00	NOT IDENT.
ND-147	1.736E+00	7.651E+01	6.575E+01	3.904E+01	NOT IDENT.
PM-149	8.218E+04	1.135E+05	0.000E+00	5.790E+04	SHORT HLIF
EU-152	-1.024E+00	7.566E+00	6.218E+00	3.860E+00	NOT IDENT.
GD-153	3.649E+00	8.434E+00	6.516E+00	4.303E+00	NOT IDENT.
EU-154	-3.337E+00	6.516E+00	4.729E+00	3.325E+00	NOT IDENT.
EU-155	-6.366E+00	1.017E+01	8.004E+00	5.190E+00	NOT IDENT.
TA-182	7.795E-02	1.230E+01	1.038E+01	6.276E+00	FAIL ABUN
IR-192	-2.985E+00	3.514E+00	2.711E+00	1.793E+00	NOT IDENT.
HG-203	2.348E+00	3.441E+00	3.080E+00	1.755E+00	NOT IDENT.
BI-207	-1.040E+00	4.028E+00	3.295E+00	2.055E+00	NOT IDENT.
TL-208	-1.671E+00	3.370E+00	2.792E+00	1.719E+00	NOT IDENT.
PB-210	-1.348E+02	3.574E+02	2.959E+02	1.823E+02	NOT IDENT.
BI-211	6.203E+00	5.798E+02	1.755E+01	2.958E+02	NOT IDENT.
PB-211	5.681E+00	5.339E+02	4.836E+01	2.724E+02	NOT IDENT.
BI-212	-5.880E+00	3.657E+01	2.990E+01	1.866E+01	NOT IDENT.
PB-212	2.046E+00	6.445E+00	4.635E+00	3.288E+00	FAIL ABUN
BI-214	-2.762E+00	6.775E+00	5.268E+00	3.456E+00	NOT IDENT.
PB-214	2.941E+00	7.387E+00	6.373E+00	3.769E+00	NOT IDENT.
RN-219	-1.796E+00	1.712E+02	2.806E+01	8.734E+01	NOT IDENT.
RA-223	-1.760E+01	1.645E+03	4.634E+01	8.391E+02	NOT IDENT.
RA-224	-6.732E+01	5.963E+01	3.862E+01	3.042E+01	NOT IDENT.
AC-227	-1.499E+01	2.187E+01	1.743E+01	1.116E+01	NOT IDENT.
TH-227	-1.499E+01	1.400E+03	1.743E+01	7.145E+02	NOT IDENT.
AC-228	3.573E+00	1.163E+01	1.026E+01	5.933E+00	NOT IDENT.
RA-228	3.573E+00	1.163E+01	1.026E+01	5.933E+00	NOT IDENT.
TH-228	2.046E+00	6.445E+00	4.635E+00	3.288E+00	FAIL ABUN
TH-229	2.017E+01	4.501E+01	3.994E+01	2.296E+01	NOT IDENT.
PA-231	6.302E+00	1.164E+02	9.878E+01	5.941E+01	NOT IDENT.
TH-231	6.233E+00	4.143E+01	3.378E+01	2.114E+01	NOT IDENT.
PA-233	6.616E+00	5.305E+00	4.943E+00	2.707E+00	NOT IDENT.
PA-234	1.026E+01	2.070E+01	1.850E+01	1.056E+01	NOT IDENT.
PA-234M	1.078E+02	3.259E+02	2.928E+02	1.663E+02	NOT IDENT.
U-235	-2.757E+00	2.079E+01	1.653E+01	1.061E+01	FAIL ABUN
NP-237	6.616E+00	5.321E+00	4.943E+00	2.715E+00	NOT IDENT.
NP-239	-9.516E+00	2.512E+01	2.005E+01	1.282E+01	NOT IDENT.
AM-241	-4.226E+00	1.500E+01	1.101E+01	7.652E+00	NOT IDENT.
CM-247	-1.036E+00	3.119E+00	2.477E+00	1.591E+00	NOT IDENT.
CF-249	7.518E-02	3.296E+00	2.736E+00	1.682E+00	NOT IDENT.
CF-251	5.273E+00	1.127E+01	1.005E+01	5.752E+00	NOT IDENT.
ANH-511	-6.175E+00	4.471E+00	4.093E+00	2.281E+00	NOT IDENT.

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

ENERGY	MDA COUNTS
46.54	81.4386
49.72	67.0569
57.36	0.0000
59.54	74.1131
63.29	71.8502
63.29	71.8502
63.81	102.7686
64.28	102.8813
67.67	114.5450
67.75	114.5657
69.67	92.2451
70.83	83.5300
72.81	127.0324
72.87	127.0486
72.87	127.0486
74.82	105.3108
74.82	105.3108
74.82	105.3108
74.97	105.3445
77.11	96.7461
77.11	96.7461
77.11	96.7461
79.69	97.2578
79.69	97.2578
80.12	103.4262
80.19	91.2712
81.00	90.4042
81.07	90.4169
83.79	84.7760
84.21	84.8457
85.43	96.3184
86.55	112.9558
86.94	112.2182
87.57	111.1179
88.03	105.0365
88.47	85.0265
89.96	96.1167
91.11	97.8761
92.59	108.0091
92.59	108.0091
93.35	108.1593
94.56	103.1854
94.65	84.4380
94.67	84.4413
94.67	84.4413
97.43	78.5728
98.43	102.0099
98.43	102.0099
98.44	102.0118
99.53	105.1509
100.11	86.3109
103.18	83.5931
103.37	87.8540
105.31	108.3200
106.12	95.7060
109.28	113.3108
111.00	107.1971
111.76	95.5226
116.30	98.3769
116.74	99.5267
121.12	75.1522
121.78	92.6717
122.06	107.9814
123.07	128.9023
131.20	81.8130
133.52	87.6326
136.00	102.4125

136.47	108.0504
140.51	0.0000
140.51	0.0000
140.88	106.4730
143.76	102.3926
144.24	88.9481
145.44	91.3475
152.43	76.2610
153.25	78.6210
154.21	88.9870
156.02	97.1987
158.56	81.4531
159.00	88.3850
162.66	83.0259
163.33	95.7906
165.86	94.9318
176.60	102.0275
177.52	83.6469
181.07	0.0000
185.72	78.2186
186.21	78.2615
193.51	79.7980
205.31	91.7154
210.85	94.0746
222.11	70.2127
227.38	70.5791
228.16	63.1980
228.18	63.1990
235.69	64.4081
235.96	64.4249
235.96	64.4249
238.63	68.5316
238.63	68.5316
240.99	85.8082
242.00	69.3145
244.70	57.5929
252.40	64.6574
252.80	66.5836
256.23	74.4229
256.23	74.4229
260.90	0.0000
264.66	49.9886
268.22	54.0013
269.46	57.9208
271.23	55.1083
273.65	63.9425
276.40	54.3816
277.37	55.3988
277.60	57.3534
278.00	56.4008
279.20	46.7241
279.54	46.7373
283.69	52.7624
284.31	51.8120
285.41	51.8597
285.90	0.0000
287.50	54.8900
293.27	0.0000
295.22	67.0745
295.96	60.2051
299.98	62.3809
299.98	62.3809
300.09	62.3867
300.09	62.3867
300.13	60.4080
300.13	60.4080
301.36	61.4579
302.85	61.5317
304.50	61.6121
304.50	61.6121
304.85	62.6232
308.46	53.8294
311.90	36.9825
311.90	36.9825
316.51	72.2230
319.41	45.2396
320.08	54.3148
323.87	61.5333

328.76	68.8467
333.37	43.6850
334.37	55.9173
334.37	55.9173
338.28	39.7647
338.32	39.7659
338.32	39.7659
340.48	45.9558
340.48	45.9558
340.55	45.9586
344.28	43.0107
351.06	52.4817
351.93	50.4550
356.01	72.2868
364.49	40.5127
366.42	0.0000
383.85	43.1540
388.16	41.1661
388.63	32.7322
391.70	44.4359
400.66	39.3746
401.81	42.5989
402.40	44.7455
404.85	38.4137
414.70	39.7275
423.72	33.4730
427.09	31.3780
427.87	43.3008
433.94	22.8172
453.88	30.7869
463.37	48.6467
468.07	34.3665
473.00	30.0162
476.78	22.2818
477.60	11.1461
487.02	33.6150
492.35	0.0000
497.08	38.7593
511.00	34.5110
514.00	108.2469
527.90	0.0000
529.87	0.0000
531.02	30.2881
537.26	25.7817
546.56	0.0000
563.25	35.4515
569.33	37.4297
569.50	38.3684
569.70	38.3724
583.19	32.0311
600.60	46.5476
602.73	35.1834
604.72	39.0231
609.32	33.3842
610.33	35.3081
614.28	34.4171
618.01	26.8153
621.93	23.0256
621.93	23.0256
633.25	25.0739
635.95	19.3110
636.99	19.3198
645.85	28.1256
657.76	35.0982
661.66	28.3224
661.66	28.3224
664.57	0.0000
666.33	31.3156
666.50	31.3180
677.62	27.5352
685.70	26.6434
695.00	32.6922
696.49	35.6871
696.51	35.6871
697.00	34.7026
702.65	39.7539
706.68	20.9062
720.70	21.0272

721.93	0.0000
722.78	22.0473
722.91	22.0483
723.31	29.0680
724.19	31.0840
727.33	22.0881
733.00	19.1197
735.93	19.1424
739.50	0.0000
747.24	27.3250
753.82	24.3521
756.73	15.2377
763.94	27.5049
765.80	18.3502
766.42	17.3349
777.92	0.0000
778.90	18.4434
783.70	17.4507
785.37	23.6250
795.86	13.4062
801.95	15.5043
810.76	17.6296
815.77	20.7793
818.51	18.7203
832.01	26.1292
834.85	14.6474
836.80	0.0000
846.77	16.8121
856.80	17.9272
860.56	15.8394
871.09	32.8558
873.19	24.3948
875.33	0.0000
880.51	23.3943
883.24	14.9013
884.68	11.7141
889.28	15.9990
898.04	17.1172
911.20	11.8210
911.20	11.8210
926.36	19.4423
937.49	11.9254
944.13	16.2975
946.00	11.9587
949.00	13.0588
964.08	22.9652
968.97	15.3344
968.97	15.3344
983.53	11.0044
996.26	16.5729
1001.03	15.6757
1004.73	12.9245
1037.84	10.2592
1038.76	0.0000
1048.07	13.0977
1050.41	12.1706
1050.41	12.1706
1063.66	20.6787
1085.87	20.8148
1099.25	18.9966
1112.07	16.2073
1115.54	27.6748
1120.29	12.4229
1120.55	13.3796
1121.30	14.3384
1131.51	0.0000
1173.23	12.6091
1189.05	17.5342
1204.77	18.5872
1221.41	13.7573
1231.02	12.8075
1235.36	9.8629
1238.28	12.8318
1260.41	0.0000
1274.44	9.9638
1274.54	9.9642
1291.59	7.0054
1298.22	0.0000

1312.11	13.0778
1332.49	7.0778
1365.19	7.1347
1368.63	0.0000
1384.29	12.2876
1408.01	8.2383
1457.56	0.0000
1460.82	10.4252
1489.16	9.4435
1596.21	12.8906
1620.50	4.3190
1678.03	0.0000
1690.97	7.5126
1764.49	4.7648
1770.23	12.4024
1771.35	10.4967
1791.20	0.0000
1836.06	4.8308

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID     : 1048163                  SAMPLE ID  : G1202262533        *
*   ANALYST      : KXG3                     DETECTOR   : GAM12              *
*   SAMPLE DATE  :  2-NOV-2010 12:00:00.00  COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE: 26-NOV-2010 06:18:02.22  SAMPLE ALQT:    2.000 LITER     *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/LITER ) : 1.142E+01
GROSS GAMMA ERROR  (pCi/LITER )   : 3.165E+01
GROSS GAMMA MDA    (pCi/LITER )   : 2.097E+01
GROSS GAMMA DLC    (pCi/LITER )   : 9.722E+00
```

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 07:26:43.61

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262535.CNF;1
Sample date      : 12-NOV-2010 00:00:00 Acquisition date : 26-NOV-2010 06:26:06
Sample ID        : G1202262535          Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM08                Detector geometry: 2LMB
Elapsed live time: 0 01:00:00.00        Elapsed real time: 0 01:00:01.72  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.56	754	222	1.04	118.99	115	9	2.09E-01	5.2	
2	0	88.06*	273	224	0.89	176.01	171	10	7.59E-02	12.0	
3	0	92.46*	15	159	1.05	184.81	181	8	4.08E-03	161.2	
4	0	122.37	36	197	1.15	244.65	238	10	1.00E-02	74.6	
5	0	185.52*	18	95	1.20	370.98	368	7	5.11E-03	99.4	
6	0	238.32*	20	101	1.12	476.60	473	9	5.69E-03	99.0	
7	0	661.99	897	69	1.54	1324.12	1318	15	2.49E-01	3.9	
8	0	1173.76	708	10	2.05	2347.79	2341	16	1.97E-01	3.9	
9	0	1333.06	689	5	2.07	2666.42	2656	20	1.91E-01	3.9	

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

VMS Nuclide Identification Report V3.1 Generated 26-NOV-2010 07:26:45

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262535.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : KXG3
Sample date : 12-NOV-2010 00:00:00 Acquisition date : 26-NOV-2010 06:26:06
Sample ID : G1202262535 Sample quantity : 2.0000 LITER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA8 Detector geometry: 2LMB
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.72 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
CO-57	+	122.06	*	7.470E+00	1.116E+01	1.108E+01	1.020E+00	0.674
		136.47		-3.836E+01	5.570E+01	8.413E+01	7.903E+00	-0.456
CO-60	+	1173.23		4.637E+02	5.302E+01	1.645E+01	1.372E+00	28.183
	+	1332.49	*	4.993E+02	6.105E+01	9.131E+00	8.614E-01	54.677
CD-109	+	88.03	*	1.678E+03	4.450E+02	3.477E+02	3.964E+01	4.826
SN-126		64.28		-1.285E+02	1.922E+02	2.707E+02	4.454E+01	-0.475
	+	86.94		6.827E+02	3.302E+02	1.441E+02	6.051E+01	4.740
	+	87.57	*	1.642E+02	4.355E+01	3.429E+01	3.896E+00	4.790
BA-137M	+	661.66	*	4.053E+02	4.572E+01	1.492E+01	1.218E+00	27.156
CS-137	+	661.66	*	4.281E+02	4.835E+01	1.576E+01	1.290E+00	27.156
RA-226	+	186.21	*	9.299E+01	1.952E+02	2.636E+02	1.776E+02	0.353
AM-241	+	59.54	*	1.379E+03	2.105E+02	1.212E+02	1.357E+01	11.379

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7		477.60	*	3.627E+01	8.192E+01	1.423E+02	1.268E+01	0.255
NA-22		1274.54	*	-2.814E+00	6.807E+00	1.006E+01	9.102E-01	-0.280
NA-24		1368.63	*	4.021E+01	6.807E+00	Half-Life too short		
K-40		1460.82	*	4.355E+00	4.895E+01	8.932E+01	8.575E+00	0.049
SC-46		889.28	*	-8.113E-01	1.156E+01	1.927E+01	1.824E+00	-0.042
		1120.55		1.173E+01	1.200E+01	2.184E+01	1.897E+00	0.537
V-48		944.13		-9.312E+01	2.720E+02	4.399E+02	4.144E+01	-0.212
		983.53	*	-7.440E+00	1.867E+01	2.971E+01	2.767E+00	-0.250
		1312.11		2.586E+00	1.176E+01	2.009E+01	1.868E+00	0.129
CR-51		320.08	*	8.639E+01	8.872E+01	1.552E+02	1.483E+01	0.557
MN-54		834.85	*	-3.497E+00	9.219E+00	1.415E+01	1.300E+00	-0.247
CO-56		846.77	*	-2.584E+00	1.150E+01	1.805E+01	1.669E+00	-0.143
		1037.84		-7.104E+01	8.651E+01	1.299E+02	1.239E+01	-0.547
		1238.28		-1.664E+00	1.016E+01	1.594E+01	1.441E+00	-0.104
		1771.35		9.298E+00	3.444E+01	6.204E+01	5.297E+00	0.150
CO-58		810.76	*	1.291E-01	1.029E+01	1.664E+01	1.510E+00	0.008
FE-59		1099.25	*	-4.767E+00	2.754E+01	4.466E+01	4.240E+00	-0.107

Sample ID : G1202262535 Acquisition date : 26-NOV-2010 06:26:06

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		1291.59		-3.905E+00	1.786E+01	2.752E+01	2.824E+00	-0.142
ZN-65		1115.54	*	3.329E+00	2.317E+01	3.878E+01	3.383E+00	0.086
SE-75	+	121.12		3.894E+01	5.824E+01	6.502E+01	7.509E+00	0.599
		136.00		-5.955E+00	1.039E+01	1.583E+01	1.399E+00	-0.376
		264.66	*	-3.655E+00	1.167E+01	1.882E+01	1.775E+00	-0.194
		279.54		2.690E+00	2.689E+01	4.450E+01	4.369E+00	0.060
		400.66		3.132E+01	6.986E+01	1.162E+02	1.230E+01	0.270
SR-85		514.00	*	7.694E-01	1.098E+01	1.842E+01	1.525E+00	0.042
Y-88		898.04		2.060E+00	1.180E+01	2.009E+01	1.918E+00	0.103
		1836.06	*	4.817E+00	5.815E+00	1.188E+01	9.812E-01	0.406
Y-91		1204.77	*	-6.535E+02	3.967E+03	6.328E+03	5.416E+02	-0.103
NB-94		702.65	*	-4.689E-01	6.901E+00	1.117E+01	9.404E-01	-0.042
		871.09		-1.653E-01	1.086E+01	1.741E+01	1.632E+00	-0.009
NB-95		765.80	*	-2.958E+00	1.034E+01	1.623E+01	1.428E+00	-0.182
NB-95M		235.69	*	-2.148E+00	3.125E+01	4.529E+01	4.672E+00	-0.047
ZR-95		724.19		-7.783E+00	2.357E+01	3.706E+01	3.441E+00	-0.210
		756.73	*	-8.116E+00	1.757E+01	2.692E+01	2.594E+00	-0.301
MO-99		140.51		1.321E+03	4.781E+03	7.706E+03	1.832E+03	0.171
		181.07		-3.500E+03	3.978E+03	5.385E+03	1.010E+03	-0.650
		366.42		1.935E+04	2.065E+04	3.584E+04	3.017E+03	0.540
		739.50	*	-4.509E+02	2.302E+03	3.651E+03	5.758E+02	-0.123
		777.92		-2.593E+03	7.354E+03	1.141E+04	1.012E+03	-0.227
TC-99M		140.51	*	2.565E+11	7.354E+03	Half-Life too short		
RU-103		497.08	*	-1.916E+00	9.800E+00	1.611E+01	2.214E+00	-0.119
		610.33		9.774E+01	1.800E+02	3.129E+02	5.058E+01	0.312
RH-106		621.93	*	-3.785E+01	7.062E+01	1.088E+02	1.417E+01	-0.348
		1050.41		1.731E+02	7.352E+02	1.246E+03	1.128E+02	0.139
RU-106		621.93	*	-3.785E+01	7.052E+01	1.088E+02	8.979E+00	-0.348
		1050.41		1.731E+02	7.352E+02	1.246E+03	1.128E+02	0.139
AG-108M		433.94	*	1.163E+00	8.137E+00	1.316E+01	1.104E+00	0.088
		614.28		-5.550E+00	9.001E+00	1.393E+01	1.193E+00	-0.398
		722.91		-3.582E+00	9.390E+00	1.466E+01	1.293E+00	-0.244
AG-110M		657.76	*	4.401E+00	1.040E+01	1.563E+01	1.320E+00	0.282
		677.62		-8.001E+01	6.975E+01	9.675E+01	8.247E+00	-0.827
		706.68		-7.242E+00	4.570E+01	7.309E+01	6.358E+00	-0.099
		763.94		2.194E+01	3.790E+01	6.540E+01	5.900E+00	0.335
		884.68		7.657E-01	1.427E+01	2.407E+01	2.334E+00	0.032
		937.49		-2.007E+00	3.511E+01	5.836E+01	5.673E+00	-0.034
		1384.29		7.161E+00	2.606E+01	4.500E+01	4.339E+00	0.159
SN-113		391.70	*	-9.763E+00	1.205E+01	1.795E+01	1.473E+00	-0.544
CD-115		260.90		1.598E+04	2.719E+04	4.659E+04	4.361E+03	0.343
		492.35		-5.115E+01	7.655E+03	1.281E+04	1.056E+03	-0.004
		527.90	*	-4.049E+02	2.001E+03	3.266E+03	2.709E+02	-0.124
SN-117M		156.02		1.510E+02	5.007E+02	8.640E+02	7.335E+01	0.175
		158.56	*	-7.830E+00	1.264E+01	2.062E+01	1.746E+00	-0.380
TE-123M		159.00	*	-3.454E+00	6.875E+00	1.130E+01	9.626E-01	-0.306
SB-124		602.73		1.094E+00	8.555E+00	1.431E+01	1.185E+00	0.076
		645.85		-4.184E+00	1.056E+02	1.726E+02	1.506E+01	-0.024
		722.78		-3.192E+01	9.375E+01	1.471E+02	1.286E+01	-0.217

Sample ID : G1202262535 Acquisition date : 26-NOV-2010 06:26:06

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		1690.97	*	-1.184E+01	1.546E+01	1.964E+01	1.807E+00	-0.603
SB-125		427.87	*	-1.282E+01	2.546E+01	3.879E+01	3.198E+00	-0.330
		463.37		-1.977E+01	7.355E+01	1.211E+02	1.074E+01	-0.163
		600.60		-4.780E+00	4.262E+01	6.960E+01	6.226E+00	-0.069
		635.95		8.028E+01	6.886E+01	1.254E+02	1.124E+01	0.640
TE-125M		109.28	*	-1.120E+03	2.541E+03	3.955E+03	4.419E+02	-0.283
I-126		388.63		4.016E+01	4.303E+01	7.435E+01	5.935E+00	0.540
		666.33	*	4.272E+01	5.031E+01	8.132E+01	6.663E+00	0.525
		753.82		-1.120E+02	3.975E+02	6.224E+02	5.433E+01	-0.180
SB-126		414.70		5.681E+00	1.875E+01	3.084E+01	2.474E+00	0.184
		666.50		1.309E+01	1.706E+01	2.730E+01	2.237E+00	0.479
		695.00		-2.066E-01	1.717E+01	2.802E+01	2.346E+00	-0.007
		697.00		-5.616E+01	5.843E+01	8.398E+01	7.043E+00	-0.669
		720.70	*	-9.966E+00	3.400E+01	5.357E+01	4.570E+00	-0.186
		856.80		3.292E+01	1.199E+02	1.987E+02	1.848E+01	0.166
SB-127		252.40		-8.352E+02	1.048E+03	1.543E+03	6.421E+02	-0.541
		473.00		-1.634E+02	3.744E+02	6.056E+02	7.428E+01	-0.270
		685.70	*	-1.432E+02	2.745E+02	4.216E+02	4.590E+01	-0.340
		783.70		4.284E+02	7.542E+02	1.294E+03	1.595E+02	0.331
I-131		80.19		-3.814E+02	1.228E+03	1.963E+03	2.148E+02	-0.194
		284.31		-2.109E+02	3.531E+02	5.528E+02	5.463E+01	-0.381
		364.49	*	-8.751E+00	2.814E+01	4.422E+01	3.944E+00	-0.198
		636.99		1.178E+02	3.819E+02	6.466E+02	5.647E+01	0.182
TE-132		49.72		2.750E+03	9.793E+03	1.647E+04	2.318E+03	0.167
		111.76		-5.018E+02	7.198E+03	1.150E+04	1.308E+03	-0.044
		116.30		-8.304E+01	7.335E+03	1.045E+04	1.179E+03	-0.008
		228.16	*	-1.552E+01	1.554E+02	2.569E+02	4.079E+01	-0.060
BA-133		81.00		8.268E+00	2.656E+01	4.399E+01	7.442E+00	0.188
		276.40		-8.425E+01	8.773E+01	1.324E+02	1.942E+01	-0.636
		302.85		-2.214E+01	3.388E+01	5.227E+01	7.075E+00	-0.424
		356.01	*	4.477E+00	9.921E+00	1.668E+01	2.158E+00	0.268
		383.85		-6.934E+00	7.743E+01	1.237E+02	1.491E+01	-0.056
I-133		529.87	*	-1.254E-01	7.743E+01	Half-Life too short		
		875.33		-8.138E+00	7.743E+01	Half-Life too short		
		1298.22		-1.823E+01	7.743E+01	Half-Life too short		
CS-134		563.25		-1.933E+01	8.641E+01	1.402E+02	1.176E+01	-0.138
		569.33		-1.707E+01	4.579E+01	7.295E+01	6.148E+00	-0.234
		604.72		-6.590E+00	7.665E+00	1.147E+01	9.517E-01	-0.575
		795.86	*	2.894E+00	1.222E+01	2.025E+01	1.829E+00	0.143
		801.95		2.596E-01	1.051E+02	1.698E+02	1.537E+01	0.002
		1365.19		-2.680E+02	2.315E+02	2.559E+02	2.508E+01	-1.047
CS-135		268.22	*	2.359E+01	3.875E+01	6.639E+01	7.085E+00	0.355
I-135		546.56		-1.737E+11	3.875E+01	Half-Life too short		
		836.80		-2.554E+11	3.875E+01	Half-Life too short		
		1038.76		-4.317E+11	3.875E+01	Half-Life too short		
		1131.51		1.519E+11	3.875E+01	Half-Life too short		
		1260.41	*	5.816E+08	3.875E+01	Half-Life too short		
		1457.56		-1.079E+11	3.875E+01	Half-Life too short		
		1678.03		-2.047E+11	3.875E+01	Half-Life too short		

Sample ID : G1202262535 Acquisition date : 26-NOV-2010 06:26:06

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		1791.20		-1.084E+11	3.875E+01	Half-Life too short		
CS-136		153.25		-1.460E+01	1.885E+02	3.185E+02	3.242E+01	-0.046
		176.60		1.782E+01	1.169E+02	1.987E+02	1.867E+01	0.090
		273.65		-7.021E+01	1.180E+02	1.853E+02	1.879E+01	-0.379
		340.55		1.727E+00	3.351E+01	5.461E+01	5.004E+00	0.032
		818.51		-4.817E+00	1.934E+01	3.029E+01	2.757E+00	-0.159
		1048.07	*	-5.013E+00	2.988E+01	4.862E+01	4.575E+00	-0.103
		1235.36		2.003E+01	6.673E+01	1.160E+02	1.378E+01	0.173
CE-139		165.86	*	-9.252E+00	7.377E+00	1.148E+01	9.669E-01	-0.806
BA-140		162.66		2.406E+02	1.926E+02	3.461E+02	3.125E+01	0.695
		304.85		3.777E+01	3.103E+02	5.118E+02	1.509E+02	0.074
		423.72		1.804E+02	4.744E+02	7.801E+02	2.555E+02	0.231
		537.26	*	2.282E+01	6.076E+01	1.040E+02	3.517E+01	0.220
LA-140		328.76		-1.196E+01	6.945E+01	1.114E+02	1.056E+01	-0.107
		487.02		-3.248E+00	3.382E+01	5.620E+01	4.942E+00	-0.058
		815.77		2.818E+01	8.015E+01	1.346E+02	1.352E+01	0.209
		1596.21	*	6.808E+00	1.438E+01	2.652E+01	2.422E+00	0.257
CE-141		145.44	*	1.300E-01	1.648E+01	2.612E+01	2.290E+00	0.005
CE-143		57.36		7.752E-01	1.648E+01	Half-Life too short		
		293.27	*	1.896E-02	1.648E+01	Half-Life too short		
		664.57		4.060E+00	1.648E+01	Half-Life too short		
		721.93		-1.154E-01	1.648E+01	Half-Life too short		
CE-144		80.12		-2.417E+02	7.134E+02	1.139E+03	1.241E+02	-0.212
		133.52	*	1.141E+01	5.300E+01	8.548E+01	1.317E+01	0.133
PM-144		476.78		-3.451E+00	1.696E+01	2.797E+01	2.516E+00	-0.123
		618.01		-3.920E+00	7.619E+00	1.185E+01	1.008E+00	-0.331
		696.49	*	-9.822E+00	7.908E+00	1.087E+01	9.117E-01	-0.903
PR-144		696.51	*	-7.373E+02	5.913E+02	8.121E+02	6.809E+01	-0.908
		1489.16		-1.293E+03	1.829E+03	2.325E+03	2.172E+02	-0.556
PM-146		453.88	*	-4.919E+00	1.181E+01	1.924E+01	1.966E+00	-0.256
		633.25		-9.539E+00	3.793E+02	6.225E+02	2.372E+02	-0.015
		735.93		-2.706E+01	3.694E+01	5.357E+01	1.501E+01	-0.505
		747.24		1.852E-01	2.384E+01	3.877E+01	5.671E+00	0.005
ND-147	+	91.11		2.695E+01	8.698E+01	1.132E+02	1.300E+01	0.238
		319.41		4.543E+02	7.757E+02	1.322E+03	1.208E+02	0.344
		531.02	*	1.063E+02	1.229E+02	2.202E+02	3.252E+01	0.483
PM-149		285.90	*	4.453E+03	1.791E+04	2.989E+04	4.791E+03	0.149
EU-152	+	121.78		2.155E+01	3.221E+01	3.628E+01	3.779E+00	0.594
		244.70		1.803E+01	8.897E+01	1.444E+02	1.329E+01	0.125
		344.28	*	-1.892E+01	2.512E+01	3.806E+01	3.535E+00	-0.497
		778.90		-1.677E+01	6.320E+01	9.902E+01	8.787E+00	-0.169
		964.08		-1.045E+01	7.684E+01	1.265E+02	1.185E+01	-0.083
		1085.87		1.564E+01	1.017E+02	1.709E+02	1.518E+01	0.091
		1112.07		1.339E+01	8.130E+01	1.364E+02	1.192E+01	0.098
		1408.01		3.188E+01	2.402E+01	5.249E+01	4.945E+00	0.607
GD-153		69.67		2.586E+02	5.554E+02	9.337E+02	9.951E+01	0.277
		97.43	*	2.614E+00	2.330E+01	3.792E+01	3.861E+00	0.069
		103.18		-2.406E+01	3.069E+01	4.673E+01	4.556E+00	-0.515
EU-154	+	123.07		1.523E+01	2.279E+01	2.506E+01	2.949E+00	0.608

Sample ID : G1202262535 Acquisition date : 26-NOV-2010 06:26:06

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		723.31		-4.369E+01	4.455E+01	6.464E+01	6.094E+00	-0.676
		873.19		-8.676E+01	8.841E+01	1.254E+02	1.563E+01	-0.692
		996.26		-9.517E+00	1.054E+02	1.738E+02	3.093E+01	-0.055
		1004.73		-2.459E+01	5.398E+01	8.480E+01	1.026E+01	-0.290
		1274.44	*	-4.467E+00	1.914E+01	2.958E+01	3.461E+00	-0.151
EU-155		86.55		1.141E+02	3.710E+01	6.085E+01	6.910E+00	1.875
		105.31	*	2.329E+00	2.831E+01	4.582E+01	4.454E+00	0.051
TA-182		67.75		-1.809E+01	3.656E+01	5.814E+01	6.199E+00	-0.311
		100.11		1.856E+00	4.940E+01	7.992E+01	7.958E+00	0.023
		152.43		-2.437E+01	8.869E+01	1.373E+02	1.171E+01	-0.177
		222.11		2.543E+01	9.333E+01	1.579E+02	1.415E+01	0.161
		1121.30		2.682E+01	3.261E+01	5.861E+01	5.088E+00	0.458
		1189.05		-8.395E+00	5.515E+01	8.813E+01	7.447E+00	-0.095
		1221.41	*	1.075E+01	3.112E+01	5.393E+01	4.678E+00	0.199
		1231.02		-2.185E+01	6.786E+01	1.037E+02	9.065E+00	-0.211
IR-192		295.96		-7.056E+00	2.660E+01	4.265E+01	4.027E+00	-0.165
		308.46		-4.722E+00	2.469E+01	3.972E+01	3.695E+00	-0.119
		316.51	*	-5.029E+00	8.700E+00	1.349E+01	1.240E+00	-0.373
		468.07		9.335E+00	1.823E+01	3.176E+01	2.812E+00	0.294
HG-203		70.83		4.978E+02	4.137E+02	7.099E+02	1.224E+02	0.701
		72.87		-1.329E+02	2.293E+02	3.606E+02	6.045E+01	-0.369
		279.20	*	5.723E-01	9.294E+00	1.534E+01	1.492E+00	0.037
BI-207		72.81		-4.258E+01	5.415E+01	8.417E+01	8.987E+00	-0.506
		74.97		-3.953E+00	3.056E+01	5.007E+01	5.366E+00	-0.079
		569.70		-2.485E+00	6.984E+00	1.114E+01	9.251E-01	-0.223
		1063.66	*	3.277E+00	1.378E+01	2.340E+01	2.104E+00	0.140
		1770.23		-1.208E+01	7.492E+01	1.166E+02	9.960E+00	-0.104
TL-208		277.37		-3.067E+01	9.466E+01	1.518E+02	1.996E+01	-0.202
		583.19	*	-9.999E+00	8.430E+00	1.304E+01	1.164E+00	-0.767
		860.56		-1.544E+01	7.729E+01	1.226E+02	1.214E+01	-0.126
PB-210		46.54	*	-1.638E+03	2.259E+03	3.608E+03	4.477E+02	-0.454
BI-211		72.87		-5.413E+02	3.099E+04	1.469E+03	8.404E+04	-0.369
		351.06	*	-5.301E+01	3.033E+03	7.755E+01	4.437E+03	-0.684
PB-211		404.85	*	5.216E+01	2.991E+03	3.207E+02	1.835E+04	0.163
		427.09		-2.330E+02	1.334E+04	6.344E+02	3.630E+04	-0.367
		832.01		-3.363E+01	1.943E+03	4.227E+02	2.419E+04	-0.080
BI-212		727.33	*	7.164E+01	1.379E+02	2.405E+02	2.989E+01	0.298
		785.37		-4.556E+02	7.954E+02	1.198E+03	1.068E+02	-0.380
		1620.50		1.810E+02	4.041E+02	7.470E+02	6.771E+01	0.242
PB-212		74.82		-2.031E+01	1.084E+02	1.770E+02	2.562E+01	-0.115
		77.11		-3.475E+01	6.175E+01	9.865E+01	1.063E+01	-0.352
	+	238.63	*	9.804E+00	1.943E+01	2.813E+01	2.877E+00	0.348
		300.09		-1.328E+01	1.922E+02	3.113E+02	3.467E+01	-0.043
BI-214		609.32	*	1.201E+01	1.788E+01	3.144E+01	3.085E+00	0.382
		1120.29		6.767E+01	7.131E+01	1.293E+02	1.418E+01	0.524
		1764.49		5.805E+00	3.358E+01	5.840E+01	5.003E+00	0.099
PB-214		74.82		-3.550E+01	1.895E+02	3.094E+02	4.124E+01	-0.115
		77.11		-6.041E+01	1.074E+02	1.715E+02	2.327E+01	-0.352
		242.00		-8.110E+01	1.014E+02	1.363E+02	1.479E+01	-0.595

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		295.22		3.403E+01	3.600E+01	6.240E+01	7.133E+00	0.545
		351.93	*	-1.283E+01	1.789E+01	2.778E+01	2.957E+00	-0.462
RN-219		271.23		9.831E+00	5.653E+02	9.436E+01	5.399E+03	0.104
		401.81	*	7.366E+00	4.367E+02	1.841E+02	1.054E+04	0.040
RA-223		81.07		1.803E+01	1.033E+03	9.958E+01	5.698E+03	0.181
		83.79		-1.446E+01	8.283E+02	5.587E+01	3.197E+03	-0.259
		94.56		-2.868E+01	1.644E+03	1.261E+02	7.214E+03	-0.228
		144.24		-1.041E+02	5.957E+03	2.766E+02	1.583E+04	-0.376
		154.21		-8.353E+00	4.862E+02	1.510E+02	8.639E+03	-0.055
		269.46		-1.243E+01	7.127E+02	7.346E+01	4.203E+03	-0.169
		323.87	*	-1.739E+01	1.009E+03	2.688E+02	1.538E+04	-0.065
		338.28		-1.351E+01	8.104E+02	3.934E+02	2.251E+04	-0.034
RA-224		240.99	*	-2.644E+01	1.770E+02	2.543E+02	2.330E+01	-0.104
AC-227		79.69		-3.071E+02	3.682E+02	5.637E+02	1.041E+02	-0.545
		235.96		9.225E-01	3.823E+01	5.590E+01	6.013E+00	0.017
		256.23	*	6.560E-01	6.465E+01	1.069E+02	1.342E+01	0.006
		299.98		-5.750E+00	2.093E+02	3.401E+02	4.492E+01	-0.017
		304.50		-3.722E+01	3.980E+02	6.457E+02	1.091E+02	-0.058
		334.37		-3.850E+02	4.374E+02	6.524E+02	1.028E+02	-0.590
TH-227		79.69		-3.071E+02	1.758E+04	5.637E+02	3.225E+04	-0.545
		235.96		9.225E-01	6.517E+01	5.590E+01	3.199E+03	0.017
		256.23	*	6.560E-01	7.476E+01	1.069E+02	6.115E+03	0.006
		299.98		-5.750E+00	3.899E+02	3.401E+02	1.946E+04	-0.017
		304.50		-3.722E+01	2.166E+03	6.457E+02	3.695E+04	-0.058
		334.37		-3.850E+02	2.203E+04	6.524E+02	3.733E+04	-0.590
AC-228		338.32		-3.420E+00	6.155E+01	9.948E+01	4.155E+01	-0.034
		911.20	*	1.005E+01	4.054E+01	6.940E+01	8.503E+00	0.145
		968.97		5.616E+01	7.199E+01	1.263E+02	3.110E+01	0.445
RA-228		338.32		-3.420E+00	6.155E+01	9.948E+01	4.155E+01	-0.034
		911.20	*	1.005E+01	4.054E+01	6.940E+01	8.503E+00	0.145
		968.97		5.616E+01	7.199E+01	1.263E+02	3.110E+01	0.445
TH-228		74.82		-2.031E+01	1.084E+02	1.770E+02	1.908E+01	-0.115
		77.11		-3.475E+01	6.175E+01	9.865E+01	1.063E+01	-0.352
	+	238.63	*	9.804E+00	1.943E+01	2.813E+01	2.877E+00	0.348
		300.09		-1.328E+01	1.924E+02	3.113E+02	1.909E+02	-0.043
TH-229		85.43		-1.440E+01	6.375E+01	9.162E+01	1.027E+01	-0.157
	+	88.47		2.532E+02	6.714E+01	8.735E+01	9.891E+00	2.899
		193.51	*	-4.486E+01	1.386E+02	2.283E+02	1.976E+01	-0.196
		210.85		-5.842E+01	2.181E+02	3.584E+02	3.169E+01	-0.163
TH-230		67.67	*	-1.772E+03	3.650E+03	5.808E+03	6.194E+02	-0.305
PA-231		283.69	*	-1.772E+02	3.770E+02	5.962E+02	9.012E+01	-0.297
		301.36		2.360E+01	1.149E+02	1.899E+02	2.271E+01	0.124
TH-231		84.21	*	-7.023E+01	1.461E+02	2.050E+02	3.853E+01	-0.343
TH-232		63.81	*	-9.394E+03	7.264E+04	9.863E+03	7.587E+04	-0.953
		140.88		2.564E+03	2.937E+04	4.686E+04	4.069E+03	0.055
PA-233		94.65		-2.797E+01	7.340E+01	1.024E+02	1.082E+01	-0.273
		98.43		-8.023E+00	3.838E+01	6.113E+01	6.409E+00	-0.131
		300.13		-7.945E+00	9.423E+01	1.524E+02	2.326E+01	-0.052
		311.90	*	-1.762E+00	1.661E+01	2.688E+01	2.541E+00	-0.066

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
		340.48		6.905E+00	1.496E+02	2.438E+02	5.887E+01	0.028
PA-234		94.67		-1.948E+01	4.936E+01	6.871E+01	9.445E+00	-0.283
		98.44		-5.429E+00	2.570E+01	4.065E+01	2.278E+01	-0.134
		111.00		-7.851E+00	4.833E+01	7.673E+01	9.709E+00	-0.102
		131.20		1.382E+01	2.884E+01	4.728E+01	4.205E+00	0.292
		569.50		-2.579E+01	6.293E+01	9.984E+01	8.291E+00	-0.258
		733.00		-2.684E+01	9.947E+01	1.569E+02	3.482E+01	-0.171
		880.51		1.545E+01	7.995E+01	1.367E+02	1.287E+01	0.113
		883.24		-8.546E+00	8.415E+01	1.395E+02	9.396E+01	-0.061
		926.36		-4.041E+00	5.216E+01	8.656E+01	2.214E+01	-0.047
		946.00	*	-1.314E+01	9.796E+01	1.616E+02	3.093E+01	-0.081
		949.00		1.235E+02	1.390E+02	2.491E+02	2.344E+01	0.496
PA-234M		766.42		-1.200E+02	2.573E+03	4.148E+03	2.106E+03	-0.029
		1001.03	*	-2.364E+02	1.237E+03	2.049E+03	2.155E+02	-0.115
TH-234		63.29	*	-3.485E+02	5.035E+02	7.054E+02	1.371E+02	-0.494
	+	92.59		7.214E+01	2.332E+02	3.092E+02	7.104E+01	0.233
U-235		89.96		4.218E+02	3.281E+02	4.094E+02	1.047E+02	1.030
	+	93.35		5.449E+01	1.762E+02	2.310E+02	5.523E+01	0.236
		143.76	*	-3.285E+01	5.511E+01	8.412E+01	1.427E+01	-0.391
		163.33		1.192E+02	1.090E+02	1.920E+02	3.430E+01	0.621
	+	185.72		5.836E+00	1.161E+01	1.828E+01	1.568E+00	0.319
		205.31		1.145E+02	1.221E+02	2.122E+02	3.868E+01	0.539
NP-237		94.67		-1.948E+01	4.933E+01	6.871E+01	7.188E+00	-0.283
		98.43		-8.023E+00	3.838E+01	6.113E+01	6.169E+00	-0.131
		300.13		-7.945E+00	9.423E+01	1.524E+02	1.983E+01	-0.052
		311.90	*	-1.762E+00	1.661E+01	2.688E+01	3.072E+00	-0.066
		340.48		6.905E+00	1.496E+02	2.438E+02	2.156E+01	0.028
U-238		63.29	*	-3.485E+02	5.035E+02	7.054E+02	1.371E+02	-0.494
	+	92.59		7.214E+01	2.328E+02	3.092E+02	3.311E+01	0.233
NP-239		99.53		-4.050E+00	4.568E+01	7.331E+01	7.333E+00	-0.055
		103.37		-1.240E+01	2.769E+01	4.324E+01	4.211E+00	-0.287
		106.12		5.496E+00	2.271E+01	3.712E+01	3.560E+00	0.148
		116.74	*	-2.195E+01	8.385E+01	1.168E+02	1.081E+01	-0.188
		228.18		-6.686E-01	5.525E+01	9.180E+01	8.289E+00	-0.007
		277.60		-1.024E+01	4.292E+01	6.930E+01	6.590E+00	-0.148
CM-247		278.00		-9.801E+00	1.810E+02	2.964E+02	2.820E+01	-0.033
		287.50		1.148E+02	3.140E+02	5.285E+02	4.999E+01	0.217
		402.40	*	-1.648E+00	1.056E+01	1.673E+01	1.333E+00	-0.099
CF-249		252.80		-9.805E+01	2.509E+02	4.035E+02	3.746E+01	-0.243
		333.37		-8.208E+00	4.373E+01	6.996E+01	6.261E+00	-0.117
		388.16	*	1.078E+01	1.077E+01	1.869E+01	1.494E+00	0.577
CF-251		177.52	*	4.096E+00	3.209E+01	5.448E+01	4.633E+00	0.075
		227.38		1.033E+01	9.103E+01	1.525E+02	1.375E+01	0.068
		285.41		4.065E+01	5.643E+02	9.309E+02	8.821E+01	0.044
ANH-511		511.00	*	7.002E-01	9.738E+00	1.837E+01	1.520E+00	0.038

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262535      *
* Acquisition date : 26-NOV-2010 06:26:06 Detector SN#    :                 *
* Detector ID      : GAM08                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 01:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 01:00:01.72     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-NOV-2010 00:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G1202262535          Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 20-SEP-2010 11:25:28 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	
CO-57	7.470E+00	1.094E+01	1.108E+01	0.000E+00
CO-60	4.993E+02	5.983E+01	9.131E+00	0.000E+00
CD-109	1.678E+03	4.361E+02	3.477E+02	0.000E+00
SN-126	1.642E+02	4.268E+01	3.429E+01	0.000E+00
BA-137M	4.053E+02	4.481E+01	1.492E+01	0.000E+00
CS-137	4.281E+02	4.739E+01	1.576E+01	0.000E+00
RA-226	9.299E+01	1.913E+02	2.636E+02	0.000E+00
AM-241	1.379E+03	2.062E+02	1.212E+02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)		
BE-7	3.627E+01		8.028E+01	1.423E+02	0.000E+00	NOT IDENT.
NA-22	-2.814E+00		6.671E+00	1.006E+01	0.000E+00	NOT IDENT.
NA-24	0.000E+00		4.410E+07	0.000E+00	0.000E+00	SHORT HLIF
K-40	4.355E+00		4.797E+01	8.932E+01	0.000E+00	NOT IDENT.
SC-46	-8.113E-01		1.133E+01	1.927E+01	0.000E+00	NOT IDENT.
V-48	-7.440E+00		1.830E+01	2.971E+01	0.000E+00	NOT IDENT.
CR-51	8.639E+01		8.695E+01	1.552E+02	0.000E+00	NOT IDENT.
MN-54	-3.497E+00		9.034E+00	1.415E+01	0.000E+00	NOT IDENT.
CO-56	-2.584E+00		1.127E+01	1.805E+01	0.000E+00	NOT IDENT.
CO-58	1.291E-01		1.009E+01	1.664E+01	0.000E+00	NOT IDENT.
FE-59	-4.767E+00		2.699E+01	4.466E+01	0.000E+00	NOT IDENT.
ZN-65	3.329E+00		2.271E+01	3.878E+01	0.000E+00	NOT IDENT.
SE-75	-3.655E+00		1.144E+01	1.882E+01	0.000E+00	FAIL ABUN
SR-85	7.694E-01		1.076E+01	1.842E+01	0.000E+00	NOT IDENT.
Y-88	4.817E+00		5.698E+00	1.188E+01	0.000E+00	NOT IDENT.
Y-91	-6.535E+02		3.888E+03	6.328E+03	0.000E+00	NOT IDENT.
NB-94	-4.689E-01		6.763E+00	1.117E+01	0.000E+00	NOT IDENT.
NB-95	-2.958E+00		1.013E+01	1.623E+01	0.000E+00	NOT IDENT.
NB-95M	-2.148E+00		3.062E+01	4.529E+01	0.000E+00	NOT IDENT.

ZR-95	-8.116E+00	1.722E+01	2.692E+01	0.000E+00	NOT IDENT.
MO-99	-4.509E+02	2.256E+03	3.651E+03	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	9.103E+17	0.000E+00	0.000E+00	SHORT HLIF
RU-103	-1.916E+00	9.604E+00	1.611E+01	0.000E+00	NOT IDENT.
RH-106	-3.785E+01	6.921E+01	1.088E+02	0.000E+00	NOT IDENT.
RU-106	-3.785E+01	6.911E+01	1.088E+02	0.000E+00	NOT IDENT.
AG-108M	1.163E+00	7.974E+00	1.316E+01	0.000E+00	NOT IDENT.
AG-110M	4.401E+00	1.019E+01	1.563E+01	0.000E+00	NOT IDENT.
SN-113	-9.763E+00	1.181E+01	1.795E+01	0.000E+00	NOT IDENT.
CD-115	-4.049E+02	1.961E+03	3.266E+03	0.000E+00	NOT IDENT.
SN-117M	-7.830E+00	1.239E+01	2.062E+01	0.000E+00	NOT IDENT.
TE-123M	-3.454E+00	6.738E+00	1.130E+01	0.000E+00	NOT IDENT.
SB-124	-1.184E+01	1.515E+01	1.964E+01	0.000E+00	NOT IDENT.
SB-125	-1.282E+01	2.495E+01	3.879E+01	0.000E+00	NOT IDENT.
TE-125M	-1.120E+03	2.490E+03	3.955E+03	0.000E+00	NOT IDENT.
I-126	4.272E+01	4.930E+01	8.132E+01	0.000E+00	NOT IDENT.
SB-126	-9.966E+00	3.332E+01	5.357E+01	0.000E+00	NOT IDENT.
SB-127	-1.432E+02	2.691E+02	4.216E+02	0.000E+00	NOT IDENT.
I-131	-8.751E+00	2.758E+01	4.422E+01	0.000E+00	NOT IDENT.
TE-132	-1.552E+01	1.523E+02	2.569E+02	0.000E+00	NOT IDENT.
BA-133	4.477E+00	9.722E+00	1.668E+01	0.000E+00	NOT IDENT.
I-133	0.000E+00	6.919E+05	0.000E+00	0.000E+00	SHORT HLIF
CS-134	2.894E+00	1.197E+01	2.025E+01	0.000E+00	NOT IDENT.
CS-135	2.359E+01	3.797E+01	6.639E+01	0.000E+00	NOT IDENT.
I-135	0.000E+00	9.999E+16	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.013E+00	2.928E+01	4.862E+01	0.000E+00	NOT IDENT.
CE-139	-9.252E+00	7.230E+00	1.148E+01	0.000E+00	NOT IDENT.
BA-140	2.282E+01	5.954E+01	1.040E+02	0.000E+00	NOT IDENT.
LA-140	6.808E+00	1.409E+01	2.652E+01	0.000E+00	NOT IDENT.
CE-141	1.300E-01	1.615E+01	2.612E+01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.019E+04	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.141E+01	5.194E+01	8.548E+01	0.000E+00	NOT IDENT.
PM-144	-9.822E+00	7.750E+00	1.087E+01	0.000E+00	NOT IDENT.
PR-144	-7.373E+02	5.795E+02	8.121E+02	0.000E+00	NOT IDENT.
PM-146	-4.919E+00	1.157E+01	1.924E+01	0.000E+00	NOT IDENT.
ND-147	1.063E+02	1.205E+02	2.202E+02	0.000E+00	FAIL ABUN
PM-149	4.453E+03	1.755E+04	2.989E+04	0.000E+00	NOT IDENT.
EU-152	-1.892E+01	2.462E+01	3.806E+01	0.000E+00	FAIL ABUN
GD-153	2.614E+00	2.284E+01	3.792E+01	0.000E+00	NOT IDENT.
EU-154	-4.467E+00	1.876E+01	2.958E+01	0.000E+00	FAIL ABUN
EU-155	2.329E+00	2.774E+01	4.582E+01	0.000E+00	NOT IDENT.
TA-182	1.075E+01	3.050E+01	5.393E+01	0.000E+00	NOT IDENT.
IR-192	-5.029E+00	8.526E+00	1.349E+01	0.000E+00	NOT IDENT.
HG-203	5.723E-01	9.108E+00	1.534E+01	0.000E+00	NOT IDENT.
BI-207	3.277E+00	1.350E+01	2.340E+01	0.000E+00	NOT IDENT.
TL-208	-9.999E+00	8.261E+00	1.304E+01	0.000E+00	NOT IDENT.
PB-210	-1.638E+03	2.213E+03	3.608E+03	0.000E+00	NOT IDENT.
BI-211	-5.301E+01	2.973E+03	7.755E+01	0.000E+00	NOT IDENT.
PB-211	5.216E+01	2.931E+03	3.207E+02	0.000E+00	NOT IDENT.
BI-212	7.164E+01	1.352E+02	2.405E+02	0.000E+00	NOT IDENT.
PB-212	9.804E+00	1.904E+01	2.813E+01	0.000E+00	FAIL ABUN
BI-214	1.201E+01	1.752E+01	3.144E+01	0.000E+00	NOT IDENT.
PB-214	-1.283E+01	1.753E+01	2.778E+01	0.000E+00	NOT IDENT.
RN-219	7.366E+00	4.279E+02	1.841E+02	0.000E+00	NOT IDENT.
RA-223	-1.739E+01	9.888E+02	2.688E+02	0.000E+00	NOT IDENT.
RA-224	-2.644E+01	1.734E+02	2.543E+02	0.000E+00	NOT IDENT.
AC-227	6.560E-01	6.335E+01	1.069E+02	0.000E+00	NOT IDENT.
TH-227	6.560E-01	7.326E+01	1.069E+02	0.000E+00	NOT IDENT.
AC-228	1.005E+01	3.973E+01	6.940E+01	0.000E+00	NOT IDENT.
RA-228	1.005E+01	3.973E+01	6.940E+01	0.000E+00	NOT IDENT.
TH-228	9.804E+00	1.904E+01	2.813E+01	0.000E+00	FAIL ABUN
TH-229	-4.486E+01	1.359E+02	2.283E+02	0.000E+00	FAIL ABUN
TH-230	-1.772E+03	3.577E+03	5.808E+03	0.000E+00	NOT IDENT.
PA-231	-1.772E+02	3.695E+02	5.962E+02	0.000E+00	NOT IDENT.
TH-231	-7.023E+01	1.431E+02	2.050E+02	0.000E+00	NOT IDENT.
TH-232	-9.394E+03	7.119E+04	9.863E+03	0.000E+00	NOT IDENT.
PA-233	-1.762E+00	1.627E+01	2.688E+01	0.000E+00	NOT IDENT.
PA-234	-1.314E+01	9.600E+01	1.616E+02	0.000E+00	NOT IDENT.
PA-234M	-2.364E+02	1.212E+03	2.049E+03	0.000E+00	NOT IDENT.
TH-234	-3.485E+02	4.935E+02	7.054E+02	0.000E+00	FAIL ABUN
U-235	-3.285E+01	5.401E+01	8.412E+01	0.000E+00	FAIL ABUN
NP-237	-1.762E+00	1.627E+01	2.688E+01	0.000E+00	NOT IDENT.
U-238	-3.485E+02	4.935E+02	7.054E+02	0.000E+00	FAIL ABUN
NP-239	-2.195E+01	8.218E+01	1.168E+02	0.000E+00	NOT IDENT.
CM-247	-1.648E+00	1.035E+01	1.673E+01	0.000E+00	NOT IDENT.
CF-249	1.078E+01	1.055E+01	1.869E+01	0.000E+00	NOT IDENT.
CF-251	4.096E+00	3.145E+01	5.448E+01	0.000E+00	NOT IDENT.
ANH-511	7.002E-01	9.543E+00	1.837E+01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 07:26:42.12

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262535.CNF;1
Sample date      : 12-NOV-2010 00:00:00 Acquisition date : 26-NOV-2010 06:26:06
Sample ID        : G1202262535          Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM08                Detector geometry: 2LMB
Elapsed live time: 0 01:00:00.00        Elapsed real time: 0 01:00:01.72  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.56	754	222	1.04	118.99	115	9	2.09E-01	5.2	
2	0	88.06	281	224	0.89	176.01	171	10	7.80E-02	11.6	
3	0	92.46	62	159	1.05	184.81	181	8	1.72E-02	37.6	
4	0	122.37	36	197	1.15	244.65	238	10	1.00E-02	74.6	
5	0	185.52	53	95	1.20	370.98	368	7	1.47E-02	34.0	
6	0	238.32	73	101	1.12	476.60	473	9	2.02E-02	27.4	
7	0	661.99	897	69	1.54	1324.12	1318	15	2.49E-01	3.9	
8	0	1173.76	708	10	2.05	2347.79	2341	16	1.97E-01	3.9	
9	0	1333.06	689	5	2.07	2666.42	2656	20	1.91E-01	3.9	

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 07:26:44.34

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262535.CNF;1
Sample date      : 12-NOV-2010 00:00:00 Acquisition date : 26-NOV-2010 06:26:06
Sample ID        : G1202262535          Sample quantity  : 2.00000E+00 LITER
Detector name    : GAM08                Detector geometry: 2LMB
Elapsed live time: 0 01:00:00.00        Elapsed real time: 0 01:00:01.72  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : KXG3
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 1048163              Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/LITER	Decay Corr pCi/LITER	2-Sigma %Error
CO-57	122.06	36	85.60*	2.201E+00	7.203E+00	7.470E+00	149.41
	136.47	------	10.68	2.230E+00	------	Line Not Found	------
CO-60	1173.23	708	99.85	5.769E-01	4.613E+02	4.637E+02	11.43
	1332.49	689	99.98*	5.210E-01	4.967E+02	4.993E+02	12.23
CD-109	88.03	273	3.70*	1.689E+00	1.642E+03	1.678E+03	26.52
SN-126	64.28	------	9.60	7.748E-01	------	Line Not Found	------
	86.94	273	8.90	1.689E+00	6.827E+02	6.827E+02	48.37
	87.57	273	37.00*	1.689E+00	1.642E+02	1.642E+02	26.52
BA-137M	661.66	897	89.90*	9.252E-01	4.049E+02	4.053E+02	11.28
CS-137	661.66	897	85.10*	9.252E-01	4.277E+02	4.281E+02	11.29
RA-226	186.21	18	3.59*	2.070E+00	9.299E+01	9.299E+01	209.92
AM-241	59.54	754	35.90*	5.716E-01	1.379E+03	1.379E+03	15.27

Flag: "*" = Keyline

Sample ID : G1202262535 Acquisition date : 26-NOV-2010 06:26:06

Total number of lines in spectrum 9
Number of unidentified lines 0
Number of lines tentatively identified by NID 9 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/LITER	Decay Corr pCi/LITER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	271.74D	1.04	7.203E+00	7.470E+00	11.16E+00	149.41	
CO-60	1925.28D	1.01	4.967E+02	4.993E+02	0.611E+02	12.23	
CD-109	461.40D	1.02	1.642E+03	1.678E+03	0.445E+03	26.52	
SN-126	2.30E+05Y	1.00	1.642E+02	1.642E+02	0.436E+02	26.52	
BA-137M	30.08Y	1.00	4.049E+02	4.053E+02	0.457E+02	11.28	
CS-137	30.08Y	1.00	4.277E+02	4.281E+02	0.484E+02	11.29	
RA-226	1600.00Y	1.00	9.299E+01	9.299E+01	19.52E+01	209.92	
AM-241	432.60Y	1.00	1.379E+03	1.379E+03	0.210E+03	15.27	
			---	---			
	Total Activity :		4.615E+03	4.654E+03			

Grand Total Activity : 4.615E+03 4.654E+03

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

Sample ID : G1202262535 Acquisition date : 26-NOV-2010 06:26:06

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	92.46	15	159	1.05	184.81	181	8	4.08E-03	****	1.81E+00	T
0	238.32	20	101	1.12	476.60	473	9	5.69E-03	****	1.82E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-NOV-2010 07:26:46.87

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29407                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202262535.CNF;1  *
* Acquisition date : 26-NOV-2010 06:26:06  Detector SN#    :                *
* Detector ID      : GAM08                 Sensitivity     : 5.00000        *
* Geometry         : 2LMB                  Energy tolerance: 1.50000        *
* Elapsed live time: 0 01:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 01:00:01.72         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-NOV-2010 00:00:00  Nuclide Library : LIQUID          *
* Sample ID        : G1202262535           Analyst initials: KXG3           *
* Batch Number     : 1048163               Sample Quantity : 2.00000E+00 LITER *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 20-SEP-2010 11:25:28.6MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
CO-57	7.470E+00	1.116E+01	1.108E+01	1.020E+00	0.674
CO-60	4.993E+02	6.105E+01	9.131E+00	8.614E-01	54.677
CD-109	1.678E+03	4.450E+02	3.477E+02	3.964E+01	4.826
SN-126	1.642E+02	4.355E+01	3.429E+01	3.896E+00	4.790
BA-137M	4.053E+02	4.572E+01	1.492E+01	1.218E+00	27.156
CS-137	4.281E+02	4.835E+01	1.576E+01	1.290E+00	27.156
RA-226	9.299E+01	1.952E+02	2.636E+02	1.776E+02	0.353
AM-241	1.379E+03	2.105E+02	1.212E+02	1.357E+01	11.379

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
BE-7	3.627E+01		8.192E+01	1.423E+02	1.268E+01	0.255
NA-22	-2.814E+00		6.807E+00	1.006E+01	9.102E-01	-0.280
NA-24	4.021E+01		2.250E+01	Half-Life too short		
K-40	4.355E+00		4.895E+01	8.932E+01	8.575E+00	0.049

Sample ID : G1202262535 Acquisition date : 26-NOV-2010 06:26:06

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
SC-46	-8.113E-01		1.156E+01	1.927E+01	1.824E+00	-0.042
V-48	-7.440E+00		1.867E+01	2.971E+01	2.767E+00	-0.250
CR-51	8.639E+01		8.872E+01	1.552E+02	1.483E+01	0.557
MN-54	-3.497E+00		9.219E+00	1.415E+01	1.300E+00	-0.247
CO-56	-2.584E+00		1.150E+01	1.805E+01	1.669E+00	-0.143
CO-58	1.291E-01		1.029E+01	1.664E+01	1.510E+00	0.008
FE-59	-4.767E+00		2.754E+01	4.466E+01	4.240E+00	-0.107
ZN-65	3.329E+00		2.317E+01	3.878E+01	3.383E+00	0.086
SE-75	-3.655E+00		1.167E+01	1.882E+01	1.775E+00	-0.194
SR-85	7.694E-01		1.098E+01	1.842E+01	1.525E+00	0.042
Y-88	4.817E+00		5.815E+00	1.188E+01	9.812E-01	0.406
Y-91	-6.535E+02		3.967E+03	6.328E+03	5.416E+02	-0.103
NB-94	-4.689E-01		6.901E+00	1.117E+01	9.404E-01	-0.042
NB-95	-2.958E+00		1.034E+01	1.623E+01	1.428E+00	-0.182
NB-95M	-2.148E+00		3.125E+01	4.529E+01	4.672E+00	-0.047
ZR-95	-8.116E+00		1.757E+01	2.692E+01	2.594E+00	-0.301
MO-99	-4.509E+02		2.302E+03	3.651E+03	5.758E+02	-0.123
TC-99M	2.565E+11		4.644E+11	Half-Life too short		
RU-103	-1.916E+00		9.800E+00	1.611E+01	2.214E+00	-0.119
RH-106	-3.785E+01		7.062E+01	1.088E+02	1.417E+01	-0.348
RU-106	-3.785E+01		7.052E+01	1.088E+02	8.979E+00	-0.348
AG-108M	1.163E+00		8.137E+00	1.316E+01	1.104E+00	0.088
AG-110M	4.401E+00		1.040E+01	1.563E+01	1.320E+00	0.282
SN-113	-9.763E+00		1.205E+01	1.795E+01	1.473E+00	-0.544
CD-115	-4.049E+02		2.001E+03	3.266E+03	2.709E+02	-0.124
SN-117M	-7.830E+00		1.264E+01	2.062E+01	1.746E+00	-0.380
TE-123M	-3.454E+00		6.875E+00	1.130E+01	9.626E-01	-0.306
SB-124	-1.184E+01		1.546E+01	1.964E+01	1.807E+00	-0.603
SB-125	-1.282E+01		2.546E+01	3.879E+01	3.198E+00	-0.330
TE-125M	-1.120E+03		2.541E+03	3.955E+03	4.419E+02	-0.283
I-126	4.272E+01		5.031E+01	8.132E+01	6.663E+00	0.525
SB-126	-9.966E+00		3.400E+01	5.357E+01	4.570E+00	-0.186
SB-127	-1.432E+02		2.745E+02	4.216E+02	4.590E+01	-0.340
I-131	-8.751E+00		2.814E+01	4.422E+01	3.944E+00	-0.198
TE-132	-1.552E+01		1.554E+02	2.569E+02	4.079E+01	-0.060
BA-133	4.477E+00		9.921E+00	1.668E+01	2.158E+00	0.268
I-133	-1.254E-01		3.530E-01	Half-Life too short		
CS-134	2.894E+00		1.222E+01	2.025E+01	1.829E+00	0.143
CS-135	2.359E+01		3.875E+01	6.639E+01	7.085E+00	0.355
I-135	5.816E+08		5.102E+10	Half-Life too short		
CS-136	-5.013E+00		2.988E+01	4.862E+01	4.575E+00	-0.103
CE-139	-9.252E+00		7.377E+00	1.148E+01	9.669E-01	-0.806
BA-140	2.282E+01		6.076E+01	1.040E+02	3.517E+01	0.220
LA-140	6.808E+00		1.438E+01	2.652E+01	2.422E+00	0.257
CE-141	1.300E-01		1.648E+01	2.612E+01	2.290E+00	0.005
CE-143	1.896E-02		1.030E-02	Half-Life too short		
CE-144	1.141E+01		5.300E+01	8.548E+01	1.317E+01	0.133
PM-144	-9.822E+00		7.908E+00	1.087E+01	9.117E-01	-0.903

Sample ID : G1202262535 Acquisition date : 26-NOV-2010 06:26:06

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L. Ided	Act error	MDA (pCi/LITER)	MDA error	Act/MDA
PR-144	-7.373E+02		5.913E+02	8.121E+02	6.809E+01	-0.908
PM-146	-4.919E+00		1.181E+01	1.924E+01	1.966E+00	-0.256
ND-147	1.063E+02		1.229E+02	2.202E+02	3.252E+01	0.483
PM-149	4.453E+03		1.791E+04	2.989E+04	4.791E+03	0.149
EU-152	-1.892E+01		2.512E+01	3.806E+01	3.535E+00	-0.497
GD-153	2.614E+00		2.330E+01	3.792E+01	3.861E+00	0.069
EU-154	-4.467E+00		1.914E+01	2.958E+01	3.461E+00	-0.151
EU-155	2.329E+00		2.831E+01	4.582E+01	4.454E+00	0.051
TA-182	1.075E+01		3.112E+01	5.393E+01	4.678E+00	0.199
IR-192	-5.029E+00		8.700E+00	1.349E+01	1.240E+00	-0.373
HG-203	5.723E-01		9.294E+00	1.534E+01	1.492E+00	0.037
BI-207	3.277E+00		1.378E+01	2.340E+01	2.104E+00	0.140
TL-208	-9.999E+00		8.430E+00	1.304E+01	1.164E+00	-0.767
PB-210	-1.638E+03		2.259E+03	3.608E+03	4.477E+02	-0.454
BI-211	-5.301E+01		3.033E+03	7.755E+01	4.437E+03	-0.684
PB-211	5.216E+01		2.991E+03	3.207E+02	1.835E+04	0.163
BI-212	7.164E+01		1.379E+02	2.405E+02	2.989E+01	0.298
PB-212	9.804E+00	+	1.943E+01	2.813E+01	2.877E+00	0.348
BI-214	1.201E+01		1.788E+01	3.144E+01	3.085E+00	0.382
PB-214	-1.283E+01		1.789E+01	2.778E+01	2.957E+00	-0.462
RN-219	7.366E+00		4.367E+02	1.841E+02	1.054E+04	0.040
RA-223	-1.739E+01		1.009E+03	2.688E+02	1.538E+04	-0.065
RA-224	-2.644E+01		1.770E+02	2.543E+02	2.330E+01	-0.104
AC-227	6.560E-01		6.465E+01	1.069E+02	1.342E+01	0.006
TH-227	6.560E-01		7.476E+01	1.069E+02	6.115E+03	0.006
AC-228	1.005E+01		4.054E+01	6.940E+01	8.503E+00	0.145
RA-228	1.005E+01		4.054E+01	6.940E+01	8.503E+00	0.145
TH-228	9.804E+00	+	1.943E+01	2.813E+01	2.877E+00	0.348
TH-229	-4.486E+01		1.386E+02	2.283E+02	1.976E+01	-0.196
TH-230	-1.772E+03		3.650E+03	5.808E+03	6.194E+02	-0.305
PA-231	-1.772E+02		3.770E+02	5.962E+02	9.012E+01	-0.297
TH-231	-7.023E+01		1.461E+02	2.050E+02	3.853E+01	-0.343
TH-232	-9.394E+03		7.264E+04	9.863E+03	7.587E+04	-0.953
PA-233	-1.762E+00		1.661E+01	2.688E+01	2.541E+00	-0.066
PA-234	-1.314E+01		9.796E+01	1.616E+02	3.093E+01	-0.081
PA-234M	-2.364E+02		1.237E+03	2.049E+03	2.155E+02	-0.115
TH-234	-3.485E+02		5.035E+02	7.054E+02	1.371E+02	-0.494
U-235	-3.285E+01		5.511E+01	8.412E+01	1.427E+01	-0.391
NP-237	-1.762E+00		1.661E+01	2.688E+01	3.072E+00	-0.066
U-238	-3.485E+02		5.035E+02	7.054E+02	1.371E+02	-0.494
NP-239	-2.195E+01		8.385E+01	1.168E+02	1.081E+01	-0.188
CM-247	-1.648E+00		1.056E+01	1.673E+01	1.333E+00	-0.099
CF-249	1.078E+01		1.077E+01	1.869E+01	1.494E+00	0.577
CF-251	4.096E+00		3.209E+01	5.448E+01	4.633E+00	0.075
ANH-511	7.002E-01		9.738E+00	1.837E+01	1.520E+00	0.038

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29407                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202262535           *
* Acquisition date : 26-NOV-2010 06:26:06 Detector SN#    :                 *
* Detector ID      : GAM08                Sensitivity     : 5.000           *
* Geometry         : 2LMB                 Energy tolerance: 1.500           *
* Elapsed live time:    0 01:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 01:00:01.72     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-NOV-2010 00:00:00 Nuclide Library : LIQUI           *
* Sample ID        : G1202262535          Analyst initials: KXG3            *
* Batch Number     : 1048163              Sample Quantity : 2.0000E+00 LITER *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 20-SEP-2010 11:25:28 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/LITER)	Act Error	DLC (pCi/LITER)	TPU
CO-57	7.470E+00	1.094E+01	5.543E+00	5.581E+00
CO-60	4.993E+02	5.983E+01	4.568E+00	3.053E+01
CD-109	1.678E+03	4.361E+02	1.740E+02	2.225E+02
SN-126	1.642E+02	4.268E+01	1.715E+01	2.178E+01
BA-137M	4.053E+02	4.481E+01	7.466E+00	2.286E+01
CS-137	4.281E+02	4.739E+01	7.887E+00	2.418E+01
RA-226	9.299E+01	1.913E+02	1.319E+02	9.760E+01
AM-241	1.379E+03	2.062E+02	6.062E+01	1.052E+02

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

Nuclide	Key-Line Activity (pCi/LITER)	K.L Act error	DLC (pCi/LITER)	TPU	
BE-7	3.627E+01	8.028E+01	7.119E+01	4.096E+01	NOT IDENT.
NA-22	-2.814E+00	6.671E+00	5.031E+00	3.403E+00	NOT IDENT.
NA-24	4.021E+07	4.410E+07	0.000E+00	2.250E+07	SHORT HLIF
K-40	4.355E+00	4.797E+01	4.469E+01	2.447E+01	NOT IDENT.
SC-46	-8.113E-01	1.133E+01	9.640E+00	5.781E+00	NOT IDENT.
V-48	-7.440E+00	1.830E+01	1.486E+01	9.336E+00	NOT IDENT.
CR-51	8.639E+01	8.695E+01	7.765E+01	4.436E+01	NOT IDENT.
MN-54	-3.497E+00	9.034E+00	7.081E+00	4.609E+00	NOT IDENT.
CO-56	-2.584E+00	1.127E+01	9.030E+00	5.750E+00	NOT IDENT.
CO-58	1.291E-01	1.009E+01	8.326E+00	5.147E+00	NOT IDENT.
FE-59	-4.767E+00	2.699E+01	2.234E+01	1.377E+01	NOT IDENT.
ZN-65	3.329E+00	2.271E+01	1.940E+01	1.159E+01	NOT IDENT.
SE-75	-3.655E+00	1.144E+01	9.414E+00	5.835E+00	FAIL ABUN
SR-85	7.694E-01	1.076E+01	9.214E+00	5.489E+00	NOT IDENT.
Y-88	4.817E+00	5.698E+00	5.943E+00	2.907E+00	NOT IDENT.
Y-91	-6.535E+02	3.888E+03	3.166E+03	1.984E+03	NOT IDENT.
NB-94	-4.689E-01	6.763E+00	5.587E+00	3.450E+00	NOT IDENT.
NB-95	-2.958E+00	1.013E+01	8.121E+00	5.170E+00	NOT IDENT.
NB-95M	-2.148E+00	3.062E+01	2.266E+01	1.562E+01	NOT IDENT.

ZR-95	-8.116E+00	1.722E+01	1.347E+01	8.785E+00	NOT IDENT.
MO-99	-4.509E+02	2.256E+03	1.827E+03	1.151E+03	NOT IDENT.
TC-99M	2.565E+17	9.103E+17	0.000E+00	0.000E+00	SHORT HLIF
RU-103	-1.916E+00	9.604E+00	8.058E+00	4.900E+00	NOT IDENT.
RH-106	-3.785E+01	6.921E+01	5.443E+01	3.531E+01	NOT IDENT.
RU-106	-3.785E+01	6.911E+01	5.443E+01	3.526E+01	NOT IDENT.
AG-108M	1.163E+00	7.974E+00	6.583E+00	4.068E+00	NOT IDENT.
AG-110M	4.401E+00	1.019E+01	7.820E+00	5.199E+00	NOT IDENT.
SN-113	-9.763E+00	1.181E+01	8.980E+00	6.026E+00	NOT IDENT.
CD-115	-4.049E+02	1.961E+03	1.634E+03	1.001E+03	NOT IDENT.
SN-117M	-7.830E+00	1.239E+01	1.031E+01	6.320E+00	NOT IDENT.
TE-123M	-3.454E+00	6.738E+00	5.654E+00	3.438E+00	NOT IDENT.
SB-124	-1.184E+01	1.515E+01	9.828E+00	7.728E+00	NOT IDENT.
SB-125	-1.282E+01	2.495E+01	1.941E+01	1.273E+01	NOT IDENT.
TE-125M	-1.120E+03	2.490E+03	1.979E+03	1.270E+03	NOT IDENT.
I-126	4.272E+01	4.930E+01	4.068E+01	2.515E+01	NOT IDENT.
SB-126	-9.966E+00	3.332E+01	2.680E+01	1.700E+01	NOT IDENT.
SB-127	-1.432E+02	2.691E+02	2.109E+02	1.373E+02	NOT IDENT.
I-131	-8.751E+00	2.758E+01	2.212E+01	1.407E+01	NOT IDENT.
TE-132	-1.552E+01	1.523E+02	1.285E+02	7.772E+01	NOT IDENT.
BA-133	4.477E+00	9.722E+00	8.343E+00	4.960E+00	NOT IDENT.
I-133	-1.254E+05	6.919E+05	0.000E+00	3.530E+05	SHORT HLIF
CS-134	2.894E+00	1.197E+01	1.013E+01	6.109E+00	NOT IDENT.
CS-135	2.359E+01	3.797E+01	3.321E+01	1.937E+01	NOT IDENT.
I-135	5.816E+14	9.999E+16	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.013E+00	2.928E+01	2.433E+01	1.494E+01	NOT IDENT.
CE-139	-9.252E+00	7.230E+00	5.746E+00	3.689E+00	NOT IDENT.
BA-140	2.282E+01	5.954E+01	5.201E+01	3.038E+01	NOT IDENT.
LA-140	6.808E+00	1.409E+01	1.327E+01	7.188E+00	NOT IDENT.
CE-141	1.300E-01	1.615E+01	1.307E+01	8.241E+00	NOT IDENT.
CE-143	1.896E+04	2.019E+04	0.000E+00	1.030E+04	SHORT HLIF
CE-144	1.141E+01	5.194E+01	4.277E+01	2.650E+01	NOT IDENT.
PM-144	-9.822E+00	7.750E+00	5.439E+00	3.954E+00	NOT IDENT.
PR-144	-7.373E+02	5.795E+02	4.063E+02	2.957E+02	NOT IDENT.
PM-146	-4.919E+00	1.157E+01	9.624E+00	5.903E+00	NOT IDENT.
ND-147	1.063E+02	1.205E+02	1.102E+02	6.147E+01	FAIL ABUN
PM-149	4.453E+03	1.755E+04	1.496E+04	8.953E+03	NOT IDENT.
EU-152	-1.892E+01	2.462E+01	1.904E+01	1.256E+01	FAIL ABUN
GD-153	2.614E+00	2.284E+01	1.897E+01	1.165E+01	NOT IDENT.
EU-154	-4.467E+00	1.876E+01	1.480E+01	9.572E+00	FAIL ABUN
EU-155	2.329E+00	2.774E+01	2.292E+01	1.415E+01	NOT IDENT.
TA-182	1.075E+01	3.050E+01	2.698E+01	1.556E+01	NOT IDENT.
IR-192	-5.029E+00	8.526E+00	6.750E+00	4.350E+00	NOT IDENT.
HG-203	5.723E-01	9.108E+00	7.676E+00	4.647E+00	NOT IDENT.
BI-207	3.277E+00	1.350E+01	1.171E+01	6.889E+00	NOT IDENT.
TL-208	-9.999E+00	8.261E+00	6.523E+00	4.215E+00	NOT IDENT.
PB-210	-1.638E+03	2.213E+03	1.805E+03	1.129E+03	NOT IDENT.
BI-211	-5.301E+01	2.973E+03	3.880E+01	1.517E+03	NOT IDENT.
PB-211	5.216E+01	2.931E+03	1.604E+02	1.495E+03	NOT IDENT.
BI-212	7.164E+01	1.352E+02	1.203E+02	6.897E+01	NOT IDENT.
PB-212	9.804E+00	1.904E+01	1.407E+01	9.715E+00	FAIL ABUN
BI-214	1.201E+01	1.752E+01	1.573E+01	8.941E+00	NOT IDENT.
PB-214	-1.283E+01	1.753E+01	1.390E+01	8.946E+00	NOT IDENT.
RN-219	7.366E+00	4.279E+02	9.212E+01	2.183E+02	NOT IDENT.
RA-223	-1.739E+01	9.888E+02	1.345E+02	5.045E+02	NOT IDENT.
RA-224	-2.644E+01	1.734E+02	1.272E+02	8.848E+01	NOT IDENT.
AC-227	6.560E-01	6.335E+01	5.346E+01	3.232E+01	NOT IDENT.
TH-227	6.560E-01	7.326E+01	5.346E+01	3.738E+01	NOT IDENT.
AC-228	1.005E+01	3.973E+01	3.472E+01	2.027E+01	NOT IDENT.
RA-228	1.005E+01	3.973E+01	3.472E+01	2.027E+01	NOT IDENT.
TH-228	9.804E+00	1.904E+01	1.407E+01	9.715E+00	FAIL ABUN
TH-229	-4.486E+01	1.359E+02	1.142E+02	6.932E+01	FAIL ABUN
TH-230	-1.772E+03	3.577E+03	2.906E+03	1.825E+03	NOT IDENT.
PA-231	-1.772E+02	3.695E+02	2.983E+02	1.885E+02	NOT IDENT.
TH-231	-7.023E+01	1.431E+02	1.026E+02	7.303E+01	NOT IDENT.
TH-232	-9.394E+03	7.119E+04	4.934E+03	3.632E+04	NOT IDENT.
PA-233	-1.762E+00	1.627E+01	1.345E+01	8.303E+00	NOT IDENT.
PA-234	-1.314E+01	9.600E+01	8.084E+01	4.898E+01	NOT IDENT.
PA-234M	-2.364E+02	1.212E+03	1.025E+03	6.184E+02	NOT IDENT.
TH-234	-3.485E+02	4.935E+02	3.529E+02	2.518E+02	FAIL ABUN
U-235	-3.285E+01	5.401E+01	4.208E+01	2.755E+01	FAIL ABUN
NP-237	-1.762E+00	1.627E+01	1.345E+01	8.303E+00	NOT IDENT.
U-238	-3.485E+02	4.935E+02	3.529E+02	2.518E+02	FAIL ABUN
NP-239	-2.195E+01	8.218E+01	5.842E+01	4.193E+01	NOT IDENT.
CM-247	-1.648E+00	1.035E+01	8.369E+00	5.280E+00	NOT IDENT.
CF-249	1.078E+01	1.055E+01	9.351E+00	5.383E+00	NOT IDENT.
CF-251	4.096E+00	3.145E+01	2.726E+01	1.605E+01	NOT IDENT.
ANH-511	7.002E-01	9.543E+00	9.190E+00	4.869E+00	NOT IDENT.

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                 2040 SAVAGE ROAD                          *
*                              CHARLESTON ,SC 29417                         *
*                        GAMMA SPECTROSCOPY BACKGROUND REPORT               *
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ENERGY	MDA COUNTS
46.54	165.7508
49.72	186.5230
57.36	0.0000
59.54	202.3730
63.29	127.0467
63.29	127.0467
63.81	154.1454
64.28	140.8367
67.67	153.0514
67.75	153.0793
69.67	141.6228
70.83	123.7400
72.81	167.0805
72.87	160.9887
72.87	160.9887
74.82	153.4966
74.82	153.4966
74.82	153.4966
74.97	151.4989
77.11	162.4859
77.11	162.4859
77.11	162.4859
79.69	175.7846
79.69	175.7846
80.12	162.4884
80.19	162.5123
81.00	146.1966
81.07	146.2181
83.79	156.4201
84.21	158.1184
85.43	153.7987
86.55	146.2775
86.94	147.9651
87.57	148.1487
88.03	148.2828
88.47	148.4104
89.96	133.0066
91.11	133.3014
92.59	122.5378
92.59	122.5378
93.35	130.6825
94.56	146.9528
94.65	146.9774
94.67	146.9830
94.67	146.9830
97.43	130.6060
98.43	138.3518
98.43	138.3518
98.44	138.3544
99.53	135.4041
100.11	134.4694
103.18	146.0220
103.37	138.4974
105.31	124.8536
106.12	125.0290
109.28	131.1719
111.00	126.0708
111.76	124.0357
116.30	132.7063
116.74	142.7610
121.12	132.6191
121.78	132.7565
122.06	132.8152
123.07	130.7895
131.20	134.6848
133.52	129.4711
136.00	136.7810

136.47	146.0000
140.51	136.5237
140.51	0.0000
140.88	140.0399
143.76	147.5247
144.24	140.7038
145.44	139.7832
152.43	130.6279
153.25	120.8469
154.21	120.1248
156.02	113.3819
158.56	134.9267
159.00	135.0038
162.66	111.7073
163.33	111.8035
165.86	151.3323
176.60	123.5876
177.52	125.5308
181.07	142.2089
185.72	132.2293
186.21	125.5535
193.51	148.1418
205.31	114.6678
210.85	134.1105
222.11	130.0043
227.38	120.2091
228.16	123.1677
228.18	120.3052
235.69	104.6612
235.96	104.6895
235.96	104.6895
238.63	103.2260
238.63	103.2260
240.99	119.1272
242.00	133.1814
244.70	120.8839
252.40	128.0506
252.80	115.3856
256.23	103.0017
256.23	103.0017
260.90	93.5925
264.66	109.7280
268.22	90.2460
269.46	106.2310
271.23	92.4764
273.65	103.6350
276.40	108.8802
277.37	97.9746
277.60	97.9955
278.00	94.0273
279.20	91.1222
279.54	92.1502
283.69	104.5427
284.31	102.5868
285.41	95.6364
285.90	90.6413
287.50	87.7394
293.27	0.0000
295.22	80.1898
295.96	99.5372
299.98	83.5628
299.98	83.5628
300.09	83.5703
300.09	83.5703
300.13	83.5728
300.13	83.5728
301.36	76.5163
302.85	91.9308
304.50	84.8947
304.50	84.8947
304.85	79.8031
308.46	90.2975
311.90	87.4604
311.90	87.4604
316.51	88.8135
319.41	69.3504
320.08	64.2081
323.87	89.3266

328.76	84.4520
333.37	80.5647
334.37	96.3322
334.37	96.3322
338.28	90.3147
338.32	90.3186
338.32	90.3186
340.48	82.0490
340.48	82.0490
340.55	82.0538
344.28	90.7202
351.06	79.5124
351.93	68.9544
356.01	60.6469
364.49	79.2144
366.42	63.2439
383.85	75.9494
388.16	65.2899
388.63	66.3995
391.70	88.3527
400.66	74.6168
401.81	82.3608
402.40	86.7872
404.85	75.9225
414.70	65.3361
423.72	59.0306
427.09	79.2466
427.87	81.5190
433.94	69.4984
453.88	85.3275
463.37	82.1602
468.07	69.5717
473.00	75.2804
476.78	69.0051
477.60	58.9117
487.02	62.9324
492.35	63.1225
497.08	59.5672
511.00	62.8415
514.00	92.0688
527.90	47.3279
529.87	0.0000
531.02	36.9767
537.26	44.7085
546.56	0.0000
563.25	52.0620
569.33	50.2887
569.50	50.2925
569.70	48.3630
583.19	47.7152
600.60	51.0682
602.73	43.2566
604.72	56.0899
609.32	45.3655
610.33	45.3868
614.28	62.2771
618.01	49.5142
621.93	43.6520
621.93	43.6520
633.25	53.8563
635.95	35.9490
636.99	47.9555
645.85	35.1094
657.76	47.0654
661.66	50.5151
661.66	50.5151
664.57	0.0000
666.33	26.9974
666.50	26.9993
677.62	45.7855
685.70	46.9681
695.00	41.0068
696.49	51.2915
696.51	51.2915
697.00	48.2243
702.65	32.9125
706.68	36.0596
720.70	46.6370

721.93	0.0000
722.78	50.8267
722.91	50.8291
723.31	61.2125
724.19	55.0082
727.33	41.5693
733.00	51.0421
735.93	47.9743
739.50	37.6005
747.24	39.8146
753.82	37.8193
756.73	44.1738
763.94	34.8087
765.80	48.5572
766.42	40.1217
777.92	44.5471
778.90	40.3203
783.70	37.2063
785.37	46.8048
795.86	44.8588
801.95	43.8928
810.76	41.8926
815.77	35.5145
818.51	45.2474
832.01	45.4761
834.85	43.3564
836.80	0.0000
846.77	52.2574
856.80	40.4290
860.56	42.6724
871.09	54.9158
873.19	62.6513
875.33	0.0000
880.51	45.9167
883.24	51.4769
884.68	48.7440
889.28	52.5086
898.04	47.1256
911.20	48.2697
911.20	48.2697
926.36	51.3208
937.49	59.9440
944.13	61.9556
946.00	61.9945
949.00	46.0721
964.08	54.8081
968.97	43.5387
968.97	43.5387
983.53	44.6965
996.26	49.6556
1001.03	41.1235
1004.73	40.2150
1037.84	50.3115
1038.76	0.0000
1048.07	47.5585
1050.41	42.7360
1050.41	42.7360
1063.66	35.1079
1085.87	35.3438
1099.25	53.2266
1112.07	38.5874
1115.54	39.6175
1120.29	27.7710
1120.55	27.7721
1121.30	27.7790
1131.51	0.0000
1173.23	29.2006
1189.05	20.2279
1204.77	22.3473
1221.41	14.2854
1231.02	15.3455
1235.36	9.2183
1238.28	10.2507
1260.41	0.0000
1274.44	12.4189
1274.54	13.4544
1291.59	10.3955
1298.22	0.0000

1312.11	8.3604
1332.49	7.3532
1365.19	15.8862
1368.63	0.0000
1384.29	7.4483
1408.01	1.0702
1457.56	0.0000
1460.82	2.7867
1489.16	7.4799
1596.21	5.7455
1620.50	4.8131
1678.03	0.0000
1690.97	9.7698
1764.49	3.9665
1770.23	4.9639
1771.35	2.9790
1791.20	0.0000
1836.06	2.0112

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*****************************************************************************
*                                                                           *
*                           GEL Laboratories LLC                          *
*                                2040 SAVAGE ROAD                           *
*                              CHARLESTON ,SC 29417                         *
*                               GROSS GAMMA REPORT                          *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID     : 1048163                  SAMPLE ID  : G1202262535        *
*   ANALYST      : KXG3                     DETECTOR   : GAM08              *
*   SAMPLE DATE  : 12-NOV-2010 00:00:00.00  COUNT TIME :    0 01:00:00.00   *
*   ANALYSIS DATE: 26-NOV-2010 06:26:06.66  SAMPLE ALQT:    2.000 LITER     *
*                                                                           *
*****************************************************************************


         GROSS GAMMA ACTIVITY (pCi/LITER ) : 1.894E+03
         GROSS GAMMA ERROR  (pCi/LITER )   : 3.337E+02
         GROSS GAMMA MDA    (pCi/LITER )   : 1.950E+02
         GROSS GAMMA DLC    (pCi/LITER )   : 9.294E+01
```

Gas Flow Raw Data

Radiochemistry Batch Checklist

01-Dec-2010

Batch# 1652582 Product: GAB Date: 12/6/10

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

Primary Review Performed By: [signature] 12/9 ARSL

Secondary Review Performed By: [signature] 12/6/10

Blank Correction Report

Batch ID 1052582

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202273346	DUP	ALPHA	0.150 L	14.9	2.59	2.75	-1.04	pCi/L	NO
		BETA	0.150 L	8.53	1.40	2.47	.906666667	pCi/L	NO
1202273349	LCS	ALPHA	1.00 L	14.9	1.85	0.383	-.156	pCi/L	NO
		BETA	1.00 L	49.1	4.16	0.456	.136	pCi/L	NO
1202273345	MB	ALPHA	1.00 L	-0.156	0.0514	0.385	-.156	pCi/L	NO
		BETA	1.00 L	0.136	0.108	0.366	.136	pCi/L	YES
1202273347	MS	ALPHA	0.050 L	254	29.1	7.44	-3.12	pCi/L	NO
		BETA	0.050 L	1070	90.8	9.76	2.72	pCi/L	NO
1202273348	MSD	ALPHA	0.050 L	291	34.7	7.42	-3.12	pCi/L	NO
		BETA	0.050 L	1110	94.3	12.0	2.72	pCi/L	NO
266780001	CASA-11-1478	ALPHA	0.150 L	0.162	0.519	2.26	-1.04	pCi/L	NO
		BETA	0.150 L	1.51	0.779	2.48	.906666667	pCi/L	YES
266780002	CASA-11-1340	ALPHA	0.125 L	0.523	0.682	2.65	-1.248	pCi/L	NO
		BETA	0.125 L	12.2	1.79	2.66	1.088	pCi/L	NO
266780003	CASA-11-1337	ALPHA	0.100 L	1.16	0.846	2.80	-1.56	pCi/L	NO
		BETA	0.100 L	10.9	1.74	2.94	1.36	pCi/L	NO
266780004	CASA-11-1332	ALPHA	0.100 L	0.411	0.674	2.79	-1.56	pCi/L	NO
		BETA	0.100 L	10.0	1.66	2.92	1.36	pCi/L	NO
266780005	CASA-11-1342	ALPHA	0.125 L	1.27	0.809	2.54	-1.248	pCi/L	NO
		BETA	0.125 L	17.5	2.22	2.61	1.088	pCi/L	NO
266877001	Buckman1-11-1944	ALPHA	0.150 L	4.70	1.41	2.70	-1.04	pCi/L	NO
		BETA	0.150 L	4.33	1.03	2.39	.906666667	pCi/L	YES
266877003	Buckman06-11-1970	ALPHA	0.100 L	8.56	1.90	2.91	-1.56	pCi/L	NO
		BETA	0.100 L	6.47	1.36	2.98	1.36	pCi/L	YES
266877005	Buckman08-11-2042	ALPHA	0.150 L	8.83	2.04	2.88	-1.04	pCi/L	NO
		BETA	0.150 L	8.17	1.37	2.54	.906666667	pCi/L	NO
266892002	SWWS46-11-2074	ALPHA	0.100 L	0.046	0.589	2.85	-1.56	pCi/L	NO
		BETA	0.100 L	14.0	2.07	2.86	1.36	pCi/L	NO
266988001	CAMO-11-1240	ALPHA	0.150 L	2.12	0.979	2.73	-1.04	pCi/L	NO
		BETA	0.150 L	2.24	0.846	2.46	.906666667	pCi/L	YES
266989003	CASA-11-1334	ALPHA	0.125 L	0.932	0.827	2.94	-1.248	pCi/L	NO
		BETA	0.125 L	10.3	1.63	2.69	1.088	pCi/L	NO
267227001	CAMO-11-1312	ALPHA	0.150 L	1.66	0.969	2.91	-1.04	pCi/L	NO
		BETA	0.150 L	2.68	0.866	2.36	.906666667	pCi/L	YES
267227004	CAMO-11-1316	ALPHA	0.150 L	0.165	0.661	2.81	-1.04	pCi/L	NO
		BETA	0.150 L	1.12	0.685	2.21	.906666667	pCi/L	YES
267227005	CAMO-11-1317	ALPHA	0.150 L	1.63	0.899	2.78	-1.04	pCi/L	NO
		BETA	0.150 L	0.433	0.698	2.45	.906666667	pCi/L	YES

Gross Alpha Beta Que Sheet

11/29/2010 09:58:24

Batch #:1052582 Analyst:LYL1 First Client DueDate 12/09/2010 Internal Due Date11/28/2010

10% HNO3: 1487424
Conc HNO3: 1488252.35

Alpha Spike Isotope: Th-230 Spike Code: 1242-C Vol: 0.1 Balance #: 17955160
Beta Spike Isotope: Sr-90 Spike Code: 1243-C Vol: 0.1 Pipette #: 44970623 Analytical Scale #1113021018
Alpha LCS Isotope: Th-230 LCS Code: 1242-C Vol: 0.1 Prep Date: 12/1/10 Witness: KD 12/1/10
Beta LCS Isotope: Sr-90 LCS Code: 1243-C Vol: 0.1 Initials: LL recopy

Conc HCl: —
Conc HF: —
Conc Boric: —

Sample ID	Client Description	Type	Hazard Code	RDL Alpha/Beta	Client	Matrix	Bkr#	Wet/Dry Aliquot (mL or g)	Carrier or Det#	Initial Wt (g)	Final Wt (g)	Net Wt (mg)	
266780001-1	CASA-11-1478	SAMPLE		3 pCi/L	ARSL001	WATER	1	150	6C	7.5423	7.5430	0.7	9C
266780002-1	CASA-11-1340	SAMPLE		3 pCi/L	ARSL001	WATER	2	125	5C	7.5019	7.5597	57.8	8B
266780003-1	CASA-11-1337	SAMPLE		3 pCi/L	ARSL001	WATER	3	100	1B	7.5164	7.5622	45.8	10A
266780004-1	CASA-11-1332	SAMPLE		3 pCi/L	ARSL001	WATER	4	100	1C	7.4967	7.5406	439	10C
266780005-1	CASA-11-1342	SAMPLE		3 pCi/L	ARSL001	WATER	5	125	1D	7.5029	7.5607	57.8	9D
266877001-1	Buckman1-11-1944	SAMPLE		3 pCi/L	ARSL001	WATER	6	150	7D	7.5329	7.5638	30.9	9B
266877003-1	Buckman06-11-1970	SAMPLE		3 pCi/L	ARSL001	WATER	7	100	9D	7.5235	7.5631	39.6	10B
266877005-1	Buckman08-11-2042	SAMPLE		3 pCi/L	ARSL001	WATER	8	150	10A	7.5094	7.5560	246.6	10D
266892002-1	SWWS46-11-2074	SAMPLE		3 pCi/L	ARSL001	WATER	9	100	10B	7.5301	7.5727	42.6	9A
266988001-1	CAMO-11-1240	SAMPLE		3 pCi/L	ARSL001	WATER	10	150	10C	7.4866	7.5209	34.3	2A
266989003-1	CASA-11-1334	SAMPLE		3 pCi/L	ARSL001	WATER	11	125	6D	7.5455	7.5953	49.8	2B
267227001-1	CAMO-11-1312	SAMPLE		3 pCi/L	ARSL001	WATER	12	150	7B	7.5070	7.5258	18.8	1D
267227004-1	CAMO-11-1316	SAMPLE		3 pCi/L	ARSL001	WATER	13	150	2C	7.5203	7.5353	15.0	1C
267227005-1	CAMO-11-1317	SAMPLE		3 pCi/L	ARSL001	WATER	14	150	3D	7.5144	7.5319	17.5	1A
1202273345-1	MB	MB		3 pCi/L	QC ACCOUNT	WATER	15	~~150~~ 1000	~~7D~~ 10C	7.4804	7.4817	1.3	3C
1202273346-1	* ~~DUP CASA-11-1478(266780001)~~ Dup Buckman 08-11-2042 (266877005)	DUP		3 pCi/L	QC ACCOUNT	WATER	16	150	7A	7.5046	7.5549	50.3	2C
1202273347-1	* ~~MS CASA-11-1478(266780001)~~ MS Buckman 08-11-2042 (266877005)	MS		3 pCi/L	QC ACCOUNT	WATER	17	50	1C	7.5222	7.5386	16.4	3D
1202273348-1	* ~~MSD CASA-11-1478(266780001)~~ MSD Buckman 08-11-2042 (266877005)	MSD		3 pCi/L	QC ACCOUNT	WATER	18	50	1D	7.5284	7.5441	15.7	8C
1202273349-1	LCS	LCS		3 pCi/L	QC ACCOUNT	WATER	19	~~150~~ 1000 *	3C	7.5164	7.5178	1.4	4D

NL 12/6/10

*NL 12/7/10

*-SRB 12.4.10

Have the planchets been flamed? Yes / No

Data Reviewed By: [signature]

Gross Alpha Liquid

Filename : ALPHA.XLS
File type : Excel
Version # : 1.3.4

Batch : 1052582
Analyst : LYL1
Prep Date : 12/1/2010

Method Uncertainty : 0.0829
Geometry: 2 inch Planchett

Spike S/N : 1242-C
Spike Exp Date : 8/6/2011
Spike Activity (dpm/ml): 282.06
Spike Volume Added: 0.10

LCS S/N : 1242-C
LCS Exp Date : 8/6/2011
LCS Activity (dpm/ml): 282.06
LCS Volume Added: 0.10

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1 ml Stdev : +/- 0.005480 ml

Procedure Code : GFCGANBL
Parmname : Alpha
Required MDC : 3 pCi/L

Sample Characteristics						Count Raw Data				
Pos.	Sample ID	Sample Aliquot L	Sample Residue Wt. (mg)	Sample Aliquot StDev. L	Sample Date/Time	Detector ID	Counting Time (min.)	Gross Counts Alpha	Gross Counts Beta	Count Start Date/Time
1	266780001.2	0.1500	0.7	1.4035E-05	11/9/2010 12:00	9C	60	5	46	12/6/2010 9:28
2	266780002.2	0.1250	57.8	1.2800E-05	11/9/2010 12:00	8B	90	6	176	12/6/2010 9:28
3	266780003.2	0.1000	45.8	1.1370E-05	11/9/2010 12:00	10A	90	6	138	12/6/2010 9:28
4	266780004.2	0.1000	43.9	1.1370E-05	11/9/2010 12:00	10C	90	4	161	12/6/2010 9:28
5	266780005.2	0.1250	57.8	1.2800E-05	11/9/2010 12:00	9D	90	8	304	12/6/2010 9:29
6	266877001.2	0.1500	30.9	1.4035E-05	11/10/2010 12:00	9B	60	18	118	12/6/2010 9:28
7	266877003.2	0.1000	39.6	1.1370E-05	11/10/2010 12:00	10B	100	35	96	12/6/2010 9:29
8	266877005.2	0.1500	46.6	1.4035E-05	11/10/2010 12:00	10D	60	29	97	12/6/2010 9:29
9	266892002.2	0.1000	42.6	1.1370E-05	11/10/2010 12:00	9A	90	3	147	12/6/2010 9:29
10	266988001.2	0.1500	34.3	1.4035E-05	11/11/2010 12:00	2A	70	13	41	12/6/2010 10:15
11	266989003.2	0.1250	49.8	1.2800E-05	11/11/2010 12:00	2B	90	8	240	12/6/2010 10:15
12	267227001.2	0.1500	18.8	1.4035E-05	11/16/2010 12:00	1D	60	13	77	12/6/2010 10:16
13	267227004.2	0.1500	15.0	1.4035E-05	11/16/2010 12:00	1C	60	6	73	12/6/2010 10:16
14	267227005.2	0.1500	17.5	1.4035E-05	11/16/2010 12:00	1A	70	13	46	12/6/2010 10:19
15	1202273345.2	1.0000	1.3	2.0399E-05	12/1/2010 0:00	3C	60	2	30	12/6/2010 10:17
16	1202273346.2	0.1500	50.3	1.4035E-05	11/10/2010 12:00	2C	70	60	97	12/6/2010 10:19
17	1202273347.2	0.0500	16.4	7.8337E-06	11/10/2010 12:00	3D	60	354	2918	12/6/2010 10:18
18	1202273348.2	0.0500	15.7	7.8337E-06	11/10/2010 12:00	8C	60	409	3325	12/6/2010 9:23
19	1202273349.2	1.0000	1.4	2.0399E-05	12/1/2010 0:00	4D	60	511	3139	12/6/2010 10:18

Analytical SOP: GL-RAD-A-001
Instrument SOP: GL-RAD-I-016

Calibration Data

Pos.	Counted on	Calibration Date	Calibration Due Date	Calibration Source Used	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Beta X-Talk	CPM	Weekly Bkg Count Start Date/Time	Count Time (min.)
1	PIC	8/1/2010	8/31/2011	Th230	0.2212	0.06392	0.00051	0.071	12/5/2010 12:47	1000
2	PIC	8/1/2010	8/31/2011	Th230	0.1485	0.06392	0.00057	0.044	12/5/2010 13:39	1000
3	PIC	8/1/2010	8/31/2011	Th230	0.1491	0.06392	0.00072	0.027	12/5/2010 13:39	1000
4	PIC	8/1/2010	8/31/2011	Th230	0.1531	0.06392	0.00083	0.029	12/5/2010 13:39	1000
5	PIC	8/1/2010	8/31/2011	Th230	0.1447	0.06392	0.00058	0.036	12/5/2010 13:39	1000
6	PIC	8/1/2010	8/31/2011	Th230	0.1613	0.06392	0.00033	0.047	12/5/2010 12:47	1000
7	PIC	8/1/2010	8/31/2011	Th230	0.1600	0.06392	0.00098	0.045	12/5/2010 12:47	1000
8	PIC	8/1/2010	8/31/2011	Th230	0.1486	0.06392	0.00071	0.045	12/5/2010 13:47	1000
9	PIC	8/1/2010	8/31/2011	Th230	0.1535	0.06392	0.00047	0.031	12/5/2010 13:39	1000
10	PIC	8/1/2010	8/31/2011	Th230	0.1639	0.05327	0.00318	0.068	12/5/2010 14:43	1000
11	PIC	8/1/2010	8/31/2011	Th230	0.1412	0.03211	0.00051	0.051	12/5/2010 12:47	1000
12	PIC	8/1/2010	8/31/2011	Th230	0.1922	0.05139	0.01059	0.097	12/5/2010 13:46	1000
13	PIC	8/1/2010	8/31/2011	Th230	0.1904	0.04146	0.00293	0.086	12/5/2010 13:46	1000
14	PIC	8/1/2010	8/31/2011	Th230	0.1776	0.04886	0.00051	0.089	12/5/2010 13:41	1000
15	PIC	8/1/2010	8/31/2011	Th230	0.2261	0.05526	0.00898	0.107	12/5/2010 13:46	1000
16	PIC	8/1/2010	8/31/2011	Th230	0.1567	0.04912	0.01272	0.061	12/5/2010 13:47	1000
17	PIC	8/1/2010	8/31/2011	Th230	0.1904	0.03657	0.00992	0.060	12/5/2010 13:46	1000
18	PIC	8/1/2010	8/31/2011	Th230	0.2032	0.06392	0.00325	0.072	12/5/2010 12:47	1000
19	PIC	8/1/2010	8/31/2011	Th230	0.2334	0.06392	0.01307	0.115	12/5/2010 13:41	1000

Notes:
* - Reference date for Spike Activity (dpm/ml) is the batch Prep Date

Alpha Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	1.1204	0.7910	3	2.2608	**0.1622**	3.0986	0.0123	0.0382	0.5188	0.5193		SAMPLE				
2	1.3052	0.9215	3	2.6519	**0.5228**	1.2375	0.0227	0.0280	0.6798	0.6822		SAMPLE				
3	1.2728	0.8986	3	2.8041	**1.1648**	0.7014	0.0397	0.0277	0.8370	0.8463		SAMPLE				
4	1.2846	0.9069	3	2.7945	**0.4108**	1.4819	0.0154	0.0229	0.6727	0.6743		SAMPLE				
5	1.2116	0.8554	3	2.5408	**1.2681**	0.6083	0.0529	0.0320	0.7968	0.8086		SAMPLE				
6	1.2502	0.8826	3	2.6963	**4.6987**	0.2880	0.2530	0.0710	1.3228	1.4118		SAMPLE				
7	1.4594	1.0304	3	2.9053	**8.5601**	0.2054	0.3050	0.0595	1.6762	1.9020		SAMPLE				
8	1.3274	0.9371	3	2.8845	**8.8332**	0.2151	0.4383	0.0900	1.8185	2.0412		SAMPLE				
9	1.3249	0.9354	3	2.8489	**0.0460**	8.5863	0.0023	0.0200	0.5879	0.5889		SAMPLE				
10	1.3761	0.9715	3	2.7281	**2.1222**	0.4463	0.1177	0.0522	0.9556	0.9789		SAMPLE				
11	1.4779	1.0434	3	2.9376	**0.9323**	0.8512	0.0379	0.0322	0.8225	0.8270		SAMPLE				
12	1.5071	1.0640	3	2.9093	**1.6575**	0.5115	0.1197	0.0609	0.9515	0.9688		SAMPLE				
13	1.4328	1.0115	3	2.8119	**0.1646**	2.9906	0.0140	0.0419	0.6605	0.6609		SAMPLE				
14	1.4532	1.0259	3	2.7766	**1.6297**	0.5436	0.0967	0.0524	0.8854	0.8993		SAMPLE				
15	0.2018	0.1425	3	0.3846	**-0.1557**	0.3538	-0.0737	0.0257	0.0513	0.0514		MB				
16	1.3638	0.9628	3	2.7472	**14.9226**	0.1477	0.7961	0.1109	2.1263	2.5853	266877005.1	DUP	51.3%	0.6581		
17	3.5902	2.5347	3	7.4359	**253.5657**	0.0650	5.8400	0.3137	14.8456	29.1130	266877005.1	MS			254.1055	96.3%
18	3.6836	2.6006	3	7.4176	**290.9919**	0.0812	6.7447	0.3372	14.9458	34.6831	266877005.1	MSD	13.7%	0.2933	254.1055	111.0%
19	0.2027	0.1431	3	0.3827	**14.8939**	0.0781	8.4017	0.3769	0.7274	1.8466		LCS			12.7053	117.2%

SampleID	Instr	Time (min.)	Alpha Counts	Beta Counts	Count Start Time	Count End Time	Machine
266780001	9C	60	5	46	12/6/2010 9:28	12/6/2010 10:28	PIC
266780002	8B	90	6	176	12/6/2010 9:28	12/6/2010 10:58	PIC
266780003	10A	90	6	138	12/6/2010 9:28	12/6/2010 10:58	PIC
266780004	10C	90	4	161	12/6/2010 9:28	12/6/2010 10:58	PIC
266780005	9D	90	8	304	12/6/2010 9:29	12/6/2010 10:59	PIC
266877001	9B	60	18	118	12/6/2010 9:28	12/6/2010 10:28	PIC
266877003	10B	100	35	96	12/6/2010 9:29	12/6/2010 11:09	PIC
266877005	10D	60	29	97	12/6/2010 9:29	12/6/2010 10:29	PIC
266892002	9A	90	3	147	12/6/2010 9:29	12/6/2010 10:59	PIC
266988001	2A	70	13	41	12/6/2010 10:15	12/6/2010 11:25	PIC
266989003	2B	90	8	240	12/6/2010 10:15	12/6/2010 11:45	PIC
267227001	1D	60	13	77	12/6/2010 10:16	12/6/2010 11:16	PIC
267227004	1C	60	6	73	12/6/2010 10:16	12/6/2010 11:16	PIC
267227005	1A	70	13	46	12/6/2010 10:19	12/6/2010 11:29	PIC
1202273345	3C	60	2	30	12/6/2010 10:17	12/6/2010 11:17	PIC
1202273346	2C	70	60	97	12/6/2010 10:19	12/6/2010 11:29	PIC
1202273347	3D	60	354	2918	12/6/2010 10:18	12/6/2010 11:18	PIC
1202273348	8C	60	409	3325	12/6/2010 9:23	12/6/2010 10:23	PIC
1202273349	4D	60	511	3139	12/6/2010 10:18	12/6/2010 11:18	PIC

Gross Alpha Beta Que Sheet

12/02/2010 08:23:36

Batch #:1052582 Analyst:LYL1 First Client DueDate 12/09/2010 Internal Due Date11/28/2010

10% HNO3: 1487424
Conc HNO3: 1488232.35
Conc HCl: —
Conc HF: —
Conc Boric: —

Alpha Spike Isotope: Th-230 Spike Code: 1242-C Vol: 0.1 Balance #: 17955160
Beta Spike Isotope: Sr-90 Spike Code: 1243-C Vol: 0.1 Pipette #: 4497063 Analytical Scale #: 1113021018
Alpha LCS Isotope: Th-230 LCS Code: 1242-C Vol: 0.1 Prep Date: 12/1/10 Witness: KD 12/1/10
Beta LCS Isotope: Sr-90 LCS Code: 1243-C Vol: 0.1 Initials: LL recopy

Sample ID	Client Description	Type	Hazard Code	RDL Alpha/Beta	Client	Matrix	Bkr#	Wet/Dry Aliquot (mL or g)	Carrier or Det#	Initial Wt (g)	Final Wt (g)	Net Wt (mg)
266780001-1	CASA-11-1478	SAMPLE		3 pCi/L	ARSL001	WATER	1	150	5D	7.5423	7.5430	0.7
266780002-1	CASA-11-1340	SAMPLE		3 pCi/L	ARSL001	WATER	2	125	10B	7.5019	7.5856	83.7
266780003-1	CASA-11-1337	SAMPLE		3 pCi/L	ARSL001	WATER	3	100	10A	7.5164	7.5873	70.9
266780004-1	CASA-11-1332	SAMPLE		3 pCi/L	ARSL001	WATER	4	100	10C	7.4967	7.5687	72.0
266780005-1	CASA-11-1342	SAMPLE		3 pCi/L	ARSL001	WATER	5	125	5B	7.5029	7.5842	81.3
266877001-1	Buckman1-11-1944	SAMPLE		3 pCi/L	ARSL001	WATER	6	150	3D	7.5329	7.5918	58.9
266877003-1	Buckman06-11-1970	SAMPLE		3 pCi/L	ARSL001	WATER	7	100	7B	7.5235	7.5966	73.1
266877005-1	Buckman08-11-2042	SAMPLE		3 pCi/L	ARSL001	WATER	8	150	5C	7.5094	7.5945	85.1
266892002-1	SWWS46-11-2074	SAMPLE		3 pCi/L	ARSL001	WATER	9	100	7C	7.5301	7.6085	78.4
266988001-1	CAMO-11-1240	SAMPLE		3 pCi/L	ARSL001	WATER	10	150	7D	7.4866	7.5524	65.8
266989003-1	CASA-11-1334	SAMPLE		3 pCi/L	ARSL001	WATER	11	125	2C	7.5455	~~7.6643~~	~~68.8~~ *LL 12/2/10
267227001-1	CAMO-11-1312	SAMPLE		3 pCi/L	ARSL001	WATER	12	150	8B	7.5070	7.5432	36.2
267227004-1	CAMO-11-1316	SAMPLE		3 pCi/L	ARSL001	WATER	13	150	9A	7.5203	7.5524	32.1
267227005-1	CAMO-11-1317	SAMPLE		3 pCi/L	ARSL001	WATER	14	150	1A	7.5144	7.5488	34.4
1202273345-1	MB	MB		3 pCi/L	QC ACCOUNT	WATER	15	~~150~~* 1000	6C	7.4804	7.4810	0.6
1202273346-1	DUP Buckman08-11-2042(266877005)	DUP		3 pCi/L	QC ACCOUNT	WATER	16	~~150~~	8A	7.5046	7.5965	91.9
1202273347-1	MS Buckman08-11-2042(266877005)	MS		3 pCi/L	QC ACCOUNT	WATER	17	50	1C	7.5222	7.5509	28.7
1202273348-1	MSD Buckman08-11-2042(266877005)	MSD		3 pCi/L	QC ACCOUNT	WATER	18	50	2B	7.5284	7.5572	28.8
1202273349-1	LCS	LCS		3 pCi/L	QC ACCOUNT	WATER	19	~~150~~* 1000	4D	7.5164	7.5168	0.4 ✓ wks.

JN 12/2/10

Have the planchets been flamed? Yes / No

Data Reviewed By: [signature]

Gross Beta Liquid

Filename : BETA.XLS
File type : Excel
Version # : 1.3.4

Batch : 1052582
Analyst : LYL1
Prep Date : 12/1/2010

Method Uncertainty : 0.0821
Geometry: 2 inch Planchett

Spike S/N : 1243-C
Spike Exp Date : 8/6/2011
Spike Activity (dpm/ml): 552.15
Spike Volume Added: 0.10

LCS S/N : 1243-C
LCS Exp Date : 8/6/2011
LCS Activity (dpm/ml): 552.15
LCS Volume Added: 0.10

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1 ml Stdev : +/- 0.005480 ml

Procedure Code : GFCGANBL
Parmname : Beta
Required MDC : 3 pCi/L

Sample Characteristics						Count Raw Data				
Pos.	Sample ID	Sample Aliquot L	Sample Residue Wt. (mg)	Sample Aliquot StDev. L	Sample Date/Time	Detector ID	Counting Time (min.)	Gross Counts Alpha	Gross Counts Beta	Count Start Date/Time
1	266780001.1	0.1500	0.7	1.4035E-05	11/9/2010 12:00	5D	60	3	50	12/2/2010 19:30
2	266780002.1	0.1250	83.7	1.2800E-05	11/9/2010 12:00	10B	60	5	110	12/2/2010 19:30
3	266780003.1	0.1000	70.9	1.1370E-05	11/9/2010 12:00	10A	70	5	97	12/2/2010 19:30
4	266780004.1	0.1000	72	1.1370E-05	11/9/2010 12:00	10C	70	5	91	12/2/2010 19:30
5	266780005.1	0.1250	81.3	1.2800E-05	11/9/2010 12:00	5B	60	12	149	12/2/2010 19:30
6	266877001.1	0.1500	58.9	1.4035E-05	11/10/2010 12:00	3D	60	23	60	12/2/2010 19:30
7	266877003.1	0.1000	73.1	1.1370E-05	11/10/2010 12:00	7B	70	13	68	12/2/2010 19:31
8	266877005.1	0.1500	85.1	1.4035E-05	11/10/2010 12:00	5C	60	27	103	12/2/2010 19:31
9	266892002.1	0.1000	78.4	1.1370E-05	11/10/2010 12:00	7C	60	4	96	12/2/2010 19:31
10	266988001.1	0.1500	65.8	1.4035E-05	11/11/2010 12:00	7D	60	11	47	12/2/2010 19:31
11	266989003.1	0.1250	83.7	1.2800E-05	11/11/2010 12:00	2C	60	8	95	12/2/2010 19:31
12	267227001.1	0.1500	36.2	1.4035E-05	11/16/2010 12:00	8B	60	4	46	12/2/2010 19:32
13	267227004.1	0.1500	32.1	1.4035E-05	11/16/2010 12:00	9A	60	4	31	12/2/2010 19:32
14	267227005.1	0.1500	34.4	1.4035E-05	11/16/2010 12:00	1A	60	17	31	12/2/2010 19:32
15	1202273345.1	1.0000	0.6	2.0399E-05	12/1/2010 0:00	6C	60	7	43	12/2/2010 19:32
16	1202273346.1	0.1500	91.9	1.4035E-05	11/10/2010 12:00	2A	60	30	100	12/2/2010 19:32
17	1202273347.1	0.0500	28.7	7.8337E-06	11/10/2010 12:00	1C	60	249	3055	12/2/2010 19:32
18	1202273348.1	0.0500	28.8	7.8337E-06	11/10/2010 12:00	2B	60	231	3158	12/2/2010 19:33
19	1202273349.1	1.0000	0.4	2.0399E-05	12/1/2010 0:00	4D	60	466	3175	12/2/2010 19:33

Analytical SOP: GL-RAD-A-001
Instrument SOP: GL-RAD-I-016

Calibration Data

Pos.	Counted on	Calibration Date	Calibration Due Date	Calibration Source Used	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Alpha X-Talk	CPM	Weekly Bkg Count Start Date/Time	Count Time (min.)
1	PIC	8/1/2010	8/31/2011	Sr90	0.4792	0.00816	0.04047	0.590	11/29/2010 3:48	500
2	PIC	8/1/2010	8/31/2011	Sr90	0.4322	0.00816	0.09484	0.358	11/29/2010 3:49	500
3	PIC	8/1/2010	8/31/2011	Sr90	0.4327	0.00816	0.12184	0.326	11/29/2010 3:49	500
4	PIC	8/1/2010	8/31/2011	Sr90	0.4345	0.00816	0.11070	0.324	11/29/2010 3:49	500
5	PIC	8/1/2010	8/31/2011	Sr90	0.4376	0.00816	0.04918	0.354	11/29/2010 3:48	500
6	PIC	8/1/2010	8/31/2011	Sr90	0.4136	0.00464	0.04529	0.386	11/29/2010 3:48	500
7	PIC	8/1/2010	8/31/2011	Sr90	0.4344	0.00816	0.05061	0.338	11/29/2010 3:48	500
8	PIC	8/1/2010	8/31/2011	Sr90	0.4372	0.00816	0.05168	0.504	11/29/2010 3:48	500
9	PIC	8/1/2010	8/31/2011	Sr90	0.4334	0.00816	0.06905	0.250	11/29/2010 3:48	500
10	PIC	8/1/2010	8/31/2011	Sr90	0.4307	0.00816	0.05802	0.452	11/29/2010 3:48	500
11	PIC	8/1/2010	8/31/2011	Sr90	0.4280	0.00575	0.04280	0.360	11/29/2010 3:48	500
12	PIC	8/1/2010	8/31/2011	Sr90	0.4183	0.00816	0.11886	0.386	11/29/2010 3:48	500
13	PIC	8/1/2010	8/31/2011	Sr90	0.4275	0.00816	0.14009	0.348	11/29/2010 3:49	500
14	PIC	8/1/2010	8/31/2011	Sr90	0.4198	0.00600	0.11357	0.424	11/29/2010 3:48	500
15	PIC	8/1/2010	8/31/2011	Sr90	0.4790	0.00816	0.03744	0.568	11/29/2010 3:48	500
16	PIC	8/1/2010	8/31/2011	Sr90	0.4222	0.00349	0.06333	0.436	11/29/2010 3:48	500
17	PIC	8/1/2010	8/31/2011	Sr90	0.4186	0.00344	0.07075	0.806	11/29/2010 3:48	500
18	PIC	8/1/2010	8/31/2011	Sr90	0.4133	0.00383	0.10476	1.232	11/29/2010 3:48	500
19	PIC	8/1/2010	8/31/2011	Sr90	0.4755	0.00816	0.02770	0.922	11/29/2010 3:48	500

Notes:
* - Reference date for Spike Activity (dpm/ml) is the batch Prep Date

Beta Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	1.5322	1.0817	3	2.4768	**1.5121**	0.5045	0.2433	0.1228	0.7692	0.7794		SAMPLE				
2	1.5881	1.1212	3	2.6592	**12.2347**	0.1201	1.4753	0.1768	1.4744	1.7899		SAMPLE				
3	1.7675	1.2479	3	2.9420	**10.9423**	0.1352	1.0597	0.1430	1.4888	1.7450		SAMPLE				
4	1.7546	1.2388	3	2.9218	**10.0361**	0.1423	0.9760	0.1386	1.4372	1.6621		SAMPLE				
5	1.5598	1.1012	3	2.6142	**17.4546**	0.0967	2.1293	0.2052	1.6897	2.2244		SAMPLE				
6	1.4359	1.0138	3	2.3906	**4.3318**	0.2151	0.6140	0.1321	0.9588	1.0265		SAMPLE				
7	1.7925	1.2655	3	2.9754	**6.4707**	0.1906	0.6334	0.1206	1.2509	1.3632		SAMPLE				
8	1.5522	1.0958	3	2.5351	**8.1689**	0.1422	1.2127	0.1721	1.1820	1.3672		SAMPLE				
9	1.6545	1.1681	3	2.8559	**13.9847**	0.1224	1.3500	0.1648	1.7132	2.0677		SAMPLE				
10	1.4922	1.0535	3	2.4557	**2.2360**	0.3567	0.3313	0.1182	0.8238	0.8456		SAMPLE				
11	1.6083	1.1355	3	2.6920	**10.2530**	0.1347	1.2233	0.1646	1.3864	1.6251		SAMPLE				
12	1.4198	1.0024	3	2.3637	**2.6758**	0.3059	0.3807	0.1164	0.8356	0.8655		SAMPLE				
13	1.3191	0.9313	3	2.2137	**1.1191**	0.5720	0.1687	0.0965	0.6776	0.6846		SAMPLE				
14	1.4830	1.0470	3	2.4517	**0.4328**	1.0496	0.0927	0.0973	0.6958	0.6979		SAMPLE				
15	0.2256	0.1593	3	0.3656	**0.1357**	0.7693	0.1487	0.1144	0.1076	0.1082		MB				
16	1.4952	1.0556	3	2.4669	**8.5289**	0.1376	1.2307	0.1693	1.2040	1.4025	266877005.1	DUP	4.3%	0.0650		
17	6.1512	4.3428	3	9.7617	**1072.2083**	0.0187	50.1107	0.9221	19.8457	90.8199	266877005.1	MS			994.8610	107.0%
18	7.7020	5.4377	3	11.9653	**1111.6368**	0.0186	51.4013	0.9379	20.4444	94.3295	266877005.1	MSD	3.6%	0.1065	994.8610	110.9%
19	0.2896	0.2045	3	0.4563	**49.0547**	0.0198	51.9947	0.9401	0.8906	4.1605		LCS			49.7430	98.6%

SampleID	Instr	Time (min.)	Alpha Counts	Beta Counts	Count Start Time	Count End Time	Machine
266780001	5D	60	3	50	12/2/2010 19:30	12/2/2010 20:30	PIC
266780002	10B	60	5	110	12/2/2010 19:30	12/2/2010 20:30	PIC
266780003	10A	70	5	97	12/2/2010 19:30	12/2/2010 20:40	PIC
266780004	10C	70	5	91	12/2/2010 19:30	12/2/2010 20:40	PIC
266780005	5B	60	12	149	12/2/2010 19:30	12/2/2010 20:30	PIC
266877001	3D	60	23	60	12/2/2010 19:30	12/2/2010 20:30	PIC
266877003	7B	70	13	68	12/2/2010 19:31	12/2/2010 20:41	PIC
266877005	5C	60	27	103	12/2/2010 19:31	12/2/2010 20:31	PIC
266892002	7C	60	4	96	12/2/2010 19:31	12/2/2010 20:31	PIC
266988001	7D	60	11	47	12/2/2010 19:31	12/2/2010 20:31	PIC
266989003	2C	60	8	95	12/2/2010 19:31	12/2/2010 20:31	PIC
267227001	8B	60	4	46	12/2/2010 19:32	12/2/2010 20:32	PIC
267227004	9A	60	4	31	12/2/2010 19:32	12/2/2010 20:32	PIC
267227005	1A	60	17	31	12/2/2010 19:32	12/2/2010 20:32	PIC
1202273345	6C	60	7	43	12/2/2010 19:32	12/2/2010 20:32	PIC
1202273346	2A	60	30	100	12/2/2010 19:32	12/2/2010 20:32	PIC
1202273347	1C	60	249	3055	12/2/2010 19:32	12/2/2010 20:32	PIC
1202273348	2B	60	231	3158	12/2/2010 19:33	12/2/2010 20:33	PIC
1202273349	4D	60	466	3175	12/2/2010 19:33	12/2/2010 20:33	PIC

Radiochemistry Batch Checklist

18-Nov-2010

Batch# 1048899 Product: Ra-228 Date: 11/19/10

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

Primary Review Performed By: [signature] 11/19/10

Secondary Review Performed By: [signature]

ARSL
11/25

Blank Correction Report

Batch ID 1048899

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202264554	DUP	Radium-228	0.900 L	1.03	0.275	0.578	-.03033333	pCi/L	NO
1202264557	LCS	Radium-228	1.00 L	10.3	1.46	0.715	-.0273	pCi/L	NO
1202264553	MB	Radium-228	1.00 L	-0.0273	0.128	0.504	-.0273	pCi/L	NO
1202264556	MS	Radium-228	0.250 L	43.5	6.10	3.20	-.1092	pCi/L	NO
265580002	WT_IPSAN-10-26392	Radium-228	0.900 L	0.714	0.218	0.555	-.03033333	pCi/L	NO
266877001	Buckman1-11-1944	Radium-228	0.900 L	0.778	0.233	0.564	-.03033333	pCi/L	NO
266877003	Buckman06-11-1970	Radium-228	0.900 L	0.650	0.219	0.580	-.03033333	pCi/L	NO
266877005	Buckman08-11-2042	Radium-228	0.900 L	1.13	0.275	0.569	-.03033333	pCi/L	NO
266892002	SWWS46-11-2074	Radium-228	0.900 L	0.097	0.196	0.710	-.03033333	pCi/L	NO

Radium-228 Que Sheet

11/16/2010

Batch #: 1048899 Analyst:AYB1 First Client Due Date:11/25/2010 Internal Due Date11/18/2010

Spike Isotope: Radium-228 Spike Code: 1460-A Expiration Date: 7/27/10 Vol: 0.1 Ac-228 Ingrow: 1745 11/17/10

LCS Isotope: Radium-228 LCS Code: 1460-A Expiration Date: 7/27/10 Vol: 0.1

Tracer Isotope: Barium-133 Tracer Code: 0112-K Expiration Date: 2/12/11 Vol: 0.1 Ac-228 Separation Date/Time: 0900 11/19/10

Prep Date: 11/16/10 Initials: AYB Pipet ID: 1795419 Balance ID: 51204063 Witness: 11/16/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collect Date & Time	Pos. #	Vol (mL)	Det #	Ba Yield (%)	Gamma Det. #
265580002-1	WT_IPSAN-10-26392	SAMPLE		1 pCi/L	WATER	ARSL001	20-OCT-10 12:00 PM	1	900	1B	92.64	
266877001-1	Buckman1-11-1944	SAMPLE		1 pCi/L	WATER	ARSL001	10-NOV-10 12:00 PM	2	900	2D	76.65	
266877003-1	Buckman06-11-1970	SAMPLE		1 pCi/L	WATER	ARSL001	10-NOV-10 12:00 PM	3	900	2A	81.62	
266877005-1	Buckman08-11-2042	SAMPLE		1 pCi/L	WATER	ARSL001	10-NOV-10 12:00 PM	4	900	3D	79.66	
266892002-1	SWWS46-11-2074	SAMPLE		1 pCi/L	WATER	ARSL001	10-NOV-10 12:00 PM	5	900	~~5B~~ 2A 11/19/10	75.28	
1202264553-1	MB for batch 1048899	MB		1 pCi/L	WATER	QC ACCOUNT		6	1000 ~~900~~ 11/19/10	1A	91.31	
1202264554-1	SWWS46-11-2074(266892002D	DUP		1 pCi/L	WATER	QC ACCOUNT	10-NOV-10 12:00 PM	7	900	4C	68.71	
1202264556-1	SWWS46-11-2074(266892002M	MS		1 pCi/L	WATER	QC ACCOUNT	10-NOV-10 12:00 PM	8	250	2B	80.83	
1202264557-1	LCS for batch 1048899	LCS		1 pCi/L	WATER	QC ACCOUNT		9	~~900~~ 1000 11/19/10	1C	73.64	

AYB 11/19/10

✓ dmlr

Data Reviewed By: KDat 11/19/10

Radium-228 Liquid

Filename : RA228.XLS
File type : Excel
Version # : 1.3.4

Batch : 1048899
Analyst : AYB1
Prep Date : 11/16/2010

Ra-228 Abundance : 1
Ra-228 Method Uncertainty : 0.1268

Geometry: CeF on 25mm Filter

Spike S/N : 1460-A
Spike Exp Date : 7/27/2011
Spike Activity (dpm/ml): 219.05
Spike Volume Added: 0.10

LCS S/N : 1460-A
LCS Exp Date : 7/27/2011
LCS Activity (dpm/ml): 219.05
LCS Volume Added: 0.10

Tracer S/N : 0112-K
Tracer Exp Date : 2/12/2011
Tracer Volume Added: 0.10

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1 ml Stdev : +/- 0.005480 ml

Procedure Code : GFC28RAL
Parmname : Radium-228
Required MDC : 1 pCi/L
Halflife of Ra-228 : 5.75 years
Halflife of Ac-228 : 6.15 hours

Sample Characteristics					Tracer Calculations					
Pos.	Sample ID	Sample Aliquot L	Sample Aliquot StDev. L	Sample Date/Time	Tracer Concentration (cpm) (Ba-133 Ref.)	Tracer Ref. Count Uncertainty (cpm)	Tracer Concentration (cpm) (Ba-133 Samp.)	Tracer Samp. Count Uncertainty (cpm)	Tracer Aliquot (mL)	Tracer Aliquot StDev. (mL)
1	265580002.1	0.9000	2.0768E-05	10/20/2010 12:00	292.1	3.60%	270.6	3.76%	0.1	0.000701
2	266877001.1	0.9000	2.0768E-05	11/10/2010 12:00	292.1	3.60%	223.9	4.19%	0.1	0.000701
3	266877003.1	0.9000	2.0768E-05	11/10/2010 12:00	292.1	3.60%	238.4	4.04%	0.1	0.000701
4	266877005.1	0.9000	2.0768E-05	11/10/2010 12:00	292.1	3.60%	232.7	4.09%	0.1	0.000701
5	266892002.1	0.9000	2.0768E-05	11/10/2010 12:00	292.1	3.60%	219.9	4.23%	0.1	0.000701
6	1202264553.1	1.0000	2.0399E-05	11/16/2010 0:00	292.1	3.60%	237.5	4.05%	0.1	0.000701
7	1202264554.1	0.9000	2.0768E-05	11/10/2010 12:00	292.1	3.60%	186.1	4.66%	0.1	0.000701
8	1202264556.1	0.2500	1.7439E-05	11/10/2010 12:00	292.1	3.60%	236.1	4.06%	0.1	0.000701
9	1202264557.1	1.0000	2.0399E-05	11/16/2010 0:00	292.1	3.60%	215.1	4.28%	0.1	0.000701

Analytical SOP: GL-RAD-A-009
Instrument SOP: GL-RAD-I-016

Count raw Data													Calibration Data							
Pos.	Detector ID	Counting Time (min.)	Gross Counts Alpha	Gross Counts Beta	Beta cpm	Count Start Date/Time	Separation Date/Time	Ra-228 Decay	Ac-228 Decay	Ac-228 Count Correction	Calculated Sample Recovery %	Sample Recovery Error %	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	cpm	Weekly Bkg Count Start Date/Time	Count Time (min.)
1	1B	60	54	61	1.017	11/19/2010 12:50	11/19/2010 9:00	0.990	0.648	1.057	92.6%	2.79%	PIC	8/1/2010	8/31/2011	0.5953	0.00409	0.539	11/15/2010 3:21	1000
2	2D	60	12	47	0.783	11/19/2010 12:50	11/19/2010 9:00	0.997	0.648	1.057	76.7%	2.93%	PIC	8/1/2010	8/31/2011	0.5885	0.00479	0.355	11/14/2010 8:16	1000
3	2A	60	9	51	0.850	11/19/2010 12:50	11/19/2010 9:00	0.997	0.648	1.057	81.6%	2.88%	PIC	8/1/2010	8/31/2011	0.6003	0.00349	0.461	11/14/2010 8:16	1000
4	3D	60	6	62	1.033	11/19/2010 12:51	11/19/2010 9:00	0.997	0.648	1.057	79.7%	2.90%	PIC	8/1/2010	8/31/2011	0.5855	0.00464	0.392	11/14/2010 8:16	1000
5	5C	60	8	39	0.650	11/19/2010 12:55	11/19/2010 9:00	0.997	0.643	1.057	75.3%	2.95%	PIC	8/1/2010	8/31/2011	0.5993	0.00816	0.597	11/14/2010 8:17	1000
6	1A	60	8	24	0.400	11/19/2010 12:51	11/19/2010 9:00	0.999	0.648	1.057	81.3%	2.89%	PIC	8/1/2010	8/31/2011	0.5980	0.00600	0.418	11/14/2010 8:16	1000
7	4C	60	10	45	0.750	11/19/2010 12:51	11/19/2010 9:00	0.997	0.648	1.057	63.7%	3.11%	PIC	8/1/2010	8/31/2011	0.6082	0.00426	0.261	11/14/2010 8:18	1000
8	2B	60	17	500	8.333	11/19/2010 12:51	11/19/2010 9:00	0.997	0.647	1.057	80.8%	2.89%	PIC	8/1/2010	8/31/2011	0.6003	0.00383	1.185	11/14/2010 8:16	1000
9	1C	60	13	403	6.717	11/19/2010 12:51	11/19/2010 9:00	0.999	0.647	1.057	73.6%	2.97%	PIC	8/1/2010	8/31/2011	0.5839	0.00344	0.705	11/14/2010 8:16	1000

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	0.3399	0.2400	1	0.5547	**0.7141**	0.2782	0.4777	0.1322	0.1977	0.2184		SAMPLE				
2	0.3349	0.2365	1	0.5637	**0.7775**	0.2720	0.4283	0.1158	0.2102	0.2333		SAMPLE				
3	0.3515	0.2482	1	0.5799	**0.6503**	0.3123	0.3890	0.1209	0.2022	0.2192		SAMPLE				
4	0.3406	0.2405	1	0.5688	**1.1265**	0.2090	0.6413	0.1327	0.2331	0.2754		SAMPLE				
5	0.4381	0.3093	1	0.7102	**0.0970**	2.0175	0.0530	0.1069	0.1958	0.1962		SAMPLE				
6	0.3032	0.2141	1	0.5039	**-0.0273**	4.6762	-0.0180	0.0842	0.1275	0.1275		MB				
7	0.3347	0.2363	1	0.5784	**1.0345**	0.2331	0.4890	0.1130	0.2390	0.2745	266892002.1	DUP	165.7%	0.9958		
8	2.0510	1.4481	1	3.2003	**43.4899**	0.0599	7.1483	0.3743	2.2770	6.0992	266892002.1	MS			39.5395	110.0%
9	0.4456	0.3146	1	0.7149	**10.3025**	0.0633	6.0117	0.3356	0.5752	1.4602		LCS			9.8669	104.4%

SampleID	Instr	Time (min.)	Alpha Counts	Beta Counts	Count Start Time	Count End Time	Machine
265580002	1B	60	54	61	11/19/2010 12:50	11/19/2010 13:50	PIC
266877001	2D	60	12	47	11/19/2010 12:50	11/19/2010 13:50	PIC
266877003	2A	60	9	51	11/19/2010 12:50	11/19/2010 13:50	PIC
266877005	3D	60	6	62	11/19/2010 12:51	11/19/2010 13:51	PIC
266892002	5C	60	8	39	11/19/2010 12:55	11/19/2010 13:55	PIC
1202264553	1A	60	8	24	11/19/2010 12:51	11/19/2010 13:51	PIC
1202264554	4C	60	10	45	11/19/2010 12:51	11/19/2010 13:51	PIC
1202264556	2B	60	17	500	11/19/2010 12:51	11/19/2010 13:51	PIC
1202264557	1C	60	13	403	11/19/2010 12:51	11/19/2010 13:51	PIC

ASSAY 18-Nov-10 18:30:13

Protocol	id	8	228_REC
Time	limit	180	
Count	limit	50000	
Isotope	Ba-133		
Protocol	date	9-Apr-07	10:03:07
Run	id.	46	

POS	RACK	BATCH	TIME	COUNTS	CPM	ERROR	% RECOVERY	COUNT TIME
1	74	1	180	968	292.1	3.6		18:30:15
2	74	2	180	903	270.6	3.76	92.64	18:33:27
3	74	3	180	763	223.9	4.19	76.65	18:36:38
4	74	4	180	806	238.4	4.04	81.62	18:39:50
5	74	5	180	789	232.7	4.09	79.66	18:43:01
6	99	6	180	751	219.9	4.23	75.28	18:46:26
7	99	7	180	804	237.5	4.05	81.31	18:49:37
8	99	8	180	650	186.1	4.66	63.71	18:52:48
9	99	9	180	800	236.1	4.06	80.83	18:56:00
10	99	10	180	736	215.1	4.28	73.64	18:59:11

END OF ASSAY

Radiochemistry Batch Checklist

01-Dec-2010

Batch# 10 50 902 Product: Sr-90 Date: 12/7/10

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

Primary Review Performed By: [illegible] 12/7/10

Secondary Review Performed By: [illegible]

ARSL
12/9

Blank Correction Report

Batch ID 1050902

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202269465	DUP	Strontium-90	0.400 L	0.235	0.146	0.478	.116	pCi/L	YES
1202269467	LCS	Strontium-90	1.00 L	23.6	1.96	0.491	.0464	pCi/L	NO
1202269464	MB	Strontium-90	1.00 L	0.0464	0.0689	0.242	.0464	pCi/L	YES
1202269466	MS	Strontium-90	0.100 L	241	20.0	4.03	.464	pCi/L	NO
266780001	CASA-11-1478	Strontium-90	0.400 L	-0.166	0.0781	0.395	.116	pCi/L	YES
266780002	CASA-11-1340	Strontium-90	0.500 L	0.117	0.137	0.475	.0928	pCi/L	YES
266780003	CASA-11-1337	Strontium-90	0.500 L	-0.251	0.128	0.489	.0928	pCi/L	YES
266780004	CASA-11-1332	Strontium-90	0.500 L	0.0702	0.140	0.492	.0928	pCi/L	YES
266780005	CASA-11-1342	Strontium-90	0.500 L	0.0279	0.133	0.487	.0928	pCi/L	YES
266877001	Buckman1-11-1944	Strontium-90	0.500 L	-0.235	0.115	0.497	.0928	pCi/L	YES
266877003	Buckman06-11-1970	Strontium-90	0.500 L	-0.0391	0.132	0.488	.0928	pCi/L	YES
266877005	Buckman08-11-2042	Strontium-90	0.500 L	0.404	0.161	0.495	.0928	pCi/L	YES
266988001	CAMO-11-1240	Strontium-90	0.500 L	0.267	0.151	0.489	.0928	pCi/L	YES
266989003	CASA-11-1334	Strontium-90	0.500 L	0.0749	0.0926	0.333	.0928	pCi/L	YES
267028001	CAWR-10-23736	Strontium-90	0.500 L	-0.195	0.117	0.497	.0928	pCi/L	YES
267227001	CAMO-11-1312	Strontium-90	0.500 L	-0.216	0.125	0.493	.0928	pCi/L	YES
267227004	CAMO-11-1316	Strontium-90	0.500 L	0.150	0.144	0.497	.0928	pCi/L	YES
267227005	CAMO-11-1317	Strontium-90	0.500 L	-0.117	0.119	0.484	.0928	pCi/L	YES

Strontium 90 Que Sheet

11/30/10

Batch #: 1050902 **Analyst:** SYS1 **First Client Due Date:** 12/09/2010 **Internal Due Date:** 11/28/2010 **Comments**

Sr-90 Spike Code: 1243-C **Expiration Date:** 8-6-11 **Vol:** 0.1 **Sr Sep. Date/time:** 11-29-10/1735

Sr-90 LCS Code: 1243-C **Expiration Date:** 8-6-11 **Vol:** 0.1

Sr Carrier Code: 1425235 **Exp Date:** 8-19-11 **Vol:** 0.5 **Sdt Wt:** 8.28

Prep Date: 11-24-10 **Initials:** SMS **Pipet ID:** 1795419 **Balance #:** 51204863 **Analytical Scale #:** F30560 **Witness:** AW 11-24-10 Recopied

Sample ID	Client Description	Type	RDL	Collection Date	Matrix	Client	Rad	Pos. #	Wet/Dry Aliquot (mL) or (g)	Det # 1 & 2		Initial Sr wt (g)	Final Sr wt (g)	Net Sr wt (mg)
266780001-1	CASA-11-1478	SAMPLE	.5 pCi/L	NOV-09-10 12:00 PM	WATER	ARSL001		1	400	2C	7B	0.0239	0.0323	8.4
266780002-1	CASA-11-1340	SAMPLE	.5 pCi/L	NOV-09-10 12:00 PM	WATER	ARSL001		2	500	1B		0.0236	~~0.0321~~ 0.0321	8.5
266780003-1	CASA-11-1337	SAMPLE	.5 pCi/L	NOV-09-10 12:00 PM	WATER	ARSL001		3	500	7B		0.0238	0.0281	4.3
266780004-1	CASA-11-1332	SAMPLE	.5 pCi/L	NOV-09-10 12:00 PM	WATER	ARSL001		4	500	9A		0.0232	0.0286	5.4
266780005-1	CASA-11-1342	SAMPLE	.5 pCi/L	NOV-09-10 12:00 PM	WATER	ARSL001		5	500	2A		0.0225	0.0308	8.3
266877001-1	Buckman1-11-1944	SAMPLE	.5 pCi/L	NOV-10-10 12:00 PM	WATER	ARSL001		6	500	7A		0.0241	0.0325	8.4
266877003-1	Buckman06-11-1970	SAMPLE	.5 pCi/L	NOV-10-10 12:00 PM	WATER	ARSL001		7	500	4C		0.0239	0.0324	8.5
266877005-1	Buckman08-11-2042	SAMPLE	.5 pCi/L	NOV-10-10 12:00 PM	WATER	ARSL001		8	500	3B		0.0245	0.0330	8.5
266880001-1	WST39-11-2059	SAMPLE	.5 pCi/L	NOV-10-10 12:00 PM	WATER	ARSL001		~~9~~	~~500~~	~~2D~~		~~0.0225~~	~~0.0302~~	~~7.7~~
266988001-1	CAMO-11-1240	SAMPLE	.5 pCi/L	NOV-11-10 12:00 PM	WATER	ARSL001		10	500	6C		0.0238	~~0.0328~~ 0.0323	8.5
266989003-1	CASA-11-1334	SAMPLE	.5 pCi/L	NOV-11-10 12:00 PM	WATER	ARSL001		11	500	3D	5B	0.0237	0.0320	8.3
267028001-1	CAWR-10-23736	SAMPLE	.5 pCi/L	NOV-12-10 12:00 PM	WATER	ARSL001		12	500	1A		0.0241	0.0323	8.2
267227001-1	CAMO-11-1312	SAMPLE	.5 pCi/L	NOV-16-10 12:00 PM	WATER	ARSL001		13	500	3C		0.0236	0.0321	8.5
267227004-1	CAMO-11-1316	SAMPLE	.5 pCi/L	NOV-16-10 12:00 PM	WATER	ARSL001		14	500	7D		0.0242	0.0326	8.4
267227005-1	CAMO-11-1317	SAMPLE	.5 pCi/L	NOV-16-10 12:00 PM	WATER	ARSL001		15	500	8B		0.0248	0.0327	7.9
1202269464-1	MB for batch 1050902	MB	.5 pCi/L		WATER	QC ACCOUNT		16	~~500~~ 1000	5C		0.0243	0.0327	8.4
1202269465-1	CASA-11-1478(266780001DUP)	DUP	.5 pCi/L	NOV-09-10 12:00 PM	WATER	QC ACCOUNT		17	400	5B		0.0240	0.0324	8.4
1202269466-1	CASA-11-1478(266780001MS)	MS	.5 pCi/L	NOV-09-10 12:00 PM	WATER	QC ACCOUNT		18	100	1C		0.0243	0.0326	8.3
1202269467-1	LCS for batch 1050902	LCS	.5 pCi/L		WATER	QC ACCOUNT		19	~~500~~ 1000	2B		0.0244	0.0327	8.3

✓ wts.
✓ details

Solid Sample Dissolution by: **LEACH or DIGESTION** (Circle One) **Data Reviewed By:** 12/7/10

Strontium-90 Liquid

Filename : SR90.XLS
File type : Excel
Version # : 1.3.6

Spike S/N : 1243-C
Spike Exp Date : 8/6/2011
Spike Activity (dpm/ml): 552.40
Spike Volume Added: 0.10

Batch : 1050902
Analyst : SYS1
Prep Date : 11/24/2010

LCS S/N : 1243-C
LCS Exp Date : 8/6/2011
LCS Activity (dpm/ml): 552.40
LCS Volume Added: 0.10

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1 ml Stdev : +/- 0.005480 ml

Sr-90 Abundance : 1
Method Uncertainty : 0.0784

Carrier S/N : 1425235
Carrier Exp Date : 8/19/2011
Carrier Volume Added: 0.50
Carrier Weight (mg/ml): 16.55
Carrier Weight StDev.: 0.06

Procedure Code : GFC90SRL
Parmname : Strontium-90
Required MDC : 0.5 pCi/L
Halflife of Sr-90 : 28.90 years
Halflife of Y-90 : 64.053 hours

Geometry: Tuffryn Filter

Sample Characteristics					Carrier Calculations				
Pos.	Sample ID	Sample Aliquot L	Sample Aliquot StDev. L	Sample Date/Time	Carrier Weight (mg) (Standard)	Net Weight (mg) (Sample)	Net Weight StDev. (mg)	Carrier Aliquot (mL)	Carrier Aliquot StDev. (mL)
1	266780001.1	0.4000	1.9669E-05	11/9/2010 12:00	16.55	8.40	0.043433	0.5	0.002564
2	266780002.1	0.5000	2.0256E-05	11/9/2010 12:00	16.55	8.50	0.043863	0.5	0.002564
3	266780003.1	0.5000	2.0256E-05	11/9/2010 12:00	16.55	4.30	0.025811	0.5	0.002564
4	266780004.1	0.5000	2.0256E-05	11/9/2010 12:00	16.55	5.40	0.030539	0.5	0.002564
5	266780005.1	0.5000	2.0256E-05	11/9/2010 12:00	16.55	8.30	0.043003	0.5	0.002564
6	266877001.1	0.5000	2.0256E-05	11/10/2010 12:00	16.55	8.40	0.043433	0.5	0.002564
7	266877003.1	0.5000	2.0256E-05	11/10/2010 12:00	16.55	8.50	0.043863	0.5	0.002564
8	266877005.1	0.5000	2.0256E-05	11/10/2010 12:00	16.55	8.50	0.043863	0.5	0.002564
~~9~~	~~266880001.1~~	~~0.5000~~	~~2.0256E-05~~	~~11/10/2010 12:00~~	~~16.55~~	~~7.70~~	~~0.040425~~	~~0.5~~	~~0.002564~~
10	266988001.1	0.5000	2.0256E-05	11/11/2010 12:00	16.55	8.50	0.043863	0.5	0.002564
11	266989003.1	0.5000	2.0256E-05	11/11/2010 12:00	16.55	8.30	0.043003	0.5	0.002564
12	267028001.1	0.5000	2.0256E-05	11/12/2010 12:00	16.55	8.20	0.042574	0.5	0.002564
13	267227001.1	0.5000	2.0256E-05	11/16/2010 12:00	16.55	8.50	0.043863	0.5	0.002564
14	267227004.1	0.5000	2.0256E-05	11/16/2010 12:00	16.55	8.40	0.043433	0.5	0.002564
15	267227005.1	0.5000	2.0256E-05	11/16/2010 12:00	16.55	7.90	0.041284	0.5	0.002564
16	1202269464.1	1.0000	2.0399E-05	11/24/2010 0:00	16.55	8.40	0.043433	0.5	0.002564
17	1202269465.1	0.4000	1.9669E-05	11/9/2010 12:00	16.55	8.40	0.043433	0.5	0.002564
18	1202269466.1	0.1000	1.1370E-05	11/9/2010 12:00	16.55	8.30	0.043003	0.5	0.002564
19	1202269467.1	1.0000	2.0399E-05	11/24/2010 0:00	16.55	8.30	0.043003	0.5	0.002564

Analytical SOP: GL-RAD-A-004
Instrument SOP: GL-RAD-I-016

Count Raw Data

Pos.	Detector ID	Counting Time (min.)	Gross Counts Alpha	Gross Counts Beta	Gross Beta CPM	Count Start Date/Time	Strontium Separation Date/Time	Yttrium Ingrowth	Sr-90 Decay	Calculated Sample Recovery %	Sample Recovery Error %
1	7B	60	5	11	0.179	12/5/2010 15:44	11/29/2010 17:35	0.786	0.998	102%	0.96%
2	1B	110	40	68	0.584	11/30/2010 12:38	11/29/2010 17:35	0.194	0.999	103%	0.96%
3	7B	300	14	79	0.261	11/30/2010 12:39	11/29/2010 17:35	0.208	0.999	52.0%	1.06%
4	9A	170	2	64	0.375	11/30/2010 12:39	11/29/2010 17:35	0.199	0.999	65.3%	1.02%
5	2A	90	6	41	0.452	11/30/2010 12:39	11/29/2010 17:35	0.193	0.999	100%	0.97%
6	7A	90	6	29	0.318	11/30/2010 12:39	11/29/2010 17:35	0.193	0.999	102%	0.96%
7	4C	110	11	59	0.531	11/30/2010 12:39	11/29/2010 17:35	0.195	0.999	103%	0.96%
8	3B	110	7	85	0.770	11/30/2010 12:39	11/29/2010 17:35	0.195	0.999	103%	0.96%
~~9~~	~~7C~~	~~60~~	~~178~~	~~83~~	~~1.192~~	~~12/5/2010 15:45~~	~~11/29/2010 17:35~~	~~0.786~~	~~0.998~~	~~93.1%~~	~~0.97%~~
10	6C	110	5	80	0.725	11/30/2010 12:40	11/29/2010 17:35	0.195	0.999	103%	0.96%
11	5B	60	10	25	0.410	12/5/2010 15:45	11/29/2010 17:35	0.786	0.998	100%	0.97%
12	1A	90	7	29	0.315	11/30/2010 12:40	11/29/2010 17:35	0.193	0.999	99.1%	0.97%
13	3C	120	12	58	0.480	11/30/2010 12:40	11/29/2010 17:35	0.195	0.999	103%	0.96%
14	7D	90	11	49	0.538	11/30/2010 12:41	11/29/2010 17:35	0.193	0.999	102%	0.96%
15	8B	90	1	29	0.321	11/30/2010 12:44	11/29/2010 17:35	0.194	0.999	95.5%	0.97%
16	5C	100	3	56	0.559	11/30/2010 12:41	11/29/2010 17:35	0.194	1.000	102%	0.96%
17	5B	120	8	56	0.464	11/30/2010 12:41	11/29/2010 17:35	0.196	0.999	102%	0.96%
18	1C	60	15	1678	27.951	11/30/2010 12:41	11/29/2010 17:35	0.191	0.999	100%	0.97%
19	2B	60	3	1654	27.562	11/30/2010 12:41	11/29/2010 17:35	0.191	1.000	100%	0.97%

Calibration Data

Pos.	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm) Sr-90	Detector Efficiency (cpm/dpm) Y-90	Detector Efficiency Error (cpm/dpm)	Alpha X-Talk	CPM	Weekly Bkg Count Start Date/Time	Count Time (min.)
1	PIC	2/1/2010	2/28/2011	0.4140	0.5113	0.00816	0.04698	0.301	12/5/2010 13:47	1000
2	PIC	2/1/2010	2/28/2011	0.4131	0.5009	0.00409	0.09350	0.516	11/29/2010 3:48	500
3	PIC	2/1/2010	2/28/2011	0.4253	0.5113	0.00816	0.04419	0.338	11/29/2010 3:48	500
4	PIC	2/1/2010	2/28/2011	0.4323	0.5100	0.00816	0.11678	0.348	11/29/2010 3:49	500
5	PIC	2/1/2010	2/28/2011	0.4233	0.5055	0.00349	0.05091	0.436	11/29/2010 3:48	500
6	PIC	2/1/2010	2/28/2011	0.4150	0.5088	0.00816	0.05825	0.454	11/29/2010 3:48	500
7	PIC	2/1/2010	2/28/2011	0.4149	0.5055	0.00426	0.05196	0.554	11/29/2010 3:48	500
8	PIC	2/1/2010	2/28/2011	0.4029	0.5015	0.00655	0.03755	0.540	11/29/2010 3:48	500
~~9~~	~~PIC~~	~~2/1/2010~~	~~2/28/2011~~	~~0.4163~~	~~0.5135~~	~~0.00816~~	~~0.06463~~	~~0.266~~	~~12/5/2010 13:39~~	~~1000~~
10	PIC	2/1/2010	2/28/2011	0.4187	0.5103	0.00816	0.04110	0.568	11/29/2010 3:48	500
11	PIC	2/1/2010	2/28/2011	0.4198	0.5140	0.00816	0.04252	0.341	12/5/2010 13:39	1000
12	PIC	2/1/2010	2/28/2011	0.4146	0.4969	0.00600	0.09731	0.424	11/29/2010 3:48	500
13	PIC	2/1/2010	2/28/2011	0.4085	0.5044	0.00535	0.03824	0.604	11/29/2010 3:48	500
14	PIC	2/1/2010	2/28/2011	0.4142	0.5086	0.00816	0.04947	0.452	11/29/2010 3:48	500
15	PIC	2/1/2010	2/28/2011	0.4215	0.5148	0.00816	0.09504	0.386	11/29/2010 3:48	500
16	PIC	2/1/2010	2/28/2011	0.4239	0.5140	0.00816	0.04342	0.504	11/29/2010 3:48	500
17	PIC	2/1/2010	2/28/2011	0.4196	0.5140	0.00816	0.04259	0.354	11/29/2010 3:48	500
18	PIC	2/1/2010	2/28/2011	0.4114	0.4984	0.00344	0.06305	0.806	11/29/2010 3:48	500
19	PIC	2/1/2010	2/28/2011	0.4073	0.4956	0.00383	0.09665	1.232	11/29/2010 3:48	500

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

* - RPD changed to 0% due to activity below MDC for 1202269465.1

Results Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	0.2314	0.1633	0.5	0.3948	**-0.1656**	0.4720	-0.1216	0.0574	0.0781	0.0781		SAMPLE				
2	0.3032	0.2141	0.5	0.4751	**0.1173**	1.1681	0.0682	0.0796	0.1370	0.1373		SAMPLE				
3	0.3230	0.2281	0.5	0.4888	**-0.2505**	0.5128	-0.0767	0.0393	0.1284	0.1284		SAMPLE				
4	0.3161	0.2231	0.5	0.4920	**0.0702**	1.9883	0.0271	0.0539	0.1395	0.1397		SAMPLE				
5	0.3042	0.2148	0.5	0.4871	**0.0279**	4.7512	0.0162	0.0768	0.1326	0.1326		SAMPLE				
6	0.3113	0.2198	0.5	0.4972	**-0.2349**	0.4916	-0.1357	0.0667	0.1154	0.1155		SAMPLE				
7	0.3125	0.2206	0.5	0.4880	**-0.0391**	3.3746	-0.0228	0.0771	0.1318	0.1319		SAMPLE				
8	0.3164	0.2234	0.5	0.4947	**0.4042**	0.3905	0.2303	0.0899	0.1578	0.1610		SAMPLE				
~~9~~	~~0.1889~~	~~0.1333~~	~~0.5~~	~~0.3258~~	~~**1.0945**~~	~~0.1538~~	~~0.9256~~	~~0.1419~~	~~0.1677~~	~~0.1891~~		~~SAMPLE~~				
10	0.3135	0.2213	0.5	0.4889	**0.2668**	0.5587	0.1574	0.0879	0.1491	0.1506		SAMPLE				
11	0.1974	0.1394	0.5	0.3333	**0.0749**	1.2345	0.0686	0.0847	0.0924	0.0926		SAMPLE				
12	0.3097	0.2186	0.5	0.4967	**-0.1949**	0.6029	-0.1093	0.0659	0.1175	0.1175		SAMPLE				
13	0.3187	0.2250	0.5	0.4932	**-0.2155**	0.5796	-0.1245	0.0721	0.1249	0.1249		SAMPLE				
14	0.3109	0.2195	0.5	0.4967	**0.1497**	0.9606	0.0864	0.0830	0.1438	0.1443		SAMPLE				
15	0.3003	0.2120	0.5	0.4845	**-0.1175**	1.0163	-0.0648	0.0659	0.1194	0.1194		SAMPLE				
16	0.1536	0.1085	0.5	0.2423	**0.0464**	1.4848	0.0547	0.0812	0.0688	0.0689		MB				
17	0.3010	0.2125	0.5	0.4784	**0.2346**	0.6159	0.1098	0.0676	0.1444	0.1457	266780001.1	DUP	0.0%	0.8940		
18	2.5365	1.7908	0.5	4.0253	**240.9127**	0.0272	27.1449	0.6837	6.0680	20.0085	266780001.1	MS			249.0666	96.7%
19	0.3162	0.2232	0.5	0.4912	**23.5609**	0.0278	26.3298	0.6796	0.6081	1.9621		LCS			24.8830	94.7%

SampleID	Instr	Time (min.)	Alpha Counts	Beta Counts	Count Start Time	Count End Time	Machine
266780001	7B	60	5	11	12/5/2010 15:44	12/5/2010 16:44	PIC
266780002	1B	110	40	68	11/30/2010 12:38	11/30/2010 14:28	PIC
266780003	7B	300	14	79	11/30/2010 12:39	11/30/2010 17:39	PIC
266780004	9A	170	2	64	11/30/2010 12:39	11/30/2010 15:29	PIC
266780005	2A	90	6	41	11/30/2010 12:39	11/30/2010 14:09	PIC
266877001	7A	90	6	29	11/30/2010 12:39	11/30/2010 14:09	PIC
266877003	4C	110	11	59	11/30/2010 12:39	11/30/2010 14:29	PIC
266877005	3B	110	7	85	11/30/2010 12:39	11/30/2010 14:29	PIC
~~266880001~~	~~7C~~	~~60~~	~~178~~	~~83~~	~~12/5/2010 15:45~~	~~12/5/2010 16:45~~	~~PIC~~
266988001	6C	110	5	80	11/30/2010 12:40	11/30/2010 14:30	PIC
266989003	5B	60	10	25	12/5/2010 15:45	12/5/2010 16:45	PIC
267028001	1A	90	7	29	11/30/2010 12:40	11/30/2010 14:10	PIC
267227001	3C	120	12	58	11/30/2010 12:40	11/30/2010 14:40	PIC
267227004	7D	90	11	49	11/30/2010 12:41	11/30/2010 14:11	PIC
267227005	8B	90	1	29	11/30/2010 12:44	11/30/2010 14:14	PIC
1202269464	5C	100	3	56	11/30/2010 12:41	11/30/2010 14:21	PIC
1202269465	5B	120	8	56	11/30/2010 12:41	11/30/2010 14:41	PIC
1202269466	1C	60	15	1678	11/30/2010 12:41	11/30/2010 13:41	PIC
1202269467	2B	60	3	1654	11/30/2010 12:41	11/30/2010 13:41	PIC

Lucas Cell Raw Data

Batch# 1048498 Product: Ra-226 Date: 12/1/10

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

Primary Review Performed By: [signature] ARSL 12/10/10

Secondary Review Performed By: [signature] 12/1/10

Radium-226 Que Sheet

01-DEC-10

GEL Laboratories, Radiochemistry Division

Batch #: 1048498 **Analyst:** CRO **First Client Due Date:** 12/10/2010 **Internal Due Date:** 11/29/2010

Spike Isotope: Radium-226 **Spike Code:** 010386 **Expiration Date:** 9/27/11 **Vol:** 0.1 **End Initial/Degas Date/Time:** 11/23/10 1025

LCS Isotope: Radium-226 **LCS Code:** 010386 **Expiration Date:** 9/27/11 **Vol:** 0.1 **End LN De-em Date:** 12/1/10

Prep Date: 11/16/10 **Bkg Count Time:** 30 (Min) **Pipet ID:** 27660953 **Sample Count Time:** 30 (Min) **Balance ID:** 40309539 **Initials:** LW **Start Count Date:** 12/1/10 **Witness:** DJM 11-16-10

Sample I	Client Description	Type	Hazard Code	Matrix	Min CRDL	Client	Position (Label)	Aliquot (mL or g)	End LN De-em Time	Start Count Time	Cell #	Det #	Bkg counts	Total Counts
266877001-1	Buckman1-11-1944	SAMPLE		WATER	1 pCi/L	ARSL001	1	500	0940	1240	706	7	4	9
266877003-1	Buckman06-11-1970	SAMPLE		WATER	1 pCi/L	ARSL001	2	500	0940	1240	809	8	4	18
266877005-1	Buckman08-11-2042	SAMPLE		WATER	1 pCi/L	ARSL001	3	500	1010	1310	104	1	4	15
266892002-1	SWWS46-11-2074	SAMPLE		WATER	1 pCi/L	ARSL001	4	500	1010	1310	203	2	8	13
1202263432-1	MB for batch 1048498	MB		WATER	1 pCi/L	QC ACCOUNT	5	~~500~~ 1000	1010	1310	405	4	4	9
1202263433-1	Buckman1-11-1944(266877001DUP)	DUP		WATER	1 pCi/L	QC ACCOUNT	6	500	1010	1310	510	5	2	2
1202263434-1	Buckman1-11-1944(266877001MS)	MS		WATER	1 pCi/L	QC ACCOUNT	7	100	1010	1310	610	6	2	1256
1202263435-1	LCS for batch 1048498	LCS		WATER	1 pCi/L	QC ACCOUNT	8	~~500~~ 1000	1010	1310	710	7	4	1088

JP 12/1/10

JP 12/1/10

Comments:

Data Reviewed By: Timothy Pare 12/1/10

Blank Correction Report

Batch ID 1048498

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202263433	DUP	Radium-226	0.500 L	0.00	0.0447	0.213	.1172	pCi/L	YES
1202263435	LCS	Radium-226	1.00 L	10.4	1.54	0.118	.0586	pCi/L	NO
1202263432	MB	Radium-226	1.00 L	0.0586	0.043	0.144	.0586	pCi/L	YES
1202263434	MS	Radium-226	0.100 L	113	14.2	0.862	.586	pCi/L	NO
266877001	Buckman1-11-1944	Radium-226	0.500 L	0.123	0.0902	0.302	.1172	pCi/L	YES
266877003	Buckman06-11-1970	Radium-226	0.500 L	0.268	0.0966	0.236	.1172	pCi/L	YES
266877005	Buckman08-11-2042	Radium-226	0.500 L	0.217	0.0895	0.243	.1172	pCi/L	YES
266892002	SWWS46-11-2074	Radium-226	0.500 L	0.0937	0.0872	0.303	.1172	pCi/L	YES

Radium-226 Liquid

Filename : RA226.XLS
File type : Excel
Version # : 1.2.8

Batch : 1048498
Analyst : KSD1
Prep Date : 11/16/2010
Ra-226 Abundance : 1
Ra-226 Method Uncertainty : 0.0918

Spike S/N : 0638-J
Spike Exp Date : 9/27/2011
Spike Activity (dpm/ml): 274.41
Spike Volume Added: 0.10

LCS S/N : 0638-J
LCS Exp Date : 9/27/2011
LCS Activity (dpm/ml): 274.41
LCS Volume Added: 0.10

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1 ml Stdev : +/- 0.005480 ml

Procedure Code : LUC26RAL
Parmname : Radium-226
Required MDC : 1 pCi/L
Halflife of Ra-226 : 1600 years
Halflife of Rn-222: 3.8235 days
Batch counted on : LUCAS CELL DETECTOR
BKG Count time : 30 min

Sample Characteristics					Count Raw Data					Background		
Pos.	Sample ID	Sample Aliquot L	Sample Aliquot StDev. L	Sample Date/Time	Cell Number	Counting Time (min.)	Gross Counts	Gross CPM	Counts	CPM	Count Time (min.)	Detector Efficiency (cpm/dpm)
1	266877001.1	0.5000	2.0256E-05	11/10/2010 12:00	706	30	9	0.300	4	0.133	30	1.6360
2	266877003.1	0.5000	2.0256E-05	11/10/2010 12:00	809	30	18	0.600	4	0.133	30	2.0930
3	266877005.1	0.5000	2.0256E-05	11/10/2010 12:00	104	30	15	0.500	4	0.133	30	2.0320
4	266892002.1	0.5000	2.0256E-05	11/10/2010 12:00	203	30	13	0.433	8	0.267	30	2.1390
5	1202263432.1	1.0000	2.0399E-05	11/16/2010 0:00	405	30	9	0.300	4	0.133	30	1.7090
6	1202263433.1	0.5000	2.0256E-05	11/10/2010 12:00	510	30	2	0.067	2	0.067	30	1.8000
7	1202263434.1	0.1000	1.1370E-05	11/10/2010 12:00	610	30	1256	41.867	2	0.067	30	2.2280
8	1202263435.1	1.0000	2.0399E-05	11/16/2010 0:00	710	30	1088	36.267	4	0.133	30	2.0820

Analytical SOP: GL-RAD-A-008
Instrument SOP: GL-RAD-I-007

Detector Efficiency Error (cpm/dpm)	Cell Calibration Date	Cell Calibration Due Date	De-Gas Date/Time	Rn-222 Ingrow End Date/Time	Count Start Date/Time	Rn-222 Corrections			Ra-226 Decay
						De-Gas to Ingrowth	Ingrowth to Count	During Count	
0.11201	11/22/2010	11/22/2011	11/23/2010 10:25	12/1/2010 9:40	12/1/2010 12:40	0.764	0.978	1.002	1.000
0.09431	2/9/2010	2/9/2011	11/23/2010 10:25	12/1/2010 9:40	12/1/2010 12:40	0.764	0.978	1.002	1.000
0.06792	9/1/2010	9/1/2011	11/23/2010 10:25	12/1/2010 10:10	12/1/2010 13:10	0.765	0.978	1.002	1.000
0.13069	12/21/2009	12/21/2010	11/23/2010 10:25	12/1/2010 10:10	12/1/2010 13:10	0.765	0.978	1.002	1.000
0.10392	12/10/2009	12/10/2010	11/23/2010 10:25	12/1/2010 10:10	12/1/2010 13:10	0.765	0.978	1.002	1.000
0.14548	4/12/2010	4/12/2011	11/23/2010 10:25	12/1/2010 10:10	12/1/2010 13:10	0.765	0.978	1.002	1.000
0.08202	2/16/2010	2/16/2011	11/23/2010 10:25	12/1/2010 10:10	12/1/2010 13:10	0.765	0.978	1.002	1.000
0.11201	11/22/2010	11/22/2011	11/23/2010 10:25	12/1/2010 10:10	12/1/2010 13:10	0.765	0.978	1.002	1.000

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

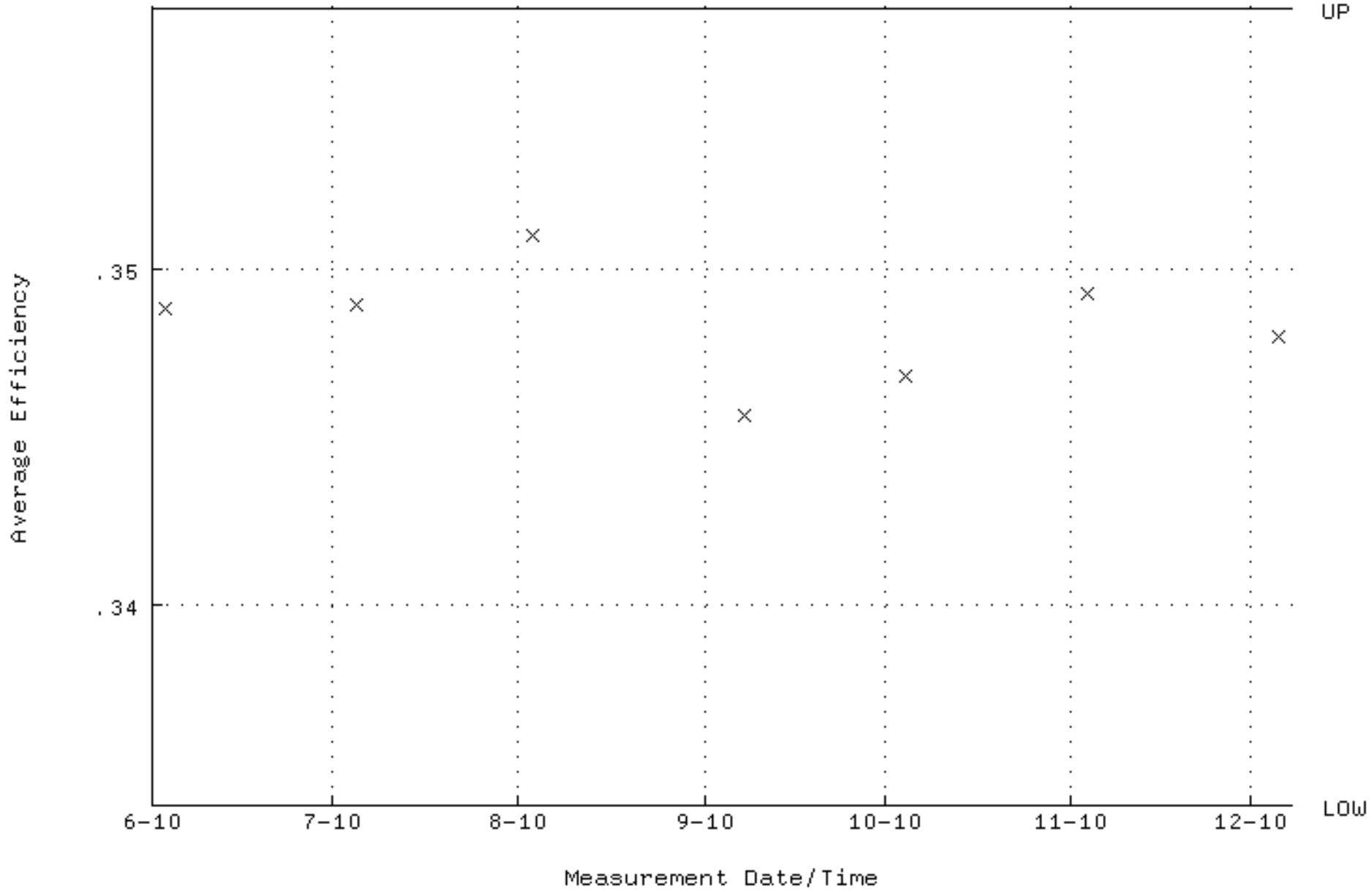
4 - RPD changed to 0% due to activity below MDC for 1202263433.1

Results

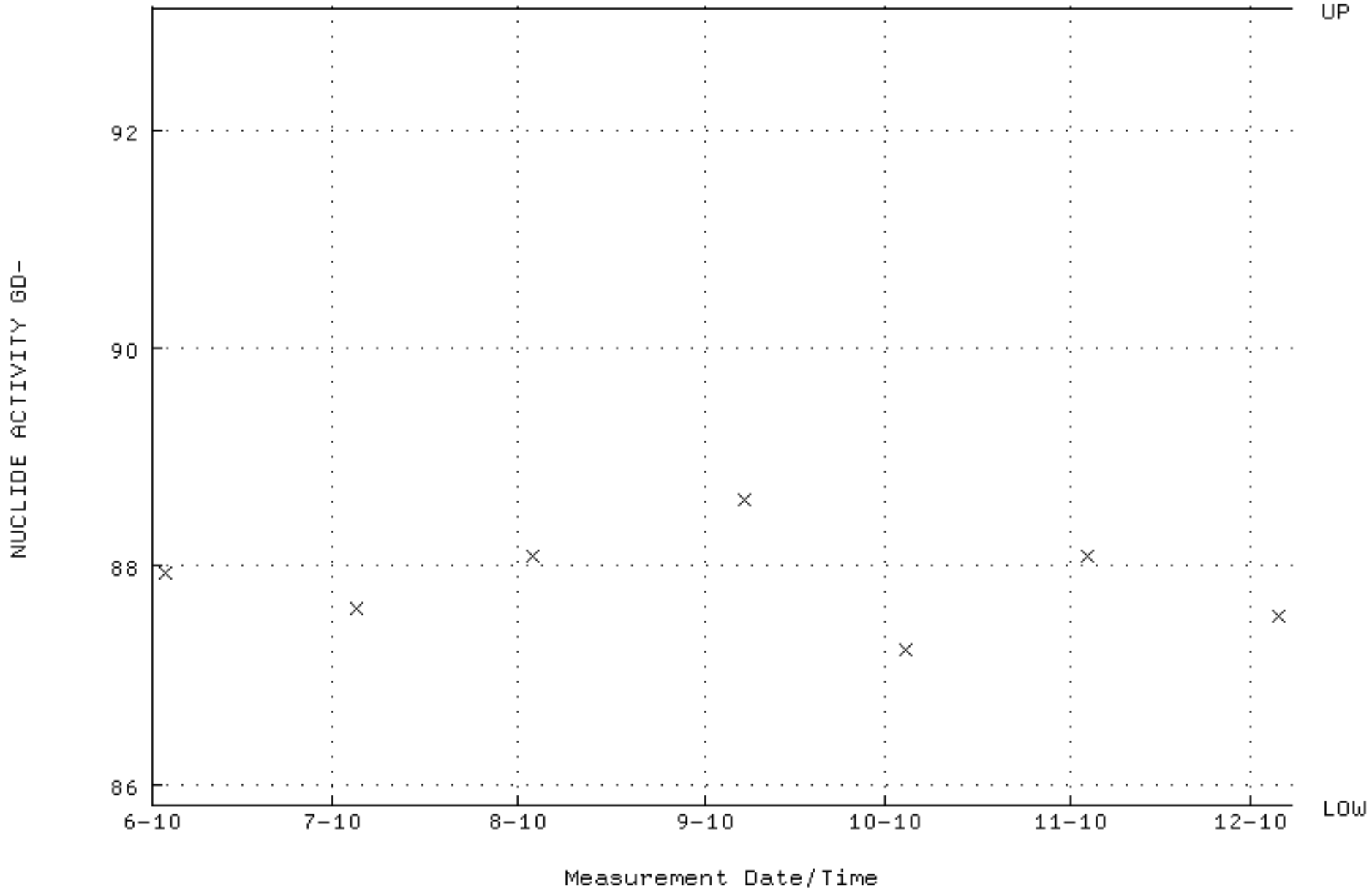
Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	**1 SIGMA** Counting Uncertainty pCi/L	**1 SIGMA** Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	0.1616	0.1141	1	0.3018	**0.1226**	0.7298	0.1667	0.1202	0.0884	0.0902		SAMPLE				
2	0.1263	0.0892	1	0.2359	**0.2684**	0.3481	0.4667	0.1563	0.0899	0.0966		SAMPLE				
3	0.1300	0.0918	1	0.2427	**0.2170**	0.4020	0.3667	0.1453	0.0860	0.0895		SAMPLE				
4	0.1746	0.1233	1	0.3028	**0.0937**	0.9258	0.1667	0.1528	0.0859	0.0872		SAMPLE				
5	0.0773	0.0546	1	0.1443	**0.0586**	0.7286	0.1667	0.1202	0.0423	0.0430		MB				
6	0.1038	0.0733	1	0.2133	**0.000E+00**	0.0000	0.0000	0.0667	0.0445	0.0447	266877001.1	DUP	0.0%	0.4546		
7	0.4191	0.2959	1	0.8616	**112.7832**	0.0868	41.8000	1.1823	3.1900	14.2454	266877001.1	MS			123.6097	91.2%
8	0.0634	0.0448	1	0.1184	**10.4330**	0.1161	36.1333	1.1015	0.3180	1.5441		LCS			12.3609	84.4%

Background and Efficiency Data

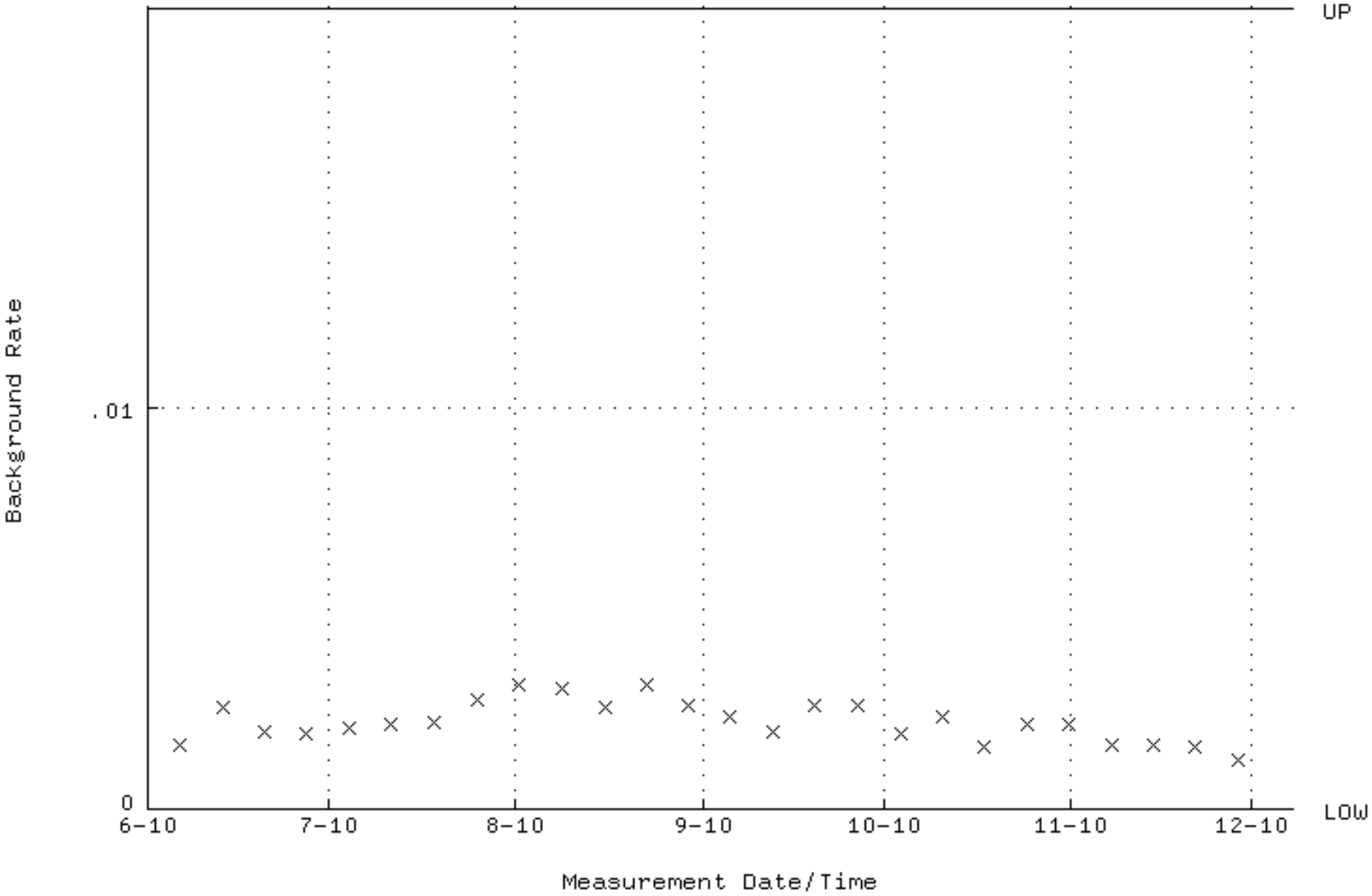
QA filename : DKA100:[ENV_ALPHA.QA.W]W020.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-JUN-2010 07:49:26 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 0.334062 through 0.357734



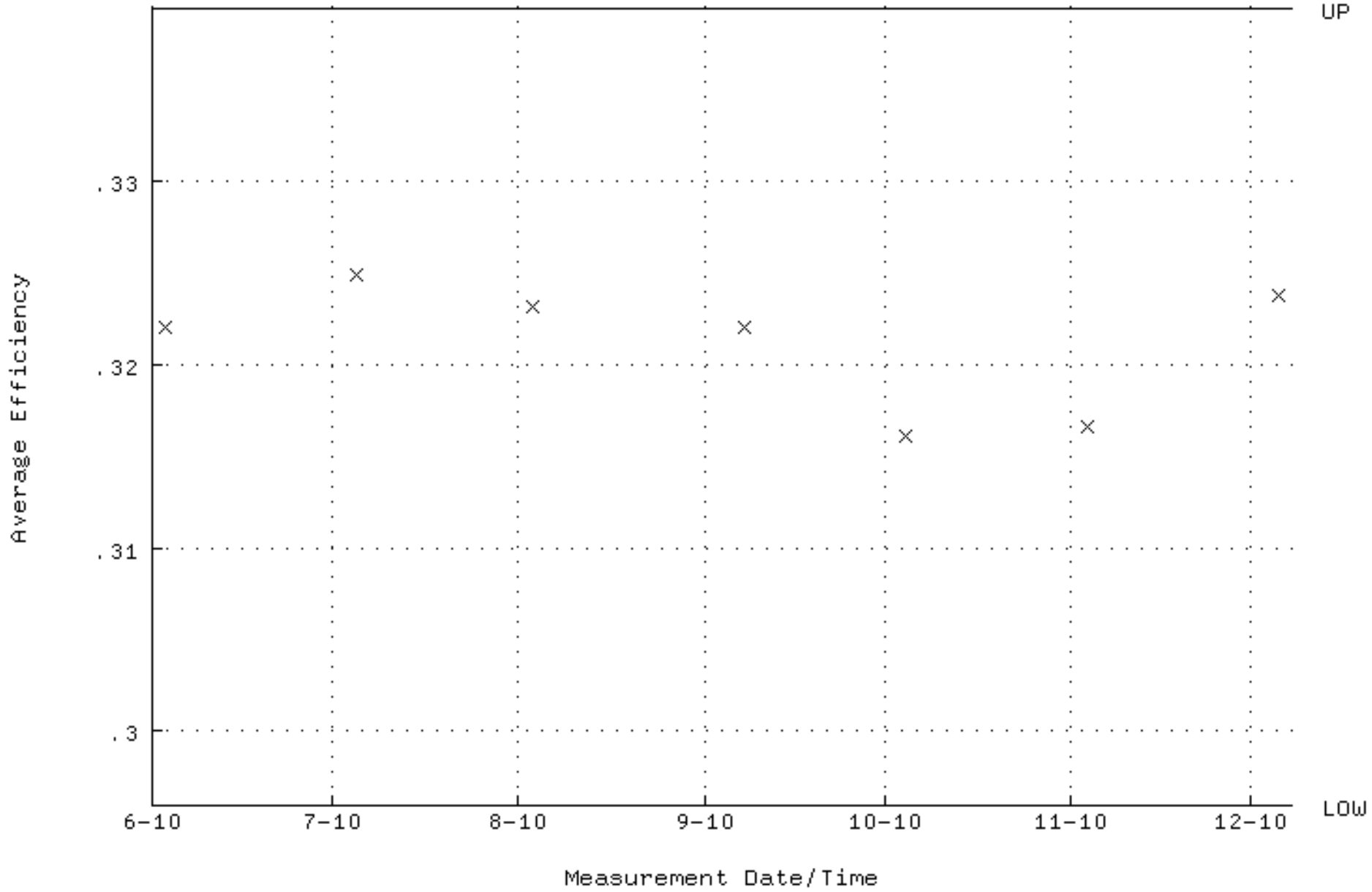
QA filename : DKA100:[ENV_ALPHA.QA.W]W020.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-JUN-2010 07:49:26 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 85.8060 through 93.1084



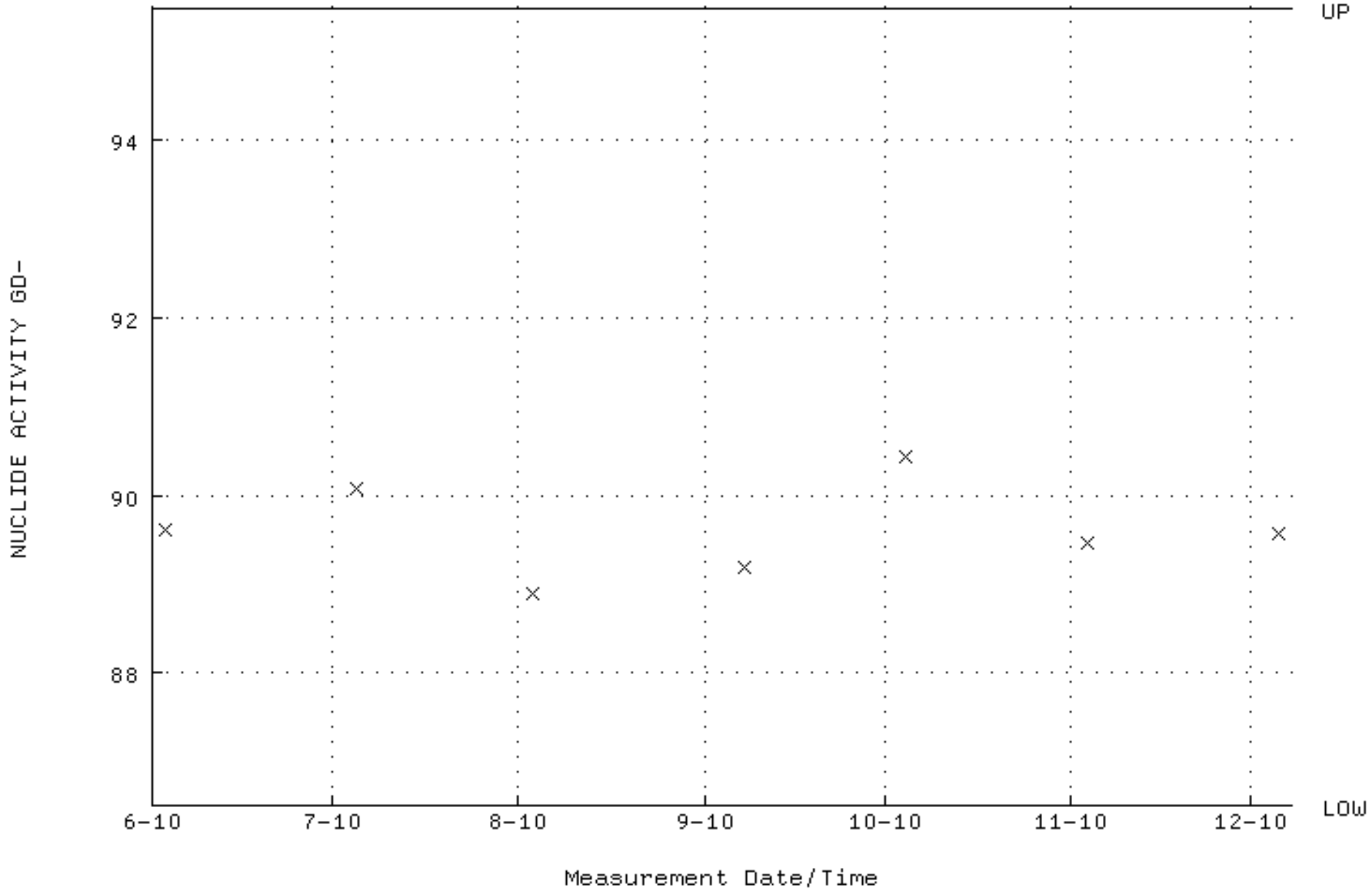
QA filename : DKA100:[ENV_ALPHA.QA.B]B020.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 6-JUN-2010 07:52:06 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



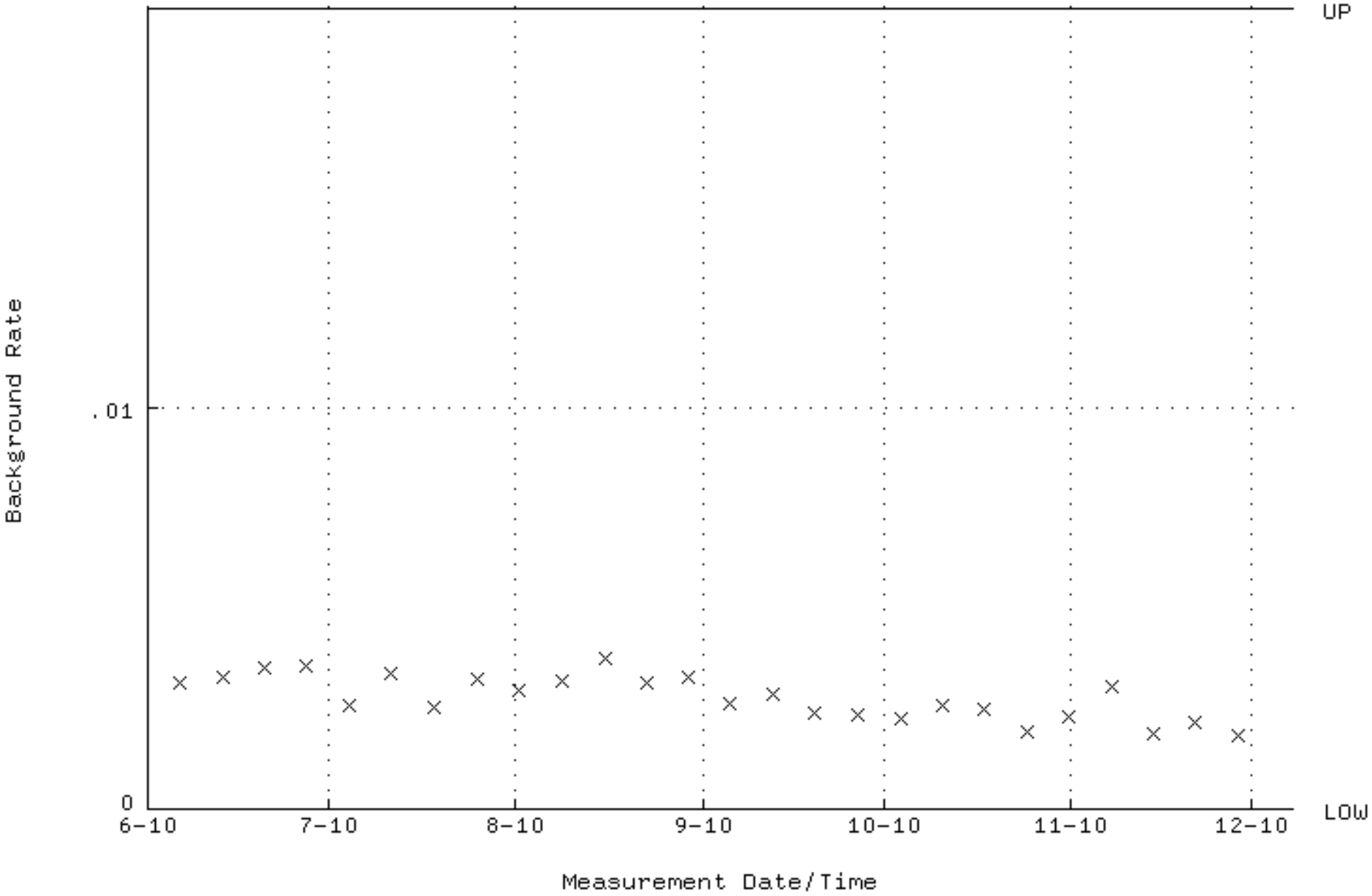
QA filename : DKA100:[ENV_ALPHA.QA.W]W022.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-JUN-2010 07:49:26 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 0.295932 through 0.339472



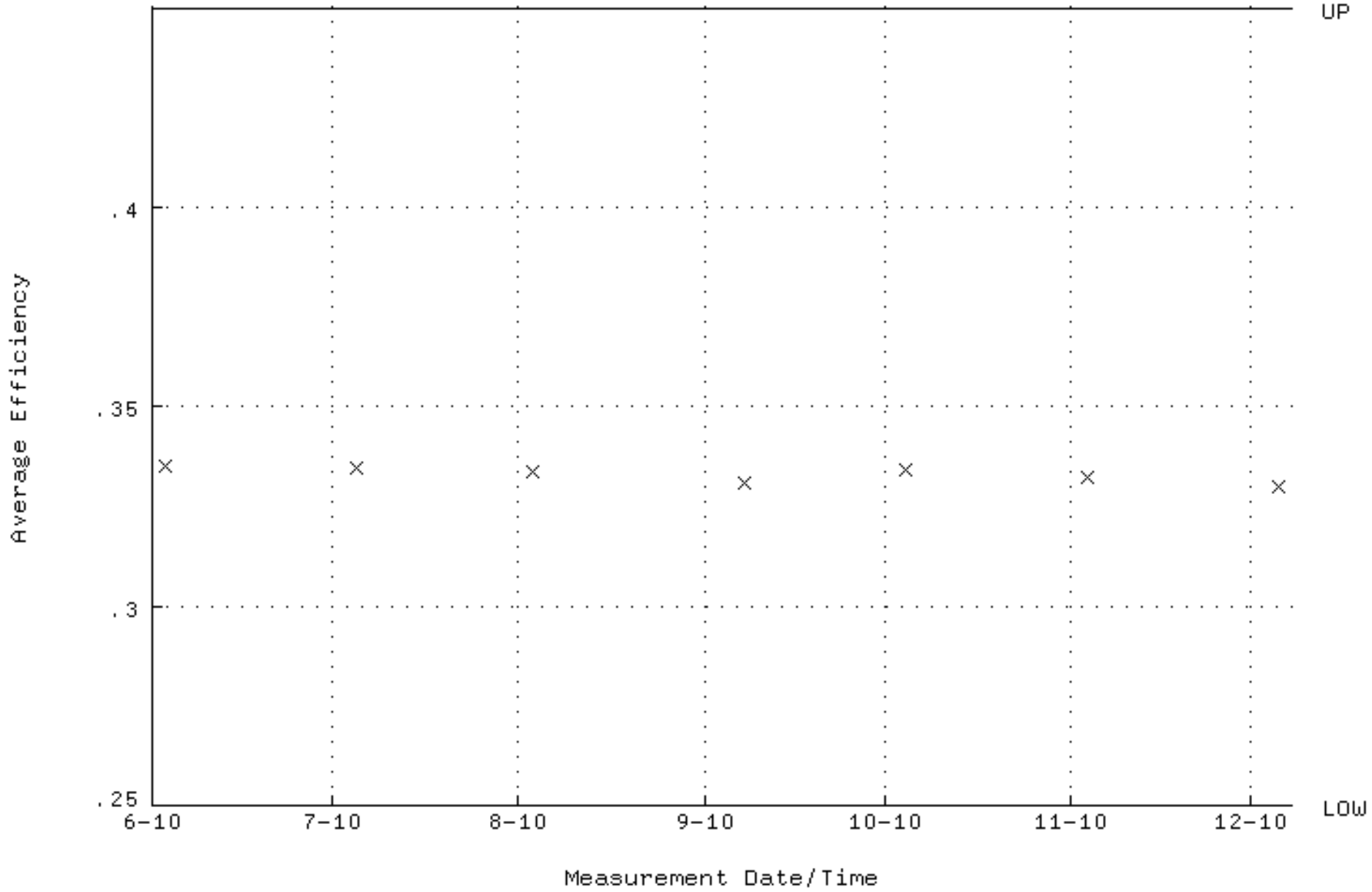
QA filename : DKA100:[ENV_ALPHA.QA.W]W022.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-JUN-2010 07:49:26 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 86.5031 through 95.4865



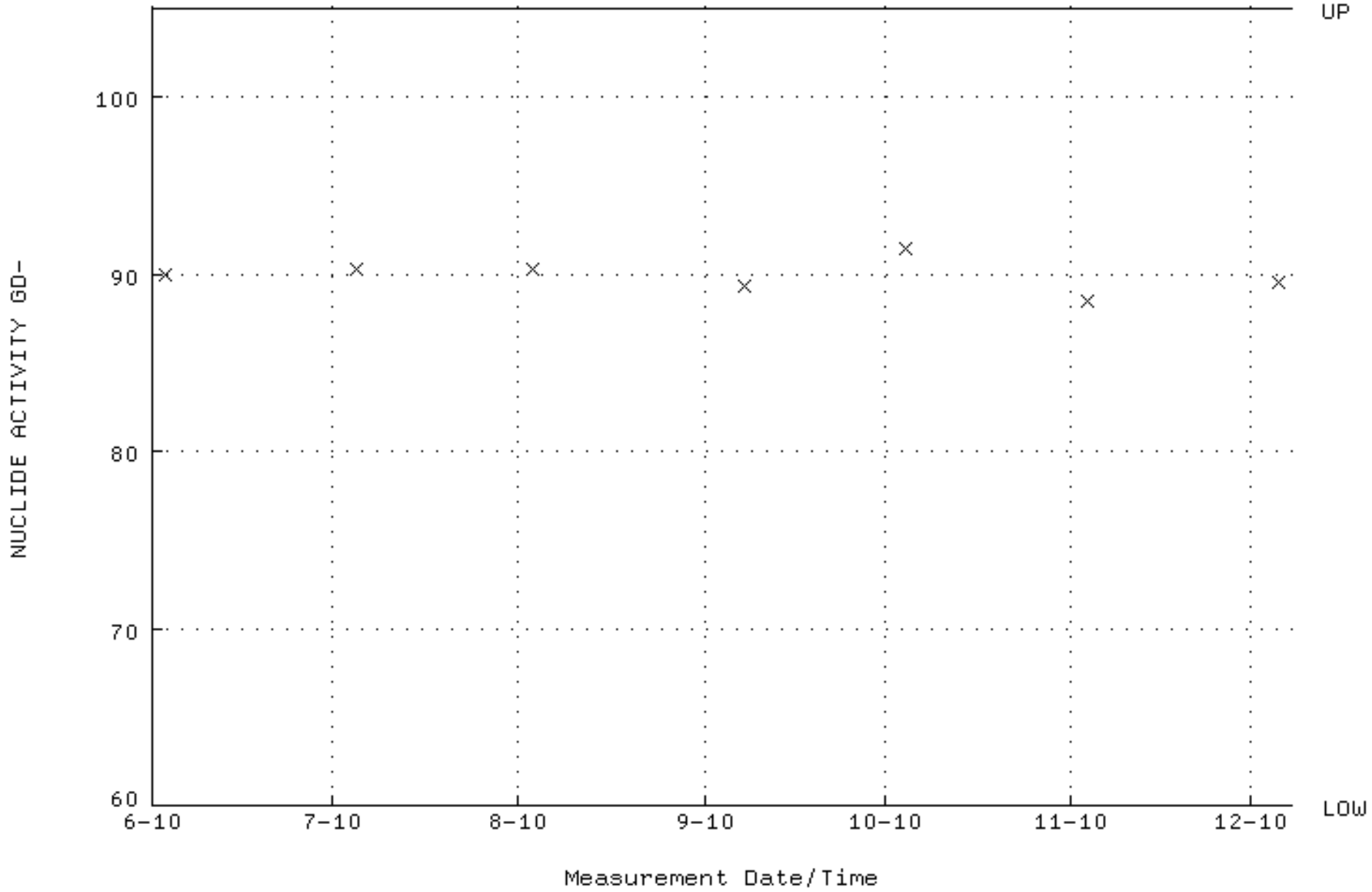
QA filename : DKA100:[ENV_ALPHA.QA.B]B022.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 6-JUN-2010 07:52:06 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



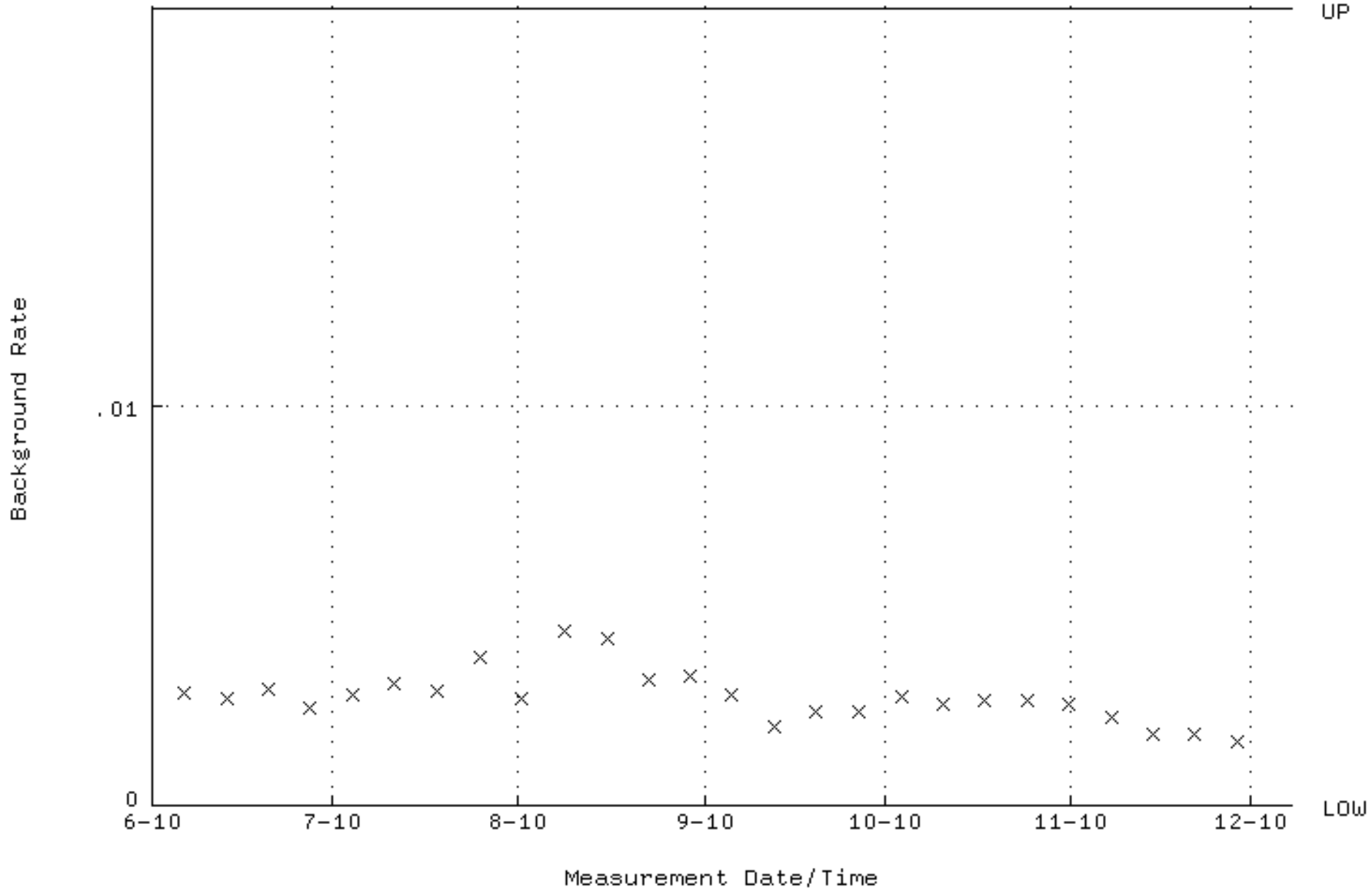
QA filename : DKA100:[ENV_ALPHA.QA.W]W023.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-JUN-2010 07:49:26 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



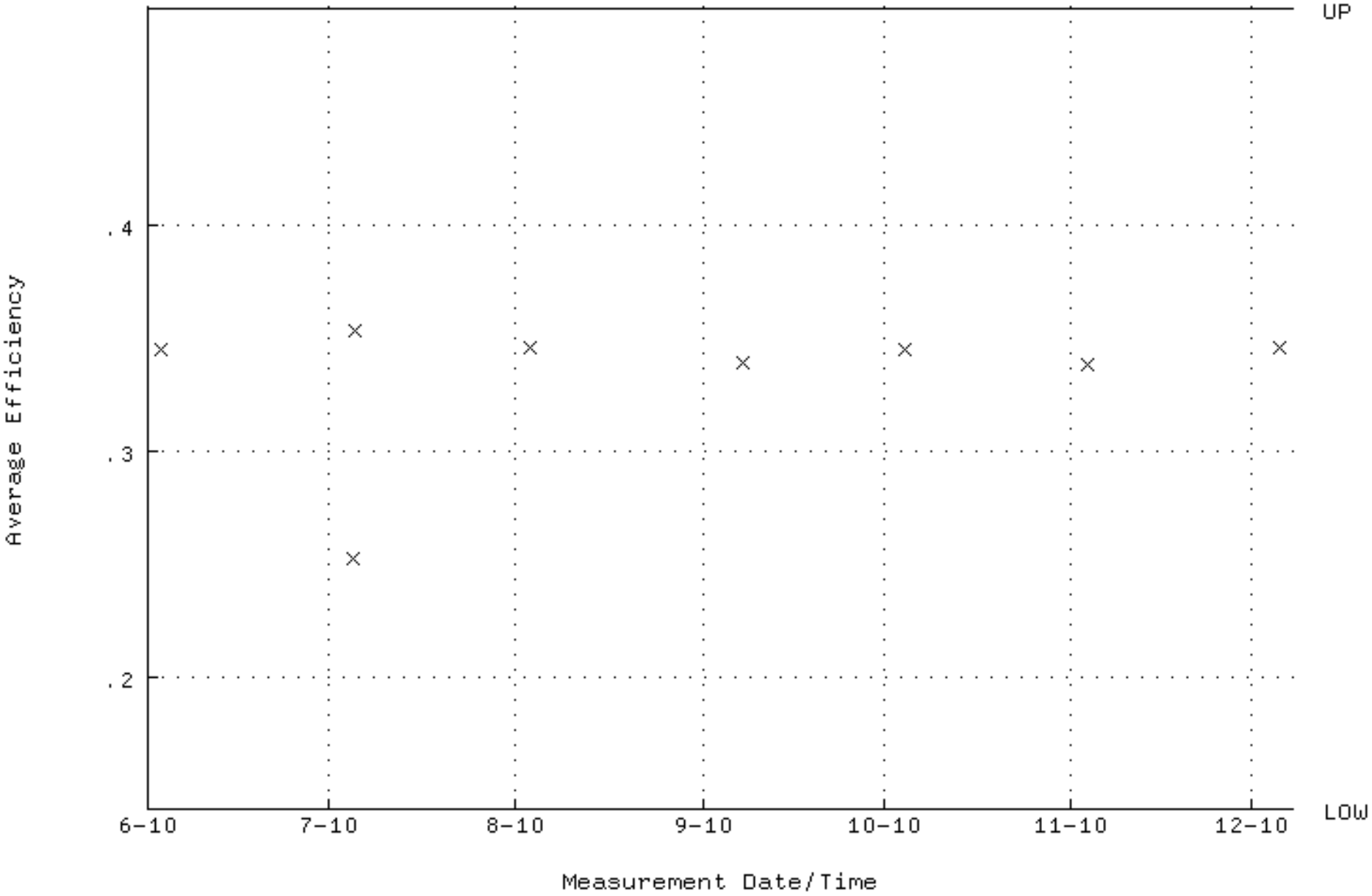
QA filename : DKA100:[ENV_ALPHA.QA.W]W023.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-JUN-2010 07:49:26 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



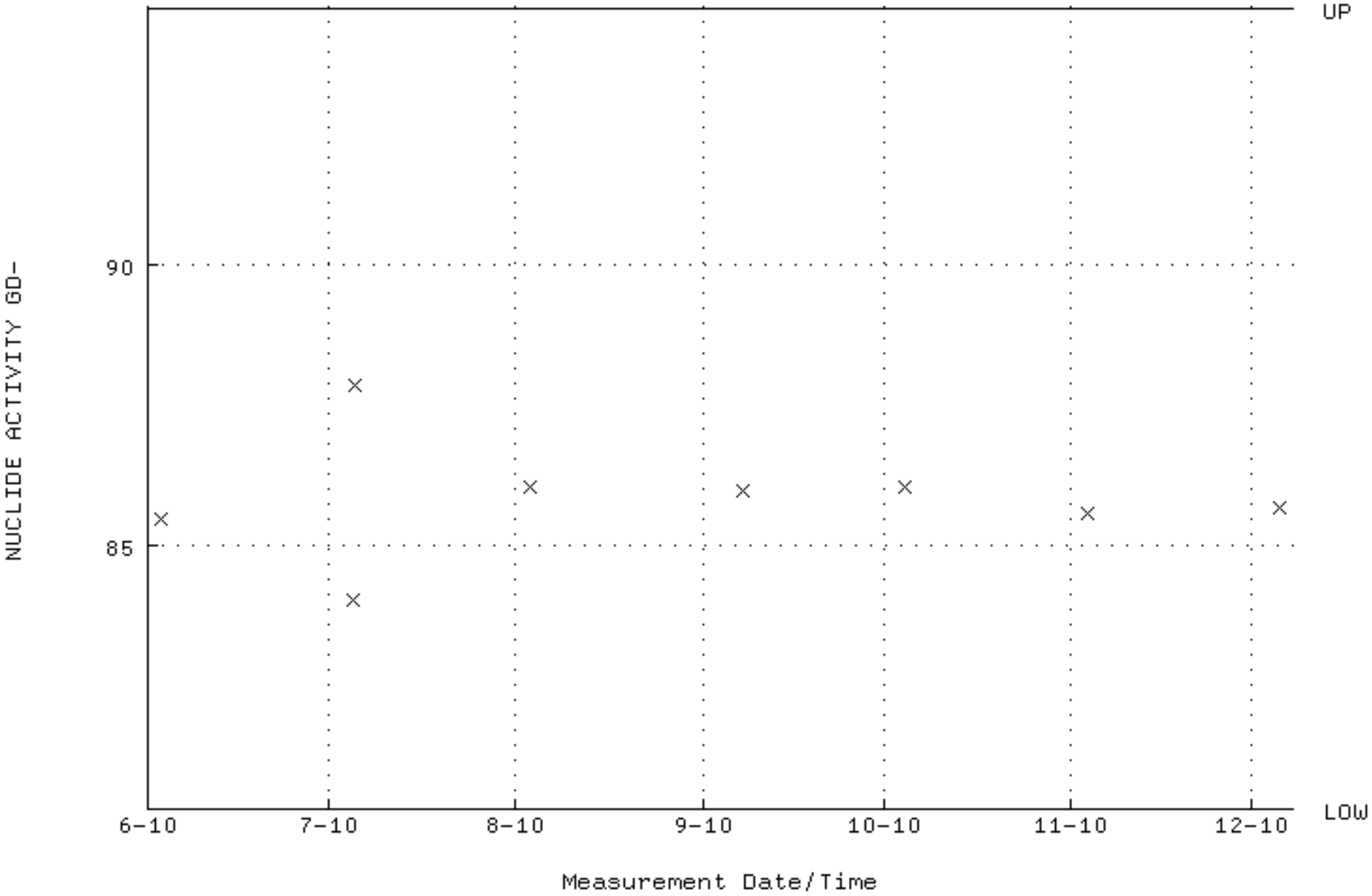
QA filename : DKA100:[ENV_ALPHA.QA.B]B023.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 6-JUN-2010 07:52:06 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



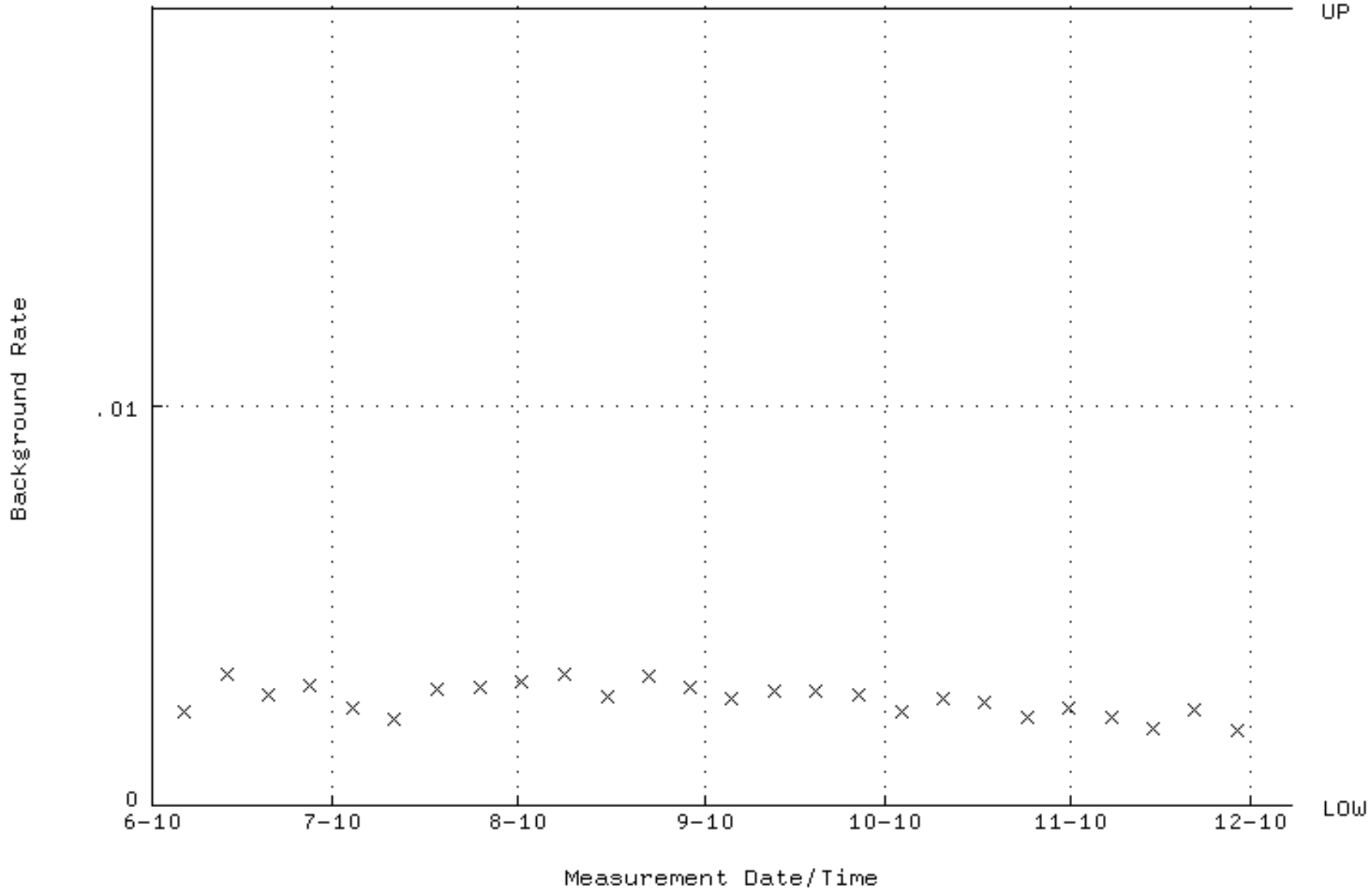
QA filename : DKA100:[ENV_ALPHA.QA.W]W024.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-JUN-2010 07:49:26 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 0.141370 through 0.496348



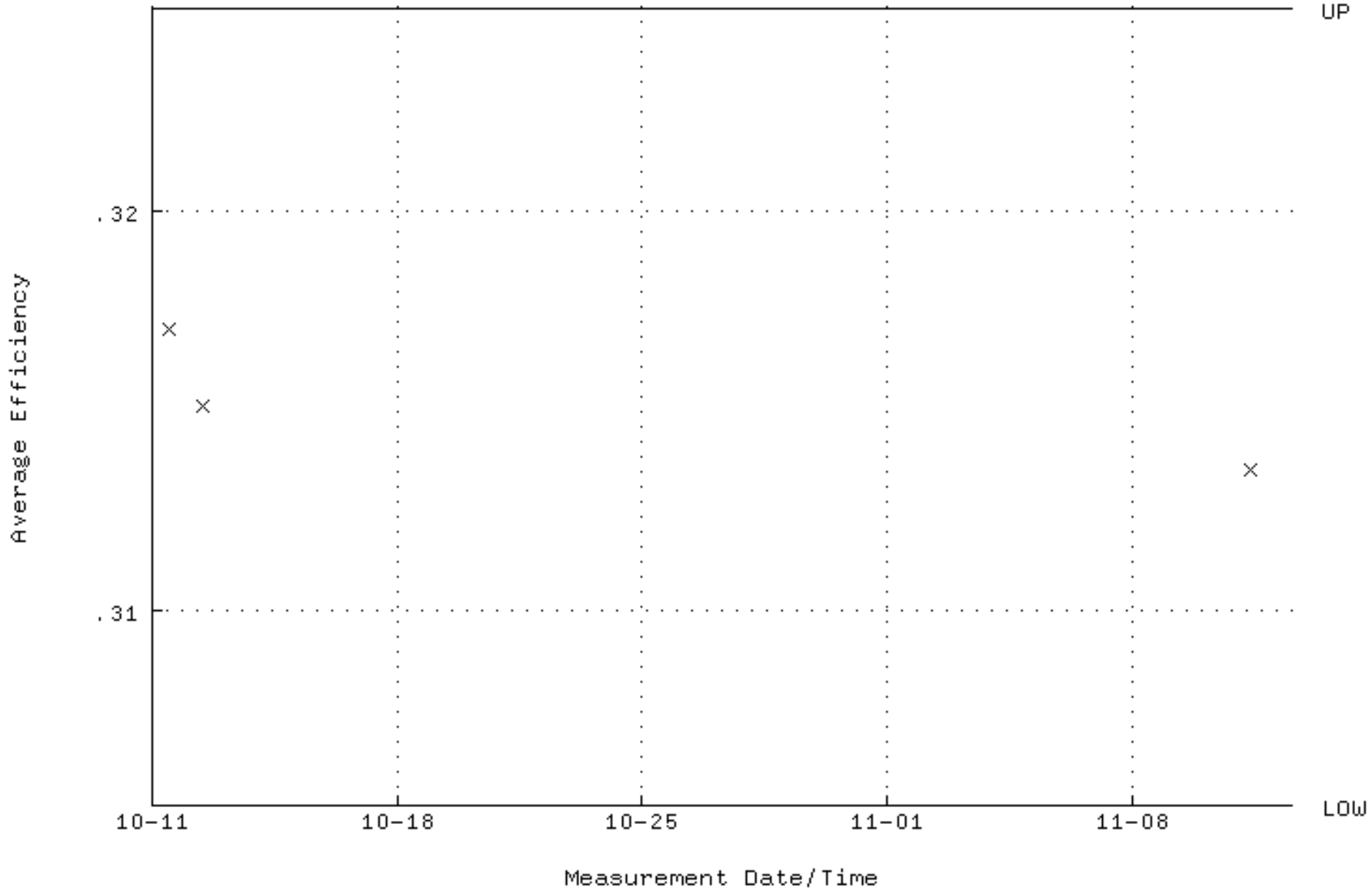
QA filename : DKA100:[ENV_ALPHA.QA.W]W024.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-JUN-2010 07:49:26 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 80.2832 through 94.5738



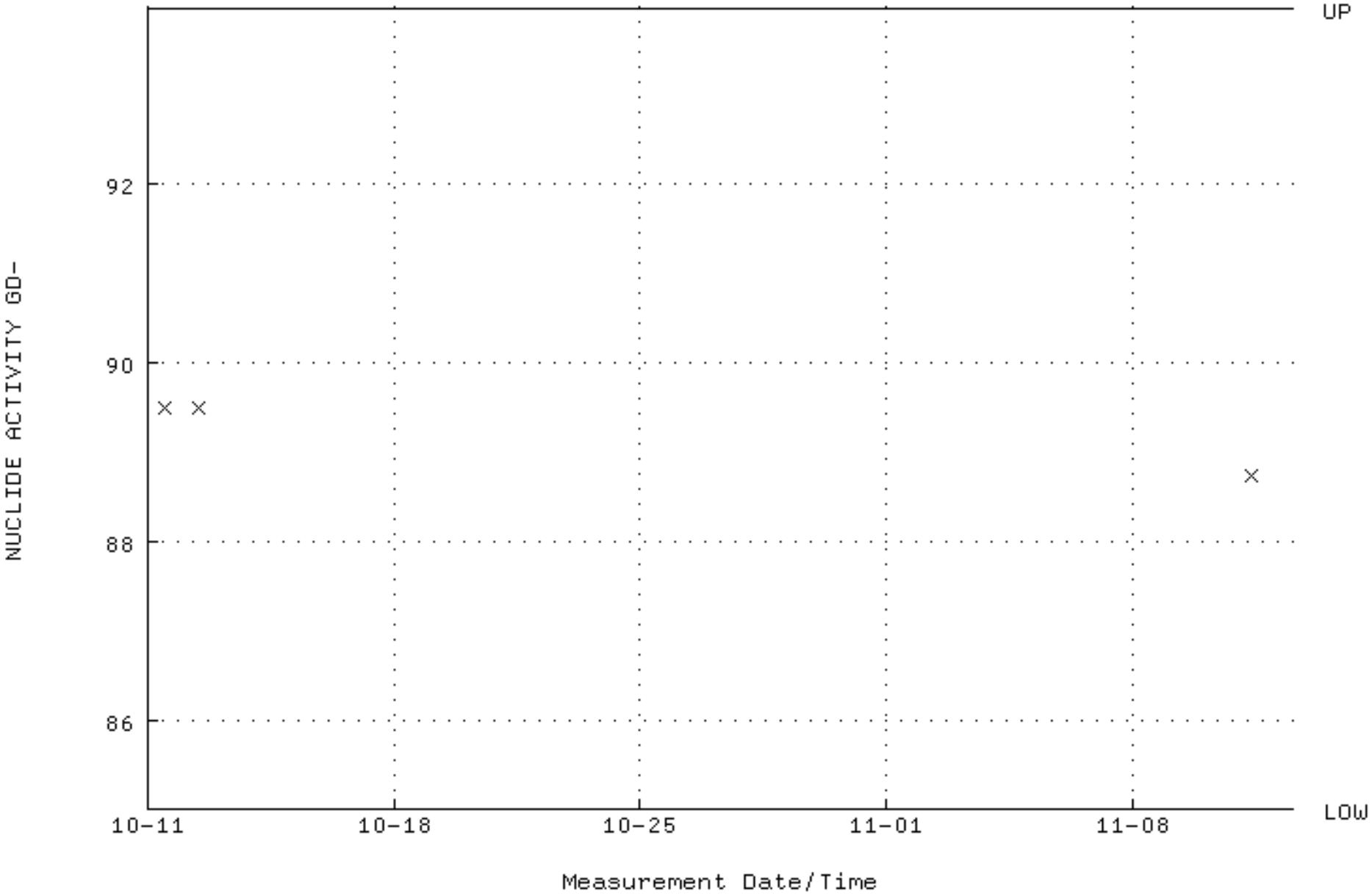
QA filename : DKA100:[ENV_ALPHA.QA.B]B024.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 6-JUN-2010 07:52:06 through 7-DEC-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



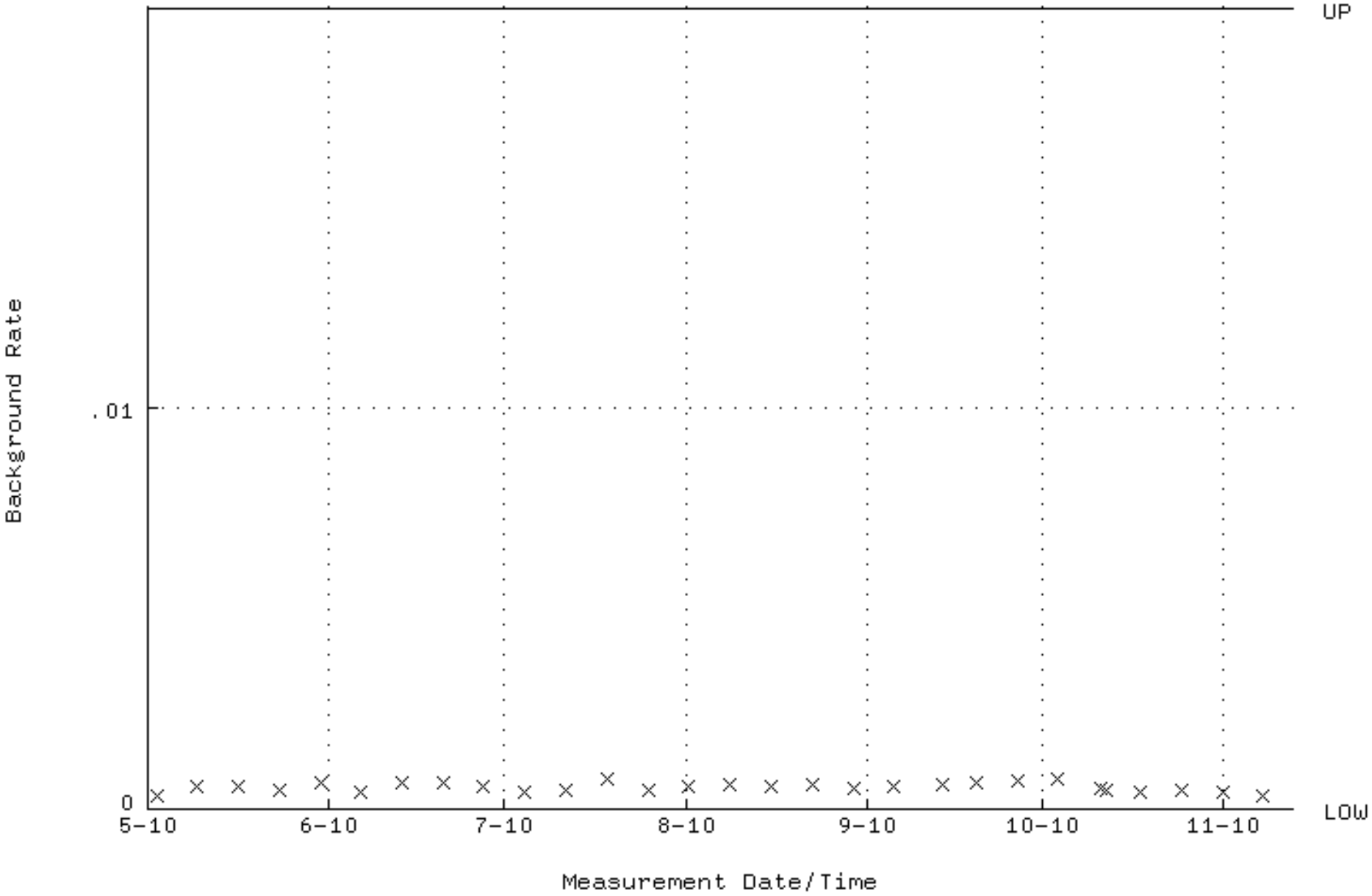
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 11-OCT-2010 10:59:00 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 0.305087 through 0.325087



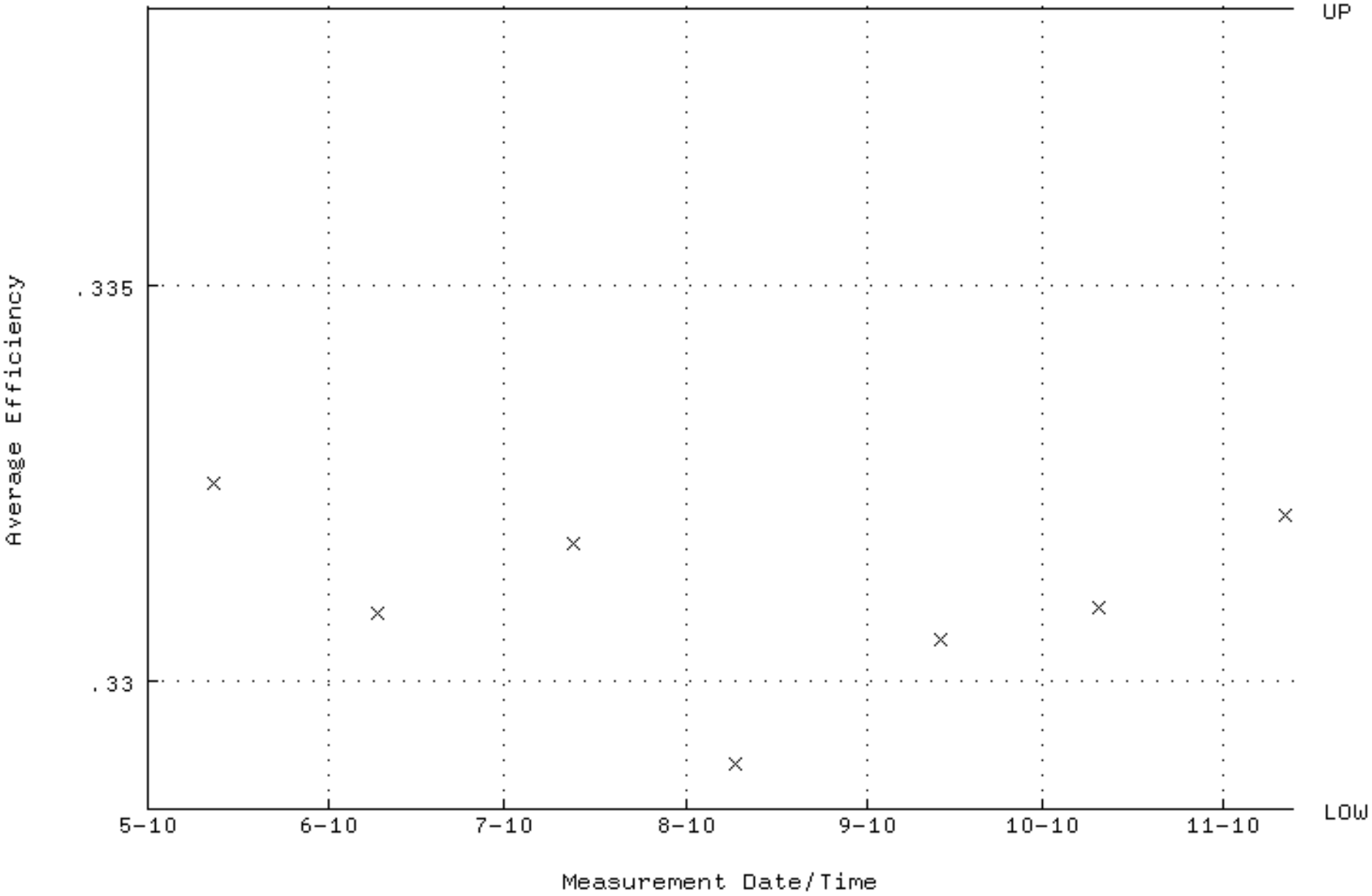
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 11-OCT-2010 10:59:00 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 85.0161 through 93.9651



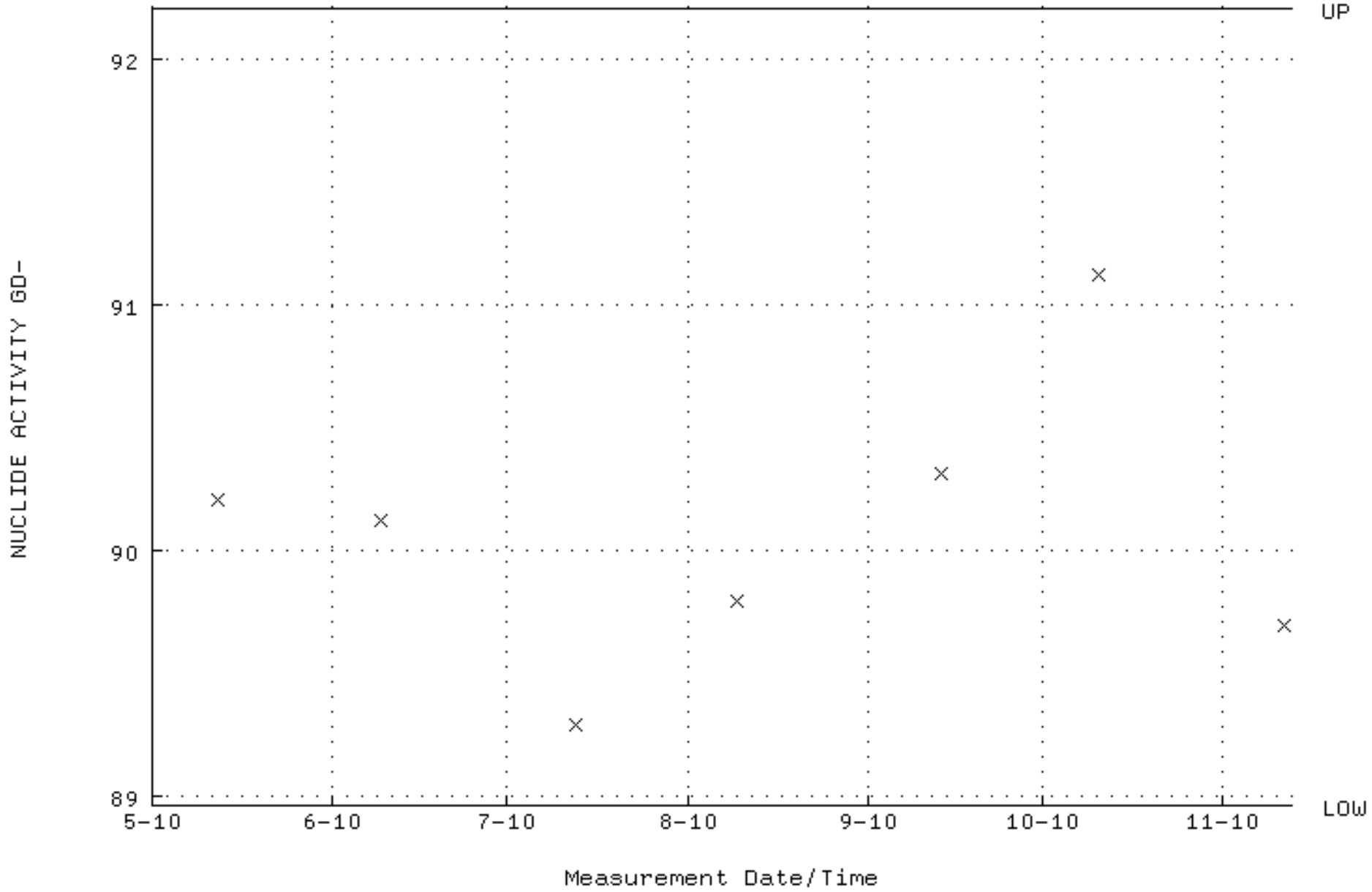
QA filename : DKA100:[ENV_ALPHA.QA.B]B074.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:12:57 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



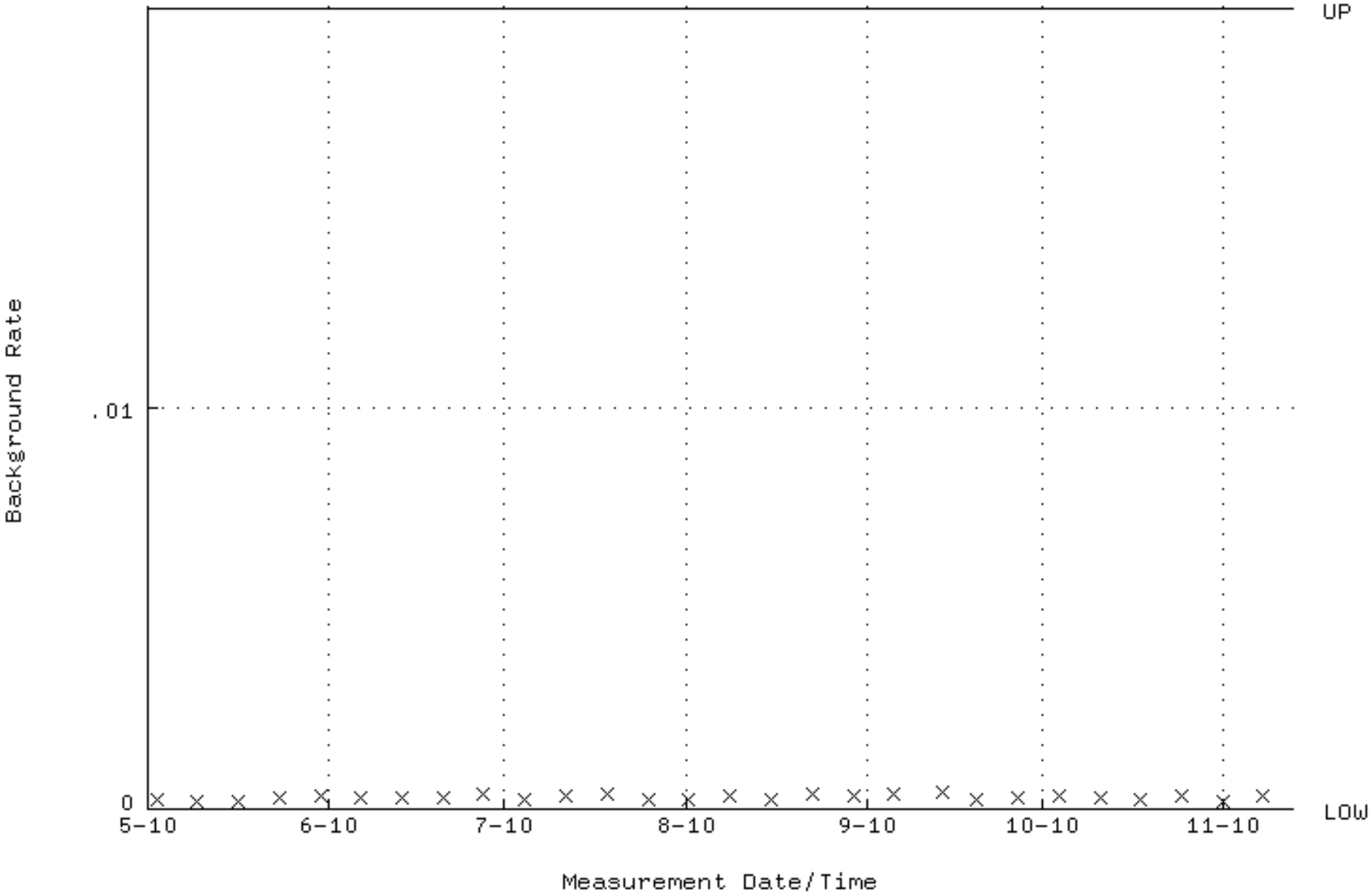
QA filename : DKA100:[ENV_ALPHA.QA.W]W080.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-MAY-2010 07:28:46 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 0.328389 through 0.338509



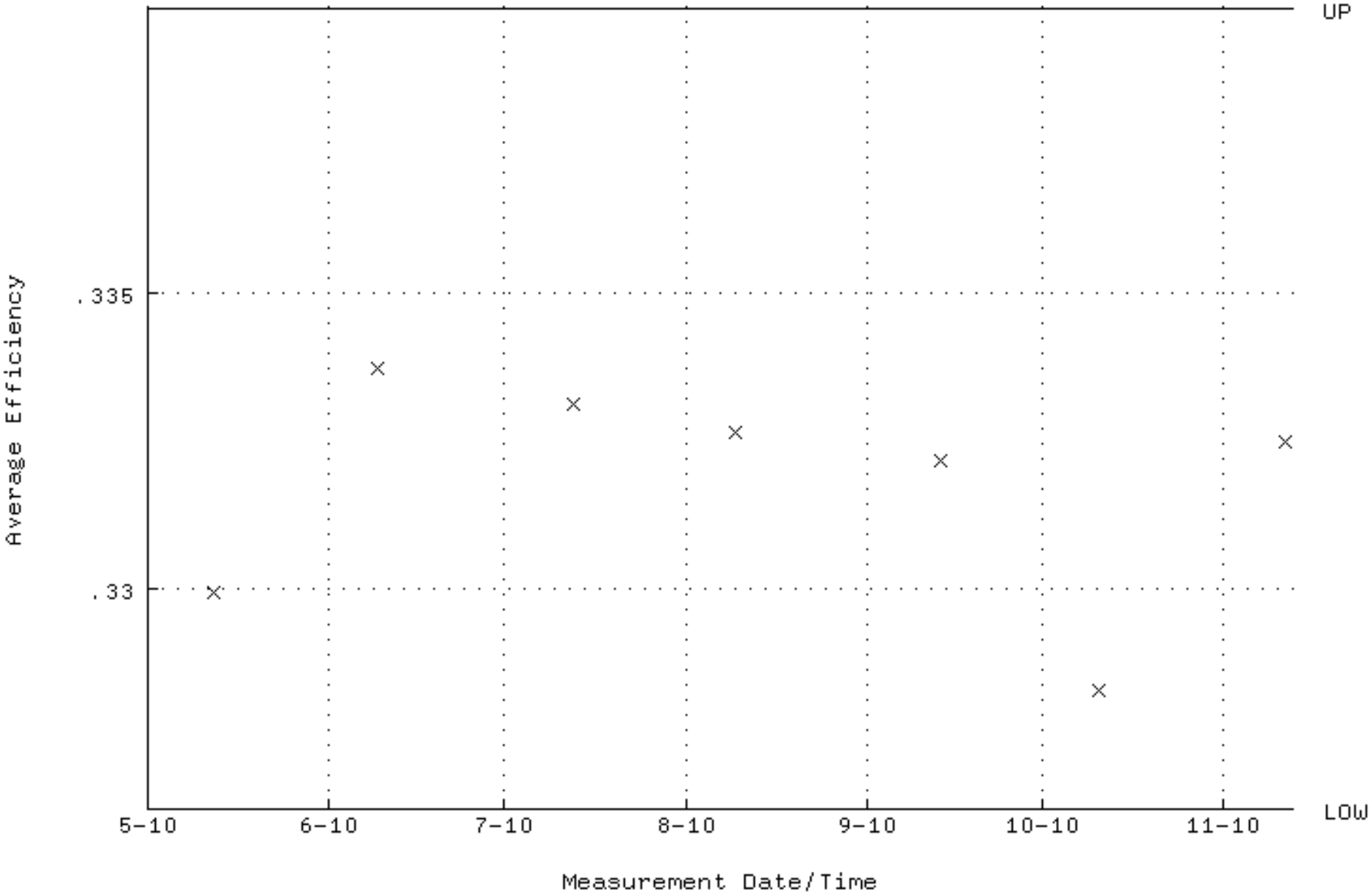
QA filename : DKA100:[ENV_ALPHA.QA.W]W080.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-MAY-2010 07:28:46 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 88.9650 through 92.2072



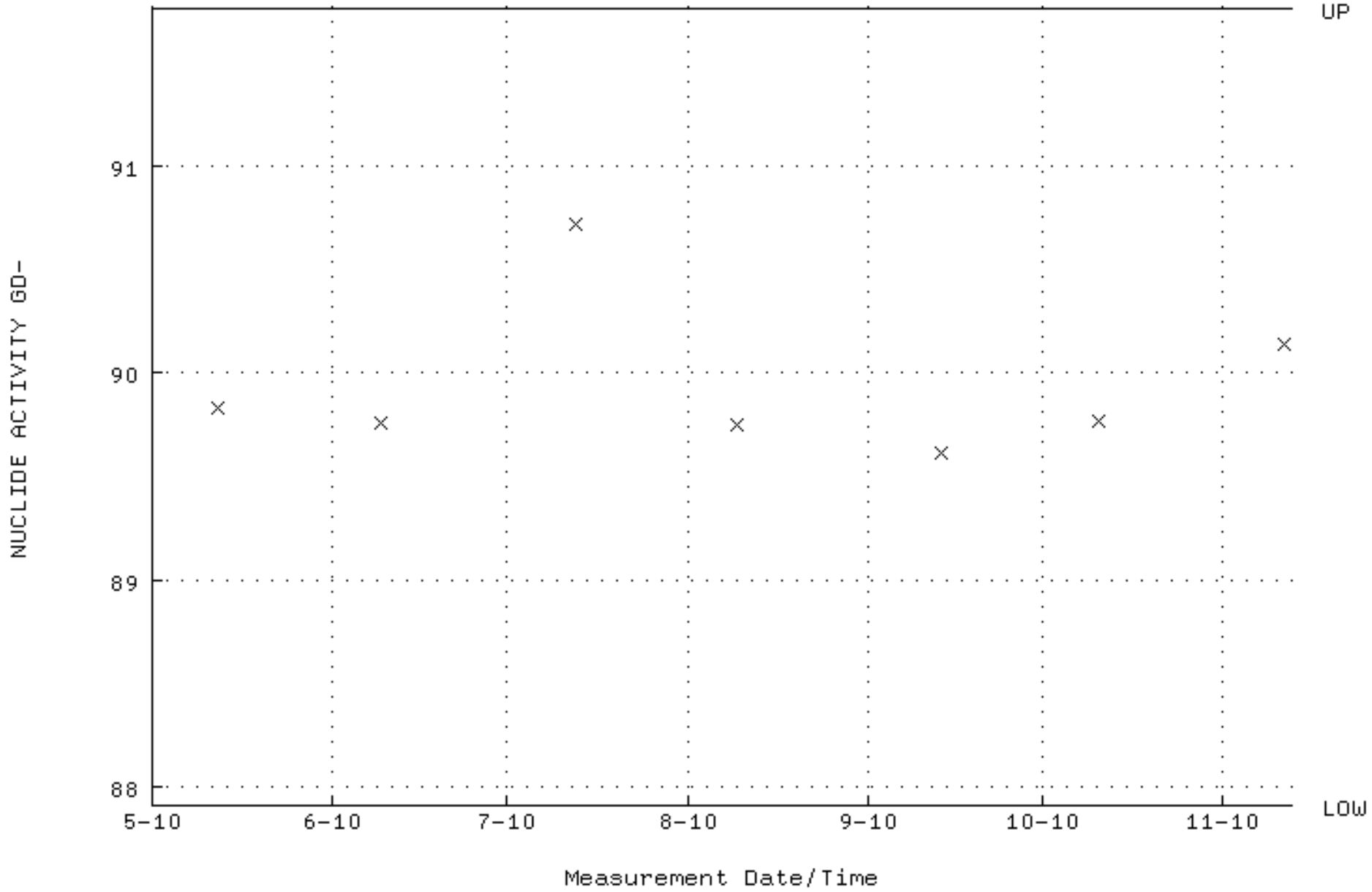
QA filename : DKA100:[ENV_ALPHA.QA.B]B080.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:12:59 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



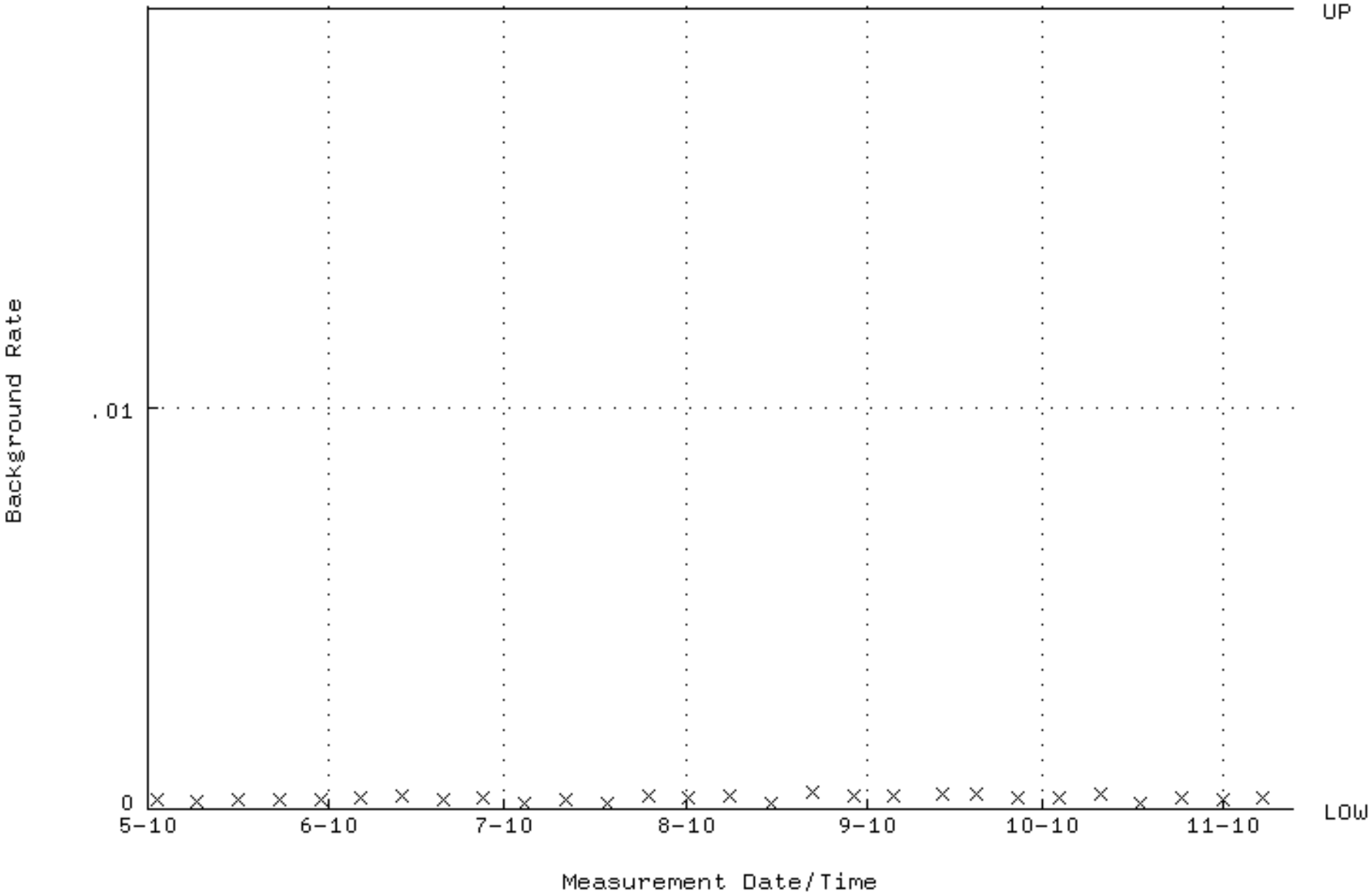
QA filename : DKA100:[ENV_ALPHA.QA.W]W081.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-MAY-2010 07:28:46 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 0.326285 through 0.339827



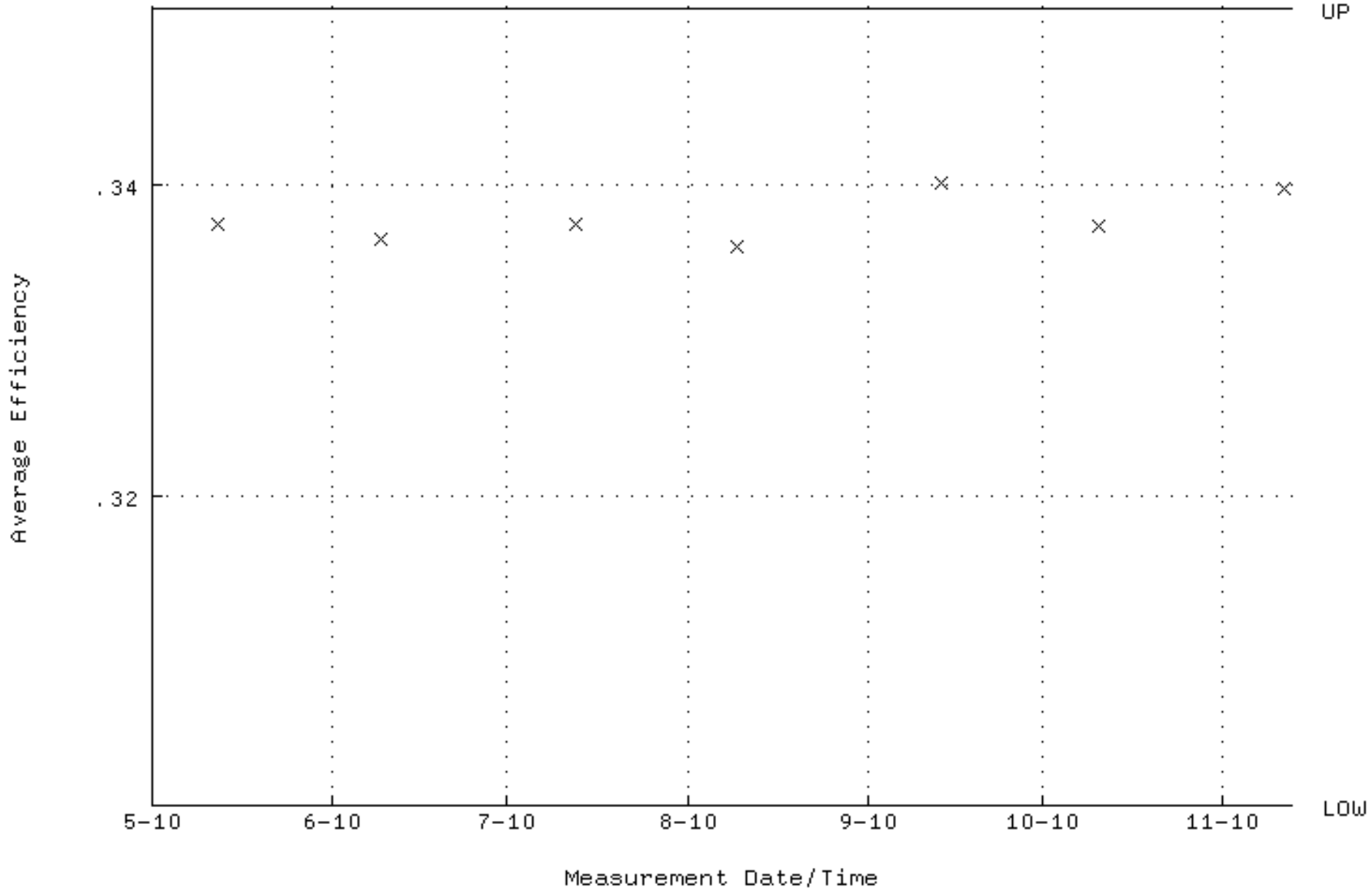
QA filename : DKA100:[ENV_ALPHA.QA.W]W081.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-MAY-2010 07:28:46 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 87.9130 through 91.7586



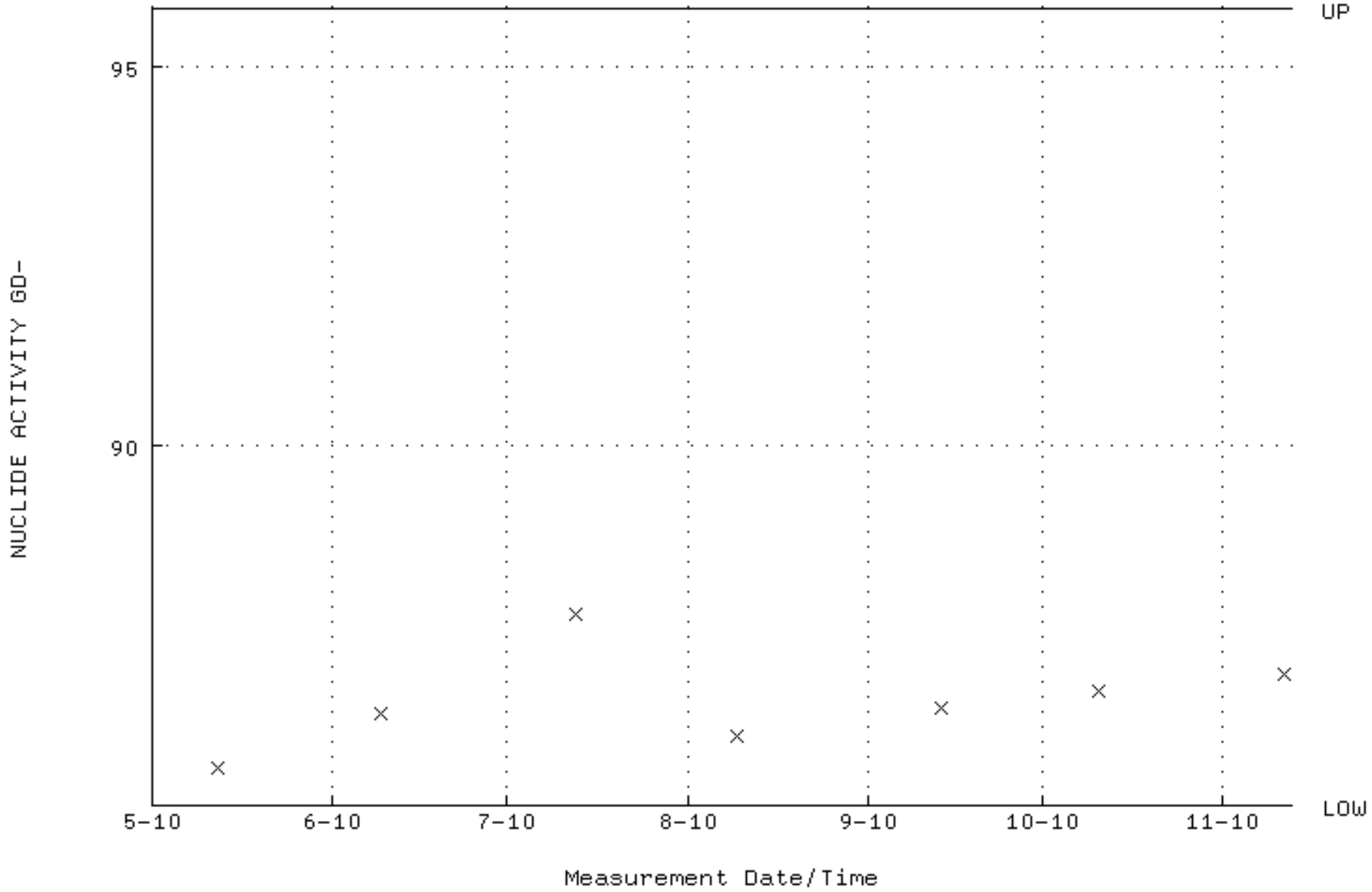
QA filename : DKA100:[ENV_ALPHA.QA.B]B081.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:12:59 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



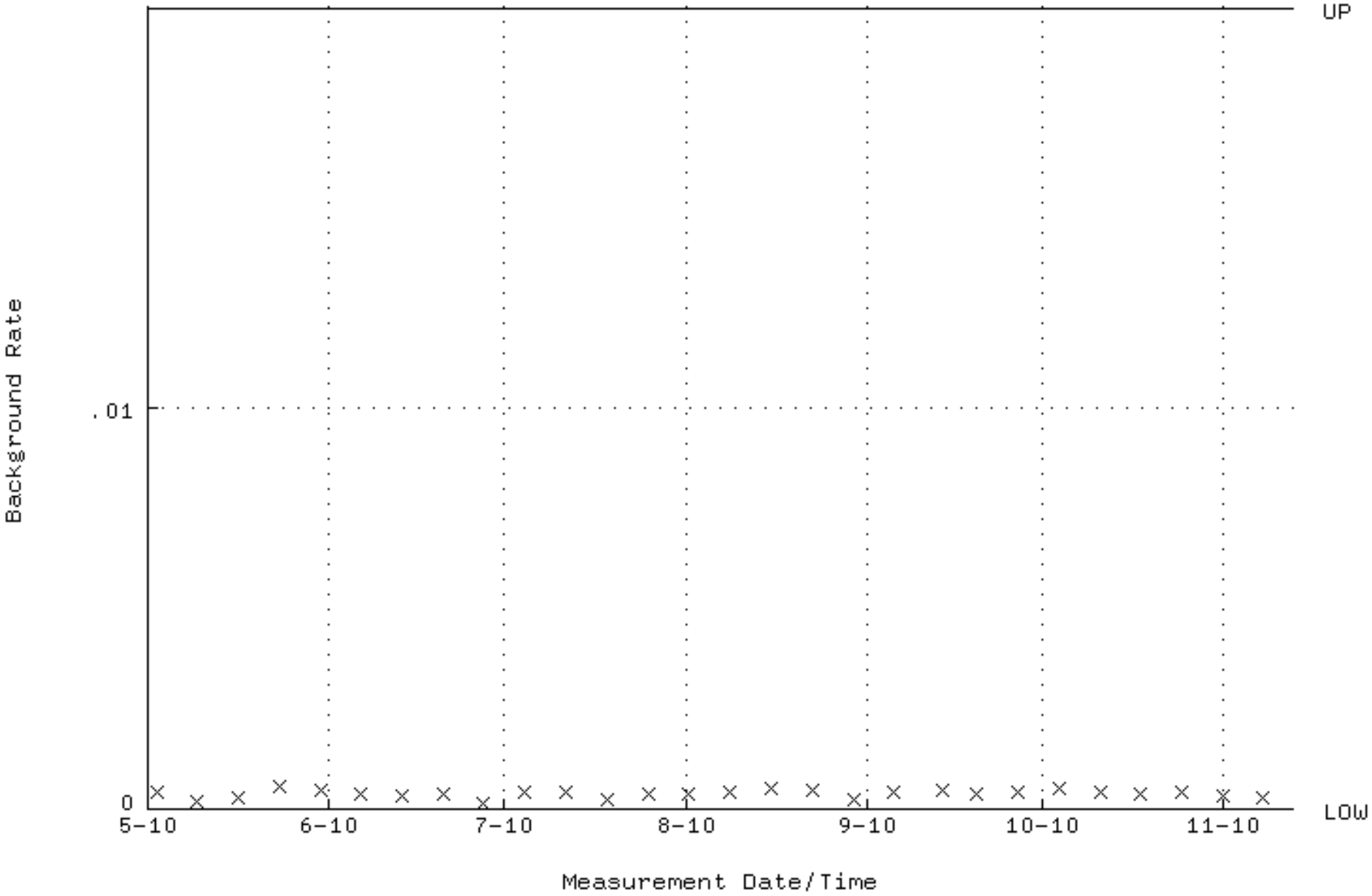
QA filename : DKA100:[ENV_ALPHA.QA.W]W082.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-MAY-2010 07:28:46 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 0.300260 through 0.351240



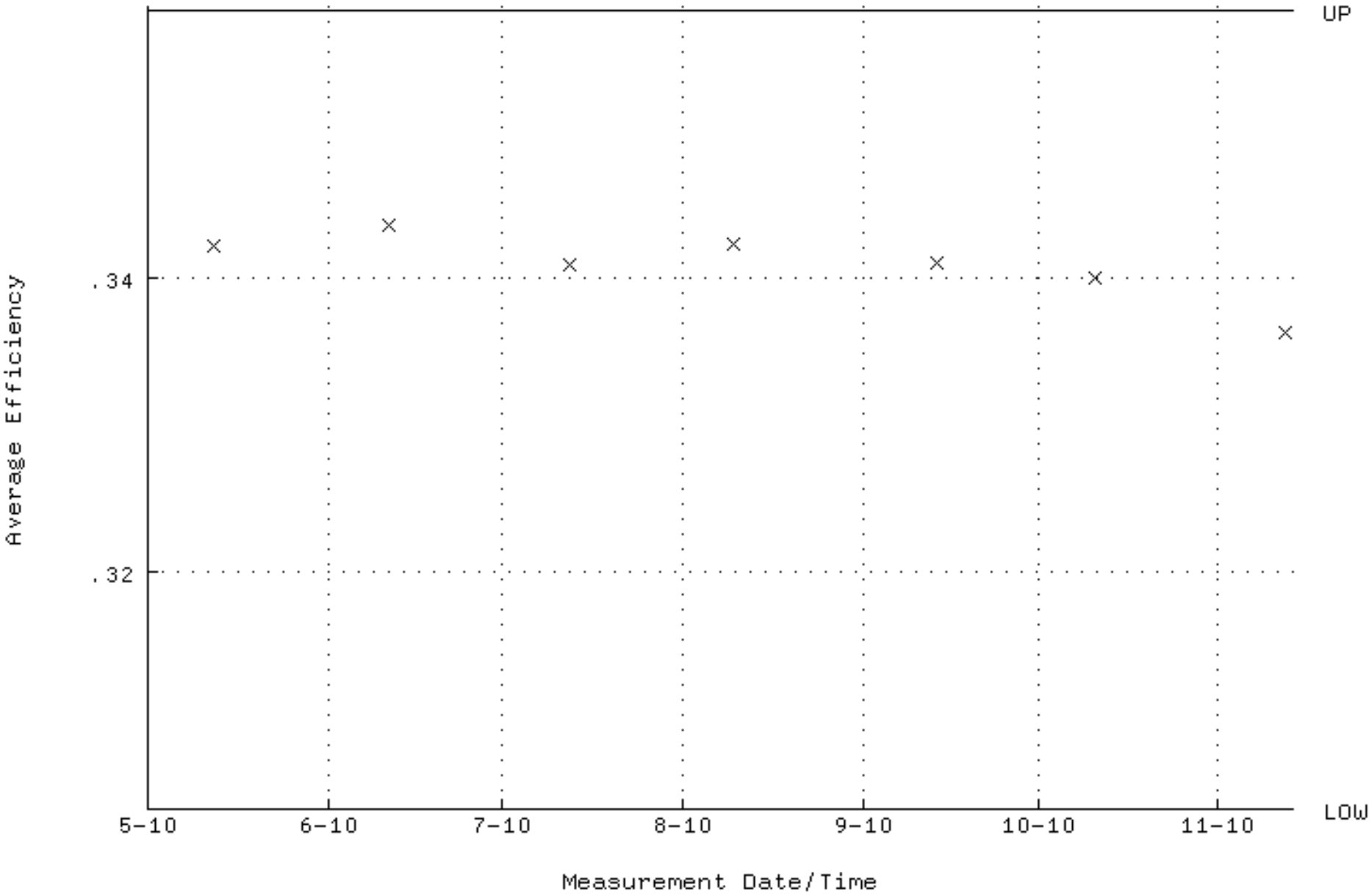
QA filename : DKA100:[ENV_ALPHA.QA.W]W082.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-MAY-2010 07:28:46 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 85.2649 through 95.7657



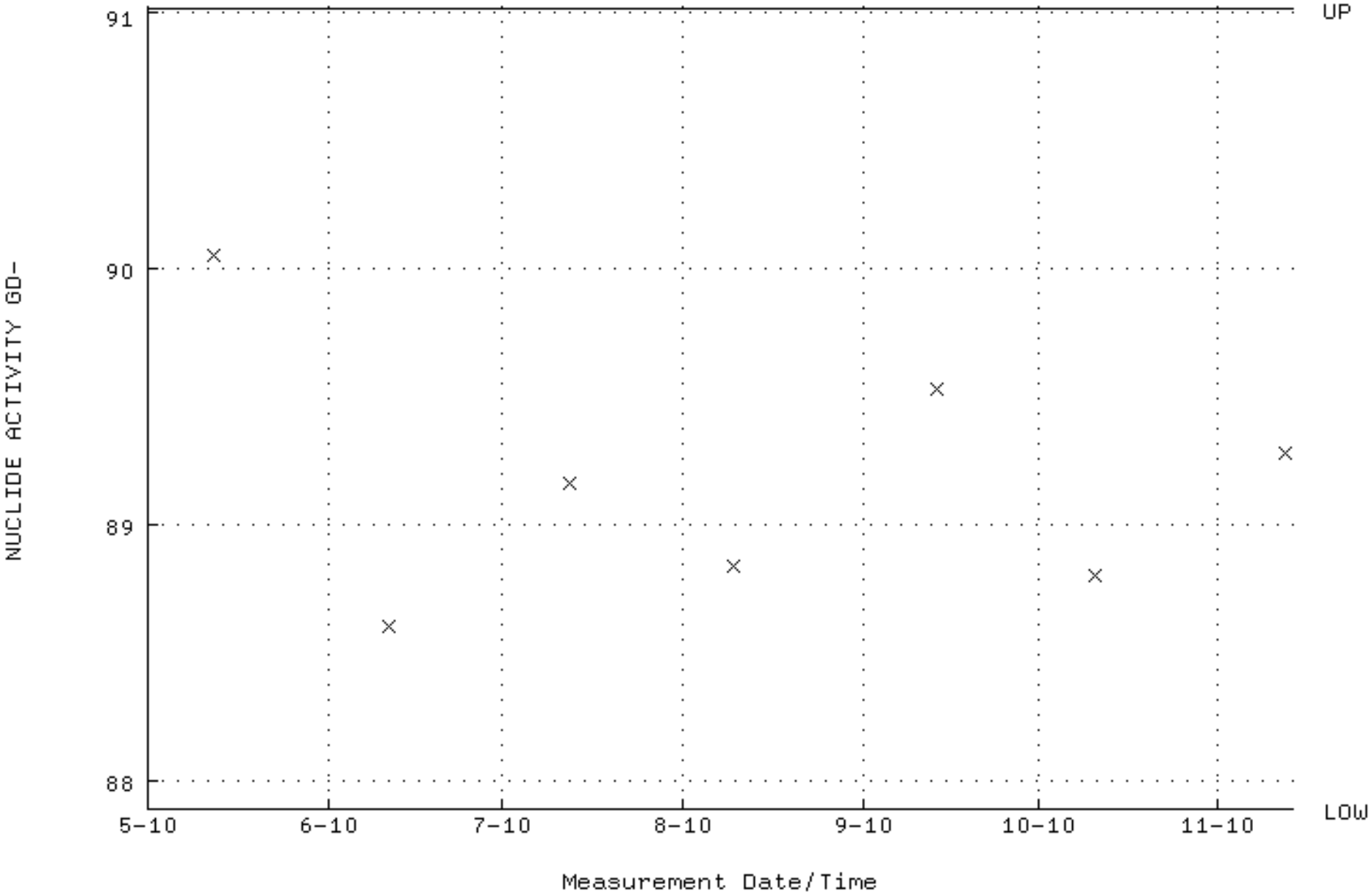
QA filename : DKA100:[ENV_ALPHA.QA.B]B082.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:12:59 through 12-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



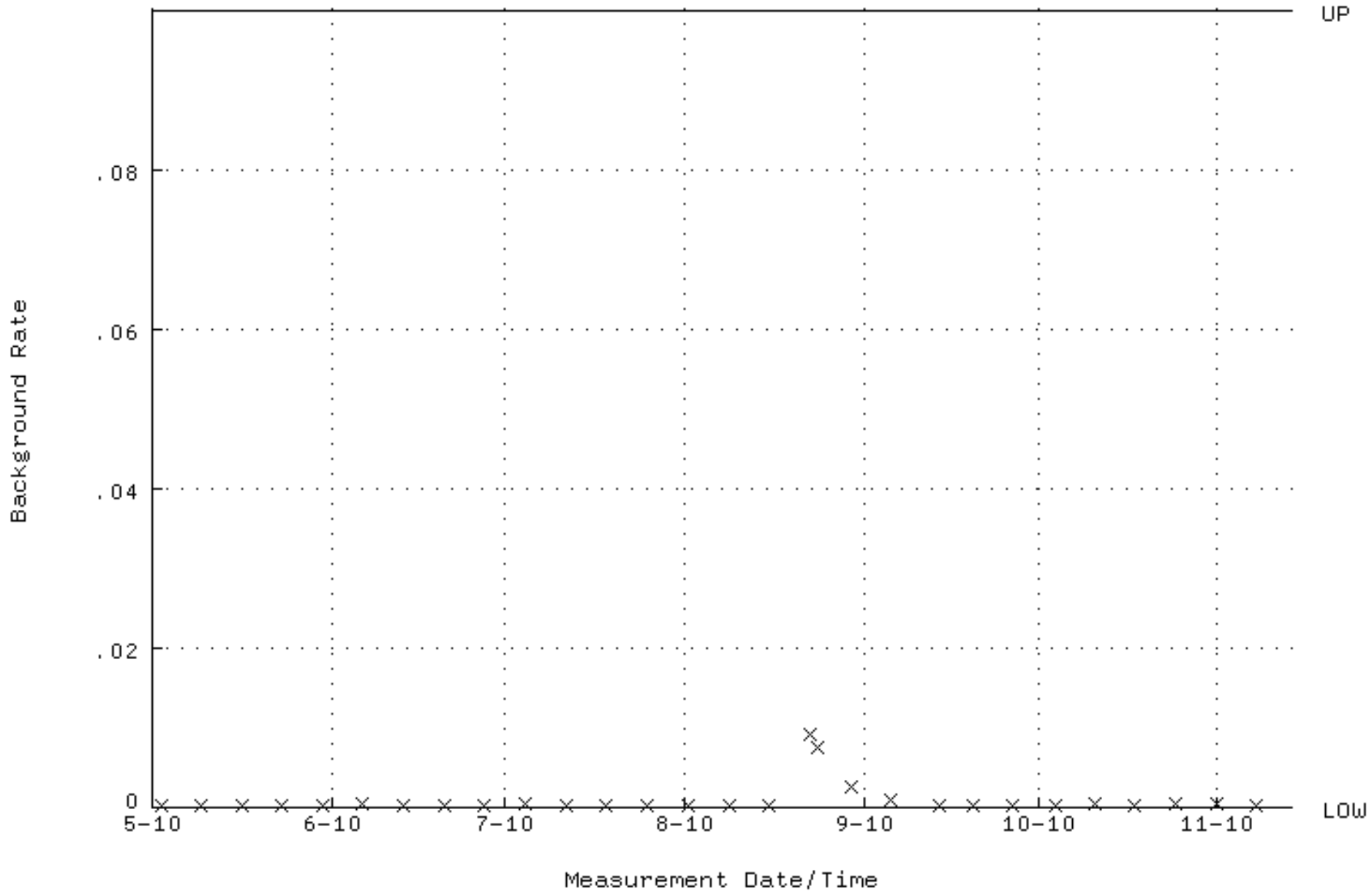
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-MAY-2010 07:54:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.303812 through 0.358300



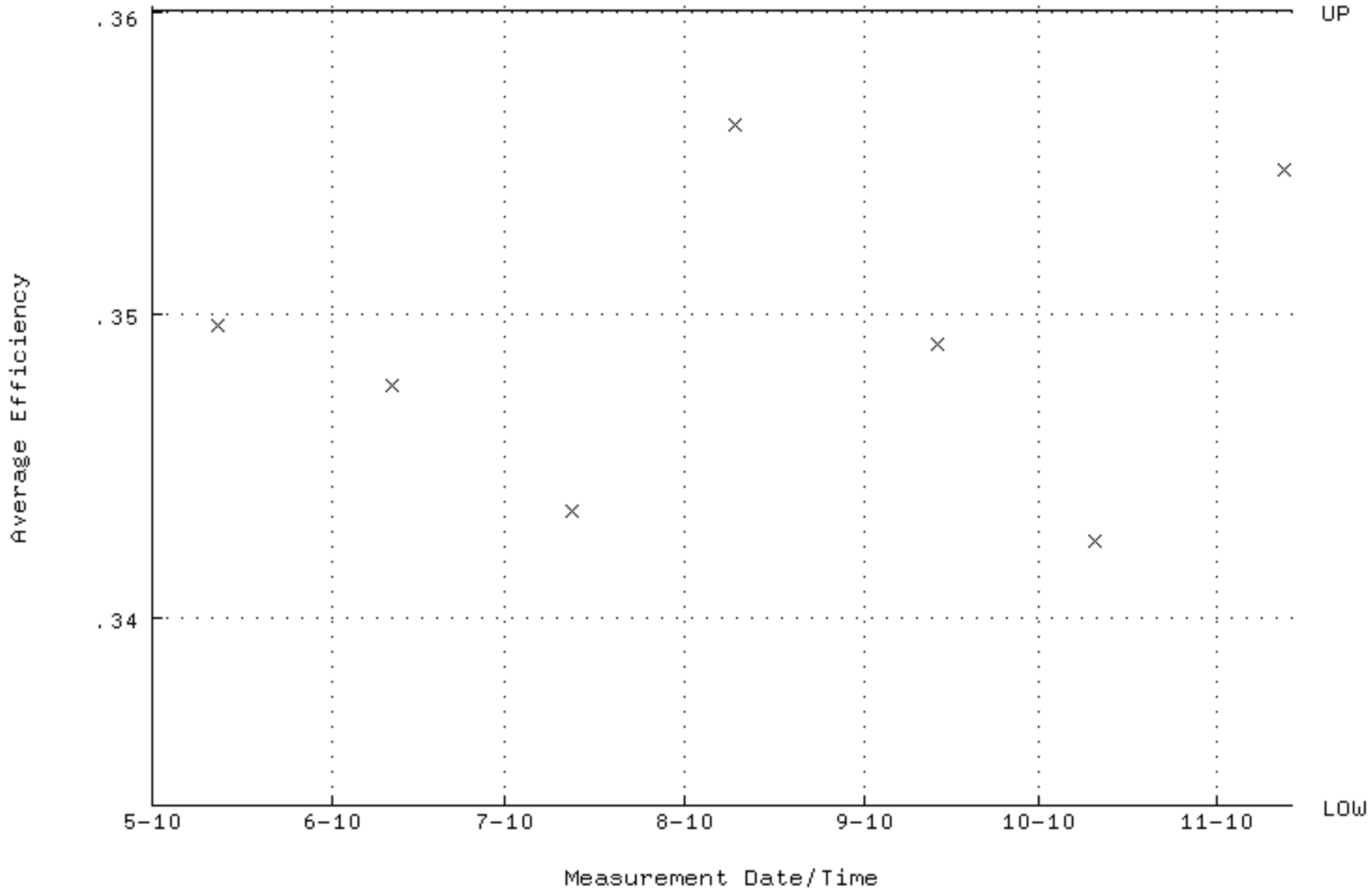
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-MAY-2010 07:54:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 87.8865 through 91.0169



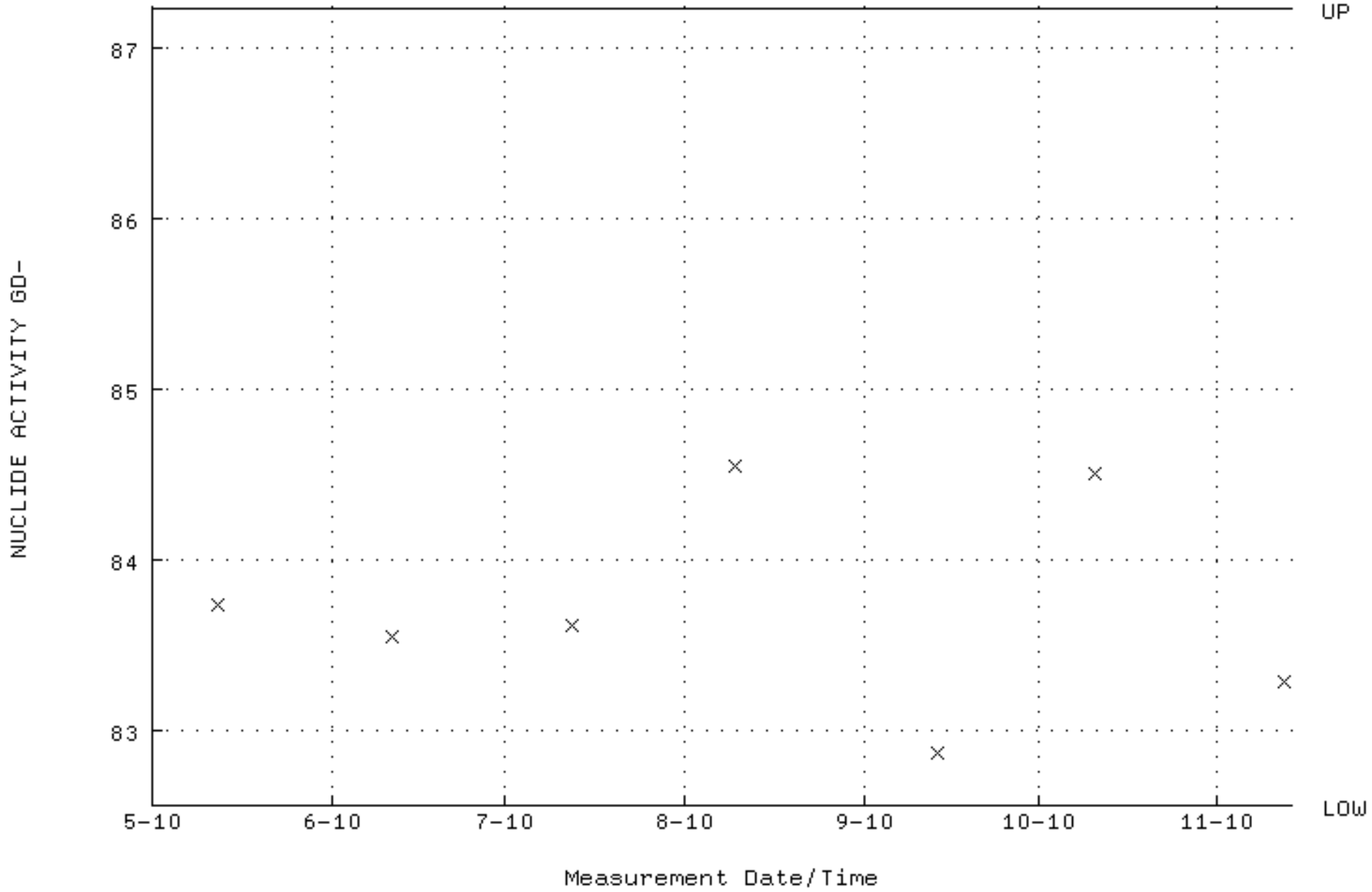
QA filename : DKA100:[ENV_ALPHA.QA.B]B090.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:13:04 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



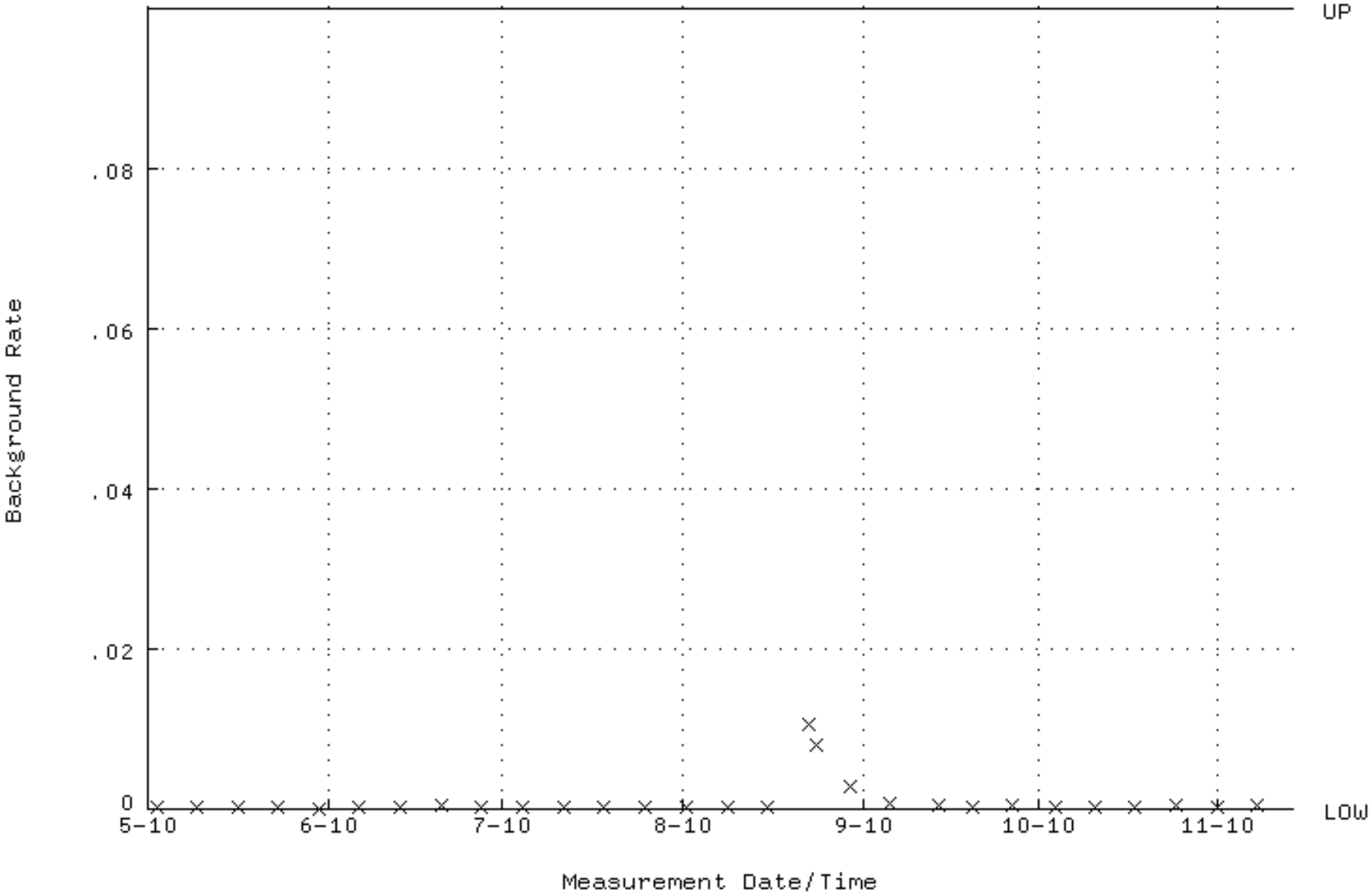
QA filename : DKA100:[ENV_ALPHA.QA.W]W091.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-MAY-2010 07:54:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.333793 through 0.360099



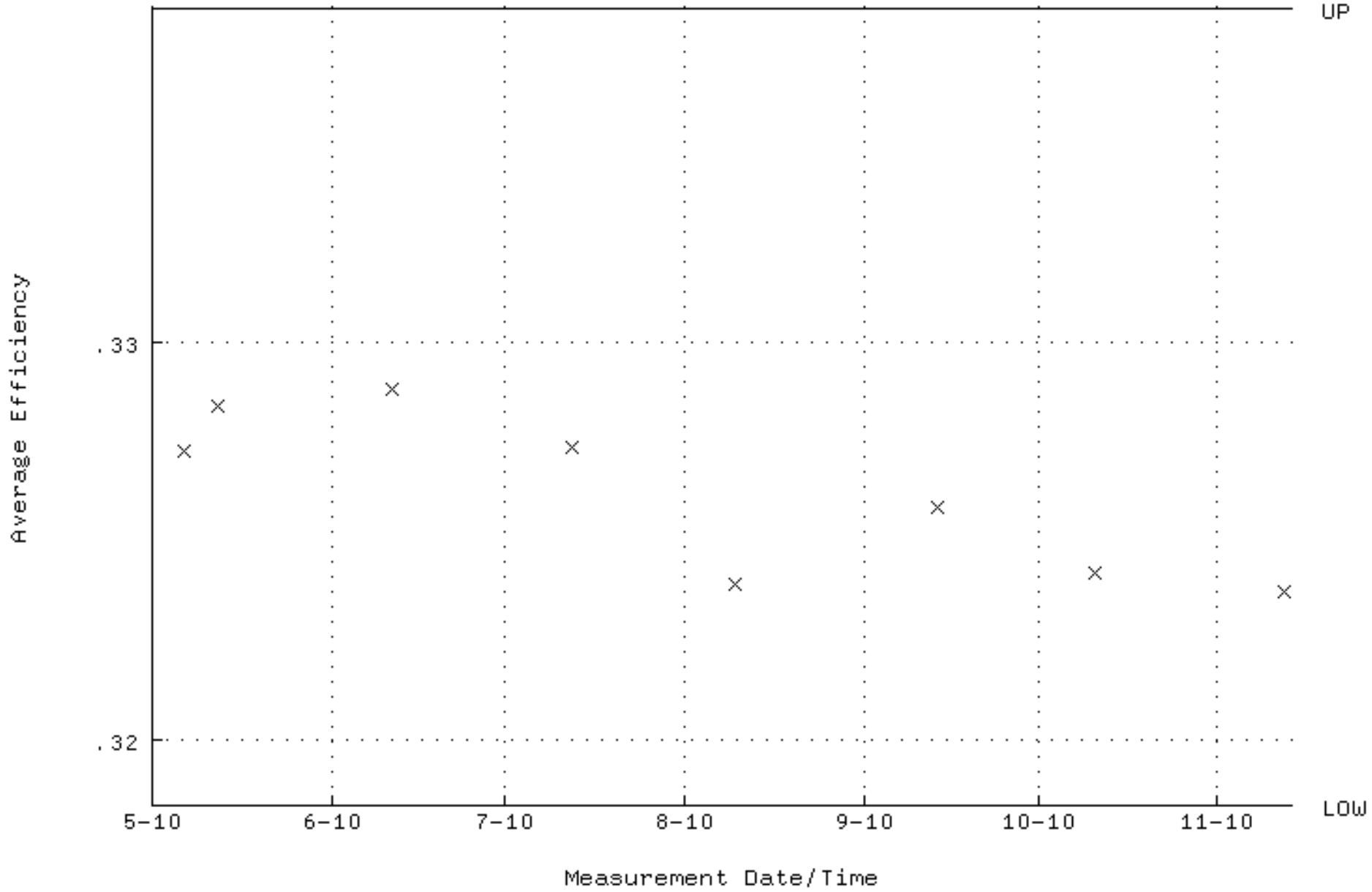
QA filename : DKA100:[ENV_ALPHA.QA.W]W091.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-MAY-2010 07:54:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 82.5566 through 87.2320



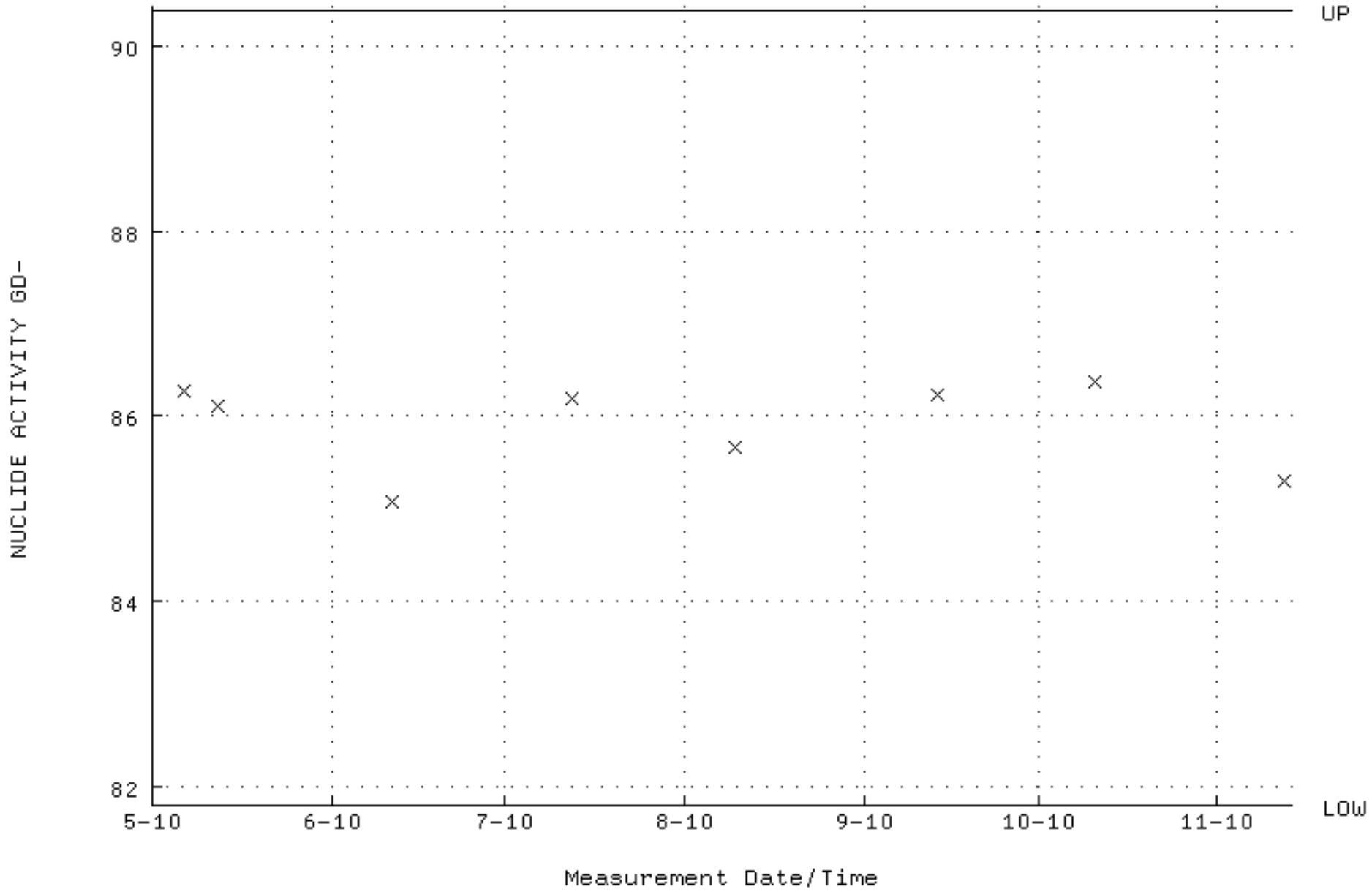
QA filename : DKA100:[ENV_ALPHA.QA.B]B091.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:13:04 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



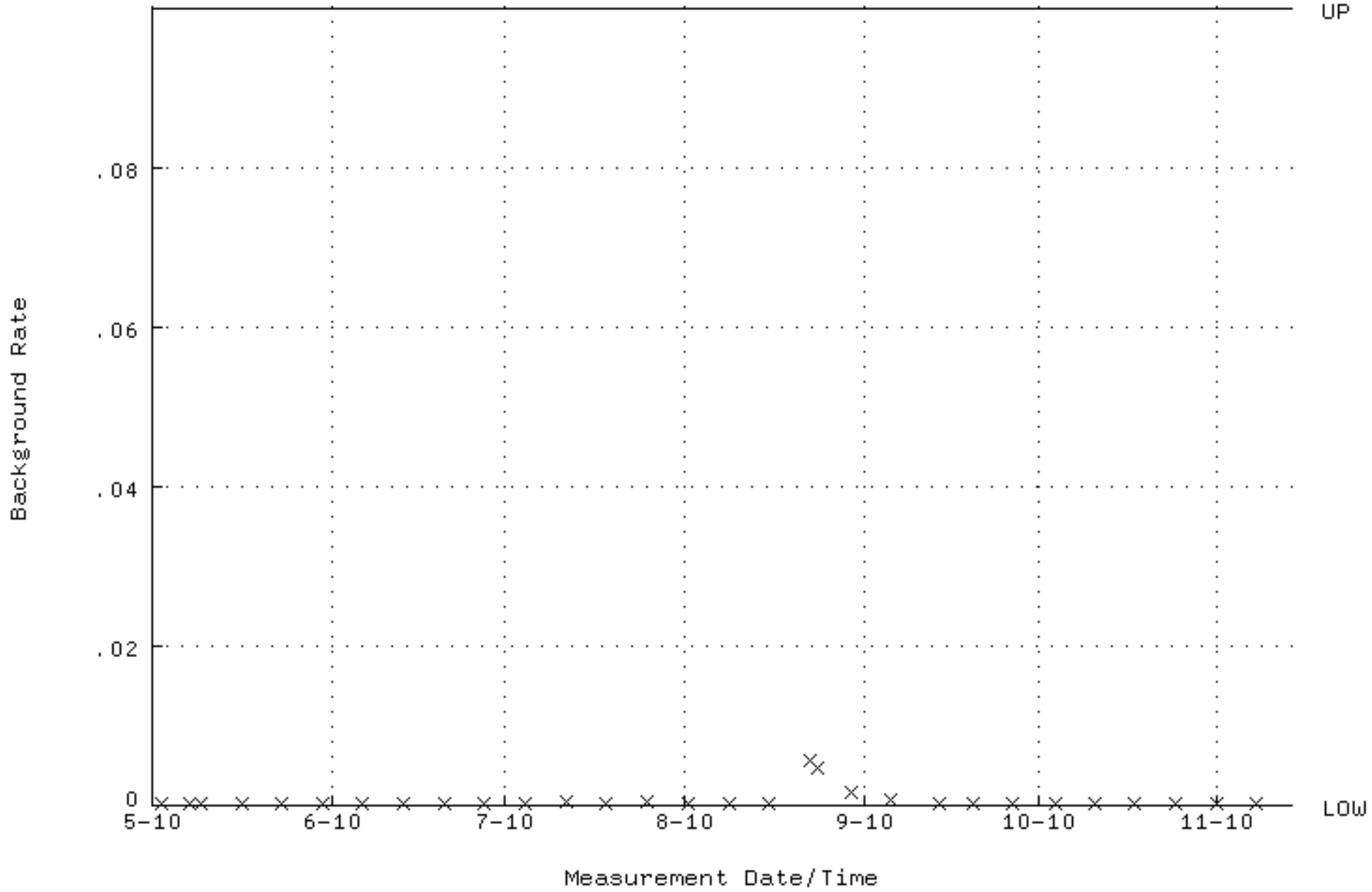
QA filename : DKA100:[ENV_ALPHA.QA.W]W092.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-MAY-2010 10:58:27 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.318355 through 0.338355



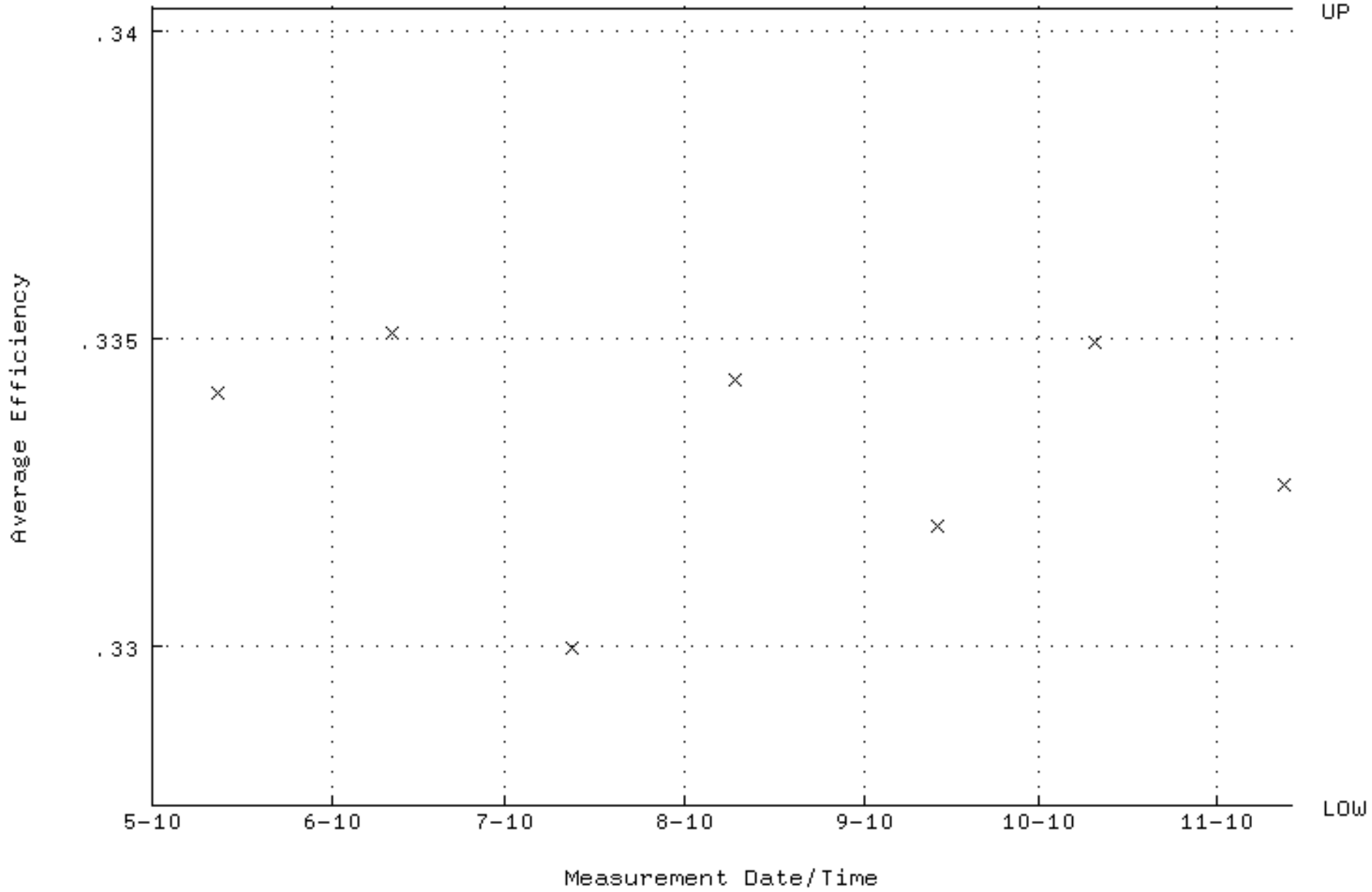
QA filename : DKA100:[ENV_ALPHA.QA.W]W092.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-MAY-2010 10:58:27 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 81.7941 through 90.4040



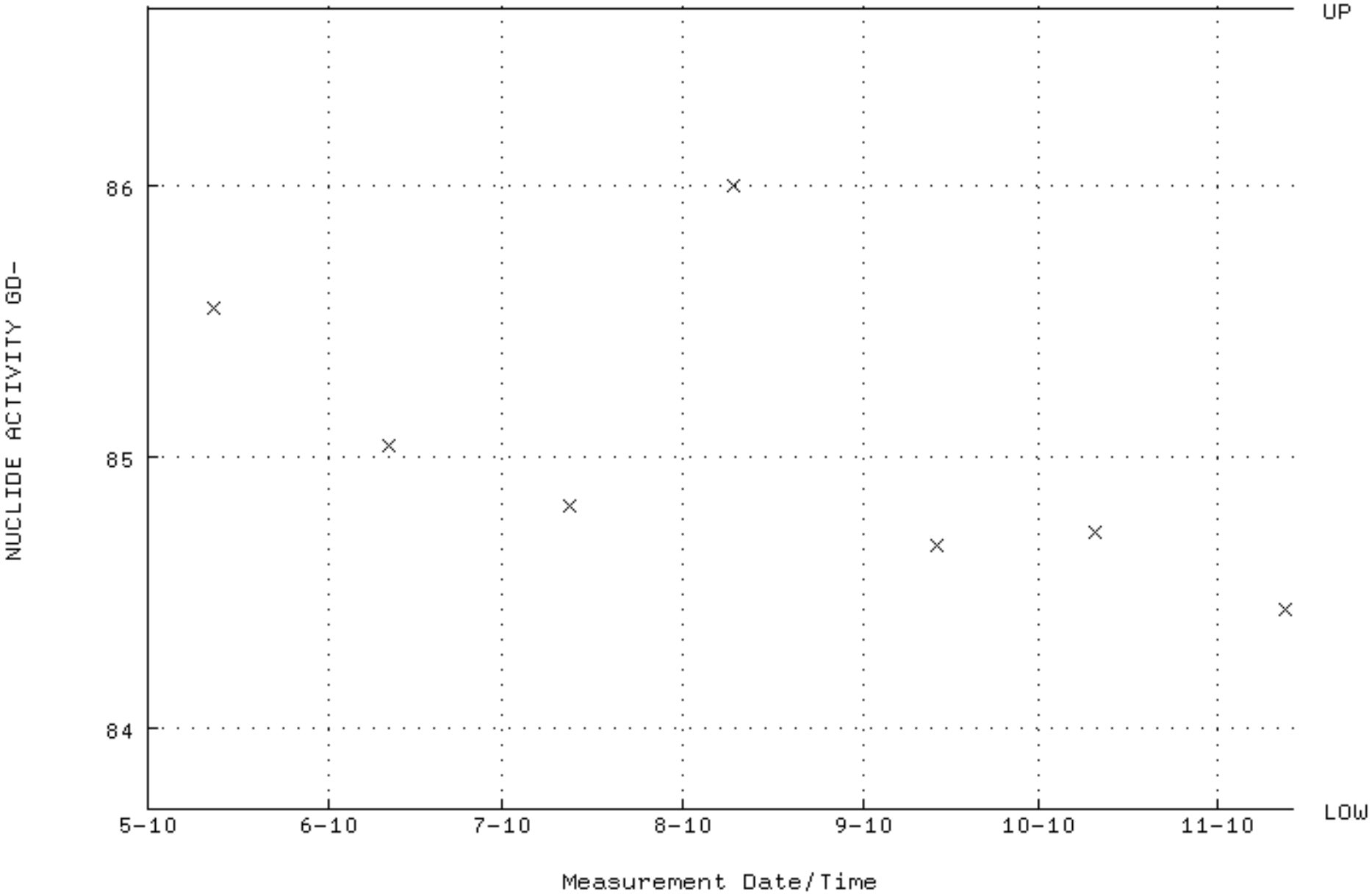
QA filename : DKA100:[ENV_ALPHA.QA.B]B092.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:13:04 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



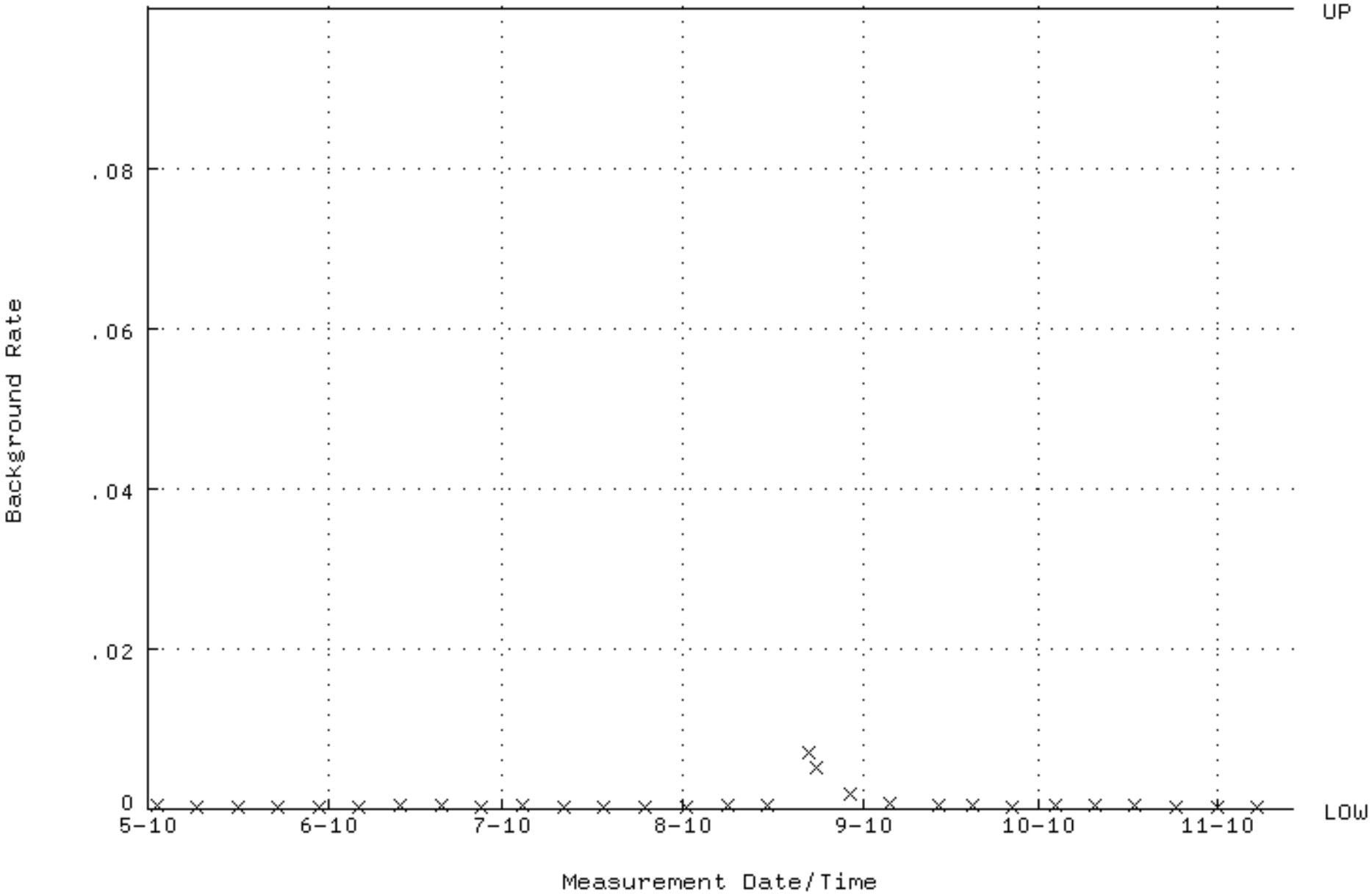
QA filename : DKA100:[ENV_ALPHA.QA.W]W093.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-MAY-2010 07:54:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.327426 through 0.340354



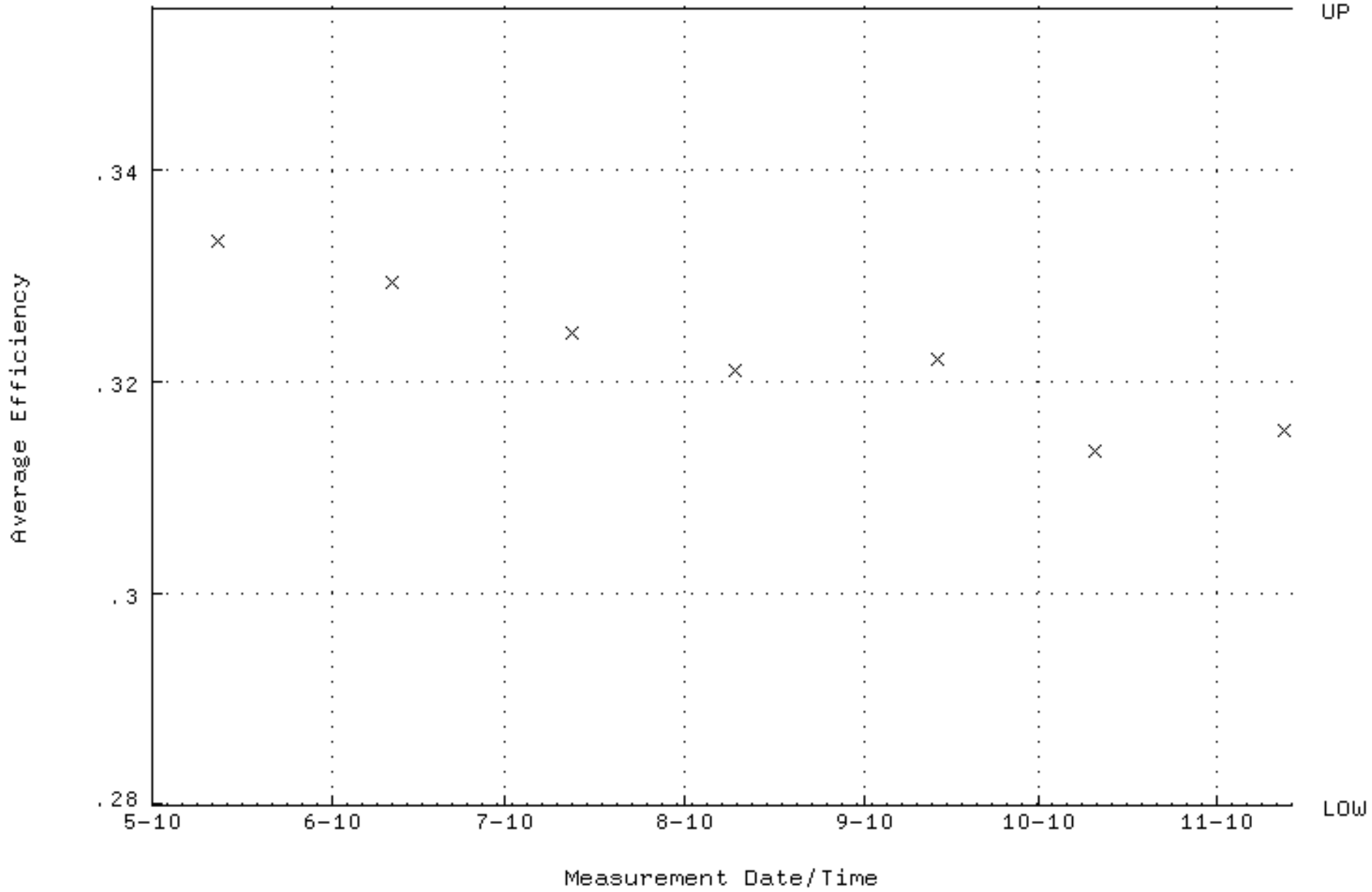
QA filename : DKA100:[ENV_ALPHA.QA.W]W093.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-MAY-2010 07:54:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 83.7038 through 86.6524



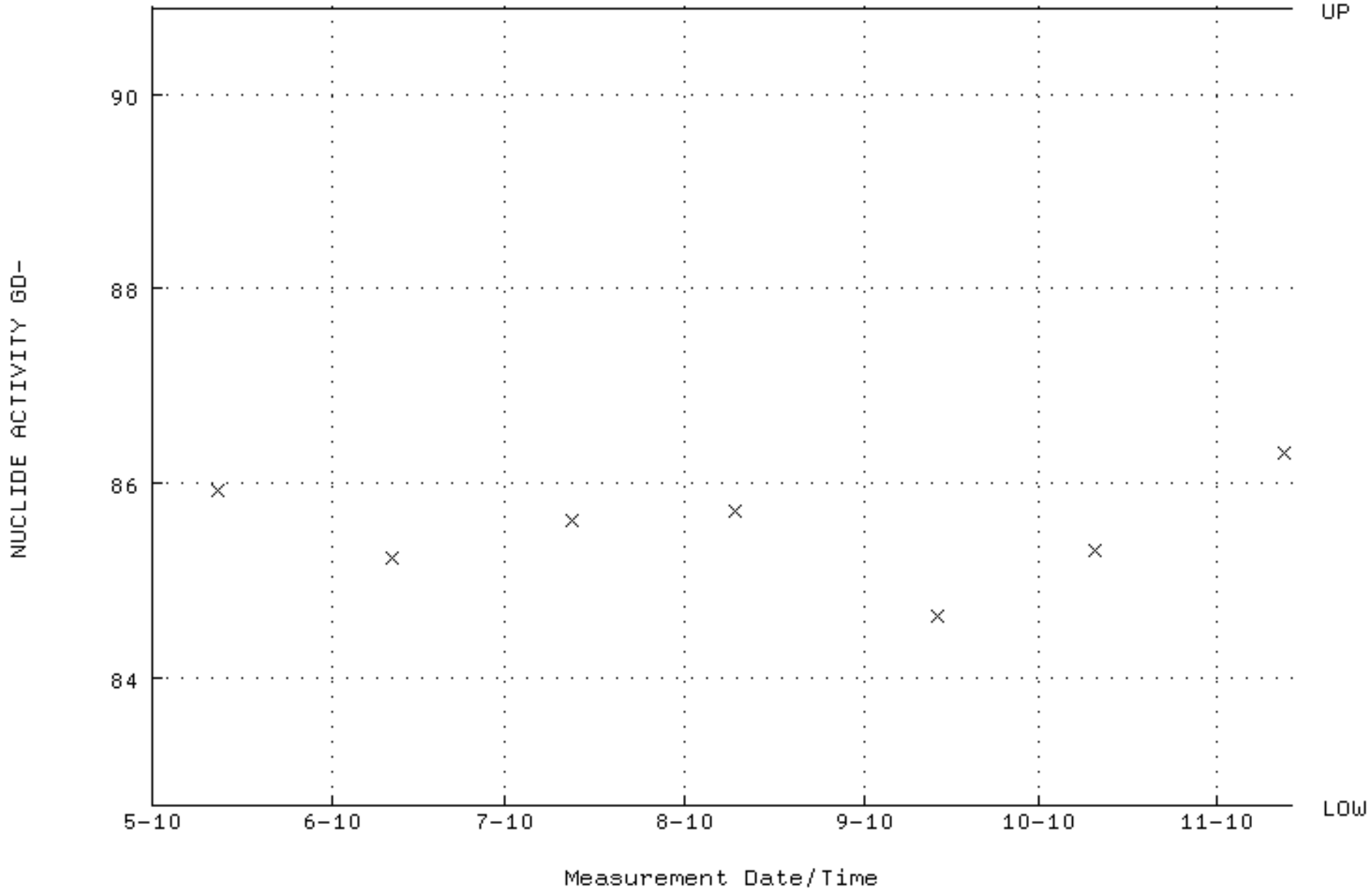
QA filename : DKA100:[ENV_ALPHA.QA.B]B093.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:13:04 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



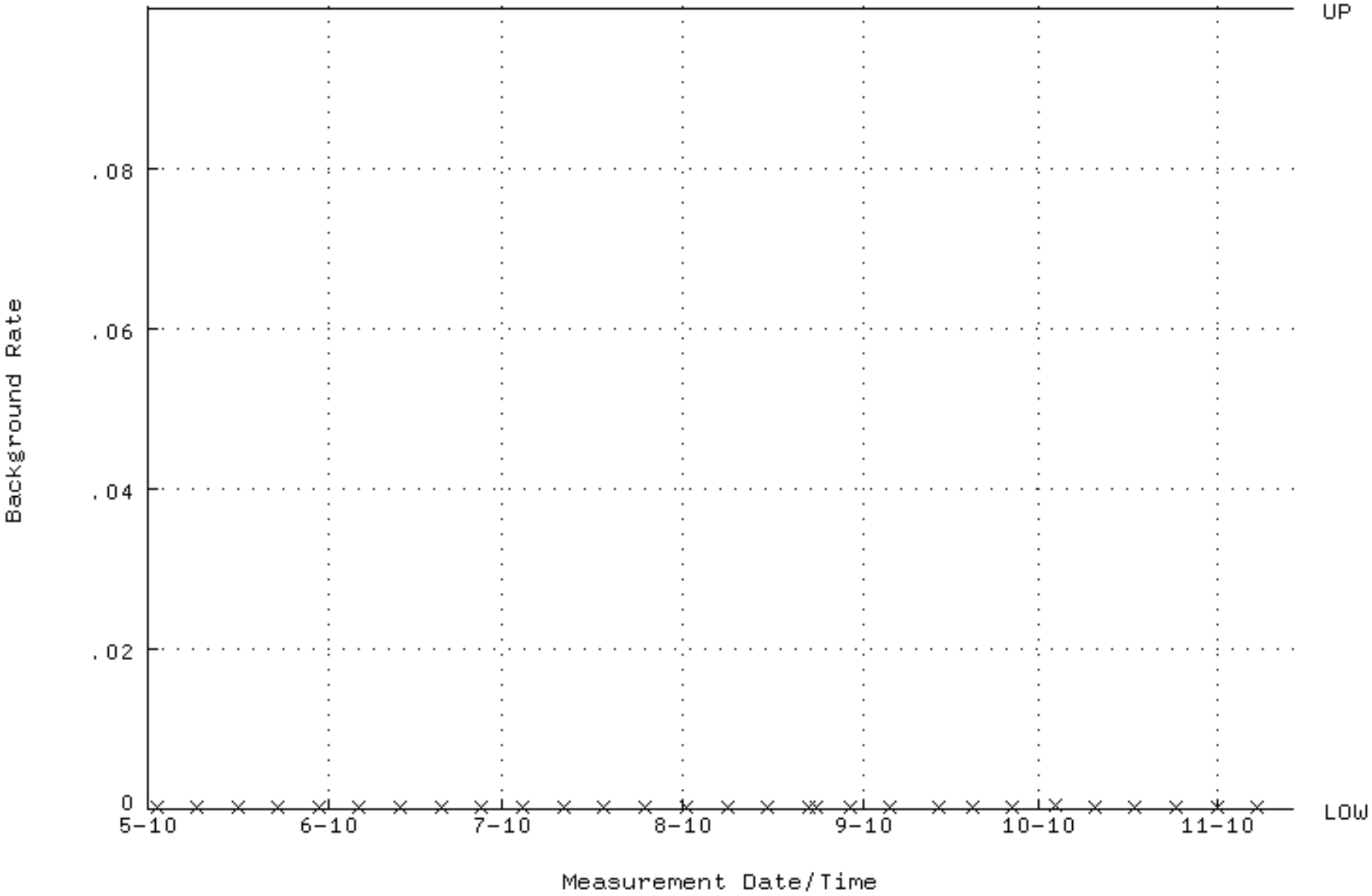
QA filename : DKA100:[ENV_ALPHA.QA.W]W094.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-MAY-2010 07:54:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.279864 through 0.355292



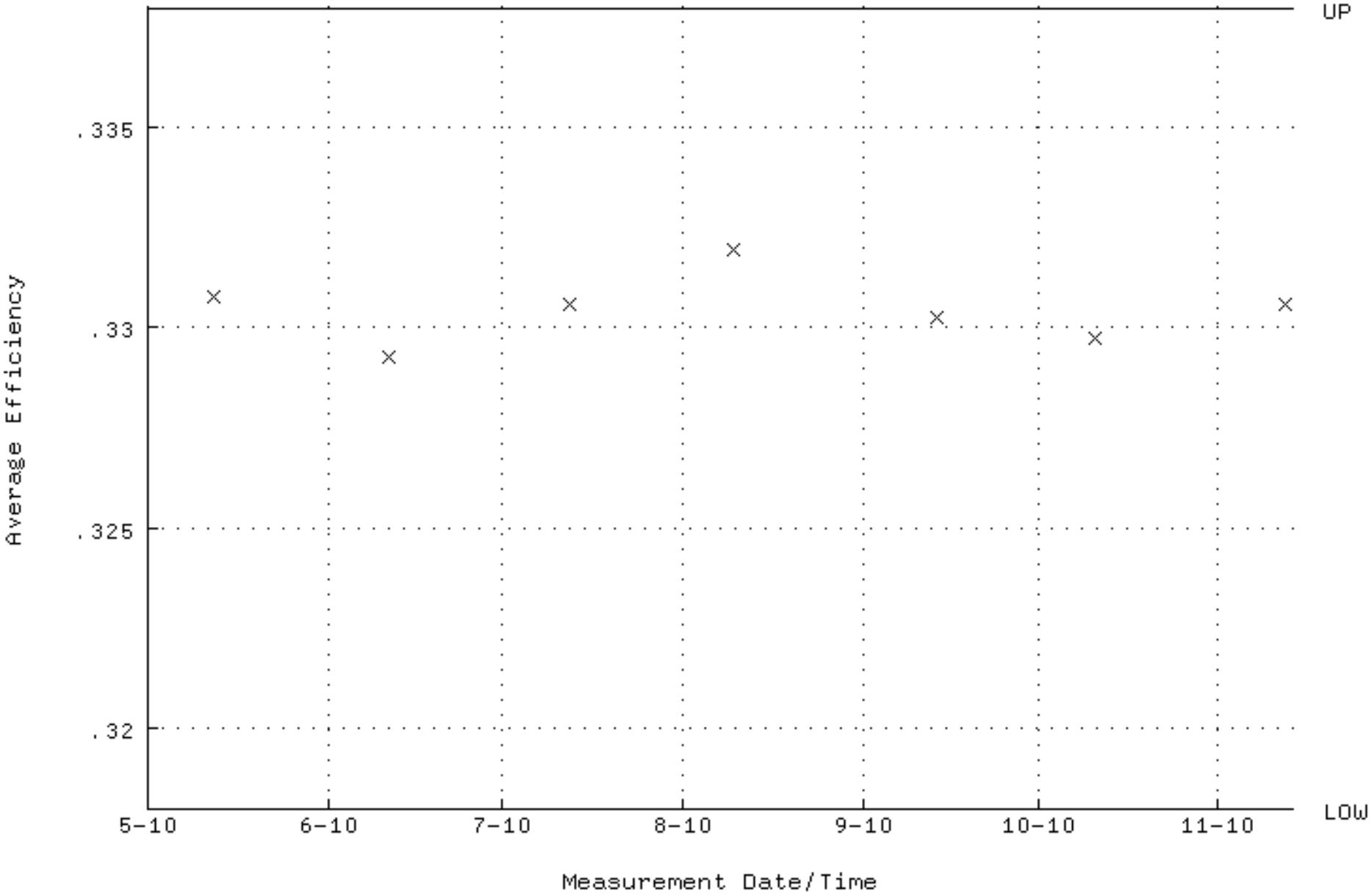
QA filename : DKA100:[ENV_ALPHA.QA.W]W094.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-MAY-2010 07:54:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 82.6832 through 90.8830



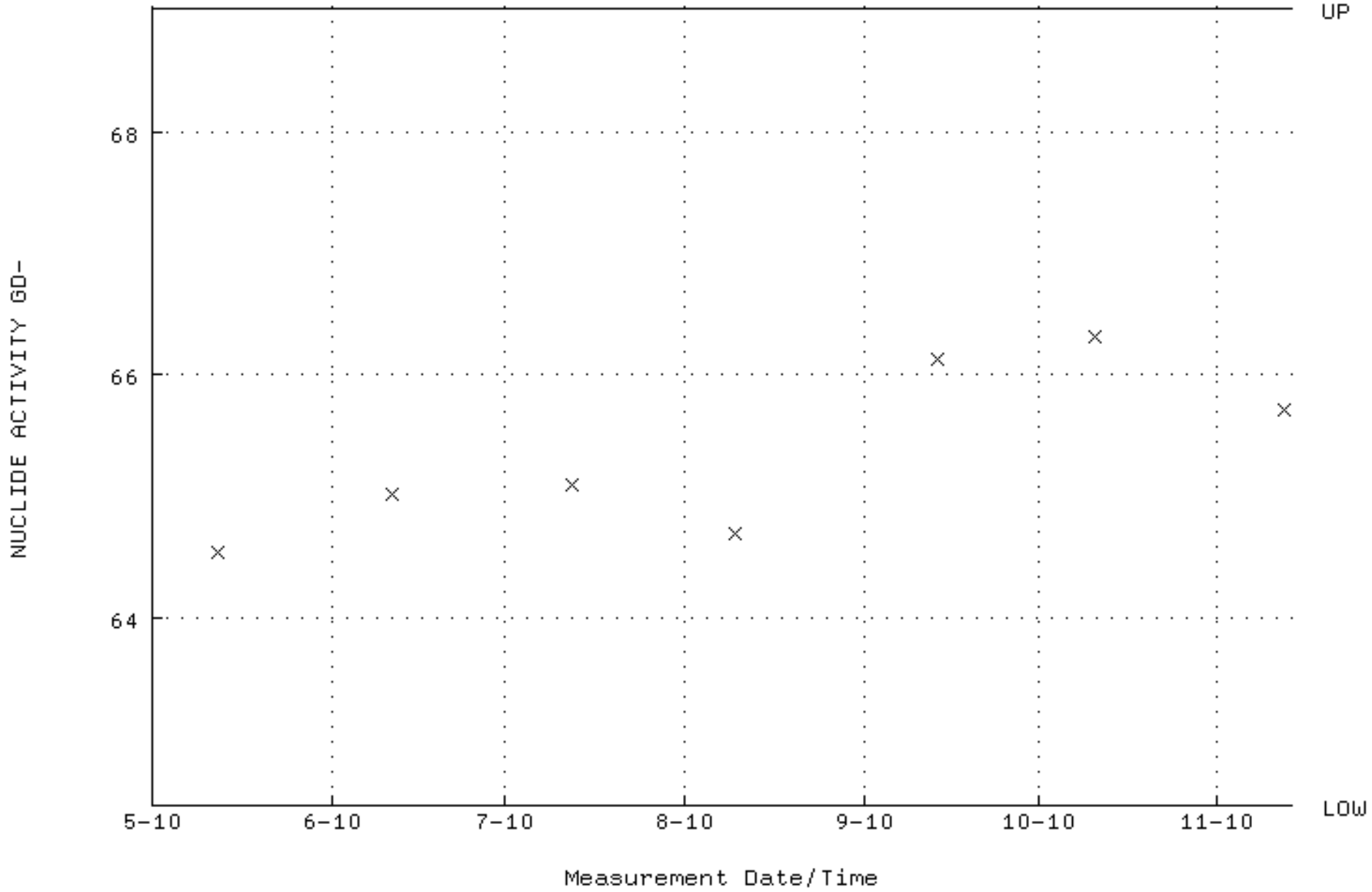
QA filename : DKA100:[ENV_ALPHA.QA.B]B094.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:13:04 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



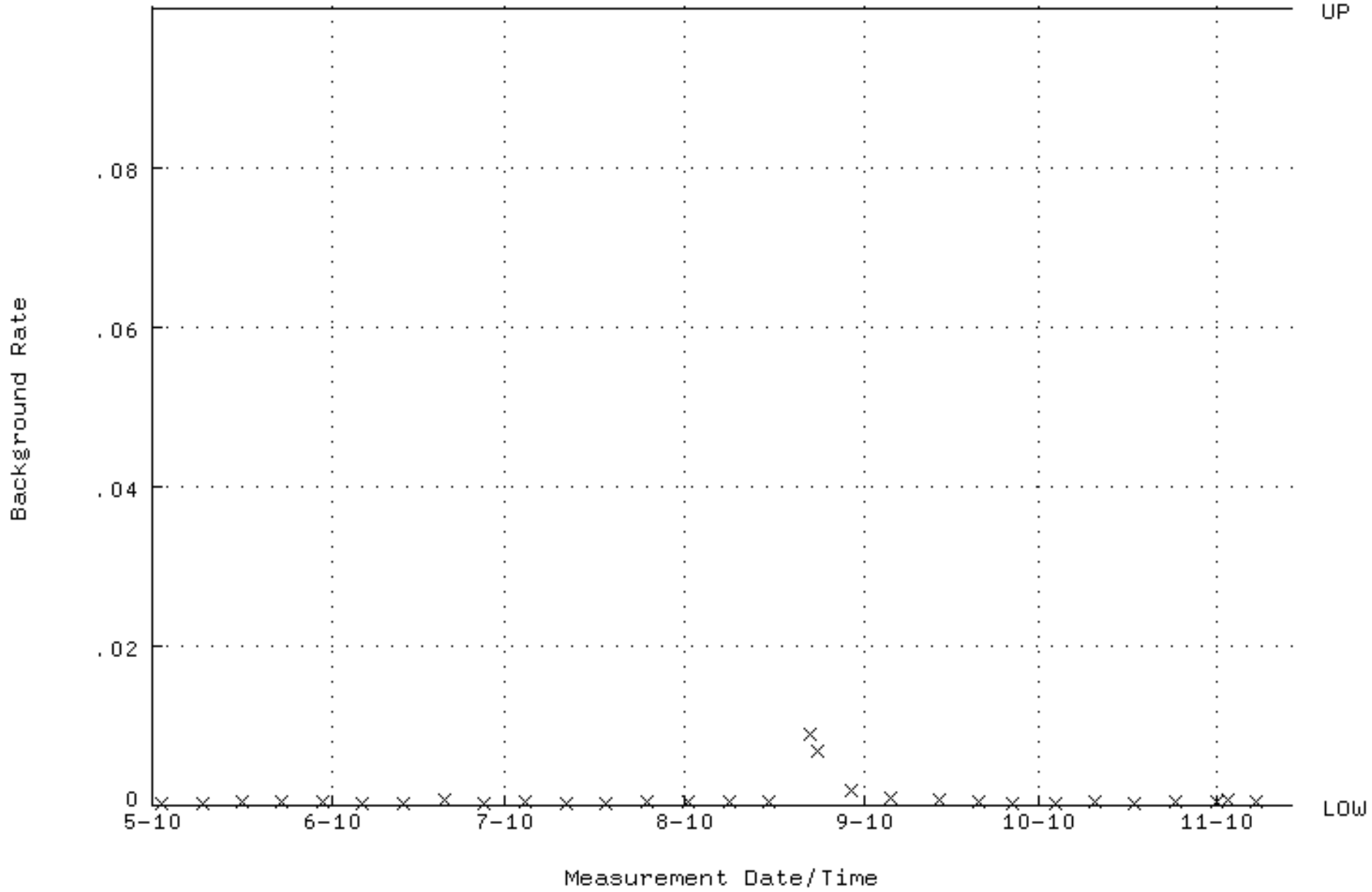
QA filename : DKA100:[ENV_ALPHA.QA.W]W096.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-MAY-2010 07:54:08 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.317970 through 0.337970



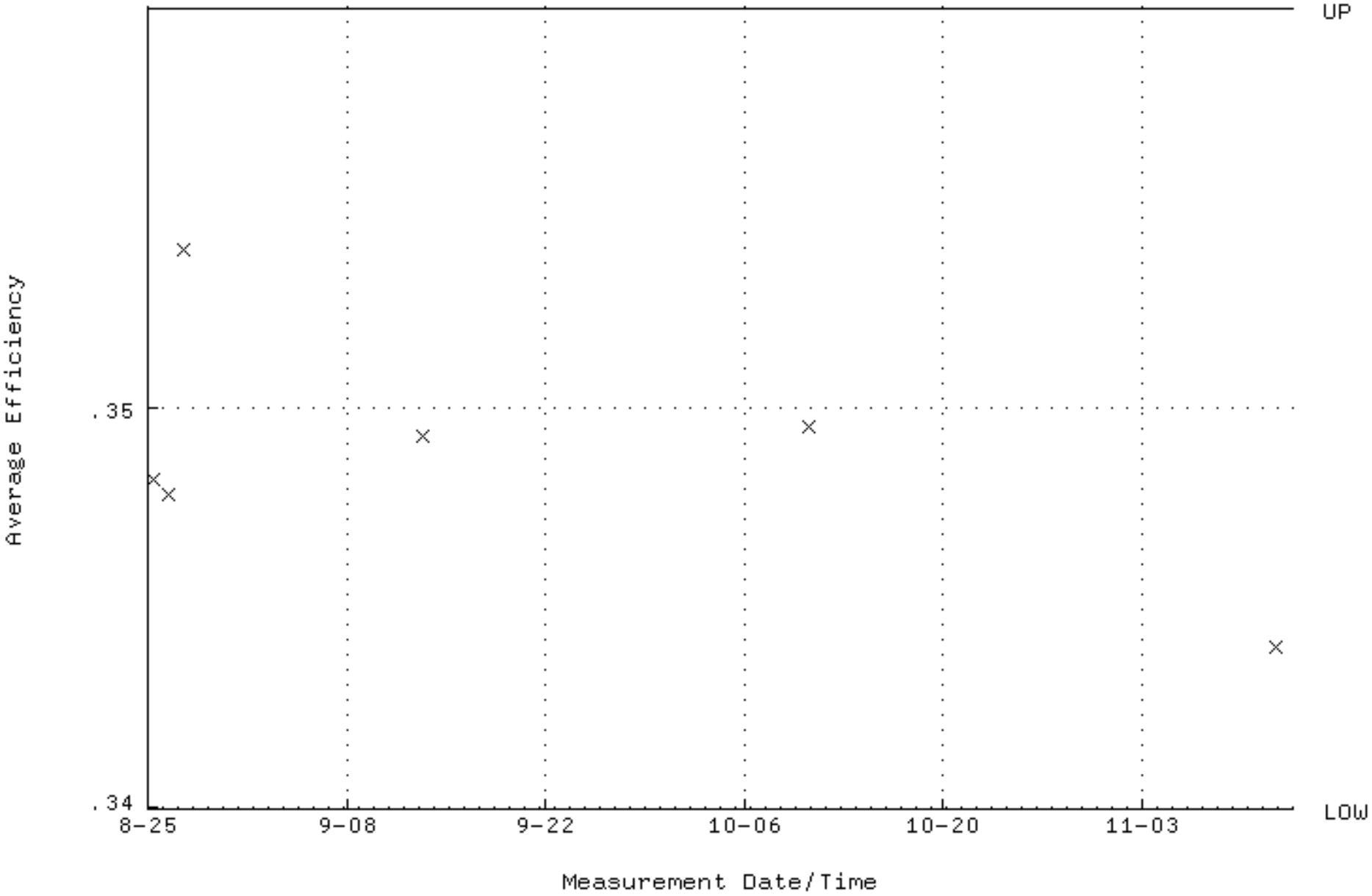
QA filename : DKA100:[ENV_ALPHA.QA.W]W096.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-MAY-2010 07:54:08 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 62.4466 through 69.0200



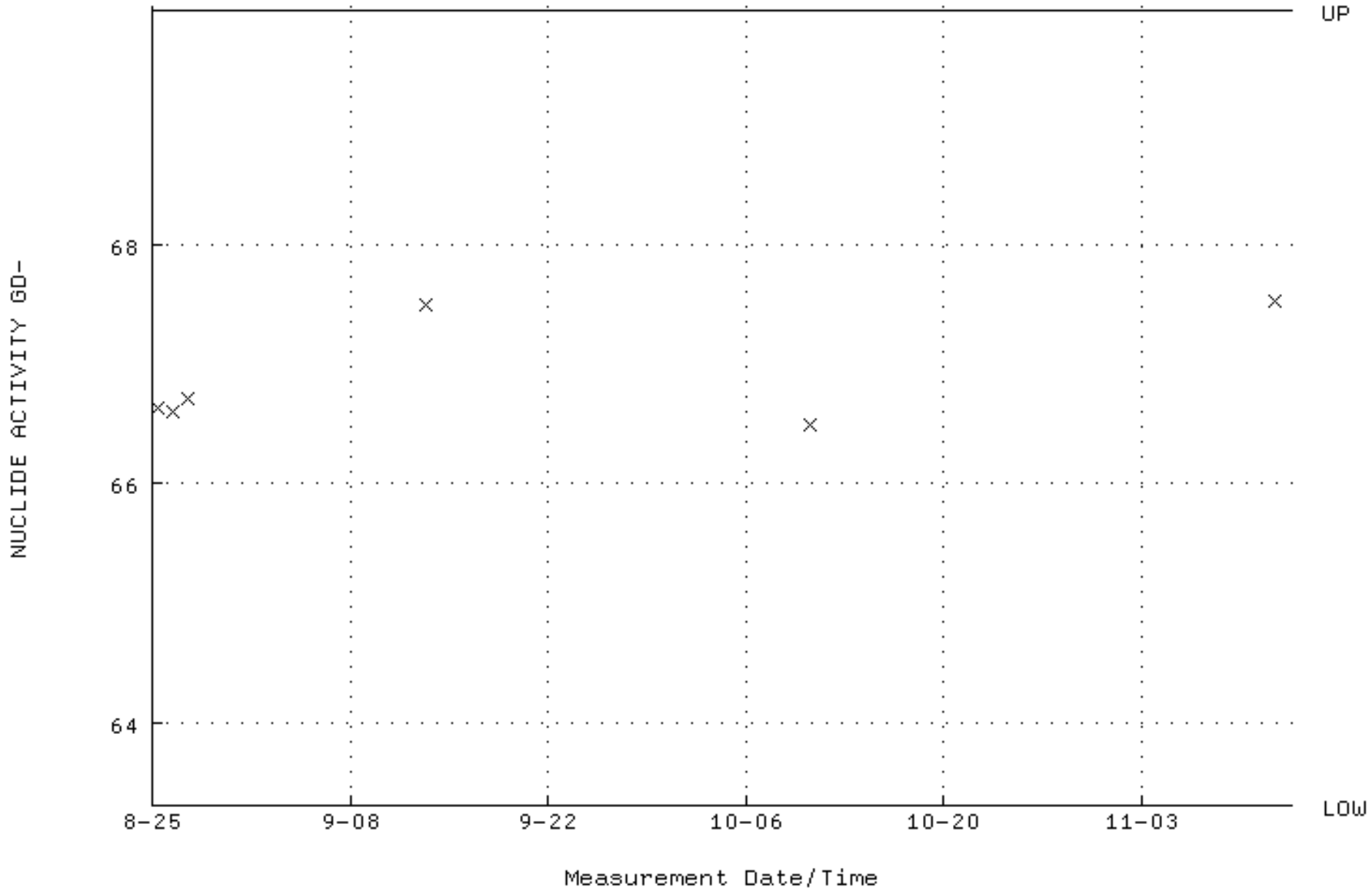
QA filename : DKA100:[ENV_ALPHA.QA.B]B096.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:13:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



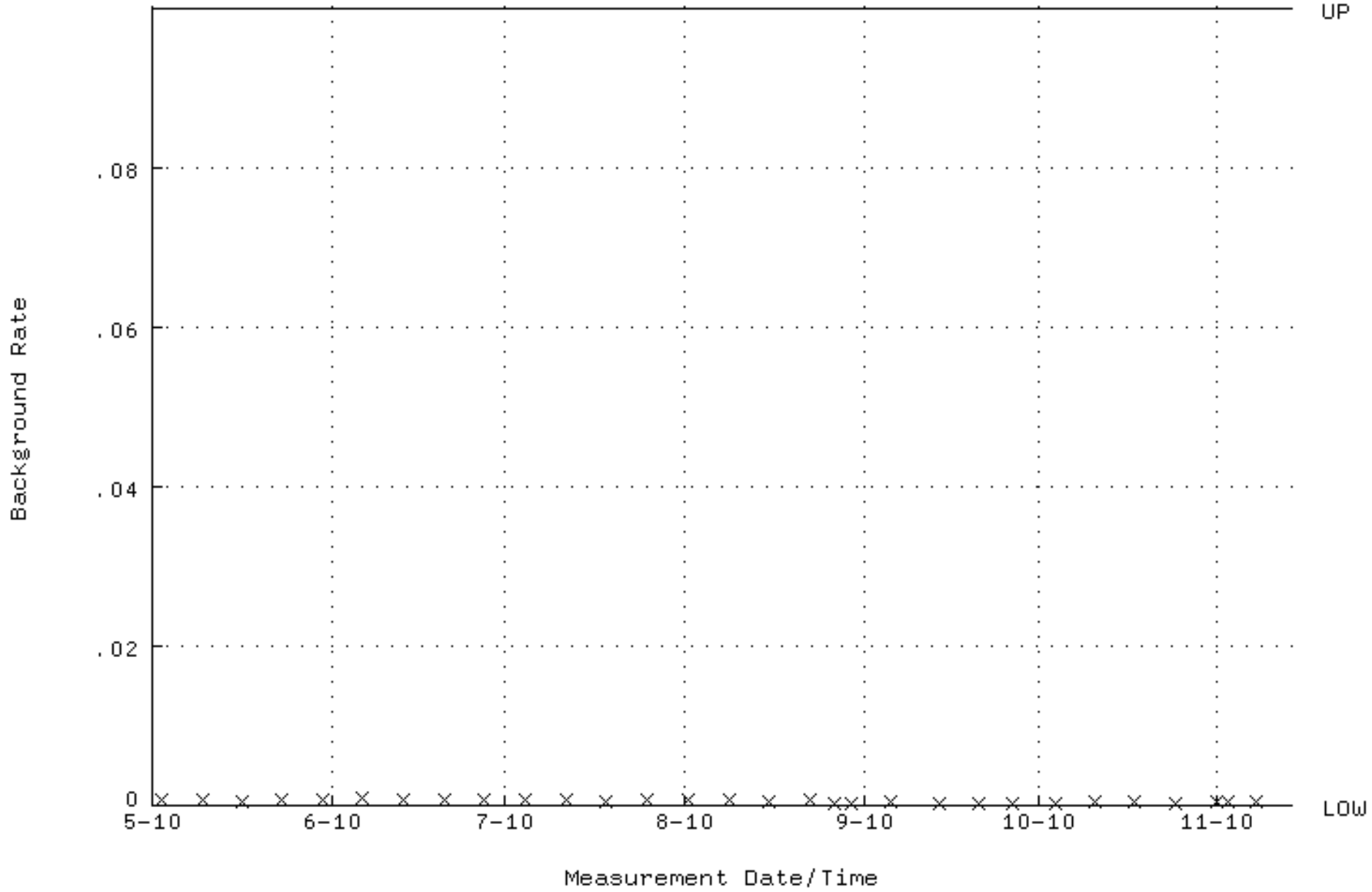
QA filename : DKA100:[ENV_ALPHA.QA.W]W097.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 25-AUG-2010 10:59:38 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.339957 through 0.359957



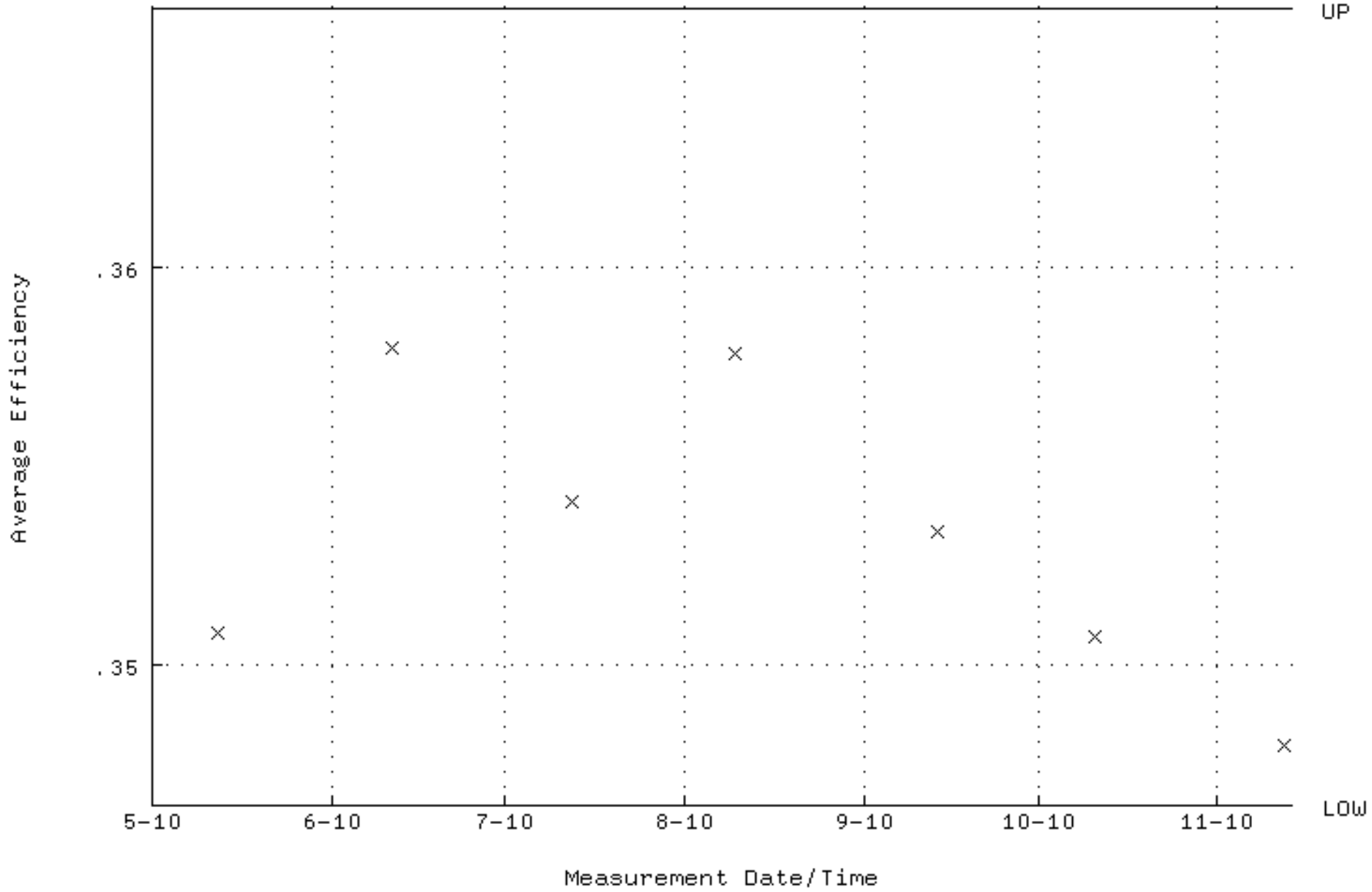
QA filename : DKA100:[ENV_ALPHA.QA.W]W097.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 25-AUG-2010 10:59:38 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 63.3052 through 69.9690



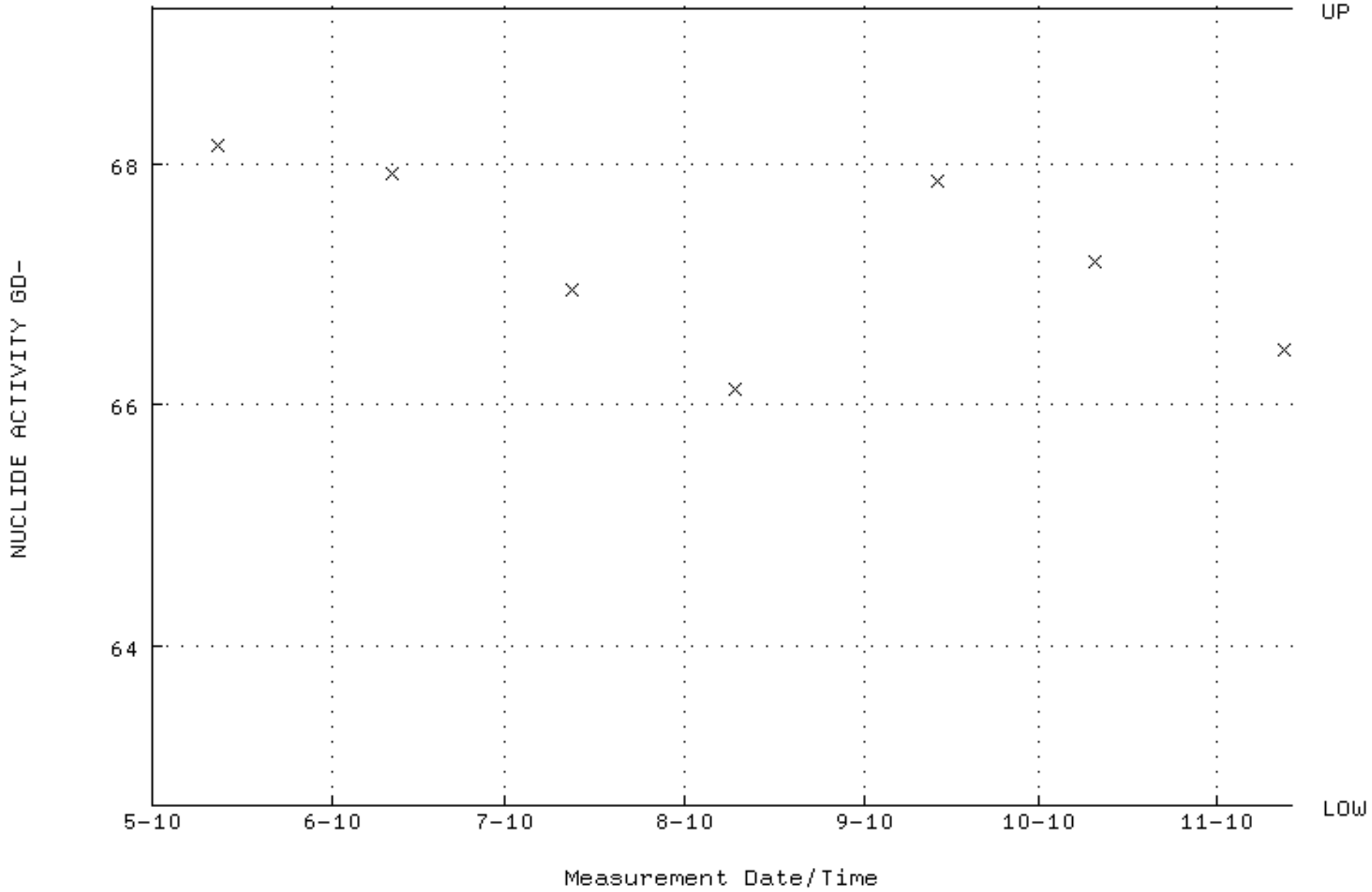
QA filename : DKA100:[ENV_ALPHA.QA.B]B097.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:13:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



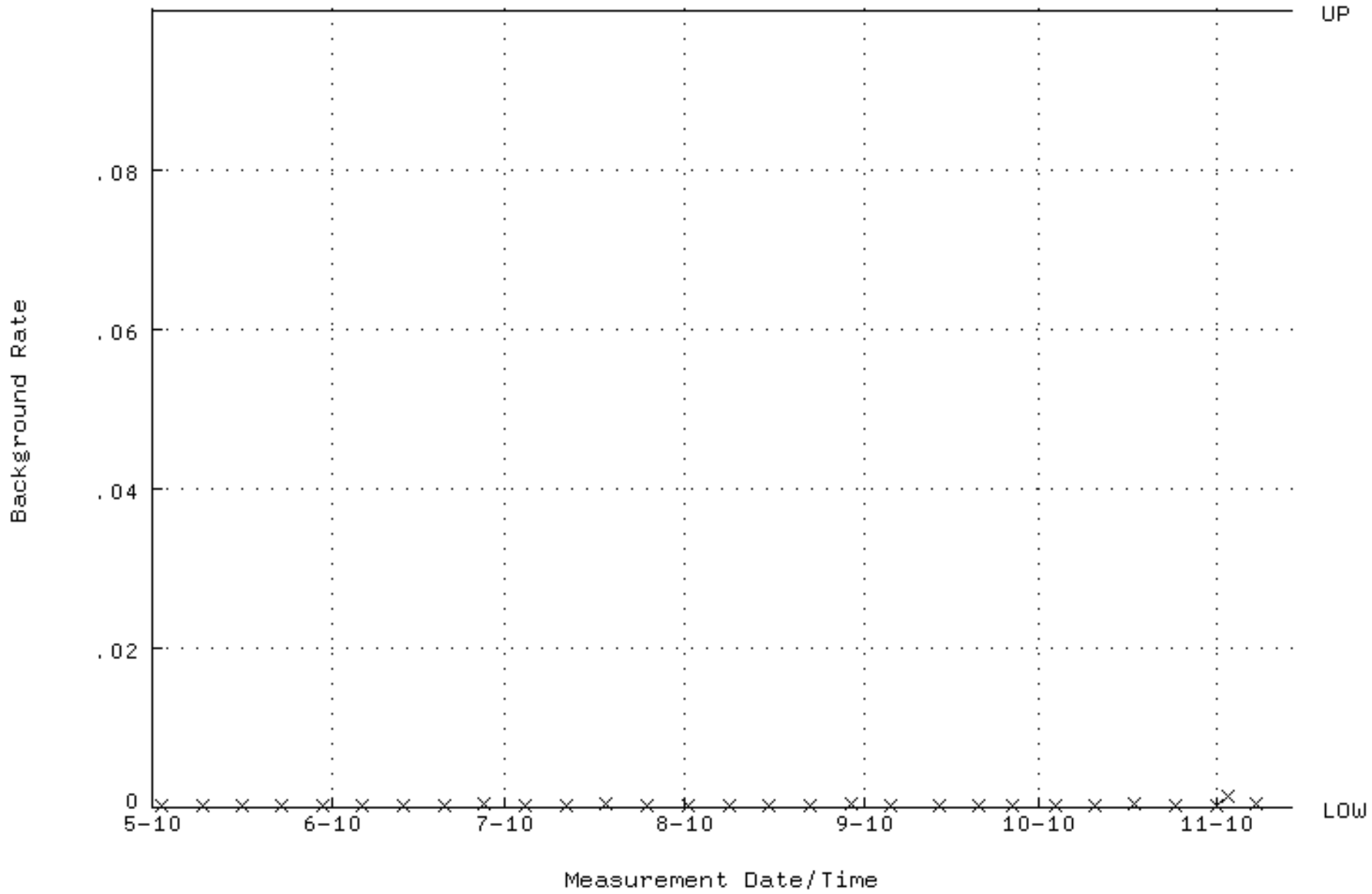
QA filename : DKA100:[ENV_ALPHA.QA.W]W098.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-MAY-2010 07:54:08 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.346488 through 0.366488



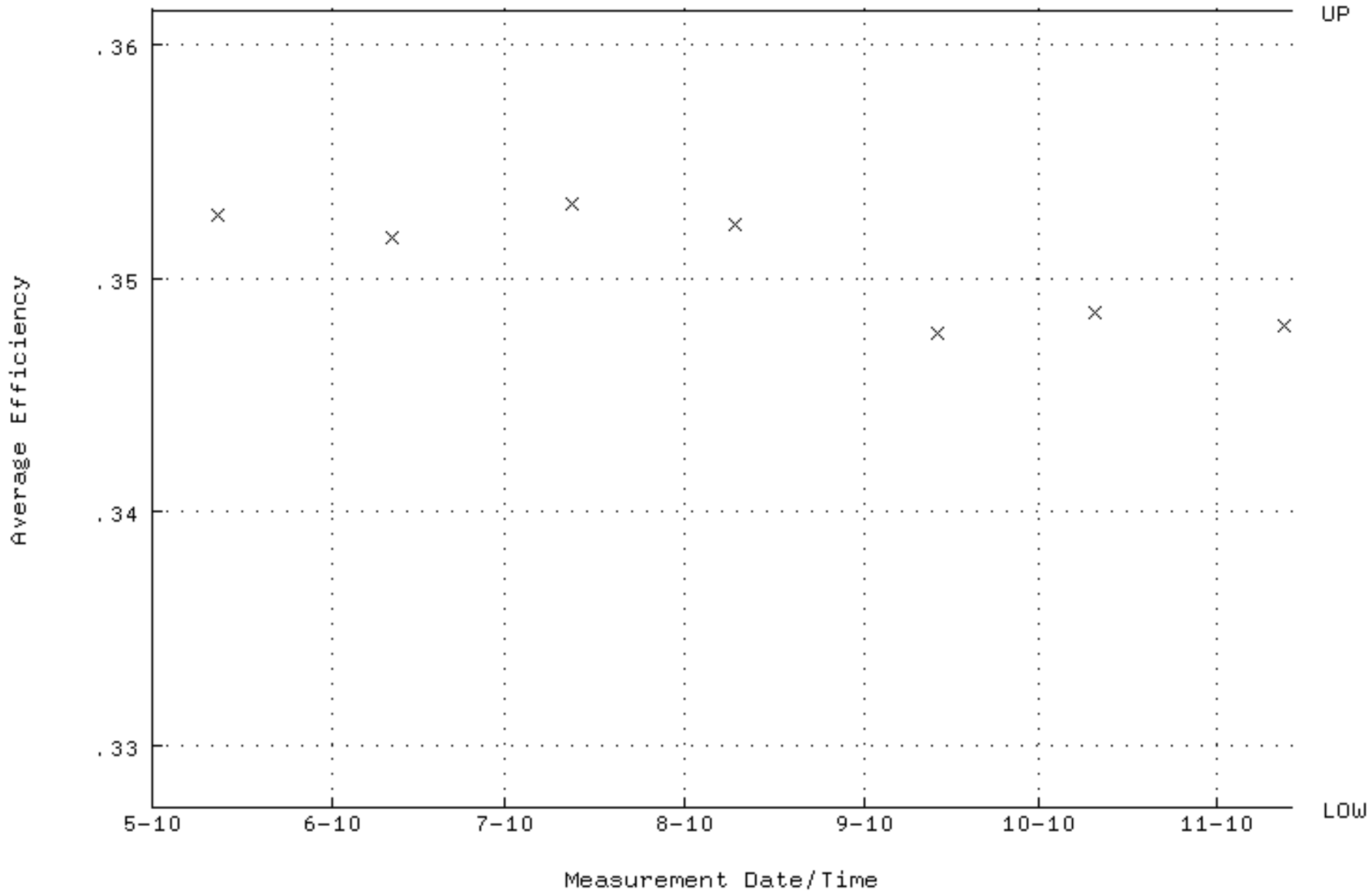
QA filename : DKA100:[ENV_ALPHA.QA.W]W098.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-MAY-2010 07:54:08 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 62.6847 through 69.2831



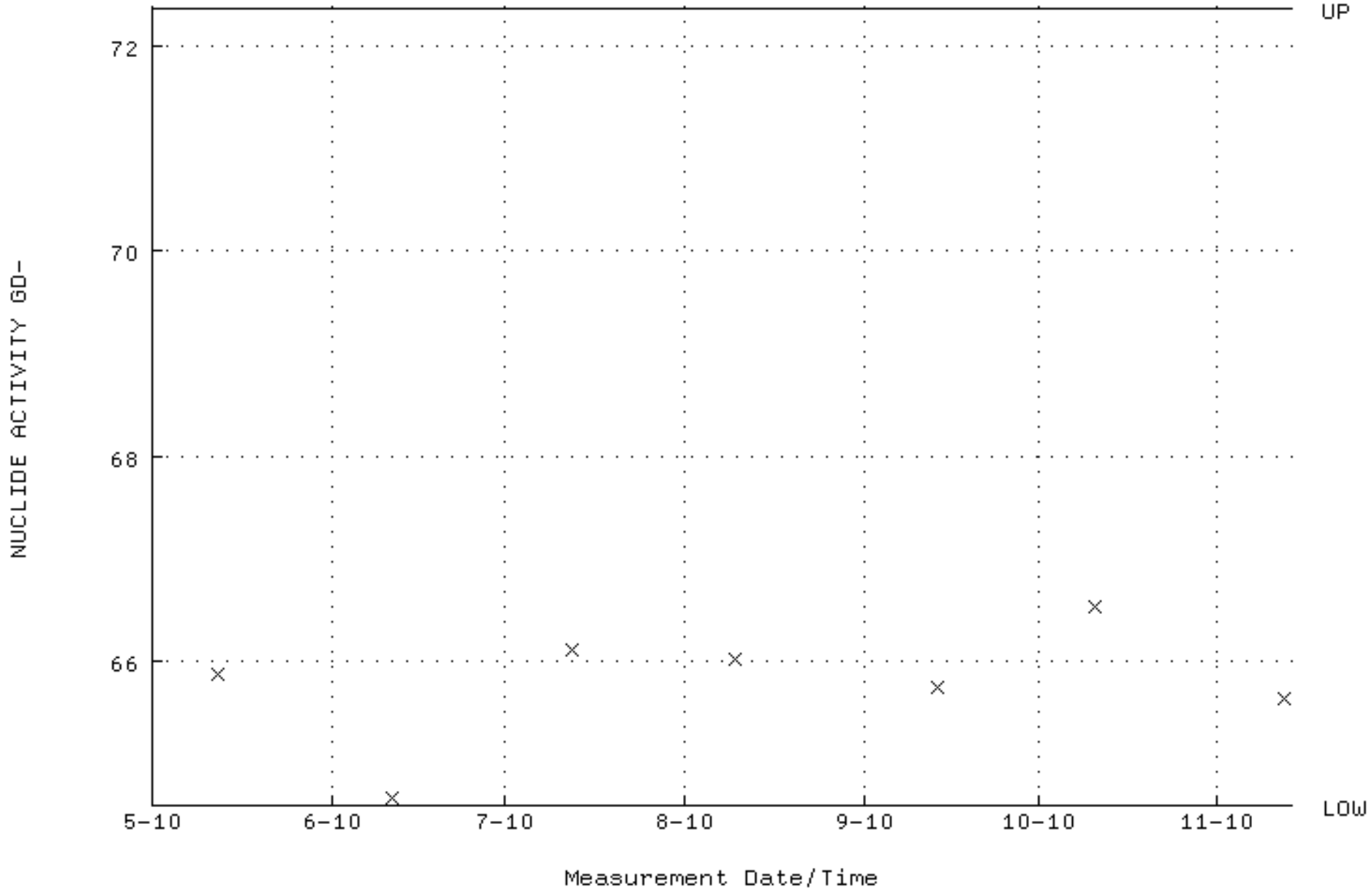
QA filename : DKA100:[ENV_ALPHA.QA.B]B098.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:13:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



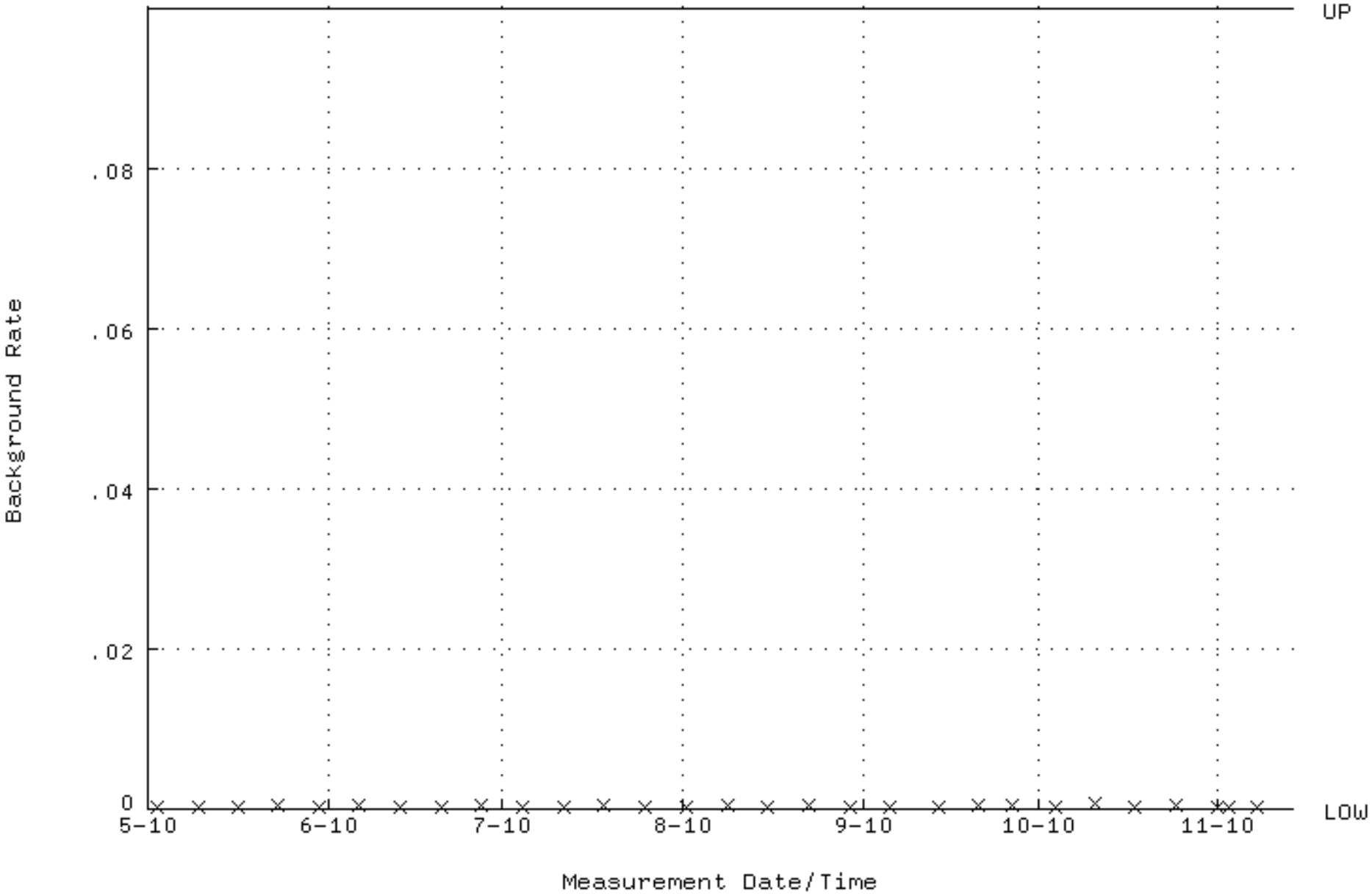
QA filename : DKA100:[ENV_ALPHA.QA.W]W100.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-MAY-2010 07:54:08 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.327374 through 0.361422



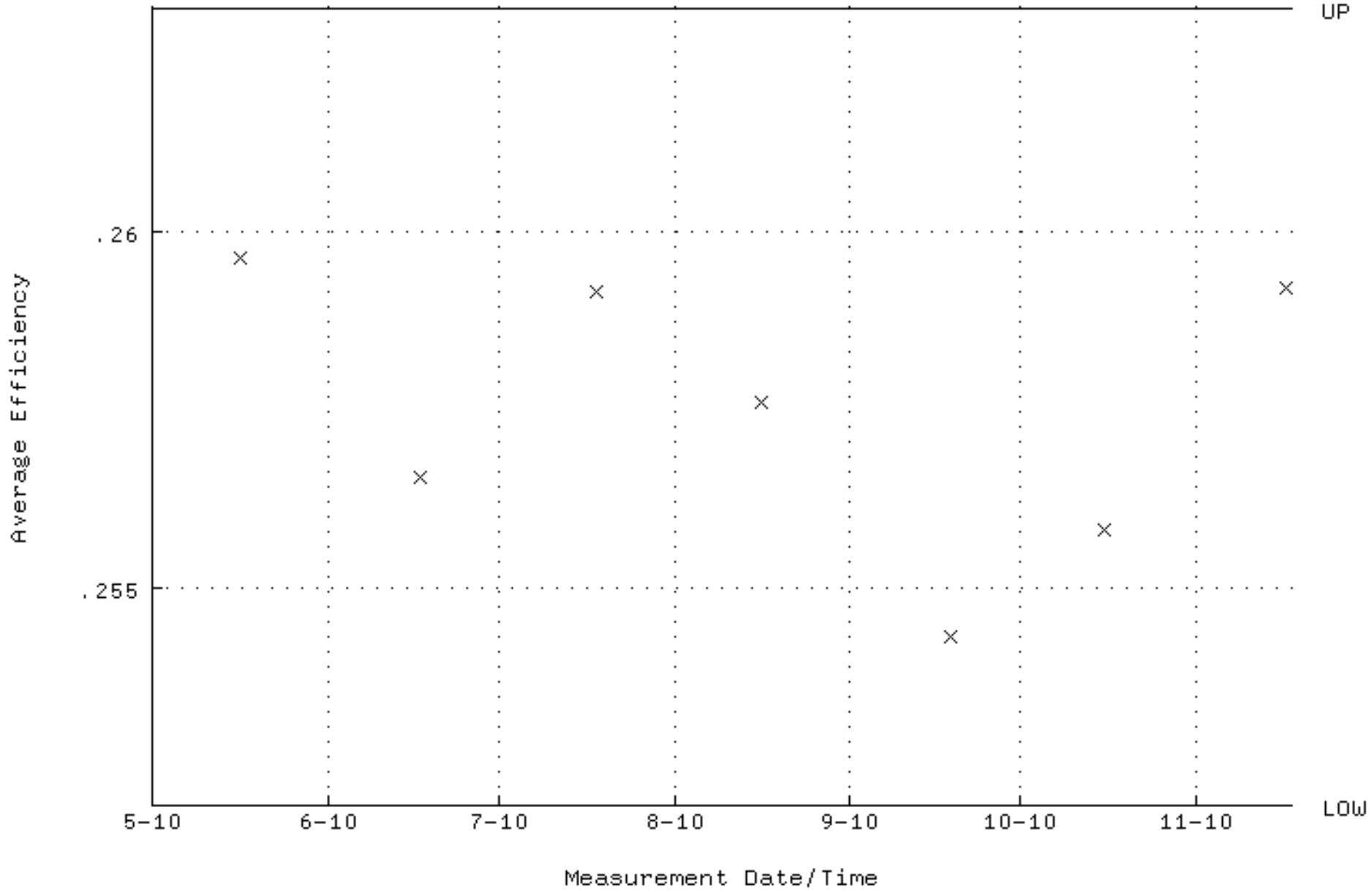
QA filename : DKA100:[ENV_ALPHA.QA.W]W100.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-MAY-2010 07:54:08 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 64.5993 through 72.3649



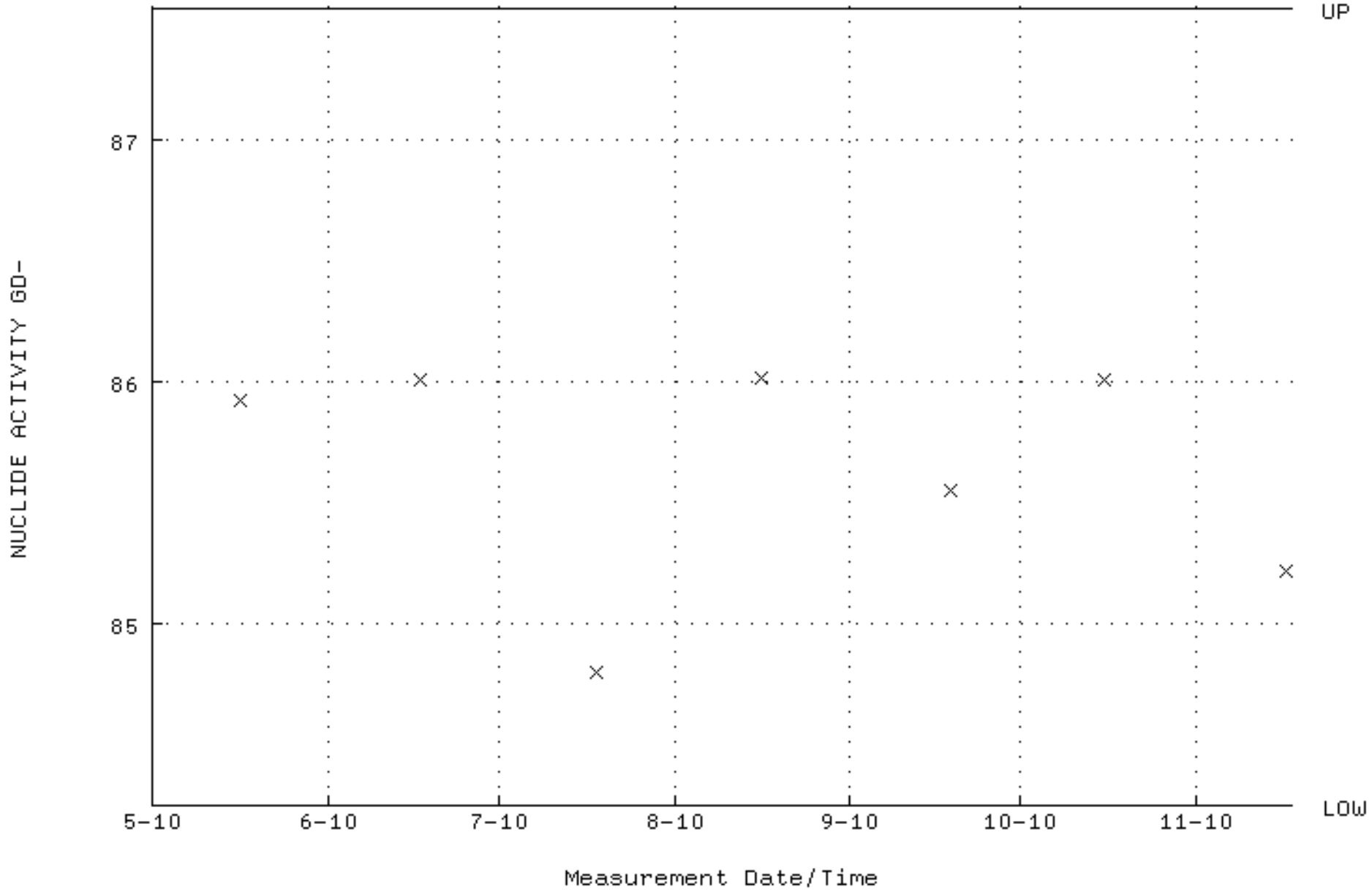
QA filename : DKA100:[ENV_ALPHA.QA.B]B100.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:13:07 through 13-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



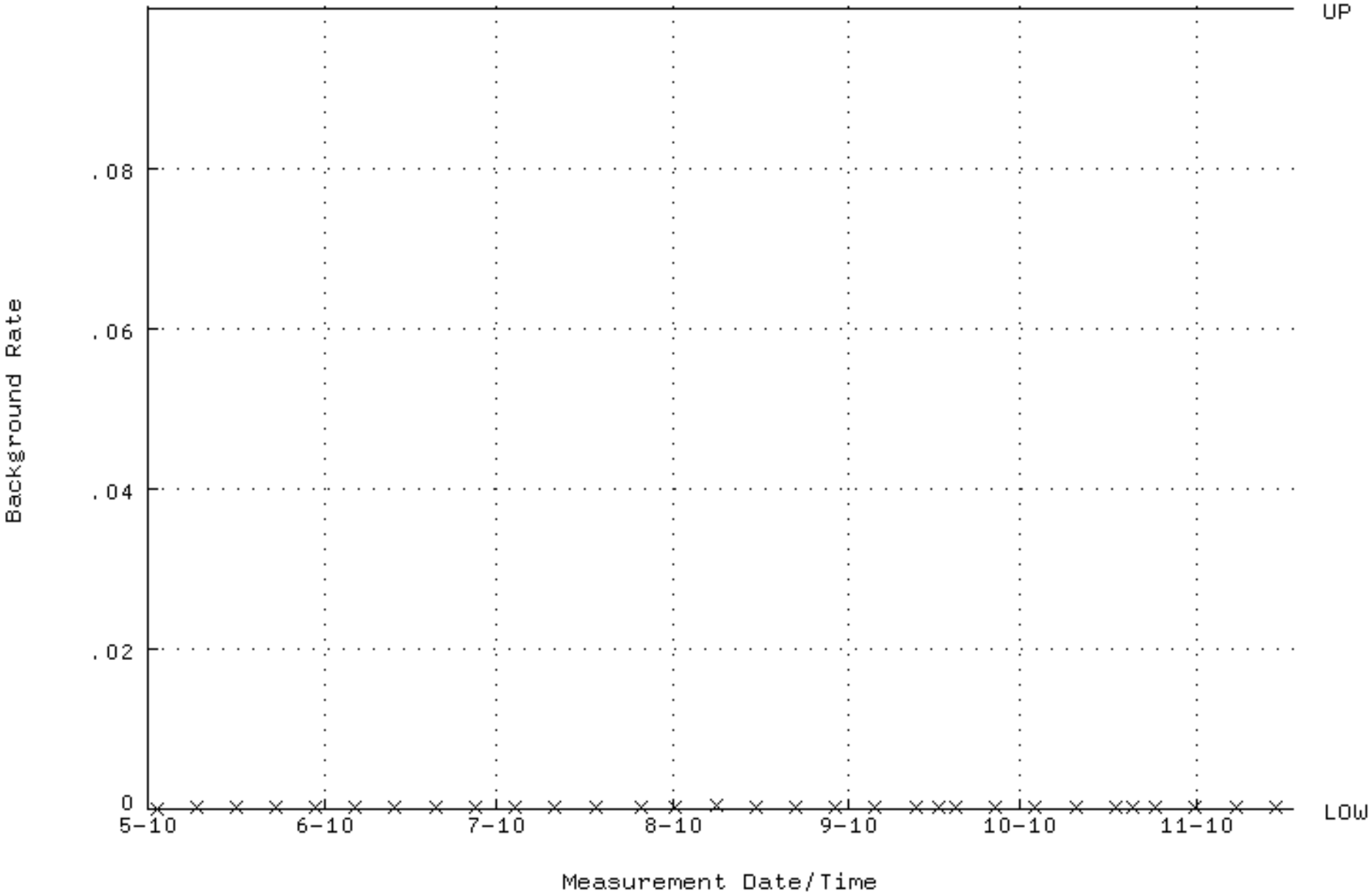
QA filename : DKA100:[ENV_ALPHA.QA.W]W113.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 16-MAY-2010 08:10:32 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 0.251943 through 0.263147



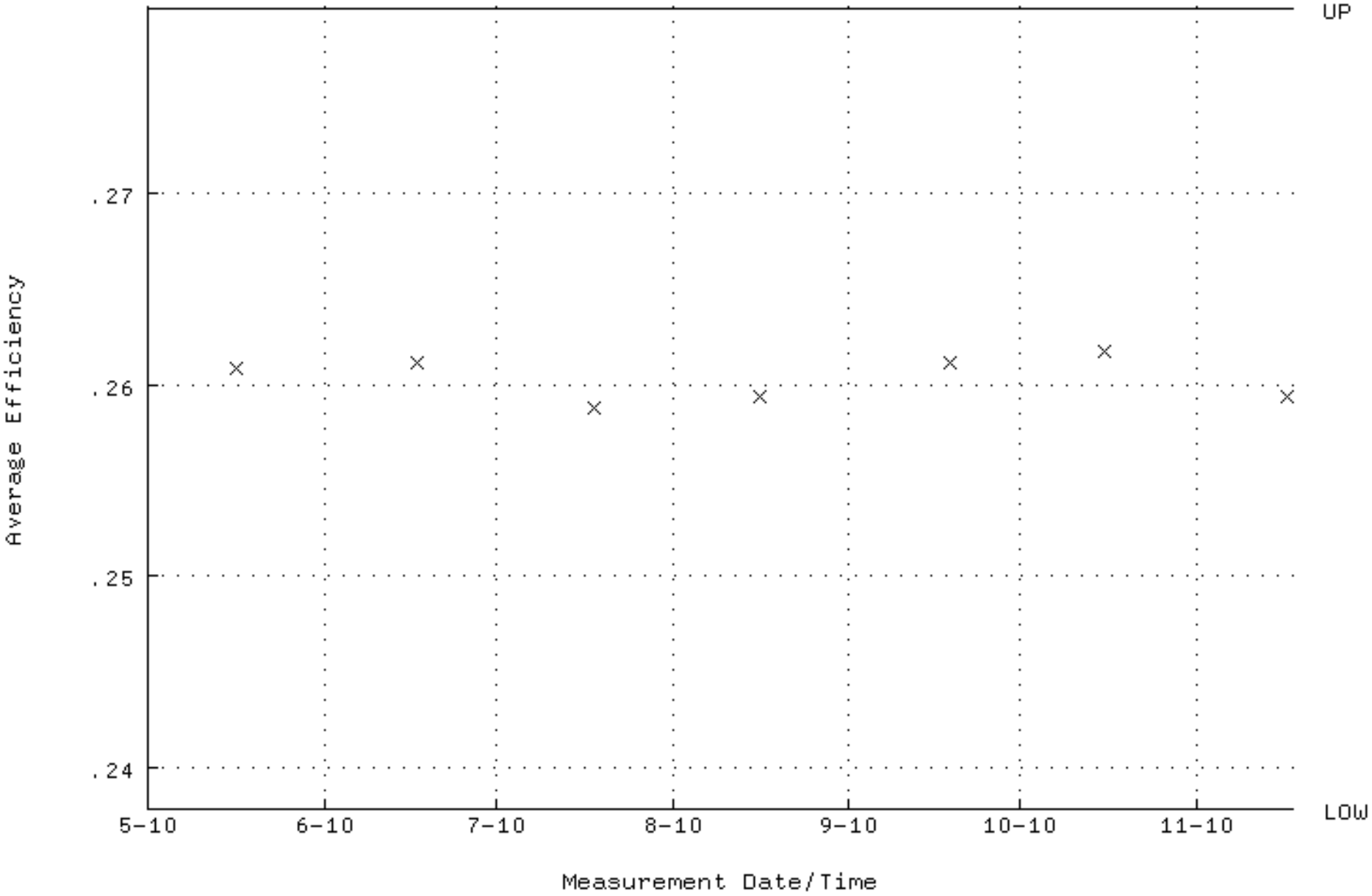
QA filename : DKA100:[ENV_ALPHA.QA.W]W113.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 16-MAY-2010 08:10:32 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 84.2476 through 87.5388



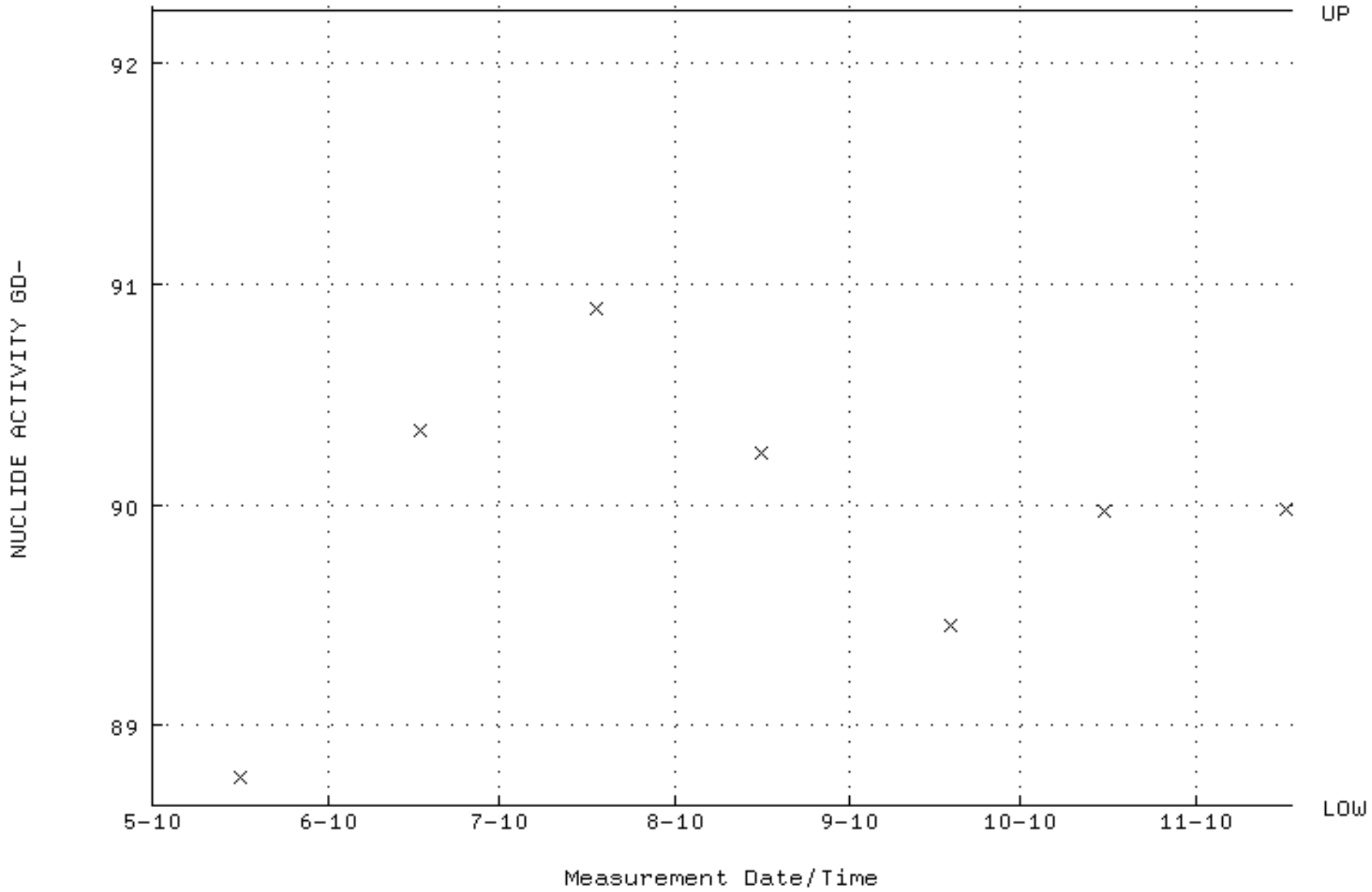
QA filename : DKA100:[ENV_ALPHA.QA.B]B113.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:22:59 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



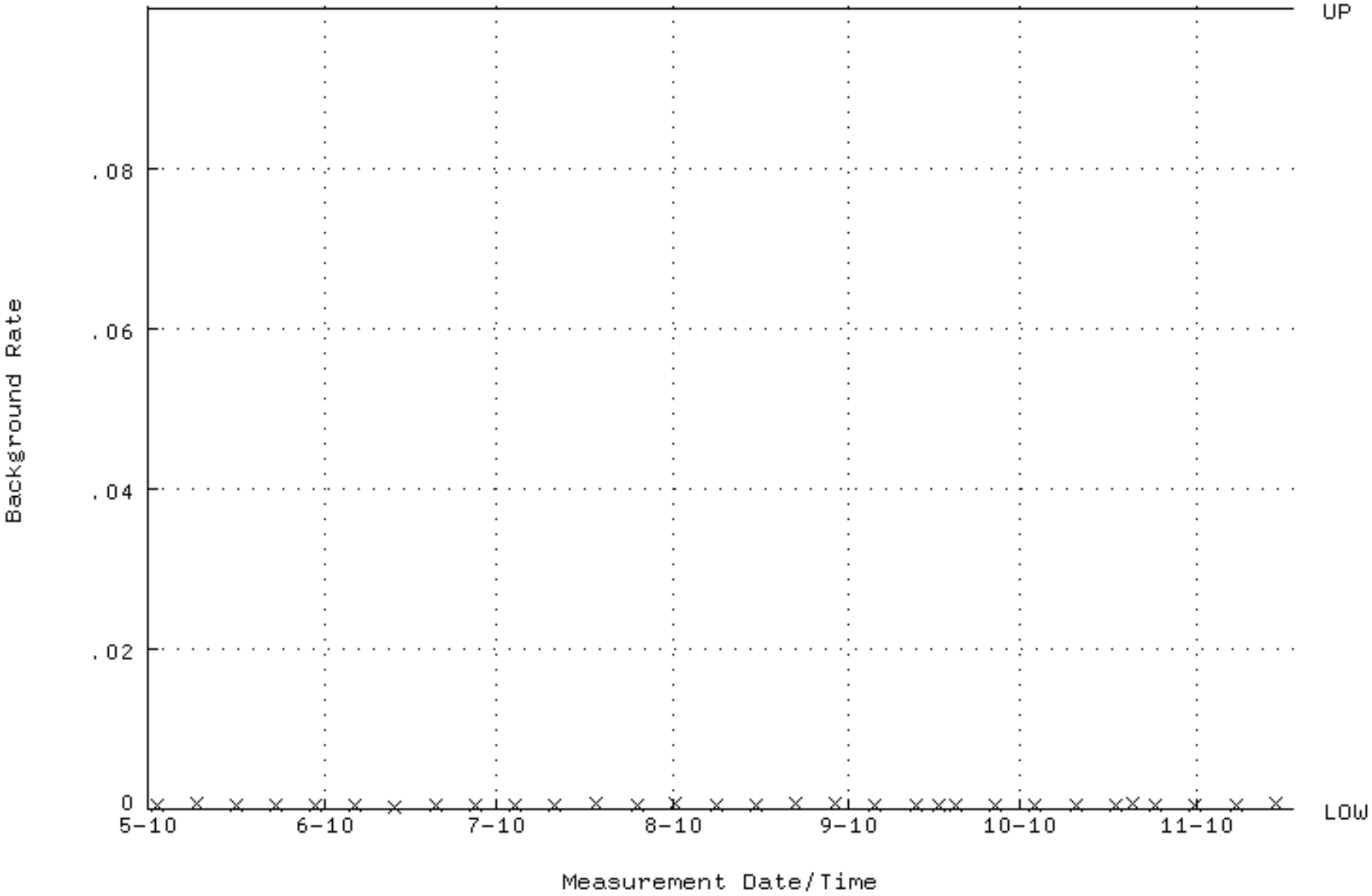
QA filename : DKA100:[ENV_ALPHA.QA.W]W120.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 16-MAY-2010 08:13:20 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 0.237809 through 0.279685



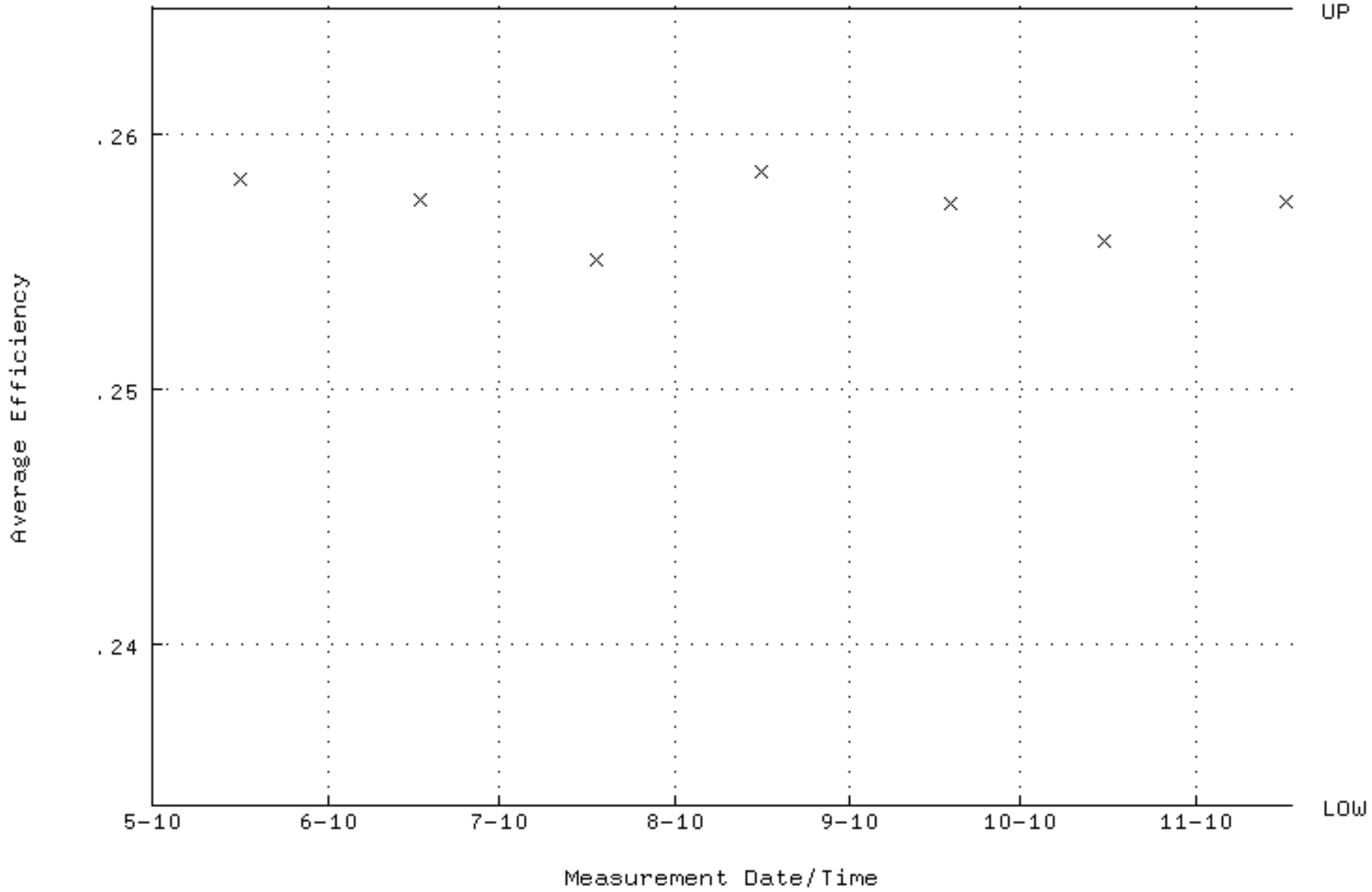
QA filename : DKA100:[ENV_ALPHA.QA.W]W120.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 16-MAY-2010 08:13:20 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 88.6380 through 92.2456



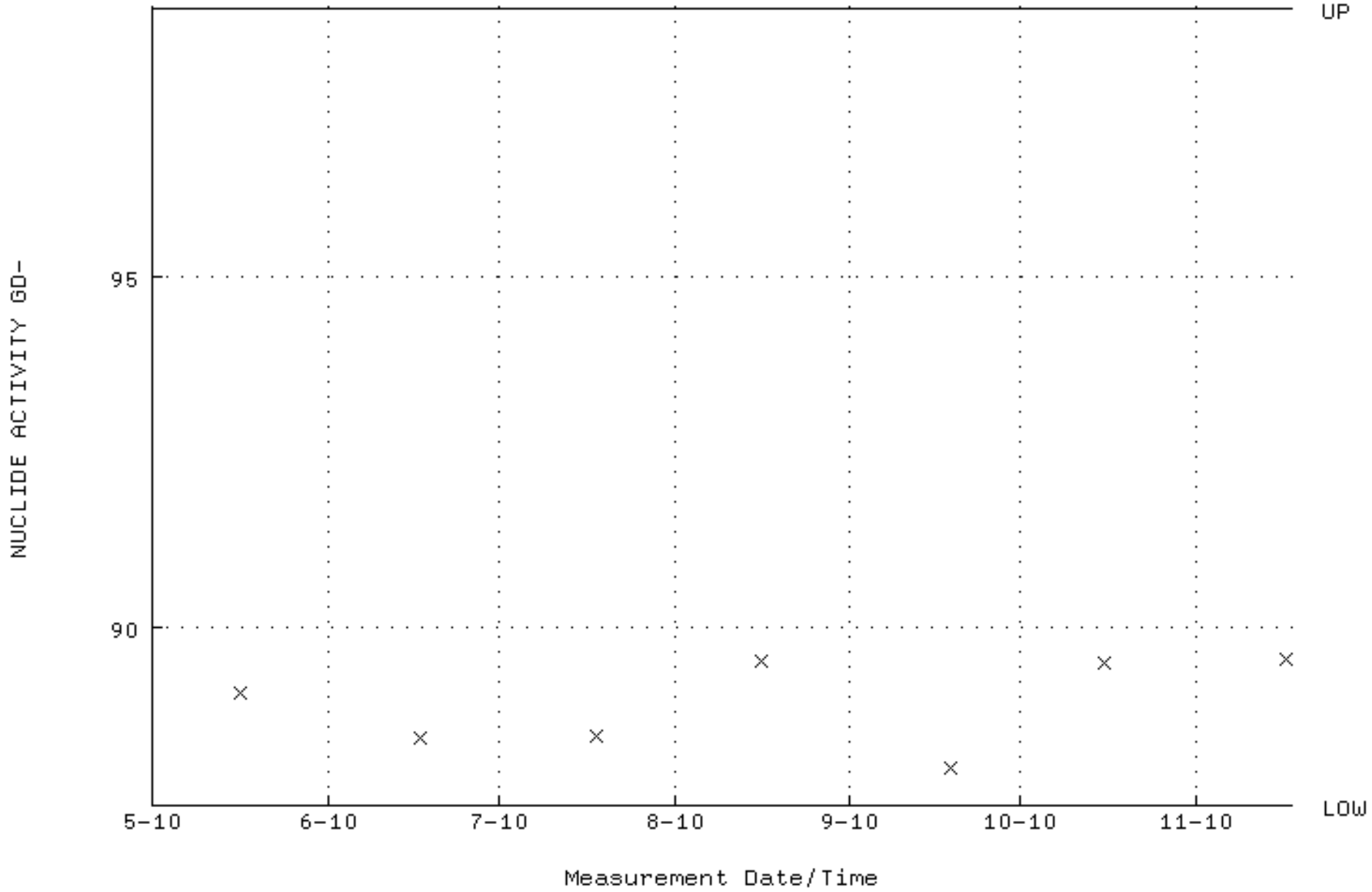
QA filename : DKA100:[ENV_ALPHA.QA.B]B120.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:23:35 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



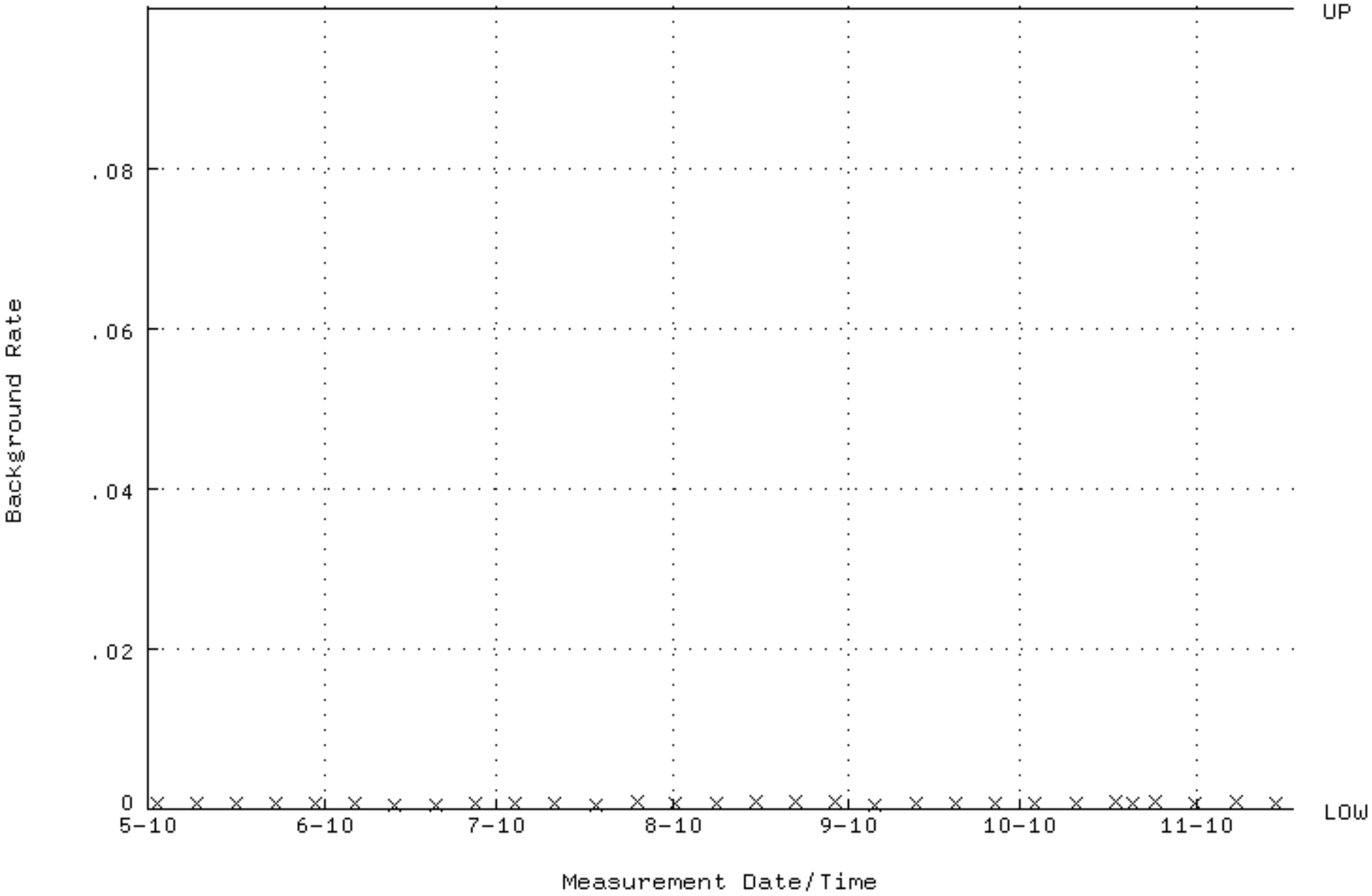
QA filename : DKA100:[ENV_ALPHA.QA.W]W121.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 16-MAY-2010 08:13:45 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 0.233688 through 0.264938



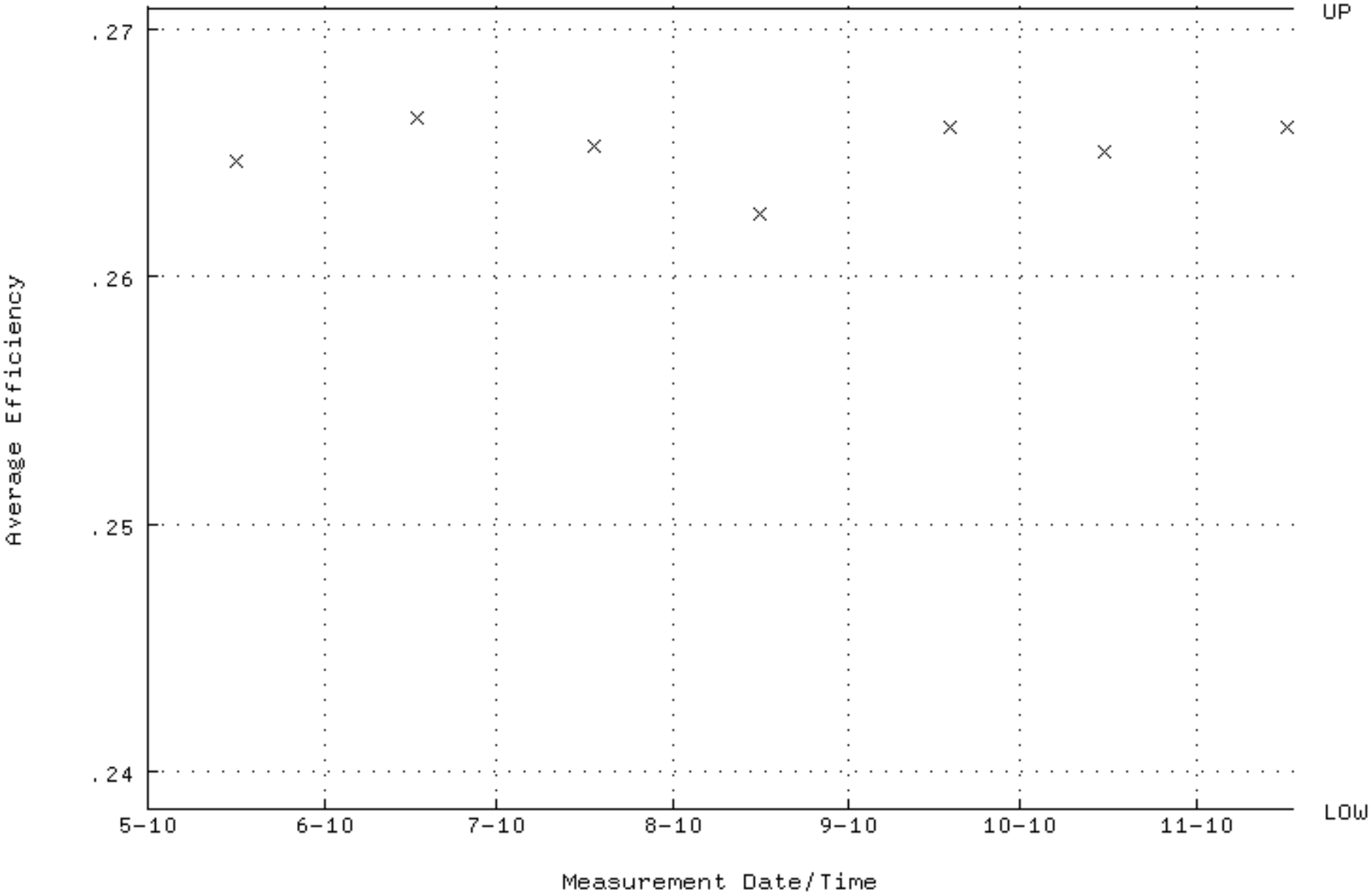
QA filename : DKA100:[ENV_ALPHA.QA.W]W121.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 16-MAY-2010 08:13:45 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 87.4602 through 98.8046



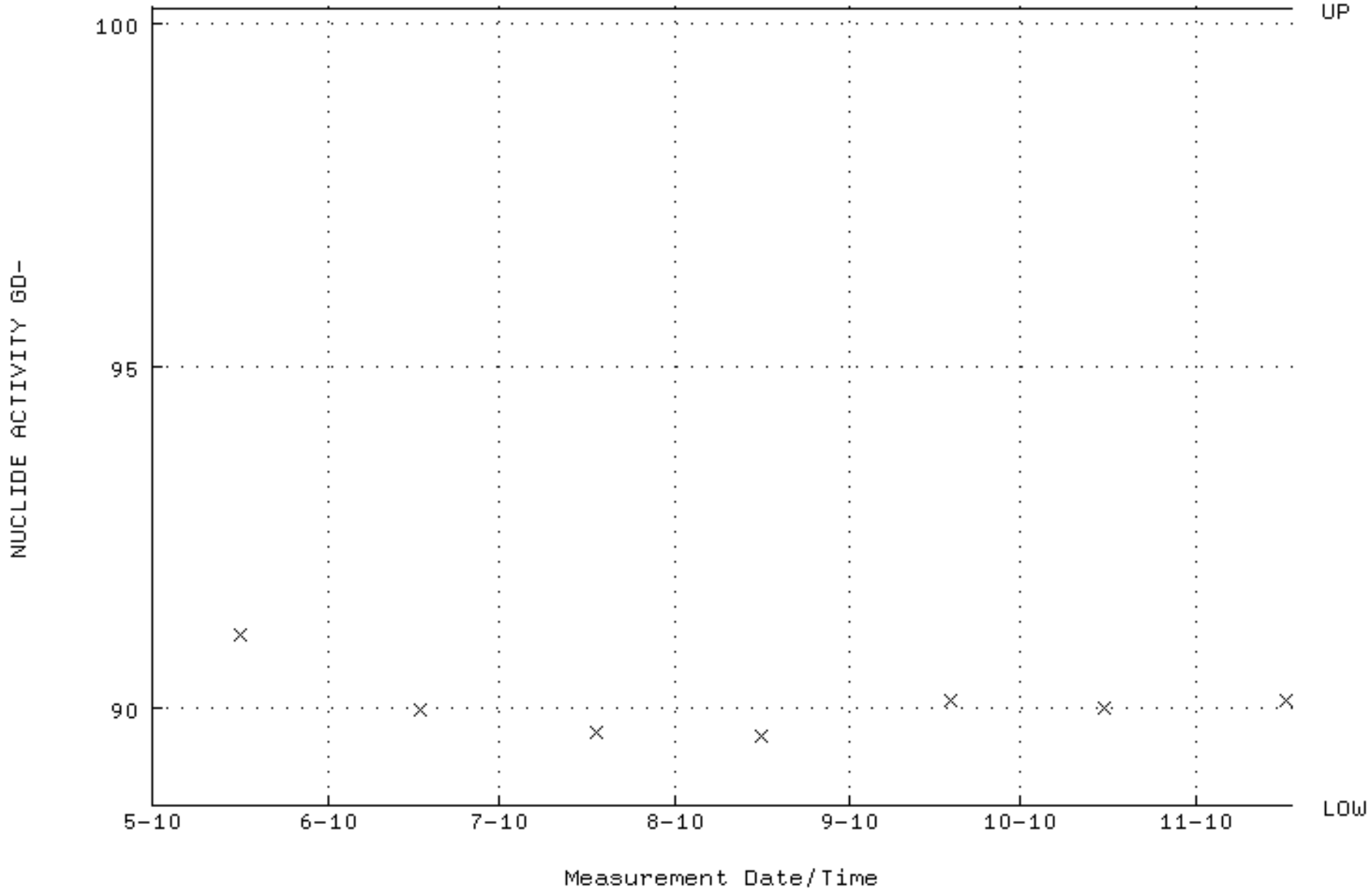
QA filename : DKA100:[ENV_ALPHA.QA.B]B121.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:23:40 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



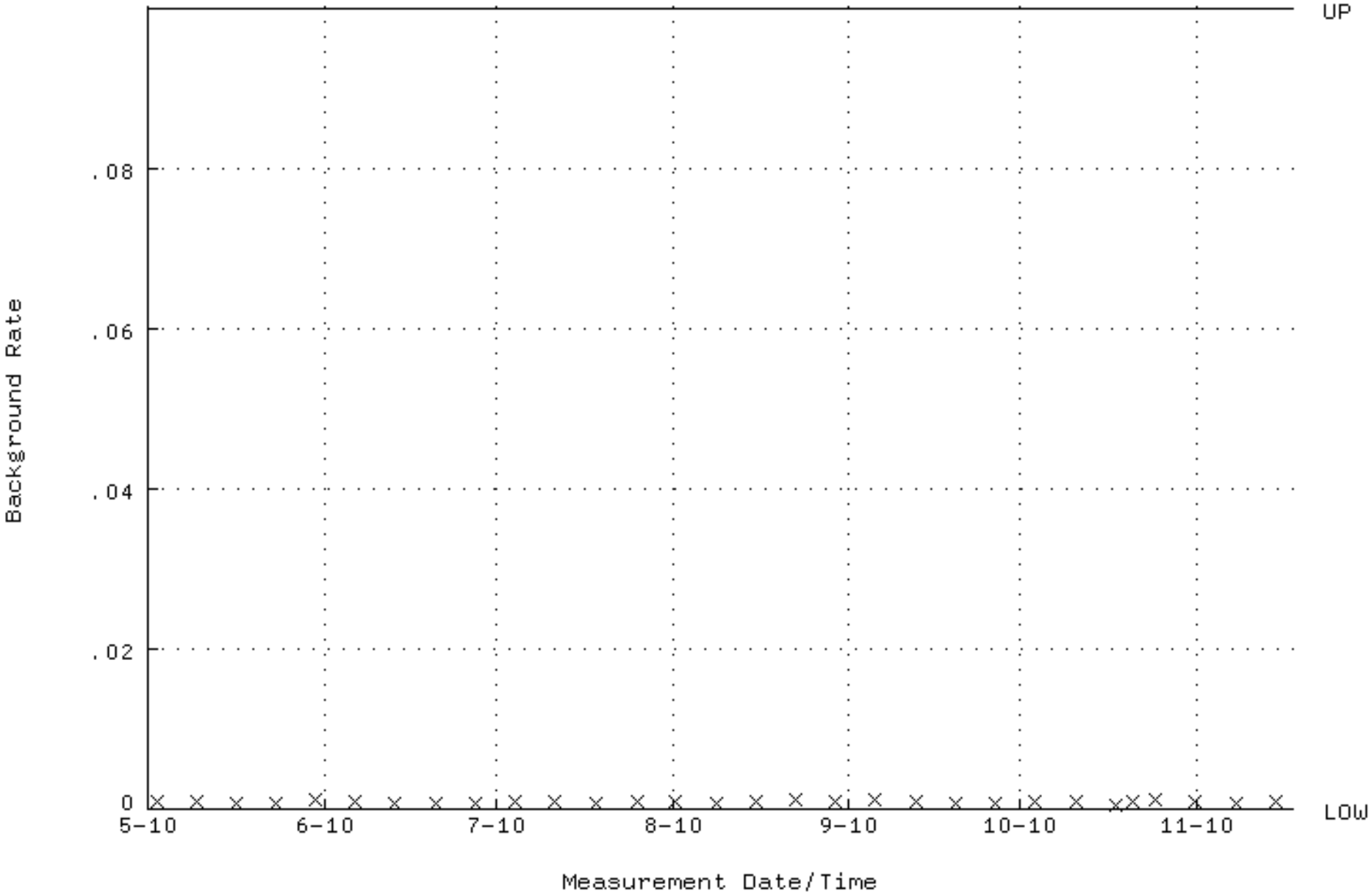
QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 16-MAY-2010 08:14:08 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 0.238472 through 0.270816



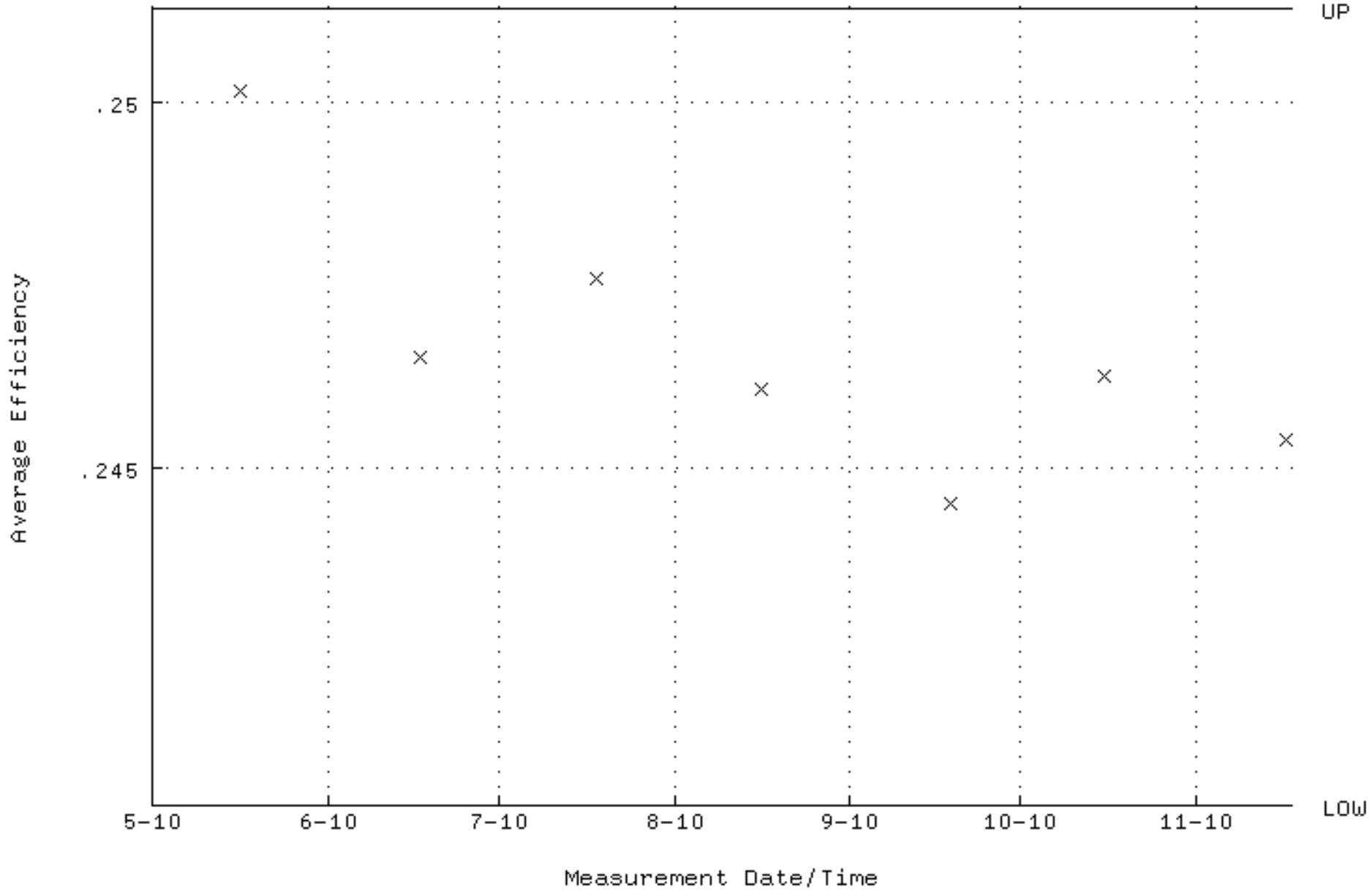
QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 16-MAY-2010 08:14:08 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 88.5873 through 100.224



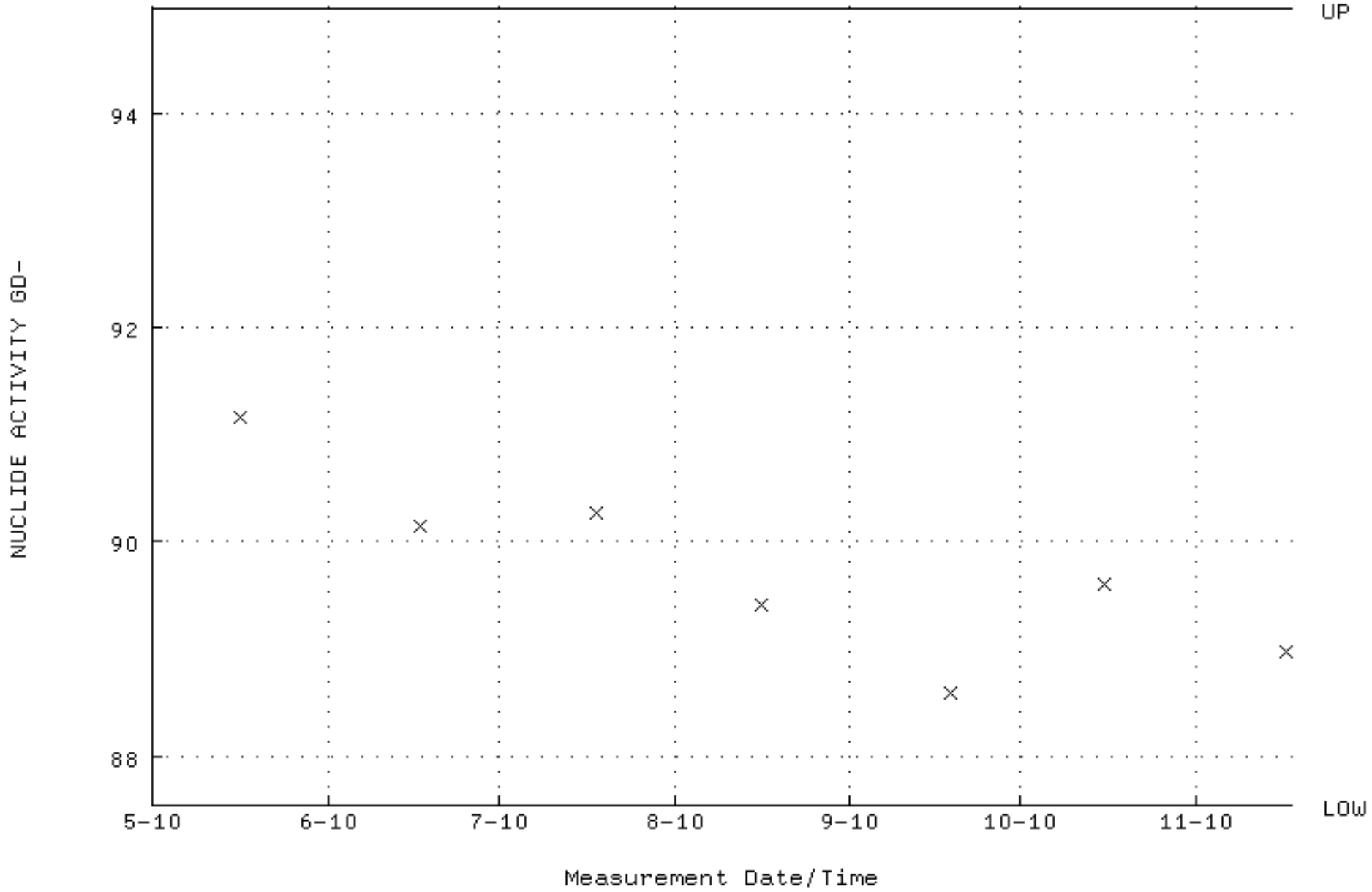
QA filename : DKA100:[ENV_ALPHA.QA.B]B122.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:23:46 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



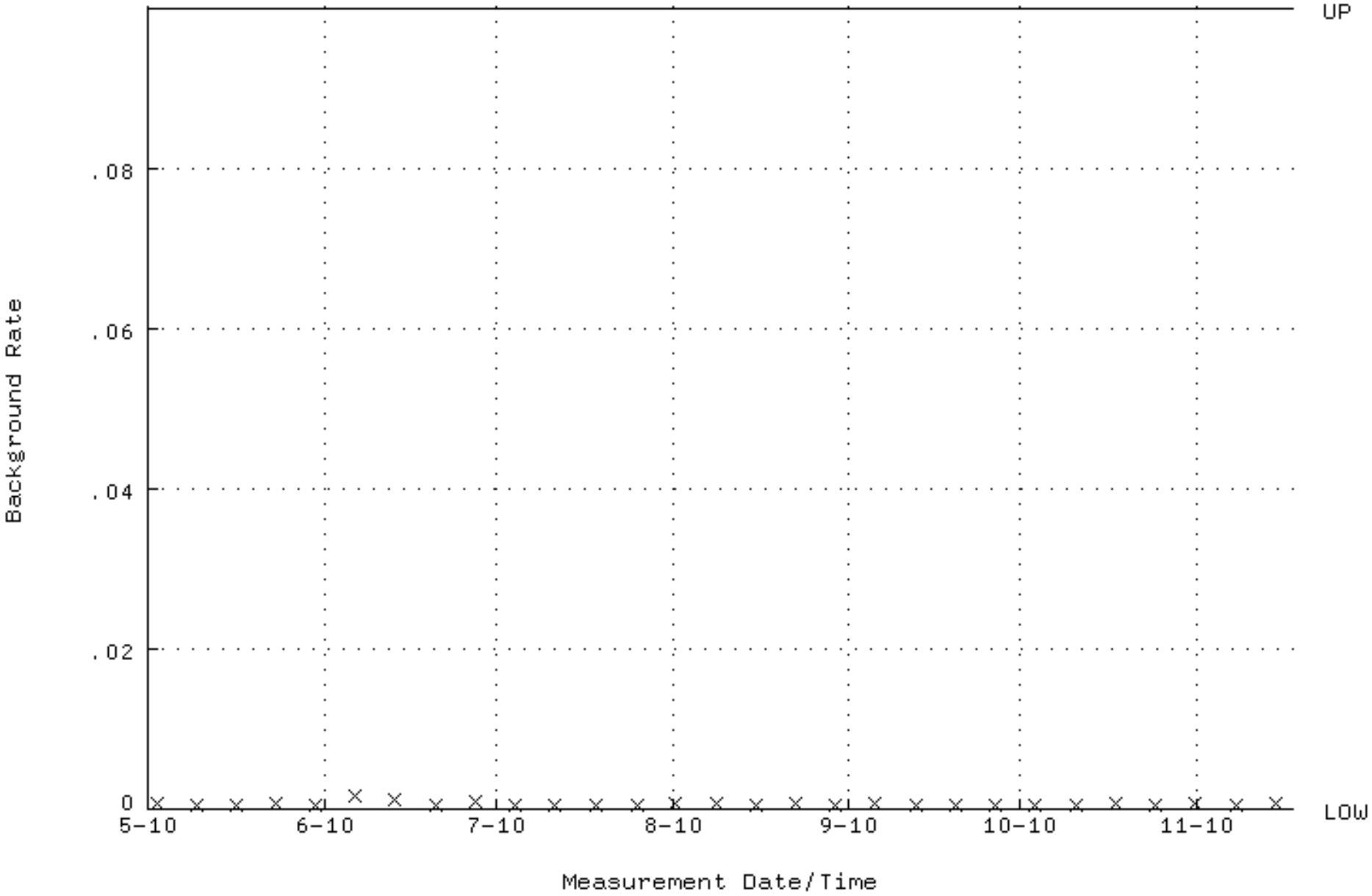
QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 16-MAY-2010 08:21:57 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 0.240364 through 0.251288



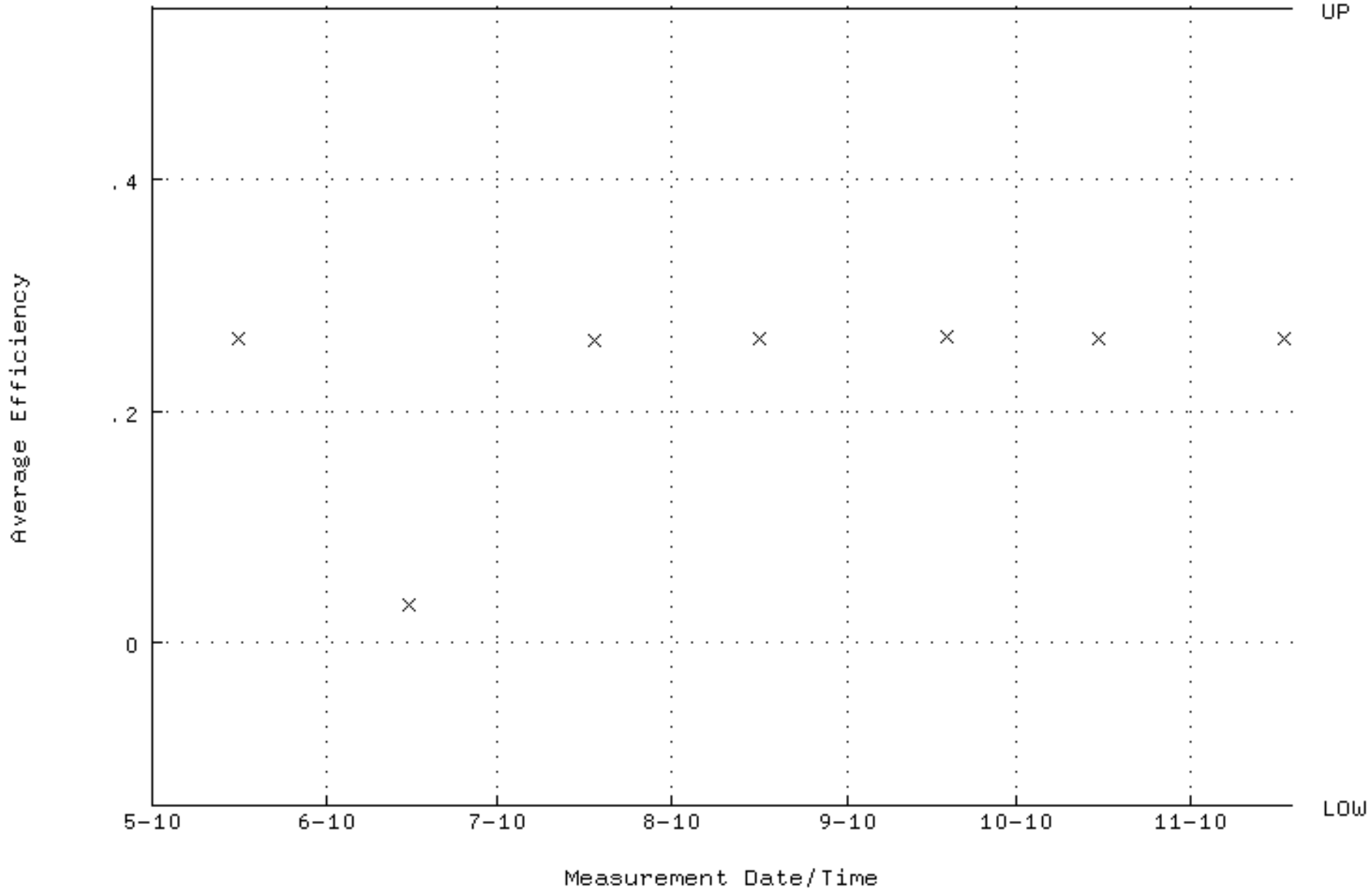
QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 16-MAY-2010 08:21:57 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 87.5413 through 94.9775



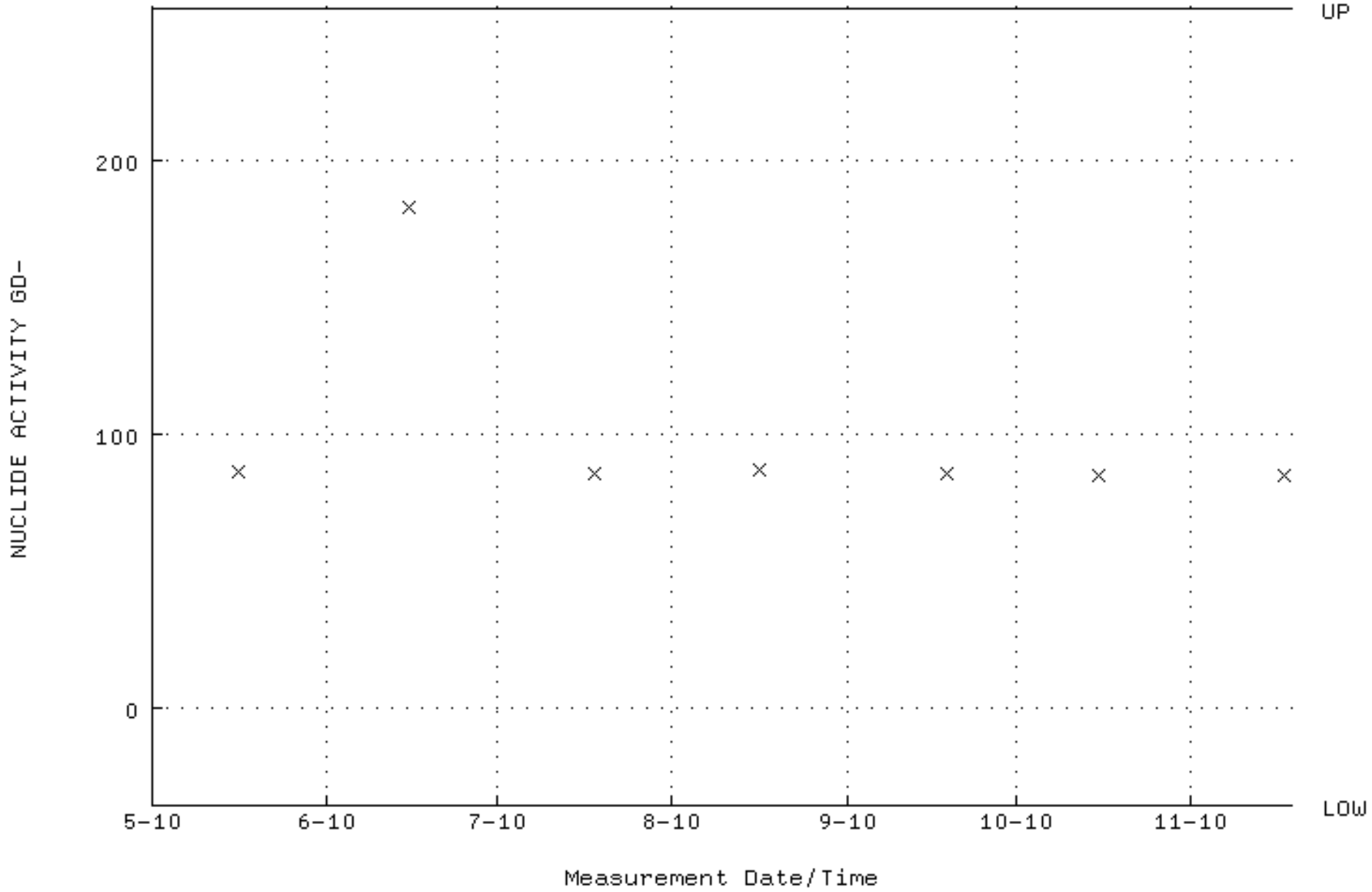
QA filename : DKA100:[ENV_ALPHA.QA.B]B134.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:24:47 through 17-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



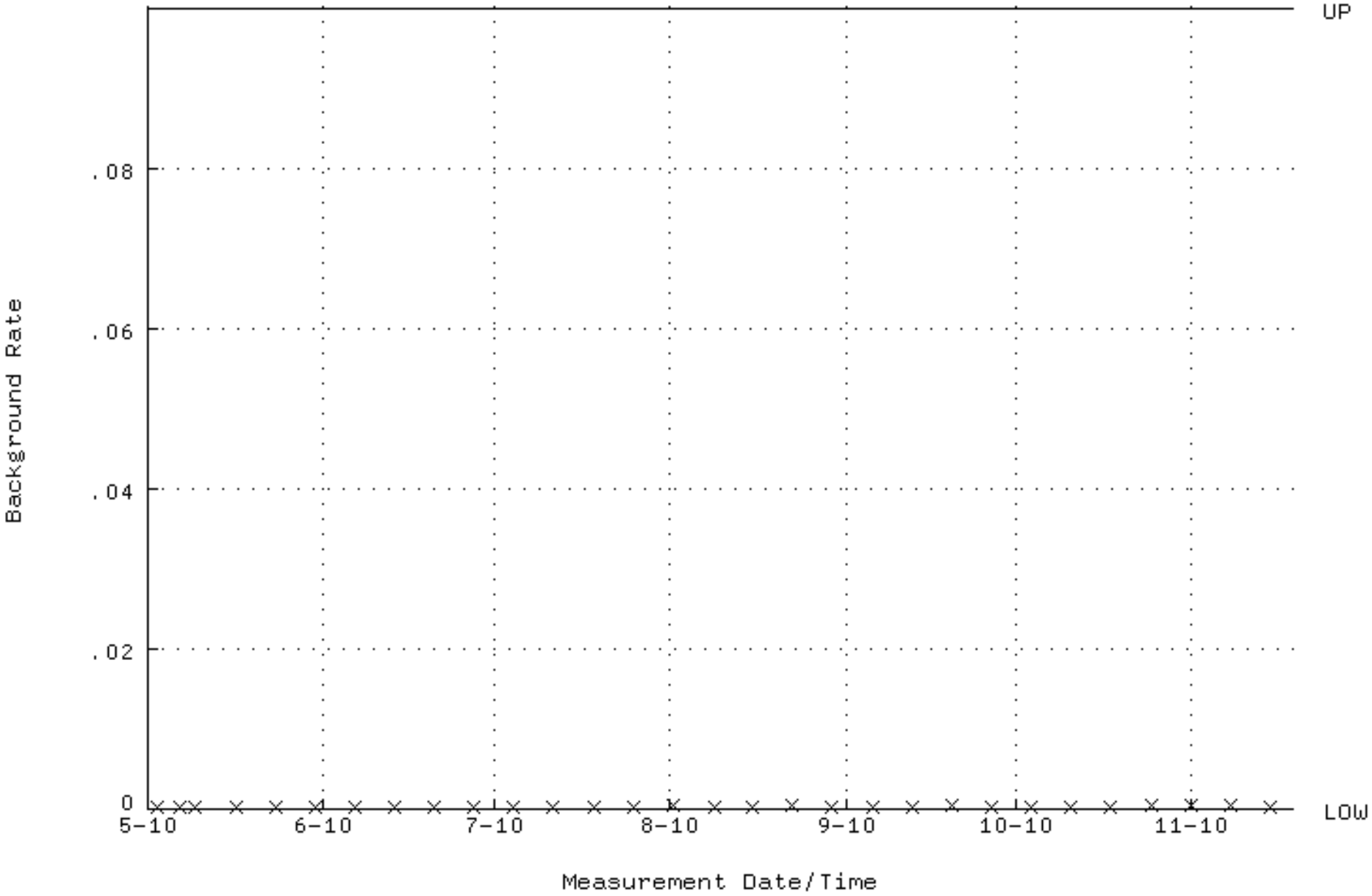
QA filename : DKA100:[ENV_ALPHA.QA.W]W137.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 16-MAY-2010 08:22:16 through 18-NOV-2010 12:00:00
Lower/Upper Lmts: -0.141591 through 0.548427



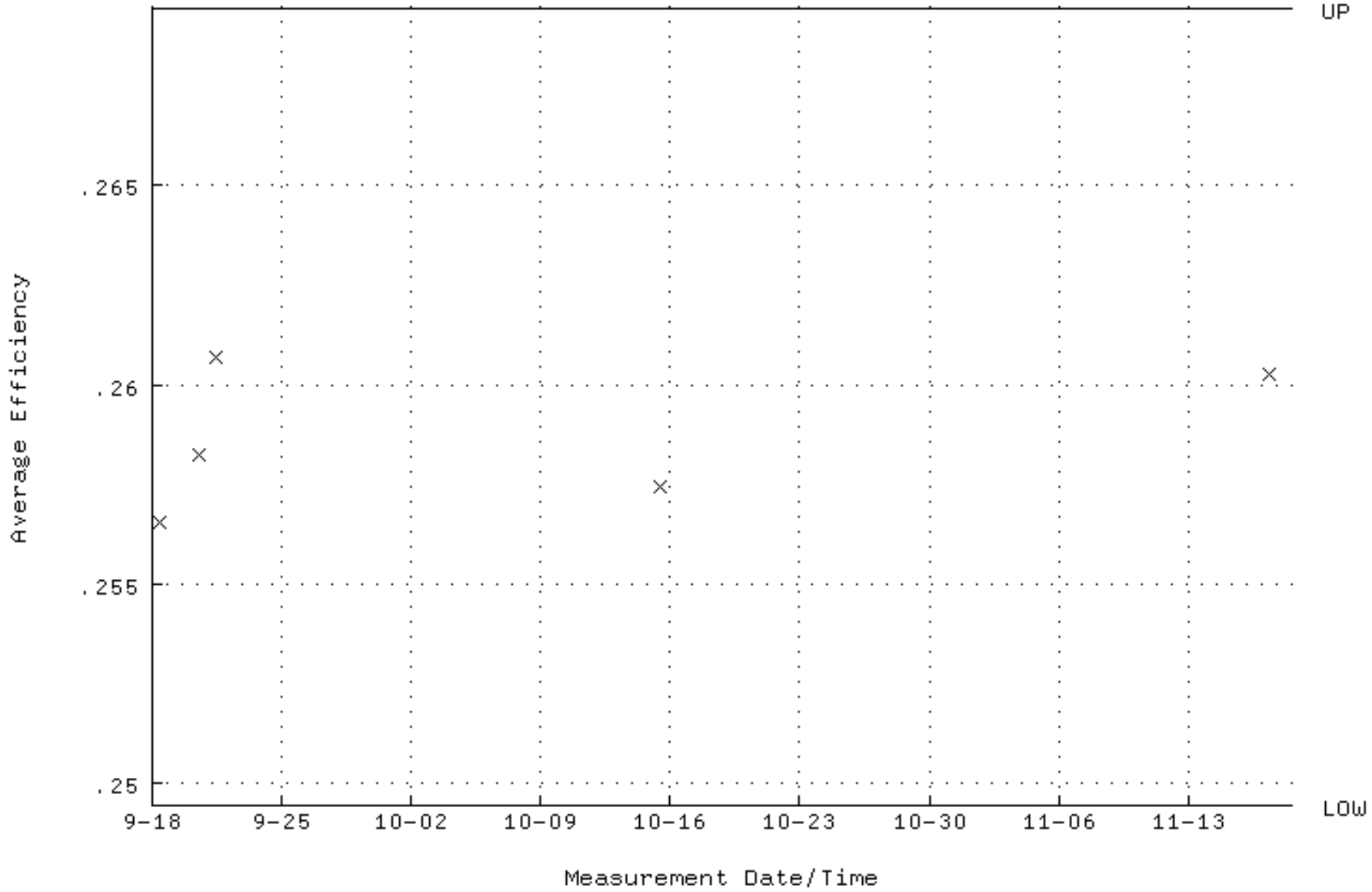
QA filename : DKA100:[ENV_ALPHA.QA.W]W137.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 16-MAY-2010 08:22:16 through 18-NOV-2010 12:00:00
Lower/Upper Lmts: -35.7367 through 255.581



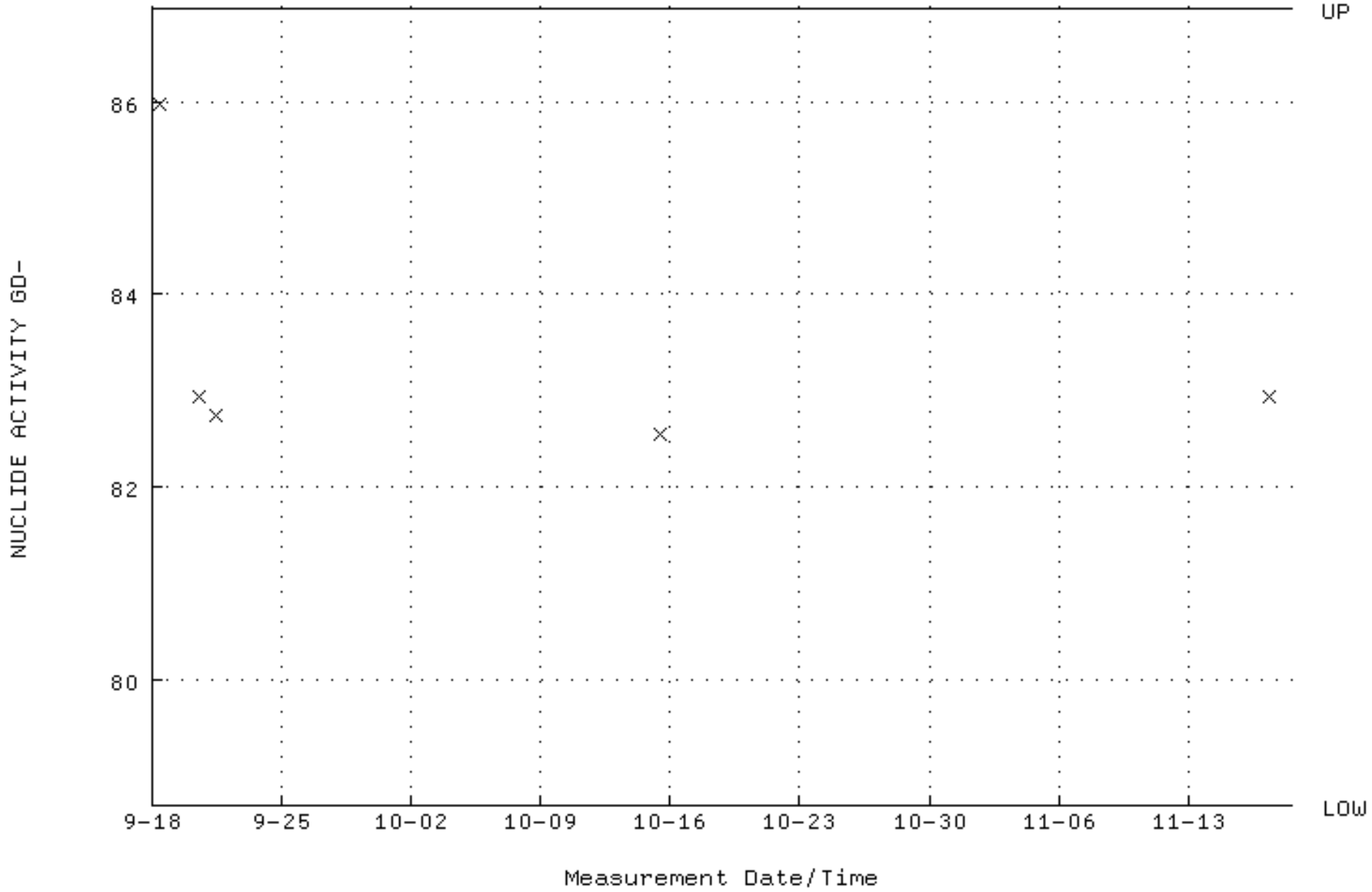
QA filename : DKA100:[ENV_ALPHA.QA.B]B137.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:25:01 through 18-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



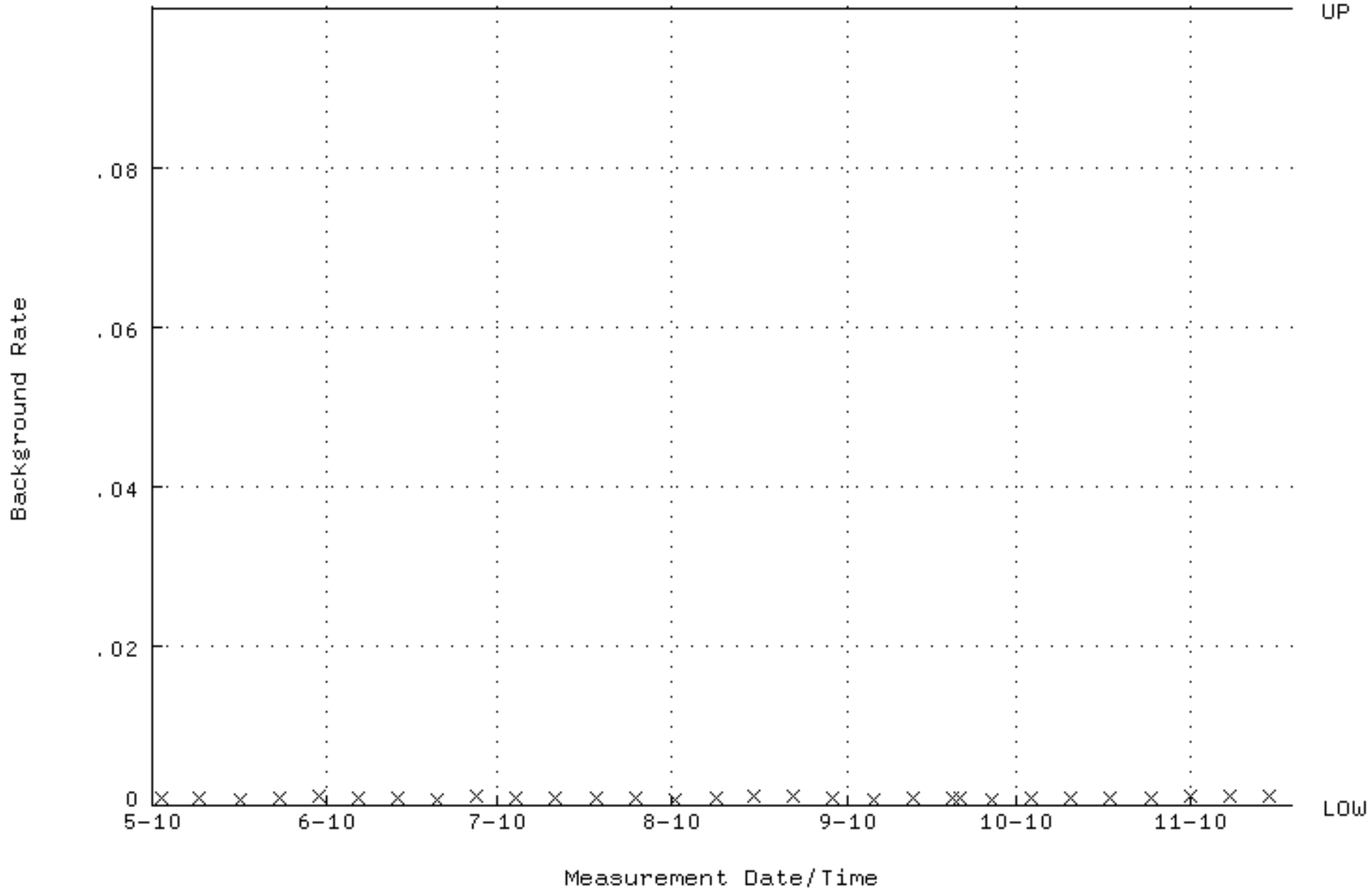
QA filename : DKA100:[ENV_ALPHA.QA.W]W138.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-SEP-2010 09:04:30 through 18-NOV-2010 12:00:00
Lower/Upper Lmts: 0.249437 through 0.269437



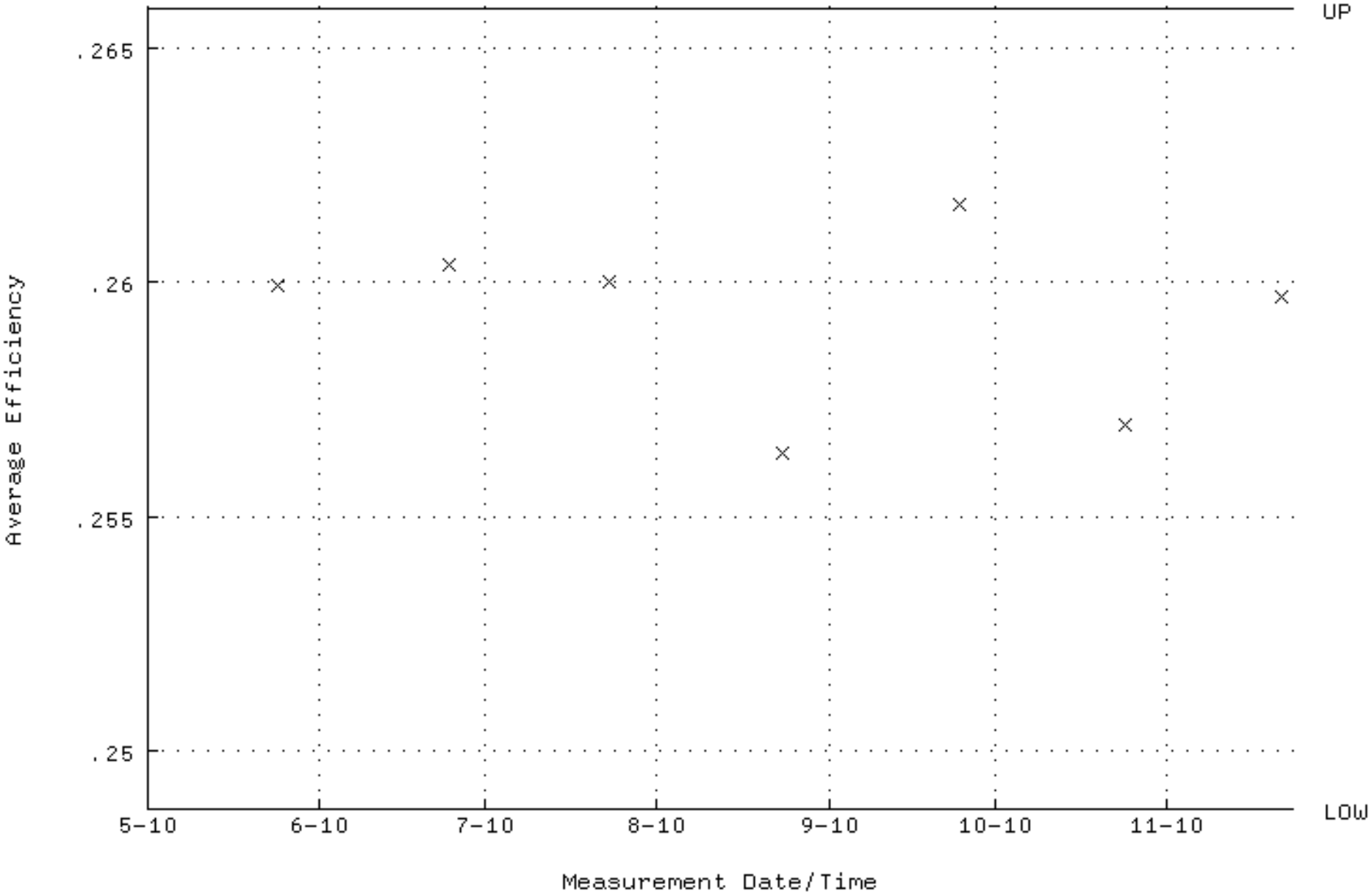
QA filename : DKA100:[ENV_ALPHA.QA.W]W138.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-SEP-2010 09:04:30 through 18-NOV-2010 12:00:00
Lower/Upper Lmts: 78.6855 through 86.9681



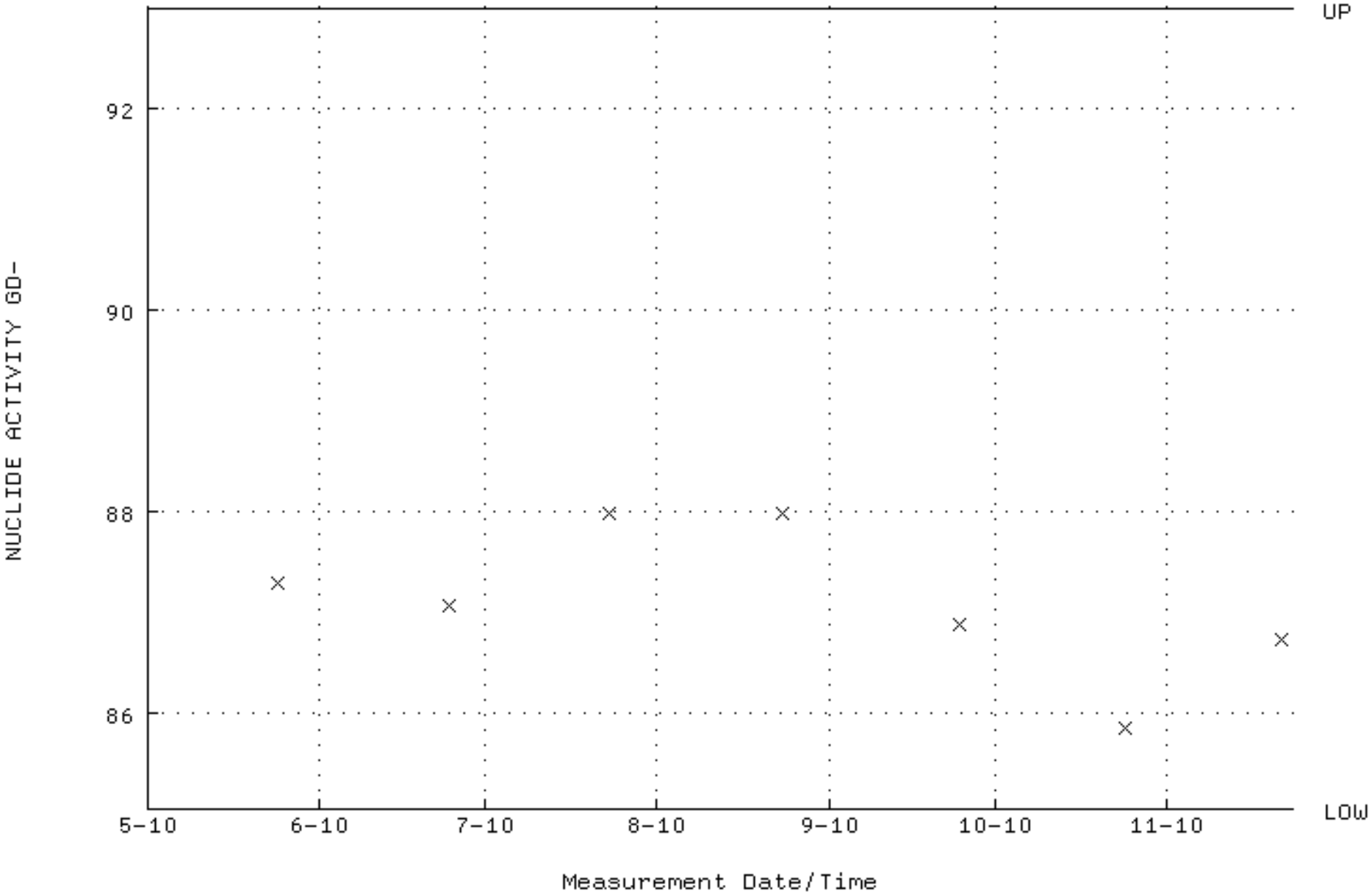
QA filename : DKA100:[ENV_ALPHA.QA.B]B138.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:25:05 through 18-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



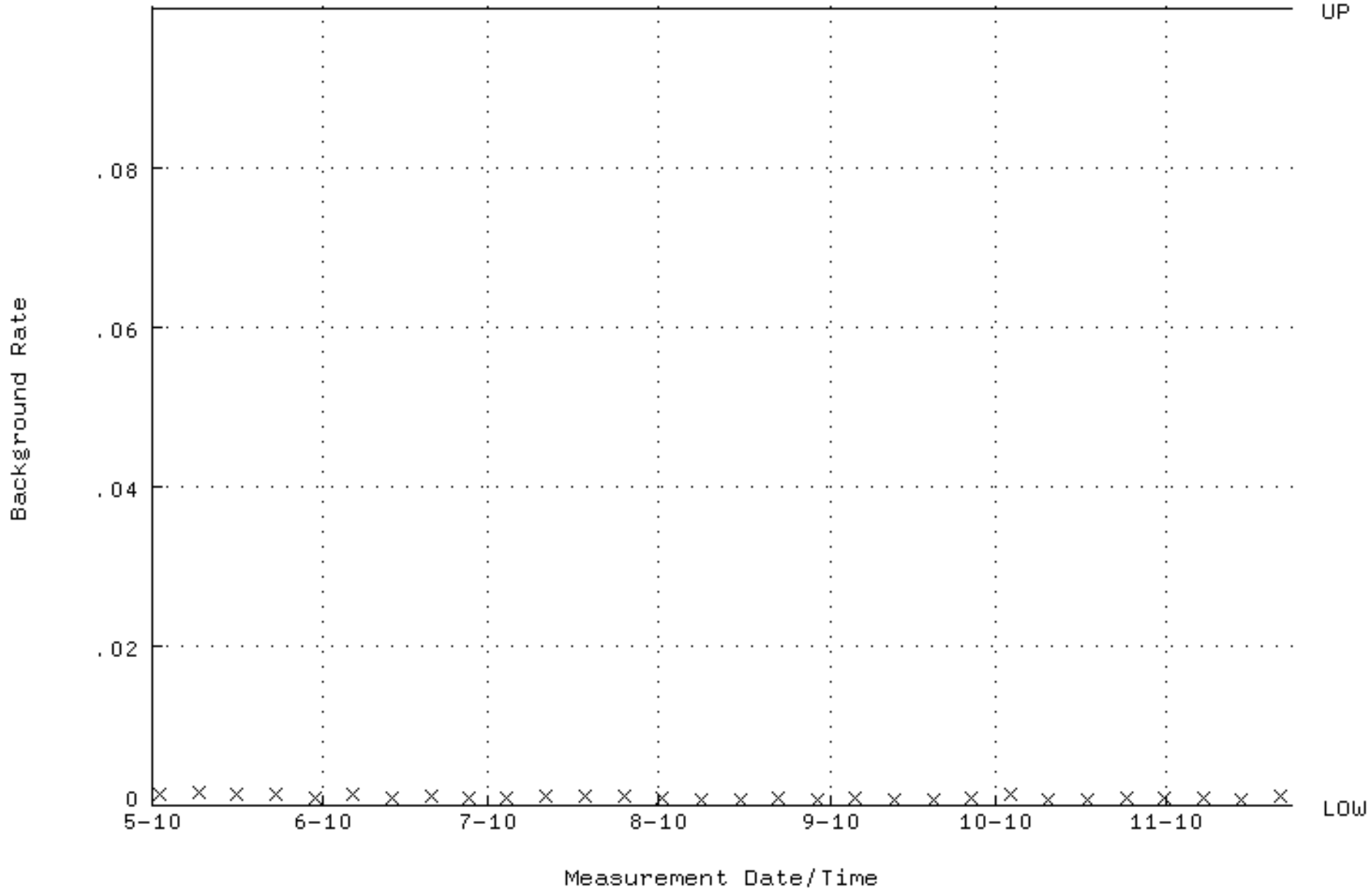
QA filename : DKA100:[ENV_ALPHA.QA.W]W194.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 24-MAY-2010 10:03:10 through 23-NOV-2010 12:00:00
Lower/Upper Lmts: 0.248741 through 0.265853



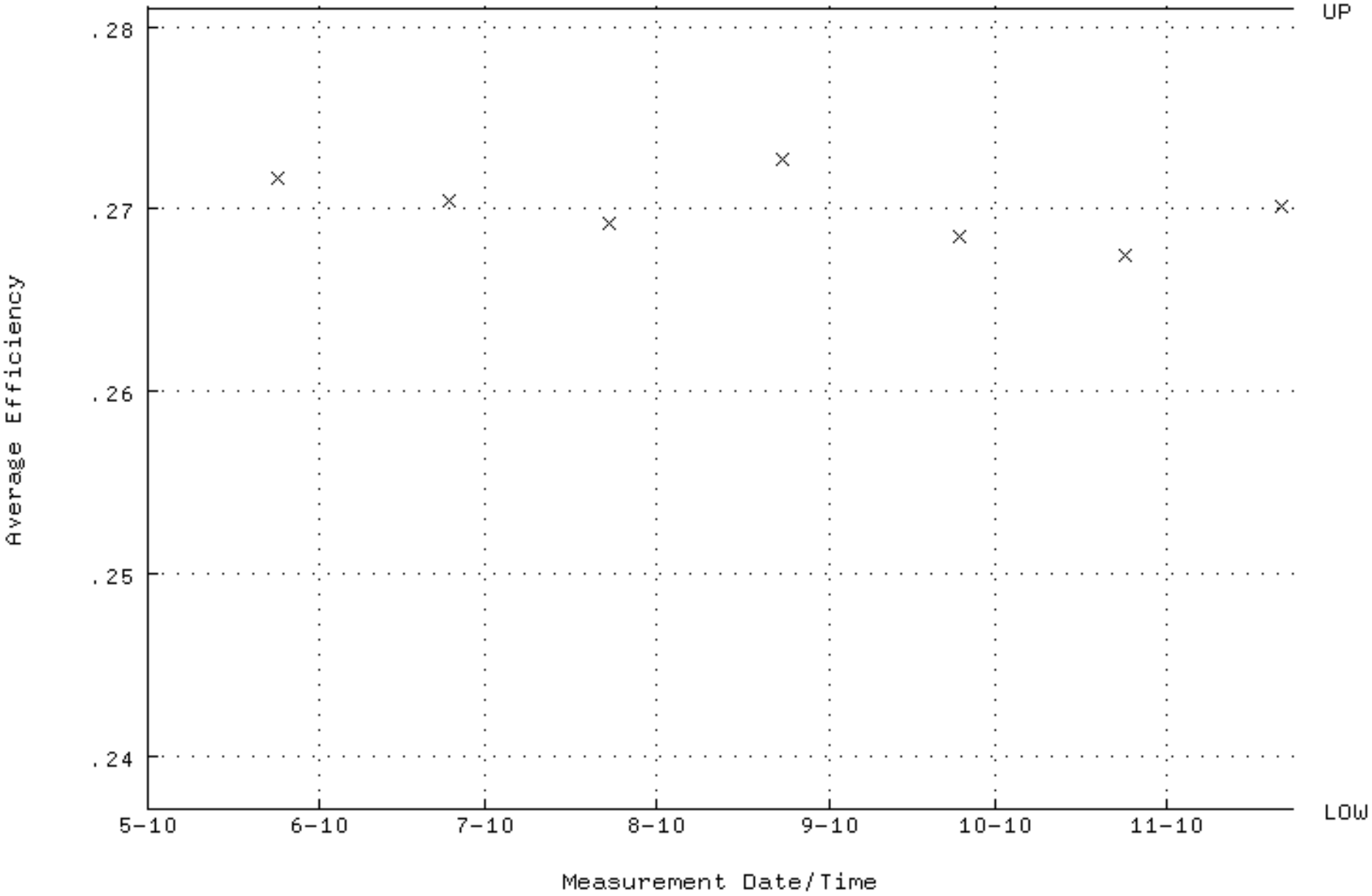
QA filename : DKA100:[ENV_ALPHA.QA.W]W194.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 24-MAY-2010 10:03:10 through 23-NOV-2010 12:00:00
Lower/Upper Lmts: 85.0560 through 92.9988



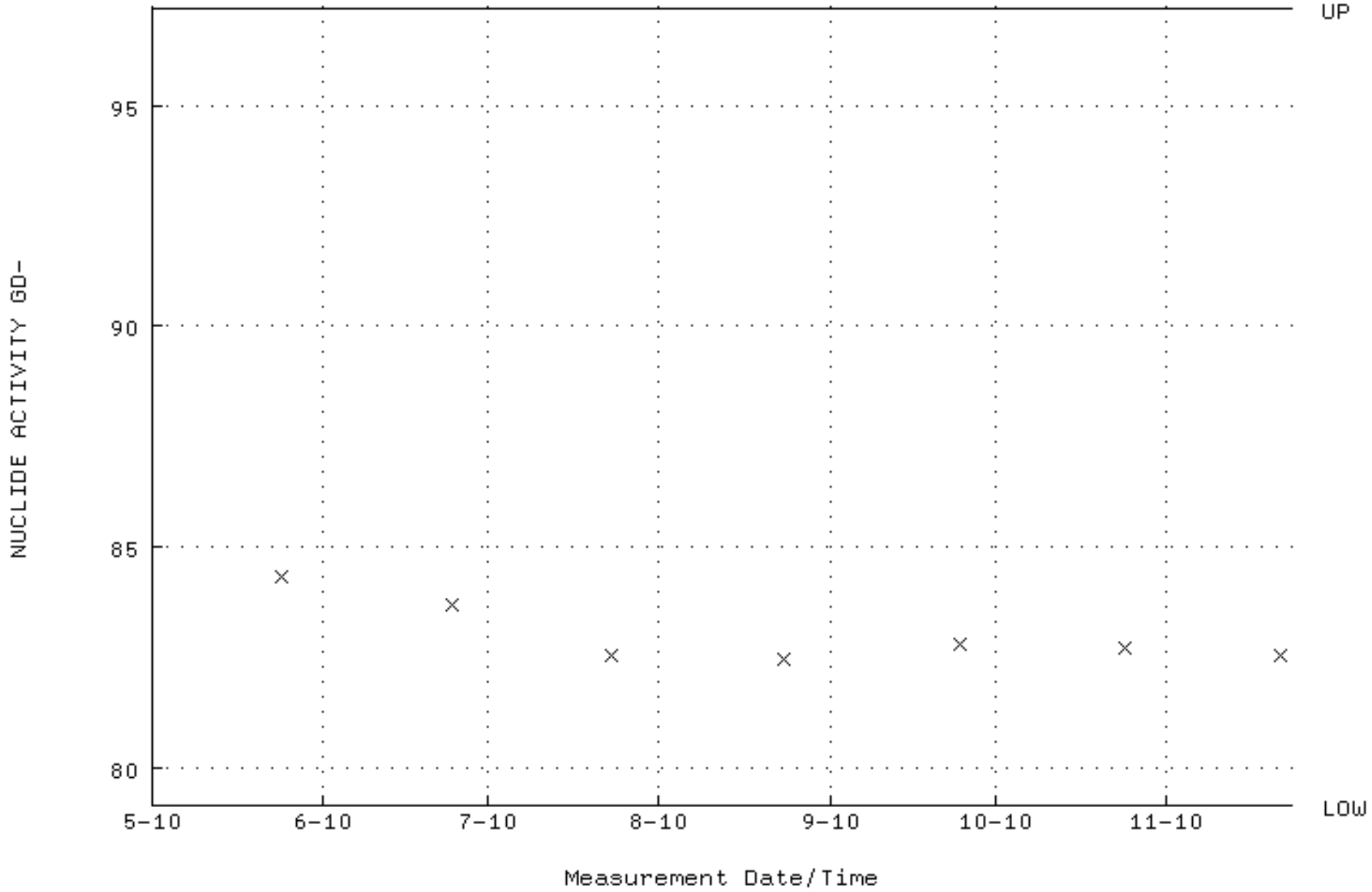
QA filename : DKA100:[ENV_ALPHA.QA.B]B194.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:32:17 through 23-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



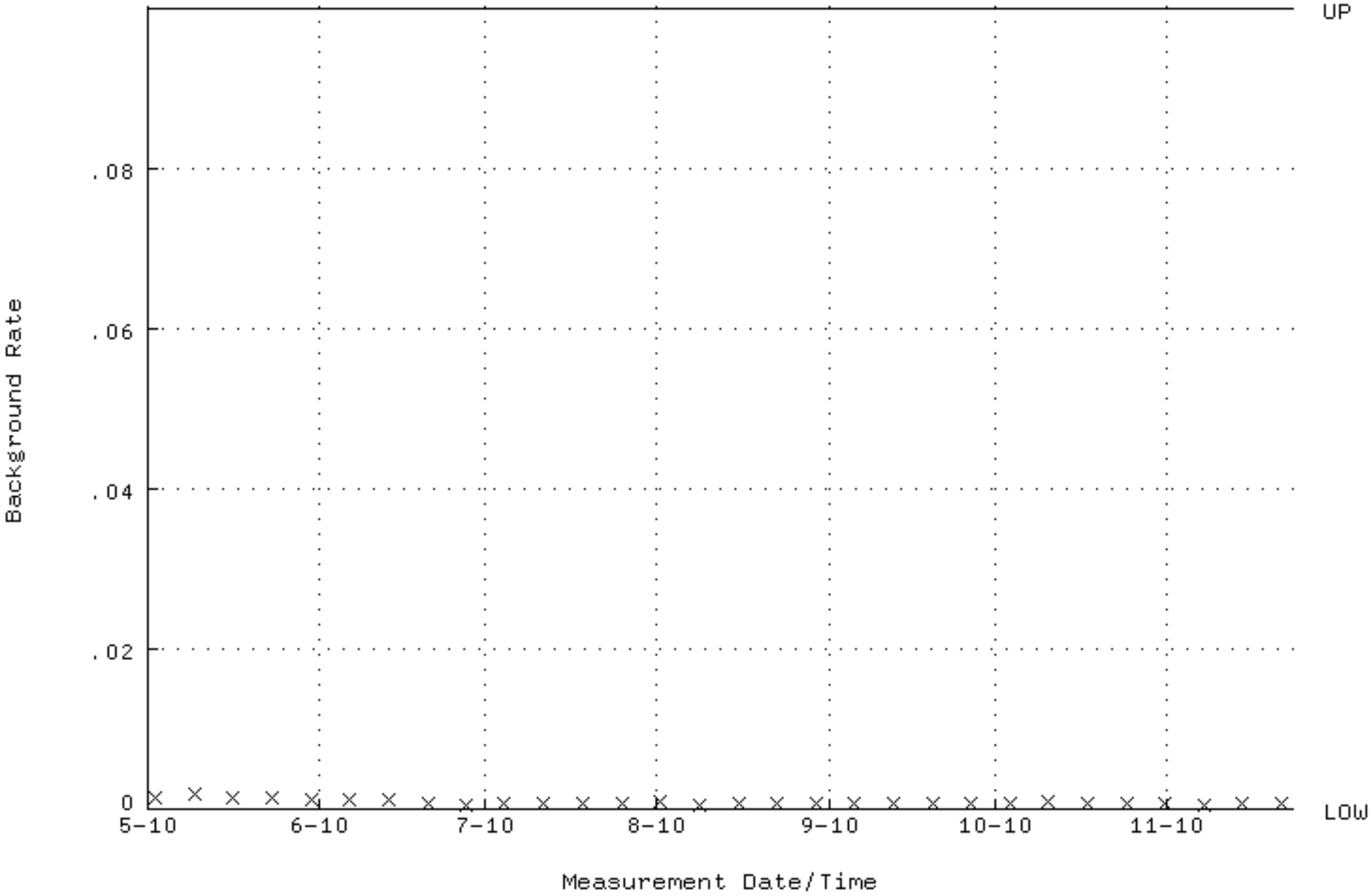
QA filename : DKA100:[ENV_ALPHA.QA.W]W196.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 24-MAY-2010 10:03:20 through 23-NOV-2010 12:00:00
Lower/Upper Lmts: 0.237109 through 0.280989



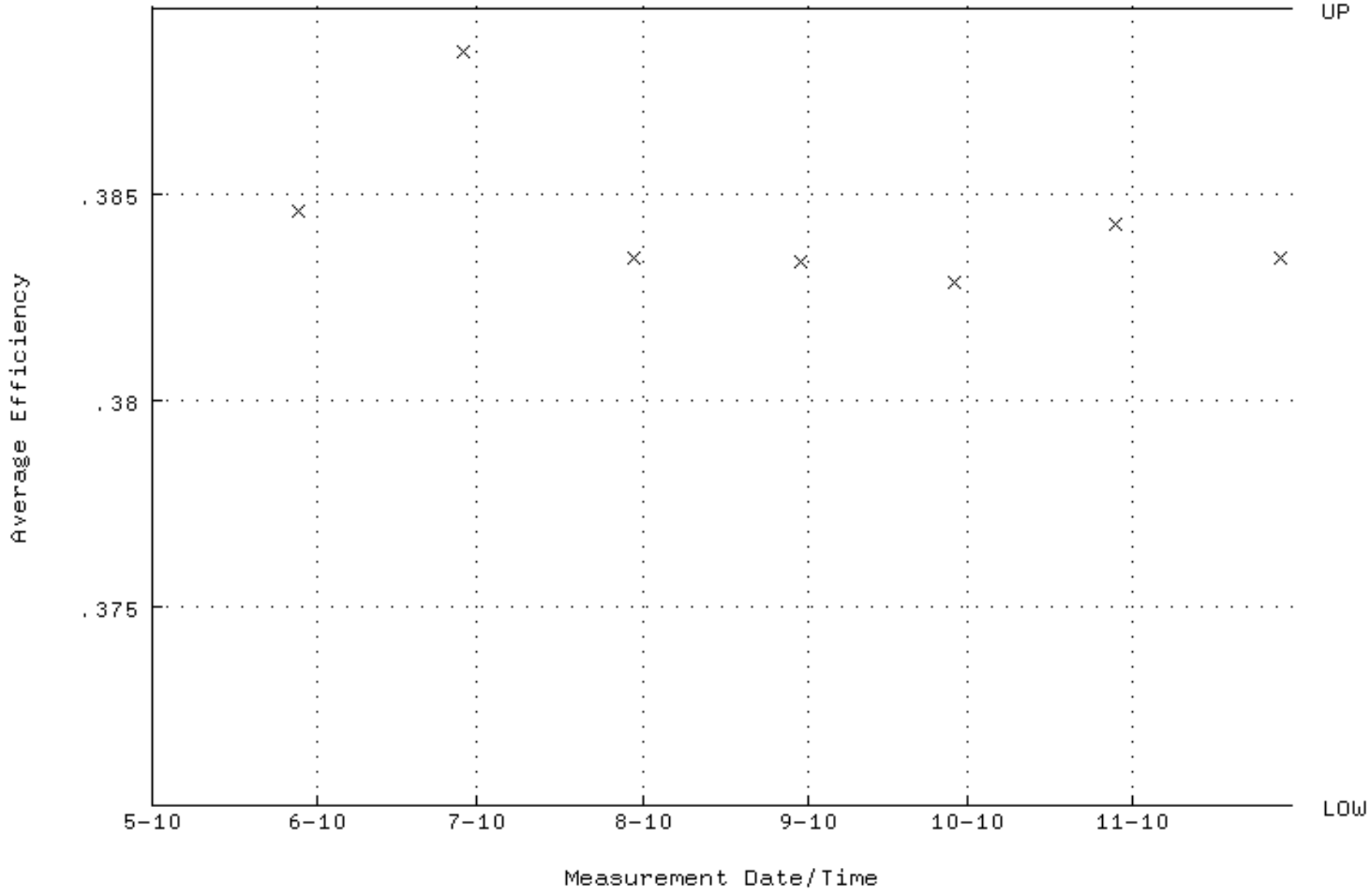
QA filename : DKA100:[ENV_ALPHA.QA.W]W196.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 24-MAY-2010 10:03:20 through 23-NOV-2010 12:00:00
Lower/Upper Lmts: 79.1314 through 97.2082



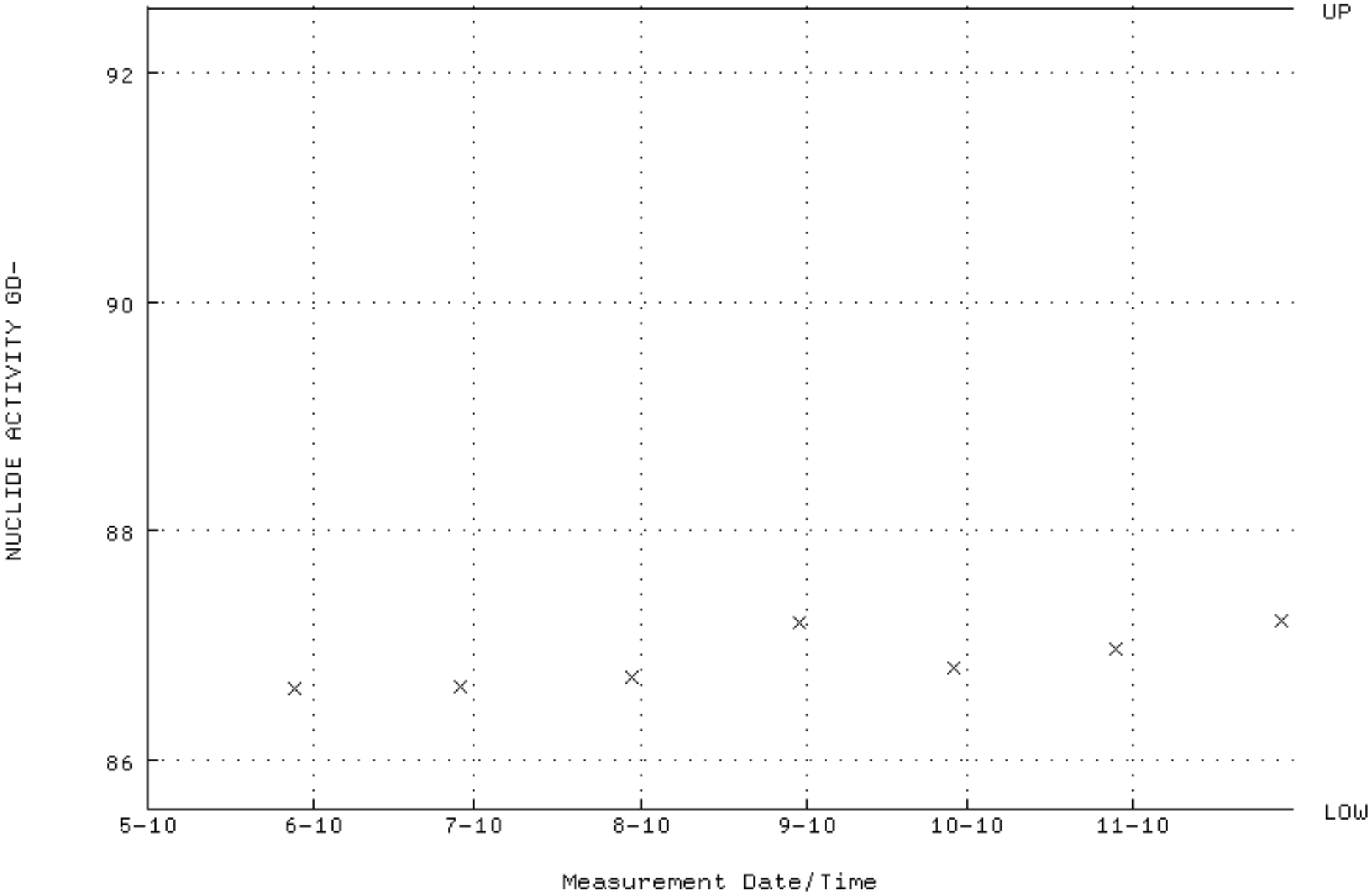
QA filename : DKA100:[ENV_ALPHA.QA.B]B196.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:32:25 through 23-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



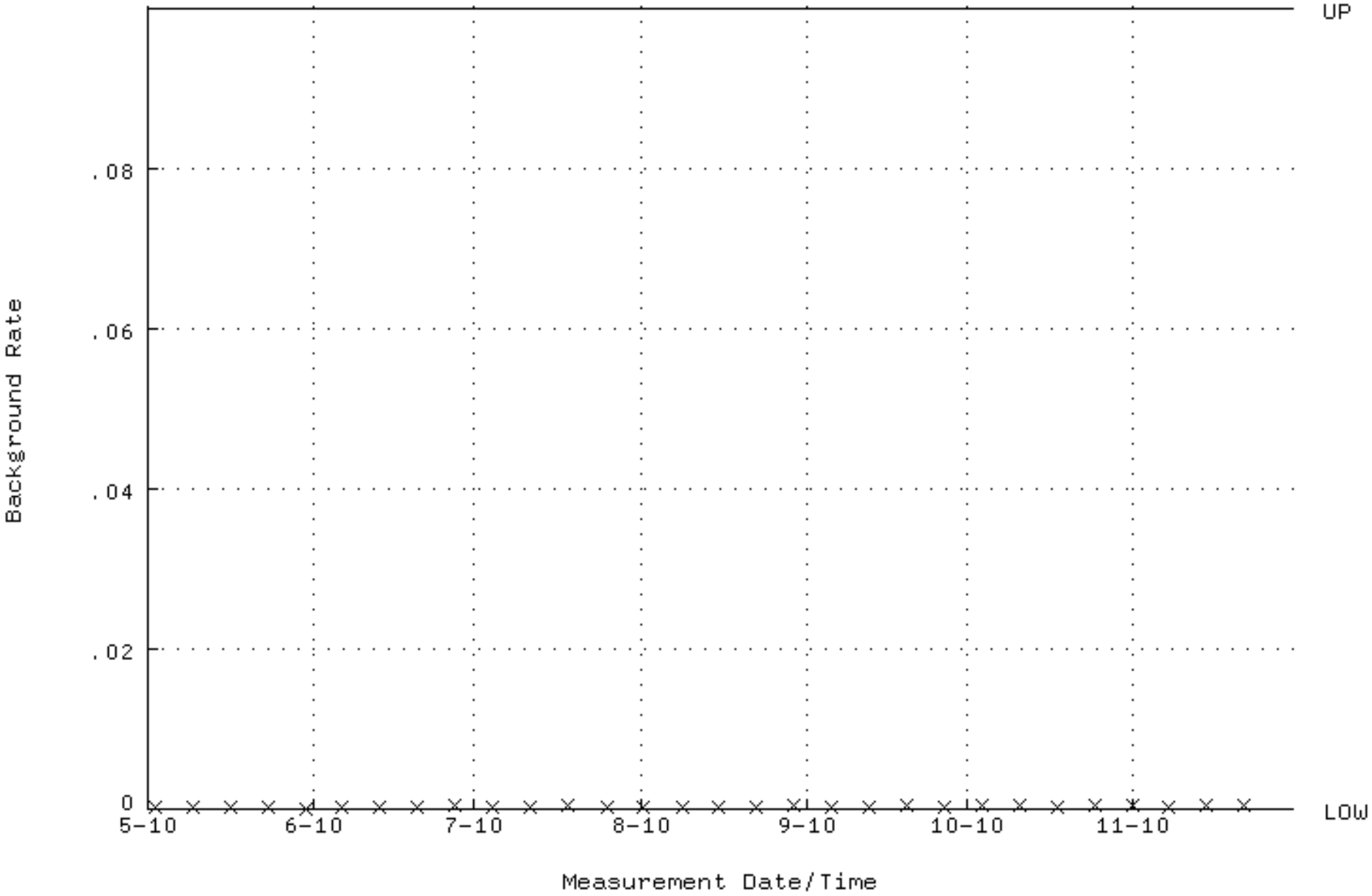
QA filename : DKA100:[ENV_ALPHA.QA.W]W224.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 28-MAY-2010 06:26:09 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.370149 through 0.389511



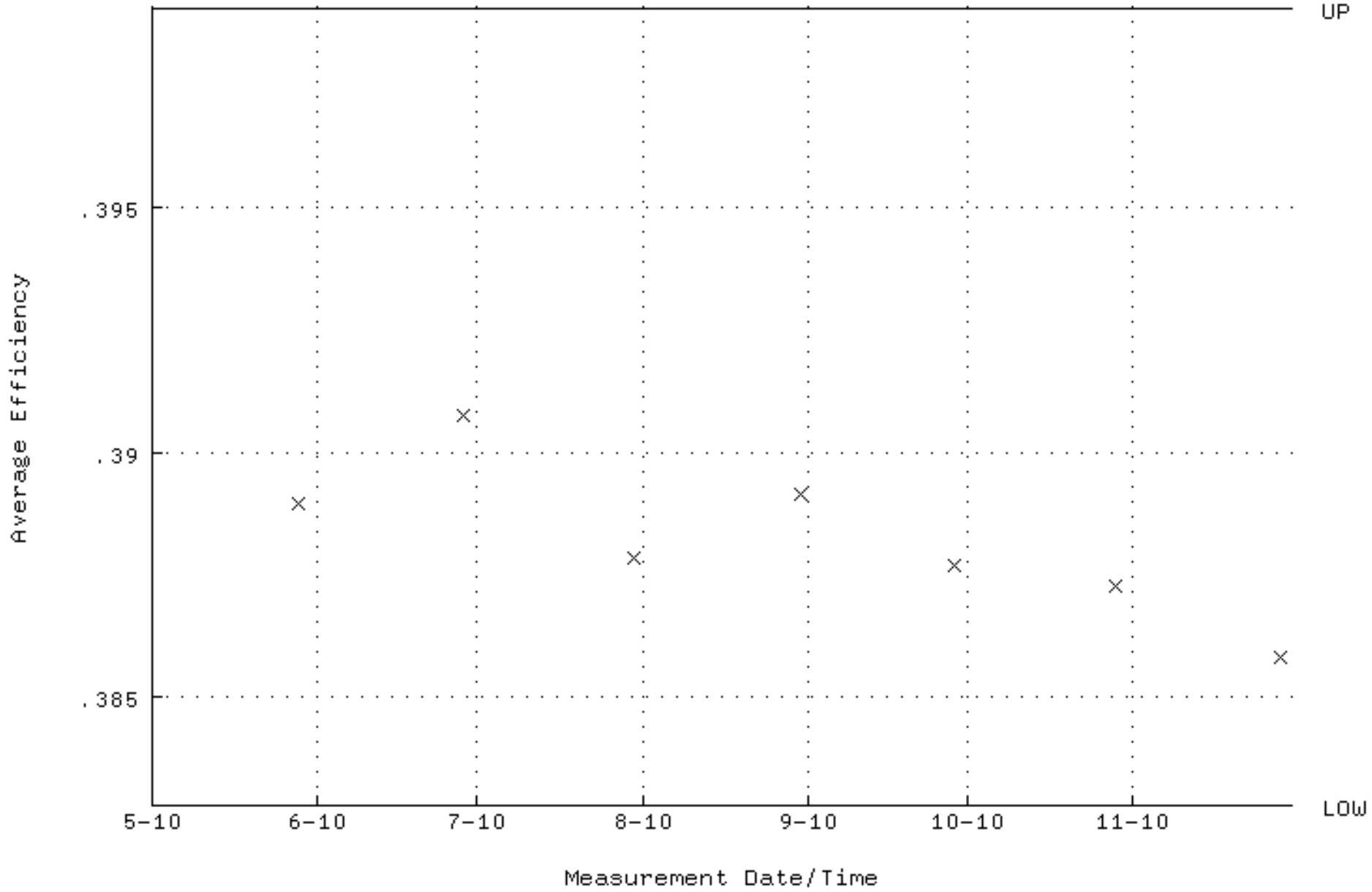
QA filename : DKA100:[ENV_ALPHA.QA.W]W224.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 28-MAY-2010 06:26:09 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 85.5747 through 92.5537



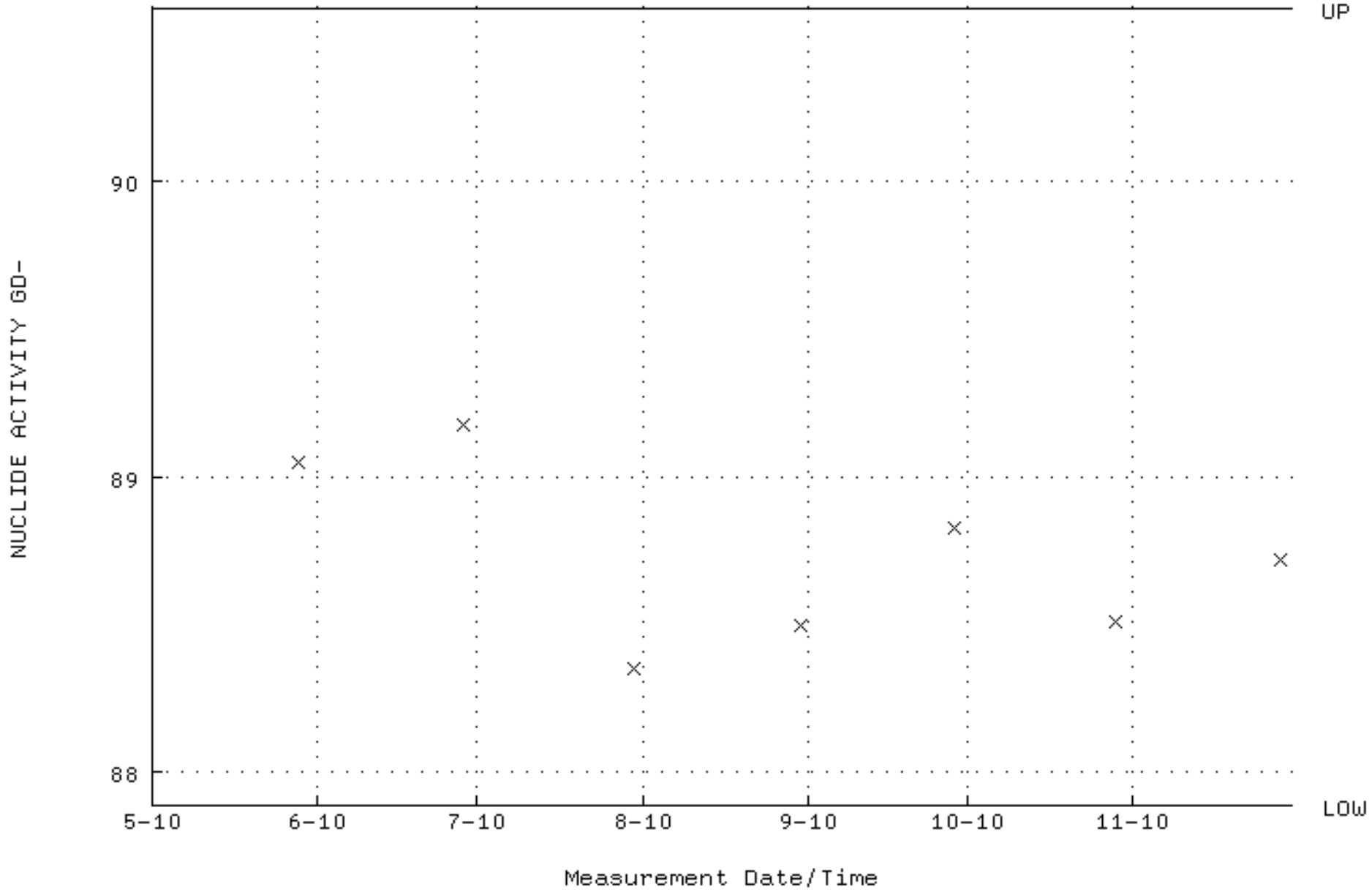
QA filename : DKA100:[ENV_ALPHA.QA.B]B224.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:35:00 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



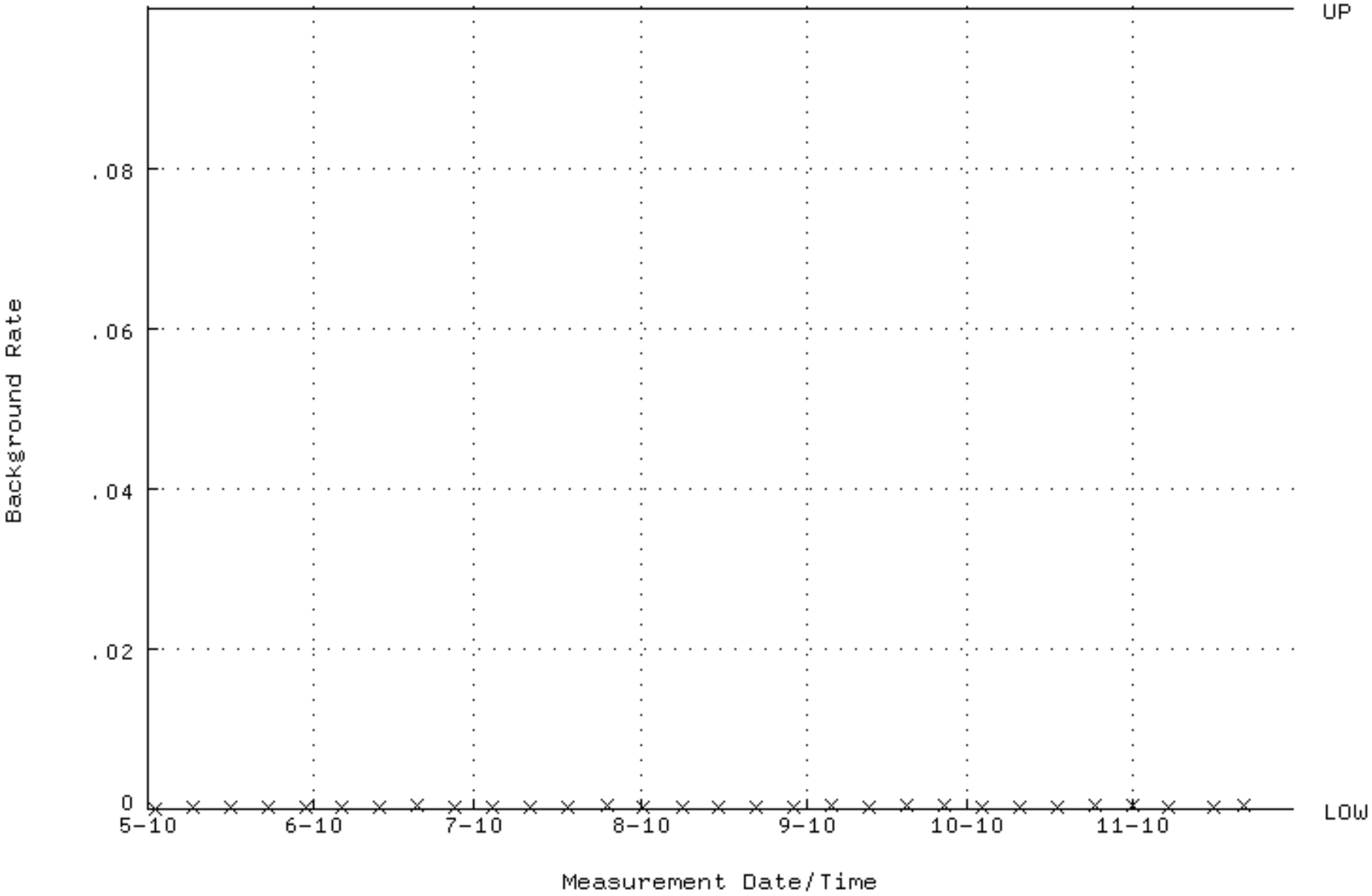
QA filename : DKA100:[ENV_ALPHA.QA.W]W225.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 28-MAY-2010 06:26:14 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.382792 through 0.399070



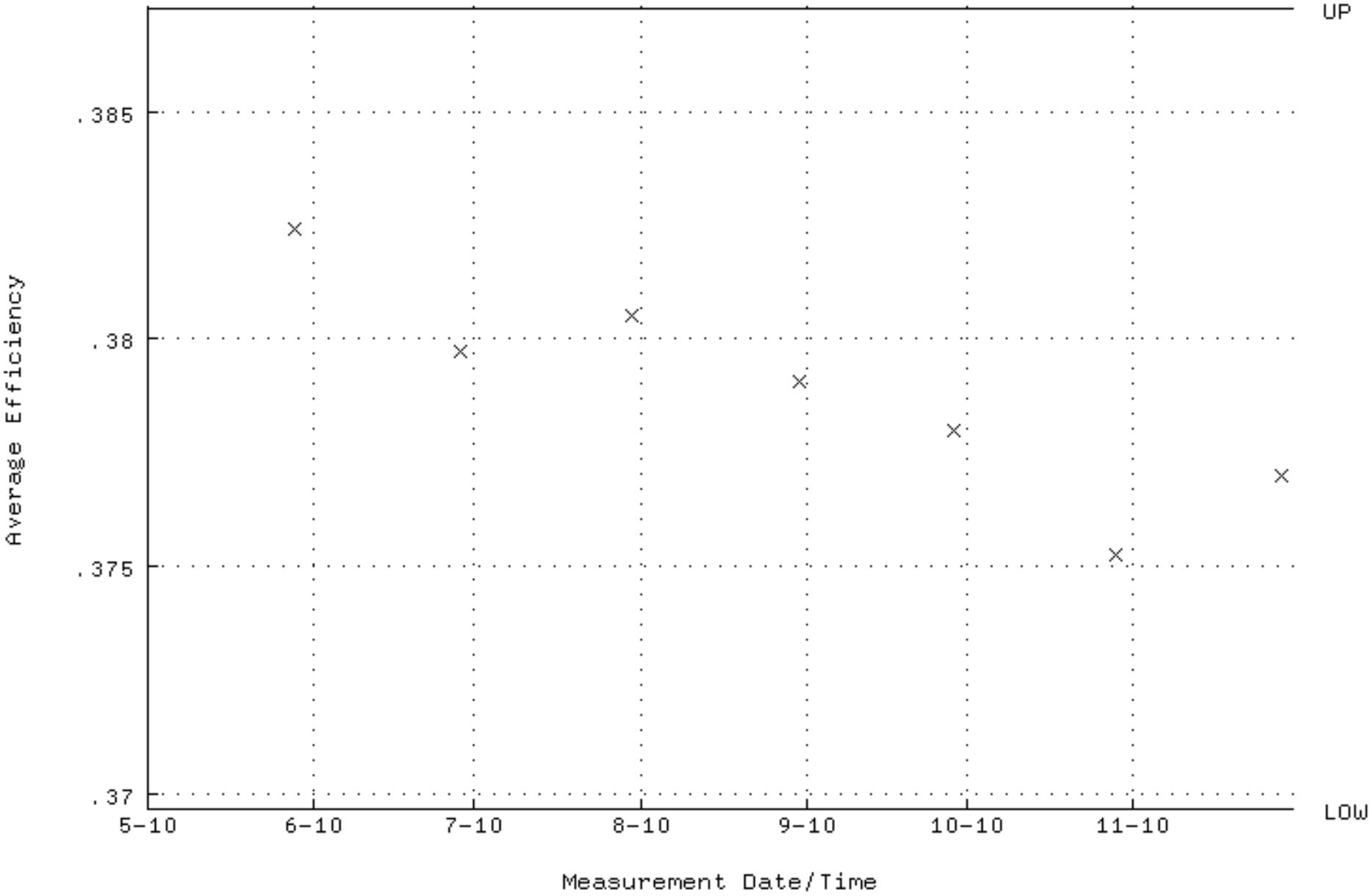
QA filename : DKA100:[ENV_ALPHA.QA.W]W225.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 28-MAY-2010 06:26:14 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 87.8853 through 90.5875



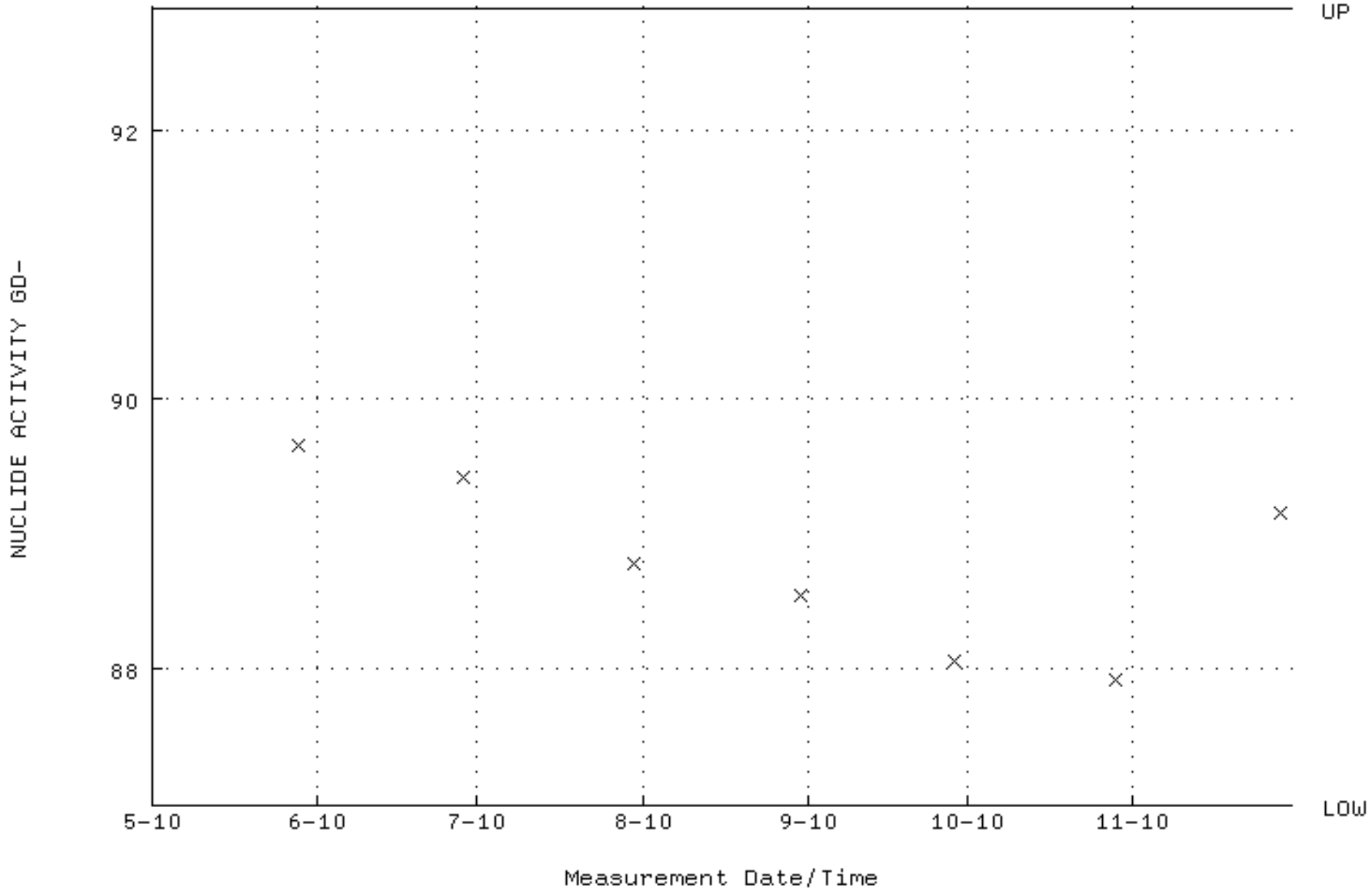
QA filename : DKA100:[ENV_ALPHA.QA.B]B225.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:35:05 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



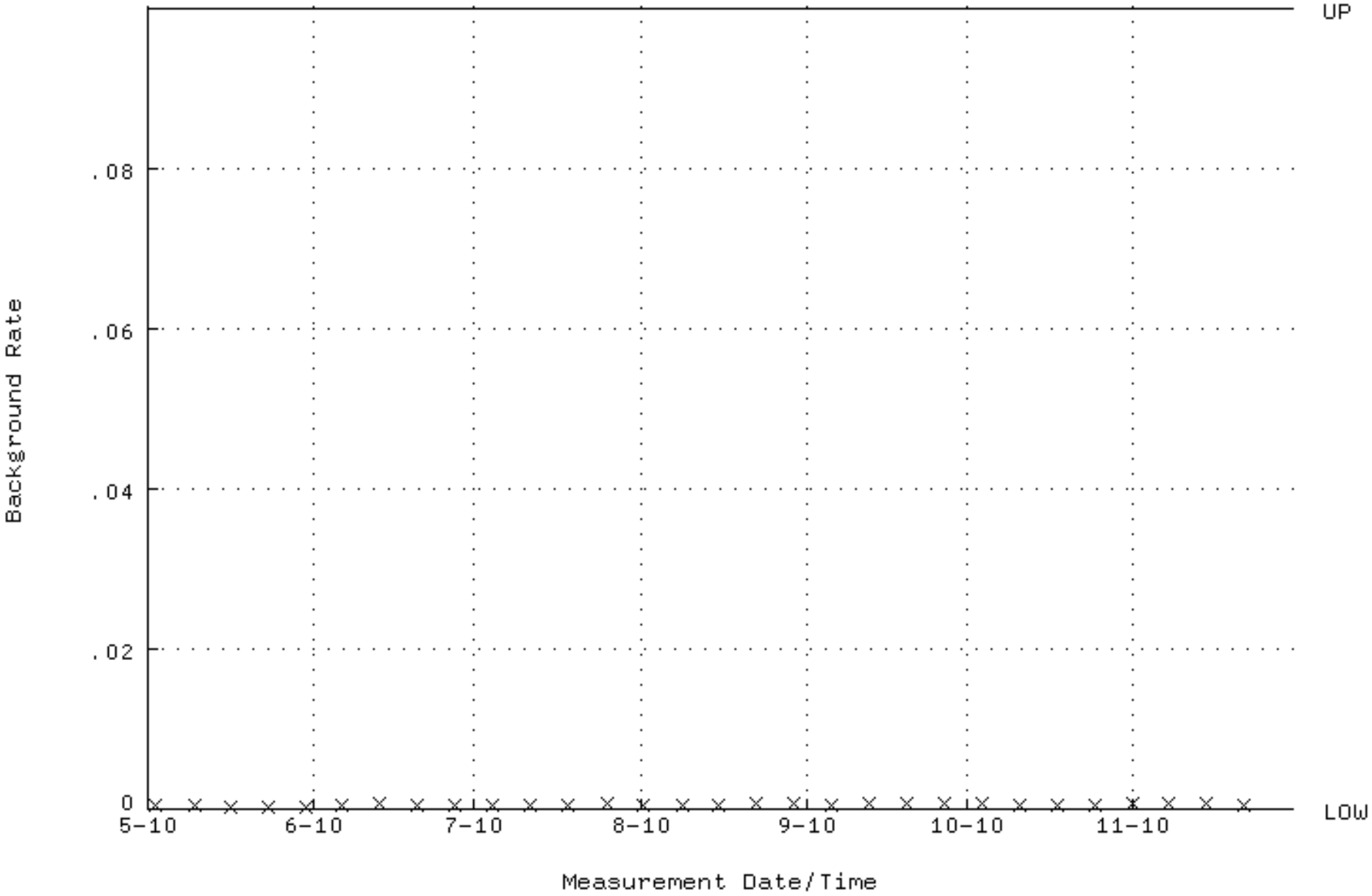
QA filename : DKA100:[ENV_ALPHA.QA.W]W230.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 28-MAY-2010 06:26:41 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.369648 through 0.387266



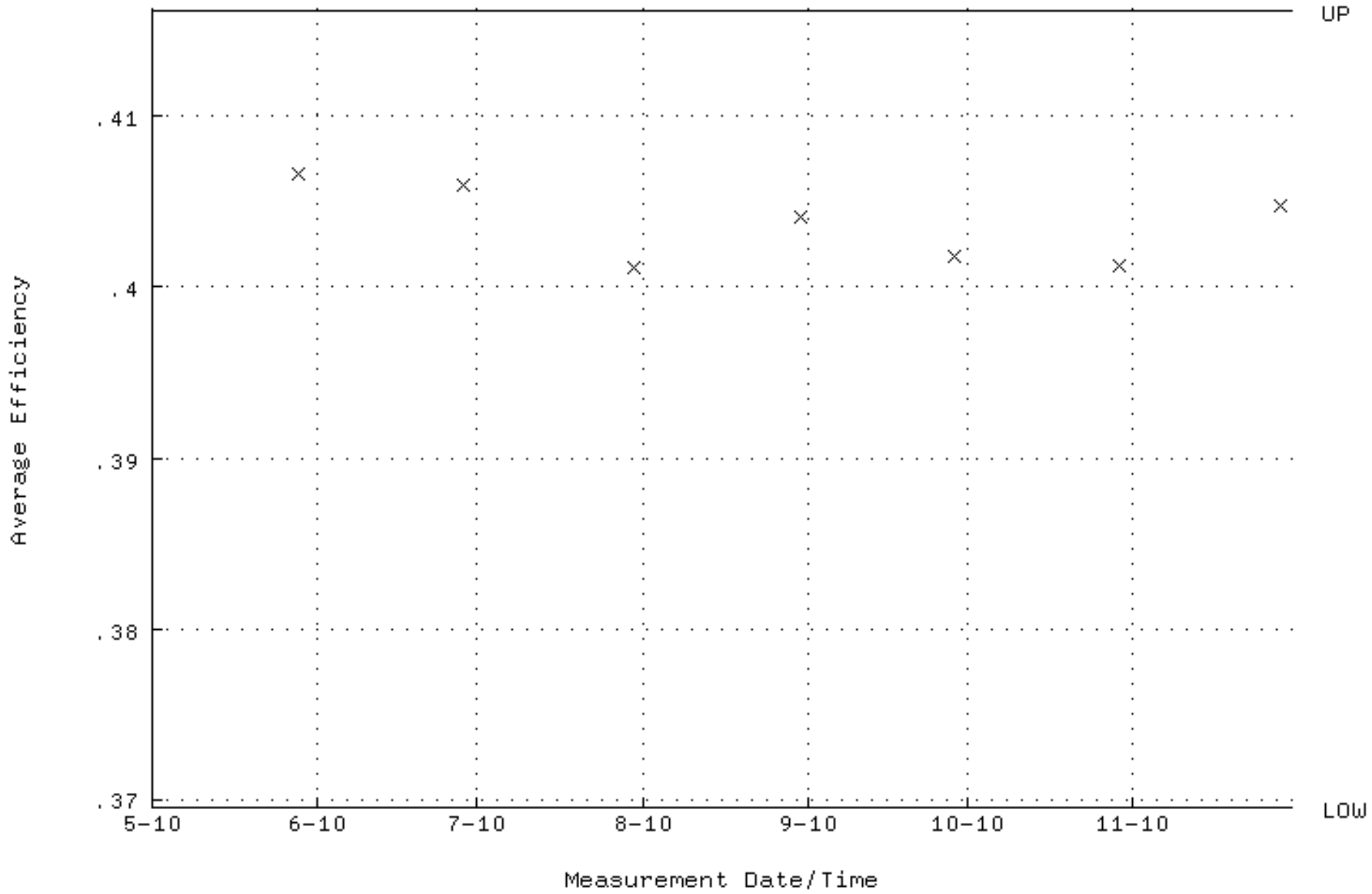
QA filename : DKA100:[ENV_ALPHA.QA.W]W230.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 28-MAY-2010 06:26:41 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 86.9785 through 92.9041



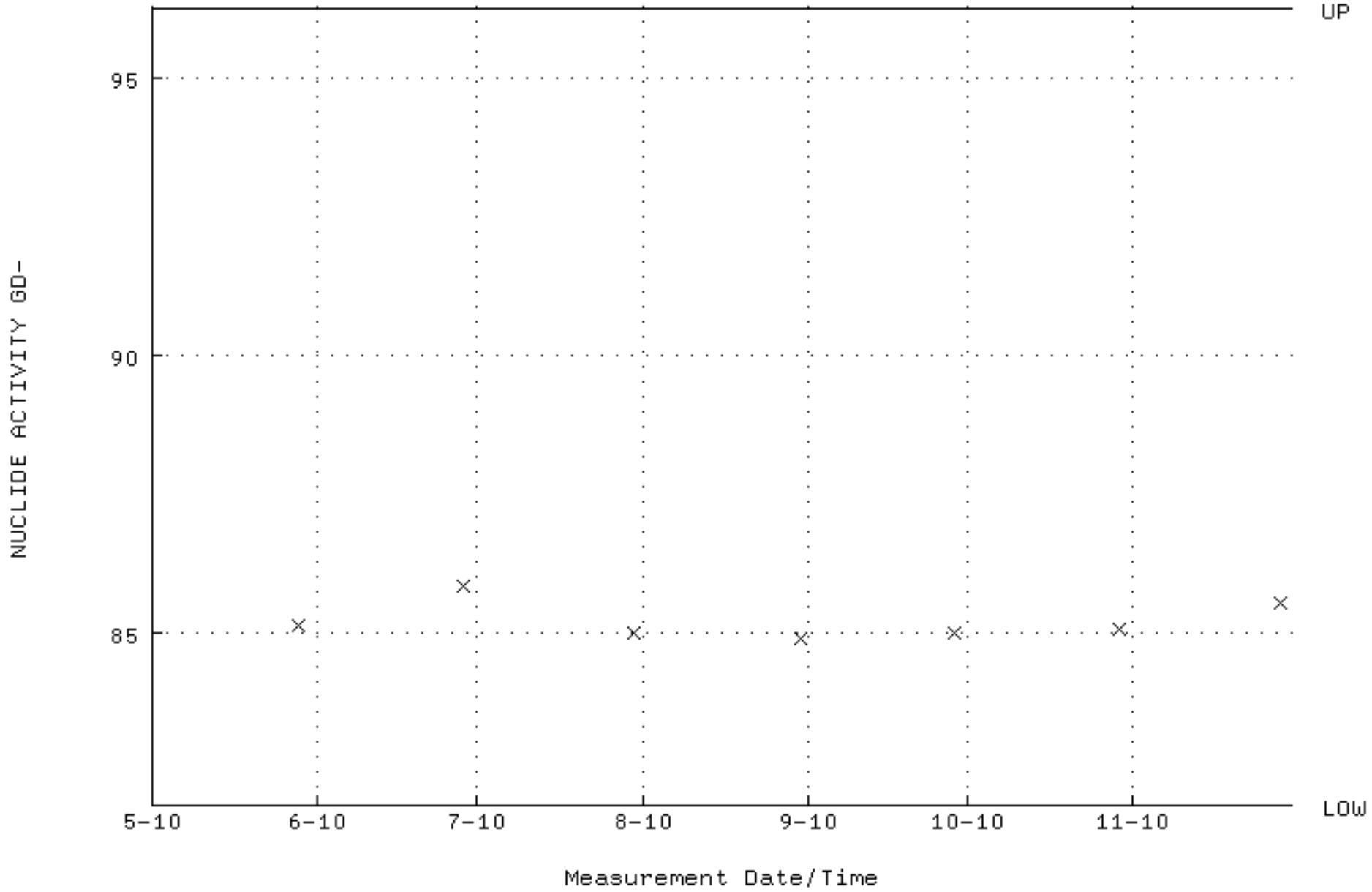
QA filename : DKA100:[ENV_ALPHA.QA.B]B230.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:35:29 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



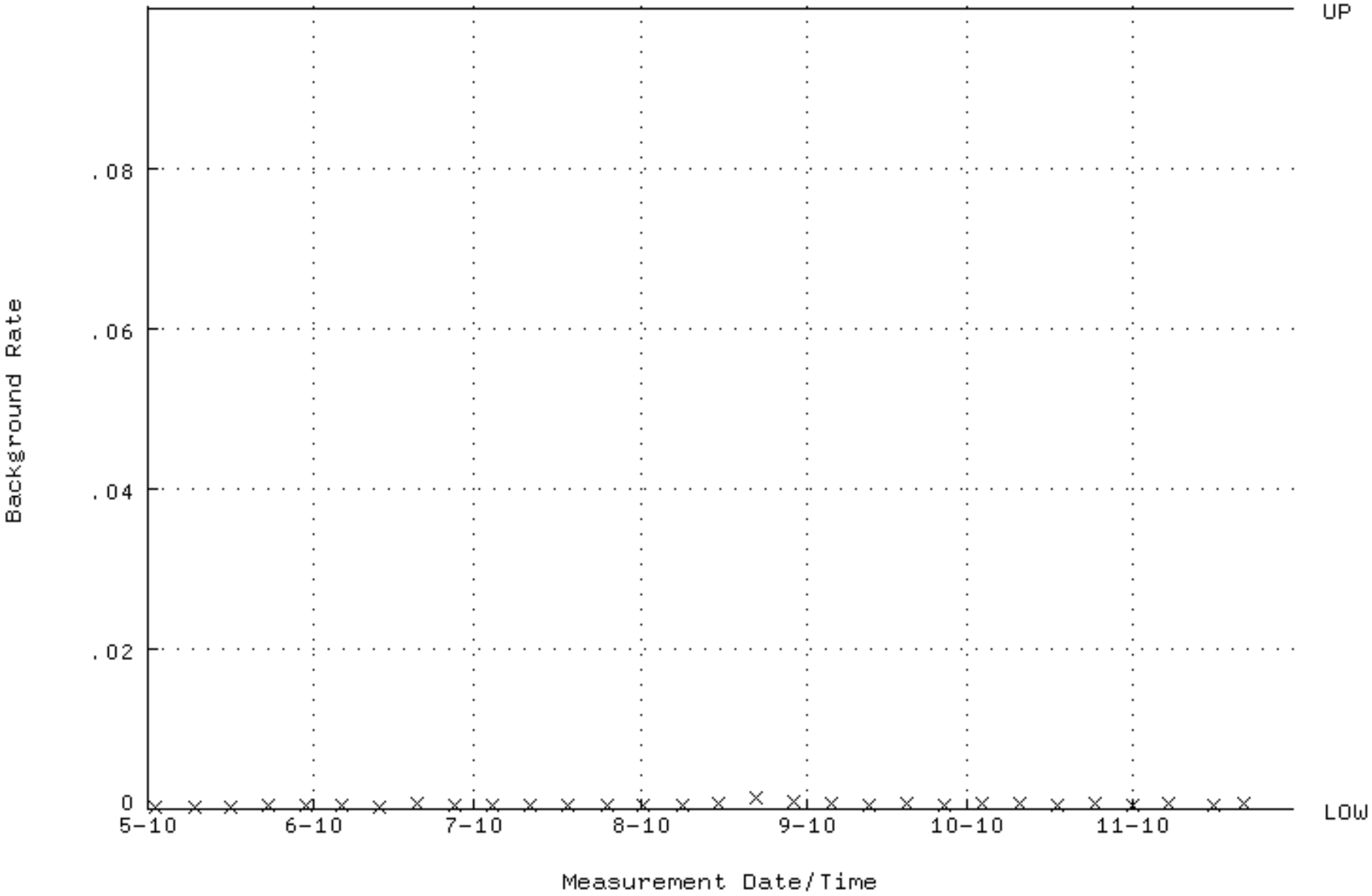
QA filename : DKA100:[ENV_ALPHA.QA.W]W231.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 28-MAY-2010 06:26:46 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.369606 through 0.416088



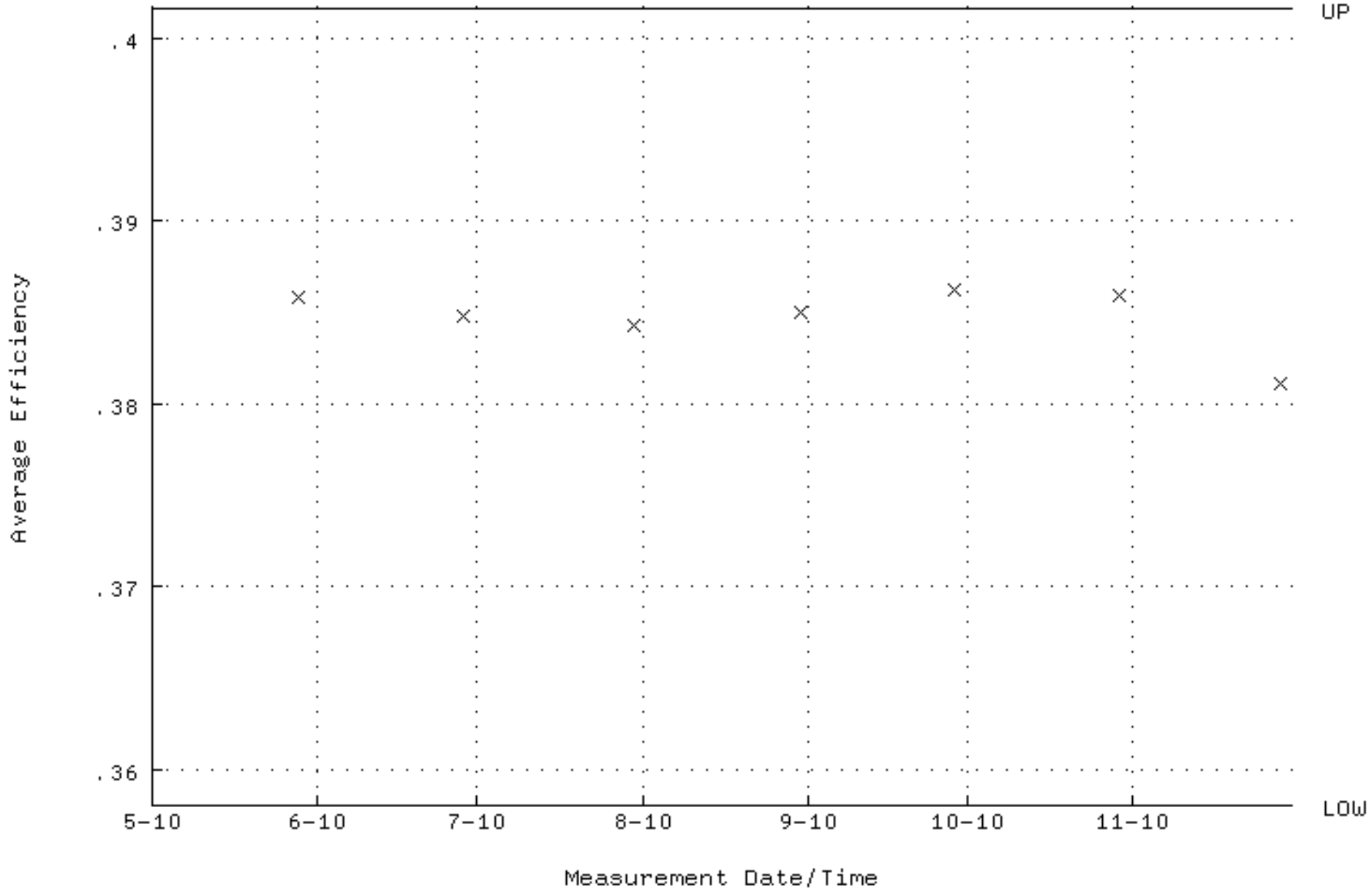
QA filename : DKA100:[ENV_ALPHA.QA.W]W231.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 28-MAY-2010 06:26:46 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 81.9098 through 96.2570



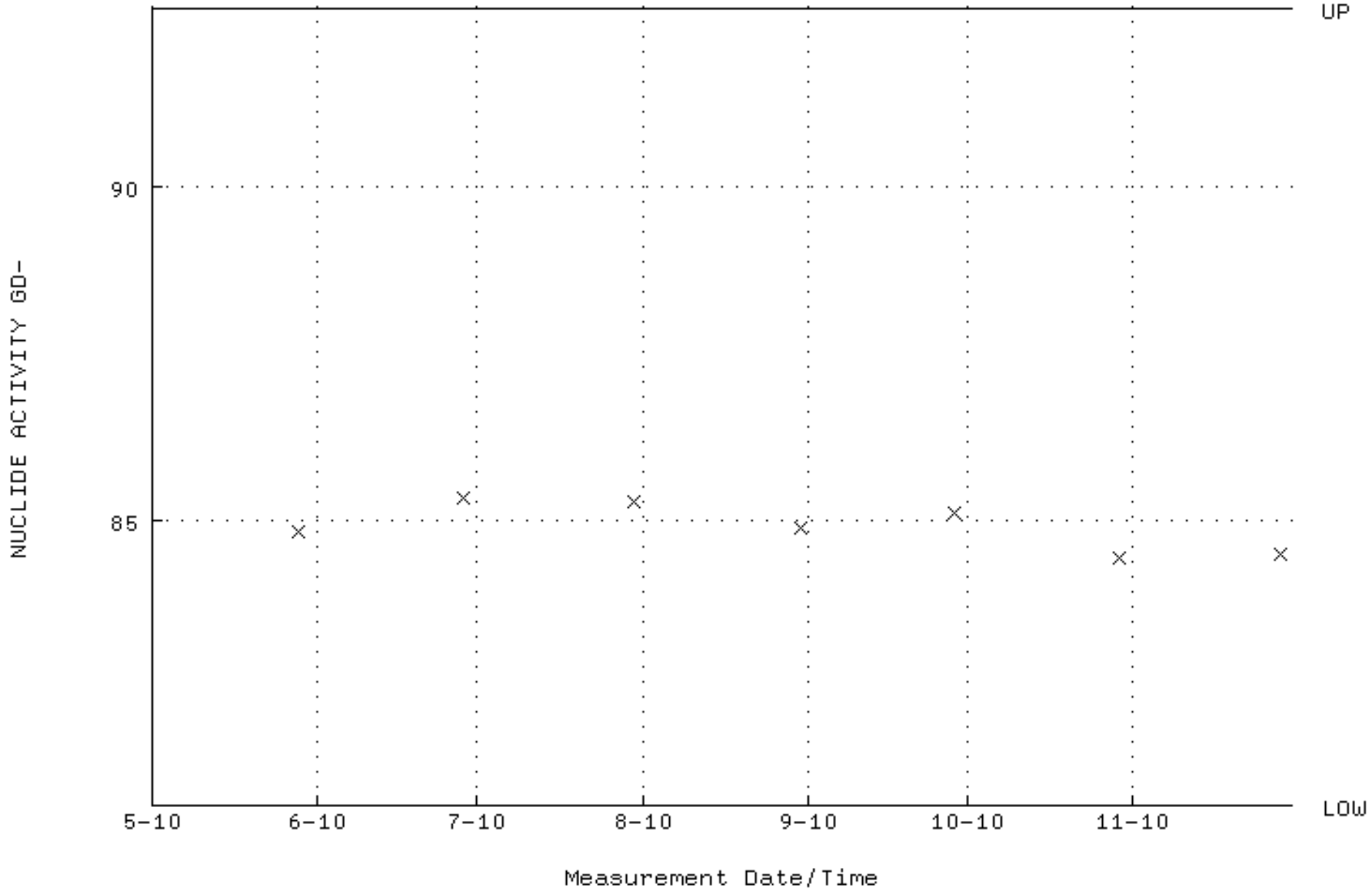
QA filename : DKA100:[ENV_ALPHA.QA.B]B231.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:35:34 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



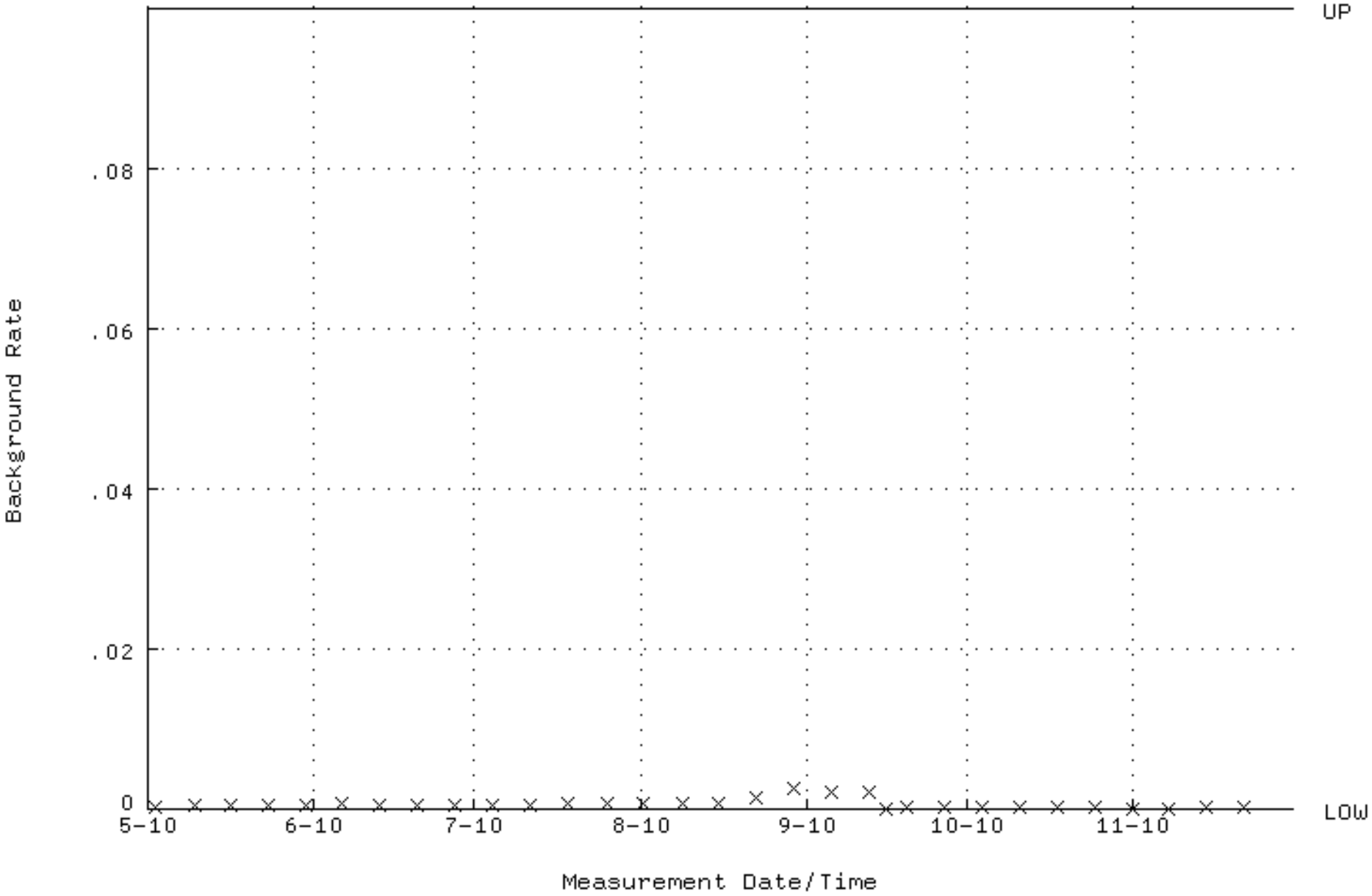
QA filename : DKA100:[ENV_ALPHA.QA.W]W232.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 28-MAY-2010 06:26:51 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.358023 through 0.401603



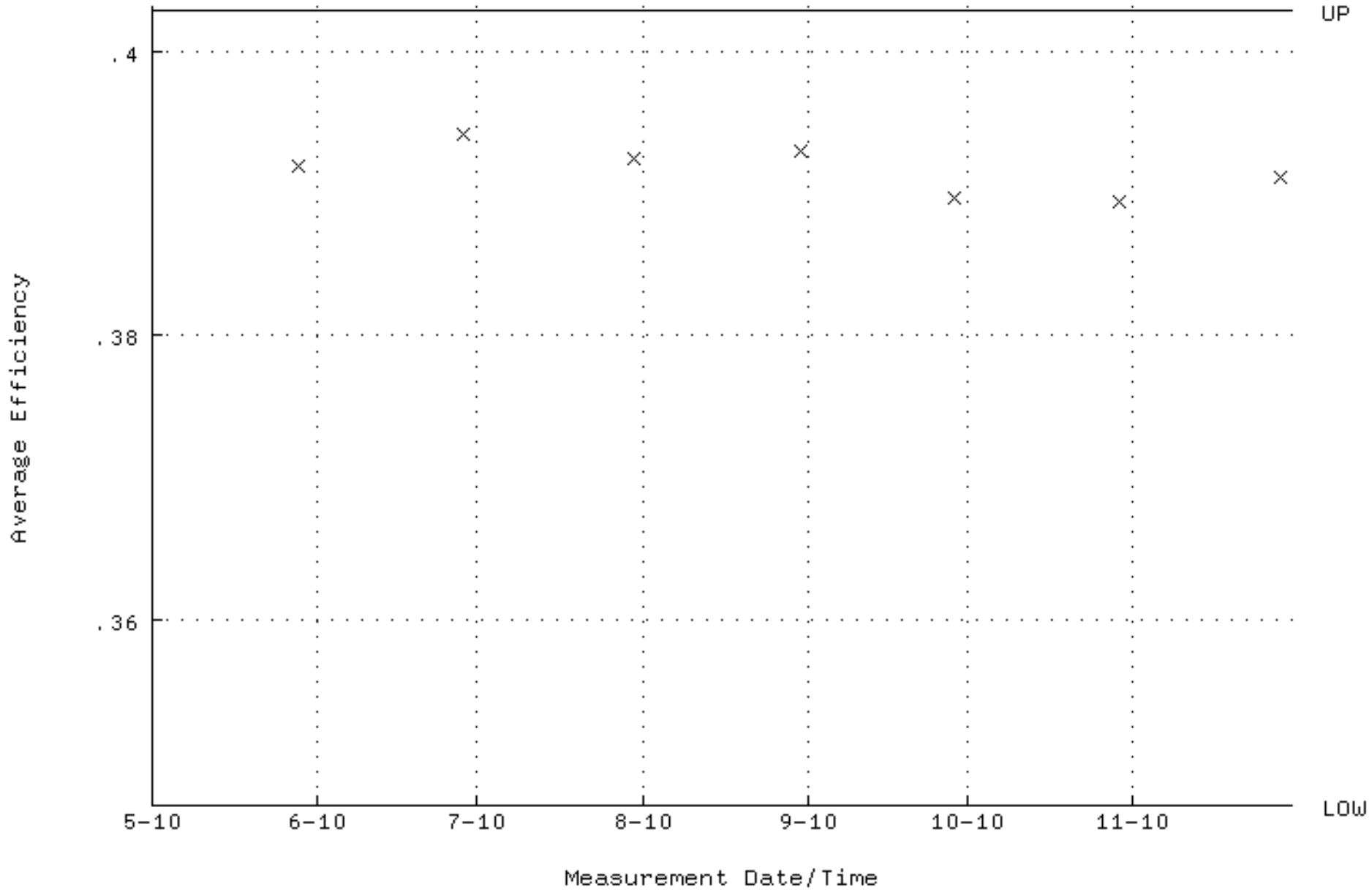
QA filename : DKA100:[ENV_ALPHA.QA.W]W232.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 28-MAY-2010 06:26:51 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 80.7079 through 92.6703



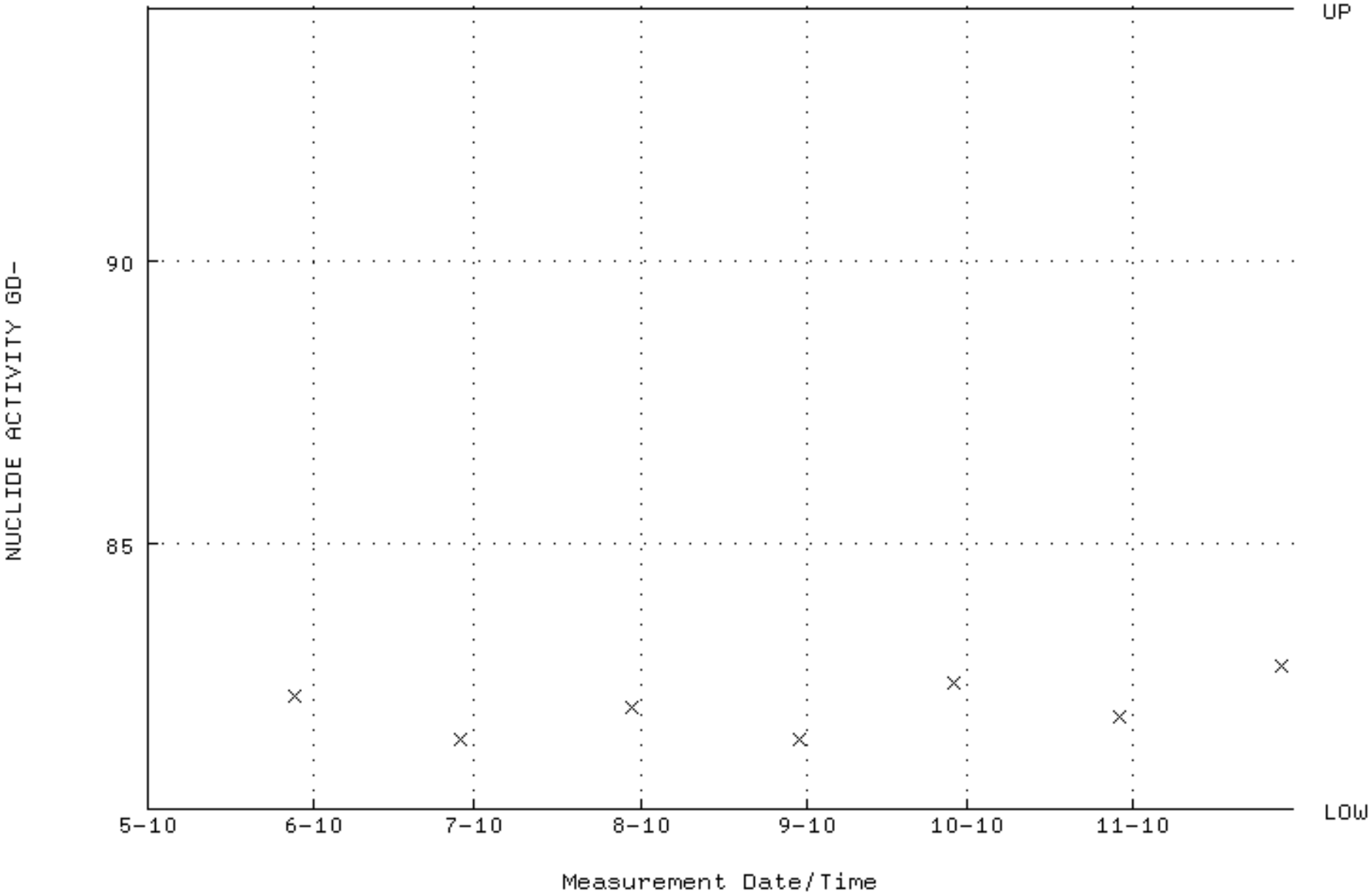
QA filename : DKA100:[ENV_ALPHA.QA.B]B232.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:35:38 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



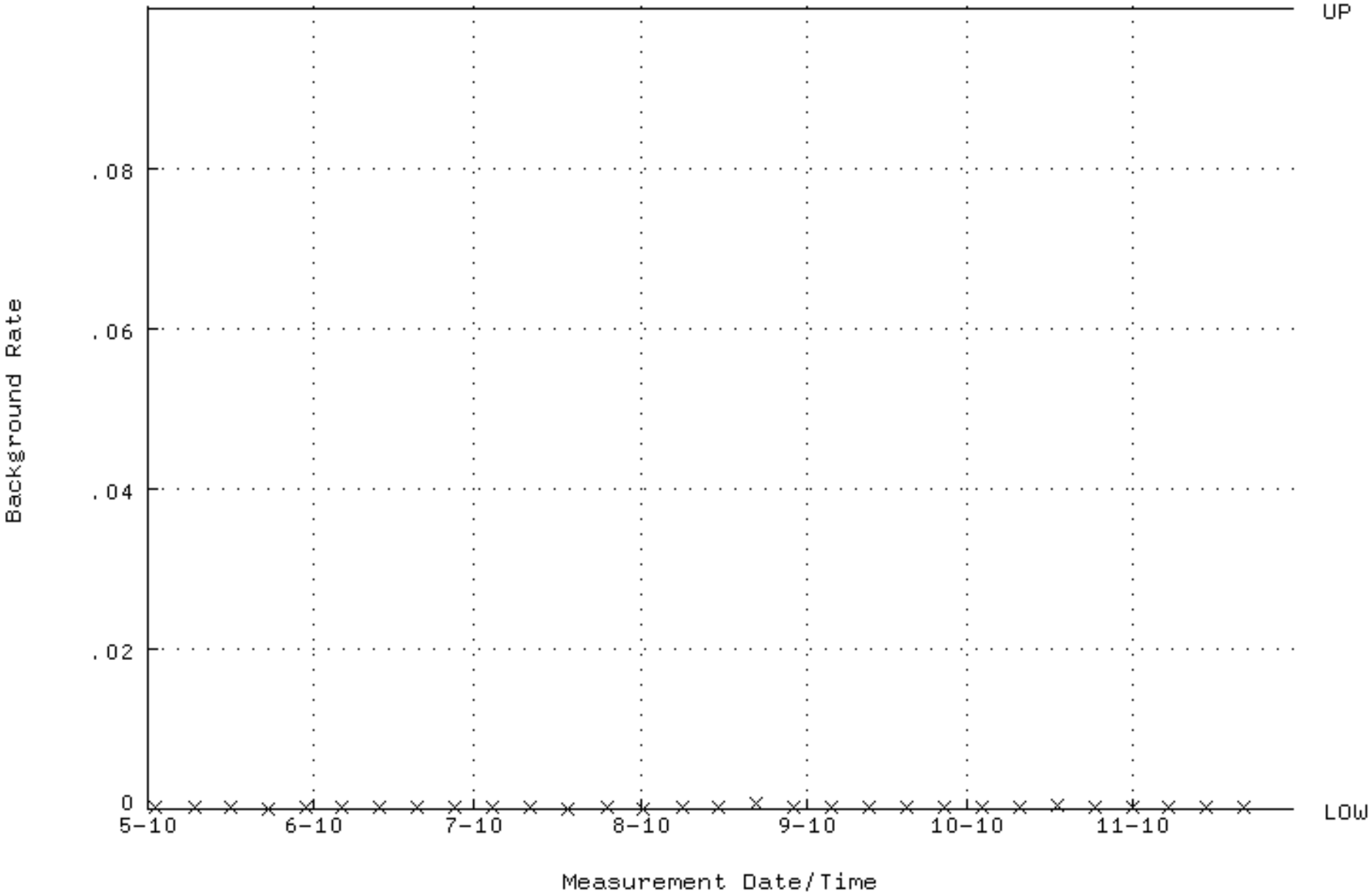
QA filename : DKA100:[ENV_ALPHA.QA.W]W244.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 28-MAY-2010 06:27:55 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.346871 through 0.403035



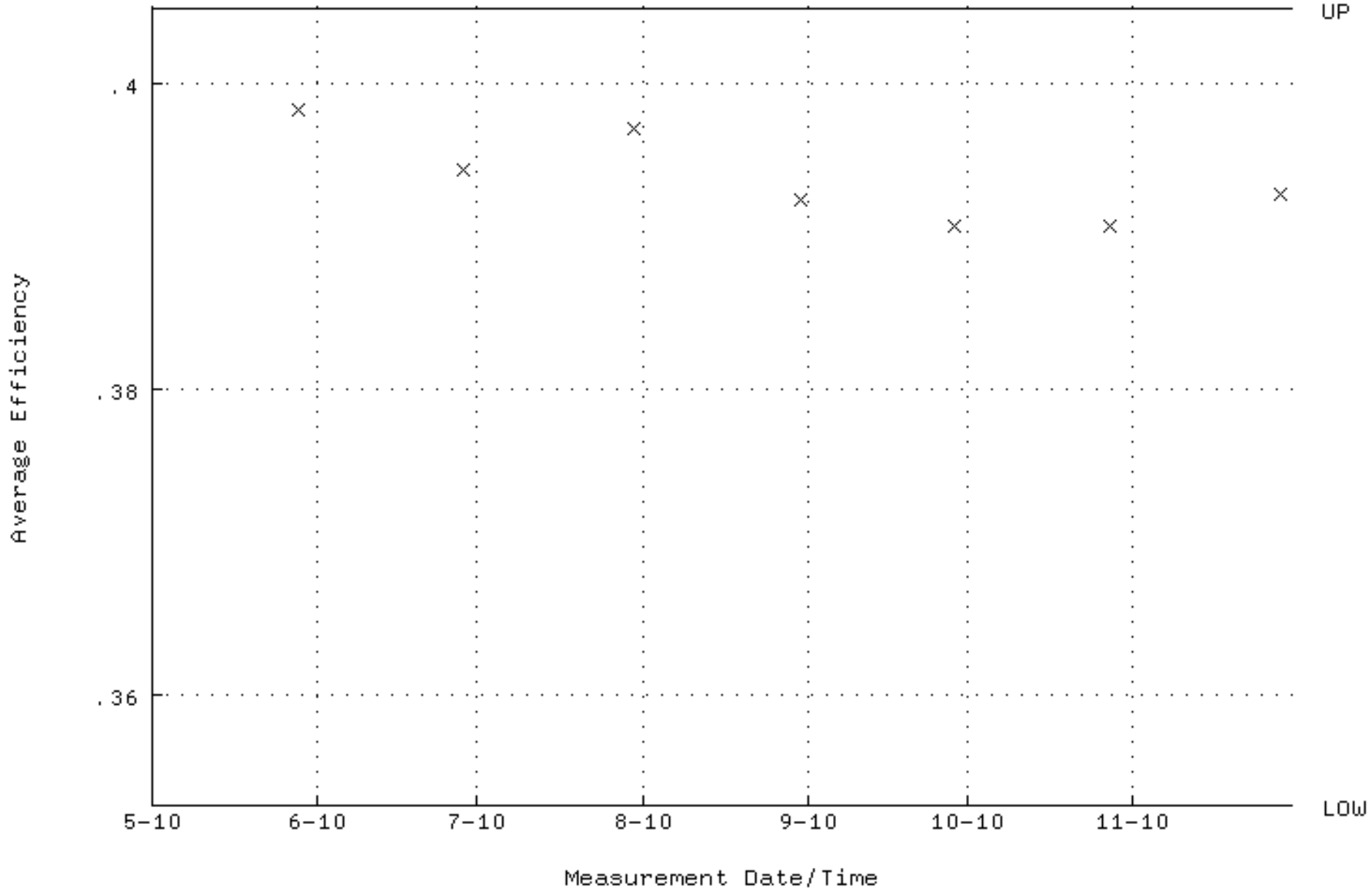
QA filename : DKA100:[ENV_ALPHA.QA.W]W244.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 28-MAY-2010 06:27:55 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 80.2814 through 94.4734



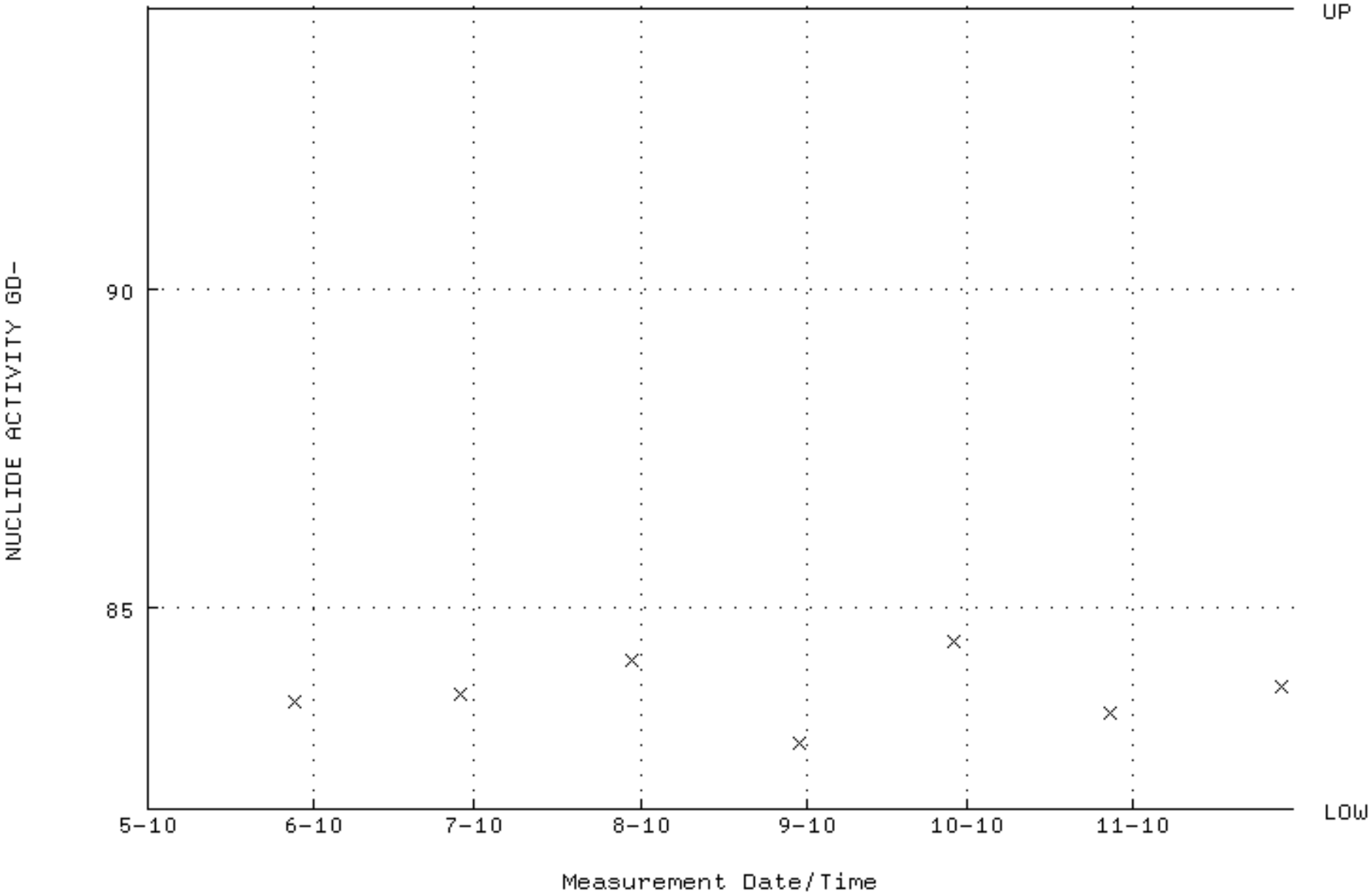
QA filename : DKA100:[ENV_ALPHA.QA.B]B244.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:36:35 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



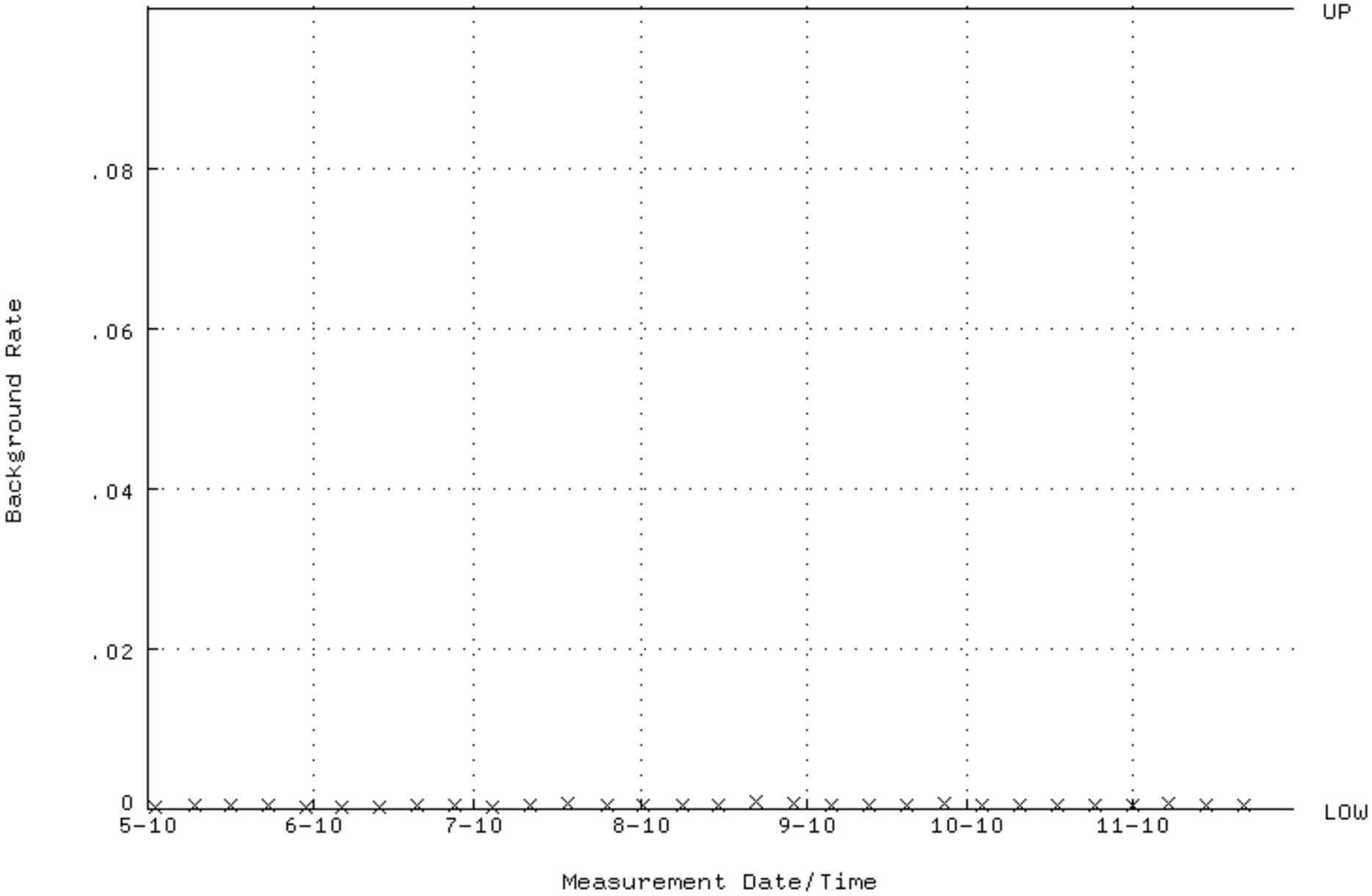
QA filename : DKA100:[ENV_ALPHA.QA.W]W247.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 28-MAY-2010 06:28:10 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.352698 through 0.404942



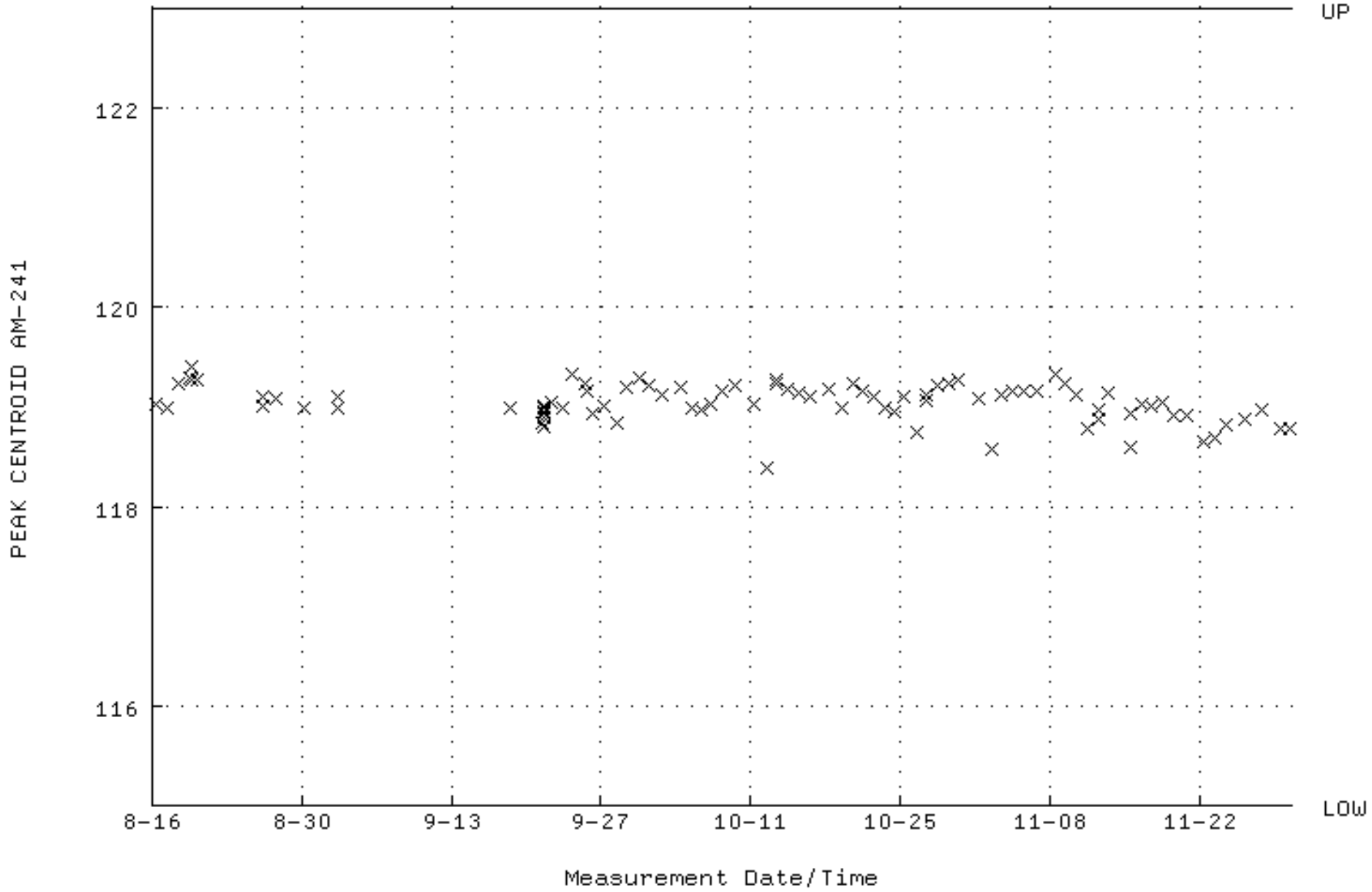
QA filename : DKA100:[ENV_ALPHA.QA.W]W247.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 28-MAY-2010 06:28:10 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 81.8318 through 94.4164



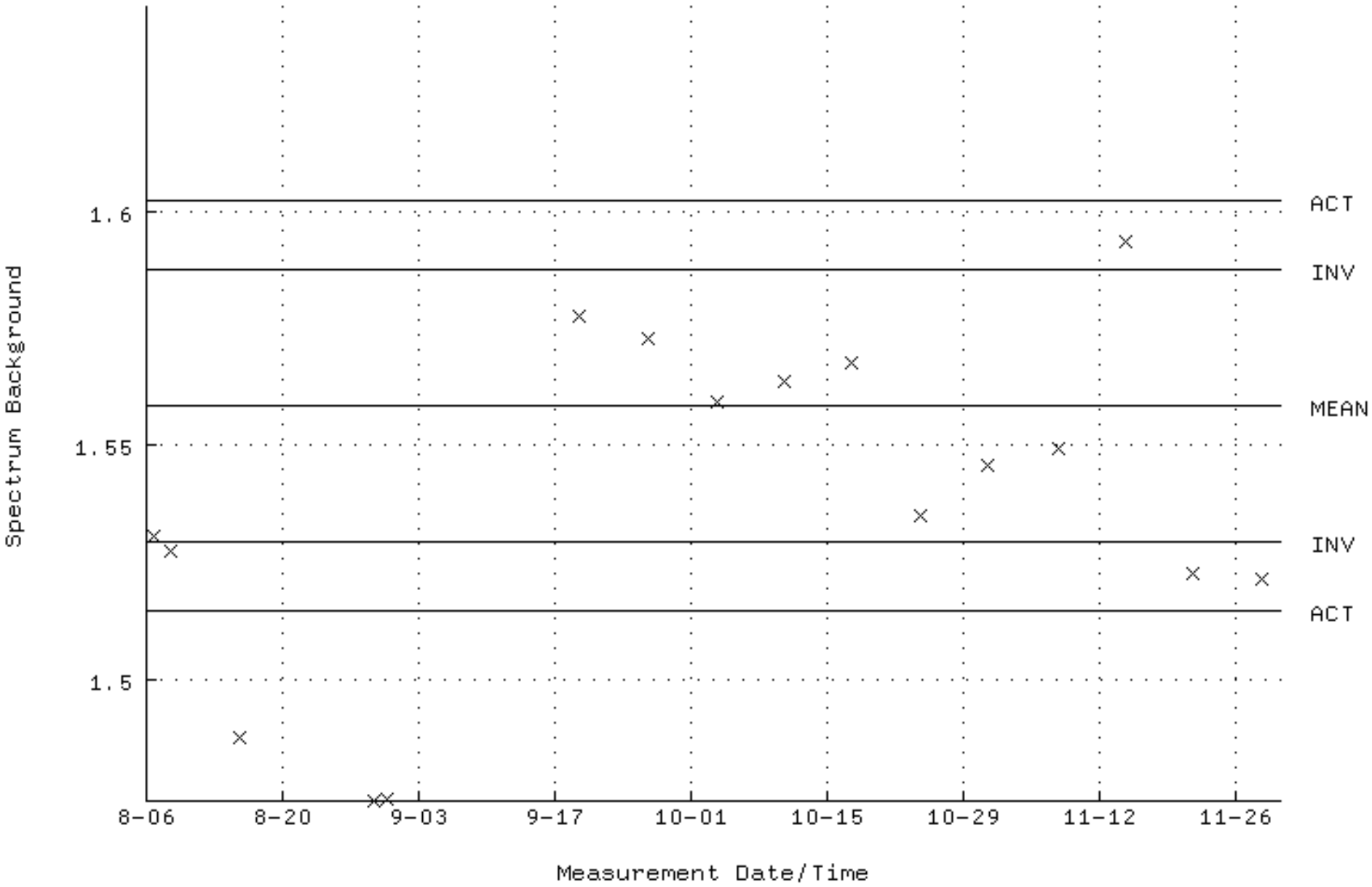
QA filename : DKA100:[ENV_ALPHA.QA.B]B247.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-MAY-2010 12:36:48 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



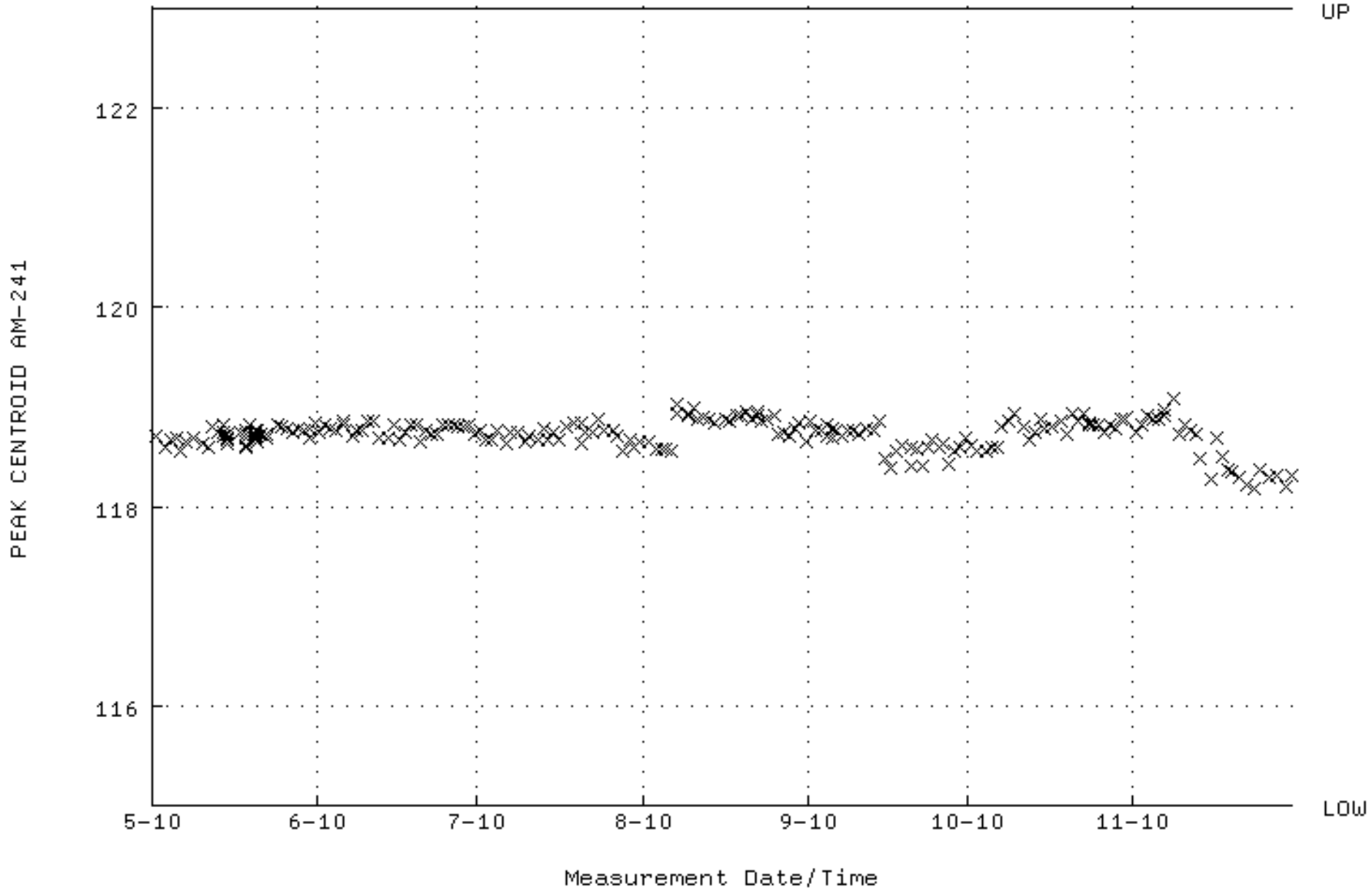
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM08_JAR.QAF;1
Parameter Name : PSCENTRD-59 (PEAK CENTROID AM-241)
Start/End Dates : 16-AUG-2010 08:26:46 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



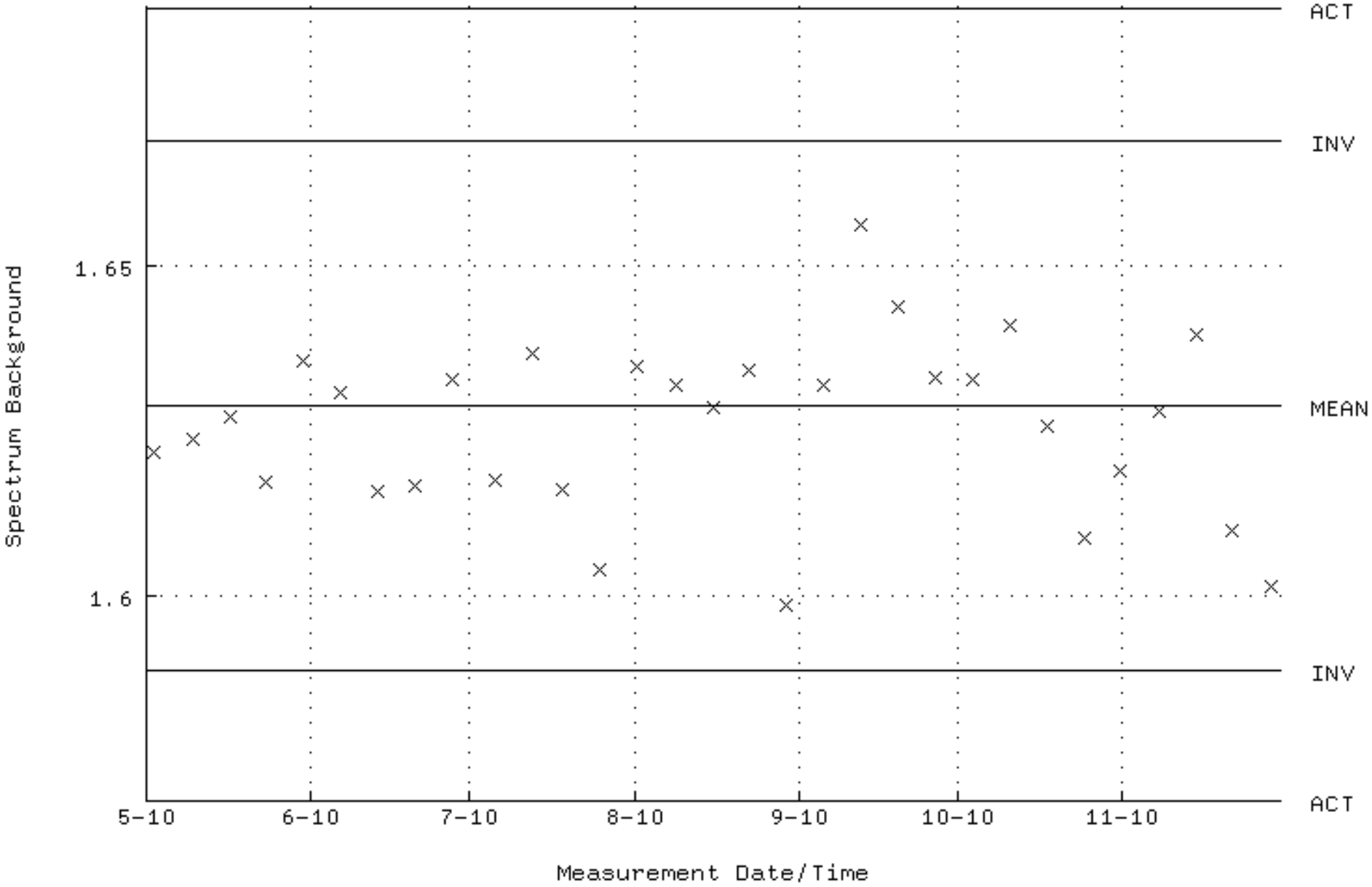
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM08.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 6-AUG-2010 17:31:28 through 30-NOV-2010 12:00:00
Mean +- Std Dev : 1.55866 +- 1.455441E-02 (0.93 %)



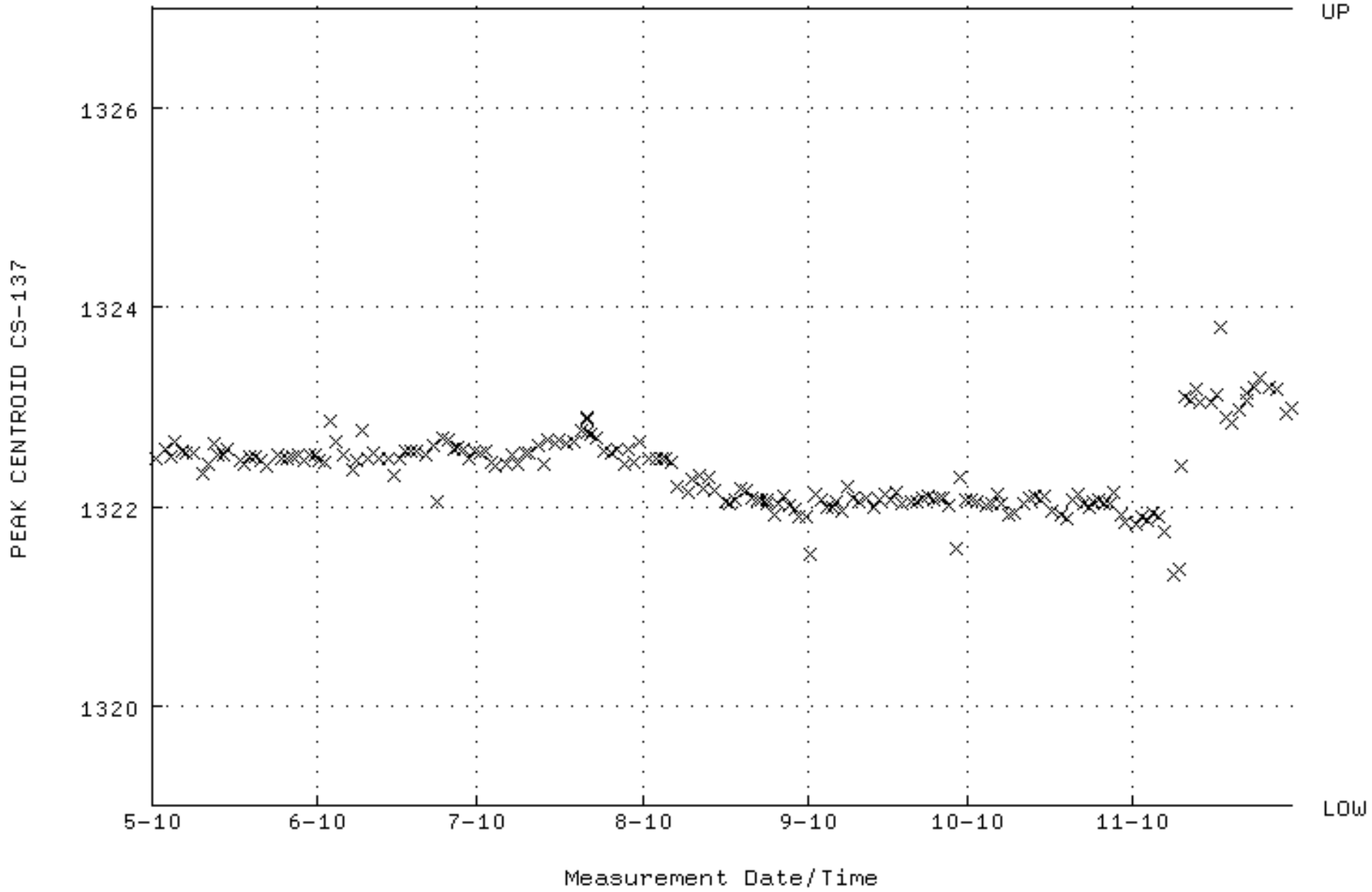
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM09_500MLMB.QAF;1
Parameter Name : PSCENTRD-59 (PEAK CENTROID AM-241)
Start/End Dates : 1-MAY-2010 14:57:20 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



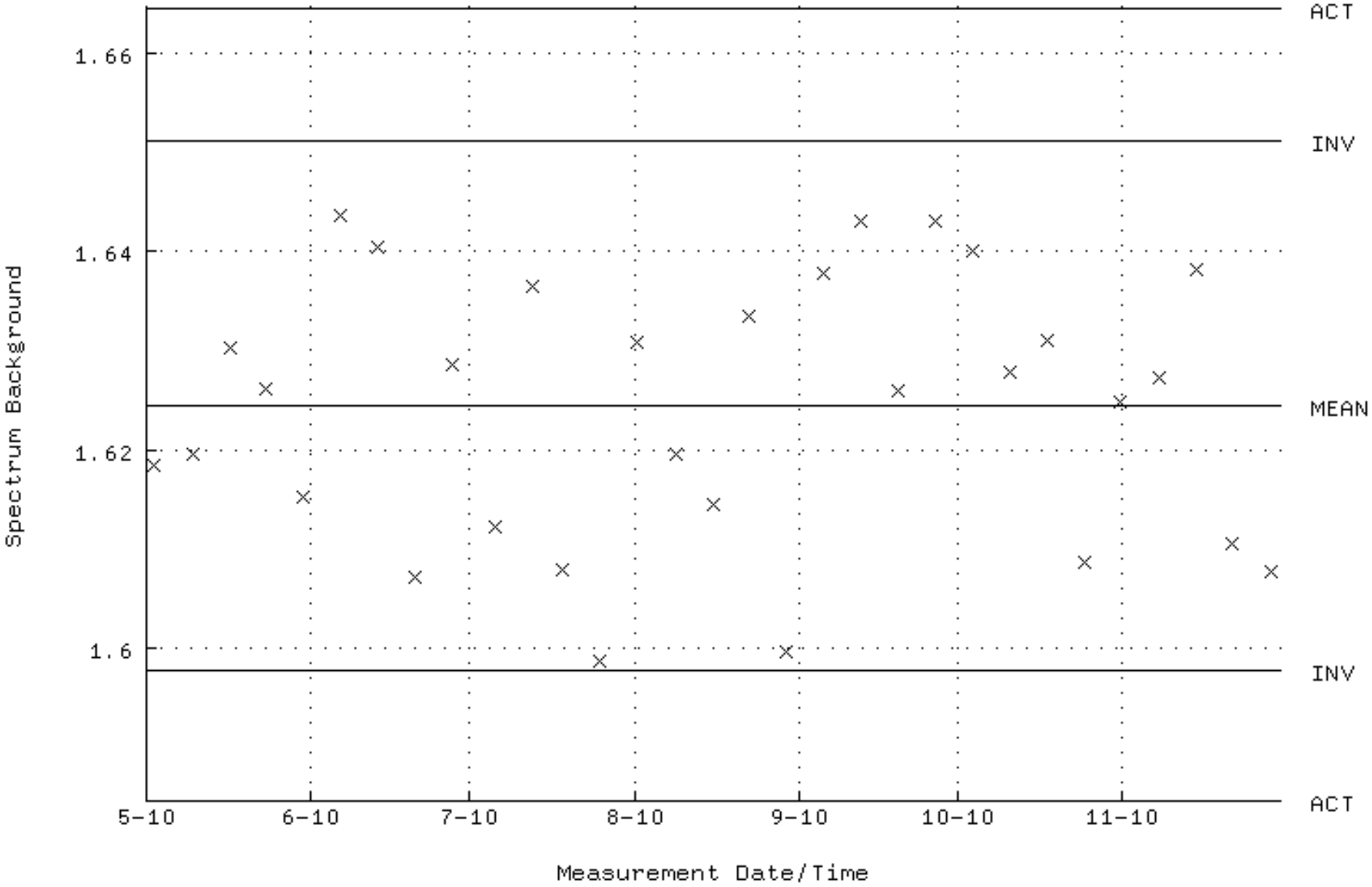
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM09.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-MAY-2010 11:09:52 through 30-NOV-2010 12:00:00
Mean +- Std Dev : 1.62892 +- 2.004048E-02 (1.23 %)



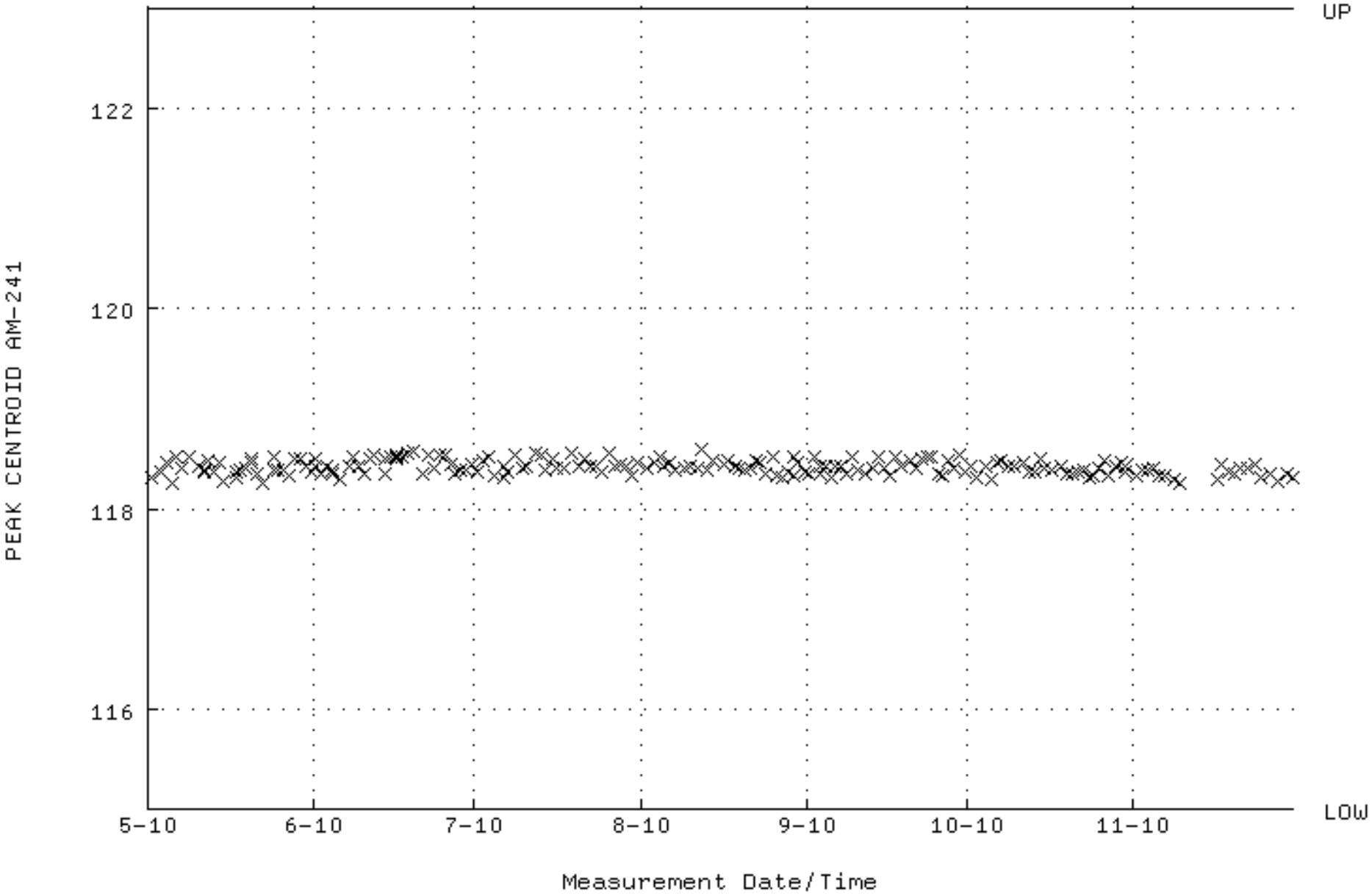
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_JAR.QAF;1
Parameter Name : PSCENTRD-59 (PEAK CENTROID CS-137)
Start/End Dates : 1-MAY-2010 14:57:27 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 1319.00 through 1327.00



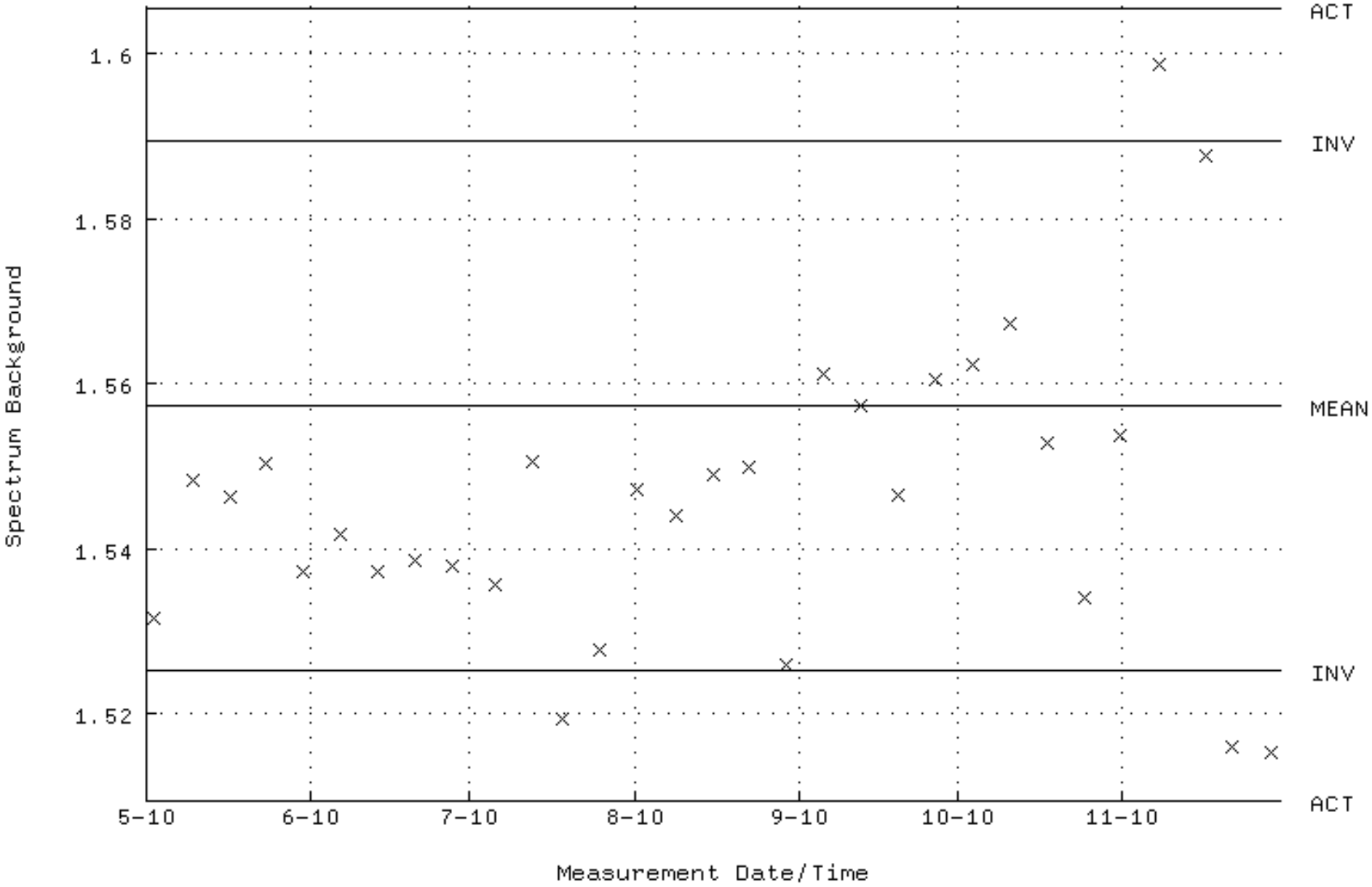
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM11.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-MAY-2010 11:10:47 through 30-NOV-2010 12:00:00
Mean +- Std Dev : 1.62453 +- 1.329743E-02 (0.82 %)



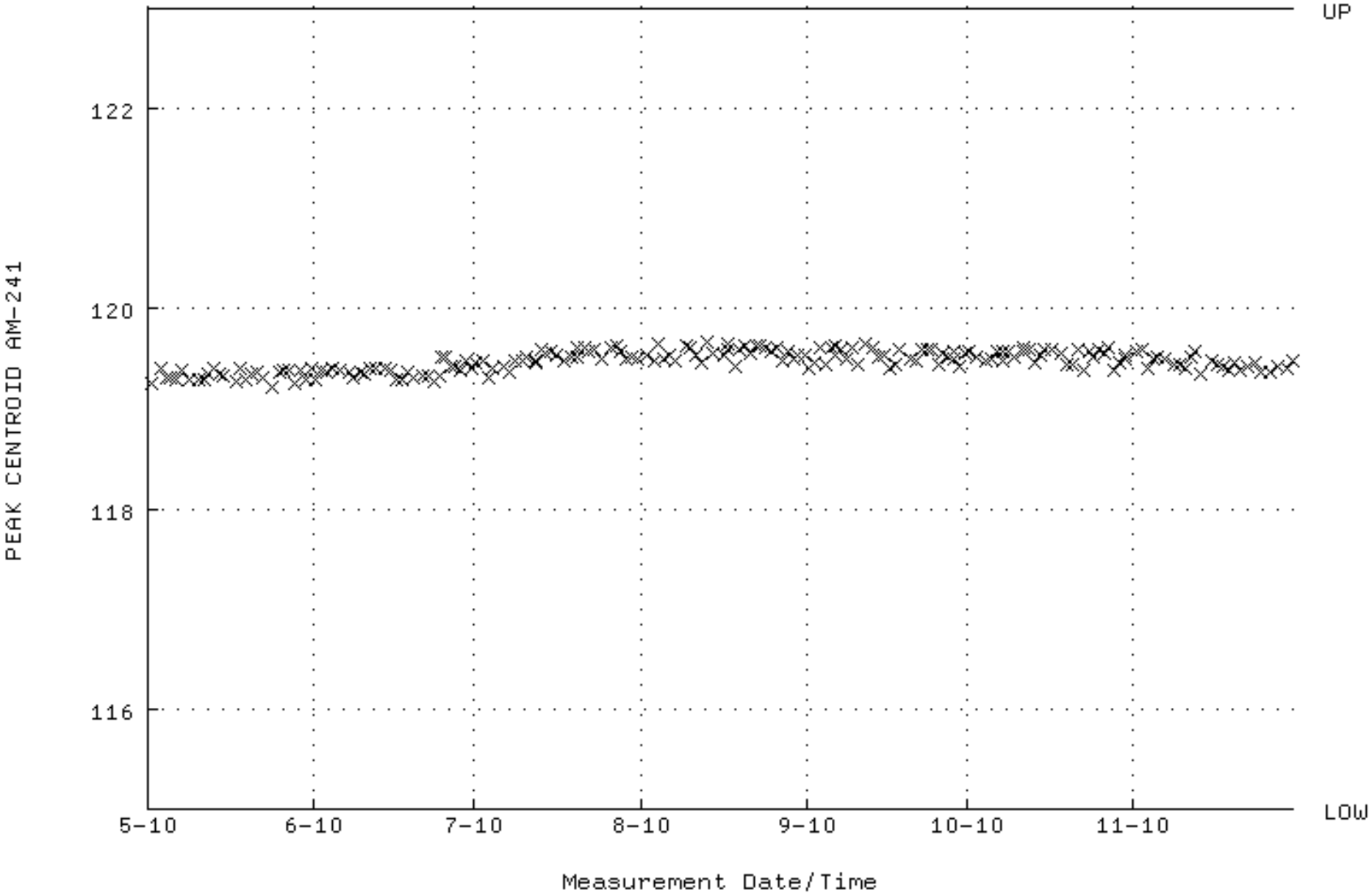
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM12_CAN.QAF;1
Parameter Name : PSCENTRD-59 (PEAK CENTROID AM-241)
Start/End Dates : 1-MAY-2010 14:42:28 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



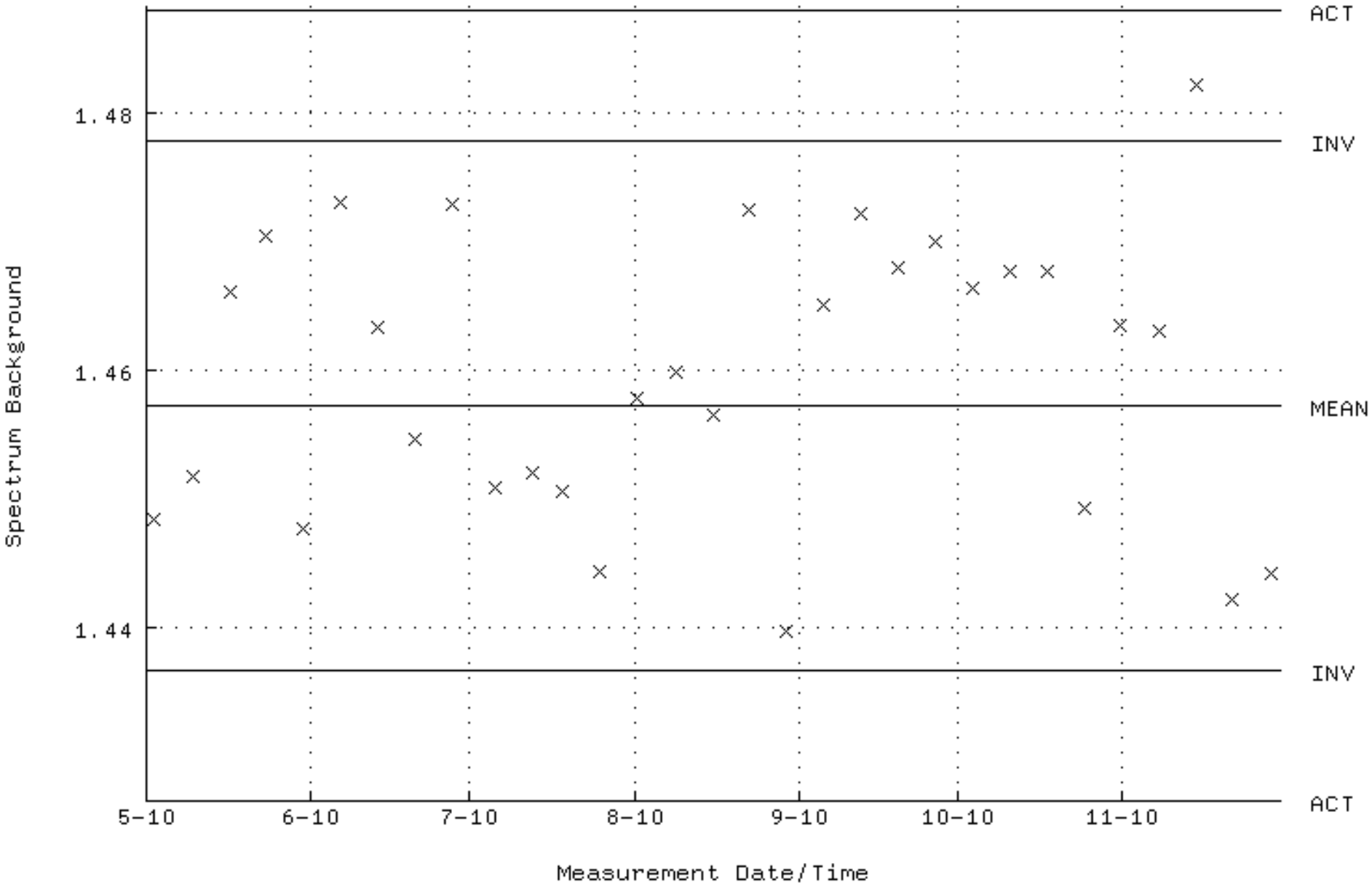
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM12.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-MAY-2010 11:11:07 through 30-NOV-2010 12:00:00
Mean +- Std Dev : 1.55746 +- 1.601675E-02 (1.03 %)



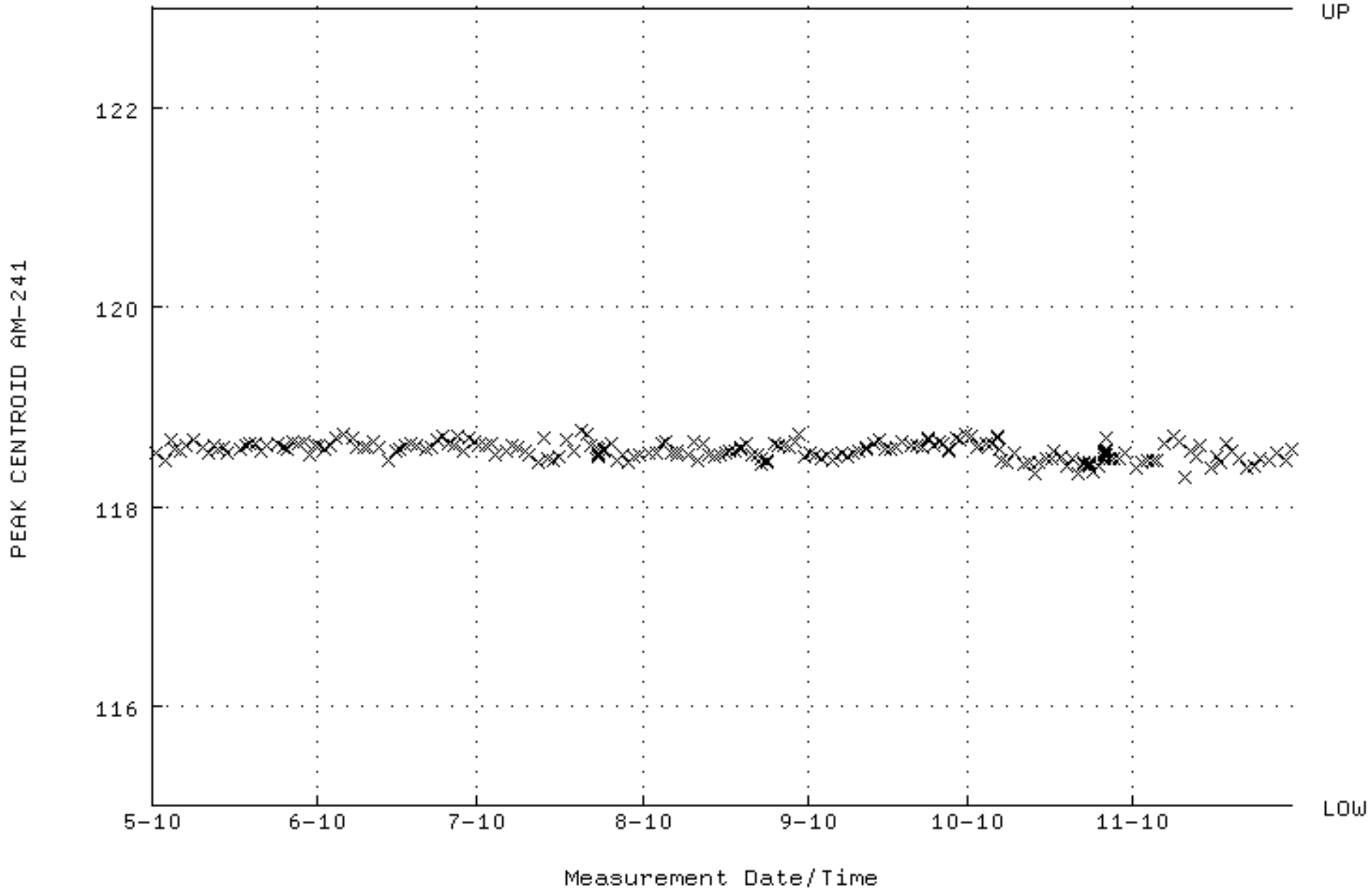
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM20_500MLMB.QAF;1
Parameter Name : PSCENTRD-59 (PEAK CENTROID AM-241)
Start/End Dates : 1-MAY-2010 15:41:15 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



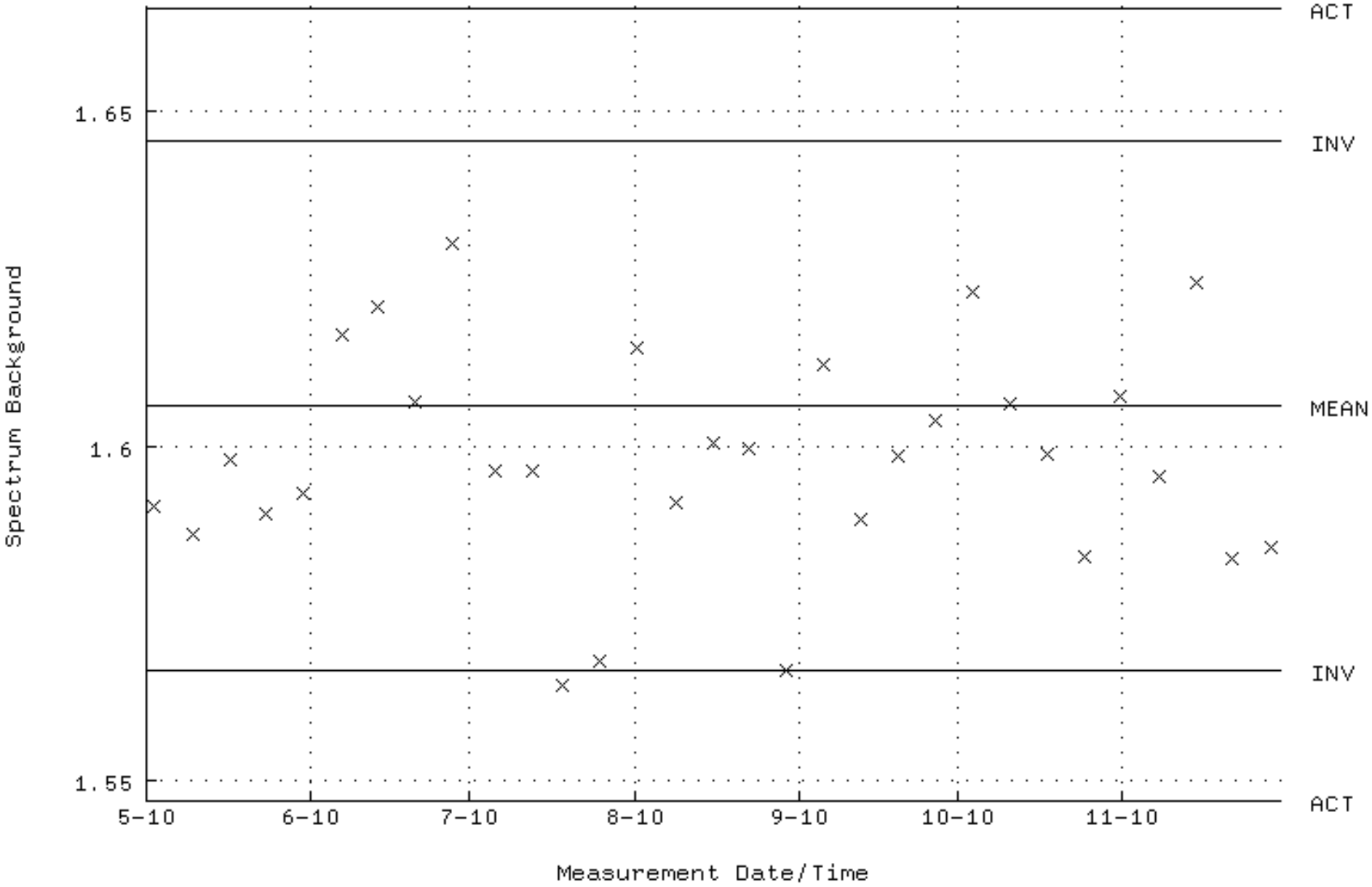
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM20.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-MAY-2010 11:13:53 through 30-NOV-2010 12:00:00
Mean +- Std Dev : 1.45726 +- 1.026917E-02 (0.70 %)



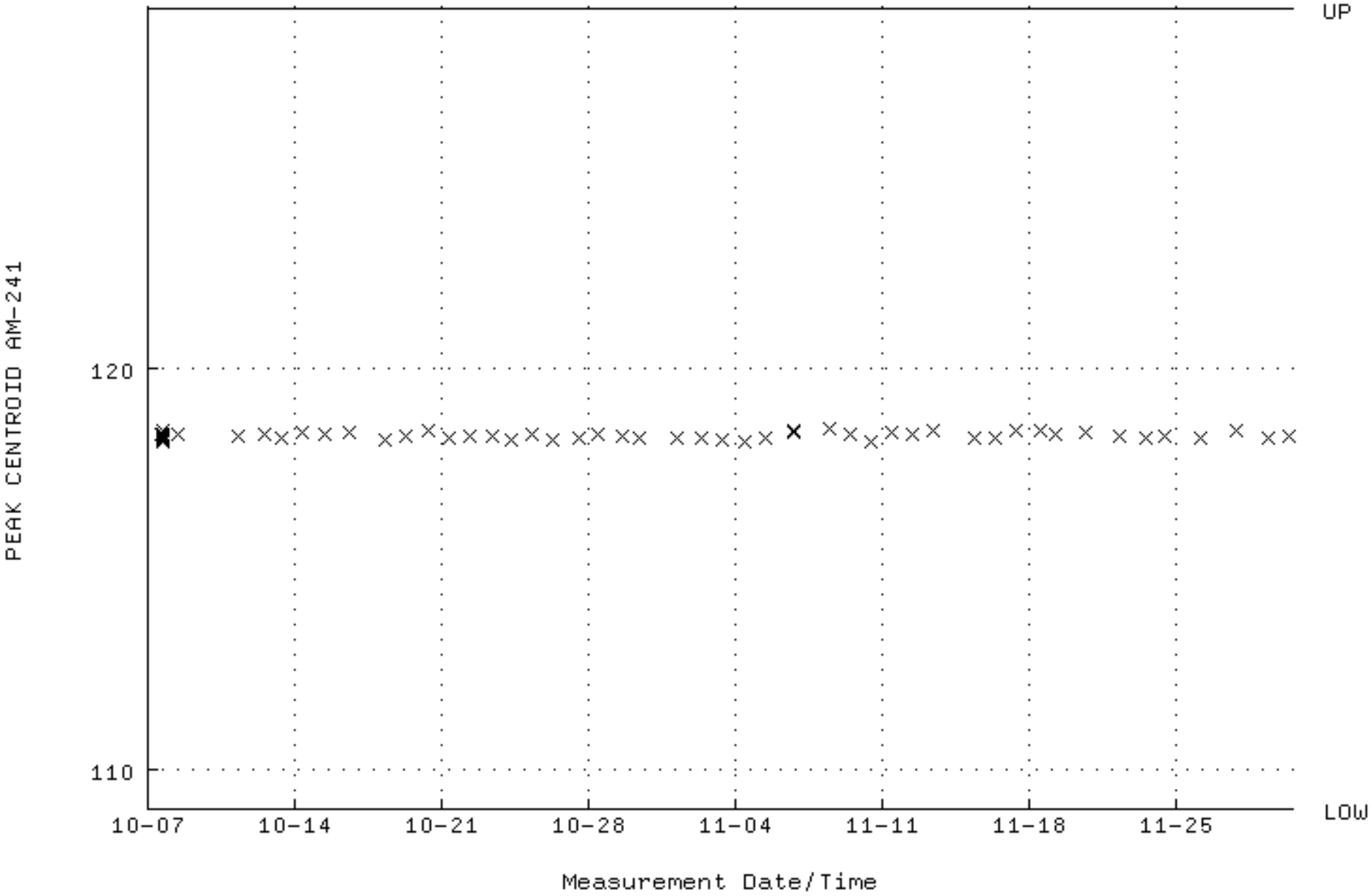
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM25_CAN.QAF;1
Parameter Name : PSCENTRD-59 (PEAK CENTROID AM-241)
Start/End Dates : 1-MAY-2010 14:57:50 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



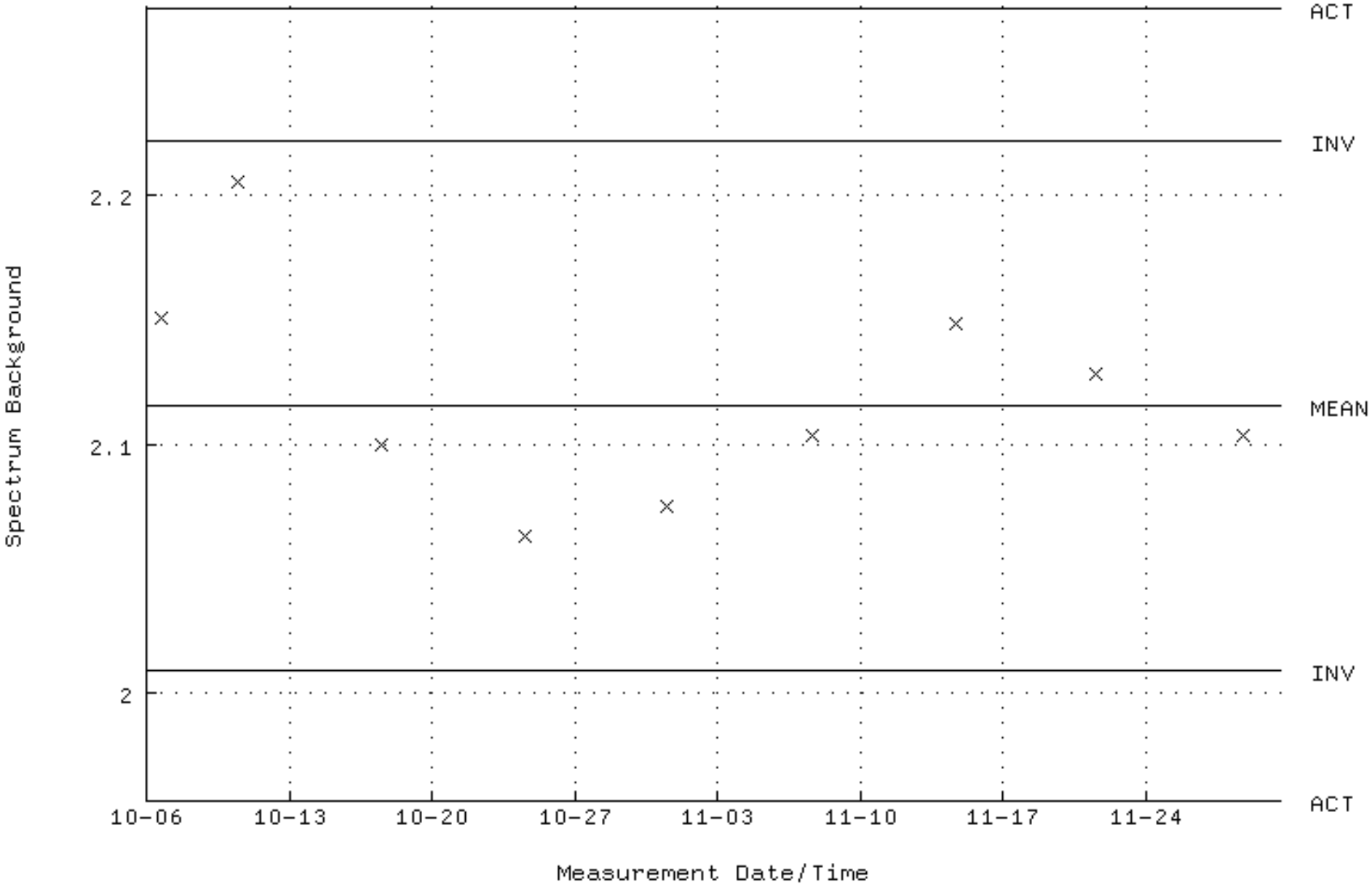
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM25.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-MAY-2010 11:15:14 through 30-NOV-2010 12:00:00
Mean +- Std Dev : 1.60614 +- 1.973761E-02 (1.23 %)

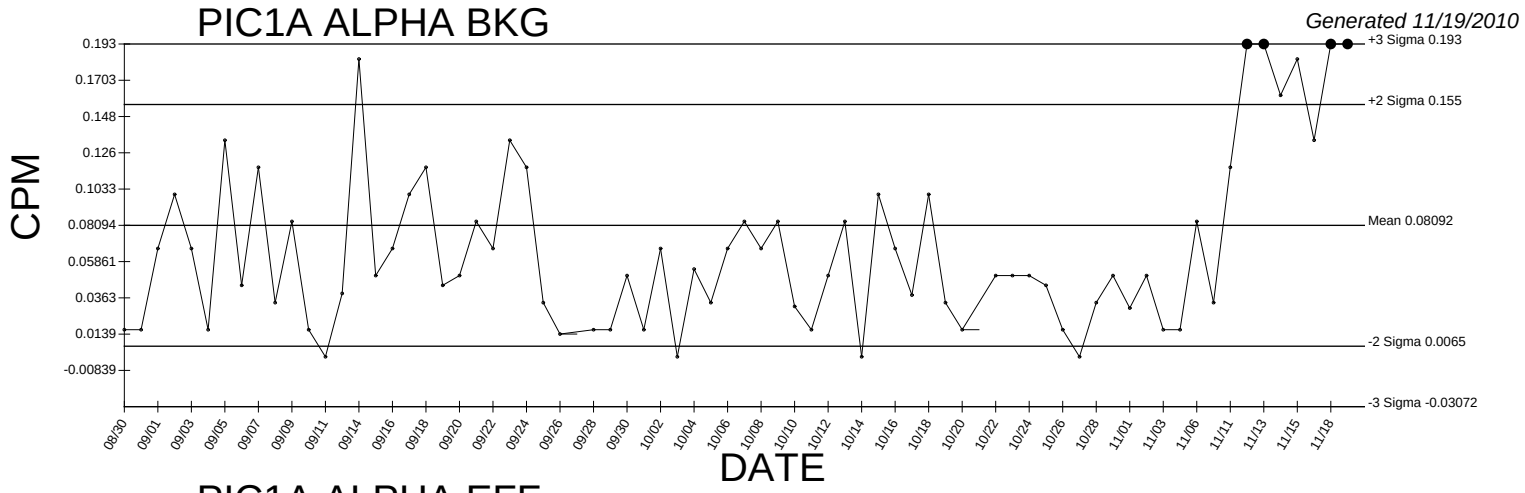


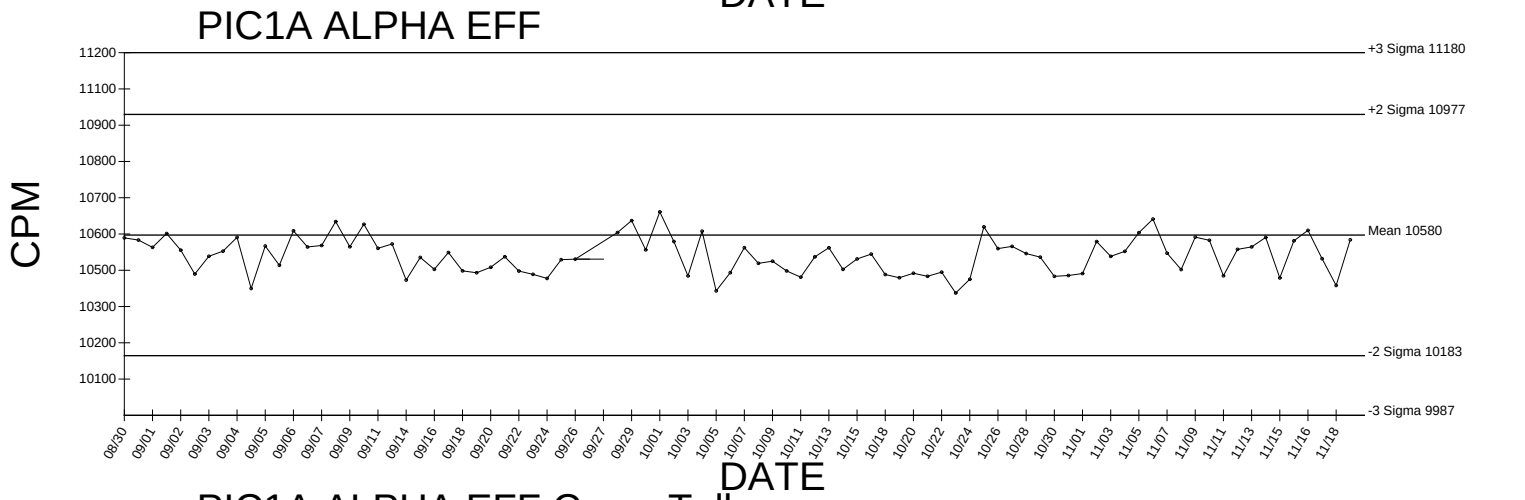
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM28_JAR.QAF;1
Parameter Name : PSCENTRD-59 (PEAK CENTROID AM-241)
Start/End Dates : 7-OCT-2010 16:05:37 through 30-NOV-2010 12:00:00
Lower/Upper Lmts: 109.000 through 129.000

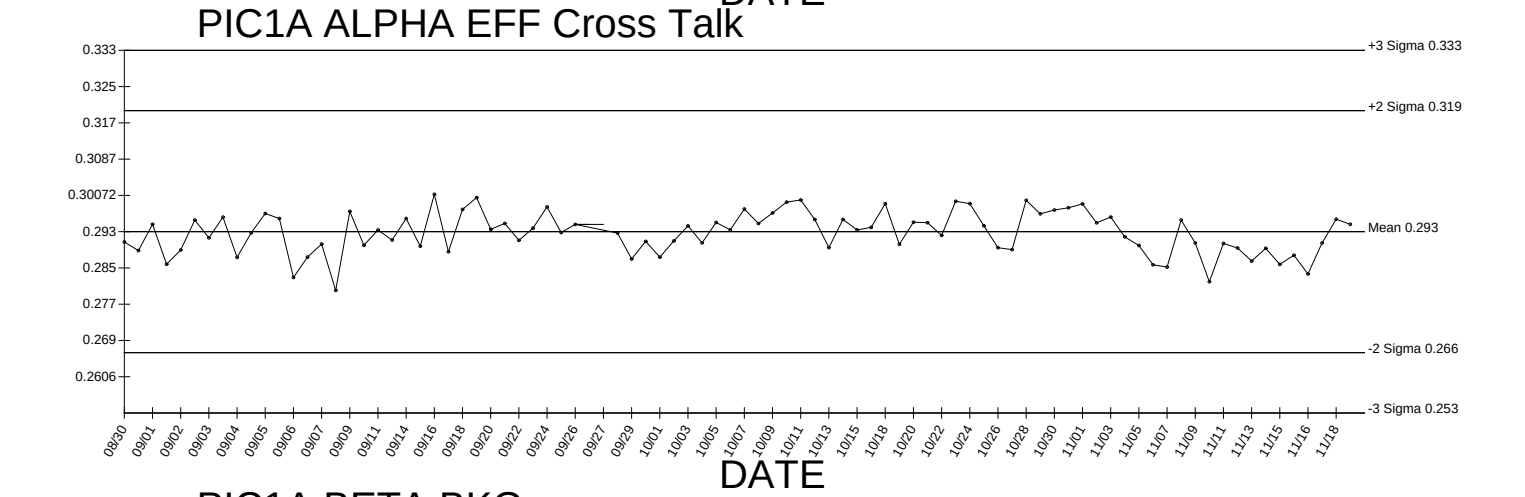


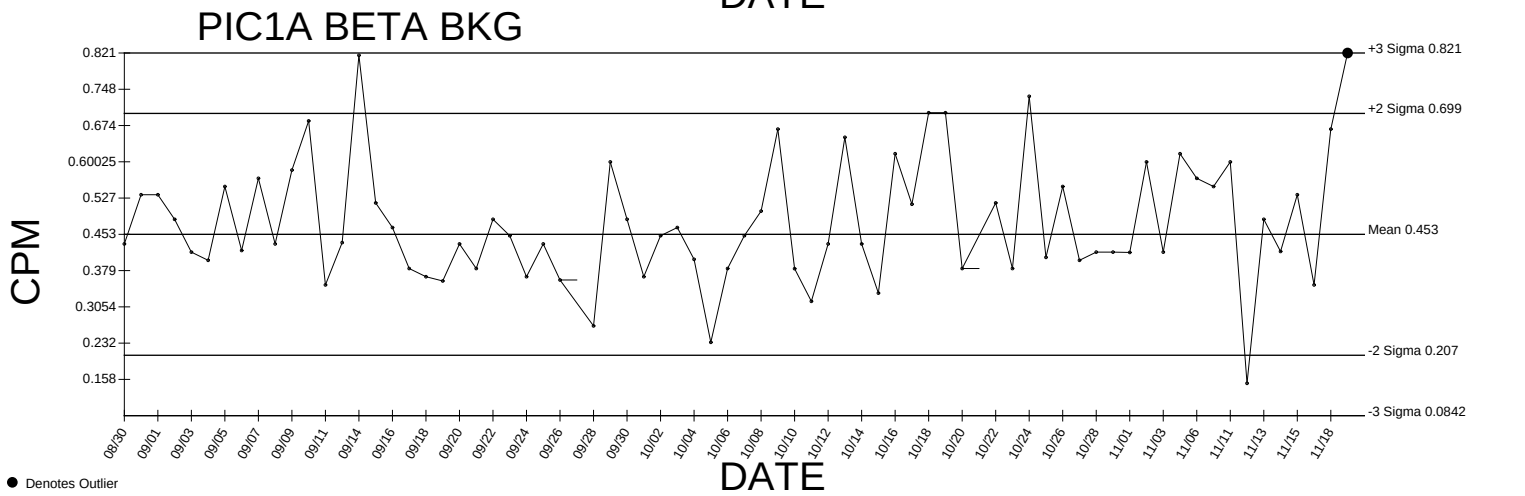
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM28.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 6-OCT-2010 17:28:52 through 30-NOV-2010 12:00:00
Mean +- Std Dev : 2.11597 +- 5.308584E-02 (2.51 %)



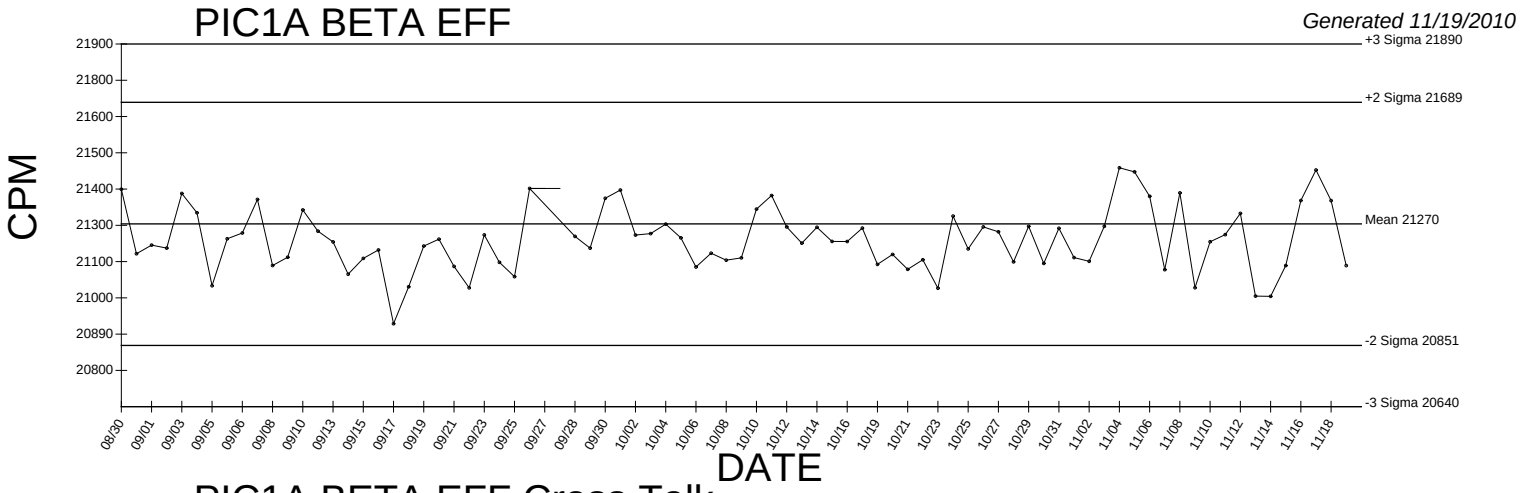


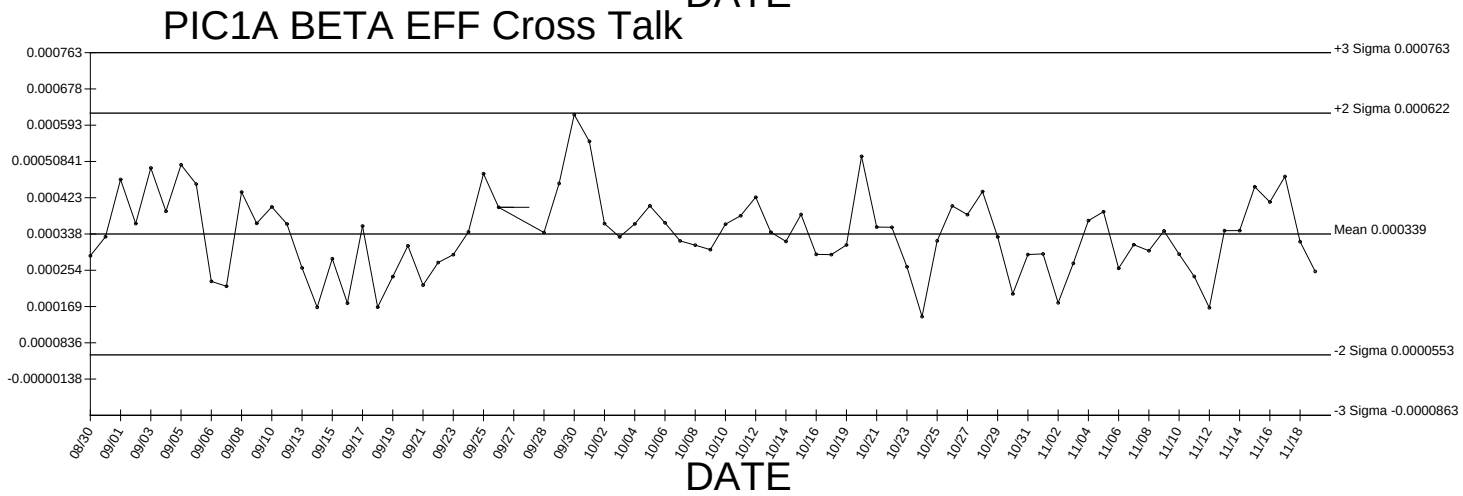






● Denotes Outlier





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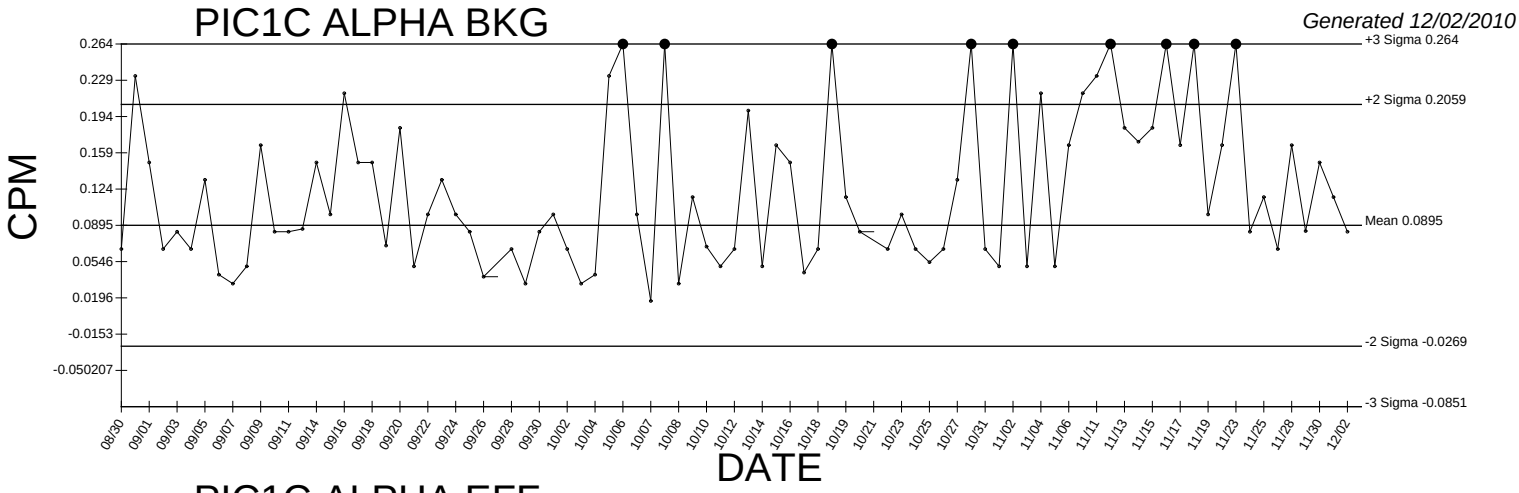

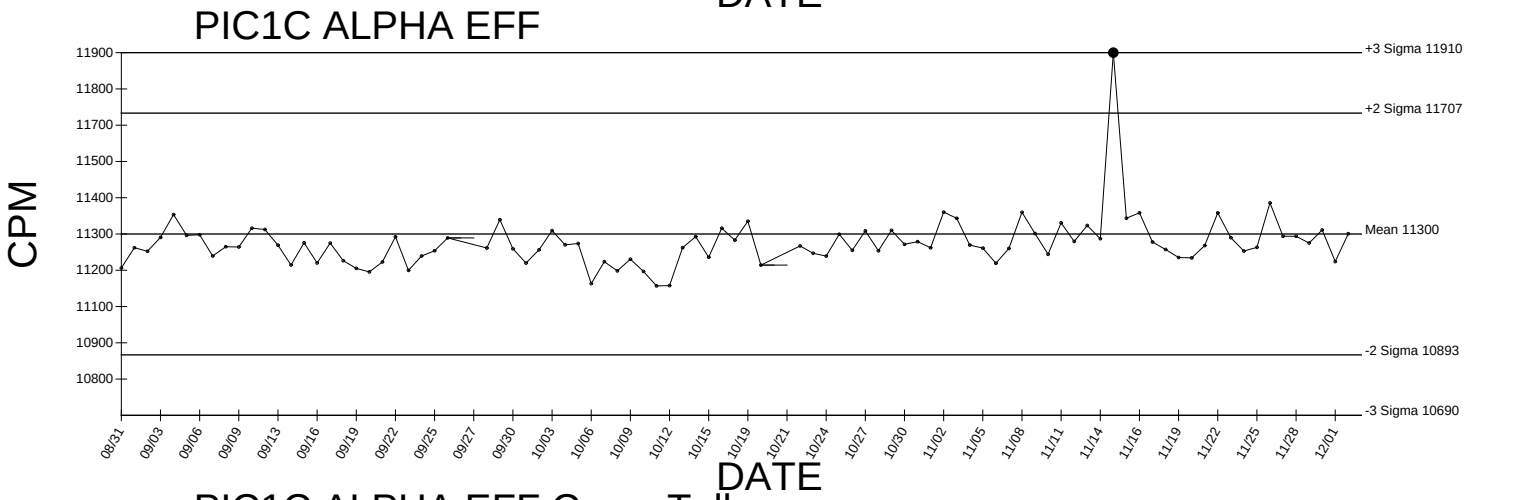

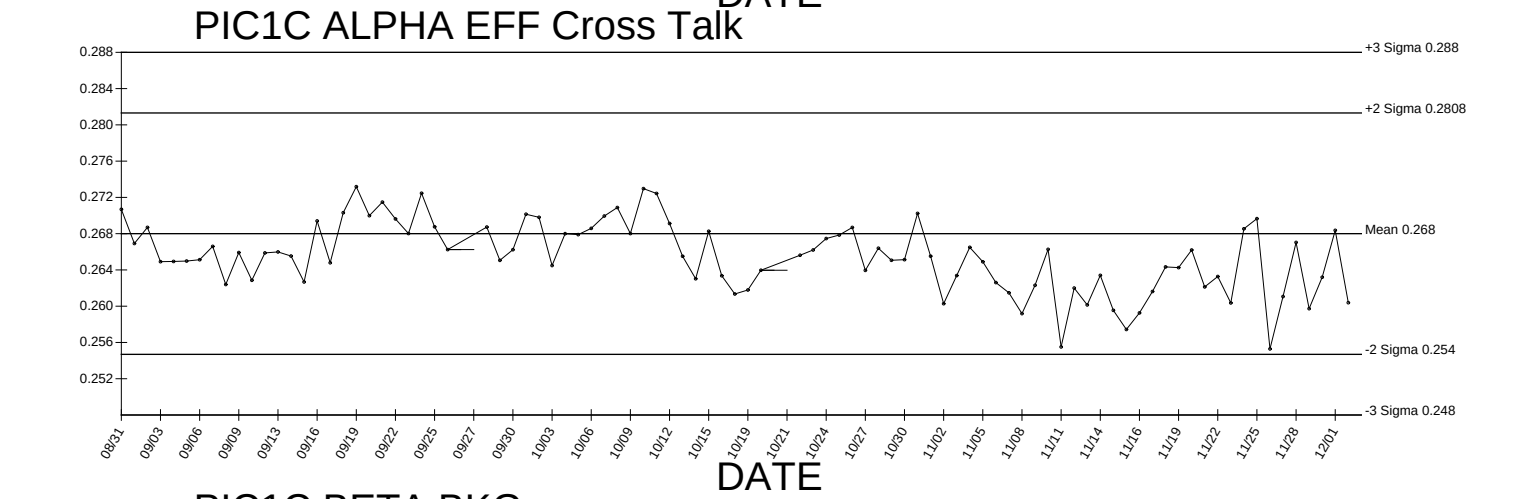

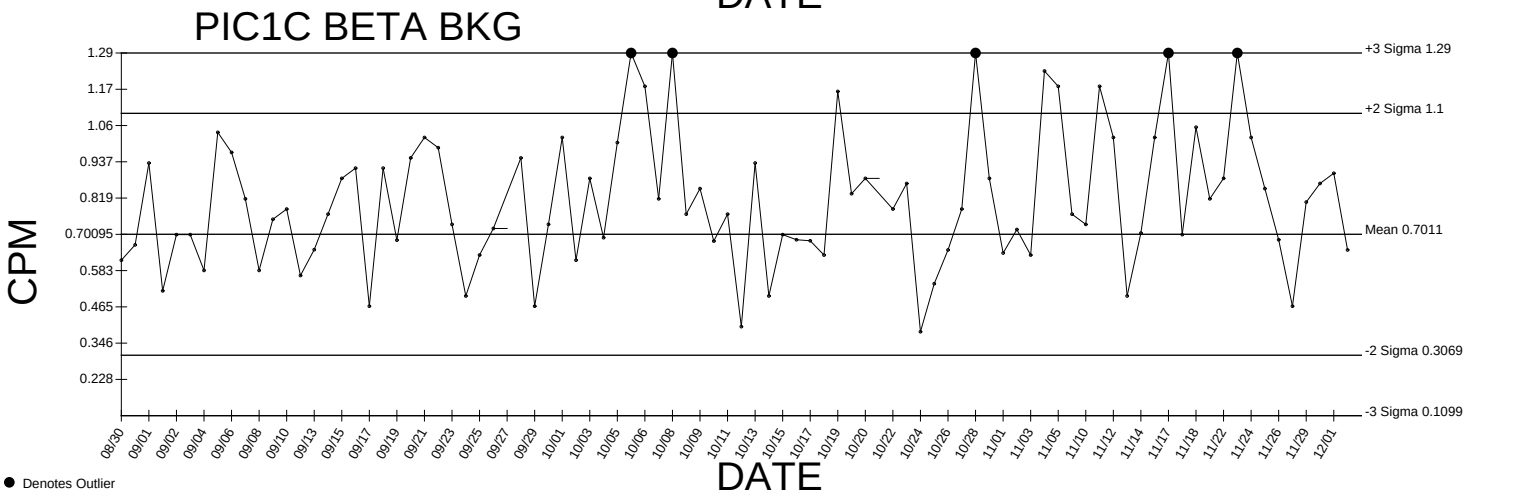

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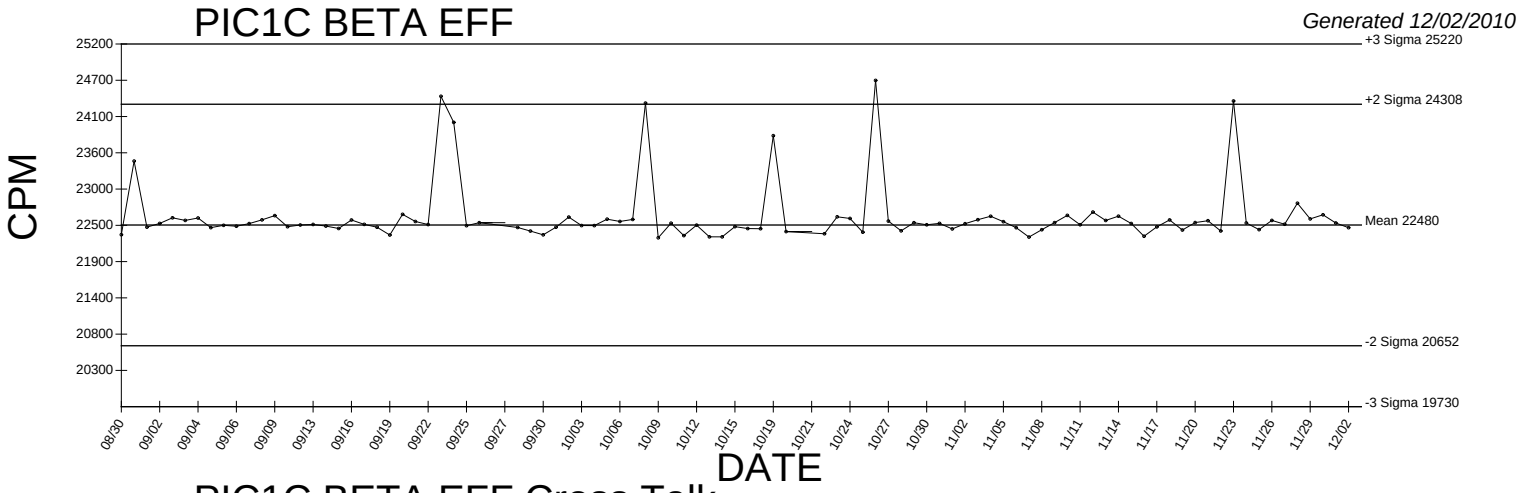

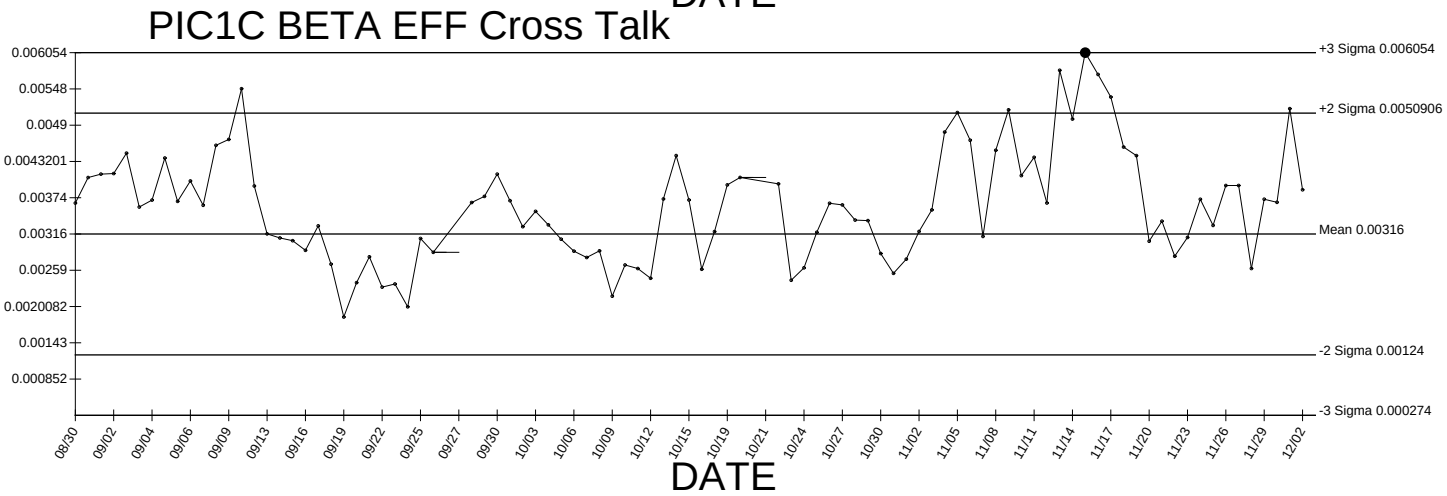

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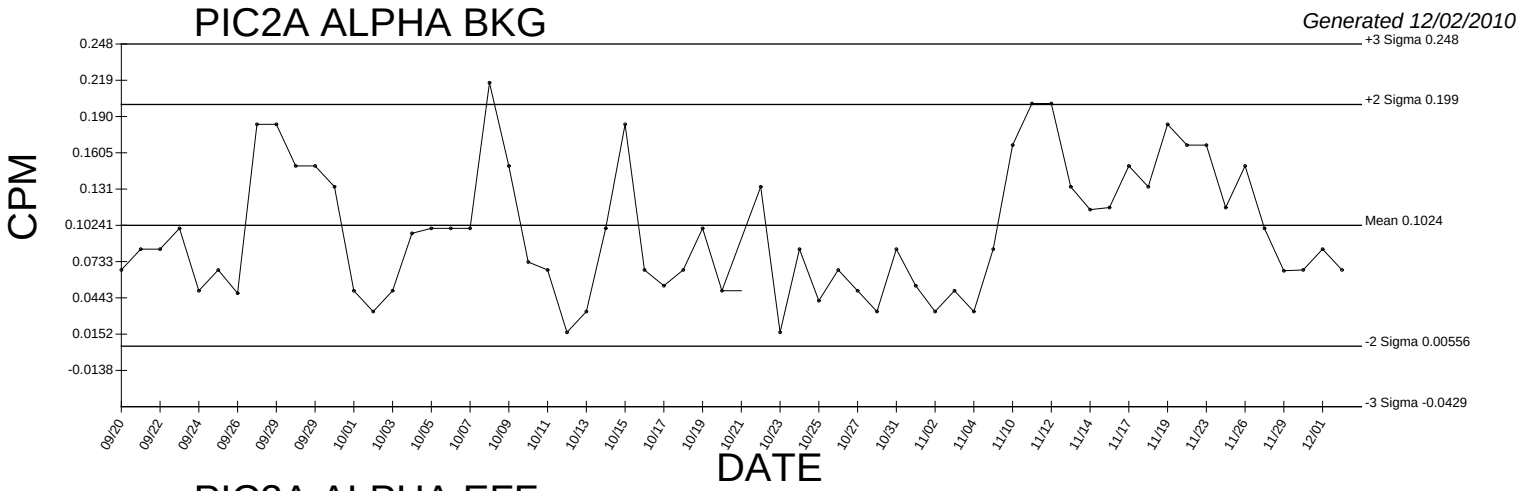

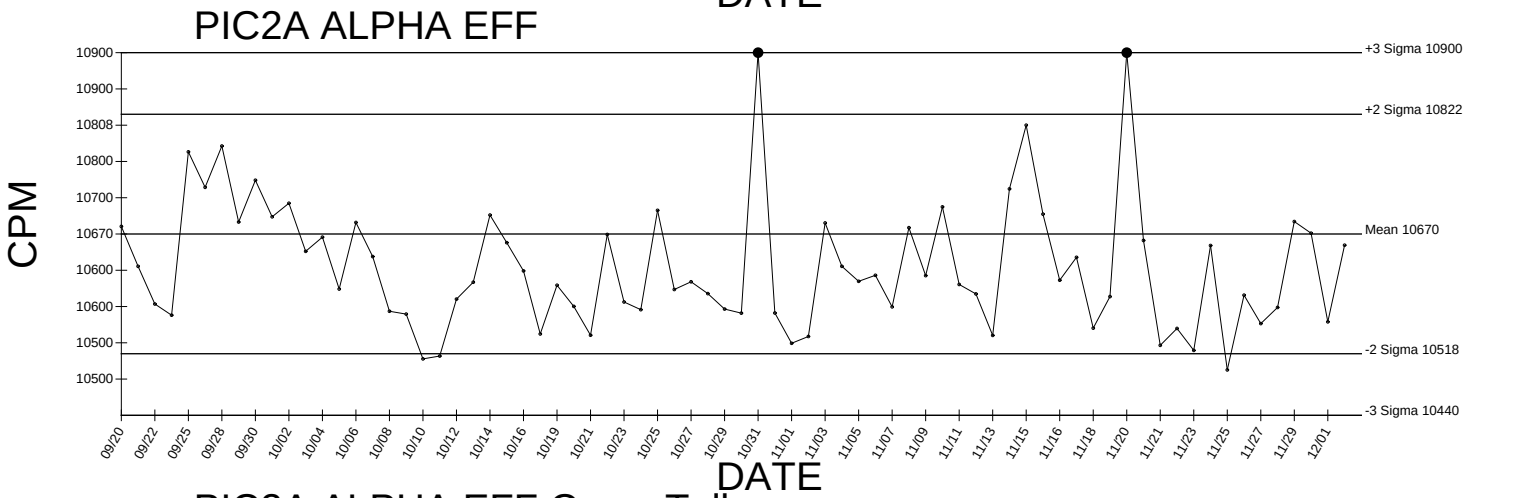

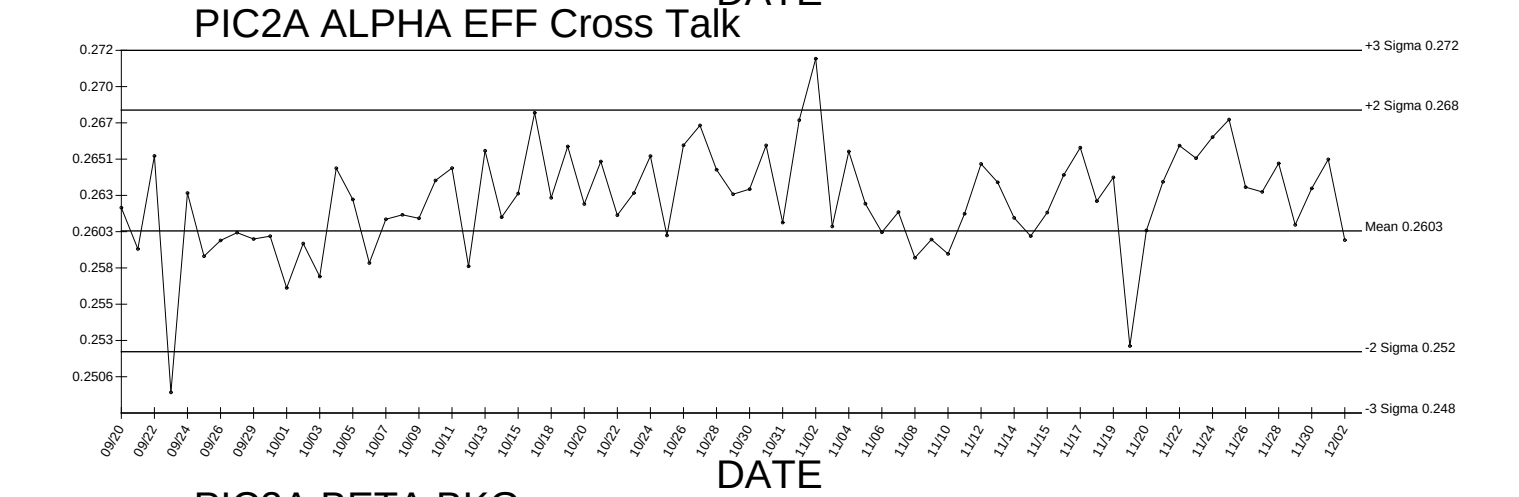

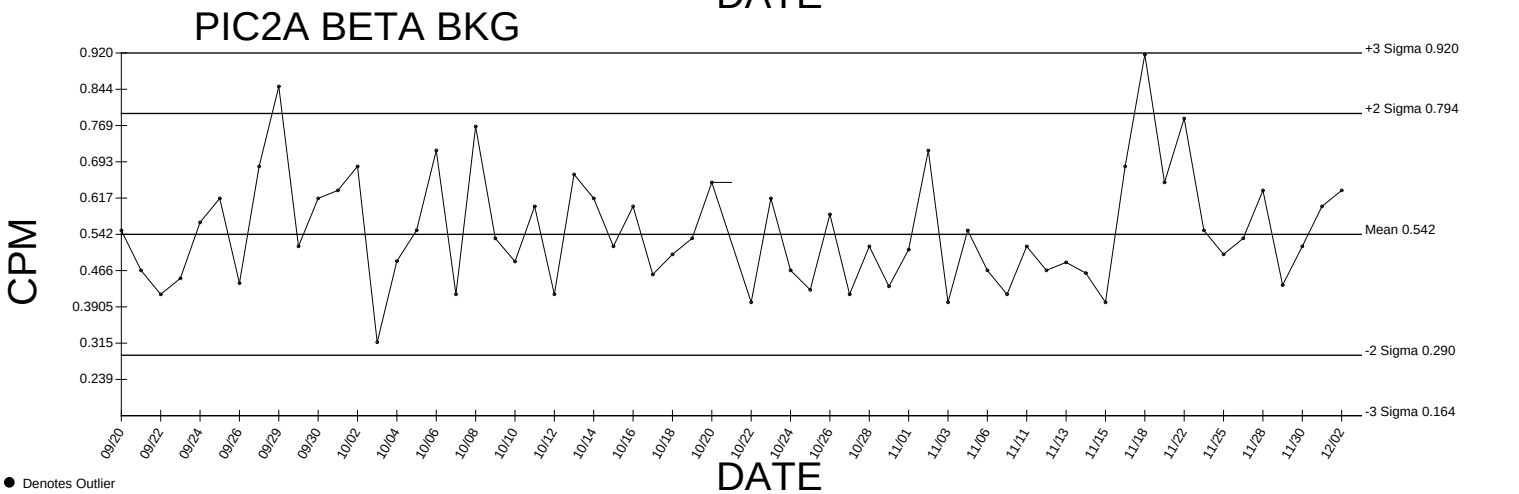

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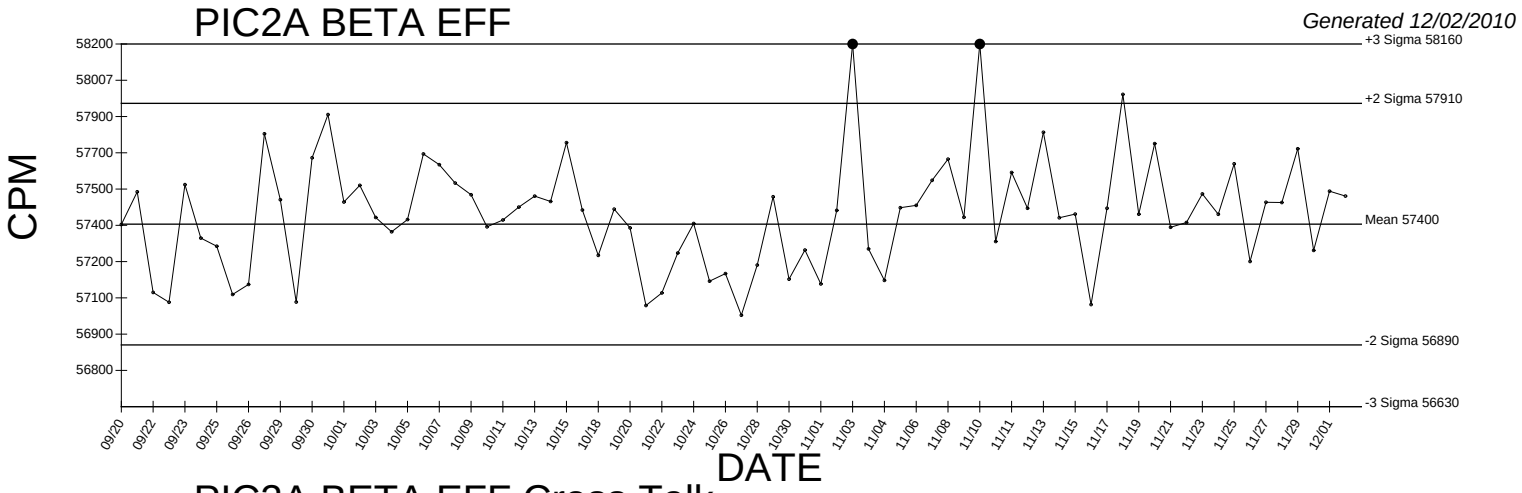

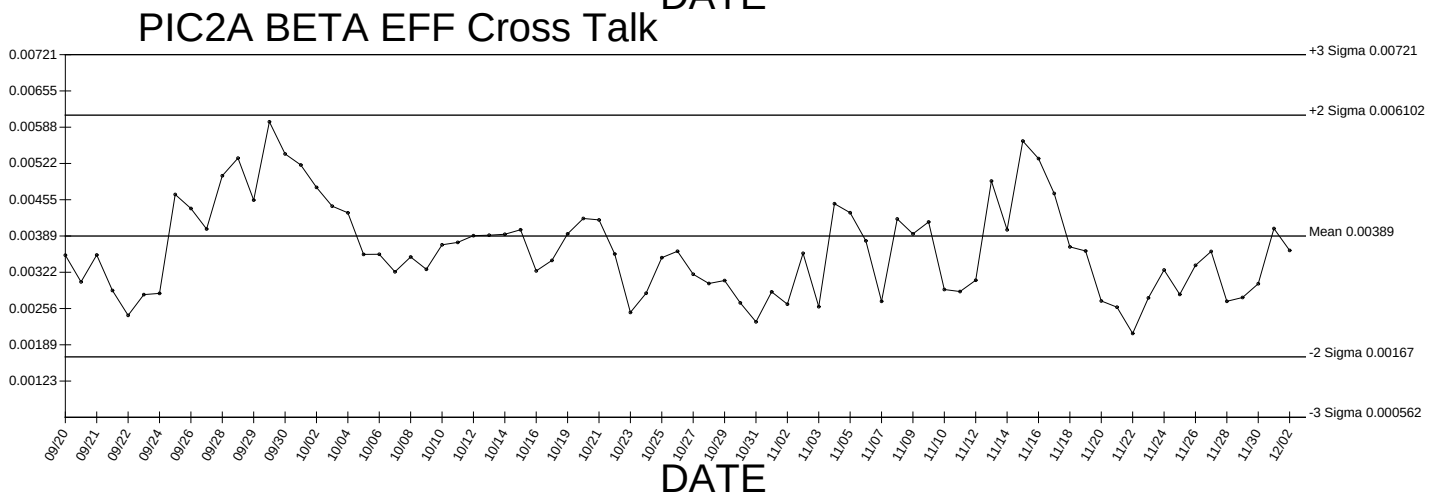

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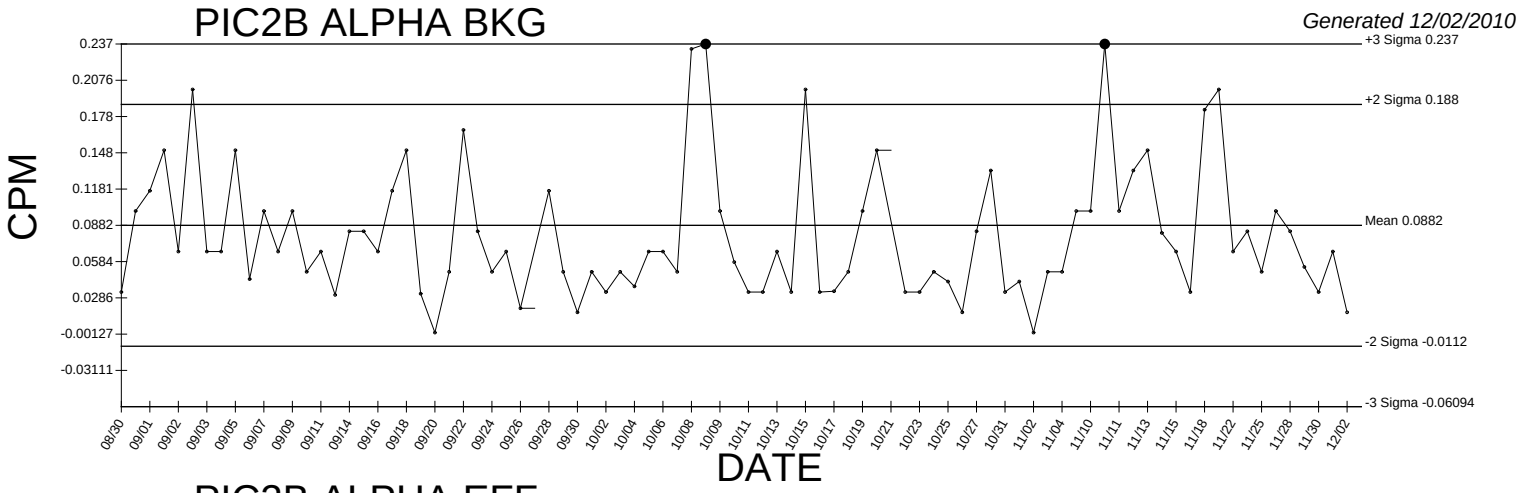

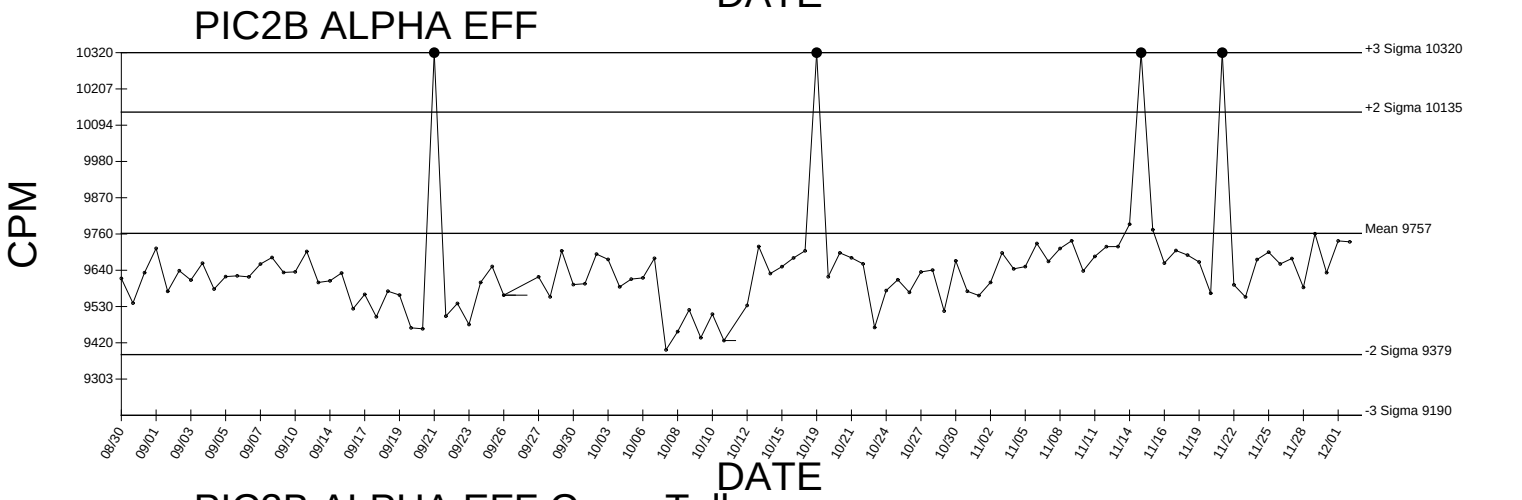

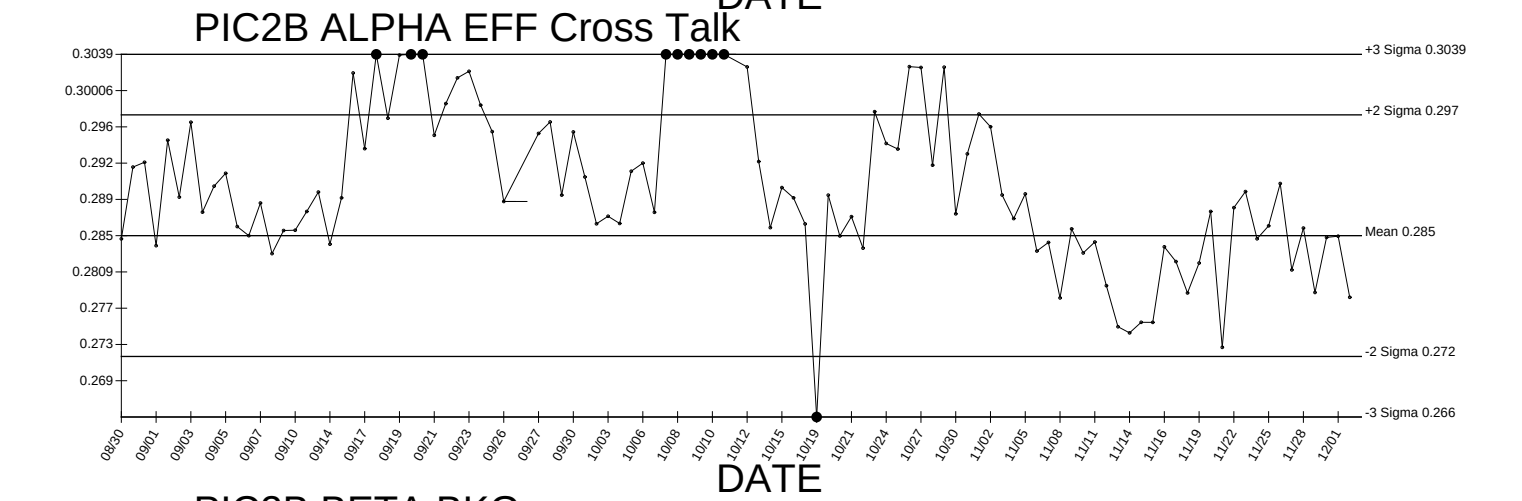

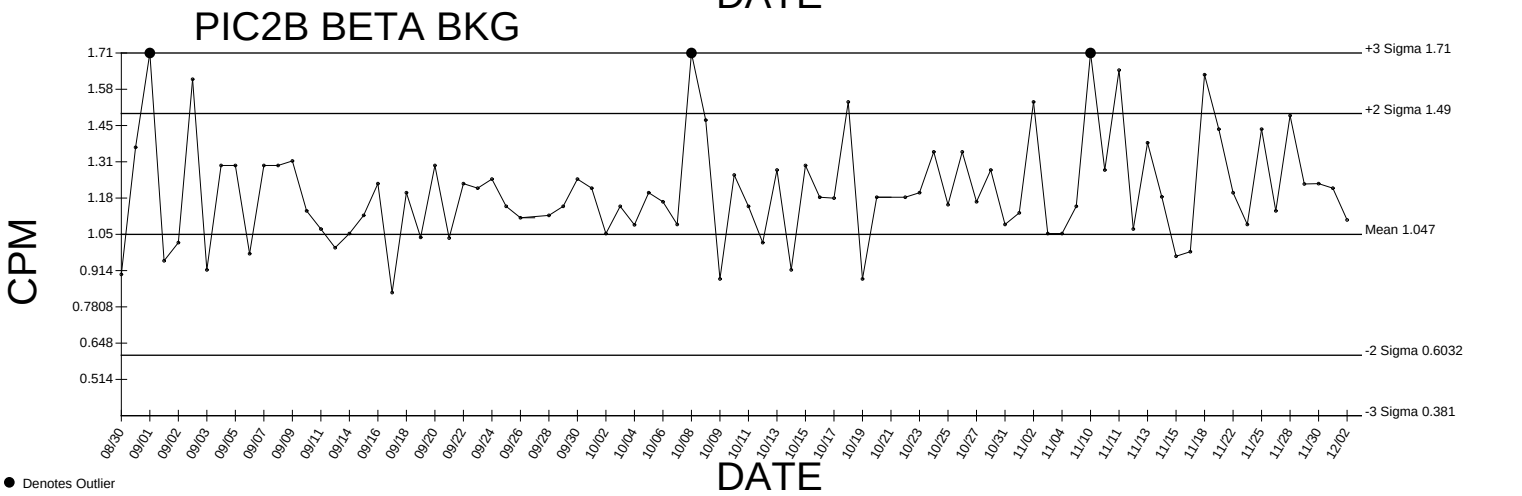

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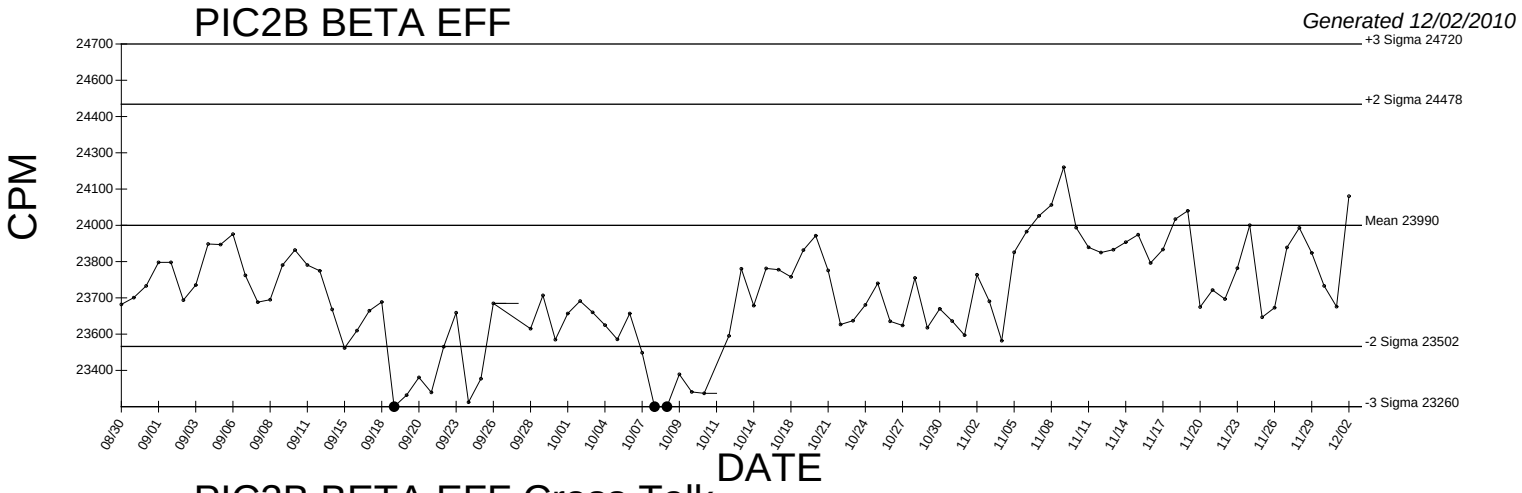

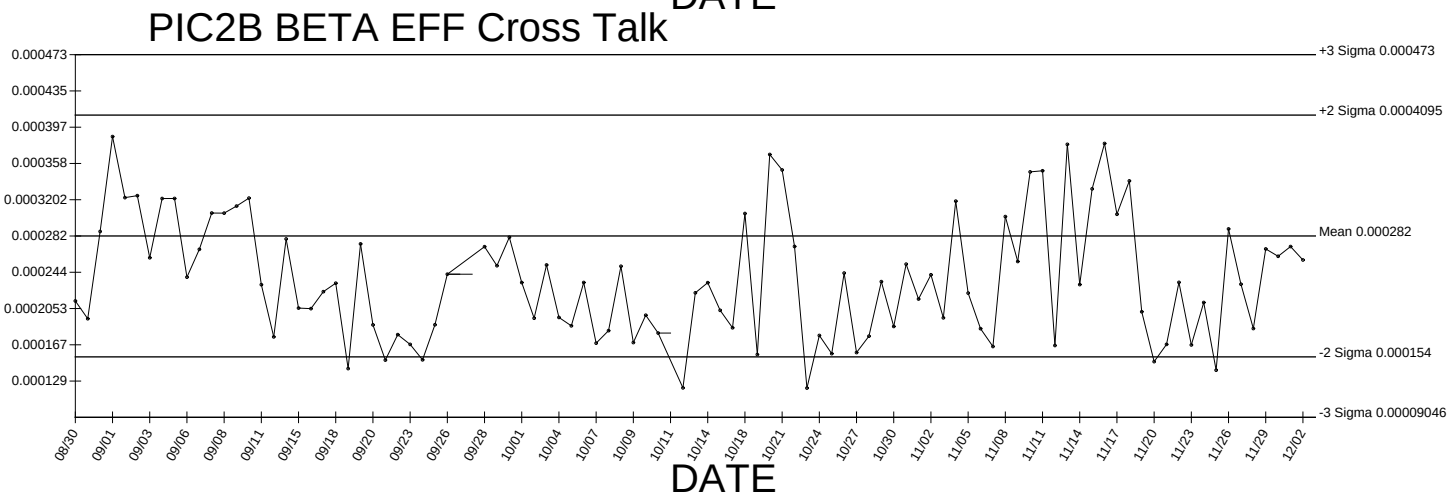

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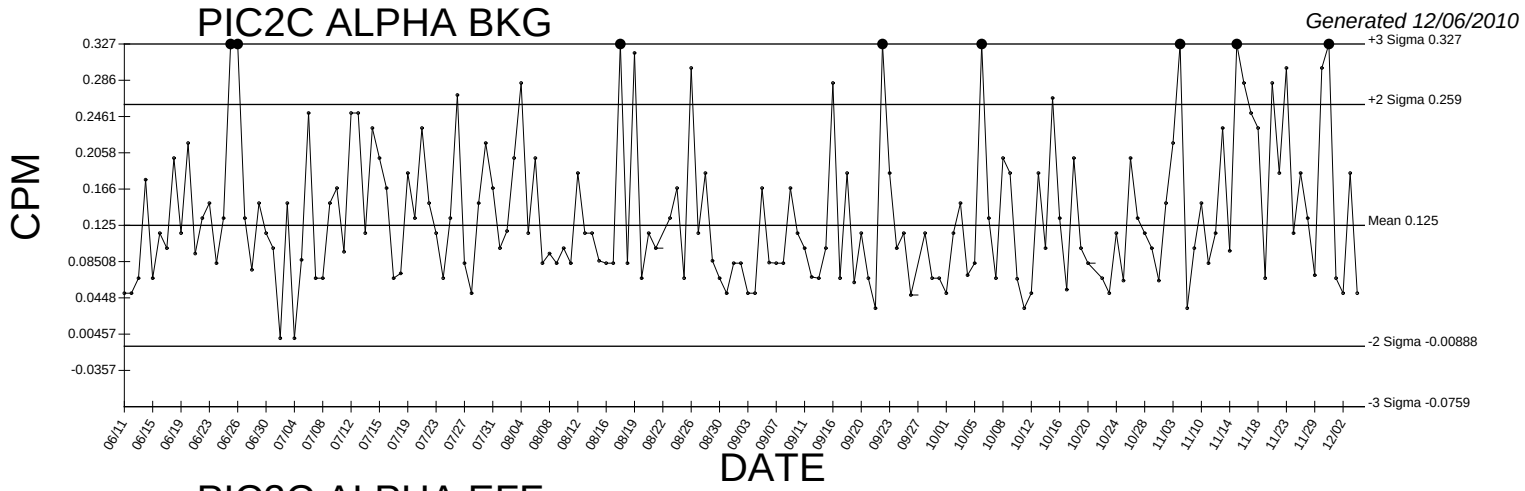

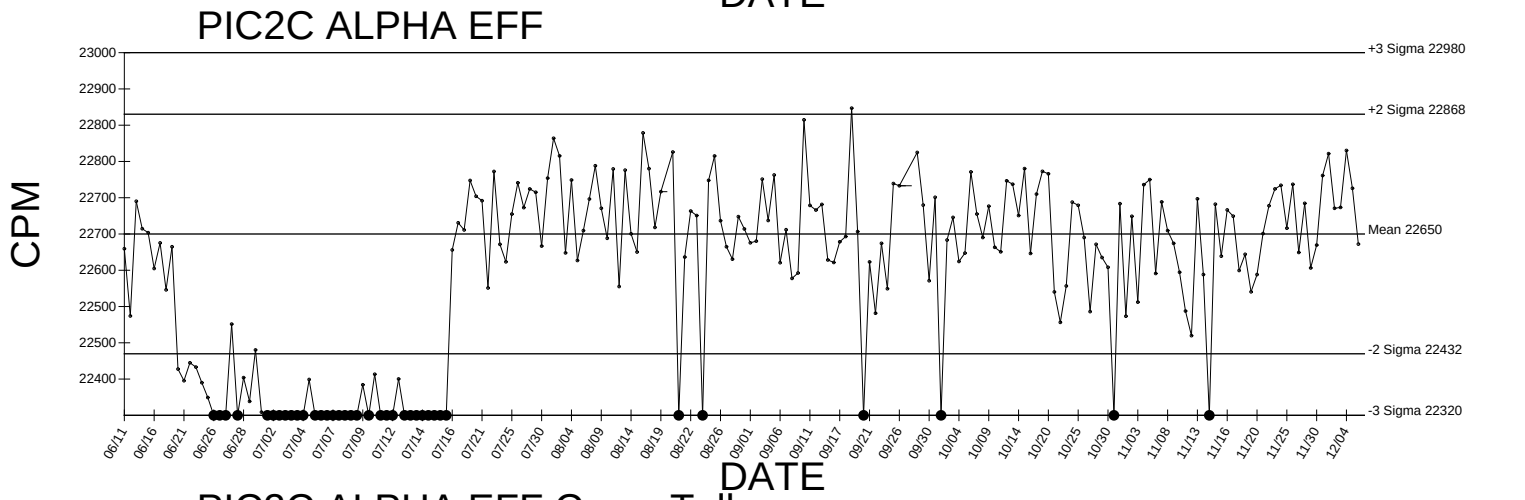

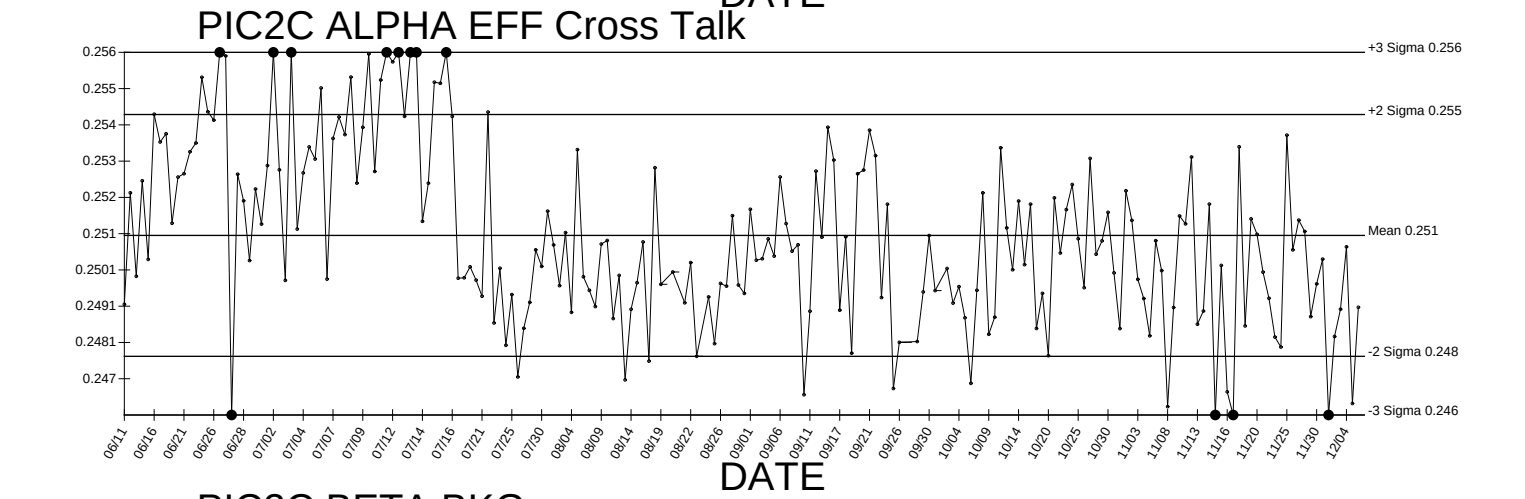

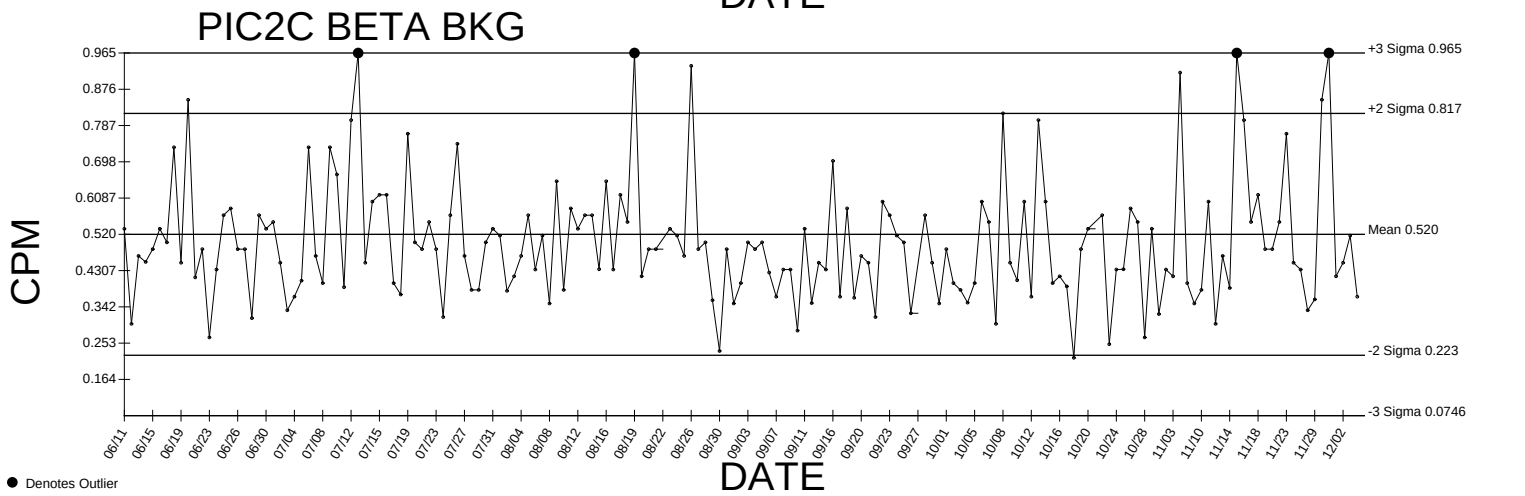

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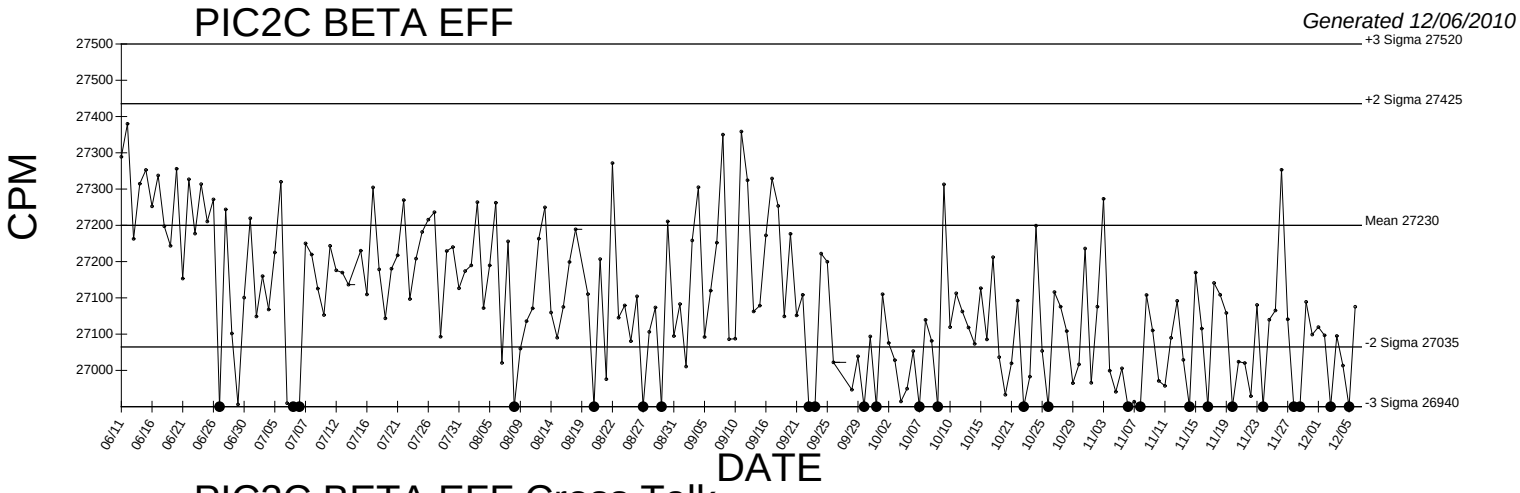

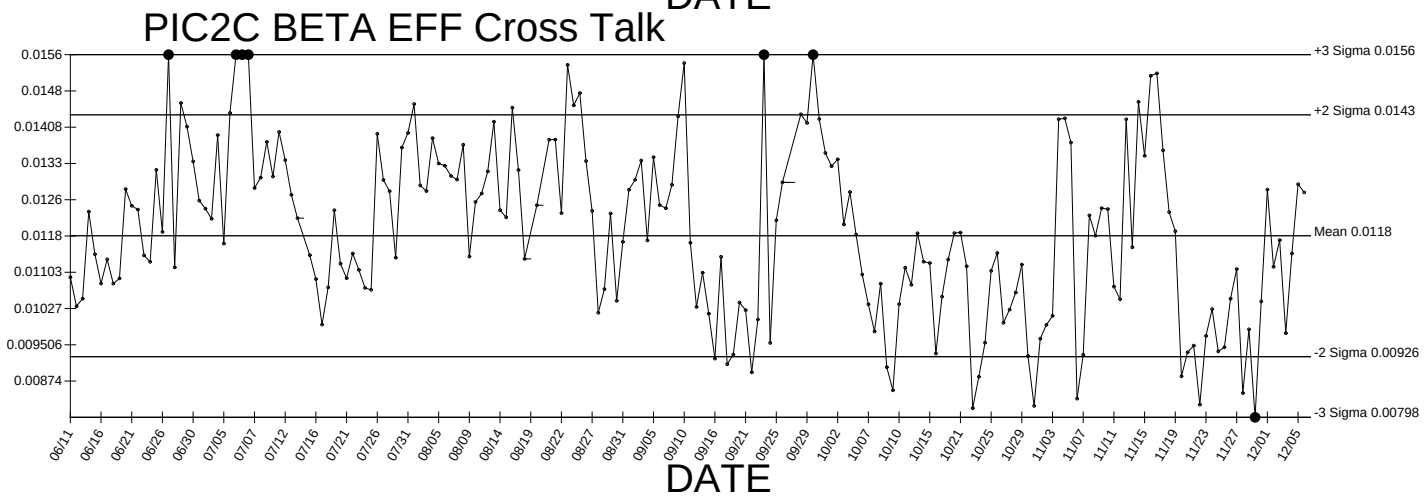

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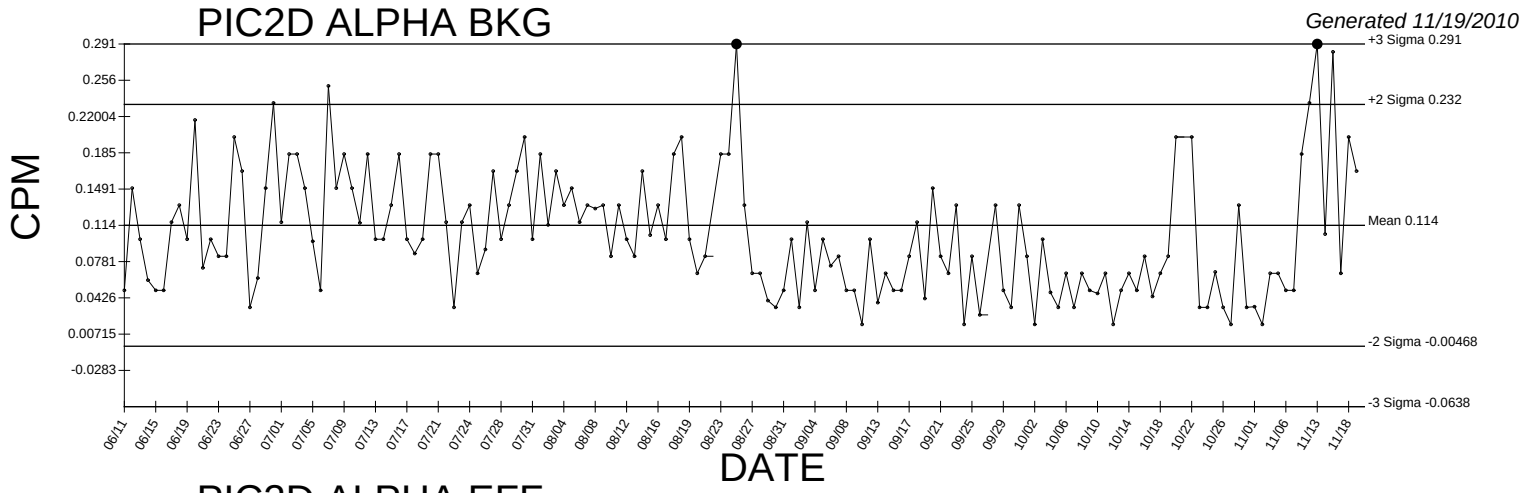

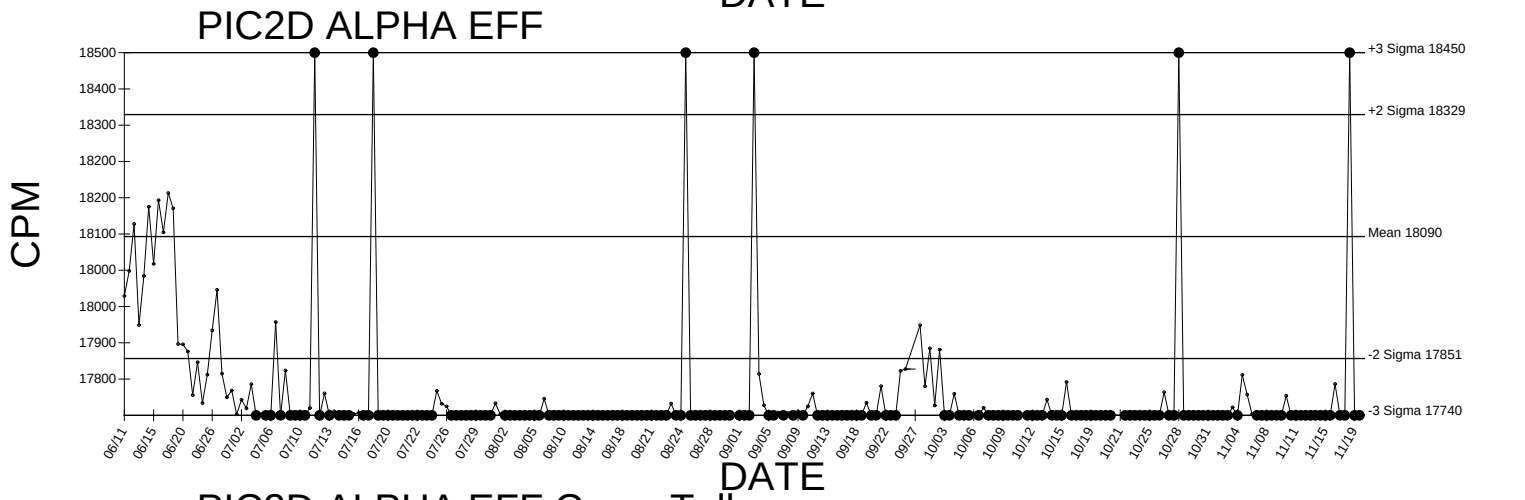

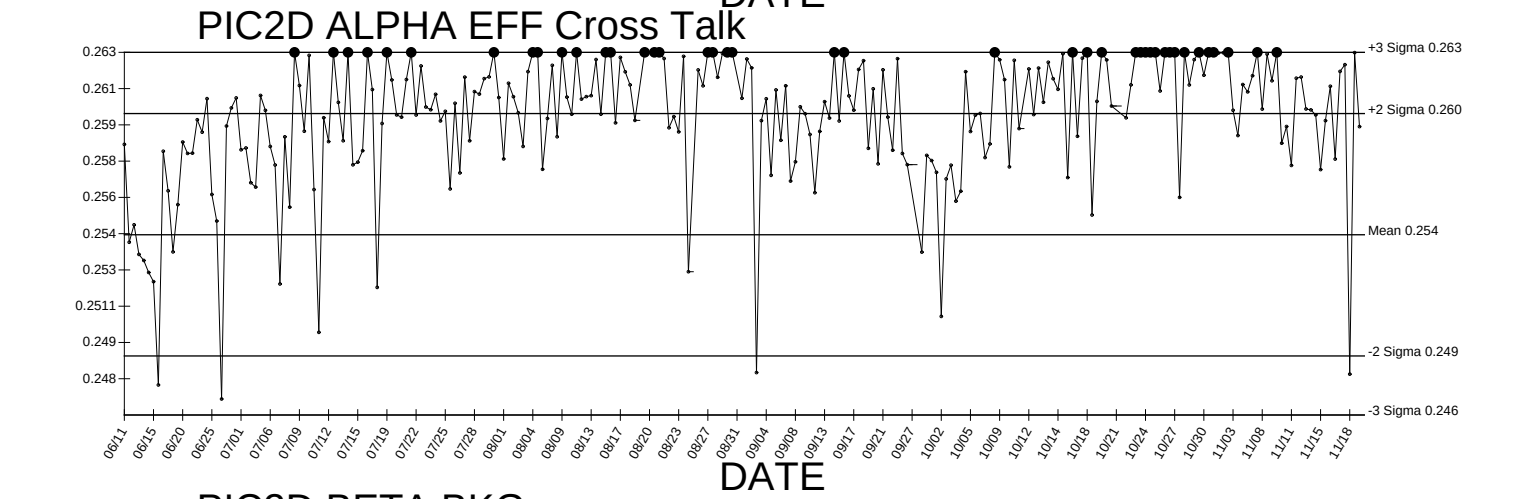

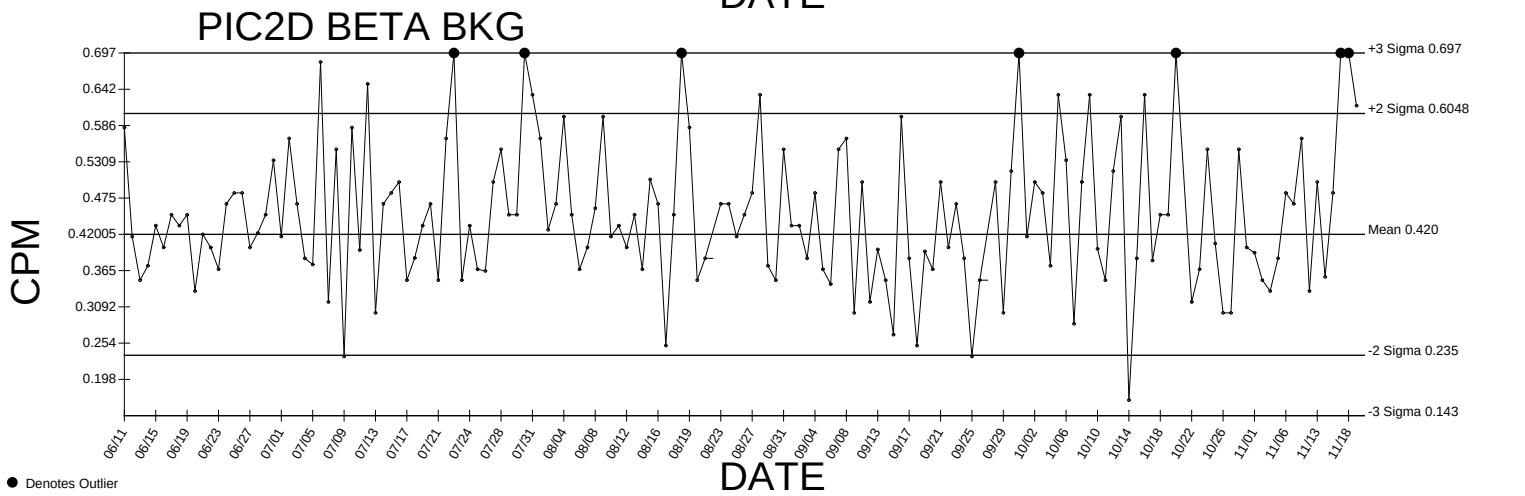

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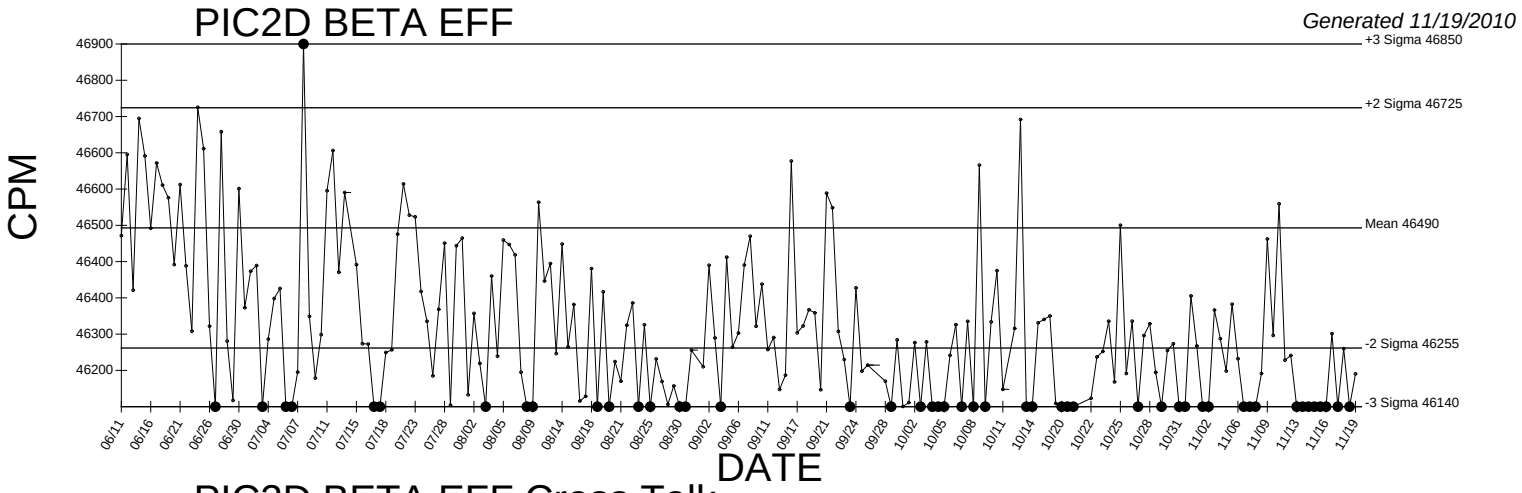

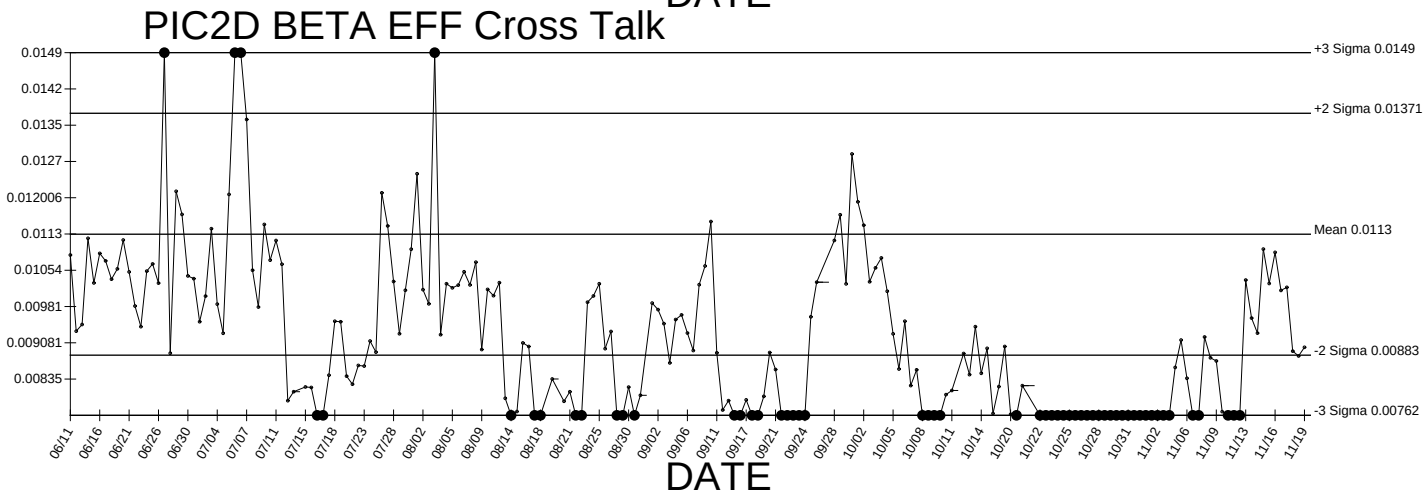

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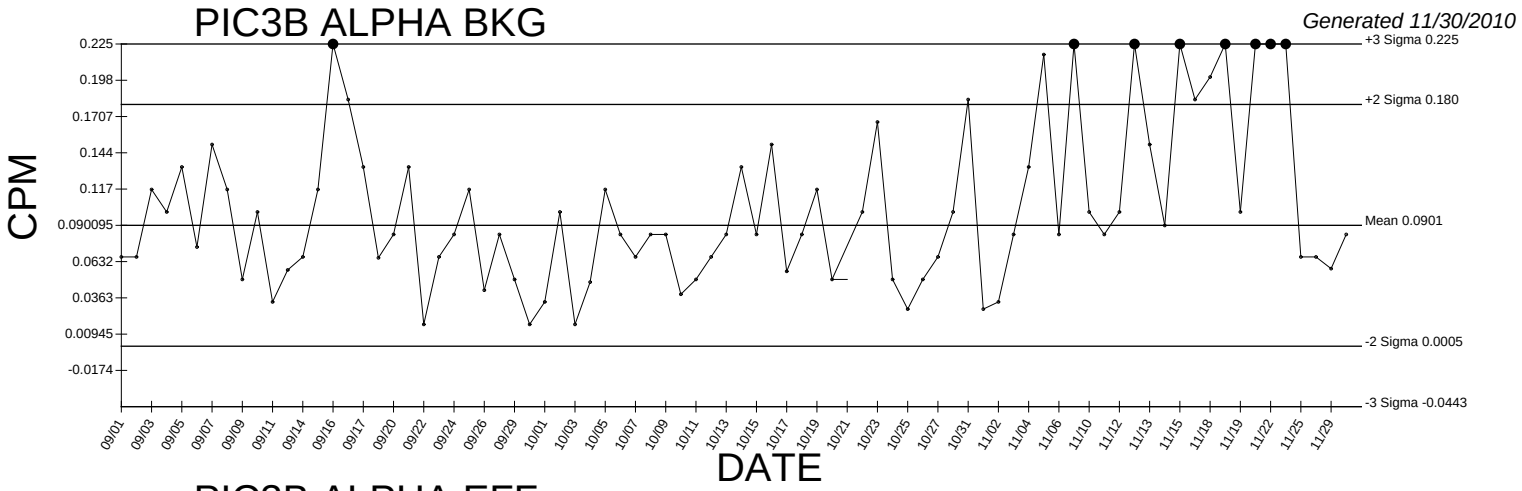

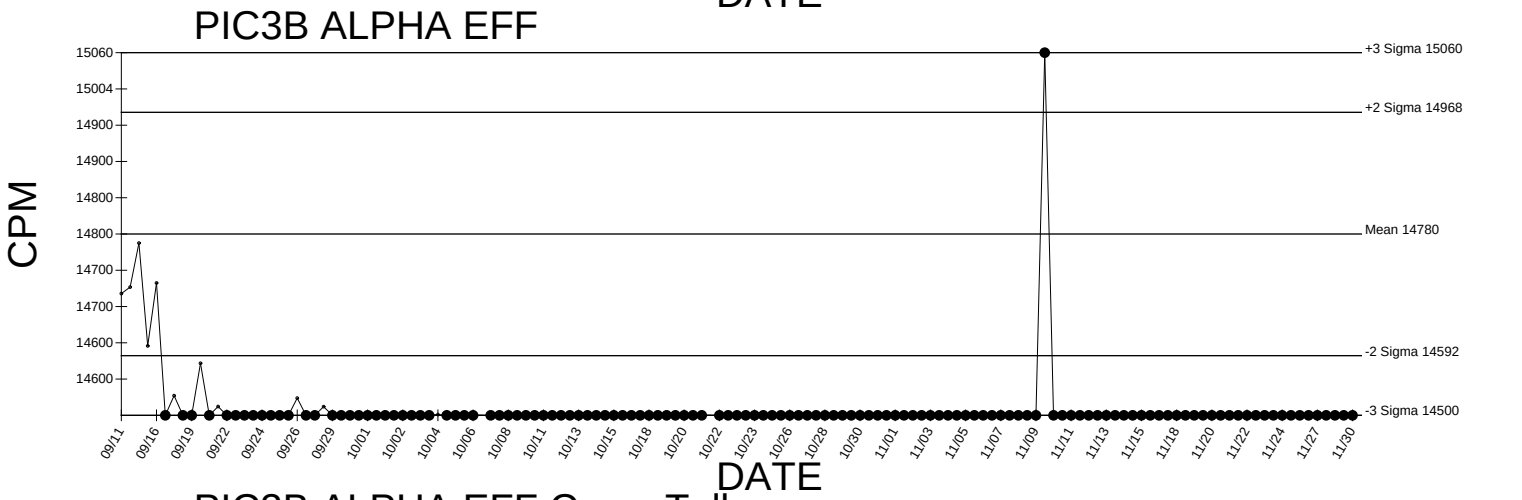

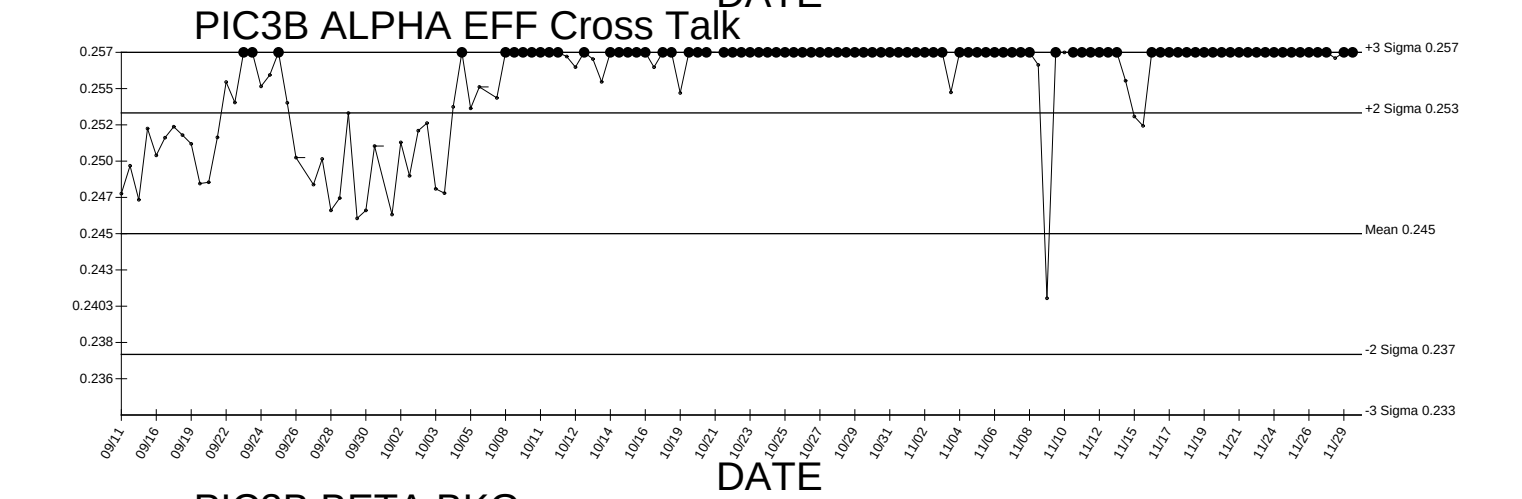

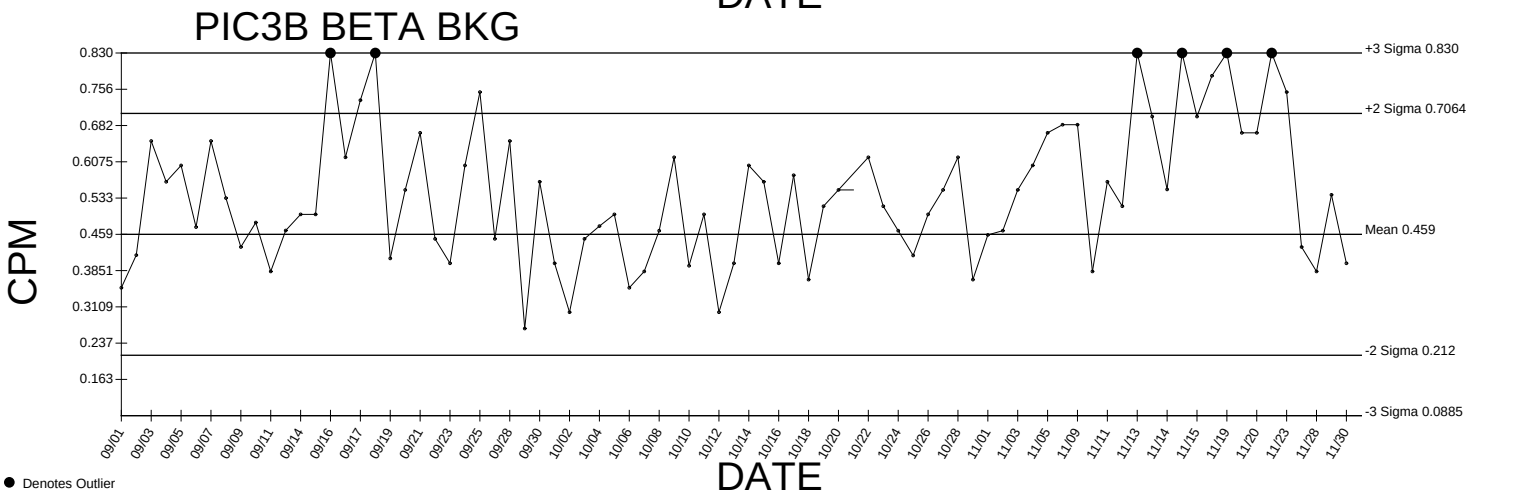

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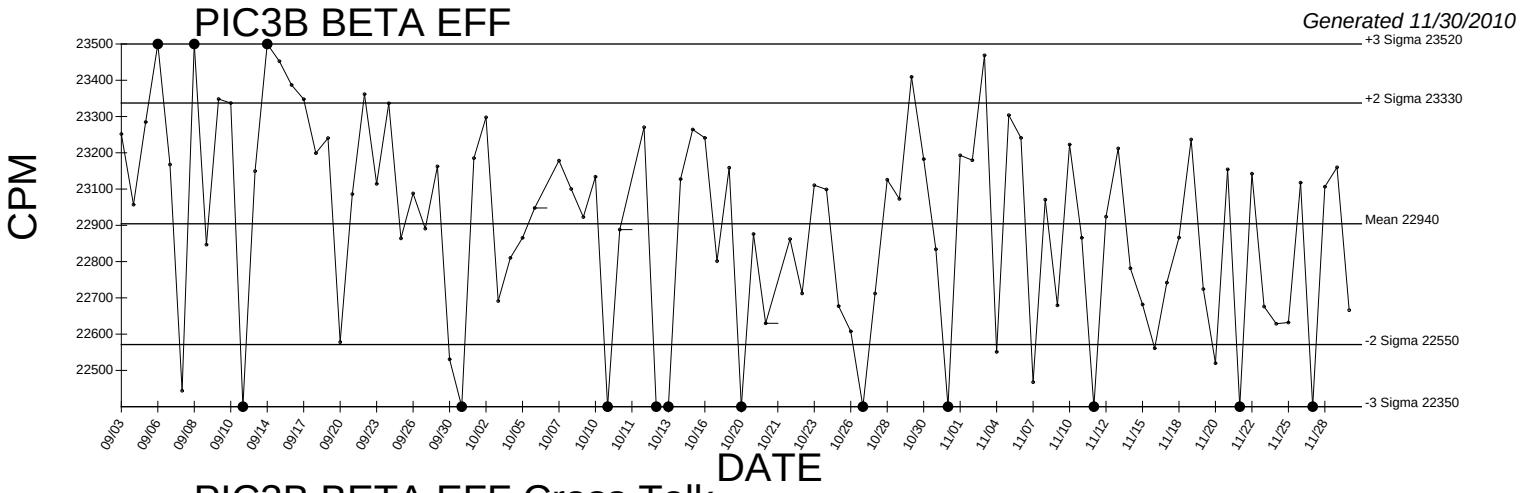

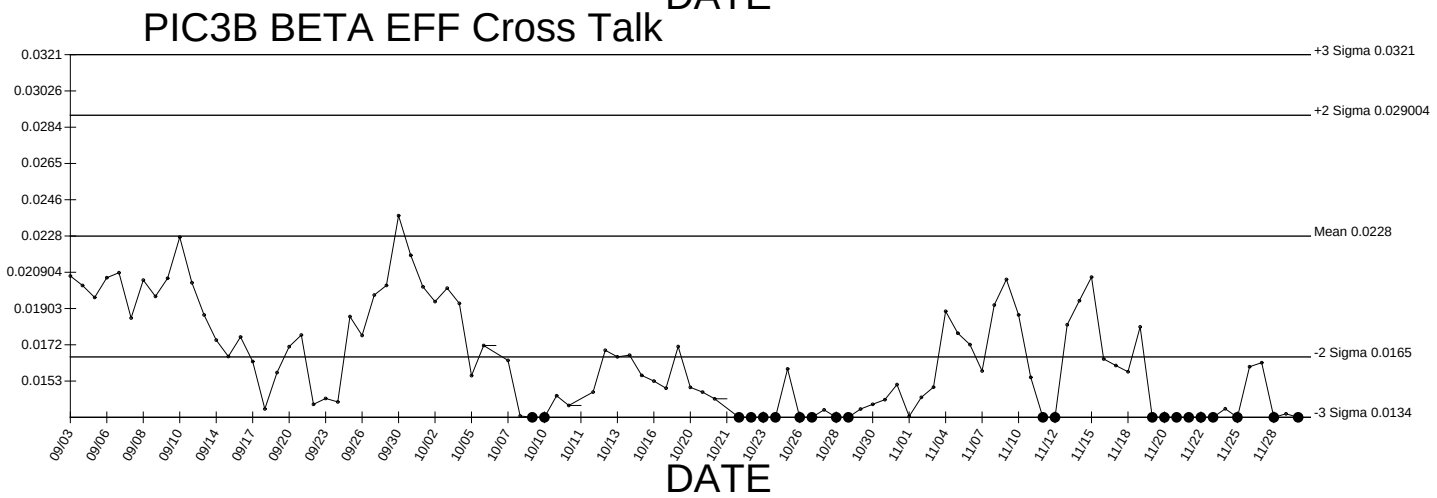

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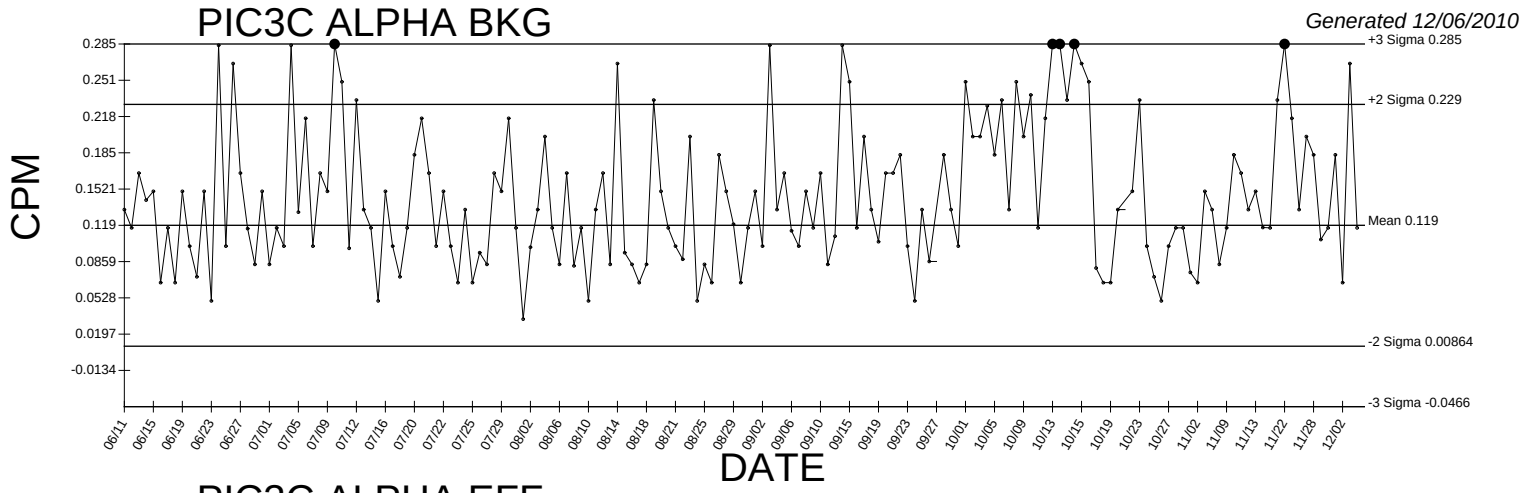

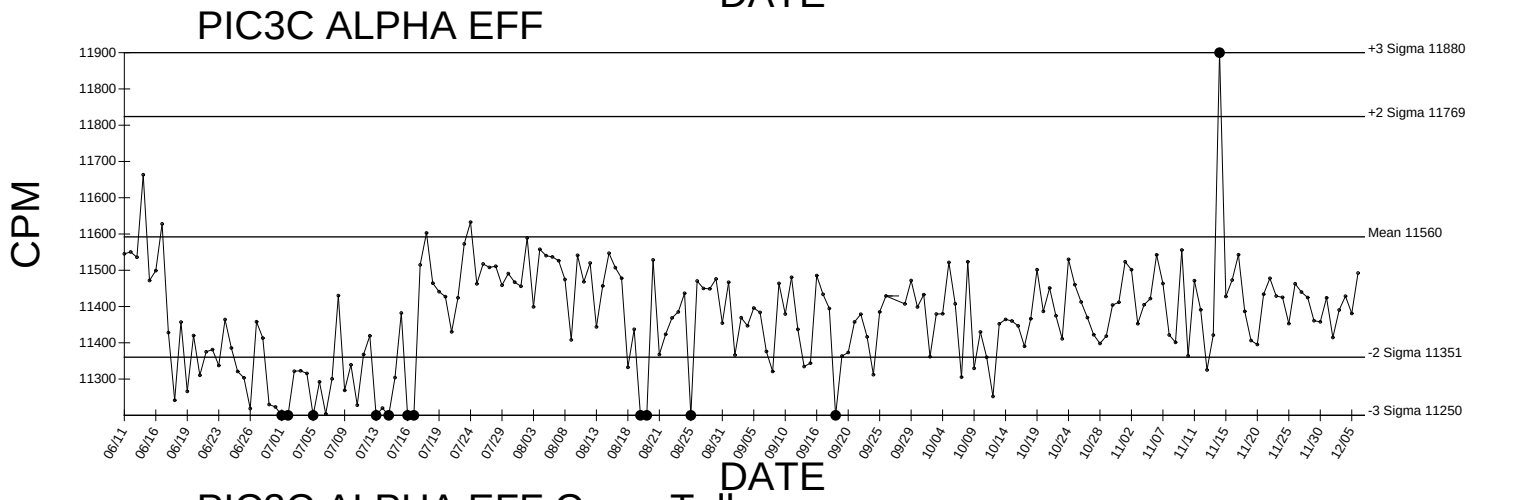

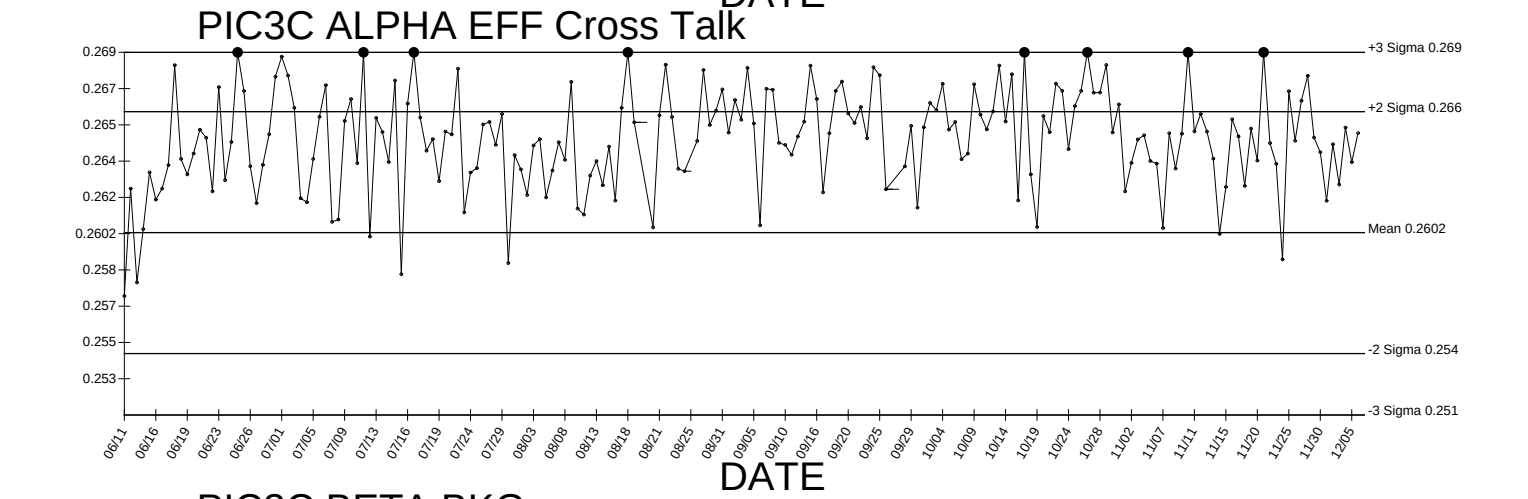

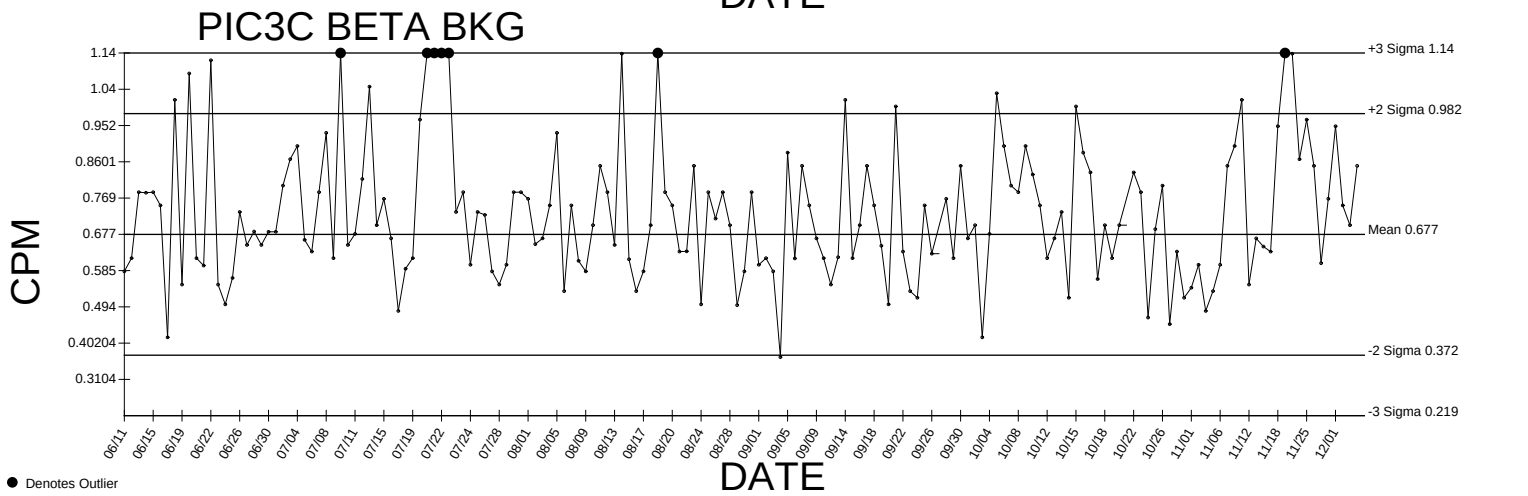

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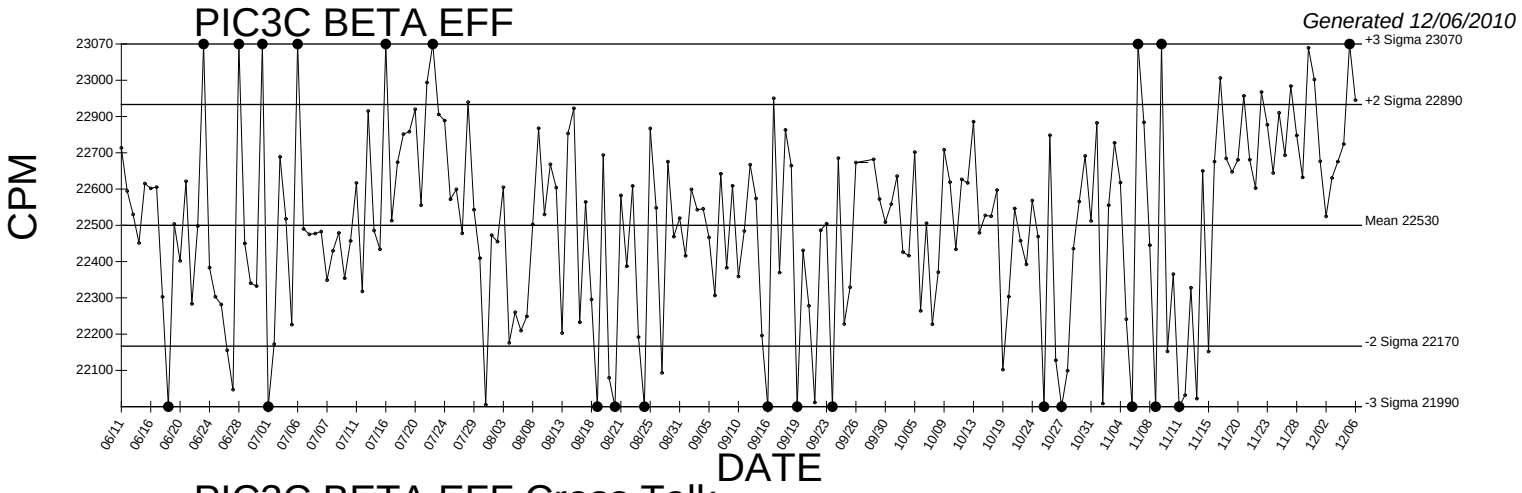

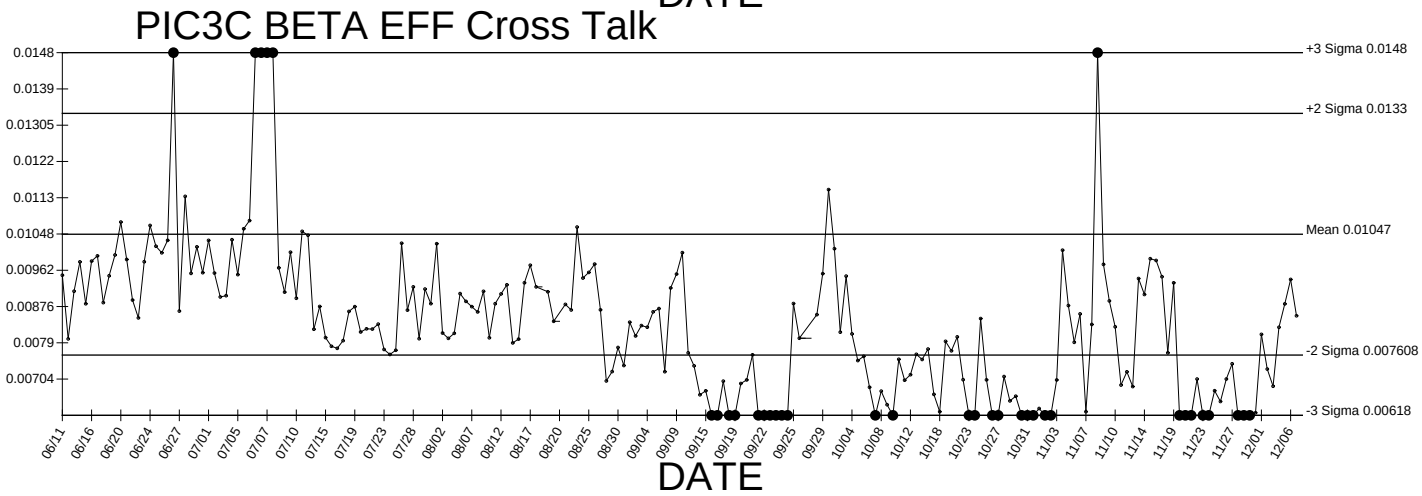

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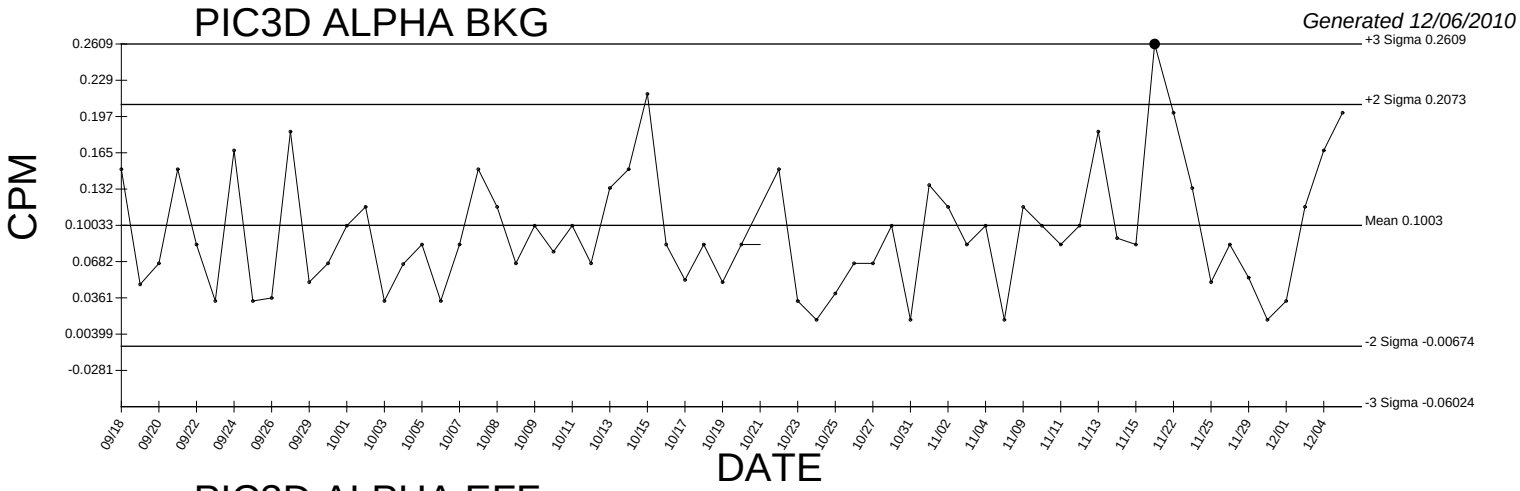

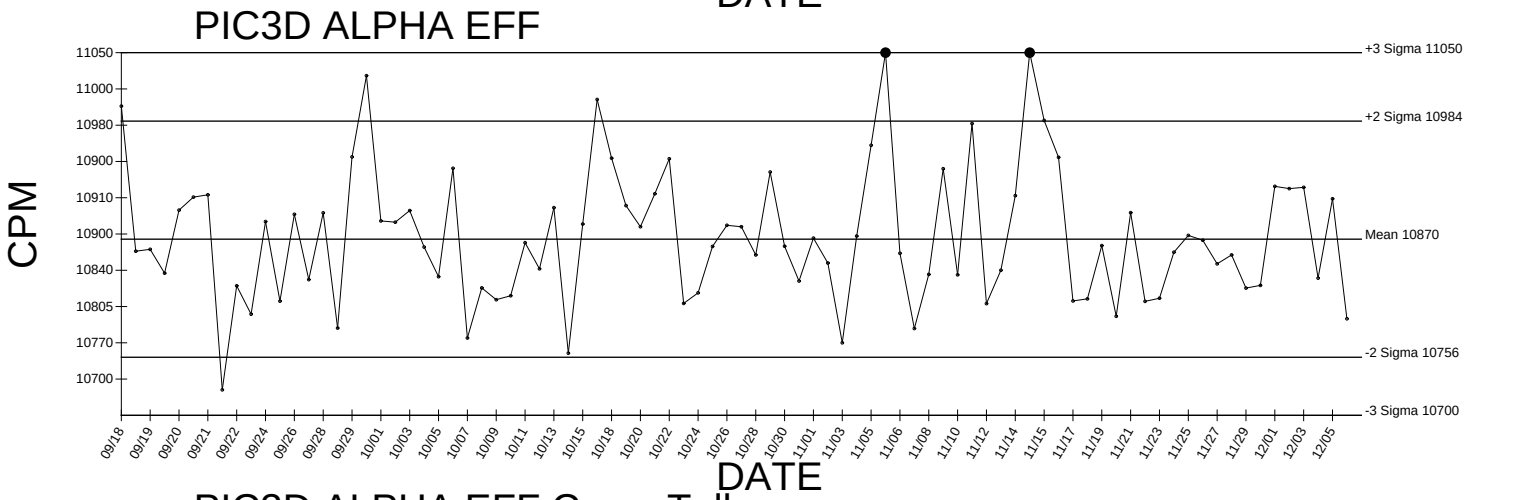

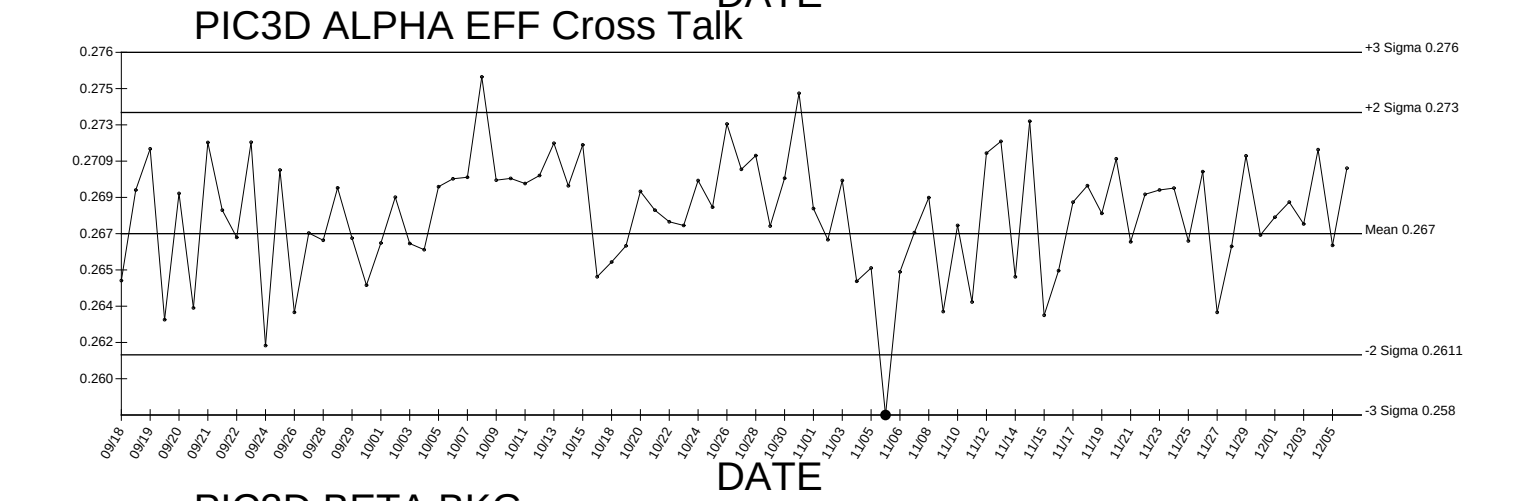

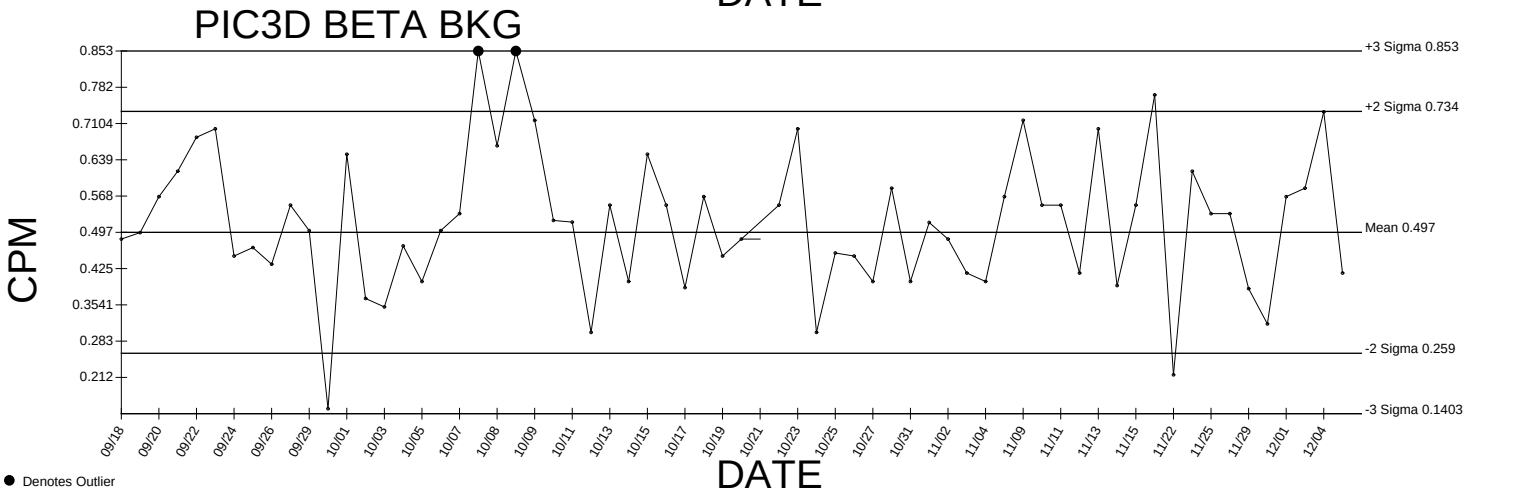

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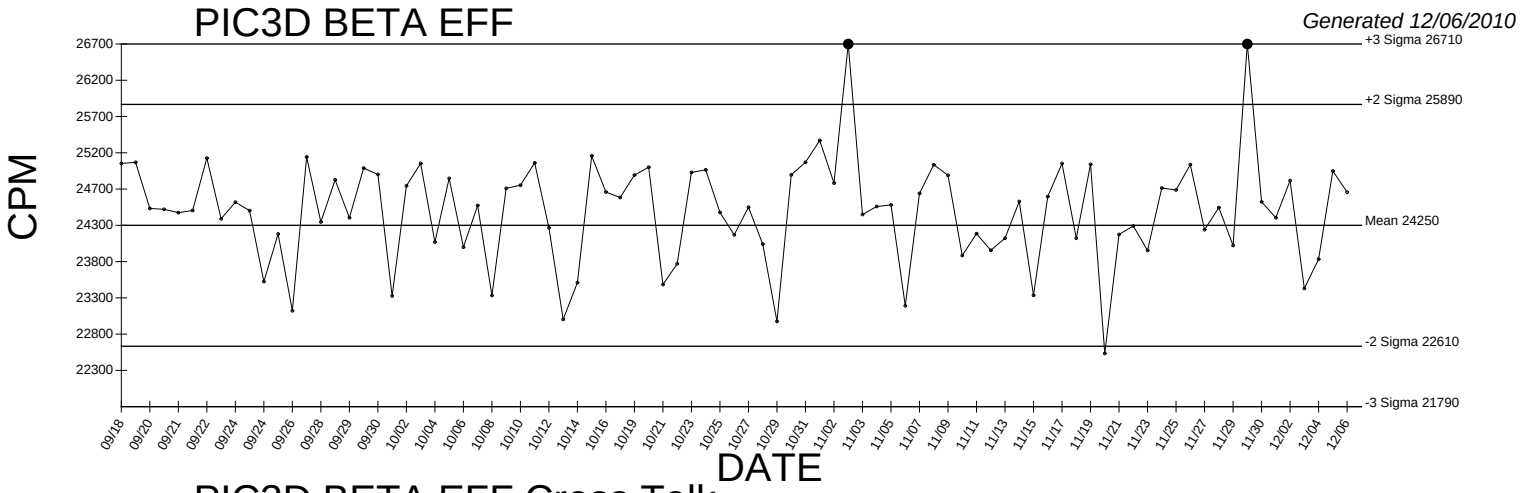

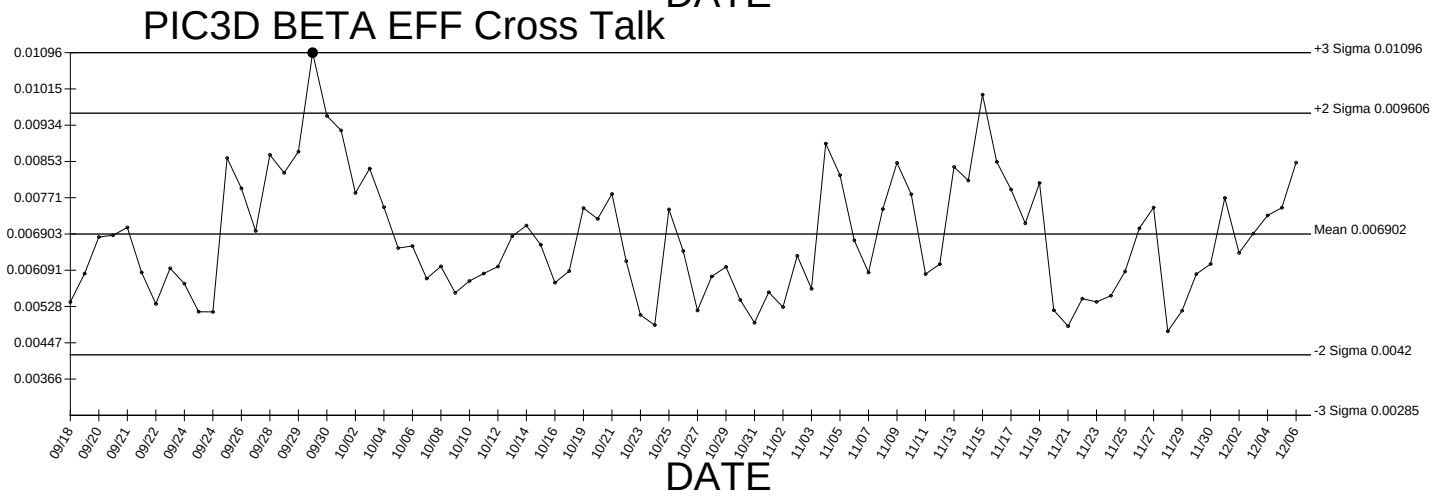

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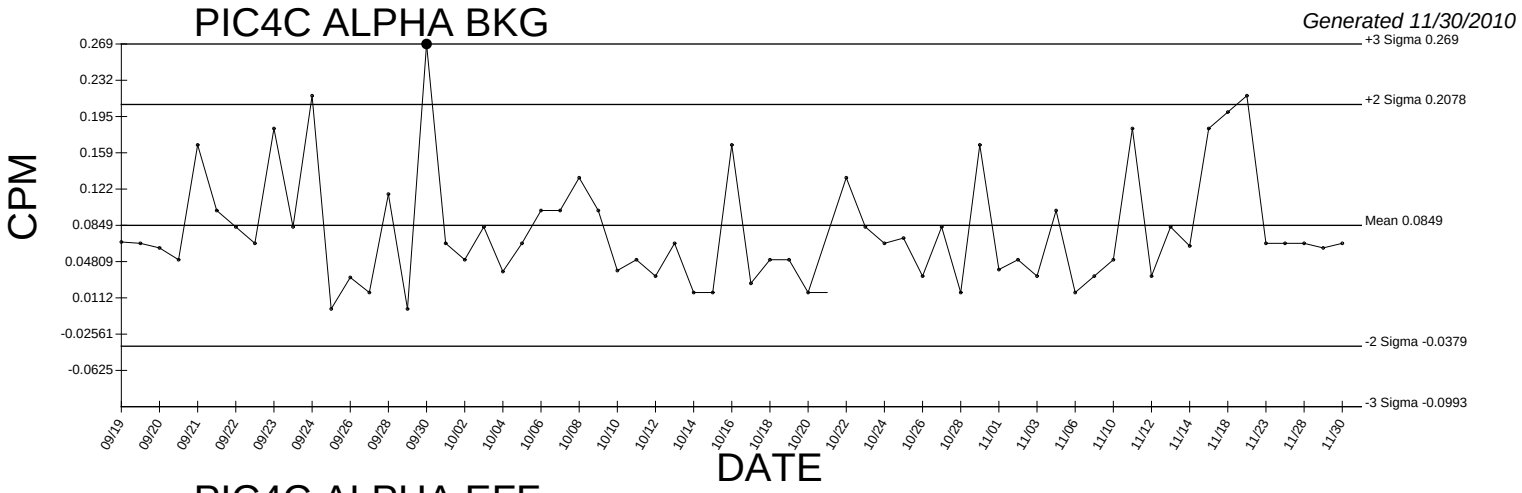

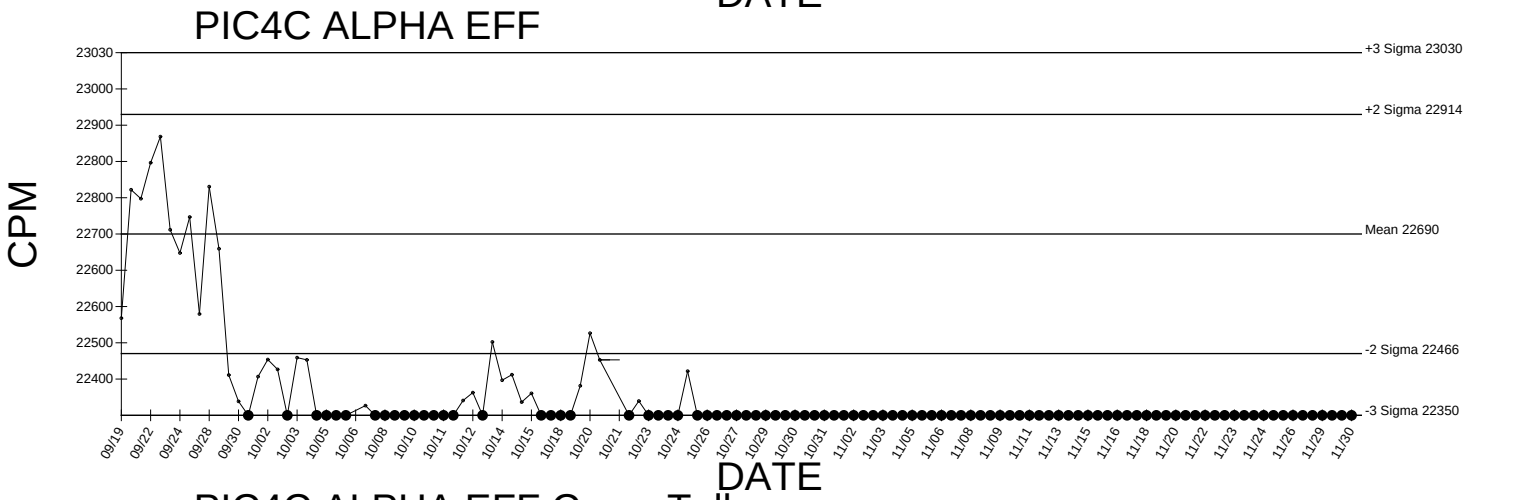

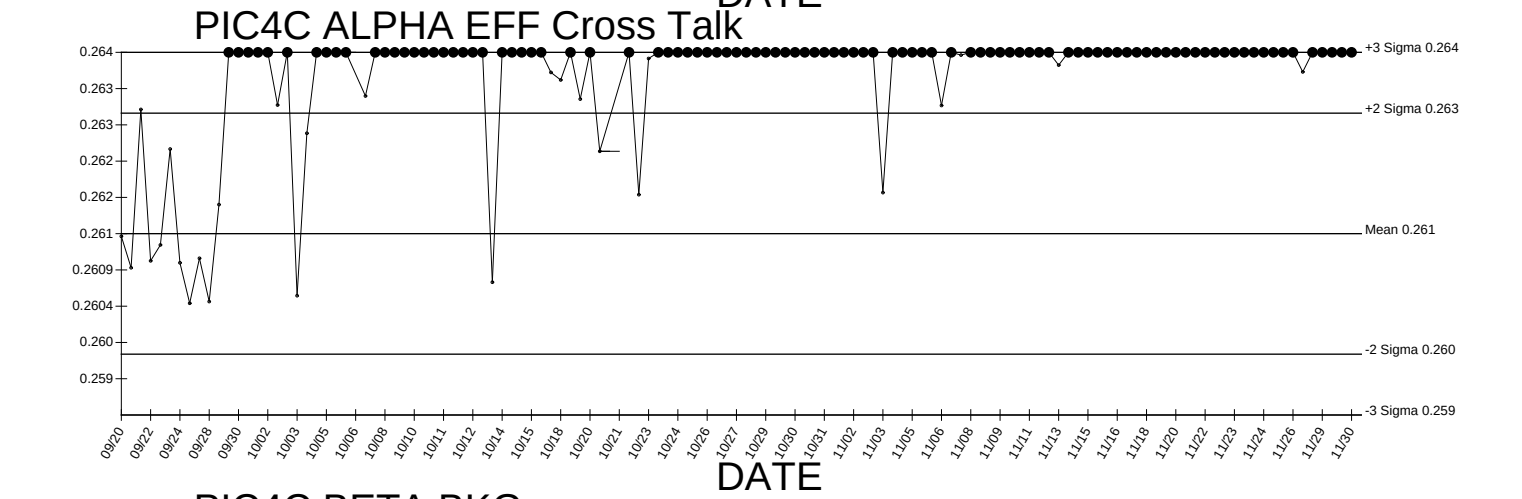

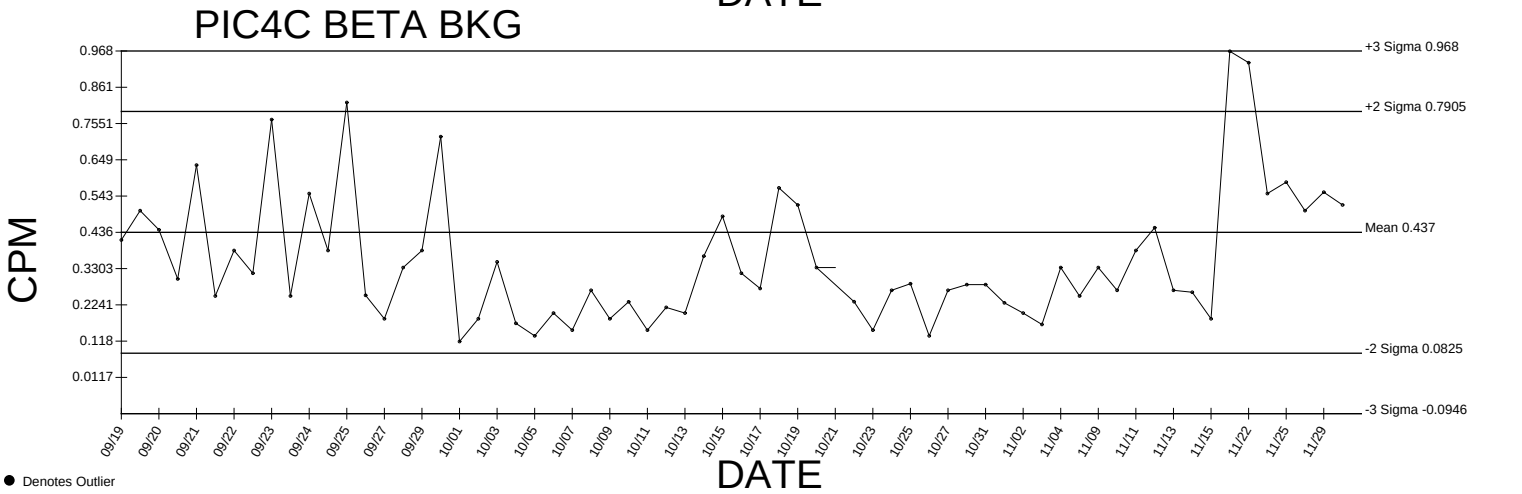

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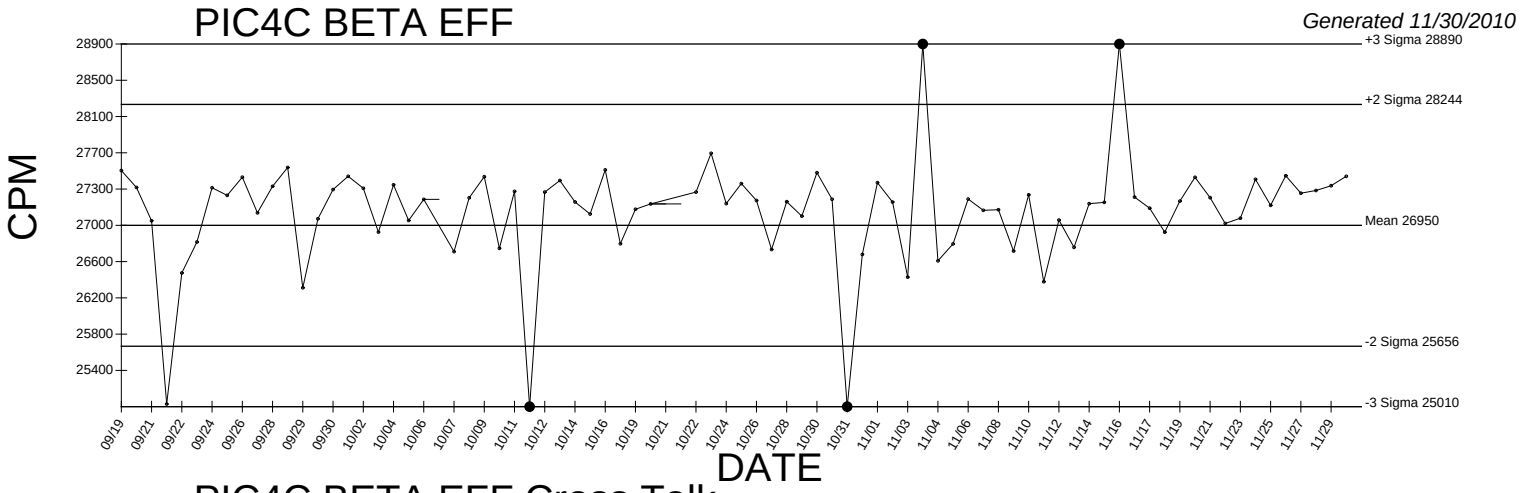

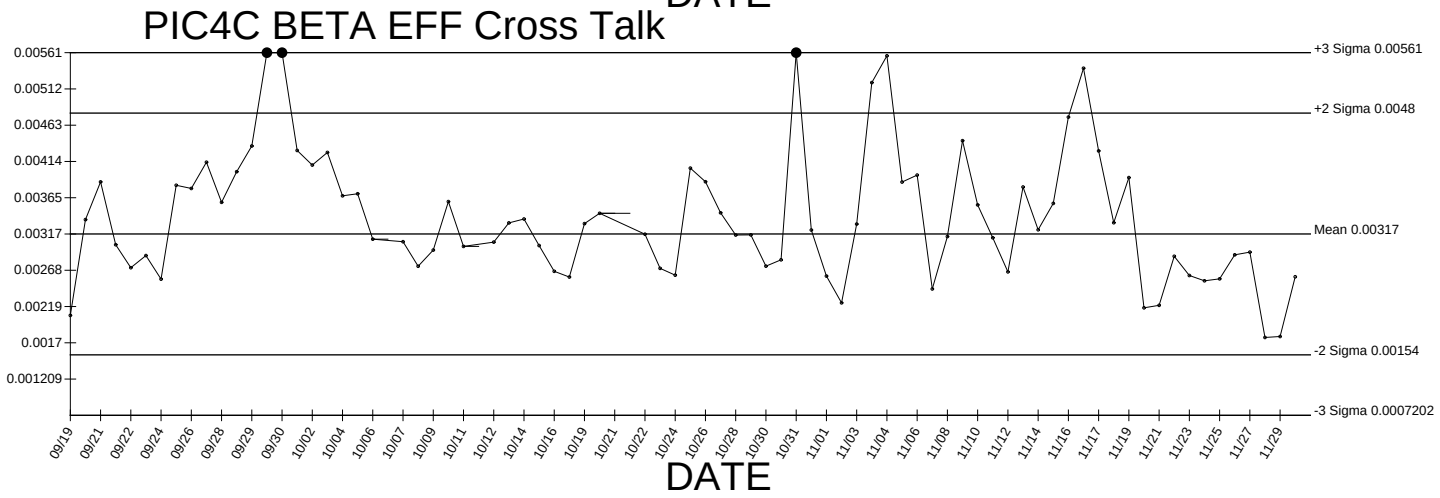

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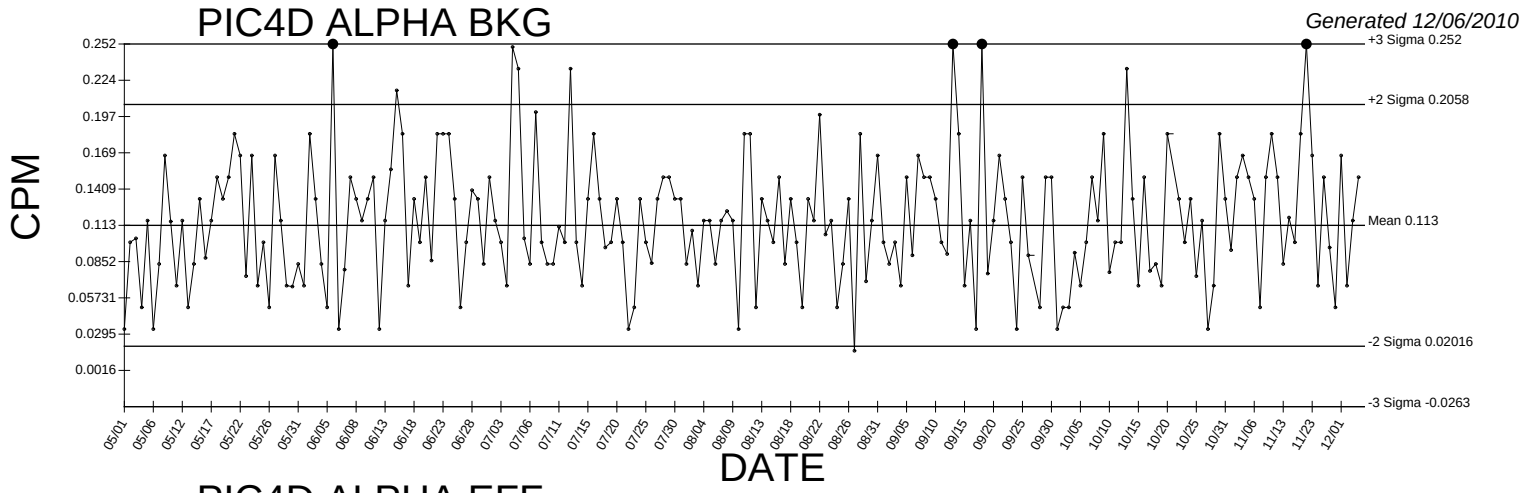

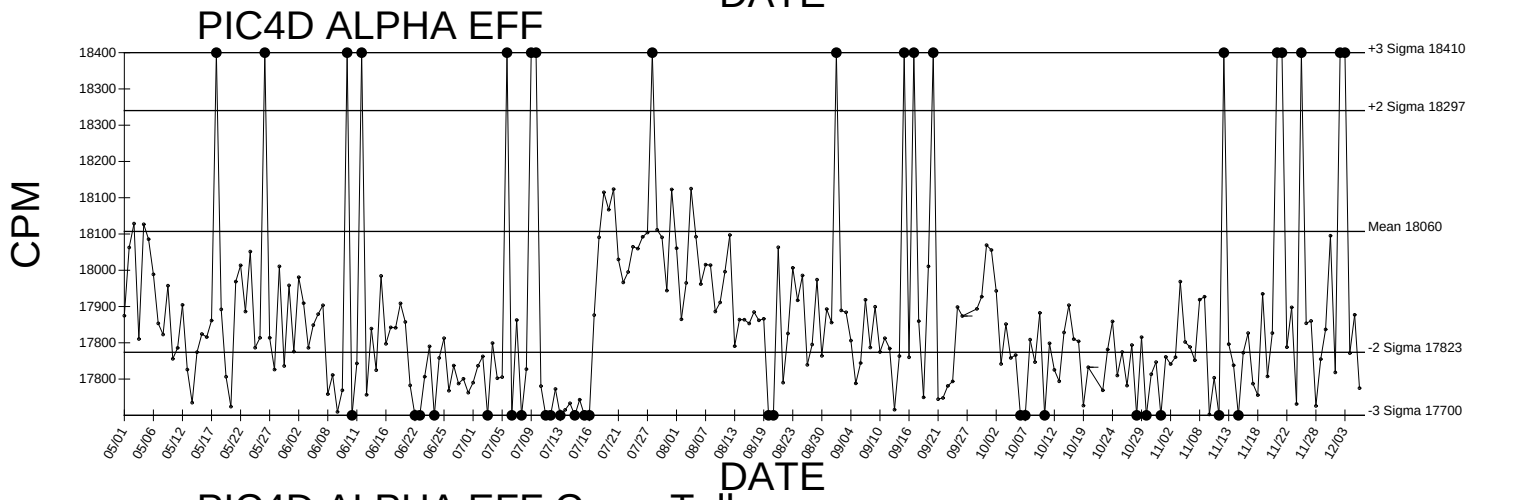

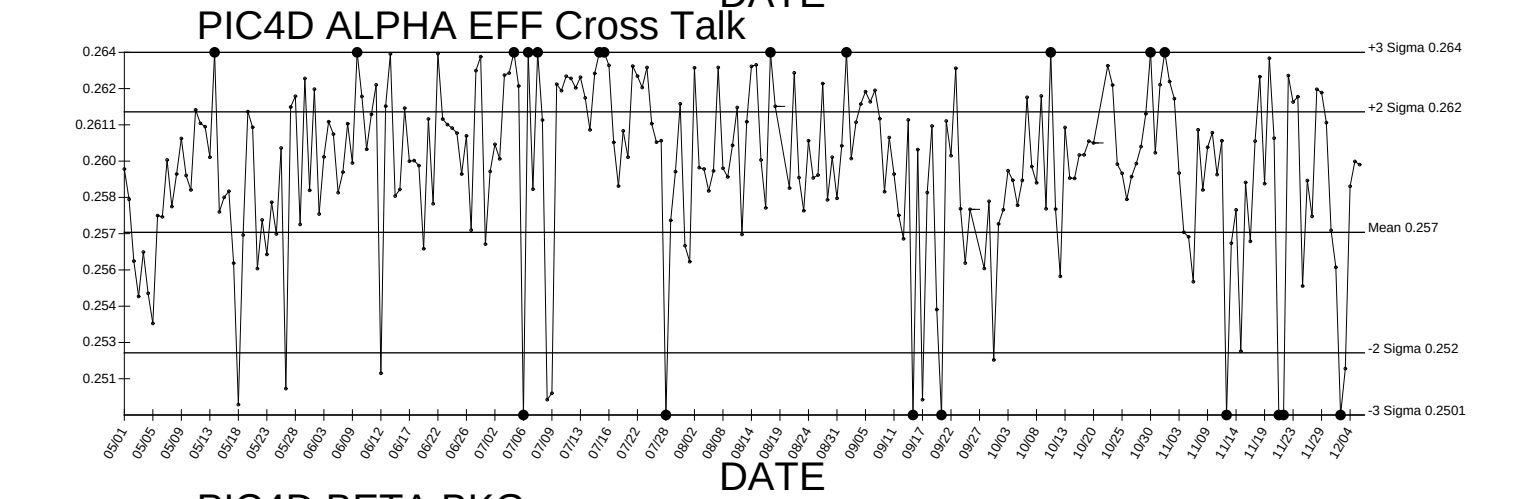

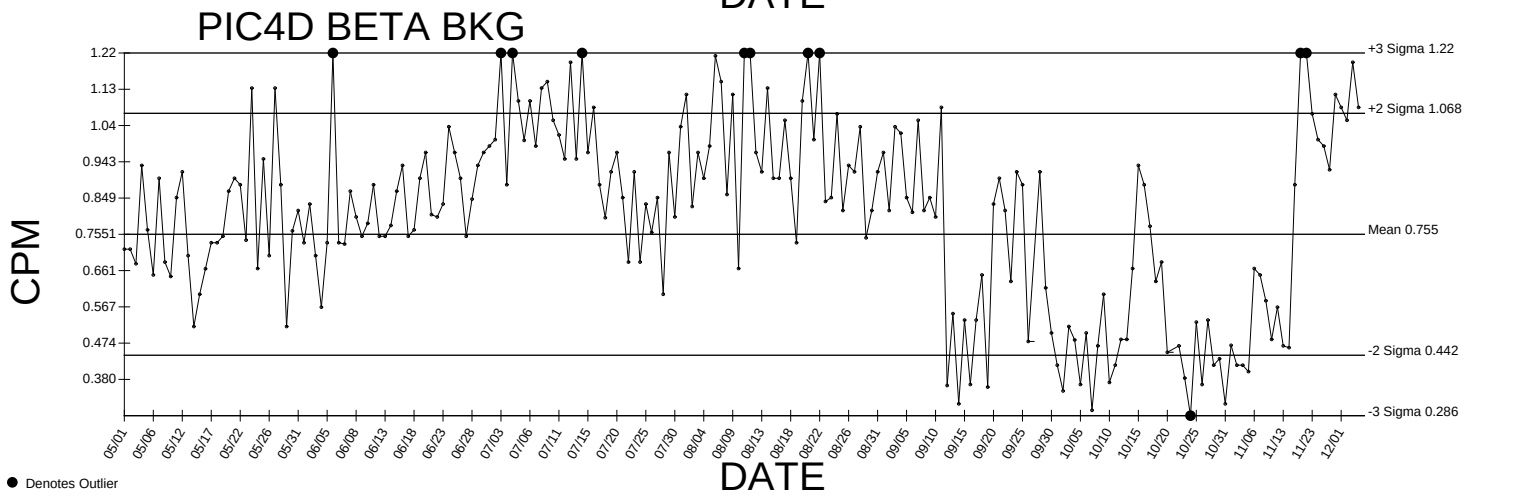

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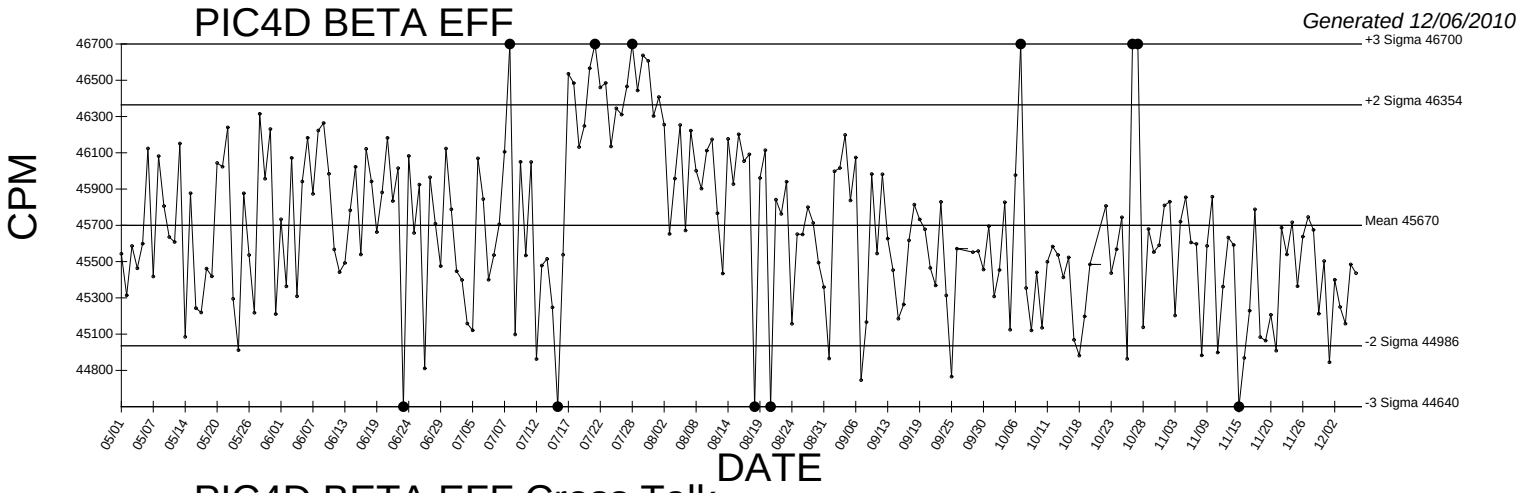

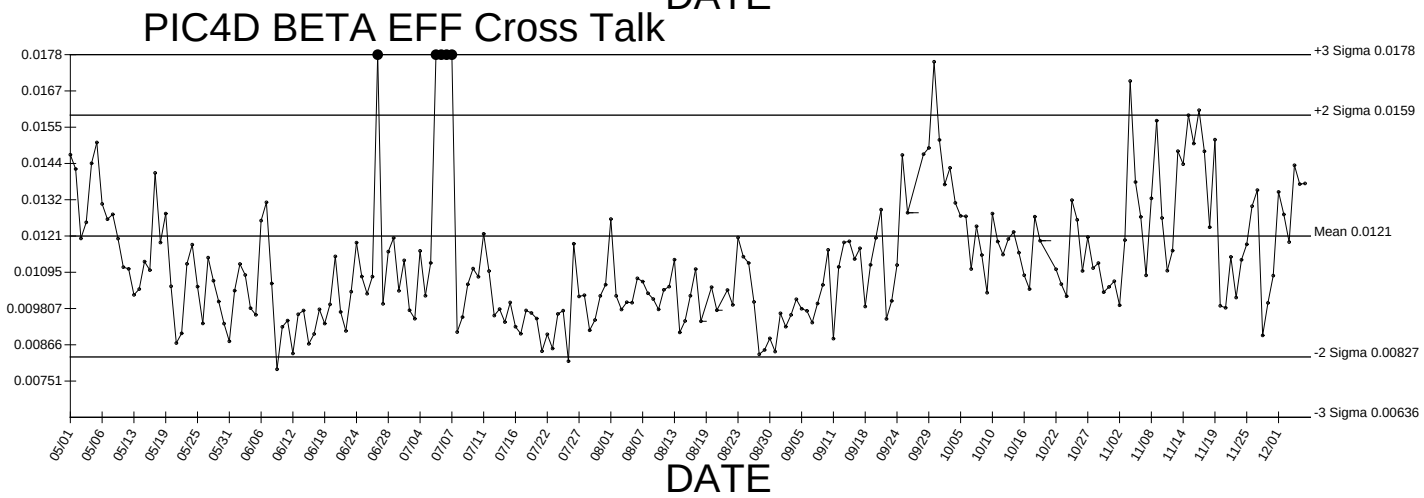

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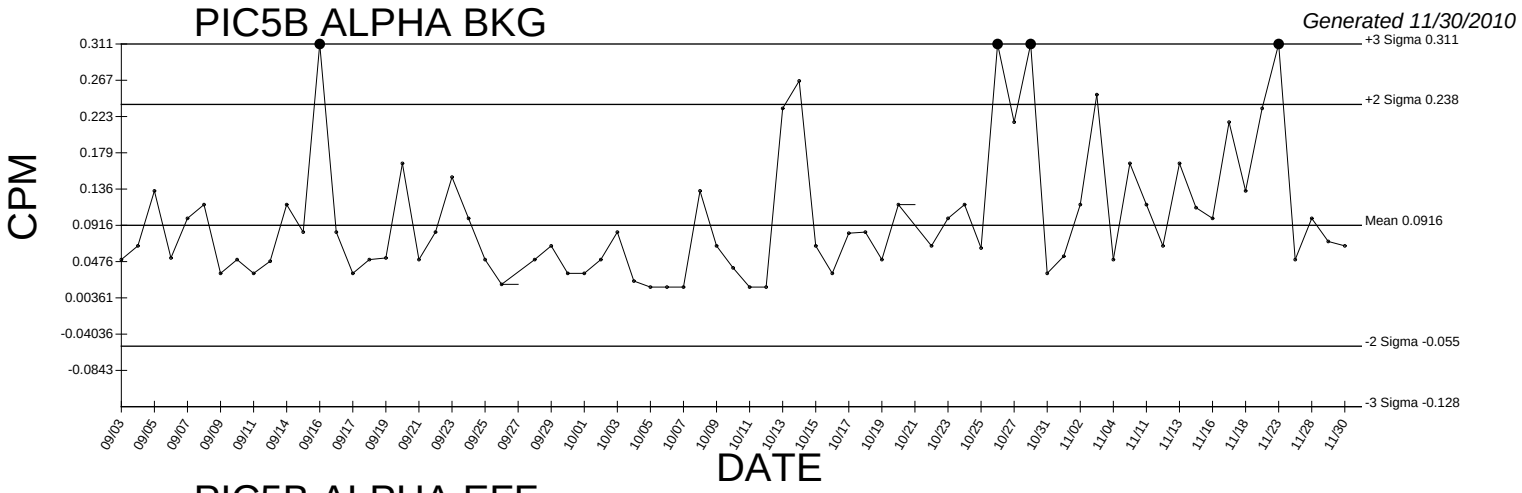

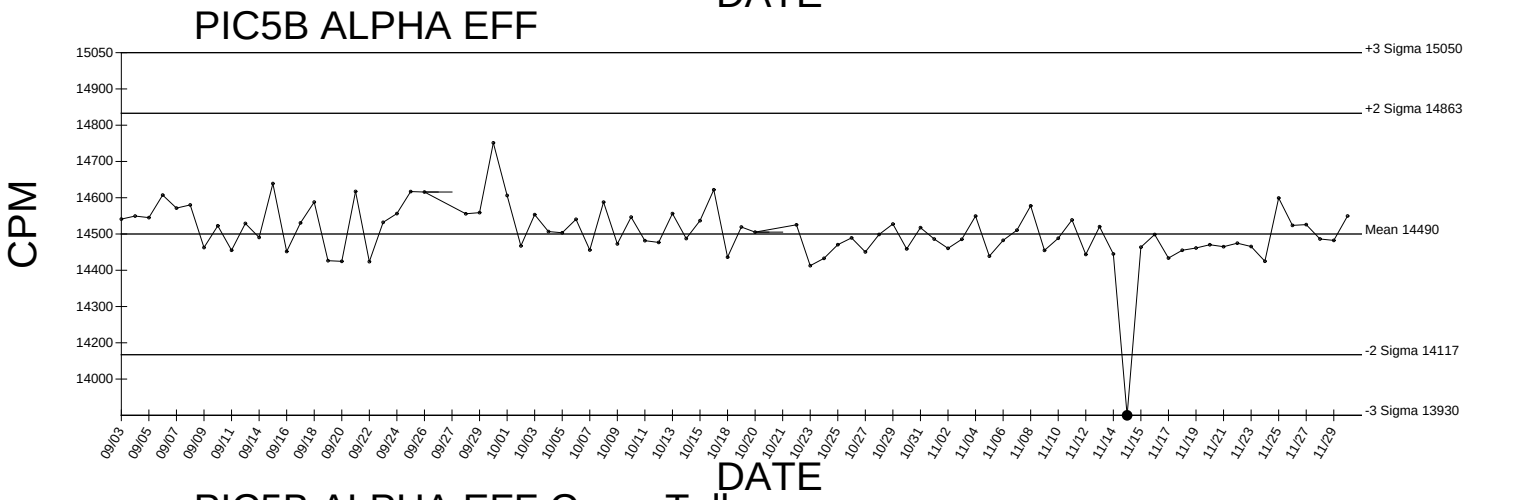

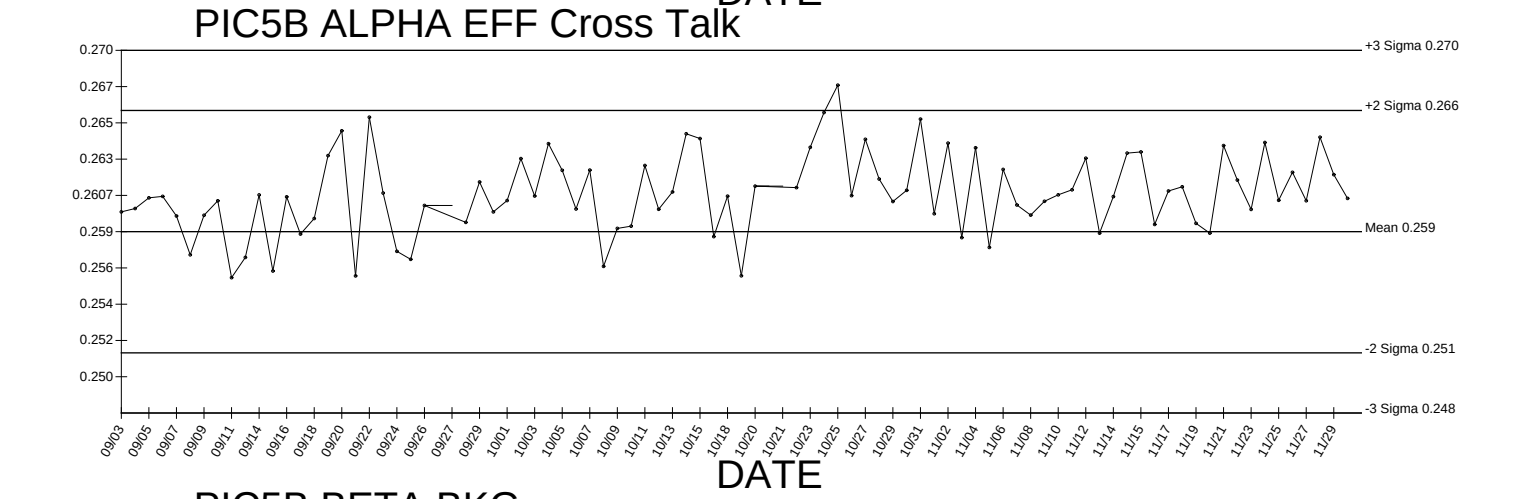

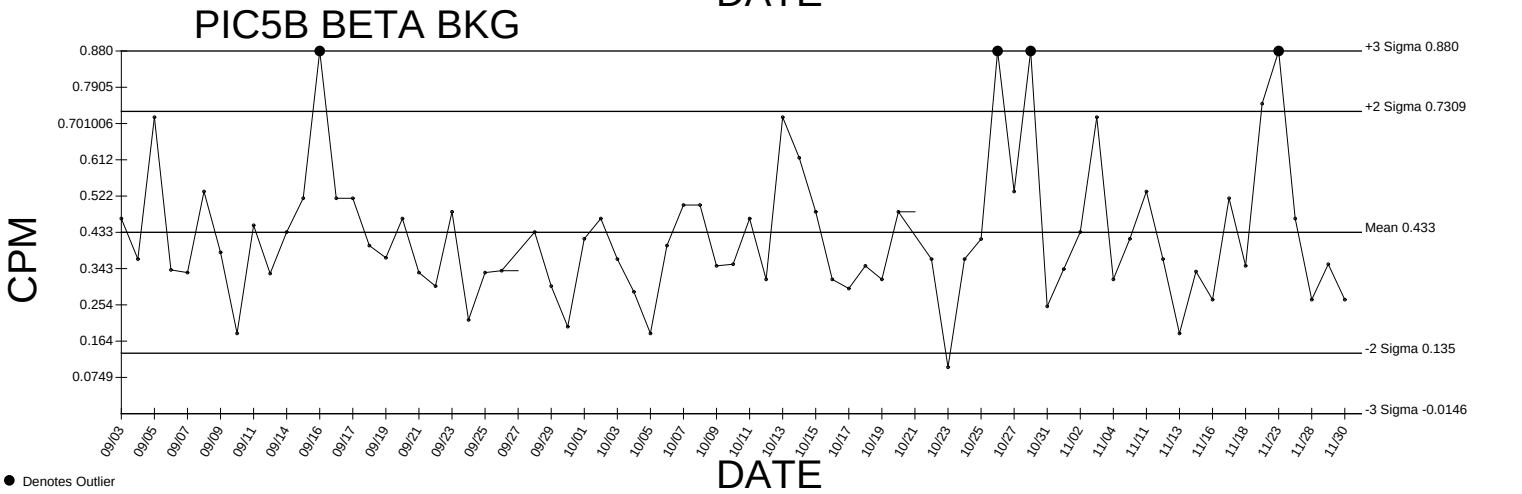

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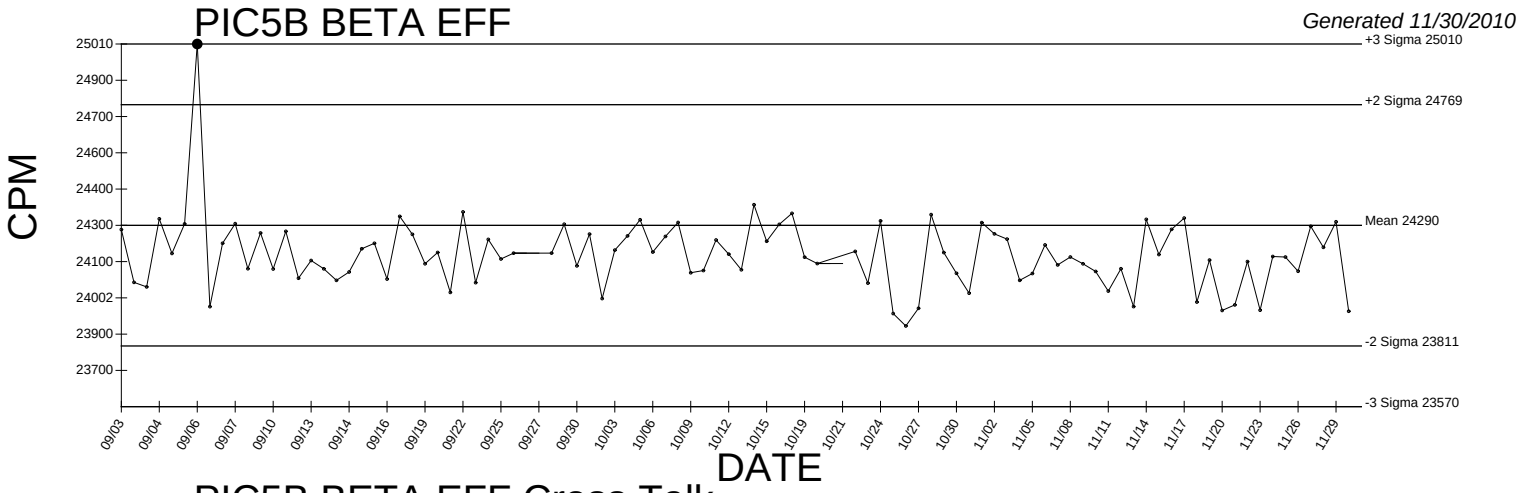

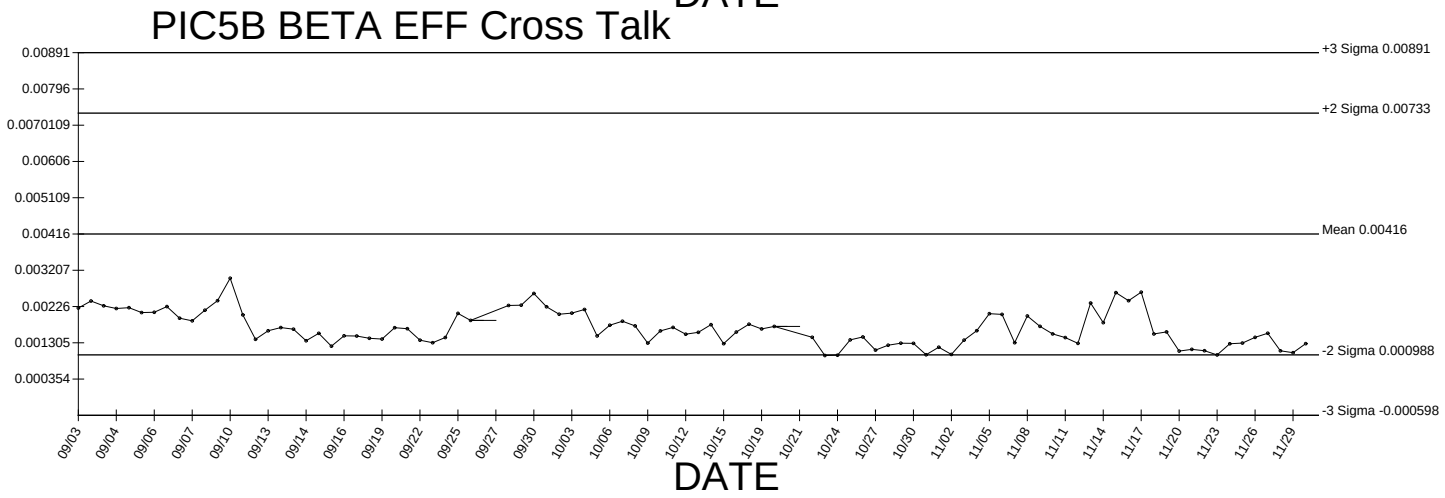

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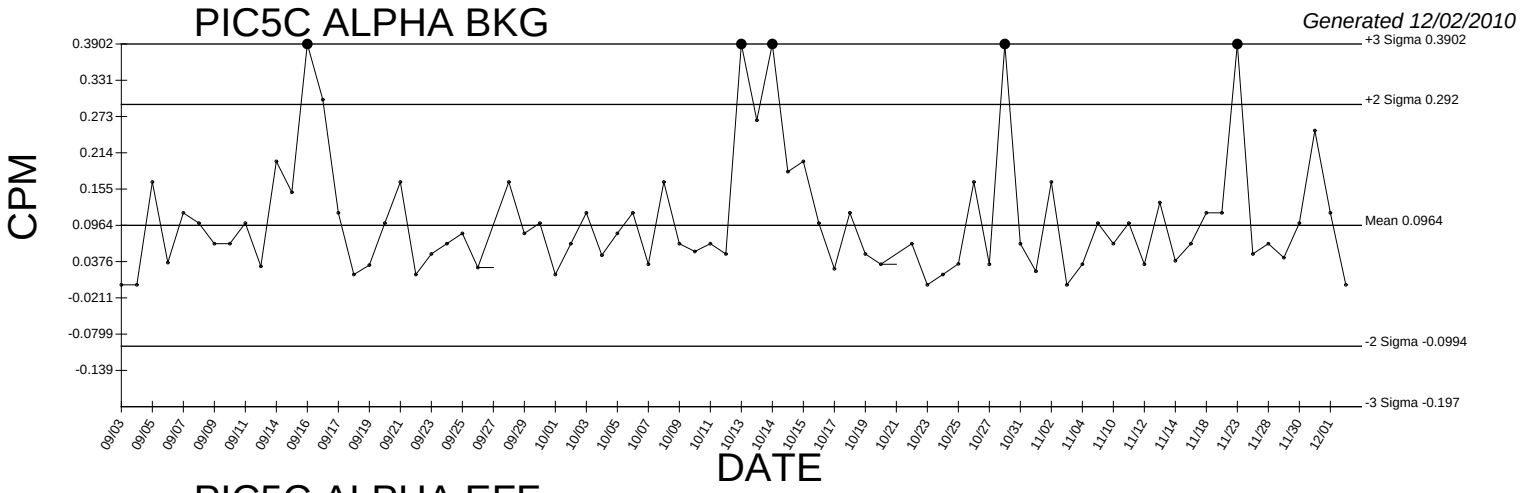

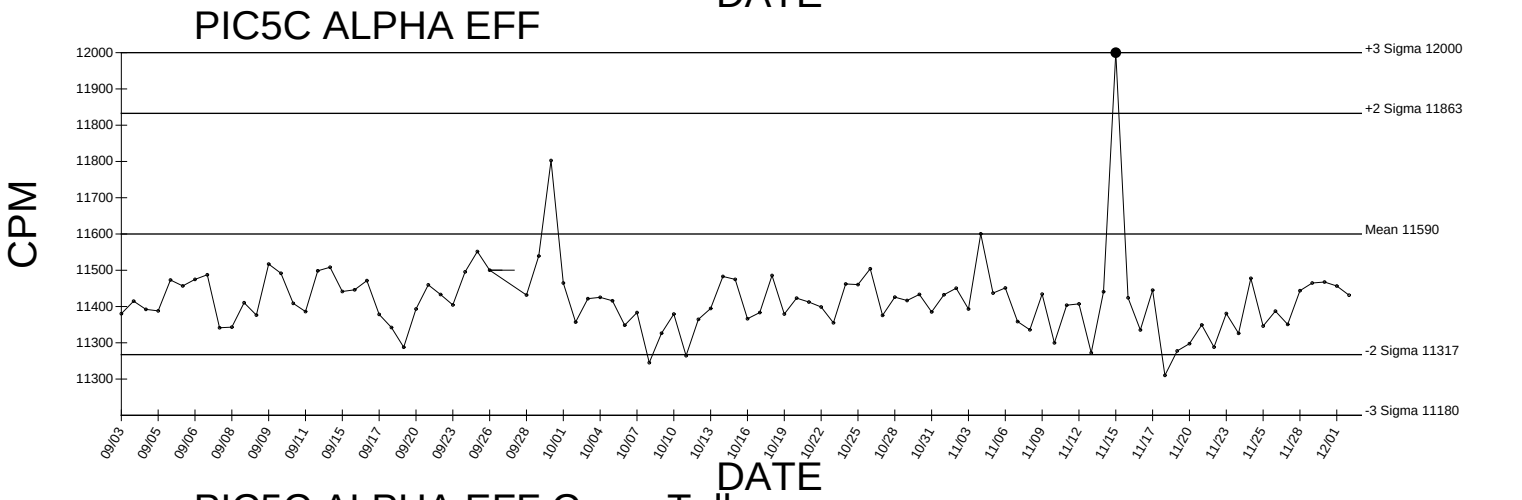

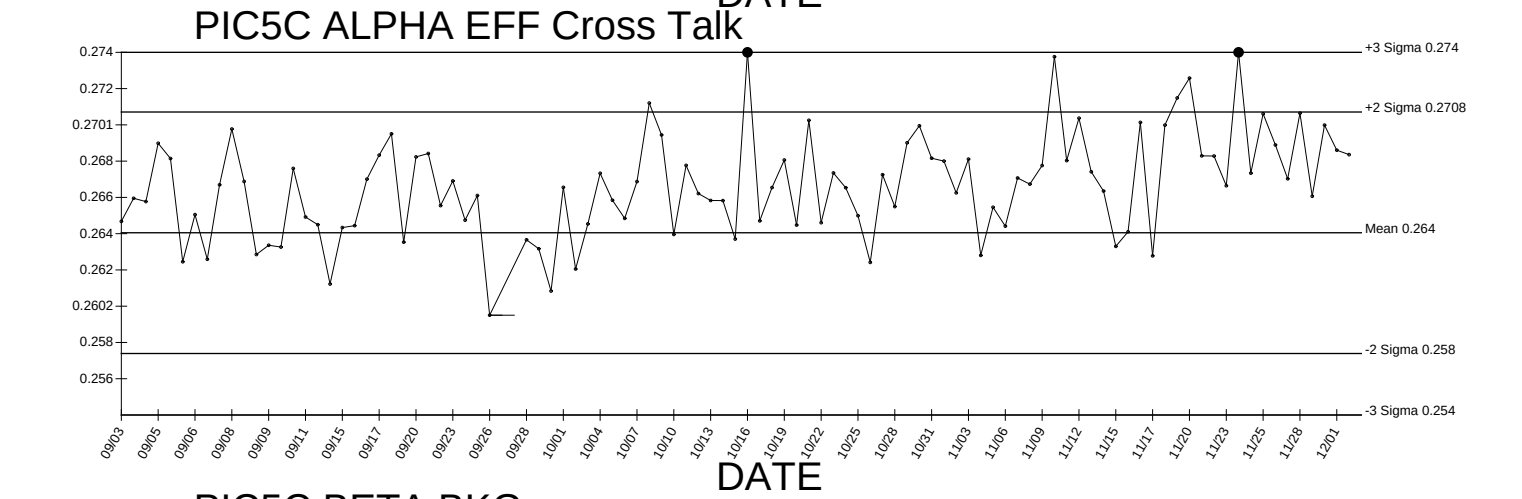

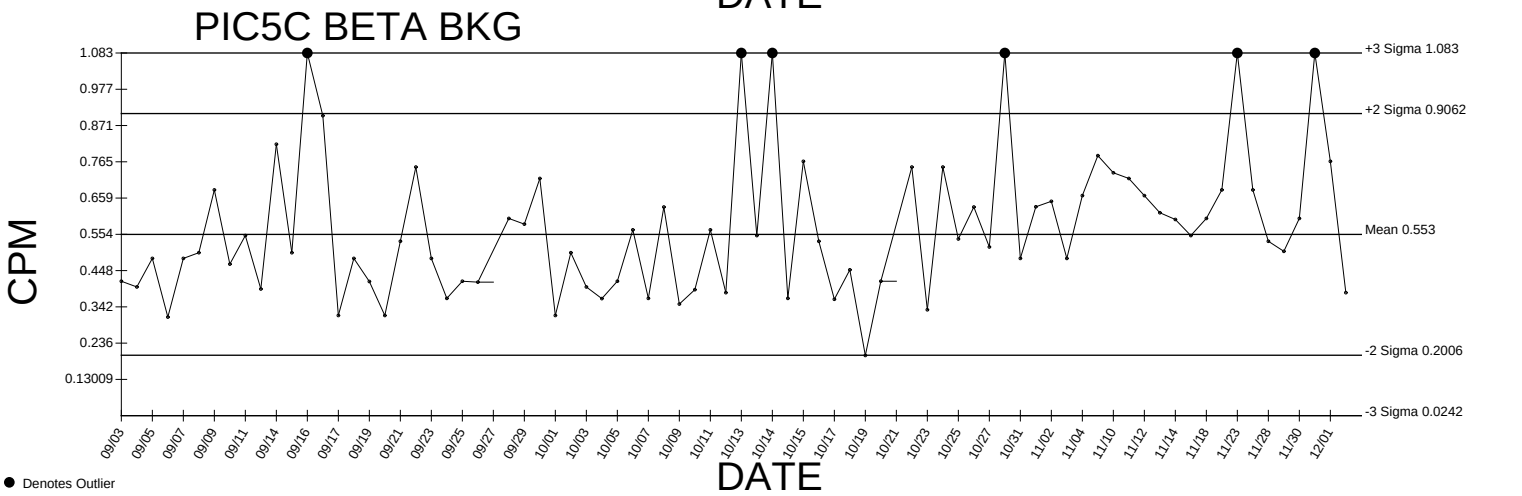

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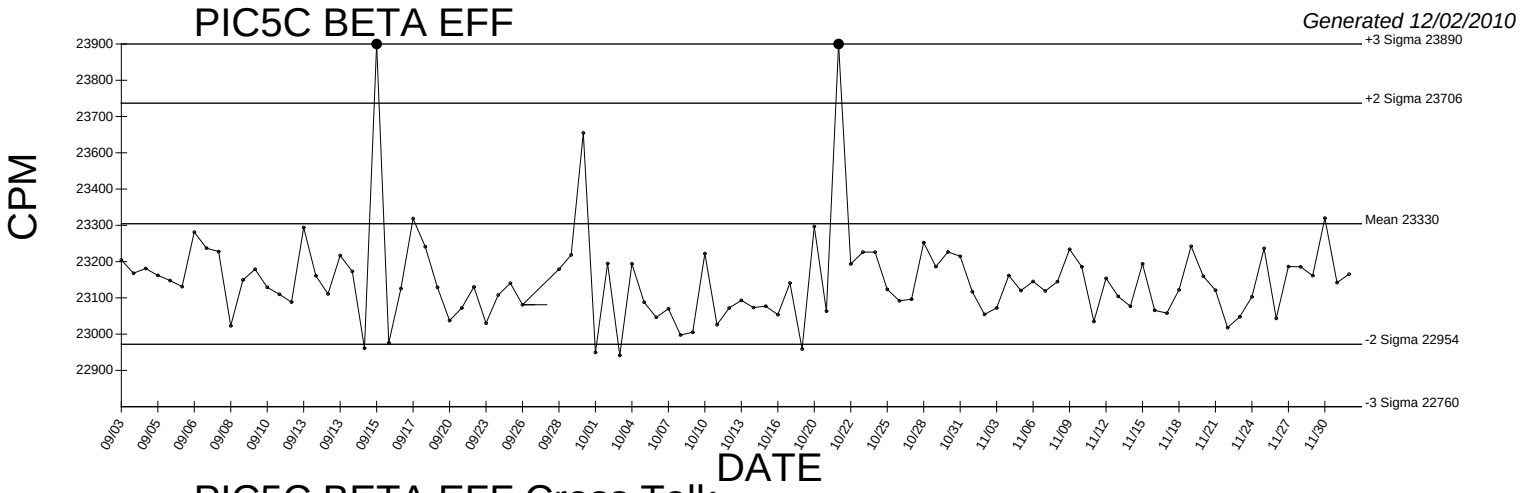

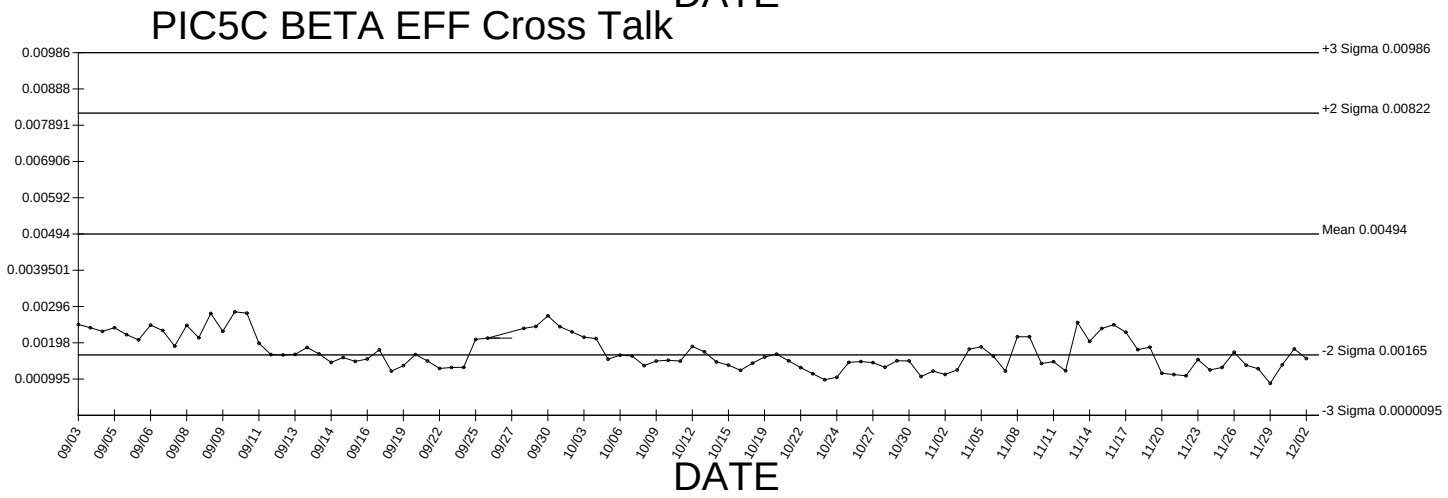

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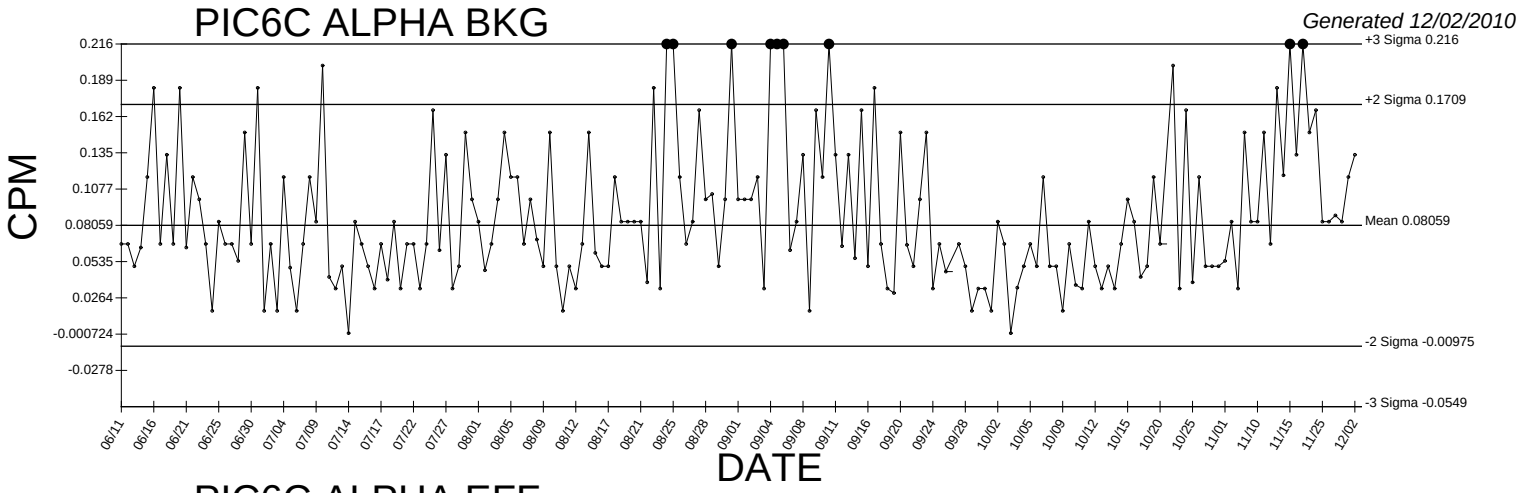

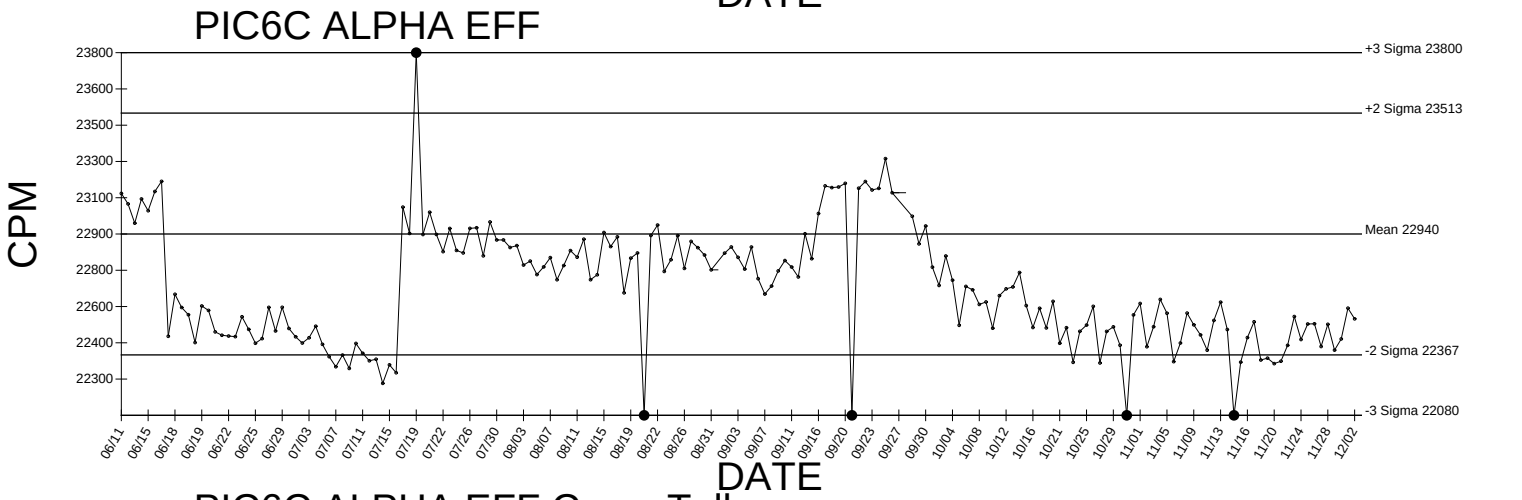

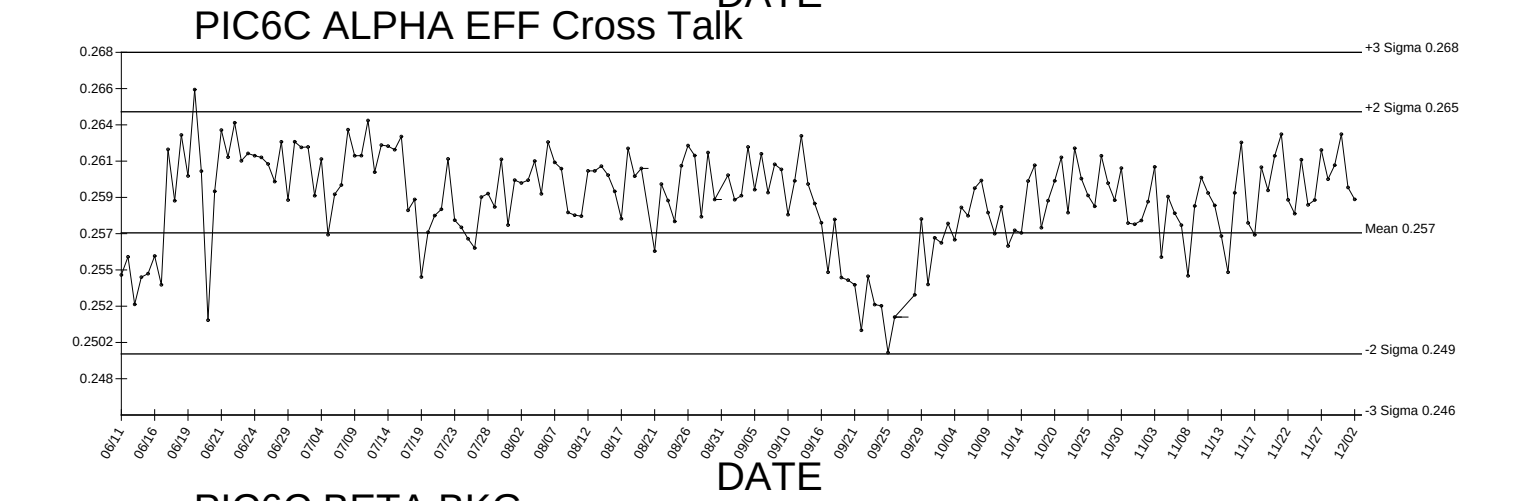

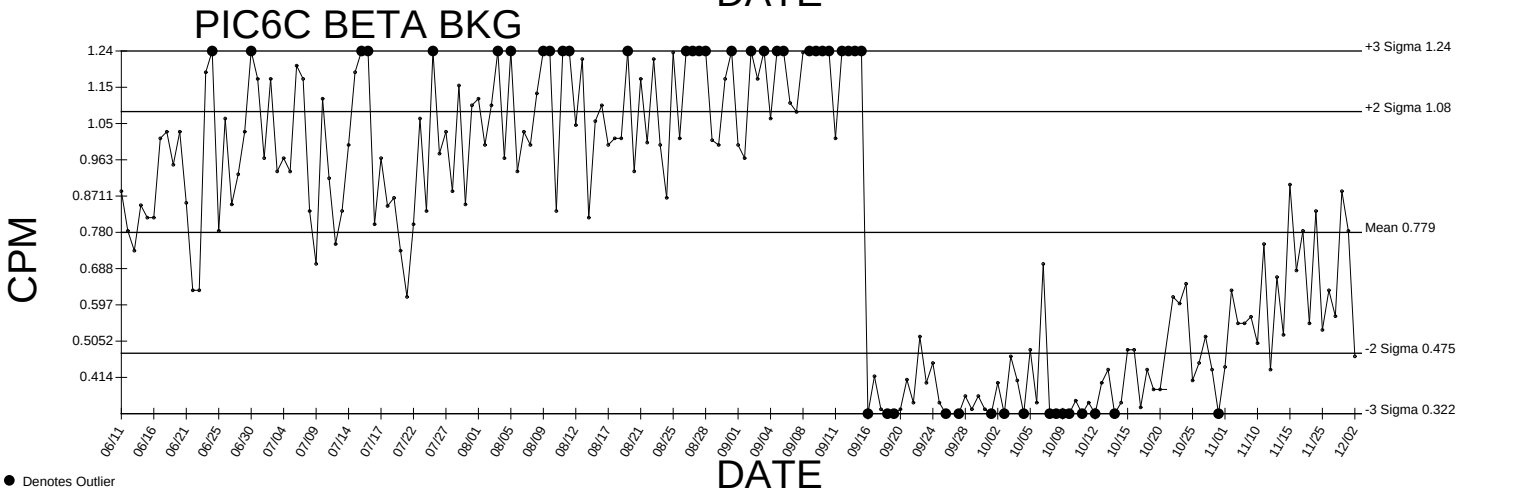

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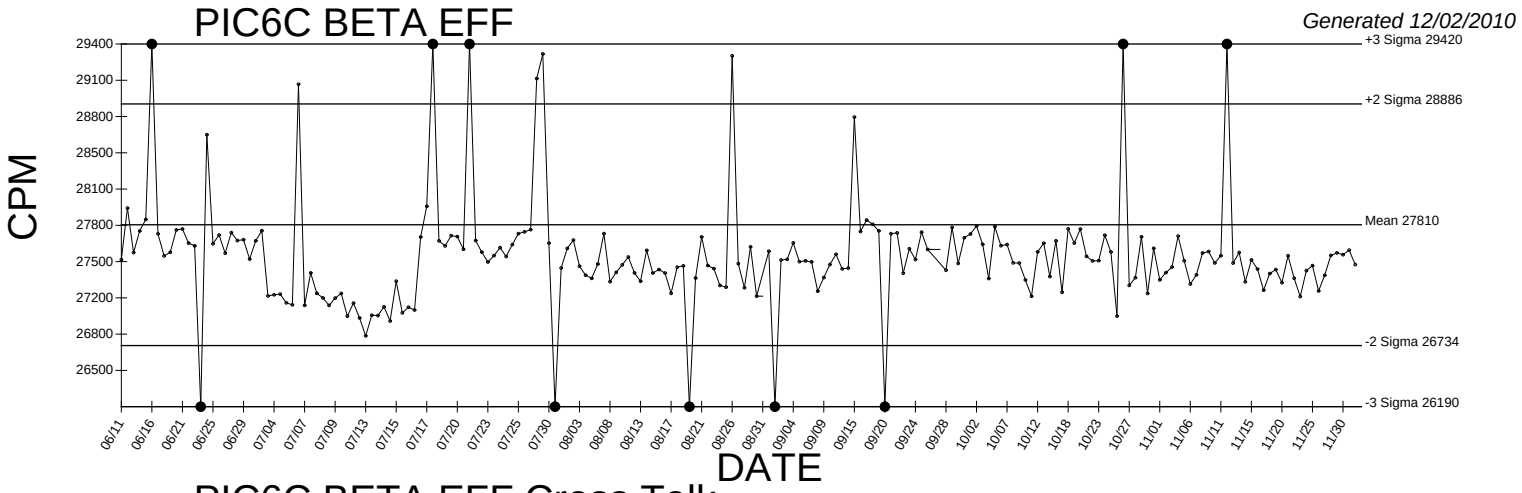

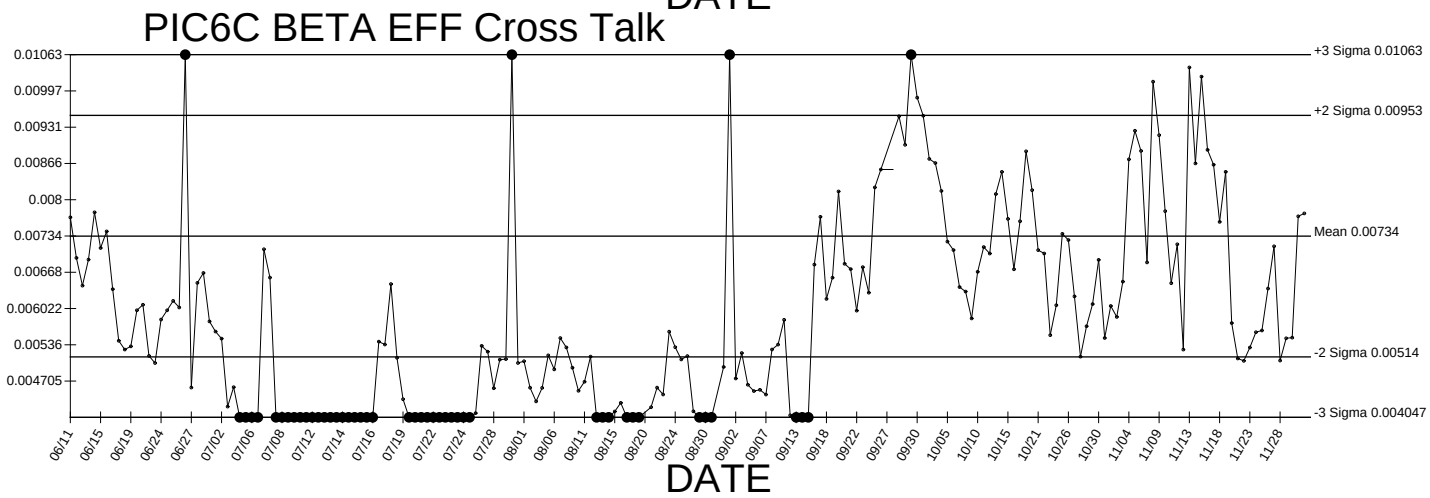

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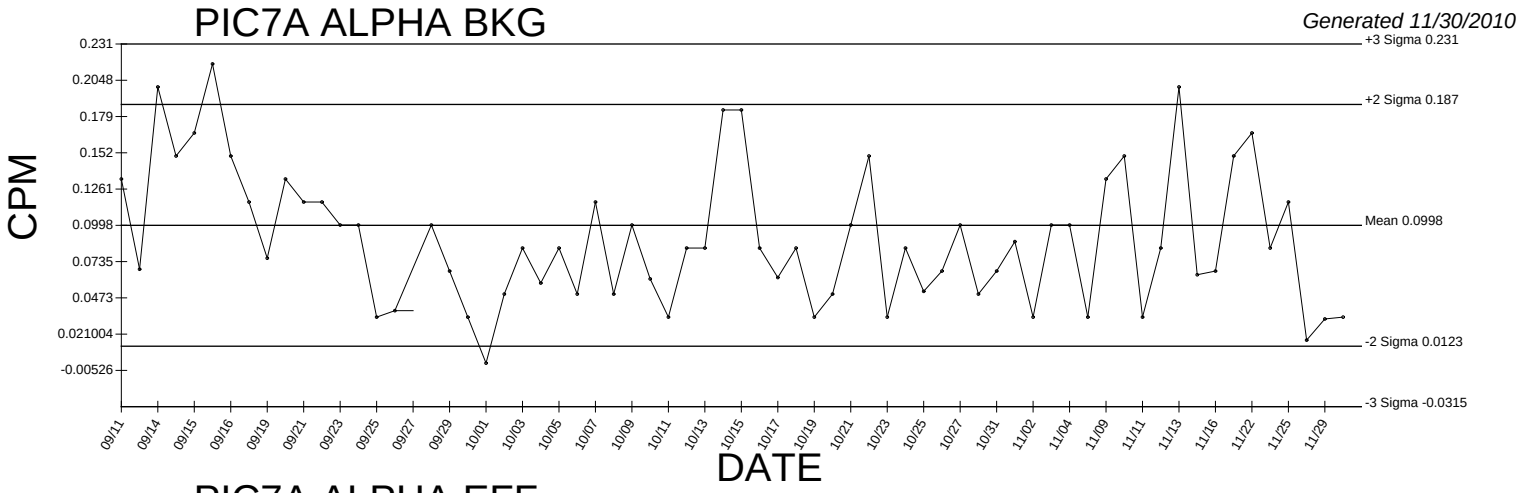

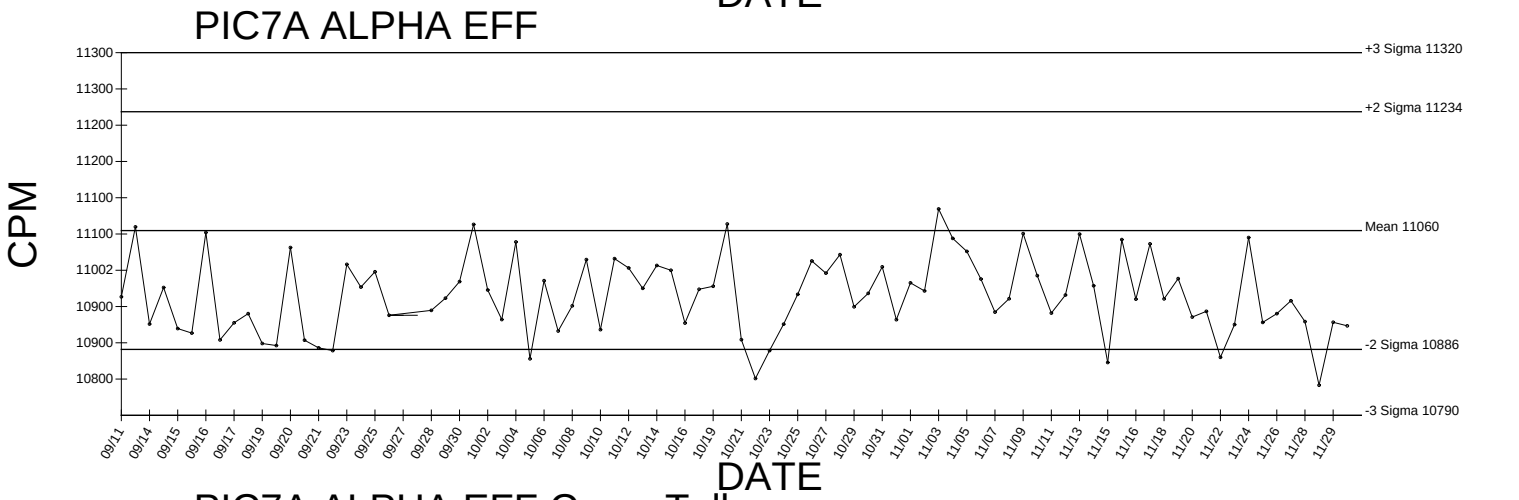

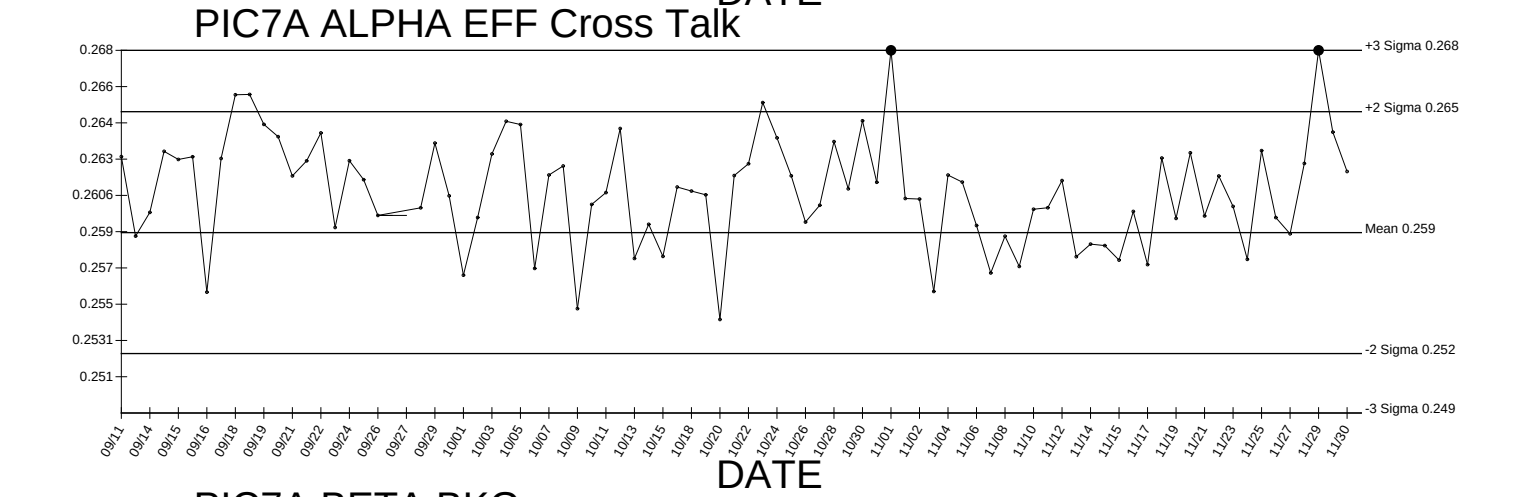

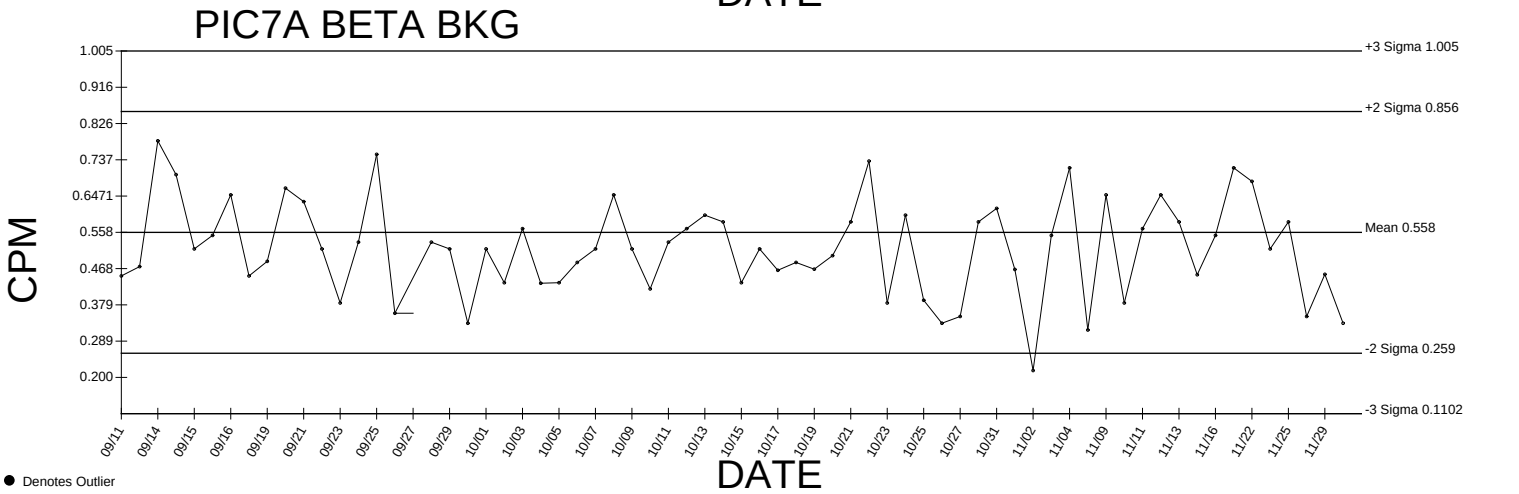

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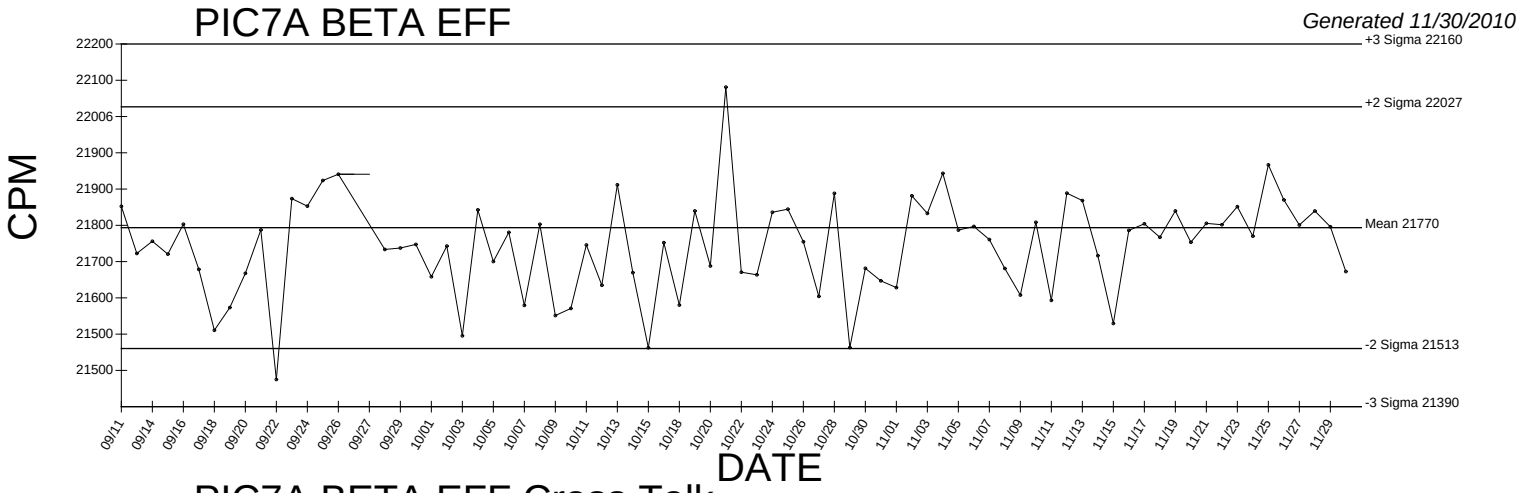

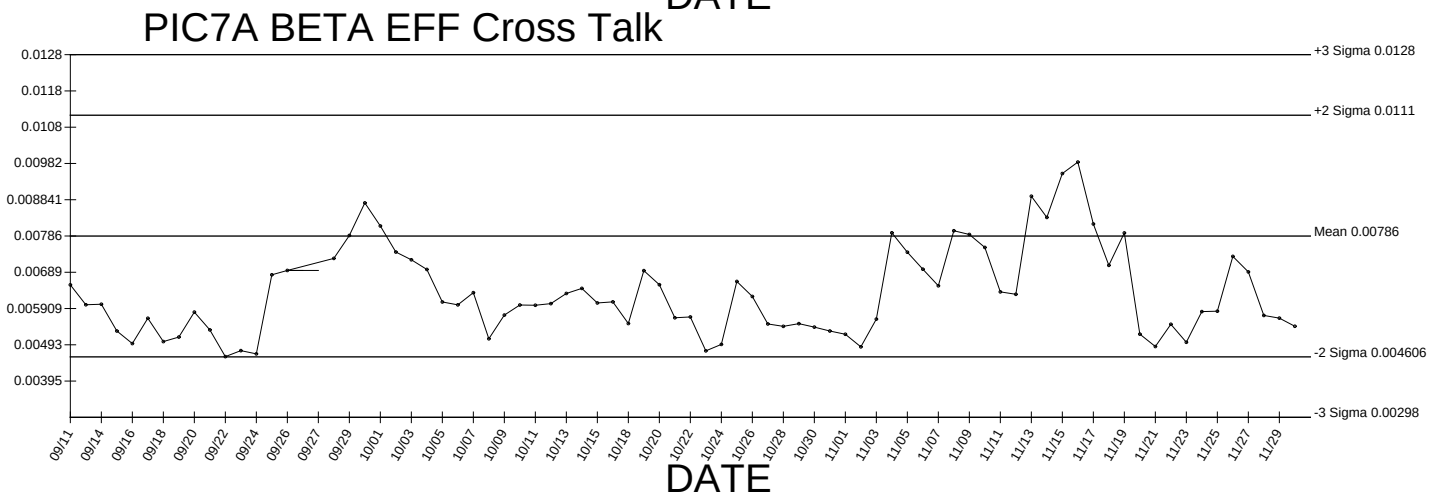

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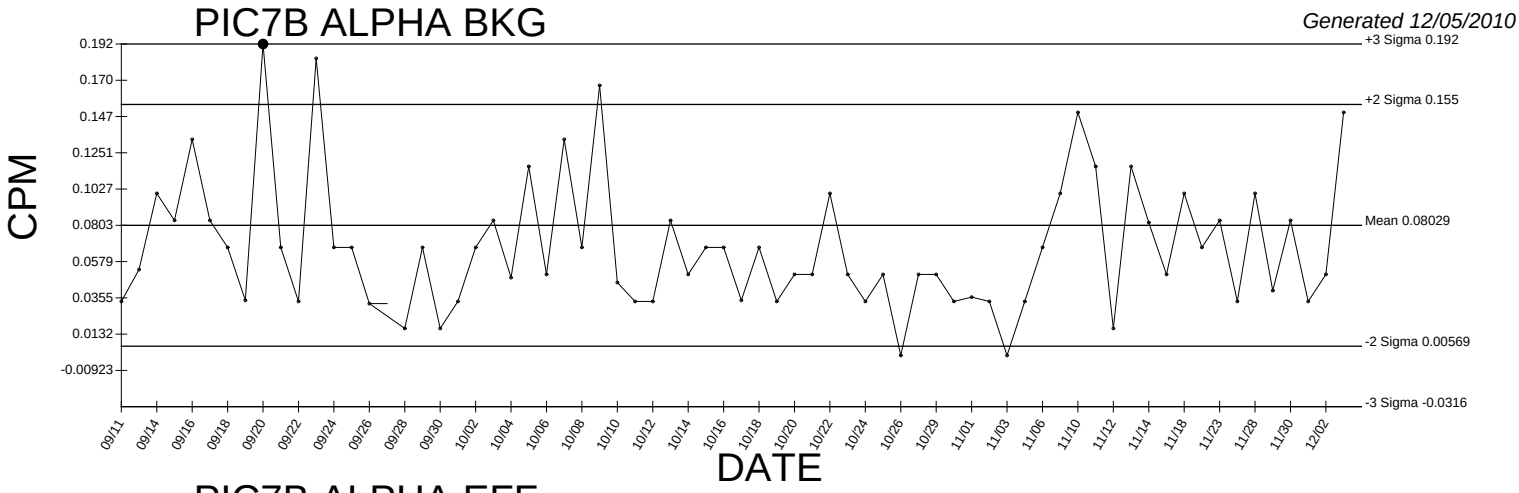
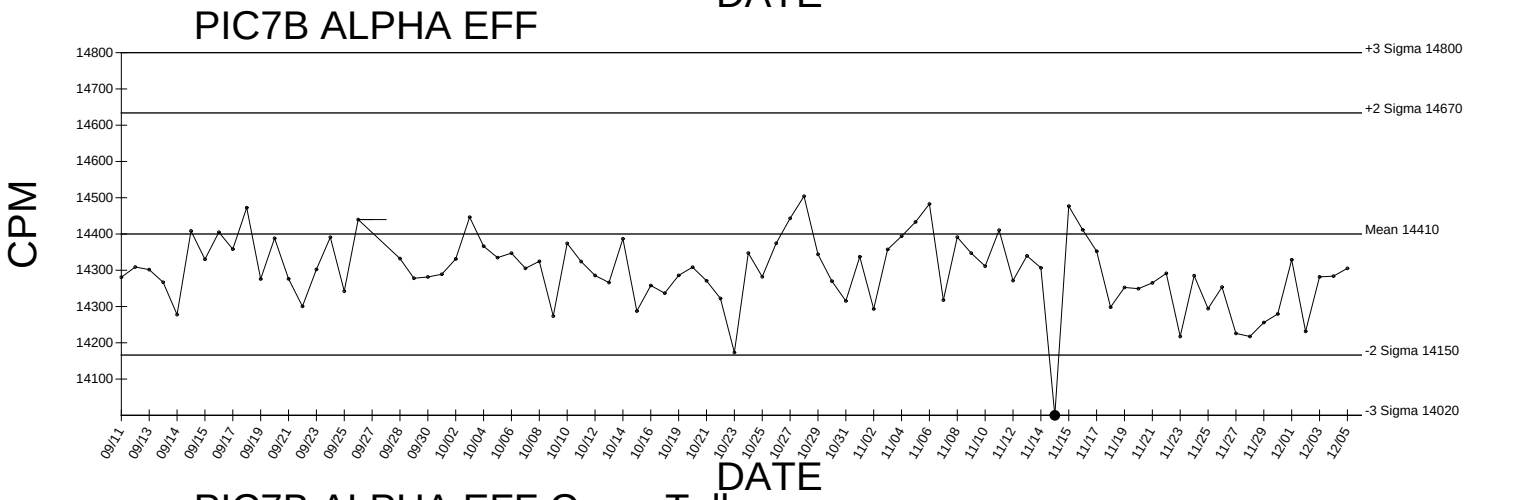
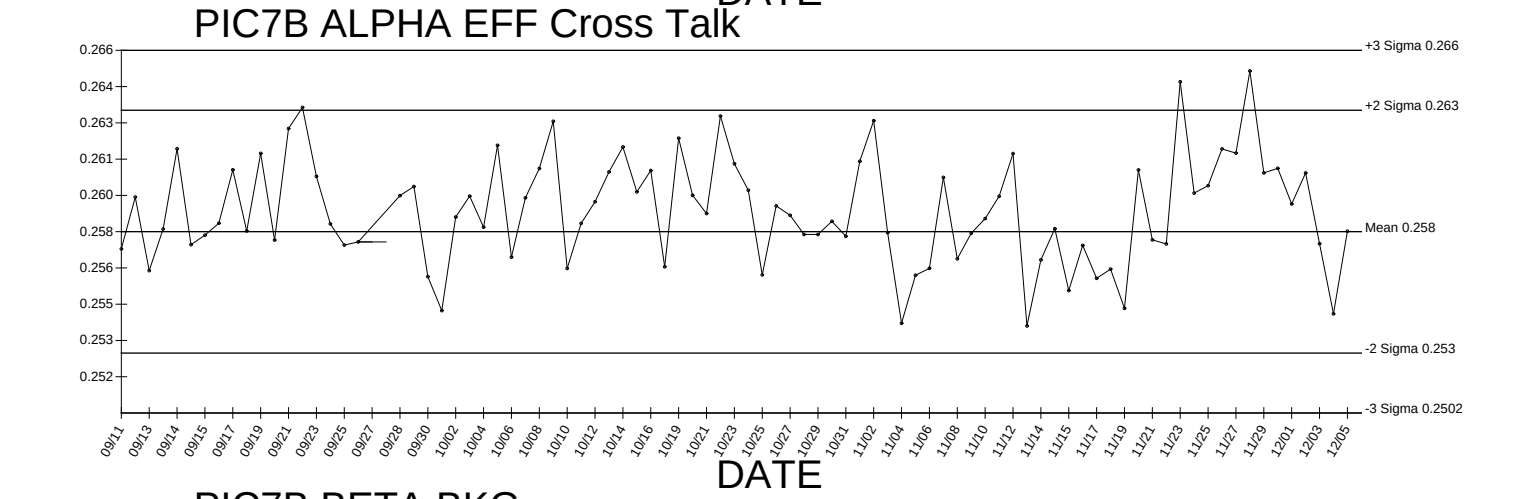
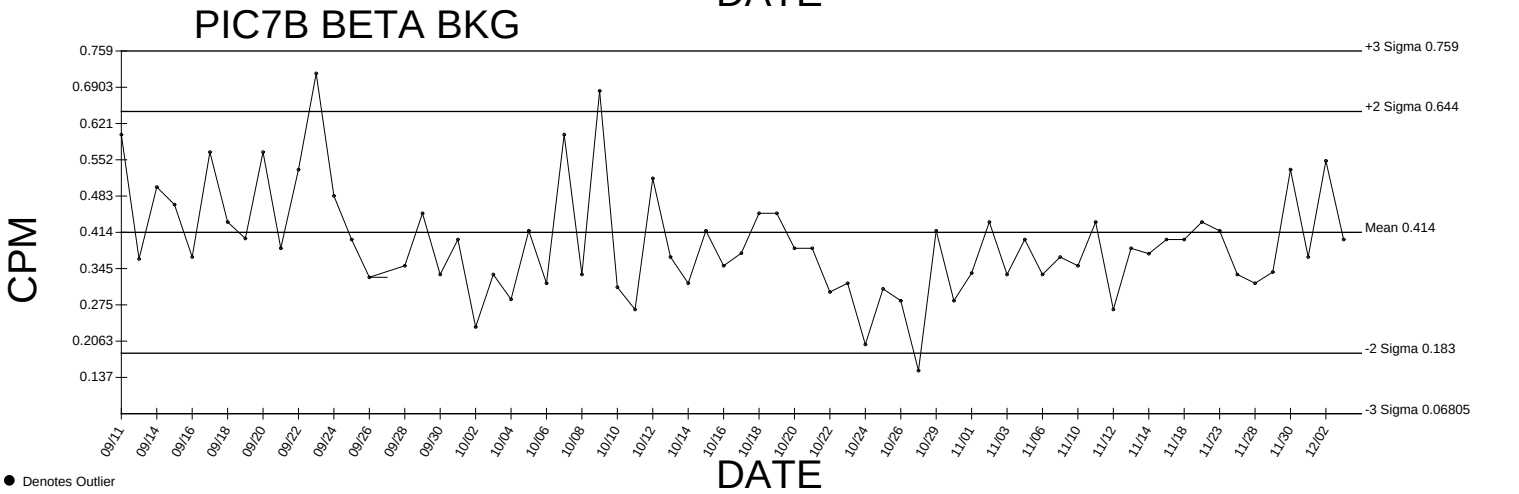
Generated 12/05/2010









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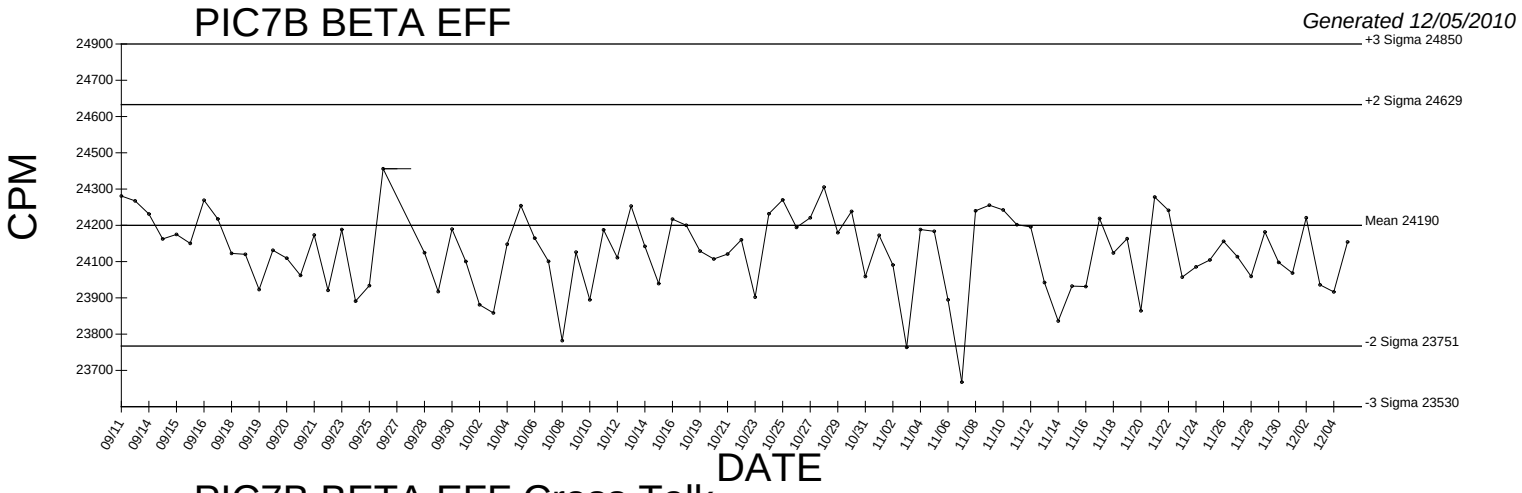

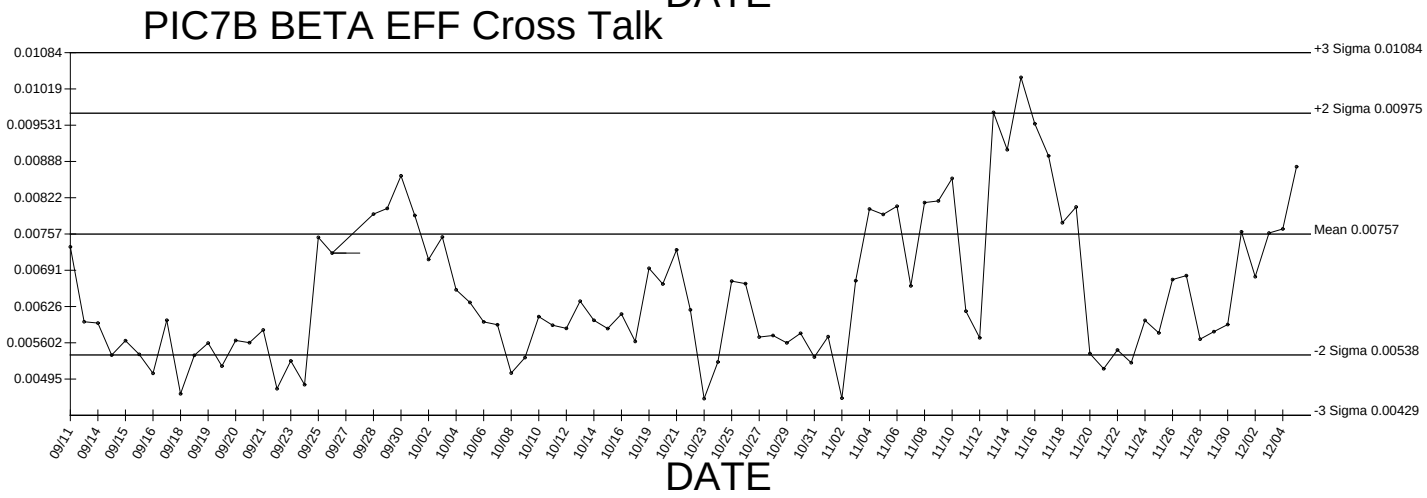

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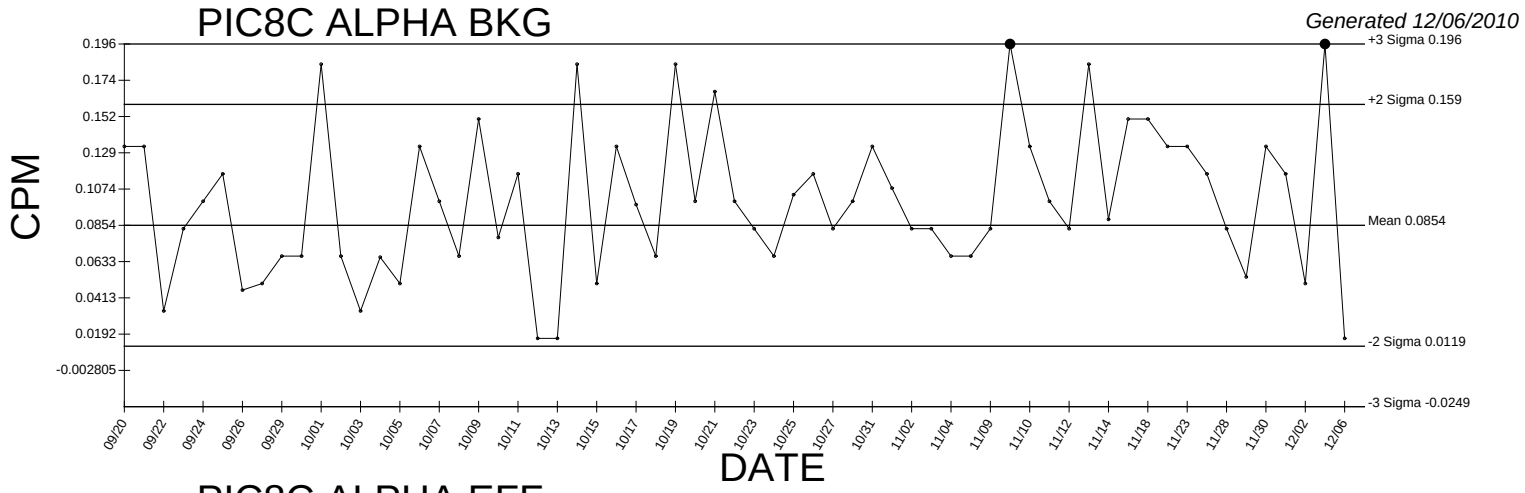

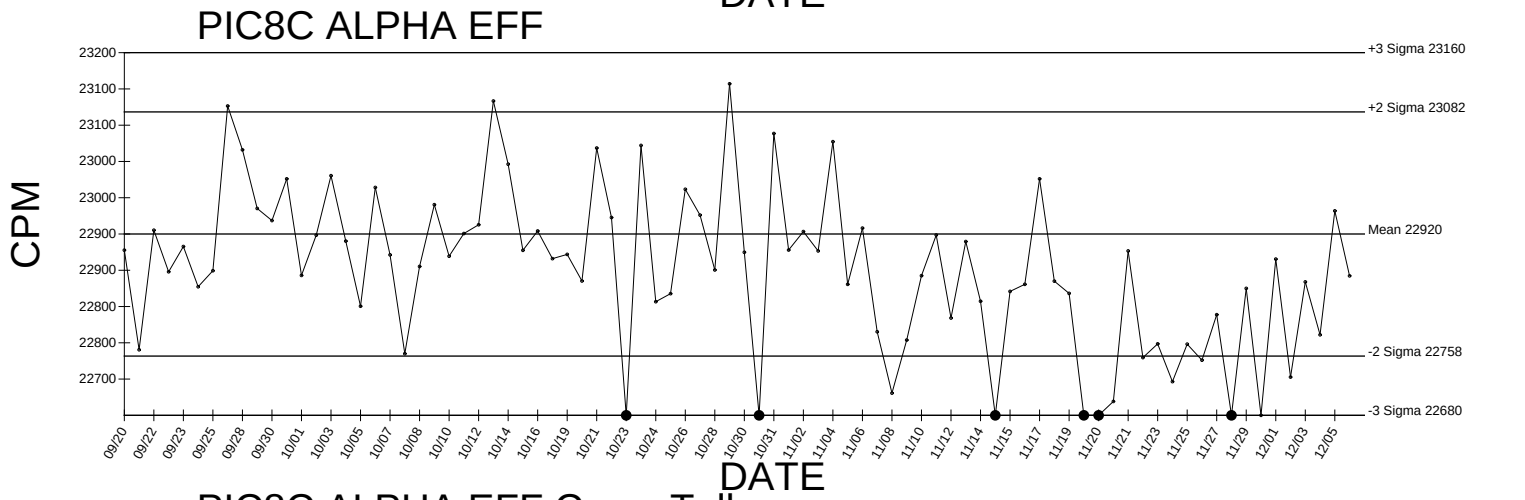

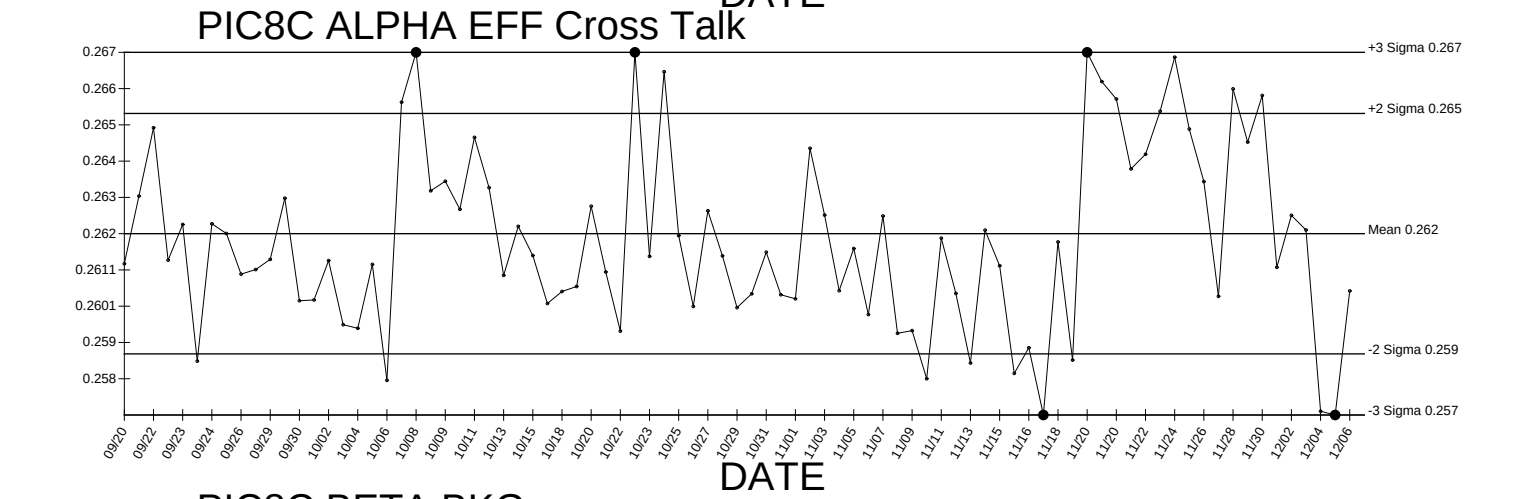

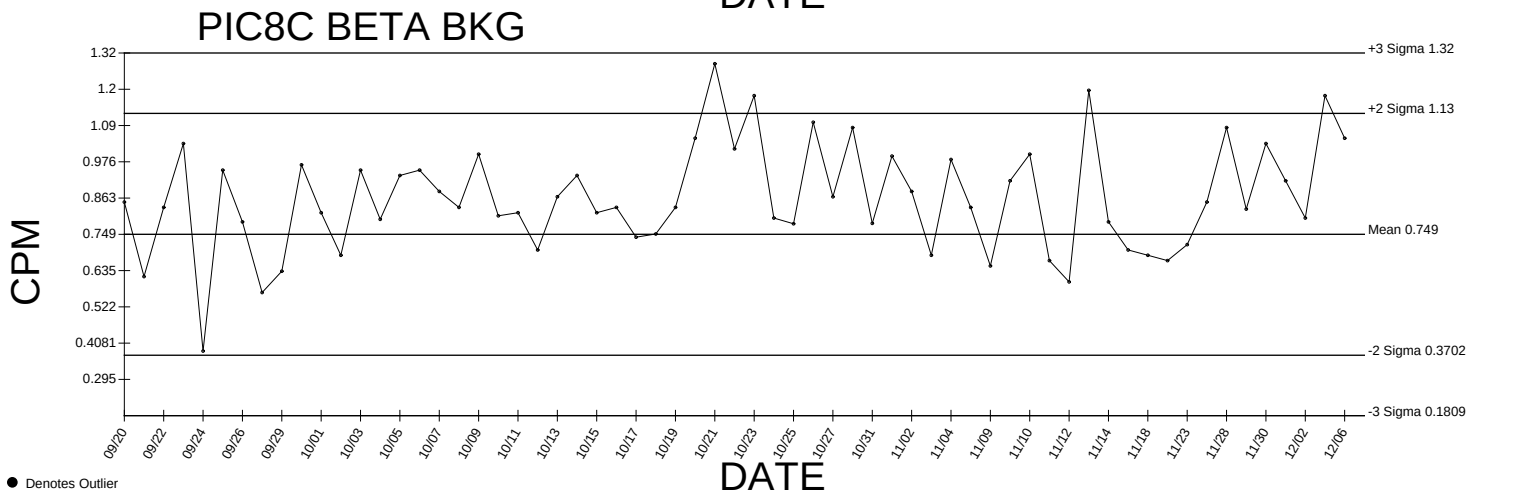

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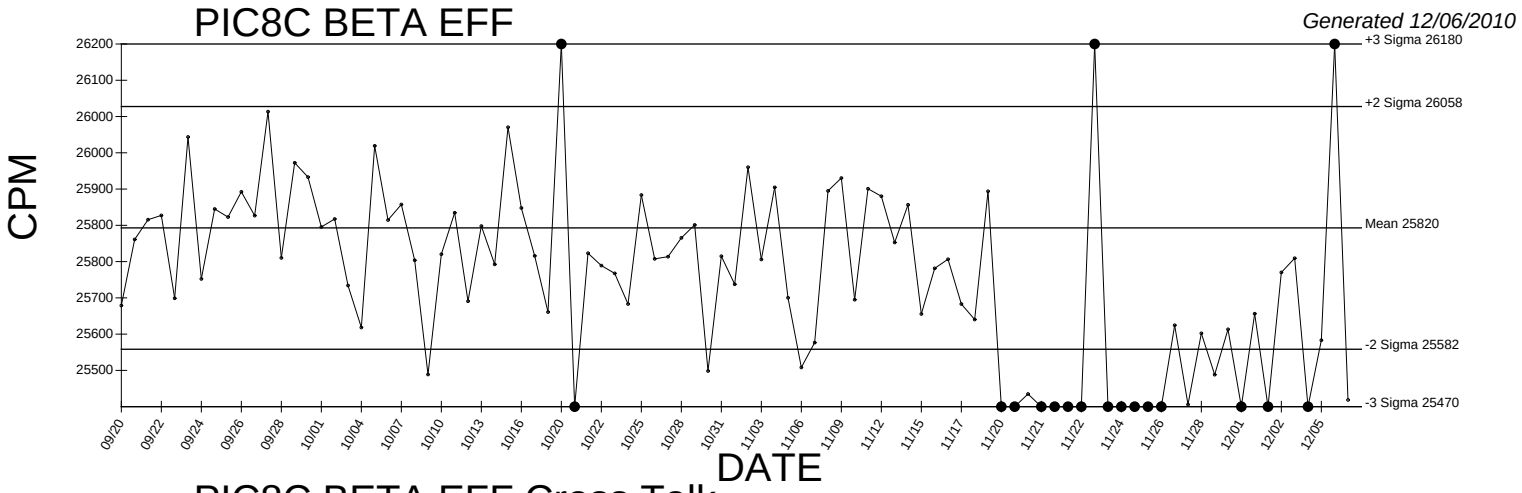

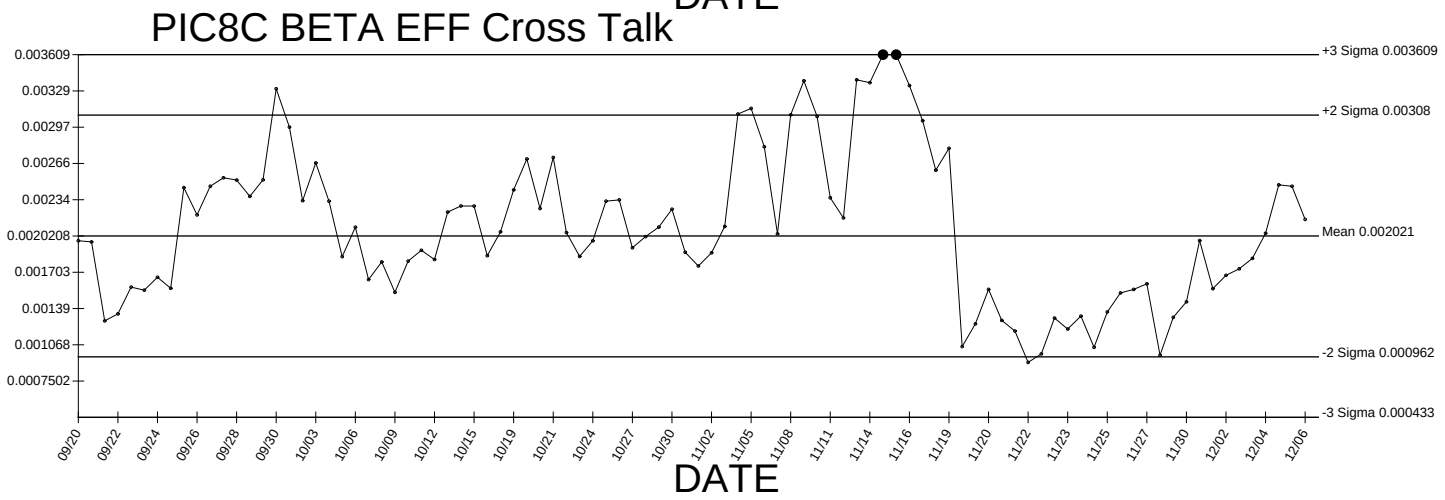

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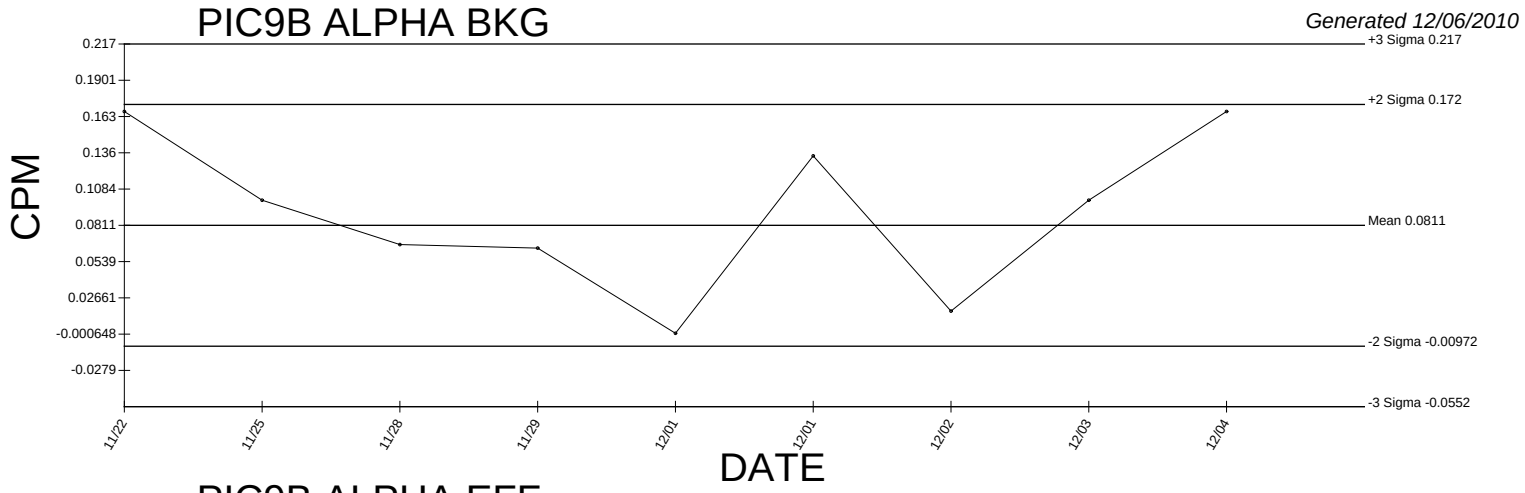
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Generated 12/06/2010
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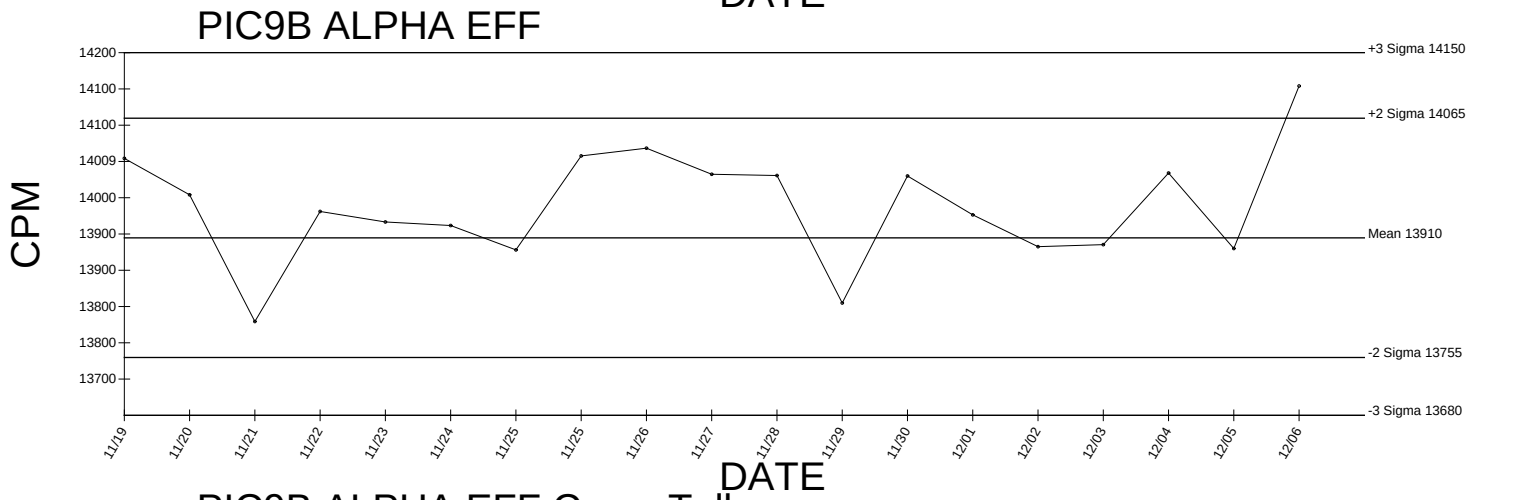
0.1901
0.163
0.136
0.1084
0.0811
0.0539
0.02661
-0.000648
-0.0279
+3 Sigma 0.217
+2 Sigma 0.172
Mean 0.0811
-2 Sigma -0.00972
-3 Sigma -0.0552
11/22
11/25
11/28
11/29
12/01
12/01
12/02
12/03
12/04
DATE


PIC9B ALPHA EFF
CPM
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14100
14100
14009
14000
13900
13900
13800
13800
13700
+3 Sigma 14150
+2 Sigma 14065
Mean 13910
-2 Sigma 13755
-3 Sigma 13680
11/19
11/20
11/21
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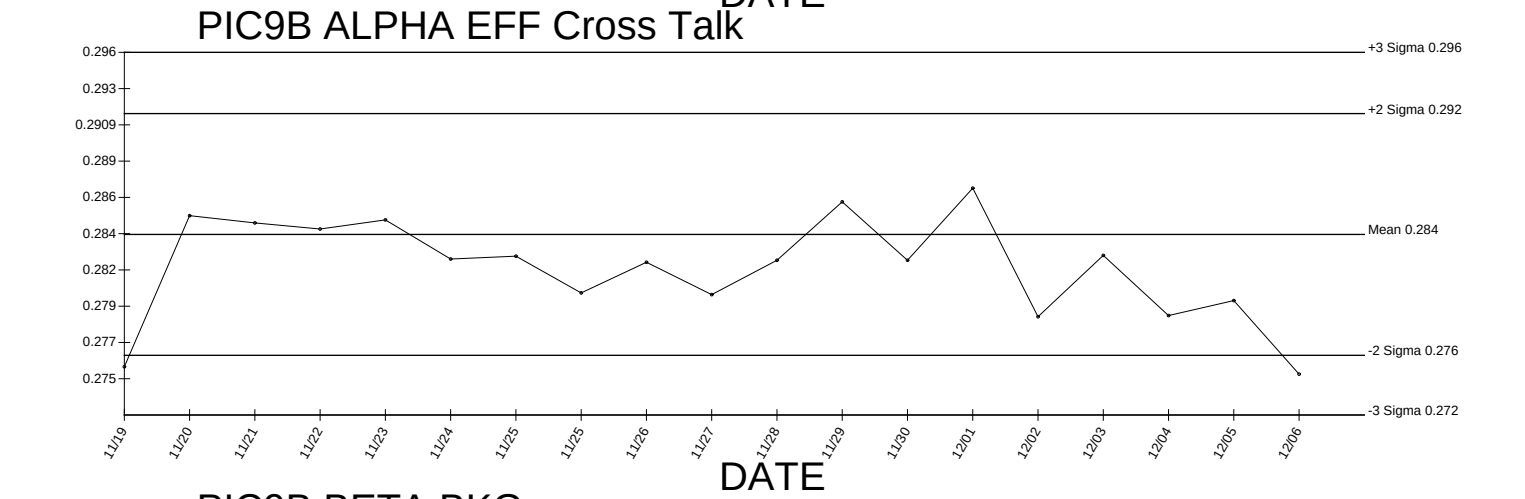
12/05
12/06
DATE


PIC9B ALPHA EFF Cross Talk
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0.293
0.2909
0.289
0.286
0.284
0.282
0.279
0.277
0.275
+3 Sigma 0.296
+2 Sigma 0.292
Mean 0.284
-2 Sigma 0.276
-3 Sigma 0.272
11/19
11/20
11/21
11/22
11/23
11/24
11/25
11/25
11/26
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12/01
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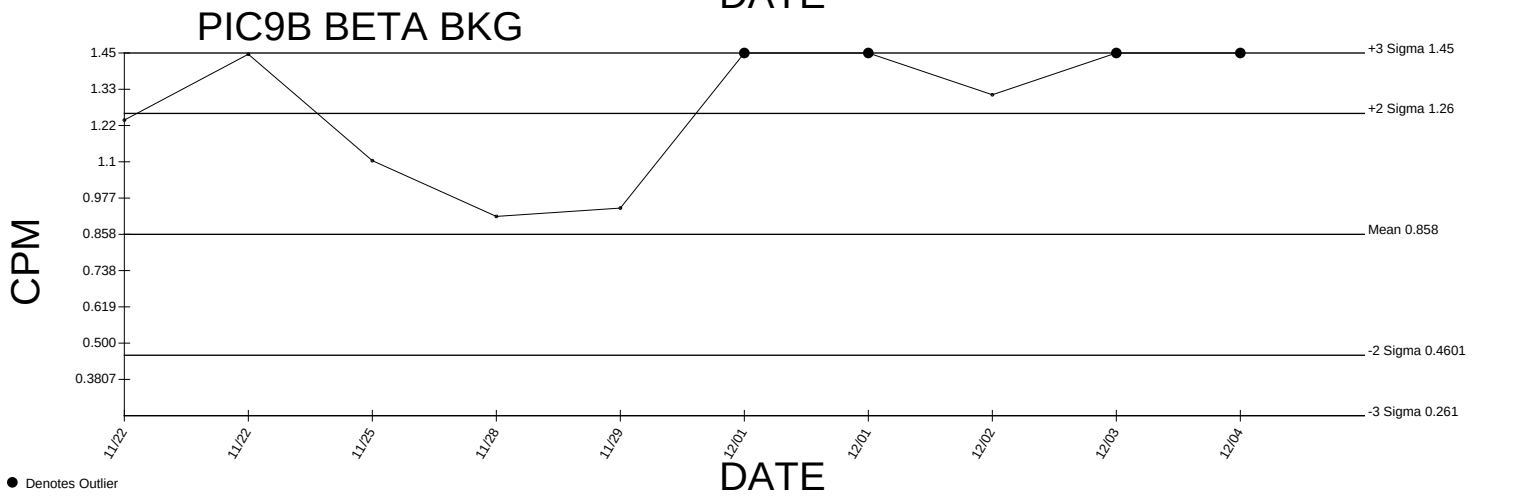
12/05
12/06
DATE


PIC9B BETA BKG
CPM
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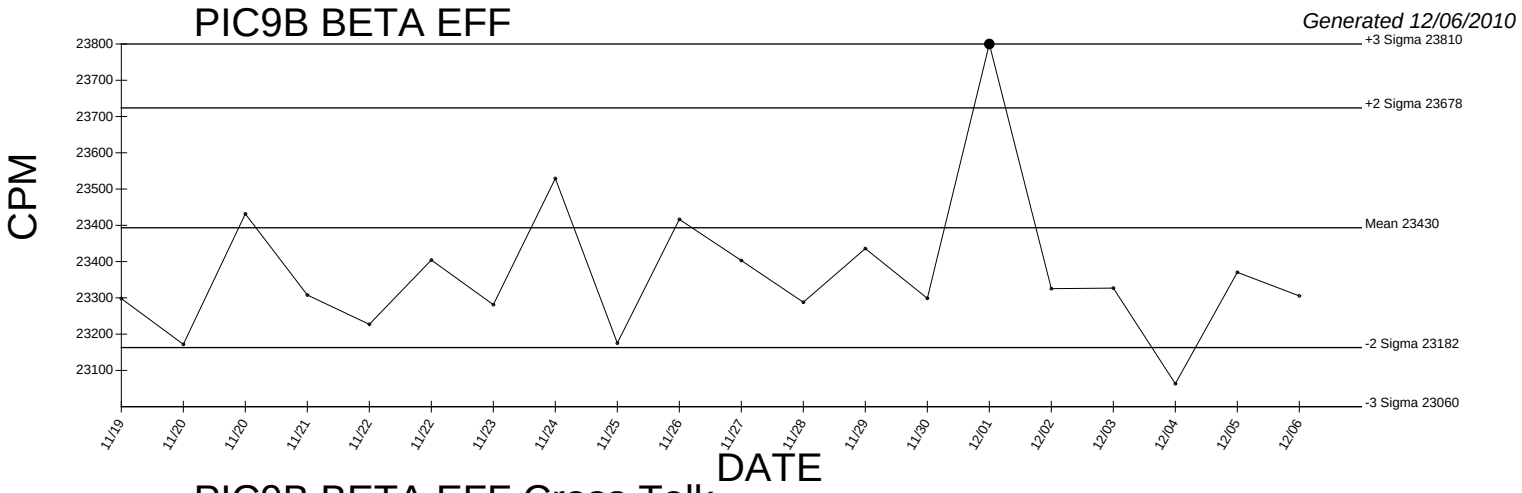
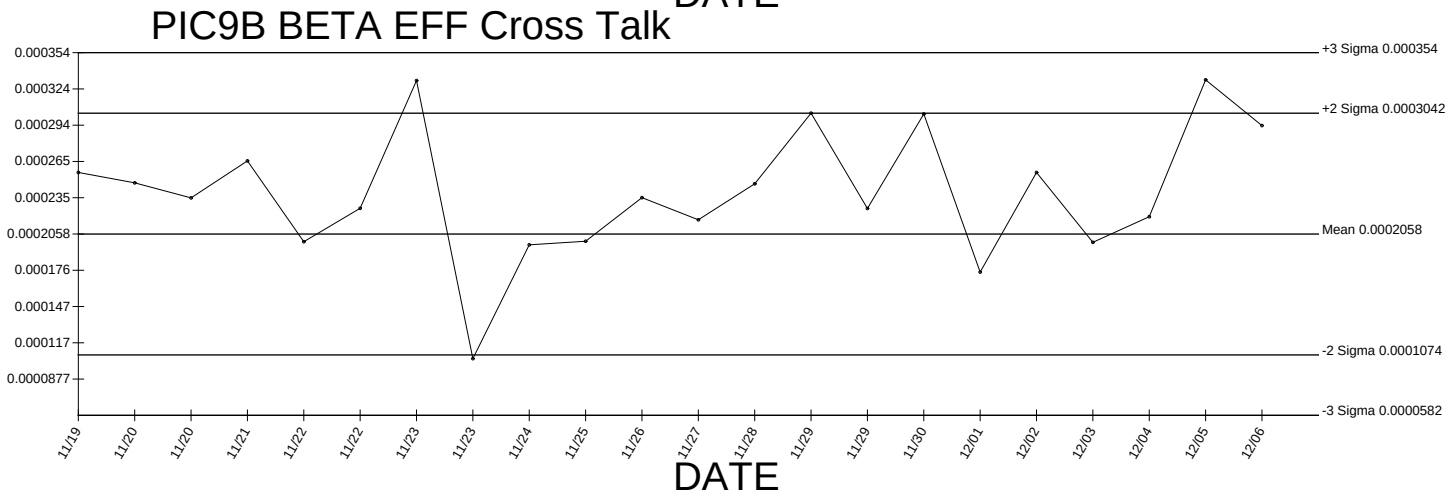
1.33
1.22
1.1
0.977
0.858
0.738
0.619
0.500
0.3807
+3 Sigma 1.45
+2 Sigma 1.26
Mean 0.858
-2 Sigma 0.4601
-3 Sigma 0.261
11/22
11/22
11/25
11/28
11/29
12/01
12/01
12/02
12/03
12/04
DATE
Denotes Outlier





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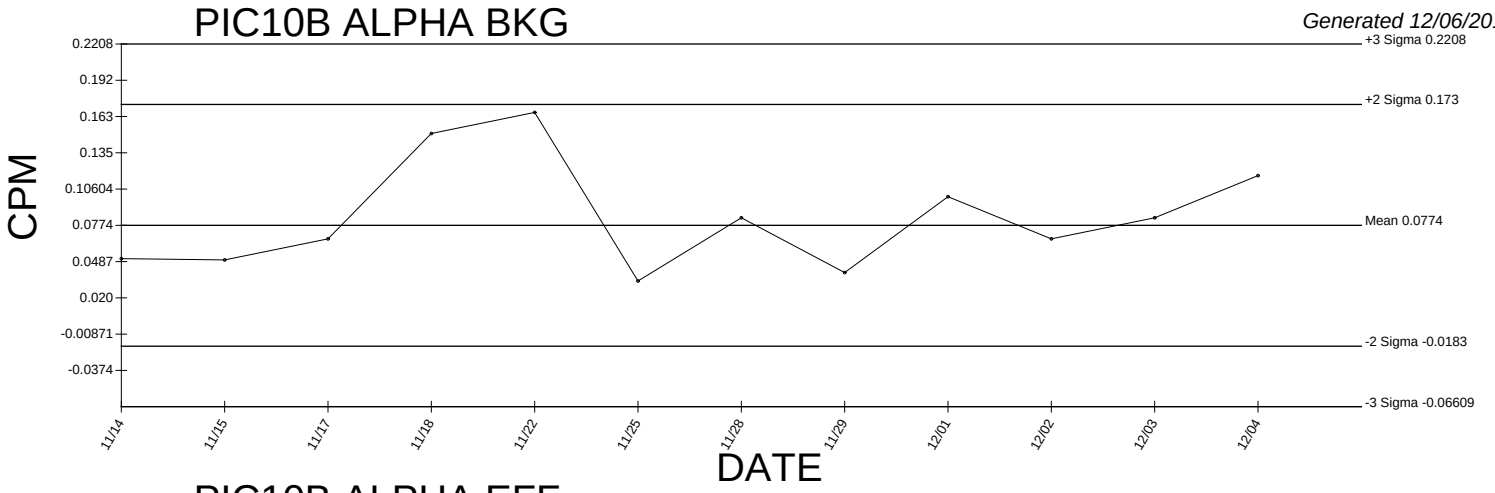

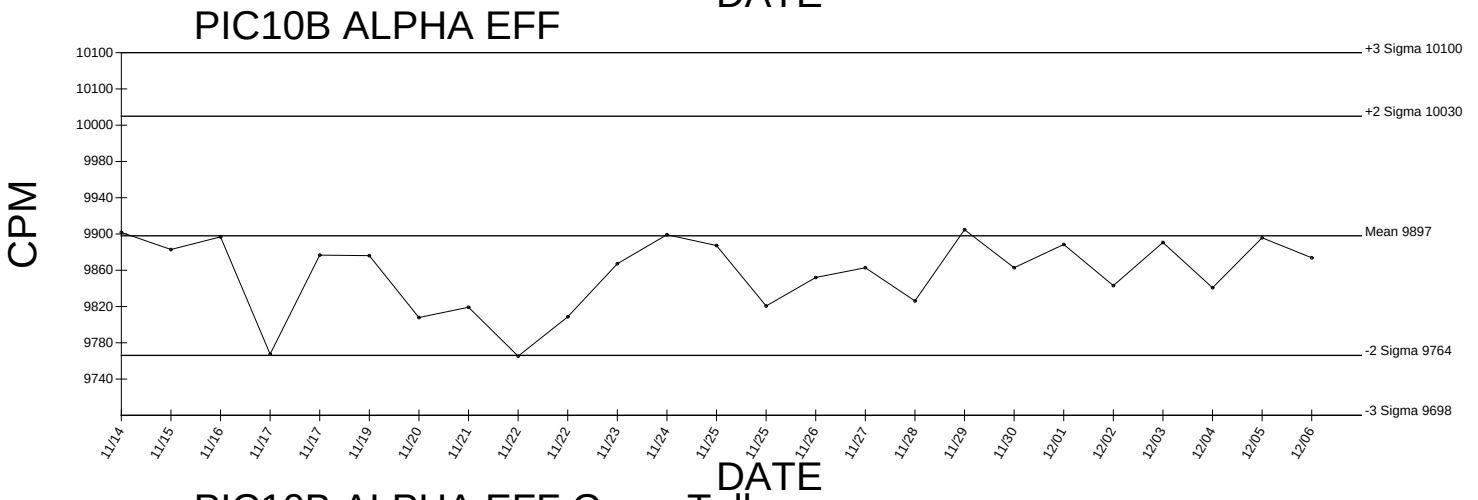

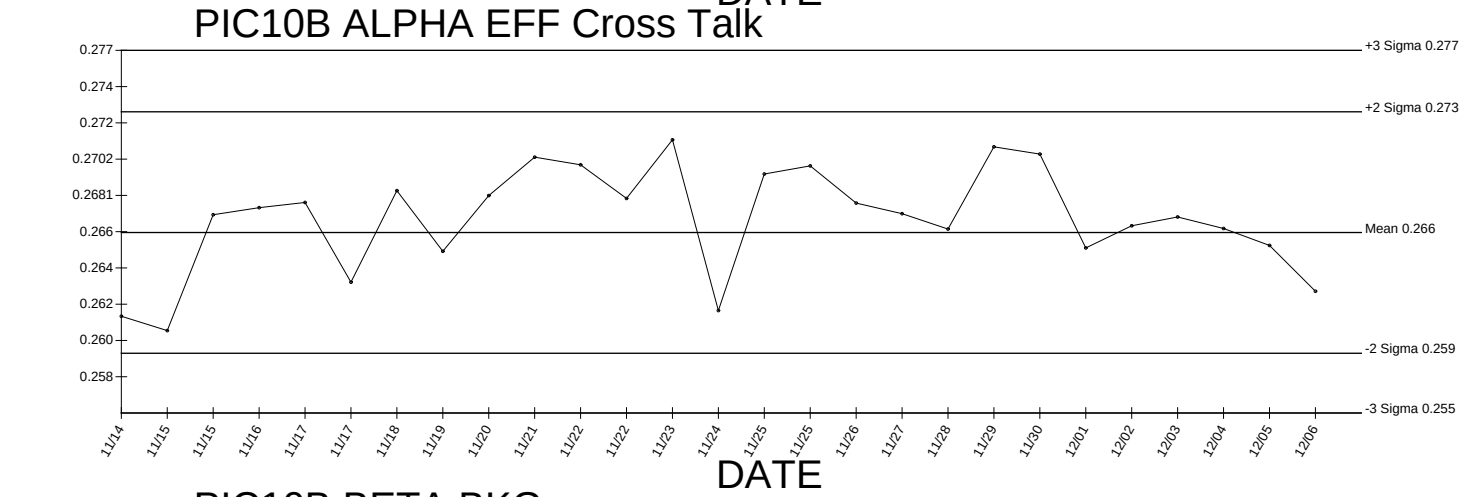

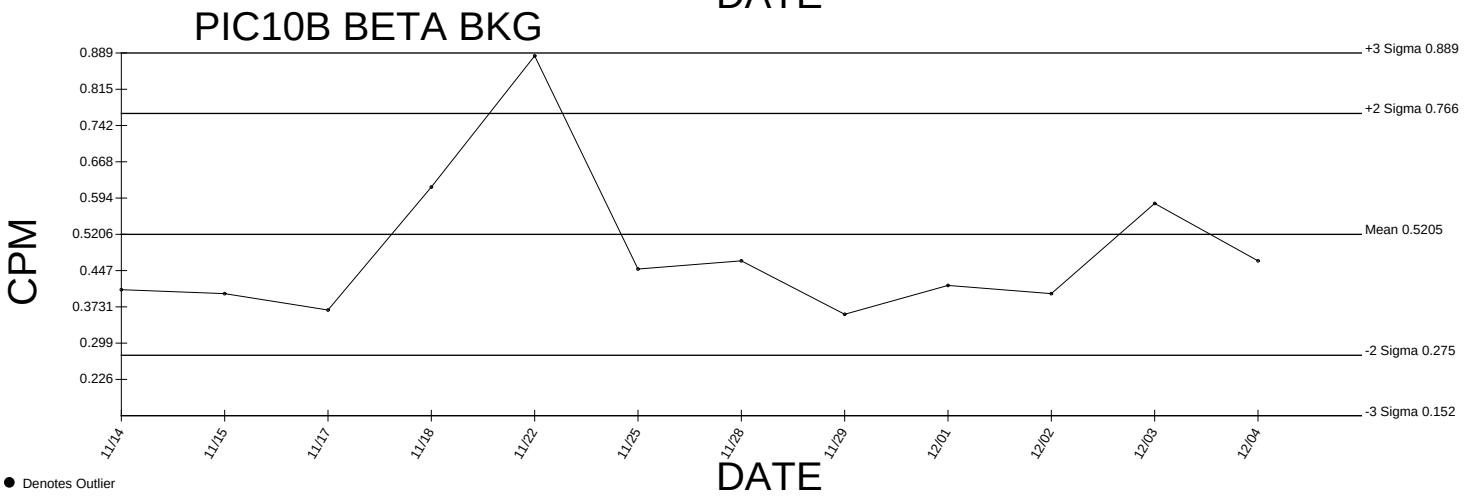

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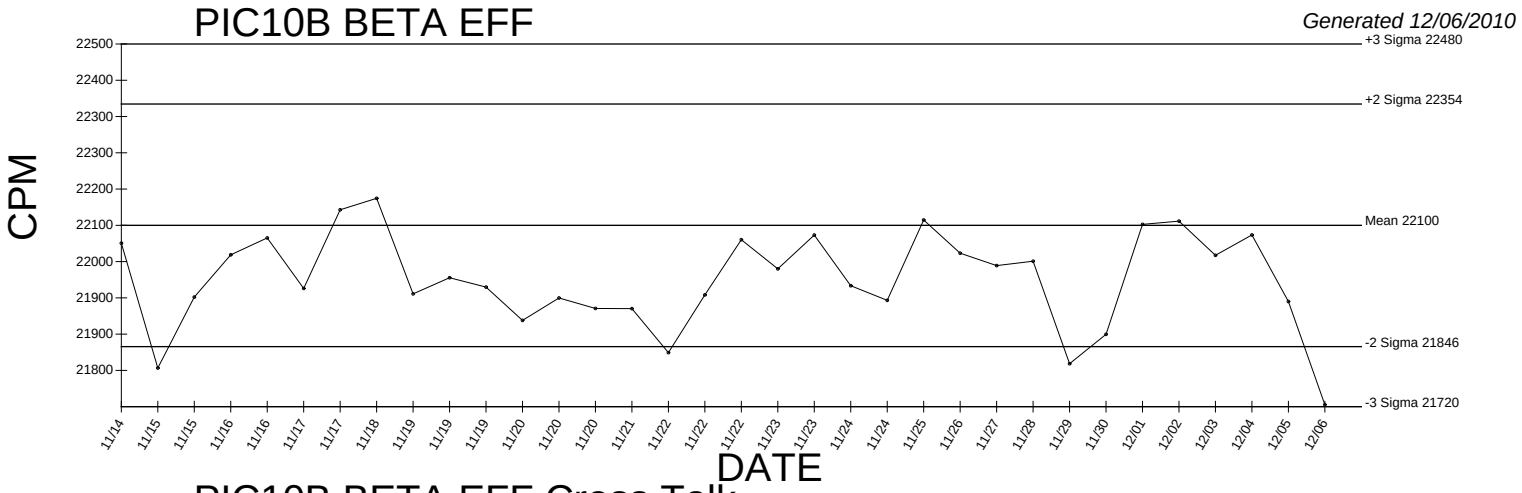

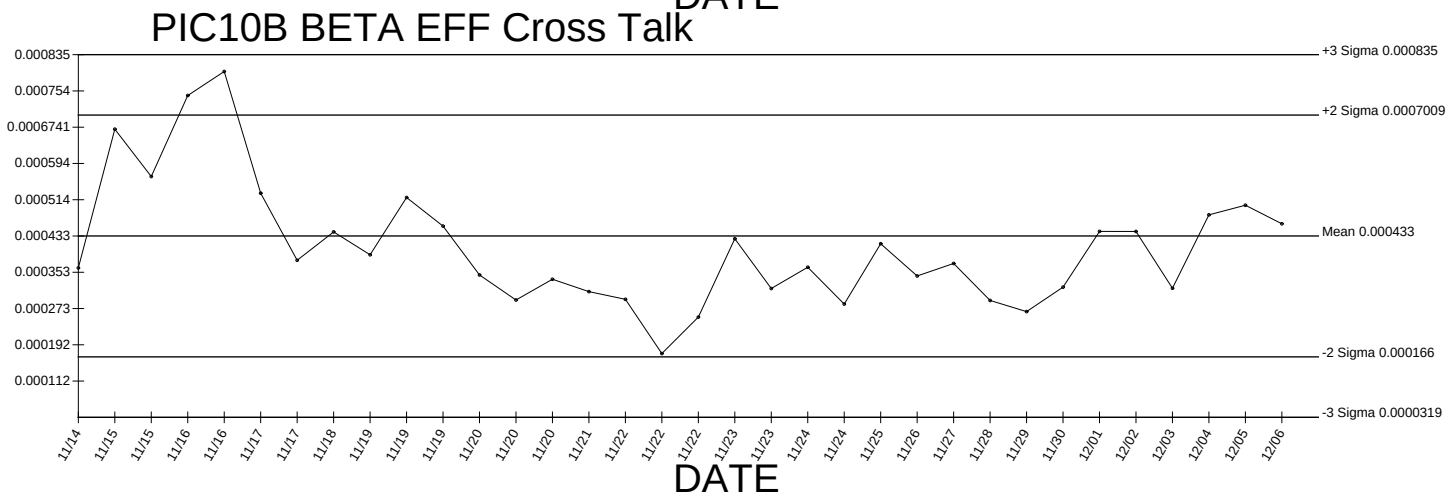

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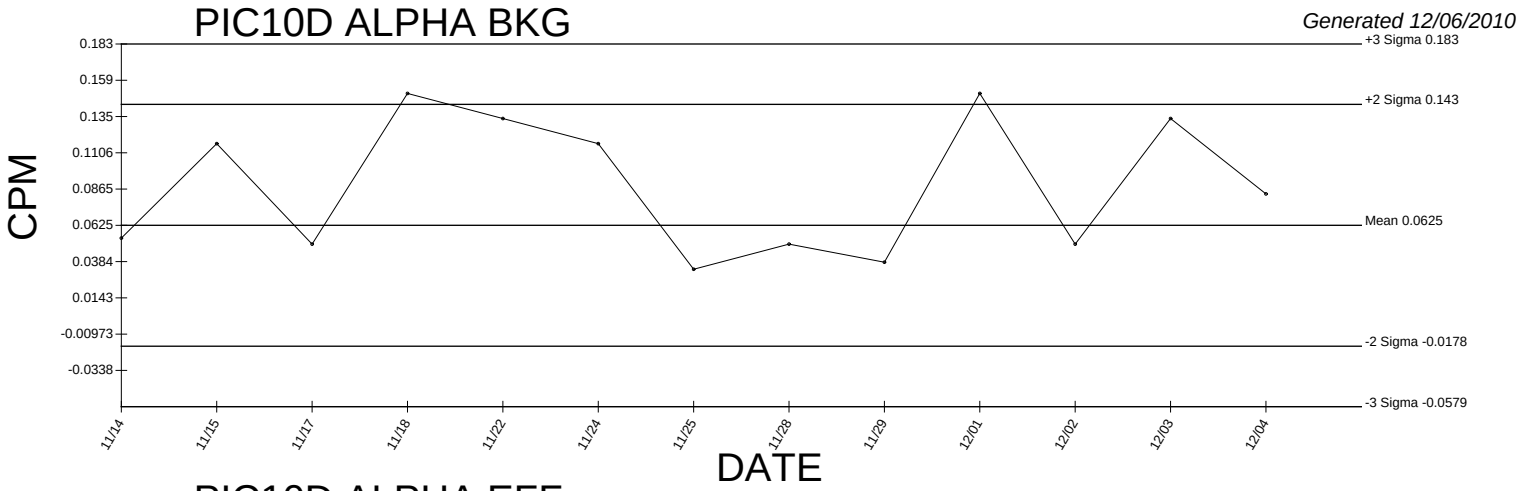

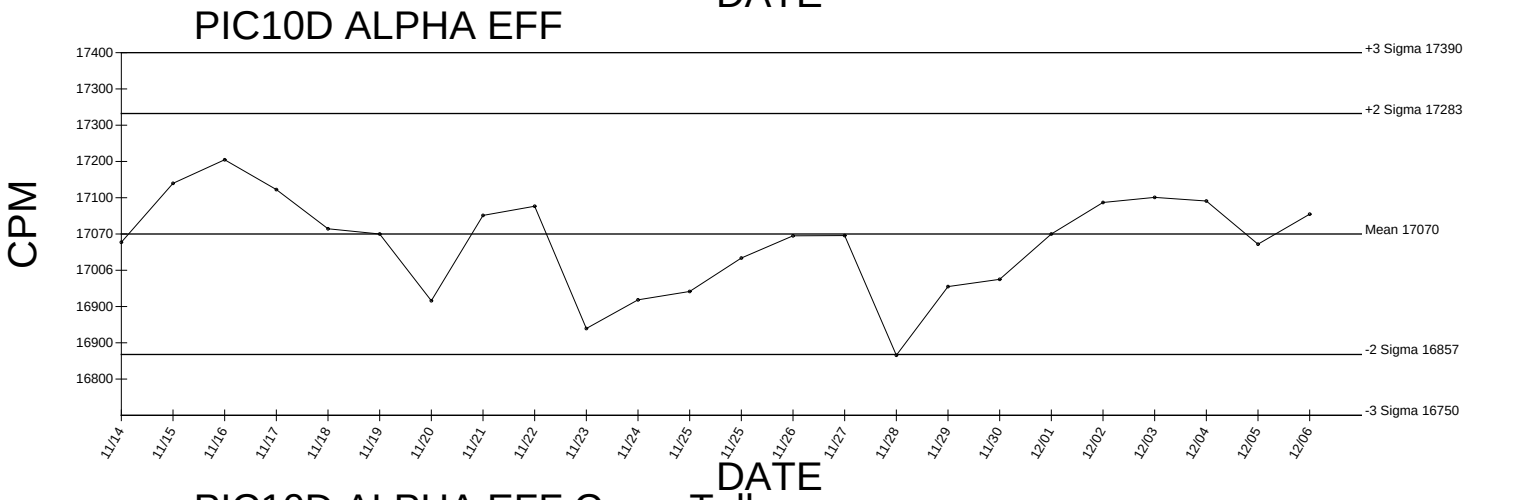

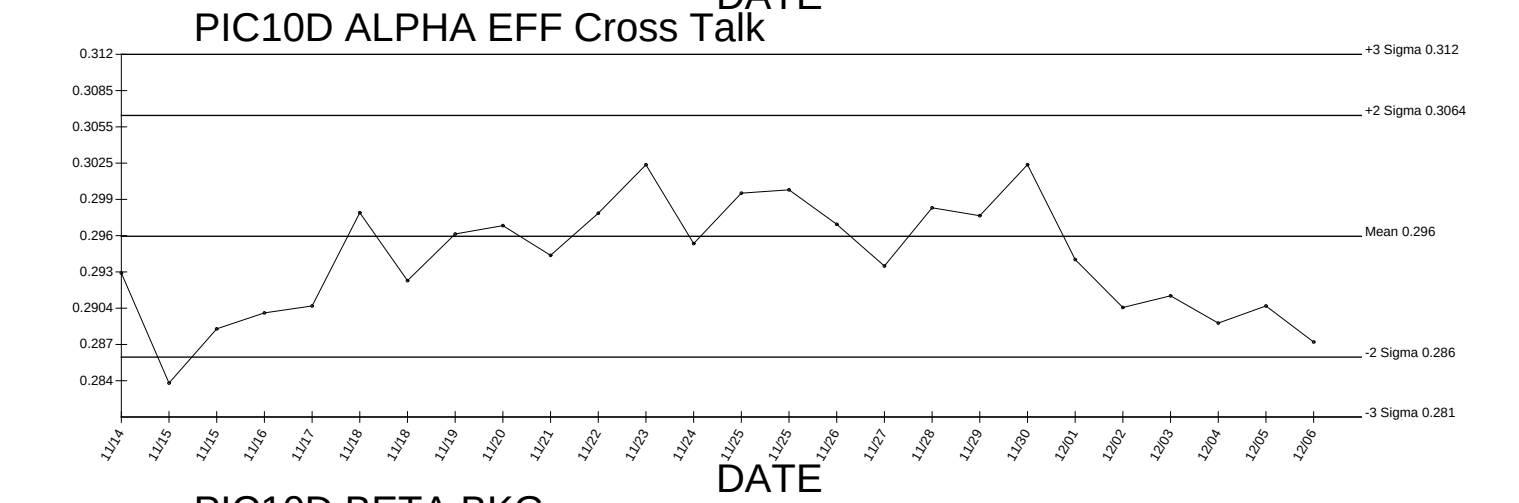

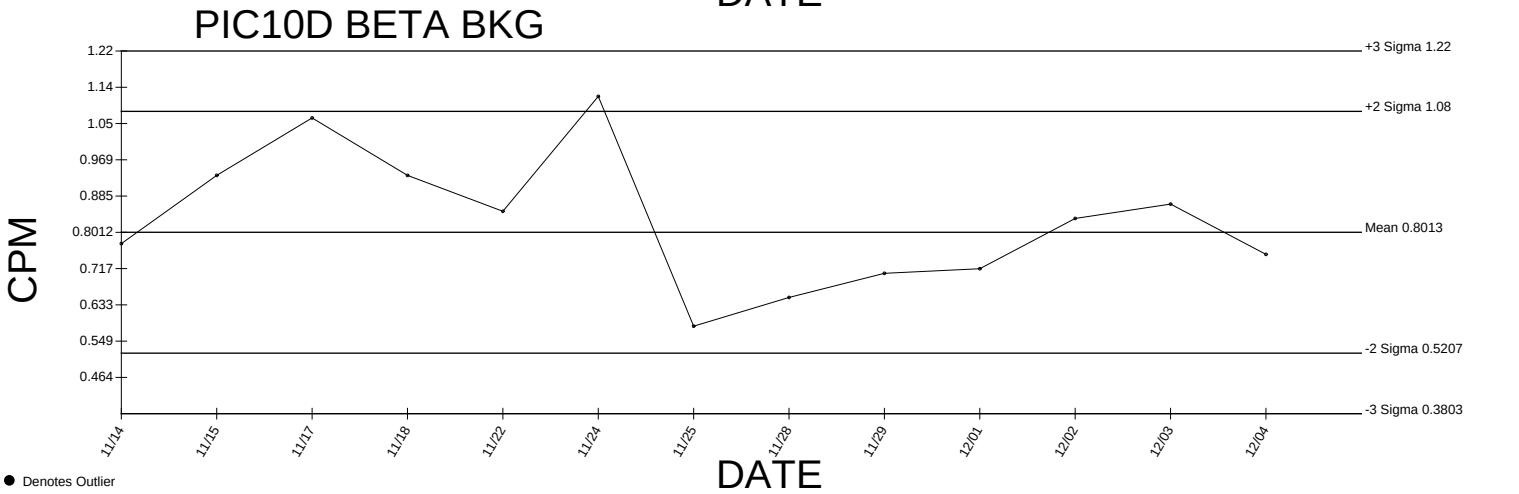

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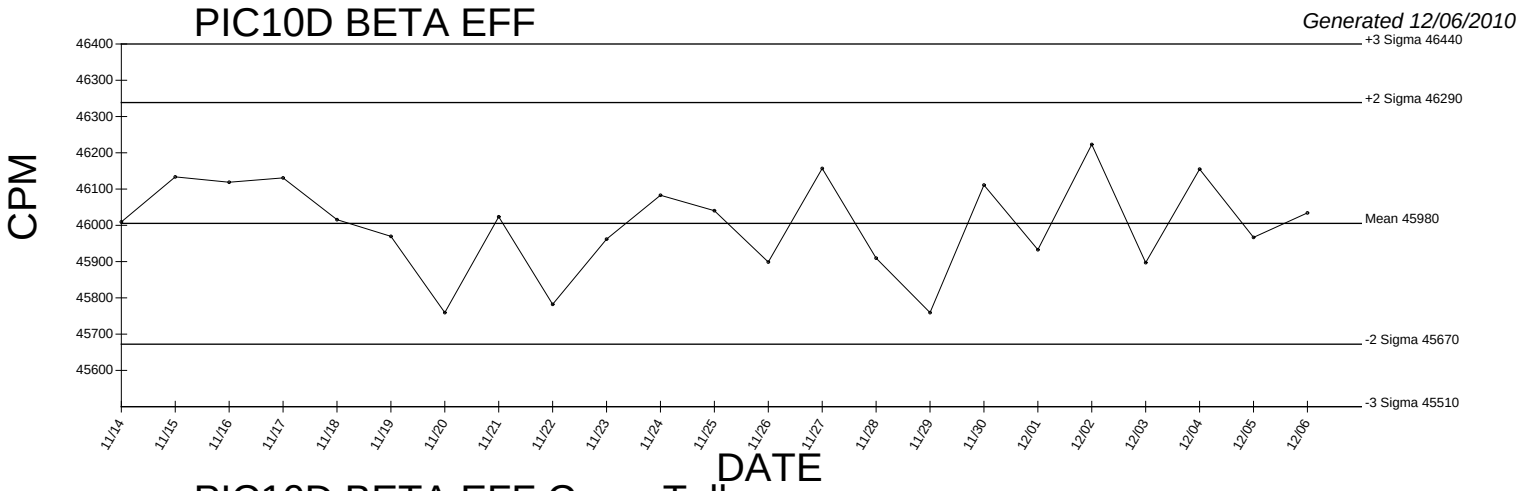

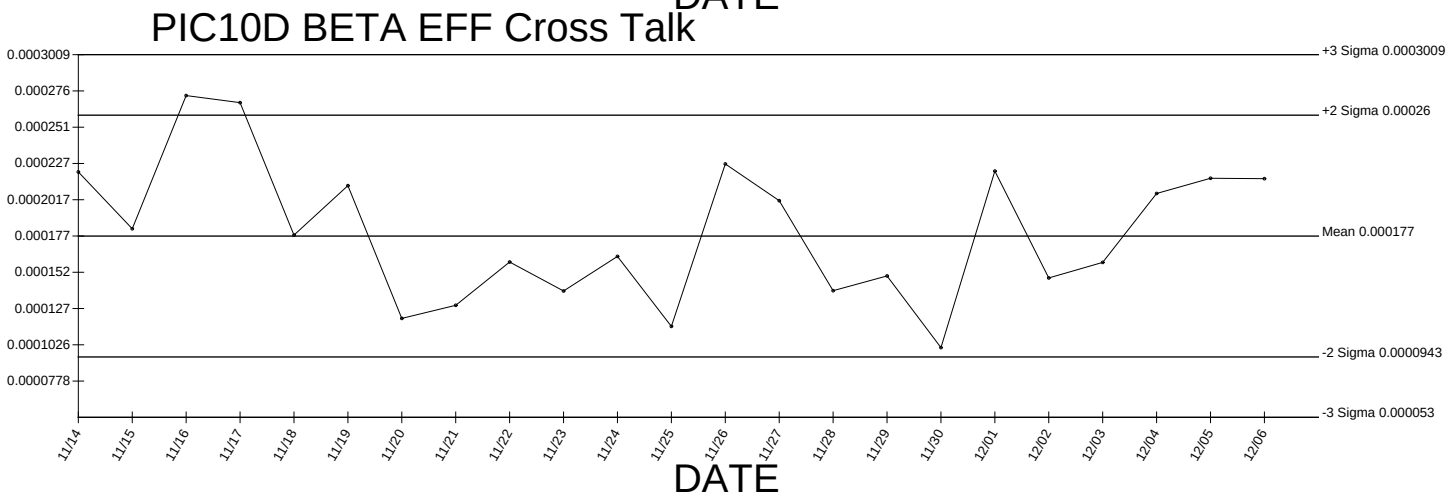

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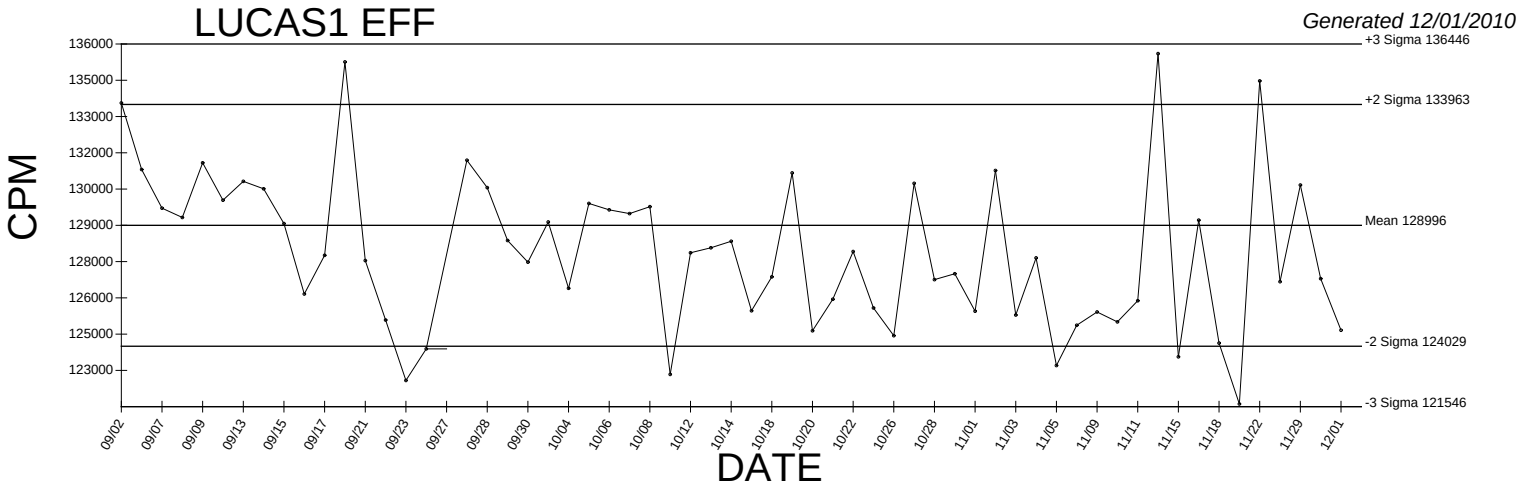
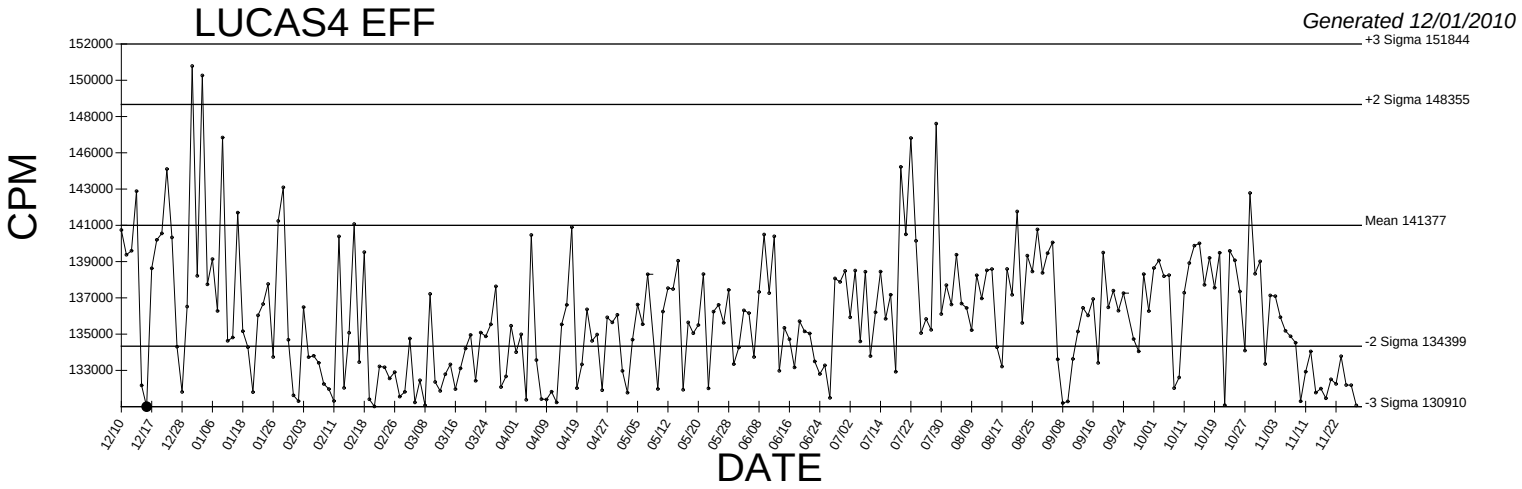
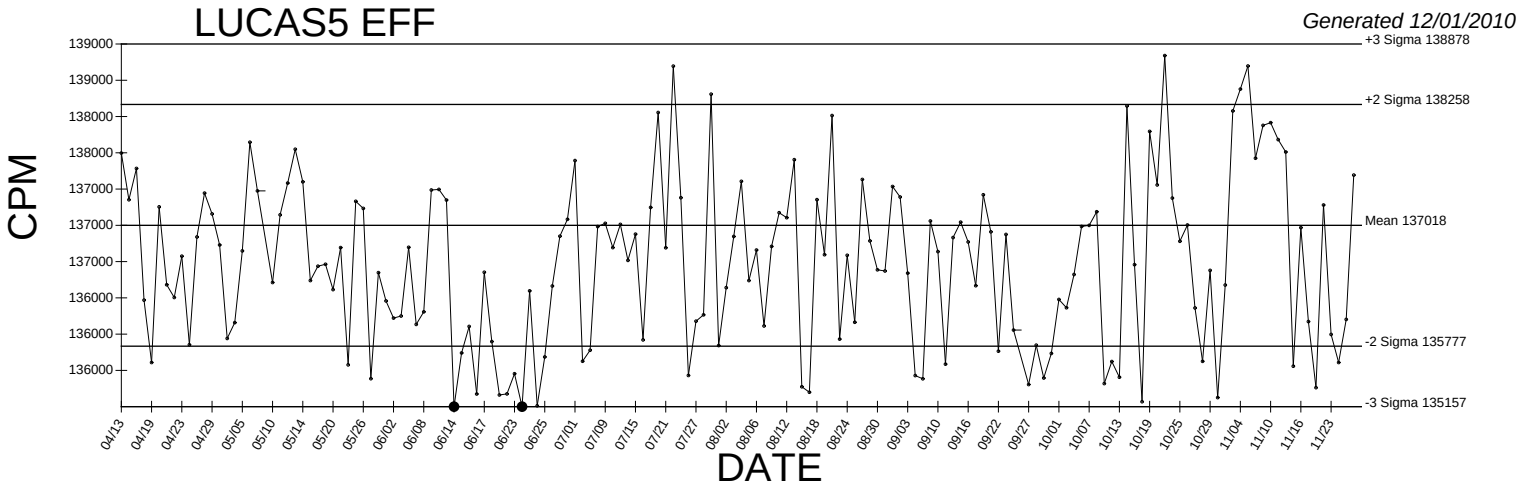


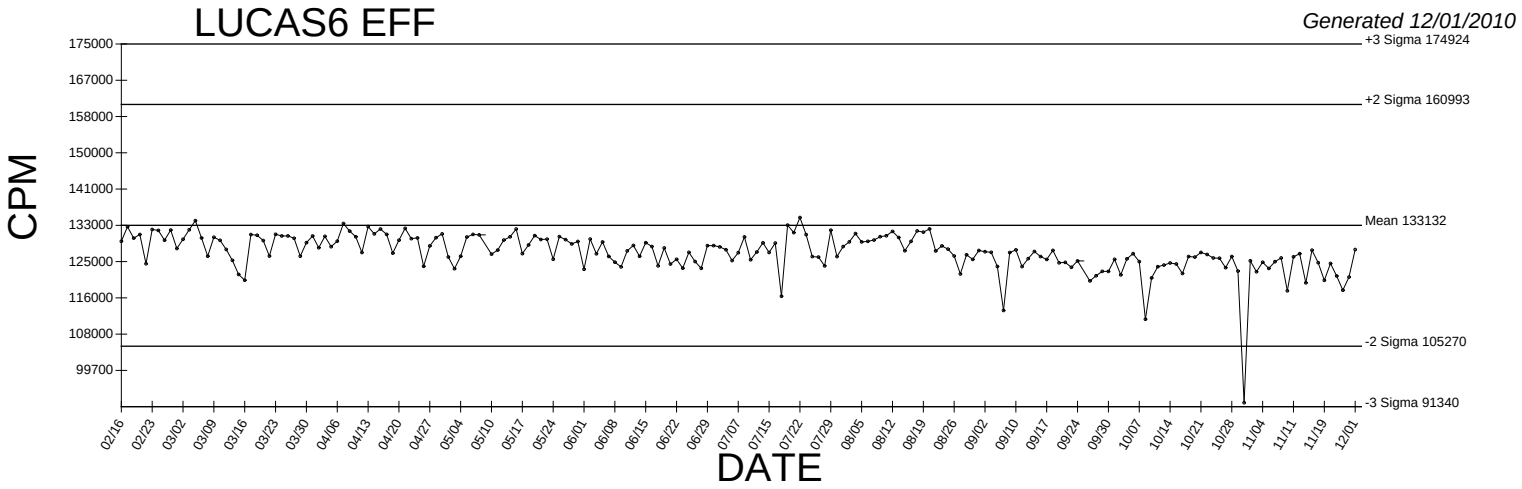
● Denotes Outlier



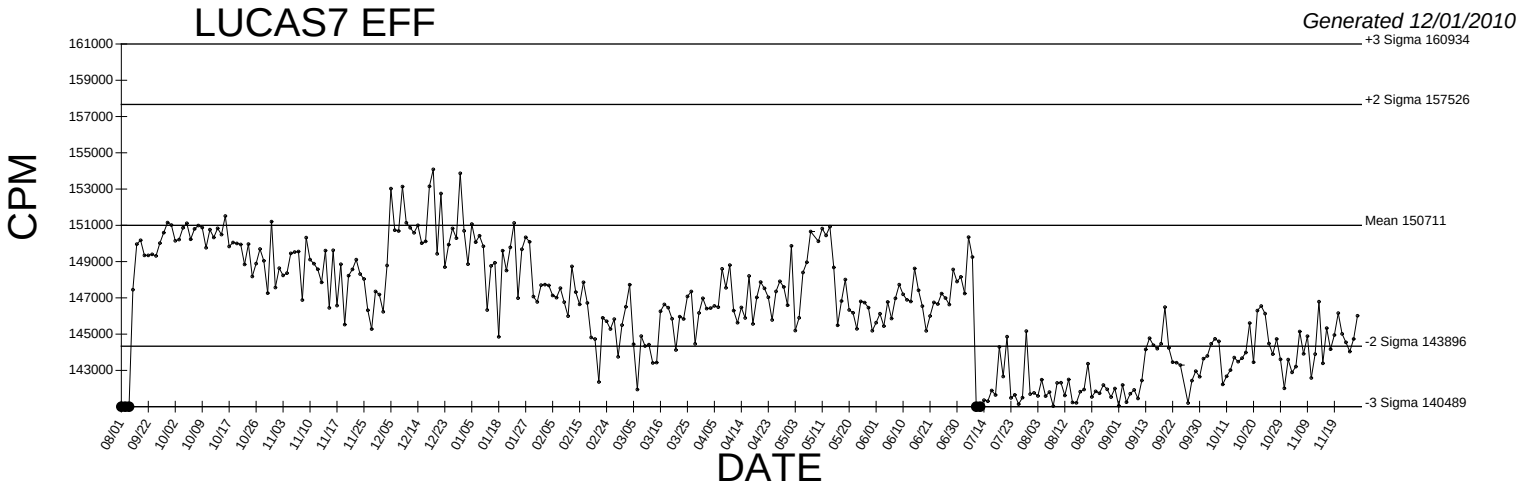
● Denotes Outlier



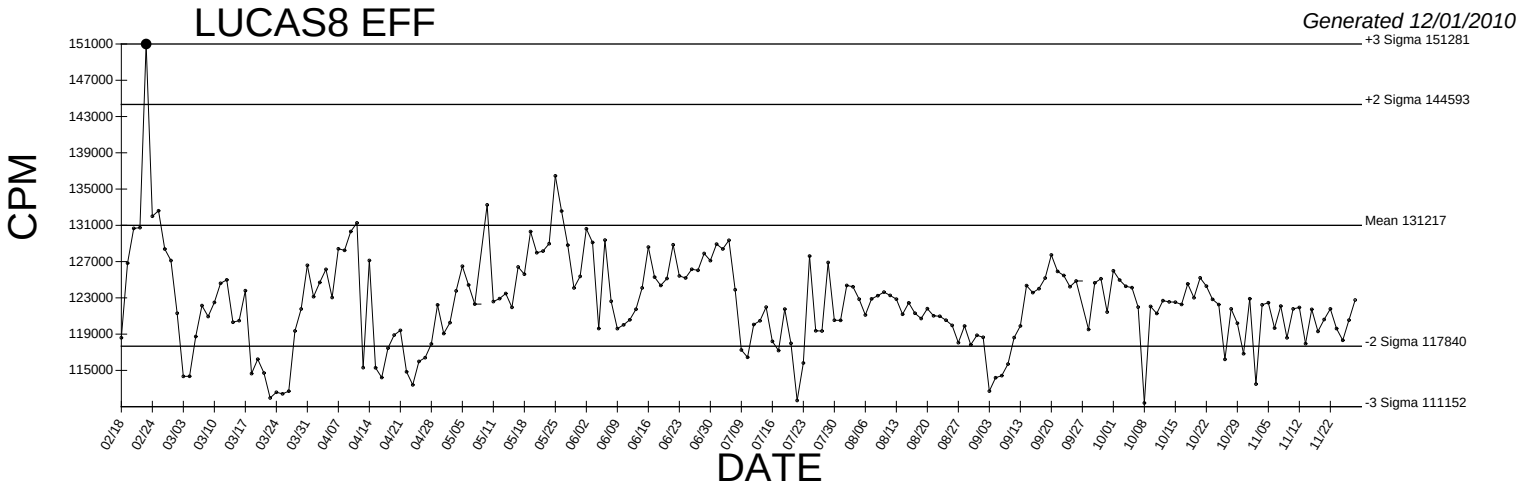
● Denotes Outlier



● Denotes Outlier



● Denotes Outlier



● Denotes Outlier

Standards Data

0533

ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 · U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

65338-278

Am-241 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:	Am-241
ACTIVITY (dps):	3.920 E4
HALF-LIFE:	4.322 E2 years
CALIBRATION DATE:	January 15, 2003 12:00 EST
TOTAL UNCERTAINTY*:	3.2%
SYSTEMATIC:	2.2%
RANDOM:	1.0%

*99% confidence level.

5.10649 grams 1M HCl solution.

Impurities: γ-impurities <0.1%
α-impurities <0.1%

P O NUMBER 3213 RD, Item 1

SOURCE PREPARED BY: M Taskaeva
M. Taskaeva, Radiochemist

Q A APPROVED: 1-16-03

RC-S-035-048a

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0533
Prepared By:	Angela Johnson
Carrier Conc:	1 M HCL
Reference Date:	01/15/2003
Ampoule Mass (g):	5.10649 g
Uncertainty:	+/- 3.2 %
LogBook No:	RC S 035 048

A Solution Material Info			
Isotope:	Americium-241		
Prepared By:	Angela Johnson		
Prep Date:	02/05/2003		
Verification Date:	11/09/2010		
Expiration Date:	11/09/2011		
Primary Code:	0533-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	4.8225 g		
Density(g/mL):	1.0139	Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(4.8225 g) * (39200 dps) * (60 dpm/dps) / (5.10649 g * 100 mL) = 22211.9695 dpm/mL
(4.8225 g) * (39200 dps) * (60 dpm/dps) / (1.0139 g/mL)/ (5.10649 g * 100 mL) = 21907.2185 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
02/20/2003	Angela Johnson	1.0151	100	0533-B	222.38 dpm/mL	03/01/2006	03/01/2007
02/20/2003	Angela Johnson	.6819	250	0533-C	59.754 dpm/mL	02/20/2004	02/20/2005
05/07/2003	Tim Chandler	.1245	100	0533-D	27.2745 dpm/mL	05/03/2004	05/03/2005
09/10/2004	Amanda Fehr	.6933	250	0533-E	60.753 dpm/mL	09/10/2005	09/10/2006
12/17/2004	Brenda Burke	.0093	100	0533-F	2.0374 dpm/mL	12/20/2004	12/20/2005
12/21/2004	Brenda Burke	.009273	100	0533-G	2.0315 dpm/mL	12/07/2005	12/07/2006
04/28/2005	Brenda Burke	.1347	100	0533-H	29.4598 dpm/mL	04/27/2006	04/27/2007
10/19/2005	Mary Aders	.6948	250	0533-I	60.7831 dpm/mL	10/18/2006	10/18/2007

05/08/2006	Julie Strock	.0711	100	0533-J	15.576 dpm/mL	05/10/2008	05/10/2009
05/11/2006	Brenda Burke	.00092601	100	0533-K	.20286 dpm/mL	08/02/2007	07/28/2007
11/15/2006	Tara Sides	.132	1000	0533-L	2.88586 dpm/mL	10/06/2010	10/06/2011
06/12/2007	Julie Strock	.000979	100	0533-M	.21448 dpm/mL	05/20/2009	05/20/2010
08/03/2007	Daniel Roy	.7042	250	0533-N	61.7083 dpm/ml	08/02/2008	08/02/2009
09/25/2008	Daniel Roy	1.4561	500	0533-O	63.7982 dpm/ml	09/07/2010	09/07/2011
09/29/2008	Tara Sides	.1004	100	0533-P	21.9948 dpm/mL	09/07/2010	09/07/2011
06/03/2009	Julie Strock	.0009751	100	0533-Q	.2136 dpm/mL	06/01/2010	06/01/2011
11/08/2010	Ashley Drochter	1.4675	500	0533-R	64.2977 dpm/mL	11/08/2010	11/08/2011
11/09/2010	Ashley Drochter	.7295	500	0533-S	31.9626 dpm/mL	11/09/2010	11/09/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Am-241 Standard *0533-S*

A. Drochter
11/12/2010

	Isotope	Value	Uncertainty
	0533-S #1	1.500	0.2010
	0533-S #2	1.440	0.1880
	0533-S #3	1.370	0.1930
Mean Value (Counting) =	1.437	1.0104549	
Stdev =	0.065064071		
Target =	1.42		
Lower Limit =	1.306538525		
Upper Limit =	1.566794809		
Rule 1 Pass/Fail	**Pass**	**Pass**	**Pass**
Two sigma =	0.130128142		
10 % of Mean =	0.143666667		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The target value must lie within the average counting value concentration plus or minus two times the standard deviation of the three counting sources.
Rule 2 =The calculated value of two times the standard deviation of the concentration of the three counted sources must be less than 10% of the average concentration value.
Rule 3 = The determined mean value must be +/- 5% of the of the certificate value or within the uncertainty of the standards being verified.

The analyst prepared three standard verification sources for standard ***0533-S*** using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Cm 1216-B*** standard in a disposable centrifuge tube. 20 mL of 3M HCL was added and was diluted with 20 mL of DI water. 10 micrograms of neodymium carrier and five mL of 49% HF was added to precipitate neodymium (and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-241 were calculated by comparison to Am-243 certified values.

11/16/10

11/17/10

CERTIFICATE OF CALIBRATION
ALPHA STANDARD SOLUTION

Radionuclide	Am-243	Customer:	GENERAL ENGINEERING LABS
Half Life:	7380 ± 40 years	P.O.No.:	9290-RAD
Catalog No.:	7243	Reference Date:	January 1 1994 12:00 PST.
Source No.:	445-96-2	Contained Radioactivity:	(Am-243) 101.2 μCi
		Contained Radioactivity:	(Am-243) 3750 kBq

Description of Solution

a. Mass of solution: 5.3739 g (in a 5 ml Flame Sealed Ampoule)

b. Chemical form: Am(NO3)3 in 2N HNO3

c. Carrier content: None added

d. Density: 1.0651 g/ml @ 20°C.

Radioimpurities None detected

Radioactive Daughters

Np-239 (beta active) in equilibrium

Radionuclide Concentration

(Am-243) 18.84 μCi/g

Method of Calibration

Weighed aliquots of the solution were assayed using gamma spectrometry for Np-239:

Energy peak(s) intergrated under: 228, 278 keV.

Branching ratio(s) used: 0.108, 0.1420 gamma rays per decay.

Uncertainty of Measurement

a. Systematic uncertainty in instrument calibration: ±3.0%

b. Random uncertainty in assay: ±0.4%

c. Random uncertainty in weighing(s): ±0.0%

d. Total uncertainty at the 99% confidence level: ±3.0%

NIST Traceability

This calibration is implicitly traceable to the National Institute of Standards and Technology.

Leak Test(s)

See reverse side for Leak Test(s) applied to this source.

Notes

1. Nuclear data were taken from "Table of Radioactive Isotopes", edited by Virginia S. Shirley, 1986.
2. IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).

Anna U. Pleen
QUALITY CONTROL

Jan 3, 1994
Date Signed

ISOTOPE PRODUCTS LABORATORIES
1800 North Keystone Street
Burbank, California 91504
(818) 843 - 7000

RC-S-005-32

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO DETERMINE THE INTEGRITY OF THE SOURCE DESCRIBED ON THE FRONT SIDE

☑ 1. STANDARD WIPE TEST

The source is wiped over its entire surface with a moistened filter paper disk. After drying, the disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 2. SOAK TEST

The source is immersed in distilled water and maintained at 50 ± 10° C for a minimum of four hours. After removal of the source, the liquid is a) checked for activity using a liquid scintillation counter, or b) evaporated in a planchet and the residue is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 3. SOAK TEST -- BERYLLIUM WINDOW

The source is immersed in distilled water and maintained at 50 ± 10° C for 20 minutes. The entire surface of the source is then wiped with a moistened cotton swab or filter paper disk. After drying, the swab or disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 4. GAS SOURCE TEST (Radioactive Gas)

The source is placed in a vacuum desiccator and maintained at a pressure of less than 1 mm Hg for not less than 12 hours. The activity is checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. Activity levels exceeding 1000 cpm are cause for rejection of the source.

☑ 5. OTHER LEAK TEST

The ampoule is kept in an inverted position on a filter paper disk for a minimum of 16 hours. The filter paper disk is then checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 6. LEAK TEST NOT APPLICABLE

The active area of this source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test. Levels of removable activity did not exceed 0.001 μCi beta-gamma or 0.0001 μCi alpha at the time of shipment.

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	445-96-2
Prepared By:	Genie Bost
Carrier Conc:	2M HNO3
Reference Date:	01/01/1994
Ampoule Mass (g):	5.3739 g
Uncertainty:	+/- 3 %
LogBook No:	RC S 005 032

A Solution Material Info			
Isotope:	Americium-243		
Prepared By:	Angela Johnson		
Prep Date:	01/05/1994		
Verification Date:	11/23/2010		
Expiration Date:	11/23/2011		
Primary Code:	445-96-2-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	5.3419 g		
Density(g/mL):	1.0785	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3419 g) * (18.84 uCi/g) * (2220000 dpm/uCi) / (100 mL) = 2234238.9912 dpm/mL
(5.3419 g) * (18.84 uCi/g) * (2220000 dpm/uCi) / (1.0785 g/mL) / (100 mL) = 2071617.0528 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/05/1994	Genie Bost	.0058	100	445-96-2-B	120.1 dpm/ml	01/05/1995	01/05/1996
09/10/2004	Amanda Fehr	.0325	1000	445-96-2-BB	67.328 dpm/mL	09/10/2005	09/10/2006
01/05/1994	Genie Bost	.0025	100	445-96-2-C	51.77 dpm/ml	01/05/1995	01/05/1996
05/27/2005	Brenda Burke	.000246	100	445-96-2-CC	5.10613 dpm/mL	05/31/2005	05/31/2006
03/25/1994	Genie Bost	.0064	100	445-96-2-D	132.53 dpm/ml	01/05/1995	01/05/1996
08/16/2005	Brenda Burke	.001224	500	445-96-2-DD	5.07144 dpm/mL	08/18/2007	08/18/2008
08/04/1994	Genie Bost	.0094	100	445-96-2-E	194.65 dpm/ml	01/05/1995	01/05/1996
10/13/2005	Brenda Burke	.0017	500	445-96-2-EE	7.0435 dpm/mL	11/15/2005	11/15/2006

08/04/1994	Genie Bost	.0046	100	445-96-2-F	95.25 dpm/ml	01/05/1995	01/05/1996
10/14/2005	Mary Aders	.0141	500	445-96-2-FF	58.4196 dpm/mL	10/14/2005	10/14/2006
09/01/1994	Genie Bost	.0031	100	445-96-2-G	64.19 dpm/ml	01/05/1995	01/05/1996
05/10/2006	Mary Aders	2.0753	1000	445-96-2-GG	4299.227 dpm/mL	09/30/2008	09/30/2009
10/17/1994	Genie Bost	.0969	100	445-96-2-H	2006.52 dpm/ml	01/05/1995	01/05/1996
06/07/2006	Mary Aders	.0365	1000	445-96-2-HH	75.614 dpm/mL	06/19/2006	06/19/2007
02/06/1995	Genie Bost	.0043	100	445-96-2-I	89.04 dpm/ml	01/05/1995	01/05/1996
05/11/2006	Brenda Burke	.000009739	100	445-96-2-II	.201761 dpm/mL	07/26/2006	07/26/2007
07/20/1995	Theresa Austin	.0041	100	445-96-2-J	84.9 dpm/ml	01/05/1995	01/05/1996
05/01/2007	Daniel Roy	.0352	1000	445-96-2-JJ	72.9209 dpm/ml	04/30/2008	04/30/2009
08/10/1995	Garret Ray	.0952	100	445-96-2-K	1971.32 dpm/ml	01/05/1995	01/05/1996
06/12/2007	Julie Strock	.01038	250	445-96-2-KK	22.1496 dpm/mL	05/28/2008	05/28/2009
09/11/1995	Theresa Austin	1.0525	100	445-96-2-L	21794.23 dpm/ml	01/05/1995	01/05/1996
09/11/1995	Theresa Austin	.5107	100	445-96-2-L-1	111.3 dpm/ml	01/05/1995	01/05/1996
04/28/1998	Richard Kinney	.1264	100	445-96-2-M	2617.4 dpm/ml	04/28/1998	04/28/1999
11/01/2007	Eric Williamson	.001274	500	445-96-2-MM	5.27945 dpm/mL	04/06/2008	04/06/2010
10/12/1998	Gregory Smith	.1348	100	445-96-2-N	2791.32 dpm/mL	01/05/1995	01/05/1996
01/25/1999	Gregory Smith	1.9382	100	445-96-2-N-1	50.16 dpm/ml	01/05/1995	01/05/1996
04/19/2008	Daniel Roy	.0424	1000	445-96-2-NN	87.8366 dpm/ml	04/16/2009	04/16/2010
04/21/1999	Greg Smith	.1645	100	445-96-2-O	3406.32 dpm/mL	04/21/1999	04/21/2000
07/27/1999	Gregory Smith	1.567	100	445-96-2-O-2	50.56 dpm/ml	05/13/1999	05/13/2000
10/12/1999	Richard Kinney	1.5589	100	445-96-2-O-3	50.31 dpm/mL	05/13/1999	05/13/2000

04/21/1999	Greg Smith	1.5309	100	445-96-2-O-1	49.4 dpm/mL	04/21/1999	04/21/2000
11/10/1999	Joe Davis	.1809	100	445-96-2-P	3745.92 dpm/mL	05/13/1999	05/13/2000
01/04/2008	Julie Strock	.00001005	100	445-96-2-PP	.20819 dpm/mL	12/29/2008	12/29/2009
01/28/2000	Angela Johnson	.0354	1000	445-96-2-Q	73.3 dpm/mL	02/08/2001	02/08/2002
09/29/2008	Tara Sides	.0025219	250	445-96-2-QQ	20.8977 dpm/mL	09/14/2009	09/14/2010
04/18/2000	Robert Timm	.429	250	445-96-2-R	3553.34 dpm/mL	04/18/2000	04/18/2001
04/23/2009	Tina Schoneman	.001251	500	445-96-2-RR	4.8075 dpm/mL	04/09/2010	04/09/2011
04/13/2001	Angela Johnson	.1869	100	445-96-2-S	3870.16 dpm/mL	04/13/2001	04/13/2002
05/08/2009	Mary Aders	.0141	1000	445-96-2-SS	29.2098 dpm/ml	05/11/2009	05/11/2010
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-103	4153.225 dpm/mL	07/03/2002	07/03/2003
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-203	4153.225 dpm/mL	07/03/2002	07/03/2003
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-303	4153.225 dpm/mL	07/03/2002	07/03/2003
06/03/2009	Julie Strock	.00000927	100	445-96-2-TT	.1923 dpm/mL	06/03/2010	06/03/2011
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-103	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-203	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-303	80.34 dpm/ml	08/23/2001	08/23/2002
06/02/2009	Mary Aders	2.1177	1000	445-96-2-UU	4387.0634 dpm/ml	05/25/2010	05/25/2011
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-103	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-203	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-303	81.586 dpm/mL	08/27/2002	08/27/2003
03/09/2010	Ashley Drochter	.011	1000	445-96-2-VV	22.7878 dpm/mL	03/09/2010	03/09/2011
03/17/2003	Angela Johnson	2.1108	1000	445-96-2-W	4370.857 dpm/mL	03/14/2006	03/14/2007

03/23/2010	Ashley Drochter	.0163	1000	445-96-2-WW	33.7674 dpm/mL	03/23/2010	03/23/2011
04/14/2003	Lonnie Morris	.0315	1000	445-96-2-X	65.2559 dpm/mL	04/14/2004	04/14/2005
09/13/2010	Julie Strock	.00049678	250	445-96-2-XX	4.1166 dpm/mL	09/13/2010	09/13/2011
05/03/2003	Tim Chandler	.0103	1000	445-96-2-Y	21.3376 dpm/mL	05/05/2003	05/05/2004
10/20/2010	Ashley Drochter	.0146	1000	445-96-2-YY	30.2456 dpm/mL	10/20/2010	10/20/2011
05/05/2003	Eric Williamson	.011	1000	445-96-2-Z	22.7877 dpm/mL	04/03/2007	04/03/2008
11/23/2010	Ashley Drochter	2.1175	1000	445-96-2-ZZ	4386.6491 dpm/mL	11/23/2010	11/23/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Am-243 Standard *445-96-2-UU*

A. Drochter
6/1/2010

Isotope	Value	Uncertainty
445-96-2-UU #1	1.850	0.2990
445-96-2-UU #2	1.990	0.3170
445-96-2-UU #3	1.920	0.3290

Mean Value (Counting) =	1.920	96.433953	
Stdev =	0.07		
Target =	1.99		
Lower Limit =	1.78		
Upper Limit =	2.06		
Rule 1 Pass/Fail	**Pass**	**Pass**	**Pass**
Two sigma =	0.14		
10 % of Mean =	0.192		
Rule 2 (Pass/Fail)	**Pass**		

The analyst put 0.1mL of ***Am_243*** standard ***445-96-2-UU*** in a centrifuge tube and diluted to 10mL with DI water. From the dilution, the analyst prepared three standard verification sources for the standard using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Am_241*** standard ***0533-O*** and diluted to 10 mL with 4 mL of 2 M HCL and 6 mL of DI water. 50 micrograms of neodymium carrier and two mL of 49% HF was added to precipitate neodymium(and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-243 were calculated by comparison to Am-241 certified values.

$$\frac{4380.3\text{dpm/mL} * 0.1\text{mL}}{10\text{mL}}$$

$$\frac{43.803\text{ dpm} * 0.1\text{mL}}{2.22}$$

Target = 1.991

6/1/10

6/2/10

Verification for Am-243 Standard *445-96-2-WW*

A.Drochter 3/25/2010	Isotope	Value	Uncertainty
	445-96-2-WW #1	1.550	0.1880
	445-96-2-WW #2	1.650	0.1990
	445-96-2-WW #3	1.560	0.1900

Mean Value (Counting) =	1.587	104.47	**Pass**
Stdev =	0.055075705		**Rule 3 (Pass/Fail)**

Target =	1.519
Lower Limit =	1.476515256
Upper Limit =	1.696818078
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.110151411
10 % of Mean =	0.158666667
Rule 2 (Pass/Fail)	**Pass**

The analyst prepared three standard verification sources for standard ***445-96-2-WW*** using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Am-241*** standard ***0533-O*** and 50 micrograms of neodymium carrier in a disposable centrifuge tube. Each standard was diluted with 4 mL of 2 M HCl and 6 mL of DI Water. Two mL of 49% HF was added to precipitate Nd(and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-243 were calculated by comparison to Am-241certified values.

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

4/7/10

4/7/10

0112

[redacted]

UKAS ACCREDITED CALIBRATION LABORATORY No. 0146

Methods of measurement The measurement techniques listed below are currently in use at Nycomed Amersham for the absolute standardisation of radioactive solutions. The methods used for this standardisation are indicated on page 2 of the certificate.

Using a gas flow proportional counter

A	4 pi beta counting
B	4 pi alpha counting
C	4 pi internal conversion electron counting
D	4 pi coincidence counting
E	4 pi anticoincidence counting
F	4 pi coincidence and anticoincidence counting

Using a liquid scintillation counter

G	4 pi coincidence counting
H	4 pi anticoincidence counting
J	4 pi coincidence and anticoincidence counting
K	4 pi efficiency tracing

SI unit of radioactivity The S.I. unit of radioactivity is the becquerel

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = 3.7×10^{10} becquerels exactly

Useful conversion factors are:

1 microcurie (μCi)	=	3.7×10^{4} Bq	=	37 kilobecquerels (kBq)
1 millicurie (mCi)	=	3.7×10^{7} Bq	=	37 megabecquerels (MBq)
1 kilobecquerel (kBq)	=	27.027 nanocuries (nCi)		
1 megabecquerel (MBq)	=	27.027 microcuries (μCi)		

RC-5-024-038B

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0112
Prepared By:	Richard Kinney
Carrier Conc:	0.1M HCL
Reference Date:	06/20/1997
Ampoule Mass (g):	5.129 g
Uncertainty:	+/- 1.8 %
LogBook No:	RC S 023 038A

A Solution Material Info			
Isotope:	Barium-133		
Prepared By:	Angela Johnson		
Prep Date:	04/09/1999		
Verification Date:	02/23/2010		
Expiration Date:	02/12/2011		
Primary Code:	0112-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	5.0881 g		
Density(g/mL):	0.9935	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.0881 g) * (474 kBq/g) * (60000 dpm/kBq) / (100 mL) = 1447055.6400 dpm/mL
(5.0881 g) * (474 kBq/g) * (60000 dpm/kBq) / (0.9935 g/mL) / (100 mL) = 1456575.8226 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
10/31/2002	Angela Johnson	10.11	1000	0112-G	14725.049 dpm/mL	10/31/2003	10/31/2004
01/19/2005	Amanda Fehr	10.431	1000	0112-H	15193.542 dpm/mL	01/18/2006	01/18/2007
11/30/2006	Daniel Roy	10.0567	1000	0112-I	14648.35 dpm/mL	11/20/2008	11/20/2009
02/17/2009	Mary Aders	10.1141	1000	0112-J	14731.9535 dpm/ml	02/12/2010	02/12/2011
02/12/2010	Bethany Fiem	10.2041	1000	0112-K	14863.0453 dpm/ml	02/12/2010	02/12/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Ba-133 Standard 0112-K

B. Fiem 2/23/2010	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Vol. Used (mL)	Source DPM/mL
	0112-K N1	5309.4700	40.8000	5268.6700	0.7842	1.0000	6718.426143
	0112-K N2	5265.2600	40.8000	5224.4600	0.7842	1.0000	6662.051077
	0112-K N3	5248.7200	40.8000	5207.9200	0.7842	1.0000	6640.95984
						Average =	6673.812353
Mean Value (Counting) =	6673.812353		**103.568871**	**Pass**			
Stdev =	40.05000315		0.00600107	**Rule 3 (Pass/Fail)**			
Certificate Value =	6443.84						
Lower Limit =	6593.712347						
Upper Limit =	6753.91236						
Rule 1 Pass/Fail	**Fail**	*Exception take to Rule 1 due to full recovery of standard					
Two sigma =	80.1000063						
10 % of Mean =	667.3812353						
Rule 2 (Pass/Fail)	**Pass**						

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for Ba-133 source 0112-K by transferring 1.0 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1.0mL DI water and 10 mL of Ecoscint Ultra cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on LSC GOLD. The Ba-133 efficiency calibration which was used for verification calculations was performed on 2/23/10 using source 0487-A (Ba-133). Calibration data is recorded in this logbook under Ba-133 0487-A. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.
RAD SOP M-001

Amanda L. Fehr 3/9/1

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
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1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

Rec'd 11/30/06
RC-S-045-073-0

Laboratory
24937 Avenue Tibbitts, Valencia, California 91355
1380 Seaboard Industrial Blvd., Atlanta, Georgia 30318

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ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info			
Isotope:	Mixed Gamma		
Prepared By:	Daniel Roy		
Prep Date:	11/30/2006		
Verification Date:	11/04/2010		
Expiration Date:	11/04/2011		
Primary Code:	1032-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	5.2579 g		
Density(g/mL):	1.0611	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL
(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A

M. Stamps
11/4/2010

Am-241	Isotope	Result	
	Mixed Gamma N1	2565	pCi/L
	Mixed Gamma N2	2624	pCi/L
	Mixed Gamma N3	2594	pCi/L
Mean Value (Counting) =	2594.33	**104.37**	**Pass**
Stdev =	29.501		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2535.330509	pCi/L	
Upper Limit =	2653.336158	pCi/L	
Rule 1 (Pass/Fail)	**Fail**	***exception taken due to full recovery of standard**	
Two sigma =	59.00282479		
10 % of Mean =	259.43333333		
Rule 2 (Pass/Fail)	**Pass**		

M Stamps 11/4/10

11/5/10

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
11/4/2010

Cs-137	Isotope	Result	
	Mixed Gamma N1	936.4	pCi/L
	Mixed Gamma N2	969.9	pCi/L
	Mixed Gamma N3	944.9	pCi/L
Mean Value (Counting) =	950.40	**101.82**	**Pass**
Stdev =	17.414	**Rule 3 (Pass/Fail)**	
Certificate Value =	933.44144	pCi/L	
Lower Limit =	915.5718505	pCi/L	
Upper Limit =	985.2281495	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	34.82814953		
10 % of Mean =	95.04000000		
Rule 2 (Pass/Fail)	**Pass**		

M Stamps 11/4/10
MGH 11/5/10

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
11/4/2010

	Isotope	Result	
Co-60 (1332.5)	Mixed Gamma N1	1572	pCi/L
	Mixed Gamma N2	1649	pCi/L
	Mixed Gamma N3	1581	pCi/L
Mean Value (Counting) =	1600.67	**103.55**	**Pass**
Stdev =	42.099	**Rule 3 (Pass/Fail)**	
Certificate Value =	1545.8378	pCi/L	
Lower Limit =	1516.468488	pCi/L	
Upper Limit =	1684.864846	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	84.19817892		
10 % of Mean =	160.06666667		
Rule 2 (Pass/Fail)	**Pass**		

M Stamps 11/4/10

MGH 11/5/10

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

0518

Amersham plc
The Grove Centre

UKAS CALIBRATION 0146

ISSUED BY:	Amersham plc Radiation & Radioactivity Calibration Laboratory The Grove Centre White Lion Road Amersham Buckinghamshire HP7 9LL	ISSUED FOR:	AEA Technology plc Isotrak 329 Harwell Didcot Oxfordshire OX11 OQJ

Description

Principal radionuclide: Neptunium-237

Daughter radionuclide: Protactinium-233

Product code: NGZ44

Solution number: S5/31/100

Measurement

Reference time:	**1200 GMT on 27 November 1995**	
Radioactive concentration of neptunium-237:	45.86	kilobecquerels per gram of solution
which is equivalent to:	1.240	microcuries per gram of solution
Mass of solution:	5.0201	grams
Total activity of neptunium-237:	230.2	kilobecquerels
which is equivalent to:	6.22	microcuries

Method of measurement used:
4π coincidence and anticoincidence counting using a gas flow proportional counter.

Calibration date(s): 25 November 1995 to 1 December 1995
The calibration date is provided for added information only, and must not be confused with the reference date. It is the reference date that must be used in all calculations relating to the values of activity.

Uncertainty

Expanded uncertainty in the radioactive concentration quoted above: ± 1.79 %

Combined Type A uncertainty: ± 0.24 %

Combined Type B uncertainty: ± 0.87 %

Approved Signatory

Date of issue 11th March 2002

[redacted]

UKAS ACCREDITED CALIBRATION LABORATORY No. 0146

Radionuclidic Purity The estimated activities of any radioactive impurities found by high-resolution gamma ray spectrometry, or in any other examination of the solution, are listed below expressed as percentages of the activity of the principal radionuclide at the reference time.

Plutonium-238 0.14(2)%

Chemical Composition 0.1M HCl containing 1.82 milligrams of neptunium per ml.

Physical Data Recommended half life: $(2.14 \pm 0.01) \times 10^6$ years (1 year = 365.25 days)

This measurement was based on the following assumptions about the decay scheme of neptunium-237 and protactinium-233:

Neptunium-237: 100% alpha particle emission followed by prompt L X-rays of Protactinium-233.

Protactinium-233: 100% beta particle emission. Half life 27.0 days.

Remarks This product meets the quality assurance requirements for achieving traceability to NIST as defined in ANSI N42.22-1995.

Nuclear data quoted on this certificate are taken from the Joint European File, Version 2.2.

The daughter nuclide protactinium-233 was chemically separated from the neptunium-237 at 0814 GMT on 22 November 1995. At any time t days from the time of separation, the ratio

$\frac{\text{activity of Pa-233}}{\text{activity of Np-237}}$ in the ampoule is given by $(1-e^{-0.02567t})$

There can be no guarantee that the protactinium will remain in solution.

Expression of Uncertainties The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor **k** = 2.00, which for a *t*-distribution with $\nu_{eff} = \infty$ effective degrees of freedom corresponds to a coverage probability of approximately 95 %. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

Unless indicated, all other uncertainties are expressed at the confidence level associated with one standard uncertainty.

The format used for the uncertainties in the values of radionuclidic purity is illustrated in the following examples;

6.5(21)	=	6.5 ± 2.1
6.54(21)	=	6.54 ± 0.21
6.543(21)	=	6.543 ± 0.021

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0518
Prepared By:	Penet Melton
Carrier Conc:	0.1 M HCL
Reference Date:	11/27/1995
Ampoule Mass (g):	5.02014 g
Uncertainty:	+/- 1.79 %
LogBook No:	RC S 035 033

A Solution Material Info			
Isotope:	Neptunium-237		
Prepared By:	Angela Johnson		
Prep Date:	12/20/2002		
Verification Date:	03/17/2010		
Expiration Date:	03/17/2011		
Primary Code:	0518-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	3.003 g		
Density(g/mL):	0.9992	Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.003 g) * (45.86 kBq/g) * (60000 dpm/kBq) / (100 mL) = 82630.5480 dpm/mL
(3.003 g) * (45.86 kBq/g) * (60000 dpm/kBq) / (0.9992 g/mL) / (100 mL) = 82693.3120 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
09/05/2003	Amanda Fehr	.1004	100	0518-B	83.0241 dpm/mL	09/10/2004	09/10/2005
01/19/2004	Tim Chandler	.1612	250	0518-C	53.3206 dpm/mL	01/18/2004	01/18/2005
11/23/2004	Amanda Fehr	.25	250	0518-D	82.69 dpm/mL	11/30/2007	11/29/2008
04/16/2008	Daniel Roy	.1312	100	0518-E	108.4936 dpm/ml	08/23/2008	04/16/2009
12/05/2008	Julie Strock	.096	250	0518-F	31.7542 dpm/mL	12/05/2008	12/05/2009
12/05/2008	Julie Strock	.0060406148	250	0518-G	.02555 dpm/mL	12/05/2008	12/05/2009
10/14/2008	Daniel Roy	.2195	250	0518-H	72.6047 dpm/ml	10/14/2008	10/14/2009
02/02/2009	Tina Schoneman	.001312	500	0518-I	.216872 dpm/mL	02/02/2010	02/02/2011

02/11/2009	Tina Schoneman	.0569	250	0518-J	18.821 dpm/mL	02/11/2009	02/11/2010
07/10/2009	Mary Aders	.2642	250	0518-K	87.3903 dpm/mL	07/13/2010	07/13/2011
10/06/2009	Robert Timm	1.5146	100	0518-L	1252.47 dpm/mL	10/06/2009	10/06/2010
03/02/2010	Julie Strock	.095	250	0518-M	31.4235 dpm/mL	03/02/2010	03/02/2011
03/17/2010	Ashley Drochter	.2751	250	0518-N	90.9957 dpm/mL	03/17/2010	03/17/2011
06/03/2010	Julie Strock	.00532519	100	0518-O	4.4036 dpm/mL	06/04/2010	06/03/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Neptunium-237 Standard *0518-K*

A.Drochter	**ID**	**Value**	**Uncertainty**
7/13/2010	0518-K #1	3.9800	0.5620
	0518-K #2	3.9300	0.5570
	0518-K #3	3.9800	0.5650
Mean Value (Counting) =	3.963	100.68165	**Pass**
Stdev =	0.028867513		
Target =	3.94		
Lower Limit =	3.905598306		
Upper Limit =	4.02106836		
Rule 1 Pass/Fail	**Pass**	**Pass**	**Pass**
Two sigma =	0.057735027		
10 % of Mean =	0.396333333		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 0518-K using 0.1 mL for each source. Each verification was analyzed following SOP GL-RAD-A-032. Each source was counted using routine alpha spec procedures. Am-243 standard 445-96-2-UU was used as a tracer material. Neptunium results were calculated using the current calibration efficiencies and then compared to the NIST standard value.

7/15/10
7/16/10

0338

ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 · U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

60513-278

Pu-239 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using an aliquot measured gravimetrically from a master radionuclide solution standard. The master radionuclide solution standard was calibrated by the Department Des Applications Et De La Metrologie Des Rayonnements Ionisants (DAMRI), Paris, France, as Number 24148.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:	Pu-239
ACTIVITY (dps):	3.674 E4
HALF-LIFE:	24131 years
CALIBRATION DATE:	October 30, 2000 12:00 EST
TOTAL UNCERTAINTY*:	5.0%

*99% confidence level.

5.45541 grams 3M HNO_3 solution.

Impurities detected (activity in dps/vial on Oct. 30, 2000):

Am-241 297.28
Pu-240 1208.8
Pu-241 2010.7
Pu-242 0.17

See reverse side for additional information.

P O NUMBER 2528RD, Item 1

PREPARED BY: M. Taskaeva
M. Taskaeva, Radiochemist

Q A APPROVED: RCullen 11/13/00

RC-S-028-167

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0338
Prepared By:	Penet Melton
Carrier Conc:	3 M HNO3
Reference Date:	10/30/2000
Ampoule Mass (g):	5.45541 g
Uncertainty:	+/- 5 %
LogBook No:	RC S 027 167

A Solution Material Info			
Isotope:	Plutonium-239		
Prepared By:	Penet Melton		
Prep Date:	12/01/2000		
Verification Date:	03/09/2010		
Expiration Date:	03/09/2011		
Primary Code:	0338-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	5.1674 g		
Density(g/mL):	1.0121	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.1674 g) * (36740 dps) * (60 dpm/dps) / (5.45541 g * 100 mL) = 20880.2208 dpm/mL
(5.1674 g) * (36740 dps) * (60 dpm/dps) / (1.0121 g/mL)/ (5.45541 g * 100 mL) = 20630.6111 dpm/g
(5.1674 g) * (37948.8 dps) * (60 dpm/dps) / (5.45541 g * 100 mL) = 21567.2108 dpm/mL
(5.1674 g) * (37948.8 dps) * (60 dpm/dps) / (1.0121 g/mL)/ (5.45541 g * 100 mL) = 21309.3885 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
06/23/2009	Mary Aders	.591	250	0338-BB	50.3753 dpm/mL	06/23/2009	06/23/2010
03/09/2010	Ashley Drochter	.5127	250	0338-CC	43.7013 dpm/mL	03/09/2010	03/09/2011
10/29/2001	Tim Chandler	.3032	250	0338-E		10/16/2003	10/16/2004
12/30/2002	Tim Chandler	10.0252	100	0338-I		10/24/2003	10/24/2004
08/12/2003	Amanda Fehr	.2282	100	0338-K		08/12/2003	08/12/2004
12/09/2003	Amanda Fehr	.2409	100	0338-L		12/09/2003	12/09/2004
03/18/2004	Tim Chandler	10.0192	500	0338-M		03/18/2004	03/18/2005
04/26/2004	Amanda Fehr	.643	250	0338-N		04/26/2005	04/26/2006
05/26/2004	Eric Williamson	.355	250	0338-O	30.2619 dpm/mL	05/17/2007	05/17/2008

12/20/2004	Brenda Burke	.01957	100	0338-P	4.16992 dpm/mL	12/19/2006	12/19/2007
03/16/2005	Julie Strock	10.0395	100	0338-Q	2139.558 dpm/mL	06/12/2008	06/12/2009
07/19/2005	Amanda Fehr	.677	250	0338-R		07/10/2006	07/10/2007
05/11/2006	Brenda Burke	.0009935	100	0338-S	.21172 dpm/mL	07/30/2007	07/28/2007
01/04/2007	Julie Strock	.050286	250	0338-T	4.2887 dpm/mL	12/31/2007	12/31/2008
01/05/2007	Daniel Roy	.7285	250	0338-U		01/05/2008	01/05/2009
03/16/2005	Julie Strock	.010175	1000	0338-V	.216847 dpm/mL	04/13/2010	04/13/2011
05/15/2007	Eric Williamson	.253	250	0338-W	21.567 dpm/mL	05/17/2010	05/17/2011
07/31/2007	Julie Strock	.0010045	100	0338-X	.21379 dpm/mL	12/31/2007	12/31/2008
12/10/2008	Daniel Roy	.7715	250	0338-Y		12/10/2008	12/10/2009
09/29/2008	Tara Sides	.0504	250	0338-Z	4.29599 dpm/mL	09/01/2010	09/01/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Plutonium-239 Standard *0338-CC*

Analyst: A.DROCHTER	**Serial #**	**Value**	**Uncertainty**
Date: 3/15/2010	0338-CC #1	1.870	0.2670
	0338-CC #2	1.900	0.2470
	0338-CC #3	1.870	0.2940
Mean Value (Counting) =	1.880	98.671565	**Pass**
Stdev =	0.017320508		
Target =	1.905		
Lower Limit =	1.845358984		
Upper Limit =	1.914641016		
Rule 1 Pass/Fail	**Pass**	**Pass**	**Pass**
Two sigma =	0.034641016		
10 % of Mean =	0.188		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements.
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three Pu-239 standard verification sources for standard ***0338-CC*** using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Pu-236*** standard **1430-C** and was diluted in a disposable centrifuge tube with 4 mL of 2 M HCl, and 6 mL of DI water, 50 micrograms of Nd carrier and 4 drops of hydrazine dihydrochloride were added to the centrifuge tube and swirled. After waiting ten minutes, two mL of 49% HF was added to precipitate Nd(and ***plutonium***) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for ***Pu-239*** were calculated by comparison to ***Pu-236*** certified values.

3/16/10
3/16/10

1488

National Institute of Standards & Technology

Certificate

Rec'd 7/19/10

Standard Reference Material® 4334I

Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of a solution of a standardized and certified quantity of radioactive plutonium-242 in a suitably stable and homogeneous matrix. It is intended primarily for the calibration of instruments that are used to measure radioactivity and for the monitoring of radiochemical procedures. A unit consists of a solution, whose composition is specified in Table 1, contained in a flame-sealed 5 mL borosilicate-glass ampoule (see Note 1)*.

The certified **Plutonium-242** massic activity value, at a **Reference Time of 1200 EST, 01 January 2010**, is:

$$(26.77 \pm 0.18)\ \mathrm{Bq \cdot g^{-1}}.$$

Additional physical, chemical, and radiological properties for this SRM, as well as details on the standardization method, are given in Table 1. Uncertainties for the certified quantities are expanded ($k = 2$). The uncertainties are calculated according to the ISO Guide (see Note 2). Table 2 contains a specification of the components that comprise the uncertainty analyses.

Expiration of Certification: The certification of **SRM 4334I** is valid indefinitely provided the SRM is handled and stored properly and that no evaporation or change in composition has occurred. The solution matrix, in an unopened ampoule, is homogeneous and stable within its half-life-dependent useful lifetime provided the SRM is handled in accordance with instructions given in this certificate (see "Instructions for Storage and Handling"). The certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

Maintenance of Certification: NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet) will facilitate notification.

This SRM may represent a radiological hazard and a chemical hazard. Consult the Material Safety Data Sheet (MSDS), enclosed with the SRM shipment, for details.

This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Group Leader. The overall technical direction and physical measurement leading to certification were provided by L. Lucas of the NIST Radioactivity Group.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Measurement Services Division.

INSTRUCTIONS FOR STORAGE AND HANDLING

Storage: SRM 4334I should be stored and used at a temperature between 5 °C and 65 °C. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material.

Handling: If the ampoule is transported, it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) because of both the radioactivity and the strong acid. The ampoule should be opened only by persons qualified to handle both radioactive material and alkaline and/or acidic solutions. Appropriate shielding and/or distance should be used to minimize personnel exposure. Refer to MSDS for further information.

Lisa R. Karam, Chief
Ionizing Radiation Division

Robert L. Watters, Jr., Chief
Measurement Services Division

Gaithersburg, MD 20899
Certificate Issue Date: 29 June 2010

* Notes and references may be found on pages 4 and 5.

RC-S-060-035

Table 1. Properties of SRM 4334I

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 1 January 2010 (See Note 3) ***
Massic activity of the solution	**26.77 Bq•g^{-1}**
Relative expanded uncertainty (k = 2)	**0.68 %** (see Note 2)

Uncertified information

Source description	Liquid in a flame-sealed 5 mL borosilicate-glass ampoule (see Note 1)
Solution composition	3.2 mol•L^{-1} HNO_3
Solution density	(1.105 ± 0.002) g•mL^{-1} at 22 °C (see Note 4)
Solution mass	Approximately 5.5 g
Alpha-particle- emitting impurities	^{241}Am : (0.0016 ± 0.0003) Bq•g^{-1} (See Note 3, 5 and 6)
Beta-particle- emitting impurities	^{241}Pu : (0.044 ± 0.009) Bq•g^{-1} (see Note 4)
Photon-emitting impurities	None detected (see Note 7)
Half-lifes used	^{242}Pu : (373 500 ± 1100) a (see Note 8) [1] ^{241}Pu : (14.290 ± 0.006) a ^{240}Pu: (6 561 ± 7) a ^{239}Pu: (24 110 ± 30) a ^{238}Pu: (87.7 ± 0.1) a ^{241}Am : (432.6 ± 0.6) a
Calibration methods (and instruments)	The certified massic activity for ^{242}Pu was obtained by 4πα liquid scintillation (LS) spectrometry using four commercial LS counters, a calibrated germanium detector system, and a silicon surface-barrier detector.

* Notes and references may be found on pages 4 and 5.

Table 2. Uncertainty evaluation for the massic activity of SRM 4334I

	Uncertainty component	Assessment Type †	Relative standard uncertainty contribution on massic activity of ^{242}Pu (%)
1	Massic alpha-particle emission rate, corrected for background and decay. Standard deviation of the mean for 180 $4\pi\alpha$ liquid-scintillation measurements.	A	0.06
2	Half life of ^{242}Pu; standard uncertainty of the half life	B	3×10^{-6}
3	Decay-scheme data; standard uncertainty of the probability of decay by alpha-particle emission	B	0.001
4	Extrapolation of the alpha-particle-count-rate-versus-energy to zero energy	B	0.25
5	Gravimetric measurements	B	0.10
6	Live time	B	0.10
7	Alpha-particle detection efficiency of scintillators	B	0.10
8	^{241}Pu detection efficiency of scintillators	B	0.04
9	Alpha-particle emitting impurities; limit of detection	B	0.10
10	^{241}Pu impurity	B	0.02
11	Photon emitting impurities; limit of detection	B	0.10
Relative combined standard uncertainty			**0.34**
Relative expanded uncertainty ($k = 2$)			**0.68**

† = (A) denotes evaluation by statistical methods; (B) denotes evaluation by other methods.

Note 1. Refer to http://physics.nist.gov/Divisions/Div846/srm.html (accessed Jun 2010) for assistance and instructions on how to properly open an ampoule. Information on additional storage and handling requirements is also included on the website. This SRM is contained in a generic borosilicate-glass ampoule and not in the standard NIST ampoule.

Note 2. The uncertainties on certified values are expanded uncertainties, $U = ku_c$. The quantity u_c is the combined standard uncertainty calculated according to the ISO Guides [2-3]. The combined standard uncertainty is multiplied by a coverage factor of $k = 2$ and was chosen to obtain an approximate 95 % level of confidence.

Note 3. The ^{242}Pu was chemically purified 07 June 1994 at the Lawrence Livermore National Laboratory (LLNL). Americium-241, the daughter of ^{241}Pu, was removed but has been growing in since that time.

Note 4. The stated uncertainty is two times the standard uncertainty. See reference 3.

Note 5. The estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (number of alpha-particles emission rates per second per gram), are:

$0.003\ s^{-1}\bullet g^{-1}$ for energies less than 3.1 MeV,
$0.03\ s^{-1}\bullet g^{-1}$ for energies between 3.1 MeV and 4.4 keV, and
$0.003\ s^{-1}\bullet g^{-1}$ for energies greater than 5.0 MeV

Note 6. The ^{242}Pu was chemically purified 07 June 1994. The relative massic activities of radionuclidic impurities after purification follow;

Radionuclide	Relative Activity As Determined By	
	LLNL	NIST
^{242}Pu	1	1
^{241}Pu	--	$(3.5 \pm 0.4) \times 10^{-3}$ (a)
^{240}Pu + ^{239}Pu	$< 10^{-6}$ (b)	$(2.0 \pm 2.1) \times 10^{-5}$ (c)
^{238}Pu + ^{241}Am	$< 1.6 \times 10^{-5}$ (b)	$(9 \pm 16) \times 10^{-6}$ (c)
^{241}Am	--	assumed 0 (a)

(a) The stated uncertainty is the standard uncertainty. The ^{241}Pu activity was calculated from a gamma-ray measurement of the ^{241}Am ingrowth as of 25 November 1998, assuming that ^{241}Am was completely removed at the time of chemical purification.
(b) Using alpha-particle spectrometry. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.
(c) Using alpha-particle spectrometry. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July 1999.

Note 7. The estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:

$5 \times 10^{-5}\ s^{-1}\bullet g^{-1}$ for energies between 19 keV and 39 keV,
$7 \times 10^{-5}\ s^{-1}\bullet g^{-1}$ for energies between 49 keV and 92 keV,
$2 \times 10^{-5}\ s^{-1}\bullet g^{-1}$ for energies between 106 keV and 507 keV,
$1 \times 10^{-5}\ s^{-1}\bullet g^{-1}$ for energies between 515 keV and 1456 keV, and
$5 \times 10^{-6}\ s^{-1}\bullet g^{-1}$ for energies between 1465 keV and 2750 keV.

provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of ^{242}Pu, ^{241}Pu, or ^{241}Am.

Note 8. The stated uncertainty is the standard uncertainty. See reference 2.

REFERENCES

[1] Evaluated Nuclear Structure Data File (ENSDF), online database, National Nuclear Center, Brookhaven National Laboratory (Upton, NY), accessed November 2009. Refer to http://www.nndc.bnl.gov/nudat2/ (accessed Jun 2010).

[2] JCGM 100:2008; *Evaluation of Measurement Data — Guide to the Expression of Uncertainty in Measurement* (ISO GUM 1995 with Minor Corrections); Joint Committee for Guides in Metrology (2008); available at http://www.bipm.org/utils/common/documents/jcgm/JCGM_100_2008_E.pdf (accessed May 2010); see also Taylor, B.N.; Kuyatt, C.E.; *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*; NIST Technical Note 1297; U.S. Government Printing Office: Washington, DC (1994); available at http://www.nist.gov/physlab/pubs/index.cfm (accessed Jun 2010).

[3] Thompson, A.; Taylor, B.N.; *Guide for the Use of the International System of Units (SI)*; NIST Special Publication 811; U.S. Government Printing Office: Washington, DC (2008); available at: http://ts.nist.gov/WeightsAndMeasures/Metric/mpo_pubs.cfm (accessed Jun 2010).

Users of this SRM should ensure that the Certificate in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 926-4751; e-mail srminfo@nist.gov; or via the Internet at http://www.nist.gov/srm.

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1488
Prepared By:	Gregory Ramsay
Carrier Conc:	3.2M HNO3
Reference Date:	01/01/2010
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .68 %
LogBook No:	RC-S-060-035

A Solution Material Info			
Isotope:	Plutonium-242		
Prepared By:	Ashley Drochter		
Prep Date:	11/02/2010		
Verification Date:	11/02/2010		
Expiration Date:	11/02/2011		
Primary Code:	1488-A		
Dilution(mL):	250 mL		
Mass of Parent(g):	5.3308 g		
Density(g/mL):	1.0908	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3308 g) * (26.77 Bq/g) * (60 dpm/Bq) / (250 mL) = 34.2493 dpm/mL
(5.3308 g) * (26.77 Bq/g) * (60 dpm/Bq) / (1.0908 g/mL) / (250 mL) = 31.3995 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1488-A

A.Drochter	**Isotope**	**Value**	**Uncertainty**
11/8/2010	1488-A	1.630	0.2870
	1488-A	1.680	0.2800
	1488-A	1.550	0.2630
Mean Value (Counting) =	1.620	105.01	**Pass**
Stdev =	0.065574385		**Rule 3 (Pass/Fail)**
Target =	1.54		
Lower Limit =	1.33		
Upper Limit =	1.75114877		
Rule 1 Pass/Fail	**Pass**		
Two sigma =	0.13114877		
10 % of Mean =	0.162		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1488-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu 239 standard 0338-CC and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Four drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 49% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

11/9/10

STANDARDIZATION OF STRONTIUM CARRIER

DATE: 8/19/2010 EXP. DATE: 8/19/2011
LOT NUMBER 1425235 Analyst: JLR

STRONTIUM PRECIPITATES

	1	2	3	4
Weight of carrier added	1	1.01	1	1.01
Aliquot (5.00 mL)				
Crucible + ppt.	0.0406	0.0401	0.0408	0.0408
Crucible	0.0240	0.0236	0.0243	0.0242
Wt. of ppt., g	0.0166	0.0165	0.0165	0.0166
mg Sr/mL	16.60	16.50	16.50	16.60
mg Sr/g	16.60	16.34	16.50	16.44

Must weigh carrier added

Average	**Std. Dev.**	
16.55	± 0.06	0.00348852
16.47	± 0.11	0.00672105
mg Sr/ 0.5 mL		**8.28**
mg Sr/g		16.47

0.5% of Mean Value = 0.08275 Pass

A satisfactory standardization is obtained when results give a standard deviation of less than 0.5% of the mean value.

Amanda L. Fuehr

ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 · U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837

0638

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

67519-278

Ra-226 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

Analytics maintains traceability to the National Institute of Standards and Technology through participation in a Measurements Assurance Program as described in USNRC Reg. Guide 4.15, Revision 1, February 1979.

ISOTOPE:	Ra-226
ACTIVITY (dps):	2.353 E4
HALF-LIFE:	1.600 E3 years
CALIBRATION DATE:	January 23, 2004 12:00 EST
RELATIVE EXPANDED UNCERTAINTY (k=2):	3.3%

Impurities: γ-impurities (other than decay products) <0.1%

5.01065 grams 0.1M HCl solution with 50 μg/g Ba carrier.

P O NUMBER 3231RD, Item 5

SOURCE PREPARED BY: M. D. Currie
M. D. Currie, Radiochemist

Q A APPROVED: 1/26/04

RC-S-037-037a

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0638
Prepared By:	Amanda Fehr
Carrier Conc:	0.1M HCl
Reference Date:	01/23/2004
Ampoule Mass (g):	5.01065 g
Uncertainty:	+/- 3.3 %
LogBook No:	RC-S-037-037

A Solution Material Info			
Isotope:	Radium-226		
Prepared By:	Amanda Fehr		
Prep Date:	01/16/2006		
Verification Date:	09/28/2009		
Expiration Date:	09/27/2011		
Primary Code:	0638-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	4.8398 g		
Density(g/mL):	1.0266	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(4.8398 g) * (23530 dps) * (60 dpm/dps) / (5.01065 g * 100 mL) = 13636.6133 dpm/mL
(4.8398 g) * (23530 dps) * (60 dpm/dps) / (1.0266 g/mL)/ (5.01065 g * 100 mL) = 13282.9676 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/17/2006	Amanda Fehr	2.1041	100	0638-B	279.0211 dpm/mL	01/17/2007	01/17/2008
07/17/2006	Mary Aders	2.1313	100	0638-C	282.6281 dpm/mL	07/26/2006	07/26/2007
03/28/2007	Daniel Roy	2.1025	100	0638-D	279.2744 dpm/ml	04/08/2007	04/08/2008
03/28/2007	Daniel Roy	45.468	250	0638-E	2415.7999 dpm/ml	04/08/2010	04/08/2011
12/18/2007	Daniel Roy	2.014	100	0638-F	267.519 dpm/ml	02/02/2009	02/02/2010
02/12/2008	Daniel Roy	.5004	100	0638-G	66.468 dpm/ml	03/18/2010	03/18/2011
07/23/2008	Daniel Roy	5.0607	250	0638-H	268.8845 dpm/ml	07/17/2009	07/17/2010
09/28/2009	Angela Johnson	4.052	200	0638-I	269.113 dpm/mL	09/28/2009	09/28/2010
09/14/2010	Gregory Ramsay	5.18	250	0638-J	275.2231 dpm/mL	09/14/2010	09/27/2011

Verification for Ra-226 Standard 0638-J 10

G. Ramsay	**Isotope**	**Value**	**Uncertainty**
9/27/2010	0638-J	1212.679	287.3311
	0638-J	1213.513	287.4371
	0638-J	1197.598	282.3895

Mean Value (Counting) =	1207.930	97.43	**Pass**
Stdev =	8.957401906		**Rule 3 (Pass/Fail)**

Target =	1239.74	
Lower Limit =	1190.015496	
Upper Limit =	1225.845104	
Rule 1 Pass/Fail	**Fail**	*Exception Taken due to full standard recovery
Two sigma =	17.91480381	
10 % of Mean =	120.79303	
Rule 2 (Pass/Fail)	**Pass**	

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for Ra-226 source 0638-J by transferring portions of the degassed standard into tared glass liquid scintillation vials. Ten mL of DI Water and 10 mL mineral oil was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 10 mL of DI water and 10 mL of mineral oil. The standard verification vials and Background source were dark adapted for two hours and counted on LSC Red using source standard verification. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.
Reference RAD SOP M-001

10-5-10
10/4/10

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404·352·8677
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www.analyticsinc.com

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

1460

81902-278

5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories
P.O. No.: 7334 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a master solution calibrated by Eckert & Ziegler Analytics, using a germanium gamma spectrometer system. Radionuclide purity and calibration were checked with a germanium gamma spectrometer system. The nuclear decay rate and reference date for this source are given below. Eckert & Ziegler Analytics (EZA) maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Revision 1, February, 1979, and compliance with ANSI N42.22-1995, "Traceability of Radioactive Sources to NIST." EZA is accredited by the Health Physics Society (HPS) for the production of NIST-traceable sources, and this source was produced in accordance with the HPS accreditation requirements. Customers may report any concerns with the accreditation program to the HPS Secretariat, 1313 Dolley Madison Blvd., Ste. 402, McLean, VA 22101.

Isotope	Half-Life, Days	Activity (Bq)	Uncertainty*, % Type u_A	u_B	U	Reference Date (12:00 PM EST)
Ra-228	2.100E+03	4.100E+02	0.2	1.9	3.8	03/18/2010

***Uncertainty:** U - Relative expanded uncertainty, k = 2. See NIST Technical Note 1297, "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results."

Comments:
Impurities: γ-impurities < 0.1 %. 5.03780 grams 0.1M HCl solution with approximately 30 μg/g Ba carrier.

Source Prepared by: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 3/18/10
J. D. McCorvey, QA Manager Alternate

ACCREDITED SOURCE CALIBRATION LABORATORY HEALTH PHYSICS SOCIETY FOUNDED 1956

ANA Form005 Rev. ---

Single Isotope Certificate, Rev 1 9/28/2009

Rec'd 3/22/10 gr

Corporate Office
24937 Avenue Tibbitts Valencia, California 91355

Laboratory
1380 Seaboard Industrial Blvd. Atlanta, Georgia, 30318

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1460
Prepared By:	Gregory Ramsay
Carrier Conc:	0.1M HCl
Reference Date:	03/18/2010
Ampoule Mass (g):	5.0378 g
Uncertainty:	+/- 3.8 %
LogBook No:	RC-S-060-007

A Solution Material Info			
Isotope:	Radium-228		
Prepared By:	Amanda Fehr		
Prep Date:	07/27/2010		
Verification Date:	07/28/2010		
Expiration Date:	07/27/2011		
Primary Code:	1460-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	4.8604 g		
Density(g/mL):	0.9994	Balance ID:	38110047

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(4.8604 g) * (410 Bq) * (60 dpm/Bq) / (5.0378 g * 100 mL) = 237.3374 dpm/mL
(4.8604 g) * (410 Bq) * (60 dpm/Bq) / (0.9994 g/mL)/ (5.0378 g * 100 mL) = 237.4774 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Ra-228 Standard 1460-A

A. Fehr 7/28/2010	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
	1460-A N1	891.6000	45.0000	846.6000	7.77163792	0.5000	217.8691309
	1460-A N2	882.6000	45.0000	837.6000	7.77163792	0.5000	215.5530169
	1460-A N3	909.4000	45.0000	864.4000	7.77163792	0.5000	222.4498899
						Average =	218.6240126

Mean Value (Counting) =	218.6240126	dpm/mL	**96.2185817**	**Pass**
Stdev =	3.50985742	dpm/mL	0.01605431	**Rule 3 (Pass/Fail)**
Certificate Value =	227.216	dpm/mL		
Lower Limit =	211.6042977	dpm/mL		
Upper Limit =	225.6437274	dpm/mL		
Rule 1 Pass/Fail	**Fail***		***Exception to rule taken due to full recovery of standard**	
Two sigma =	7.019714839			
10 % of Mean =	21.86240126			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for Ra-228 source 1460-A by transferring portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on LSC RED for Ra-228 source standard verification. The Ra-228 efficiency calibration which was used for verification calculations was performed on 2/13/10 using source 1220-A (Ra-228). Calibration data is recorded in this logbook under Ra-228 1220. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

9/15/10
Amanda L. Fehr 9/3/10

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404·352·8677
Fax 404·352·2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

1243

78352-278

Sr-90 10 mL Liquid in Flame Sealed Vial

Customer: General Engineering Labs/Charleston, SC
P.O. No.: 7312 RD, Item 3

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	Sr-90
Activity (Bq):	3.856 E5
Half-Life:	28.79 years
Calibration Date:	October 1, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	1.7%

Comments:
Impurities: γ-impurities <0.1%
10.41484 grams 0.1M HCl solution with 30 μg/g Sr carrier.

NOTE: This source also contains Y-90 in secular equilibrium with Sr-90. The Y-90 activity is equal to the Sr-90 activity. Since Sr-90 and Y-90 both decay 100% by beta emission, the total beta emission rate for the source is twice the certified Sr-90 activity. The half-life for Y-90 is 64.08 hours.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 10/3/08
D. M. Montgomery, QA Manager

RECEIVED

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1243
Prepared By:	Daniel Roy
Carrier Conc:	0.1M HCL
Reference Date:	10/01/2008
Ampoule Mass (g):	10.41484 g
Uncertainty:	+/- 1.7 %
LogBook No:	RC-S-048-124

A Solution Material Info			
Isotope:	Strontium-90		
Prepared By:	Daniel Roy		
Prep Date:	12/19/2008		
Verification Date:	01/21/2010		
Expiration Date:	08/06/2011		
Primary Code:	1243-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	10.2164 g		
Density(g/mL):	0.9991	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(10.2164 g) * (385600 Bq) * (60 dpm/Bq) / (10.41484 g * 100 mL) = 226951.7634 dpm/mL
(10.2164 g) * (385600 Bq) * (60 dpm/Bq) / (0.9991 g/mL)/ (10.41484 g * 100 mL) = 227146.2010 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/21/2010	Bethany Fiem	2.2467	1000	1243-B	510.329369 dpm/mL	01/21/2010	01/21/2011
08/03/2010	Bethany Fiem	2.5604	1000	1243-C	581.5851 dpm/mL	08/06/2010	08/06/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Sr-90 Standard 1243-C

G. Ramsay	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Vol. Used (mL)	Source DPM/mL
8/17/2010	1243-C N1	1177.4000	47.4000	1130.0000	2.013366	1.0000	561.24911
	1243-C N2	1174.0000	47.4000	1126.6000	2.013366	1.0000	559.5603959
	1243-C N3	1147.4000	47.4000	1100.0000	2.013366	1.0000	546.34869
						Average =	555.719399

Mean Value (Counting) =	555.719399	dpm/mL	**99.8791138**	**Pass**
Stdev =	8.159078571	dpm/mL	0.01468201	**Rule 3 (Pass/Fail)**

Certificate Value =	556.392	dpm/mL
Lower Limit =	539.4012419	dpm/mL
Upper Limit =	572.0375561	dpm/mL
Rule 1 Pass/Fail	**Pass**	
Two sigma =	16.31815714	
10 % of Mean =	55.5719399	
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for Sr-90 source 1243-C by transferring 1.0 mL portions of the standard into glass liquid scintillation vials. Ten mL Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra cocktail. The standard verification vials and Background source were dark adapted and counted on LSC Brown for Sr-90 source standard verification. The Sr-90 efficiency calibration which was used for verification calculations was performed on 08/6/10 using source 0133-A (Sr-90). Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.
Reference RAD SOP M-001

8/17/10
8/20/10

0934

ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 • U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

72858-278

Th-229 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:	Th-229
ACTIVITY (dps):	3.842 E3
HALF-LIFE:	7340 years
CALIBRATION DATE:	May 2, 2006 12:00 EST
RELATIVE EXPANDED UNCERTAINTY (k=2):	3.5%

Impurities: Th-228 5.7 dps
Th-230 24 dps
Th-232 1.5 dps

5.05657 grams 0.5M HNO_3 solution.

P O NUMBER 2724RD, Item 1

SOURCE PREPARED BY: M Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 05-02-2006

RECEIVED 5/5/06 MLK

RCS-041-110

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0934
Prepared By:	Daniel Roy
Carrier Conc:	0.05M HNO3
Reference Date:	05/02/2006
Ampoule Mass (g):	5.05657 g
Uncertainty:	+/- 3.5 %
LogBook No:	RC-S-041-110

A Solution Material Info			
Isotope:	Thorium-229		
Prepared By:	Daniel Roy		
Prep Date:	04/23/2008		
Verification Date:	06/11/2010		
Expiration Date:	06/11/2011		
Primary Code:	0934-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	4.8973 g		
Density(g/mL):	1.0143	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(4.8973 g) * (3842 dps) * (60 dpm/dps) / (5.05657 g * 100 mL) = 2232.5917 dpm/mL
(4.8973 g) * (3842 dps) * (60 dpm/dps) / (1.0143 g/mL)/ (5.05657 g * 100 mL) = 2201.0332 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
04/23/2008	Daniel Roy	2.5898	250	0934-B	22.8009 dpm/ml	04/23/2008	04/23/2009
09/25/2008	Daniel Roy	2.6237	250	0934-C	23.0994 dpm/ml	09/25/2008	09/25/2009
12/16/2008	Daniel Roy	2.6547	250	0934-D	23.3723 dpm/ml	12/16/2008	12/16/2009
01/09/2009	Daniel Roy	2.5399	250	0934-E	22.3616 dpm/ml	01/09/2009	01/09/2010
04/03/2009	Mary Aders	2.5434	250	0934-F	22.3924 dpm/ml	04/03/2009	04/03/2010
04/22/2009	Mary Aders	2.5138	250	0934-G	22.1318 dpm/ml	04/28/2009	04/28/2010
07/31/2009	Mary Aders	2.579	250	0934-H	22.7059 dpm/mL	07/31/2009	07/31/2010
09/16/2009	Mary Aders	2.5029	250	0934-I	22.0359 dpm/mL	09/16/2009	09/16/2010

10/21/2009	Mary Aders	2.4847	250	0934-J	21.8756 dpm/mL	10/21/2009	10/21/2010
12/02/2009	Ashley Drochter	5.0356	500	0934-K	22.167 dpm/mL	12/02/2009	12/02/2010
03/09/2010	Ashley Drochter	5.0236	500	0934-L	22.1142 dpm/mL	03/09/2010	03/09/2011
06/11/2010	Ashley Drochter	10.1236	1000	0934-M	22.2824 dpm/mL	06/11/2010	06/11/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Th-229 Standard 0934-M

A.DROCHTER	Isotope	Value	Uncertainty
6/15/2010	0934-M	0.989	0.1380
	0934-M	1.050	0.1470
	0934-M	0.968	0.1370

Mean Value (Counting) =	1.002	99.90	**Pass**
Stdev =	0.042594992		**Rule 3 (Pass/Fail)**

Target =	1.003
Lower Limit =	0.91714335
Upper Limit =	1.087523317
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.085189984
10 % of Mean =	0.100233333
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard 0934-M using 0.1 mL for each source. Each standard was combined with 0.1 mL of Th-230 standard A2796-J and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Two mL of 49% HF was added to precipitate neodymium(and Thorium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Th-229 were calculated by comparison to Th-230 certified values.

6/15/10

6/15/10

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404·352·8677
Fax 404·352·2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

1242

78148-278

Th-230 5 mL Liquid in Flame Sealed Vial

Customer: General Engineerings Labs
P.O. No.: 7311RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	Th-230
Activity (Bq):	4.021 E4
Half-Life:	7.538 E4 years
Calibration Date:	August 25, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	2.0%

Comments:
Impurities: γ-impurities <0.1%, α-impurities <0.04%
5.07467 grams 0.5M HNO3 solution.

Source Prepared By: MITaskaeva
M. I. Taskaeva, Radiochemist

QA Approved: DM Montgomery
D. M. Montgomery, QA Manager

Date: 9-4-08

RECEIVED 9/17/08
RC-S-048-123

End of Certificate

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1242
Prepared By:	Daniel Roy
Carrier Conc:	0.5M HNO3
Reference Date:	08/25/2008
Ampoule Mass (g):	5.07467 g
Uncertainty:	+/- 2 %
LogBook No:	RC-S-048-123

A Solution Material Info			
Isotope:	Thorium-230		
Prepared By:	Ashley Drochter		
Prep Date:	11/10/2009		
Verification Date:	08/06/2010		
Expiration Date:	08/06/2011		
Primary Code:	1242-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	4.8836 g		
Density(g/mL):	1.0597	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(4.8836 g) * (40210 Bq) * (60 dpm/Bq) / (5.07467 g * 100 mL) = 23217.6149 dpm/mL
(4.8836 g) * (40210 Bq) * (60 dpm/Bq) / (1.0597 g/mL)/ (5.07467 g * 100 mL) = 21908.6601 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/01/2009	Bethany Fiem	6.3855	500	1242-B	279.79548 dpm/mL	12/02/2009	12/02/2010
08/03/2010	Gregory Ramsay	12.8745	1000	1242-C	282.063 dpm/mL	08/06/2010	08/06/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Th-230 Standard 1242-C

Analyst: G. Ramsay Date: 8/6/10	Source ID	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Vol. Used (ml)	Source DPM/ml
	1242-B #1	327.0000	48.4000	278.6000	1.02228097	1.0000	272.528
	1242-B #2	326.6000	48.4000	278.2000	1.02228097	1.0000	272.137
	1242-B #3	335.4000	48.4000	287.0000	1.02228097	1.0000	280.745

Mean Value (Counting) =	275.1363612	97.5460229	**Pass**
Stdev =	4.86093241		**Rule 3 (Pass/Fail)**

Certificate Value =	282.058
Lower Limit =	265.4144964
Upper Limit =	284.858226
Rule 1 Pass/Fail	**Pass**
Two sigma =	9.721864821
10 % of Mean =	27.51363612
Rule 2 (Pass/Fail)	**Pass**

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for Th-230 source 1242-C by transferring 1.0 mL portions of the standard to glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A background vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for one hour and counted on LSC Brown for standard verification. The alpha efficiency calibration which was used for verification calculations was performed on 8/6/10 using NIST source 1105-A. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference: RAD SOP M - 001

8/11/10

8/12/10

CERTIFICATE OF CALIBRATION

MODEL CAL3000 STANDARDIZED SOLUTION

Radionuclide:	Th-230	**Activity:**	352.6 kBq (9.531 μCi)
Serial Number:	A2796	**Mass of Solution:**	5.0778 grams
Concentration:	69.44 kBq/g (1.877 μCi/g)	**Chemical Form:**	$Th(NO_3)_4$ in 0.5 M HNO_3
Half Life[1]:	$(7.54 \pm 0.03) \times 10^4$ years	**Reference Date:**	1200 PDT Dec. 1, 1994

PRINCIPAL EMISSIONS[1]

Type	Energy (keV)	Intensity (%)
alpha	4621.1	23.4
alpha	4687.6	76.3

SOURCE DESCRIPTION

Standardized solution in a 5 milliliter flame-seal ampoule.

METHOD OF CALIBRATION

Gravimetric aliquots of a master solution were calibrated by liquid scintillation counting. The efficiency for Th-230 was established through ongoing intercomparisons with the National Institute of Standards and Technology. A gravimetric aliquot of this master solution was dispensed into a flame-seal ampoule. This standard is indirectly (implicitly) traceable to the National Institute of Standards and Technology.

North American Scientific, Inc. actively participates in the Radioactivity Measurements Assurance Program conducted by the National Institute of Standards and Technology in cooperation with the Nuclear Energy Institute.

TOTAL UNCERTAINTY (99% Confidence Level)

Systematic uncertainty	1.43%
Weighing uncertainty	0.01%
Total uncertainty (quadratic sum)	± 1.43%

Daniel Kalas
Calibration Laboratory Manager

December 6, 1994
Date

REFERENCES

(1) Table of Radioactive Isotopes, 7th edition, 1986.

• LEAK TEST CERTIFICATION ON REVERSE •

North American Scientific, Inc. 7435 Greenbush Ave., North Hollywood, CA 91605 (818) 503-9201 Fax (818) 503-0764

RC-S-004-122

LEAK TEST METHODS

1. **Soak (Immersion) Test** (ISO/TR 4826-1979 (E) section 2.1.3)

   The source is immersed in water or other suitable liquid at 50°C for at least 4 hours and the activity in the liquid measured. Acceptance limit: 0.0001 µCi alpha, 0.001 µCi beta-gamma.

2. **Immersion Test** (ANSI N542-1977, Appendix A2.1.3)

   The source is immersed in water at 100°C for 10 minutes. The water is removed and the source cooled and rinsed using fresh water. These operations are repeated twice, boiling in the water from the previous rinsing operation. Acceptance limit: 0.0001 µCi alpha, 0.005 µCi beta-gamma for all the water collected.

3. **Wipe (Smear) Test** (ANSI N542-1977, Appendix A2.1.1)

   All external surfaces of the source are wiped with a piece of filter paper or other absorbent material which has been moistened with an appropriate solvent and the activity removed is measured. Acceptance limit: 0.0001 µCi alpha, 0.001 µCi beta-gamma.

4. **Leak Test Not Applicable**

   For sources with no covering or a delicate covering over the radioactive portion or gas standards and sources, the inactive portions or containment vessel are wipe tested as in Method 2 above. Acceptance limit: 0.0001 µCi alpha, 0.001 µCi beta-gamma.

5. **Other**

LEAK TEST CERTIFICATION

The flame-seal ampoule was leak tested in accordance with Leak Test Method 3 as described above. The removable activity was found to be less than 0.0001 µCi alpha. This leak test should be performed every six months or as specified by a specific NRC or Agreement State license.

B. Kelsoe
Health Physics

December 7, 1994
Date

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	A2796
Prepared By:	Daniel Roy
Carrier Conc:	0.5M HNO3
Reference Date:	12/01/1994
Ampoule Mass (g):	5.0778 g
Uncertainty:	+/- 1.43 %
LogBook No:	RC-S-004-122

A Solution Material Info			
Isotope:	Thorium-230		
Prepared By:	Angela Johnson		
Prep Date:	02/01/1995		
Verification Date:	03/29/2010		
Expiration Date:	03/29/2011		
Primary Code:	A2796-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	5.0778 g		
Density(g/mL):	1.0210	Balance ID:	38110047

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.0778 g) * (1.877 uCi/g) * (2220000 dpm/uCi) / (100 mL) = 211588.8793 dpm/mL
(5.0778 g) * (1.877 uCi/g) * (2220000 dpm/uCi) / (1.0210 g/mL) / (100 mL) = 207236.9018 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
06/11/2007	Daniel Roy	.6205	500	A2796-G	257.1811 dpm/ml	06/11/2007	06/11/2008
03/15/2008	Daniel Roy	.6102	500	A2796-H	252.9121 dpm/ml	04/18/2008	04/18/2009
01/09/2009	Daniel Roy	.6262	500	A2796-I	259.5435 dpm/ml	01/09/2009	01/09/2010
04/09/2009	Mary Aders	.2293	1000	A2796-J	47.5194 dpm/ml	03/29/2010	03/29/2011
10/06/2009	Bethany Fiem	.6605	500	A2796-K	273.76 dpm/mL	10/08/2009	10/08/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Thorium-230 Standard A2796-J

A. Drochter	Isotope	Value	Uncertainty
4/5/2010	A2796-J	2.180	0.2980
	A2796-J	2.230	0.3250
	A2796-J	2.060	0.3010
Mean Value (Counting) =	2.157	100.76885	**Pass**
Stdev =	0.087368949		
Target =	2.14		
Lower Limit =	1.981928768		
Upper Limit =	2.331404566		
Rule 1 Pass/Fail	**Pass**	**Pass**	**Pass**
Two sigma =	0.174737899		
10 % of Mean =	0.215666667		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard ***A2796-J*** using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Th-229*** standard ***0934-L*** and 50 micrograms of Nd carrier in a disposable centrifuge tube. Four mL of 2 M HCl was added to each standard and then diluted with 6 mL of DI water. Two mL of 49% HF was added to precipitate Nd(and ***Thorium***) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for ***Th-230*** were calculated by comparison to ***Th-229*** certified values.

4/6/10

4/5/10

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

1444

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

81271-278
U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7331 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a master solution calibrated by the Department Des Applications Et De La Metrologie Des Rayonnements Ionisants (DAMRI), Paris, France. Radionuclide purity and calibration were checked with a germanium gamma spectrometer system. The nuclear decay rate and reference date for this source are given below. Eckert & Ziegler Analytics (EZA) maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Revision 1, February, 1979, and compliance with ANSI N42.22-1995, "Traceability of Radioactive Sources to NIST." EZA is accredited by the Health Physics Society (HPS) for the production of NIST-traceable sources, and this source was produced in accordance with the HPS accreditation requirements. Customers may report any concerns with the accreditation program to the HPS Secretariat, 1313 Dolley Madison Blvd., Ste. 402, McLean, VA 22101.

Isotope	Half-Life, Days	Activity (Bq)	Uncertainty*, % Type u_A	u_B	U	Reference Date (12:00 PM EST)
U-232	2.517E+04	3.737E+03	0.5	2.4	4.9	12/18/2009

***Uncertainty:** U - Relative expanded uncertainty, k = 2. See NIST Technical Note 1297, "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results."

Comments:
Impurities: γ-impurities <0.1%, Am-241 <0.15%, U-233 <0.3%. 5.23659 g 1M HNO3 solution, carrier free.

Source Prepared by: M. I. Taskaeva, Radiochemist

QA Approved: D. M. Montgomery, QA Manager Date: 12/18/09

RECEIVED 12/21/09 AM.

ACCREDITED SOURCE CALIBRATION LABORATORY HEALTH PHYSICS SOCIETY FOUNDED 1954

RC-S-051-162

Corporate Office
24937 Avenue Tibbitts Valencia, California 91355

Laboratory
1380 Seaboard Industrial Blvd. Atlanta, Georgia, 30318

ANA Form005 Rev. ---

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1444
Prepared By:	Ashley Drochter
Carrier Conc:	1M HNO3
Reference Date:	12/18/2009
Ampoule Mass (g):	5.23659 g
Uncertainty:	+/- 4.9 %
LogBook No:	RC-S-051-162

A Solution Material Info			
Isotope:	Uranium-232		
Prepared By:	Julie Strock		
Prep Date:	03/02/2010		
Verification Date:	05/03/2010		
Expiration Date:	05/03/2011		
Primary Code:	1444-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	5.1936 g		
Density(g/mL):	1.0309	Balance ID:	70104421

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.1936 g) * (3737 Bq) * (60 dpm/Bq) / (5.23659 g * 100 mL) = 2223.7926 dpm/mL
(5.1936 g) * (3737 Bq) * (60 dpm/Bq) / (1.0309 g/mL)/ (5.23659 g * 100 mL) = 2157.2019 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
03/02/2010	Julie Strock	2.076	250	1444-B	17.9134 dpm/mL	03/15/2010	03/02/2011
05/03/2010	Ashley Drochter	23.2518	1000	1444-C	50.1588 dpm/mL	05/03/2010	05/03/2011
11/09/2010	Ashley Drochter	23.045	1000	1444-D	49.7127 dpm/mL	11/09/2010	11/09/2011
11/11/2010	Christina Kimball	.516	250	1444-E	4.4525 dpm/mL	11/18/2010	11/11/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard 1444-C

	Serial #	Value		Uncertainty	
Analyst: A. Drochter					
Date: 5/7/10	1444-C N1	2.150	pCi/L	0.288	pCi/L
	1444-C N2	2.280	pCi/L	0.300	pCi/L
	1444-C N3	2.330	pCi/L	0.307	pCi/L
Mean Value (Counting) =	2.253	pCi/L		**100.11087**	**Pass**
Stdev =	0.092915732	pCi/L			**Rule 3 (Pass/Fail)**
Target =	2.251	pCi/L			
Lower Limit =	2.067501868	pCi/L			
Upper Limit =	2.439164798	pCi/L			
Rule 1 Pass/Fail	**Pass**				
Two sigma =	0.185831465				
10 % of Mean =	0.225333333				
Rule 2 (Pass/Fail)	**Pass**				

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1444-C** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-H** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 49% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

5/7/10

1476

National Institute of Standards & Technology
Certificate

Standard Reference Material 4321C
Natural Uranium Radioactivity Standard

This Standard Reference Material (SRM) consists of a solution of a standardized and certified quantity of radioactive uranium-238, uranium-235, and uranium-234 in a suitably stable and homogeneous matrix. It is intended primarily for the calibration of instruments that are used to measure radioactivity and for the monitoring of radiochemical procedures. The solution, whose composition is specified in Table 1, is contained in a flame-sealed, 5 mL, NIST, borosilicate-glass ampoule (see Note 1)*.

The certified massic activities for the uranium isotopes at a **Reference Time of 1200 EST, 1 August 1997**, are:

Uranium-238: (242.0 ± 1.5) Bq•g^{-1}

Uranium-235: (11.14 ± 0.07) Bq•g^{-1}

Uranium-234: (233.1 ± 2.2) Bq•g^{-1}

Additional physical, chemical, and radiological properties for the SRM, as well as details on the standardization method, are given in Table 1. Uncertainty intervals for certified quantities are expanded ($k = 2$) uncertainties calculated according to the ISO and NIST Guidelines (see Note 2). Table 2 contains a specification of the components that comprise the uncertainty analyses.

The certification of this SRM, within the measurement uncertainties specified, is valid for at least five (5) years after receipt. The solution matrix, in an unopened ampoule, is believed to be indefinitely homogeneous and stable, within its half-life-dependent, useful lifetime. NIST will monitor this material and will report any substantive changes in certification to the purchaser. Should any of the certified values change, purchasers of this SRM will be notified of the change by NIST.

This SRM may represent a radiological hazard and a chemical hazard. Consult the Material Safety Data Sheet (MSDS), enclosed with the SRM shipment, for details (see Note 1).

This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, Dr. M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by Dr. L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

Lisa R. Karam, Deputy Chief
Ionizing Radiation Division

Robert L. Watters, Jr., Chief
Measurement Services Division

Gaithersburg, Maryland 20899
November 1997
Text revised and expiration date extended February 2007

*Notes and references are on page 4

RECEIVED 5/10/10 AMC

Table 1. Properties of SRM 4321C

Certified values

Radionuclides	**Natural Uranium (Mixture of ^{238}U, ^{235}U, and ^{234}U)**
Reference time	**1200 EST, 1 August 1997**
Massic activities of the solution	**^{238}U : 242.0 Bq•g^{-1}** **^{235}U : 11.14 Bq•g^{-1}** **^{234}U : 233.1 Bq•g^{-1}**
Relative expanded uncertainties ($k = 2$)	**^{238}U : 0.60%** (see Note 2)* **^{235}U : 0.60%** (see Note 2) **^{234}U : 0.96%** (see Note 2)

Uncertified information

Source description	Liquid in flame-sealed, 5 mL NIST borosilicate ampoule (see Note 1)
Solution composition	1.0 mol•L^{-1} HNO_3 with 30 mg $UO_2(NO_3)_2$ per gram of solution
Solution density	(1.053 ± 0.001) g•mL^{-1} at 21.4 °C (see Note 3)
Solution mass	(5.258 ± 0.002) g (see Note 3)
Mass fraction of uranium	(0.01960 ± 0.00010) g•g^{-1} (see Note 3)
Photon-emitting impurities	None detected (see Note 4)
Half-lifes used [1]	^{238}U : (4.468 ± 0.003) x 10^9 a ‡ ^{235}U : (7.038 ± 0.005) x 10^8 a ‡ ^{234}U : (2.455 ± 0.006) x 10^5 a ‡
Calibration method (and instruments)	The certified massic activity for natural uranium was obtained by mass spectrometer, silicon surface-barrier detector, and $4\pi\alpha\beta$ liquid scintillation (LS) counting systems.

‡ See Note 5

*Notes and references are on page 4

Table 2. Uncertainty evaluation for the massic activity for SRM 4321C

	Uncertainty component	Assessment Type †	Relative standard uncertainty contribution on massic activity of Natural Uranium (%)
1	Isotopic uranium atom fraction in SRM 960; standard deviation of the mean for replicate mass-spectrometric measurements for ^{238}U	A	0.001
2	Isotopic uranium atom fraction in SRM 960; standard deviation of the mean for replicate mass-spectrometric measurements for ^{235}U	A	0.07
3	Isotopic uranium atom fraction in SRM 960; standard deviation of the mean for replicate mass-spectrometric measurements for ^{234}U	A	0.3
4	Half life of ^{238}U; standard uncertainty of the half-life	A	0.07
5	Half life of ^{235}U; standard uncertainty of the half-life	A	0.07
6	Half life of ^{234}U; standard uncertainty of the half-life	A	0.24
7	Uranium mass fraction in SRM 960; from SRM960 certificate	B	0.003
8	Quantitative dissolution	B	0.25
9	Gravimetric (mass) measurements	B	0.10
10	Limit for photon-emitting impurities	B	0.10
Relative combined standard uncertainty		^{238}U	**0.30**
		^{235}U	**0.30**
		^{234}U	**0.48**
Relative expanded uncertainty ($k = 2$)		^{238}U	**0.60**
		^{235}U	**0.60**
		^{234}U	**0.96**

† = (A) denotes evaluation by statistical methods; (B) denotes evaluation by other methods.

NOTES

Note 1. Refer to http://physics.nist.gov/Divisions/Div846/srm.html for the standardized ampoule dimensions and for assistance and instructions on how to properly open an ampoule. Information on additional storage and handling requirements is also included in the website.

Note 2. The uncertainties on certified values are expanded uncertainties, $U = ku_c$. The quantity u_c is the combined standard uncertainty calculated according to the ISO and NIST Guides (see references [2] and [3]). The combined standard uncertainty is multiplied by a coverage factor of $k = 2$ and was chosen to obtain an approximate 95 % level of confidence.

Note 3. The stated uncertainty is two times the standard uncertainty. See reference [3]

Note 4. The estimated lower limits of detection for photon-emitting impurities, expressed as massic photon emission rates are:

$1.4\ s^{-1} \cdot g^{-1}$ for $8\ keV < E < 59\ keV$
$1.1\ s^{-1} \cdot g^{-1}$ for $67\ keV < E < 88\ keV$
$0.5\ s^{-1} \cdot g^{-1}$ for $102\ keV < E < 197\ keV$
$0.3\ s^{-1} \cdot g^{-1}$ for $205\ keV < E < 762\ keV$
$0.2\ s^{-1} \cdot g^{-1}$ for $770\ keV < E < 996\ keV$, and
$0.1\ s^{-1} \cdot g^{-1}$ for $1006\ keV < E < 1900\ keV$

provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of ^{238}U, ^{235}U, ^{234}U, or their progeny

Note 5. The stated uncertainty is the standard uncertainty. See reference [3].

REFERENCES

[1] Evaluated Nuclear Structure Data File (ENSDF), online database, National Nuclear Data Center, Brookhaven Laboratory (Upton, NY), August 2007. Refer to http://www.nndc.bnl.gov/ensdf/

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B. N. Taylor and C. E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

Information about your session

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1476
Prepared By:	Ashley Drochter
Carrier Conc:	1M HNO3
Reference Date:	08/01/1997
Ampoule Mass (g):	5.258 g
Uncertainty:	+/- .6 %
LogBook No:	RC-S-060-023

A Solution Material Info			
Isotope:	Uranium-238		
Prepared By:	Ashley Drochter		
Prep Date:	06/11/2010		
Verification Date:	06/11/2010		
Expiration Date:	06/11/2011		
Primary Code:	1476-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	5.0769 g		
Density(g/mL):	1.0280	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.0769 g) * (233.1 Bq/g) * (60 dpm/Bq) / (100 mL) = 710.0552 dpm/mL
(5.0769 g) * (233.1 Bq/g) * (60 dpm/Bq) / (1.0280 g/mL) / (100 mL) = 690.7152 dpm/g
(5.0769 g) * (242 Bq/g) * (60 dpm/Bq) / (100 mL) = 737.1659 dpm/mL
(5.0769 g) * (242 Bq/g) * (60 dpm/Bq) / (1.0280 g/mL) / (100 mL) = 717.0874 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
06/11/2010	Ashley Drochter	20.2441	250	1476-B	58.0672 dpm/mL	06/11/2010	06/11/2011
12/01/2010	Christina Kimball	1.442	250	1476-C	4.13616 dpm/mL	12/01/2010	12/01/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-238 Standard 1476-B

Analyst: A. Drochter	Serial #	Value		Uncertainty	
Date: 6/11/10	1476-B #1	2.810	pCi/L	0.429	pCi/L
	1476-B #2	2.650	pCi/L	0.408	pCi/L
	1476-B #3	2.670	pCi/L	0.410	pCi/L

Mean Value (Counting) =	2.710	pCi/L	**103.60754**	**Pass**
Stdev =	0.087177979	pCi/L		**Rule 3 (Pass/Fail)**

Target =	2.616	pCi/L
Lower Limit =	2.535644042	pCi/L
Upper Limit =	2.884355958	pCi/L
Rule 1 Pass/Fail	**Pass**	
Two sigma =	0.174355958	
10 % of Mean =	0.271	
Rule 2 (Pass/Fail)	**Pass**	

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1476-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-232** standard **1444-C** and was diluted to 15 mL with 0.1M HCl. Then, was diluted to 40mLs with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. Five mL of 49% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

6/15/10

6/16/10

Runlogs

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 1050788**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
266780001	SAMPLE	MXA1	1225	DEC-02-10 18:25:00	DONE		28-NOV-10 15:08
266780002	SAMPLE	MXA1	1226	DEC-02-10 18:25:02	DONE		28-NOV-10 15:08
266780003	SAMPLE	MXA1	1227	DEC-02-10 18:25:05	DONE		28-NOV-10 15:08
266780004	SAMPLE	MXA1	1228	DEC-02-10 18:25:07	DONE		28-NOV-10 15:09
266780005	SAMPLE	MXA1	1229	DEC-02-10 18:25:09	DONE		28-NOV-10 15:09
266877001	SAMPLE	MXA1	1230	DEC-02-10 18:25:11	DONE		28-NOV-10 15:09
266877003	SAMPLE	MXA1	1231	DEC-02-10 18:25:14	DONE		28-NOV-10 15:09
266877005	SAMPLE	MXA1	1232	DEC-02-10 18:25:16	DONE		28-NOV-10 15:10
266988001	SAMPLE	MXA1	1233	DEC-02-10 18:25:18	DONE		28-NOV-10 15:10
266989003	SAMPLE	MXA1	1234	DEC-02-10 18:25:19	DONE		28-NOV-10 15:10
267028001	SAMPLE	MXA1	1235	DEC-02-10 18:25:22	DONE		28-NOV-10 15:10
267227001	SAMPLE	MXA1	1236	DEC-02-10 18:25:24	DONE		28-NOV-10 15:11
267227004	SAMPLE	MXA1	1237	DEC-02-10 18:25:27	DONE		28-NOV-10 15:11
267227005	SAMPLE	MXA1	1238	DEC-02-10 18:25:28	DONE		28-NOV-10 15:11
267349003	SAMPLE	MXA1	1239	DEC-02-10 18:25:31	DONE		28-NOV-10 15:11
267349005	SAMPLE	MXA1	1240	DEC-02-10 18:25:33	DONE		28-NOV-10 15:11
267352001	SAMPLE	MXA1	1241	DEC-02-10 18:25:35	DONE		28-NOV-10 15:11
267352004	SAMPLE	MXA1	1242	DEC-02-10 18:25:38	DONE		28-NOV-10 15:12
1202269109	MB	MXA1	1243	DEC-02-10 18:25:40	DUSE		28-NOV-10 15:12
1202269110	DUP	MXA1	1244	DEC-02-10 18:25:42	DONE		28-NOV-10 15:12
1202269111	LCS	MXA1	1247	DEC-02-10 18:25:44	DONE		28-NOV-10 15:12
1202269109	MB	MXA1	1224	DEC-03-10 18:28:22	DONE		28-NOV-10 15:08

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 1050816**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
266877001	SAMPLE	MXA1	1090	DEC-07-10 08:03:38	DONE		12-NOV-10 12:43
266877003	SAMPLE	MXA1	1091	DEC-07-10 08:03:38	DONE		12-NOV-10 12:43
266877005	SAMPLE	MXA1	1092	DEC-07-10 08:03:38	DONE		12-NOV-10 12:44
1202269196	MB	MXA1	1093	DEC-07-10 08:03:38	DONE		12-NOV-10 12:45
1202269197	DUP	MXA1	1094	DEC-07-10 08:03:38	DONE		12-NOV-10 12:46
1202269198	LCS	MXA1	1100	DEC-07-10 08:03:39	DONE		12-NOV-10 12:48

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 1050789**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
266780001	SAMPLE	MXA1	1074	DEC-03-10 14:37:12	DONE		11-NOV-10 13:19
266780002	SAMPLE	MXA1	1075	DEC-03-10 14:37:12	DUSE		11-NOV-10 13:19
266780003	SAMPLE	MXA1	1076	DEC-03-10 14:37:12	DUSE		11-NOV-10 13:19
266780004	SAMPLE	MXA1	1078	DEC-03-10 14:37:14	DONE		11-NOV-10 13:19
266780005	SAMPLE	MXA1	1079	DEC-03-10 14:37:14	DUSE		11-NOV-10 13:19
266877001	SAMPLE	MXA1	1080	DEC-03-10 14:37:14	DONE		11-NOV-10 13:20
266877003	SAMPLE	MXA1	1081	DEC-03-10 14:37:14	DONE		11-NOV-10 13:20
266877005	SAMPLE	MXA1	1082	DEC-03-10 14:37:14	DONE		11-NOV-10 13:20
266880001	SAMPLE	MXA1	1084	DEC-03-10 14:37:17	DUSE		11-NOV-10 13:20
266988001	SAMPLE	MXA1	1085	DEC-03-10 14:37:17	DONE		11-NOV-10 13:20
266989003	SAMPLE	MXA1	1086	DEC-03-10 14:37:17	DUSE		11-NOV-10 13:20
267028001	SAMPLE	MXA1	1087	DEC-03-10 14:37:17	DUSE		11-NOV-10 13:21
267227001	SAMPLE	MXA1	1088	DEC-03-10 14:37:17	DONE		11-NOV-10 13:21
267227004	SAMPLE	MXA1	1090	DEC-03-10 14:37:19	DONE		12-NOV-10 12:43
267227005	SAMPLE	MXA1	1091	DEC-03-10 14:37:19	DONE		12-NOV-10 12:43
267349003	SAMPLE	MXA1	1092	DEC-03-10 14:37:19	DONE		12-NOV-10 12:44
267349005	SAMPLE	MXA1	1093	DEC-03-10 14:37:19	DONE		12-NOV-10 12:45
267352001	SAMPLE	MXA1	1094	DEC-03-10 14:37:19	DONE		12-NOV-10 12:46
267352004	SAMPLE	MXA1	1095	DEC-03-10 14:37:20	DUSE		12-NOV-10 12:46
1202269112	MB	MXA1	1096	DEC-03-10 14:37:20	DONE		12-NOV-10 12:47
1202269113	DUP	MXA1	1097	DEC-03-10 14:37:20	DONE		12-NOV-10 12:47
1202269114	LCS	MXA1	1098	DEC-03-10 14:37:20	DONE		12-NOV-10 12:47
267028001	SAMPLE	MXA1	1219	DEC-06-10 10:56:21	DONE		28-NOV-10 15:07
266989003	SAMPLE	MXA1	1209	DEC-07-10 14:29:23	DONE		28-NOV-10 15:03
267352004	SAMPLE	MXA1	1210	DEC-07-10 14:29:25	DONE		28-NOV-10 15:04

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 1050818**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
266877001	SAMPLE	MXA1	1188	DEC-03-10 14:37:04	DUSE		21-NOV-10 15:01
266877003	SAMPLE	MXA1	1189	DEC-03-10 14:37:06	DUSE		21-NOV-10 15:01
266877005	SAMPLE	MXA1	1190	DEC-03-10 14:37:09	DUSE		21-NOV-10 15:01
1202269199	MB	MXA1	1191	DEC-03-10 14:37:11	DUSE		21-NOV-10 15:01
1202269200	DUP	MXA1	1192	DEC-03-10 14:37:14	DUSE		21-NOV-10 15:02
1202269201	LCS	MXA1	1193	DEC-03-10 14:37:16	DUSE		21-NOV-10 15:02
266877005	SAMPLE	MXA1	1020	DEC-07-10 20:40:49	DONE		05-DEC-10 15:10
1202269199	MB	MXA1	1022	DEC-07-10 20:40:49	DONE		05-DEC-10 15:10
1202269200	DUP	MXA1	1023	DEC-07-10 20:40:49	DONE		05-DEC-10 15:10
1202269201	LCS	MXA1	1024	DEC-07-10 20:40:49	DONE		05-DEC-10 15:11
266877001	SAMPLE	MXA1	1194	DEC-07-10 20:51:52	DONE		21-NOV-10 15:02
266877003	SAMPLE	MXA1	1196	DEC-07-10 20:51:54	DONE		21-NOV-10 15:02

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 1050795**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
266780001	SAMPLE	MXA1	1113	DEC-03-10 18:54:26	DONE		16-NOV-10 14:06
266780002	SAMPLE	MXA1	1114	DEC-03-10 18:54:29	DONE		16-NOV-10 14:07
266780003	SAMPLE	MXA1	1115	DEC-03-10 18:54:31	DONE		16-NOV-10 14:07
266780004	SAMPLE	MXA1	1116	DEC-03-10 18:54:33	DONE		16-NOV-10 14:07
266780005	SAMPLE	MXA1	1117	DEC-03-10 18:54:35	DONE		16-NOV-10 14:07
266877001	SAMPLE	MXA1	1120	DEC-03-10 18:54:38	DONE		16-NOV-10 14:08
266877003	SAMPLE	MXA1	1121	DEC-03-10 18:54:39	DONE		16-NOV-10 14:08
266877005	SAMPLE	MXA1	1122	DEC-03-10 18:54:41	DONE		16-NOV-10 14:08
266880001	SAMPLE	MXA1	1123	DEC-03-10 18:54:44	DONE		16-NOV-10 14:09
266988001	SAMPLE	MXA1	1124	DEC-03-10 18:54:46	DONE		16-NOV-10 14:09
266989003	SAMPLE	MXA1	1125	DEC-03-10 18:54:49	DONE		16-NOV-10 14:09
267028001	SAMPLE	MXA1	1126	DEC-03-10 18:54:51	DONE		16-NOV-10 14:10
267227001	SAMPLE	MXA1	1127	DEC-03-10 18:54:53	DONE		16-NOV-10 14:10
267227004	SAMPLE	MXA1	1128	DEC-03-10 18:54:55	DONE		16-NOV-10 14:10
267227005	SAMPLE	MXA1	1129	DEC-03-10 18:54:58	DONE		16-NOV-10 14:10
267349003	SAMPLE	MXA1	1130	DEC-03-10 18:55:00	DONE		16-NOV-10 14:10
267349005	SAMPLE	MXA1	1131	DEC-03-10 18:55:02	DONE		16-NOV-10 14:10
267352001	SAMPLE	MXA1	1132	DEC-03-10 18:55:04	DONE		16-NOV-10 14:11
267352004	SAMPLE	MXA1	1133	DEC-03-10 18:55:07	DONE		16-NOV-10 14:11
1202269120	MB	MXA1	1134	DEC-03-10 18:55:09	DONE		16-NOV-10 14:11
1202269121	DUP	MXA1	1137	DEC-03-10 18:55:11	DONE		17-NOV-10 13:21
1202269122	LCS	MXA1	1138	DEC-03-10 18:55:12	DONE		17-NOV-10 13:21

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 1048163**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
265922001	SAMPLE	KXG3	GAM11	NOV-26-10 04:08:35	DONE	2LMB	16-NOV-10 00:00
266238003	SAMPLE	KXG3	GAM08	NOV-26-10 04:21:24	DONE	2LMB	20-SEP-10 00:00
266780003	SAMPLE	KXG3	GAM17	NOV-26-10 04:21:53	DONE	2LMB	11-JAN-10 00:00
266780005	SAMPLE	KXG3	GAM10	NOV-26-10 04:22:22	DONE	2LMB	06-MAR-10 00:00
266877001	SAMPLE	KXG3	GAM09	NOV-26-10 04:31:25	DONE	2LMB	24-MAR-10 00:00
266780001	SAMPLE	KXG3	GAM06	NOV-26-10 05:17:42	DONE	2LMB	19-FEB-10 00:00
266780002	SAMPLE	KXG3	GAM02	NOV-26-10 06:05:37	DONE	2LMB	01-JUL-10 00:00
266780004	SAMPLE	KXG3	GAM07	NOV-26-10 06:05:58	DONE	2LMB	16-JUL-10 00:00
266877003	SAMPLE	KXG3	GAM25	NOV-26-10 06:06:23	DONE	2LMB	02-AUG-10 00:00
266877005	SAMPLE	KXG3	GAM28	NOV-26-10 06:07:08	DONE	2LMB	08-OCT-10 00:00
266880001	SAMPLE	KXG3	GAM29	NOV-26-10 06:07:35	DONE	2LMB	26-FEB-10 00:00
1202262532	MB	KXG3	GAM20	NOV-26-10 06:09:24	DONE	2LMB	27-JUL-10 00:00
1202262533	DUP	KXG3	GAM12	NOV-26-10 06:18:02	DONE	2LMB	26-FEB-10 00:00
1202262535	LCS	KXG3	GAM08	NOV-26-10 06:26:06	DONE	2LMB	20-SEP-10 00:00

Instrument Run Log

Instrument Type: GFPC **Batch ID: 1048899**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
265580002	SAMPLE	AYB1	PIC1B	NOV-19-10 12:50:40	DONE	CeF on 25mm Filter	01-AUG-10 00:00
266877001	SAMPLE	AYB1	PIC2D	NOV-19-10 12:50:47	DONE	CeF on 25mm Filter	01-AUG-10 00:00
266877003	SAMPLE	AYB1	PIC2A	NOV-19-10 12:50:55	DONE	CeF on 25mm Filter	01-AUG-10 00:00
266877005	SAMPLE	AYB1	PIC3D	NOV-19-10 12:51:02	DONE	CeF on 25mm Filter	01-AUG-10 00:00
1202264553	MB	AYB1	PIC1A	NOV-19-10 12:51:18	DONE	CeF on 25mm Filter	01-AUG-10 00:00
1202264554	DUP	AYB1	PIC4C	NOV-19-10 12:51:22	DONE	CeF on 25mm Filter	01-AUG-10 00:00
1202264556	MS	AYB1	PIC2B	NOV-19-10 12:51:30	DONE	CeF on 25mm Filter	01-AUG-10 00:00
1202264557	LCS	AYB1	PIC1C	NOV-19-10 12:51:38	DONE	CeF on 25mm Filter	01-AUG-10 00:00
266892002	SAMPLE	AYB1	PIC5C	NOV-19-10 12:55:26	DONE	CeF on 25mm Filter	01-AUG-10 00:00

Instrument Run Log

Instrument Type: GFPC **Batch ID: 1050902**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
266780002	SAMPLE	SYS1	PIC1B	NOV-30-10 12:38:41	DONE	Tuffryn Filter	01-FEB-10 00:00
266780003	SAMPLE	SYS1	PIC7B	NOV-30-10 12:39:06	DONE	Tuffryn Filter	01-FEB-10 00:00
266780004	SAMPLE	SYS1	PIC9A	NOV-30-10 12:39:10	DONE	Tuffryn Filter	01-FEB-10 00:00
266780005	SAMPLE	SYS1	PIC2A	NOV-30-10 12:39:17	DONE	Tuffryn Filter	01-FEB-10 00:00
266877001	SAMPLE	SYS1	PIC7A	NOV-30-10 12:39:32	DONE	Tuffryn Filter	01-FEB-10 00:00
266877003	SAMPLE	SYS1	PIC4C	NOV-30-10 12:39:44	DONE	Tuffryn Filter	01-FEB-10 00:00
266877005	SAMPLE	SYS1	PIC3B	NOV-30-10 12:39:55	DONE	Tuffryn Filter	01-FEB-10 00:00
266988001	SAMPLE	SYS1	PIC6C	NOV-30-10 12:40:23	DONE	Tuffryn Filter	01-FEB-10 00:00
267028001	SAMPLE	SYS1	PIC1A	NOV-30-10 12:40:46	DONE	Tuffryn Filter	01-FEB-10 00:00
267227001	SAMPLE	SYS1	PIC3C	NOV-30-10 12:40:56	DONE	Tuffryn Filter	01-FEB-10 00:00
267227004	SAMPLE	SYS1	PIC7D	NOV-30-10 12:41:16	DONE	Tuffryn Filter	01-FEB-10 00:00
1202269464	MB	SYS1	PIC5C	NOV-30-10 12:41:43	DONE	Tuffryn Filter	01-FEB-10 00:00
1202269465	DUP	SYS1	PIC5B	NOV-30-10 12:41:48	DONE	Tuffryn Filter	01-FEB-10 00:00
1202269466	MS	SYS1	PIC1C	NOV-30-10 12:41:53	DONE	Tuffryn Filter	01-FEB-10 00:00
1202269467	LCS	SYS1	PIC2B	NOV-30-10 12:41:57	DONE	Tuffryn Filter	01-FEB-10 00:00
267227005	SAMPLE	SYS1	PIC8B	NOV-30-10 12:44:30	DONE	Tuffryn Filter	01-FEB-10 00:00
266780001	SAMPLE	SYS1	PIC7B	DEC-05-10 15:44:59	DONE	Tuffryn Filter	01-FEB-10 00:00
266880001	SAMPLE	SYS1	PIC7C	DEC-05-10 15:45:06	DUSE	Tuffryn Filter	01-FEB-10 00:00
266989003	SAMPLE	SYS1	PIC5B	DEC-05-10 15:45:09	DONE	Tuffryn Filter	01-FEB-10 00:00

Instrument Run Log

Instrument Type: GFPC **Batch ID: 1052582**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
266780001	SAMPLE	LYL1	PIC5D	DEC-02-10 19:30:04	DONE	2 inch Planchett	01-AUG-10 00:00
266780002	SAMPLE	LYL1	PIC10B	DEC-02-10 19:30:14	DONE	2 inch Planchett	01-AUG-10 00:00
266780003	SAMPLE	LYL1	PIC10A	DEC-02-10 19:30:27	DONE	2 inch Planchett	01-AUG-10 00:00
266780004	SAMPLE	LYL1	PIC10C	DEC-02-10 19:30:41	DONE	2 inch Planchett	01-AUG-10 00:00
266780005	SAMPLE	LYL1	PIC5B	DEC-02-10 19:30:52	DONE	2 inch Planchett	01-AUG-10 00:00
266877001	SAMPLE	LYL1	PIC3D	DEC-02-10 19:30:58	DONE	2 inch Planchett	01-AUG-10 00:00
266877003	SAMPLE	LYL1	PIC7B	DEC-02-10 19:31:16	DONE	2 inch Planchett	01-AUG-10 00:00
266877005	SAMPLE	LYL1	PIC5C	DEC-02-10 19:31:29	DONE	2 inch Planchett	01-AUG-10 00:00
266892002	SAMPLE	LYL1	PIC7C	DEC-02-10 19:31:40	DONE	2 inch Planchett	01-AUG-10 00:00
266988001	SAMPLE	LYL1	PIC7D	DEC-02-10 19:31:43	DONE	2 inch Planchett	01-AUG-10 00:00
266989003	SAMPLE	LYL1	PIC2C	DEC-02-10 19:31:58	DONE	2 inch Planchett	01-AUG-10 00:00
267227001	SAMPLE	LYL1	PIC8B	DEC-02-10 19:32:09	DONE	2 inch Planchett	01-AUG-10 00:00
267227004	SAMPLE	LYL1	PIC9A	DEC-02-10 19:32:19	DONE	2 inch Planchett	01-AUG-10 00:00
267227005	SAMPLE	LYL1	PIC1A	DEC-02-10 19:32:29	DONE	2 inch Planchett	01-AUG-10 00:00
1202273345	MB	LYL1	PIC6C	DEC-02-10 19:32:45	DONE	2 inch Planchett	01-AUG-10 00:00
1202273346	DUP	LYL1	PIC2A	DEC-02-10 19:32:53	DONE	2 inch Planchett	01-AUG-10 00:00
1202273347	MS	LYL1	PIC1C	DEC-02-10 19:32:58	DONE	2 inch Planchett	01-AUG-10 00:00
1202273348	MSD	LYL1	PIC2B	DEC-02-10 19:33:01	DONE	2 inch Planchett	01-AUG-10 00:00
1202273349	LCS	LYL1	PIC4D	DEC-02-10 19:33:05	DONE	2 inch Planchett	01-AUG-10 00:00
1202273348	MSD	LYL1	PIC8C	DEC-06-10 09:23:28	DONE	2 inch Planchett	01-AUG-10 00:00
266780002	SAMPLE	LYL1	PIC8B	DEC-06-10 09:28:26	DONE	2 inch Planchett	01-AUG-10 00:00
266780001	SAMPLE	LYL1	PIC9C	DEC-06-10 09:28:29	DONE	2 inch Planchett	01-AUG-10 00:00
266780003	SAMPLE	LYL1	PIC10A	DEC-06-10 09:28:45	DONE	2 inch Planchett	01-AUG-10 00:00
266780004	SAMPLE	LYL1	PIC10C	DEC-06-10 09:28:45	DONE	2 inch Planchett	01-AUG-10 00:00
266877001	SAMPLE	LYL1	PIC9B	DEC-06-10 09:28:59	DONE	2 inch Planchett	01-AUG-10 00:00
266780005	SAMPLE	LYL1	PIC9D	DEC-06-10 09:29:03	DONE	2 inch Planchett	01-AUG-10 00:00
266877005	SAMPLE	LYL1	PIC10D	DEC-06-10 09:29:16	DONE	2 inch Planchett	01-AUG-10 00:00
266877003	SAMPLE	LYL1	PIC10B	DEC-06-10 09:29:18	DONE	2 inch Planchett	01-AUG-10 00:00
266892002	SAMPLE	LYL1	PIC9A	DEC-06-10 09:29:25	DONE	2 inch Planchett	01-AUG-10 00:00
266988001	SAMPLE	LYL1	PIC2A	DEC-06-10 10:15:29	DONE	2 inch Planchett	01-AUG-10 00:00
266989003	SAMPLE	LYL1	PIC2B	DEC-06-10 10:15:38	DONE	2 inch Planchett	01-AUG-10 00:00
267227004	SAMPLE	LYL1	PIC1C	DEC-06-10 10:16:53	DONE	2 inch Planchett	01-AUG-10 00:00
267227001	SAMPLE	LYL1	PIC1D	DEC-06-10 10:16:53	DONE	2 inch Planchett	01-AUG-10 00:00
1202273345	MB	LYL1	PIC3C	DEC-06-10 10:17:49	DONE	2 inch Planchett	01-AUG-10 00:00
1202273349	LCS	LYL1	PIC4D	DEC-06-10 10:18:26	DONE	2 inch Planchett	01-AUG-10 00:00
1202273347	MS	LYL1	PIC3D	DEC-06-10 10:18:39	DONE	2 inch Planchett	01-AUG-10 00:00
267227005	SAMPLE	LYL1	PIC1A	DEC-06-10 10:19:04	DONE	2 inch Planchett	01-AUG-10 00:00
1202273346	DUP	LYL1	PIC2C	DEC-06-10 10:19:16	DONE	2 inch Planchett	01-AUG-10 00:00

Instrument Run Log

Instrument Type: LUCAS CELL DETECTOR **Batch ID: 1048498**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
266877001	SAMPLE	KSD1	LUCAS7	DEC-01-10 12:40:00	DONE	Lucas Cell	22-NOV-10 00:00
266877003	SAMPLE	KSD1	LUCAS8	DEC-01-10 12:40:00	DONE	Lucas Cell	09-FEB-10 00:00
266877005	SAMPLE	KSD1	LUCAS1	DEC-01-10 13:10:00	DONE	Lucas Cell	01-SEP-10 00:00
266892002	SAMPLE	KSD1	LUCAS2	DEC-01-10 13:10:00	DONE	Lucas Cell	22-DEC-09 00:00
1202263432	MB	KSD1	LUCAS4	DEC-01-10 13:10:00	DONE	Lucas Cell	10-DEC-09 00:00
1202263433	DUP	KSD1	LUCAS5	DEC-01-10 13:10:00	DONE	Lucas Cell	12-APR-10 00:00
1202263434	MS	KSD1	LUCAS6	DEC-01-10 13:10:00	DONE	Lucas Cell	16-FEB-10 00:00
1202263435	LCS	KSD1	LUCAS7	DEC-01-10 13:10:00	DONE	Lucas Cell	22-NOV-10 00:00

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Solids, Total Dissolved.....948
Specific Conductivity.....950
Total Kjeldahl Nitrogen.....953
Total Phosphorus.....968
pH..... 980
Miscellaneous..... 986

Case Narrative

Case Narrative for
ARS International (63641-10)
LANL-WQH Water Samples
Workorder #: 266878
SDG # : 11-464

November 15, 2010

Laboratory Identification:

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

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on November 12, 2010 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. There are no additional comments concerning sample receipt. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
266878001	Buckman1-11-1944
266878002	Buckman1-11-1945
266878003	Buckman06-11-1970
266878004	Buckman06-11-1971
266878005	Buckman08-11-2042
266878006	Buckman08-11-2043

Case Narrative

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

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry, Metals and Perchlorates by LCMSMS.

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

for

Valerie Davis
Project Manager

List of current GEL Certifications as of 15 November 2010

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

Chain of Custody and Supporting Documentation

Thursday, November 11, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 11-464C

REQUEST NUMBER: 11-464

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 12/11/2010

TURNAROUND REQ'D: 30

LAB REQUEST COMMENTS:

266878

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
Buckman1-11-1944	1	POLY	WSP-CN(T)	Sodium Hydroxide	WG
Buckman1-11-1944	1	POLY	WSP-GENINORG	Ice	WG
Buckman1-11-1944	1	POLY	WSP-Met+B+SN+SR+U	Nitric Acid	WG
Buckman1-11-1944	1	AMBER GLASS	WSP-NH3+NO3/NO2+ PO4	Sulfuric Acid (Hydrogen Sulfate)	WG
Buckman1-11-1944	1	AMBER GLASS	WSP-TKN+TOC	Sulfuric Acid (Hydrogen Sulfate)	WG
Buckman1-11-1945	1	POLY	WSP-CR	Nitric Acid Ice	WG
Buckman06-11-1970	1	POLY	WSP-CN(T)	Sodium Hydroxide	WG
Buckman06-11-1970	1	POLY	WSP-GENINORG	Ice	WG
Buckman06-11-1970	1	POLY	WSP-Met+B+SN+SR+U	Nitric Acid	WG
Buckman06-11-1970	1	AMBER GLASS	WSP-NH3+NO3/NO2+ PO4	Sulfuric Acid (Hydrogen Sulfate)	WG
Buckman06-11-1970	1	AMBER GLASS	WSP-TKN+TOC	Sulfuric Acid (Hydrogen Sulfate)	WG
Buckman06-11-1971	1	POLY	WSP-CR	Nitric Acid Ice	WG
Buckman08-11-2042	1	POLY	WSP-CN(T)	Sodium Hydroxide	WG
Buckman08-11-2042	1	POLY	WSP-GENINORG	Ice	WG
Buckman08-11-2042	1	POLY	WSP-Met+B+SN+SR+U	Nitric Acid	WG
Buckman08-11-2042	1	AMBER GLASS	WSP-NH3+NO3/NO2+ PO4	Sulfuric Acid (Hydrogen Sulfate)	WG
Buckman08-11-2042	1	AMBER GLASS	WSP-TKN+TOC	Sulfuric Acid (Hydrogen Sulfate)	WG
Buckman08-11-2043	1	POLY	WSP-CR	Nitric Acid Ice	WG

Relinquished By:	Date	Time	Received By:	Date	Time
Printed Name / Signature	11/11/10	3:00	Dionne Francis / Signature	11/12/10	0850
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

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

Printed Name Signature

Thursday, November 11, 2010

REQUEST NUMBER: 11-464

LOS ALAMOS
NATIONAL LABORATORY

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

These Samples are on:
LANL Request Number:11-464
Per Agreement Number:126310011
Project Cost Code: WEPR1158W100

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 11/11/2010
TURNAROUND/REPORT DUE: 12/11/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:120.1	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:150.1	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:160.1	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:245.2	1	Buckman1-11-1944	WG	11/10/2010	

Thursday, November 11, 2010

REQUEST NUMBER: 11-464

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:245.2	1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:300.0	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:310.1	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:335.3	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:350.1	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:351.2	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:353.2	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	EPA:365.4	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	SM:A2340B	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	SW-846:6010B	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	

Thursday, November 11, 2010

REQUEST NUMBER: 11-464

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	Buckman08-11-2042	WG	11/10/2010	
	SW-846:6020	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman1-11-1945	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman06-11-1971	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
		1	Buckman08-11-2043	WG	11/10/2010	
	SW-846:6850	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	
	SW-846:9060	1	Buckman1-11-1944	WG	11/10/2010	
		1	Buckman06-11-1970	WG	11/10/2010	
		1	Buckman08-11-2042	WG	11/10/2010	

Final Page of REQUEST NUMBER 11-464

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/AR/COC/Work Order: 11-464**
Received By: Dionne Francis	**Date Received: November 12, 2010**

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

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?	X			Preservation Method: Ice bags **Blue ice** Dry ice **None** Other (describe) **3-5C 14,16C**
2a	Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: **61524649** Secondary Temperature Device Serial # (If Applicable):
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected: **time not indicated on COCs**
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			
13	Carrier and tracking number.	X			Circle Applicable: **FedEx Air** FedEx Ground UPS Field Services Courier Other **7209 7852 8341 3C 7209 7852 8319 3C 7209 7852 8363 3C 7209 7852 8374 3C 7209 7852 8385 4C 7209 7852 8396 4C 7209 7852 8330 5C 7209 7852 8352 4C 7297 7852 8308 16C 7209 7852 8320 14C**

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AVIZ Date 11/15/10 Page 1 of 1

TA00 BLDG 1237 DPU 03 | CAD: 0014176/CAFE2470

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

°VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

3

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

J181818095018124

2 of 3
PS# 0263 7209 7852 8341
Mstr# 7209 7852 8330 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

SB5C1/BCDA/DA47

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 50.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

°VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

3

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

J181818095018124

1 of 3
TRK# 0201 7209 7852 8363
MASTER

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

TA00 BLDG 1237 DPU 03 | CAD: 0014176/CAFE2470

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

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GENERAL ENGINEERING LAB
2040 SAVAGE RD

3

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMRA1A015AGWK0

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2 of 3
MPS# 0263 7209 7852 8319
Mstr# 7209 7852 8308 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 158148-434 RIT2 08/10

SB5C1/BCDA/DA47

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 44.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

°VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

3

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

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J181818095018124

2 of 3
MPS# 0263 7209 7852 8374
Mstr# 7209 7852 8363 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 51.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

4

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

J101010909010124

3 of 3
MPS# 0263 7209 7852 8385
Mstr# 7209 7852 8363 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156148-434 RIT2 08/12

505C1/BCDA/DA47

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 40.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

4

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWE6L11570000

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J101010909010124

TRK# 0201 7209 7852 8396

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156148-434 RIT2 08/12

505C1/BCDA/DA47

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 48.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

5

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

J101010909010124

1 of 3
TRK# 0201 7209 7852 8330
MASTER

FRI - 12 NOV A1
PRIORITY OVERNIGHT

29407

XX CHSA

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 47.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

4

MDA6

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(843) 556-8171
REF: 6B010AWEPR1158W100

FedEx Express

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3 of 3
MPS# 0263 7209 7852 8352
Mstr# 7209 7852 8330 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 56.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

°VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

16

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REF: 6B010AMRA1A015AGWK0

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J1818180918124

1 of 3

TRK# 0201 7209 7852 8308

MASTER

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156148-434 RIT2 08/10

585C1/BCDA/DA47

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

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 11NOV10
ACTWGT: 35.0 LB MAN
CAD: 0014176/CAFE2470

BILL SENDER

°VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

14

RT 249 - 1

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMRA1A015AGWK0

FZ

FedEx Express

J1818180918124

3 of 3

MPS# 0263 7209 7852 8320

Mstr# 7209 7852 8308 0201

FRI - 12 NOV A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156148-434 RIT2 08/10

585C1/BCDA/DA47

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

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

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LC/MS/MS PERCHLORATE ANALYSIS

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate by LC/MSMS
ARS International (ARSL)
SDG 11-464

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	1048547
Prep Batch Number:	1048543

Sample Analysis

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202263571	Interference Check Sample (ICS)
1202263567	Method Blank (MB)
1202263568	Laboratory Control Sample (LCS)
1202263569	266778004(CASA-11-1339) Matrix Spike (MS)
1202263570	266778004(CASA-11-1339) Matrix Spike Duplicate (MSD)

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

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 7.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

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CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 266778004 (CASA-11-1339) from SDG 11-446 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

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Preparation/Analytical Method Verification
In the SOP, it states the samples are extracted by filtering the samples through a series of desalting cartridges consisting of two Barium and one hydrogen. However due to contamination issues with the present stock in house, an alternative cartridge setup was found. The laboratory is presently using a desalting cartridge that consists of Barium, Silver and Hydrogen. This configuration was tested on several QC samples (MB, LCS, and ICS) with acceptable results. The laboratory is working with the manufacturer to resolve this issue.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Data Exception (DER) Documentation
Data exception reports (DERs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG for this analytical batch.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

Perchlorate Isotope Ratio
The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1 and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

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Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

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

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GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ARSL001 ARS International (63641–10)

Client SDG: 11–464 GEL Work Order: 266878

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re–analyzed without re–extraction.
RE Indicates that sample is re–extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP–like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Herbert N Maier **Name: Herbert Maier**

Date: 23 NOV 2010 **Title: Data Validator**

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 1048543

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
Buckman1–11–1944

Date Received: 12–NOV–10

GEL Job No (SDG): 11–464

GEL Sample ID: 266878001

Date Filtered: 16–NOV–10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.344	ug/L		1	16–NOV–10 19:38	per1116058a
	Perchlorate Isotope Ratio			3.29			1	16–NOV–10 19:38	per1116058a
14797–73–0	Perchlorate–101	.05	.2	0.327	ug/L		1	16–NOV–10 19:38	per1116058a
	Perchlorate–O(18)			0.600	ug/L		1	16–NOV–10 19:38	per1116058a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 1048543

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
Buckman06–11–1970

Date Received: 12–NOV–10

GEL Job No (SDG): 11–464

GEL Sample ID: 266878003

Date Filtered: 16–NOV–10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.459	ug/L		1	16–NOV–10 19:45	per1116059a
	Perchlorate Isotope Ratio			3.12			1	16–NOV–10 19:45	per1116059a
14797–73–0	Perchlorate–101	.05	.2	0.459	ug/L		1	16–NOV–10 19:45	per1116059a
	Perchlorate–O(18)			0.665	ug/L		1	16–NOV–10 19:45	per1116059a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 1048543

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
Buckman08–11–2042

Date Received: 12–NOV–10

GEL Job No (SDG): 11–464

GEL Sample ID: 266878005

Date Filtered: 16–NOV–10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.320	ug/L		1	16–NOV–10 19:53	per1116060a
	Perchlorate Isotope Ratio			3.09			1	16–NOV–10 19:53	per1116060a
14797–73–0	Perchlorate–101	.05	.2	0.323	ug/L		1	16–NOV–10 19:53	per1116060a
	Perchlorate–O(18)			0.630	ug/L		1	16–NOV–10 19:53	per1116060a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 11–464

Extract Batch Code: 1048543

Date Filtered: 16–NOV–10

Matrix: WATER

Sample ID: 1202263568

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.223	ug/L	111		85 – 115
Perchlorate Isotope Ratio		3.1				–
Perchlorate–101	0.200	.224	ug/L	112		85 – 115
Perchlorate–O(18)		.534	ug/L			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 11–464

Extract Batch Code: 1048543

Date Filtered: 16–NOV–10

Matrix: WATER

Sample ID: 1202263571

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.247	ug/L	123		70 – 130
Perchlorate Isotope Ratio		2.98				
Perchlorate–101	0.200	.258	ug/L	129		70 – 130
Perchlorate–O(18)		.534	ug/L			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

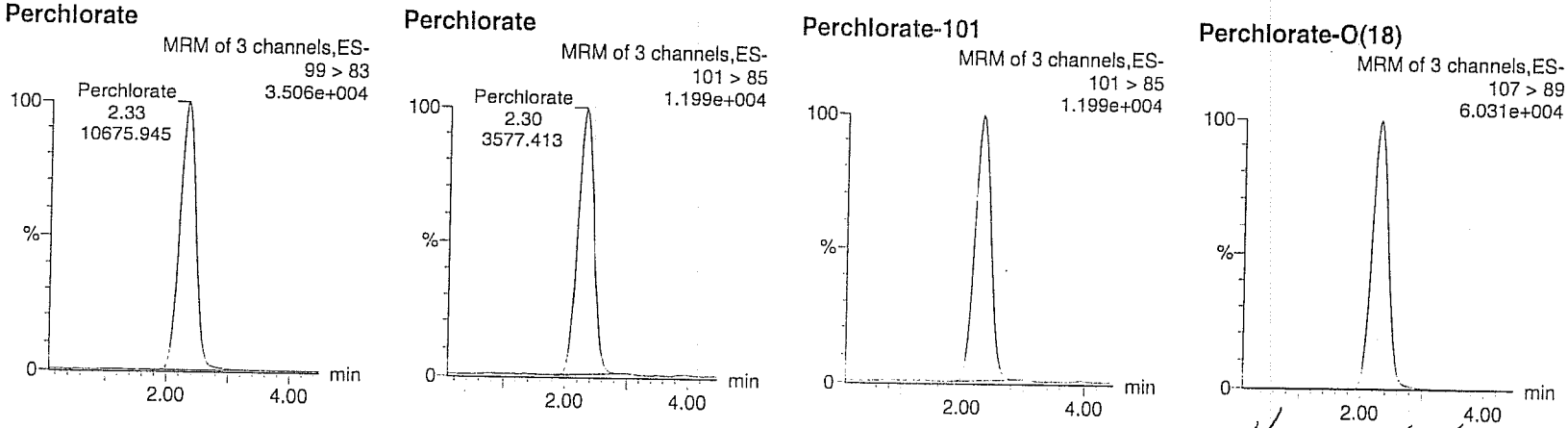
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116043a
Date: 16-Nov-2010
Time: 17:44:53
ID: 1202263571
Vial: 2:1,C

|ARSL|1048547|LCW|ICS|11

WW 11-17-10



HMM 11/19/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202263571	Perchlorate	99 > 83	2.33	10675.945	10675.945	bb			0.2470	123.48	23.48	797.271	2.98
1202263571	Perchlorate-101	101 > 85	2.30	3577.413	3577.413	bb			0.2582	129.11	29.11	1006.4...	
1202263571	Perchlorate-O(18)	107 > 89	2.30	18423.566	18423.566	bb			0.5340	106.80	6.80	8126.5...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 11–464

Extract Batch Code: 1048543

Date Extracted: 16–NOV–10

GEL MS/PS ID: 1202263569

Client ID: CASA–11–1339

GEL MSD/PSD ID: 1202263570

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	0.200	0.241	ug/L	0.477	118	.485	122	1.68	30	75 – 125
Perchlorate Isotope Ratio	0	3.17		3.08		3.12		1.03		–
Perchlorate–101	0.200	0.238	ug/L	0.483	123	.486	124	.644	30	75 – 125
Perchlorate–O(18)	0	0.530	ug/L	0.600		.507		17		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 11–464

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	16–NOV–10	per1116001a	IPB001
Perchlorate–101	0.00	0	NA	16–NOV–10	per1116001a	IPB001
Perchlorate	0.00	0	NA	16–NOV–10	per1116002a	IPB001
Perchlorate–101	0.00	0	NA	16–NOV–10	per1116002a	IPB001

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

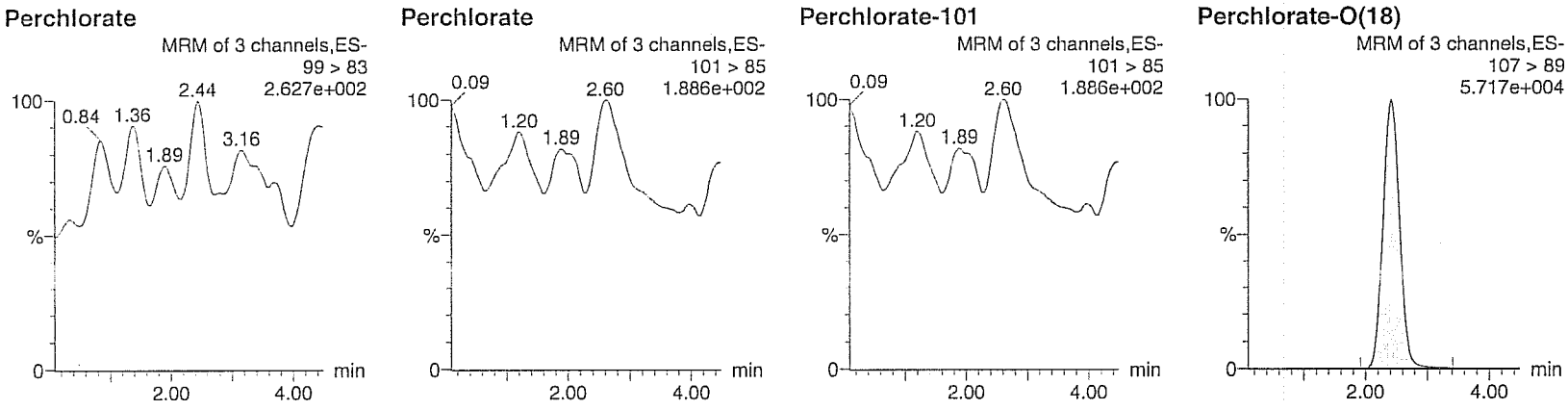
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per111610a.mdb 16 Nov 2010 13:26:11
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per111610a.cdb 17 Nov 2010 10:27:46

Name: per1116001a
Date: 16-Nov-2010
Time: 12:27:43
ID: IPB001
Vial: 1:1,A

CWW 11-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.41	17665.031	17665.031	bb			0.5120	102.41	2.41	2715.8...	

11/18/10

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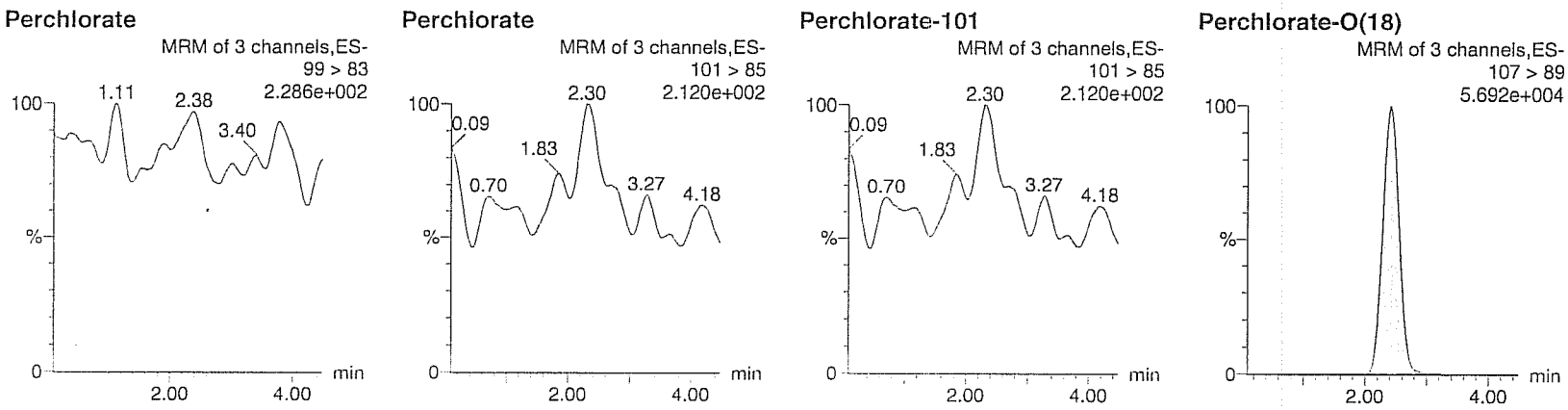
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116002a
Date: 16-Nov-2010
Time: 12:35:26
ID: IPB001
Vial: 1:1,A

CWW 11-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.41	17490.516	17490.516	bb			0.5070	101.39	1.39	7265.7...	

11/18/10

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 11–464

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	16–NOV–10	per1116008a	IPB002
Perchlorate–101	0.00	0	NA	16–NOV–10	per1116008a	IPB002
Perchlorate	0.00	0	NA	16–NOV–10	per1116010a	IPB003
Perchlorate–101	0.00	0	NA	16–NOV–10	per1116010a	IPB003
Perchlorate	0.00	0	NA	16–NOV–10	per1116013a	IPB004
Perchlorate–101	0.00	0	NA	16–NOV–10	per1116013a	IPB004
Perchlorate	0.00	0	NA	16–NOV–10	per1116016a	IPB005
Perchlorate–101	0.00	0	NA	16–NOV–10	per1116016a	IPB005
Perchlorate	0.00	0	NA	16–NOV–10	per1116028a	IPB006
Perchlorate–101	0.00	0	NA	16–NOV–10	per1116028a	IPB006
Perchlorate	0.00	0	NA	16–NOV–10	per1116039a	IPB007
Perchlorate–101	0.00	0	NA	16–NOV–10	per1116039a	IPB007
Perchlorate	0.00	0	NA	16–NOV–10	per1116052a	IPB008

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 11–464

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate–101	0.00	0	NA	16–NOV–10	per1116052a	IPB008
Perchlorate	0.00	0	NA	16–NOV–10	per1116064a	IPB009
Perchlorate–101	0.00	0	NA	16–NOV–10	per1116064a	IPB009

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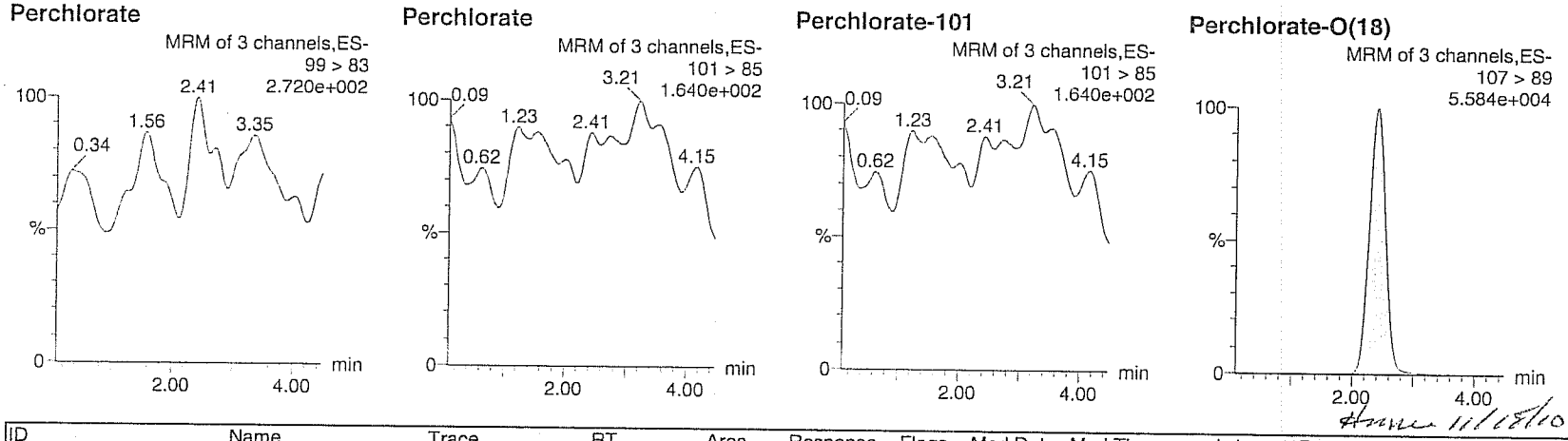
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116008a
Date: 16-Nov-2010
Time: 13:20:36
ID: IPB002
Vial: 1:1,A

11-17-10



11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83											0.00
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	2.41	17285.619	17285.619	bb			0.5010	100.21	0.21	8346.0...	

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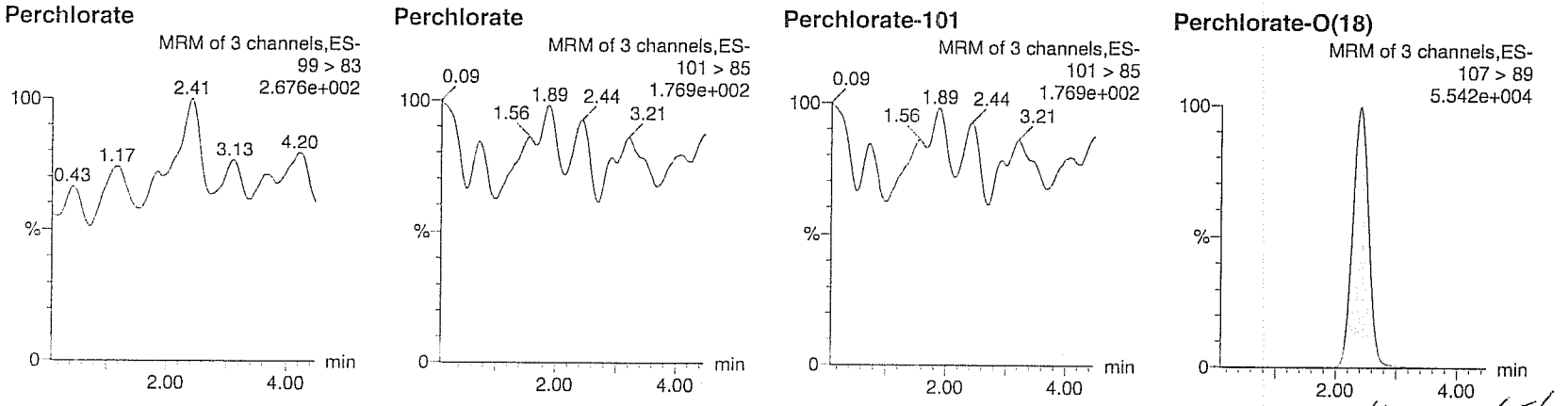
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116010a
Date: 16-Nov-2010
Time: 13:35:41
ID: IPB003
Vial: 1:1,A

CWJ 11-17-10



Hmc 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83											0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	2.41	17040.158	17040.158	bb			0.4939	98.78	-1.22	650.733	

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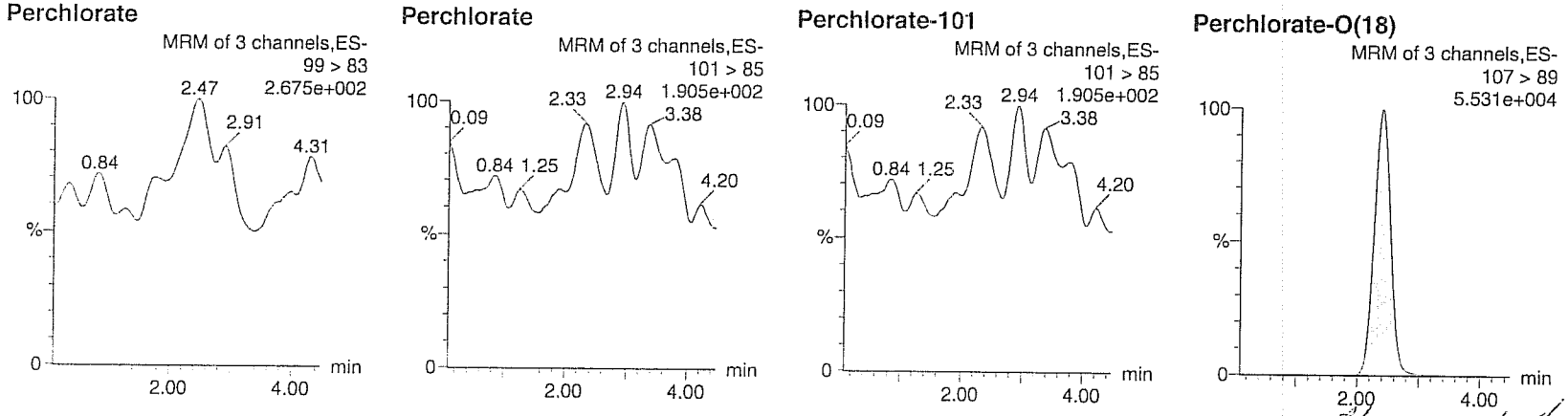
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116013a
Date: 16-Nov-2010
Time: 13:58:20
ID: IPB004
Vial: 1:1,A

11-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83											0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	2.38	17153.652	17153.652	bb			0.4972	99.44	-0.56	2741.1...	

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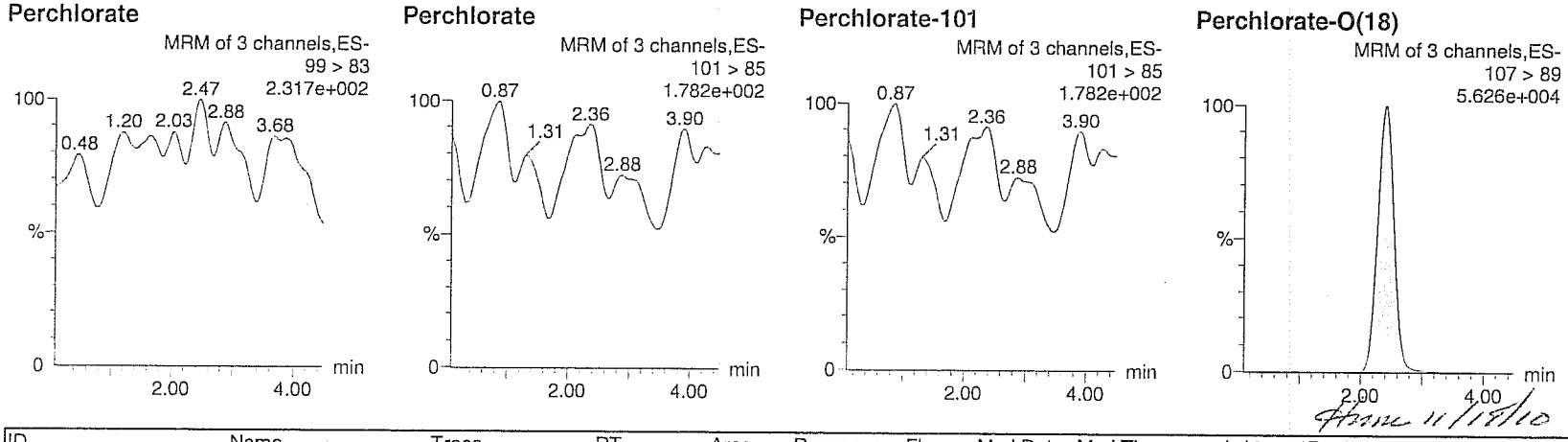
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116016a
Date: 16-Nov-2010
Time: 14:20:58
ID: IPB005
Vial: 1:1,A

CWJ 11-17-10



Hsm 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.38	17405.109	17405.109	bb			0.5045	100.90	0.90	2687.7...	

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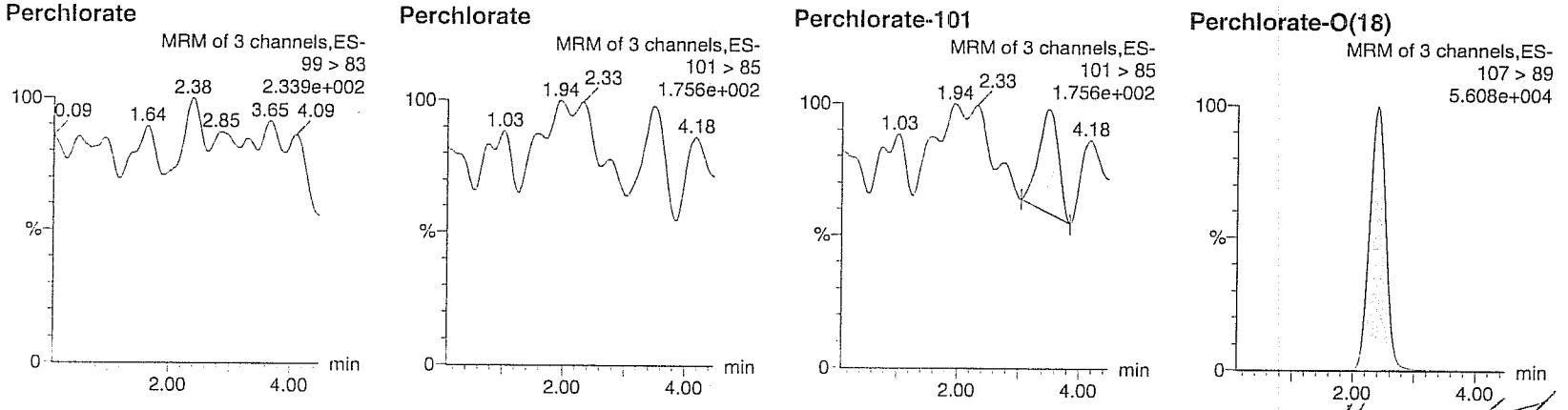
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116028a
Date: 16-Nov-2010
Time: 15:51:30
ID: IPB006
Vial: 1:1,A

11-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83											0.00
IPB006	Perchlorate-101	101 > 85	3.49	26.327	26.327	bb			0.0019			4.358	
IPB006	Perchlorate-O(18)	107 > 89	2.38	17203.979	17203.979	bb			0.4987	99.73	-0.27	2462.8...	

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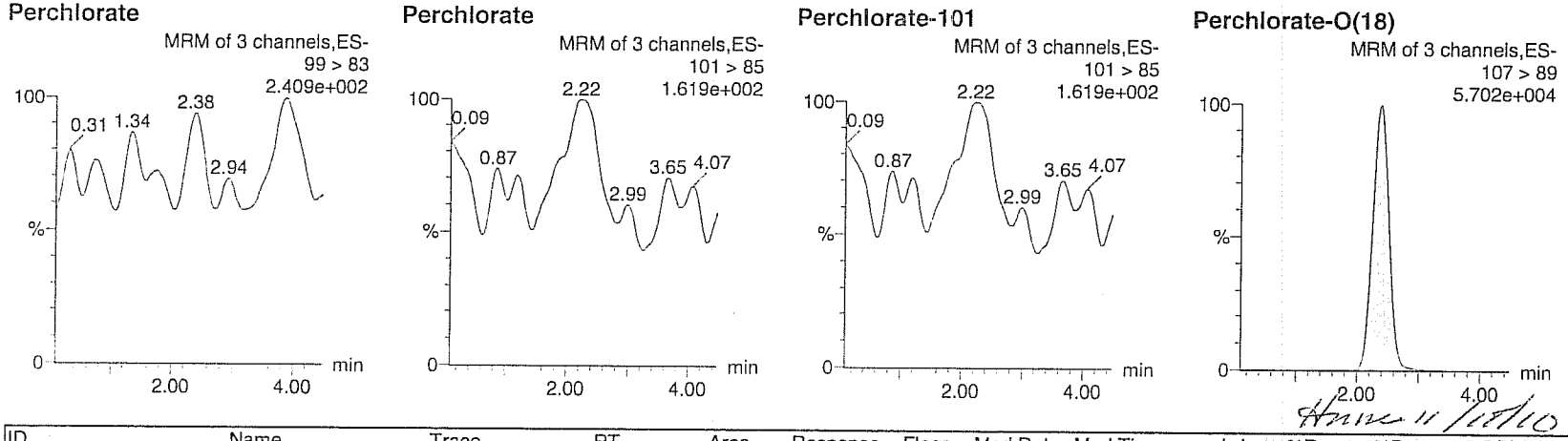
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116039a
Date: 16-Nov-2010
Time: 17:14:31
ID: IPB007
Vial: 1:1,A

CWO 11-17-10



Hmm 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83											0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	2.38	17643.951	17643.951	bb			0.5114	102.28	2.28	10715....	

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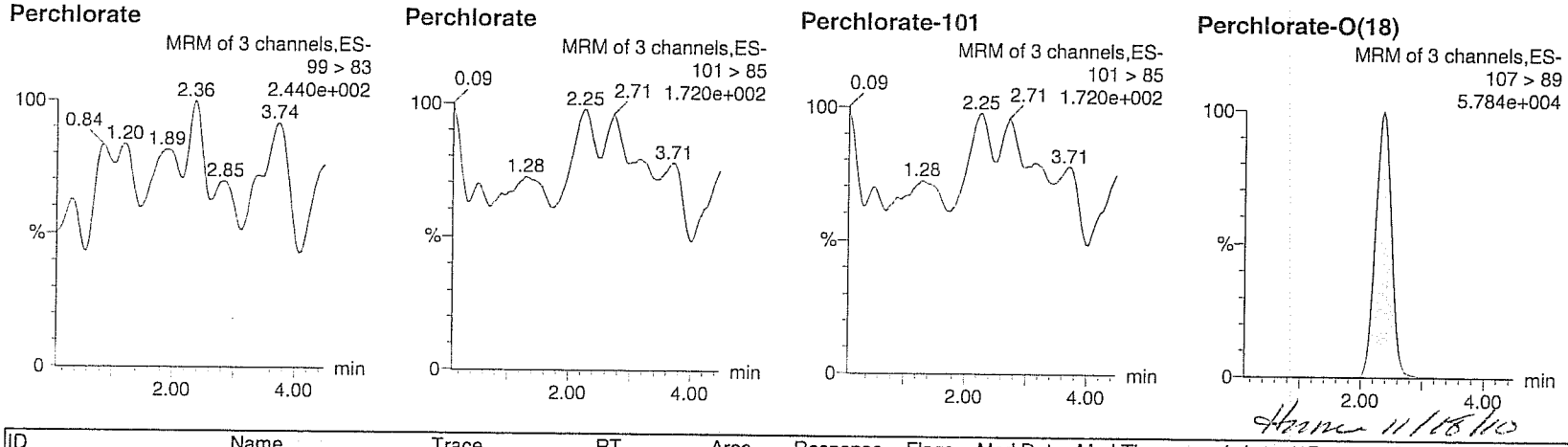
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116052a
Date: 16-Nov-2010
Time: 18:52:52
ID: IPB008
Vial: 1:1,A

11-17-10



Hanna 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83											0.00
IPB008	Perchlorate-101	101 > 85											
IPB008	Perchlorate-O(18)	107 > 89	2.36	17620.883	17620.883	bb			0.5107	102.15	2.15	1478.3...	

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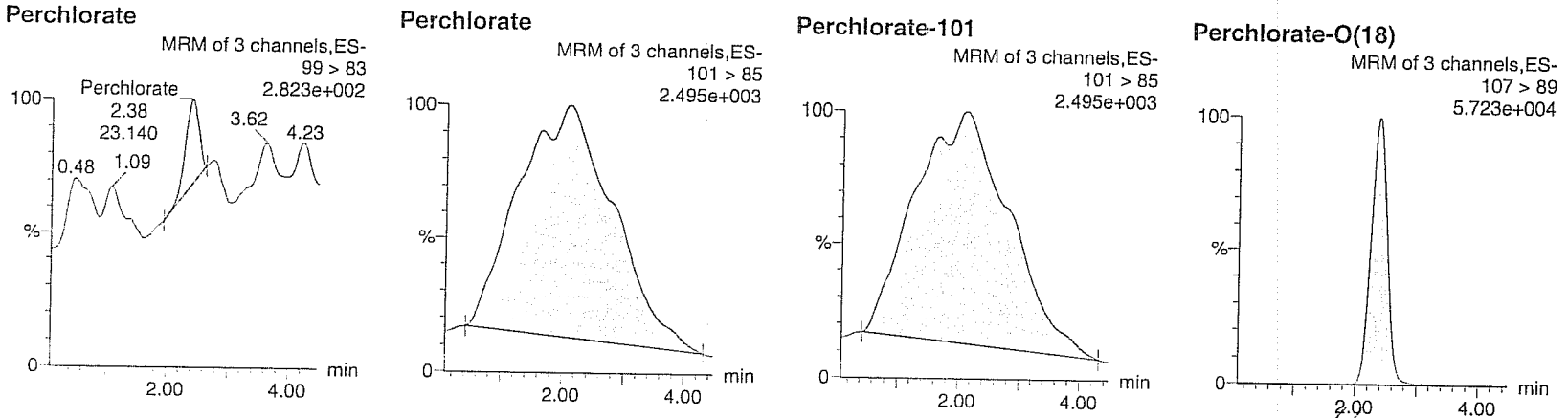
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116064a
Date: 16-Nov-2010
Time: 20:23:45
ID: IPB009
Vial: 1:1,A

CWJ 11-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB009	Perchlorate	99 > 83	2.38	23.140	23.140	bb			0.0005			1.946	0.01
IPB009	Perchlorate-101	101 > 85	2.11	3909.110	3909.110	bb			0.2822			33.901	
IPB009	Perchlorate-O(18)	107 > 89	2.36	17485.656	17485.656	bb			0.5068	101.37	1.37	7079.8...	

Okay 4.0000

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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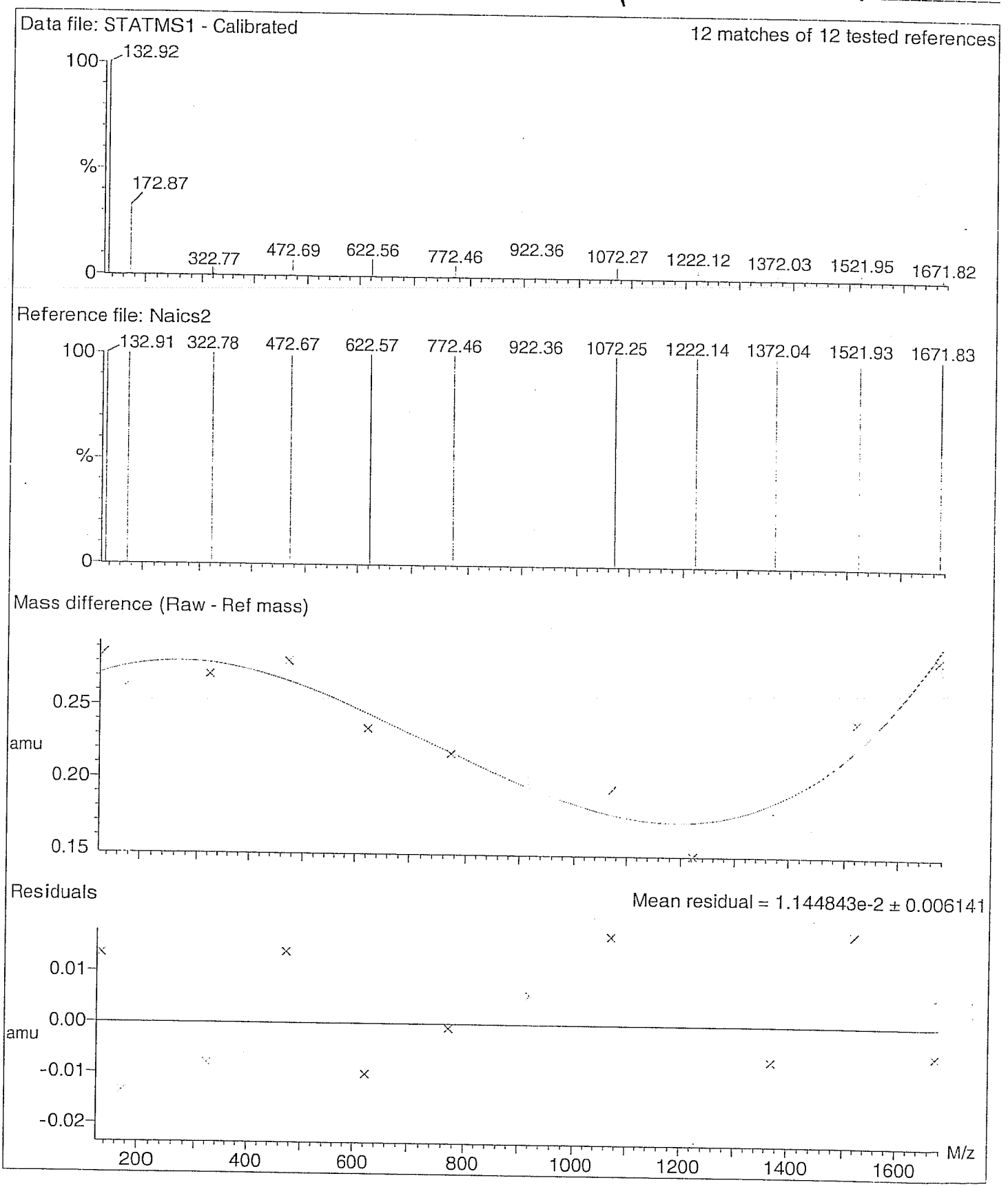
Calibration Report - MS1 Static

Printed: Fri Jun 04 13:08:35 2010

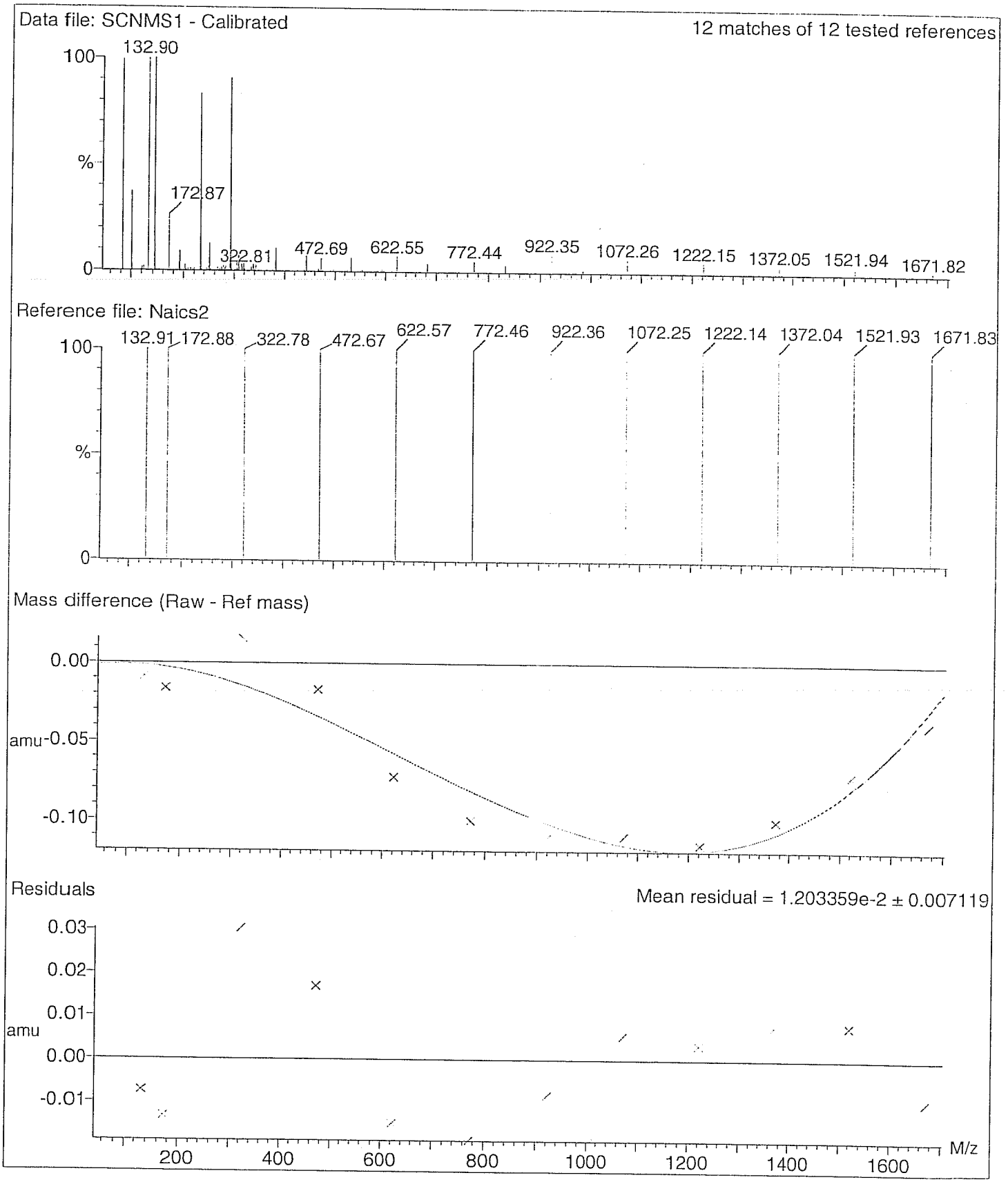
Naics2_pos_06_04_10.cal



PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS1 Scanning

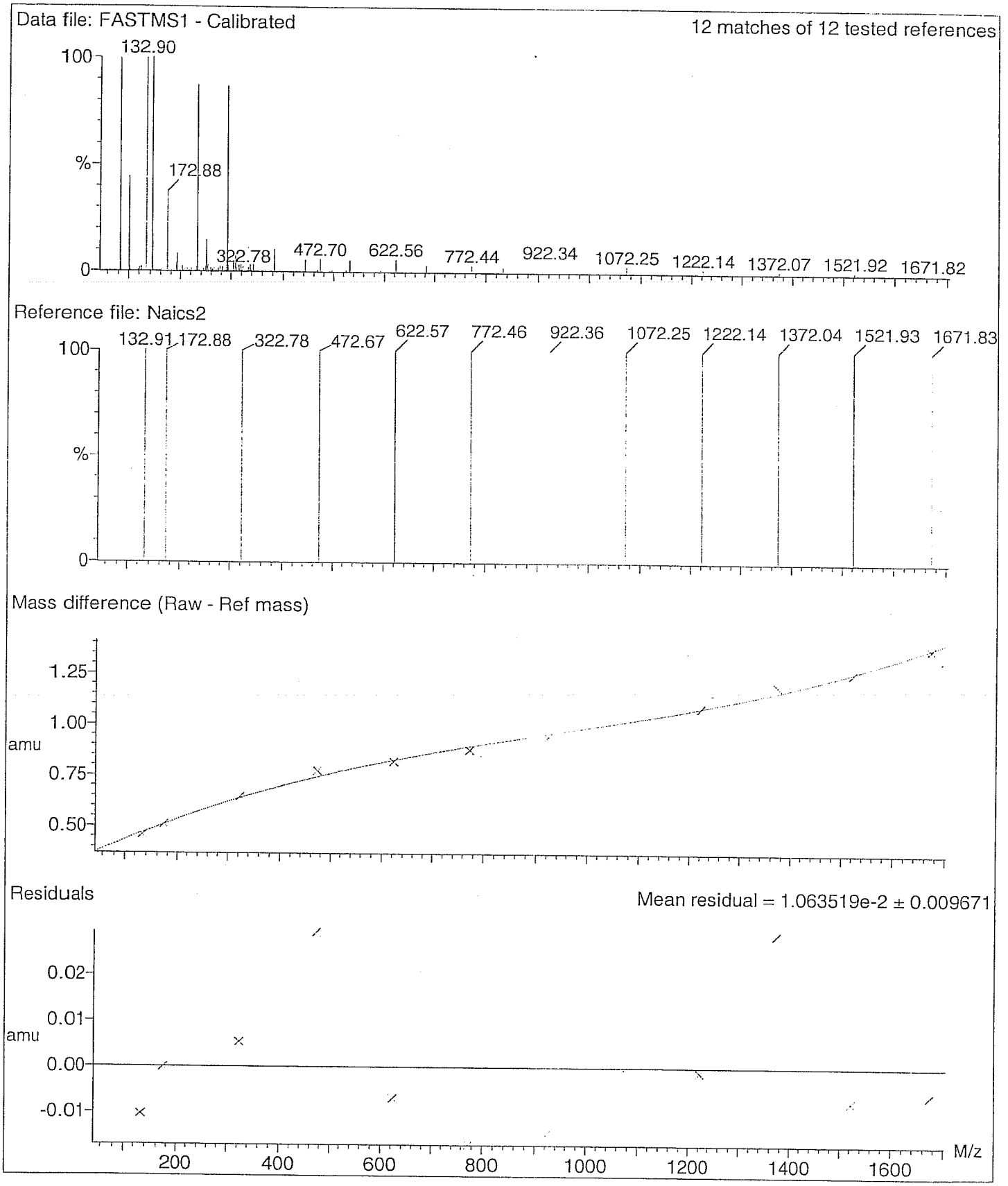
Printed: Fri Jun 04 13:09:41 2010



PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS1 Scan Speed Compensation

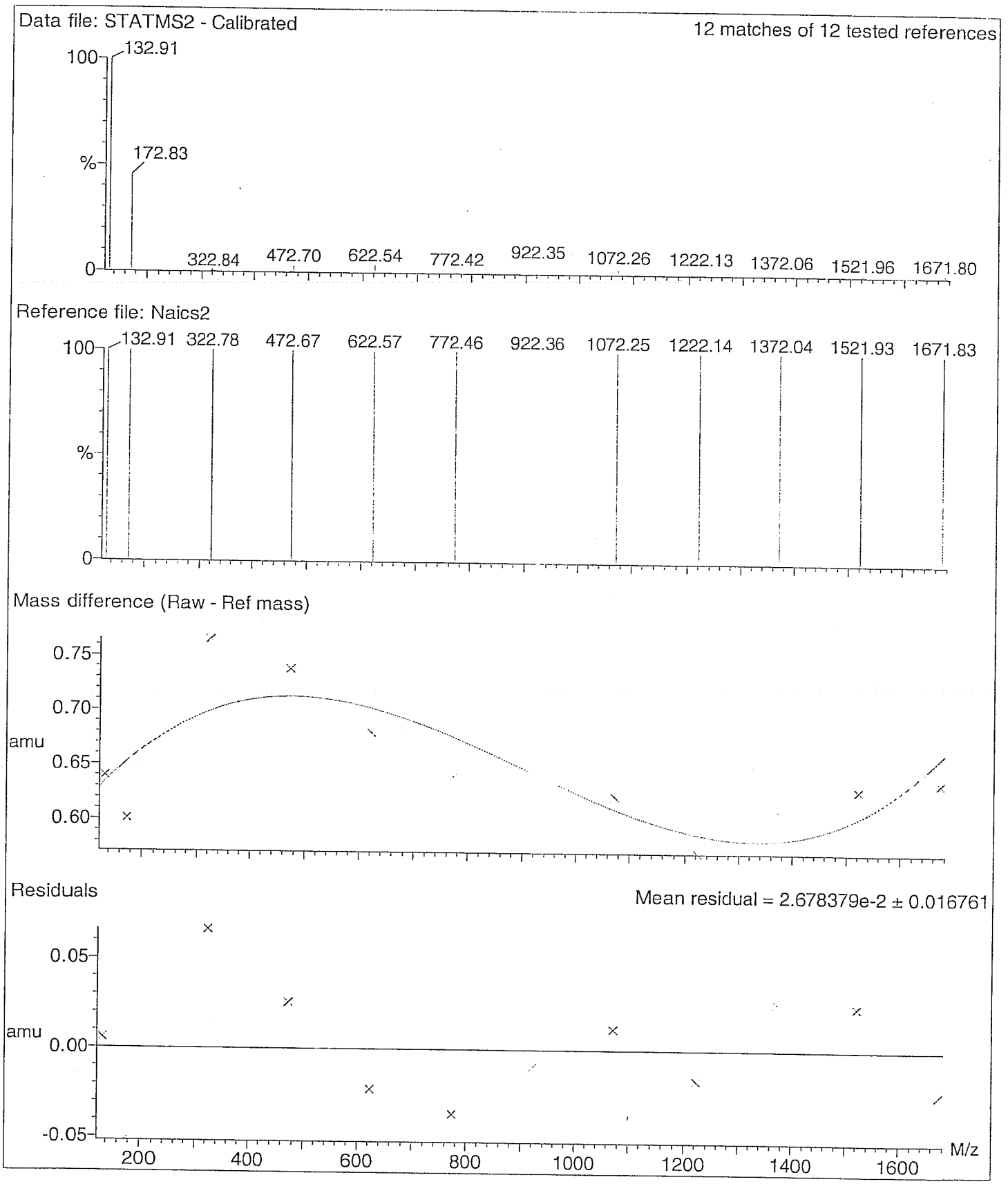
Printed: Fri Jun 04 13:10:49 2010



PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

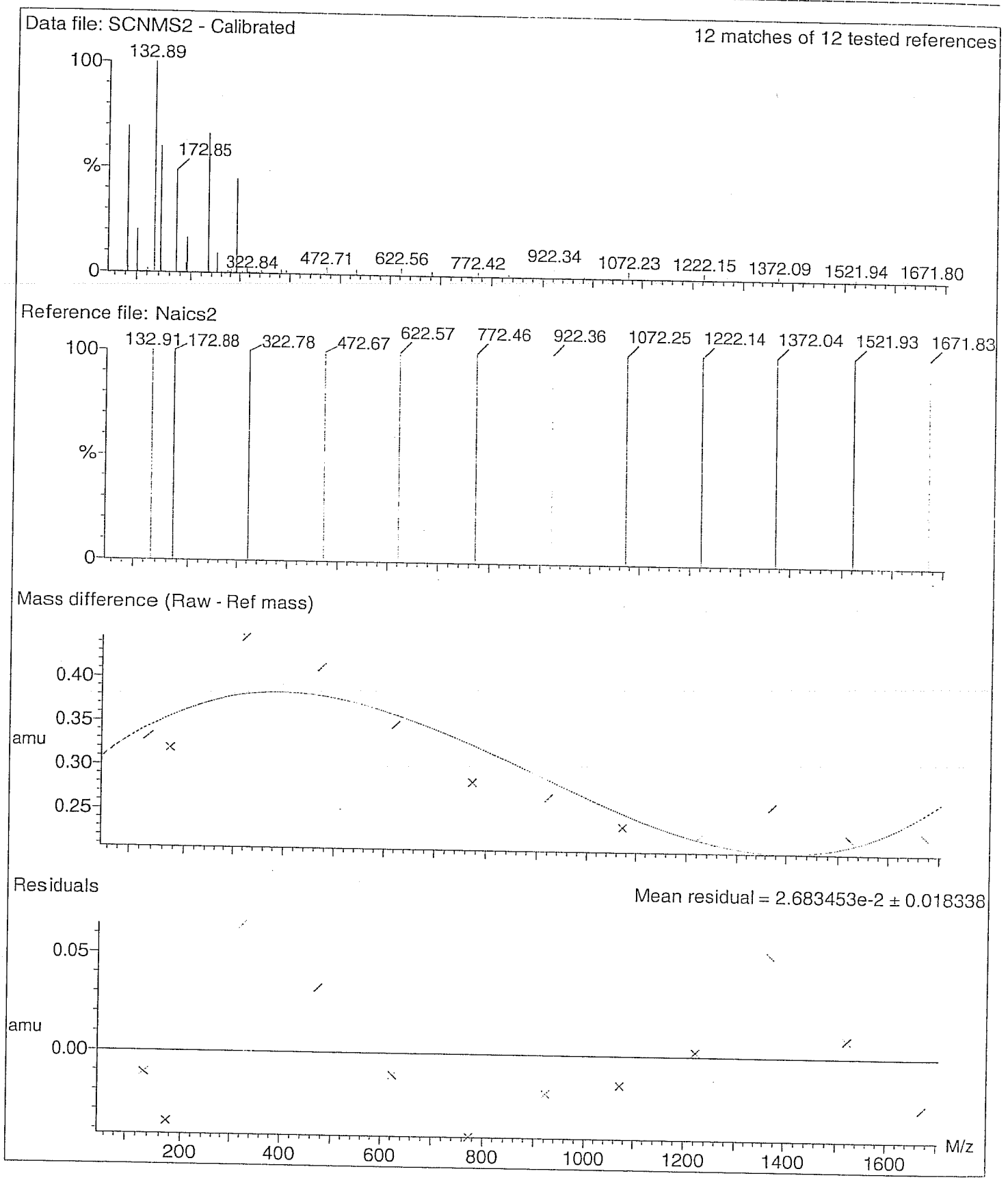
Printed: Fri Jun 04 13:13:46 2010



PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scanning

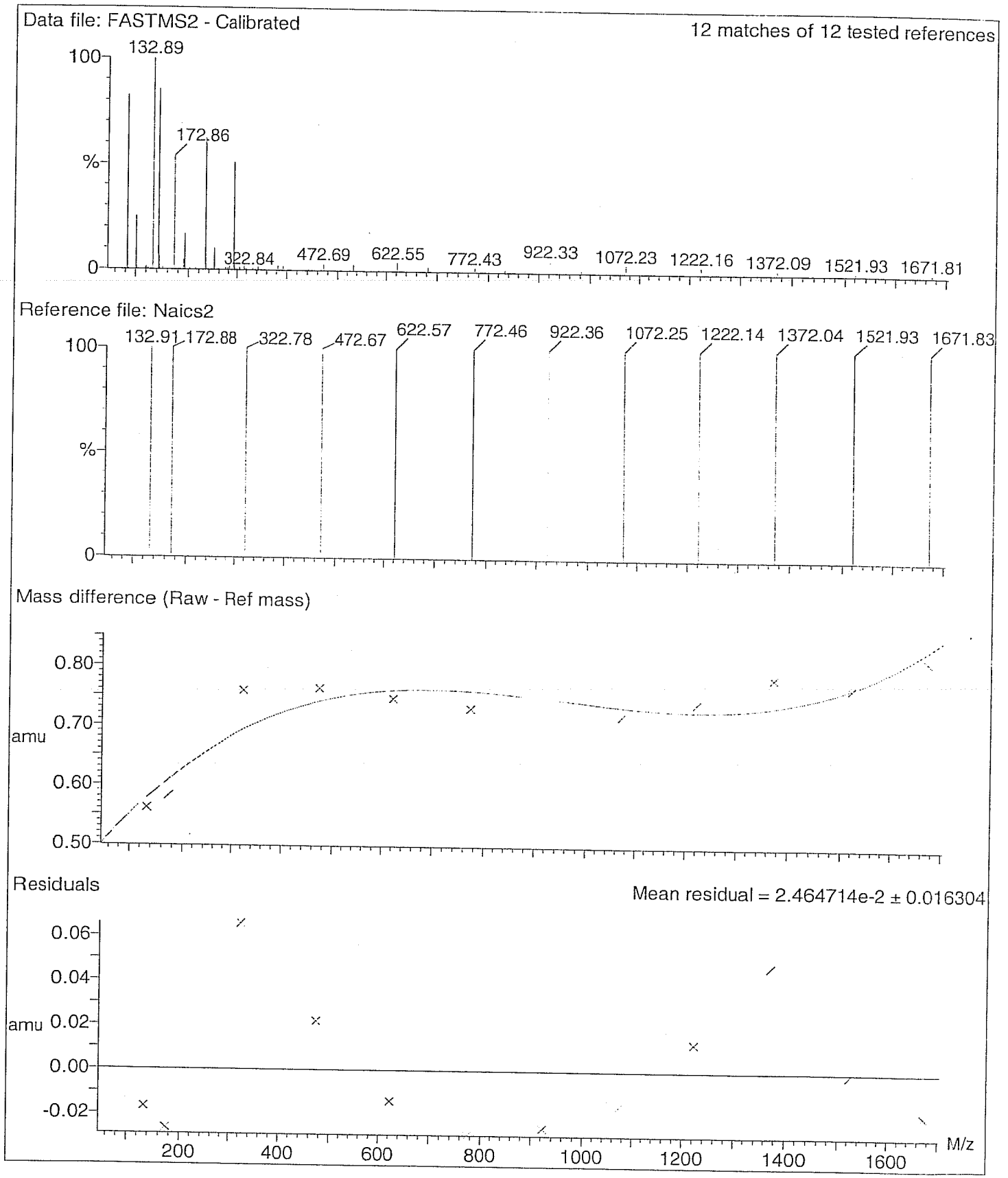
Printed: Fri Jun 04 13:14:53 2010



PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scan Speed Compensation

Printed: Fri Jun 04 13:16:01 2010



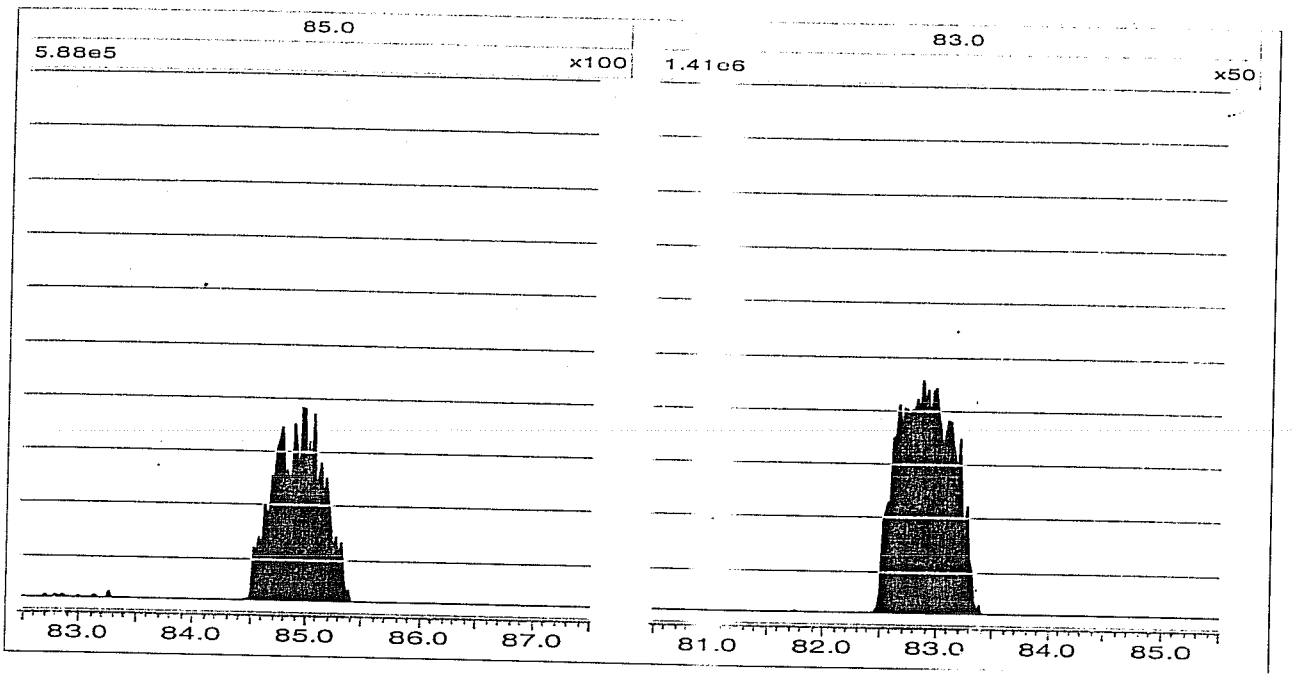
PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Tune Parameters

MassLynx 4.0 SP4

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\ntr_Perchlorate.ipr

Printed: Tuesday, November 16, 2010 10:44:50 Eastern Standard Time



Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 11–464

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per1116006a**	**16–NOV–10**	**17184.7**				
Lower Area Limit			**8592.35**				
Upper Area Limit			**34369.4**				
1202263567	per1116041a	16–NOV–10 17:29	20363.3	2.38	2.38367	1.002	
1202263568	per1116042a	16–NOV–10 17:37	18415.3	2.38	2.41118	1.013	
1202263571	per1116043a	16–NOV–10 17:44	18423.6	2.3	2.3285	1.012	
1202263569	per1116046a	16–NOV–10 18:07	20712.6	2.33	2.35602	1.011	
1202263570	per1116047a	16–NOV–10 18:14	17474.6	2.33	2.35602	1.011	
266878001	per1116058a	16–NOV–10 19:38	20694.7	2.33	2.35602	1.011	
266878003	per1116059a	16–NOV–10 19:45	22928.1	2.3	2.3285	1.012	
266878005	per1116060a	16–NOV–10 19:53	21726.6	2.33	2.35602	1.011	

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SAMPLE
DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 1048543

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
Buckman1–11–1944

Date Received: 12–NOV–10

GEL Job No (SDG): 11–464

GEL Sample ID: 266878001

Date Filtered: 16–NOV–10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.344	ug/L		1	16–NOV–10 19:38	per1116058a
	Perchlorate Isotope Ratio			3.29			1	16–NOV–10 19:38	per1116058a
14797–73–0	Perchlorate–101	.05	.2	0.327	ug/L		1	16–NOV–10 19:38	per1116058a
	Perchlorate–O(18)			0.600	ug/L		1	16–NOV–10 19:38	per1116058a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

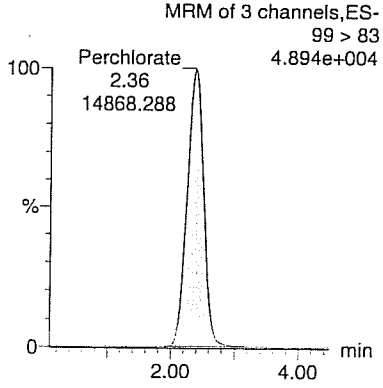
Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116058a
Date: 16-Nov-2010
Time: 19:38:16
ID: 266878001
Vial: 2:3,C

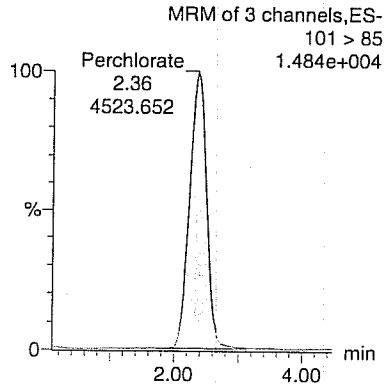
|ARSL|1048547|LCQ|1|

11-17-10

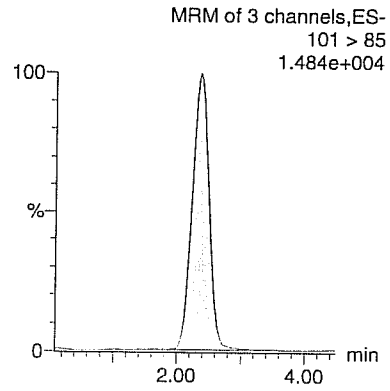
Perchlorate



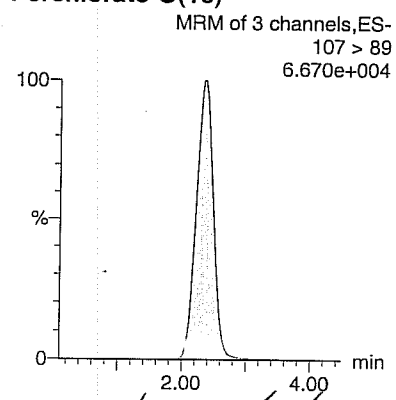
Perchlorate



Perchlorate-101



Perchlorate-O(18)



tmw 11/19/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
266878001	Perchlorate	99 > 83	2.36	14868.288	14868.288	bb			0.3439			1361.9...	3.29
266878001	Perchlorate-101	101 > 85	2.36	4523.652	4523.652	bb			0.3265			980.478	
266878001	Perchlorate-O(18)	107 > 89	2.33	20694.686	20694.686	bb			0.5998	119.97	19.97	9776.5...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 1048543

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
Buckman06–11–1970

Date Received: 12–NOV–10

GEL Job No (SDG): 11–464

GEL Sample ID: 266878003

Date Filtered: 16–NOV–10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.459	ug/L		1	16–NOV–10 19:45	per1116059a
	Perchlorate Isotope Ratio			3.12			1	16–NOV–10 19:45	per1116059a
14797–73–0	Perchlorate–101	.05	.2	0.459	ug/L		1	16–NOV–10 19:45	per1116059a
	Perchlorate–O(18)			0.665	ug/L		1	16–NOV–10 19:45	per1116059a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

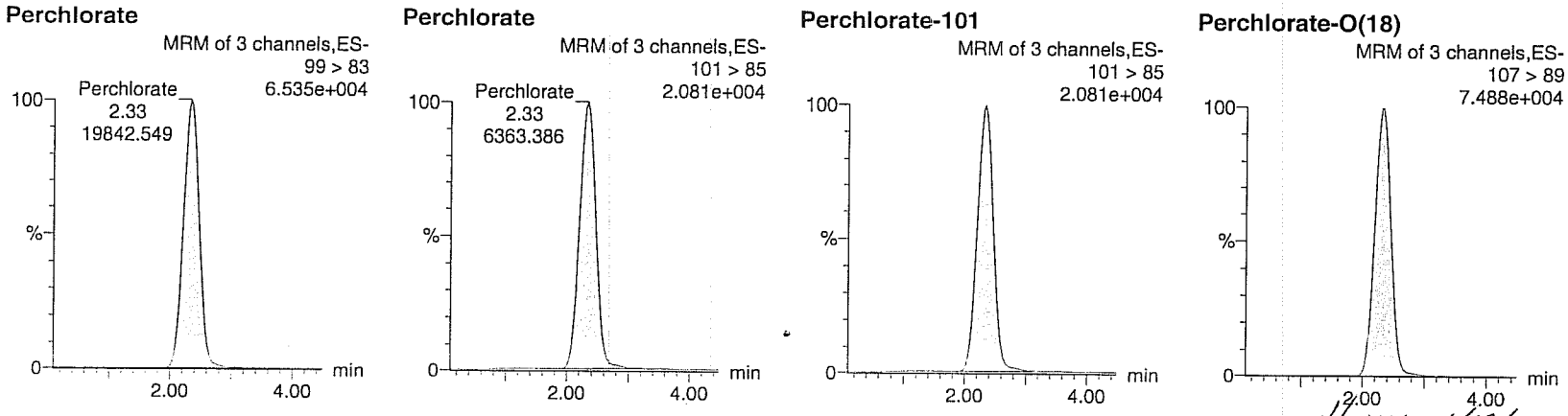
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116059a
Date: 16-Nov-2010
Time: 19:45:49
ID: 266878003
Vial: 2:3,D

|ARSL|1048547|LZQ|1|

11-17-10



HWW 11/19/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
266878003	Perchlorate	99 > 83	2.33	19842.549	19842.549	bb			0.4590			1878.1...	3.12
266878003	Perchlorate-101	101 > 85	2.33	6363.386	6363.386	bb			0.4593			1632.9...	
266878003	Perchlorate-O(18)	107 > 89	2.30	22928.063	22928.063	bb			0.6646	132.92	32.92	3654.0...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 1048543

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
Buckman08–11–2042

Date Received: 12–NOV–10

GEL Job No (SDG): 11–464

GEL Sample ID: 266878005

Date Filtered: 16–NOV–10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.320	ug/L		1	16–NOV–10 19:53	per1116060a
	Perchlorate Isotope Ratio			3.09			1	16–NOV–10 19:53	per1116060a
14797–73–0	Perchlorate–101	.05	.2	0.323	ug/L		1	16–NOV–10 19:53	per1116060a
	Perchlorate–O(18)			0.630	ug/L		1	16–NOV–10 19:53	per1116060a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

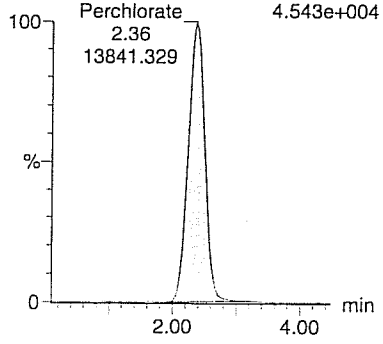
Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116060a
Date: 16-Nov-2010
Time: 19:53:20
ID: 266878005
Vial: 2:3,E

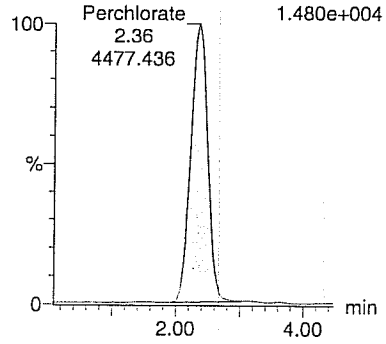
|ARSL|1048547|LZQ|1|

CWW
11-17-10

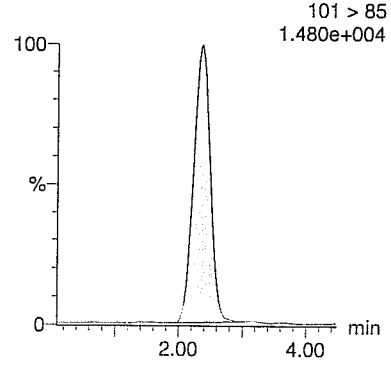
Perchlorate



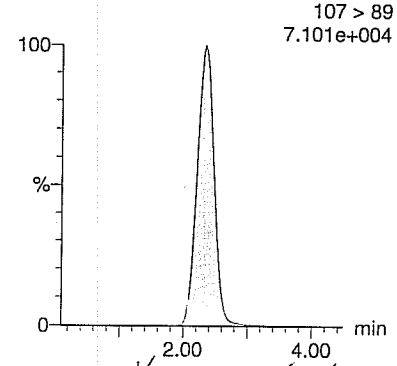
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 11/19/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
266878005	Perchlorate	99 > 83	2.36	13841.329	13841.329	bb			0.3202			1285.0...	3.09
266878005	Perchlorate-101	101 > 85	2.36	4477.436	4477.436	bb			0.3232			614.037	
266878005	Perchlorate-O(18)	107 > 89	2.33	21726.613	21726.613	bb			0.6298	125.95	25.95	6717.1...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 11–464

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 16–NOV–10

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 43229.54

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 11–464

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 16–NOV–10

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 13853.94

Response Type: External Standard

Curve Type: RF

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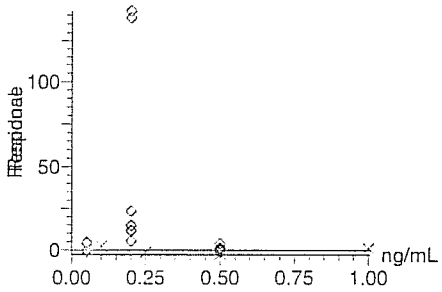
Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

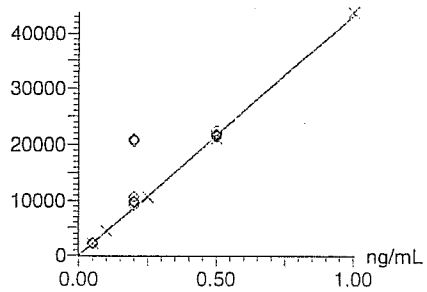
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per111610a.mdb 16 Nov 2010 13:26:11
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per111610a.cdb 17 Nov 2010 10:27:46

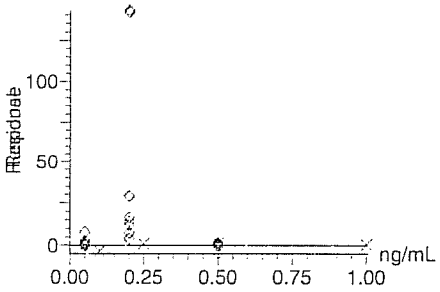
Compound name: Perchlorate
Response Factor: 43229.5
RRF SD: 831.513, % Relative SD: 1.92348
Response type: External Std, Area
Curve type: RF

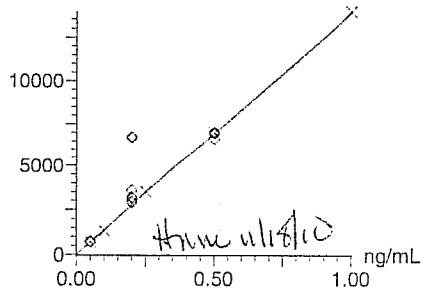




CWW 11-17-10

Compound name: Perchlorate-101
Response Factor: 13854
RRF SD: 266.953, % Relative SD: 1.9269
Response type: External Std, Area
Curve type: RF





HWW 11/18/10

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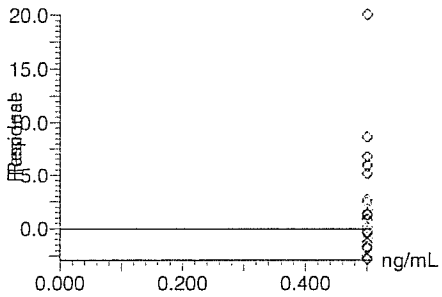
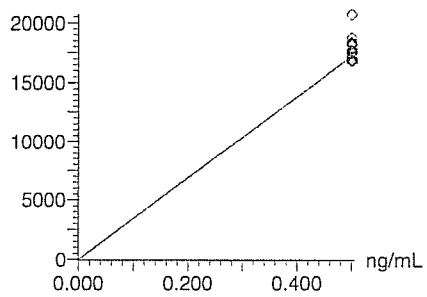
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Compound name: Perchlorate-O(18)
Response Factor: 34500.3
RRF SD: 327.299, % Relative SD: 0.948685
Response type: External Std, Area
Curve type: RF





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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 11–464

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.51	101.16	16–NOV–10 13:28	per1116009a
Perchlorate Isotope Ratio		3.16		16–NOV–10 13:28	per1116009a
Perchlorate–101	.5	.5	99.79	16–NOV–10 13:28	per1116009a

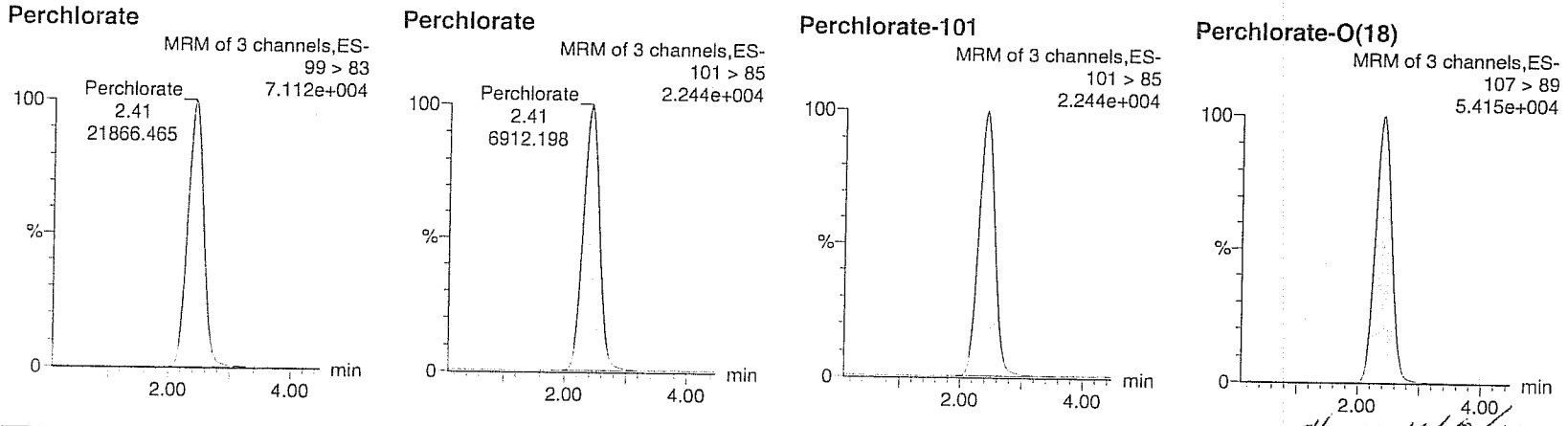
PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116009a
Date: 16-Nov-2010
Time: 13:28:09
ID: WCL101108-06ICV
Vial: 1:2,A

PWB 11-17-10



Hume 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-06ICV	Perchlorate	99 > 83	2.41	21866.465	21866.465	bb			0.5058	101.16	1.16	3423.4...	3.16
WCL101108-06ICV	Perchlorate-101	101 > 85	2.41	6912.198	6912.198	bb			0.4989	99.79	-0.21	1112.1...	
WCL101108-06ICV	Perchlorate-O(18)	107 > 89	2.41	16824.590	16824.590	bb			0.4877	97.53	-2.47	3102.9...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 11–464

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	100.75	16–NOV–10 14:13	per1116015a
Perchlorate Isotope Ratio		3.09		16–NOV–10 14:13	per1116015a
Perchlorate–101	.5	.51	101.8	16–NOV–10 14:13	per1116015a
Perchlorate	.5	.51	101.4	16–NOV–10 15:43	per1116027a
Perchlorate Isotope Ratio		3.17		16–NOV–10 15:43	per1116027a
Perchlorate–101	.5	.5	99.69	16–NOV–10 15:43	per1116027a
Perchlorate	.5	.5	99.61	16–NOV–10 17:06	per1116038a
Perchlorate Isotope Ratio		3.07		16–NOV–10 17:06	per1116038a
Perchlorate–101	.5	.51	101.11	16–NOV–10 17:06	per1116038a
Perchlorate	.5	.52	103.78	16–NOV–10 18:45	per1116051a
Perchlorate Isotope Ratio		3.23		16–NOV–10 18:45	per1116051a
Perchlorate–101	.5	.5	100.18	16–NOV–10 18:45	per1116051a
Perchlorate	.5	.49	98.61	16–NOV–10 20:15	per1116063a

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 11–464

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		3.22		16–NOV–10 20:15	per1116063a
Perchlorate–101	.5	.48	95.6	16–NOV–10 20:15	per1116063a

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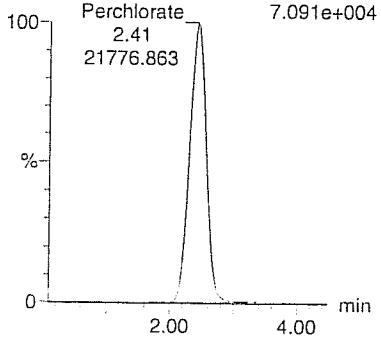
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

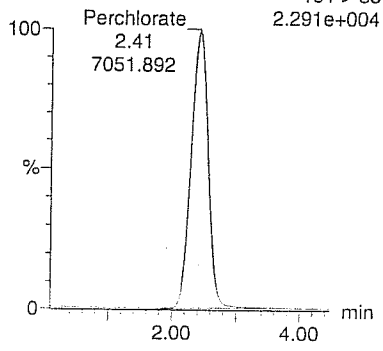
Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116015a
Date: 16-Nov-2010
Time: 14:13:25
ID: WCL101108-06CCV
Vial: 1:2,A

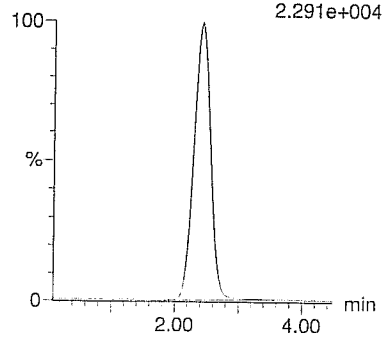
Perchlorate
MRM of 3 channels,ES-
99 > 83
7.091e+004



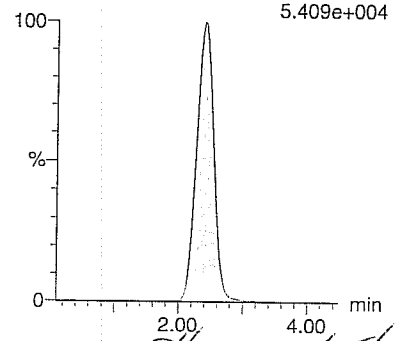
Perchlorate
MRM of 3 channels,ES-
101 > 85
2.291e+004



Perchlorate-101
MRM of 3 channels,ES-
101 > 85
2.291e+004



Perchlorate-O(18)
MRM of 3 channels,ES-
107 > 89
5.409e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-06CCV	Perchlorate	99 > 83	2.41	21776.863	21776.863	bb			0.5037	100.75	0.75	5320.2...	3.09
WCL101108-06CCV	Perchlorate-101	101 > 85	2.41	7051.892	7051.892	bb			0.5090	101.80	1.80	1430.7...	
WCL101108-06CCV	Perchlorate-O(18)	107 > 89	2.38	16761.305	16761.305	bb			0.4858	97.17	-2.83	5013.0...	

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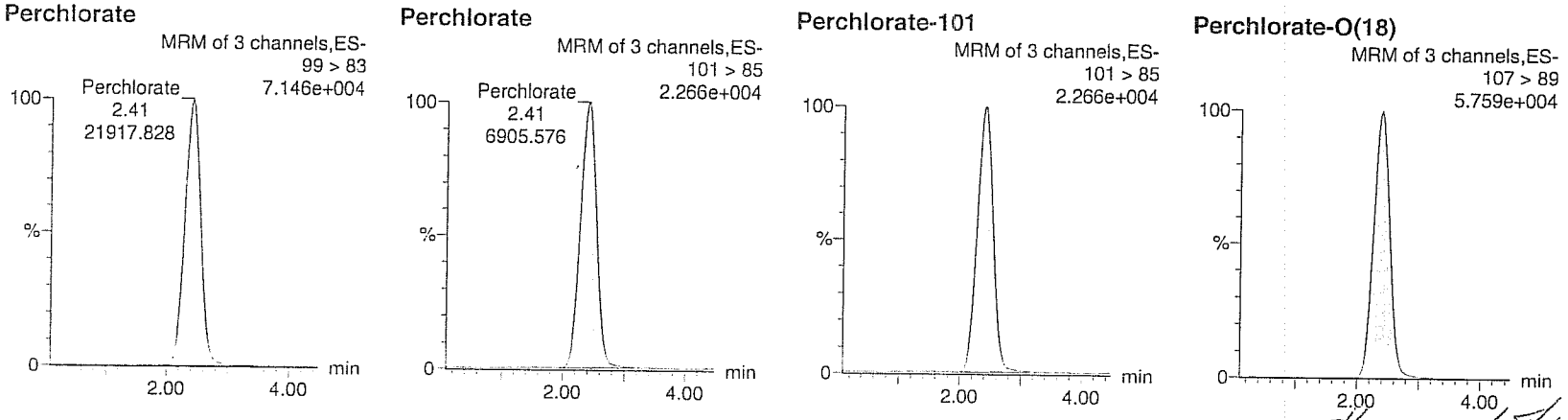
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116027a
Date: 16-Nov-2010
Time: 15:43:57
ID: WCL101108-06CCV
Vial: 1:2,A

Pass
11-17-10



Hmm 11/17/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-06CCV	Perchlorate	99 > 83	2.41	21917.828	21917.828	bb			0.5070	101.40	1.40	7185.3...	3.17
WCL101108-06CCV	Perchlorate-101	101 > 85	2.41	6905.576	6905.576	bb			0.4985	99.69	-0.31	1000.7...	
WCL101108-06CCV	Perchlorate-O(18)	107 > 89	2.38	17673.957	17673.957	bb			0.5123	102.46	2.46	3557.7...	

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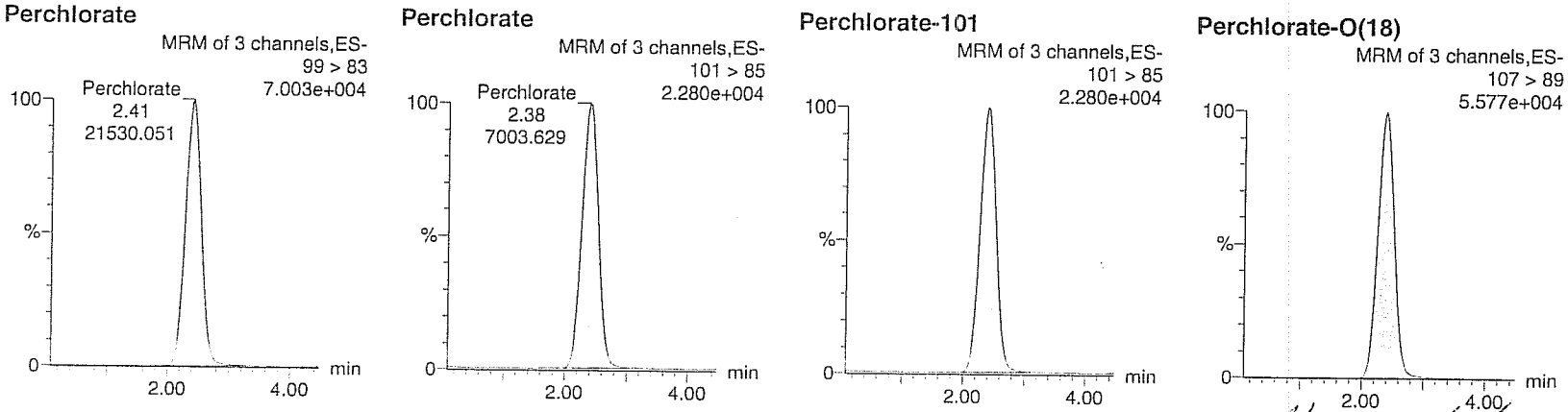
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116038a
Date: 16-Nov-2010
Time: 17:06:58
ID: WCL101108-06CCV
Vial: 1:2,A

Pwm
11-17-10



Hmm 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-06CCV	Perchlorate	99 > 83	2.41	21530.051	21530.051	bb			0.4980	99.61	-0.39	4788.8...	3.07
WCL101108-06CCV	Perchlorate-101	101 > 85	2.38	7003.629	7003.629	bb			0.5055	101.11	1.11	941.631	
WCL101108-06CCV	Perchlorate-O(18)	107 > 89	2.38	17175.012	17175.012	bb			0.4978	99.56	-0.44	3993.5...	

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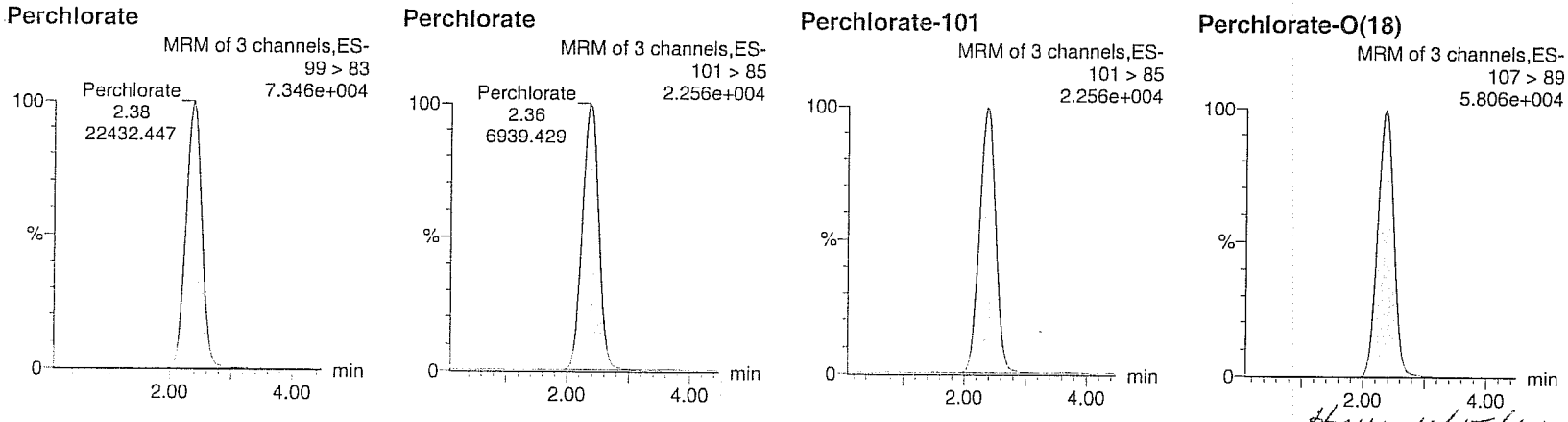
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116051a
Date: 16-Nov-2010
Time: 18:45:06
ID: WCL101108-06CCV
Vial: 1:2,A

Pass
11-17-10



Hmw 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-06CCV	Perchlorate	99 > 83	2.38	22432.447	22432.447	bb			0.5189	103.78	3.78	4733.6...	3.23
WCL101108-06CCV	Perchlorate-101	101 > 85	2.36	6939.429	6939.429	bb			0.5009	100.18	0.18	1876.8...	
WCL101108-06CCV	Perchlorate-O(18)	107 > 89	2.36	17724.092	17724.092	bb			0.5137	102.75	2.75	7931.8...	

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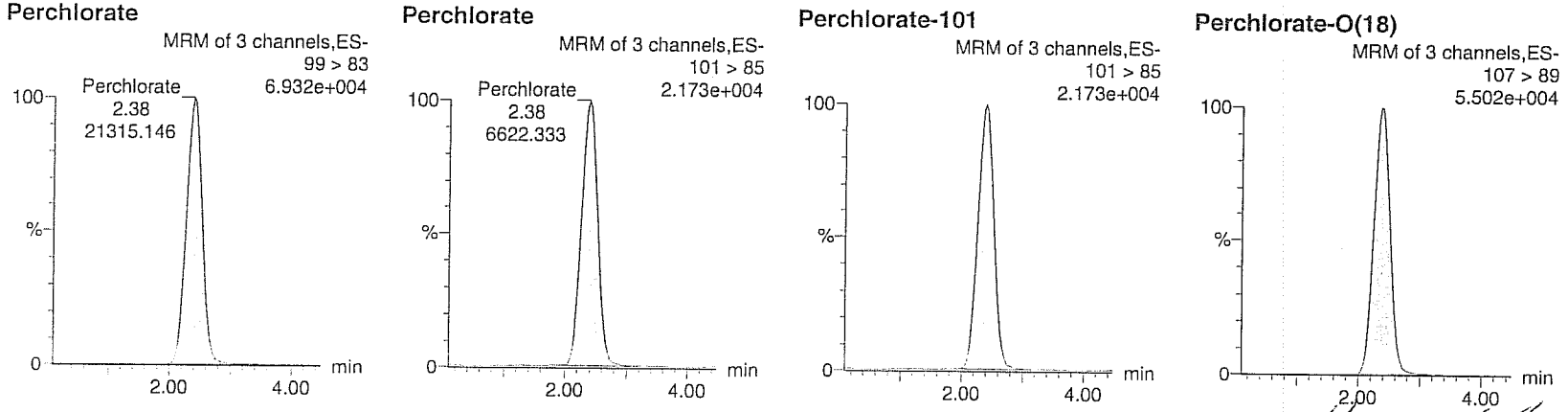
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116063a
Date: 16-Nov-2010
Time: 20:15:58
ID: WCL101108-06CCV
Vial: 1:2,A

Pwo
Cwo
11-17-10



Hwu 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-06CCV	Perchlorate	99 > 83	2.38	21315.146	21315.146	bb			0.4931	98.61	-1.39	1932.6...	3.22
WCL101108-06CCV	Perchlorate-101	101 > 85	2.38	6622.333	6622.333	bb			0.4780	95.60	-4.40	620.576	
WCL101108-06CCV	Perchlorate-O(18)	107 > 89	2.36	16933.475	16933.475	bb			0.4908	98.16	-1.84	8326.6...	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 11–464

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	104.82	16–NOV–10 13:43	per1116011a
Perchlorate Isotope Ratio		3.18		16–NOV–10 13:43	per1116011a
Perchlorate–101	.05	.05	102.97	16–NOV–10 13:43	per1116011a
Perchlorate	.05	.05	100.05	16–NOV–10 14:28	per1116017a
Perchlorate Isotope Ratio		3.09		16–NOV–10 14:28	per1116017a
Perchlorate–101	.05	.05	100.97	16–NOV–10 14:28	per1116017a
Perchlorate	.05	.05	104.01	16–NOV–10 15:59	per1116029a
Perchlorate Isotope Ratio		3.23		16–NOV–10 15:59	per1116029a
Perchlorate–101	.05	.05	100.36	16–NOV–10 15:59	per1116029a
Perchlorate	.05	.05	104.38	16–NOV–10 17:22	per1116040a
Perchlorate Isotope Ratio		3.2		16–NOV–10 17:22	per1116040a

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 11–464

Lab Code: GEL

Reporting Units: ug/L

Perchlorate–101	.05	.05	101.81	16–NOV–10 17:22	per1116040a
Perchlorate	.05	.05	104.23	16–NOV–10 19:00	per1116053a
Perchlorate Isotope Ratio		3.27		16–NOV–10 19:00	per1116053a
Perchlorate–101	.05	.05	99.47	16–NOV–10 19:00	per1116053a
Perchlorate	.05	.05	99.16	16–NOV–10 20:31	per1116065a
Perchlorate Isotope Ratio		2.86		16–NOV–10 20:31	per1116065a
Perchlorate–101	.05	.05	108.09	16–NOV–10 20:31	per1116065a

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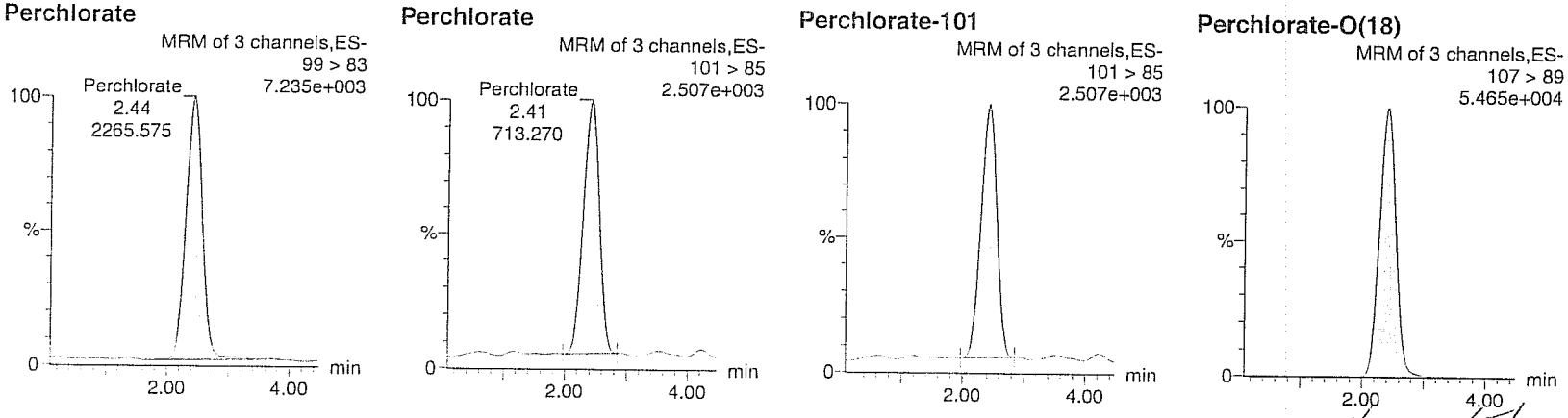
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116011a
Date: 16-Nov-2010
Time: 13:43:14
ID: WCL101108-07CRI
Vial: 1:2,B

CWW 11-17-10



Hrane 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-07CRI	Perchlorate	99 > 83	2.44	2265.575	2265.575	bb			0.0524	104.82	4.82	338.134	3.18
WCL101108-07CRI	Perchlorate-101	101 > 85	2.41	713.270	713.270	bb			0.0515	102.97	2.97	125.369	
WCL101108-07CRI	Perchlorate-O(18)	107 > 89	2.41	16961.586	16961.586	bb			0.4916	98.33	-1.67	4320.0...	

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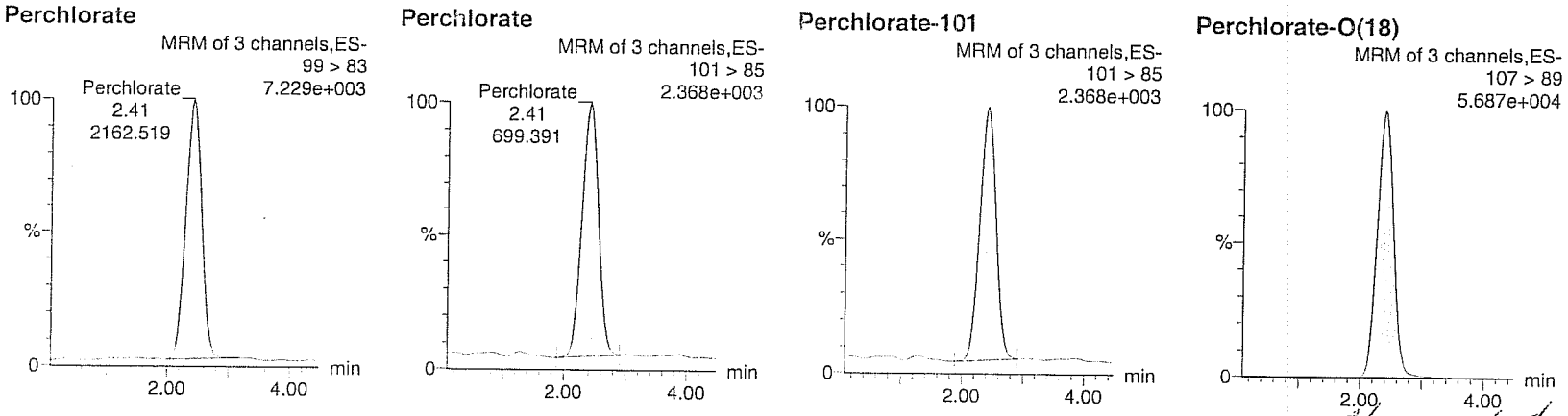
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116017a
Date: 16-Nov-2010
Time: 14:28:31
ID: WCL101108-07CRI
Vial: 1:2,B

Pass
11-17-10



Hmm 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-07CRI	Perchlorate	99 > 83	2.41	2162.519	2162.519	bb			0.0500	100.05	0.05	344.379	3.09
WCL101108-07CRI	Perchlorate-101	101 > 85	2.41	699.391	699.391	bb			0.0505	100.97	0.97	140.400	
WCL101108-07CRI	Perchlorate-O(18)	107 > 89	2.38	17489.203	17489.203	bb			0.5069	101.39	1.39	5341.7...	

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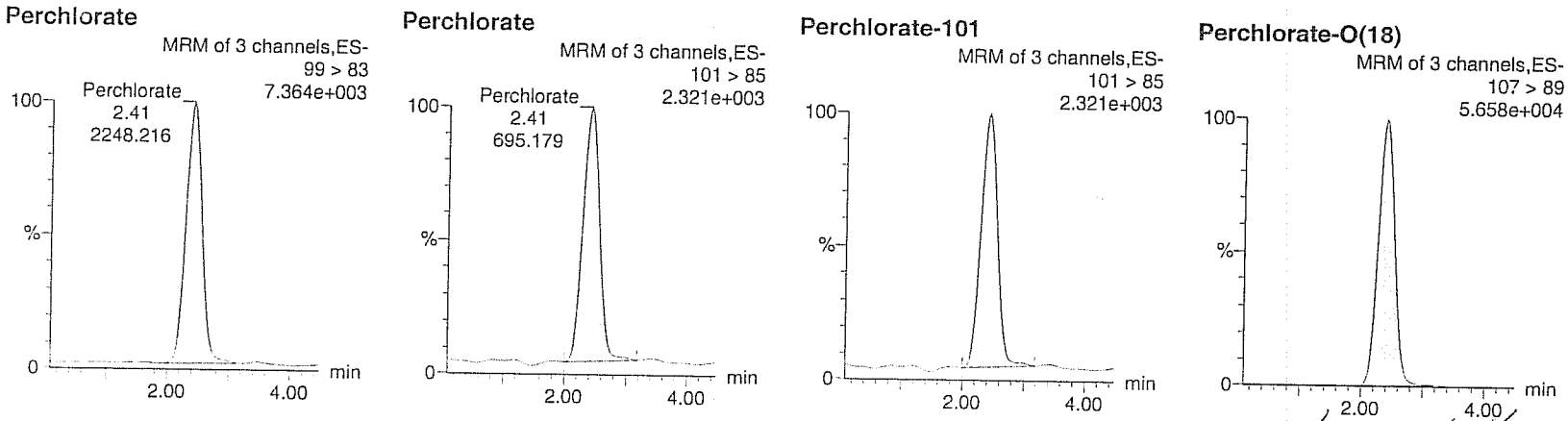
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116029a
Date: 16-Nov-2010
Time: 15:59:03
ID: WCL101108-07CRI
Vial: 1:2,B

Pwss
11-17-10



Anm 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-07CRI	Perchlorate	99 > 83	2.41	2248.216	2248.216	bb			0.0520	104.01	4.01	319.069	3.23
WCL101108-07CRI	Perchlorate-101	101 > 85	2.41	695.179	695.179	bb			0.0502	100.36	0.36	76.630	
WCL101108-07CRI	Perchlorate-O(18)	107 > 89	2.38	17406.344	17406.344	bb			0.5045	100.91	0.91	3346.7...	

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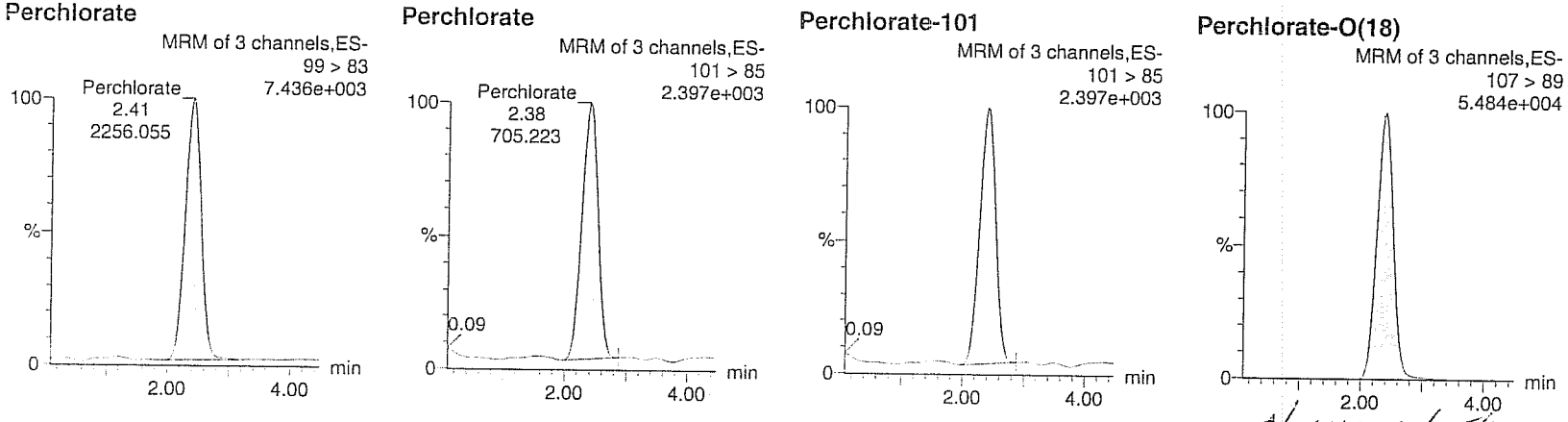
Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116040a
Date: 16-Nov-2010
Time: 17:22:04
ID: WCL101108-07CRI
Vial: 1:2,B

Pwp
11-17-10



Area w/10%

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-07CRI	Perchlorate	99 > 83	2.41	2256.055	2256.055	bb			0.0522	104.38	4.38	303.146	3.20
WCL101108-07CRI	Perchlorate-101	101 > 85	2.38	705.223	705.223	bb			0.0509	101.81	1.81	102.846	
WCL101108-07CRI	Perchlorate-O(18)	107 > 89	2.38	16970.387	16970.387	bb			0.4919	98.38	-1.62	2891.3...	

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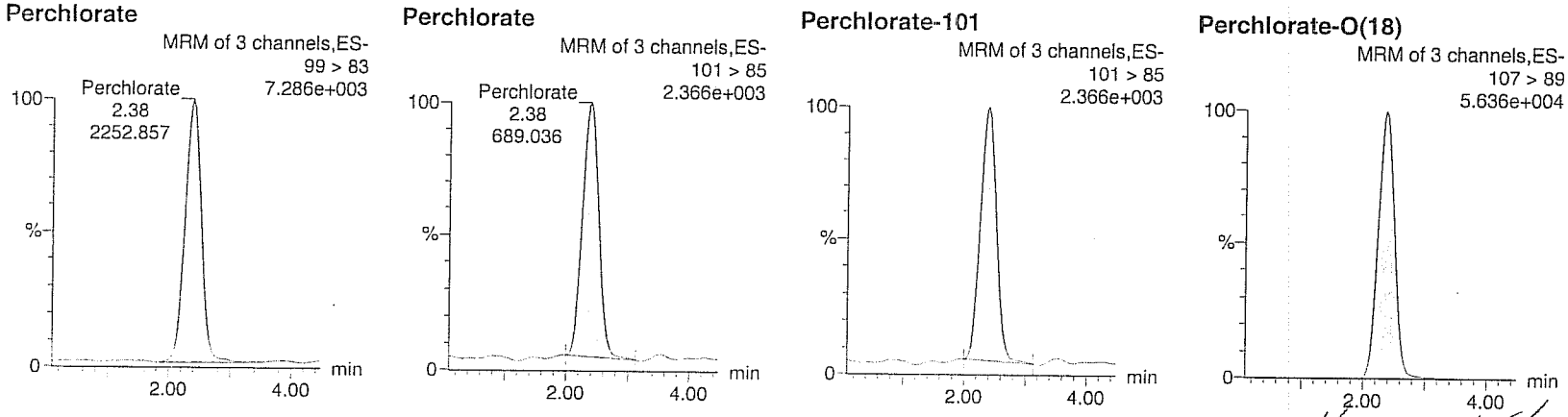
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116053a
Date: 16-Nov-2010
Time: 19:00:25
ID: WCL101108-07CRI
Vial: 1:2,B

Perp 11-17-10



Hmm 11/18/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-07CRI	Perchlorate	99 > 83	2.38	2252.857	2252.857	bb			0.0521	104.23	4.23	232.083	3.27
WCL101108-07CRI	Perchlorate-101	101 > 85	2.38	689.036	689.036	bb			0.0497	99.47	-0.53	79.432	
WCL101108-07CRI	Perchlorate-O(18)	107 > 89	2.36	17212.230	17212.230	bb			0.4989	99.78	-0.22	2216.9...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

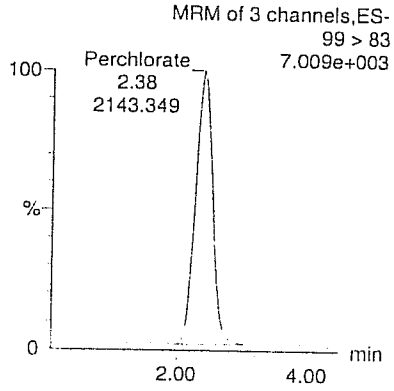
Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

MANUAL

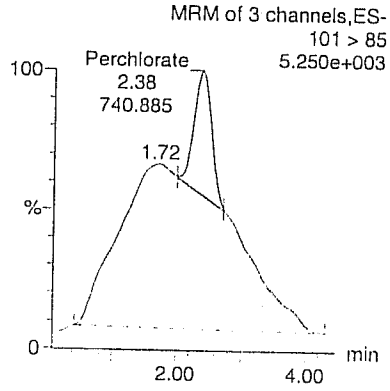
Name: per1116065a
Date: 16-Nov-2010
Time: 20:31:17
ID: WCL101108-07CRI
Vial: 1:2,B

Pass 11-17-10

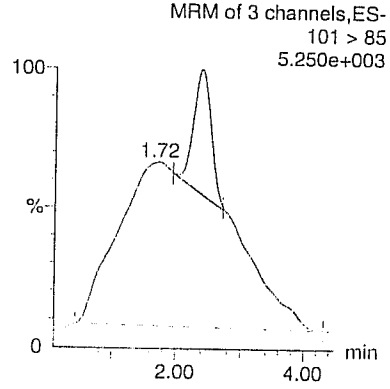
Perchlorate



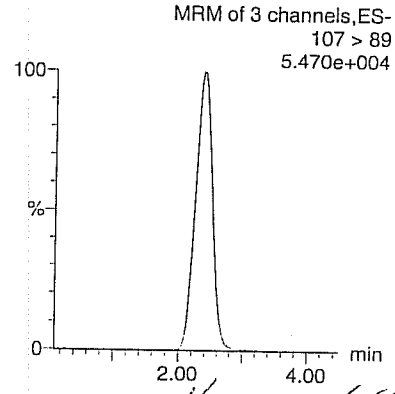
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL101108-07CRI	Perchlorate	99 > 83	2.38	2143.349	2143.349	bb	17-Nov-...	10:38:37	0.0496	99.16	-0.84	133.480	~~2.80~~ -2.86
WCL101108-07CRI	Perchlorate-101	101 > 85	2.38	748.763	748.763	MM	17-Nov-...	10:37:26	0.0540	108.09	8.09	5.117	
WCL101108-07CRI	Perchlorate-O(18)	107 > 89	2.36	16782.611	16782.611	bb			0.4864	97.29	-2.71	3448.5...	

11/23/10

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WATER

Extraction Batch ID: 1048543

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
MB

Date Received: 16–NOV–10

GEL Job No (SDG): 11–464

GEL Sample ID: 1202263567

Date Filtered: 16–NOV–10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.050	ug/L	U	1	16–NOV–10 17:29	per1116041a
	Perchlorate Isotope Ratio						1	16–NOV–10 17:29	per1116041a
14797–73–0	Perchlorate–101	.05	.2	0.050	ug/L	U	1	16–NOV–10 17:29	per1116041a
	Perchlorate–O(18)			0.590	ug/L		1	16–NOV–10 17:29	per1116041a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

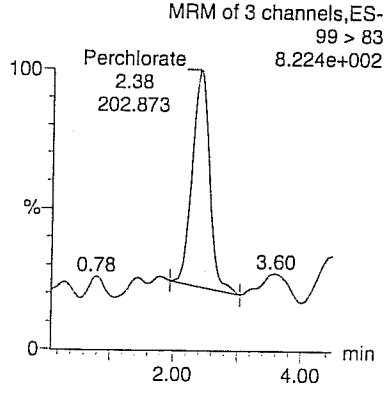
Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116041a
Date: 16-Nov-2010
Time: 17:29:38
ID: 1202263567
Vial: 2:1,A

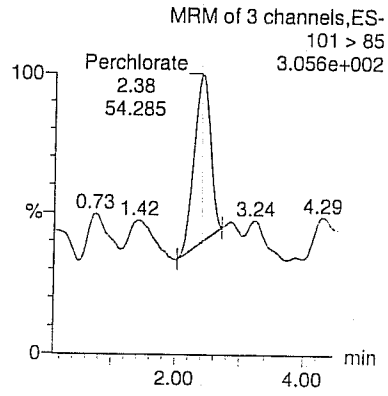
| ARSL | 1048547 | LZQ | MB | 1 |

CWW 11-17-10

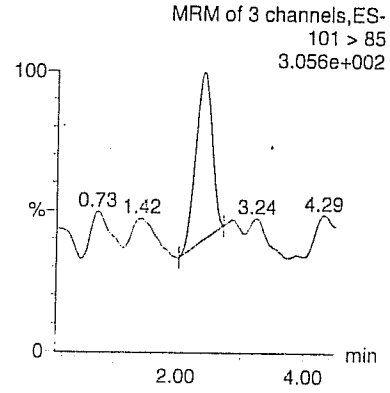
Perchlorate



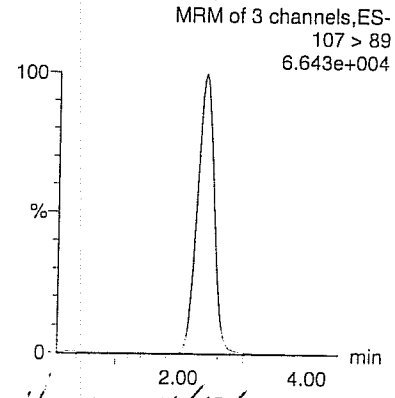
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hnm 11/19/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202263567	Perchlorate	99 > 83	2.38	202.873	202.873	bb			0.0047			15.518	3.74
1202263567	Perchlorate-101	101 > 85	2.38	54.285	54.285	bb			0.0039			12.735	
1202263567	Perchlorate-O(18)	107 > 89	2.38	20363.275	20363.275	bb			0.5902	118.05	18.05	3860.6...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WATER

Extraction Batch ID: 1048543

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
LCS

Date Received: 16–NOV–10

GEL Job No (SDG): 11–464

GEL Sample ID: 1202263568

Date Filtered: 16–NOV–10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.223	ug/L		1	16–NOV–10 17:37	per1116042a
	Perchlorate Isotope Ratio			3.1			1	16–NOV–10 17:37	per1116042a
14797–73–0	Perchlorate–101	.05	.2	0.224	ug/L		1	16–NOV–10 17:37	per1116042a
	Perchlorate–O(18)			0.534	ug/L		1	16–NOV–10 17:37	per1116042a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

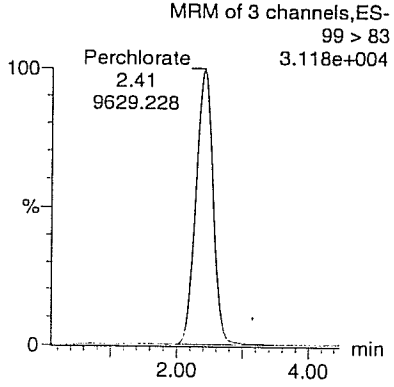
Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116042a
Date: 16-Nov-2010
Time: 17:37:21
ID: 1202263568
Vial: 2:1,B

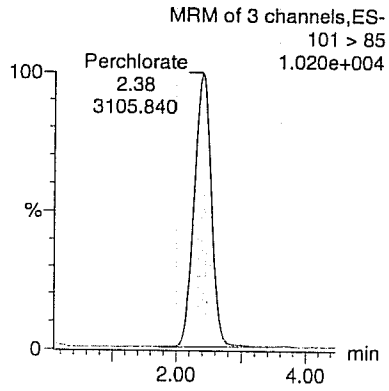
|ARSC|1048547|LCQ|LCS|1|

11-17-10

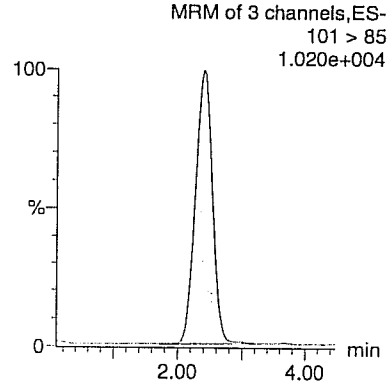
Perchlorate



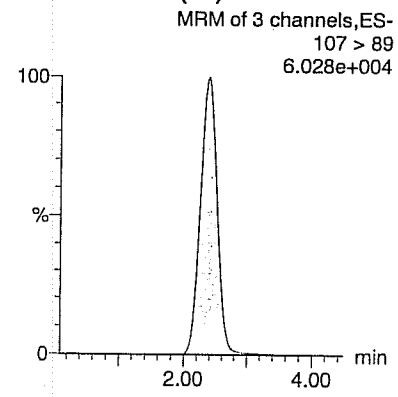
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202263568	Perchlorate	99 > 83	2.41	9629.228	9629.228	bb			0.2227	111.37	11.37	764.622	3.10
1202263568	Perchlorate-101	101 > 85	2.38	3105.840	3105.840	bb			0.2242	112.09	12.09	543.042	
1202263568	Perchlorate-O(18)	107 > 89	2.38	18415.260	18415.260	bb			0.5338	106.75	6.75	6134.9...	

$$\frac{9629.228}{43229.5} = 0.2227$$

11/19/10

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 1048543 **Verified by:** _____

Analyst: Jareth Shirley

Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 7

Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1202263567 MB	16-NOV-2010 16:28:00	10	10	1
1202263568 LCS	16-NOV-2010 16:28:00	10	10	1
266778002	16-NOV-2010 16:28:00	10	10	1
266778004	16-NOV-2010 16:28:00	10	10	1
1202263569 MS (266778004)	16-NOV-2010 16:28:00	10	10	1
1202263570 MSD (266778004)	16-NOV-2010 16:28:00	10	10	1
266778006	16-NOV-2010 16:28:00	10	10	1
266778008	16-NOV-2010 16:28:00	10	10	1
266778009	16-NOV-2010 16:28:00	10	10	1
266782001	16-NOV-2010 16:28:00	10	10	1
266782004	16-NOV-2010 16:28:00	10	10	1
266789002	16-NOV-2010 16:28:00	10	10	1
266791002	16-NOV-2010 16:28:00	10	10	1
266878001	16-NOV-2010 16:28:00	10	10	1
266878003	16-NOV-2010 16:28:00	10	10	1
266878005	16-NOV-2010 16:28:00	10	10	1
266881002	16-NOV-2010 16:28:00	10	10	1
266881004	16-NOV-2010 16:28:00	10	10	1
1202263571 ICS	16-NOV-2010 16:28:00	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1202263571	10 ug/L ICV/CCV Second Source	UCL101008-01.2	.2	mL
LCS	1202263568	10 ug/L ICV/CCV Second Source	UCL101008-01.2	.2	mL
MS	1202263569	10 ug/L ICV/CCV Second Source	UCL101008-01.2	.2	mL
MSD	1202263570	10 ug/L ICV/CCV Second Source	UCL101008-01.2	.2	mL
RGNT	All	O2SI HPLC Grade Water	1443028	10	mL
RGNT	All	500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1450128	10	mL

Comments:

Desalting cartridges used: 100803-2.5-Ba/Ag/H

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 11/16/10
Extr. Injection Volume: 20uL
Sequence Number: per111610a
Initial Calibration Date: 11/16/10

Method: EPA 6850-Modified
Int. Std.: UCL100902-02
Mobile Phase Lot#: 1475252, 1481901
Standard-Samp Reagent Lot#:: 1481901

Reviewed BY: [illegible]
Date: 11/19/10
SOP: GL-OA-E-067 Rev.7
Alt Check Std. ID: WCL101108-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per1116001a	IPB001	CWW	11/16/2010 12:27			1		USE	B
per1116002a	IPB001	CWW	11/16/2010 12:35			1		USE	B
per1116003a	WCLICAL-01	CWW	11/16/2010 12:42			1		USE	I
per1116004a	WCLICAL-02	CWW	11/16/2010 12:50			1		USE	I
per1116005a	WCLICAL-03	CWW	11/16/2010 12:58			1		USE	I
per1116006a	WCLICAL-04	CWW	11/16/2010 13:05			1		USE	I
per1116007a	WCLICAL-05	CWW	11/16/2010 13:13			1		USE	I
per1116008a	IPB002	CWW	11/16/2010 13:20			1		USE	B
per1116009a	WCLICV	CWW	11/16/2010 13:28			1		USE	C
per1116010a	IPB003	CWW	11/16/2010 13:35			1		USE	B
per1116011a	WCLCRI	CWW	11/16/2010 13:43			1		USE	C
per1116012a	266505004	CWW	11/16/2010 13:50	1047069	11-408-1	1	ARSL	USE	S
per1116013a	IPB004	CWW	11/16/2010 13:58			1		USE	B
per1116014a	266876003	CWW	11/16/2010 14:05	1048535	11-477	4	LANL	USE	S
per1116015a	WCLCCV	CWW	11/16/2010 14:13			1		USE	C
per1116016a	IPB005	CWW	11/16/2010 14:20			1		USE	B
per1116017a	WCLCRI	CWW	11/16/2010 14:28			1		USE	C
per1116018a	1202262141	CWW	11/16/2010 14:36	1048026	VARIOUS	1	ARSL	USE	S
per1116019a	1202262142	CWW	11/16/2010 14:43	1048026	VARIOUS	1	ARSL	USE	S
per1116020a	1202262145	CWW	11/16/2010 14:51	1048026	VARIOUS	1	ARSL	USE	S
per1116021a	266490001	CWW	11/16/2010 14:58	1048026	11-402-1	1	ARSL	USE	S
per1116022a	266490002	CWW	11/16/2010 15:06	1048026	11-402-1	1	ARSL	USE	S
per1116023a	1202262143	CWW	11/16/2010 15:13	1048026	11-402-1	1	ARSL	USE	S
per1116024a	1202262144	CWW	11/16/2010 15:21	1048026	11-402-1	1	ARSL	USE	S
per1116025a	266490003	CWW	11/16/2010 15:28	1048026	11-402-1	1	ARSL	USE	S
per1116026a	266490004	CWW	11/16/2010 15:36	1048026	11-402-1	1	ARSL	USE	S
per1116027a	WCLCCV	CWW	11/16/2010 15:43			1		USE	C
per1116028a	IPB006	CWW	11/16/2010 15:51			1		USE	B
per1116029a	WCLCRI	CWW	11/16/2010 15:59			1		USE	C

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per1116030a	266490005	CWW	11/16/2010 16:06	1048026	11-402-1	1	ARSL	USE	S
per1116031a	266490006	CWW	11/16/2010 16:14	1048026	11-402-1	1	ARSL	USE	S
per1116032a	266490007	CWW	11/16/2010 16:21	1048026	11-402-1	1	ARSL	USE	S
per1116033a	266490008	CWW	11/16/2010 16:29	1048026	11-402-1	1	ARSL	USE	S
per1116034a	266490009	CWW	11/16/2010 16:36	1048026	11-402-1	1	ARSL	USE	S
per1116035a	266490010	CWW	11/16/2010 16:44	1048026	11-402-1	1	ARSL	USE	S
per1116036a	266490011	CWW	11/16/2010 16:51	1048026	11-402-1	1	ARSL	USE	S
per1116037a	266886002	CWW	11/16/2010 16:59	1048026	11-468	1	ARSL	USE	S
per1116038a	WCLCCV	CWW	11/16/2010 17:06			1		USE	C
per1116039a	IPB007	CWW	11/16/2010 17:14			1		USE	B
per1116040a	WCLCRI	CWW	11/16/2010 17:22			1		USE	C
per1116041a	1202263567	CWW	11/16/2010 17:29	1048547	VARIOUS	1	ARSL	USE	S
per1116042a	1202263568	CWW	11/16/2010 17:37	1048547	VARIOUS	1	ARSL	USE	S
per1116043a	1202263571	CWW	11/16/2010 17:44	1048547	VARIOUS	1	ARSL	USE	S
per1116044a	266778002	CWW	11/16/2010 17:52	1048547	11-446	1	ARSL	USE	S
per1116045a	266778004	CWW	11/16/2010 17:59	1048547	11-446	1	ARSL	USE	S
per1116046a	1202263569	CWW	11/16/2010 18:07	1048547	11-446	1	ARSL	USE	S
per1116047a	1202263570	CWW	11/16/2010 18:14	1048547	11-446	1	ARSL	USE	S
per1116048a	266778006	CWW	11/16/2010 18:22	1048547	11-446	1	ARSL	USE	S
per1116049a	266778008	CWW	11/16/2010 18:30	1048547	11-446	1	ARSL	USE	S
per1116050a	266778009	CWW	11/16/2010 18:37	1048547	11-446	1	ARSL	USE	S
per1116051a	WCLCCV	CWW	11/16/2010 18:45			1		USE	C
per1116052a	IPB008	CWW	11/16/2010 18:52			1		USE	B
per1116053a	WCLCRI	CWW	11/16/2010 19:00			1		USE	C
per1116054a	266782001	CWW	11/16/2010 19:07	1048547	11-451	1	ARSL	DUSE-DL	S
per1116055a	266782004	CWW	11/16/2010 19:15	1048547	11-451	1	ARSL	DUSE-RA	S
per1116056a	266789002	CWW	11/16/2010 19:23	1048547	11-457	1	ARSL	USE	S
per1116057a	266791002	CWW	11/16/2010 19:30	1048547	11-459	1	ARSL	USE	S
per1116058a	266878001	CWW	11/16/2010 19:38	1048547	11-464	1	ARSL	USE	S
per1116059a	266878003	CWW	11/16/2010 19:45	1048547	11-464	1	ARSL	USE	S
per1116060a	266878005	CWW	11/16/2010 19:53	1048547	11-464	1	ARSL	USE	S
per1116061a	266881002	CWW	11/16/2010 20:00	1048547	11-467	1	ARSL	DUSE-DL	S
per1116062a	266881004	CWW	11/16/2010 20:08	1048547	11-467	1	ARSL	DUSE-DL	S
per1116063a	WCLCCV	CWW	11/16/2010 20:15			1		USE	C
per1116064a	IPB009	CWW	11/16/2010 20:23			1		USE	B
per1116065a	WCLCRI	CWW	11/16/2010 20:31			1		USE	C

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

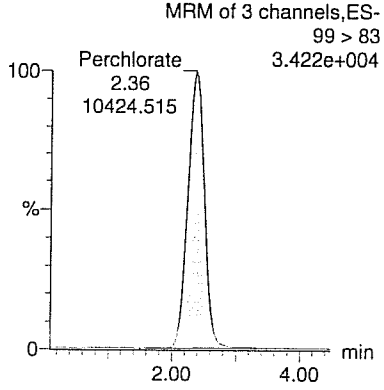
Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116045a
Date: 16-Nov-2010
Time: 17:59:56
ID: 266778004
Vial: 2:1,E

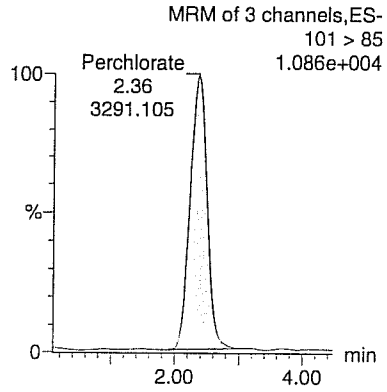
1ANSL | 1048547 | LCO | 1 |

11-17-10

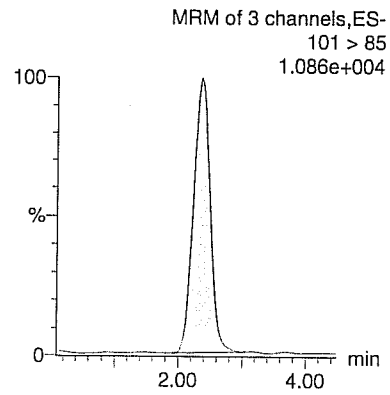
Perchlorate



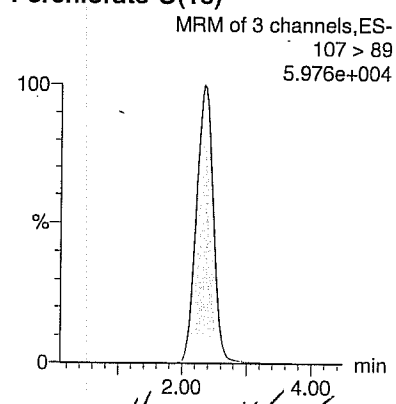
Perchlorate



Perchlorate-101



Perchlorate-O(18)



11/19/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
266778004	Perchlorate	99 > 83	2.36	10424.515	10424.515	bb			0.2411			1743.9...	3.17
266778004	Perchlorate-101	101 > 85	2.36	3291.105	3291.105	bb			0.2376			873.180	
266778004	Perchlorate-O(18)	107 > 89	2.33	18275.520	18275.520	bb			0.5297	105.94	5.94	4167.9...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

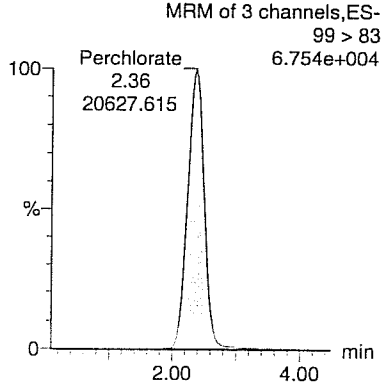
Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116046a
Date: 16-Nov-2010
Time: 18:07:26
ID: 1202263569
Vial: 2:1,F

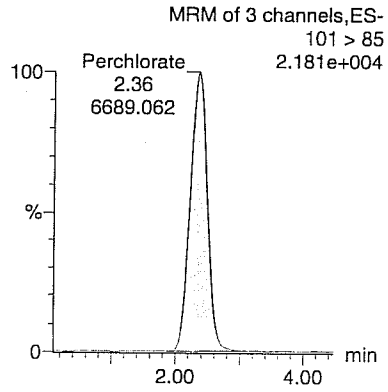
1ARSL | 1048547 | L222 | MS | 1 |

CWW 11-17-10

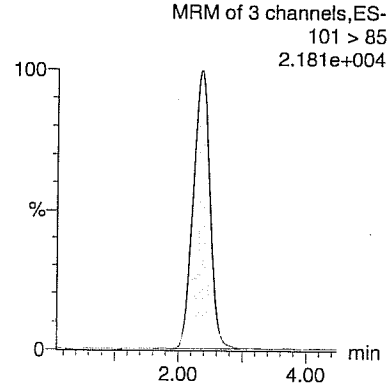
Perchlorate



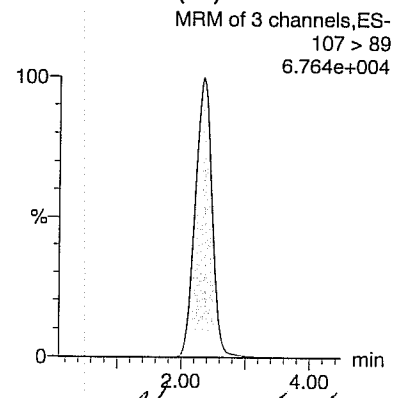
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Anne 11/19/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202263569	Perchlorate	99 > 83	2.36	20627.615	20627.615	bb			0.4772	238.58	138.58	1577.1...	3.08
1202263569	Perchlorate-101	101 > 85	2.36	6689.062	6689.062	bb			0.4828	241.41	141.41	1014.4...	
1202263569	Perchlorate-O(18)	107 > 89	2.33	20712.555	20712.555	bb			0.6004	120.07	20.07	1008.3...	

$$\frac{20627.615}{43229.5} = 0.4772$$

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson Jr.

Dataset: C:\MassLynx\Perchlorate.PRO\per111610a.qld

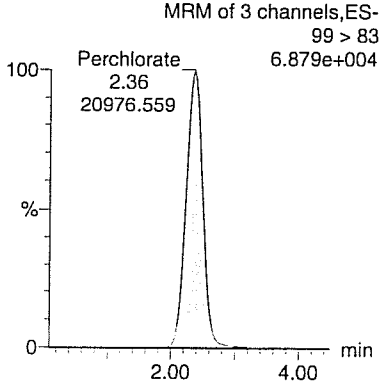
Last Altered: Wednesday, November 17, 2010 10:38:37 AM Eastern Standard Time
Printed: Wednesday, November 17, 2010 10:52:30 AM Eastern Standard Time

Name: per1116047a
Date: 16-Nov-2010
Time: 18:14:57
ID: 1202263570
Vial: 2:2,A

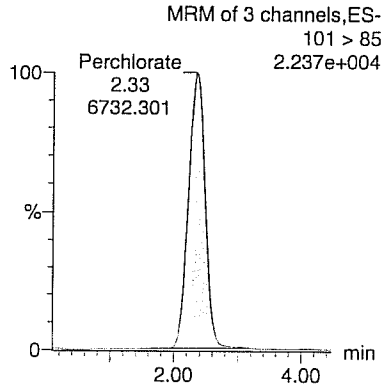
|ARSL|1048547|LZQ|MSO|1|

AWJ 11-17-10

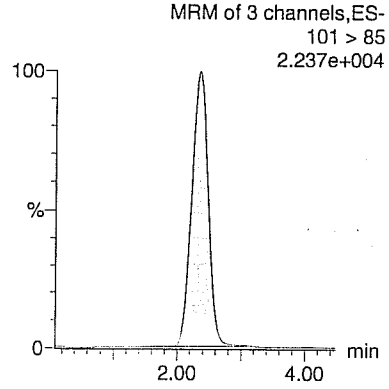
Perchlorate



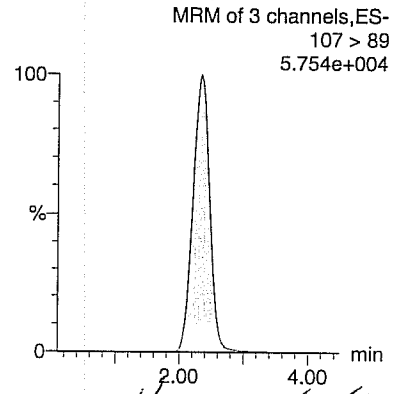
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 11/19/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202263570	Perchlorate	99 > 83	2.36	20976.559	20976.559	bb			0.4852	242.62	142.62	1880.1...	3.12
1202263570	Perchlorate-101	101 > 85	2.33	6732.301	6732.301	bb			0.4859	242.97	142.97	835.899	
1202263570	Perchlorate-O(18)	107 > 89	2.33	17474.602	17474.602	bb			0.5065	101.30	1.30	5561.0...	

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Isotope Ratio Criteria

Isotope Ratio $_{35}$Cl/$_{37}$CL

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

Metals Analysis

Case Narrative

Metals Fractional Narrative
ARS International (ARSL)
SDG 11-464

Sample Analysis

Sample ID	Client ID
266878001	Buckman1-11-1944
266878002	Buckman1-11-1945
266878003	Buckman06-11-1970
266878004	Buckman06-11-1971
266878005	Buckman08-11-2042
266878006	Buckman08-11-2043
1202262892	Method Blank (MB) **ICP**
1202266499	Method Blank (MB) **ICP**
1202262893	Laboratory Control Sample (LCS)
1202266500	Laboratory Control Sample (LCS)
1202262896	266878001(Buckman1-11-1944L) Serial Dilution (SD)
1202266503	266878005(Buckman08-11-2042L) Serial Dilution (SD)
1202262894	266878001(Buckman1-11-1944D) Sample Duplicate (DUP)
1202266501	266878005(Buckman08-11-2042D) Sample Duplicate (DUP)
1202262895	266878001(Buckman1-11-1944S) Matrix Spike (MS)
1202266502	266878005(Buckman08-11-2042S) Matrix Spike (MS)
1202262897	Method Blank (MB) **ICP-MS**
1202266504	Method Blank (MB) **ICP-MS**
1202278966	Method Blank (MB) **ICP-MS**
1202279258	Method Blank (MB) **ICP-MS**
1202262898	Laboratory Control Sample (LCS)
1202266505	Laboratory Control Sample (LCS)
1202278967	Laboratory Control Sample (LCS)
1202279259	Laboratory Control Sample (LCS)
1202262901	266878001(Buckman1-11-1944L) Serial Dilution (SD)
1202278970	266878001(Buckman1-11-1944L) Serial Dilution (SD)
1202266508	266878005(Buckman08-11-2042L) Serial Dilution (SD)
1202279262	266878005(Buckman08-11-2042L) Serial Dilution (SD)
1202262899	266878001(Buckman1-11-1944D) Sample Duplicate (DUP)

1202278968	266878001(Buckman1-11-1944D) Sample Duplicate (DUP)
1202266506	266878005(Buckman08-11-2042D) Sample Duplicate (DUP)
1202279260	266878005(Buckman08-11-2042D) Sample Duplicate (DUP)
1202262900	266878001(Buckman1-11-1944S) Matrix Spike (MS)
1202278969	266878001(Buckman1-11-1944S) Matrix Spike (MS)
1202266507	266878005(Buckman08-11-2042S) Matrix Spike (MS)
1202279261	266878005(Buckman08-11-2042S) Matrix Spike (MS)
1202265723	Method Blank (MB) **CVAA**
1202265724	Laboratory Control Sample (LCS)
1202265731	266878001(Buckman1-11-1944L) Serial Dilution (SD)
1202265725	266878001(Buckman1-11-1944D) Sample Duplicate (DUP)
1202265726	266878001(Buckman1-11-1944S) Matrix Spike (MS)

Method/Analysis Information

Analytical Batch:	1048315, 1049744, 1048319, 1054826, 1054715, 1049747, 1049385 and 1055168
Prep Batch :	1048312, 1049743, 1048317, 1054824, 1054713, 1049746 and 1049383
Standard Operating Procedures:	GL-MA-E-013 REV# 20, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 21, GL-MA-E-010 REV# 23 and GL-GC-E-107 REV# 6
Analytical Method:	SW846 3005/6010B, SW846 3005/6020 DOE-AL, EPA 245.1/245.2 and SM 2340 B
Prep Method :	SW846 3005A and EPA 245.1/245.2 Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Hardness as CaCO3 is calculated from Calcium and Magnesium results.

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 266878001 (Buckman1-11-1944)-ICP, ICP-MS, ICP-MS and CVAA and 266878005 (Buckman08-11-2042)-ICP, ICP-MS and ICP-MS.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of molybdenum.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instruments. Dilutions were required for sample 266878003 in order to minimize tin suppression due to matrix interferences.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not

generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DER was generated for this SDG: DER ID 904984. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.
Total Hardness by Calculation is determined using the results of Total Calcium (Ca) and Total Magnesium (Mg) determined by ICP or ICP-MS.

Hardness = 2.497 (Ca) + 4.118 (Mg)

Please refer to the Total Ca and Total Mg data to validate results appearing on the Hardness Summary sheet. Both results are in the Inorganic/metals section of the package. There is no Batch QC for calculated results, and thus no QC Summary for the Hardness by Calculation Batch. The MDLs and PQLs are calculated using the higher of the two calculated values of Ca or Mg.

Certification Statement

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

Review Validation:

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

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

Reviewer:_____ **Date:** 12-9-10

Sample Data Summary

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ARSL001 ARS International (63641-10)

Client SDG: 11-464 GEL Work Order: 266878

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

J Value is estimated

N Metals--The Matrix spike sample recovery is not within specified control limits

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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

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

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

Reviewed by Nikki-Edel A. Elmore 12-9-10

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 11−464 **METHOD TYPE:** EPA

SAMPLE ID: 266878001 **CLIENT ID:** Buckman1−11−1944

CONTRACT: ESHL00210

MATRIX:WG **DATE RECEIVED** 12−NOV−10 **LEVEL:** Low **%SOLIDS:**

CAS No	Analyte	Result	Units	C	Qual	M	MDL	DF	Instrument ID	Analytical Run
7439−97−6	Mercury	0.066	ug/L	U		AV	0.066	1	HG3	120110W1−9
7631−86−9	Silica	40.2	mg/L			P	0.053	1	OPTIMA3	120310−1
7429−90−5	Aluminum	68	ug/L	U		P	68	1	OPTIMA3	120310−1
7440−36−0	Antimony	0.5	ug/L	U		MS	0.5	1	ICPMS5	101201−2
7440−38−2	Arsenic	11.5	ug/L			MS	1.5	1	ICPMS5	101201−2
7440−39−3	Barium	21.2	ug/L			P	1	1	OPTIMA3	120310−1
7440−41−7	Beryllium	1	ug/L	U		P	1	1	OPTIMA3	120310−1
7440−42−8	Boron	113	ug/L			P	15	1	OPTIMA3	120310−1
7440−43−9	Cadmium	0.11	ug/L	U		MS	0.11	1	ICPMS5	101201−2
7440−70−2	Calcium	7590	ug/L			P	50	1	OPTIMA3	120310−1
7440−47−3	Chromium	10.9	ug/L			MS	2.5	1	ICPMS5	101201−2
7440−48−4	Cobalt	1	ug/L	U		P	1	1	OPTIMA3	120310−1
7440−50−8	Copper	14.6	ug/L			P	3	1	OPTIMA3	120310−1
7439−89−6	Iron	30	ug/L	U		P	30	1	OPTIMA3	120310−1
7439−92−1	Lead	1.11	ug/L	J		MS	0.5	1	ICPMS5	101201−2
7439−95−4	Magnesium	380	ug/L			P	85	1	OPTIMA3	120310−1
7439−96−5	Manganese	2	ug/L	U		P	2	1	OPTIMA3	120310−1
7439−98−7	Molybdenum	3.8	ug/L		N	MS	0.1	1	ICPMS5	101203−5
7440−02−0	Nickel	0.5	ug/L	U		MS	0.5	1	ICPMS5	101201−2
7440−09−7	Potassium	2050	ug/L			P	50	1	OPTIMA3	120310−1
7782−49−2	Selenium	1	ug/L	U		MS	1	1	ICPMS5	101201−2
7440−22−4	Silver	0.2	ug/L	U		MS	0.2	1	ICPMS5	101201−2
7440−23−5	Sodium	97900	ug/L			P	100	1	OPTIMA3	120310−1
7440−24−6	Strontium	136	ug/L			P	1	1	OPTIMA3	120310−1
7440−28−0	Thallium	0.3	ug/L	U		MS	0.3	1	ICPMS5	101203−5
7440−31−5	Tin	2.5	ug/L	U		P	2.5	1	OPTIMA3	120310−1

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 11−464 **METHOD TYPE:** EPA

SAMPLE ID: 266878001 **CLIENT ID:** Buckman1−11−1944

CONTRACT: ESHL00210

MATRIX: WG **DATE RECEIVED** 12−NOV−10 **LEVEL:** Low **%SOLIDS:**

CAS No	Analyte	Result	Units	C	Qual	M	MDL	DF	Instrument ID	Analytical Run
7440−61−1	Uranium	18.8	ug/L			MS	0.05	1	ICPMS5	101207−7
7440−62−2	Vanadium	37.9	ug/L			P	1	1	OPTIMA3	120310−1
7440−66−6	Zinc	7.14	ug/L	J		P	3.3	1	OPTIMA3	120310−1
	Hardness as CaCO3	20.5	mg/L				0.35	1	CALC001	

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 11−464 **METHOD TYPE:** SW846

SAMPLE ID: 266878002 **CLIENT ID:** Buckman1−11−1945

CONTRACT: ESHL00210

MATRIX: WG **DATE RECEIVED** 12−NOV−10 **LEVEL:** Low **%SOLIDS:**

CAS No	Analyte	Result	Units	C	Qual	M	MDL	DF	Instrument ID	Analytical Run
7440−47−3	Chromium	10.5	ug/L			MS	2.5	1	ICPMS5	101201−4

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 11−464 **METHOD TYPE:** EPA

SAMPLE ID: 266878003 **CLIENT ID:** Buckman06−11−1970

CONTRACT: ESHL00210

MATRIX:WG **DATE RECEIVED** 12−NOV−10 **LEVEL:** Low **%SOLIDS:**

CAS No	Analyte	Result	Units	C	Qual	M	MDL	DF	Instrument ID	Analytical Run
7439−97−6	Mercury	0.066	ug/L	U		AV	0.066	1	HG3	120110W1−9
7631−86−9	Silica	37.4	mg/L			P	0.053	1	OPTIMA3	120310−1
7429−90−5	Aluminum	68	ug/L	U		P	68	1	OPTIMA3	120310−1
7440−36−0	Antimony	0.5	ug/L	U		MS	0.5	1	ICPMS5	101201−2
7440−38−2	Arsenic	9.34	ug/L			MS	1.5	1	ICPMS5	101201−2
7440−39−3	Barium	188	ug/L			P	1	1	OPTIMA3	120310−1
7440−41−7	Beryllium	1	ug/L	U		P	1	1	OPTIMA3	120310−1
7440−42−8	Boron	85	ug/L			P	15	1	OPTIMA3	120310−1
7440−43−9	Cadmium	0.11	ug/L	U		MS	0.11	1	ICPMS5	101201−2
7440−70−2	Calcium	58600	ug/L			P	50	1	OPTIMA3	120310−1
7440−47−3	Chromium	6.92	ug/L	J		MS	2.5	1	ICPMS5	101201−2
7440−48−4	Cobalt	1	ug/L	U		P	1	1	OPTIMA3	120310−1
7440−50−8	Copper	53.1	ug/L			P	3	1	OPTIMA3	120310−1
7439−89−6	Iron	30	ug/L	U		P	30	1	OPTIMA3	120310−1
7439−92−1	Lead	2.55	ug/L			MS	0.5	1	ICPMS5	101201−2
7439−95−4	Magnesium	7820	ug/L			P	85	1	OPTIMA3	120310−1
7439−96−5	Manganese	2	ug/L	U		P	2	1	OPTIMA3	120310−1
7439−98−7	Molybdenum	4.72	ug/L		N	MS	0.1	1	ICPMS5	101203−5
7440−02−0	Nickel	1.37	ug/L	J		MS	0.5	1	ICPMS5	101201−2
7440−09−7	Potassium	4550	ug/L			P	50	1	OPTIMA3	120310−1
7782−49−2	Selenium	1	ug/L	U		MS	1	1	ICPMS5	101201−2
7440−22−4	Silver	0.2	ug/L	U		MS	0.2	1	ICPMS5	101201−2
7440−23−5	Sodium	73600	ug/L			P	100	1	OPTIMA3	120310−1
7440−24−6	Strontium	1250	ug/L			P	1	1	OPTIMA3	120310−1
7440−28−0	Thallium	0.3	ug/L	U		MS	0.3	1	ICPMS5	101203−5
7440−31−5	Tin	12.5	ug/L	U		P	12.5	5	OPTIMA3	120310−1

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 11−464 **METHOD TYPE:** EPA

SAMPLE ID: 266878003 **CLIENT ID:** Buckman06−11−1970

CONTRACT: ESHL00210

MATRIX: WG **DATE RECEIVED** 12−NOV−10 **LEVEL:** Low **%SOLIDS:**

CAS No	Analyte	Result	Units	C	Qual	M	MDL	DF	Instrument ID	Analytical Run
7440−61−1	Uranium	5.44	ug/L			MS	0.05	1	ICPMS5	101207−7
7440−62−2	Vanadium	14.8	ug/L			P	1	1	OPTIMA3	120310−1
7440−66−6	Zinc	3.56	ug/L	J		P	3.3	1	OPTIMA3	120310−1
	Hardness as CaCO3	178	mg/L				0.35	1	CALC001	

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 11−464 **METHOD TYPE:** SW846

SAMPLE ID: 266878004 **CLIENT ID:** Buckman06−11−1971

CONTRACT: ESHL00210

MATRIX:WG **DATE RECEIVED** 12−NOV−10 **LEVEL:** Low **%SOLIDS:**

CAS No	Analyte	Result	Units	C	Qual	M	MDL	DF	Instrument ID	Analytical Run
7440−47−3	Chromium	6.34	ug/L	J		MS	2.5	1	ICPMS5	101201−2

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 11−464 **METHOD TYPE:** EPA

SAMPLE ID: 266878005 **CLIENT ID:** Buckman08−11−2042

CONTRACT: ESHL00210

MATRIX:WG **DATE RECEIVED** 12−NOV−10 **LEVEL:** Low **%SOLIDS:**

CAS No	Analyte	Result	Units	C	Qual	M	MDL	DF	Instrument ID	Analytical Run
7439−97−6	Mercury	0.066	ug/L	U		AV	0.066	1	HG3	120110W1−9
7631−86−9	Silica	39.1	mg/L			P	0.053	1	OPTIMA3	120310−1
7429−90−5	Aluminum	68	ug/L	U		P	68	1	OPTIMA3	120310−1
7440−36−0	Antimony	0.5	ug/L	U		MS	0.5	1	ICPMS5	101201−4
7440−38−2	Arsenic	6.74	ug/L			MS	1.5	1	ICPMS5	101201−4
7440−39−3	Barium	67.7	ug/L			P	1	1	OPTIMA3	120310−1
7440−41−7	Beryllium	1	ug/L	U		P	1	1	OPTIMA3	120310−1
7440−42−8	Boron	99.5	ug/L			P	15	1	OPTIMA3	120310−1
7440−43−9	Cadmium	0.11	ug/L	U		MS	0.11	1	ICPMS5	101201−4
7440−70−2	Calcium	22500	ug/L			P	50	1	OPTIMA3	120310−1
7440−47−3	Chromium	7.74	ug/L	J		MS	2.5	1	ICPMS5	101201−4
7440−48−4	Cobalt	1	ug/L	U		P	1	1	OPTIMA3	120310−1
7440−50−8	Copper	24.5	ug/L			P	3	1	OPTIMA3	120310−1
7439−89−6	Iron	30	ug/L	U		P	30	1	OPTIMA3	120310−1
7439−92−1	Lead	2.31	ug/L			MS	0.5	1	ICPMS5	101206−6
7439−95−4	Magnesium	3600	ug/L			P	85	1	OPTIMA3	120310−1
7439−96−5	Manganese	2	ug/L	U		P	2	1	OPTIMA3	120310−1
7439−98−7	Molybdenum	3.03	ug/L		N	MS	0.1	1	ICPMS5	101206−6
7440−02−0	Nickel	0.834	ug/L	J		MS	0.5	1	ICPMS5	101201−4
7440−09−7	Potassium	3040	ug/L			P	50	1	OPTIMA3	120310−1
7782−49−2	Selenium	1	ug/L	U		MS	1	1	ICPMS5	101201−4
7440−22−4	Silver	0.2	ug/L	U		MS	0.2	1	ICPMS5	101201−4
7440−23−5	Sodium	99800	ug/L			P	100	1	OPTIMA3	120310−1
7440−24−6	Strontium	537	ug/L			P	1	1	OPTIMA3	120310−1
7440−28−0	Thallium	0.3	ug/L	U		MS	0.3	1	ICPMS5	101206−6
7440−31−5	Tin	2.5	ug/L	U		P	2.5	1	OPTIMA3	120310−1

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 11−464 **METHOD TYPE:** EPA

SAMPLE ID: 266878005 **CLIENT ID:** Buckman08−11−2042

CONTRACT: ESHL00210

MATRIX: WG **DATE RECEIVED** 12−NOV−10 **LEVEL:** Low **%SOLIDS:**

CAS No	Analyte	Result	Units	C	Qual	M	MDL	DF	Instrument ID	Analytical Run
7440−61−1	Uranium	21.2	ug/L			MS	0.05	1	ICPMS5	101207−8
7440−62−2	Vanadium	37.3	ug/L			P	1	1	OPTIMA3	120310−1
7440−66−6	Zinc	5.66	ug/L	J		P	3.3	1	OPTIMA3	120310−1
	Hardness as CaCO3	71	mg/L				0.35	1	CALC001	

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 11−464 **METHOD TYPE:** SW846

SAMPLE ID: 266878006 **CLIENT ID:** Buckman08−11−2043

CONTRACT: ESHL00210

MATRIX:WG **DATE RECEIVED** 12−NOV−10 **LEVEL:** Low **%SOLIDS:**

CAS No	Analyte	Result	Units	C	Qual	M	MDL	DF	Instrument ID	Analytical Run
7440−47−3	Chromium	7.5	ug/L	J		MS	2.5	1	ICPMS5	101201−2

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Mercury	5.09	ug/L	5	ug/L	101.7	90.0 − 110.0	AV	01−DEC−10 06:35	120110W1−9
	Antimony	47.7	ug/L	50	ug/L	95.4	90.0 − 110.0	MS	02−DEC−10 18:34	101201−2
	Arsenic	48.6	ug/L	50	ug/L	97.2	90.0 − 110.0	MS	02−DEC−10 18:34	101201−2
	Cadmium	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	02−DEC−10 18:34	101201−2
	Chromium	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	02−DEC−10 18:34	101201−2
	Lead	53.2	ug/L	50	ug/L	106.4	90.0 − 110.0	MS	02−DEC−10 18:34	101201−2
	Nickel	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	02−DEC−10 18:34	101201−2
	Selenium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	02−DEC−10 18:34	101201−2
	Silver	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	02−DEC−10 18:34	101201−2
	Aluminum	5060	ug/L	5000	ug/L	101.3	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Barium	514	ug/L	500	ug/L	102.8	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Beryllium	252	ug/L	250	ug/L	100.7	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Boron	512	ug/L	500	ug/L	102.4	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Calcium	5170	ug/L	5000	ug/L	103.3	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Cobalt	514	ug/L	500	ug/L	102.8	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Copper	518	ug/L	500	ug/L	103.6	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Magnesium	5210	ug/L	5000	ug/L	104.2	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Manganese	513	ug/L	500	ug/L	102.6	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Potassium	2610	ug/L	2500	ug/L	104.4	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Silica	10700	ug/L	10700	ug/L	100.1	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Sodium	2600	ug/L	2500	ug/L	104.1	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Strontium	515	ug/L	500	ug/L	103	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Tin	516	ug/L	500	ug/L	103.1	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Vanadium	510	ug/L	500	ug/L	102.1	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Zinc	505	ug/L	500	ug/L	101	90.0 − 110.0	P	03−DEC−10 05:38	120310−1
	Antimony	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	03−DEC−10 07:43	101201−4
	Arsenic	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	03−DEC−10 07:43	101201−4
	Cadmium	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	03−DEC−10 07:43	101201−4
	Chromium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	03−DEC−10 07:43	101201−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Nickel	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	03−DEC−10 07:43	101201−4
	Selenium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	03−DEC−10 07:43	101201−4
	Silver	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	03−DEC−10 07:43	101201−4
	Molybdenum	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	03−DEC−10 14:48	101203−5
	Thallium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	03−DEC−10 14:48	101203−5
	Lead	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	06−DEC−10 13:54	101206−6
	Molybdenum	48.5	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	06−DEC−10 13:54	101206−6
	Thallium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	06−DEC−10 13:54	101206−6
	Uranium	52.2	ug/L	50	ug/L	104.5	90.0 − 110.0	MS	07−DEC−10 23:56	101207−7
	Uranium	52.9	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	08−DEC−10 01:07	101207−8
CCV01										
	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 − 120.0	AV	01−DEC−10 06:40	120110W1−9
	Antimony	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	02−DEC−10 19:04	101201−2
	Arsenic	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	02−DEC−10 19:04	101201−2
	Cadmium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	02−DEC−10 19:04	101201−2
	Chromium	52.2	ug/L	50	ug/L	104.5	90.0 − 110.0	MS	02−DEC−10 19:04	101201−2
	Lead	53.7	ug/L	50	ug/L	107.3	90.0 − 110.0	MS	02−DEC−10 19:04	101201−2
	Nickel	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	02−DEC−10 19:04	101201−2
	Selenium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	02−DEC−10 19:04	101201−2
	Silver	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	02−DEC−10 19:04	101201−2
	Aluminum	5030	ug/L	5000	ug/L	100.7	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Barium	505	ug/L	500	ug/L	101	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Beryllium	504	ug/L	500	ug/L	100.8	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Boron	509	ug/L	500	ug/L	101.8	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Calcium	5180	ug/L	5000	ug/L	103.5	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Cobalt	499	ug/L	500	ug/L	99.9	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Copper	503	ug/L	500	ug/L	100.7	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Iron	5140	ug/L	5000	ug/L	102.7	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Manganese	505	ug/L	500	ug/L	101	90.0 − 110.0	P	03−DEC−10 05:56	120310−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5280	ug/L	5000	ug/L	105.5	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Silica	5480	ug/L	5350	ug/L	102.5	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Sodium	10400	ug/L	10000	ug/L	103.7	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Strontium	508	ug/L	500	ug/L	101.6	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Tin	509	ug/L	500	ug/L	101.8	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Vanadium	509	ug/L	500	ug/L	101.9	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 − 110.0	P	03−DEC−10 05:56	120310−1
	Antimony	47	ug/L	50	ug/L	93.9	90.0 − 110.0	MS	03−DEC−10 08:14	101201−4
	Arsenic	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	03−DEC−10 08:14	101201−4
	Cadmium	47.2	ug/L	50	ug/L	94.3	90.0 − 110.0	MS	03−DEC−10 08:14	101201−4
	Chromium	48.3	ug/L	50	ug/L	96.7	90.0 − 110.0	MS	03−DEC−10 08:14	101201−4
	Nickel	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	03−DEC−10 08:14	101201−4
	Selenium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	03−DEC−10 08:14	101201−4
	Silver	47.7	ug/L	50	ug/L	95.3	90.0 − 110.0	MS	03−DEC−10 08:14	101201−4
	Molybdenum	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	03−DEC−10 15:00	101203−5
	Thallium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	03−DEC−10 15:00	101203−5
	Lead	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	06−DEC−10 14:07	101206−6
	Molybdenum	48.6	ug/L	50	ug/L	97.2	90.0 − 110.0	MS	06−DEC−10 14:07	101206−6
	Thallium	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	06−DEC−10 14:07	101206−6
	Uranium	53.1	ug/L	50	ug/L	106.2	90.0 − 110.0	MS	08−DEC−10 00:07	101207−7
	Uranium	53.8	ug/L	50	ug/L	107.6	90.0 − 110.0	MS	08−DEC−10 01:18	101207−8
CCV02										
	Mercury	5.13	ug/L	5	ug/L	102.7	80.0 − 120.0	AV	01−DEC−10 07:00	120110W1−9
	Antimony	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	02−DEC−10 19:23	101201−2
	Arsenic	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	02−DEC−10 19:23	101201−2
	Cadmium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	02−DEC−10 19:23	101201−2
	Chromium	52.2	ug/L	50	ug/L	104.4	90.0 − 110.0	MS	02−DEC−10 19:23	101201−2
	Lead	54	ug/L	50	ug/L	108	90.0 − 110.0	MS	02−DEC−10 19:23	101201−2
	Nickel	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	02−DEC−10 19:23	101201−2
	Selenium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	02−DEC−10 19:23	101201−2

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	02−DEC−10 19:23	101201−2
	Aluminum	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Barium	504	ug/L	500	ug/L	100.8	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Beryllium	503	ug/L	500	ug/L	100.5	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Boron	498	ug/L	500	ug/L	99.6	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Calcium	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Cobalt	496	ug/L	500	ug/L	99.3	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Copper	502	ug/L	500	ug/L	100.4	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Magnesium	5100	ug/L	5000	ug/L	101.9	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Manganese	504	ug/L	500	ug/L	100.7	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Silica	5400	ug/L	5350	ug/L	100.9	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Sodium	10300	ug/L	10000	ug/L	102.8	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Strontium	505	ug/L	500	ug/L	101.1	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Tin	504	ug/L	500	ug/L	100.8	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Vanadium	508	ug/L	500	ug/L	101.6	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Zinc	501	ug/L	500	ug/L	100.1	90.0 − 110.0	P	03−DEC−10 06:30	120310−1
	Antimony	46.2	ug/L	50	ug/L	92.3	90.0 − 110.0	MS	03−DEC−10 08:38	101201−4
	Arsenic	47.7	ug/L	50	ug/L	95.5	90.0 − 110.0	MS	03−DEC−10 08:38	101201−4
	Cadmium	46.2	ug/L	50	ug/L	92.4	90.0 − 110.0	MS	03−DEC−10 08:38	101201−4
	Chromium	46.8	ug/L	50	ug/L	93.6	90.0 − 110.0	MS	03−DEC−10 08:38	101201−4
	Nickel	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	03−DEC−10 08:38	101201−4
	Selenium	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	03−DEC−10 08:38	101201−4
	Silver	47	ug/L	50	ug/L	94.1	90.0 − 110.0	MS	03−DEC−10 08:38	101201−4
	Molybdenum	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	03−DEC−10 15:10	101203−5
	Thallium	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	03−DEC−10 15:10	101203−5
	Lead	52.5	ug/L	50	ug/L	105	90.0 − 110.0	MS	06−DEC−10 14:17	101206−6
	Molybdenum	48.6	ug/L	50	ug/L	97.2	90.0 − 110.0	MS	06−DEC−10 14:17	101206−6
	Thallium	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	06−DEC−10 14:17	101206−6

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Uranium	52.9	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	08−DEC−10 00:26	101207−7
	Uranium	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	08−DEC−10 01:37	101207−8
CCV03										
	Antimony	48.1	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	02−DEC−10 19:53	101201−2
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	02−DEC−10 19:53	101201−2
	Cadmium	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	02−DEC−10 19:53	101201−2
	Chromium	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	02−DEC−10 19:53	101201−2
	Lead	53.7	ug/L	50	ug/L	107.5	90.0 − 110.0	MS	02−DEC−10 19:53	101201−2
	Nickel	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	02−DEC−10 19:53	101201−2
	Selenium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	02−DEC−10 19:53	101201−2
	Silver	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	02−DEC−10 19:53	101201−2
	Aluminum	4850	ug/L	5000	ug/L	96.9	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Barium	498	ug/L	500	ug/L	99.6	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Beryllium	495	ug/L	500	ug/L	98.9	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Boron	491	ug/L	500	ug/L	98.2	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Calcium	5130	ug/L	5000	ug/L	102.6	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Cobalt	497	ug/L	500	ug/L	99.4	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Copper	502	ug/L	500	ug/L	100.5	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Iron	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Magnesium	5140	ug/L	5000	ug/L	102.8	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Manganese	498	ug/L	500	ug/L	99.6	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Potassium	4920	ug/L	5000	ug/L	98.3	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Silica	5350	ug/L	5350	ug/L	100	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Sodium	9950	ug/L	10000	ug/L	99.5	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Strontium	487	ug/L	500	ug/L	97.3	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Tin	498	ug/L	500	ug/L	99.6	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Vanadium	505	ug/L	500	ug/L	101.1	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 − 110.0	P	03−DEC−10 07:03	120310−1
	Antimony	47.9	ug/L	50	ug/L	95.7	90.0 − 110.0	MS	03−DEC−10 09:33	101201−4
	Arsenic	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	03−DEC−10 09:33	101201−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cadmium	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	03−DEC−10 09:33	101201−4
	Chromium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	03−DEC−10 09:33	101201−4
	Nickel	52.3	ug/L	50	ug/L	104.6	90.0 − 110.0	MS	03−DEC−10 09:33	101201−4
	Selenium	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	03−DEC−10 09:33	101201−4
	Silver	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	03−DEC−10 09:33	101201−4
	Molybdenum	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	03−DEC−10 15:31	101203−5
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	03−DEC−10 15:31	101203−5
	Lead	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	06−DEC−10 14:35	101206−6
	Molybdenum	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	06−DEC−10 14:35	101206−6
	Thallium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	06−DEC−10 14:35	101206−6
	Uranium	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	08−DEC−10 00:50	101207−7
	Uranium	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	08−DEC−10 01:56	101207−8
CCV04										
	Antimony	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	02−DEC−10 20:18	101201−2
	Arsenic	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	02−DEC−10 20:18	101201−2
	Cadmium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	02−DEC−10 20:18	101201−2
	Chromium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	02−DEC−10 20:18	101201−2
	Lead	53.3	ug/L	50	ug/L	106.7	90.0 − 110.0	MS	02−DEC−10 20:18	101201−2
	Nickel	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	02−DEC−10 20:18	101201−2
	Selenium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	02−DEC−10 20:18	101201−2
	Silver	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	02−DEC−10 20:18	101201−2
	Aluminum	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Barium	507	ug/L	500	ug/L	101.4	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Beryllium	505	ug/L	500	ug/L	101.1	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Boron	500	ug/L	500	ug/L	100.1	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Calcium	5130	ug/L	5000	ug/L	102.6	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Cobalt	499	ug/L	500	ug/L	99.9	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Copper	504	ug/L	500	ug/L	100.9	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Iron	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Magnesium	5100	ug/L	5000	ug/L	101.9	90.0 − 110.0	P	03−DEC−10 07:35	120310−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Manganese	506	ug/L	500	ug/L	101.3	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Potassium	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Silica	5430	ug/L	5350	ug/L	101.5	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Sodium	10500	ug/L	10000	ug/L	104.5	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Strontium	511	ug/L	500	ug/L	102.2	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Tin	507	ug/L	500	ug/L	101.5	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Vanadium	511	ug/L	500	ug/L	102.2	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Zinc	504	ug/L	500	ug/L	100.9	90.0 − 110.0	P	03−DEC−10 07:35	120310−1
	Molybdenum	49.3	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	03−DEC−10 15:56	101203−5
	Thallium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	03−DEC−10 15:56	101203−5
	Uranium	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	08−DEC−10 02:18	101207−8
CCV05										
	Antimony	48.9	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	02−DEC−10 20:48	101201−2
	Arsenic	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	02−DEC−10 20:48	101201−2
	Cadmium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	02−DEC−10 20:48	101201−2
	Chromium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	02−DEC−10 20:48	101201−2
	Lead	53.5	ug/L	50	ug/L	106.9	90.0 − 110.0	MS	02−DEC−10 20:48	101201−2
	Nickel	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	02−DEC−10 20:48	101201−2
	Selenium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	02−DEC−10 20:48	101201−2
	Silver	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	02−DEC−10 20:48	101201−2
	Aluminum	4950	ug/L	5000	ug/L	98.9	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Barium	507	ug/L	500	ug/L	101.4	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Beryllium	505	ug/L	500	ug/L	101	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Boron	499	ug/L	500	ug/L	99.9	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Calcium	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Cobalt	501	ug/L	500	ug/L	100.2	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Copper	504	ug/L	500	ug/L	100.7	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Iron	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Magnesium	5110	ug/L	5000	ug/L	102.1	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Manganese	506	ug/L	500	ug/L	101.3	90.0 − 110.0	P	03−DEC−10 08:06	120310−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Silica	5430	ug/L	5350	ug/L	101.5	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Sodium	10200	ug/L	10000	ug/L	101.9	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Strontium	497	ug/L	500	ug/L	99.4	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Tin	509	ug/L	500	ug/L	101.8	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Vanadium	511	ug/L	500	ug/L	102.1	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Zinc	503	ug/L	500	ug/L	100.6	90.0 − 110.0	P	03−DEC−10 08:06	120310−1
	Molybdenum	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	03−DEC−10 16:05	101203−5
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	03−DEC−10 16:05	101203−5
CCV06										
	Antimony	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	02−DEC−10 21:13	101201−2
	Arsenic	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	02−DEC−10 21:13	101201−2
	Cadmium	49.5	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	02−DEC−10 21:13	101201−2
	Chromium	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	02−DEC−10 21:13	101201−2
	Lead	54.1	ug/L	50	ug/L	108.1	90.0 − 110.0	MS	02−DEC−10 21:13	101201−2
	Nickel	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	02−DEC−10 21:13	101201−2
	Selenium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	02−DEC−10 21:13	101201−2
	Silver	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	02−DEC−10 21:13	101201−2
	Aluminum	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Barium	507	ug/L	500	ug/L	101.4	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Beryllium	504	ug/L	500	ug/L	100.9	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Boron	501	ug/L	500	ug/L	100.1	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Calcium	5110	ug/L	5000	ug/L	102.3	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Cobalt	499	ug/L	500	ug/L	99.8	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Copper	505	ug/L	500	ug/L	100.9	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Iron	5100	ug/L	5000	ug/L	102	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Magnesium	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Manganese	506	ug/L	500	ug/L	101.1	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Potassium	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Silica	5420	ug/L	5350	ug/L	101.3	90.0 − 110.0	P	03−DEC−10 08:38	120310−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	10100	ug/L	10000	ug/L	101.2	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Strontium	494	ug/L	500	ug/L	98.9	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Tin	506	ug/L	500	ug/L	101.2	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Vanadium	511	ug/L	500	ug/L	102.2	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Zinc	502	ug/L	500	ug/L	100.4	90.0 − 110.0	P	03−DEC−10 08:38	120310−1
	Molybdenum	47.5	ug/L	50	ug/L	95	90.0 − 110.0	MS	03−DEC−10 16:35	101203−5
	Thallium	47.8	ug/L	50	ug/L	95.5	90.0 − 110.0	MS	03−DEC−10 16:35	101203−5
CCV07										
	Antimony	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	02−DEC−10 22:08	101201−2
	Arsenic	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	02−DEC−10 22:08	101201−2
	Cadmium	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	02−DEC−10 22:08	101201−2
	Chromium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	02−DEC−10 22:08	101201−2
	Lead	54.2	ug/L	50	ug/L	108.5	90.0 − 110.0	MS	02−DEC−10 22:08	101201−2
	Nickel	47.2	ug/L	50	ug/L	94.3	90.0 − 110.0	MS	02−DEC−10 22:08	101201−2
	Selenium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	02−DEC−10 22:08	101201−2
	Silver	51.8	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	02−DEC−10 22:08	101201−2
	Aluminum	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Barium	509	ug/L	500	ug/L	101.7	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Beryllium	508	ug/L	500	ug/L	101.6	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Boron	505	ug/L	500	ug/L	101	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Calcium	5170	ug/L	5000	ug/L	103.3	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Cobalt	503	ug/L	500	ug/L	100.5	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Copper	506	ug/L	500	ug/L	101.2	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Iron	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Magnesium	5170	ug/L	5000	ug/L	103.5	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Manganese	508	ug/L	500	ug/L	101.7	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Potassium	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Silica	5450	ug/L	5350	ug/L	101.8	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Sodium	10300	ug/L	10000	ug/L	102.6	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Strontium	500	ug/L	500	ug/L	99.9	90.0 − 110.0	P	03−DEC−10 09:17	120310−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Tin	513	ug/L	500	ug/L	102.6	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
	Zinc	507	ug/L	500	ug/L	101.4	90.0 − 110.0	P	03−DEC−10 09:17	120310−1
CCV08										
	Antimony	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	02−DEC−10 22:32	101201−2
	Arsenic	48.9	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	02−DEC−10 22:32	101201−2
	Cadmium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	02−DEC−10 22:32	101201−2
	Chromium	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	02−DEC−10 22:32	101201−2
	Lead	54.1	ug/L	50	ug/L	108.1	90.0 − 110.0	MS	02−DEC−10 22:32	101201−2
	Nickel	47.3	ug/L	50	ug/L	94.6	90.0 − 110.0	MS	02−DEC−10 22:32	101201−2
	Selenium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	02−DEC−10 22:32	101201−2
	Silver	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	02−DEC−10 22:32	101201−2
	Aluminum	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Barium	508	ug/L	500	ug/L	101.6	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Beryllium	507	ug/L	500	ug/L	101.3	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Boron	504	ug/L	500	ug/L	100.8	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Calcium	5140	ug/L	5000	ug/L	102.8	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Cobalt	502	ug/L	500	ug/L	100.4	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Copper	505	ug/L	500	ug/L	101	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Iron	5130	ug/L	5000	ug/L	102.7	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Magnesium	5190	ug/L	5000	ug/L	103.8	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Manganese	507	ug/L	500	ug/L	101.5	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Potassium	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Silica	5450	ug/L	5350	ug/L	101.8	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Sodium	10300	ug/L	10000	ug/L	103.1	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Strontium	501	ug/L	500	ug/L	100.2	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Tin	511	ug/L	500	ug/L	102.1	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 − 110.0	P	03−DEC−10 09:46	120310−1
	Zinc	505	ug/L	500	ug/L	101.1	90.0 − 110.0	P	03−DEC−10 09:46	120310−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV09										
	Antimony	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	02−DEC−10 23:15	101201−2
	Arsenic	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	02−DEC−10 23:15	101201−2
	Cadmium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	02−DEC−10 23:15	101201−2
	Chromium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	02−DEC−10 23:15	101201−2
	Lead	53.8	ug/L	50	ug/L	107.6	90.0 − 110.0	MS	02−DEC−10 23:15	101201−2
	Nickel	46.3	ug/L	50	ug/L	92.5	90.0 − 110.0	MS	02−DEC−10 23:15	101201−2
	Selenium	48.4	ug/L	50	ug/L	96.7	90.0 − 110.0	MS	02−DEC−10 23:15	101201−2
	Silver	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	02−DEC−10 23:15	101201−2
	Aluminum	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Barium	503	ug/L	500	ug/L	100.5	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Beryllium	500	ug/L	500	ug/L	100.1	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Boron	497	ug/L	500	ug/L	99.3	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Calcium	5060	ug/L	5000	ug/L	101.1	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Cobalt	495	ug/L	500	ug/L	98.9	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Copper	500	ug/L	500	ug/L	100.1	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Iron	5060	ug/L	5000	ug/L	101.3	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Magnesium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Manganese	502	ug/L	500	ug/L	100.4	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Potassium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Silica	5370	ug/L	5350	ug/L	100.4	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Sodium	10400	ug/L	10000	ug/L	103.7	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Strontium	501	ug/L	500	ug/L	100.2	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Tin	503	ug/L	500	ug/L	100.7	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
	Zinc	498	ug/L	500	ug/L	99.6	90.0 − 110.0	P	03−DEC−10 10:13	120310−1
CCV10										
	Antimony	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	02−DEC−10 23:40	101201−2
	Arsenic	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	02−DEC−10 23:40	101201−2
	Cadmium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	02−DEC−10 23:40	101201−2
	Chromium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	02−DEC−10 23:40	101201−2

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Lead	53.3	ug/L	50	ug/L	106.6	90.0 − 110.0	MS	02−DEC−10 23:40	101201−2
	Nickel	46.3	ug/L	50	ug/L	92.6	90.0 − 110.0	MS	02−DEC−10 23:40	101201−2
	Selenium	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	02−DEC−10 23:40	101201−2
	Silver	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	02−DEC−10 23:40	101201−2
	Aluminum	4890	ug/L	5000	ug/L	97.9	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Barium	498	ug/L	500	ug/L	99.5	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Beryllium	495	ug/L	500	ug/L	98.9	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Boron	492	ug/L	500	ug/L	98.4	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Calcium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Cobalt	489	ug/L	500	ug/L	97.9	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Copper	497	ug/L	500	ug/L	99.4	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Iron	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Magnesium	5010	ug/L	5000	ug/L	100.1	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Manganese	497	ug/L	500	ug/L	99.3	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Potassium	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Silica	5310	ug/L	5350	ug/L	99.3	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Sodium	10200	ug/L	10000	ug/L	101.9	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Strontium	491	ug/L	500	ug/L	98.3	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Tin	497	ug/L	500	ug/L	99.4	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Vanadium	505	ug/L	500	ug/L	100.9	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
	Zinc	493	ug/L	500	ug/L	98.6	90.0 − 110.0	P	03−DEC−10 10:47	120310−1
CCV11										
	Antimony	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	03−DEC−10 00:35	101201−2
	Arsenic	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	03−DEC−10 00:35	101201−2
	Cadmium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	03−DEC−10 00:35	101201−2
	Chromium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	03−DEC−10 00:35	101201−2
	Lead	54.3	ug/L	50	ug/L	108.6	90.0 − 110.0	MS	03−DEC−10 00:35	101201−2
	Nickel	46.5	ug/L	50	ug/L	93	90.0 − 110.0	MS	03−DEC−10 00:35	101201−2
	Selenium	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	03−DEC−10 00:35	101201−2
	Silver	52.2	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	03−DEC−10 00:35	101201−2

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Aluminum	4950	ug/L	5000	ug/L	99.1	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Barium	504	ug/L	500	ug/L	100.8	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Beryllium	502	ug/L	500	ug/L	100.4	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Boron	498	ug/L	500	ug/L	99.6	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Calcium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Cobalt	494	ug/L	500	ug/L	98.9	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Copper	502	ug/L	500	ug/L	100.4	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Iron	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Manganese	503	ug/L	500	ug/L	100.6	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Potassium	5030	ug/L	5000	ug/L	100.7	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Silica	5380	ug/L	5350	ug/L	100.7	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Sodium	10300	ug/L	10000	ug/L	103.3	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Strontium	498	ug/L	500	ug/L	99.6	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Tin	505	ug/L	500	ug/L	100.9	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Vanadium	511	ug/L	500	ug/L	102.1	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
	Zinc	501	ug/L	500	ug/L	100.1	90.0 − 110.0	P	03−DEC−10 11:12	120310−1
CCV12										
	Aluminum	4970	ug/L	5000	ug/L	99.3	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Barium	501	ug/L	500	ug/L	100.3	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Beryllium	499	ug/L	500	ug/L	99.8	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Boron	496	ug/L	500	ug/L	99.2	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Calcium	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Cobalt	492	ug/L	500	ug/L	98.3	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Copper	500	ug/L	500	ug/L	100	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Iron	5060	ug/L	5000	ug/L	101.3	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Magnesium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Manganese	500	ug/L	500	ug/L	100.1	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Silica	5350	ug/L	5350	ug/L	100.1	90.0 − 110.0	P	03−DEC−10 11:39	120310−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	10400	ug/L	10000	ug/L	104	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Strontium	502	ug/L	500	ug/L	100.3	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Tin	501	ug/L	500	ug/L	100.2	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Vanadium	507	ug/L	500	ug/L	101.4	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
	Zinc	498	ug/L	500	ug/L	99.5	90.0 − 110.0	P	03−DEC−10 11:39	120310−1
CCV13										
	Aluminum	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Barium	502	ug/L	500	ug/L	100.4	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Beryllium	499	ug/L	500	ug/L	99.8	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Boron	497	ug/L	500	ug/L	99.4	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Calcium	5030	ug/L	5000	ug/L	100.7	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Cobalt	493	ug/L	500	ug/L	98.6	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Copper	501	ug/L	500	ug/L	100.2	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Iron	5060	ug/L	5000	ug/L	101.2	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Magnesium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Manganese	501	ug/L	500	ug/L	100.2	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Potassium	5080	ug/L	5000	ug/L	101.7	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Silica	5390	ug/L	5350	ug/L	100.7	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Sodium	10400	ug/L	10000	ug/L	103.7	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Strontium	500	ug/L	500	ug/L	100	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Tin	499	ug/L	500	ug/L	99.7	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
	Zinc	503	ug/L	500	ug/L	100.6	90.0 − 110.0	P	03−DEC−10 12:09	120310−1
CCV14										
	Aluminum	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Barium	505	ug/L	500	ug/L	101	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Beryllium	503	ug/L	500	ug/L	100.5	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Boron	498	ug/L	500	ug/L	99.6	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Calcium	5100	ug/L	5000	ug/L	102	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Cobalt	495	ug/L	500	ug/L	98.9	90.0 − 110.0	P	03−DEC−10 12:32	120310−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Copper	504	ug/L	500	ug/L	100.9	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Iron	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Magnesium	5110	ug/L	5000	ug/L	102.1	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Manganese	504	ug/L	500	ug/L	100.8	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Potassium	5180	ug/L	5000	ug/L	103.7	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Silica	5400	ug/L	5350	ug/L	101	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Sodium	10500	ug/L	10000	ug/L	105.4	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Strontium	507	ug/L	500	ug/L	101.4	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Tin	502	ug/L	500	ug/L	100.4	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Vanadium	511	ug/L	500	ug/L	102.2	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
	Zinc	501	ug/L	500	ug/L	100.2	90.0 − 110.0	P	03−DEC−10 12:32	120310−1
CCV15										
	Aluminum	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Barium	502	ug/L	500	ug/L	100.5	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Beryllium	500	ug/L	500	ug/L	100	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Boron	495	ug/L	500	ug/L	99.1	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Calcium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Cobalt	495	ug/L	500	ug/L	98.9	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Copper	501	ug/L	500	ug/L	100.2	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Iron	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Magnesium	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Manganese	501	ug/L	500	ug/L	100.3	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Potassium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Silica	5370	ug/L	5350	ug/L	100.3	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Sodium	10500	ug/L	10000	ug/L	104.9	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Strontium	504	ug/L	500	ug/L	100.8	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Tin	502	ug/L	500	ug/L	100.5	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Vanadium	508	ug/L	500	ug/L	101.6	90.0 − 110.0	P	03−DEC−10 12:45	120310−1
	Zinc	498	ug/L	500	ug/L	99.7	90.0 − 110.0	P	03−DEC−10 12:45	120310−1

METALS
−2b−
CRDL Standard for AA & ICP

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.202	ug/L	.2	ug/L	101	70.0 − 130.0	AV	01−DEC−10 06:39	120110W1−9
	Lead	2.49	ug/L	2	ug/L	124.4	70.0 − 130.0	MS	02−DEC−10 18:46	101201−2
	Nickel	2.28	ug/L	2	ug/L	113.8	70.0 − 130.0	MS	02−DEC−10 18:46	101201−2
	Antimony	2.4	ug/L	3	ug/L	79.9	70.0 − 130.0	MS	02−DEC−10 18:46	101201−2
	Chromium	11.9	ug/L	10	ug/L	118.8	70.0 − 130.0	MS	02−DEC−10 18:46	101201−2
	Cadmium	1.13	ug/L	1	ug/L	112.7	70.0 − 130.0	MS	02−DEC−10 18:46	101201−2
	Arsenic	5.24	ug/L	5	ug/L	104.8	70.0 − 130.0	MS	02−DEC−10 18:46	101201−2
	Silver	1.05	ug/L	1	ug/L	104.5	70.0 − 130.0	MS	02−DEC−10 18:46	101201−2
	Selenium	5.03	ug/L	5	ug/L	100.5	70.0 − 130.0	MS	02−DEC−10 18:46	101201−2
	Nickel	2.29	ug/L	2	ug/L	114.3	70.0 − 130.0	MS	03−DEC−10 07:55	101201−4
	Silver	1.04	ug/L	1	ug/L	104	70.0 − 130.0	MS	03−DEC−10 07:55	101201−4
	Arsenic	5.28	ug/L	5	ug/L	105.6	70.0 − 130.0	MS	03−DEC−10 07:55	101201−4
	Selenium	5.49	ug/L	5	ug/L	109.8	70.0 − 130.0	MS	03−DEC−10 07:55	101201−4
	Chromium	11.4	ug/L	10	ug/L	114.4	70.0 − 130.0	MS	03−DEC−10 07:55	101201−4
	Cadmium	1.09	ug/L	1	ug/L	109.3	70.0 − 130.0	MS	03−DEC−10 07:55	101201−4
	Antimony	2.61	ug/L	3	ug/L	86.9	70.0 − 130.0	MS	03−DEC−10 07:55	101201−4
	Thallium	1.2	ug/L	1	ug/L	120.1	70.0 − 130.0	MS	03−DEC−10 14:53	101203−5
	Molybdenum	.587	ug/L	.5	ug/L	117.4	70.0 − 130.0	MS	03−DEC−10 14:53	101203−5
	Lead	2.5	ug/L	2	ug/L	124.8	70.0 − 130.0	MS	06−DEC−10 13:59	101206−6
	Thallium	1.19	ug/L	1	ug/L	119.3	70.0 − 130.0	MS	06−DEC−10 13:59	101206−6
	Molybdenum	.525	ug/L	.5	ug/L	105	70.0 − 130.0	MS	06−DEC−10 13:59	101206−6
	Uranium	.218	ug/L	.2	ug/L	109	70.0 − 130.0	MS	08−DEC−10 00:00	101207−7
	Uranium	.214	ug/L	.2	ug/L	107	70.0 − 130.0	MS	08−DEC−10 01:11	101207−8
PQL01										
	Silica	216	ug/L	213	ug/L	101.4	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Aluminum	231	ug/L	200	ug/L	115.3	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Iron	101	ug/L	100	ug/L	101.3	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Magnesium	284	ug/L	300	ug/L	94.7	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Manganese	10.3	ug/L	10	ug/L	103.3	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Potassium	117	ug/L	150	ug/L	77.8	70.0 − 130.0	P	03−DEC−10 05:44	120310−1

METALS
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CRDL Standard for AA & ICP

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

AA CRDL Standard Source:

ICP CRDL Standard Source

Instrument ID: HG3,ICPMS5,OPTIMA3,OPTIMA4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
	Sodium	303	ug/L	300	ug/L	100.9	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Barium	5.09	ug/L	5	ug/L	101.7	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Beryllium	5.03	ug/L	5	ug/L	100.7	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Cobalt	4.78	ug/L	5	ug/L	95.6	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Copper	10.2	ug/L	10	ug/L	101.5	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Vanadium	4.55	ug/L	5	ug/L	91	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Zinc	10.1	ug/L	10	ug/L	100.5	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Calcium	205	ug/L	200	ug/L	102.5	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Boron	49.4	ug/L	50	ug/L	98.8	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Tin	10.2	ug/L	10	ug/L	102	70.0 − 130.0	P	03−DEC−10 05:44	120310−1
	Strontium	5.3	ug/L	5	ug/L	106	70.0 − 130.0	P	03−DEC−10 05:44	120310−1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Mercury	0.066	+/−.2	U	0.066	0.2	LIQ	AV	01−DEC−10 06:37	120110W1−9
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	02−DEC−10 18:40	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 18:40	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 18:40	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 18:40	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 18:40	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 18:40	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 18:40	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 18:40	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 05:41	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 05:41	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 05:41	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 05:41	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 05:41	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 05:41	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 05:41	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 05:41	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 05:41	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 05:41	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 05:41	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 05:41	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 05:41	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 05:41	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 05:41	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 05:41	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 05:41	120310−1
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	03−DEC−10 07:49	101201−4
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	03−DEC−10 07:49	101201−4
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	03−DEC−10 07:49	101201−4
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	03−DEC−10 07:49	101201−4
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	03−DEC−10 07:49	101201−4

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−DEC−10 07:49	101201−4
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	03−DEC−10 07:49	101201−4
	Molybdenum	0.224	+/−.5	J	0.1	0.5	LIQ	MS	03−DEC−10 14:50	101203−5
	Thallium	0.3	+/−1	U	0.3	1.0	LIQ	MS	03−DEC−10 14:50	101203−5
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	06−DEC−10 13:57	101206−6
	Molybdenum	0.183	+/−.5	J	0.1	0.5	LIQ	MS	06−DEC−10 13:57	101206−6
	Thallium	0.3	+/−1	U	0.3	1.0	LIQ	MS	06−DEC−10 13:57	101206−6
	Uranium	0.092	+/−.2	J	0.05	0.2	LIQ	MS	07−DEC−10 23:58	101207−7
	Uranium	0.089	+/−.2	J	0.05	0.2	LIQ	MS	08−DEC−10 01:09	101207−8
CCB01										
	Mercury	0.066	+/−.2	U	0.066	0.2	LIQ	AV	01−DEC−10 06:42	120110W1−9
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	02−DEC−10 19:10	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 19:10	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 19:10	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 19:10	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 19:10	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 19:10	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 19:10	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 19:10	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 05:59	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 05:59	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 05:59	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 05:59	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 05:59	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 05:59	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 05:59	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 05:59	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 05:59	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 05:59	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 05:59	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 05:59	120310−1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 05:59	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 05:59	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 05:59	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 05:59	120310−1
	Zinc	3.91	+/−10	J	3.3	10.0	LIQ	P	03−DEC−10 05:59	120310−1
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	03−DEC−10 08:20	101201−4
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	03−DEC−10 08:20	101201−4
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	03−DEC−10 08:20	101201−4
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	03−DEC−10 08:20	101201−4
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	03−DEC−10 08:20	101201−4
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−DEC−10 08:20	101201−4
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	03−DEC−10 08:20	101201−4
	Molybdenum	0.409	+/−.5	J	0.1	0.5	LIQ	MS	03−DEC−10 15:02	101203−5
	Thallium	0.3	+/−1	U	0.3	1.0	LIQ	MS	03−DEC−10 15:02	101203−5
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	06−DEC−10 14:09	101206−6
	Molybdenum	0.406	+/−.5	J	0.1	0.5	LIQ	MS	06−DEC−10 14:09	101206−6
	Thallium	0.3	+/−1	U	0.3	1.0	LIQ	MS	06−DEC−10 14:09	101206−6
	Uranium	0.096	+/−.2	J	0.05	0.2	LIQ	MS	08−DEC−10 00:09	101207−7
	Uranium	0.07	+/−.2	J	0.05	0.2	LIQ	MS	08−DEC−10 01:20	101207−8
CCB02										
	Mercury	0.066	+/−.2	U	0.066	0.2	LIQ	AV	01−DEC−10 07:02	120110W1−9
	Antimony	0.705	+/−3	J	0.5	3.0	LIQ	MS	02−DEC−10 19:29	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 19:29	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 19:29	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 19:29	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 19:29	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 19:29	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 19:29	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 19:29	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 06:34	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 06:34	120310−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 06:34	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 06:34	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 06:34	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 06:34	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 06:34	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 06:34	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 06:34	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 06:34	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 06:34	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 06:34	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 06:34	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 06:34	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 06:34	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 06:34	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 06:34	120310−1
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	03−DEC−10 08:44	101201−4
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	03−DEC−10 08:44	101201−4
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	03−DEC−10 08:44	101201−4
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	03−DEC−10 08:44	101201−4
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	03−DEC−10 08:44	101201−4
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−DEC−10 08:44	101201−4
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	03−DEC−10 08:44	101201−4
	Molybdenum	0.207	+/−.5	J	0.1	0.5	LIQ	MS	03−DEC−10 15:12	101203−5
	Thallium	0.3	+/−1	U	0.3	1.0	LIQ	MS	03−DEC−10 15:12	101203−5
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	06−DEC−10 14:19	101206−6
	Molybdenum	0.181	+/−.5	J	0.1	0.5	LIQ	MS	06−DEC−10 14:19	101206−6
	Thallium	0.392	+/−1	J	0.3	1.0	LIQ	MS	06−DEC−10 14:19	101206−6
	Uranium	0.079	+/−.2	J	0.05	0.2	LIQ	MS	08−DEC−10 00:29	101207−7
	Uranium	0.071	+/−.2	J	0.05	0.2	LIQ	MS	08−DEC−10 01:39	101207−8
CCB03										
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	02−DEC−10 19:59	101201−2

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 19:59	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 19:59	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 19:59	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 19:59	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 19:59	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 19:59	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 19:59	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 07:06	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 07:06	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 07:06	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 07:06	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 07:06	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 07:06	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 07:06	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 07:06	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 07:06	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 07:06	120310−1
	Potassium	200.64	+/−150		50.0	150	LIQ	P	03−DEC−10 07:06	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 07:06	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 07:06	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 07:06	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 07:06	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 07:06	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 07:06	120310−1
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	03−DEC−10 09:39	101201−4
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	03−DEC−10 09:39	101201−4
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	03−DEC−10 09:39	101201−4
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	03−DEC−10 09:39	101201−4
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	03−DEC−10 09:39	101201−4
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−DEC−10 09:39	101201−4
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	03−DEC−10 09:39	101201−4

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Molybdenum	0.17	+/−.5	J	0.1	0.5	LIQ	MS	03−DEC−10 15:34	101203−5
	Thallium	0.3	+/−1	U	0.3	1.0	LIQ	MS	03−DEC−10 15:34	101203−5
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	06−DEC−10 14:37	101206−6
	Molybdenum	0.155	+/−.5	J	0.1	0.5	LIQ	MS	06−DEC−10 14:37	101206−6
	Thallium	0.417	+/−1	J	0.3	1.0	LIQ	MS	06−DEC−10 14:37	101206−6
	Uranium	0.078	+/−.2	J	0.05	0.2	LIQ	MS	08−DEC−10 00:52	101207−7
	Uranium	0.07	+/−.2	J	0.05	0.2	LIQ	MS	08−DEC−10 01:59	101207−8
CCB04										
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	02−DEC−10 20:24	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 20:24	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 20:24	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 20:24	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 20:24	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 20:24	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 20:24	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 20:24	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 07:38	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 07:38	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 07:38	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 07:38	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 07:38	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 07:38	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 07:38	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 07:38	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 07:38	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 07:38	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 07:38	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 07:38	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 07:38	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 07:38	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 07:38	120310−1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 07:38	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 07:38	120310−1
	Molybdenum	0.165	+/−.5	J	0.1	0.5	LIQ	MS	03−DEC−10 15:58	101203−5
	Thallium	0.48	+/−1	J	0.3	1.0	LIQ	MS	03−DEC−10 15:58	101203−5
	Uranium	0.075	+/−.2	J	0.05	0.2	LIQ	MS	08−DEC−10 02:20	101207−8
CCB05										
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	02−DEC−10 20:54	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 20:54	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 20:54	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 20:54	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 20:54	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 20:54	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 20:54	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 20:54	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 08:10	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 08:10	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 08:10	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 08:10	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 08:10	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 08:10	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 08:10	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 08:10	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 08:10	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 08:10	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 08:10	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 08:10	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 08:10	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 08:10	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 08:10	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 08:10	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 08:10	120310−1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Molybdenum	0.195	+/−.5	J	0.1	0.5	LIQ	MS	03−DEC−10 16:08	101203−5
	Thallium	0.569	+/−1	J	0.3	1.0	LIQ	MS	03−DEC−10 16:08	101203−5
CCB06										
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	02−DEC−10 21:19	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 21:19	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 21:19	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 21:19	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 21:19	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 21:19	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 21:19	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 21:19	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 08:42	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 08:42	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 08:42	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 08:42	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 08:42	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 08:42	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 08:42	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 08:42	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 08:42	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 08:42	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 08:42	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 08:42	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 08:42	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 08:42	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 08:42	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 08:42	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 08:42	120310−1
	Molybdenum	0.171	+/−.5	J	0.1	0.5	LIQ	MS	03−DEC−10 16:37	101203−5
	Thallium	0.37	+/−1	J	0.3	1.0	LIQ	MS	03−DEC−10 16:37	101203−5

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB07										
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	02−DEC−10 22:14	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 22:14	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 22:14	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 22:14	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 22:14	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 22:14	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 22:14	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 22:14	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 09:20	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 09:20	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 09:20	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 09:20	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 09:20	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 09:20	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 09:20	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 09:20	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 09:20	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 09:20	120310−1
	Potassium	−64.85	+/−150	J	50.0	150	LIQ	P	03−DEC−10 09:20	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 09:20	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 09:20	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 09:20	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 09:20	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 09:20	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 09:20	120310−1
CCB08										
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	02−DEC−10 22:38	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 22:38	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 22:38	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 22:38	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 22:38	101201−2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 22:38	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 22:38	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 22:38	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 09:49	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 09:49	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 09:49	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 09:49	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 09:49	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 09:49	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 09:49	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 09:49	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 09:49	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 09:49	120310−1
	Potassium	−50.29	+/−150	J	50.0	150	LIQ	P	03−DEC−10 09:49	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 09:49	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 09:49	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 09:49	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 09:49	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 09:49	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 09:49	120310−1
CCB09										
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	02−DEC−10 23:21	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 23:21	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 23:21	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 23:21	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 23:21	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 23:21	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 23:21	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 23:21	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 10:16	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 10:16	120310−1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 10:16	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 10:16	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 10:16	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 10:16	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 10:16	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 10:16	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 10:16	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 10:16	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 10:16	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 10:16	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 10:16	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 10:16	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 10:16	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 10:16	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 10:16	120310−1
CCB10										
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	02−DEC−10 23:46	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	02−DEC−10 23:46	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	02−DEC−10 23:46	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	02−DEC−10 23:46	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 23:46	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	02−DEC−10 23:46	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	02−DEC−10 23:46	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	02−DEC−10 23:46	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 10:51	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 10:51	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 10:51	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 10:51	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 10:51	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 10:51	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 10:51	120310−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 10:51	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 10:51	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 10:51	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 10:51	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 10:51	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 10:51	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 10:51	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 10:51	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 10:51	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 10:51	120310−1
CCB11										
	Antimony	0.5	+/−3	U	0.5	3.0	LIQ	MS	03−DEC−10 00:41	101201−2
	Arsenic	1.5	+/−5	U	1.5	5.0	LIQ	MS	03−DEC−10 00:41	101201−2
	Cadmium	0.11	+/−1	U	0.11	1.0	LIQ	MS	03−DEC−10 00:41	101201−2
	Chromium	2.5	+/−10	U	2.5	10.0	LIQ	MS	03−DEC−10 00:41	101201−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	03−DEC−10 00:41	101201−2
	Nickel	0.5	+/−2	U	0.5	2.0	LIQ	MS	03−DEC−10 00:41	101201−2
	Selenium	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−DEC−10 00:41	101201−2
	Silver	0.2	+/−1	U	0.2	1.0	LIQ	MS	03−DEC−10 00:41	101201−2
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 11:15	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 11:15	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 11:15	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 11:15	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 11:15	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 11:15	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 11:15	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 11:15	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 11:15	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 11:15	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 11:15	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 11:15	120310−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 11:15	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 11:15	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 11:15	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 11:15	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 11:15	120310−1
CCB12										
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 11:42	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 11:42	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 11:42	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 11:42	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 11:42	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 11:42	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 11:42	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 11:42	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 11:42	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 11:42	120310−1
	Potassium	−73.23	+/−150	J	50.0	150	LIQ	P	03−DEC−10 11:42	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 11:42	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 11:42	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 11:42	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 11:42	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 11:42	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 11:42	120310−1
CCB13										
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 12:12	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:12	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:12	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 12:12	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 12:12	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:12	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 12:12	120310−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 12:12	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 12:12	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 12:12	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 12:12	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 12:12	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 12:12	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:12	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 12:12	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:12	120310−1
	Zinc	5.05	+/−10	J	3.3	10.0	LIQ	P	03−DEC−10 12:12	120310−1
CCB14										
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 12:35	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:35	120310−1
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:35	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 12:35	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 12:35	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:35	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 12:35	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 12:35	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 12:35	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 12:35	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 12:35	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 12:35	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 12:35	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:35	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 12:35	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:35	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 12:35	120310−1
CCB15										
	Aluminum	68.0	+/−200	U	68.0	200	LIQ	P	03−DEC−10 12:48	120310−1
	Barium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:48	120310−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 11−464

Contract: ESHL00210

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Beryllium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:48	120310−1
	Boron	15.0	+/−50	U	15.0	50.0	LIQ	P	03−DEC−10 12:48	120310−1
	Calcium	50.0	+/−200	U	50.0	200	LIQ	P	03−DEC−10 12:48	120310−1
	Cobalt	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:48	120310−1
	Copper	3.0	+/−10	U	3.0	10.0	LIQ	P	03−DEC−10 12:48	120310−1
	Iron	30.0	+/−100	U	30.0	100	LIQ	P	03−DEC−10 12:48	120310−1
	Magnesium	85.0	+/−300	U	85.0	300	LIQ	P	03−DEC−10 12:48	120310−1
	Manganese	2.0	+/−10	U	2.0	10.0	LIQ	P	03−DEC−10 12:48	120310−1
	Potassium	50.0	+/−150	U	50.0	150	LIQ	P	03−DEC−10 12:48	120310−1
	Silica	53.0	+/−213	U	53.0	213	LIQ	P	03−DEC−10 12:48	120310−1
	Sodium	100	+/−300	U	100	300	LIQ	P	03−DEC−10 12:48	120310−1
	Strontium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:48	120310−1
	Tin	2.5	+/−10	U	2.5	10.0	LIQ	P	03−DEC−10 12:48	120310−1
	Vanadium	1.0	+/−5	U	1.0	5.0	LIQ	P	03−DEC−10 12:48	120310−1
	Zinc	3.3	+/−10	U	3.3	10.0	LIQ	P	03−DEC−10 12:48	120310−1

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 11−464

Contract: ESHL00210

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1202262892								
	Aluminum	68	ug/L	+/−200	U	P	68	200
	Barium	1	ug/L	+/−5	U	P	1	5
	Beryllium	1	ug/L	+/−5	U	P	1	5
	Boron	15	ug/L	+/−50	U	P	15	50
	Iron	30	ug/L	+/−100	U	P	30	100
	Manganese	2	ug/L	+/−10	U	P	2	10
	Silica	0.053	mg/L	+/−0.213	U	P	0.053	0.213
	Strontium	1	ug/L	+/−5	U	P	1	5
	Vanadium	1	ug/L	+/−5	U	P	1	5
	Zinc	3.3	ug/L	+/−10	U	P	3.3	10
	Tin	2.5	ug/L	+/−10	U	P	2.5	10
	Sodium	100	ug/L	+/−300	U	P	100	300
	Potassium	50	ug/L	+/−150	U	P	50	150
	Magnesium	85	ug/L	+/−300	U	P	85	300
	Copper	3	ug/L	+/−10	U	P	3	10
	Cobalt	1	ug/L	+/−5	U	P	1	5
	Calcium	50	ug/L	+/−200	U	P	50	200
1202262897								
	Thallium	0.3	ug/L	+/−1	U	MS	0.3	1
	Silver	0.2	ug/L	+/−1	U	MS	0.2	1
	Selenium	1	ug/L	+/−5	U	MS	1	5
	Nickel	0.5	ug/L	+/−2	U	MS	0.5	2
	Molybdenum	0.302	ug/L	+/−0.5	J	MS	0.1	0.5
	Lead	0.5	ug/L	+/−2	U	MS	0.5	2
	Chromium	2.5	ug/L	+/−10	U	MS	2.5	10
	Cadmium	0.11	ug/L	+/−1	U	MS	0.11	1
	Arsenic	1.5	ug/L	+/−5	U	MS	1.5	5
	Antimony	0.5	ug/L	+/−3	U	MS	0.5	3
1202265723								
	Mercury	0.066	ug/L	+/−0.2	U	AV	0.066	0.2
1202266499								
	Aluminum	68	ug/L	+/−200	U	P	68	200
	Barium	1	ug/L	+/−5	U	P	1	5
	Beryllium	1	ug/L	+/−5	U	P	1	5
	Boron	15	ug/L	+/−50	U	P	15	50
	Calcium	50	ug/L	+/−200	U	P	50	200
	Cobalt	1	ug/L	+/−5	U	P	1	5

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 11−464

Contract: ESHL00210

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
	Copper	3	ug/L	+/−10	U	P	3	10
	Iron	30	ug/L	+/−100	U	P	30	100
	Magnesium	85	ug/L	+/−300	U	P	85	300
	Manganese	2	ug/L	+/−10	U	P	2	10
	Potassium	50	ug/L	+/−150	U	P	50	150
	Silica	0.053	mg/L	+/−0.213	U	P	0.053	0.213
	Sodium	100	ug/L	+/−300	U	P	100	300
	Strontium	1	ug/L	+/−5	U	P	1	5
	Tin	2.5	ug/L	+/−10	U	P	2.5	10
	Zinc	3.3	ug/L	+/−10	U	P	3.3	10
	Vanadium	1	ug/L	+/−5	U	P	1	5
1202266504								
	Antimony	0.5	ug/L	+/−3	U	MS	0.5	3
	Arsenic	1.5	ug/L	+/−5	U	MS	1.5	5
	Cadmium	0.11	ug/L	+/−1	U	MS	0.11	1
	Chromium	2.5	ug/L	+/−10	U	MS	2.5	10
	Lead	0.5	ug/L	+/−2	U	MS	0.5	2
	Molybdenum	0.135	ug/L	+/−0.5	J	MS	0.1	0.5
	Nickel	0.5	ug/L	+/−2	U	MS	0.5	2
	Selenium	1	ug/L	+/−5	U	MS	1	5
	Silver	0.2	ug/L	+/−1	U	MS	0.2	1
	Thallium	0.3	ug/L	+/−1	U	MS	0.3	1
1202278966								
	Uranium	0.05	ug/L	+/−0.2	U	MS	0.05	0.2
1202279258								
	Uranium	0.05	ug/L	+/−0.2	U	MS	0.05	0.2

METALS
−4−
Interference Check Sample

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	499000	ug/L	500000	ug/L	99.7	80.0 − 120.0	03−DEC−10 05:47	120310−1
	Barium	0.0068	ug/L					03−DEC−10 05:47	120310−1
	Beryllium	−5.86	ug/L					03−DEC−10 05:47	120310−1
	Boron	−20.9	ug/L					03−DEC−10 05:47	120310−1
	Calcium	495000	ug/L	500000	ug/L	99	80.0 − 120.0	03−DEC−10 05:47	120310−1
	Cobalt	−1.27	ug/L					03−DEC−10 05:47	120310−1
	Copper	1.97	ug/L					03−DEC−10 05:47	120310−1
	Iron	195000	ug/L	200000	ug/L	97.5	80.0 − 120.0	03−DEC−10 05:47	120310−1
	Magnesium	485000	ug/L	500000	ug/L	96.9	80.0 − 120.0	03−DEC−10 05:47	120310−1
	Manganese	−12.8	ug/L					03−DEC−10 05:47	120310−1
	Potassium	13.9	ug/L					03−DEC−10 05:47	120310−1
	Silica	26.5	ug/L					03−DEC−10 05:47	120310−1
	Sodium	33.5	ug/L					03−DEC−10 05:47	120310−1
	Strontium	−0.251	ug/L					03−DEC−10 05:47	120310−1
	Tin	7.34	ug/L					03−DEC−10 05:47	120310−1
	Vanadium	−0.391	ug/L					03−DEC−10 05:47	120310−1
	Zinc	13.4	ug/L					03−DEC−10 05:47	120310−1
ICSAB01									
	Aluminum	504000	ug/L	500000	ug/L	101	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Barium	519	ug/L	500	ug/L	104	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Beryllium	248	ug/L	250	ug/L	99	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Boron	514	ug/L	500	ug/L	103	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Calcium	500000	ug/L	500000	ug/L	100	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Cobalt	485	ug/L	500	ug/L	97	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Copper	577	ug/L	500	ug/L	115	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Iron	197000	ug/L	200000	ug/L	98.3	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Magnesium	487000	ug/L	500000	ug/L	97.3	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Manganese	505	ug/L	500	ug/L	101	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Potassium	5720	ug/L	5000	ug/L	114	80.0 − 120.0	03−DEC−10 05:48	120310−1

METALS
−4−
Interference Check Sample

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silica	11500	ug/L	10700	ug/L	108	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Sodium	5490	ug/L	5000	ug/L	110	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Strontium	517	ug/L	500	ug/L	103	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Tin	523	ug/L	500	ug/L	105	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Vanadium	515	ug/L	500	ug/L	103	80.0 − 120.0	03−DEC−10 05:48	120310−1
	Zinc	508	ug/L	500	ug/L	102	80.0 − 120.0	03−DEC−10 05:48	120310−1
ICSA02									
	Aluminum	494000	ug/L	500000	ug/L	98.9	80.0 − 120.0	03−DEC−10 09:13	120310−1
	Barium	−0.27	ug/L					03−DEC−10 09:13	120310−1
	Beryllium	−5.88	ug/L					03−DEC−10 09:13	120310−1
	Boron	−19.9	ug/L					03−DEC−10 09:13	120310−1
	Calcium	494000	ug/L	500000	ug/L	98.8	80.0 − 120.0	03−DEC−10 09:13	120310−1
	Cobalt	−1.53	ug/L					03−DEC−10 09:13	120310−1
	Copper	2.31	ug/L					03−DEC−10 09:13	120310−1
	Iron	195000	ug/L	200000	ug/L	97.3	80.0 − 120.0	03−DEC−10 09:13	120310−1
	Magnesium	489000	ug/L	500000	ug/L	97.8	80.0 − 120.0	03−DEC−10 09:13	120310−1
	Manganese	−13.0	ug/L					03−DEC−10 09:13	120310−1
	Potassium	2.38	ug/L					03−DEC−10 09:13	120310−1
	Silica	19.5	ug/L					03−DEC−10 09:13	120310−1
	Sodium	19.0	ug/L					03−DEC−10 09:13	120310−1
	Strontium	−0.512	ug/L					03−DEC−10 09:13	120310−1
	Tin	7.29	ug/L					03−DEC−10 09:13	120310−1
	Vanadium	0.667	ug/L					03−DEC−10 09:13	120310−1
	Zinc	14.1	ug/L					03−DEC−10 09:13	120310−1
ICSAB02									
	Aluminum	502000	ug/L	500000	ug/L	100	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Barium	524	ug/L	500	ug/L	105	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Beryllium	251	ug/L	250	ug/L	100	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Boron	526	ug/L	500	ug/L	105	80.0 − 120.0	03−DEC−10 09:15	120310−1

METALS
−4−
Interference Check Sample

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Calcium	500000	ug/L	500000	ug/L	100	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Cobalt	493	ug/L	500	ug/L	98.6	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Copper	582	ug/L	500	ug/L	116	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Iron	197000	ug/L	200000	ug/L	98.5	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Magnesium	492000	ug/L	500000	ug/L	98.3	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Manganese	511	ug/L	500	ug/L	102	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Potassium	5700	ug/L	5000	ug/L	114	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Silica	11700	ug/L	10700	ug/L	109	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Sodium	5540	ug/L	5000	ug/L	111	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Strontium	517	ug/L	500	ug/L	103	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Tin	528	ug/L	500	ug/L	106	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Vanadium	523	ug/L	500	ug/L	105	80.0 − 120.0	03−DEC−10 09:15	120310−1
	Zinc	516	ug/L	500	ug/L	103	80.0 − 120.0	03−DEC−10 09:15	120310−1

METALS
−4−
Interference Check Sample

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.297	ug/L					02−DEC−10 18:52	101201−2
	Arsenic	−0.284	ug/L					02−DEC−10 18:52	101201−2
	Cadmium	0.295	ug/L					02−DEC−10 18:52	101201−2
	Chromium	2.3	ug/L					02−DEC−10 18:52	101201−2
	Lead	0.399	ug/L					02−DEC−10 18:52	101201−2
	Nickel	2.84	ug/L					02−DEC−10 18:52	101201−2
	Selenium	−1.01	ug/L					02−DEC−10 18:52	101201−2
	Silver	0.144	ug/L					02−DEC−10 18:52	101201−2
ICSAB01									
	Antimony	20.5	ug/L	20	ug/L	103	80.0 − 120.0	02−DEC−10 18:58	101201−2
	Arsenic	20.6	ug/L	20	ug/L	103	80.0 − 120.0	02−DEC−10 18:58	101201−2
	Cadmium	19.7	ug/L	20.44	ug/L	96.2	80.0 − 120.0	02−DEC−10 18:58	101201−2
	Chromium	24.3	ug/L	23.3	ug/L	104	80.0 − 120.0	02−DEC−10 18:58	101201−2
	Lead	22.4	ug/L	20.19	ug/L	111	80.0 − 120.0	02−DEC−10 18:58	101201−2
	Nickel	23.5	ug/L	23.31	ug/L	101	80.0 − 120.0	02−DEC−10 18:58	101201−2
	Selenium	19.1	ug/L	20	ug/L	95.6	80.0 − 120.0	02−DEC−10 18:58	101201−2
	Silver	19.9	ug/L	20	ug/L	99.3	80.0 − 120.0	02−DEC−10 18:58	101201−2

METALS
−4−
Interference Check Sample

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.193	ug/L					03−DEC−10 08:01	101201−4
	Arsenic	0.106	ug/L					03−DEC−10 08:01	101201−4
	Cadmium	0.17	ug/L					03−DEC−10 08:01	101201−4
	Chromium	1.79	ug/L					03−DEC−10 08:01	101201−4
	Nickel	2.63	ug/L					03−DEC−10 08:01	101201−4
	Selenium	−1.12	ug/L					03−DEC−10 08:01	101201−4
	Silver	0.119	ug/L					03−DEC−10 08:01	101201−4
ICSAB01									
	Antimony	20.2	ug/L	20	ug/L	101	80.0 − 120.0	03−DEC−10 08:08	101201−4
	Arsenic	20.0	ug/L	20	ug/L	100	80.0 − 120.0	03−DEC−10 08:08	101201−4
	Cadmium	18.8	ug/L	20.44	ug/L	92.1	80.0 − 120.0	03−DEC−10 08:08	101201−4
	Chromium	22.8	ug/L	23.3	ug/L	97.7	80.0 − 120.0	03−DEC−10 08:08	101201−4
	Nickel	22.5	ug/L	23.31	ug/L	96.7	80.0 − 120.0	03−DEC−10 08:08	101201−4
	Selenium	18.5	ug/L	20	ug/L	92.5	80.0 − 120.0	03−DEC−10 08:08	101201−4
	Silver	18.9	ug/L	20	ug/L	94.7	80.0 − 120.0	03−DEC−10 08:08	101201−4

METALS
−4−
Interference Check Sample

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Molybdenum	2060	ug/L	2000	ug/L	103	80.0 − 120.0	03−DEC−10 14:55	101203−5
	Thallium	0.081	ug/L					03−DEC−10 14:55	101203−5
ICSAB01									
	Molybdenum	2000	ug/L	2000	ug/L	100	80.0 − 120.0	03−DEC−10 14:58	101203−5
	Thallium	20.9	ug/L	20	ug/L	104	80.0 − 120.0	03−DEC−10 14:58	101203−5

METALS
−4−
Interference Check Sample

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Lead	0.423	ug/L					06−DEC−10 14:02	101206−6
	Molybdenum	1870	ug/L	2000	ug/L	93.5	80.0 − 120.0	06−DEC−10 14:02	101206−6
	Thallium	0.068	ug/L					06−DEC−10 14:02	101206−6
ICSAB01									
	Lead	22.1	ug/L	20.19	ug/L	110	80.0 − 120.0	06−DEC−10 14:04	101206−6
	Molybdenum	1870	ug/L	2000	ug/L	93.5	80.0 − 120.0	06−DEC−10 14:04	101206−6
	Thallium	21.2	ug/L	20	ug/L	106	80.0 − 120.0	06−DEC−10 14:04	101206−6

METALS
−4−
Interference Check Sample

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium	0.004	ug/L					08−DEC−10 00:02	101207−7
ICSAB01									
	Uranium	23.3	ug/L	20	ug/L	116	80.0 − 120.0	08−DEC−10 00:05	101207−7

METALS
−4−
Interference Check Sample

SDG No: 11−464

Contract: ESHL00210 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium	0.001	ug/L					08−DEC−10 01:14	101207−8
ICSAB01									
	Uranium	23.6	ug/L	20	ug/L	118	80.0 − 120.0	08−DEC−10 01:16	101207−8

METALS
−5a−

Matrix Spike Summary

SDG NO. 11−464 **Client ID** Buckman1−11−1944S

Contract: ESHL00210 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 266878001 **Spike ID:** 1202262895

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75−125	4850		68	U	5000	95.8		P
Barium	ug/L	75−125	523		21.2		500	100		P
Beryllium	ug/L	75−125	507		1	U	500	101		P
Boron	ug/L	75−125	620		113		500	102		P
Calcium	ug/L	75−125	12500		7590		5000	97.6		P
Cobalt	ug/L	75−125	499		1	U	500	99.8		P
Copper	ug/L	75−125	553		14.6		500	108		P
Iron	ug/L	75−125	5080		30	U	5000	101		P
Magnesium	ug/L	75−125	5440		380		5000	101		P
Manganese	ug/L	75−125	493		2	U	500	98.5		P
Potassium	ug/L	75−125	6900		2050		5000	96.9		P
Silica	mg/L	75−125	51.3		40.2		10.7	103		P
Sodium	ug/L		102000		97900		5000	83.6	N/A	P
Strontium	ug/L	75−125	628		136		500	98.2		P
Tin	ug/L	75−125	513		2.5	U	500	103		P
Vanadium	ug/L	75−125	542		37.9		500	101		P
Zinc	ug/L	75−125	515		7.14	J	500	101		P

METALS
−5a−

Matrix Spike Summary

SDG NO. 11−464 **Client ID** Buckman1−11−1944S

Contract: ESHL00210 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 266878001 **Spike ID:** 1202262900

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	75−125	188		0.5	U	200	93.7		MS
Arsenic	ug/L	75−125	85.4		11.5		80	92.3		MS
Cadmium	ug/L	75−125	10.1		0.11	U	10	101		MS
Chromium	ug/L	75−125	57.9		10.9		50	94		MS
Lead	ug/L	75−125	43		1.11	J	40	105		MS
Molybdenum	ug/L	75−125	56.9		3.8		50	106		MS
Nickel	ug/L	75−125	42.9		0.5	U	50	85.4		MS
Selenium	ug/L	75−125	17		1	U	20	83.2		MS
Silver	ug/L	75−125	51.1		0.2	U	50	102		MS
Thallium	ug/L	75−125	86.4		0.3	U	100	86.4		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 11−464 **Client ID** Buckman1−11−1944S

Contract: ESHL00210 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 266878001 **Spike ID:** 1202265726

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75−125	2.04		0.066	U	2	102		AV

METALS
−5a−

Matrix Spike Summary

SDG NO. 11−464 **Client ID** Buckman08−11−2042S

Contract: ESHL00210 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 266878005 **Spike ID:** 1202266502

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75−125	4860		68	U	5000	97.3		P
Barium	ug/L	75−125	578		67.7		500	102		P
Beryllium	ug/L	75−125	516		1	U	500	103		P
Boron	ug/L	75−125	618		99.5		500	104		P
Calcium	ug/L		27600		22500		5000	101	N/A	P
Cobalt	ug/L	75−125	508		1	U	500	102		P
Copper	ug/L	75−125	570		24.5		500	109		P
Iron	ug/L	75−125	5160		30	U	5000	103		P
Magnesium	ug/L	75−125	8750		3600		5000	103		P
Manganese	ug/L	75−125	498		2	U	500	99.5		P
Potassium	ug/L	75−125	7960		3040		5000	98.5		P
Silica	mg/L	75−125	50.4		39.1		10.7	105		P
Sodium	ug/L		104000		99800		5000	81.7	N/A	P
Strontium	ug/L	75−125	1030		537		500	98.5		P
Tin	ug/L	75−125	521		2.5	U	500	104		P
Vanadium	ug/L	75−125	547		37.3		500	102		P
Zinc	ug/L	75−125	520		5.66	J	500	103		P

METALS
−5a−

Matrix Spike Summary

SDG NO. 11−464 **Client ID** Buckman08−11−2042S

Contract: ESHL00210 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 266878005 **Spike ID:** 1202266507

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	75−125	182		0.5	U	200	91.1		MS
Arsenic	ug/L	75−125	84.5		6.74		80	97.1		MS
Cadmium	ug/L	75−125	10.2		0.11	U	10	102		MS
Chromium	ug/L	75−125	55.9		7.74	J	50	96.3		MS
Lead	ug/L	75−125	52.2		2.31		40	125		MS
Molybdenum	ug/L	75−125	69.6		3.03		50	133	N	MS
Nickel	ug/L	75−125	50.6		0.834	J	50	99.5		MS
Selenium	ug/L	75−125	19.4		1	U	20	95.2		MS
Silver	ug/L	75−125	50.2		0.2	U	50	100		MS
Thallium	ug/L	75−125	108		0.3	U	100	108		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 11−464 **Client ID** Buckman1−11−1944S

Contract: ESHL00210 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 266878001 **Spike ID:** 1202278969

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Uranium	ug/L	75−125	62.5		18.8		50	87.4		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 11−464 **Client ID** Buckman08−11−2042S

Contract: ESHL00210 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 266878005 **Spike ID:** 1202279261

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Uranium	ug/L	75−125	69.4		21.2		50	96.4		MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** Buckman1−11−1944D

Sample ID: 266878001 **Duplicate ID:** 1202262894 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68	U	68	U			P
Barium	ug/L	+/−5	21.2		21.3		.25		P
Beryllium	ug/L		1	U	1	U			P
Boron	ug/L	+/−50	113		112		.908		P
Calcium	ug/L	+/−20%	7590		7580		.0909		P
Cobalt	ug/L		1	U	1	U			P
Copper	ug/L	+/−10	14.6		12.3		17.3		P
Iron	ug/L		30	U	30	U			P
Magnesium	ug/L	+/−300	380		407		6.87		P
Manganese	ug/L		2	U	2	U			P
Potassium	ug/L	+/−20%	2050		2000		2.51		P
Silica	mg/L	+/−20%	40.2		40.3		.0844		P
Sodium	ug/L	+/−20%	97900		97700		.227		P
Strontium	ug/L	+/−20%	136		136		.183		P
Tin	ug/L		2.5	U	2.5	U			P
Vanadium	ug/L	+/−20%	37.9		37.8		.264		P
Zinc	ug/L	+/−10	7.14	J	5.6	J	24.1		P

Metals
−6−
Duplicate Sample Summary

SDG No.: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** Buckman1−11−1944D

Sample ID: 266878001 **Duplicate ID:** 1202262899 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		0.5	U	0.5	U			MS
Arsenic	ug/L	+/−5	11.5		11.5		.599		MS
Cadmium	ug/L		0.11	U	0.11	U			MS
Chromium	ug/L	+/−10	10.9		10.9		.11		MS
Lead	ug/L	+/−2	1.11	J	1.03	J	7.65		MS
Molybdenum	ug/L	+/−20%	3.8		3.8		0		MS
Nickel	ug/L		0.5	U	0.5	U			MS
Selenium	ug/L		1	U	1	U			MS
Silver	ug/L		0.2	U	0.2	U			MS
Thallium	ug/L		0.3	U	0.3	U			MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** Buckman1−11−1944D

Sample ID: 266878001 **Duplicate ID:** 1202265725 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066	U	0.066	U			AV

Metals
−6−
Duplicate Sample Summary

SDG No.: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** Buckman08−11−2042D

Sample ID: 266878005 **Duplicate ID:** 1202266501 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68	U	68	U			P
Barium	ug/L	+/−20%	67.7		68.3		.894		P
Beryllium	ug/L		1	U	1	U			P
Boron	ug/L	+/−50	99.5		100		.548		P
Calcium	ug/L	+/−20%	22500		22800		1.17		P
Cobalt	ug/L		1	U	1	U			P
Copper	ug/L	+/−10	24.5		24.6		.248		P
Iron	ug/L		30	U	30	U			P
Magnesium	ug/L	+/−20%	3600		3640		1.24		P
Manganese	ug/L		2	U	2	U			P
Potassium	ug/L	+/−20%	3040		3090		1.56		P
Silica	mg/L	+/−20%	39.1		39.6		1.24		P
Sodium	ug/L	+/−20%	99800		101000		1.11		P
Strontium	ug/L	+/−20%	537		542		1.06		P
Tin	ug/L		2.5	U	2.5	U			P
Vanadium	ug/L	+/−20%	37.3		37.6		.775		P
Zinc	ug/L	+/−10	5.66	J	4.65	J	19.5		P

Metals
−6−
Duplicate Sample Summary

SDG No.: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** Buckman08−11−2042D

Sample ID: 266878005 **Duplicate ID:** 1202266506 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		0.5	U	0.5	U			MS
Arsenic	ug/L	+/−5	6.74		6.66		1.15		MS
Cadmium	ug/L		0.11	U	0.11	U			MS
Chromium	ug/L	+/−10	7.74	J	8.34	J	7.45		MS
Lead	ug/L	+/−2	2.31		2.29		.74		MS
Molybdenum	ug/L	+/−20%	3.03		2.91		4.01		MS
Nickel	ug/L	+/−2	0.834	J	0.799	J	4.29		MS
Selenium	ug/L		1	U	1	U			MS
Silver	ug/L		0.2	U	0.2	U			MS
Thallium	ug/L		0.3	U	0.3	U			MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** Buckman1−11−1944D

Sample ID: 266878001 **Duplicate ID:** 1202278968 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Uranium	ug/L	+/−20%	18.8		18.4		1.79		MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 11−464

Contract: ESHL00210 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** Buckman08−11−2042D

Sample ID: 266878005 **Duplicate ID:** 1202279260 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Uranium	ug/L	+/−20%	21.2		21		.658		MS

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 11−464

Contract: ESHL00210

Aqueous LCS Source: OS2I **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202262893								
	Aluminum	ug/L	5000	4980		99.7	80−120	P
	Barium	ug/L	500	509		102	80−120	P
	Beryllium	ug/L	500	506		101	80−120	P
	Boron	ug/L	500	504		101	80−120	P
	Calcium	ug/L	5000	5220		104	80−120	P
	Cobalt	ug/L	500	504		101	80−120	P
	Copper	ug/L	500	519		104	80−120	P
	Iron	ug/L	5000	5120		102	80−120	P
	Magnesium	ug/L	5000	5210		104	80−120	P
	Manganese	ug/L	500	504		101	80−120	P
	Potassium	ug/L	5000	5030		101	80−120	P
	Silica	mg/L	10.7	10.7		99.9	80−120	P
	Sodium	ug/L	5000	5150		103	80−120	P
	Strontium	ug/L	500	506		101	80−120	P
	Tin	ug/L	500	521		104	80−120	P
	Vanadium	ug/L	500	505		101	80−120	P
	Zinc	ug/L	500	502		100	80−120	P

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 11−464

Contract: ESHL00210

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202262898								
	Arsenic	ug/L	50	46.9		93.7	80−120	MS
	Cadmium	ug/L	50	49.6		99.2	80−120	MS
	Chromium	ug/L	50	52		104	80−120	MS
	Lead	ug/L	50	53.2		106	80−120	MS
	Molybdenum	ug/L	50	53.2		106	80−120	MS
	Nickel	ug/L	50	46.5		93	80−120	MS
	Selenium	ug/L	50	45.3		90.7	80−120	MS
	Silver	ug/L	50	52.6		105	80−120	MS
	Thallium	ug/L	50	45.7		91.5	80−120	MS
	Antimony	ug/L	50	49		98	80−120	MS

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 11−464

Contract: ESHL00210

Aqueous LCS Source: GEL **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202265724								
	Mercury	ug/L	2	2.05		102	85−115	AV

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 11−464

Contract: ESHL00210

Aqueous LCS Source: OS2I **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202266500								
	Aluminum	ug/L	5000	5070		101	80−120	P
	Barium	ug/L	500	520		104	80−120	P
	Beryllium	ug/L	500	517		103	80−120	P
	Boron	ug/L	500	514		103	80−120	P
	Calcium	ug/L	5000	5310		106	80−120	P
	Cobalt	ug/L	500	515		103	80−120	P
	Copper	ug/L	500	531		106	80−120	P
	Iron	ug/L	5000	5210		104	80−120	P
	Magnesium	ug/L	5000	5310		106	80−120	P
	Manganese	ug/L	500	517		103	80−120	P
	Potassium	ug/L	5000	5100		102	80−120	P
	Silica	mg/L	10.7	11		103	80−120	P
	Sodium	ug/L	5000	5200		104	80−120	P
	Strontium	ug/L	500	515		103	80−120	P
	Tin	ug/L	500	534		107	80−120	P
	Vanadium	ug/L	500	516		103	80−120	P
	Zinc	ug/L	500	515		103	80−120	P

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 11−464

Contract: ESHL00210

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202266505								
	Antimony	ug/L	50	46.8		93.6	80−120	MS
	Arsenic	ug/L	50	43.6		87.2	80−120	MS
	Cadmium	ug/L	50	46.4		92.9	80−120	MS
	Thallium	ug/L	50	49.8		99.5	80−120	MS
	Chromium	ug/L	50	48.5		97	80−120	MS
	Lead	ug/L	50	56.5		113	80−120	MS
	Molybdenum	ug/L	50	55.7		111	80−120	MS
	Nickel	ug/L	50	51.3		103	80−120	MS
	Selenium	ug/L	50	46.3		92.6	80−120	MS
	Silver	ug/L	50	50.3		101	80−120	MS

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 11−464

Contract: ESHL00210

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202278967								
	Uranium	ug/L	50	50.2		100	80−120	MS

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 11−464

Contract: ESHL00210

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202279259								
	Uranium	ug/L	50	50.6		101	80−120	MS

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 11−464 **Client ID** Buckman1−11−1944L

Contract: ESHL00210

Matrix: LIQUID **Level:** Low

Sample ID: 266878001 **Serial Dilution ID:** 1202262896

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Barium	21.2		22.2	J	4.72			P
Beryllium	1	U	5	U				P
Boron	113		117	J	3.1			P
Calcium	7590		7250		4.48		10	P
Cobalt	1	U	5	U				P
Copper	14.6		15	U	100			P
Iron	30	U	150	U				P
Magnesium	380		425	U	100			P
Manganese	2	U	10	U				P
Potassium	2050		2090		1.71			P
Silica	40200		39300		2.36		10	P
Sodium	97900		99000		1.12		10	P
Strontium	136		138		1.1		10	P
Tin	2.5	U	12.5	U				P
Vanadium	37.9		35.8		5.67			P
Zinc	7.14	J	16.5	U	100			P

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 11−464 **Client ID** Buckman1−11−1944L

Contract: ESHL00210

Matrix: LIQUID **Level:** Low

Sample ID: 266878001 **Serial Dilution ID:** 1202262901

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	.5	U	2.5	U				MS
Arsenic	11.5		11.4	J	.87			MS
Cadmium	.11	U	.55	U				MS
Chromium	10.9		12.5	U	100			MS
Lead	1.11	J	2.5	U	100			MS
Molybdenum	3.8		3.95		3.82			MS
Nickel	.5	U	2.5	U				MS
Selenium	1	U	5	U				MS
Silver	.2	U	1	U				MS
Thallium	.3	U	5.2					MS

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 11−464 **Client ID** Buckman1−11−1944L

Contract: ESHL00210

Matrix: LIQUID **Level:** Low

Sample ID: 266878001 **Serial Dilution ID:** 1202265731

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 11−464 **Client ID** Buckman08−11−2042L

Contract: ESHL00210

Matrix: LIQUID **Level:** Low

Sample ID: 266878005 **Serial Dilution ID:** 1202266503

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	1640					P
Barium	67.7		69		1.92		10	P
Beryllium	1	U	5	U				P
Boron	99.5		98.5	J	1.01			P
Calcium	22500		22100		1.78		10	P
Cobalt	1	U	5	U				P
Copper	24.5		24.1	J	1.63			P
Iron	30	U	150	U				P
Magnesium	3600		3470		3.61			P
Manganese	2	U	10	U				P
Potassium	3040		3200		5.26		10	P
Silica	39100		39000		.256		10	P
Sodium	99800		102000		1.7		10	P
Strontium	537		540		.559		10	P
Tin	2.5	U	12.5	U				P
Vanadium	37.3		35		6.17			P
Zinc	5.66	J	16.5	U	100			P

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 11−464 **Client ID** Buckman08−11−2042L

Contract: ESHL00210

Matrix: LIQUID **Level:** Low

Sample ID: 266878005 **Serial Dilution ID:** 1202266508

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	.5	U	2.5	U				MS
Arsenic	6.74		7.5	U	100			MS
Cadmium	.11	U	.55	U				MS
Chromium	7.74	J	12.5	U	100			MS
Lead	2.31		2.5	U	100			MS
Molybdenum	3.03		3.14		3.47			MS
Nickel	.834	J	2.5	U	100			MS
Selenium	1	U	5	U				MS
Silver	.2	U	1	U				MS
Thallium	.3	U	6.1					MS

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 11−464 **Client ID** Buckman1−11−1944L

Contract: ESHL00210

Matrix: LIQUID **Level:** Low

Sample ID: 266878001 **Serial Dilution ID:** 1202278970

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Uranium	18.8		18.7		.532		10	MS

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 11−464 **Client ID** Buckman08−11−2042L

Contract: ESHL00210

Matrix: LIQUID **Level:** Low

Sample ID: 266878005 **Serial Dilution ID:** 1202279262

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Uranium	21.2		21.3		.472		10	MS

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 11−464 **Method Type:** P

Contract: ESHL00210 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 1048312							
1202262892	MB for batch 1048312	MB	W	17−NOV−10	50mL	50mL	
1202262893	LCS for batch 1048312	LCS	W	17−NOV−10	50mL	50mL	
1202262895	Buckman1−11−1944S	MS	W	17−NOV−10	50mL	50mL	
1202262894	Buckman1−11−1944D	DUP	W	17−NOV−10	50mL	50mL	
266878001	Buckman1−11−1944	SAMPLE	W	17−NOV−10	50mL	50mL	
266878003	Buckman06−11−1970	SAMPLE	W	17−NOV−10	50mL	50mL	
Batch Number 1049743							
1202266499	MB for batch 1049743	MB	W	18−NOV−10	50mL	50mL	
1202266500	LCS for batch 1049743	LCS	W	18−NOV−10	50mL	50mL	
1202266502	Buckman08−11−2042S	MS	W	18−NOV−10	50mL	50mL	
1202266501	Buckman08−11−2042D	DUP	W	18−NOV−10	50mL	50mL	
266878005	Buckman08−11−2042	SAMPLE	W	18−NOV−10	50mL	50mL	

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 11−464 **Method Type:** MS

Contract: ESHL00210 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 1048317							
1202262897	MB for batch 1048317	MB	W	17−NOV−10	50mL	50mL	
1202262898	LCS for batch 1048317	LCS	W	17−NOV−10	50mL	50mL	
1202262900	Buckman1−11−1944S	MS	W	17−NOV−10	50mL	50mL	
1202262899	Buckman1−11−1944D	DUP	W	17−NOV−10	50mL	50mL	
266878001	Buckman1−11−1944	SAMPLE	W	17−NOV−10	50mL	50mL	
266878003	Buckman06−11−1970	SAMPLE	W	17−NOV−10	50mL	50mL	
266878004	Buckman06−11−1971	SAMPLE	W	17−NOV−10	50mL	50mL	
266878006	Buckman08−11−2043	SAMPLE	W	17−NOV−10	50mL	50mL	
Batch Number 1049746							
1202266504	MB for batch 1049746	MB	W	18−NOV−10	50mL	50mL	
1202266505	LCS for batch 1049746	LCS	W	18−NOV−10	50mL	50mL	
1202266507	Buckman08−11−2042S	MS	W	18−NOV−10	50mL	50mL	
1202266506	Buckman08−11−2042D	DUP	W	18−NOV−10	50mL	50mL	
266878002	Buckman1−11−1945	SAMPLE	W	18−NOV−10	50mL	50mL	
266878005	Buckman08−11−2042	SAMPLE	W	18−NOV−10	50mL	50mL	
Batch Number 1054713							
1202278966	MB for batch 1054713	MB	W	06−DEC−10	50mL	50mL	
1202278967	LCS for batch 1054713	LCS	W	06−DEC−10	50mL	50mL	
1202278969	Buckman1−11−1944S	MS	W	06−DEC−10	50mL	50mL	

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 11−464 **Method Type:** MS

Contract: ESHL00210 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
1202278968	Buckman1−11−1944D	DUP	W	06−DEC−10	50mL	50mL	
266878001	Buckman1−11−1944	SAMPLE	W	06−DEC−10	50mL	50mL	
266878003	Buckman06−11−1970	SAMPLE	W	06−DEC−10	50mL	50mL	
266878004	Buckman06−11−1971	SAMPLE	W	06−DEC−10	50mL	50mL	
266878006	Buckman08−11−2043	SAMPLE	W	06−DEC−10	50mL	50mL	
Batch Number	1054824						
1202279258	MB for batch 1054824	MB	W	06−DEC−10	50mL	50mL	
1202279259	LCS for batch 1054824	LCS	W	06−DEC−10	50mL	50mL	
1202279261	Buckman08−11−2042S	MS	W	06−DEC−10	50mL	50mL	
1202279260	Buckman08−11−2042D	DUP	W	06−DEC−10	50mL	50mL	
266878002	Buckman1−11−1945	SAMPLE	W	06−DEC−10	50mL	50mL	
266878005	Buckman08−11−2042	SAMPLE	W	06−DEC−10	50mL	50mL	

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 11−464 **Method Type:** AV

Contract: ESHL00210 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 1049383							
1202265723	MB for batch 1049383	MB	W	30−NOV−10	20mL	20mL	
1202265724	LCS for batch 1049383	LCS	W	30−NOV−10	20mL	20mL	
1202265726	Buckman1−11−1944S	MS	W	30−NOV−10	20mL	20mL	
1202265725	Buckman1−11−1944D	DUP	W	30−NOV−10	20mL	20mL	
266878001	Buckman1−11−1944	SAMPLE	W	30−NOV−10	20mL	20mL	
266878003	Buckman06−11−1970	SAMPLE	W	30−NOV−10	20mL	20mL	
266878005	Buckman08−11−2042	SAMPLE	W	30−NOV−10	20mL	20mL	

Metals
−14−
Analysis Run Log

Contract: ESHL00210
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 02−DEC−10
End Date: 03−DEC−10
Client Sdg: 11−464
Method MS
Data File: 101201−2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu		Fe	Pb	Mg	Mn	Hg	Mo	Ni	K	Se	SiO2	Ag	Na	Sr	Tl	Sn	U	V	Zn
S0.0	1	18:15:00		X	X				X		X					X					X		X		X							
S10	1	18:22:00		X	X				X		X					X					X		X		X							
S100	1	18:28:00		X	X				X		X					X					X		X		X							
ICV01	1	18:34:00		X	X				X		X					X					X		X		X							
ICB01	1	18:40:00		X	X				X		X					X					X		X		X							
CRDL01	1	18:46:00		X	X				X		X					X					X		X		X							
ICSA01	1	18:52:00		X	X				X		X					X					X		X		X							
ICSAB01	1	18:58:00		X	X				X		X					X					X		X		X							
CCV01	1	19:04:00		X	X				X		X					X					X		X		X							
CCB01	1	19:10:00		X	X				X		X					X					X		X		X							
LR01	1	19:17:00		X	X				X		X					X					X		X		X							
CCV02	1	19:23:00		X	X				X		X					X					X		X		X							
CCB02	1	19:29:00		X	X				X		X					X					X		X		X							
ZZZZZZ	1	19:35:00																														
ZZZZZZ	1	19:41:00																														
ZZZZZZ	1	19:47:00																														
CCV03	1	19:53:00		X	X				X		X					X					X		X		X							
CCB03	1	19:59:00		X	X				X		X					X					X		X		X							
ZZZZZZ	1	20:05:00																														
ZZZZZZ	1	20:12:00																														
CCV04	1	20:18:00		X	X				X		X					X					X		X		X							
CCB04	1	20:24:00		X	X				X		X					X					X		X		X							
ZZZZZZ	5	20:30:00																														
ZZZZZZ	1	20:36:00																														
ZZZZZZ	1	20:42:00																														
CCV05	1	20:48:00		X	X				X		X					X					X		X		X							
CCB05	1	20:54:00		X	X				X		X					X					X		X		X							
ZZZZZZ	1	21:00:00																														
ZZZZZZ	1	21:07:00																														
CCV06	1	21:13:00		X	X				X		X					X					X		X		X							
CCB06	1	21:19:00		X	X				X		X					X					X		X		X							
ZZZZZZ	1	21:25:00																														
ZZZZZZ	1	21:31:00																														
ZZZZZZ	1	21:37:00																														
ZZZZZZ	5	21:43:00																														
ZZZZZZ	1	21:49:00																														
ZZZZZZ	1	21:55:00																														
ZZZZZZ	1	22:02:00																														
CCV07	1	22:08:00		X	X				X		X					X					X		X		X							
CCB07	1	22:14:00		X	X				X		X					X					X		X		X							

Metals
−14−
Analysis Run Log

Samp No.	D/F	Run Time																													
ZZZZZZ	1	22:20:00																													
ZZZZZZ	1	22:26:00																													
CCV08	1	22:32:00		X	X				X		X					X					X		X		X							
CCB08	1	22:38:00		X	X				X		X					X					X		X		X							
ZZZZZZ	1	22:44:00																													
ZZZZZZ	1	22:51:00																													
ZZZZZZ	1	22:57:00																													
ZZZZZZ	1	23:03:00																													
ZZZZZZ	5	23:09:00																													
CCV09	1	23:15:00		X	X				X		X					X					X		X		X							
CCB09	1	23:21:00		X	X				X		X					X					X		X		X							
1202262897	1	23:27:00		X	X				X		X					X					X		X		X							
1202262898	1	23:33:00		X	X				X		X					X					X		X		X							
CCV10	1	23:40:00		X	X				X		X					X					X		X		X							
CCB10	1	23:46:00		X	X				X		X					X					X		X		X							
266878001	1	23:52:00		X	X				X		X					X					X		X		X							
1202262899	1	23:58:00		X	X				X		X					X					X		X		X							
1202262900	1	00:04:00		X	X				X		X					X					X		X		X							
1202262901	5	00:10:00		X	X				X		X					X					X		X		X							
266878003	1	00:16:00		X	X				X		X					X					X		X		X							
266878004	1	00:23:00									X																				
266878006	1	00:29:00									X																				
CCV11	1	00:35:00		X	X				X		X					X					X		X		X							
CCB11	1	00:41:00		X	X				X		X					X					X		X		X							

Metals
−14−
Analysis Run Log

Contract: ESHL00210
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 02−DEC−10
End Date: 03−DEC−10
Client Sdg: 11−464
Method MS
Data File: 101201−4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu		Fe	Pb	Mg	Mn	Hg	Mo	Ni	K	Se	SiO2	Ag	Na	Sr	Tl	Sn	U	V	Zn
S0.0	1	07:25:00		X	X				X		X										X		X		X							
S10	1	07:31:00		X	X				X		X										X		X		X							
S100	1	07:37:00		X	X				X		X										X		X		X							
ICV01	1	07:43:00		X	X				X		X										X		X		X							
ICB01	1	07:49:00		X	X				X		X										X		X		X							
CRDL01	1	07:55:00		X	X				X		X										X		X		X							
ICSA01	1	08:01:00		X	X				X		X										X		X		X							
ICSAB01	1	08:08:00		X	X				X		X										X		X		X							
CCV01	1	08:14:00		X	X				X		X										X		X		X							
CCB01	1	08:20:00		X	X				X		X										X		X		X							
1202266504	1	08:26:00		X	X				X		X										X		X		X							
1202266505	1	08:32:00		X	X				X		X										X		X		X							
CCV02	1	08:38:00		X	X				X		X										X		X		X							
CCB02	1	08:44:00		X	X				X		X										X		X		X							
266878002	1	08:50:00									X																					
266878005	1	08:56:00		X	X				X		X										X		X		X							
1202266506	1	09:03:00		X	X				X		X										X		X		X							
1202266507	1	09:09:00		X	X				X		X										X		X		X							
1202266508	5	09:15:00		X	X				X		X										X		X		X							
ZZZZZZ	1	09:21:00																														
ZZZZZZ	1	09:27:00																														
CCV03	1	09:33:00		X	X				X		X										X		X		X							
CCB03	1	09:39:00		X	X				X		X										X		X		X							

Metals
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Analysis Run Log

Contract: ESHL00210
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 03-DEC-10 **End Date:** 03-DEC-10

Client Sdg: 11-464
Method MS
Data File: 101203-5

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu		Fe	Pb	Mg	Mn	Hg	Mo	Ni	K	Se	SiO2	Ag	Na	Sr	Tl	Sn	U	V	Zn
S0.0	1	14:41:00																		X								X				
S10	1	14:43:00																		X								X				
S100	1	14:45:00																		X								X				
ICV01	1	14:48:00																		X								X				
ICB01	1	14:50:00																		X								X				
CRDL01	1	14:53:00																		X								X				
ICSA01	1	14:55:00																		X								X				
ICSAB01	1	14:58:00																		X								X				
CCV01	1	15:00:00																		X								X				
CCB01	1	15:02:00																		X								X				
ZZZZZZ	1	15:05:00																														
ZZZZZZ	1	15:07:00																														
CCV02	1	15:10:00																		X								X				
CCB02	1	15:12:00																		X								X				
ZZZZZZ	1	15:14:00																														
ZZZZZZ	1	15:17:00																														
ZZZZZZ	1	15:19:00																														
ZZZZZZ	5	15:22:00																														
ZZZZZZ	1	15:24:00																														
ZZZZZZ	1	15:27:00																														
ZZZZZZ	1	15:29:00																														
CCV03	1	15:31:00																		X								X				
CCB03	1	15:34:00																		X								X				
ZZZZZZ	1	15:36:00																														
ZZZZZZ	1	15:39:00																														
ZZZZZZ	1	15:41:00																														
ZZZZZZ	1	15:43:00																														
ZZZZZZ	1	15:46:00																														
ZZZZZZ	1	15:48:00																														
ZZZZZZ	1	15:51:00																														
ZZZZZZ	5	15:53:00																														
CCV04	1	15:56:00																		X								X				
CCB04	1	15:58:00																		X								X				
1202262897	1	16:00:00																		X								X				
1202262898	1	16:03:00																		X								X				
CCV05	1	16:05:00																		X								X				
CCB05	1	16:08:00																		X								X				
266878001	1	16:18:00																		X								X				
1202262899	1	16:20:00																		X								X				
1202262900	1	16:23:00																		X								X				

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																												
1202262901	5	16:25:00																	X								X				
266878003	1	16:28:00																	X								X				
ZZZZZZ	1	16:30:00																													
ZZZZZZ	1	16:33:00																													
CCV06	1	16:35:00																	X								X				
CCB06	1	16:37:00																	X								X				

Metals
−14−
Analysis Run Log

Contract: ESHL00210
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 06−DEC−10
End Date: 06−DEC−10
Client Sdg: 11−464
Method MS
Data File: 101206−6

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu		Fe	Pb	Mg	Mn	Hg	Mo	Ni	K	Se	SiO2	Ag	Na	Sr	Tl	Sn	U	V	Zn
S0.0	1	13:47:00														X				X								X				
S10	1	13:49:00														X				X								X				
S100	1	13:52:00														X				X								X				
ICV01	1	13:54:00														X				X								X				
ICB01	1	13:57:00														X				X								X				
CRDL01	1	13:59:00														X				X								X				
ICSA01	1	14:02:00														X				X								X				
ICSAB01	1	14:04:00														X				X								X				
CCV01	1	14:07:00														X				X								X				
CCB01	1	14:09:00														X				X								X				
1202266504	1	14:12:00														X				X								X				
1202266505	1	14:14:00														X				X								X				
CCV02	1	14:17:00														X				X								X				
CCB02	1	14:19:00														X				X								X				
ZZZZZZ	1	14:22:00																														
266878005	1	14:25:00														X				X								X				
1202266506	1	14:27:00														X				X								X				
1202266507	1	14:30:00														X				X								X				
1202266508	5	14:32:00														X				X								X				
CCV03	1	14:35:00														X				X								X				
CCB03	1	14:37:00														X				X								X				

Metals
−14−
Analysis Run Log

Contract: ESHL00210
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 07−DEC−10
End Date: 08−DEC−10
Client Sdg: 11−464
Method MS
Data File: 101207−7

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu		Fe	Pb	Mg	Mn	Hg	Mo	Ni	K	Se	SiO2	Ag	Na	Sr	Tl	Sn	U	V	Zn
S0.0	1	23:50:00																												X		
S10	1	23:52:00																												X		
S100	1	23:54:00																												X		
ICV01	1	23:56:00																												X		
ICB01	1	23:58:00																												X		
CRDL01	1	00:00:00																												X		
ICSA01	1	00:02:00																												X		
ICSAB01	1	00:05:00																												X		
CCV01	1	00:07:00																												X		
CCB01	1	00:09:00																												X		
ZZZZZZ	1	00:11:00																														
ZZZZZZ	1	00:13:00																														
ZZZZZZ	1	00:16:00																														
ZZZZZZ	1	00:18:00																														
ZZZZZZ	1	00:20:00																														
ZZZZZZ	1	00:22:00																														
ZZZZZZ	5	00:24:00																														
CCV02	1	00:26:00																												X		
CCB02	1	00:29:00																												X		
1202278966	1	00:31:00																												X		
1202278967	1	00:33:00																												X		
266878001	1	00:35:00																												X		
1202278968	1	00:37:00																												X		
1202278969	1	00:40:00																												X		
1202278970	5	00:42:00																												X		
266878003	1	00:44:00																												X		
ZZZZZZ	1	00:46:00																														
ZZZZZZ	1	00:48:00																														
CCV03	1	00:50:00																												X		
CCB03	1	00:52:00																												X		

Metals
−14−
Analysis Run Log

Contract: ESHL00210
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 07−DEC−10
End Date: 08−DEC−10
Client Sdg: 11−464
Method MS
Data File: 101207−8

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu		Fe	Pb	Mg	Mn	Hg	Mo	Ni	K	Se	SiO2	Ag	Na	Sr	Tl	Sn	U	V	Zn
S0.0	1	01:01:00																												X		
S10	1	01:03:00																												X		
S100	1	01:05:00																												X		
ICV01	1	01:07:00																												X		
ICB01	1	01:09:00																												X		
CRDL01	1	01:11:00																												X		
ICSA01	1	01:14:00																												X		
ICSAB01	1	01:16:00																												X		
CCV01	1	01:18:00																												X		
CCB01	1	01:20:00																												X		
ZZZZZZ	1	01:22:00																														
ZZZZZZ	1	01:24:00																														
ZZZZZZ	1	01:26:00																														
ZZZZZZ	1	01:29:00																														
ZZZZZZ	1	01:31:00																														
ZZZZZZ	5	01:33:00																														
ZZZZZZ	1	01:35:00																														
CCV02	1	01:37:00																												X		
CCB02	1	01:39:00																												X		
ZZZZZZ	1	01:41:00																														
ZZZZZZ	1	01:44:00																														
ZZZZZZ	1	01:46:00																														
ZZZZZZ	1	01:48:00																														
ZZZZZZ	1	01:50:00																														
ZZZZZZ	1	01:52:00																														
ZZZZZZ	1	01:54:00																														
CCV03	1	01:56:00																												X		
CCB03	1	01:59:00																												X		
1202279258	1	02:01:00																												X		
1202279259	1	02:03:00																												X		
ZZZZZZ	1	02:05:00																														
266878005	1	02:07:00																												X		
1202279260	1	02:09:00																												X		
1202279261	1	02:12:00																												X		
1202279262	5	02:14:00																												X		
ZZZZZZ	1	02:16:00																														
CCV04	1	02:18:00																												X		
CCB04	1	02:20:00																												X		

Metals
−14−
Analysis Run Log

Contract: ESHL00210
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 03−DEC−10
End Date: 03−DEC−10
Client Sdg: 11−464
Method P
Data File: 120310−1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu		Fe	Pb	Mg	Mn	Hg	Mo	Ni	K	Se	SiO2	Ag	Na	Sr	Tl	Sn	U	V	Zn
S0.0	1	05:25:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
S0.1	1	05:29:00				X	X	X				X	X					X				X		X			X		X		X	X
S0.5	1	05:31:00	X			X	X	X		X		X	X				X	X				X		X			X		X		X	X
SCAL	1	05:34:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
S10	1	05:37:00	X							X					X		X									X						
ICV01	1	05:38:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ICB01	1	05:41:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
PQL01	1	05:44:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ICSA01	1	05:47:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ICSAB01	1	05:48:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
LR01	1	05:50:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
LR02	1	05:52:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCV01	1	05:56:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB01	1	05:59:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	1	06:10:00																														
ZZZZZZ	1	06:13:00																														
ZZZZZZ	1	06:15:00																														
ZZZZZZ	1	06:18:00																														
ZZZZZZ	1	06:21:00																														
ZZZZZZ	1	06:23:00																														
ZZZZZZ	5	06:24:00																														
ZZZZZZ	1	06:27:00																														
CCV02	1	06:30:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB02	1	06:34:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	1	06:37:00																														
ZZZZZZ	1	06:40:00																														
ZZZZZZ	1	06:43:00																														
ZZZZZZ	1	06:46:00																														
ZZZZZZ	1	06:49:00																														
ZZZZZZ	1	06:53:00																														
ZZZZZZ	1	06:56:00																														
ZZZZZZ	1	06:59:00																														
CCV03	1	07:03:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB03	1	07:06:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	1	07:09:00																														
ZZZZZZ	1	07:12:00																														
ZZZZZZ	1	07:15:00																														
ZZZZZZ	1	07:18:00																														
ZZZZZZ	1	07:22:00																														
ZZZZZZ	1	07:25:00																														

Metals
−14−
Analysis Run Log

Samp No.	D/F	Run Time																													
ZZZZZZ	1	07:28:00																													
ZZZZZZ	1	07:32:00																													
CCV04	1	07:35:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB04	1	07:38:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	1	07:41:00																													
ZZZZZZ	1	07:44:00																													
ZZZZZZ	1	07:46:00																													
ZZZZZZ	1	07:49:00																													
ZZZZZZ	1	07:52:00																													
ZZZZZZ	1	07:55:00																													
ZZZZZZ	5	07:57:00																													
ZZZZZZ	1	08:00:00																													
ZZZZZZ	1	08:03:00																													
CCV05	1	08:06:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB05	1	08:10:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	1	08:13:00																													
ZZZZZZ	1	08:16:00																													
ZZZZZZ	1	08:19:00																													
ZZZZZZ	1	08:22:00																													
ZZZZZZ	1	08:26:00																													
ZZZZZZ	1	08:29:00																													
ZZZZZZ	1	08:32:00																													
ZZZZZZ	1	08:35:00																													
CCV06	1	08:38:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB06	1	08:42:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	1	08:53:00																													
ZZZZZZ	1	08:56:00																													
ZZZZZZ	1	08:59:00																													
ZZZZZZ	1	09:02:00																													
ZZZZZZ	1	09:05:00																													
ZZZZZZ	1	09:08:00																													
ZZZZZZ	5	09:10:00																													
ICSA02	1	09:13:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ICSAB02	1	09:15:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCV07	1	09:17:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB07	1	09:20:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
1202266499	1	09:23:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
1202266500	1	09:26:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
266878005	1	09:28:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
1202266501	1	09:31:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X

Metals
−14−
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu		Fe	Pb	Mg	Mn	Hg	Mo	Ni	K	Se	SiO2	Ag	Na	Sr	Tl	Sn	U	V	Zn
1202266502	1	09:34:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
1202266503	5	09:37:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	1	09:40:00																														
ZZZZZZ	1	09:43:00																														
CCV08	1	09:46:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB08	1	09:49:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
1202262892	1	09:52:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
1202262893	1	09:56:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
266878001	1	09:58:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
1202262894	1	10:01:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
1202262895	1	10:04:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
1202262896	5	10:06:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
266878003	1	10:10:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X				X	X
CCV09	1	10:13:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB09	1	10:16:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	5	10:26:00																														
ZZZZZZ	5	10:29:00																														
ZZZZZZ	5	10:32:00																														
ZZZZZZ	5	10:35:00																														
ZZZZZZ	5	10:38:00																														
ZZZZZZ	5	10:41:00																														
ZZZZZZ	25	10:44:00																														
CCV10	1	10:47:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB10	1	10:51:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	5	10:54:00																														
ZZZZZZ	5	10:57:00																														
ZZZZZZ	5	11:00:00																														
ZZZZZZ	5	11:03:00																														
ZZZZZZ	5	11:06:00																														
ZZZZZZ	5	11:09:00																														
CCV11	1	11:12:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB11	1	11:15:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	1	11:19:00																														
ZZZZZZ	1	11:22:00																														
ZZZZZZ	1	11:24:00																														
ZZZZZZ	1	11:27:00																														
ZZZZZZ	1	11:30:00																														
ZZZZZZ	5	11:33:00																														
ZZZZZZ	1	11:36:00																														
CCV12	1	11:39:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X

Metals
−14−
Analysis Run Log

Samp No.	D/F	Run Time																														
CCB12	1	11:42:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	1	11:52:00																														
ZZZZZZ	1	11:55:00																														
ZZZZZZ	1	11:57:00																														
ZZZZZZ	1	12:00:00																														
ZZZZZZ	1	12:03:00																														
ZZZZZZ	1	12:05:00																														
ZZZZZZ	5	12:06:00																														
CCV13	1	12:09:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB13	1	12:12:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	1	12:16:00																														
ZZZZZZ	1	12:19:00																														
ZZZZZZ	1	12:21:00																														
ZZZZZZ	1	12:23:00																														
ZZZZZZ	1	12:26:00																														
ZZZZZZ	1	12:27:00																														
ZZZZZZ	5	12:29:00																														
CCV14	1	12:32:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB14	1	12:35:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
ZZZZZZ	5	12:39:00																														
266878003	5	12:42:00																											X			
CCV15	1	12:45:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X
CCB15	1	12:48:00	X			X	X	X		X		X	X		X		X	X				X		X		X	X		X		X	X

Metals
−14−
Analysis Run Log

Contract: ESHL00210
Lab Code: GEL
Inst Name: HG3
Start Date: 01−DEC−10
End Date: 01−DEC−10
Client Sdg: 11−464
Method AV
Data File: 120110W1−9

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu		Fe	Pb	Mg	Mn	Hg	Mo	Ni	K	Se	SiO2	Ag	Na	Sr	Tl	Sn	U	V	Zn
S0.0	1	06:25:00																	X													
S0.2	1	06:27:00																	X													
S0.5	1	06:29:00																	X													
S2.0	1	06:30:00																	X													
S5.0	1	06:32:00																	X													
S10.0	1	06:34:00																	X													
ICV01	1	06:35:00																	X													
ICB01	1	06:37:00																	X													
CRDL01	1	06:39:00																	X													
CCV01	1	06:40:00																	X													
CCB01	1	06:42:00																	X													
1202265723	1	06:44:00																	X													
1202265724	1	06:45:00																	X													
266878001	1	06:47:00																	X													
1202265725	1	06:49:00																	X													
1202265726	1	06:50:00																	X													
1202265731	5	06:52:00																	X													
266878003	1	06:54:00																	X													
266878005	1	06:55:00																	X													
ZZZZZZ	1	06:57:00																														
ZZZZZZ	1	06:59:00																														
CCV02	1	07:00:00																	X													
CCB02	1	07:02:00																	X													

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 11−464

Contract: ESHL00210 **Lab Code: GEL** **MDL Effective Date:** 01−FEB−09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		10.0	30
	Antimony		0.5	3
	Arsenic		1.5	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Boron		4.0	15
	Cadmium		0.11	1
	Calcium		20.0	200
	Chromium		2.5	10
	Cobalt		0.1	1
	Copper		0.3	1
	Iron		10.0	100
	Lead		0.5	2
	Magnesium		5.0	15
	Manganese		1.0	5
	Molybdenum		0.1	.5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Strontium		2.0	10
	Thallium		0.3	1
	Tin		1.0	5
	Uranium		0.05	.2
	Vanadium		3.0	10
	Zinc		2.6	10

METALS
−10−
Instrument Detection Limits

SDG NO. 11−464

Contract: ESHL00210 **Lab Code: GEL** **MDL Effective Date:** 01−JUL−09

	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
MERCURY				
LIQUID	Mercury		0.066	.2

METALS
−10−
Instrument Detection Limits

SDG NO. 11−464

Contract: ESHL00210 **Lab Code: GEL** **MDL Effective Date:** 01−JUL−09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Boron	249.677	15.0	50
	Cadmium	226.502	1.0	5
	Calcium	317.933	50.0	200
	Chromium	267.716	1.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	30.0	100
	Lead	220.353	3.3	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Molybdenum	202.031	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	30
	Silica		53.0	213
	Silver	328.068	1.0	5
	Sodium	589.592	100	300
	Strontium	421.552	1.0	5
	Thallium	190.801	5.0	20
	Tin	189.927	2.5	10
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
Contract: ESHL00210
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 11−464
Effective Dates: 31−OCT−10

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.03021	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Calcium	317.933	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	−1.23077	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.60262	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	−0.17415	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	−0.04341	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	589.592	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.08524	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
Contract: ESHL00210
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 11−464
Effective Dates: 31−OCT−10

Parmname	Wavelength	Boron	Cadmium	Calcium	Chromium	Cobalt
Aluminum	396.153	0.00000	0.00000	0.54718	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	−6.74151	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	2.85580
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Calcium	317.933	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.45721	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	−0.34136
Lead	220.353	0.00000	0.00000	−0.07992	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	−0.00538	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.23901
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00919	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00205	0.00000	0.00000
Sodium	589.592	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.02571	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	4.53071
Tin	189.927	0.00000	0.00000	−0.07070	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	−0.04059	0.36147	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.02761	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	−4.37139	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: ESHL00210
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 11−464
Effective Dates: 31−OCT−10

Parmname	Wavelength	Copper	Iron	Lead	Magnesium	Manganese
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.04438	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	−0.00631	0.00000	0.00000	0.00000
Barium	233.527	0.00000	−0.19425	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.11438	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.09887	0.00000	0.00000	0.00000
Calcium	317.933	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	−0.02607	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.01511	0.00000	0.00000	0.00000
Copper	324.752	0.00000	−0.06793	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	−0.25151	−0.02303	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.45363	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00688	0.00000	0.04089	0.00000
Molybdenum	202.031	0.00000	−0.02703	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00211	0.00000	0.00000	0.00000
Phosphorous	214.914	381.78	0.46007	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	−0.19347	0.00000	0.00000	0.39429
Selenium	196.026	0.00000	−0.63921	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	−0.06862	0.00000	0.00000	0.00000
Sodium	589.592	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	−1.24504
Tin	189.927	0.00000	0.00184	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.08439	0.00000
Uranium	409.014	0.00000	0.30749	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.08814	0.00000	−0.00678	0.00000
Zinc	213.857	1.00765	0.09441	0.00000	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
GEL Job No: 11−464
Contract: ESHL00210
Instrument: OPTIMA3
Effective Dates: 31−OCT−10
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Molybdenum	Nickel	Phosphorous	Potassium	Selenium
Aluminum	396.153	23.4970	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	−9.95288	0.15910	0.00000	0.00000	0.00000
Arsenic	188.979	−1.88293	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	−0.63547	0.00000	0.00000	0.00000
Calcium	317.933	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	−1.53160	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.52273	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	−2.47807	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	−9.53389	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	1.18725	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	−2.29202	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	12.3082	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	589.592	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	−10.6726	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	6.37026	0.00000	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: ESHL00210
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 11−464
Effective Dates: 31−OCT−10

Parmname	Wavelength	Silicon	Silver	Sodium	Strontium	Sulfur
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Calcium	317.933	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.14598	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	589.592	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: **11−464**
Contract: **ESHL00210**
Instrument: **OPTIMA3**
Effective Dates: **31−OCT−10**
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Thallium	Tin	Titanium	Uranium	Vanadium
Aluminum	**396.153**	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	**206.836**	0.00000	−0.60614	−2.14381	0.00000	−0.70921
Arsenic	**188.979**	0.00000	0.00000	−0.77442	0.00000	0.00000
Barium	**233.527**	0.00000	0.00000	0.00000	0.00000	−0.33997
Beryllium	**313.107**	0.00000	0.00000	0.24470	0.00000	0.00000
Boron	**249.677**	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	**226.502**	0.00000	0.00000	0.00000	−0.01706	0.00000
Calcium	**317.933**	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	**267.716**	0.00000	0.00000	0.00000	0.62302	−0.54915
Cobalt	**228.616**	0.00000	0.00000	2.09497	0.00000	0.00000
Copper	**324.752**	0.00000	0.00000	0.00000	0.80138	0.00000
Iron	**238.204**	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	**220.353**	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	**279.077**	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	**257.61**	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	**202.031**	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	**231.604**	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	**214.914**	0.00000	−9.37529	0.00000	0.00000	0.00000
Potassium	**766.49**	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	**196.026**	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	**251.611**	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	**328.068**	0.00000	0.00000	0.00000	0.36126	−11.3849
Sodium	**589.592**	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	**421.552**	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	**181.975**	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	**190.801**	0.00000	0.00000	−8.79269	0.00000	1.64806
Tin	**189.927**	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	**334.94**	0.00000	0.00000	0.00000	0.43915	0.00000
Uranium	**409.014**	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	**292.402**	0.00000	0.00000	1.05947	−1.19721	0.00000
Zinc	**213.857**	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 11−464
Contract: ESHL00210
Instrument: OPTIMA3
Effective Dates: 31−OCT−10
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Zinc
Aluminum	396.153	0.00000
Antimony	206.836	0.00000
Arsenic	188.979	0.00000
Barium	233.527	0.00000
Beryllium	313.107	0.00000
Boron	249.677	0.00000
Cadmium	226.502	0.00000
Calcium	317.933	0.00000
Chromium	267.716	0.00000
Cobalt	228.616	0.00000
Copper	324.752	0.00000
Iron	238.204	0.00000
Lead	220.353	0.00000
Magnesium	279.077	0.00000
Manganese	257.61	0.00000
Molybdenum	202.031	0.00000
Nickel	231.604	0.00000
Phosphorous	214.914	0.00000
Potassium	766.49	0.00000
Selenium	196.026	0.00000
Silicon	251.611	0.00000
Silver	328.068	0.00000
Sodium	589.592	0.00000
Strontium	421.552	0.00000
Sulfur	181.975	0.00000
Thallium	190.801	0.00000
Tin	189.927	0.00000
Titanium	334.94	0.00000
Uranium	409.014	0.00000
Vanadium	292.402	0.00000
Zinc	213.857	0.00000

METALS
−12−
Linear Ranges

SDG NO. 11−464

Contract: ESHL00210 **Lab Code: GEL**

Instrument ID ICPMS5

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	31−OCT−10
Antimony	1000	250	ug/L	31−OCT−10
Arsenic	1000	1000	ug/L	31−OCT−10
Barium	1000	1000	ug/L	31−OCT−10
Beryllium	1000	1000	ug/L	31−OCT−10
Boron	1000	200	ug/L	31−OCT−10
Cadmium	1000	1000	ug/L	31−OCT−10
Calcium	500	50000	ug/L	31−OCT−10
Chromium	1000	1000	ug/L	31−OCT−10
Cobalt	1000	1000	ug/L	31−OCT−10
Copper	1000	1000	ug/L	31−OCT−10
Iron	500	50000	ug/L	31−OCT−10
Lead	1000	5000	ug/L	31−OCT−10
Magnesium	1	50000	ug/L	31−OCT−10
Manganese	1000	1000	ug/L	31−OCT−10
Molybdenum	1000	1000	ug/L	31−OCT−10
Nickel	1000	1000	ug/L	31−OCT−10
Potassium	1	50000	ug/L	31−OCT−10
Selenium	1000	500	ug/L	31−OCT−10
Silver	1000	250	ug/L	31−OCT−10
Sodium	1	50000	ug/L	31−OCT−10
Strontium	1000	1000	ug/L	31−OCT−10
Thallium	1000	500	ug/L	31−OCT−10
Tin	1000	1000	ug/L	31−OCT−10
Uranium	1000	5000	ug/L	31−OCT−10
Vanadium	1000	100	ug/L	31−OCT−10
Zinc	1000	2500	ug/L	31−OCT−10

METALS
−12−
Linear Ranges

SDG NO. 11−464

Contract: ESHL00210 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Zinc	20	15000	ug/L	31−OCT−10
Aluminum	20	500000	ug/L	31−OCT−10
Antimony	20	10000	ug/L	31−OCT−10
Arsenic	20	10000	ug/L	31−OCT−10
Barium	20	15000	ug/L	31−OCT−10
Beryllium	20	3000	ug/L	31−OCT−10
Boron	20	5000	ug/L	31−OCT−10
Cadmium	20	10000	ug/L	31−OCT−10
Calcium	20	500000	ug/L	31−OCT−10
Chromium	20	25000	ug/L	31−OCT−10
Cobalt	20	20000	ug/L	31−OCT−10
Iron	20	500000	ug/L	31−OCT−10
Lead	20	25000	ug/L	31−OCT−10
Magnesium	20	500000	ug/L	31−OCT−10
Manganese	20	10000	ug/L	31−OCT−10
Molybdenum	20	10000	ug/L	31−OCT−10
Nickel	20	10000	ug/L	31−OCT−10
Potassium	20	300000	ug/L	31−OCT−10
Selenium	20	10000	ug/L	31−OCT−10
Silica	20	107000	ug/L	31−OCT−10
Silver	20	1000	ug/L	31−OCT−10
Sodium	20	500000	ug/L	31−OCT−10
Strontium	20	10000	ug/L	31−OCT−10
Thallium	20	10000	ug/L	31−OCT−10
Tin	20	10000	ug/L	31−OCT−10
Uranium	20	15000	ug/L	31−OCT−10
Vanadium	20	10000	ug/L	31−OCT−10

Raw Data

Calculation Data Logbook

Report run on: December 8, 2010 3:01 PM

Batch Id: **1055168** **Sop:** **GL-GC-E-107**
Employee: **Jamie Johnson**
Instrument: **No instrument-calculation method**

Samp Id	Sample Type	Parmname	Run Date	Calcium mg/L	Magnesium mg/L	Result	Units
266878001	SAMPLE	Hardness as CaCO3	07-DEC-2010 16:17	7.59	0.380	20.5	mg/L
266878003	SAMPLE	Hardness as CaCO3	07-DEC-2010 16:17	58.6	7.82	178	mg/L
266878005	SAMPLE	Hardness as CaCO3	07-DEC-2010 16:17	22.5	3.60	71.0	mg/L
267130001	SAMPLE	Hardness as CaCO3	07-DEC-2010 16:17	21.8	4.12	71.3	mg/L
267130002	SAMPLE	Hardness as CaCO3	07-DEC-2010 16:17	21.2	3.98	69.4	mg/L

Calculation: **(2.497 * Calcium) + (4.118 * Magnesium)**

==========
12/3/2010 05:09:12 Hg ReAlign... Actual peak offset (nm): -0.009
Drift (nm): 0.000 Slit adjustment: 0
==========

==========
Analysis Begun

Start Time: 12/3/2010 05:25:55 **Plasma On Time: 12/2/2010 07:32:09**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: AS-93plus

Sample Information File: C:\pe\Optima3\Sample Information\120310.sif
Batch ID:
Results Data Set: 120310
Results Library: C:\pe\Optima3\Results\Results.mdb

==========
Method Loaded
Method Name: Gen Eng fast_new Si **Method Last Saved: 12/2/2010 20:45:54**
IEC File: 092310.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

==========
Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 12/3/2010 05:25:57**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time

1	Sc RADIAL	16445.6	16445.6	0.000	%	05:26:29
1	Al 396.153Radial†	282.9	281.4	[0.00]	µg/L	05:26:29
1	Ca 317.933Radial†	63.4	63.1	[0.00]	µg/L	05:26:49
1	Fe 238.204 Radial†	31.3	31.1	[0.00]	µg/L	05:26:49
1	K 766.490 Radial†	2657.1	2643.2	[0.00]	µg/L	05:26:29
1	Mg 279.077 IEC†	14.2	14.1	[0.00]	µg/L	05:26:49
1	Na 589.592 Radial†	323.2	321.5	[0.00]	µg/L	05:26:29
1	Sr 421.552†	-16.8	-16.7	[0.00]	µg/L	05:26:29
1	Sc 361.383	502579.7	502579.7	0.0000	%	05:27:46
1	Y 371.029	443248.0	443248.0	0.0000	%	05:27:46
1	Ag 328.068†	-332.4	-331.0	[0.00]	µg/L	05:27:46
1	As 188.979†	1.3	1.3	[0.00]	µg/L	05:28:06
1	B 249.677†	-63.5	-63.2	[0.00]	µg/L	05:28:06
1	Ba 233.527†	-254.2	-253.2	[0.00]	µg/L	05:28:06
1	Be 313.107†	-4513.6	-4495.1	[0.00]	µg/L	05:27:46
1	Cd 226.502†	-356.1	-354.6	[0.00]	µg/L	05:28:06
1	Co 228.616†	-83.0	-82.7	[0.00]	µg/L	05:28:06
1	Cr 267.716†	173.3	172.6	[0.00]	µg/L	05:28:06
1	Cu 324.752†	4279.6	4262.0	[0.00]	µg/L	05:27:46
1	Mn 257.610†	290.7	289.6	[0.00]	µg/L	05:28:06
1	Mo 202.031†	-54.5	-54.3	[0.00]	µg/L	05:28:06
1	Ni 231.604†	-195.6	-194.8	[0.00]	µg/L	05:28:06
1	P 214.914†	550.7	548.4	[0.00]	µg/L	05:28:06
1	Pb 220.353†	304.8	303.6	[0.00]	µg/L	05:28:06
1	S 181.975 Axial†	42.2	42.0	[0.00]	µg/L	05:28:06
1	Sb 206.836†	74.6	74.3	[0.00]	µg/L	05:28:06
1	Se 196.026†	-99.4	-99.0	[0.00]	µg/L	05:28:06
1	SiO2†	2611.4	2600.6	[0.00]	µg/L	05:27:46
1	Si 251.611†	456.1	454.2	[0.00]	µg/L	05:28:06
1	Sn 189.927†	77.5	77.2	[0.00]	µg/L	05:28:06
1	Ti 334.940†	-2019.6	-2011.3	[0.00]	µg/L	05:27:46
1	Tl 190.801†	-127.8	-127.3	[0.00]	µg/L	05:28:06
1	U 409.014†	-7012.5	-6983.7	[0.00]	µg/L	05:27:46
1	V 292.402†	61.8	61.6	[0.00]	µg/L	05:27:46
1	Zn 213.857†	1151.0	1146.3	[0.00]	µg/L	05:28:06
2	Sc RADIAL	16420.6	16420.6	0.000	%	05:26:54
2	Al 396.153Radial†	349.5	348.1	[0.00]	µg/L	05:26:54
2	Ca 317.933Radial†	89.5	89.2	[0.00]	µg/L	05:27:14
2	Fe 238.204 Radial†	28.0	27.9	[0.00]	µg/L	05:27:14
2	K 766.490 Radial†	2696.7	2686.6	[0.00]	µg/L	05:26:54
2	Mg 279.077 IEC†	8.3	8.2	[0.00]	µg/L	05:27:14
2	Na 589.592 Radial†	351.9	350.6	[0.00]	µg/L	05:26:54
2	Sr 421.552†	-10.8	-10.7	[0.00]	µg/L	05:26:54
2	Sc 361.383	499494.3	499494.3	0.0000	%	05:28:12
2	Y 371.029	440391.6	440391.6	0.0000	%	05:28:12
2	Ag 328.068†	-236.5	-237.0	[0.00]	µg/L	05:28:12
2	As 188.979†	1.5	1.5	[0.00]	µg/L	05:28:32
2	B 249.677†	-48.5	-48.6	[0.00]	µg/L	05:28:32
2	Ba 233.527†	-247.2	-247.7	[0.00]	µg/L	05:28:32
2	Be 313.107†	-4575.8	-4585.2	[0.00]	µg/L	05:28:12
2	Cd 226.502†	-366.3	-367.1	[0.00]	µg/L	05:28:32
2	Co 228.616†	-96.7	-96.9	[0.00]	µg/L	05:28:32
2	Cr 267.716†	149.7	150.0	[0.00]	µg/L	05:28:32
2	Cu 324.752†	4199.7	4208.2	[0.00]	µg/L	05:28:12
2	Mn 257.610†	258.3	258.8	[0.00]	µg/L	05:28:32
2	Mo 202.031†	-40.8	-40.9	[0.00]	µg/L	05:28:32
2	Ni 231.604†	-186.7	-187.1	[0.00]	µg/L	05:28:32
2	P 214.914†	550.7	551.9	[0.00]	µg/L	05:28:32
2	Pb 220.353†	312.2	312.8	[0.00]	µg/L	05:28:32
2	S 181.975 Axial†	44.7	44.8	[0.00]	µg/L	05:28:32
2	Sb 206.836†	78.8	79.0	[0.00]	µg/L	05:28:32
2	Se 196.026†	-114.4	-114.6	[0.00]	µg/L	05:28:32
2	SiO2†	2674.3	2679.8	[0.00]	µg/L	05:28:12
2	Si 251.611†	467.1	468.1	[0.00]	µg/L	05:28:32
2	Sn 189.927†	66.3	66.4	[0.00]	µg/L	05:28:32
2	Ti 334.940†	-2004.0	-2008.1	[0.00]	µg/L	05:28:12
2	Tl 190.801†	-128.5	-128.7	[0.00]	µg/L	05:28:32
2	U 409.014†	-6765.9	-6779.7	[0.00]	µg/L	05:28:12
2	V 292.402†	68.2	68.3	[0.00]	µg/L	05:28:12
2	Zn 213.857†	1183.6	1186.0	[0.00]	µg/L	05:28:32
3	Sc RADIAL	16211.2	16211.2	0.000	%	05:27:20

3	Al 396.153Radial†	280.1	282.6	[0.00]	µg/L	05:27:20
3	Ca 317.933Radial†	69.1	69.7	[0.00]	µg/L	05:27:40
3	Fe 238.204 Radial†	28.3	28.5	[0.00]	µg/L	05:27:40
3	K 766.490 Radial†	2563.8	2587.2	[0.00]	µg/L	05:27:20
3	Mg 279.077 IEC†	13.2	13.3	[0.00]	µg/L	05:27:40
3	Na 589.592 Radial†	377.2	380.6	[0.00]	µg/L	05:27:20
3	Sr 421.552†	5.1	5.2	[0.00]	µg/L	05:27:20
3	Sc 361.383	499467.1	499467.1	0.0000	%	05:28:37
3	Y 371.029	440318.2	440318.2	0.0000	%	05:28:37
3	Ag 328.068†	-337.7	-338.4	[0.00]	µg/L	05:28:37
3	As 188.979†	2.9	2.9	[0.00]	µg/L	05:28:57
3	B 249.677†	-46.1	-46.2	[0.00]	µg/L	05:28:57
3	Ba 233.527†	-263.2	-263.7	[0.00]	µg/L	05:28:57
3	Be 313.107†	-4581.9	-4591.5	[0.00]	µg/L	05:28:37
3	Cd 226.502†	-345.1	-345.8	[0.00]	µg/L	05:28:57
3	Co 228.616†	-63.5	-63.6	[0.00]	µg/L	05:28:57
3	Cr 267.716†	143.8	144.1	[0.00]	µg/L	05:28:57
3	Cu 324.752†	4149.8	4158.5	[0.00]	µg/L	05:28:37
3	Mn 257.610†	274.5	275.1	[0.00]	µg/L	05:28:57
3	Mo 202.031†	-38.6	-38.7	[0.00]	µg/L	05:28:57
3	Ni 231.604†	-216.6	-217.0	[0.00]	µg/L	05:28:57
3	P 214.914†	539.9	541.1	[0.00]	µg/L	05:28:57
3	Pb 220.353†	311.4	312.0	[0.00]	µg/L	05:28:57
3	S 181.975 Axial†	35.6	35.7	[0.00]	µg/L	05:28:57
3	Sb 206.836†	86.3	86.5	[0.00]	µg/L	05:28:57
3	Se 196.026†	-98.5	-98.7	[0.00]	µg/L	05:28:57
3	SiO2†	2734.3	2740.1	[0.00]	µg/L	05:28:37
3	Si 251.611†	481.9	482.9	[0.00]	µg/L	05:28:57
3	Sn 189.927†	83.8	84.0	[0.00]	µg/L	05:28:57
3	Ti 334.940†	-1945.1	-1949.2	[0.00]	µg/L	05:28:37
3	Tl 190.801†	-113.5	-113.8	[0.00]	µg/L	05:28:57
3	U 409.014†	-6833.2	-6847.5	[0.00]	µg/L	05:28:37
3	V 292.402†	86.1	86.2	[0.00]	µg/L	05:28:37
3	Zn 213.857†	1143.0	1145.4	[0.00]	µg/L	05:28:57

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	500513.7	1789.25	0.36%	0.0000	%
Sc RADIAL	16359.2	128.71	0.79%	0.000	%
Y 371.029	441319.3	1670.73	0.38%	0.0000	%
Ag 328.068†	-302.1	56.54	18.71%	[0.00]	µg/L
Al 396.153Radial†	304.1	38.17	12.55%	[0.00]	µg/L
As 188.979†	1.9	0.88	46.53%	[0.00]	µg/L
B 249.677†	-52.7	9.20	17.46%	[0.00]	µg/L
Ba 233.527†	-254.9	8.15	3.20%	[0.00]	µg/L
Be 313.107†	-4557.2	53.94	1.18%	[0.00]	µg/L
Ca 317.933Radial†	74.0	13.57	18.35%	[0.00]	µg/L
Cd 226.502†	-355.9	10.67	3.00%	[0.00]	µg/L
Co 228.616†	-81.0	16.69	20.60%	[0.00]	µg/L
Cr 267.716†	155.6	15.00	9.65%	[0.00]	µg/L
Cu 324.752†	4209.6	51.77	1.23%	[0.00]	µg/L
Fe 238.204 Radial†	29.2	1.72	5.89%	[0.00]	µg/L
K 766.490 Radial†	2639.0	49.86	1.89%	[0.00]	µg/L
Mg 279.077 IEC†	11.9	3.20	26.86%	[0.00]	µg/L
Mn 257.610†	274.5	15.37	5.60%	[0.00]	µg/L
Mo 202.031†	-44.6	8.45	18.94%	[0.00]	µg/L
Na 589.592 Radial†	350.9	29.53	8.42%	[0.00]	µg/L
Ni 231.604†	-199.6	15.53	7.78%	[0.00]	µg/L
P 214.914†	547.1	5.52	1.01%	[0.00]	µg/L
Pb 220.353†	309.5	5.11	1.65%	[0.00]	µg/L
S 181.975 Axial†	40.8	4.67	11.43%	[0.00]	µg/L
Sb 206.836†	79.9	6.14	7.68%	[0.00]	µg/L
Se 196.026†	-104.1	9.09	8.73%	[0.00]	µg/L
SiO2†	2673.5	69.94	2.62%	[0.00]	µg/L
Si 251.611†	468.4	14.35	3.06%	[0.00]	µg/L
Sn 189.927†	75.9	8.85	11.66%	[0.00]	µg/L
Sr 421.552†	-7.4	11.31	152.50%	[0.00]	µg/L
Ti 334.940†	-1989.5	34.99	1.76%	[0.00]	µg/L
Tl 190.801†	-123.3	8.26	6.70%	[0.00]	µg/L

U 409.014†	-6870.3	103.88	1.51%	[0.00]	µg/L
V 292.402†	72.0	12.76	17.71%	[0.00]	µg/L
Zn 213.857†	1159.2	23.20	2.00%	[0.00]	µg/L

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Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S0.1 **Date Collected: 12/3/2010 05:29:05**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	16329.4	16329.4	99.8	%	05:29:35
1	K 766.490 Radial†	4533.2	1902.5	[1000]	µg/L	05:29:35
1	Sr 421.552†	35555.3	35627.5	[100]	µg/L	05:29:35
1	Sc 361.383	504050.3	504050.3	100.71	%	05:29:52
1	Y 371.029	443617.5	443617.5	100.52	%	05:29:52
1	Ag 328.068†	11961.7	12179.9	[100]	µg/L	05:29:52
1	As 188.979†	308.8	304.7	[100]	µg/L	05:30:12
1	B 249.677†	3344.8	3374.0	[100]	µg/L	05:29:52
1	Ba 233.527†	13071.8	13234.9	[100]	µg/L	05:29:52
1	Be 313.107†	179708.6	183004.9	[100]	µg/L	05:29:52
1	Cd 226.502†	10506.7	10788.9	[100]	µg/L	05:29:52
1	Co 228.616†	5419.8	5462.8	[100]	µg/L	05:30:12
1	Cr 267.716†	7265.1	7058.6	[100]	µg/L	05:29:52
1	Cu 324.752†	21803.0	17440.4	[100]	µg/L	05:29:52
1	Mn 257.610†	77994.9	77173.2	[100]	µg/L	05:29:52
1	Mo 202.031†	1957.1	1988.0	[100]	µg/L	05:30:12
1	Ni 231.604†	3762.2	3935.4	[100]	µg/L	05:30:12
1	P 214.914†	1606.9	1048.5	[500]	µg/L	05:30:12
1	Pb 220.353†	1346.9	1028.0	[100]	µg/L	05:30:12
1	S 181.975 Axial†	220.4	178.1	[200]	µg/L	05:30:12
1	Sb 206.836†	463.2	380.1	[100]	µg/L	05:30:12
1	Se 196.026†	163.2	266.1	[100]	µg/L	05:30:12
1	SiO2†	12579.0	9817.2	[1069.5]	µg/L	05:29:52
1	Si 251.611†	13669.2	13104.9	[500]	µg/L	05:29:52
1	Sn 189.927†	1096.5	1012.9	[100]	µg/L	05:30:12
1	Ti 334.940†	31164.4	32935.3	[100]	µg/L	05:29:52
1	Tl 190.801†	410.4	530.8	[100]	µg/L	05:30:12
1	U 409.014†	-5211.5	1695.4	[100]	µg/L	05:29:52
1	V 292.402†	9129.4	8993.3	[100]	µg/L	05:29:52
1	Zn 213.857†	15603.4	14334.7	[100]	µg/L	05:29:52
2	Sc RADIAL	16485.3	16485.3	101	%	05:29:40
2	K 766.490 Radial†	4524.5	1850.9	[1000]	µg/L	05:29:40
2	Sr 421.552†	35997.3	35729.3	[100]	µg/L	05:29:40
2	Sc 361.383	502174.2	502174.2	100.33	%	05:30:18
2	Y 371.029	441398.4	441398.4	100.02	%	05:30:18
2	Ag 328.068†	11870.0	12132.8	[100]	µg/L	05:30:18
2	As 188.979†	284.2	281.3	[100]	µg/L	05:30:38
2	B 249.677†	3385.4	3426.9	[100]	µg/L	05:30:18
2	Ba 233.527†	13051.4	13263.1	[100]	µg/L	05:30:18
2	Be 313.107†	178812.9	182778.8	[100]	µg/L	05:30:18
2	Cd 226.502†	10430.0	10751.4	[100]	µg/L	05:30:18
2	Co 228.616†	5361.9	5425.2	[100]	µg/L	05:30:38
2	Cr 267.716†	7139.8	6960.7	[100]	µg/L	05:30:18
2	Cu 324.752†	21812.1	17530.4	[100]	µg/L	05:30:18
2	Mn 257.610†	77760.3	77228.7	[100]	µg/L	05:30:18
2	Mo 202.031†	1944.5	1982.7	[100]	µg/L	05:30:38
2	Ni 231.604†	3748.6	3935.8	[100]	µg/L	05:30:38
2	P 214.914†	1619.9	1067.4	[500]	µg/L	05:30:38
2	Pb 220.353†	1340.3	1026.4	[100]	µg/L	05:30:38
2	S 181.975 Axial†	221.6	180.1	[200]	µg/L	05:30:38
2	Sb 206.836†	460.1	378.7	[100]	µg/L	05:30:38
2	Se 196.026†	147.1	250.8	[100]	µg/L	05:30:38
2	SiO2†	12654.4	9939.0	[1069.5]	µg/L	05:30:18
2	Si 251.611†	13658.6	13145.1	[500]	µg/L	05:30:18
2	Sn 189.927†	1082.2	1002.8	[100]	µg/L	05:30:38
2	Ti 334.940†	31003.9	32890.9	[100]	µg/L	05:30:18
2	Tl 190.801†	414.7	536.6	[100]	µg/L	05:30:38
2	U 409.014†	-5307.8	1580.1	[100]	µg/L	05:30:18
2	V 292.402†	8949.7	8848.1	[100]	µg/L	05:30:18

2	Zn 213.857†	15571.0	14360.3	[100]	µg/L	05:30:18
3	Sc RADIAL	16277.1	16277.1	99.5	%	05:29:45
3	K 766.490 Radial†	4497.7	1881.4	[1000]	µg/L	05:29:45
3	Sr 421.552†	35622.5	35809.5	[100]	µg/L	05:29:45
3	Sc 361.383	500888.6	500888.6	100.07	%	05:30:43
3	Y 371.029	440466.6	440466.6	99.807	%	05:30:43
3	Ag 328.068†	12003.1	12296.2	[100]	µg/L	05:30:43
3	As 188.979†	303.4	301.3	[100]	µg/L	05:31:03
3	B 249.677†	3347.7	3397.9	[100]	µg/L	05:30:43
3	Ba 233.527†	13114.8	13359.9	[100]	µg/L	05:30:43
3	Be 313.107†	178335.0	182758.8	[100]	µg/L	05:30:43
3	Cd 226.502†	10362.9	10711.0	[100]	µg/L	05:30:43
3	Co 228.616†	5373.9	5450.9	[100]	µg/L	05:31:03
3	Cr 267.716†	7152.7	6991.8	[100]	µg/L	05:30:43
3	Cu 324.752†	21968.4	17742.3	[100]	µg/L	05:30:43
3	Mn 257.610†	77580.9	77248.3	[100]	µg/L	05:30:43
3	Mo 202.031†	1950.0	1993.1	[100]	µg/L	05:31:03
3	Ni 231.604†	3726.8	3923.7	[100]	µg/L	05:31:03
3	P 214.914†	1612.9	1064.6	[500]	µg/L	05:31:03
3	Pb 220.353†	1344.4	1034.0	[100]	µg/L	05:31:03
3	S 181.975 Axial†	220.3	179.3	[200]	µg/L	05:31:03
3	Sb 206.836†	458.2	377.9	[100]	µg/L	05:31:03
3	Se 196.026†	155.6	259.6	[100]	µg/L	05:31:03
3	SiO2†	12623.0	9940.0	[1069.5]	µg/L	05:30:43
3	Si 251.611†	13623.5	13145.0	[500]	µg/L	05:30:43
3	Sn 189.927†	1088.1	1011.4	[100]	µg/L	05:31:03
3	Ti 334.940†	31015.3	32981.6	[100]	µg/L	05:30:43
3	Tl 190.801†	410.0	532.9	[100]	µg/L	05:31:03
3	U 409.014†	-5172.7	1701.4	[100]	µg/L	05:30:43
3	V 292.402†	9000.8	8922.0	[100]	µg/L	05:30:43
3	Zn 213.857†	15582.0	14411.1	[100]	µg/L	05:30:43

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	502371.0	1589.99	0.32%	100.37	%
Sc RADIAL	16363.9	108.31	0.66%	100	%
Y 371.029	441827.5	1618.68	0.37%	100.12	%
Ag 328.068†	12203.0	84.08	0.69%	[100]	µg/L
As 188.979†	295.8	12.63	4.27%	[100]	µg/L
B 249.677†	3399.6	26.47	0.78%	[100]	µg/L
Ba 233.527†	13286.0	65.56	0.49%	[100]	µg/L
Be 313.107†	182847.5	136.68	0.07%	[100]	µg/L
Cd 226.502†	10750.4	38.93	0.36%	[100]	µg/L
Co 228.616†	5446.3	19.24	0.35%	[100]	µg/L
Cr 267.716†	7003.7	50.02	0.71%	[100]	µg/L
Cu 324.752†	17571.0	154.99	0.88%	[100]	µg/L
K 766.490 Radial†	1878.3	25.94	1.38%	[1000]	µg/L
Mn 257.610†	77216.7	38.97	0.05%	[100]	µg/L
Mo 202.031†	1987.9	5.22	0.26%	[100]	µg/L
Ni 231.604†	3931.6	6.90	0.18%	[100]	µg/L
P 214.914†	1060.2	10.21	0.96%	[500]	µg/L
Pb 220.353†	1029.5	3.99	0.39%	[100]	µg/L
S 181.975 Axial†	179.1	1.01	0.56%	[200]	µg/L
Sb 206.836†	378.9	1.10	0.29%	[100]	µg/L
Se 196.026†	258.8	7.71	2.98%	[100]	µg/L
SiO2†	9898.7	70.61	0.71%	[1069.5]	µg/L
Si 251.611†	13131.7	23.15	0.18%	[500]	µg/L
Sn 189.927†	1009.0	5.46	0.54%	[100]	µg/L
Sr 421.552†	35722.1	91.22	0.26%	[100]	µg/L
Ti 334.940†	32935.9	45.35	0.14%	[100]	µg/L
Tl 190.801†	533.4	2.96	0.55%	[100]	µg/L
U 409.014†	1659.0	68.38	4.12%	[100]	µg/L
V 292.402†	8921.1	72.58	0.81%	[100]	µg/L
Zn 213.857†	14368.7	38.88	0.27%	[100]	µg/L

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Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S0.5 **Date Collected: 12/3/2010 05:31:13**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	16183.9	16183.9	98.9	%	05:32:02
1	Al 396.153Radial†	12056.7	11883.2	[5000]	µg/L	05:31:42
1	Ca 317.933Radial†	11951.3	12006.8	[5000]	µg/L	05:32:02
1	K 766.490 Radial†	11851.2	9340.6	[5000]	µg/L	05:31:42
1	Mg 279.077 IEC†	1258.3	1260.0	[5000]	µg/L	05:32:02
1	Sr 421.552†	176596.4	178516.4	[500]	µg/L	05:31:42
1	Sc 361.383	505233.5	505233.5	100.94	%	05:33:00
1	Y 371.029	440917.9	440917.9	99.909	%	05:33:00
1	Ag 328.068†	60506.3	60243.2	[500]	µg/L	05:33:00
1	As 188.979†	1484.3	1468.5	[500]	µg/L	05:33:20
1	B 249.677†	17376.8	17267.2	[500]	µg/L	05:33:00
1	Ba 233.527†	65486.5	65129.6	[500]	µg/L	05:33:00
1	Be 313.107†	915526.8	911531.3	[500]	µg/L	05:33:00
1	Cd 226.502†	53201.3	53060.1	[500]	µg/L	05:33:00
1	Co 228.616†	27108.2	26936.0	[500]	µg/L	05:33:20
1	Cr 267.716†	34794.4	34313.8	[500]	µg/L	05:33:00
1	Cu 324.752†	92618.9	87544.1	[500]	µg/L	05:33:00
1	Mn 257.610†	380345.8	376518.2	[500]	µg/L	05:33:00
1	Mo 202.031†	9960.9	9912.4	[500]	µg/L	05:33:20
1	Ni 231.604†	19539.4	19556.5	[500]	µg/L	05:33:20
1	P 214.914†	5972.1	5369.2	[2500]	µg/L	05:33:20
1	Pb 220.353†	5518.8	5157.8	[500]	µg/L	05:33:20
1	S 181.975 Axial†	938.7	889.1	[1000]	µg/L	05:33:20
1	Sb 206.836†	1991.2	1892.6	[500]	µg/L	05:33:20
1	Se 196.026†	1280.4	1372.6	[500]	µg/L	05:33:20
1	SiO2†	52828.8	49661.8	[5347.5]	µg/L	05:33:00
1	Si 251.611†	67183.4	66087.4	[2500]	µg/L	05:33:00
1	Sn 189.927†	5157.4	5033.3	[500]	µg/L	05:33:20
1	Ti 334.940†	164103.4	164559.9	[500]	µg/L	05:33:00
1	Tl 190.801†	2497.4	2597.4	[500]	µg/L	05:33:20
1	U 409.014†	1506.3	8362.5	[500]	µg/L	05:33:00
1	V 292.402†	45238.3	44743.7	[500]	µg/L	05:33:00
1	Zn 213.857†	73040.8	71199.3	[500]	µg/L	05:33:00
2	Sc RADIAL	16178.1	16178.1	98.9	%	05:32:27
2	Al 396.153Radial†	12131.9	11963.5	[5000]	µg/L	05:32:07
2	Ca 317.933Radial†	11908.9	11968.1	[5000]	µg/L	05:32:27
2	K 766.490 Radial†	11747.0	9239.4	[5000]	µg/L	05:32:07
2	Mg 279.077 IEC†	1262.7	1265.0	[5000]	µg/L	05:32:27
2	Sr 421.552†	177576.6	179571.1	[500]	µg/L	05:32:07
2	Sc 361.383	503131.9	503131.9	100.52	%	05:33:26
2	Y 371.029	439095.2	439095.2	99.496	%	05:33:26
2	Ag 328.068†	60262.0	60250.6	[500]	µg/L	05:33:26
2	As 188.979†	1485.1	1475.5	[500]	µg/L	05:33:46
2	B 249.677†	17277.7	17240.5	[500]	µg/L	05:33:26
2	Ba 233.527†	65371.0	65285.7	[500]	µg/L	05:33:26
2	Be 313.107†	912339.5	912149.1	[500]	µg/L	05:33:26
2	Cd 226.502†	52853.0	52933.8	[500]	µg/L	05:33:26
2	Co 228.616†	27105.8	27045.8	[500]	µg/L	05:33:46
2	Cr 267.716†	34670.0	34334.0	[500]	µg/L	05:33:26
2	Cu 324.752†	92252.9	87563.3	[500]	µg/L	05:33:26
2	Mn 257.610†	379078.1	376831.0	[500]	µg/L	05:33:26
2	Mo 202.031†	9918.2	9911.2	[500]	µg/L	05:33:46
2	Ni 231.604†	19543.2	19641.2	[500]	µg/L	05:33:46
2	P 214.914†	5950.7	5372.7	[2500]	µg/L	05:33:46
2	Pb 220.353†	5551.9	5213.6	[500]	µg/L	05:33:46
2	S 181.975 Axial†	934.7	889.0	[1000]	µg/L	05:33:46
2	Sb 206.836†	2003.2	1912.9	[500]	µg/L	05:33:46
2	Se 196.026†	1265.1	1362.6	[500]	µg/L	05:33:46
2	SiO2†	52628.8	49681.5	[5347.5]	µg/L	05:33:26

2	Si 251.611†	66957.1	66140.3	[2500]	µg/L	05:33:26
2	Sn 189.927†	5134.6	5032.1	[500]	µg/L	05:33:46
2	Ti 334.940†	163622.0	164760.1	[500]	µg/L	05:33:26
2	Tl 190.801†	2510.4	2620.6	[500]	µg/L	05:33:46
2	U 409.014†	1257.0	8120.7	[500]	µg/L	05:33:26
2	V 292.402†	45048.0	44741.5	[500]	µg/L	05:33:26
2	Zn 213.857†	72847.2	71308.9	[500]	µg/L	05:33:26
3	Sc RADIAL	16092.3	16092.3	98.4	%	05:32:52
3	Al 396.153Radial†	12046.2	11941.9	[5000]	µg/L	05:32:32
3	Ca 317.933Radial†	11839.9	11962.3	[5000]	µg/L	05:32:52
3	K 766.490 Radial†	11851.4	9408.9	[5000]	µg/L	05:32:32
3	Mg 279.077 IEC†	1254.5	1263.4	[5000]	µg/L	05:32:52
3	Sr 421.552†	176983.3	179925.3	[500]	µg/L	05:32:32
3	Sc 361.383	502036.9	502036.9	100.30	%	05:33:52
3	Y 371.029	438224.1	438224.1	99.299	%	05:33:52
3	Ag 328.068†	60018.6	60138.7	[500]	µg/L	05:33:52
3	As 188.979†	1481.7	1475.3	[500]	µg/L	05:34:12
3	B 249.677†	17239.6	17239.9	[500]	µg/L	05:33:52
3	Ba 233.527†	65220.0	65276.9	[500]	µg/L	05:33:52
3	Be 313.107†	910262.9	912058.3	[500]	µg/L	05:33:52
3	Cd 226.502†	52724.5	52920.4	[500]	µg/L	05:33:52
3	Co 228.616†	26968.0	26967.2	[500]	µg/L	05:34:12
3	Cr 267.716†	34732.0	34471.1	[500]	µg/L	05:33:52
3	Cu 324.752†	92301.1	87811.4	[500]	µg/L	05:33:52
3	Mn 257.610†	378216.6	376794.6	[500]	µg/L	05:33:52
3	Mo 202.031†	9905.4	9919.9	[500]	µg/L	05:34:12
3	Ni 231.604†	19407.0	19547.8	[500]	µg/L	05:34:12
3	P 214.914†	5933.8	5368.7	[2500]	µg/L	05:34:12
3	Pb 220.353†	5508.7	5182.6	[500]	µg/L	05:34:12
3	S 181.975 Axial†	946.1	902.4	[1000]	µg/L	05:34:12
3	Sb 206.836†	1981.3	1895.4	[500]	µg/L	05:34:12
3	Se 196.026†	1255.6	1355.9	[500]	µg/L	05:34:12
3	SiO2†	52527.8	49694.9	[5347.5]	µg/L	05:33:52
3	Si 251.611†	66772.7	66101.7	[2500]	µg/L	05:33:52
3	Sn 189.927†	5111.0	5019.6	[500]	µg/L	05:34:12
3	Ti 334.940†	163213.9	164708.2	[500]	µg/L	05:33:52
3	Tl 190.801†	2512.4	2628.0	[500]	µg/L	05:34:12
3	U 409.014†	1552.3	8417.9	[500]	µg/L	05:33:52
3	V 292.402†	44980.0	44771.5	[500]	µg/L	05:33:52
3	Zn 213.857†	72736.9	71357.0	[500]	µg/L	05:33:52

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	503467.4	1624.51	0.32%	100.59	%
Sc RADIAL	16151.5	51.28	0.32%	98.7	%
Y 371.029	439412.4	1374.64	0.31%	99.568	%
Ag 328.068†	60210.8	62.59	0.10%	[500]	µg/L
Al 396.153Radial†	11929.5	41.55	0.35%	[5000]	µg/L
As 188.979†	1473.1	3.95	0.27%	[500]	µg/L
B 249.677†	17249.2	15.58	0.09%	[500]	µg/L
Ba 233.527†	65230.8	87.69	0.13%	[500]	µg/L
Be 313.107†	911912.9	333.61	0.04%	[500]	µg/L
Ca 317.933Radial†	11979.1	24.20	0.20%	[5000]	µg/L
Cd 226.502†	52971.5	77.07	0.15%	[500]	µg/L
Co 228.616†	26983.0	56.58	0.21%	[500]	µg/L
Cr 267.716†	34373.0	85.55	0.25%	[500]	µg/L
Cu 324.752†	87639.6	149.12	0.17%	[500]	µg/L
K 766.490 Radial†	9329.6	85.26	0.91%	[5000]	µg/L
Mg 279.077 IEC†	1262.8	2.51	0.20%	[5000]	µg/L
Mn 257.610†	376714.6	171.05	0.05%	[500]	µg/L
Mo 202.031†	9914.5	4.73	0.05%	[500]	µg/L
Ni 231.604†	19581.8	51.57	0.26%	[500]	µg/L
P 214.914†	5370.2	2.17	0.04%	[2500]	µg/L
Pb 220.353†	5184.6	27.94	0.54%	[500]	µg/L
S 181.975 Axial†	893.5	7.73	0.86%	[1000]	µg/L
Sb 206.836†	1900.3	11.00	0.58%	[500]	µg/L
Se 196.026†	1363.7	8.40	0.62%	[500]	µg/L
SiO2†	49679.4	16.68	0.03%	[5347.5]	µg/L
Si 251.611†	66109.8	27.37	0.04%	[2500]	µg/L

Sn 189.927†	5028.3	7.58	0.15%	[500] µg/L
Sr 421.552†	179337.6	732.87	0.41%	[500] µg/L
Ti 334.940†	164676.1	103.90	0.06%	[500] µg/L
Tl 190.801†	2615.3	15.99	0.61%	[500] µg/L
U 409.014†	8300.3	158.02	1.90%	[500] µg/L
V 292.402†	44752.2	16.70	0.04%	[500] µg/L
Zn 213.857†	71288.4	80.82	0.11%	[500] µg/L

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Sequence No.: 4 **Autosampler Location: 4**
Sample ID: SCAL **Date Collected: 12/3/2010 05:34:21**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	16147.4	16147.4	98.7	%	05:35:10
1	Al 396.153Radial†	23605.2	23610.7	[10000]	µg/L	05:34:50
1	Ca 317.933Radial†	23458.3	23692.0	[10000]	µg/L	05:35:10
1	Fe 238.204 Radial†	19013.4	19233.6	[10000]	µg/L	05:35:10
1	K 766.490 Radial†	20716.0	18348.6	[10000]	µg/L	05:34:50
1	Mg 279.077 IEC†	2503.6	2524.6	[10000]	µg/L	05:35:10
1	Na 589.592 Radial†	56069.6	56454.0	[10000]	µg/L	05:34:50
1	Sr 421.552†	351675.2	356294.3	[1000]	µg/L	05:34:50
1	Sc 361.383	504495.6	504495.6	100.80	%	05:36:10
1	Y 371.029	439536.1	439536.1	99.596	%	05:36:10
1	Ag 328.068†	120855.6	120203.8	[1000]	µg/L	05:36:10
1	As 188.979†	2953.1	2927.9	[1000]	µg/L	05:36:30
1	B 249.677†	34926.4	34703.4	[1000]	µg/L	05:36:10
1	Ba 233.527†	130609.4	129833.4	[1000]	µg/L	05:36:10
1	Be 313.107†	1827475.6	1817608.9	[1000]	µg/L	05:36:10
1	Cd 226.502†	106155.1	105673.1	[1000]	µg/L	05:36:10
1	Co 228.616†	55088.1	54734.4	[1000]	µg/L	05:36:10
1	Cr 267.716†	69366.5	68663.4	[1000]	µg/L	05:36:10
1	Cu 324.752†	180821.1	175184.3	[1000]	µg/L	05:36:10
1	Mn 257.610†	755752.4	749512.9	[1000]	µg/L	05:36:10
1	Mo 202.031†	19768.2	19656.8	[1000]	µg/L	05:36:30
1	Ni 231.604†	39906.5	39791.2	[1000]	µg/L	05:36:10
1	P 214.914†	11318.1	10681.6	[5000]	µg/L	05:36:30
1	Pb 220.353†	10606.1	10212.9	[1000]	µg/L	05:36:30
1	S 181.975 Axial†	1832.0	1776.7	[2000]	µg/L	05:36:30
1	Sb 206.836†	3938.6	3827.6	[1000]	µg/L	05:36:30
1	Se 196.026†	2624.0	2707.3	[1000]	µg/L	05:36:30
1	SiO2†	102365.4	98884.0	[10695]	µg/L	05:36:10
1	Si 251.611†	132967.1	131449.2	[5000]	µg/L	05:36:10
1	Sn 189.927†	10150.4	9994.4	[1000]	µg/L	05:36:30
1	Ti 334.940†	329660.6	329048.2	[1000]	µg/L	05:36:10
1	Tl 190.801†	5132.4	5215.2	[1000]	µg/L	05:36:30
1	U 409.014†	9803.6	16596.5	[1000]	µg/L	05:36:10
1	V 292.402†	90505.3	89718.9	[1000]	µg/L	05:36:10
1	Zn 213.857†	144068.1	141771.8	[1000]	µg/L	05:36:10
2	Sc RADIAL	16202.8	16202.8	99.0	%	05:35:35
2	Al 396.153Radial†	23798.0	23723.6	[10000]	µg/L	05:35:15
2	Ca 317.933Radial†	23526.5	23679.6	[10000]	µg/L	05:35:35
2	Fe 238.204 Radial†	19055.0	19209.7	[10000]	µg/L	05:35:35
2	K 766.490 Radial†	20675.4	18235.9	[10000]	µg/L	05:35:15
2	Mg 279.077 IEC†	2505.1	2517.4	[10000]	µg/L	05:35:35
2	Na 589.592 Radial†	56188.4	56379.8	[10000]	µg/L	05:35:15
2	Sr 421.552†	352344.2	355752.0	[1000]	µg/L	05:35:15
2	Sc 361.383	501954.2	501954.2	100.29	%	05:36:38
2	Y 371.029	437184.4	437184.4	99.063	%	05:36:38
2	Ag 328.068†	120246.8	120203.8	[1000]	µg/L	05:36:38
2	As 188.979†	2985.0	2974.5	[1000]	µg/L	05:36:58
2	B 249.677†	34890.4	34842.9	[1000]	µg/L	05:36:38
2	Ba 233.527†	130366.1	130246.8	[1000]	µg/L	05:36:38
2	Be 313.107†	1821772.7	1821101.6	[1000]	µg/L	05:36:38
2	Cd 226.502†	105882.1	105934.0	[1000]	µg/L	05:36:38
2	Co 228.616†	55067.9	54990.8	[1000]	µg/L	05:36:38
2	Cr 267.716†	68992.1	68638.5	[1000]	µg/L	05:36:38
2	Cu 324.752†	180054.1	175327.8	[1000]	µg/L	05:36:38
2	Mn 257.610†	753808.0	751370.1	[1000]	µg/L	05:36:38
2	Mo 202.031†	19829.4	19817.1	[1000]	µg/L	05:36:58
2	Ni 231.604†	39771.9	39857.4	[1000]	µg/L	05:36:38
2	P 214.914†	11415.6	10835.7	[5000]	µg/L	05:36:58
2	Pb 220.353†	10654.7	10314.6	[1000]	µg/L	05:36:58

2	S 181.975 Axial†	1833.4	1787.3	[2000]	µg/L	05:36:58
2	Sb 206.836†	3954.8	3863.6	[1000]	µg/L	05:36:58
2	Se 196.026†	2653.7	2750.2	[1000]	µg/L	05:36:58
2	SiO2†	102039.2	99072.9	[10695]	µg/L	05:36:38
2	Si 251.611†	132756.4	131907.0	[5000]	µg/L	05:36:38
2	Sn 189.927†	10204.7	10099.6	[1000]	µg/L	05:36:58
2	Ti 334.940†	328505.4	329552.2	[1000]	µg/L	05:36:38
2	Tl 190.801†	5151.2	5259.7	[1000]	µg/L	05:36:58
2	U 409.014†	9691.8	16534.2	[1000]	µg/L	05:36:38
2	V 292.402†	89988.2	89657.9	[1000]	µg/L	05:36:38
2	Zn 213.857†	143578.5	142007.3	[1000]	µg/L	05:36:38
3	Sc RADIAL	16252.7	16252.7	99.3	%	05:36:00
3	Al 396.153Radial†	23801.5	23653.4	[10000]	µg/L	05:35:40
3	Ca 317.933Radial†	23553.1	23633.5	[10000]	µg/L	05:36:00
3	Fe 238.204 Radial†	19145.7	19242.0	[10000]	µg/L	05:36:00
3	K 766.490 Radial†	20743.3	18240.3	[10000]	µg/L	05:35:40
3	Mg 279.077 IEC†	2520.6	2525.2	[10000]	µg/L	05:36:00
3	Na 589.592 Radial†	56295.8	56313.8	[10000]	µg/L	05:35:40
3	Sr 421.552†	353279.9	355602.5	[1000]	µg/L	05:35:40
3	Sc 361.383	502485.4	502485.4	100.39	%	05:37:05
3	Y 371.029	437459.0	437459.0	99.125	%	05:37:05
3	Ag 328.068†	120470.5	120299.9	[1000]	µg/L	05:37:05
3	As 188.979†	2957.5	2944.0	[1000]	µg/L	05:37:25
3	B 249.677†	34948.4	34864.0	[1000]	µg/L	05:37:05
3	Ba 233.527†	130256.8	130000.6	[1000]	µg/L	05:37:05
3	Be 313.107†	1820698.4	1818111.3	[1000]	µg/L	05:37:05
3	Cd 226.502†	105567.9	105509.5	[1000]	µg/L	05:37:05
3	Co 228.616†	54911.5	54777.0	[1000]	µg/L	05:37:05
3	Cr 267.716†	68989.7	68563.4	[1000]	µg/L	05:37:05
3	Cu 324.752†	180196.4	175279.7	[1000]	µg/L	05:37:05
3	Mn 257.610†	753000.1	749770.9	[1000]	µg/L	05:37:05
3	Mo 202.031†	19669.4	19636.8	[1000]	µg/L	05:37:25
3	Ni 231.604†	39674.8	39718.8	[1000]	µg/L	05:37:05
3	P 214.914†	11332.6	10741.0	[5000]	µg/L	05:37:25
3	Pb 220.353†	10599.8	10248.8	[1000]	µg/L	05:37:25
3	S 181.975 Axial†	1824.4	1776.4	[2000]	µg/L	05:37:25
3	Sb 206.836†	3927.0	3831.6	[1000]	µg/L	05:37:25
3	Se 196.026†	2614.4	2708.2	[1000]	µg/L	05:37:25
3	SiO2†	102136.2	99062.0	[10695]	µg/L	05:37:05
3	Si 251.611†	132741.2	131751.9	[5000]	µg/L	05:37:05
3	Sn 189.927†	10094.2	9978.7	[1000]	µg/L	05:37:25
3	Ti 334.940†	328366.1	329067.2	[1000]	µg/L	05:37:05
3	Tl 190.801†	5123.3	5226.4	[1000]	µg/L	05:37:25
3	U 409.014†	9799.7	16631.6	[1000]	µg/L	05:37:05
3	V 292.402†	90005.9	89580.7	[1000]	µg/L	05:37:05
3	Zn 213.857†	143376.2	141654.4	[1000]	µg/L	05:37:05

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	502978.4	1340.46	0.27%	100.49	%
Sc RADIAL	16201.0	52.64	0.32%	99.0	%
Y 371.029	438059.8	1285.88	0.29%	99.261	%
Ag 328.068†	120235.9	55.48	0.05%	[1000]	µg/L
Al 396.153Radial†	23662.6	57.00	0.24%	[10000]	µg/L
As 188.979†	2948.8	23.66	0.80%	[1000]	µg/L
B 249.677†	34803.5	87.26	0.25%	[1000]	µg/L
Ba 233.527†	130026.9	207.99	0.16%	[1000]	µg/L
Be 313.107†	1818940.6	1888.24	0.10%	[1000]	µg/L
Ca 317.933Radial†	23668.4	30.80	0.13%	[10000]	µg/L
Cd 226.502†	105705.5	214.12	0.20%	[1000]	µg/L
Co 228.616†	54834.1	137.42	0.25%	[1000]	µg/L
Cr 267.716†	68621.8	52.06	0.08%	[1000]	µg/L
Cu 324.752†	175263.9	73.04	0.04%	[1000]	µg/L
Fe 238.204 Radial†	19228.4	16.74	0.09%	[10000]	µg/L
K 766.490 Radial†	18274.9	63.87	0.35%	[10000]	µg/L
Mg 279.077 IEC†	2522.4	4.33	0.17%	[10000]	µg/L
Mn 257.610†	750218.0	1006.08	0.13%	[1000]	µg/L
Mo 202.031†	19703.5	98.81	0.50%	[1000]	µg/L
Na 589.592 Radial†	56382.5	70.16	0.12%	[10000]	µg/L

Ni 231.604†	39789.1	69.33	0.17%	[1000]	µg/L
P 214.914†	10752.8	77.71	0.72%	[5000]	µg/L
Pb 220.353†	10258.8	51.60	0.50%	[1000]	µg/L
S 181.975 Axial†	1780.1	6.19	0.35%	[2000]	µg/L
Sb 206.836†	3840.9	19.71	0.51%	[1000]	µg/L
Se 196.026†	2721.9	24.48	0.90%	[1000]	µg/L
SiO2†	99006.3	106.07	0.11%	[10695]	µg/L
Si 251.611†	131702.7	232.83	0.18%	[5000]	µg/L
Sn 189.927†	10024.2	65.73	0.66%	[1000]	µg/L
Sr 421.552†	355882.9	364.01	0.10%	[1000]	µg/L
Ti 334.940†	329222.5	285.67	0.09%	[1000]	µg/L
Tl 190.801†	5233.7	23.14	0.44%	[1000]	µg/L
U 409.014†	16587.4	49.30	0.30%	[1000]	µg/L
V 292.402†	89652.5	69.30	0.08%	[1000]	µg/L
Zn 213.857†	141811.2	179.70	0.13%	[1000]	µg/L

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Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S10 **Date Collected: 12/3/2010 05:37:33**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	16134.4	16134.4	98.6	%	05:38:06
1	Al 396.153Radial†	117226.2	118555.1	[50000]	µg/L	05:38:01
1	Ca 317.933Radial†	116376.5	117923.6	[50000]	µg/L	05:38:06
1	Fe 238.204 Radial†	37936.9	38436.2	[20000]	µg/L	05:38:06
1	Mg 279.077 IEC†	12224.9	12383.3	[50000]	µg/L	05:38:06
1	Na 589.592 Radial†	111504.4	112706.7	[20000]	µg/L	05:38:01
1	Sc 361.383	495505.8	495505.8	98.999	%	05:38:33
1	Y 371.029	430664.3	430664.3	97.586	%	05:38:33
2	Sc RADIAL	16145.2	16145.2	98.7	%	05:38:16
2	Al 396.153Radial†	118382.3	119646.8	[50000]	µg/L	05:38:11
2	Ca 317.933Radial†	116237.5	117703.7	[50000]	µg/L	05:38:16
2	Fe 238.204 Radial†	37841.3	38313.5	[20000]	µg/L	05:38:16
2	Mg 279.077 IEC†	12277.6	12428.3	[50000]	µg/L	05:38:16
2	Na 589.592 Radial†	112171.5	113306.9	[20000]	µg/L	05:38:11
2	Sc 361.383	494263.8	494263.8	98.751	%	05:38:39
2	Y 371.029	429591.6	429591.6	97.343	%	05:38:39
3	Sc RADIAL	16152.1	16152.1	98.7	%	05:38:27
3	Al 396.153Radial†	118375.7	119589.5	[50000]	µg/L	05:38:22
3	Ca 317.933Radial†	116589.8	118010.8	[50000]	µg/L	05:38:27
3	Fe 238.204 Radial†	37960.3	38417.9	[20000]	µg/L	05:38:27
3	Mg 279.077 IEC†	12275.3	12420.8	[50000]	µg/L	05:38:27
3	Na 589.592 Radial†	112335.0	113424.5	[20000]	µg/L	05:38:22
3	Sc 361.383	496230.1	496230.1	99.144	%	05:38:44
3	Y 371.029	431266.7	431266.7	97.722	%	05:38:44

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	495333.2	994.44	0.20%	98.965	%
Sc RADIAL	16143.9	8.90	0.06%	98.7	%
Y 371.029	430507.5	848.50	0.20%	97.550	%
Al 396.153Radial†	119263.8	614.44	0.52%	[50000]	µg/L
Ca 317.933Radial†	117879.4	158.27	0.13%	[50000]	µg/L
Fe 238.204 Radial†	38389.2	66.20	0.17%	[20000]	µg/L
Mg 279.077 IEC†	12410.8	24.12	0.19%	[50000]	µg/L
Na 589.592 Radial†	113146.0	384.96	0.34%	[20000]	µg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	120.3	0.00000	0.999999	
Al 396.153Radial	3	Lin Thru 0	0.0	2.385	0.00000	0.999999	
As 188.979	3	Lin Thru 0	0.0	2.948	0.00000	1.000000	
B 249.677	3	Lin Thru 0	0.0	34.74	0.00000	0.999992	
Ba 233.527	3	Lin Thru 0	0.0	130.1	0.00000	0.999997	
Be 313.107	3	Lin Thru 0	0.0	1820	0.00000	0.999999	
Ca 317.933Radial	3	Lin Thru 0	0.0	2.358	0.00000	0.999999	
Cd 226.502	3	Lin Thru 0	0.0	105.8	0.00000	0.999999	
Co 228.616	3	Lin Thru 0	0.0	54.66	0.00000	0.999980	
Cr 267.716	3	Lin Thru 0	0.0	68.66	0.00000	0.999998	
Cu 324.752	3	Lin Thru 0	0.0	175.3	0.00000	1.000000	
Fe 238.204 Radia	2	Lin Thru 0	0.0	1.920	0.00000	1.000000	
K 766.490 Radial	3	Lin Thru 0	0.0	1.836	0.00000	0.999963	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.2484	0.00000	0.999994	
Mn 257.610	3	Lin Thru 0	0.0	751.0	0.00000	0.999995	
Mo 202.031	3	Lin Thru 0	0.0	19.73	0.00000	0.999997	
Na 589.592 Radia	2	Lin Thru 0	0.0	5.653	0.00000	0.999999	

Ni 231.604	3	Lin Thru 0	0.0	39.66	0.00000	0.999980
P 214.914	3	Lin Thru 0	0.0	2.150	0.00000	0.999999
Pb 220.353	3	Lin Thru 0	0.0	10.28	0.00000	0.999991
S 181.975 Axial	3	Lin Thru 0	0.0	0.8908	0.00000	0.999999
Sb 206.836	3	Lin Thru 0	0.0	3.833	0.00000	0.999991
Se 196.026	3	Lin Thru 0	0.0	2.722	0.00000	0.999990
SiO2	3	Lin Thru 0	0.0	9.264	0.00000	0.999999
Si 251.611	3	Lin Thru 0	0.0	26.36	0.00000	0.999999
Sn 189.927	3	Lin Thru 0	0.0	10.03	0.00000	0.999999
Sr 421.552	3	Lin Thru 0	0.0	356.4	0.00000	0.999995
Ti 334.940	3	Lin Thru 0	0.0	329.2	0.00000	1.000000
Tl 190.801	3	Lin Thru 0	0.0	5.234	0.00000	0.999999
U 409.014	3	Lin Thru 0	0.0	16.59	0.00000	1.000000
V 292.402	3	Lin Thru 0	0.0	89.62	0.00000	1.000000
Zn 213.857	3	Lin Thru 0	0.0	142.0	0.00000	0.999997

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Sequence No.: 6 **Autosampler Location: 9**
Sample ID: ICV **Date Collected: 12/3/2010 05:38:52**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16380.5	16380.5	100	%			05:39:41
1	Al 396.153Radial†	12460.3	12140.0	5076.1	µg/L	5076.1	ppb	05:39:21
1	Ca 317.933Radial†	12260.4	12170.5	5160.7	µg/L	5160.7	ppb	05:39:41
1	Fe 238.204 Radial†	9797.9	9756.0	5081.0	µg/L	5081.0	ppb	05:39:41
1	K 766.490 Radial†	7369.7	4721.2	2571.2	µg/L	2571.2	ppb	05:39:21
1	Mg 279.077 IEC†	1310.6	1297.0	5223.9	µg/L	5223.9	ppb	05:39:41
1	Na 589.592 Radial†	15088.3	14717.8	2603.3	µg/L	2603.3	ppb	05:39:21
1	Sr 421.552†	184023.6	183791.7	515.49	µg/L	515.49	ppb	05:39:21
1	Sc 361.383	503023.5	503023.5	100.50	%			05:40:39
1	Y 371.029	440540.5	440540.5	99.824	%			05:40:39
1	Ag 328.068†	28932.8	29090.6	247.72	µg/L	247.72	ppb	05:40:44
1	As 188.979†	1523.9	1514.4	518.51	µg/L	518.51	ppb	05:40:44
1	B 249.677†	17947.5	17910.6	513.57	µg/L	513.57	ppb	05:40:44
1	Ba 233.527†	66815.7	66737.2	513.68	µg/L	513.68	ppb	05:40:39
1	Be 313.107†	455713.1	457996.6	251.52	µg/L	251.52	ppb	05:40:39
1	Cd 226.502†	54081.1	54167.1	511.97	µg/L	511.97	ppb	05:40:44
1	Co 228.616†	28125.9	28066.6	513.54	µg/L	513.54	ppb	05:40:44
1	Cr 267.716†	35606.5	35273.3	513.84	µg/L	513.84	ppb	05:40:44
1	Cu 324.752†	95457.4	90771.5	517.55	µg/L	517.55	ppb	05:40:39
1	Mn 257.610†	387358.1	385150.9	512.58	µg/L	512.58	ppb	05:40:39
1	Mo 202.031†	10199.9	10193.6	516.83	µg/L	516.83	ppb	05:40:44
1	Ni 231.604†	20317.0	20415.3	514.61	µg/L	514.61	ppb	05:40:44
1	P 214.914†	6115.8	5538.2	2381.8	µg/L	2381.8	ppb	05:40:44
1	Pb 220.353†	5719.3	5381.3	522.21	µg/L	522.21	ppb	05:40:44
1	S 181.975 Axial†	2372.4	2319.8	2603.7	µg/L	2603.7	ppb	05:40:44
1	Sb 206.836†	2078.3	1988.0	525.43	µg/L	525.43	ppb	05:40:44
1	Se 196.026†	6920.1	6989.7	2573.2	µg/L	2573.2	ppb	05:40:44
1	SiO2†	102259.9	99076.2	10701	µg/L	10701	ppb	05:40:39
1	Si 251.611†	132723.3	131592.7	4985.7	µg/L	4985.7	ppb	05:40:39
1	Sn 189.927†	5283.6	5181.4	516.88	µg/L	516.88	ppb	05:40:44
1	Ti 334.940†	165652.2	166815.2	506.38	µg/L	506.38	ppb	05:40:39
1	Tl 190.801†	2618.1	2728.3	523.20	µg/L	523.20	ppb	05:40:44
1	U 409.014†	1877.0	8737.9	527.75	µg/L	527.75	ppb	05:40:39
1	V 292.402†	45422.3	45123.7	510.94	µg/L	510.94	ppb	05:40:44
1	Zn 213.857†	73758.7	72231.4	504.47	µg/L	504.47	ppb	05:40:39
2	Sc RADIAL	16389.0	16389.0	100	%			05:40:07
2	Al 396.153Radial†	12394.6	12068.0	5046.0	µg/L	5046.0	ppb	05:39:46
2	Ca 317.933Radial†	12306.8	12210.4	5177.6	µg/L	5177.6	ppb	05:40:07
2	Fe 238.204 Radial†	9806.4	9759.4	5082.9	µg/L	5082.9	ppb	05:40:07
2	K 766.490 Radial†	7489.2	4836.6	2634.2	µg/L	2634.2	ppb	05:39:46
2	Mg 279.077 IEC†	1310.4	1296.1	5220.2	µg/L	5220.2	ppb	05:40:07
2	Na 589.592 Radial†	14979.7	14601.6	2582.8	µg/L	2582.8	ppb	05:39:46
2	Sr 421.552†	183416.2	183090.3	513.52	µg/L	513.52	ppb	05:39:46
2	Sc 361.383	500619.1	500619.1	100.02	%			05:40:49
2	Y 371.029	438818.7	438818.7	99.433	%			05:40:49
2	Ag 328.068†	28658.2	28954.3	246.58	µg/L	246.58	ppb	05:40:54
2	As 188.979†	1513.0	1510.8	517.27	µg/L	517.27	ppb	05:40:54
2	B 249.677†	17751.0	17800.0	510.38	µg/L	510.38	ppb	05:40:54
2	Ba 233.527†	66601.9	66842.8	514.49	µg/L	514.49	ppb	05:40:49
2	Be 313.107†	454096.7	458558.3	251.83	µg/L	251.83	ppb	05:40:49
2	Cd 226.502†	53561.4	53905.9	509.50	µg/L	509.50	ppb	05:40:54
2	Co 228.616†	27954.0	28029.2	512.85	µg/L	512.85	ppb	05:40:54
2	Cr 267.716†	35311.4	35148.4	512.02	µg/L	512.02	ppb	05:40:54
2	Cu 324.752†	95147.3	90917.6	518.38	µg/L	518.38	ppb	05:40:49
2	Mn 257.610†	385837.7	385482.0	513.02	µg/L	513.02	ppb	05:40:49
2	Mo 202.031†	10083.4	10125.9	513.39	µg/L	513.39	ppb	05:40:54
2	Ni 231.604†	20157.7	20353.0	513.04	µg/L	513.04	ppb	05:40:54
2	P 214.914†	6017.2	5468.8	2349.2	µg/L	2349.2	ppb	05:40:54
2	Pb 220.353†	5642.0	5331.4	517.36	µg/L	517.36	ppb	05:40:54

2	S 181.975 Axial†	2331.8	2290.4	2570.8	µg/L	2570.8	ppb	05:40:54
2	Sb 206.836†	2032.3	1952.0	516.00	µg/L	516.00	ppb	05:40:54
2	Se 196.026†	6891.2	6993.9	2574.7	µg/L	2574.7	ppb	05:40:54
2	SiO2†	101759.3	99064.4	10699	µg/L	10699	ppb	05:40:49
2	Si 251.611†	132065.5	131569.3	4984.8	µg/L	4984.8	ppb	05:40:49
2	Sn 189.927†	5231.6	5154.7	514.22	µg/L	514.22	ppb	05:40:54
2	Ti 334.940†	164919.7	166874.5	506.56	µg/L	506.56	ppb	05:40:49
2	Tl 190.801†	2598.3	2721.0	521.83	µg/L	521.83	ppb	05:40:54
2	U 409.014†	1945.4	8815.3	532.42	µg/L	532.42	ppb	05:40:49
2	V 292.402†	45117.0	45035.4	509.92	µg/L	509.92	ppb	05:40:54
2	Zn 213.857†	73470.9	72296.3	504.94	µg/L	504.94	ppb	05:40:49
3	Sc RADIAL	16259.1	16259.1	99.4	%			05:40:32
3	Al 396.153Radial†	12352.3	12124.3	5069.5	µg/L	5069.5	ppb	05:40:12
3	Ca 317.933Radial†	12160.3	12161.2	5156.7	µg/L	5156.7	ppb	05:40:32
3	Fe 238.204 Radial†	9700.9	9731.4	5068.3	µg/L	5068.3	ppb	05:40:32
3	K 766.490 Radial†	7412.1	4818.7	2624.4	µg/L	2624.4	ppb	05:40:12
3	Mg 279.077 IEC†	1293.2	1289.3	5192.7	µg/L	5192.7	ppb	05:40:32
3	Na 589.592 Radial†	15088.7	14830.7	2623.3	µg/L	2623.3	ppb	05:40:12
3	Sr 421.552†	182901.6	184034.2	516.17	µg/L	516.17	ppb	05:40:12
3	Sc 361.383	499245.0	499245.0	99.747	%			05:41:00
3	Y 371.029	437464.6	437464.6	99.127	%			05:41:00
3	Ag 328.068†	28798.9	29174.2	248.41	µg/L	248.41	ppb	05:41:05
3	As 188.979†	1489.4	1491.3	510.66	µg/L	510.66	ppb	05:41:05
3	B 249.677†	17765.0	17862.8	512.19	µg/L	512.19	ppb	05:41:05
3	Ba 233.527†	66346.2	66769.7	513.93	µg/L	513.93	ppb	05:41:00
3	Be 313.107†	452662.3	458369.8	251.73	µg/L	251.73	ppb	05:41:00
3	Cd 226.502†	53668.3	54160.6	511.91	µg/L	511.91	ppb	05:41:05
3	Co 228.616†	27986.9	28139.1	514.86	µg/L	514.86	ppb	05:41:05
3	Cr 267.716†	35316.1	35250.3	513.50	µg/L	513.50	ppb	05:41:05
3	Cu 324.752†	94839.6	90871.0	518.11	µg/L	518.11	ppb	05:41:00
3	Mn 257.610†	384933.4	385637.1	513.23	µg/L	513.23	ppb	05:41:00
3	Mo 202.031†	10140.2	10210.6	517.68	µg/L	517.68	ppb	05:41:05
3	Ni 231.604†	20209.1	20460.1	515.74	µg/L	515.74	ppb	05:41:05
3	P 214.914†	6059.1	5527.4	2376.5	µg/L	2376.5	ppb	05:41:05
3	Pb 220.353†	5689.0	5394.0	523.45	µg/L	523.45	ppb	05:41:05
3	S 181.975 Axial†	2342.5	2307.6	2590.1	µg/L	2590.1	ppb	05:41:05
3	Sb 206.836†	2079.9	2005.3	529.95	µg/L	529.95	ppb	05:41:05
3	Se 196.026†	6935.8	7057.6	2598.1	µg/L	2598.1	ppb	05:41:05
3	SiO2†	101767.1	99352.3	10731	µg/L	10731	ppb	05:41:00
3	Si 251.611†	131719.5	131585.8	4985.4	µg/L	4985.4	ppb	05:41:00
3	Sn 189.927†	5230.6	5168.1	515.56	µg/L	515.56	ppb	05:41:05
3	Ti 334.940†	164483.4	166890.9	506.61	µg/L	506.61	ppb	05:41:00
3	Tl 190.801†	2635.2	2765.1	530.24	µg/L	530.24	ppb	05:41:05
3	U 409.014†	2002.3	8877.6	536.17	µg/L	536.17	ppb	05:41:00
3	V 292.402†	45035.0	45077.4	510.45	µg/L	510.45	ppb	05:41:05
3	Zn 213.857†	73314.3	72341.4	505.24	µg/L	505.24	ppb	05:41:00

Mean Data: ICV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	500962.6	100.09	%	0.382				0.38%
Sc RADIAL	16342.9	99.9	%	0.44				0.44%
Y 371.029	438941.3	99.461	%	0.3493				0.35%
Ag 328.068†	29073.0	247.57	µg/L	0.925	247.57	ppb	0.925	0.37%
QC value within limits for Ag 328.068 Recovery = 99.03%								
Al 396.153Radial†	12110.8	5063.9	µg/L	15.82	5063.9	ppb	15.82	0.31%
QC value within limits for Al 396.153Radial Recovery = 101.28%								
As 188.979†	1505.5	515.48	µg/L	4.219	515.48	ppb	4.219	0.82%
QC value within limits for As 188.979 Recovery = 103.10%								
B 249.677†	17857.8	512.05	µg/L	1.596	512.05	ppb	1.596	0.31%
QC value within limits for B 249.677 Recovery = 102.41%								
Ba 233.527†	66783.2	514.03	µg/L	0.416	514.03	ppb	0.416	0.08%
QC value within limits for Ba 233.527 Recovery = 102.81%								
Be 313.107†	458308.2	251.70	µg/L	0.157	251.70	ppb	0.157	0.06%
QC value within limits for Be 313.107 Recovery = 100.68%								
Ca 317.933Radial†	12180.7	5165.0	µg/L	11.10	5165.0	ppb	11.10	0.21%
QC value within limits for Ca 317.933Radial Recovery = 103.30%								
Cd 226.502†	54077.9	511.13	µg/L	1.410	511.13	ppb	1.410	0.28%
QC value within limits for Cd 226.502 Recovery = 102.23%								
Co 228.616†	28078.3	513.75	µg/L	1.025	513.75	ppb	1.025	0.20%

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   QC value within limits for Co 228.616  Recovery = 102.75%
Cr 267.716†            35224.0      513.12 µg/L         0.969      513.12 ppb          0.969   0.19%
   QC value within limits for Cr 267.716  Recovery = 102.62%
Cu 324.752†            90853.4      518.01 µg/L         0.424      518.01 ppb          0.424   0.08%
   QC value within limits for Cu 324.752  Recovery = 103.60%
Fe 238.204 Radial†      9748.9      5077.4 µg/L          7.96      5077.4 ppb           7.96   0.16%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.55%
K 766.490 Radial†       4792.2      2609.9 µg/L         33.86      2609.9 ppb          33.86   1.30%
   QC value within limits for K 766.490 Radial  Recovery = 104.40%
Mg 279.077 IEC†         1294.1      5212.2 µg/L         17.02      5212.2 ppb          17.02   0.33%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.24%
Mn 257.610†           385423.3      512.95 µg/L         0.331      512.95 ppb          0.331   0.06%
   QC value within limits for Mn 257.610  Recovery = 102.59%
Mo 202.031†            10176.7      515.97 µg/L         2.270      515.97 ppb          2.270   0.44%
   QC value within limits for Mo 202.031  Recovery = 103.19%
Na 589.592 Radial†     14716.7      2603.1 µg/L         20.26      2603.1 ppb          20.26   0.78%
   QC value within limits for Na 589.592 Radial  Recovery = 104.12%
Ni 231.604†            20409.5      514.46 µg/L         1.356      514.46 ppb          1.356   0.26%
   QC value within limits for Ni 231.604  Recovery = 102.89%
P 214.914†              5511.5      2369.2 µg/L         17.51      2369.2 ppb          17.51   0.74%
   QC value within limits for P 214.914  Recovery = 94.77%
Pb 220.353†             5368.9      521.00 µg/L         3.217      521.00 ppb          3.217   0.62%
   QC value within limits for Pb 220.353  Recovery = 104.20%
S 181.975 Axial†        2305.9      2588.2 µg/L         16.55      2588.2 ppb          16.55   0.64%
   QC value within limits for S 181.975 Axial  Recovery = 103.53%
Sb 206.836†             1981.8      523.79 µg/L         7.120      523.79 ppb          7.120   1.36%
   QC value within limits for Sb 206.836  Recovery = 104.76%
Se 196.026†             7013.7      2582.0 µg/L         13.97      2582.0 ppb          13.97   0.54%
   QC value within limits for Se 196.026  Recovery = 103.28%
SiO2†                  99164.3       10710 µg/L          17.6       10710 ppb           17.6   0.16%
   QC value within limits for SiO2  Recovery = 100.14%
Si 251.611†           131582.6      4985.3 µg/L          0.43      4985.3 ppb           0.43   0.01%
   QC value within limits for Si 251.611  Recovery = 99.71%
Sn 189.927†             5168.0      515.55 µg/L         1.330      515.55 ppb          1.330   0.26%
   QC value within limits for Sn 189.927  Recovery = 103.11%
Sr 421.552†           183638.7      515.06 µg/L         1.375      515.06 ppb          1.375   0.27%
   QC value within limits for Sr 421.552  Recovery = 103.01%
Ti 334.940†           166860.2      506.52 µg/L         0.121      506.52 ppb          0.121   0.02%
   QC value within limits for Ti 334.940  Recovery = 101.30%
Tl 190.801†             2738.1      525.09 µg/L         4.512      525.09 ppb          4.512   0.86%
   QC value within limits for Tl 190.801  Recovery = 105.02%
U 409.014†              8810.3      532.12 µg/L         4.217      532.12 ppb          4.217   0.79%
   QC value within limits for U 409.014  Recovery = 106.42%
V 292.402†             45078.9      510.44 µg/L         0.512      510.44 ppb          0.512   0.10%
   QC value within limits for V 292.402  Recovery = 102.09%
Zn 213.857†            72289.7      504.88 µg/L         0.387      504.88 ppb          0.387   0.08%
   QC value within limits for Zn 213.857  Recovery = 100.98%
All analyte(s) passed QC.
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Sequence No.: 7 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 12/3/2010 05:41:13**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16524.7	16524.7	101	%			05:41:41
1	Al 396.153Radial†	348.2	40.6	17.057	µg/L	17.057	ppb	05:41:41
1	Ca 317.933Radial†	65.4	-9.2	-3.9213	µg/L	-3.9213	ppb	05:42:02
1	Fe 238.204 Radial†	32.9	3.5	1.7978	µg/L	1.7978	ppb	05:42:02
1	K 766.490 Radial†	2526.1	-138.2	-75.305	µg/L	-75.305	ppb	05:41:41
1	Mg 279.077 IEC†	7.9	-4.1	-16.468	µg/L	-16.468	ppb	05:42:02
1	Na 589.592 Radial†	359.3	4.8	0.8403	µg/L	0.8403	ppb	05:41:41
1	Sr 421.552†	171.2	176.9	0.4964	µg/L	0.4964	ppb	05:41:41
1	Sc 361.383	501263.7	501263.7	100.15	%			05:42:59
1	Y 371.029	442446.6	442446.6	100.26	%			05:42:59
1	Ag 328.068†	-275.2	27.4	0.2216	µg/L	0.2216	ppb	05:42:59
1	As 188.979†	1.4	-0.5	-0.1522	µg/L	-0.1522	ppb	05:43:19
1	B 249.677†	30.8	83.5	2.4032	µg/L	2.4032	ppb	05:43:19
1	Ba 233.527†	-237.5	17.8	0.1366	µg/L	0.1366	ppb	05:43:19
1	Be 313.107†	-4395.2	168.6	0.0926	µg/L	0.0926	ppb	05:42:59
1	Cd 226.502†	-363.0	-6.6	-0.0626	µg/L	-0.0626	ppb	05:43:19
1	Co 228.616†	-84.6	-3.5	-0.0650	µg/L	-0.0650	ppb	05:43:19
1	Cr 267.716†	170.9	15.1	0.2181	µg/L	0.2181	ppb	05:43:19
1	Cu 324.752†	4196.3	-19.6	-0.1135	µg/L	-0.1135	ppb	05:42:59
1	Mn 257.610†	285.1	10.2	0.0142	µg/L	0.0142	ppb	05:43:19
1	Mo 202.031†	-53.8	-9.1	-0.4628	µg/L	-0.4628	ppb	05:43:19
1	Ni 231.604†	-207.3	-7.3	-0.1847	µg/L	-0.1847	ppb	05:43:19
1	P 214.914†	555.1	7.2	3.4037	µg/L	3.4037	ppb	05:43:19
1	Pb 220.353†	268.4	-41.4	-4.0418	µg/L	-4.0418	ppb	05:43:19
1	S 181.975 Axial†	45.8	4.9	5.5518	µg/L	5.5518	ppb	05:43:19
1	Sb 206.836†	96.0	16.0	4.1652	µg/L	4.1652	ppb	05:43:19
1	Se 196.026†	-104.9	-0.7	-0.2466	µg/L	-0.2466	ppb	05:43:19
1	SiO2†	2714.7	37.1	4.0003	µg/L	4.0003	ppb	05:42:59
1	Si 251.611†	510.0	40.9	1.5566	µg/L	1.5566	ppb	05:43:19
1	Sn 189.927†	88.3	12.3	1.2227	µg/L	1.2227	ppb	05:43:19
1	Ti 334.940†	-1866.6	125.8	0.3817	µg/L	0.3817	ppb	05:42:59
1	Tl 190.801†	-117.9	5.5	1.0572	µg/L	1.0572	ppb	05:43:19
1	U 409.014†	-6838.0	42.5	2.5614	µg/L	2.5614	ppb	05:42:59
1	V 292.402†	31.8	-40.3	-0.4516	µg/L	-0.4516	ppb	05:42:59
1	Zn 213.857†	1167.0	6.1	0.0439	µg/L	0.0439	ppb	05:43:19
2	Sc RADIAL	16326.5	16326.5	99.8	%			05:42:07
2	Al 396.153Radial†	327.9	24.5	10.268	µg/L	10.268	ppb	05:42:07
2	Ca 317.933Radial†	69.9	-3.9	-1.6481	µg/L	-1.6481	ppb	05:42:27
2	Fe 238.204 Radial†	31.6	2.5	1.2960	µg/L	1.2960	ppb	05:42:27
2	K 766.490 Radial†	2661.8	28.1	15.326	µg/L	15.326	ppb	05:42:07
2	Mg 279.077 IEC†	10.0	-1.9	-7.5782	µg/L	-7.5782	ppb	05:42:27
2	Na 589.592 Radial†	364.4	14.2	2.5156	µg/L	2.5156	ppb	05:42:07
2	Sr 421.552†	91.9	99.5	0.2791	µg/L	0.2791	ppb	05:42:07
2	Sc 361.383	505137.1	505137.1	100.92	%			05:43:24
2	Y 371.029	445381.3	445381.3	100.92	%			05:43:24
2	Ag 328.068†	-331.9	-26.7	-0.2260	µg/L	-0.2260	ppb	05:43:24
2	As 188.979†	-1.0	-2.9	-0.9855	µg/L	-0.9855	ppb	05:43:44
2	B 249.677†	0.8	53.5	1.5385	µg/L	1.5385	ppb	05:43:44
2	Ba 233.527†	-229.9	27.1	0.2081	µg/L	0.2081	ppb	05:43:44
2	Be 313.107†	-4413.9	183.7	0.1009	µg/L	0.1009	ppb	05:43:24
2	Cd 226.502†	-364.1	-4.9	-0.0467	µg/L	-0.0467	ppb	05:43:44
2	Co 228.616†	-68.2	13.4	0.2450	µg/L	0.2450	ppb	05:43:44
2	Cr 267.716†	136.8	-20.0	-0.2937	µg/L	-0.2937	ppb	05:43:44
2	Cu 324.752†	4256.2	7.6	0.0407	µg/L	0.0407	ppb	05:43:24
2	Mn 257.610†	264.7	-12.3	-0.0160	µg/L	-0.0160	ppb	05:43:44
2	Mo 202.031†	-54.8	-9.7	-0.4929	µg/L	-0.4929	ppb	05:43:44
2	Ni 231.604†	-198.8	2.7	0.0679	µg/L	0.0679	ppb	05:43:44
2	P 214.914†	547.3	-4.8	-2.2480	µg/L	-2.2480	ppb	05:43:44
2	Pb 220.353†	292.8	-19.4	-1.8897	µg/L	-1.8897	ppb	05:43:44

2	S 181.975 Axial†	47.7	6.5	7.2667	µg/L	7.2667	ppb	05:43:44
2	Sb 206.836†	92.3	11.5	3.0001	µg/L	3.0001	ppb	05:43:44
2	Se 196.026†	-117.3	-12.1	-4.4468	µg/L	-4.4468	ppb	05:43:44
2	SiO2†	2718.4	20.0	2.1573	µg/L	2.1573	ppb	05:43:24
2	Si 251.611†	525.7	52.5	1.9989	µg/L	1.9989	ppb	05:43:44
2	Sn 189.927†	70.6	-5.9	-0.5856	µg/L	-0.5856	ppb	05:43:44
2	Ti 334.940†	-1924.5	82.6	0.2497	µg/L	0.2497	ppb	05:43:24
2	Tl 190.801†	-114.7	9.6	1.8450	µg/L	1.8450	ppb	05:43:44
2	U 409.014†	-6867.5	65.6	3.9556	µg/L	3.9556	ppb	05:43:24
2	V 292.402†	51.8	-20.8	-0.2338	µg/L	-0.2338	ppb	05:43:24
2	Zn 213.857†	1155.9	-13.9	-0.0985	µg/L	-0.0985	ppb	05:43:44
3	Sc RADIAL	16239.1	16239.1	99.3	%			05:42:32
3	Al 396.153Radial†	301.2	-0.6	-0.2671	µg/L	-0.2671	ppb	05:42:32
3	Ca 317.933Radial†	66.8	-6.7	-2.8253	µg/L	-2.8253	ppb	05:42:52
3	Fe 238.204 Radial†	33.6	4.7	2.4255	µg/L	2.4255	ppb	05:42:52
3	K 766.490 Radial†	2610.2	-9.5	-5.1786	µg/L	-5.1786	ppb	05:42:32
3	Mg 279.077 IEC†	6.0	-5.9	-23.617	µg/L	-23.617	ppb	05:42:52
3	Na 589.592 Radial†	358.6	10.3	1.8214	µg/L	1.8214	ppb	05:42:32
3	Sr 421.552†	85.0	93.1	0.2612	µg/L	0.2612	ppb	05:42:32
3	Sc 361.383	501262.9	501262.9	100.15	%			05:43:49
3	Y 371.029	441917.4	441917.4	100.14	%			05:43:49
3	Ag 328.068†	-414.7	-112.0	-0.9338	µg/L	-0.9338	ppb	05:43:49
3	As 188.979†	3.0	1.1	0.3641	µg/L	0.3641	ppb	05:44:09
3	B 249.677†	23.7	76.4	2.1969	µg/L	2.1969	ppb	05:44:09
3	Ba 233.527†	-215.4	39.7	0.3056	µg/L	0.3056	ppb	05:44:09
3	Be 313.107†	-4405.9	157.9	0.0867	µg/L	0.0867	ppb	05:43:49
3	Cd 226.502†	-347.3	9.0	0.0854	µg/L	0.0854	ppb	05:44:09
3	Co 228.616†	-62.8	18.4	0.3358	µg/L	0.3358	ppb	05:44:09
3	Cr 267.716†	145.1	-10.7	-0.1584	µg/L	-0.1584	ppb	05:44:09
3	Cu 324.752†	4217.1	1.2	0.0043	µg/L	0.0043	ppb	05:43:49
3	Mn 257.610†	240.6	-34.3	-0.0447	µg/L	-0.0447	ppb	05:44:09
3	Mo 202.031†	-46.0	-1.3	-0.0656	µg/L	-0.0656	ppb	05:44:09
3	Ni 231.604†	-193.6	6.4	0.1602	µg/L	0.1602	ppb	05:44:09
3	P 214.914†	531.1	-16.8	-7.8084	µg/L	-7.8084	ppb	05:44:09
3	Pb 220.353†	300.8	-9.1	-0.8853	µg/L	-0.8853	ppb	05:44:09
3	S 181.975 Axial†	44.8	3.9	4.3644	µg/L	4.3644	ppb	05:44:09
3	Sb 206.836†	94.4	14.3	3.7425	µg/L	3.7425	ppb	05:44:09
3	Se 196.026†	-103.8	0.5	0.1703	µg/L	0.1703	ppb	05:44:09
3	SiO2†	2699.6	22.1	2.3851	µg/L	2.3851	ppb	05:43:49
3	Si 251.611†	523.2	54.0	2.0502	µg/L	2.0502	ppb	05:44:09
3	Sn 189.927†	89.2	13.2	1.3200	µg/L	1.3200	ppb	05:44:09
3	Ti 334.940†	-1937.6	54.8	0.1666	µg/L	0.1666	ppb	05:43:49
3	Tl 190.801†	-111.2	12.2	2.3288	µg/L	2.3288	ppb	05:44:09
3	U 409.014†	-6820.7	59.8	3.6029	µg/L	3.6029	ppb	05:43:49
3	V 292.402†	58.3	-13.8	-0.1518	µg/L	-0.1518	ppb	05:43:49
3	Zn 213.857†	1146.7	-14.2	-0.1012	µg/L	-0.1012	ppb	05:44:09

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	502554.5	100.41	%	0.447				0.45%
Sc RADIAL	16363.4	100	%	0.9				0.89%
Y 371.029	443248.4	100.44	%	0.423				0.42%
Ag 328.068†	-37.1	-0.3127	µg/L	0.58257	-0.3127	ppb	0.58257	186.28%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	21.5	9.0196	µg/L	8.72954	9.0196	ppb	8.72954	96.78%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.8	-0.2579	µg/L	0.68097	-0.2579	ppb	0.68097	264.08%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	71.1	2.0462	µg/L	0.45160	2.0462	ppb	0.45160	22.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	28.2	0.2168	µg/L	0.08485	0.2168	ppb	0.08485	39.14%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	170.1	0.0934	µg/L	0.00713	0.0934	ppb	0.00713	7.64%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-6.6	-2.7982	µg/L	1.13683	-2.7982	ppb	1.13683	40.63%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	-0.8	-0.0080	µg/L	0.08124	-0.0080	ppb	0.08124	>999.9%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	9.4	0.1719	µg/L	0.21017	0.1719	ppb	0.21017	122.23%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -5.2     -0.0780 µg/L       0.26523     -0.0780 ppb        0.26523 340.04%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -3.6     -0.0228 µg/L       0.08061     -0.0228 ppb        0.08061 353.60%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.5      1.8398 µg/L       0.56589      1.8398 ppb        0.56589  30.76%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -39.9     -21.719 µg/L       47.5255     -21.719 ppb        47.5255 218.82%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -3.9     -15.888 µg/L        8.0353     -15.888 ppb         8.0353  50.58%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -12.1     -0.0155 µg/L       0.02943     -0.0155 ppb        0.02943 189.91%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -6.7     -0.3404 µg/L       0.23850     -0.3404 ppb        0.23850  70.06%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†          9.8      1.7258 µg/L       0.84175      1.7258 ppb        0.84175  48.78%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 0.6      0.0145 µg/L       0.17857      0.0145 ppb        0.17857 >999.9%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -4.8     -2.2176 µg/L       5.60615     -2.2176 ppb        5.60615 252.81%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -23.3     -2.2723 µg/L       1.61262     -2.2723 ppb        1.61262  70.97%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.1      5.7276 µg/L       1.45908      5.7276 ppb        1.45908  25.47%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                13.9      3.6359 µg/L       0.58986      3.6359 ppb        0.58986  16.22%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -4.1     -1.5077 µg/L       2.55384     -1.5077 ppb        2.55384 169.39%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      26.4      2.8475 µg/L       1.00475      2.8475 ppb        1.00475  35.28%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                49.1      1.8686 µg/L       0.27138      1.8686 ppb        0.27138  14.52%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 6.5      0.6524 µg/L       1.07319      0.6524 ppb        1.07319 164.50%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               123.2      0.3456 µg/L       0.13095      0.3456 ppb        0.13095  37.89%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                87.7      0.2660 µg/L       0.10844      0.2660 ppb        0.10844  40.76%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 9.1      1.7436 µg/L       0.64181      1.7436 ppb        0.64181  36.81%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 56.0      3.3733 µg/L       0.72490      3.3733 ppb        0.72490  21.49%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -25.0     -0.2790 µg/L       0.15492     -0.2790 ppb        0.15492  55.52%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                -7.3     -0.0520 µg/L       0.08300     -0.0520 ppb        0.08300 159.76%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 8 **Autosampler Location: 101**
Sample ID: PQL **Date Collected: 12/3/2010 05:44:17**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16633.4	16633.4	102	%			05:44:46
1	Al 396.153Radial†	865.2	546.9	229.00	µg/L	229.00	ppb	05:44:46
1	Ca 317.933Radial†	566.8	483.5	205.02	µg/L	205.02	ppb	05:45:06
1	Fe 238.204 Radial†	223.9	191.0	99.479	µg/L	99.479	ppb	05:45:06
1	K 766.490 Radial†	2920.3	233.2	126.98	µg/L	126.98	ppb	05:44:46
1	Mg 279.077 IEC†	78.1	64.9	261.39	µg/L	261.39	ppb	05:45:06
1	Na 589.592 Radial†	2067.5	1682.5	297.60	µg/L	297.60	ppb	05:44:46
1	Sr 421.552†	1879.8	1856.2	5.2023	µg/L	5.2023	ppb	05:44:46
1	Sc 361.383	504597.2	504597.2	100.82	%			05:46:03
1	Y 371.029	445170.3	445170.3	100.87	%			05:46:03
1	Ag 328.068†	356.5	655.7	5.4837	µg/L	5.4837	ppb	05:46:03
1	As 188.979†	86.0	83.4	28.357	µg/L	28.357	ppb	05:46:23
1	B 249.677†	1742.4	1781.0	51.246	µg/L	51.246	ppb	05:46:03
1	Ba 233.527†	404.5	656.1	5.0562	µg/L	5.0562	ppb	05:46:23
1	Be 313.107†	4655.3	9174.9	5.0399	µg/L	5.0399	ppb	05:46:03
1	Cd 226.502†	178.3	532.7	5.0305	µg/L	5.0305	ppb	05:46:23
1	Co 228.616†	186.4	265.9	4.8721	µg/L	4.8721	ppb	05:46:23
1	Cr 267.716†	516.5	356.8	5.1660	µg/L	5.1660	ppb	05:46:23
1	Cu 324.752†	5953.6	1695.8	9.6313	µg/L	9.6313	ppb	05:46:03
1	Mn 257.610†	8054.2	7714.5	10.261	µg/L	10.261	ppb	05:46:03
1	Mo 202.031†	151.5	194.9	9.8830	µg/L	9.8830	ppb	05:46:23
1	Ni 231.604†	-15.6	184.2	4.6420	µg/L	4.6420	ppb	05:46:23
1	P 214.914†	850.6	296.6	134.35	µg/L	134.35	ppb	05:46:23
1	Pb 220.353†	414.6	101.8	9.8022	µg/L	9.8022	ppb	05:46:23
1	S 181.975 Axial†	129.4	87.5	98.244	µg/L	98.244	ppb	05:46:23
1	Sb 206.836†	113.5	32.7	8.6440	µg/L	8.6440	ppb	05:46:23
1	Se 196.026†	-21.7	82.6	30.449	µg/L	30.449	ppb	05:46:23
1	SiO2†	4712.9	2001.3	216.14	µg/L	216.14	ppb	05:46:03
1	Si 251.611†	3003.9	2511.2	95.142	µg/L	95.142	ppb	05:46:23
1	Sn 189.927†	174.5	97.2	9.7026	µg/L	9.7026	ppb	05:46:23
1	Ti 334.940†	-307.9	1684.1	5.0892	µg/L	5.0892	ppb	05:46:03
1	Tl 190.801†	10.2	133.4	25.508	µg/L	25.508	ppb	05:46:23
1	U 409.014†	-5969.5	949.1	57.232	µg/L	57.232	ppb	05:46:03
1	V 292.402†	443.1	367.5	4.2850	µg/L	4.2850	ppb	05:46:03
1	Zn 213.857†	2612.2	1431.9	10.037	µg/L	10.037	ppb	05:46:23
2	Sc RADIAL	16388.6	16388.6	100	%			05:45:11
2	Al 396.153Radial†	866.4	560.8	234.82	µg/L	234.82	ppb	05:45:11
2	Ca 317.933Radial†	560.1	485.1	205.71	µg/L	205.71	ppb	05:45:31
2	Fe 238.204 Radial†	227.9	198.4	103.31	µg/L	103.31	ppb	05:45:31
2	K 766.490 Radial†	2863.5	219.3	119.44	µg/L	119.44	ppb	05:45:11
2	Mg 279.077 IEC†	81.8	69.8	280.94	µg/L	280.94	ppb	05:45:31
2	Na 589.592 Radial†	2040.2	1685.7	298.16	µg/L	298.16	ppb	05:45:11
2	Sr 421.552†	1934.4	1938.3	5.4326	µg/L	5.4326	ppb	05:45:11
2	Sc 361.383	500337.6	500337.6	99.965	%			05:46:28
2	Y 371.029	441600.3	441600.3	100.06	%			05:46:28
2	Ag 328.068†	299.5	601.8	5.0404	µg/L	5.0404	ppb	05:46:28
2	As 188.979†	78.8	76.9	26.138	µg/L	26.138	ppb	05:46:48
2	B 249.677†	1648.8	1702.1	48.974	µg/L	48.974	ppb	05:46:28
2	Ba 233.527†	405.6	660.6	5.0920	µg/L	5.0920	ppb	05:46:48
2	Be 313.107†	4602.2	9161.1	5.0324	µg/L	5.0324	ppb	05:46:28
2	Cd 226.502†	155.8	511.8	4.8324	µg/L	4.8324	ppb	05:46:48
2	Co 228.616†	179.9	261.0	4.7827	µg/L	4.7827	ppb	05:46:48
2	Cr 267.716†	478.9	323.5	4.6768	µg/L	4.6768	ppb	05:46:48
2	Cu 324.752†	6072.2	1864.8	10.589	µg/L	10.589	ppb	05:46:28
2	Mn 257.610†	8071.8	7800.1	10.374	µg/L	10.374	ppb	05:46:28
2	Mo 202.031†	161.4	206.0	10.446	µg/L	10.446	ppb	05:46:48
2	Ni 231.604†	-13.0	186.7	4.7054	µg/L	4.7054	ppb	05:46:48
2	P 214.914†	857.1	310.3	140.36	µg/L	140.36	ppb	05:46:48
2	Pb 220.353†	401.3	92.0	8.8488	µg/L	8.8488	ppb	05:46:48

2	S 181.975 Axial†	136.8	96.0	107.76	µg/L	107.76 ppb	05:46:48
2	Sb 206.836†	112.9	33.1	8.7464	µg/L	8.7464 ppb	05:46:48
2	Se 196.026†	-18.6	85.5	31.512	µg/L	31.512 ppb	05:46:48
2	SiO2†	4658.7	1986.8	214.59	µg/L	214.59 ppb	05:46:28
2	Si 251.611†	2984.9	2517.5	95.376	µg/L	95.376 ppb	05:46:48
2	Sn 189.927†	187.5	111.7	11.152	µg/L	11.152 ppb	05:46:48
2	Ti 334.940†	-376.9	1612.5	4.8670	µg/L	4.8670 ppb	05:46:28
2	Tl 190.801†	-12.3	111.0	21.235	µg/L	21.235 ppb	05:46:48
2	U 409.014†	-5800.0	1068.3	64.415	µg/L	64.415 ppb	05:46:28
2	V 292.402†	499.3	427.4	4.9662	µg/L	4.9662 ppb	05:46:28
2	Zn 213.857†	2591.3	1433.0	10.042	µg/L	10.042 ppb	05:46:48
3	Sc RADIAL	16444.4	16444.4	101	%		05:45:36
3	Al 396.153Radial†	852.5	544.0	227.80	µg/L	227.80 ppb	05:45:36
3	Ca 317.933Radial†	559.0	482.1	204.43	µg/L	204.43 ppb	05:45:56
3	Fe 238.204 Radial†	224.3	194.0	101.03	µg/L	101.03 ppb	05:45:56
3	K 766.490 Radial†	2844.2	190.4	103.69	µg/L	103.69 ppb	05:45:36
3	Mg 279.077 IEC†	89.2	76.9	309.49	µg/L	309.49 ppb	05:45:56
3	Na 589.592 Radial†	2125.7	1763.7	311.97	µg/L	311.97 ppb	05:45:36
3	Sr 421.552†	1881.0	1878.7	5.2652	µg/L	5.2652 ppb	05:45:36
3	Sc 361.383	501459.2	501459.2	100.19	%		05:46:54
3	Y 371.029	442510.6	442510.6	100.27	%		05:46:54
3	Ag 328.068†	307.8	609.3	5.0996	µg/L	5.0996 ppb	05:46:54
3	As 188.979†	90.1	88.1	29.923	µg/L	29.923 ppb	05:47:14
3	B 249.677†	1619.1	1668.8	48.016	µg/L	48.016 ppb	05:46:54
3	Ba 233.527†	409.4	663.5	5.1131	µg/L	5.1131 ppb	05:47:14
3	Be 313.107†	4608.9	9157.4	5.0303	µg/L	5.0303 ppb	05:46:54
3	Cd 226.502†	170.4	526.0	4.9668	µg/L	4.9668 ppb	05:47:14
3	Co 228.616†	174.7	255.4	4.6789	µg/L	4.6789 ppb	05:47:14
3	Cr 267.716†	509.3	352.8	5.1081	µg/L	5.1081 ppb	05:47:14
3	Cu 324.752†	6021.2	1800.2	10.228	µg/L	10.228 ppb	05:46:54
3	Mn 257.610†	8076.7	7787.0	10.355	µg/L	10.355 ppb	05:46:54
3	Mo 202.031†	145.8	190.1	9.6387	µg/L	9.6387 ppb	05:47:14
3	Ni 231.604†	-9.5	190.2	4.7941	µg/L	4.7941 ppb	05:47:14
3	P 214.914†	839.6	290.9	131.46	µg/L	131.46 ppb	05:47:14
3	Pb 220.353†	390.7	80.5	7.7318	µg/L	7.7318 ppb	05:47:14
3	S 181.975 Axial†	133.7	92.6	103.91	µg/L	103.91 ppb	05:47:14
3	Sb 206.836†	121.2	41.1	10.833	µg/L	10.833 ppb	05:47:14
3	Se 196.026†	-23.8	80.3	29.617	µg/L	29.617 ppb	05:47:14
3	SiO2†	4691.8	2009.4	217.02	µg/L	217.02 ppb	05:46:54
3	Si 251.611†	3003.7	2529.6	95.844	µg/L	95.844 ppb	05:47:14
3	Sn 189.927†	173.8	97.6	9.7471	µg/L	9.7471 ppb	05:47:14
3	Ti 334.940†	-261.2	1728.8	5.2212	µg/L	5.2212 ppb	05:46:54
3	Tl 190.801†	-22.8	100.5	19.233	µg/L	19.233 ppb	05:47:14
3	U 409.014†	-5949.4	932.2	56.209	µg/L	56.209 ppb	05:46:54
3	V 292.402†	450.3	377.4	4.3918	µg/L	4.3918 ppb	05:46:54
3	Zn 213.857†	2599.1	1435.0	10.057	µg/L	10.057 ppb	05:47:14

Mean Data: PQL

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	502131.3	100.32	%	0.441				0.44%
Sc RADIAL	16488.8	101	%	0.8				0.78%
Y 371.029	443093.7	100.40	%	0.420				0.42%
Ag 328.068†	622.3	5.2079	µg/L	0.24067	5.2079	ppb	0.24067	4.62%
QC value within limits for Ag 328.068 Recovery = 104.16%								
Al 396.153Radial†	550.6	230.54	µg/L	3.754	230.54	ppb	3.754	1.63%
QC value within limits for Al 396.153Radial Recovery = 115.27%								
As 188.979†	82.8	28.139	µg/L	1.9015	28.139	ppb	1.9015	6.76%
QC value within limits for As 188.979 Recovery = 93.80%								
B 249.677†	1717.3	49.412	µg/L	1.6588	49.412	ppb	1.6588	3.36%
QC value within limits for B 249.677 Recovery = 98.82%								
Ba 233.527†	660.1	5.0871	µg/L	0.02877	5.0871	ppb	0.02877	0.57%
QC value within limits for Ba 233.527 Recovery = 101.74%								
Be 313.107†	9164.5	5.0342	µg/L	0.00506	5.0342	ppb	0.00506	0.10%
QC value within limits for Be 313.107 Recovery = 100.68%								
Ca 317.933Radial†	483.6	205.05	µg/L	0.643	205.05	ppb	0.643	0.31%
QC value within limits for Ca 317.933Radial Recovery = 102.53%								
Cd 226.502†	523.5	4.9432	µg/L	0.10113	4.9432	ppb	0.10113	2.05%
QC value within limits for Cd 226.502 Recovery = 98.86%								
Co 228.616†	260.8	4.7779	µg/L	0.09666	4.7779	ppb	0.09666	2.02%

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   QC value within limits for Co 228.616  Recovery = 95.56%
Cr 267.716†              344.4      4.9836 µg/L       0.26733      4.9836 ppb        0.26733   5.36%
   QC value within limits for Cr 267.716  Recovery = 99.67%
Cu 324.752†             1786.9      10.150 µg/L        0.4838      10.150 ppb         0.4838   4.77%
   QC value within limits for Cu 324.752  Recovery = 101.50%
Fe 238.204 Radial†       194.5      101.27 µg/L         1.926      101.27 ppb          1.926   1.90%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.27%
K 766.490 Radial†        214.3      116.70 µg/L        11.882      116.70 ppb         11.882  10.18%
   QC value within limits for K 766.490 Radial  Recovery = 77.80%
Mg 279.077 IEC†           70.5      283.94 µg/L        24.188      283.94 ppb         24.188   8.52%
   QC value within limits for Mg 279.077 IEC  Recovery = 94.65%
Mn 257.610†             7767.2      10.330 µg/L        0.0607      10.330 ppb         0.0607   0.59%
   QC value within limits for Mn 257.610  Recovery = 103.30%
Mo 202.031†              197.0      9.9892 µg/L       0.41390      9.9892 ppb        0.41390   4.14%
   QC value within limits for Mo 202.031  Recovery = 99.89%
Na 589.592 Radial†      1710.6      302.58 µg/L         8.142      302.58 ppb          8.142   2.69%
   QC value within limits for Na 589.592 Radial  Recovery = 100.86%
Ni 231.604†              187.0      4.7138 µg/L       0.07642      4.7138 ppb        0.07642   1.62%
   QC value within limits for Ni 231.604  Recovery = 94.28%
P 214.914†               299.3      135.39 µg/L         4.541      135.39 ppb          4.541   3.35%
   QC value within limits for P 214.914  Recovery = 90.26%
Pb 220.353†               91.4      8.7943 µg/L       1.03628      8.7943 ppb        1.03628  11.78%
   QC value within limits for Pb 220.353  Recovery = 87.94%
S 181.975 Axial†          92.0      103.30 µg/L         4.785      103.30 ppb          4.785   4.63%
   QC value within limits for S 181.975 Axial  Recovery = 103.30%
Sb 206.836†               35.6      9.4078 µg/L       1.23536      9.4078 ppb        1.23536  13.13%
   QC value within limits for Sb 206.836  Recovery = 94.08%
Se 196.026†               82.8      30.526 µg/L        0.9497      30.526 ppb         0.9497   3.11%
   QC value within limits for Se 196.026  Recovery = 101.75%
SiO2†                   1999.2      215.92 µg/L         1.231      215.92 ppb          1.231   0.57%
   QC value within limits for SiO2  Recovery = 101.37%
Si 251.611†             2519.5      95.454 µg/L        0.3575      95.454 ppb         0.3575   0.37%
   QC value within limits for Si 251.611  Recovery = 95.45%
Sn 189.927†              102.2      10.201 µg/L        0.8245      10.201 ppb         0.8245   8.08%
   QC value within limits for Sn 189.927  Recovery = 102.01%
Sr 421.552†             1891.1      5.3000 µg/L       0.11900      5.3000 ppb        0.11900   2.25%
   QC value within limits for Sr 421.552  Recovery = 106.00%
Ti 334.940†             1675.1      5.0591 µg/L       0.17901      5.0591 ppb        0.17901   3.54%
   QC value within limits for Ti 334.940  Recovery = 101.18%
Tl 190.801†              115.0      21.992 µg/L        3.2055      21.992 ppb         3.2055  14.58%
   QC value within limits for Tl 190.801  Recovery = 109.96%
U 409.014†               983.2      59.285 µg/L        4.4717      59.285 ppb         4.4717   7.54%
   QC value within limits for U 409.014  Recovery = 118.57%
V 292.402†               390.8      4.5477 µg/L       0.36641      4.5477 ppb        0.36641   8.06%
   QC value within limits for V 292.402  Recovery = 90.95%
Zn 213.857†             1433.3      10.045 µg/L        0.0103      10.045 ppb         0.0103   0.10%
   QC value within limits for Zn 213.857  Recovery = 100.45%
All analyte(s) passed QC.
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Sequence No.: 9 **Autosampler Location: 103**
Sample ID: ICSA **Date Collected: 12/3/2010 05:47:22**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15439.8	15439.8	94.4	%			05:47:57
1	Al 396.153Radial†	1120894.3	1187333.6	497660	µg/L	497660	ppb	05:47:52
1	Ca 317.933Radial†	1100734.9	1166203.9	494510	µg/L	494510	ppb	05:47:52
1	Fe 238.204 Radial†	353848.9	374889.6	195240	µg/L	195240	ppb	05:47:52
1	K 766.490 Radial†	2561.4	74.9	41.083	µg/L	41.083	ppb	05:47:57
1	Mg 279.077 IEC†	113691.3	120449.1	484790	µg/L	484790	ppb	05:47:57
1	Na 589.592 Radial†	483.6	161.4	28.556	µg/L	28.556	ppb	05:47:57
1	Sr 421.552†	4260.7	4521.8	-0.0298	µg/L	-0.0298	ppb	05:47:57
1	Sc 361.383	451287.4	451287.4	90.165	%			05:48:25
1	Y 371.029	390619.3	390619.3	88.512	%			05:48:25
1	Ag 328.068†	-1801.3	-1695.7	-1.5448	µg/L	-1.5448	ppb	05:48:30
1	As 188.979†	-14.9	-18.4	-5.0604	µg/L	-5.0604	ppb	05:48:30
1	B 249.677†	-36.4	12.3	-21.982	µg/L	-21.982	ppb	05:48:25
1	Ba 233.527†	-3318.7	-3425.9	-0.1450	µg/L	-0.1450	ppb	05:48:30
1	Be 313.107†	-13820.6	-10771.0	-5.9146	µg/L	-5.9146	ppb	05:48:30
1	Cd 226.502†	1364.6	1869.3	-1.6282	µg/L	-1.6282	ppb	05:48:30
1	Co 228.616†	4.0	85.5	-1.4059	µg/L	-1.4059	ppb	05:48:30
1	Cr 267.716†	-52.4	-213.7	1.9959	µg/L	1.9959	ppb	05:48:30
1	Cu 324.752†	1959.3	-2036.6	1.6623	µg/L	1.6623	ppb	05:48:30
1	Mn 257.610†	5855.0	6219.2	-12.887	µg/L	-12.887	ppb	05:48:25
1	Mo 202.031†	-273.6	-258.9	-5.1850	µg/L	-5.1850	ppb	05:48:30
1	Ni 231.604†	-110.9	76.6	1.5199	µg/L	1.5199	ppb	05:48:30
1	P 214.914†	498.1	5.4	3.5778	µg/L	3.5778	ppb	05:48:30
1	Pb 220.353†	2882.3	2887.2	13.373	µg/L	13.373	ppb	05:48:30
1	S 181.975 Axial†	-2.9	-44.0	-91.834	µg/L	-91.834	ppb	05:48:30
1	Sb 206.836†	96.1	26.6	-2.2265	µg/L	-2.2265	ppb	05:48:30
1	Se 196.026†	-453.7	-399.1	31.827	µg/L	31.827	ppb	05:48:30
1	SiO2†	2638.5	252.8	27.145	µg/L	27.145	ppb	05:48:30
1	Si 251.611†	-102.4	-581.9	-21.914	µg/L	-21.914	ppb	05:48:30
1	Sn 189.927†	-162.8	-256.4	9.0434	µg/L	9.0434	ppb	05:48:30
1	Ti 334.940†	-6085.7	-4760.0	0.6921	µg/L	0.6921	ppb	05:48:30
1	Tl 190.801†	-177.3	-73.4	-14.177	µg/L	-14.177	ppb	05:48:30
1	U 409.014†	-6426.9	-257.7	25.673	µg/L	25.673	ppb	05:48:25
1	V 292.402†	1215.1	1275.6	0.1575	µg/L	0.1575	ppb	05:48:30
1	Zn 213.857†	5154.8	4557.8	13.669	µg/L	13.669	ppb	05:48:30
2	Sc RADIAL	15546.3	15546.3	95.0	%			05:48:08
2	Al 396.153Radial†	1131367.7	1190218.9	498870	µg/L	498870	ppb	05:48:03
2	Ca 317.933Radial†	1110434.1	1168420.8	495450	µg/L	495450	ppb	05:48:03
2	Fe 238.204 Radial†	355757.3	374329.4	194950	µg/L	194950	ppb	05:48:03
2	K 766.490 Radial†	2536.3	30.0	16.502	µg/L	16.502	ppb	05:48:08
2	Mg 279.077 IEC†	114330.0	120296.0	484170	µg/L	484170	ppb	05:48:08
2	Na 589.592 Radial†	525.5	202.0	35.733	µg/L	35.733	ppb	05:48:08
2	Sr 421.552†	4195.9	4422.7	-0.3320	µg/L	-0.3320	ppb	05:48:08
2	Sc 361.383	454125.5	454125.5	90.732	%			05:48:35
2	Y 371.029	392948.2	392948.2	89.039	%			05:48:35
2	Ag 328.068†	-1700.9	-1572.6	-0.5507	µg/L	-0.5507	ppb	05:48:40
2	As 188.979†	-4.7	-7.1	-1.2587	µg/L	-1.2587	ppb	05:48:40
2	B 249.677†	27.8	83.3	-19.905	µg/L	-19.905	ppb	05:48:35
2	Ba 233.527†	-3312.0	-3395.5	0.0492	µg/L	0.0492	ppb	05:48:40
2	Be 313.107†	-13780.7	-10631.2	-5.8378	µg/L	-5.8378	ppb	05:48:40
2	Cd 226.502†	1400.2	1899.1	-1.3183	µg/L	-1.3183	ppb	05:48:40
2	Co 228.616†	0.0	81.0	-1.4803	µg/L	-1.4803	ppb	05:48:40
2	Cr 267.716†	-213.1	-390.5	-0.5882	µg/L	-0.5882	ppb	05:48:40
2	Cu 324.752†	2056.6	-1943.0	2.1750	µg/L	2.1750	ppb	05:48:40
2	Mn 257.610†	6010.7	6350.2	-12.685	µg/L	-12.685	ppb	05:48:35
2	Mo 202.031†	-258.8	-240.7	-4.2657	µg/L	-4.2657	ppb	05:48:40
2	Ni 231.604†	-106.6	82.1	1.6595	µg/L	1.6595	ppb	05:48:40
2	P 214.914†	441.0	-61.1	-27.178	µg/L	-27.178	ppb	05:48:40
2	Pb 220.353†	2773.7	2747.5	-0.9020	µg/L	-0.9020	ppb	05:48:40

2	S 181.975 Axial†	34.4	-2.9	-45.766	µg/L	-45.766	ppb	05:48:40
2	Sb 206.836†	114.7	46.5	2.9523	µg/L	2.9523	ppb	05:48:40
2	Se 196.026†	-498.7	-445.6	14.624	µg/L	14.624	ppb	05:48:40
2	SiO2†	2648.9	246.0	26.417	µg/L	26.417	ppb	05:48:40
2	Si 251.611†	-39.7	-512.2	-19.280	µg/L	-19.280	ppb	05:48:40
2	Sn 189.927†	-154.4	-246.0	10.144	µg/L	10.144	ppb	05:48:40
2	Ti 334.940†	-6158.0	-4797.5	0.7370	µg/L	0.7370	ppb	05:48:40
2	Tl 190.801†	-160.6	-53.7	-10.411	µg/L	-10.411	ppb	05:48:40
2	U 409.014†	-6444.6	-232.6	27.124	µg/L	27.124	ppb	05:48:35
2	V 292.402†	1173.8	1221.6	-0.4222	µg/L	-0.4222	ppb	05:48:40
2	Zn 213.857†	5094.5	4455.6	12.975	µg/L	12.975	ppb	05:48:40
3	Sc RADIAL	15493.6	15493.6	94.7	%			05:48:18
3	Al 396.153Radial†	1127953.7	1190664.1	499050	µg/L	499050	ppb	05:48:13
3	Ca 317.933Radial†	1106065.4	1167783.1	495180	µg/L	495180	ppb	05:48:13
3	Fe 238.204 Radial†	354203.3	373962.1	194760	µg/L	194760	ppb	05:48:13
3	K 766.490 Radial†	2471.3	-29.7	-15.997	µg/L	-15.997	ppb	05:48:18
3	Mg 279.077 IEC†	114144.7	120509.6	485030	µg/L	485030	ppb	05:48:18
3	Na 589.592 Radial†	525.8	204.3	36.129	µg/L	36.129	ppb	05:48:18
3	Sr 421.552†	4159.2	4398.9	-0.3918	µg/L	-0.3918	ppb	05:48:18
3	Sc 361.383	453688.1	453688.1	90.644	%			05:48:46
3	Y 371.029	392867.6	392867.6	89.021	%			05:48:46
3	Ag 328.068†	-1673.4	-1544.0	-0.3293	µg/L	-0.3293	ppb	05:48:51
3	As 188.979†	-15.4	-18.9	-5.2352	µg/L	-5.2352	ppb	05:48:51
3	B 249.677†	-2.9	49.5	-20.857	µg/L	-20.857	ppb	05:48:46
3	Ba 233.527†	-3297.9	-3383.4	0.1161	µg/L	0.1161	ppb	05:48:51
3	Be 313.107†	-13742.5	-10603.6	-5.8227	µg/L	-5.8227	ppb	05:48:51
3	Cd 226.502†	1432.3	1935.9	-0.9509	µg/L	-0.9509	ppb	05:48:51
3	Co 228.616†	27.8	111.7	-0.9149	µg/L	-0.9149	ppb	05:48:51
3	Cr 267.716†	-193.6	-369.1	-0.2776	µg/L	-0.2776	ppb	05:48:51
3	Cu 324.752†	2040.7	-1958.2	2.0807	µg/L	2.0807	ppb	05:48:51
3	Mn 257.610†	5983.9	6327.0	-12.750	µg/L	-12.750	ppb	05:48:46
3	Mo 202.031†	-242.5	-222.9	-3.3704	µg/L	-3.3704	ppb	05:48:51
3	Ni 231.604†	-102.9	86.1	1.7607	µg/L	1.7607	ppb	05:48:51
3	P 214.914†	466.5	-32.5	-13.774	µg/L	-13.774	ppb	05:48:51
3	Pb 220.353†	2741.9	2715.4	-4.1607	µg/L	-4.1607	ppb	05:48:51
3	S 181.975 Axial†	-2.2	-43.3	-91.160	µg/L	-91.160	ppb	05:48:51
3	Sb 206.836†	123.9	56.7	5.6182	µg/L	5.6182	ppb	05:48:51
3	Se 196.026†	-459.8	-403.1	30.103	µg/L	30.103	ppb	05:48:51
3	SiO2†	2642.3	241.5	25.949	µg/L	25.949	ppb	05:48:51
3	Si 251.611†	-29.8	-501.2	-18.875	µg/L	-18.875	ppb	05:48:51
3	Sn 189.927†	-220.4	-319.1	2.8445	µg/L	2.8445	ppb	05:48:51
3	Ti 334.940†	-6094.9	-4734.5	0.8286	µg/L	0.8286	ppb	05:48:51
3	Tl 190.801†	-165.5	-59.3	-11.475	µg/L	-11.475	ppb	05:48:51
3	U 409.014†	-6554.6	-360.8	19.354	µg/L	19.354	ppb	05:48:46
3	V 292.402†	1131.3	1176.0	-0.9077	µg/L	-0.9077	ppb	05:48:51
3	Zn 213.857†	5144.2	4516.0	13.418	µg/L	13.418	ppb	05:48:51

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	453033.7	90.514	%	0.3053				0.34%
Sc RADIAL	15493.2	94.7	%	0.33				0.34%
Y 371.029	392145.0	88.857	%	0.2995				0.34%
Ag 328.068†	-1604.1	-0.8082	µg/L	0.64741	-0.8082	ppb	0.64741	80.10%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	1189405.5	498520	µg/L	758.0	498520	ppb	758.0	0.15%
QC value within limits for Al 396.153Radial Recovery = 99.70%								
As 188.979†	-14.8	-3.8514	µg/L	2.24710	-3.8514	ppb	2.24710	58.34%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	48.4	-20.915	µg/L	1.0397	-20.915	ppb	1.0397	4.97%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-3401.6	0.0068	µg/L	0.13561	0.0068	ppb	0.13561	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-10668.6	-5.8584	µg/L	0.04930	-5.8584	ppb	0.04930	0.84%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1167469.3	495050	µg/L	483.9	495050	ppb	483.9	0.10%
QC value within limits for Ca 317.933Radial Recovery = 99.01%								
Cd 226.502†	1901.4	-1.2991	µg/L	0.33907	-1.2991	ppb	0.33907	26.10%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	92.8	-1.2670	µg/L	0.30724	-1.2670	ppb	0.30724	24.25%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -324.4      0.3767 µg/L       1.41082      0.3767 ppb        1.41082 374.51%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -1979.3      1.9727 µg/L       0.27293      1.9727 ppb        0.27293  13.84%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    374393.7      194980 µg/L         243.3      194980 ppb          243.3   0.12%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.49%
K 766.490 Radial†         25.1      13.862 µg/L       28.6313      13.862 ppb        28.6313 206.54%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       120418.2      484670 µg/L         443.4      484670 ppb          443.4   0.09%
   QC value within limits for Mg 279.077 IEC  Recovery = 96.93%
Mn 257.610†             6298.8     -12.774 µg/L        0.1030     -12.774 ppb         0.1030   0.81%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -240.8     -4.2737 µg/L       0.90734     -4.2737 ppb        0.90734  21.23%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       189.2      33.473 µg/L        4.2625      33.473 ppb         4.2625  12.73%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               81.6      1.6467 µg/L       0.12089      1.6467 ppb        0.12089   7.34%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -29.4     -12.458 µg/L       15.4201     -12.458 ppb        15.4201 123.78%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             2783.4      2.7703 µg/L       9.32602      2.7703 ppb        9.32602 336.65%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -30.1     -76.253 µg/L       26.4047     -76.253 ppb        26.4047  34.63%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               43.3      2.1147 µg/L       3.98886      2.1147 ppb        3.98886 188.63%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†             -415.9      25.518 µg/L        9.4736      25.518 ppb         9.4736  37.12%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    246.8      26.504 µg/L        0.6023      26.504 ppb         0.6023   2.27%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†             -531.8     -20.023 µg/L        1.6501     -20.023 ppb         1.6501   8.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -273.8      7.3440 µg/L       3.93538      7.3440 ppb        3.93538  53.59%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             4447.8     -0.2512 µg/L       0.19406     -0.2512 ppb        0.19406  77.26%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†            -4764.0      0.7526 µg/L       0.06957      0.7526 ppb        0.06957   9.24%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -62.1     -12.021 µg/L        1.9414     -12.021 ppb         1.9414  16.15%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -283.7      24.050 µg/L        4.1315      24.050 ppb         4.1315  17.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              1224.4     -0.3908 µg/L       0.53331     -0.3908 ppb        0.53331 136.46%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             4509.8      13.354 µg/L        0.3512      13.354 ppb         0.3512   2.63%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 10 **Autosampler Location: 104**
Sample ID: ICSAB **Date Collected: 12/3/2010 05:48:59**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15531.5	15531.5	94.9	%			05:49:33
1	Al 396.153Radial†	1138222.6	1198574.4	502360	µg/L	502360	ppb	05:49:28
1	Ca 317.933Radial†	1115698.6	1175080.2	498270	µg/L	498270	ppb	05:49:28
1	Fe 238.204 Radial†	357835.3	376875.1	196280	µg/L	196280	ppb	05:49:28
1	K 766.490 Radial†	12514.2	10542.1	5742.0	µg/L	5742.0	ppb	05:49:33
1	Mg 279.077 IEC†	114892.4	121003.1	487030	µg/L	487030	ppb	05:49:33
1	Na 589.592 Radial†	29762.5	30997.7	5482.9	µg/L	5482.9	ppb	05:49:33
1	Sr 421.552†	179478.3	189050.1	517.56	µg/L	517.56	ppb	05:49:33
1	Sc 361.383	456544.8	456544.8	91.215	%			05:50:01
1	Y 371.029	395445.1	395445.1	89.605	%			05:50:01
1	Ag 328.068†	28466.1	31509.7	280.10	µg/L	280.10	ppb	05:50:01
1	As 188.979†	1397.2	1529.9	524.81	µg/L	524.81	ppb	05:50:06
1	B 249.677†	17020.2	18712.1	514.86	µg/L	514.86	ppb	05:50:01
1	Ba 233.527†	58248.8	64113.5	519.16	µg/L	519.16	ppb	05:50:01
1	Be 313.107†	407246.5	451024.8	247.68	µg/L	247.68	ppb	05:50:01
1	Cd 226.502†	48090.6	53078.0	482.74	µg/L	482.74	ppb	05:50:06
1	Co 228.616†	23952.3	26340.1	478.94	µg/L	478.94	ppb	05:50:06
1	Cr 267.716†	30808.7	33620.3	494.78	µg/L	494.78	ppb	05:50:06
1	Cu 324.752†	94128.0	98983.7	577.43	µg/L	577.43	ppb	05:50:01
1	Mn 257.610†	361056.6	395554.7	505.42	µg/L	505.42	ppb	05:50:01
1	Mo 202.031†	9028.7	9942.9	511.93	µg/L	511.93	ppb	05:50:06
1	Ni 231.604†	17014.7	18853.0	474.82	µg/L	474.82	ppb	05:50:06
1	P 214.914†	5631.2	5626.4	2403.3	µg/L	2403.3	ppb	05:50:06
1	Pb 220.353†	7336.4	7733.5	483.56	µg/L	483.56	ppb	05:50:06
1	S 181.975 Axial†	2217.7	2390.4	2640.6	µg/L	2640.6	ppb	05:50:06
1	Sb 206.836†	1950.6	2058.5	534.82	µg/L	534.82	ppb	05:50:06
1	Se 196.026†	5738.8	6395.6	2530.4	µg/L	2530.4	ppb	05:50:06
1	SiO2†	99721.7	106652.2	11518	µg/L	11518	ppb	05:50:01
1	Si 251.611†	129523.3	141529.1	5362.8	µg/L	5362.8	ppb	05:50:01
1	Sn 189.927†	4538.1	4899.3	523.28	µg/L	523.28	ppb	05:50:06
1	Ti 334.940†	162965.9	180650.4	563.67	µg/L	563.67	ppb	05:50:01
1	Tl 190.801†	2217.6	2554.5	490.51	µg/L	490.51	ppb	05:50:06
1	U 409.014†	1011.2	7978.9	522.35	µg/L	522.35	ppb	05:50:01
1	V 292.402†	42244.1	46240.5	509.48	µg/L	509.48	ppb	05:50:06
1	Zn 213.857†	69763.0	75322.5	508.39	µg/L	508.39	ppb	05:50:01
2	Sc RADIAL	15515.4	15515.4	94.8	%			05:49:44
2	Al 396.153Radial†	1139440.5	1201098.4	503410	µg/L	503410	ppb	05:49:39
2	Ca 317.933Radial†	1117189.7	1177867.8	499460	µg/L	499460	ppb	05:49:39
2	Fe 238.204 Radial†	357359.1	376762.8	196220	µg/L	196220	ppb	05:49:39
2	K 766.490 Radial†	12389.1	10423.8	5677.5	µg/L	5677.5	ppb	05:49:44
2	Mg 279.077 IEC†	114347.0	120553.2	485210	µg/L	485210	ppb	05:49:44
2	Na 589.592 Radial†	29666.9	30929.3	5470.8	µg/L	5470.8	ppb	05:49:44
2	Sr 421.552†	178759.0	188487.2	515.95	µg/L	515.95	ppb	05:49:44
2	Sc 361.383	452183.0	452183.0	90.344	%			05:50:12
2	Y 371.029	392100.9	392100.9	88.847	%			05:50:12
2	Ag 328.068†	28193.9	31509.5	280.20	µg/L	280.20	ppb	05:50:12
2	As 188.979†	1429.5	1580.4	542.01	µg/L	542.01	ppb	05:50:17
2	B 249.677†	16812.8	18662.5	513.41	µg/L	513.41	ppb	05:50:12
2	Ba 233.527†	57666.6	64085.1	518.93	µg/L	518.93	ppb	05:50:12
2	Be 313.107†	402713.9	450314.4	247.29	µg/L	247.29	ppb	05:50:12
2	Cd 226.502†	48422.0	53953.3	491.03	µg/L	491.03	ppb	05:50:17
2	Co 228.616†	24153.7	26816.4	487.66	µg/L	487.66	ppb	05:50:17
2	Cr 267.716†	30947.4	34099.6	501.77	µg/L	501.77	ppb	05:50:17
2	Cu 324.752†	92996.8	98726.9	575.96	µg/L	575.96	ppb	05:50:12
2	Mn 257.610†	356787.3	394647.3	504.28	µg/L	504.28	ppb	05:50:12
2	Mo 202.031†	9068.8	10082.7	519.03	µg/L	519.03	ppb	05:50:17
2	Ni 231.604†	16946.2	18957.1	477.45	µg/L	477.45	ppb	05:50:17
2	P 214.914†	5681.0	5741.1	2457.5	µg/L	2457.5	ppb	05:50:17
2	Pb 220.353†	7348.0	7824.0	491.81	µg/L	491.81	ppb	05:50:17

2	S 181.975 Axial†	2234.5	2432.5	2687.8	µg/L	2687.8	ppb	05:50:17
2	Sb 206.836†	1961.1	2090.7	543.28	µg/L	543.28	ppb	05:50:17
2	Se 196.026†	5673.0	6383.5	2526.0	µg/L	2526.0	ppb	05:50:17
2	SiO2†	98625.8	106493.7	11501	µg/L	11501	ppb	05:50:12
2	Si 251.611†	128105.5	141329.4	5355.1	µg/L	5355.1	ppb	05:50:12
2	Sn 189.927†	4495.3	4899.9	523.41	µg/L	523.41	ppb	05:50:17
2	Ti 334.940†	161386.8	180625.8	563.87	µg/L	563.87	ppb	05:50:12
2	Tl 190.801†	2221.2	2581.8	495.68	µg/L	495.68	ppb	05:50:17
2	U 409.014†	1002.1	7979.5	522.38	µg/L	522.38	ppb	05:50:12
2	V 292.402†	42603.6	47085.1	519.01	µg/L	519.01	ppb	05:50:17
2	Zn 213.857†	68908.4	75114.3	506.92	µg/L	506.92	ppb	05:50:12
3	Sc RADIAL	15462.8	15462.8	94.5	%			05:49:54
3	Al 396.153Radial†	1141462.4	1207326.9	506020	µg/L	506020	ppb	05:49:49
3	Ca 317.933Radial†	1119444.3	1184262.5	502170	µg/L	502170	ppb	05:49:49
3	Fe 238.204 Radial†	358446.1	379195.5	197480	µg/L	197480	ppb	05:49:49
3	K 766.490 Radial†	12456.1	10539.1	5740.3	µg/L	5740.3	ppb	05:49:54
3	Mg 279.077 IEC†	114470.7	121094.4	487390	µg/L	487390	ppb	05:49:54
3	Na 589.592 Radial†	29863.5	31243.7	5526.4	µg/L	5526.4	ppb	05:49:54
3	Sr 421.552†	178775.5	189146.2	517.73	µg/L	517.73	ppb	05:49:54
3	Sc 361.383	452435.8	452435.8	90.394	%			05:50:22
3	Y 371.029	392200.1	392200.1	88.870	%			05:50:22
3	Ag 328.068†	28260.4	31565.6	280.74	µg/L	280.74	ppb	05:50:22
3	As 188.979†	1391.4	1537.4	527.43	µg/L	527.43	ppb	05:50:27
3	B 249.677†	16843.1	18685.6	513.93	µg/L	513.93	ppb	05:50:22
3	Ba 233.527†	57660.8	64042.9	518.78	µg/L	518.78	ppb	05:50:22
3	Be 313.107†	403530.1	450968.2	247.65	µg/L	247.65	ppb	05:50:22
3	Cd 226.502†	48525.0	54037.3	491.70	µg/L	491.70	ppb	05:50:27
3	Co 228.616†	24167.4	26816.6	487.65	µg/L	487.65	ppb	05:50:27
3	Cr 267.716†	30959.9	34094.2	501.72	µg/L	501.72	ppb	05:50:27
3	Cu 324.752†	93143.7	98832.0	576.64	µg/L	576.64	ppb	05:50:22
3	Mn 257.610†	357870.5	395624.9	505.49	µg/L	505.49	ppb	05:50:22
3	Mo 202.031†	9110.6	10123.3	521.13	µg/L	521.13	ppb	05:50:27
3	Ni 231.604†	16995.2	19000.8	478.54	µg/L	478.54	ppb	05:50:27
3	P 214.914†	5648.3	5701.4	2438.6	µg/L	2438.6	ppb	05:50:27
3	Pb 220.353†	7459.3	7942.5	501.95	µg/L	501.95	ppb	05:50:27
3	S 181.975 Axial†	2241.1	2438.4	2694.2	µg/L	2694.2	ppb	05:50:27
3	Sb 206.836†	1963.5	2092.2	543.63	µg/L	543.63	ppb	05:50:27
3	Se 196.026†	5745.6	6460.3	2555.3	µg/L	2555.3	ppb	05:50:27
3	SiO2†	98830.4	106659.0	11519	µg/L	11519	ppb	05:50:22
3	Si 251.611†	128398.7	141574.5	5364.4	µg/L	5364.4	ppb	05:50:22
3	Sn 189.927†	4495.5	4897.4	523.35	µg/L	523.35	ppb	05:50:27
3	Ti 334.940†	161350.5	180485.8	563.57	µg/L	563.57	ppb	05:50:22
3	Tl 190.801†	2248.8	2611.0	501.25	µg/L	501.25	ppb	05:50:27
3	U 409.014†	1006.7	7984.0	522.91	µg/L	522.91	ppb	05:50:22
3	V 292.402†	42533.0	46980.7	517.77	µg/L	517.77	ppb	05:50:27
3	Zn 213.857†	69167.7	75358.6	508.51	µg/L	508.51	ppb	05:50:22

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	453721.2	90.651	%	0.4892				0.54%
Sc RADIAL	15503.3	94.8	%	0.22				0.23%
Y 371.029	393248.7	89.108	%	0.4312				0.48%
Ag 328.068†	31528.3	280.35	µg/L	0.341	280.35	ppb	0.341	0.12%
QC value within limits for Ag 328.068 Recovery = 112.14%								
Al 396.153Radial†	1202333.3	503930	µg/L	1888.0	503930	ppb	1888.0	0.37%
QC value within limits for Al 396.153Radial Recovery = 100.79%								
As 188.979†	1549.2	531.42	µg/L	9.269	531.42	ppb	9.269	1.74%
QC value within limits for As 188.979 Recovery = 106.28%								
B 249.677†	18686.7	514.07	µg/L	0.732	514.07	ppb	0.732	0.14%
QC value within limits for B 249.677 Recovery = 102.81%								
Ba 233.527†	64080.5	518.96	µg/L	0.190	518.96	ppb	0.190	0.04%
QC value within limits for Ba 233.527 Recovery = 103.79%								
Be 313.107†	450769.1	247.54	µg/L	0.217	247.54	ppb	0.217	0.09%
QC value within limits for Be 313.107 Recovery = 99.02%								
Ca 317.933Radial†	1179070.2	499970	µg/L	1996.2	499970	ppb	1996.2	0.40%
QC value within limits for Ca 317.933Radial Recovery = 99.99%								
Cd 226.502†	53689.6	488.49	µg/L	4.987	488.49	ppb	4.987	1.02%
QC value within limits for Cd 226.502 Recovery = 97.70%								
Co 228.616†	26657.7	484.75	µg/L	5.032	484.75	ppb	5.032	1.04%

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   QC value within limits for Co 228.616  Recovery = 96.95%
Cr 267.716†            33938.0      499.42 µg/L         4.020      499.42 ppb          4.020   0.80%
   QC value within limits for Cr 267.716  Recovery = 99.88%
Cu 324.752†            98847.5      576.68 µg/L         0.737      576.68 ppb          0.737   0.13%
   QC value within limits for Cu 324.752  Recovery = 115.34%
Fe 238.204 Radial†    377611.2      196660 µg/L         715.2      196660 ppb          715.2   0.36%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.33%
K 766.490 Radial†      10501.7      5719.9 µg/L         36.78      5719.9 ppb          36.78   0.64%
   QC value within limits for K 766.490 Radial  Recovery = 114.40%
Mg 279.077 IEC†       120883.6      486540 µg/L        1166.1      486540 ppb         1166.1   0.24%
   QC value within limits for Mg 279.077 IEC  Recovery = 97.31%
Mn 257.610†           395275.6      505.06 µg/L         0.676      505.06 ppb          0.676   0.13%
   QC value within limits for Mn 257.610  Recovery = 101.01%
Mo 202.031†            10049.6      517.37 µg/L         4.820      517.37 ppb          4.820   0.93%
   QC value within limits for Mo 202.031  Recovery = 103.47%
Na 589.592 Radial†     31056.9      5493.4 µg/L         29.25      5493.4 ppb          29.25   0.53%
   QC value within limits for Na 589.592 Radial  Recovery = 109.87%
Ni 231.604†            18937.0      476.94 µg/L         1.912      476.94 ppb          1.912   0.40%
   QC value within limits for Ni 231.604  Recovery = 95.39%
P 214.914†              5689.6      2433.1 µg/L         27.48      2433.1 ppb          27.48   1.13%
   QC value within limits for P 214.914  Recovery = 97.33%
Pb 220.353†             7833.3      492.44 µg/L         9.211      492.44 ppb          9.211   1.87%
   QC value within limits for Pb 220.353  Recovery = 98.49%
S 181.975 Axial†        2420.4      2674.2 µg/L         29.24      2674.2 ppb          29.24   1.09%
   QC value within limits for S 181.975 Axial  Recovery = 106.97%
Sb 206.836†             2080.5      540.58 µg/L         4.991      540.58 ppb          4.991   0.92%
   QC value within limits for Sb 206.836  Recovery = 108.12%
Se 196.026†             6413.1      2537.2 µg/L         15.82      2537.2 ppb          15.82   0.62%
   QC value within limits for Se 196.026  Recovery = 101.49%
SiO2†                  106601.7       11513 µg/L          10.1       11513 ppb           10.1   0.09%
   QC value within limits for SiO2  Recovery = 107.65%
Si 251.611†            141477.7      5360.8 µg/L          4.95      5360.8 ppb          4.95   0.09%
   QC value within limits for Si 251.611  Recovery = 107.22%
Sn 189.927†             4898.8      523.35 µg/L         0.068      523.35 ppb          0.068   0.01%
   QC value within limits for Sn 189.927  Recovery = 104.67%
Sr 421.552†            188894.5      517.08 µg/L         0.982      517.08 ppb          0.982   0.19%
   QC value within limits for Sr 421.552  Recovery = 103.42%
Ti 334.940†            180587.3      563.70 µg/L         0.155      563.70 ppb          0.155   0.03%
   QC value within limits for Ti 334.940  Recovery = 112.74%
Tl 190.801†             2582.4      495.81 µg/L         5.375      495.81 ppb          5.375   1.08%
   QC value within limits for Tl 190.801  Recovery = 99.16%
U 409.014†              7980.8      522.55 µg/L         0.317      522.55 ppb          0.317   0.06%
   QC value within limits for U 409.014  Recovery = 104.51%
V 292.402†             46768.8      515.42 µg/L         5.178      515.42 ppb          5.178   1.00%
   QC value within limits for V 292.402  Recovery = 103.08%
Zn 213.857†            75265.1      507.94 µg/L         0.888      507.94 ppb          0.888   0.17%
   QC value within limits for Zn 213.857  Recovery = 101.59%
All analyte(s) passed QC.
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Sequence No.: 11 **Autosampler Location: 105**
Sample ID: LR1 **Date Collected: 12/3/2010 05:50:35**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15335.3	15335.3	93.7	%			05:51:10
1	Al 396.153Radial†	1084772.5	1156893.2	484900	µg/L	484900	ppb	05:51:05
1	Ca 317.933Radial†	1072290.5	1143807.9	485010	µg/L	485010	ppb	05:51:05
1	Fe 238.204 Radial†	844634.6	900997.5	469240	µg/L	469240	ppb	05:51:05
1	K 766.490 Radial†	2518.5	47.7	-16.914	µg/L	-16.914	ppb	05:51:10
1	Mg 279.077 IEC†	111757.3	119206.8	479670	µg/L	479670	ppb	05:51:10
1	Na 589.592 Radial†	2653598.8	2830415.3	500650	µg/L	500650	ppb	05:51:05
1	Sr 421.552†	4305.8	4600.7	0.4357	µg/L	0.4357	ppb	05:51:10
1	Sc 361.383	446923.9	446923.9	89.293	%			05:51:39
1	Y 371.029	381919.1	381919.1	86.540	%			05:51:39
1	Ag 328.068†	-3186.2	-3266.2	-1.1417	µg/L	-1.1417	ppb	05:51:44
1	As 188.979†	-15.0	-18.7	-3.4471	µg/L	-3.4471	ppb	05:51:44
1	B 249.677†	49.5	108.1	-50.577	µg/L	-50.577	ppb	05:51:39
1	Ba 233.527†	-8274.3	-9011.6	-6.3303	µg/L	-6.3303	ppb	05:51:44
1	Be 313.107†	-19432.0	-17204.8	-9.4514	µg/L	-9.4514	ppb	05:51:44
1	Cd 226.502†	3924.7	4751.1	-1.2126	µg/L	-1.2126	ppb	05:51:44
1	Co 228.616†	200.0	305.0	-1.6093	µg/L	-1.6093	ppb	05:51:44
1	Cr 267.716†	-14.1	-171.3	0.3199	µg/L	0.3199	ppb	05:51:44
1	Cu 324.752†	2529.2	-1377.1	11.897	µg/L	11.897	ppb	05:51:44
1	Mn 257.610†	14782.6	16280.6	-1.1702	µg/L	-1.1702	ppb	05:51:39
1	Mo 202.031†	-418.6	-424.2	-6.2087	µg/L	-6.2087	ppb	05:51:44
1	Ni 231.604†	-91.7	97.0	1.4549	µg/L	1.4549	ppb	05:51:44
1	P 214.914†	829.0	381.2	48.771	µg/L	48.771	ppb	05:51:44
1	Pb 220.353†	2624.8	2630.0	4.4996	µg/L	4.4996	ppb	05:51:44
1	S 181.975 Axial†	42578.1	47642.8	53442	µg/L	53442	ppb	05:51:44
1	Sb 206.836†	146.3	83.9	11.346	µg/L	11.346	ppb	05:51:44
1	Se 196.026†	-1007.5	-1024.2	-0.4649	µg/L	-0.4649	ppb	05:51:44
1	SiO2†	2369.6	-19.8	-2.3709	µg/L	-2.3709	ppb	05:51:44
1	Si 251.611†	-1940.8	-2641.9	-99.956	µg/L	-99.956	ppb	05:51:44
1	Sn 189.927†	-97.2	-184.8	15.010	µg/L	15.010	ppb	05:51:44
1	Ti 334.940†	-4011.6	-2503.1	0.2367	µg/L	0.2367	ppb	05:51:44
1	Tl 190.801†	-201.2	-102.1	-19.603	µg/L	-19.603	ppb	05:51:44
1	U 409.014†	218139.8	251166.8	15239	µg/L	15239	ppb	05:51:39
1	V 292.402†	2002.0	2170.0	4.0052	µg/L	4.0052	ppb	05:51:44
1	Zn 213.857†	7215.2	6921.1	4.4389	µg/L	4.4389	ppb	05:51:44
2	Sc RADIAL	15245.1	15245.1	93.2	%			05:51:21
2	Al 396.153Radial†	1100145.2	1180233.4	494680	µg/L	494680	ppb	05:51:16
2	Ca 317.933Radial†	1086328.0	1165636.6	494270	µg/L	494270	ppb	05:51:16
2	Fe 238.204 Radial†	854084.1	916466.5	477290	µg/L	477290	ppb	05:51:16
2	K 766.490 Radial†	2527.7	73.4	-3.8295	µg/L	-3.8295	ppb	05:51:21
2	Mg 279.077 IEC†	112147.9	120331.2	484190	µg/L	484190	ppb	05:51:21
2	Na 589.592 Radial†	2688305.8	2884400.9	510200	µg/L	510200	ppb	05:51:16
2	Sr 421.552†	4376.9	4704.2	0.4880	µg/L	0.4880	ppb	05:51:21
2	Sc 361.383	448172.5	448172.5	89.542	%			05:51:49
2	Y 371.029	383760.8	383760.8	86.958	%			05:51:49
2	Ag 328.068†	-2975.5	-3020.9	1.4005	µg/L	1.4005	ppb	05:51:55
2	As 188.979†	-34.6	-40.5	-10.783	µg/L	-10.783	ppb	05:51:55
2	B 249.677†	-145.9	-110.3	-57.785	µg/L	-57.785	ppb	05:51:49
2	Ba 233.527†	-8373.9	-9097.1	-5.9072	µg/L	-5.9072	ppb	05:51:55
2	Be 313.107†	-19296.9	-16993.3	-9.3352	µg/L	-9.3352	ppb	05:51:55
2	Cd 226.502†	3828.2	4631.2	-3.1427	µg/L	-3.1427	ppb	05:51:55
2	Co 228.616†	212.0	317.8	-1.5002	µg/L	-1.5002	ppb	05:51:55
2	Cr 267.716†	88.2	-57.0	2.1788	µg/L	2.1788	ppb	05:51:55
2	Cu 324.752†	2574.3	-1334.7	12.667	µg/L	12.667	ppb	05:51:55
2	Mn 257.610†	14835.2	16293.3	-1.3938	µg/L	-1.3938	ppb	05:51:49
2	Mo 202.031†	-428.1	-433.5	-6.4138	µg/L	-6.4138	ppb	05:51:55
2	Ni 231.604†	-70.8	120.6	2.0341	µg/L	2.0341	ppb	05:51:55
2	P 214.914†	849.7	401.8	56.263	µg/L	56.263	ppb	05:51:55
2	Pb 220.353†	2611.4	2606.9	-2.9003	µg/L	-2.9003	ppb	05:51:55

2	S 181.975 Axial†	42676.3	47619.6	53415	µg/L	53415	ppb	05:51:55
2	Sb 206.836†	185.1	126.8	22.340	µg/L	22.340	ppb	05:51:55
2	Se 196.026†	-1023.8	-1039.2	0.5837	µg/L	0.5837	ppb	05:51:55
2	SiO2†	2319.5	-83.1	-9.2158	µg/L	-9.2158	ppb	05:51:55
2	Si 251.611†	-1948.6	-2644.6	-100.05	µg/L	-100.05	ppb	05:51:55
2	Sn 189.927†	-92.0	-178.7	16.257	µg/L	16.257	ppb	05:51:55
2	Ti 334.940†	-4045.7	-2528.7	0.8152	µg/L	0.8152	ppb	05:51:55
2	Tl 190.801†	-249.7	-155.6	-29.839	µg/L	-29.839	ppb	05:51:55
2	U 409.014†	219104.9	251564.1	15264	µg/L	15264	ppb	05:51:49
2	V 292.402†	1851.7	1995.9	1.4135	µg/L	1.4135	ppb	05:51:55
2	Zn 213.857†	7155.6	6832.1	3.0475	µg/L	3.0475	ppb	05:51:55
3	Sc RADIAL	15221.8	15221.8	93.0	%			05:51:32
3	Al 396.153Radial†	1098388.8	1180155.7	494650	µg/L	494650	ppb	05:51:27
3	Ca 317.933Radial†	1085595.8	1166636.9	494690	µg/L	494690	ppb	05:51:27
3	Fe 238.204 Radial†	853866.1	917637.3	477900	µg/L	477900	ppb	05:51:27
3	K 766.490 Radial†	2520.8	70.2	-5.5450	µg/L	-5.5450	ppb	05:51:32
3	Mg 279.077 IEC†	111502.9	119822.5	482140	µg/L	482140	ppb	05:51:32
3	Na 589.592 Radial†	2683874.7	2884061.3	510140	µg/L	510140	ppb	05:51:27
3	Sr 421.552†	4391.4	4726.9	0.5408	µg/L	0.5408	ppb	05:51:32
3	Sc 361.383	444364.1	444364.1	88.782	%			05:52:00
3	Y 371.029	380334.3	380334.3	86.181	%			05:52:00
3	Ag 328.068†	-2972.8	-3046.3	1.2334	µg/L	1.2334	ppb	05:52:05
3	As 188.979†	-2.1	-4.2	1.5242	µg/L	1.5242	ppb	05:52:05
3	B 249.677†	-147.0	-112.9	-57.932	µg/L	-57.932	ppb	05:52:00
3	Ba 233.527†	-8297.6	-9091.2	-5.7803	µg/L	-5.7803	ppb	05:52:05
3	Be 313.107†	-19542.0	-17454.1	-9.5883	µg/L	-9.5883	ppb	05:52:05
3	Cd 226.502†	3902.6	4751.6	-2.0649	µg/L	-2.0649	ppb	05:52:05
3	Co 228.616†	255.9	369.3	-0.5659	µg/L	-0.5659	ppb	05:52:05
3	Cr 267.716†	25.6	-126.7	1.1844	µg/L	1.1844	ppb	05:52:05
3	Cu 324.752†	2555.8	-1330.8	12.736	µg/L	12.736	ppb	05:52:05
3	Mn 257.610†	14642.3	16218.0	-1.4144	µg/L	-1.4144	ppb	05:52:00
3	Mo 202.031†	-417.4	-425.5	-5.9882	µg/L	-5.9882	ppb	05:52:05
3	Ni 231.604†	-104.1	82.4	1.0689	µg/L	1.0689	ppb	05:52:05
3	P 214.914†	777.7	328.8	21.943	µg/L	21.943	ppb	05:52:05
3	Pb 220.353†	2594.9	2613.3	-2.2098	µg/L	-2.2098	ppb	05:52:05
3	S 181.975 Axial†	42312.0	47617.6	53413	µg/L	53413	ppb	05:52:05
3	Sb 206.836†	167.1	108.3	17.503	µg/L	17.503	ppb	05:52:05
3	Se 196.026†	-934.3	-948.3	34.454	µg/L	34.454	ppb	05:52:05
3	SiO2†	2371.0	-2.9	-0.5482	µg/L	-0.5482	ppb	05:52:05
3	Si 251.611†	-1852.1	-2554.5	-96.642	µg/L	-96.642	ppb	05:52:05
3	Sn 189.927†	-145.8	-240.2	10.156	µg/L	10.156	ppb	05:52:05
3	Ti 334.940†	-4035.8	-2556.3	0.9558	µg/L	0.9558	ppb	05:52:05
3	Tl 190.801†	-214.9	-118.8	-22.800	µg/L	-22.800	ppb	05:52:05
3	U 409.014†	217140.1	251448.0	15257	µg/L	15257	ppb	05:52:00
3	V 292.402†	1843.8	2004.8	1.4369	µg/L	1.4369	ppb	05:52:05
3	Zn 213.857†	7170.1	6916.9	3.5934	µg/L	3.5934	ppb	05:52:05

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	446486.8	89.206	%	0.3879				0.43%
Sc RADIAL	15267.4	93.3	%	0.37				0.39%
Y 371.029	382004.7	86.560	%	0.3886				0.45%
Ag 328.068†	-3111.1	0.4974	µg/L	1.42196	0.4974	ppb	1.42196	285.90%
Al 396.153Radial†	1172427.5	491410	µg/L	5638.8	491410	ppb	5638.8	1.15%
QC value within limits for Al 396.153Radial Recovery = 98.28%								
As 188.979†	-21.2	-4.2352	µg/L	6.19114	-4.2352	ppb	6.19114	146.18%
B 249.677†	-38.3	-55.431	µg/L	4.2046	-55.431	ppb	4.2046	7.59%
Ba 233.527†	-9066.6	-6.0059	µg/L	0.28801	-6.0059	ppb	0.28801	4.80%
Be 313.107†	-17217.4	-9.4583	µg/L	0.12672	-9.4583	ppb	0.12672	1.34%
Ca 317.933Radial†	1158693.8	491330	µg/L	5470.6	491330	ppb	5470.6	1.11%
QC value within limits for Ca 317.933Radial Recovery = 98.27%								
Cd 226.502†	4711.3	-2.1400	µg/L	0.96723	-2.1400	ppb	0.96723	45.20%
Co 228.616†	330.7	-1.2251	µg/L	0.57356	-1.2251	ppb	0.57356	46.82%
Cr 267.716†	-118.4	1.2277	µg/L	0.93016	1.2277	ppb	0.93016	75.76%
Cu 324.752†	-1347.6	12.433	µg/L	0.4660	12.433	ppb	0.4660	3.75%
Fe 238.204 Radial†	911700.4	474810	µg/L	4836.9	474810	ppb	4836.9	1.02%
QC value within limits for Fe 238.204 Radial Recovery = 94.96%								
K 766.490 Radial†	63.8	-8.7627	µg/L	7.11080	-8.7627	ppb	7.11080	81.15%
Mg 279.077 IEC†	119786.8	482000	µg/L	2264.6	482000	ppb	2264.6	0.47%

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   QC value within limits for Mg 279.077 IEC  Recovery = 96.40%
Mn 257.610†            16264.0     -1.3261 µg/L       0.13547     -1.3261 ppb        0.13547  10.22%
Mo 202.031†             -427.8     -6.2036 µg/L       0.21286     -6.2036 ppb        0.21286   3.43%
Na 589.592 Radial†   2866292.5      507000 µg/L        5495.9      507000 ppb         5495.9   1.08%
   QC value within limits for Na 589.592 Radial  Recovery = 101.40%
Ni 231.604†              100.0      1.5193 µg/L       0.48581      1.5193 ppb        0.48581  31.98%
P 214.914†               370.6      42.325 µg/L       18.0448      42.325 ppb        18.0448  42.63%
Pb 220.353†             2616.8     -0.2035 µg/L       4.08761     -0.2035 ppb        4.08761 >999.9%
S 181.975 Axial†       47626.7       53424 µg/L          16.2       53424 ppb           16.2   0.03%
   QC value within limits for S 181.975 Axial  Recovery = 106.85%
Sb 206.836†              106.3      17.063 µg/L        5.5104      17.063 ppb         5.5104  32.29%
Se 196.026†            -1003.9      11.524 µg/L       19.8646      11.524 ppb        19.8646 172.37%
SiO2†                    -35.3     -4.0450 µg/L       4.56986     -4.0450 ppb        4.56986 112.98%
Si 251.611†            -2613.7     -98.884 µg/L        1.9422     -98.884 ppb         1.9422   1.96%
Sn 189.927†             -201.2      13.808 µg/L        3.2234      13.808 ppb         3.2234  23.35%
Sr 421.552†             4677.3      0.4882 µg/L       0.05257      0.4882 ppb        0.05257  10.77%
Ti 334.940†            -2529.4      0.6692 µg/L       0.38114      0.6692 ppb        0.38114  56.95%
Tl 190.801†             -125.5     -24.081 µg/L        5.2366     -24.081 ppb         5.2366  21.75%
U 409.014†            251393.0       15253 µg/L          13.3       15253 ppb           13.3   0.09%
   QC value within limits for U 409.014  Recovery = 101.69%
V 292.402†              2056.9      2.2852 µg/L       1.48957      2.2852 ppb        1.48957  65.18%
Zn 213.857†             6890.0      3.6933 µg/L       0.70107      3.6933 ppb        0.70107  18.98%
All analyte(s) passed QC.
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Sequence No.: 12 **Autosampler Location: 108**
Sample ID: LR2 **Date Collected: 12/3/2010 05:52:13**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16349.7	16349.7	99.9	%			05:52:49
1	Al 396.153Radial†	1261.6	958.2	159.05	µg/L	159.05	ppb	05:52:49
1	Ca 317.933Radial†	153.4	79.6	33.738	µg/L	33.738	ppb	05:53:09
1	Fe 238.204 Radial†	45.7	16.6	12.017	µg/L	12.017	ppb	05:53:09
1	K 766.490 Radial†	541100.8	538775.2	293510	µg/L	293510	ppb	05:52:44
1	Mg 279.077 IEC†	-20.3	-32.2	-31.205	µg/L	-31.205	ppb	05:53:09
1	Na 589.592 Radial†	915.6	565.2	99.977	µg/L	99.977	ppb	05:52:49
1	Sr 421.552†	3578069.6	3580149.6	10044	µg/L	10044	ppb	05:52:44
1	Sc 361.383	490149.0	490149.0	97.929	%			05:54:29
1	Y 371.029	426357.4	426357.4	96.610	%			05:54:29
1	Ag 328.068†	-14554.6	-14560.2	-3.8389	µg/L	-3.8389	ppb	05:54:29
1	As 188.979†	29915.1	30545.8	10558	µg/L	10558	ppb	05:54:29
1	B 249.677†	179573.9	183423.8	5252.1	µg/L	5252.1	ppb	05:54:29
1	Ba 233.527†	1876401.4	1916334.7	14729	µg/L	14729	ppb	05:54:29
1	Be 313.107†	5434399.0	5553872.2	3049.1	µg/L	3049.1	ppb	05:54:21
1	Cd 226.502†	1065678.1	1088568.8	10299	µg/L	10299	ppb	05:54:29
1	Co 228.616†	530011.0	541299.7	9903.9	µg/L	9903.9	ppb	05:54:29
1	Cr 267.716†	1699252.1	1735029.0	25277	µg/L	25277	ppb	05:54:29
1	Cu 324.752†	3654979.9	3728058.6	21265	µg/L	21265	ppb	05:54:29
1	Mn 257.610†	7125568.5	7275971.6	9688.0	µg/L	9688.0	ppb	05:54:21
1	Mo 202.031†	199581.4	203846.4	10332	µg/L	10332	ppb	05:54:29
1	Ni 231.604†	396435.6	405018.3	10210	µg/L	10210	ppb	05:54:29
1	P 214.914†	44298.6	44688.2	12766	µg/L	12766	ppb	05:54:29
1	Pb 220.353†	257166.5	262295.1	25543	µg/L	25543	ppb	05:54:29
1	S 181.975 Axial†	63.8	24.3	27.296	µg/L	27.296	ppb	05:54:49
1	Sb 206.836†	39438.1	40192.1	10624	µg/L	10624	ppb	05:54:29
1	Se 196.026†	26944.0	27617.9	10170	µg/L	10170	ppb	05:54:49
1	SiO2†	928129.7	945082.4	102130	µg/L	102130	ppb	05:54:29
1	Si 251.611†	1231858.8	1257439.3	47575	µg/L	47575	ppb	05:54:29
1	Sn 189.927†	104052.5	106177.0	10585	µg/L	10585	ppb	05:54:29
1	Ti 334.940†	3348354.0	3421148.0	10382	µg/L	10382	ppb	05:54:21
1	Tl 190.801†	52428.3	53660.2	10294	µg/L	10294	ppb	05:54:29
1	U 409.014†	-9722.8	-3058.1	-185.03	µg/L	-185.03	ppb	05:54:29
1	V 292.402†	903077.7	922102.1	10499	µg/L	10499	ppb	05:54:29
1	Zn 213.857†	2103325.1	2146642.9	15033	µg/L	15033	ppb	05:54:29
2	Sc RADIAL	16232.5	16232.5	99.2	%			05:53:20
2	Al 396.153Radial†	1209.0	914.3	140.24	µg/L	140.24	ppb	05:53:20
2	Ca 317.933Radial†	129.4	56.5	23.941	µg/L	23.941	ppb	05:53:40
2	Fe 238.204 Radial†	37.4	8.5	7.8127	µg/L	7.8127	ppb	05:53:40
2	K 766.490 Radial†	539321.5	540889.4	294660	µg/L	294660	ppb	05:53:15
2	Mg 279.077 IEC†	-19.6	-31.7	-28.873	µg/L	-28.873	ppb	05:53:40
2	Na 589.592 Radial†	754.8	409.7	72.475	µg/L	72.475	ppb	05:53:20
2	Sr 421.552†	3580057.0	3607990.2	10122	µg/L	10122	ppb	05:53:15
2	Sc 361.383	491410.5	491410.5	98.181	%			05:55:05
2	Y 371.029	427366.0	427366.0	96.838	%			05:55:05
2	Ag 328.068†	-14533.5	-14500.6	-3.3781	µg/L	-3.3781	ppb	05:55:05
2	As 188.979†	30214.2	30772.0	10635	µg/L	10635	ppb	05:55:05
2	B 249.677†	180235.3	183626.7	5257.9	µg/L	5257.9	ppb	05:55:05
2	Ba 233.527†	1883303.2	1918445.6	14745	µg/L	14745	ppb	05:55:05
2	Be 313.107†	5451276.0	5556816.0	3050.7	µg/L	3050.7	ppb	05:54:57
2	Cd 226.502†	1070590.9	1090779.1	10320	µg/L	10320	ppb	05:55:05
2	Co 228.616†	532824.9	542776.3	9930.9	µg/L	9930.9	ppb	05:55:05
2	Cr 267.716†	1705051.7	1736481.5	25298	µg/L	25298	ppb	05:55:05
2	Cu 324.752†	3661555.2	3725174.4	21249	µg/L	21249	ppb	05:55:05
2	Mn 257.610†	7142053.4	7274082.7	9685.5	µg/L	9685.5	ppb	05:54:57
2	Mo 202.031†	200439.8	204197.5	10350	µg/L	10350	ppb	05:55:05
2	Ni 231.604†	399811.0	407417.0	10270	µg/L	10270	ppb	05:55:05
2	P 214.914†	44653.9	44934.0	12886	µg/L	12886	ppb	05:55:05
2	Pb 220.353†	259124.0	263614.7	25672	µg/L	25672	ppb	05:55:05

2	S 181.975 Axial†	63.0	23.3	26.174	µg/L	26.174	ppb	05:55:25
2	Sb 206.836†	39466.3	40117.5	10605	µg/L	10605	ppb	05:55:05
2	Se 196.026†	26885.2	27487.3	10122	µg/L	10122	ppb	05:55:25
2	SiO2†	933484.3	948103.3	102460	µg/L	102460	ppb	05:55:05
2	Si 251.611†	1238393.6	1260865.9	47704	µg/L	47704	ppb	05:55:05
2	Sn 189.927†	104568.4	106429.6	10610	µg/L	10610	ppb	05:55:05
2	Ti 334.940†	3355837.9	3419993.0	10378	µg/L	10378	ppb	05:54:57
2	Tl 190.801†	52682.4	53781.5	10317	µg/L	10317	ppb	05:55:05
2	U 409.014†	-9747.8	-3058.1	-185.03	µg/L	-185.03	ppb	05:55:05
2	V 292.402†	905132.3	921827.5	10496	µg/L	10496	ppb	05:55:05
2	Zn 213.857†	2110948.0	2148893.3	15049	µg/L	15049	ppb	05:55:05
3	Sc RADIAL	15970.2	15970.2	97.6	%			05:53:51
3	Al 396.153Radial†	1233.2	959.2	159.85	µg/L	159.85	ppb	05:53:51
3	Ca 317.933Radial†	125.2	54.3	23.019	µg/L	23.019	ppb	05:54:11
3	Fe 238.204 Radial†	39.5	11.3	9.2764	µg/L	9.2764	ppb	05:54:11
3	K 766.490 Radial†	537883.8	548346.0	298730	µg/L	298730	ppb	05:53:46
3	Mg 279.077 IEC†	-18.6	-31.0	-26.288	µg/L	-26.288	ppb	05:54:11
3	Na 589.592 Radial†	833.1	502.5	88.885	µg/L	88.885	ppb	05:53:51
3	Sr 421.552†	3563408.8	3650209.4	10241	µg/L	10241	ppb	05:53:46
3	Sc 361.383	488139.0	488139.0	97.528	%			05:55:40
3	Y 371.029	425052.6	425052.6	96.314	%			05:55:40
3	Ag 328.068†	-14544.2	-14610.8	-4.2401	µg/L	-4.2401	ppb	05:55:40
3	As 188.979†	29882.3	30637.9	10589	µg/L	10589	ppb	05:55:40
3	B 249.677†	179342.9	183942.0	5267.1	µg/L	5267.1	ppb	05:55:40
3	Ba 233.527†	1869059.2	1916696.2	14732	µg/L	14732	ppb	05:55:40
3	Be 313.107†	5381921.3	5522914.5	3032.1	µg/L	3032.1	ppb	05:55:32
3	Cd 226.502†	1060659.2	1087903.6	10292	µg/L	10292	ppb	05:55:40
3	Co 228.616†	527185.8	540631.4	9891.7	µg/L	9891.7	ppb	05:55:40
3	Cr 267.716†	1687785.6	1730416.7	25209	µg/L	25209	ppb	05:55:40
3	Cu 324.752†	3640173.7	3728245.4	21266	µg/L	21266	ppb	05:55:40
3	Mn 257.610†	7063946.3	7242748.4	9643.8	µg/L	9643.8	ppb	05:55:32
3	Mo 202.031†	198452.1	203527.6	10316	µg/L	10316	ppb	05:55:40
3	Ni 231.604†	393965.9	404152.9	10188	µg/L	10188	ppb	05:55:40
3	P 214.914†	44147.3	44719.4	12779	µg/L	12779	ppb	05:55:40
3	Pb 220.353†	256063.7	262245.7	25539	µg/L	25539	ppb	05:55:40
3	S 181.975 Axial†	69.2	30.1	33.754	µg/L	33.754	ppb	05:56:00
3	Sb 206.836†	39172.5	40085.6	10596	µg/L	10596	ppb	05:55:40
3	Se 196.026†	26663.3	27443.3	10106	µg/L	10106	ppb	05:56:00
3	SiO2†	928847.7	949721.2	102630	µg/L	102630	ppb	05:55:40
3	Si 251.611†	1232315.6	1263087.4	47789	µg/L	47789	ppb	05:55:40
3	Sn 189.927†	103327.1	105870.6	10554	µg/L	10554	ppb	05:55:40
3	Ti 334.940†	3322623.1	3408843.8	10344	µg/L	10344	ppb	05:55:32
3	Tl 190.801†	52224.8	53672.0	10296	µg/L	10296	ppb	05:55:40
3	U 409.014†	-9884.1	-3264.4	-197.46	µg/L	-197.46	ppb	05:55:40
3	V 292.402†	899488.1	922218.8	10499	µg/L	10499	ppb	05:55:40
3	Zn 213.857†	2093490.6	2145403.0	15024	µg/L	15024	ppb	05:55:40

Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	489899.5	97.879	%	0.3297				0.34%
Sc RADIAL	16184.1	98.9	%	1.19				1.20%
Y 371.029	426258.7	96.587	%	0.2628				0.27%
Ag 328.068†	-14557.2	-3.8191	µg/L	0.43133	-3.8191	ppb	0.43133	11.29%
Al 396.153Radial†	943.9	153.05	µg/L	11.102	153.05	ppb	11.102	7.25%
As 188.979†	30651.9	10594	µg/L	38.7	10594	ppb	38.7	0.37%
QC value within limits for As 188.979 Recovery = 105.94%								
B 249.677†	183664.2	5259.1	µg/L	7.54	5259.1	ppb	7.54	0.14%
QC value within limits for B 249.677 Recovery = 105.18%								
Ba 233.527†	1917158.8	14736	µg/L	8.7	14736	ppb	8.7	0.06%
QC value within limits for Ba 233.527 Recovery = 98.24%								
Be 313.107†	5544534.3	3043.9	µg/L	10.31	3043.9	ppb	10.31	0.34%
QC value within limits for Be 313.107 Recovery = 101.46%								
Ca 317.933Radial†	63.4	26.899	µg/L	5.9402	26.899	ppb	5.9402	22.08%
Cd 226.502†	1089083.8	10304	µg/L	14.3	10304	ppb	14.3	0.14%
QC value within limits for Cd 226.502 Recovery = 103.04%								
Co 228.616†	541569.1	9908.8	µg/L	20.07	9908.8	ppb	20.07	0.20%
QC value within limits for Co 228.616 Recovery = 99.09%								
Cr 267.716†	1733975.8	25261	µg/L	46.1	25261	ppb	46.1	0.18%
QC value within limits for Cr 267.716 Recovery = 101.04%								

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Cu 324.752†          3727159.5       21260 µg/L           9.8       21260 ppb            9.8   0.05%
   QC value within limits for Cu 324.752  Recovery = 106.30%
Fe 238.204 Radial†        12.1      9.7019 µg/L       2.13404      9.7019 ppb        2.13404  22.00%
K 766.490 Radial†     542670.2      295630 µg/L        2739.2      295630 ppb         2739.2   0.93%
   QC value within limits for K 766.490 Radial  Recovery = 98.54%
Mg 279.077 IEC†          -31.6     -28.789 µg/L        2.4595     -28.789 ppb         2.4595   8.54%
Mn 257.610†          7264267.6      9672.4 µg/L         24.85      9672.4 ppb          24.85   0.26%
   QC value within limits for Mn 257.610  Recovery = 96.72%
Mo 202.031†           203857.2       10332 µg/L          17.0       10332 ppb           17.0   0.16%
   QC value within limits for Mo 202.031  Recovery = 103.32%
Na 589.592 Radial†       492.5      87.112 µg/L       13.8365      87.112 ppb        13.8365  15.88%
Ni 231.604†           405529.4       10222 µg/L          42.6       10222 ppb           42.6   0.42%
   QC value within limits for Ni 231.604  Recovery = 102.22%
P 214.914†             44780.6       12810 µg/L          66.1       12810 ppb           66.1   0.52%
   QC value less than the lower limit for P 214.914  Recovery = 85.40%
Pb 220.353†           262718.5       25585 µg/L          75.6       25585 ppb           75.6   0.30%
   QC value within limits for Pb 220.353  Recovery = 102.34%
S 181.975 Axial†          25.9      29.075 µg/L        4.0909      29.075 ppb         4.0909  14.07%
Sb 206.836†            40131.7       10609 µg/L          14.4       10609 ppb           14.4   0.14%
   QC value within limits for Sb 206.836  Recovery = 106.09%
Se 196.026†            27516.2       10133 µg/L          33.4       10133 ppb           33.4   0.33%
   QC value within limits for Se 196.026  Recovery = 101.33%
SiO2†                 947635.7      102410 µg/L         254.1      102410 ppb          254.1   0.25%
   QC value within limits for SiO2  Recovery = 95.71%
Si 251.611†          1260464.2       47689 µg/L         108.0       47689 ppb          108.0   0.23%
   QC value within limits for Si 251.611  Recovery = 95.38%
Sn 189.927†           106159.1       10583 µg/L          27.9       10583 ppb           27.9   0.26%
   QC value within limits for Sn 189.927  Recovery = 105.83%
Sr 421.552†          3612783.1       10136 µg/L          99.0       10136 ppb           99.0   0.98%
   QC value within limits for Sr 421.552  Recovery = 101.36%
Ti 334.940†          3416661.6       10368 µg/L          20.6       10368 ppb           20.6   0.20%
   QC value within limits for Ti 334.940  Recovery = 103.68%
Tl 190.801†            53704.6       10302 µg/L          12.8       10302 ppb           12.8   0.12%
   QC value within limits for Tl 190.801  Recovery = 103.02%
U 409.014†             -3126.8     -189.17 µg/L         7.177     -189.17 ppb          7.177   3.79%
V 292.402†            922049.5       10498 µg/L           1.9       10498 ppb            1.9   0.02%
   QC value within limits for V 292.402  Recovery = 104.98%
Zn 213.857†          2146979.7       15035 µg/L          12.2       15035 ppb           12.2   0.08%
   QC value within limits for Zn 213.857  Recovery = 100.24%
QC Failed.  Continue with analysis.
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Sequence No.: 13 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 05:56:08**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16229.1	16229.1	99.2	%			05:56:59
1	Al 396.153Radial†	12178.9	11972.5	5006.0	µg/L	5006.0	ppb	05:56:39
1	Ca 317.933Radial†	12062.5	12085.2	5124.5	µg/L	5124.5	ppb	05:56:59
1	Fe 238.204 Radial†	9749.4	9798.3	5103.1	µg/L	5103.1	ppb	05:56:59
1	K 766.490 Radial†	12245.5	9704.7	5285.2	µg/L	5285.2	ppb	05:56:39
1	Mg 279.077 IEC†	1266.0	1264.2	5091.9	µg/L	5091.9	ppb	05:56:59
1	Na 589.592 Radial†	58484.1	58601.8	10366	µg/L	10366	ppb	05:56:39
1	Sr 421.552†	179288.6	180732.6	506.91	µg/L	506.91	ppb	05:56:39
1	Sc 361.383	502531.3	502531.3	100.40	%			05:57:57
1	Y 371.029	438655.9	438655.9	99.397	%			05:57:57
1	Ag 328.068†	60523.7	60582.8	509.54	µg/L	509.54	ppb	05:57:57
1	As 188.979†	1512.0	1504.0	514.90	µg/L	514.90	ppb	05:58:17
1	B 249.677†	17853.1	17834.1	511.40	µg/L	511.40	ppb	05:57:57
1	Ba 233.527†	65577.9	65569.5	504.71	µg/L	504.71	ppb	05:57:57
1	Be 313.107†	916865.6	917741.7	504.13	µg/L	504.13	ppb	05:57:57
1	Cd 226.502†	53500.2	53641.3	506.99	µg/L	506.99	ppb	05:57:57
1	Co 228.616†	27405.8	27376.8	500.91	µg/L	500.91	ppb	05:58:17
1	Cr 267.716†	34871.7	34576.2	503.71	µg/L	503.71	ppb	05:57:57
1	Cu 324.752†	92709.0	88127.2	502.49	µg/L	502.49	ppb	05:57:57
1	Mn 257.610†	381185.5	379380.6	504.90	µg/L	504.90	ppb	05:57:57
1	Mo 202.031†	10115.3	10119.3	513.06	µg/L	513.06	ppb	05:58:17
1	Ni 231.604†	19858.8	19978.8	503.60	µg/L	503.60	ppb	05:58:17
1	P 214.914†	6054.4	5483.0	2361.8	µg/L	2361.8	ppb	05:58:17
1	Pb 220.353†	5616.7	5284.7	512.84	µg/L	512.84	ppb	05:58:17
1	S 181.975 Axial†	956.1	911.5	1022.8	µg/L	1022.8	ppb	05:58:17
1	Sb 206.836†	2029.0	1940.9	513.10	µg/L	513.10	ppb	05:58:17
1	Se 196.026†	1287.3	1386.2	514.51	µg/L	514.51	ppb	05:58:17
1	SiO2†	53836.8	50947.2	5505.3	µg/L	5505.3	ppb	05:57:57
1	Si 251.611†	68482.9	67739.6	2563.4	µg/L	2563.4	ppb	05:57:57
1	Sn 189.927†	5230.8	5134.0	512.15	µg/L	512.15	ppb	05:58:17
1	Ti 334.940†	164470.8	165800.0	503.32	µg/L	503.32	ppb	05:57:57
1	Tl 190.801†	2576.2	2689.1	515.74	µg/L	515.74	ppb	05:58:17
1	U 409.014†	1295.4	8160.5	492.95	µg/L	492.95	ppb	05:57:57
1	V 292.402†	45323.6	45069.6	510.21	µg/L	510.21	ppb	05:57:57
1	Zn 213.857†	74199.7	72742.6	508.15	µg/L	508.15	ppb	05:57:57
2	Sc RADIAL	16199.3	16199.3	99.0	%			05:57:24
2	Al 396.153Radial†	12220.5	12037.0	5033.1	µg/L	5033.1	ppb	05:57:04
2	Ca 317.933Radial†	12303.7	12351.2	5237.3	µg/L	5237.3	ppb	05:57:24
2	Fe 238.204 Radial†	9879.8	9948.1	5181.1	µg/L	5181.1	ppb	05:57:24
2	K 766.490 Radial†	12154.4	9635.4	5247.4	µg/L	5247.4	ppb	05:57:04
2	Mg 279.077 IEC†	1292.9	1293.8	5210.6	µg/L	5210.6	ppb	05:57:24
2	Na 589.592 Radial†	58360.9	58586.0	10363	µg/L	10363	ppb	05:57:04
2	Sr 421.552†	179505.1	181284.1	508.45	µg/L	508.45	ppb	05:57:04
2	Sc 361.383	506081.8	506081.8	101.11	%			05:58:23
2	Y 371.029	441870.7	441870.7	100.12	%			05:58:23
2	Ag 328.068†	60932.2	60563.9	509.38	µg/L	509.38	ppb	05:58:23
2	As 188.979†	1526.4	1507.7	516.17	µg/L	516.17	ppb	05:58:43
2	B 249.677†	17853.2	17709.4	507.81	µg/L	507.81	ppb	05:58:23
2	Ba 233.527†	66154.9	65681.9	505.58	µg/L	505.58	ppb	05:58:23
2	Be 313.107†	923515.4	917911.7	504.23	µg/L	504.23	ppb	05:58:23
2	Cd 226.502†	53851.0	53614.3	506.72	µg/L	506.72	ppb	05:58:23
2	Co 228.616†	27348.8	27128.9	496.37	µg/L	496.37	ppb	05:58:43
2	Cr 267.716†	35211.1	34668.2	505.05	µg/L	505.05	ppb	05:58:23
2	Cu 324.752†	93524.1	88285.5	503.40	µg/L	503.40	ppb	05:58:23
2	Mn 257.610†	383726.2	379229.8	504.70	µg/L	504.70	ppb	05:58:23
2	Mo 202.031†	10120.6	10053.9	509.74	µg/L	509.74	ppb	05:58:43
2	Ni 231.604†	19727.1	19709.7	496.82	µg/L	496.82	ppb	05:58:43
2	P 214.914†	6023.9	5410.5	2327.7	µg/L	2327.7	ppb	05:58:43
2	Pb 220.353†	5648.3	5276.7	512.04	µg/L	512.04	ppb	05:58:43

2	S 181.975 Axial†	954.8	903.4	1013.7	µg/L	1013.7	ppb	05:58:43
2	Sb 206.836†	2032.8	1930.5	510.33	µg/L	510.33	ppb	05:58:43
2	Se 196.026†	1289.3	1379.2	511.98	µg/L	511.98	ppb	05:58:43
2	SiO2†	53980.0	50712.6	5479.9	µg/L	5479.9	ppb	05:58:23
2	Si 251.611†	68681.3	67457.3	2552.8	µg/L	2552.8	ppb	05:58:23
2	Sn 189.927†	5208.2	5075.1	506.29	µg/L	506.29	ppb	05:58:43
2	Ti 334.940†	165489.9	165658.6	502.90	µg/L	502.90	ppb	05:58:23
2	Tl 190.801†	2561.0	2656.1	509.46	µg/L	509.46	ppb	05:58:43
2	U 409.014†	1289.6	8145.7	492.08	µg/L	492.08	ppb	05:58:23
2	V 292.402†	45540.1	44967.0	509.03	µg/L	509.03	ppb	05:58:23
2	Zn 213.857†	74710.8	72729.6	508.10	µg/L	508.10	ppb	05:58:23
3	Sc RADIAL	16152.5	16152.5	98.7	%			05:57:49
3	Al 396.153Radial†	12243.5	12096.1	5057.8	µg/L	5057.8	ppb	05:57:29
3	Ca 317.933Radial†	12096.0	12176.8	5163.4	µg/L	5163.4	ppb	05:57:49
3	Fe 238.204 Radial†	9747.7	9843.3	5126.5	µg/L	5126.5	ppb	05:57:49
3	K 766.490 Radial†	12201.6	9718.8	5292.8	µg/L	5292.8	ppb	05:57:29
3	Mg 279.077 IEC†	1275.0	1279.4	5153.0	µg/L	5153.0	ppb	05:57:49
3	Na 589.592 Radial†	58251.7	58646.3	10373	µg/L	10373	ppb	05:57:29
3	Sr 421.552†	179193.3	181493.9	509.04	µg/L	509.04	ppb	05:57:29
3	Sc 361.383	503290.4	503290.4	100.55	%			05:58:49
3	Y 371.029	439059.4	439059.4	99.488	%			05:58:49
3	Ag 328.068†	60683.8	60651.1	510.09	µg/L	510.09	ppb	05:58:49
3	As 188.979†	1510.0	1499.8	513.47	µg/L	513.47	ppb	05:59:09
3	B 249.677†	17751.7	17706.5	507.72	µg/L	507.72	ppb	05:58:49
3	Ba 233.527†	65718.1	65610.4	505.03	µg/L	505.03	ppb	05:58:49
3	Be 313.107†	917440.8	916936.4	503.69	µg/L	503.69	ppb	05:58:49
3	Cd 226.502†	53499.9	53560.6	506.22	µg/L	506.22	ppb	05:58:49
3	Co 228.616†	27450.5	27380.0	500.97	µg/L	500.97	ppb	05:59:09
3	Cr 267.716†	34979.3	34630.8	504.49	µg/L	504.49	ppb	05:58:49
3	Cu 324.752†	93209.0	88485.1	504.52	µg/L	504.52	ppb	05:58:49
3	Mn 257.610†	381513.9	379134.5	504.57	µg/L	504.57	ppb	05:58:49
3	Mo 202.031†	10154.7	10143.3	514.28	µg/L	514.28	ppb	05:59:09
3	Ni 231.604†	19738.8	19829.6	499.84	µg/L	499.84	ppb	05:59:09
3	P 214.914†	6038.5	5458.1	2349.4	µg/L	2349.4	ppb	05:59:09
3	Pb 220.353†	5613.8	5273.3	511.71	µg/L	511.71	ppb	05:59:09
3	S 181.975 Axial†	950.4	904.3	1014.8	µg/L	1014.8	ppb	05:59:09
3	Sb 206.836†	2023.4	1932.3	510.85	µg/L	510.85	ppb	05:59:09
3	Se 196.026†	1286.5	1383.5	513.55	µg/L	513.55	ppb	05:59:09
3	SiO2†	53517.3	50548.6	5462.3	µg/L	5462.3	ppb	05:58:49
3	Si 251.611†	68135.0	67290.7	2546.4	µg/L	2546.4	ppb	05:58:49
3	Sn 189.927†	5199.3	5094.8	508.25	µg/L	508.25	ppb	05:59:09
3	Ti 334.940†	164704.5	165785.4	503.27	µg/L	503.27	ppb	05:58:49
3	Tl 190.801†	2568.2	2677.2	513.48	µg/L	513.48	ppb	05:59:09
3	U 409.014†	1507.6	8369.6	505.56	µg/L	505.56	ppb	05:58:49
3	V 292.402†	45268.6	44946.8	508.87	µg/L	508.87	ppb	05:58:49
3	Zn 213.857†	74166.5	72598.1	507.16	µg/L	507.16	ppb	05:58:49

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	503967.8	100.69	%	0.374				0.37%
Sc RADIAL	16193.6	99.0	%	0.24				0.24%
Y 371.029	439862.0	99.670	%	0.3968				0.40%
Ag 328.068†	60599.3	509.67	µg/L	0.374	509.67	ppb	0.374	0.07%
QC value within limits for Ag 328.068 Recovery = 101.93%								
Al 396.153Radial†	12035.2	5032.3	µg/L	25.91	5032.3	ppb	25.91	0.51%
QC value within limits for Al 396.153Radial Recovery = 100.65%								
As 188.979†	1503.8	514.85	µg/L	1.353	514.85	ppb	1.353	0.26%
QC value within limits for As 188.979 Recovery = 102.97%								
B 249.677†	17750.0	508.98	µg/L	2.098	508.98	ppb	2.098	0.41%
QC value within limits for B 249.677 Recovery = 101.80%								
Ba 233.527†	65620.6	505.11	µg/L	0.443	505.11	ppb	0.443	0.09%
QC value within limits for Ba 233.527 Recovery = 101.02%								
Be 313.107†	917530.0	504.02	µg/L	0.286	504.02	ppb	0.286	0.06%
QC value within limits for Be 313.107 Recovery = 100.80%								
Ca 317.933Radial†	12204.4	5175.1	µg/L	57.30	5175.1	ppb	57.30	1.11%
QC value within limits for Ca 317.933Radial Recovery = 103.50%								
Cd 226.502†	53605.4	506.64	µg/L	0.390	506.64	ppb	0.390	0.08%
QC value within limits for Cd 226.502 Recovery = 101.33%								
Co 228.616†	27295.2	499.42	µg/L	2.639	499.42	ppb	2.639	0.53%

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   QC value within limits for Co 228.616  Recovery = 99.88%
Cr 267.716†            34625.0      504.42 µg/L         0.674      504.42 ppb          0.674   0.13%
   QC value within limits for Cr 267.716  Recovery = 100.88%
Cu 324.752†            88299.3      503.47 µg/L         1.018      503.47 ppb          1.018   0.20%
   QC value within limits for Cu 324.752  Recovery = 100.69%
Fe 238.204 Radial†      9863.3      5136.9 µg/L         40.03      5136.9 ppb          40.03   0.78%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.74%
K 766.490 Radial†       9686.3      5275.1 µg/L         24.32      5275.1 ppb          24.32   0.46%
   QC value within limits for K 766.490 Radial  Recovery = 105.50%
Mg 279.077 IEC†         1279.1      5151.8 µg/L         59.37      5151.8 ppb          59.37   1.15%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.04%
Mn 257.610†           379248.3      504.73 µg/L         0.167      504.73 ppb          0.167   0.03%
   QC value within limits for Mn 257.610  Recovery = 100.95%
Mo 202.031†            10105.5      512.36 µg/L         2.345      512.36 ppb          2.345   0.46%
   QC value within limits for Mo 202.031  Recovery = 102.47%
Na 589.592 Radial†     58611.4       10367 µg/L           5.5       10367 ppb            5.5   0.05%
   QC value within limits for Na 589.592 Radial  Recovery = 103.67%
Ni 231.604†            19839.3      500.09 µg/L         3.398      500.09 ppb          3.398   0.68%
   QC value within limits for Ni 231.604  Recovery = 100.02%
P 214.914†              5450.5      2346.3 µg/L         17.27      2346.3 ppb          17.27   0.74%
   QC value within limits for P 214.914  Recovery = 93.85%
Pb 220.353†             5278.2      512.20 µg/L         0.580      512.20 ppb          0.580   0.11%
   QC value within limits for Pb 220.353  Recovery = 102.44%
S 181.975 Axial†         906.4      1017.1 µg/L          4.94      1017.1 ppb           4.94   0.49%
   QC value within limits for S 181.975 Axial  Recovery = 101.71%
Sb 206.836†             1934.6      511.43 µg/L         1.469      511.43 ppb          1.469   0.29%
   QC value within limits for Sb 206.836  Recovery = 102.29%
Se 196.026†             1383.0      513.35 µg/L         1.276      513.35 ppb          1.276   0.25%
   QC value within limits for Se 196.026  Recovery = 102.67%
SiO2†                  50736.1      5482.5 µg/L         21.62      5482.5 ppb          21.62   0.39%
   QC value within limits for SiO2  Recovery = 102.52%
Si 251.611†            67495.8      2554.2 µg/L          8.61      2554.2 ppb           8.61   0.34%
   QC value within limits for Si 251.611  Recovery = 102.17%
Sn 189.927†             5101.3      508.90 µg/L         2.985      508.90 ppb          2.985   0.59%
   QC value within limits for Sn 189.927  Recovery = 101.78%
Sr 421.552†           181170.2      508.13 µg/L         1.102      508.13 ppb          1.102   0.22%
   QC value within limits for Sr 421.552  Recovery = 101.63%
Ti 334.940†           165748.0      503.16 µg/L         0.233      503.16 ppb          0.233   0.05%
   QC value within limits for Ti 334.940  Recovery = 100.63%
Tl 190.801†             2674.2      512.89 µg/L         3.183      512.89 ppb          3.183   0.62%
   QC value within limits for Tl 190.801  Recovery = 102.58%
U 409.014†              8225.3      496.86 µg/L         7.545      496.86 ppb          7.545   1.52%
   QC value within limits for U 409.014  Recovery = 99.37%
V 292.402†             44994.5      509.37 µg/L         0.732      509.37 ppb          0.732   0.14%
   QC value within limits for V 292.402  Recovery = 101.87%
Zn 213.857†            72690.1      507.80 µg/L         0.561      507.80 ppb          0.561   0.11%
   QC value within limits for Zn 213.857  Recovery = 101.56%
All analyte(s) passed QC.
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Sequence No.: 14 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 05:59:17**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16206.8	16206.8	99.1	%			05:59:45
1	Al 396.153Radial†	346.6	45.8	19.198	µg/L	19.198	ppb	05:59:45
1	Ca 317.933Radial†	84.2	11.1	4.6880	µg/L	4.6880	ppb	06:00:05
1	Fe 238.204 Radial†	41.8	13.1	6.8099	µg/L	6.8099	ppb	06:00:05
1	K 766.490 Radial†	2836.7	224.4	122.25	µg/L	122.25	ppb	05:59:45
1	Mg 279.077 IEC†	4.3	-7.5	-30.270	µg/L	-30.270	ppb	06:00:05
1	Na 589.592 Radial†	513.6	167.5	29.623	µg/L	29.623	ppb	05:59:45
1	Sr 421.552†	-19.7	-12.5	-0.0352	µg/L	-0.0352	ppb	05:59:45
1	Sc 361.383	502390.5	502390.5	100.37	%			06:01:03
1	Y 371.029	442866.7	442866.7	100.35	%			06:01:03
1	Ag 328.068†	-274.6	28.6	0.2328	µg/L	0.2328	ppb	06:01:03
1	As 188.979†	3.2	1.3	0.4402	µg/L	0.4402	ppb	06:01:23
1	B 249.677†	106.2	158.5	4.5622	µg/L	4.5622	ppb	06:01:23
1	Ba 233.527†	-258.2	-2.4	-0.0174	µg/L	-0.0174	ppb	06:01:23
1	Be 313.107†	-4445.4	128.5	0.0704	µg/L	0.0704	ppb	06:01:03
1	Cd 226.502†	-250.6	106.2	1.0027	µg/L	1.0027	ppb	06:01:23
1	Co 228.616†	-78.0	3.4	0.0611	µg/L	0.0611	ppb	06:01:23
1	Cr 267.716†	178.2	22.0	0.3246	µg/L	0.3246	ppb	06:01:23
1	Cu 324.752†	4252.8	27.4	0.1619	µg/L	0.1619	ppb	06:01:03
1	Mn 257.610†	283.8	8.3	0.0122	µg/L	0.0122	ppb	06:01:23
1	Mo 202.031†	-30.8	13.9	0.7065	µg/L	0.7065	ppb	06:01:23
1	Ni 231.604†	-219.7	-19.2	-0.4851	µg/L	-0.4851	ppb	06:01:23
1	P 214.914†	527.3	-21.8	-10.182	µg/L	-10.182	ppb	06:01:23
1	Pb 220.353†	358.2	47.4	4.5996	µg/L	4.5996	ppb	06:01:23
1	S 181.975 Axial†	36.2	-4.8	-5.3677	µg/L	-5.3677	ppb	06:01:23
1	Sb 206.836†	95.3	15.0	3.9249	µg/L	3.9249	ppb	06:01:23
1	Se 196.026†	-98.4	6.1	2.2458	µg/L	2.2458	ppb	06:01:23
1	SiO2†	2976.5	291.9	31.514	µg/L	31.514	ppb	06:01:03
1	Si 251.611†	718.7	247.7	9.3861	µg/L	9.3861	ppb	06:01:23
1	Sn 189.927†	73.4	-2.7	-0.2704	µg/L	-0.2704	ppb	06:01:23
1	Ti 334.940†	-1811.8	184.4	0.5663	µg/L	0.5663	ppb	06:01:03
1	Tl 190.801†	-113.8	9.9	1.8881	µg/L	1.8881	ppb	06:01:23
1	U 409.014†	-7015.7	-119.2	-7.1852	µg/L	-7.1852	ppb	06:01:03
1	V 292.402†	11.1	-60.9	-0.6811	µg/L	-0.6811	ppb	06:01:03
1	Zn 213.857†	1754.8	589.1	4.1514	µg/L	4.1514	ppb	06:01:23
2	Sc RADIAL	16279.6	16279.6	99.5	%			06:00:11
2	Al 396.153Radial†	339.7	37.3	15.635	µg/L	15.635	ppb	06:00:11
2	Ca 317.933Radial†	89.9	16.3	6.9246	µg/L	6.9246	ppb	06:00:31
2	Fe 238.204 Radial†	36.6	7.6	3.9605	µg/L	3.9605	ppb	06:00:31
2	K 766.490 Radial†	2595.0	-31.3	-17.036	µg/L	-17.036	ppb	06:00:11
2	Mg 279.077 IEC†	7.0	-4.9	-19.733	µg/L	-19.733	ppb	06:00:31
2	Na 589.592 Radial†	498.8	150.4	26.594	µg/L	26.594	ppb	06:00:11
2	Sr 421.552†	17.4	24.9	0.0697	µg/L	0.0697	ppb	06:00:11
2	Sc 361.383	499454.4	499454.4	99.788	%			06:01:28
2	Y 371.029	440775.5	440775.5	99.877	%			06:01:28
2	Ag 328.068†	-320.6	-19.2	-0.1557	µg/L	-0.1557	ppb	06:01:28
2	As 188.979†	5.0	3.1	1.0538	µg/L	1.0538	ppb	06:01:48
2	B 249.677†	116.2	169.1	4.8687	µg/L	4.8687	ppb	06:01:48
2	Ba 233.527†	-230.5	23.9	0.1840	µg/L	0.1840	ppb	06:01:48
2	Be 313.107†	-4439.7	108.1	0.0593	µg/L	0.0593	ppb	06:01:28
2	Cd 226.502†	-269.7	85.6	0.8092	µg/L	0.8092	ppb	06:01:48
2	Co 228.616†	-101.9	-21.1	-0.3850	µg/L	-0.3850	ppb	06:01:48
2	Cr 267.716†	160.8	5.5	0.0830	µg/L	0.0830	ppb	06:01:48
2	Cu 324.752†	4177.7	-23.0	-0.1291	µg/L	-0.1291	ppb	06:01:28
2	Mn 257.610†	310.3	36.5	0.0494	µg/L	0.0494	ppb	06:01:48
2	Mo 202.031†	-30.8	13.8	0.6981	µg/L	0.6981	ppb	06:01:48
2	Ni 231.604†	-171.3	28.0	0.7065	µg/L	0.7065	ppb	06:01:48
2	P 214.914†	558.9	13.0	6.1132	µg/L	6.1132	ppb	06:01:48
2	Pb 220.353†	361.4	52.7	5.1192	µg/L	5.1192	ppb	06:01:48

2	S 181.975 Axial†	50.0	9.3	10.407	µg/L	10.407	ppb	06:01:48
2	Sb 206.836†	83.4	3.6	0.9569	µg/L	0.9569	ppb	06:01:48
2	Se 196.026†	-97.0	6.8	2.5213	µg/L	2.5213	ppb	06:01:48
2	SiO2†	2876.6	209.2	22.587	µg/L	22.587	ppb	06:01:28
2	Si 251.611†	744.0	277.2	10.508	µg/L	10.508	ppb	06:01:48
2	Sn 189.927†	88.1	12.4	1.2367	µg/L	1.2367	ppb	06:01:48
2	Ti 334.940†	-1890.2	95.3	0.2931	µg/L	0.2931	ppb	06:01:28
2	Tl 190.801†	-106.9	16.1	3.0833	µg/L	3.0833	ppb	06:01:48
2	U 409.014†	-6906.8	-51.2	-3.0848	µg/L	-3.0848	ppb	06:01:28
2	V 292.402†	90.7	18.8	0.2135	µg/L	0.2135	ppb	06:01:28
2	Zn 213.857†	1719.9	564.3	3.9699	µg/L	3.9699	ppb	06:01:48
3	Sc RADIAL	16278.7	16278.7	99.5	%			06:00:36
3	Al 396.153Radial†	316.8	14.3	5.9758	µg/L	5.9758	ppb	06:00:36
3	Ca 317.933Radial†	79.2	5.6	2.3928	µg/L	2.3928	ppb	06:00:56
3	Fe 238.204 Radial†	38.9	9.9	5.1649	µg/L	5.1649	ppb	06:00:56
3	K 766.490 Radial†	2566.9	-59.4	-32.383	µg/L	-32.383	ppb	06:00:36
3	Mg 279.077 IEC†	2.7	-9.2	-36.948	µg/L	-36.948	ppb	06:00:56
3	Na 589.592 Radial†	523.5	175.2	30.985	µg/L	30.985	ppb	06:00:36
3	Sr 421.552†	-40.4	-33.2	-0.0931	µg/L	-0.0931	ppb	06:00:36
3	Sc 361.383	500722.3	500722.3	100.04	%			06:01:53
3	Y 371.029	441754.7	441754.7	100.10	%			06:01:53
3	Ag 328.068†	-303.8	-1.5	-0.0162	µg/L	-0.0162	ppb	06:01:53
3	As 188.979†	-11.8	-13.7	-4.6479	µg/L	-4.6479	ppb	06:02:13
3	B 249.677†	85.2	137.8	3.9684	µg/L	3.9684	ppb	06:02:13
3	Ba 233.527†	-223.6	31.4	0.2417	µg/L	0.2417	ppb	06:02:13
3	Be 313.107†	-4456.1	103.0	0.0565	µg/L	0.0565	ppb	06:01:53
3	Cd 226.502†	-292.8	63.1	0.5958	µg/L	0.5958	ppb	06:02:13
3	Co 228.616†	-94.7	-13.6	-0.2499	µg/L	-0.2499	ppb	06:02:13
3	Cr 267.716†	178.5	22.8	0.3366	µg/L	0.3366	ppb	06:02:13
3	Cu 324.752†	4310.4	99.0	0.5701	µg/L	0.5701	ppb	06:01:53
3	Mn 257.610†	279.2	4.6	0.0076	µg/L	0.0076	ppb	06:02:13
3	Mo 202.031†	-34.9	9.7	0.4917	µg/L	0.4917	ppb	06:02:13
3	Ni 231.604†	-228.0	-28.3	-0.7126	µg/L	-0.7126	ppb	06:02:13
3	P 214.914†	545.5	-1.8	-1.0648	µg/L	-1.0648	ppb	06:02:13
3	Pb 220.353†	336.0	26.4	2.5690	µg/L	2.5690	ppb	06:02:13
3	S 181.975 Axial†	49.4	8.6	9.6147	µg/L	9.6147	ppb	06:02:13
3	Sb 206.836†	80.8	0.9	0.2378	µg/L	0.2378	ppb	06:02:13
3	Se 196.026†	-106.5	-2.4	-0.8800	µg/L	-0.8800	ppb	06:02:13
3	SiO2†	2852.8	178.1	19.236	µg/L	19.236	ppb	06:01:53
3	Si 251.611†	680.1	211.5	8.0160	µg/L	8.0160	ppb	06:02:13
3	Sn 189.927†	88.9	13.0	1.2987	µg/L	1.2987	ppb	06:02:13
3	Ti 334.940†	-1792.4	197.8	0.6070	µg/L	0.6070	ppb	06:01:53
3	Tl 190.801†	-104.8	18.5	3.5454	µg/L	3.5454	ppb	06:02:13
3	U 409.014†	-6979.6	-106.4	-6.4135	µg/L	-6.4135	ppb	06:01:53
3	V 292.402†	23.9	-48.1	-0.5393	µg/L	-0.5393	ppb	06:01:53
3	Zn 213.857†	1669.7	509.8	3.5942	µg/L	3.5942	ppb	06:02:13

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	500855.7	100.07	%	0.294				0.29%
Sc RADIAL	16255.0	99.4	%	0.26				0.26%
Y 371.029	441798.9	100.11	%	0.237				0.24%
Ag 328.068†	2.6	0.0203	µg/L	0.19682	0.0203	ppb	0.19682	969.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	32.5	13.603	µg/L	6.8414	13.603	ppb	6.8414	50.29%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-3.1	-1.0513	µg/L	3.12980	-1.0513	ppb	3.12980	297.71%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	155.1	4.4664	µg/L	0.45774	4.4664	ppb	0.45774	10.25%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	17.6	0.1361	µg/L	0.13602	0.1361	ppb	0.13602	99.95%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	113.2	0.0621	µg/L	0.00739	0.0621	ppb	0.00739	11.90%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.0	4.6685	µg/L	2.26596	4.6685	ppb	2.26596	48.54%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	85.0	0.8026	µg/L	0.20352	0.8026	ppb	0.20352	25.36%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-10.5	-0.1913	µg/L	0.22873	-0.1913	ppb	0.22873	119.58%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                16.8      0.2481 µg/L       0.14310      0.2481 ppb        0.14310  57.69%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                34.4      0.2009 µg/L       0.35122      0.2009 ppb        0.35122 174.78%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         10.2      5.3118 µg/L       1.43036      5.3118 ppb        1.43036  26.93%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          44.6      24.278 µg/L       85.1955      24.278 ppb        85.1955 350.92%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -7.2     -28.984 µg/L        8.6792     -28.984 ppb         8.6792  29.95%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                16.5      0.0231 µg/L       0.02288      0.0231 ppb        0.02288  99.20%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                12.5      0.6321 µg/L       0.12163      0.6321 ppb        0.12163  19.24%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        164.3      29.068 µg/L        2.2475      29.068 ppb         2.2475   7.73%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                -6.5     -0.1638 µg/L       0.76218     -0.1638 ppb        0.76218 465.43%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -3.5     -1.7113 µg/L       8.16685     -1.7113 ppb        8.16685 477.24%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                42.2      4.0960 µg/L       1.34765      4.0960 ppb        1.34765  32.90%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            4.4      4.8848 µg/L       8.88777      4.8848 ppb        8.88777 181.95%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.5      1.7066 µg/L       1.95453      1.7066 ppb        1.95453 114.53%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.5      1.2957 µg/L       1.88923      1.2957 ppb        1.88923 145.81%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     226.4      24.446 µg/L        6.3464      24.446 ppb         6.3464  25.96%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               245.4      9.3035 µg/L       1.24816      9.3035 ppb        1.24816  13.42%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 7.6      0.7550 µg/L       0.88855      0.7550 ppb        0.88855 117.69%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                -6.9     -0.0195 µg/L       0.08256     -0.0195 ppb        0.08256 422.61%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               159.2      0.4888 µg/L       0.17067      0.4888 ppb        0.17067  34.92%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                14.8      2.8389 µg/L       0.85523      2.8389 ppb        0.85523  30.12%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -92.3     -5.5612 µg/L       2.17903     -5.5612 ppb        2.17903  39.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -30.1     -0.3356 µg/L       0.48084     -0.3356 ppb        0.48084 143.27%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               554.4      3.9052 µg/L       0.28421      3.9052 ppb        0.28421   7.28%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 9 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 06:30:56**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16309.9	16309.9	99.7	%			06:31:47
1	Al 396.153Radial†	12191.3	11924.1	4985.8	µg/L	4985.8	ppb	06:31:27
1	Ca 317.933Radial†	12035.9	11998.3	5087.7	µg/L	5087.7	ppb	06:31:47
1	Fe 238.204 Radial†	9759.8	9760.1	5083.2	µg/L	5083.2	ppb	06:31:47
1	K 766.490 Radial†	11867.0	9263.8	5045.0	µg/L	5045.0	ppb	06:31:27
1	Mg 279.077 IEC†	1273.1	1265.0	5094.9	µg/L	5094.9	ppb	06:31:47
1	Na 589.592 Radial†	58130.0	57954.7	10251	µg/L	10251	ppb	06:31:27
1	Sr 421.552†	179181.1	179729.8	504.09	µg/L	504.09	ppb	06:31:27
1	Sc 361.383	505435.1	505435.1	100.98	%			06:32:45
1	Y 371.029	441220.2	441220.2	99.978	%			06:32:45
1	Ag 328.068†	60730.6	60441.3	508.34	µg/L	508.34	ppb	06:32:45
1	As 188.979†	1511.1	1494.5	511.66	µg/L	511.66	ppb	06:33:05
1	B 249.677†	17436.3	17319.3	496.58	µg/L	496.58	ppb	06:32:45
1	Ba 233.527†	65887.8	65501.1	504.18	µg/L	504.18	ppb	06:32:45
1	Be 313.107†	919497.0	915101.2	502.68	µg/L	502.68	ppb	06:32:45
1	Cd 226.502†	53567.5	53401.7	504.72	µg/L	504.72	ppb	06:32:45
1	Co 228.616†	27471.5	27285.1	499.23	µg/L	499.23	ppb	06:33:05
1	Cr 267.716†	35020.8	34524.2	502.94	µg/L	502.94	ppb	06:32:45
1	Cu 324.752†	93153.5	88036.9	501.97	µg/L	501.97	ppb	06:32:45
1	Mn 257.610†	382266.2	378269.6	503.42	µg/L	503.42	ppb	06:32:45
1	Mo 202.031†	10064.9	10011.5	507.59	µg/L	507.59	ppb	06:33:05
1	Ni 231.604†	19871.6	19877.8	501.06	µg/L	501.06	ppb	06:33:05
1	P 214.914†	6056.2	5450.2	2346.7	µg/L	2346.7	ppb	06:33:05
1	Pb 220.353†	5591.1	5227.2	507.25	µg/L	507.25	ppb	06:33:05
1	S 181.975 Axial†	953.8	903.7	1014.1	µg/L	1014.1	ppb	06:33:05
1	Sb 206.836†	2022.4	1922.7	508.29	µg/L	508.29	ppb	06:33:05
1	Se 196.026†	1289.1	1380.7	512.46	µg/L	512.46	ppb	06:33:05
1	SiO2†	53072.4	49882.2	5390.2	µg/L	5390.2	ppb	06:32:45
1	Si 251.611†	67555.2	66429.0	2513.8	µg/L	2513.8	ppb	06:32:45
1	Sn 189.927†	5214.3	5087.7	507.54	µg/L	507.54	ppb	06:33:05
1	Ti 334.940†	164908.1	165291.9	501.77	µg/L	501.77	ppb	06:32:45
1	Tl 190.801†	2546.2	2644.7	507.25	µg/L	507.25	ppb	06:33:05
1	U 409.014†	1522.7	8378.1	506.07	µg/L	506.07	ppb	06:32:45
1	V 292.402†	45469.1	44954.3	508.89	µg/L	508.89	ppb	06:32:45
1	Zn 213.857†	73595.9	71720.1	500.97	µg/L	500.97	ppb	06:32:45
2	Sc RADIAL	16307.1	16307.1	99.7	%			06:32:12
2	Al 396.153Radial†	12280.7	12015.8	5024.4	µg/L	5024.4	ppb	06:31:52
2	Ca 317.933Radial†	12013.4	11977.8	5079.0	µg/L	5079.0	ppb	06:32:12
2	Fe 238.204 Radial†	9747.4	9749.3	5077.6	µg/L	5077.6	ppb	06:32:12
2	K 766.490 Radial†	12000.4	9399.7	5119.0	µg/L	5119.0	ppb	06:31:52
2	Mg 279.077 IEC†	1267.7	1259.9	5074.3	µg/L	5074.3	ppb	06:32:12
2	Na 589.592 Radial†	58377.5	58212.9	10297	µg/L	10297	ppb	06:31:52
2	Sr 421.552†	179914.4	180496.2	506.24	µg/L	506.24	ppb	06:31:52
2	Sc 361.383	510567.3	510567.3	102.01	%			06:33:11
2	Y 371.029	445241.5	445241.5	100.89	%			06:33:11
2	Ag 328.068†	61254.4	60350.3	507.57	µg/L	507.57	ppb	06:33:11
2	As 188.979†	1508.8	1477.2	505.78	µg/L	505.78	ppb	06:33:31
2	B 249.677†	17667.6	17372.4	498.13	µg/L	498.13	ppb	06:33:11
2	Ba 233.527†	66527.7	65472.6	503.96	µg/L	503.96	ppb	06:33:11
2	Be 313.107†	928571.2	914843.8	502.54	µg/L	502.54	ppb	06:33:11
2	Cd 226.502†	53992.3	53285.0	503.62	µg/L	503.62	ppb	06:33:11
2	Co 228.616†	27471.0	27011.1	494.21	µg/L	494.21	ppb	06:33:31
2	Cr 267.716†	35366.8	34514.9	502.81	µg/L	502.81	ppb	06:33:11
2	Cu 324.752†	94058.0	87996.3	501.74	µg/L	501.74	ppb	06:33:11
2	Mn 257.610†	386442.4	378558.4	503.81	µg/L	503.81	ppb	06:33:11
2	Mo 202.031†	10094.7	9940.5	504.00	µg/L	504.00	ppb	06:33:31
2	Ni 231.604†	19834.2	19643.3	495.15	µg/L	495.15	ppb	06:33:31
2	P 214.914†	6075.0	5408.2	2327.2	µg/L	2327.2	ppb	06:33:31
2	Pb 220.353†	5606.6	5186.7	503.27	µg/L	503.27	ppb	06:33:31

2	S 181.975 Axial†	959.6	899.9	1009.8	µg/L	1009.8	ppb	06:33:31
2	Sb 206.836†	2040.4	1920.3	507.61	µg/L	507.61	ppb	06:33:31
2	Se 196.026†	1274.3	1353.3	502.39	µg/L	502.39	ppb	06:33:31
2	SiO2†	53695.1	49964.3	5399.1	µg/L	5399.1	ppb	06:33:11
2	Si 251.611†	68308.9	66495.5	2516.3	µg/L	2516.3	ppb	06:33:11
2	Sn 189.927†	5202.0	5023.7	501.16	µg/L	501.16	ppb	06:33:31
2	Ti 334.940†	166560.8	165270.5	501.71	µg/L	501.71	ppb	06:33:11
2	Tl 190.801†	2552.9	2625.9	503.68	µg/L	503.68	ppb	06:33:31
2	U 409.014†	1448.2	8289.9	500.75	µg/L	500.75	ppb	06:33:11
2	V 292.402†	45788.1	44814.5	507.28	µg/L	507.28	ppb	06:33:11
2	Zn 213.857†	74383.7	71759.8	501.29	µg/L	501.29	ppb	06:33:11
3	Sc RADIAL	16269.3	16269.3	99.5	%			06:32:38
3	Al 396.153Radial†	12253.2	12016.9	5024.8	µg/L	5024.8	ppb	06:32:18
3	Ca 317.933Radial†	12025.0	12017.5	5095.8	µg/L	5095.8	ppb	06:32:38
3	Fe 238.204 Radial†	9734.7	9759.3	5082.8	µg/L	5082.8	ppb	06:32:38
3	K 766.490 Radial†	12106.6	9534.5	5192.5	µg/L	5192.5	ppb	06:32:18
3	Mg 279.077 IEC†	1275.7	1270.9	5118.4	µg/L	5118.4	ppb	06:32:38
3	Na 589.592 Radial†	58197.3	58167.9	10289	µg/L	10289	ppb	06:32:18
3	Sr 421.552†	179275.2	180273.3	505.62	µg/L	505.62	ppb	06:32:18
3	Sc 361.383	508622.0	508622.0	101.62	%			06:33:37
3	Y 371.029	443805.8	443805.8	100.56	%			06:33:37
3	Ag 328.068†	61193.5	60520.1	508.99	µg/L	508.99	ppb	06:33:37
3	As 188.979†	1509.1	1483.1	507.80	µg/L	507.80	ppb	06:33:57
3	B 249.677†	17635.0	17406.6	499.11	µg/L	499.11	ppb	06:33:37
3	Ba 233.527†	66275.5	65473.9	503.97	µg/L	503.97	ppb	06:33:37
3	Be 313.107†	924691.1	914507.1	502.36	µg/L	502.36	ppb	06:33:37
3	Cd 226.502†	53660.2	53160.6	502.44	µg/L	502.44	ppb	06:33:37
3	Co 228.616†	27456.3	27099.6	495.83	µg/L	495.83	ppb	06:33:57
3	Cr 267.716†	35212.2	34495.3	502.52	µg/L	502.52	ppb	06:33:37
3	Cu 324.752†	93719.5	88015.9	501.85	µg/L	501.85	ppb	06:33:37
3	Mn 257.610†	384553.5	378148.5	503.26	µg/L	503.26	ppb	06:33:37
3	Mo 202.031†	10048.7	9933.1	503.62	µg/L	503.62	ppb	06:33:57
3	Ni 231.604†	19732.6	19617.7	494.50	µg/L	494.50	ppb	06:33:57
3	P 214.914†	6047.6	5404.1	2325.3	µg/L	2325.3	ppb	06:33:57
3	Pb 220.353†	5584.6	5186.1	503.21	µg/L	503.21	ppb	06:33:57
3	S 181.975 Axial†	948.2	892.3	1001.2	µg/L	1001.2	ppb	06:33:57
3	Sb 206.836†	2028.5	1916.2	506.55	µg/L	506.55	ppb	06:33:57
3	Se 196.026†	1281.6	1365.3	506.79	µg/L	506.79	ppb	06:33:57
3	SiO2†	53526.2	49999.4	5402.9	µg/L	5402.9	ppb	06:33:37
3	Si 251.611†	68139.3	66584.6	2519.7	µg/L	2519.7	ppb	06:33:37
3	Sn 189.927†	5209.4	5050.5	503.83	µg/L	503.83	ppb	06:33:57
3	Ti 334.940†	166252.8	165591.9	502.68	µg/L	502.68	ppb	06:33:37
3	Tl 190.801†	2559.5	2641.9	506.75	µg/L	506.75	ppb	06:33:57
3	U 409.014†	1562.9	8408.3	507.89	µg/L	507.89	ppb	06:33:37
3	V 292.402†	45698.2	44897.6	508.21	µg/L	508.21	ppb	06:33:37
3	Zn 213.857†	73854.4	71517.8	499.59	µg/L	499.59	ppb	06:33:37

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	508208.2	101.54	%	0.518				0.51%
Sc RADIAL	16295.4	99.6	%	0.14				0.14%
Y 371.029	443422.5	100.48	%	0.462				0.46%
Ag 328.068†	60437.3	508.30	µg/L	0.711	508.30	ppb	0.711	0.14%
QC value within limits for Ag 328.068 Recovery = 101.66%								
Al 396.153Radial†	11985.6	5011.7	µg/L	22.39	5011.7	ppb	22.39	0.45%
QC value within limits for Al 396.153Radial Recovery = 100.23%								
As 188.979†	1485.0	508.41	µg/L	2.991	508.41	ppb	2.991	0.59%
QC value within limits for As 188.979 Recovery = 101.68%								
B 249.677†	17366.1	497.94	µg/L	1.272	497.94	ppb	1.272	0.26%
QC value within limits for B 249.677 Recovery = 99.59%								
Ba 233.527†	65482.5	504.04	µg/L	0.124	504.04	ppb	0.124	0.02%
QC value within limits for Ba 233.527 Recovery = 100.81%								
Be 313.107†	914817.4	502.53	µg/L	0.164	502.53	ppb	0.164	0.03%
QC value within limits for Be 313.107 Recovery = 100.51%								
Ca 317.933Radial†	11997.8	5087.5	µg/L	8.42	5087.5	ppb	8.42	0.17%
QC value within limits for Ca 317.933Radial Recovery = 101.75%								
Cd 226.502†	53282.4	503.59	µg/L	1.142	503.59	ppb	1.142	0.23%
QC value within limits for Cd 226.502 Recovery = 100.72%								
Co 228.616†	27131.9	496.42	µg/L	2.561	496.42	ppb	2.561	0.52%

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   QC value within limits for Co 228.616  Recovery = 99.28%
Cr 267.716†            34511.4      502.75 µg/L         0.216      502.75 ppb          0.216   0.04%
   QC value within limits for Cr 267.716  Recovery = 100.55%
Cu 324.752†            88016.3      501.85 µg/L         0.113      501.85 ppb          0.113   0.02%
   QC value within limits for Cu 324.752  Recovery = 100.37%
Fe 238.204 Radial†      9756.3      5081.2 µg/L          3.13      5081.2 ppb           3.13   0.06%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.62%
K 766.490 Radial†       9399.3      5118.8 µg/L         73.72      5118.8 ppb          73.72   1.44%
   QC value within limits for K 766.490 Radial  Recovery = 102.38%
Mg 279.077 IEC†         1265.2      5095.9 µg/L         22.11      5095.9 ppb          22.11   0.43%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.92%
Mn 257.610†           378325.5      503.50 µg/L         0.281      503.50 ppb          0.281   0.06%
   QC value within limits for Mn 257.610  Recovery = 100.70%
Mo 202.031†             9961.7      505.07 µg/L         2.194      505.07 ppb          2.194   0.43%
   QC value within limits for Mo 202.031  Recovery = 101.01%
Na 589.592 Radial†     58111.9       10279 µg/L          24.4       10279 ppb           24.4   0.24%
   QC value within limits for Na 589.592 Radial  Recovery = 102.79%
Ni 231.604†            19712.9      496.90 µg/L         3.614      496.90 ppb          3.614   0.73%
   QC value within limits for Ni 231.604  Recovery = 99.38%
P 214.914†              5420.8      2333.1 µg/L         11.84      2333.1 ppb          11.84   0.51%
   QC value within limits for P 214.914  Recovery = 93.32%
Pb 220.353†             5200.0      504.58 µg/L         2.310      504.58 ppb          2.310   0.46%
   QC value within limits for Pb 220.353  Recovery = 100.92%
S 181.975 Axial†         898.6      1008.4 µg/L          6.54      1008.4 ppb           6.54   0.65%
   QC value within limits for S 181.975 Axial  Recovery = 100.84%
Sb 206.836†             1919.7      507.48 µg/L         0.880      507.48 ppb          0.880   0.17%
   QC value within limits for Sb 206.836  Recovery = 101.50%
Se 196.026†             1366.4      507.21 µg/L         5.047      507.21 ppb          5.047   0.99%
   QC value within limits for Se 196.026  Recovery = 101.44%
SiO2†                  49948.6      5397.4 µg/L          6.47      5397.4 ppb           6.47   0.12%
   QC value within limits for SiO2  Recovery = 100.93%
Si 251.611†            66503.0      2516.6 µg/L          2.99      2516.6 ppb           2.99   0.12%
   QC value within limits for Si 251.611  Recovery = 100.66%
Sn 189.927†             5054.0      504.18 µg/L         3.205      504.18 ppb          3.205   0.64%
   QC value within limits for Sn 189.927  Recovery = 100.84%
Sr 421.552†           180166.4      505.32 µg/L         1.106      505.32 ppb          1.106   0.22%
   QC value within limits for Sr 421.552  Recovery = 101.06%
Ti 334.940†           165384.8      502.05 µg/L         0.544      502.05 ppb          0.544   0.11%
   QC value within limits for Ti 334.940  Recovery = 100.41%
Tl 190.801†             2637.5      505.89 µg/L         1.930      505.89 ppb          1.930   0.38%
   QC value within limits for Tl 190.801  Recovery = 101.18%
U 409.014†              8358.8      504.90 µg/L         3.709      504.90 ppb          3.709   0.73%
   QC value within limits for U 409.014  Recovery = 100.98%
V 292.402†             44888.8      508.13 µg/L         0.806      508.13 ppb          0.806   0.16%
   QC value within limits for V 292.402  Recovery = 101.63%
Zn 213.857†            71665.9      500.62 µg/L         0.904      500.62 ppb          0.904   0.18%
   QC value within limits for Zn 213.857  Recovery = 100.12%
All analyte(s) passed QC.
```

Sequence No.: 10 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 06:34:05**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16244.0	16244.0	99.3	%			06:34:33
1	Al 396.153Radial†	376.5	75.1	31.475	µg/L	31.475	ppb	06:34:33
1	Ca 317.933Radial†	96.3	23.0	9.7685	µg/L	9.7685	ppb	06:34:54
1	Fe 238.204 Radial†	29.8	0.9	0.4481	µg/L	0.4481	ppb	06:34:54
1	K 766.490 Radial†	2584.5	-36.2	-19.700	µg/L	-19.700	ppb	06:34:33
1	Mg 279.077 IEC†	5.2	-6.7	-26.999	µg/L	-26.999	ppb	06:34:54
1	Na 589.592 Radial†	384.7	36.5	6.4607	µg/L	6.4607	ppb	06:34:33
1	Sr 421.552†	22.0	29.6	0.0828	µg/L	0.0828	ppb	06:34:33
1	Sc 361.383	506516.9	506516.9	101.20	%			06:35:51
1	Y 371.029	446709.9	446709.9	101.22	%			06:35:51
1	Ag 328.068†	-310.6	-4.7	-0.0449	µg/L	-0.0449	ppb	06:35:51
1	As 188.979†	0.6	-1.3	-0.4247	µg/L	-0.4247	ppb	06:36:11
1	B 249.677†	9.6	62.2	1.7894	µg/L	1.7894	ppb	06:36:11
1	Ba 233.527†	-245.7	12.1	0.0930	µg/L	0.0930	ppb	06:36:11
1	Be 313.107†	-4449.7	160.3	0.0880	µg/L	0.0880	ppb	06:35:51
1	Cd 226.502†	-325.0	34.7	0.3279	µg/L	0.3279	ppb	06:36:11
1	Co 228.616†	-79.8	2.2	0.0399	µg/L	0.0399	ppb	06:36:11
1	Cr 267.716†	176.4	18.8	0.2690	µg/L	0.2690	ppb	06:36:11
1	Cu 324.752†	4183.5	-75.7	-0.4377	µg/L	-0.4377	ppb	06:35:51
1	Mn 257.610†	281.1	3.3	0.0055	µg/L	0.0055	ppb	06:36:11
1	Mo 202.031†	-28.5	16.4	0.8333	µg/L	0.8333	ppb	06:36:11
1	Ni 231.604†	-191.7	10.2	0.2573	µg/L	0.2573	ppb	06:36:11
1	P 214.914†	553.4	-0.3	0.0371	µg/L	0.0371	ppb	06:36:11
1	Pb 220.353†	326.2	12.8	1.2324	µg/L	1.2324	ppb	06:36:11
1	S 181.975 Axial†	40.0	-1.3	-1.4725	µg/L	-1.4725	ppb	06:36:11
1	Sb 206.836†	70.7	-10.1	-2.6262	µg/L	-2.6262	ppb	06:36:11
1	Se 196.026†	-120.9	-15.4	-5.6428	µg/L	-5.6428	ppb	06:36:11
1	SiO2†	2742.2	36.2	3.9174	µg/L	3.9174	ppb	06:35:51
1	Si 251.611†	545.8	71.0	2.6825	µg/L	2.6825	ppb	06:36:11
1	Sn 189.927†	85.0	8.2	0.8138	µg/L	0.8138	ppb	06:36:11
1	Ti 334.940†	-1866.6	145.1	0.4410	µg/L	0.4410	ppb	06:35:51
1	Tl 190.801†	-122.4	2.3	0.4425	µg/L	0.4425	ppb	06:36:11
1	U 409.014†	-6844.5	107.0	6.4469	µg/L	6.4469	ppb	06:35:51
1	V 292.402†	48.1	-24.6	-0.2569	µg/L	-0.2569	ppb	06:35:51
1	Zn 213.857†	1307.9	133.1	0.9366	µg/L	0.9366	ppb	06:36:11
2	Sc RADIAL	16320.6	16320.6	99.8	%			06:34:59
2	Al 396.153Radial†	331.9	28.6	11.954	µg/L	11.954	ppb	06:34:59
2	Ca 317.933Radial†	77.4	3.7	1.5490	µg/L	1.5490	ppb	06:35:19
2	Fe 238.204 Radial†	37.9	8.8	4.5940	µg/L	4.5940	ppb	06:35:19
2	K 766.490 Radial†	2568.8	-64.1	-34.911	µg/L	-34.911	ppb	06:34:59
2	Mg 279.077 IEC†	7.3	-4.6	-18.421	µg/L	-18.421	ppb	06:35:19
2	Na 589.592 Radial†	352.6	2.5	0.4482	µg/L	0.4482	ppb	06:34:59
2	Sr 421.552†	30.1	37.6	0.1054	µg/L	0.1054	ppb	06:34:59
2	Sc 361.383	503593.7	503593.7	100.62	%			06:36:16
2	Y 371.029	444290.0	444290.0	100.67	%			06:36:16
2	Ag 328.068†	-365.0	-60.7	-0.4988	µg/L	-0.4988	ppb	06:36:16
2	As 188.979†	-3.0	-4.9	-1.6586	µg/L	-1.6586	ppb	06:36:36
2	B 249.677†	-16.2	36.6	1.0518	µg/L	1.0518	ppb	06:36:36
2	Ba 233.527†	-228.7	27.5	0.2125	µg/L	0.2125	ppb	06:36:36
2	Be 313.107†	-4453.1	131.4	0.0722	µg/L	0.0722	ppb	06:36:16
2	Cd 226.502†	-332.2	25.7	0.2426	µg/L	0.2426	ppb	06:36:36
2	Co 228.616†	-66.7	14.7	0.2712	µg/L	0.2712	ppb	06:36:36
2	Cr 267.716†	192.2	35.5	0.5165	µg/L	0.5165	ppb	06:36:36
2	Cu 324.752†	4163.3	-71.8	-0.4106	µg/L	-0.4106	ppb	06:36:16
2	Mn 257.610†	275.3	-0.9	-0.0005	µg/L	-0.0005	ppb	06:36:36
2	Mo 202.031†	-23.6	21.2	1.0740	µg/L	1.0740	ppb	06:36:36
2	Ni 231.604†	-208.3	-7.4	-0.1872	µg/L	-0.1872	ppb	06:36:36
2	P 214.914†	552.9	2.4	1.2732	µg/L	1.2732	ppb	06:36:36
2	Pb 220.353†	316.5	5.1	0.4926	µg/L	0.4926	ppb	06:36:36

2	S 181.975 Axial†	50.1	9.0	10.068	µg/L	10.068	ppb	06:36:36
2	Sb 206.836†	79.3	-1.1	-0.2791	µg/L	-0.2791	ppb	06:36:36
2	Se 196.026†	-100.9	3.8	1.3900	µg/L	1.3900	ppb	06:36:36
2	SiO2†	2758.6	68.2	7.3734	µg/L	7.3734	ppb	06:36:16
2	Si 251.611†	570.1	98.3	3.7143	µg/L	3.7143	ppb	06:36:36
2	Sn 189.927†	83.8	7.4	0.7413	µg/L	0.7413	ppb	06:36:36
2	Ti 334.940†	-1995.4	6.3	0.0203	µg/L	0.0203	ppb	06:36:16
2	Tl 190.801†	-102.7	21.2	4.0476	µg/L	4.0476	ppb	06:36:36
2	U 409.014†	-6898.0	14.5	0.8765	µg/L	0.8765	ppb	06:36:16
2	V 292.402†	116.0	43.2	0.4967	µg/L	0.4967	ppb	06:36:16
2	Zn 213.857†	1293.9	126.8	0.8944	µg/L	0.8944	ppb	06:36:36
3	Sc RADIAL	16537.3	16537.3	101	%			06:35:24
3	Al 396.153Radial†	359.3	51.4	21.526	µg/L	21.526	ppb	06:35:24
3	Ca 317.933Radial†	84.7	9.8	4.1589	µg/L	4.1589	ppb	06:35:44
3	Fe 238.204 Radial†	32.7	3.2	1.6410	µg/L	1.6410	ppb	06:35:44
3	K 766.490 Radial†	2741.8	73.3	39.932	µg/L	39.932	ppb	06:35:24
3	Mg 279.077 IEC†	12.2	0.2	0.8756	µg/L	0.8756	ppb	06:35:44
3	Na 589.592 Radial†	336.4	-18.1	-3.2031	µg/L	-3.2031	ppb	06:35:24
3	Sr 421.552†	16.0	23.3	0.0652	µg/L	0.0652	ppb	06:35:24
3	Sc 361.383	503145.5	503145.5	100.53	%			06:36:41
3	Y 371.029	443863.0	443863.0	100.58	%			06:36:41
3	Ag 328.068†	-339.6	-35.7	-0.3068	µg/L	-0.3068	ppb	06:36:41
3	As 188.979†	3.9	2.0	0.6911	µg/L	0.6911	ppb	06:37:01
3	B 249.677†	2.6	55.3	1.5918	µg/L	1.5918	ppb	06:37:01
3	Ba 233.527†	-256.3	-0.1	-0.0005	µg/L	-0.0005	ppb	06:37:01
3	Be 313.107†	-4563.8	17.3	0.0094	µg/L	0.0094	ppb	06:36:41
3	Cd 226.502†	-356.4	1.3	0.0122	µg/L	0.0122	ppb	06:37:01
3	Co 228.616†	-81.6	-0.2	-0.0028	µg/L	-0.0028	ppb	06:37:01
3	Cr 267.716†	167.2	10.8	0.1561	µg/L	0.1561	ppb	06:37:01
3	Cu 324.752†	4261.8	29.9	0.1693	µg/L	0.1693	ppb	06:36:41
3	Mn 257.610†	281.8	5.9	0.0078	µg/L	0.0078	ppb	06:37:01
3	Mo 202.031†	-25.4	19.3	0.9776	µg/L	0.9776	ppb	06:37:01
3	Ni 231.604†	-190.8	9.8	0.2482	µg/L	0.2482	ppb	06:37:01
3	P 214.914†	541.2	-8.7	-4.1251	µg/L	-4.1251	ppb	06:37:01
3	Pb 220.353†	295.8	-15.3	-1.4941	µg/L	-1.4941	ppb	06:37:01
3	S 181.975 Axial†	41.0	-0.1	-0.0963	µg/L	-0.0963	ppb	06:37:01
3	Sb 206.836†	93.5	13.1	3.4187	µg/L	3.4187	ppb	06:37:01
3	Se 196.026†	-118.0	-13.2	-4.8603	µg/L	-4.8603	ppb	06:37:01
3	SiO2†	2691.6	4.0	0.4439	µg/L	0.4439	ppb	06:36:41
3	Si 251.611†	543.5	72.3	2.7297	µg/L	2.7297	ppb	06:37:01
3	Sn 189.927†	70.3	-6.0	-0.5933	µg/L	-0.5933	ppb	06:37:01
3	Ti 334.940†	-1834.1	165.0	0.5010	µg/L	0.5010	ppb	06:36:41
3	Tl 190.801†	-107.5	16.3	3.1293	µg/L	3.1293	ppb	06:37:01
3	U 409.014†	-6887.3	19.0	1.1442	µg/L	1.1442	ppb	06:36:41
3	V 292.402†	-6.7	-78.7	-0.8664	µg/L	-0.8664	ppb	06:36:41
3	Zn 213.857†	1278.7	112.8	0.7925	µg/L	0.7925	ppb	06:37:01

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	504418.7	100.78	%	0.366				0.36%
Sc RADIAL	16367.3	100	%	0.9				0.93%
Y 371.029	444954.3	100.82	%	0.348				0.35%
Ag 328.068†	-33.7	-0.2835	µg/L	0.22783	-0.2835	ppb	0.22783	80.37%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	51.7	21.652	µg/L	9.7608	21.652	ppb	9.7608	45.08%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.4	-0.4641	µg/L	1.17536	-0.4641	ppb	1.17536	253.28%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	51.3	1.4777	µg/L	0.38179	1.4777	ppb	0.38179	25.84%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	13.2	0.1016	µg/L	0.10675	0.1016	ppb	0.10675	105.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	103.0	0.0565	µg/L	0.04157	0.0565	ppb	0.04157	73.56%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	12.2	5.1588	µg/L	4.19995	5.1588	ppb	4.19995	81.41%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	20.6	0.1943	µg/L	0.16333	0.1943	ppb	0.16333	84.07%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	5.6	0.1028	µg/L	0.14743	0.1028	ppb	0.14743	143.44%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                21.7      0.3139 µg/L       0.18431      0.3139 ppb        0.18431  58.72%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -39.2     -0.2263 µg/L       0.34289     -0.2263 ppb        0.34289 151.52%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.3      2.2277 µg/L       2.13432      2.2277 ppb        2.13432  95.81%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          -9.0     -4.8931 µg/L      39.55786     -4.8931 ppb       39.55786 808.44%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -3.7     -14.848 µg/L       14.2765     -14.848 ppb        14.2765  96.15%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                 2.8      0.0043 µg/L       0.00426      0.0043 ppb        0.00426 100.07%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                19.0      0.9616 µg/L       0.12115      0.9616 ppb        0.12115  12.60%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†          7.0      1.2353 µg/L       4.87976      1.2353 ppb        4.87976 395.04%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 4.2      0.1061 µg/L       0.25406      0.1061 ppb        0.25406 239.46%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -2.2     -0.9383 µg/L       2.82821     -0.9383 ppb        2.82821 301.42%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 0.9      0.0770 µg/L       1.40998      0.0770 ppb        1.40998 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            2.5      2.8330 µg/L       6.30317      2.8330 ppb        6.30317 222.49%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 0.6      0.1712 µg/L       3.04749      0.1712 ppb        3.04749 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -8.3     -3.0377 µg/L       3.85445     -3.0377 ppb        3.85445 126.89%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      36.1      3.9116 µg/L       3.46473      3.9116 ppb        3.46473  88.58%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                80.5      3.0422 µg/L       0.58258      3.0422 ppb        0.58258  19.15%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 3.2      0.3206 µg/L       0.79230      0.3206 ppb        0.79230 247.13%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                30.2      0.0845 µg/L       0.02018      0.0845 ppb        0.02018  23.89%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               105.5      0.3208 µg/L       0.26193      0.3208 ppb        0.26193  81.65%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                13.3      2.5398 µg/L       1.87343      2.5398 ppb        1.87343  73.76%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 46.8      2.8226 µg/L       3.14166      2.8226 ppb        3.14166 111.31%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -20.0     -0.2089 µg/L       0.68278     -0.2089 ppb        0.68278 326.89%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               124.3      0.8745 µg/L       0.07407      0.8745 ppb        0.07407   8.47%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 19 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 07:03:04**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15894.0	15894.0	97.2	%			07:03:55
1	Al 396.153Radial†	10524.4	10528.3	4401.2	µg/L	4401.2	ppb	07:03:35
1	Ca 317.933Radial†	11750.3	12020.2	5097.0	µg/L	5097.0	ppb	07:03:55
1	Fe 238.204 Radial†	9531.3	9781.0	5094.1	µg/L	5094.1	ppb	07:03:55
1	K 766.490 Radial†	10418.7	8084.6	4402.8	µg/L	4402.8	ppb	07:03:35
1	Mg 279.077 IEC†	1235.5	1259.7	5073.4	µg/L	5073.4	ppb	07:03:55
1	Na 589.592 Radial†	49812.9	50919.8	9006.8	µg/L	9006.8	ppb	07:03:35
1	Sr 421.552†	152319.0	156784.1	439.72	µg/L	439.72	ppb	07:03:35
1	Sc 361.383	511688.2	511688.2	102.23	%			07:04:53
1	Y 371.029	446656.6	446656.6	101.21	%			07:04:53
1	Ag 328.068†	61999.9	60948.1	512.60	µg/L	512.60	ppb	07:04:53
1	As 188.979†	1448.5	1415.0	484.66	µg/L	484.66	ppb	07:05:13
1	B 249.677†	17892.5	17554.4	503.43	µg/L	503.43	ppb	07:04:53
1	Ba 233.527†	67105.4	65894.8	507.21	µg/L	507.21	ppb	07:04:53
1	Be 313.107†	937975.9	922049.1	506.50	µg/L	506.50	ppb	07:04:53
1	Cd 226.502†	54506.1	53671.6	507.26	µg/L	507.26	ppb	07:04:53
1	Co 228.616†	26180.1	25689.4	469.98	µg/L	469.98	ppb	07:05:13
1	Cr 267.716†	35640.9	34707.0	505.60	µg/L	505.60	ppb	07:04:53
1	Cu 324.752†	95031.9	88746.9	506.03	µg/L	506.03	ppb	07:04:53
1	Mn 257.610†	390069.3	381276.3	507.43	µg/L	507.43	ppb	07:04:53
1	Mo 202.031†	9620.7	9455.2	479.40	µg/L	479.40	ppb	07:05:13
1	Ni 231.604†	18903.6	18690.4	471.13	µg/L	471.13	ppb	07:05:13
1	P 214.914†	5778.3	5105.0	2184.2	µg/L	2184.2	ppb	07:05:13
1	Pb 220.353†	5367.1	4940.4	479.64	µg/L	479.64	ppb	07:05:13
1	S 181.975 Axial†	914.5	853.7	957.96	µg/L	957.96	ppb	07:05:13
1	Sb 206.836†	1936.1	1813.9	479.62	µg/L	479.62	ppb	07:05:13
1	Se 196.026†	1222.0	1299.4	482.50	µg/L	482.50	ppb	07:05:13
1	SiO2†	53998.9	50146.1	5418.4	µg/L	5418.4	ppb	07:04:53
1	Si 251.611†	68659.5	66691.7	2524.1	µg/L	2524.1	ppb	07:04:53
1	Sn 189.927†	4977.1	4792.5	478.11	µg/L	478.11	ppb	07:05:13
1	Ti 334.940†	168402.4	166714.2	506.09	µg/L	506.09	ppb	07:04:53
1	Tl 190.801†	2421.7	2492.0	478.25	µg/L	478.25	ppb	07:05:13
1	U 409.014†	1524.2	8361.2	505.05	µg/L	505.05	ppb	07:04:53
1	V 292.402†	46362.4	45277.9	512.20	µg/L	512.20	ppb	07:04:53
1	Zn 213.857†	74869.4	72075.2	503.66	µg/L	503.66	ppb	07:04:53
2	Sc RADIAL	16339.4	16339.4	99.9	%			07:04:20
2	Al 396.153Radial†	12433.1	12144.1	5077.1	µg/L	5077.1	ppb	07:04:00
2	Ca 317.933Radial†	12197.8	12138.6	5147.2	µg/L	5147.2	ppb	07:04:20
2	Fe 238.204 Radial†	9872.7	9855.4	5132.8	µg/L	5132.8	ppb	07:04:20
2	K 766.490 Radial†	12118.8	9494.4	5170.6	µg/L	5170.6	ppb	07:04:00
2	Mg 279.077 IEC†	1298.3	1288.0	5187.8	µg/L	5187.8	ppb	07:04:20
2	Na 589.592 Radial†	59206.4	58927.1	10423	µg/L	10423	ppb	07:04:00
2	Sr 421.552†	181991.5	182218.8	511.08	µg/L	511.08	ppb	07:04:00
2	Sc 361.383	335611.3	335611.3	67.053	%			07:05:19
2	Y 371.029	296313.8	296313.8	67.143	%			07:05:19
2	Ag 328.068†	39912.9	59826.1	503.13	µg/L	503.13	ppb	07:05:19
2	As 188.979†	1042.1	1552.2	531.21	µg/L	531.21	ppb	07:05:39
2	B 249.677†	11077.7	16573.5	475.00	µg/L	475.00	ppb	07:05:19
2	Ba 233.527†	42201.0	63191.4	486.44	µg/L	486.44	ppb	07:05:19
2	Be 313.107†	584830.4	876743.6	481.61	µg/L	481.61	ppb	07:05:19
2	Cd 226.502†	32554.9	48906.5	462.24	µg/L	462.24	ppb	07:05:19
2	Co 228.616†	19560.9	29253.1	535.29	µg/L	535.29	ppb	07:05:39
2	Cr 267.716†	22618.1	33575.9	489.17	µg/L	489.17	ppb	07:05:19
2	Cu 324.752†	61604.5	87664.2	499.89	µg/L	499.89	ppb	07:05:19
2	Mn 257.610†	245942.8	366512.1	487.77	µg/L	487.77	ppb	07:05:19
2	Mo 202.031†	7223.1	10816.7	548.41	µg/L	548.41	ppb	07:05:39
2	Ni 231.604†	14079.2	21196.6	534.30	µg/L	534.30	ppb	07:05:39
2	P 214.914†	4297.4	5861.9	2539.2	µg/L	2539.2	ppb	07:05:39
2	Pb 220.353†	3942.2	5569.8	540.61	µg/L	540.61	ppb	07:05:39

2	S 181.975 Axial†	652.6	932.4	1046.3	µg/L	1046.3	ppb	07:05:39
2	Sb 206.836†	1479.5	2126.5	561.86	µg/L	561.86	ppb	07:05:39
2	Se 196.026†	873.7	1407.1	522.28	µg/L	522.28	ppb	07:05:39
2	SiO2†	34437.7	48685.1	5261.5	µg/L	5261.5	ppb	07:05:19
2	Si 251.611†	43365.5	64204.8	2428.9	µg/L	2428.9	ppb	07:05:19
2	Sn 189.927†	3601.5	5295.2	528.22	µg/L	528.22	ppb	07:05:39
2	Ti 334.940†	108010.8	163071.3	495.06	µg/L	495.06	ppb	07:05:19
2	Tl 190.801†	1777.5	2774.1	531.75	µg/L	531.75	ppb	07:05:39
2	U 409.014†	127.0	7059.7	426.61	µg/L	426.61	ppb	07:05:19
2	V 292.402†	29528.1	43964.7	498.13	µg/L	498.13	ppb	07:05:19
2	Zn 213.857†	46641.2	68399.1	477.37	µg/L	477.37	ppb	07:05:19
3	Sc RADIAL	16333.0	16333.0	99.8	%			07:04:45
3	Al 396.153Radial†	12378.8	12094.5	5057.5	µg/L	5057.5	ppb	07:04:25
3	Ca 317.933Radial†	12179.7	12125.2	5141.5	µg/L	5141.5	ppb	07:04:45
3	Fe 238.204 Radial†	9843.9	9830.5	5119.9	µg/L	5119.9	ppb	07:04:45
3	K 766.490 Radial†	12116.9	9497.4	5172.2	µg/L	5172.2	ppb	07:04:25
3	Mg 279.077 IEC†	1289.7	1279.9	5154.6	µg/L	5154.6	ppb	07:04:45
3	Na 589.592 Radial†	59088.7	58832.4	10406	µg/L	10406	ppb	07:04:25
3	Sr 421.552†	181242.4	181540.0	509.17	µg/L	509.17	ppb	07:04:25
3	Sc 361.383	431029.1	431029.1	86.117	%			07:05:45
3	Y 371.029	377861.9	377861.9	85.621	%			07:05:45
3	Ag 328.068†	51669.3	60300.9	507.15	µg/L	507.15	ppb	07:05:45
3	As 188.979†	1236.3	1433.7	490.99	µg/L	490.99	ppb	07:06:05
3	B 249.677†	14788.0	17224.6	493.89	µg/L	493.89	ppb	07:05:45
3	Ba 233.527†	55726.8	64965.2	500.07	µg/L	500.07	ppb	07:05:45
3	Be 313.107†	773042.5	902219.1	495.61	µg/L	495.61	ppb	07:05:45
3	Cd 226.502†	44184.1	51662.7	488.27	µg/L	488.27	ppb	07:05:45
3	Co 228.616†	22820.4	26580.2	486.31	µg/L	486.31	ppb	07:06:05
3	Cr 267.716†	29640.5	34263.2	499.16	µg/L	499.16	ppb	07:05:45
3	Cu 324.752†	79299.2	87873.1	501.07	µg/L	501.07	ppb	07:05:45
3	Mn 257.610†	323309.3	375154.3	499.27	µg/L	499.27	ppb	07:05:45
3	Mo 202.031†	8418.8	9820.6	497.92	µg/L	497.92	ppb	07:06:05
3	Ni 231.604†	16526.9	19390.8	488.78	µg/L	488.78	ppb	07:06:05
3	P 214.914†	5013.9	5275.1	2265.4	µg/L	2265.4	ppb	07:06:05
3	Pb 220.353†	4659.3	5101.0	494.90	µg/L	494.90	ppb	07:06:05
3	S 181.975 Axial†	779.4	864.2	969.71	µg/L	969.71	ppb	07:06:05
3	Sb 206.836†	1696.3	1889.9	499.60	µg/L	499.60	ppb	07:06:05
3	Se 196.026†	1042.7	1314.9	488.30	µg/L	488.30	ppb	07:06:05
3	SiO2†	45140.7	49744.1	5375.2	µg/L	5375.2	ppb	07:05:45
3	Si 251.611†	57013.5	65736.1	2487.6	µg/L	2487.6	ppb	07:05:45
3	Sn 189.927†	4269.8	4882.2	487.06	µg/L	487.06	ppb	07:06:05
3	Ti 334.940†	140551.0	165198.2	501.50	µg/L	501.50	ppb	07:05:45
3	Tl 190.801†	2090.3	2550.6	489.32	µg/L	489.32	ppb	07:06:05
3	U 409.014†	835.1	7840.0	473.64	µg/L	473.64	ppb	07:05:45
3	V 292.402†	38518.8	44656.2	505.40	µg/L	505.40	ppb	07:05:45
3	Zn 213.857†	61703.5	70491.3	492.39	µg/L	492.39	ppb	07:05:45

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	426109.5	85.134	%	17.6102				20.69%
Sc RADIAL	16188.8	99.0	%	1.56				1.58%
Y 371.029	373610.8	84.658	%	17.0538				20.14%
Ag 328.068†	60358.4	507.63	µg/L	4.749	507.63	ppb	4.749	0.94%
QC value within limits for Ag 328.068 Recovery = 101.53%								
Al 396.153Radial†	11589.0	4845.3	µg/L	384.72	4845.3	ppb	384.72	7.94%
QC value within limits for Al 396.153Radial Recovery = 96.91%								
As 188.979†	1467.0	502.29	µg/L	25.246	502.29	ppb	25.246	5.03%
QC value within limits for As 188.979 Recovery = 100.46%								
B 249.677†	17117.5	490.78	µg/L	14.469	490.78	ppb	14.469	2.95%
QC value within limits for B 249.677 Recovery = 98.16%								
Ba 233.527†	64683.8	497.90	µg/L	10.555	497.90	ppb	10.555	2.12%
QC value within limits for Ba 233.527 Recovery = 99.58%								
Be 313.107†	900337.3	494.57	µg/L	12.477	494.57	ppb	12.477	2.52%
QC value within limits for Be 313.107 Recovery = 98.91%								
Ca 317.933Radial†	12094.7	5128.5	µg/L	27.49	5128.5	ppb	27.49	0.54%
QC value within limits for Ca 317.933Radial Recovery = 102.57%								
Cd 226.502†	51413.6	485.92	µg/L	22.601	485.92	ppb	22.601	4.65%
QC value within limits for Cd 226.502 Recovery = 97.18%								
Co 228.616†	27174.3	497.20	µg/L	33.988	497.20	ppb	33.988	6.84%

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   QC value within limits for Co 228.616  Recovery = 99.44%
Cr 267.716†            34182.0      497.98 µg/L         8.279      497.98 ppb          8.279   1.66%
   QC value within limits for Cr 267.716  Recovery = 99.60%
Cu 324.752†            88094.7      502.33 µg/L         3.263      502.33 ppb          3.263   0.65%
   QC value within limits for Cu 324.752  Recovery = 100.47%
Fe 238.204 Radial†      9822.3      5115.6 µg/L         19.73      5115.6 ppb          19.73   0.39%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.31%
K 766.490 Radial†       9025.5      4915.2 µg/L        443.75      4915.2 ppb         443.75   9.03%
   QC value within limits for K 766.490 Radial  Recovery = 98.30%
Mg 279.077 IEC†         1275.9      5138.6 µg/L         58.86      5138.6 ppb          58.86   1.15%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.77%
Mn 257.610†           374314.2      498.16 µg/L         9.879      498.16 ppb          9.879   1.98%
   QC value within limits for Mn 257.610  Recovery = 99.63%
Mo 202.031†            10030.8      508.58 µg/L        35.717      508.58 ppb         35.717   7.02%
   QC value within limits for Mo 202.031  Recovery = 101.72%
Na 589.592 Radial†     56226.4      9945.4 µg/L        812.93      9945.4 ppb         812.93   8.17%
   QC value within limits for Na 589.592 Radial  Recovery = 99.45%
Ni 231.604†            19759.3      498.07 µg/L        32.596      498.07 ppb         32.596   6.54%
   QC value within limits for Ni 231.604  Recovery = 99.61%
P 214.914†              5414.0      2329.6 µg/L        185.99      2329.6 ppb         185.99   7.98%
   QC value within limits for P 214.914  Recovery = 93.18%
Pb 220.353†             5203.7      505.05 µg/L        31.730      505.05 ppb         31.730   6.28%
   QC value within limits for Pb 220.353  Recovery = 101.01%
S 181.975 Axial†         883.4      991.32 µg/L        47.962      991.32 ppb         47.962   4.84%
   QC value within limits for S 181.975 Axial  Recovery = 99.13%
Sb 206.836†             1943.4      513.69 µg/L        42.892      513.69 ppb         42.892   8.35%
   QC value within limits for Sb 206.836  Recovery = 102.74%
Se 196.026†             1340.5      497.70 µg/L        21.490      497.70 ppb         21.490   4.32%
   QC value within limits for Se 196.026  Recovery = 99.54%
SiO2†                  49525.1      5351.7 µg/L         81.08      5351.7 ppb          81.08   1.52%
   QC value within limits for SiO2  Recovery = 100.08%
Si 251.611†            65544.2      2480.2 µg/L         48.03      2480.2 ppb          48.03   1.94%
   QC value within limits for Si 251.611  Recovery = 99.21%
Sn 189.927†             4990.0      497.80 µg/L        26.726      497.80 ppb         26.726   5.37%
   QC value within limits for Sn 189.927  Recovery = 99.56%
Sr 421.552†           173514.3      486.66 µg/L        40.658      486.66 ppb         40.658   8.35%
   QC value within limits for Sr 421.552  Recovery = 97.33%
Ti 334.940†           164994.6      500.89 µg/L         5.540      500.89 ppb          5.540   1.11%
   QC value within limits for Ti 334.940  Recovery = 100.18%
Tl 190.801†             2605.6      499.78 µg/L        28.241      499.78 ppb         28.241   5.65%
   QC value within limits for Tl 190.801  Recovery = 99.96%
U 409.014†              7753.7      468.43 µg/L        39.481      468.43 ppb         39.481   8.43%
   QC value within limits for U 409.014  Recovery = 93.69%
V 292.402†             44633.0      505.24 µg/L         7.038      505.24 ppb          7.038   1.39%
   QC value within limits for V 292.402  Recovery = 101.05%
Zn 213.857†            70321.8      491.14 µg/L        13.191      491.14 ppb         13.191   2.69%
   QC value within limits for Zn 213.857  Recovery = 98.23%
All analyte(s) passed QC.
```

Sequence No.: 20 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 07:06:13**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	10845.3	10845.3	66.3	%			07:06:42
1	Al 396.153Radial†	264.8	95.4	39.995	µg/L	39.995	ppb	07:06:42
1	Ca 317.933Radial†	49.8	1.2	0.4902	µg/L	0.4902	ppb	07:07:02
1	Fe 238.204 Radial†	31.6	18.5	9.6443	µg/L	9.6443	ppb	07:07:02
1	K 766.490 Radial†	2434.5	1033.3	562.94	µg/L	562.94	ppb	07:06:42
1	Mg 279.077 IEC†	13.3	8.2	32.999	µg/L	32.999	ppb	07:07:02
1	Na 589.592 Radial†	285.6	79.9	14.125	µg/L	14.125	ppb	07:06:42
1	Sr 421.552†	43.6	73.2	0.2053	µg/L	0.2053	ppb	07:06:42
1	Sc 361.383	474296.2	474296.2	94.762	%			07:07:59
1	Y 371.029	419626.8	419626.8	95.085	%			07:07:59
1	Ag 328.068†	-337.0	-53.5	-0.4336	µg/L	-0.4336	ppb	07:07:59
1	As 188.979†	-2.1	-4.2	-1.4089	µg/L	-1.4089	ppb	07:08:19
1	B 249.677†	32.7	87.2	2.5081	µg/L	2.5081	ppb	07:08:19
1	Ba 233.527†	-250.5	-9.5	-0.0719	µg/L	-0.0719	ppb	07:08:19
1	Be 313.107†	-4286.3	34.0	0.0187	µg/L	0.0187	ppb	07:07:59
1	Cd 226.502†	-337.0	0.2	0.0004	µg/L	0.0004	ppb	07:08:19
1	Co 228.616†	-59.8	17.9	0.3276	µg/L	0.3276	ppb	07:08:19
1	Cr 267.716†	160.1	13.4	0.2125	µg/L	0.2125	ppb	07:08:19
1	Cu 324.752†	4115.6	133.5	0.7848	µg/L	0.7848	ppb	07:07:59
1	Mn 257.610†	285.5	26.8	0.0342	µg/L	0.0342	ppb	07:08:19
1	Mo 202.031†	-45.6	-3.5	-0.1768	µg/L	-0.1768	ppb	07:08:19
1	Ni 231.604†	-201.6	-13.1	-0.3300	µg/L	-0.3300	ppb	07:08:19
1	P 214.914†	531.8	14.0	6.2378	µg/L	6.2378	ppb	07:08:19
1	Pb 220.353†	314.5	22.4	2.1543	µg/L	2.1543	ppb	07:08:19
1	S 181.975 Axial†	45.7	7.4	8.2815	µg/L	8.2815	ppb	07:08:19
1	Sb 206.836†	84.3	9.0	2.3581	µg/L	2.3581	ppb	07:08:19
1	Se 196.026†	-101.5	-3.0	-1.0953	µg/L	-1.0953	ppb	07:08:19
1	SiO2†	2641.7	114.2	12.326	µg/L	12.326	ppb	07:07:59
1	Si 251.611†	544.1	105.8	4.0165	µg/L	4.0165	ppb	07:08:19
1	Sn 189.927†	65.8	-6.5	-0.6454	µg/L	-0.6454	ppb	07:08:19
1	Ti 334.940†	-1933.3	-50.6	-0.1442	µg/L	-0.1442	ppb	07:07:59
1	Tl 190.801†	-123.2	-6.8	-1.3008	µg/L	-1.3008	ppb	07:08:19
1	U 409.014†	-6951.0	-465.0	-28.026	µg/L	-28.026	ppb	07:07:59
1	V 292.402†	68.1	-0.2	-0.0373	µg/L	-0.0373	ppb	07:07:59
1	Zn 213.857†	1238.5	147.7	1.0410	µg/L	1.0410	ppb	07:08:19
2	Sc RADIAL	15451.5	15451.5	94.5	%			07:07:07
2	Al 396.153Radial†	333.9	49.4	20.712	µg/L	20.712	ppb	07:07:07
2	Ca 317.933Radial†	58.7	-11.9	-5.0281	µg/L	-5.0281	ppb	07:07:27
2	Fe 238.204 Radial†	32.2	5.0	2.5916	µg/L	2.5916	ppb	07:07:27
2	K 766.490 Radial†	2492.1	-0.5	-0.2698	µg/L	-0.2698	ppb	07:07:07
2	Mg 279.077 IEC†	6.0	-5.5	-22.193	µg/L	-22.193	ppb	07:07:27
2	Na 589.592 Radial†	353.3	23.1	4.0857	µg/L	4.0857	ppb	07:07:07
2	Sr 421.552†	75.2	87.0	0.2443	µg/L	0.2443	ppb	07:07:07
2	Sc 361.383	485159.2	485159.2	96.932	%			07:08:24
2	Y 371.029	428429.4	428429.4	97.079	%			07:08:24
2	Ag 328.068†	-337.1	-45.6	-0.3829	µg/L	-0.3829	ppb	07:08:24
2	As 188.979†	2.0	0.1	0.0428	µg/L	0.0428	ppb	07:08:44
2	B 249.677†	-12.6	39.7	1.1440	µg/L	1.1440	ppb	07:08:44
2	Ba 233.527†	-225.3	22.4	0.1725	µg/L	0.1725	ppb	07:08:44
2	Be 313.107†	-4359.5	59.8	0.0328	µg/L	0.0328	ppb	07:08:24
2	Cd 226.502†	-351.6	-6.8	-0.0650	µg/L	-0.0650	ppb	07:08:44
2	Co 228.616†	-95.2	-17.2	-0.3143	µg/L	-0.3143	ppb	07:08:44
2	Cr 267.716†	170.3	20.2	0.2959	µg/L	0.2959	ppb	07:08:44
2	Cu 324.752†	4164.5	86.7	0.4979	µg/L	0.4979	ppb	07:08:24
2	Mn 257.610†	302.4	37.5	0.0509	µg/L	0.0509	ppb	07:08:44
2	Mo 202.031†	-37.1	6.3	0.3207	µg/L	0.3207	ppb	07:08:44
2	Ni 231.604†	-195.4	-2.0	-0.0497	µg/L	-0.0497	ppb	07:08:44
2	P 214.914†	544.5	14.6	6.6313	µg/L	6.6313	ppb	07:08:44
2	Pb 220.353†	320.7	21.4	2.0662	µg/L	2.0662	ppb	07:08:44

2	S 181.975 Axial†	46.2	6.8	7.6669	µg/L	7.6669	ppb	07:08:44
2	Sb 206.836†	73.3	-4.3	-1.1292	µg/L	-1.1292	ppb	07:08:44
2	Se 196.026†	-91.6	9.6	3.5435	µg/L	3.5435	ppb	07:08:44
2	SiO2†	2661.3	72.0	7.7757	µg/L	7.7757	ppb	07:08:24
2	Si 251.611†	539.6	88.3	3.3458	µg/L	3.3458	ppb	07:08:44
2	Sn 189.927†	83.8	10.6	1.0569	µg/L	1.0569	ppb	07:08:44
2	Ti 334.940†	-1880.3	49.7	0.1540	µg/L	0.1540	ppb	07:08:24
2	Tl 190.801†	-108.0	11.9	2.2758	µg/L	2.2758	ppb	07:08:44
2	U 409.014†	-6724.8	-67.4	-4.0601	µg/L	-4.0601	ppb	07:08:24
2	V 292.402†	29.1	-42.0	-0.4696	µg/L	-0.4696	ppb	07:08:24
2	Zn 213.857†	1266.1	147.0	1.0348	µg/L	1.0348	ppb	07:08:44
3	Sc RADIAL	15248.4	15248.4	93.2	%			07:07:32
3	Al 396.153Radial†	377.1	100.5	42.161	µg/L	42.161	ppb	07:07:32
3	Ca 317.933Radial†	81.9	13.9	5.9000	µg/L	5.9000	ppb	07:07:52
3	Fe 238.204 Radial†	32.1	5.3	2.7377	µg/L	2.7377	ppb	07:07:52
3	K 766.490 Radial†	2527.0	72.0	39.247	µg/L	39.247	ppb	07:07:32
3	Mg 279.077 IEC†	8.8	-2.4	-9.7503	µg/L	-9.7503	ppb	07:07:52
3	Na 589.592 Radial†	365.7	41.5	7.3341	µg/L	7.3341	ppb	07:07:32
3	Sr 421.552†	108.9	124.3	0.3484	µg/L	0.3484	ppb	07:07:32
3	Sc 361.383	491455.7	491455.7	98.190	%			07:08:49
3	Y 371.029	433433.5	433433.5	98.213	%			07:08:49
3	Ag 328.068†	-338.8	-43.0	-0.3559	µg/L	-0.3559	ppb	07:08:49
3	As 188.979†	0.5	-1.3	-0.4522	µg/L	-0.4522	ppb	07:09:09
3	B 249.677†	-14.3	38.1	1.0966	µg/L	1.0966	ppb	07:09:09
3	Ba 233.527†	-244.0	6.4	0.0496	µg/L	0.0496	ppb	07:09:09
3	Be 313.107†	-4399.0	77.1	0.0423	µg/L	0.0423	ppb	07:08:49
3	Cd 226.502†	-352.5	-3.1	-0.0300	µg/L	-0.0300	ppb	07:09:09
3	Co 228.616†	-73.6	6.1	0.1098	µg/L	0.1098	ppb	07:09:09
3	Cr 267.716†	174.6	22.3	0.3291	µg/L	0.3291	ppb	07:09:09
3	Cu 324.752†	4234.4	102.8	0.5929	µg/L	0.5929	ppb	07:08:49
3	Mn 257.610†	289.0	19.9	0.0268	µg/L	0.0268	ppb	07:09:09
3	Mo 202.031†	-54.7	-11.1	-0.5635	µg/L	-0.5635	ppb	07:09:09
3	Ni 231.604†	-212.9	-17.2	-0.4341	µg/L	-0.4341	ppb	07:09:09
3	P 214.914†	534.6	-2.7	-1.4507	µg/L	-1.4507	ppb	07:09:09
3	Pb 220.353†	322.2	18.7	1.7897	µg/L	1.7897	ppb	07:09:09
3	S 181.975 Axial†	33.7	-6.5	-7.3182	µg/L	-7.3182	ppb	07:09:09
3	Sb 206.836†	84.7	6.3	1.6509	µg/L	1.6509	ppb	07:09:09
3	Se 196.026†	-107.3	-5.2	-1.9109	µg/L	-1.9109	ppb	07:09:09
3	SiO2†	2724.1	100.8	10.872	µg/L	10.872	ppb	07:08:49
3	Si 251.611†	514.5	55.6	2.1152	µg/L	2.1152	ppb	07:09:09
3	Sn 189.927†	75.9	1.4	0.1394	µg/L	0.1394	ppb	07:09:09
3	Ti 334.940†	-1839.7	115.9	0.3564	µg/L	0.3564	ppb	07:08:49
3	Tl 190.801†	-123.5	-2.5	-0.4776	µg/L	-0.4776	ppb	07:09:09
3	U 409.014†	-6863.3	-119.5	-7.2034	µg/L	-7.2034	ppb	07:08:49
3	V 292.402†	58.9	-12.0	-0.1481	µg/L	-0.1481	ppb	07:08:49
3	Zn 213.857†	1233.9	97.4	0.6881	µg/L	0.6881	ppb	07:09:09

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	483637.0	96.628	%	1.7343				1.79%
Sc RADIAL	13848.4	84.7	%	15.91				18.79%
Y 371.029	427163.3	96.792	%	1.5839				1.64%
Ag 328.068†	-47.3	-0.3908	µg/L	0.03947	-0.3908	ppb	0.03947	10.10%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	81.8	34.289	µg/L	11.8082	34.289	ppb	11.8082	34.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.8	-0.6061	µg/L	0.73797	-0.6061	ppb	0.73797	121.75%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	55.0	1.5829	µg/L	0.80158	1.5829	ppb	0.80158	50.64%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	6.4	0.0501	µg/L	0.12222	0.0501	ppb	0.12222	244.09%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	57.0	0.0313	µg/L	0.01186	0.0313	ppb	0.01186	37.93%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.1	0.4541	µg/L	5.46412	0.4541	ppb	5.46412	>999.9%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	-3.2	-0.0315	µg/L	0.03275	-0.0315	ppb	0.03275	103.88%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	2.3	0.0411	µg/L	0.32642	0.0411	ppb	0.32642	794.99%

```
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                18.6      0.2792 µg/L       0.06010      0.2792 ppb        0.06010  21.53%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               107.7      0.6252 µg/L       0.14612      0.6252 ppb        0.14612  23.37%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          9.6      4.9912 µg/L       4.03038      4.9912 ppb        4.03038  80.75%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         368.3      200.64 µg/L       314.381      200.64 ppb        314.381 156.69%
   QC value greater than the upper limit for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.1      0.3518 µg/L      28.94978      0.3518 ppb       28.94978 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                28.1      0.0373 µg/L       0.01230      0.0373 ppb        0.01230  32.96%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -2.8     -0.1399 µg/L       0.44324     -0.1399 ppb        0.44324 316.86%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         48.1      8.5150 µg/L       5.12279      8.5150 ppb        5.12279  60.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -10.8     -0.2713 µg/L       0.19883     -0.2713 ppb        0.19883  73.30%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  8.7      3.8061 µg/L       4.55683      3.8061 ppb        4.55683 119.72%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                20.8      2.0034 µg/L       0.19024      2.0034 ppb        0.19024   9.50%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            2.6      2.8767 µg/L       8.83439      2.8767 ppb        8.83439 307.10%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 3.7      0.9599 µg/L       1.84348      0.9599 ppb        1.84348 192.05%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.5      0.1791 µg/L       2.94205      0.1791 ppb        2.94205 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      95.7      10.324 µg/L        2.3240      10.324 ppb         2.3240  22.51%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                83.2      3.1592 µg/L       0.96431      3.1592 ppb        0.96431  30.52%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.8      0.1836 µg/L       0.85201      0.1836 ppb        0.85201 463.96%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                94.8      0.2660 µg/L       0.07399      0.2660 ppb        0.07399  27.82%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                38.3      0.1221 µg/L       0.25183      0.1221 ppb        0.25183 206.32%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 0.9      0.1658 µg/L       1.87311      0.1658 ppb        1.87311 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -217.3     -13.096 µg/L       13.0244     -13.096 ppb        13.0244  99.45%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -18.1     -0.2183 µg/L       0.22452     -0.2183 ppb        0.22452 102.84%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               130.7      0.9213 µg/L       0.20198      0.9213 ppb        0.20198  21.92%
   QC value within limits for Zn 213.857  Recovery = Not calculated
QC Failed.  Continue with analysis.
```

Sequence No.: 29 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 07:35:10**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15745.0	15745.0	96.2	%			07:36:00
1	Al 396.153Radial†	12255.1	12429.1	5197.6	µg/L	5197.6	ppb	07:35:40
1	Ca 317.933Radial†	11670.0	12051.2	5110.1	µg/L	5110.1	ppb	07:36:00
1	Fe 238.204 Radial†	9446.7	9786.1	5096.7	µg/L	5096.7	ppb	07:36:00
1	K 766.490 Radial†	12035.0	9865.5	5372.7	µg/L	5372.7	ppb	07:35:40
1	Mg 279.077 IEC†	1220.5	1256.2	5059.7	µg/L	5059.7	ppb	07:36:00
1	Na 589.592 Radial†	58630.9	60567.0	10713	µg/L	10713	ppb	07:35:40
1	Sr 421.552†	179698.1	186715.0	523.69	µg/L	523.69	ppb	07:35:40
1	Sc 361.383	511606.6	511606.6	102.22	%			07:36:58
1	Y 371.029	446190.9	446190.9	101.10	%			07:36:58
1	Ag 328.068†	61846.9	60808.1	511.42	µg/L	511.42	ppb	07:36:58
1	As 188.979†	1536.2	1501.0	513.88	µg/L	513.88	ppb	07:37:18
1	B 249.677†	17788.1	17455.1	500.49	µg/L	500.49	ppb	07:36:58
1	Ba 233.527†	67055.8	65856.7	506.92	µg/L	506.92	ppb	07:36:58
1	Be 313.107†	935124.5	919405.9	505.05	µg/L	505.05	ppb	07:36:58
1	Cd 226.502†	54496.6	53670.8	507.27	µg/L	507.27	ppb	07:36:58
1	Co 228.616†	27747.4	27226.8	498.16	µg/L	498.16	ppb	07:37:18
1	Cr 267.716†	35567.9	34641.2	504.64	µg/L	504.64	ppb	07:36:58
1	Cu 324.752†	94843.5	88577.4	505.05	µg/L	505.05	ppb	07:36:58
1	Mn 257.610†	389097.7	380386.6	506.25	µg/L	506.25	ppb	07:36:58
1	Mo 202.031†	10189.6	10013.3	507.68	µg/L	507.68	ppb	07:37:18
1	Ni 231.604†	20070.0	19834.5	499.97	µg/L	499.97	ppb	07:37:18
1	P 214.914†	6109.2	5429.6	2336.0	µg/L	2336.0	ppb	07:37:18
1	Pb 220.353†	5698.4	5265.4	510.83	µg/L	510.83	ppb	07:37:18
1	S 181.975 Axial†	959.6	897.9	1007.6	µg/L	1007.6	ppb	07:37:18
1	Sb 206.836†	2043.0	1918.8	507.28	µg/L	507.28	ppb	07:37:18
1	Se 196.026†	1296.5	1372.5	509.47	µg/L	509.47	ppb	07:37:18
1	SiO2†	54162.8	50314.9	5437.0	µg/L	5437.0	ppb	07:36:58
1	Si 251.611†	68796.3	66836.2	2529.2	µg/L	2529.2	ppb	07:36:58
1	Sn 189.927†	5277.0	5086.7	507.44	µg/L	507.44	ppb	07:37:18
1	Ti 334.940†	167841.5	166191.8	504.51	µg/L	504.51	ppb	07:36:58
1	Tl 190.801†	2569.6	2637.1	505.84	µg/L	505.84	ppb	07:37:18
1	U 409.014†	1540.7	8377.6	506.03	µg/L	506.03	ppb	07:36:58
1	V 292.402†	46224.8	45150.5	511.08	µg/L	511.08	ppb	07:36:58
1	Zn 213.857†	75108.9	72321.2	505.21	µg/L	505.21	ppb	07:36:58
2	Sc RADIAL	16488.4	16488.4	101	%			07:36:25
2	Al 396.153Radial†	12408.8	12007.4	5020.7	µg/L	5020.7	ppb	07:36:05
2	Ca 317.933Radial†	12299.0	12128.6	5142.9	µg/L	5142.9	ppb	07:36:25
2	Fe 238.204 Radial†	9914.0	9807.2	5107.7	µg/L	5107.7	ppb	07:36:25
2	K 766.490 Radial†	12096.1	9362.3	5098.6	µg/L	5098.6	ppb	07:36:05
2	Mg 279.077 IEC†	1288.0	1266.0	5098.9	µg/L	5098.9	ppb	07:36:25
2	Na 589.592 Radial†	59291.1	58475.5	10343	µg/L	10343	ppb	07:36:05
2	Sr 421.552†	181595.0	180179.1	505.35	µg/L	505.35	ppb	07:36:05
2	Sc 361.383	508846.7	508846.7	101.66	%			07:37:24
2	Y 371.029	443421.8	443421.8	100.48	%			07:37:24
2	Ag 328.068†	61416.5	60712.8	510.62	µg/L	510.62	ppb	07:37:24
2	As 188.979†	1524.4	1497.6	512.71	µg/L	512.71	ppb	07:37:44
2	B 249.677†	17714.3	17476.9	501.11	µg/L	501.11	ppb	07:37:24
2	Ba 233.527†	66652.4	65815.7	506.60	µg/L	506.60	ppb	07:37:24
2	Be 313.107†	930388.4	919709.3	505.22	µg/L	505.22	ppb	07:37:24
2	Cd 226.502†	54264.4	53731.6	507.84	µg/L	507.84	ppb	07:37:24
2	Co 228.616†	27791.2	27417.1	501.64	µg/L	501.64	ppb	07:37:44
2	Cr 267.716†	35384.5	34649.4	504.77	µg/L	504.77	ppb	07:37:24
2	Cu 324.752†	94188.6	88436.5	504.25	µg/L	504.25	ppb	07:37:24
2	Mn 257.610†	386801.7	380192.9	505.99	µg/L	505.99	ppb	07:37:24
2	Mo 202.031†	10165.9	10044.0	509.24	µg/L	509.24	ppb	07:37:44
2	Ni 231.604†	20111.6	19981.9	503.68	µg/L	503.68	ppb	07:37:44
2	P 214.914†	6139.4	5491.8	2365.2	µg/L	2365.2	ppb	07:37:44
2	Pb 220.353†	5708.3	5305.3	514.83	µg/L	514.83	ppb	07:37:44

2	S 181.975 Axial†	969.8	913.1	1024.6	µg/L	1024.6 ppb	07:37:44
2	Sb 206.836†	2046.1	1932.7	510.92	µg/L	510.92 ppb	07:37:44
2	Se 196.026†	1311.2	1393.9	517.32	µg/L	517.32 ppb	07:37:44
2	SiO2†	53741.9	50188.3	5423.3	µg/L	5423.3 ppb	07:37:24
2	Si 251.611†	68380.4	66792.2	2527.5	µg/L	2527.5 ppb	07:37:24
2	Sn 189.927†	5273.6	5111.3	509.90	µg/L	509.90 ppb	07:37:44
2	Ti 334.940†	166877.1	166133.8	504.33	µg/L	504.33 ppb	07:37:24
2	Tl 190.801†	2573.0	2654.1	509.06	µg/L	509.06 ppb	07:37:44
2	U 409.014†	1449.0	8295.6	501.10	µg/L	501.10 ppb	07:37:24
2	V 292.402†	45947.9	45123.4	510.79	µg/L	510.79 ppb	07:37:24
2	Zn 213.857†	74527.7	72148.0	503.96	µg/L	503.96 ppb	07:37:24
3	Sc RADIAL	16323.2	16323.2	99.8	%		07:36:50
3	Al 396.153Radial†	12283.7	12006.7	5020.5	µg/L	5020.5 ppb	07:36:30
3	Ca 317.933Radial†	12177.2	12130.1	5143.6	µg/L	5143.6 ppb	07:36:50
3	Fe 238.204 Radial†	9856.4	9849.0	5129.5	µg/L	5129.5 ppb	07:36:50
3	K 766.490 Radial†	12050.1	9437.7	5139.8	µg/L	5139.8 ppb	07:36:30
3	Mg 279.077 IEC†	1282.6	1273.6	5129.4	µg/L	5129.4 ppb	07:36:50
3	Na 589.592 Radial†	58455.3	58233.3	10300	µg/L	10300 ppb	07:36:30
3	Sr 421.552†	179487.8	179891.1	504.55	µg/L	504.55 ppb	07:36:30
3	Sc 361.383	509603.7	509603.7	101.82	%		07:37:50
3	Y 371.029	444600.0	444600.0	100.74	%		07:37:50
3	Ag 328.068†	61556.7	60760.8	511.03	µg/L	511.03 ppb	07:37:50
3	As 188.979†	1530.9	1501.7	514.10	µg/L	514.10 ppb	07:38:10
3	B 249.677†	17687.3	17424.5	499.61	µg/L	499.61 ppb	07:37:50
3	Ba 233.527†	66818.4	65881.4	507.11	µg/L	507.11 ppb	07:37:50
3	Be 313.107†	932774.2	920693.1	505.76	µg/L	505.76 ppb	07:37:50
3	Cd 226.502†	54379.3	53765.1	508.16	µg/L	508.16 ppb	07:37:50
3	Co 228.616†	27651.7	27239.5	498.38	µg/L	498.38 ppb	07:38:10
3	Cr 267.716†	35458.1	34670.1	505.07	µg/L	505.07 ppb	07:37:50
3	Cu 324.752†	94272.1	88380.9	503.93	µg/L	503.93 ppb	07:37:50
3	Mn 257.610†	387913.1	380719.3	506.69	µg/L	506.69 ppb	07:37:50
3	Mo 202.031†	10095.1	9959.7	504.97	µg/L	504.97 ppb	07:38:10
3	Ni 231.604†	19980.3	19823.5	499.69	µg/L	499.69 ppb	07:38:10
3	P 214.914†	6098.4	5442.5	2342.3	µg/L	2342.3 ppb	07:38:10
3	Pb 220.353†	5683.9	5273.1	511.68	µg/L	511.68 ppb	07:38:10
3	S 181.975 Axial†	958.6	900.7	1010.7	µg/L	1010.7 ppb	07:38:10
3	Sb 206.836†	2034.3	1918.1	507.07	µg/L	507.07 ppb	07:38:10
3	Se 196.026†	1292.3	1373.3	509.79	µg/L	509.79 ppb	07:38:10
3	SiO2†	53922.2	50286.9	5433.9	µg/L	5433.9 ppb	07:37:50
3	Si 251.611†	68575.8	66884.2	2531.1	µg/L	2531.1 ppb	07:37:50
3	Sn 189.927†	5227.1	5058.0	504.58	µg/L	504.58 ppb	07:38:10
3	Ti 334.940†	167192.6	166199.8	504.53	µg/L	504.53 ppb	07:37:50
3	Tl 190.801†	2562.8	2640.3	506.44	µg/L	506.44 ppb	07:38:10
3	U 409.014†	1554.1	8396.7	507.20	µg/L	507.20 ppb	07:37:50
3	V 292.402†	46092.6	45198.4	511.58	µg/L	511.58 ppb	07:37:50
3	Zn 213.857†	74589.3	72099.6	503.65	µg/L	503.65 ppb	07:37:50

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	510019.0	101.90	%	0.285				0.28%
Sc RADIAL	16185.5	98.9	%	2.39				2.41%
Y 371.029	444737.6	100.77	%	0.315				0.31%
Ag 328.068†	60760.6	511.03	µg/L	0.396	511.03	ppb	0.396	0.08%
QC value within limits for Ag 328.068 Recovery = 102.21%								
Al 396.153Radial†	12147.7	5079.6	µg/L	102.18	5079.6	ppb	102.18	2.01%
QC value within limits for Al 396.153Radial Recovery = 101.59%								
As 188.979†	1500.1	513.57	µg/L	0.746	513.57	ppb	0.746	0.15%
QC value within limits for As 188.979 Recovery = 102.71%								
B 249.677†	17452.2	500.40	µg/L	0.756	500.40	ppb	0.756	0.15%
QC value within limits for B 249.677 Recovery = 100.08%								
Ba 233.527†	65851.3	506.88	µg/L	0.256	506.88	ppb	0.256	0.05%
QC value within limits for Ba 233.527 Recovery = 101.38%								
Be 313.107†	919936.1	505.34	µg/L	0.370	505.34	ppb	0.370	0.07%
QC value within limits for Be 313.107 Recovery = 101.07%								
Ca 317.933Radial†	12103.3	5132.2	µg/L	19.13	5132.2	ppb	19.13	0.37%
QC value within limits for Ca 317.933Radial Recovery = 102.64%								
Cd 226.502†	53722.5	507.75	µg/L	0.451	507.75	ppb	0.451	0.09%
QC value within limits for Cd 226.502 Recovery = 101.55%								
Co 228.616†	27294.5	499.39	µg/L	1.949	499.39	ppb	1.949	0.39%

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   QC value within limits for Co 228.616  Recovery = 99.88%
Cr 267.716†            34653.6      504.83 µg/L         0.217      504.83 ppb          0.217   0.04%
   QC value within limits for Cr 267.716  Recovery = 100.97%
Cu 324.752†            88465.0      504.41 µg/L         0.576      504.41 ppb          0.576   0.11%
   QC value within limits for Cu 324.752  Recovery = 100.88%
Fe 238.204 Radial†      9814.1      5111.3 µg/L         16.68      5111.3 ppb          16.68   0.33%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.23%
K 766.490 Radial†       9555.2      5203.7 µg/L        147.81      5203.7 ppb         147.81   2.84%
   QC value within limits for K 766.490 Radial  Recovery = 104.07%
Mg 279.077 IEC†         1265.3      5096.0 µg/L         34.94      5096.0 ppb          34.94   0.69%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.92%
Mn 257.610†           380432.9      506.31 µg/L         0.354      506.31 ppb          0.354   0.07%
   QC value within limits for Mn 257.610  Recovery = 101.26%
Mo 202.031†            10005.6      507.30 µg/L         2.164      507.30 ppb          2.164   0.43%
   QC value within limits for Mo 202.031  Recovery = 101.46%
Na 589.592 Radial†     59091.9       10452 µg/L         227.0       10452 ppb          227.0   2.17%
   QC value within limits for Na 589.592 Radial  Recovery = 104.52%
Ni 231.604†            19880.0      501.11 µg/L         2.229      501.11 ppb          2.229   0.44%
   QC value within limits for Ni 231.604  Recovery = 100.22%
P 214.914†              5454.7      2347.8 µg/L         15.35      2347.8 ppb          15.35   0.65%
   QC value within limits for P 214.914  Recovery = 93.91%
Pb 220.353†             5281.3      512.45 µg/L         2.105      512.45 ppb          2.105   0.41%
   QC value within limits for Pb 220.353  Recovery = 102.49%
S 181.975 Axial†         903.9      1014.3 µg/L          9.04      1014.3 ppb           9.04   0.89%
   QC value within limits for S 181.975 Axial  Recovery = 101.43%
Sb 206.836†             1923.2      508.42 µg/L         2.166      508.42 ppb          2.166   0.43%
   QC value within limits for Sb 206.836  Recovery = 101.68%
Se 196.026†             1379.9      512.19 µg/L         4.445      512.19 ppb          4.445   0.87%
   QC value within limits for Se 196.026  Recovery = 102.44%
SiO2†                  50263.4      5431.4 µg/L          7.17      5431.4 ppb           7.17   0.13%
   QC value within limits for SiO2  Recovery = 101.57%
Si 251.611†            66837.5      2529.3 µg/L          1.77      2529.3 ppb           1.77   0.07%
   QC value within limits for Si 251.611  Recovery = 101.17%
Sn 189.927†             5085.3      507.31 µg/L         2.660      507.31 ppb          2.660   0.52%
   QC value within limits for Sn 189.927  Recovery = 101.46%
Sr 421.552†           182261.8      511.20 µg/L        10.828      511.20 ppb         10.828   2.12%
   QC value within limits for Sr 421.552  Recovery = 102.24%
Ti 334.940†           166175.1      504.46 µg/L         0.107      504.46 ppb          0.107   0.02%
   QC value within limits for Ti 334.940  Recovery = 100.89%
Tl 190.801†             2643.9      507.11 µg/L         1.714      507.11 ppb          1.714   0.34%
   QC value within limits for Tl 190.801  Recovery = 101.42%
U 409.014†              8356.6      504.78 µg/L         3.238      504.78 ppb          3.238   0.64%
   QC value within limits for U 409.014  Recovery = 100.96%
V 292.402†             45157.4      511.15 µg/L         0.403      511.15 ppb          0.403   0.08%
   QC value within limits for V 292.402  Recovery = 102.23%
Zn 213.857†            72189.6      504.27 µg/L         0.825      504.27 ppb          0.825   0.16%
   QC value within limits for Zn 213.857  Recovery = 100.85%
All analyte(s) passed QC.
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Sequence No.: 30 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 07:38:18**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15143.5	15143.5	92.6	%			07:38:47
1	Al 396.153Radial†	361.3	86.2	36.164	µg/L	36.164	ppb	07:38:47
1	Ca 317.933Radial†	60.0	-9.2	-3.8908	µg/L	-3.8908	ppb	07:39:07
1	Fe 238.204 Radial†	37.2	11.1	5.7579	µg/L	5.7579	ppb	07:39:07
1	K 766.490 Radial†	2503.3	65.3	35.581	µg/L	35.581	ppb	07:38:47
1	Mg 279.077 IEC†	1.7	-10.0	-40.319	µg/L	-40.319	ppb	07:39:07
1	Na 589.592 Radial†	344.4	21.2	3.7437	µg/L	3.7437	ppb	07:38:47
1	Sr 421.552†	163.6	184.1	0.5167	µg/L	0.5167	ppb	07:38:47
1	Sc 361.383	505729.8	505729.8	101.04	%			07:40:04
1	Y 371.029	445636.8	445636.8	100.98	%			07:40:04
1	Ag 328.068†	-332.6	-27.1	-0.2363	µg/L	-0.2363	ppb	07:40:04
1	As 188.979†	5.2	3.3	1.1156	µg/L	1.1156	ppb	07:40:24
1	B 249.677†	20.7	73.2	2.1066	µg/L	2.1066	ppb	07:40:24
1	Ba 233.527†	-234.3	23.0	0.1774	µg/L	0.1774	ppb	07:40:24
1	Be 313.107†	-4568.8	35.5	0.0195	µg/L	0.0195	ppb	07:40:04
1	Cd 226.502†	-361.3	-1.7	-0.0168	µg/L	-0.0168	ppb	07:40:24
1	Co 228.616†	-64.0	17.7	0.3241	µg/L	0.3241	ppb	07:40:24
1	Cr 267.716†	134.4	-22.5	-0.3313	µg/L	-0.3313	ppb	07:40:24
1	Cu 324.752†	4184.8	-68.0	-0.3914	µg/L	-0.3914	ppb	07:40:04
1	Mn 257.610†	281.3	3.9	0.0068	µg/L	0.0068	ppb	07:40:24
1	Mo 202.031†	-38.9	6.1	0.3071	µg/L	0.3071	ppb	07:40:24
1	Ni 231.604†	-200.2	1.5	0.0386	µg/L	0.0386	ppb	07:40:24
1	P 214.914†	544.9	-7.9	-3.5085	µg/L	-3.5085	ppb	07:40:24
1	Pb 220.353†	309.7	-2.9	-0.3044	µg/L	-0.3044	ppb	07:40:24
1	S 181.975 Axial†	49.7	8.4	9.3822	µg/L	9.3822	ppb	07:40:24
1	Sb 206.836†	74.6	-6.1	-1.5940	µg/L	-1.5940	ppb	07:40:24
1	Se 196.026†	-103.2	2.0	0.7449	µg/L	0.7449	ppb	07:40:24
1	SiO2†	2695.7	-5.6	-0.6024	µg/L	-0.6024	ppb	07:40:04
1	Si 251.611†	534.7	60.8	2.3045	µg/L	2.3045	ppb	07:40:24
1	Sn 189.927†	71.2	-5.4	-0.5361	µg/L	-0.5361	ppb	07:40:24
1	Ti 334.940†	-1993.2	16.8	0.0521	µg/L	0.0521	ppb	07:40:04
1	Tl 190.801†	-102.7	21.6	4.1263	µg/L	4.1263	ppb	07:40:24
1	U 409.014†	-6860.8	80.2	4.8381	µg/L	4.8381	ppb	07:40:04
1	V 292.402†	-5.0	-77.0	-0.8520	µg/L	-0.8520	ppb	07:40:04
1	Zn 213.857†	1215.4	43.7	0.3071	µg/L	0.3071	ppb	07:40:24
2	Sc RADIAL	16380.3	16380.3	100	%			07:39:12
2	Al 396.153Radial†	280.1	-24.4	-10.229	µg/L	-10.229	ppb	07:39:12
2	Ca 317.933Radial†	72.2	-1.9	-0.7873	µg/L	-0.7873	ppb	07:39:32
2	Fe 238.204 Radial†	35.6	6.3	3.3007	µg/L	3.3007	ppb	07:39:32
2	K 766.490 Radial†	2507.7	-134.5	-73.297	µg/L	-73.297	ppb	07:39:12
2	Mg 279.077 IEC†	9.7	-2.2	-9.0416	µg/L	-9.0416	ppb	07:39:32
2	Na 589.592 Radial†	219.0	-132.2	-23.385	µg/L	-23.385	ppb	07:39:12
2	Sr 421.552†	-30.4	-22.9	-0.0643	µg/L	-0.0643	ppb	07:39:12
2	Sc 361.383	503629.6	503629.6	100.62	%			07:40:29
2	Y 371.029	443995.3	443995.3	100.61	%			07:40:29
2	Ag 328.068†	-297.3	6.7	0.0527	µg/L	0.0527	ppb	07:40:29
2	As 188.979†	-3.2	-5.0	-1.7039	µg/L	-1.7039	ppb	07:40:49
2	B 249.677†	-19.2	33.6	0.9673	µg/L	0.9673	ppb	07:40:49
2	Ba 233.527†	-223.2	33.0	0.2540	µg/L	0.2540	ppb	07:40:49
2	Be 313.107†	-4525.3	60.0	0.0330	µg/L	0.0330	ppb	07:40:29
2	Cd 226.502†	-349.2	8.8	0.0826	µg/L	0.0826	ppb	07:40:49
2	Co 228.616†	-77.5	4.0	0.0754	µg/L	0.0754	ppb	07:40:49
2	Cr 267.716†	171.6	15.0	0.2162	µg/L	0.2162	ppb	07:40:49
2	Cu 324.752†	4239.1	3.3	0.0161	µg/L	0.0161	ppb	07:40:29
2	Mn 257.610†	286.2	9.9	0.0136	µg/L	0.0136	ppb	07:40:49
2	Mo 202.031†	-29.8	15.0	0.7586	µg/L	0.7586	ppb	07:40:49
2	Ni 231.604†	-233.9	-32.8	-0.8261	µg/L	-0.8261	ppb	07:40:49
2	P 214.914†	550.0	-0.5	-0.2347	µg/L	-0.2347	ppb	07:40:49
2	Pb 220.353†	337.3	25.8	2.5139	µg/L	2.5139	ppb	07:40:49

2	S 181.975 Axial†	42.9	1.8	1.9783	µg/L	1.9783	ppb	07:40:49
2	Sb 206.836†	94.6	14.0	3.6724	µg/L	3.6724	ppb	07:40:49
2	Se 196.026†	-102.5	2.3	0.8353	µg/L	0.8353	ppb	07:40:49
2	SiO2†	2736.7	46.3	5.0020	µg/L	5.0020	ppb	07:40:29
2	Si 251.611†	526.1	54.5	2.0576	µg/L	2.0576	ppb	07:40:49
2	Sn 189.927†	85.6	9.2	0.9197	µg/L	0.9197	ppb	07:40:49
2	Ti 334.940†	-2033.8	-31.7	-0.0970	µg/L	-0.0970	ppb	07:40:29
2	Tl 190.801†	-129.2	-5.2	-0.9889	µg/L	-0.9889	ppb	07:40:49
2	U 409.014†	-6861.2	51.6	3.1080	µg/L	3.1080	ppb	07:40:29
2	V 292.402†	54.9	-17.5	-0.1823	µg/L	-0.1823	ppb	07:40:29
2	Zn 213.857†	1214.8	48.0	0.3433	µg/L	0.3433	ppb	07:40:49
3	Sc RADIAL	16530.2	16530.2	101	%			07:39:37
3	Al 396.153Radial†	292.1	-15.0	-6.3191	µg/L	-6.3191	ppb	07:39:37
3	Ca 317.933Radial†	56.3	-18.3	-7.7392	µg/L	-7.7392	ppb	07:39:57
3	Fe 238.204 Radial†	37.8	8.2	4.2907	µg/L	4.2907	ppb	07:39:57
3	K 766.490 Radial†	2782.5	114.7	62.494	µg/L	62.494	ppb	07:39:37
3	Mg 279.077 IEC†	5.5	-6.5	-26.062	µg/L	-26.062	ppb	07:39:57
3	Na 589.592 Radial†	316.5	-37.7	-6.6711	µg/L	-6.6711	ppb	07:39:37
3	Sr 421.552†	46.2	53.2	0.1494	µg/L	0.1494	ppb	07:39:37
3	Sc 361.383	507514.5	507514.5	101.40	%			07:40:54
3	Y 371.029	447037.5	447037.5	101.30	%			07:40:54
3	Ag 328.068†	-219.5	85.7	0.7106	µg/L	0.7106	ppb	07:40:54
3	As 188.979†	-0.6	-2.5	-0.8502	µg/L	-0.8502	ppb	07:41:14
3	B 249.677†	-27.6	25.5	0.7335	µg/L	0.7335	ppb	07:41:14
3	Ba 233.527†	-229.3	28.7	0.2214	µg/L	0.2214	ppb	07:41:14
3	Be 313.107†	-4557.8	62.3	0.0341	µg/L	0.0341	ppb	07:40:54
3	Cd 226.502†	-337.7	22.8	0.2153	µg/L	0.2153	ppb	07:41:14
3	Co 228.616†	-78.8	3.3	0.0605	µg/L	0.0605	ppb	07:41:14
3	Cr 267.716†	187.8	29.7	0.4327	µg/L	0.4327	ppb	07:41:14
3	Cu 324.752†	4116.3	-150.1	-0.8558	µg/L	-0.8558	ppb	07:40:54
3	Mn 257.610†	259.1	-18.9	-0.0242	µg/L	-0.0242	ppb	07:41:14
3	Mo 202.031†	-34.4	10.7	0.5421	µg/L	0.5421	ppb	07:41:14
3	Ni 231.604†	-191.5	10.8	0.2723	µg/L	0.2723	ppb	07:41:14
3	P 214.914†	559.2	4.4	2.3467	µg/L	2.3467	ppb	07:41:14
3	Pb 220.353†	280.6	-32.7	-3.1776	µg/L	-3.1776	ppb	07:41:14
3	S 181.975 Axial†	43.6	2.1	2.3886	µg/L	2.3886	ppb	07:41:14
3	Sb 206.836†	94.9	13.7	3.5817	µg/L	3.5817	ppb	07:41:14
3	Se 196.026†	-103.0	2.6	0.9431	µg/L	0.9431	ppb	07:41:14
3	SiO2†	2651.9	-58.2	-6.2728	µg/L	-6.2728	ppb	07:40:54
3	Si 251.611†	513.1	37.6	1.4208	µg/L	1.4208	ppb	07:41:14
3	Sn 189.927†	75.6	-1.3	-0.1297	µg/L	-0.1297	ppb	07:41:14
3	Ti 334.940†	-1837.4	177.5	0.5405	µg/L	0.5405	ppb	07:40:54
3	Tl 190.801†	-108.3	16.4	3.1429	µg/L	3.1429	ppb	07:41:14
3	U 409.014†	-6979.9	-13.4	-0.8047	µg/L	-0.8047	ppb	07:40:54
3	V 292.402†	56.2	-16.6	-0.1796	µg/L	-0.1796	ppb	07:40:54
3	Zn 213.857†	1178.5	3.1	0.0204	µg/L	0.0204	ppb	07:41:14

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	505624.6	101.02	%	0.389				0.38%
Sc RADIAL	16018.0	97.9	%	4.65				4.75%
Y 371.029	445556.5	100.96	%	0.345				0.34%
Ag 328.068†	21.8	0.1756	µg/L	0.48527	0.1756	ppb	0.48527	276.30%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	15.6	6.5387	µg/L	25.73095	6.5387	ppb	25.73095	393.52%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.4	-0.4795	µg/L	1.44586	-0.4795	ppb	1.44586	301.54%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	44.1	1.2691	µg/L	0.73465	1.2691	ppb	0.73465	57.89%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	28.3	0.2176	µg/L	0.03842	0.2176	ppb	0.03842	17.65%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	52.6	0.0289	µg/L	0.00811	0.0289	ppb	0.00811	28.11%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-9.8	-4.1391	µg/L	3.48258	-4.1391	ppb	3.48258	84.14%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	10.0	0.0937	µg/L	0.11648	0.0937	ppb	0.11648	124.31%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	8.3	0.1533	µg/L	0.14808	0.1533	ppb	0.14808	96.57%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 7.4      0.1059 µg/L       0.39374      0.1059 ppb        0.39374 371.89%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -71.6     -0.4104 µg/L       0.43626     -0.4104 ppb        0.43626 106.31%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          8.5      4.4498 µg/L       1.23632      4.4498 ppb        1.23632  27.78%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          15.2      8.2594 µg/L      71.90012      8.2594 ppb       71.90012 870.52%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -6.2     -25.141 µg/L       15.6591     -25.141 ppb        15.6591  62.29%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -1.7     -0.0013 µg/L       0.02013     -0.0013 ppb        0.02013 >999.9%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                10.6      0.5359 µg/L       0.22586      0.5359 ppb        0.22586  42.14%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -49.6     -8.7708 µg/L      13.68564     -8.7708 ppb       13.68564 156.04%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                -6.8     -0.1717 µg/L       0.57863     -0.1717 ppb        0.57863 336.96%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -1.3     -0.4655 µg/L       2.93443     -0.4655 ppb        2.93443 630.38%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -3.3     -0.3227 µg/L       2.84577     -0.3227 ppb        2.84577 881.83%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            4.1      4.5830 µg/L       4.16125      4.5830 ppb        4.16125  90.80%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 7.2      1.8867 µg/L       3.01470      1.8867 ppb        3.01470 159.79%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 2.3      0.8411 µg/L       0.09923      0.8411 ppb        0.09923  11.80%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      -5.8     -0.6244 µg/L       5.63744     -0.6244 ppb        5.63744 902.85%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                51.0      1.9276 µg/L       0.45593      1.9276 ppb        0.45593  23.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.9      0.0847 µg/L       0.75119      0.0847 ppb        0.75119 887.18%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                71.5      0.2006 µg/L       0.29387      0.2006 ppb        0.29387 146.51%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                54.2      0.1652 µg/L       0.33346      0.1652 ppb        0.33346 201.87%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                10.9      2.0934 µg/L       2.71431      2.0934 ppb        2.71431 129.66%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 39.5      2.3805 µg/L       2.89087      2.3805 ppb        2.89087 121.44%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -37.0     -0.4046 µg/L       0.38742     -0.4046 ppb        0.38742  95.75%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                31.6      0.2236 µg/L       0.17691      0.2236 ppb        0.17691  79.11%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 40 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 08:06:52**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16056.7	16056.7	98.2	%			08:07:43
1	Al 396.153Radial†	11702.9	11619.3	4857.9	µg/L	4857.9	ppb	08:07:23
1	Ca 317.933Radial†	11888.5	12038.5	5104.7	µg/L	5104.7	ppb	08:07:43
1	Fe 238.204 Radial†	9614.5	9766.4	5086.5	µg/L	5086.5	ppb	08:07:43
1	K 766.490 Radial†	11359.4	8934.4	4865.6	µg/L	4865.6	ppb	08:07:23
1	Mg 279.077 IEC†	1259.6	1271.4	5120.8	µg/L	5120.8	ppb	08:07:43
1	Na 589.592 Radial†	55717.4	56416.1	9979.0	µg/L	9979.0	ppb	08:07:23
1	Sr 421.552†	170061.7	173272.8	485.98	µg/L	485.98	ppb	08:07:23
1	Sc 361.383	509461.5	509461.5	101.79	%			08:08:41
1	Y 371.029	444774.8	444774.8	100.78	%			08:08:41
1	Ag 328.068†	61516.9	60738.6	510.84	µg/L	510.84	ppb	08:08:41
1	As 188.979†	1535.8	1506.9	515.89	µg/L	515.89	ppb	08:09:01
1	B 249.677†	17616.2	17359.5	497.73	µg/L	497.73	ppb	08:08:41
1	Ba 233.527†	66675.9	65759.7	506.17	µg/L	506.17	ppb	08:08:41
1	Be 313.107†	929964.7	918188.7	504.38	µg/L	504.38	ppb	08:08:41
1	Cd 226.502†	54003.9	53411.3	504.82	µg/L	504.82	ppb	08:08:41
1	Co 228.616†	27909.0	27499.8	503.16	µg/L	503.16	ppb	08:09:01
1	Cr 267.716†	35456.7	34678.4	505.18	µg/L	505.18	ppb	08:08:41
1	Cu 324.752†	94133.8	88270.9	503.29	µg/L	503.29	ppb	08:08:41
1	Mn 257.610†	386743.9	379676.9	505.30	µg/L	505.30	ppb	08:08:41
1	Mo 202.031†	10226.0	10091.0	511.63	µg/L	511.63	ppb	08:09:01
1	Ni 231.604†	20168.2	20013.7	504.48	µg/L	504.48	ppb	08:09:01
1	P 214.914†	6149.7	5494.6	2366.9	µg/L	2366.9	ppb	08:09:01
1	Pb 220.353†	5728.3	5318.2	516.19	µg/L	516.19	ppb	08:09:01
1	S 181.975 Axial†	963.7	906.0	1016.6	µg/L	1016.6	ppb	08:09:01
1	Sb 206.836†	2055.6	1939.6	512.74	µg/L	512.74	ppb	08:09:01
1	Se 196.026†	1295.9	1377.2	511.19	µg/L	511.19	ppb	08:09:01
1	SiO2†	53708.7	50091.9	5412.9	µg/L	5412.9	ppb	08:08:41
1	Si 251.611†	68464.8	66794.0	2527.6	µg/L	2527.6	ppb	08:08:41
1	Sn 189.927†	5299.0	5130.0	511.76	µg/L	511.76	ppb	08:09:01
1	Ti 334.940†	167089.2	166144.1	504.35	µg/L	504.35	ppb	08:08:41
1	Tl 190.801†	2602.4	2679.9	513.99	µg/L	513.99	ppb	08:09:01
1	U 409.014†	1644.5	8485.9	512.57	µg/L	512.57	ppb	08:08:41
1	V 292.402†	46022.8	45142.5	511.04	µg/L	511.04	ppb	08:08:41
1	Zn 213.857†	74290.1	71826.1	501.69	µg/L	501.69	ppb	08:08:41
2	Sc RADIAL	16546.5	16546.5	101	%			08:08:08
2	Al 396.153Radial†	12355.5	11911.6	4980.6	µg/L	4980.6	ppb	08:07:48
2	Ca 317.933Radial†	12285.4	12072.4	5119.1	µg/L	5119.1	ppb	08:08:08
2	Fe 238.204 Radial†	9962.1	9820.2	5114.5	µg/L	5114.5	ppb	08:08:08
2	K 766.490 Radial†	12169.5	9392.8	5115.3	µg/L	5115.3	ppb	08:07:48
2	Mg 279.077 IEC†	1291.7	1265.2	5095.8	µg/L	5095.8	ppb	08:08:08
2	Na 589.592 Radial†	59152.5	58132.0	10283	µg/L	10283	ppb	08:07:48
2	Sr 421.552†	181031.0	178989.3	502.02	µg/L	502.02	ppb	08:07:48
2	Sc 361.383	512687.4	512687.4	102.43	%			08:09:07
2	Y 371.029	446675.8	446675.8	101.21	%			08:09:07
2	Ag 328.068†	61851.3	60684.8	510.39	µg/L	510.39	ppb	08:09:07
2	As 188.979†	1544.3	1505.7	515.48	µg/L	515.48	ppb	08:09:27
2	B 249.677†	17806.1	17436.0	499.94	µg/L	499.94	ppb	08:09:07
2	Ba 233.527†	67311.1	65967.7	507.77	µg/L	507.77	ppb	08:09:07
2	Be 313.107†	938067.0	920349.9	505.57	µg/L	505.57	ppb	08:09:07
2	Cd 226.502†	54593.3	53652.8	507.10	µg/L	507.10	ppb	08:09:07
2	Co 228.616†	27951.7	27369.0	500.76	µg/L	500.76	ppb	08:09:27
2	Cr 267.716†	35700.0	34696.7	505.45	µg/L	505.45	ppb	08:09:07
2	Cu 324.752†	94813.2	88352.3	503.77	µg/L	503.77	ppb	08:09:07
2	Mn 257.610†	390436.8	380891.4	506.92	µg/L	506.92	ppb	08:09:07
2	Mo 202.031†	10238.8	10040.3	509.05	µg/L	509.05	ppb	08:09:27
2	Ni 231.604†	20228.5	19947.8	502.82	µg/L	502.82	ppb	08:09:27
2	P 214.914†	6171.1	5477.5	2358.7	µg/L	2358.7	ppb	08:09:27
2	Pb 220.353†	5705.7	5260.7	510.51	µg/L	510.51	ppb	08:09:27

2	S 181.975 Axial†	974.7	910.7	1021.9	µg/L	1021.9	ppb	08:09:27
2	Sb 206.836†	2061.9	1933.0	510.99	µg/L	510.99	ppb	08:09:27
2	Se 196.026†	1303.2	1376.4	510.90	µg/L	510.90	ppb	08:09:27
2	SiO2†	54275.3	50313.1	5436.8	µg/L	5436.8	ppb	08:09:07
2	Si 251.611†	69037.7	66930.0	2532.8	µg/L	2532.8	ppb	08:09:07
2	Sn 189.927†	5283.7	5082.3	507.01	µg/L	507.01	ppb	08:09:27
2	Ti 334.940†	168305.2	166298.3	504.83	µg/L	504.83	ppb	08:09:07
2	Tl 190.801†	2604.9	2666.4	511.41	µg/L	511.41	ppb	08:09:27
2	U 409.014†	1555.4	8388.7	506.71	µg/L	506.71	ppb	08:09:07
2	V 292.402†	46274.3	45103.5	510.57	µg/L	510.57	ppb	08:09:07
2	Zn 213.857†	75050.7	72109.4	503.70	µg/L	503.70	ppb	08:09:07
3	Sc RADIAL	16510.4	16510.4	101	%			08:08:34
3	Al 396.153Radial†	12375.6	11958.1	5000.1	µg/L	5000.1	ppb	08:08:13
3	Ca 317.933Radial†	12272.5	12086.1	5124.9	µg/L	5124.9	ppb	08:08:34
3	Fe 238.204 Radial†	9957.0	9836.6	5123.0	µg/L	5123.0	ppb	08:08:34
3	K 766.490 Radial†	12050.0	9300.7	5065.1	µg/L	5065.1	ppb	08:08:13
3	Mg 279.077 IEC†	1290.6	1266.9	5102.4	µg/L	5102.4	ppb	08:08:34
3	Na 589.592 Radial†	59091.8	58199.6	10294	µg/L	10294	ppb	08:08:13
3	Sr 421.552†	180964.6	179314.3	502.93	µg/L	502.93	ppb	08:08:13
3	Sc 361.383	512339.4	512339.4	102.36	%			08:09:33
3	Y 371.029	446457.0	446457.0	101.16	%			08:09:33
3	Ag 328.068†	61975.8	60847.4	511.74	µg/L	511.74	ppb	08:09:33
3	As 188.979†	1534.0	1496.7	512.43	µg/L	512.43	ppb	08:09:54
3	B 249.677†	17821.3	17462.7	500.71	µg/L	500.71	ppb	08:09:33
3	Ba 233.527†	67254.1	65956.6	507.69	µg/L	507.69	ppb	08:09:33
3	Be 313.107†	937154.5	920080.4	505.42	µg/L	505.42	ppb	08:09:33
3	Cd 226.502†	54490.1	53588.2	506.48	µg/L	506.48	ppb	08:09:33
3	Co 228.616†	27822.4	27261.3	498.79	µg/L	498.79	ppb	08:09:54
3	Cr 267.716†	35619.5	34641.8	504.65	µg/L	504.65	ppb	08:09:33
3	Cu 324.752†	94687.2	88292.0	503.42	µg/L	503.42	ppb	08:09:33
3	Mn 257.610†	390093.1	380814.6	506.81	µg/L	506.81	ppb	08:09:33
3	Mo 202.031†	10199.7	10008.8	507.46	µg/L	507.46	ppb	08:09:54
3	Ni 231.604†	20102.0	19837.7	500.05	µg/L	500.05	ppb	08:09:54
3	P 214.914†	6120.3	5431.9	2337.6	µg/L	2337.6	ppb	08:09:54
3	Pb 220.353†	5666.3	5226.0	507.12	µg/L	507.12	ppb	08:09:54
3	S 181.975 Axial†	968.9	905.8	1016.4	µg/L	1016.4	ppb	08:09:54
3	Sb 206.836†	2034.1	1907.2	504.24	µg/L	504.24	ppb	08:09:54
3	Se 196.026†	1301.0	1375.1	510.44	µg/L	510.44	ppb	08:09:54
3	SiO2†	54327.3	50399.8	5446.1	µg/L	5446.1	ppb	08:09:33
3	Si 251.611†	69078.2	67015.4	2536.0	µg/L	2536.0	ppb	08:09:33
3	Sn 189.927†	5284.6	5086.7	507.45	µg/L	507.45	ppb	08:09:54
3	Ti 334.940†	168187.5	166295.0	504.82	µg/L	504.82	ppb	08:09:33
3	Tl 190.801†	2582.6	2646.2	507.57	µg/L	507.57	ppb	08:09:54
3	U 409.014†	1554.0	8388.4	506.70	µg/L	506.70	ppb	08:09:33
3	V 292.402†	46228.3	45089.2	510.39	µg/L	510.39	ppb	08:09:33
3	Zn 213.857†	74949.0	72059.8	503.36	µg/L	503.36	ppb	08:09:33

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	511496.1	102.19	%	0.354				0.35%
Sc RADIAL	16371.2	100	%	1.7				1.67%
Y 371.029	445969.2	101.05	%	0.236				0.23%
Ag 328.068†	60756.9	510.99	µg/L	0.688	510.99	ppb	0.688	0.13%
QC value within limits for Ag 328.068 Recovery = 102.20%								
Al 396.153Radial†	11829.7	4946.2	µg/L	77.07	4946.2	ppb	77.07	1.56%
QC value within limits for Al 396.153Radial Recovery = 98.92%								
As 188.979†	1503.1	514.60	µg/L	1.892	514.60	ppb	1.892	0.37%
QC value within limits for As 188.979 Recovery = 102.92%								
B 249.677†	17419.4	499.46	µg/L	1.545	499.46	ppb	1.545	0.31%
QC value within limits for B 249.677 Recovery = 99.89%								
Ba 233.527†	65894.7	507.21	µg/L	0.901	507.21	ppb	0.901	0.18%
QC value within limits for Ba 233.527 Recovery = 101.44%								
Be 313.107†	919539.7	505.12	µg/L	0.647	505.12	ppb	0.647	0.13%
QC value within limits for Be 313.107 Recovery = 101.02%								
Ca 317.933Radial†	12065.6	5116.2	µg/L	10.39	5116.2	ppb	10.39	0.20%
QC value within limits for Ca 317.933Radial Recovery = 102.32%								
Cd 226.502†	53550.8	506.13	µg/L	1.180	506.13	ppb	1.180	0.23%
QC value within limits for Cd 226.502 Recovery = 101.23%								
Co 228.616†	27376.7	500.90	µg/L	2.188	500.90	ppb	2.188	0.44%

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   QC value within limits for Co 228.616  Recovery = 100.18%
Cr 267.716†            34672.3      505.10 µg/L         0.407      505.10 ppb          0.407   0.08%
   QC value within limits for Cr 267.716  Recovery = 101.02%
Cu 324.752†            88305.1      503.50 µg/L         0.244      503.50 ppb          0.244   0.05%
   QC value within limits for Cu 324.752  Recovery = 100.70%
Fe 238.204 Radial†      9807.7      5108.0 µg/L         19.12      5108.0 ppb          19.12   0.37%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.16%
K 766.490 Radial†       9209.3      5015.3 µg/L        132.07      5015.3 ppb         132.07   2.63%
   QC value within limits for K 766.490 Radial  Recovery = 100.31%
Mg 279.077 IEC†         1267.8      5106.3 µg/L         12.96      5106.3 ppb          12.96   0.25%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.13%
Mn 257.610†           380460.9      506.34 µg/L         0.906      506.34 ppb          0.906   0.18%
   QC value within limits for Mn 257.610  Recovery = 101.27%
Mo 202.031†            10046.7      509.38 µg/L         2.101      509.38 ppb          2.101   0.41%
   QC value within limits for Mo 202.031  Recovery = 101.88%
Na 589.592 Radial†     57582.6       10185 µg/L         178.8       10185 ppb          178.8   1.76%
   QC value within limits for Na 589.592 Radial  Recovery = 101.85%
Ni 231.604†            19933.0      502.45 µg/L         2.241      502.45 ppb          2.241   0.45%
   QC value within limits for Ni 231.604  Recovery = 100.49%
P 214.914†              5468.0      2354.4 µg/L         15.07      2354.4 ppb          15.07   0.64%
   QC value within limits for P 214.914  Recovery = 94.18%
Pb 220.353†             5268.3      511.28 µg/L         4.580      511.28 ppb          4.580   0.90%
   QC value within limits for Pb 220.353  Recovery = 102.26%
S 181.975 Axial†         907.5      1018.3 µg/L          3.14      1018.3 ppb           3.14   0.31%
   QC value within limits for S 181.975 Axial  Recovery = 101.83%
Sb 206.836†             1926.6      509.33 µg/L         4.488      509.33 ppb          4.488   0.88%
   QC value within limits for Sb 206.836  Recovery = 101.87%
Se 196.026†             1376.2      510.84 µg/L         0.379      510.84 ppb          0.379   0.07%
   QC value within limits for Se 196.026  Recovery = 102.17%
SiO2†                  50268.3      5431.9 µg/L         17.11      5431.9 ppb          17.11   0.32%
   QC value within limits for SiO2  Recovery = 101.58%
Si 251.611†            66913.1      2532.1 µg/L          4.26      2532.1 ppb           4.26   0.17%
   QC value within limits for Si 251.611  Recovery = 101.28%
Sn 189.927†             5099.7      508.74 µg/L         2.626      508.74 ppb          2.626   0.52%
   QC value within limits for Sn 189.927  Recovery = 101.75%
Sr 421.552†           177192.1      496.97 µg/L         9.533      496.97 ppb          9.533   1.92%
   QC value within limits for Sr 421.552  Recovery = 99.39%
Ti 334.940†           166245.8      504.67 µg/L         0.271      504.67 ppb          0.271   0.05%
   QC value within limits for Ti 334.940  Recovery = 100.93%
Tl 190.801†             2664.2      510.99 µg/L         3.226      510.99 ppb          3.226   0.63%
   QC value within limits for Tl 190.801  Recovery = 102.20%
U 409.014†              8421.0      508.66 µg/L         3.384      508.66 ppb          3.384   0.67%
   QC value within limits for U 409.014  Recovery = 101.73%
V 292.402†             45111.7      510.67 µg/L         0.337      510.67 ppb          0.337   0.07%
   QC value within limits for V 292.402  Recovery = 102.13%
Zn 213.857†            71998.4      502.92 µg/L         1.073      502.92 ppb          1.073   0.21%
   QC value within limits for Zn 213.857  Recovery = 100.58%
All analyte(s) passed QC.
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Sequence No.: 41 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 08:10:01**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15518.8	15518.8	94.9	%			08:10:29
1	Al 396.153Radial†	304.9	17.4	7.2650	µg/L	7.2650	ppb	08:10:29
1	Ca 317.933Radial†	63.8	-6.8	-2.8657	µg/L	-2.8657	ppb	08:10:50
1	Fe 238.204 Radial†	37.6	10.5	5.4592	µg/L	5.4592	ppb	08:10:50
1	K 766.490 Radial†	2515.9	13.1	7.1504	µg/L	7.1504	ppb	08:10:29
1	Mg 279.077 IEC†	7.2	-4.3	-17.453	µg/L	-17.453	ppb	08:10:50
1	Na 589.592 Radial†	296.3	-38.6	-6.8205	µg/L	-6.8205	ppb	08:10:29
1	Sr 421.552†	-38.8	-33.5	-0.0939	µg/L	-0.0939	ppb	08:10:29
1	Sc 361.383	506097.0	506097.0	101.12	%			08:11:47
1	Y 371.029	446141.6	446141.6	101.09	%			08:11:47
1	Ag 328.068†	-267.2	37.9	0.3032	µg/L	0.3032	ppb	08:11:47
1	As 188.979†	-4.2	-6.1	-2.0648	µg/L	-2.0648	ppb	08:12:07
1	B 249.677†	9.9	62.5	1.7980	µg/L	1.7980	ppb	08:12:07
1	Ba 233.527†	-253.7	4.0	0.0312	µg/L	0.0312	ppb	08:12:07
1	Be 313.107†	-4588.1	19.7	0.0108	µg/L	0.0108	ppb	08:11:47
1	Cd 226.502†	-341.3	18.3	0.1722	µg/L	0.1722	ppb	08:12:07
1	Co 228.616†	-78.8	3.1	0.0577	µg/L	0.0577	ppb	08:12:07
1	Cr 267.716†	163.5	6.1	0.0824	µg/L	0.0824	ppb	08:12:07
1	Cu 324.752†	4239.1	-17.3	-0.1062	µg/L	-0.1062	ppb	08:11:47
1	Mn 257.610†	276.6	-1.0	-0.0006	µg/L	-0.0006	ppb	08:12:07
1	Mo 202.031†	-33.9	11.1	0.5627	µg/L	0.5627	ppb	08:12:07
1	Ni 231.604†	-220.8	-18.7	-0.4715	µg/L	-0.4715	ppb	08:12:07
1	P 214.914†	558.0	4.8	2.2556	µg/L	2.2556	ppb	08:12:07
1	Pb 220.353†	297.0	-15.7	-1.5335	µg/L	-1.5335	ppb	08:12:07
1	S 181.975 Axial†	40.9	-0.4	-0.4520	µg/L	-0.4520	ppb	08:12:07
1	Sb 206.836†	90.4	9.5	2.4831	µg/L	2.4831	ppb	08:12:07
1	Se 196.026†	-108.2	-2.9	-1.0703	µg/L	-1.0703	ppb	08:12:07
1	SiO2†	2683.7	-19.4	-2.0926	µg/L	-2.0926	ppb	08:11:47
1	Si 251.611†	522.3	48.1	1.8193	µg/L	1.8193	ppb	08:12:07
1	Sn 189.927†	75.2	-1.5	-0.1504	µg/L	-0.1504	ppb	08:12:07
1	Ti 334.940†	-1957.4	53.7	0.1600	µg/L	0.1600	ppb	08:11:47
1	Tl 190.801†	-121.7	2.9	0.5541	µg/L	0.5541	ppb	08:12:07
1	U 409.014†	-6785.3	159.8	9.6361	µg/L	9.6361	ppb	08:11:47
1	V 292.402†	5.6	-66.5	-0.7252	µg/L	-0.7252	ppb	08:11:47
1	Zn 213.857†	1211.7	39.1	0.2780	µg/L	0.2780	ppb	08:12:07
2	Sc RADIAL	16656.5	16656.5	102	%			08:10:55
2	Al 396.153Radial†	344.5	34.3	14.347	µg/L	14.347	ppb	08:10:55
2	Ca 317.933Radial†	76.0	0.7	0.2943	µg/L	0.2943	ppb	08:11:15
2	Fe 238.204 Radial†	39.4	9.5	4.9468	µg/L	4.9468	ppb	08:11:15
2	K 766.490 Radial†	2595.1	-90.2	-49.124	µg/L	-49.124	ppb	08:10:55
2	Mg 279.077 IEC†	8.1	-4.0	-16.071	µg/L	-16.071	ppb	08:11:15
2	Na 589.592 Radial†	304.9	-51.5	-9.1023	µg/L	-9.1023	ppb	08:10:55
2	Sr 421.552†	4.6	11.9	0.0335	µg/L	0.0335	ppb	08:10:55
2	Sc 361.383	507918.0	507918.0	101.48	%			08:12:12
2	Y 371.029	447394.4	447394.4	101.38	%			08:12:12
2	Ag 328.068†	-332.7	-25.7	-0.2151	µg/L	-0.2151	ppb	08:12:12
2	As 188.979†	4.3	2.4	0.8070	µg/L	0.8070	ppb	08:12:32
2	B 249.677†	-20.5	32.5	0.9361	µg/L	0.9361	ppb	08:12:32
2	Ba 233.527†	-222.4	35.7	0.2749	µg/L	0.2749	ppb	08:12:32
2	Be 313.107†	-4499.2	123.6	0.0678	µg/L	0.0678	ppb	08:12:12
2	Cd 226.502†	-337.1	23.7	0.2238	µg/L	0.2238	ppb	08:12:32
2	Co 228.616†	-81.4	0.8	0.0152	µg/L	0.0152	ppb	08:12:32
2	Cr 267.716†	175.2	17.1	0.2445	µg/L	0.2445	ppb	08:12:32
2	Cu 324.752†	4248.6	-22.9	-0.1373	µg/L	-0.1373	ppb	08:12:12
2	Mn 257.610†	270.1	-8.4	-0.0105	µg/L	-0.0105	ppb	08:12:32
2	Mo 202.031†	-31.2	13.9	0.7025	µg/L	0.7025	ppb	08:12:32
2	Ni 231.604†	-200.7	1.8	0.0462	µg/L	0.0462	ppb	08:12:32
2	P 214.914†	547.4	-7.7	-3.5283	µg/L	-3.5283	ppb	08:12:32
2	Pb 220.353†	289.0	-24.6	-2.4027	µg/L	-2.4027	ppb	08:12:32

2	S 181.975 Axial†	37.8	-3.6	-4.0652	µg/L	-4.0652	ppb	08:12:32
2	Sb 206.836†	93.3	12.0	3.1400	µg/L	3.1400	ppb	08:12:32
2	Se 196.026†	-112.6	-6.9	-2.5323	µg/L	-2.5323	ppb	08:12:32
2	SiO2†	2735.2	21.8	2.3603	µg/L	2.3603	ppb	08:12:12
2	Si 251.611†	525.4	49.3	1.8622	µg/L	1.8622	ppb	08:12:32
2	Sn 189.927†	69.6	-7.3	-0.7269	µg/L	-0.7269	ppb	08:12:32
2	Ti 334.940†	-1912.1	105.3	0.3176	µg/L	0.3176	ppb	08:12:12
2	Tl 190.801†	-120.3	4.7	0.8950	µg/L	0.8950	ppb	08:12:32
2	U 409.014†	-6837.7	132.3	7.9769	µg/L	7.9769	ppb	08:12:12
2	V 292.402†	83.5	10.2	0.1316	µg/L	0.1316	ppb	08:12:12
2	Zn 213.857†	1208.9	32.1	0.2255	µg/L	0.2255	ppb	08:12:32
3	Sc RADIAL	16464.9	16464.9	101	%			08:11:20
3	Al 396.153Radial†	308.4	2.4	0.9921	µg/L	0.9921	ppb	08:11:20
3	Ca 317.933Radial†	70.3	-4.1	-1.7362	µg/L	-1.7362	ppb	08:11:40
3	Fe 238.204 Radial†	32.4	3.0	1.5631	µg/L	1.5631	ppb	08:11:40
3	K 766.490 Radial†	2598.1	-57.6	-31.373	µg/L	-31.373	ppb	08:11:20
3	Mg 279.077 IEC†	11.6	-0.4	-1.4715	µg/L	-1.4715	ppb	08:11:40
3	Na 589.592 Radial†	223.8	-128.5	-22.737	µg/L	-22.737	ppb	08:11:20
3	Sr 421.552†	44.9	52.0	0.1460	µg/L	0.1460	ppb	08:11:20
3	Sc 361.383	505785.5	505785.5	101.05	%			08:12:37
3	Y 371.029	445777.7	445777.7	101.01	%			08:12:37
3	Ag 328.068†	-322.8	-17.4	-0.1468	µg/L	-0.1468	ppb	08:12:37
3	As 188.979†	2.7	0.8	0.2742	µg/L	0.2742	ppb	08:12:57
3	B 249.677†	-1.1	51.6	1.4869	µg/L	1.4869	ppb	08:12:57
3	Ba 233.527†	-251.2	6.3	0.0483	µg/L	0.0483	ppb	08:12:57
3	Be 313.107†	-4452.5	151.2	0.0830	µg/L	0.0830	ppb	08:12:37
3	Cd 226.502†	-333.6	25.7	0.2428	µg/L	0.2428	ppb	08:12:57
3	Co 228.616†	-106.8	-24.6	-0.4503	µg/L	-0.4503	ppb	08:12:57
3	Cr 267.716†	187.8	30.3	0.4414	µg/L	0.4414	ppb	08:12:57
3	Cu 324.752†	4239.0	-14.8	-0.0836	µg/L	-0.0836	ppb	08:12:37
3	Mn 257.610†	271.6	-5.7	-0.0076	µg/L	-0.0076	ppb	08:12:57
3	Mo 202.031†	-39.0	6.0	0.3040	µg/L	0.3040	ppb	08:12:57
3	Ni 231.604†	-217.8	-15.9	-0.3996	µg/L	-0.3996	ppb	08:12:57
3	P 214.914†	552.1	-0.8	-0.3355	µg/L	-0.3355	ppb	08:12:57
3	Pb 220.353†	319.8	7.0	0.6798	µg/L	0.6798	ppb	08:12:57
3	S 181.975 Axial†	47.3	6.0	6.7341	µg/L	6.7341	ppb	08:12:57
3	Sb 206.836†	90.3	9.5	2.4741	µg/L	2.4741	ppb	08:12:57
3	Se 196.026†	-114.8	-9.6	-3.5095	µg/L	-3.5095	ppb	08:12:57
3	SiO2†	2738.4	36.3	3.9265	µg/L	3.9265	ppb	08:12:37
3	Si 251.611†	530.5	56.6	2.1415	µg/L	2.1415	ppb	08:12:57
3	Sn 189.927†	78.9	2.2	0.2201	µg/L	0.2201	ppb	08:12:57
3	Ti 334.940†	-1995.9	14.4	0.0441	µg/L	0.0441	ppb	08:12:37
3	Tl 190.801†	-114.4	10.0	1.9172	µg/L	1.9172	ppb	08:12:57
3	U 409.014†	-6963.1	-20.2	-1.2199	µg/L	-1.2199	ppb	08:12:37
3	V 292.402†	48.4	-24.2	-0.2662	µg/L	-0.2662	ppb	08:12:37
3	Zn 213.857†	1173.1	1.7	0.0143	µg/L	0.0143	ppb	08:12:57

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	506600.2	101.22	%	0.230				0.23%
Sc RADIAL	16213.4	99.1	%	3.72				3.76%
Y 371.029	446437.9	101.16	%	0.192				0.19%
Ag 328.068†	-1.7	-0.0196	µg/L	0.28159	-0.0196	ppb	0.28159	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	18.0	7.5348	µg/L	6.68167	7.5348	ppb	6.68167	88.68%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.0	-0.3279	µg/L	1.52766	-0.3279	ppb	1.52766	465.95%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	48.9	1.4070	µg/L	0.43646	1.4070	ppb	0.43646	31.02%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	15.3	0.1182	µg/L	0.13604	0.1182	ppb	0.13604	115.13%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	98.2	0.0539	µg/L	0.03808	0.0539	ppb	0.03808	70.66%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.4	-1.4359	µg/L	1.60129	-1.4359	ppb	1.60129	111.52%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	22.6	0.2129	µg/L	0.03651	0.2129	ppb	0.03651	17.15%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-6.9	-0.1258	µg/L	0.28180	-0.1258	ppb	0.28180	224.00%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.8      0.2561 µg/L       0.17981      0.2561 ppb        0.17981  70.21%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -18.3     -0.1090 µg/L       0.02697     -0.1090 ppb        0.02697  24.73%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          7.7      3.9897 µg/L       2.11706      3.9897 ppb        2.11706  53.06%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -44.9     -24.449 µg/L       28.7692     -24.449 ppb        28.7692 117.67%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -2.9     -11.665 µg/L        8.8549     -11.665 ppb         8.8549  75.91%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -5.0     -0.0062 µg/L       0.00510     -0.0062 ppb        0.00510  81.80%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                10.3      0.5231 µg/L       0.20221      0.5231 ppb        0.20221  38.66%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -72.9     -12.886 µg/L        8.6065     -12.886 ppb         8.6065  66.79%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -10.9     -0.2750 µg/L       0.28045     -0.2750 ppb        0.28045 101.99%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -1.2     -0.5360 µg/L       2.89717     -0.5360 ppb        2.89717 540.48%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -11.1     -1.0855 µg/L       1.58934     -1.0855 ppb        1.58934 146.42%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            0.7      0.7390 µg/L       5.49730      0.7390 ppb        5.49730 743.91%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                10.3      2.6991 µg/L       0.38189      2.6991 ppb        0.38189  14.15%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -6.5     -2.3707 µg/L       1.22762     -2.3707 ppb        1.22762  51.78%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      12.9      1.3981 µg/L       3.12280      1.3981 ppb        3.12280 223.37%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                51.3      1.9410 µg/L       0.17498      1.9410 ppb        0.17498   9.02%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -2.2     -0.2191 µg/L       0.47724     -0.2191 ppb        0.47724 217.84%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                10.2      0.0285 µg/L       0.12005      0.0285 ppb        0.12005 420.76%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                57.8      0.1739 µg/L       0.13727      0.1739 ppb        0.13727  78.95%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.9      1.1221 µg/L       0.70936      1.1221 ppb        0.70936  63.22%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 90.6      5.4644 µg/L       5.84786      5.4644 ppb        5.84786 107.02%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -26.8     -0.2866 µg/L       0.42873     -0.2866 ppb        0.42873 149.59%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                24.3      0.1726 µg/L       0.13958      0.1726 ppb        0.13958  80.86%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 50 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 08:38:58**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16455.1	16455.1	101	%			08:39:49
1	Al 396.153Radial†	11620.1	11248.3	4702.4	µg/L	4702.4	ppb	08:39:29
1	Ca 317.933Radial†	12189.5	12044.4	5107.2	µg/L	5107.2	ppb	08:39:49
1	Fe 238.204 Radial†	9839.1	9752.6	5079.3	µg/L	5079.3	ppb	08:39:49
1	K 766.490 Radial†	11380.4	8675.1	4724.3	µg/L	4724.3	ppb	08:39:29
1	Mg 279.077 IEC†	1278.3	1259.0	5070.7	µg/L	5070.7	ppb	08:39:49
1	Na 589.592 Radial†	55571.0	54896.2	9710.1	µg/L	9710.1	ppb	08:39:29
1	Sr 421.552†	169612.5	168631.1	472.96	µg/L	472.96	ppb	08:39:29
1	Sc 361.383	516378.4	516378.4	103.17	%			08:40:47
1	Y 371.029	450473.9	450473.9	102.07	%			08:40:47
1	Ag 328.068†	62261.2	60650.5	510.08	µg/L	510.08	ppb	08:40:47
1	As 188.979†	1547.5	1498.1	512.87	µg/L	512.87	ppb	08:41:07
1	B 249.677†	17876.0	17379.5	498.32	µg/L	498.32	ppb	08:40:47
1	Ba 233.527†	67678.1	65853.7	506.89	µg/L	506.89	ppb	08:40:47
1	Be 313.107†	941394.0	917028.8	503.74	µg/L	503.74	ppb	08:40:47
1	Cd 226.502†	54756.2	53429.8	504.99	µg/L	504.99	ppb	08:40:47
1	Co 228.616†	27968.9	27190.6	497.50	µg/L	497.50	ppb	08:41:07
1	Cr 267.716†	35797.0	34541.7	503.19	µg/L	503.19	ppb	08:40:47
1	Cu 324.752†	95486.5	88343.3	503.71	µg/L	503.71	ppb	08:40:47
1	Mn 257.610†	392010.5	379692.3	505.32	µg/L	505.32	ppb	08:40:47
1	Mo 202.031†	10273.1	10002.1	507.12	µg/L	507.12	ppb	08:41:07
1	Ni 231.604†	20246.3	19823.9	499.70	µg/L	499.70	ppb	08:41:07
1	P 214.914†	6137.2	5401.5	2323.3	µg/L	2323.3	ppb	08:41:07
1	Pb 220.353†	5700.0	5215.4	506.27	µg/L	506.27	ppb	08:41:07
1	S 181.975 Axial†	965.0	894.5	1003.8	µg/L	1003.8	ppb	08:41:07
1	Sb 206.836†	2064.9	1921.5	507.99	µg/L	507.99	ppb	08:41:07
1	Se 196.026†	1290.6	1355.0	503.00	µg/L	503.00	ppb	08:41:07
1	SiO2†	54375.1	50031.0	5406.3	µg/L	5406.3	ppb	08:40:47
1	Si 251.611†	69223.6	66628.5	2521.4	µg/L	2521.4	ppb	08:40:47
1	Sn 189.927†	5314.5	5075.4	506.31	µg/L	506.31	ppb	08:41:07
1	Ti 334.940†	169400.7	166185.7	504.49	µg/L	504.49	ppb	08:40:47
1	Tl 190.801†	2598.2	2641.6	506.69	µg/L	506.69	ppb	08:41:07
1	U 409.014†	1689.6	8508.0	513.89	µg/L	513.89	ppb	08:40:47
1	V 292.402†	46456.3	44957.0	508.92	µg/L	508.92	ppb	08:40:47
1	Zn 213.857†	75350.2	71876.0	502.08	µg/L	502.08	ppb	08:40:47
2	Sc RADIAL	16557.7	16557.7	101	%			08:40:14
2	Al 396.153Radial†	12462.6	12009.1	5021.4	µg/L	5021.4	ppb	08:39:54
2	Ca 317.933Radial†	12272.5	12051.4	5110.2	µg/L	5110.2	ppb	08:40:14
2	Fe 238.204 Radial†	9957.6	9809.0	5108.7	µg/L	5108.7	ppb	08:40:14
2	K 766.490 Radial†	12074.8	9291.0	5059.8	µg/L	5059.8	ppb	08:39:54
2	Mg 279.077 IEC†	1293.4	1266.0	5098.9	µg/L	5098.9	ppb	08:40:14
2	Na 589.592 Radial†	59553.4	58488.6	10346	µg/L	10346	ppb	08:39:54
2	Sr 421.552†	182658.4	180476.2	506.19	µg/L	506.19	ppb	08:39:54
2	Sc 361.383	513444.1	513444.1	102.58	%			08:41:13
2	Y 371.029	448033.8	448033.8	101.52	%			08:41:13
2	Ag 328.068†	62138.3	60875.5	511.99	µg/L	511.99	ppb	08:41:13
2	As 188.979†	1550.3	1509.4	516.72	µg/L	516.72	ppb	08:41:33
2	B 249.677†	17867.4	17470.1	500.92	µg/L	500.92	ppb	08:41:13
2	Ba 233.527†	67269.0	65829.8	506.71	µg/L	506.71	ppb	08:41:13
2	Be 313.107†	938286.0	919213.7	504.94	µg/L	504.94	ppb	08:41:13
2	Cd 226.502†	54540.3	53522.6	505.87	µg/L	505.87	ppb	08:41:13
2	Co 228.616†	27961.6	27338.5	500.20	µg/L	500.20	ppb	08:41:33
2	Cr 267.716†	35688.0	34633.7	504.53	µg/L	504.53	ppb	08:41:13
2	Cu 324.752†	95269.9	88661.0	505.51	µg/L	505.51	ppb	08:41:13
2	Mn 257.610†	390304.3	380200.5	506.00	µg/L	506.00	ppb	08:41:13
2	Mo 202.031†	10252.3	10038.7	508.97	µg/L	508.97	ppb	08:41:33
2	Ni 231.604†	20215.7	19906.2	501.78	µg/L	501.78	ppb	08:41:33
2	P 214.914†	6135.0	5433.3	2337.5	µg/L	2337.5	ppb	08:41:33
2	Pb 220.353†	5681.2	5228.7	507.37	µg/L	507.37	ppb	08:41:33

2	S 181.975 Axial†	980.7	915.2	1027.0	µg/L	1027.0	ppb	08:41:33
2	Sb 206.836†	2064.1	1932.2	510.78	µg/L	510.78	ppb	08:41:33
2	Se 196.026†	1307.1	1378.3	511.60	µg/L	511.60	ppb	08:41:33
2	SiO2†	54258.9	50218.9	5426.6	µg/L	5426.6	ppb	08:41:13
2	Si 251.611†	68988.0	66782.2	2527.2	µg/L	2527.2	ppb	08:41:13
2	Sn 189.927†	5297.6	5088.3	507.61	µg/L	507.61	ppb	08:41:33
2	Ti 334.940†	168668.9	166410.7	505.16	µg/L	505.16	ppb	08:41:13
2	Tl 190.801†	2598.8	2656.6	509.56	µg/L	509.56	ppb	08:41:33
2	U 409.014†	1859.3	8682.8	524.44	µg/L	524.44	ppb	08:41:13
2	V 292.402†	46494.8	45251.8	512.24	µg/L	512.24	ppb	08:41:13
2	Zn 213.857†	74886.1	71841.0	501.81	µg/L	501.81	ppb	08:41:13
3	Sc RADIAL	16639.4	16639.4	102	%			08:40:39
3	Al 396.153Radial†	12476.4	11962.2	5001.8	µg/L	5001.8	ppb	08:40:19
3	Ca 317.933Radial†	12364.2	12082.0	5123.2	µg/L	5123.2	ppb	08:40:39
3	Fe 238.204 Radial†	10002.6	9805.0	5106.6	µg/L	5106.6	ppb	08:40:39
3	K 766.490 Radial†	12211.6	9367.0	5101.2	µg/L	5101.2	ppb	08:40:19
3	Mg 279.077 IEC†	1298.8	1265.1	5095.1	µg/L	5095.1	ppb	08:40:39
3	Na 589.592 Radial†	59666.1	58310.2	10314	µg/L	10314	ppb	08:40:19
3	Sr 421.552†	182618.5	179549.9	503.59	µg/L	503.59	ppb	08:40:19
3	Sc 361.383	513405.0	513405.0	102.58	%			08:41:39
3	Y 371.029	447480.6	447480.6	101.40	%			08:41:39
3	Ag 328.068†	62068.7	60812.3	511.45	µg/L	511.45	ppb	08:41:39
3	As 188.979†	1535.5	1495.0	511.85	µg/L	511.85	ppb	08:41:59
3	B 249.677†	17937.1	17539.4	502.92	µg/L	502.92	ppb	08:41:39
3	Ba 233.527†	67283.9	65849.3	506.86	µg/L	506.86	ppb	08:41:39
3	Be 313.107†	937490.4	918507.8	504.56	µg/L	504.56	ppb	08:41:39
3	Cd 226.502†	54435.5	53424.5	504.94	µg/L	504.94	ppb	08:41:39
3	Co 228.616†	27889.8	27270.5	498.96	µg/L	498.96	ppb	08:41:59
3	Cr 267.716†	35626.2	34576.1	503.69	µg/L	503.69	ppb	08:41:39
3	Cu 324.752†	95150.5	88551.7	504.90	µg/L	504.90	ppb	08:41:39
3	Mn 257.610†	389828.1	379765.2	505.42	µg/L	505.42	ppb	08:41:39
3	Mo 202.031†	10214.2	10002.3	507.13	µg/L	507.13	ppb	08:41:59
3	Ni 231.604†	20142.9	19836.7	500.02	µg/L	500.02	ppb	08:41:59
3	P 214.914†	6136.2	5435.1	2338.5	µg/L	2338.5	ppb	08:41:59
3	Pb 220.353†	5677.5	5225.5	507.07	µg/L	507.07	ppb	08:41:59
3	S 181.975 Axial†	963.6	898.6	1008.3	µg/L	1008.3	ppb	08:41:59
3	Sb 206.836†	2071.8	1939.9	512.76	µg/L	512.76	ppb	08:41:59
3	Se 196.026†	1301.7	1373.1	509.69	µg/L	509.69	ppb	08:41:59
3	SiO2†	54253.5	50217.7	5426.5	µg/L	5426.5	ppb	08:41:39
3	Si 251.611†	68947.7	66748.0	2525.9	µg/L	2525.9	ppb	08:41:39
3	Sn 189.927†	5267.1	5058.9	504.67	µg/L	504.67	ppb	08:41:59
3	Ti 334.940†	168437.0	166197.1	504.52	µg/L	504.52	ppb	08:41:39
3	Tl 190.801†	2600.1	2658.1	509.83	µg/L	509.83	ppb	08:41:59
3	U 409.014†	1643.5	8472.5	511.76	µg/L	511.76	ppb	08:41:39
3	V 292.402†	46391.5	45154.6	511.12	µg/L	511.12	ppb	08:41:39
3	Zn 213.857†	74911.5	71871.3	502.04	µg/L	502.04	ppb	08:41:39

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	514409.2	102.78	%	0.341				0.33%
Sc RADIAL	16550.7	101	%	0.6				0.56%
Y 371.029	448662.8	101.66	%	0.361				0.35%
Ag 328.068†	60779.4	511.17	µg/L	0.983	511.17	ppb	0.983	0.19%
QC value within limits for Ag 328.068 Recovery = 102.23%								
Al 396.153Radial†	11739.8	4908.6	µg/L	178.79	4908.6	ppb	178.79	3.64%
QC value within limits for Al 396.153Radial Recovery = 98.17%								
As 188.979†	1500.8	513.81	µg/L	2.565	513.81	ppb	2.565	0.50%
QC value within limits for As 188.979 Recovery = 102.76%								
B 249.677†	17463.0	500.72	µg/L	2.304	500.72	ppb	2.304	0.46%
QC value within limits for B 249.677 Recovery = 100.14%								
Ba 233.527†	65844.3	506.82	µg/L	0.096	506.82	ppb	0.096	0.02%
QC value within limits for Ba 233.527 Recovery = 101.36%								
Be 313.107†	918250.1	504.41	µg/L	0.613	504.41	ppb	0.613	0.12%
QC value within limits for Be 313.107 Recovery = 100.88%								
Ca 317.933Radial†	12059.3	5113.5	µg/L	8.47	5113.5	ppb	8.47	0.17%
QC value within limits for Ca 317.933Radial Recovery = 102.27%								
Cd 226.502†	53459.0	505.26	µg/L	0.522	505.26	ppb	0.522	0.10%
QC value within limits for Cd 226.502 Recovery = 101.05%								
Co 228.616†	27266.5	498.88	µg/L	1.354	498.88	ppb	1.354	0.27%

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   QC value within limits for Co 228.616  Recovery = 99.78%
Cr 267.716†            34583.8      503.80 µg/L         0.675      503.80 ppb          0.675   0.13%
   QC value within limits for Cr 267.716  Recovery = 100.76%
Cu 324.752†            88518.7      504.71 µg/L         0.918      504.71 ppb          0.918   0.18%
   QC value within limits for Cu 324.752  Recovery = 100.94%
Fe 238.204 Radial†      9788.9      5098.2 µg/L         16.39      5098.2 ppb          16.39   0.32%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.96%
K 766.490 Radial†       9111.0      4961.8 µg/L        206.67      4961.8 ppb         206.67   4.17%
   QC value within limits for K 766.490 Radial  Recovery = 99.24%
Mg 279.077 IEC†         1263.3      5088.3 µg/L         15.30      5088.3 ppb          15.30   0.30%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.77%
Mn 257.610†           379886.0      505.58 µg/L         0.365      505.58 ppb          0.365   0.07%
   QC value within limits for Mn 257.610  Recovery = 101.12%
Mo 202.031†            10014.4      507.74 µg/L         1.068      507.74 ppb          1.068   0.21%
   QC value within limits for Mo 202.031  Recovery = 101.55%
Na 589.592 Radial†     57231.6       10123 µg/L         358.1       10123 ppb          358.1   3.54%
   QC value within limits for Na 589.592 Radial  Recovery = 101.23%
Ni 231.604†            19855.6      500.50 µg/L         1.116      500.50 ppb          1.116   0.22%
   QC value within limits for Ni 231.604  Recovery = 100.10%
P 214.914†              5423.3      2333.1 µg/L          8.48      2333.1 ppb           8.48   0.36%
   QC value within limits for P 214.914  Recovery = 93.32%
Pb 220.353†             5223.2      506.90 µg/L         0.571      506.90 ppb          0.571   0.11%
   QC value within limits for Pb 220.353  Recovery = 101.38%
S 181.975 Axial†         902.8      1013.0 µg/L         12.30      1013.0 ppb          12.30   1.21%
   QC value within limits for S 181.975 Axial  Recovery = 101.30%
Sb 206.836†             1931.2      510.51 µg/L         2.400      510.51 ppb          2.400   0.47%
   QC value within limits for Sb 206.836  Recovery = 102.10%
Se 196.026†             1368.8      508.10 µg/L         4.516      508.10 ppb          4.516   0.89%
   QC value within limits for Se 196.026  Recovery = 101.62%
SiO2†                  50155.9      5419.8 µg/L         11.68      5419.8 ppb          11.68   0.22%
   QC value within limits for SiO2  Recovery = 101.35%
Si 251.611†            66719.6      2524.8 µg/L          3.05      2524.8 ppb           3.05   0.12%
   QC value within limits for Si 251.611  Recovery = 100.99%
Sn 189.927†             5074.2      506.20 µg/L         1.469      506.20 ppb          1.469   0.29%
   QC value within limits for Sn 189.927  Recovery = 101.24%
Sr 421.552†           176219.0      494.24 µg/L        18.481      494.24 ppb         18.481   3.74%
   QC value within limits for Sr 421.552  Recovery = 98.85%
Ti 334.940†           166264.5      504.72 µg/L         0.381      504.72 ppb          0.381   0.08%
   QC value within limits for Ti 334.940  Recovery = 100.94%
Tl 190.801†             2652.1      508.69 µg/L         1.737      508.69 ppb          1.737   0.34%
   QC value within limits for Tl 190.801  Recovery = 101.74%
U 409.014†              8554.4      516.70 µg/L         6.787      516.70 ppb          6.787   1.31%
   QC value within limits for U 409.014  Recovery = 103.34%
V 292.402†             45121.1      510.76 µg/L         1.692      510.76 ppb          1.692   0.33%
   QC value within limits for V 292.402  Recovery = 102.15%
Zn 213.857†            71862.8      501.98 µg/L         0.143      501.98 ppb          0.143   0.03%
   QC value within limits for Zn 213.857  Recovery = 100.40%
All analyte(s) passed QC.
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Sequence No.: 51 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 08:42:07**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15281.7	15281.7	93.4	%			08:42:36
1	Al 396.153Radial†	314.5	32.6	13.651	µg/L	13.651	ppb	08:42:36
1	Ca 317.933Radial†	74.2	5.5	2.3265	µg/L	2.3265	ppb	08:42:56
1	Fe 238.204 Radial†	34.3	7.6	3.9580	µg/L	3.9580	ppb	08:42:56
1	K 766.490 Radial†	2505.6	43.3	23.605	µg/L	23.605	ppb	08:42:36
1	Mg 279.077 IEC†	5.5	-6.0	-24.184	µg/L	-24.184	ppb	08:42:56
1	Na 589.592 Radial†	271.4	-60.3	-10.674	µg/L	-10.674	ppb	08:42:36
1	Sr 421.552†	13.2	21.5	0.0603	µg/L	0.0603	ppb	08:42:36
1	Sc 361.383	507302.7	507302.7	101.36	%			08:43:53
1	Y 371.029	447256.4	447256.4	101.35	%			08:43:53
1	Ag 328.068†	-246.7	58.7	0.4868	µg/L	0.4868	ppb	08:43:53
1	As 188.979†	3.2	1.2	0.4243	µg/L	0.4243	ppb	08:44:13
1	B 249.677†	21.1	73.5	2.1155	µg/L	2.1155	ppb	08:44:13
1	Ba 233.527†	-237.3	20.7	0.1601	µg/L	0.1601	ppb	08:44:13
1	Be 313.107†	-4588.5	30.2	0.0166	µg/L	0.0166	ppb	08:43:53
1	Cd 226.502†	-320.8	39.3	0.3714	µg/L	0.3714	ppb	08:44:13
1	Co 228.616†	-90.4	-8.2	-0.1483	µg/L	-0.1483	ppb	08:44:13
1	Cr 267.716†	162.3	4.5	0.0585	µg/L	0.0585	ppb	08:44:13
1	Cu 324.752†	4103.4	-161.1	-0.9293	µg/L	-0.9293	ppb	08:43:53
1	Mn 257.610†	266.1	-12.0	-0.0150	µg/L	-0.0150	ppb	08:44:13
1	Mo 202.031†	-35.7	9.4	0.4777	µg/L	0.4777	ppb	08:44:13
1	Ni 231.604†	-201.3	1.0	0.0261	µg/L	0.0261	ppb	08:44:13
1	P 214.914†	546.5	-8.0	-3.3596	µg/L	-3.3596	ppb	08:44:13
1	Pb 220.353†	317.9	4.2	0.4043	µg/L	0.4043	ppb	08:44:13
1	S 181.975 Axial†	46.9	5.4	6.1029	µg/L	6.1029	ppb	08:44:13
1	Sb 206.836†	85.9	4.9	1.2701	µg/L	1.2701	ppb	08:44:13
1	Se 196.026†	-116.5	-10.8	-3.9658	µg/L	-3.9658	ppb	08:44:13
1	SiO2†	2861.1	149.4	16.128	µg/L	16.128	ppb	08:43:53
1	Si 251.611†	526.2	50.7	1.9192	µg/L	1.9192	ppb	08:44:13
1	Sn 189.927†	66.6	-10.1	-1.0093	µg/L	-1.0093	ppb	08:44:13
1	Ti 334.940†	-2104.8	-87.1	-0.2679	µg/L	-0.2679	ppb	08:43:53
1	Tl 190.801†	-115.3	9.5	1.8203	µg/L	1.8203	ppb	08:44:13
1	U 409.014†	-6750.3	210.3	12.678	µg/L	12.678	ppb	08:43:53
1	V 292.402†	96.1	22.7	0.2739	µg/L	0.2739	ppb	08:43:53
1	Zn 213.857†	1186.0	10.9	0.0773	µg/L	0.0773	ppb	08:44:13
2	Sc RADIAL	16667.5	16667.5	102	%			08:43:01
2	Al 396.153Radial†	323.6	13.5	5.6869	µg/L	5.6869	ppb	08:43:01
2	Ca 317.933Radial†	70.2	-5.1	-2.1448	µg/L	-2.1448	ppb	08:43:21
2	Fe 238.204 Radial†	31.5	1.7	0.8983	µg/L	0.8983	ppb	08:43:21
2	K 766.490 Radial†	2587.9	-99.0	-53.919	µg/L	-53.919	ppb	08:43:01
2	Mg 279.077 IEC†	-1.6	-13.5	-54.303	µg/L	-54.303	ppb	08:43:21
2	Na 589.592 Radial†	298.2	-58.2	-10.303	µg/L	-10.303	ppb	08:43:01
2	Sr 421.552†	138.2	143.1	0.4015	µg/L	0.4015	ppb	08:43:01
2	Sc 361.383	507287.6	507287.6	101.35	%			08:44:18
2	Y 371.029	447030.6	447030.6	101.29	%			08:44:18
2	Ag 328.068†	-377.9	-70.7	-0.5900	µg/L	-0.5900	ppb	08:44:18
2	As 188.979†	3.9	1.9	0.6503	µg/L	0.6503	ppb	08:44:38
2	B 249.677†	-0.5	52.2	1.5036	µg/L	1.5036	ppb	08:44:38
2	Ba 233.527†	-231.4	26.6	0.2044	µg/L	0.2044	ppb	08:44:38
2	Be 313.107†	-4499.8	117.6	0.0646	µg/L	0.0646	ppb	08:44:18
2	Cd 226.502†	-347.5	13.0	0.1236	µg/L	0.1236	ppb	08:44:38
2	Co 228.616†	-90.8	-8.6	-0.1574	µg/L	-0.1574	ppb	08:44:38
2	Cr 267.716†	145.1	-12.4	-0.1841	µg/L	-0.1841	ppb	08:44:38
2	Cu 324.752†	4191.9	-73.7	-0.4259	µg/L	-0.4259	ppb	08:44:18
2	Mn 257.610†	248.6	-29.2	-0.0367	µg/L	-0.0367	ppb	08:44:38
2	Mo 202.031†	-49.5	-4.2	-0.2140	µg/L	-0.2140	ppb	08:44:38
2	Ni 231.604†	-175.7	26.3	0.6640	µg/L	0.6640	ppb	08:44:38
2	P 214.914†	551.6	-2.9	-1.1857	µg/L	-1.1857	ppb	08:44:38
2	Pb 220.353†	276.8	-36.4	-3.5440	µg/L	-3.5440	ppb	08:44:38

2	S 181.975 Axial†	47.4	5.9	6.6708	µg/L	6.6708	ppb	08:44:38
2	Sb 206.836†	84.5	3.4	0.8960	µg/L	0.8960	ppb	08:44:38
2	Se 196.026†	-100.3	5.1	1.8836	µg/L	1.8836	ppb	08:44:38
2	SiO2†	2687.2	-22.2	-2.3959	µg/L	-2.3959	ppb	08:44:18
2	Si 251.611†	540.6	65.0	2.4680	µg/L	2.4680	ppb	08:44:38
2	Sn 189.927†	79.0	2.1	0.2114	µg/L	0.2114	ppb	08:44:38
2	Ti 334.940†	-2022.7	-6.2	-0.0175	µg/L	-0.0175	ppb	08:44:18
2	Tl 190.801†	-124.8	0.1	0.0166	µg/L	0.0166	ppb	08:44:38
2	U 409.014†	-6849.2	112.5	6.7831	µg/L	6.7831	ppb	08:44:18
2	V 292.402†	75.2	2.1	0.0282	µg/L	0.0282	ppb	08:44:18
2	Zn 213.857†	1177.7	2.8	0.0157	µg/L	0.0157	ppb	08:44:38
3	Sc RADIAL	16482.4	16482.4	101	%			08:43:26
3	Al 396.153Radial†	279.8	-26.4	-11.061	µg/L	-11.061	ppb	08:43:26
3	Ca 317.933Radial†	63.8	-10.6	-4.5147	µg/L	-4.5147	ppb	08:43:46
3	Fe 238.204 Radial†	32.2	2.8	1.4381	µg/L	1.4381	ppb	08:43:46
3	K 766.490 Radial†	2597.1	-61.3	-33.387	µg/L	-33.387	ppb	08:43:26
3	Mg 279.077 IEC†	5.3	-6.6	-26.619	µg/L	-26.619	ppb	08:43:46
3	Na 589.592 Radial†	159.5	-192.6	-34.075	µg/L	-34.075	ppb	08:43:26
3	Sr 421.552†	-4.8	2.6	0.0075	µg/L	0.0075	ppb	08:43:26
3	Sc 361.383	507449.2	507449.2	101.39	%			08:44:43
3	Y 371.029	447244.6	447244.6	101.34	%			08:44:43
3	Ag 328.068†	-296.8	9.4	0.0738	µg/L	0.0738	ppb	08:44:43
3	As 188.979†	0.8	-1.1	-0.3597	µg/L	-0.3597	ppb	08:45:03
3	B 249.677†	-36.5	16.7	0.4802	µg/L	0.4802	ppb	08:45:03
3	Ba 233.527†	-236.7	21.4	0.1645	µg/L	0.1645	ppb	08:45:03
3	Be 313.107†	-4556.5	63.0	0.0346	µg/L	0.0346	ppb	08:44:43
3	Cd 226.502†	-336.3	24.1	0.2281	µg/L	0.2281	ppb	08:45:03
3	Co 228.616†	-70.7	11.3	0.2062	µg/L	0.2062	ppb	08:45:03
3	Cr 267.716†	169.1	11.2	0.1525	µg/L	0.1525	ppb	08:45:03
3	Cu 324.752†	4182.0	-84.7	-0.4977	µg/L	-0.4977	ppb	08:44:43
3	Mn 257.610†	248.9	-29.0	-0.0375	µg/L	-0.0375	ppb	08:45:03
3	Mo 202.031†	-40.5	4.6	0.2336	µg/L	0.2336	ppb	08:45:03
3	Ni 231.604†	-206.6	-4.1	-0.1035	µg/L	-0.1035	ppb	08:45:03
3	P 214.914†	530.8	-23.5	-10.756	µg/L	-10.756	ppb	08:45:03
3	Pb 220.353†	324.8	10.9	1.0687	µg/L	1.0687	ppb	08:45:03
3	S 181.975 Axial†	42.1	0.7	0.7317	µg/L	0.7317	ppb	08:45:03
3	Sb 206.836†	76.5	-4.5	-1.1726	µg/L	-1.1726	ppb	08:45:03
3	Se 196.026†	-105.2	0.3	0.1260	µg/L	0.1260	ppb	08:45:03
3	SiO2†	2672.0	-38.0	-4.0977	µg/L	-4.0977	ppb	08:44:43
3	Si 251.611†	530.4	54.7	2.0728	µg/L	2.0728	ppb	08:45:03
3	Sn 189.927†	91.5	14.4	1.4336	µg/L	1.4336	ppb	08:45:03
3	Ti 334.940†	-1983.0	33.7	0.0961	µg/L	0.0961	ppb	08:44:43
3	Tl 190.801†	-106.5	18.2	3.4753	µg/L	3.4753	ppb	08:45:03
3	U 409.014†	-6666.1	295.3	17.803	µg/L	17.803	ppb	08:44:43
3	V 292.402†	88.1	14.9	0.1900	µg/L	0.1900	ppb	08:44:43
3	Zn 213.857†	1153.6	-21.4	-0.1496	µg/L	-0.1496	ppb	08:45:03

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	507346.5	101.37	%	0.018				0.02%
Sc RADIAL	16143.9	98.7	%	4.60				4.66%
Y 371.029	447177.2	101.33	%	0.029				0.03%
Ag 328.068†	-0.9	-0.0098	µg/L	0.54326	-0.0098	ppb	0.54326	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	6.6	2.7590	µg/L	12.61371	2.7590	ppb	12.61371	457.18%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.7	0.2383	µg/L	0.53004	0.2383	ppb	0.53004	222.44%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	47.5	1.3664	µg/L	0.82621	1.3664	ppb	0.82621	60.46%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.9	0.1763	µg/L	0.02443	0.1763	ppb	0.02443	13.85%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	70.2	0.0386	µg/L	0.02423	0.0386	ppb	0.02423	62.78%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.4	-1.4443	µg/L	3.47400	-1.4443	ppb	3.47400	240.53%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	25.5	0.2410	µg/L	0.12445	0.2410	ppb	0.12445	51.63%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-1.8	-0.0332	µg/L	0.20734	-0.0332	ppb	0.20734	625.20%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                1.1      0.0090 µg/L       0.17371      0.0090 ppb        0.17371 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -106.5     -0.6176 µg/L       0.27232     -0.6176 ppb        0.27232  44.09%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         4.0      2.0981 µg/L       1.63313      2.0981 ppb        1.63313  77.84%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -39.0     -21.234 µg/L       40.1653     -21.234 ppb        40.1653 189.16%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -8.7     -35.035 µg/L       16.7304     -35.035 ppb        16.7304  47.75%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -23.4     -0.0297 µg/L       0.01280     -0.0297 ppb        0.01280  43.07%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                3.3      0.1658 µg/L       0.35080      0.1658 ppb        0.35080 211.60%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      -103.7     -18.351 µg/L       13.6187     -18.351 ppb        13.6187  74.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                7.8      0.1955 µg/L       0.41088      0.1955 ppb        0.41088 210.13%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -11.5     -5.1006 µg/L       5.01729     -5.1006 ppb        5.01729  98.37%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -7.1     -0.6903 µg/L       2.49357     -0.6903 ppb        2.49357 361.21%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           4.0      4.5018 µg/L       3.27732      4.5018 ppb        3.27732  72.80%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                1.3      0.3312 µg/L       1.31566      0.3312 ppb        1.31566 397.28%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -1.8     -0.6520 µg/L       3.00131     -0.6520 ppb        3.00131 460.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     29.7      3.2115 µg/L      11.21844      3.2115 ppb       11.21844 349.32%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               56.8      2.1533 µg/L       0.28309      2.1533 ppb        0.28309  13.15%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                2.1      0.2119 µg/L       1.22146      0.2119 ppb        1.22146 576.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               55.8      0.1564 µg/L       0.21389      0.1564 ppb        0.21389 136.71%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -19.9     -0.0631 µg/L       0.18624     -0.0631 ppb        0.18624 295.08%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                9.3      1.7707 µg/L       1.72988      1.7707 ppb        1.72988  97.69%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               206.1      12.422 µg/L        5.5145      12.422 ppb         5.5145  44.39%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                13.2      0.1641 µg/L       0.12487      0.1641 ppb        0.12487  76.12%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -2.6     -0.0189 µg/L       0.11738     -0.0189 ppb        0.11738 621.97%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8 **Autosampler Location: 103**
Sample ID: ICSA **Date Collected: 12/3/2010 09:13:51**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15855.2	15855.2	96.9	%			09:14:28
1	Al 396.153Radial†	1131920.3	1167596.6	489380	µg/L	489380	ppb	09:14:23
1	Ca 317.933Radial†	1117954.3	1153416.7	489090	µg/L	489090	ppb	09:14:23
1	Fe 238.204 Radial†	358004.2	369354.9	192360	µg/L	192360	ppb	09:14:23
1	K 766.490 Radial†	2552.4	-5.4	-2.7870	µg/L	-2.7870	ppb	09:14:28
1	Mg 279.077 IEC†	117520.4	121244.1	487990	µg/L	487990	ppb	09:14:28
1	Na 589.592 Radial†	495.1	159.9	28.281	µg/L	28.281	ppb	09:14:28
1	Sr 421.552†	4146.1	4285.3	-0.5540	µg/L	-0.5540	ppb	09:14:28
1	Sc 361.383	459342.8	459342.8	91.774	%			09:14:55
1	Y 371.029	396586.4	396586.4	89.864	%			09:14:55
1	Ag 328.068†	-1774.1	-1631.0	-1.1875	µg/L	-1.1875	ppb	09:15:01
1	As 188.979†	-21.7	-25.6	-7.5309	µg/L	-7.5309	ppb	09:15:01
1	B 249.677†	-2.2	50.3	-20.560	µg/L	-20.560	ppb	09:14:55
1	Ba 233.527†	-3424.4	-3476.4	-0.9197	µg/L	-0.9197	ppb	09:15:01
1	Be 313.107†	-14060.1	-10763.1	-5.9102	µg/L	-5.9102	ppb	09:15:01
1	Cd 226.502†	1385.5	1865.6	-1.3788	µg/L	-1.3788	ppb	09:15:01
1	Co 228.616†	18.9	101.6	-1.0664	µg/L	-1.0664	ppb	09:15:01
1	Cr 267.716†	-173.2	-344.3	0.0225	µg/L	0.0225	ppb	09:15:01
1	Cu 324.752†	2142.3	-1875.3	2.3920	µg/L	2.3920	ppb	09:15:01
1	Mn 257.610†	6017.6	6282.5	-12.914	µg/L	-12.914	ppb	09:14:55
1	Mo 202.031†	-289.1	-270.4	-5.8762	µg/L	-5.8762	ppb	09:15:01
1	Ni 231.604†	-107.9	82.0	1.6623	µg/L	1.6623	ppb	09:15:01
1	P 214.914†	457.7	-48.4	-21.911	µg/L	-21.911	ppb	09:15:01
1	Pb 220.353†	2910.1	2861.5	15.509	µg/L	15.509	ppb	09:15:01
1	S 181.975 Axial†	-6.2	-47.6	-95.149	µg/L	-95.149	ppb	09:15:01
1	Sb 206.836†	146.4	79.6	11.740	µg/L	11.740	ppb	09:15:01
1	Se 196.026†	-504.0	-445.1	12.228	µg/L	12.228	ppb	09:15:01
1	SiO2†	2660.2	225.1	24.147	µg/L	24.147	ppb	09:15:01
1	Si 251.611†	-40.7	-512.8	-19.283	µg/L	-19.283	ppb	09:15:01
1	Sn 189.927†	-180.0	-272.0	7.1065	µg/L	7.1065	ppb	09:15:01
1	Ti 334.940†	-6363.7	-4944.6	-0.7501	µg/L	-0.7501	ppb	09:15:01
1	Tl 190.801†	-204.8	-99.9	-19.248	µg/L	-19.248	ppb	09:15:01
1	U 409.014†	-6632.7	-356.9	19.088	µg/L	19.088	ppb	09:14:55
1	V 292.402†	1268.2	1309.9	0.7946	µg/L	0.7946	ppb	09:15:01
1	Zn 213.857†	5348.7	4668.9	14.721	µg/L	14.721	ppb	09:15:01
2	Sc RADIAL	15987.7	15987.7	97.7	%			09:14:38
2	Al 396.153Radial†	1150991.4	1177429.3	493500	µg/L	493500	ppb	09:14:33
2	Ca 317.933Radial†	1136477.7	1162808.5	493070	µg/L	493070	ppb	09:14:33
2	Fe 238.204 Radial†	365275.5	373733.1	194640	µg/L	194640	ppb	09:14:33
2	K 766.490 Radial†	2546.4	-33.4	-17.967	µg/L	-17.967	ppb	09:14:38
2	Mg 279.077 IEC†	118754.0	121501.2	489030	µg/L	489030	ppb	09:14:38
2	Na 589.592 Radial†	424.0	83.0	14.675	µg/L	14.675	ppb	09:14:38
2	Sr 421.552†	4297.3	4404.6	-0.3218	µg/L	-0.3218	ppb	09:14:38
2	Sc 361.383	459456.7	459456.7	91.797	%			09:15:06
2	Y 371.029	396815.1	396815.1	89.916	%			09:15:06
2	Ag 328.068†	-1685.9	-1534.5	-0.2382	µg/L	-0.2382	ppb	09:15:11
2	As 188.979†	-2.1	-4.1	-0.2453	µg/L	-0.2453	ppb	09:15:11
2	B 249.677†	23.6	78.4	-20.008	µg/L	-20.008	ppb	09:15:06
2	Ba 233.527†	-3367.4	-3413.5	-0.1306	µg/L	-0.1306	ppb	09:15:11
2	Be 313.107†	-14037.0	-10734.1	-5.8945	µg/L	-5.8945	ppb	09:15:11
2	Cd 226.502†	1423.0	1906.0	-1.2223	µg/L	-1.2223	ppb	09:15:11
2	Co 228.616†	-15.4	64.3	-1.7832	µg/L	-1.7832	ppb	09:15:11
2	Cr 267.716†	-202.7	-376.3	-0.3852	µg/L	-0.3852	ppb	09:15:11
2	Cu 324.752†	2122.2	-1897.7	2.4184	µg/L	2.4184	ppb	09:15:11
2	Mn 257.610†	5980.5	6240.5	-13.028	µg/L	-13.028	ppb	09:15:06
2	Mo 202.031†	-265.3	-244.4	-4.4742	µg/L	-4.4742	ppb	09:15:11
2	Ni 231.604†	-142.8	44.1	0.7021	µg/L	0.7021	ppb	09:15:11
2	P 214.914†	441.3	-66.4	-30.549	µg/L	-30.549	ppb	09:15:11
2	Pb 220.353†	2988.7	2946.3	21.560	µg/L	21.560	ppb	09:15:11

2	S 181.975 Axial†	19.1	-20.0	-64.518	µg/L	-64.518	ppb	09:15:11
2	Sb 206.836†	108.9	38.7	1.0107	µg/L	1.0107	ppb	09:15:11
2	Se 196.026†	-463.5	-400.8	30.438	µg/L	30.438	ppb	09:15:11
2	SiO2†	2636.7	198.9	21.330	µg/L	21.330	ppb	09:15:11
2	Si 251.611†	-11.9	-481.4	-18.109	µg/L	-18.109	ppb	09:15:11
2	Sn 189.927†	-173.0	-264.3	8.1511	µg/L	8.1511	ppb	09:15:11
2	Ti 334.940†	-6080.4	-4634.2	0.5570	µg/L	0.5570	ppb	09:15:11
2	Tl 190.801†	-197.1	-91.4	-17.610	µg/L	-17.610	ppb	09:15:11
2	U 409.014†	-6638.3	-361.2	19.305	µg/L	19.305	ppb	09:15:06
2	V 292.402†	1256.4	1296.7	0.4642	µg/L	0.4642	ppb	09:15:11
2	Zn 213.857†	5271.8	4583.7	13.912	µg/L	13.912	ppb	09:15:11
3	Sc RADIAL	15880.1	15880.1	97.1	%			09:14:49
3	Al 396.153Radial†	1159017.4	1193678.8	500310	µg/L	500310	ppb	09:14:44
3	Ca 317.933Radial†	1143650.1	1178078.1	499540	µg/L	499540	ppb	09:14:44
3	Fe 238.204 Radial†	367310.6	378362.5	197050	µg/L	197050	ppb	09:14:44
3	K 766.490 Radial†	2611.0	50.8	27.894	µg/L	27.894	ppb	09:14:49
3	Mg 279.077 IEC†	118272.9	121829.1	490350	µg/L	490350	ppb	09:14:49
3	Na 589.592 Radial†	418.0	79.7	14.098	µg/L	14.098	ppb	09:14:49
3	Sr 421.552†	4209.1	4343.5	-0.6594	µg/L	-0.6594	ppb	09:14:49
3	Sc 361.383	463970.6	463970.6	92.699	%			09:15:16
3	Y 371.029	400963.1	400963.1	90.856	%			09:15:16
3	Ag 328.068†	-1653.8	-1482.0	0.3523	µg/L	0.3523	ppb	09:15:21
3	As 188.979†	-40.8	-45.9	-14.403	µg/L	-14.403	ppb	09:15:21
3	B 249.677†	60.0	117.4	-19.162	µg/L	-19.162	ppb	09:15:16
3	Ba 233.527†	-3394.8	-3407.3	0.2406	µg/L	0.2406	ppb	09:15:21
3	Be 313.107†	-14075.7	-10627.1	-5.8357	µg/L	-5.8357	ppb	09:15:21
3	Cd 226.502†	1442.3	1911.7	-1.4069	µg/L	-1.4069	ppb	09:15:21
3	Co 228.616†	-11.1	69.0	-1.7363	µg/L	-1.7363	ppb	09:15:21
3	Cr 267.716†	-166.8	-335.5	0.2666	µg/L	0.2666	ppb	09:15:21
3	Cu 324.752†	2071.1	-1975.4	2.1319	µg/L	2.1319	ppb	09:15:21
3	Mn 257.610†	6064.9	6268.1	-13.062	µg/L	-13.062	ppb	09:15:16
3	Mo 202.031†	-294.2	-272.8	-5.8152	µg/L	-5.8152	ppb	09:15:21
3	Ni 231.604†	-142.2	46.3	0.7508	µg/L	0.7508	ppb	09:15:21
3	P 214.914†	529.4	24.0	11.725	µg/L	11.725	ppb	09:15:21
3	Pb 220.353†	2931.8	2853.2	8.8174	µg/L	8.8174	ppb	09:15:21
3	S 181.975 Axial†	24.2	-14.7	-59.143	µg/L	-59.143	ppb	09:15:21
3	Sb 206.836†	144.3	75.7	10.518	µg/L	10.518	ppb	09:15:21
3	Se 196.026†	-507.0	-442.9	17.250	µg/L	17.250	ppb	09:15:21
3	SiO2†	2592.2	122.9	13.110	µg/L	13.110	ppb	09:15:21
3	Si 251.611†	25.6	-440.8	-16.553	µg/L	-16.553	ppb	09:15:21
3	Sn 189.927†	-193.2	-284.3	6.6171	µg/L	6.6171	ppb	09:15:21
3	Ti 334.940†	-6073.5	-4562.3	1.3938	µg/L	1.3938	ppb	09:15:21
3	Tl 190.801†	-207.7	-100.8	-19.400	µg/L	-19.400	ppb	09:15:21
3	U 409.014†	-6555.9	-202.0	29.414	µg/L	29.414	ppb	09:15:16
3	V 292.402†	1308.9	1340.0	0.7425	µg/L	0.7425	ppb	09:15:21
3	Zn 213.857†	5318.6	4578.3	13.647	µg/L	13.647	ppb	09:15:21

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	460923.3	92.090	%	0.5274				0.57%
Sc RADIAL	15907.7	97.2	%	0.43				0.44%
Y 371.029	398121.5	90.212	%	0.5582				0.62%
Ag 328.068†	-1549.2	-0.3578	µg/L	0.77687	-0.3578	ppb	0.77687	217.13%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	1179568.2	494400	µg/L	5521.0	494400	ppb	5521.0	1.12%
QC value within limits for Al 396.153Radial Recovery = 98.88%								
As 188.979†	-25.2	-7.3932	µg/L	7.07996	-7.3932	ppb	7.07996	95.76%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	82.1	-19.910	µg/L	0.7043	-19.910	ppb	0.7043	3.54%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-3432.4	-0.2699	µg/L	0.59254	-0.2699	ppb	0.59254	219.54%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-10708.1	-5.8801	µg/L	0.03926	-5.8801	ppb	0.03926	0.67%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1164767.7	493900	µg/L	5277.9	493900	ppb	5277.9	1.07%
QC value within limits for Ca 317.933Radial Recovery = 98.78%								
Cd 226.502†	1894.4	-1.3360	µg/L	0.09948	-1.3360	ppb	0.09948	7.45%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	78.3	-1.5286	µg/L	0.40096	-1.5286	ppb	0.40096	26.23%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -352.0     -0.0320 µg/L       0.32927     -0.0320 ppb        0.32927 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -1916.1      2.3141 µg/L       0.15836      2.3141 ppb        0.15836   6.84%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    373816.8      194680 µg/L        2345.9      194680 ppb         2345.9   1.20%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.34%
K 766.490 Radial†          4.0      2.3800 µg/L      23.36315      2.3800 ppb       23.36315 981.64%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       121524.8      489120 µg/L        1179.3      489120 ppb         1179.3   0.24%
   QC value within limits for Mg 279.077 IEC  Recovery = 97.82%
Mn 257.610†             6263.7     -13.001 µg/L        0.0774     -13.001 ppb         0.0774   0.60%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -262.5     -5.3885 µg/L       0.79242     -5.3885 ppb        0.79242  14.71%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       107.5      19.018 µg/L        8.0270      19.018 ppb         8.0270  42.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               57.5      1.0384 µg/L       0.54086      1.0384 ppb        0.54086  52.09%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -30.3     -13.578 µg/L       22.3351     -13.578 ppb        22.3351 164.49%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             2887.0      15.295 µg/L        6.3742      15.295 ppb         6.3742  41.67%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -27.4     -72.937 µg/L       19.4232     -72.937 ppb        19.4232  26.63%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               64.7      7.7562 µg/L       5.87368      7.7562 ppb        5.87368  75.73%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†             -429.6      19.972 µg/L        9.4052      19.972 ppb         9.4052  47.09%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    182.3      19.529 µg/L        5.7348      19.529 ppb         5.7348  29.37%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†             -478.3     -17.982 µg/L        1.3698     -17.982 ppb         1.3698   7.62%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -273.5      7.2915 µg/L       0.78356      7.2915 ppb        0.78356  10.75%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             4344.5     -0.5117 µg/L       0.17275     -0.5117 ppb        0.17275  33.76%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†            -4713.7      0.4002 µg/L       1.08047      0.4002 ppb        1.08047 269.95%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -97.4     -18.753 µg/L        0.9924     -18.753 ppb         0.9924   5.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -306.7      22.602 µg/L        5.9002      22.602 ppb         5.9002  26.10%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              1315.5      0.6671 µg/L       0.17763      0.6671 ppb        0.17763  26.63%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             4610.3      14.094 µg/L        0.5597      14.094 ppb         0.5597   3.97%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 9 **Autosampler Location: 104**
Sample ID: ICSAB **Date Collected: 12/3/2010 09:15:29**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15812.1	15812.1	96.7	%			09:16:03
1	Al 396.153Radial†	1152017.4	1191570.1	499420	µg/L	499420	ppb	09:15:58
1	Ca 317.933Radial†	1135474.3	1174684.7	498110	µg/L	498110	ppb	09:15:58
1	Fe 238.204 Radial†	363978.2	376541.7	196100	µg/L	196100	ppb	09:15:58
1	K 766.490 Radial†	12722.9	10524.1	5732.1	µg/L	5732.1	ppb	09:16:03
1	Mg 279.077 IEC†	117955.7	122024.8	491140	µg/L	491140	ppb	09:16:03
1	Na 589.592 Radial†	30620.3	31328.8	5541.5	µg/L	5541.5	ppb	09:16:03
1	Sr 421.552†	182811.3	189143.5	517.83	µg/L	517.83	ppb	09:16:03
1	Sc 361.383	462837.6	462837.6	92.473	%			09:16:31
1	Y 371.029	400724.2	400724.2	90.801	%			09:16:31
1	Ag 328.068†	29113.1	31785.1	282.55	µg/L	282.55	ppb	09:16:31
1	As 188.979†	1467.9	1585.5	543.80	µg/L	543.80	ppb	09:16:36
1	B 249.677†	17506.0	18983.7	522.65	µg/L	522.65	ppb	09:16:31
1	Ba 233.527†	59535.4	64636.6	523.16	µg/L	523.16	ppb	09:16:31
1	Be 313.107†	417844.6	456415.4	250.64	µg/L	250.64	ppb	09:16:31
1	Cd 226.502†	50498.5	54965.0	500.61	µg/L	500.61	ppb	09:16:36
1	Co 228.616†	25100.4	27224.6	495.14	µg/L	495.14	ppb	09:16:36
1	Cr 267.716†	32075.6	34531.1	508.04	µg/L	508.04	ppb	09:16:36
1	Cu 324.752†	96138.1	99754.4	581.80	µg/L	581.80	ppb	09:16:31
1	Mn 257.610†	369688.5	399507.5	510.51	µg/L	510.51	ppb	09:16:31
1	Mo 202.031†	9472.5	10288.2	529.43	µg/L	529.43	ppb	09:16:36
1	Ni 231.604†	17786.5	19434.1	489.47	µg/L	489.47	ppb	09:16:36
1	P 214.914†	5786.1	5710.0	2440.2	µg/L	2440.2	ppb	09:16:36
1	Pb 220.353†	7775.9	8099.5	521.00	µg/L	521.00	ppb	09:16:36
1	S 181.975 Axial†	2333.4	2482.5	2744.3	µg/L	2744.3	ppb	09:16:36
1	Sb 206.836†	2017.5	2101.8	546.35	µg/L	546.35	ppb	09:16:36
1	Se 196.026†	5962.4	6551.9	2587.5	µg/L	2587.5	ppb	09:16:36
1	SiO2†	102171.4	107814.9	11644	µg/L	11644	ppb	09:16:31
1	Si 251.611†	132883.2	143231.8	5427.2	µg/L	5427.2	ppb	09:16:31
1	Sn 189.927†	4630.2	4931.2	526.45	µg/L	526.45	ppb	09:16:36
1	Ti 334.940†	166473.1	182013.9	567.43	µg/L	567.43	ppb	09:16:31
1	Tl 190.801†	2301.8	2612.4	501.53	µg/L	501.53	ppb	09:16:36
1	U 409.014†	1217.5	8186.9	534.86	µg/L	534.86	ppb	09:16:31
1	V 292.402†	44089.7	47606.7	525.03	µg/L	525.03	ppb	09:16:36
1	Zn 213.857†	71700.1	76377.5	515.74	µg/L	515.74	ppb	09:16:31
2	Sc RADIAL	16124.9	16124.9	98.6	%			09:16:14
2	Al 396.153Radial†	1174114.9	1190867.6	499120	µg/L	499120	ppb	09:16:09
2	Ca 317.933Radial†	1156657.2	1173386.4	497560	µg/L	497560	ppb	09:16:09
2	Fe 238.204 Radial†	371073.7	376435.3	196050	µg/L	196050	ppb	09:16:09
2	K 766.490 Radial†	12815.6	10362.8	5644.3	µg/L	5644.3	ppb	09:16:14
2	Mg 279.077 IEC†	120544.0	122283.3	492180	µg/L	492180	ppb	09:16:14
2	Na 589.592 Radial†	31119.4	31220.5	5522.3	µg/L	5522.3	ppb	09:16:14
2	Sr 421.552†	186008.9	188718.5	516.65	µg/L	516.65	ppb	09:16:14
2	Sc 361.383	462823.4	462823.4	92.470	%			09:16:42
2	Y 371.029	400768.0	400768.0	90.811	%			09:16:42
2	Ag 328.068†	29233.6	31916.4	283.61	µg/L	283.61	ppb	09:16:42
2	As 188.979†	1459.4	1576.3	540.66	µg/L	540.66	ppb	09:16:47
2	B 249.677†	17603.4	19089.6	525.72	µg/L	525.72	ppb	09:16:42
2	Ba 233.527†	59624.7	64735.1	523.91	µg/L	523.91	ppb	09:16:42
2	Be 313.107†	418103.4	456709.2	250.81	µg/L	250.81	ppb	09:16:42
2	Cd 226.502†	50207.4	54651.9	497.66	µg/L	497.66	ppb	09:16:47
2	Co 228.616†	24939.7	27051.7	491.97	µg/L	491.97	ppb	09:16:47
2	Cr 267.716†	31959.9	34407.0	506.24	µg/L	506.24	ppb	09:16:47
2	Cu 324.752†	96191.4	99815.3	582.15	µg/L	582.15	ppb	09:16:42
2	Mn 257.610†	369757.8	399594.8	510.59	µg/L	510.59	ppb	09:16:42
2	Mo 202.031†	9405.7	10216.2	525.78	µg/L	525.78	ppb	09:16:47
2	Ni 231.604†	17769.8	19416.5	489.03	µg/L	489.03	ppb	09:16:47
2	P 214.914†	5776.5	5699.8	2435.3	µg/L	2435.3	ppb	09:16:47
2	Pb 220.353†	7734.1	8054.5	516.76	µg/L	516.76	ppb	09:16:47

2	S 181.975 Axial†	2343.2	2493.1	2756.2	µg/L	2756.2	ppb	09:16:47
2	Sb 206.836†	2060.3	2148.2	558.41	µg/L	558.41	ppb	09:16:47
2	Se 196.026†	5985.1	6576.6	2596.5	µg/L	2596.5	ppb	09:16:47
2	SiO2†	102252.8	107906.3	11654	µg/L	11654	ppb	09:16:42
2	Si 251.611†	132940.2	143297.9	5429.7	µg/L	5429.7	ppb	09:16:42
2	Sn 189.927†	4651.3	4954.2	528.70	µg/L	528.70	ppb	09:16:47
2	Ti 334.940†	166543.6	182095.6	567.53	µg/L	567.53	ppb	09:16:42
2	Tl 190.801†	2259.0	2566.2	492.72	µg/L	492.72	ppb	09:16:47
2	U 409.014†	1129.1	8091.4	529.09	µg/L	529.09	ppb	09:16:42
2	V 292.402†	43884.6	47386.4	522.53	µg/L	522.53	ppb	09:16:47
2	Zn 213.857†	71806.8	76495.3	516.58	µg/L	516.58	ppb	09:16:42
3	Sc RADIAL	15952.9	15952.9	97.5	%			09:16:24
3	Al 396.153Radial†	1179471.6	1209207.9	506810	µg/L	506810	ppb	09:16:19
3	Ca 317.933Radial†	1162096.7	1191620.6	505290	µg/L	505290	ppb	09:16:19
3	Fe 238.204 Radial†	372794.9	382260.6	199080	µg/L	199080	ppb	09:16:19
3	K 766.490 Radial†	12802.0	10489.1	5713.1	µg/L	5713.1	ppb	09:16:24
3	Mg 279.077 IEC†	119166.4	122189.6	491800	µg/L	491800	ppb	09:16:24
3	Na 589.592 Radial†	30899.8	31335.9	5542.7	µg/L	5542.7	ppb	09:16:24
3	Sr 421.552†	184402.6	189106.6	517.54	µg/L	517.54	ppb	09:16:24
3	Sc 361.383	464985.7	464985.7	92.902	%			09:16:52
3	Y 371.029	402294.8	402294.8	91.157	%			09:16:52
3	Ag 328.068†	29410.8	31960.2	284.17	µg/L	284.17	ppb	09:16:52
3	As 188.979†	1476.0	1586.9	544.25	µg/L	544.25	ppb	09:16:57
3	B 249.677†	17803.9	19217.0	529.04	µg/L	529.04	ppb	09:16:52
3	Ba 233.527†	60112.6	64960.5	526.05	µg/L	526.05	ppb	09:16:52
3	Be 313.107†	420346.7	457021.2	250.98	µg/L	250.98	ppb	09:16:52
3	Cd 226.502†	50431.3	54640.4	497.25	µg/L	497.25	ppb	09:16:57
3	Co 228.616†	25037.6	27031.6	491.57	µg/L	491.57	ppb	09:16:57
3	Cr 267.716†	31969.1	34256.2	504.12	µg/L	504.12	ppb	09:16:57
3	Cu 324.752†	96623.8	99796.9	582.25	µg/L	582.25	ppb	09:16:52
3	Mn 257.610†	372297.6	400469.1	511.75	µg/L	511.75	ppb	09:16:52
3	Mo 202.031†	9496.3	10266.5	528.45	µg/L	528.45	ppb	09:16:57
3	Ni 231.604†	17860.8	19425.1	489.24	µg/L	489.24	ppb	09:16:57
3	P 214.914†	5862.4	5763.2	2464.7	µg/L	2464.7	ppb	09:16:57
3	Pb 220.353†	7736.8	8018.5	509.14	µg/L	509.14	ppb	09:16:57
3	S 181.975 Axial†	2319.6	2456.0	2713.8	µg/L	2713.8	ppb	09:16:57
3	Sb 206.836†	2018.3	2092.6	543.81	µg/L	543.81	ppb	09:16:57
3	Se 196.026†	6006.8	6569.8	2596.8	µg/L	2596.8	ppb	09:16:57
3	SiO2†	102874.9	108061.8	11671	µg/L	11671	ppb	09:16:52
3	Si 251.611†	133851.9	143610.7	5441.6	µg/L	5441.6	ppb	09:16:52
3	Sn 189.927†	4666.2	4946.8	528.51	µg/L	528.51	ppb	09:16:57
3	Ti 334.940†	167743.1	182549.3	569.82	µg/L	569.82	ppb	09:16:52
3	Tl 190.801†	2271.2	2568.0	493.08	µg/L	493.08	ppb	09:16:57
3	U 409.014†	1088.8	8042.3	526.77	µg/L	526.77	ppb	09:16:52
3	V 292.402†	44081.2	47377.2	522.17	µg/L	522.17	ppb	09:16:57
3	Zn 213.857†	72207.5	76565.4	516.79	µg/L	516.79	ppb	09:16:52

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	463548.9	92.615	%	0.2486				0.27%
Sc RADIAL	15963.3	97.6	%	0.96				0.98%
Y 371.029	401262.3	90.923	%	0.2027				0.22%
Ag 328.068†	31887.2	283.44	µg/L	0.823	283.44	ppb	0.823	0.29%
QC value within limits for Ag 328.068 Recovery = 113.38%								
Al 396.153Radial†	1197215.2	501780	µg/L	4355.6	501780	ppb	4355.6	0.87%
QC value within limits for Al 396.153Radial Recovery = 100.36%								
As 188.979†	1582.9	542.90	µg/L	1.954	542.90	ppb	1.954	0.36%
QC value within limits for As 188.979 Recovery = 108.58%								
B 249.677†	19096.7	525.80	µg/L	3.193	525.80	ppb	3.193	0.61%
QC value within limits for B 249.677 Recovery = 105.16%								
Ba 233.527†	64777.4	524.37	µg/L	1.498	524.37	ppb	1.498	0.29%
QC value within limits for Ba 233.527 Recovery = 104.87%								
Be 313.107†	456715.3	250.81	µg/L	0.166	250.81	ppb	0.166	0.07%
QC value within limits for Be 313.107 Recovery = 100.32%								
Ca 317.933Radial†	1179897.2	500320	µg/L	4313.9	500320	ppb	4313.9	0.86%
QC value within limits for Ca 317.933Radial Recovery = 100.06%								
Cd 226.502†	54752.4	498.51	µg/L	1.836	498.51	ppb	1.836	0.37%
QC value within limits for Cd 226.502 Recovery = 99.70%								
Co 228.616†	27102.7	492.89	µg/L	1.957	492.89	ppb	1.957	0.40%

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   QC value within limits for Co 228.616  Recovery = 98.58%
Cr 267.716†            34398.1      506.13 µg/L         1.963      506.13 ppb          1.963   0.39%
   QC value within limits for Cr 267.716  Recovery = 101.23%
Cu 324.752†            99788.9      582.07 µg/L         0.237      582.07 ppb          0.237   0.04%
   QC value within limits for Cu 324.752  Recovery = 116.41%
Fe 238.204 Radial†    378412.5      197080 µg/L        1735.8      197080 ppb         1735.8   0.88%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.54%
K 766.490 Radial†      10458.7      5696.5 µg/L         46.22      5696.5 ppb          46.22   0.81%
   QC value within limits for K 766.490 Radial  Recovery = 113.93%
Mg 279.077 IEC†       122165.9      491710 µg/L         526.6      491710 ppb          526.6   0.11%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.34%
Mn 257.610†           399857.1      510.95 µg/L         0.691      510.95 ppb          0.691   0.14%
   QC value within limits for Mn 257.610  Recovery = 102.19%
Mo 202.031†            10257.0      527.89 µg/L         1.890      527.89 ppb          1.890   0.36%
   QC value within limits for Mo 202.031  Recovery = 105.58%
Na 589.592 Radial†     31295.1      5535.5 µg/L         11.43      5535.5 ppb          11.43   0.21%
   QC value within limits for Na 589.592 Radial  Recovery = 110.71%
Ni 231.604†            19425.2      489.24 µg/L         0.221      489.24 ppb          0.221   0.05%
   QC value within limits for Ni 231.604  Recovery = 97.85%
P 214.914†              5724.3      2446.7 µg/L         15.78      2446.7 ppb          15.78   0.64%
   QC value within limits for P 214.914  Recovery = 97.87%
Pb 220.353†             8057.5      515.63 µg/L         6.009      515.63 ppb          6.009   1.17%
   QC value within limits for Pb 220.353  Recovery = 103.13%
S 181.975 Axial†        2477.2      2738.1 µg/L         21.85      2738.1 ppb          21.85   0.80%
   QC value within limits for S 181.975 Axial  Recovery = 109.52%
Sb 206.836†             2114.2      549.53 µg/L         7.801      549.53 ppb          7.801   1.42%
   QC value within limits for Sb 206.836  Recovery = 109.91%
Se 196.026†             6566.1      2593.6 µg/L          5.30      2593.6 ppb           5.30   0.20%
   QC value within limits for Se 196.026  Recovery = 103.74%
SiO2†                  107927.7       11656 µg/L          13.5       11656 ppb           13.5   0.12%
   QC value within limits for SiO2  Recovery = 108.99%
Si 251.611†            143380.2      5432.8 µg/L          7.68      5432.8 ppb           7.68   0.14%
   QC value within limits for Si 251.611  Recovery = 108.66%
Sn 189.927†             4944.1      527.88 µg/L         1.247      527.88 ppb          1.247   0.24%
   QC value within limits for Sn 189.927  Recovery = 105.58%
Sr 421.552†            188989.6      517.34 µg/L         0.614      517.34 ppb          0.614   0.12%
   QC value within limits for Sr 421.552  Recovery = 103.47%
Ti 334.940†            182219.6      568.26 µg/L         1.351      568.26 ppb          1.351   0.24%
   QC value within limits for Ti 334.940  Recovery = 113.65%
Tl 190.801†             2582.2      495.78 µg/L         4.984      495.78 ppb          4.984   1.01%
   QC value within limits for Tl 190.801  Recovery = 99.16%
U 409.014†              8106.9      530.24 µg/L         4.166      530.24 ppb          4.166   0.79%
   QC value within limits for U 409.014  Recovery = 106.05%
V 292.402†             47456.8      523.24 µg/L         1.558      523.24 ppb          1.558   0.30%
   QC value within limits for V 292.402  Recovery = 104.65%
Zn 213.857†            76479.4      516.37 µg/L         0.553      516.37 ppb          0.553   0.11%
   QC value within limits for Zn 213.857  Recovery = 103.27%
All analyte(s) passed QC.
```

Sequence No.: 10 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 09:17:05**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16676.2	16676.2	102	%			09:17:55
1	Al 396.153Radial†	12415.6	11875.5	4965.3	µg/L	4965.3	ppb	09:17:35
1	Ca 317.933Radial†	12495.2	12183.6	5166.3	µg/L	5166.3	ppb	09:17:55
1	Fe 238.204 Radial†	10100.4	9879.2	5145.2	µg/L	5145.2	ppb	09:17:55
1	K 766.490 Radial†	11971.1	9104.5	4958.2	µg/L	4958.2	ppb	09:17:35
1	Mg 279.077 IEC†	1327.2	1290.1	5195.9	µg/L	5195.9	ppb	09:17:55
1	Na 589.592 Radial†	59031.4	57558.2	10181	µg/L	10181	ppb	09:17:35
1	Sr 421.552†	180159.3	176741.5	495.71	µg/L	495.71	ppb	09:17:35
1	Sc 361.383	518845.8	518845.8	103.66	%			09:18:53
1	Y 371.029	452117.3	452117.3	102.45	%			09:18:53
1	Ag 328.068†	62792.8	60876.3	512.00	µg/L	512.00	ppb	09:18:53
1	As 188.979†	1571.5	1514.1	518.33	µg/L	518.33	ppb	09:19:14
1	B 249.677†	18137.0	17548.9	503.17	µg/L	503.17	ppb	09:18:53
1	Ba 233.527†	68293.7	66135.6	509.07	µg/L	509.07	ppb	09:18:53
1	Be 313.107†	953557.3	924422.9	507.80	µg/L	507.80	ppb	09:18:53
1	Cd 226.502†	55821.0	54204.6	512.31	µg/L	512.31	ppb	09:18:53
1	Co 228.616†	28450.7	27526.4	503.65	µg/L	503.65	ppb	09:19:14
1	Cr 267.716†	36151.8	34718.9	505.77	µg/L	505.77	ppb	09:18:53
1	Cu 324.752†	96235.3	88625.5	505.32	µg/L	505.32	ppb	09:18:53
1	Mn 257.610†	396423.0	382141.9	508.58	µg/L	508.58	ppb	09:18:53
1	Mo 202.031†	10457.9	10133.0	513.75	µg/L	513.75	ppb	09:19:14
1	Ni 231.604†	20561.6	20034.8	505.02	µg/L	505.02	ppb	09:19:14
1	P 214.914†	6274.5	5505.7	2371.3	µg/L	2371.3	ppb	09:19:14
1	Pb 220.353†	5782.8	5269.1	511.35	µg/L	511.35	ppb	09:19:14
1	S 181.975 Axial†	987.4	911.7	1023.1	µg/L	1023.1	ppb	09:19:14
1	Sb 206.836†	2093.6	1939.7	512.81	µg/L	512.81	ppb	09:19:14
1	Se 196.026†	1327.1	1384.3	513.83	µg/L	513.83	ppb	09:19:14
1	SiO2†	55039.5	50421.3	5448.5	µg/L	5448.5	ppb	09:18:53
1	Si 251.611†	70062.5	67118.7	2539.9	µg/L	2539.9	ppb	09:18:53
1	Sn 189.927†	5412.1	5145.0	513.25	µg/L	513.25	ppb	09:19:14
1	Ti 334.940†	170897.0	166848.3	506.49	µg/L	506.49	ppb	09:18:53
1	Tl 190.801†	2643.0	2672.9	512.67	µg/L	512.67	ppb	09:19:14
1	U 409.014†	1667.7	8479.1	512.17	µg/L	512.17	ppb	09:18:53
1	V 292.402†	47011.9	45278.8	512.58	µg/L	512.58	ppb	09:18:53
1	Zn 213.857†	76432.3	72572.6	506.94	µg/L	506.94	ppb	09:18:53
2	Sc RADIAL	16688.8	16688.8	102	%			09:18:21
2	Al 396.153Radial†	12548.7	11996.8	5016.2	µg/L	5016.2	ppb	09:18:01
2	Ca 317.933Radial†	12492.4	12171.7	5161.2	µg/L	5161.2	ppb	09:18:21
2	Fe 238.204 Radial†	10104.1	9875.4	5143.3	µg/L	5143.3	ppb	09:18:21
2	K 766.490 Radial†	12127.2	9248.7	5036.8	µg/L	5036.8	ppb	09:18:01
2	Mg 279.077 IEC†	1323.8	1285.8	5178.5	µg/L	5178.5	ppb	09:18:21
2	Na 589.592 Radial†	59787.8	58256.0	10304	µg/L	10304	ppb	09:18:01
2	Sr 421.552†	182465.5	178869.2	501.68	µg/L	501.68	ppb	09:18:01
2	Sc 361.383	520013.2	520013.2	103.90	%			09:19:20
2	Y 371.029	452750.6	452750.6	102.59	%			09:19:20
2	Ag 328.068†	63051.6	60989.4	512.93	µg/L	512.93	ppb	09:19:20
2	As 188.979†	1565.5	1504.9	515.21	µg/L	515.21	ppb	09:19:40
2	B 249.677†	18261.8	17629.7	505.51	µg/L	505.51	ppb	09:19:20
2	Ba 233.527†	68267.1	65962.1	507.73	µg/L	507.73	ppb	09:19:20
2	Be 313.107†	955430.0	924160.4	507.66	µg/L	507.66	ppb	09:19:20
2	Cd 226.502†	55891.9	54151.9	511.81	µg/L	511.81	ppb	09:19:20
2	Co 228.616†	28400.1	27416.1	501.62	µg/L	501.62	ppb	09:19:40
2	Cr 267.716†	36346.1	34827.6	507.36	µg/L	507.36	ppb	09:19:20
2	Cu 324.752†	96653.1	88819.2	506.43	µg/L	506.43	ppb	09:19:20
2	Mn 257.610†	397153.7	381986.7	508.37	µg/L	508.37	ppb	09:19:20
2	Mo 202.031†	10415.3	10069.4	510.53	µg/L	510.53	ppb	09:19:40
2	Ni 231.604†	20521.6	19951.7	502.92	µg/L	502.92	ppb	09:19:40
2	P 214.914†	6250.3	5468.8	2353.7	µg/L	2353.7	ppb	09:19:40
2	Pb 220.353†	5836.1	5307.8	515.08	µg/L	515.08	ppb	09:19:40

2	S 181.975 Axial†	989.2	911.3	1022.6	µg/L	1022.6	ppb	09:19:40
2	Sb 206.836†	2098.2	1939.6	512.74	µg/L	512.74	ppb	09:19:40
2	Se 196.026†	1337.2	1391.1	516.35	µg/L	516.35	ppb	09:19:40
2	SiO2†	55203.6	50460.0	5452.7	µg/L	5452.7	ppb	09:19:20
2	Si 251.611†	70116.7	67019.1	2536.1	µg/L	2536.1	ppb	09:19:20
2	Sn 189.927†	5405.4	5126.9	511.45	µg/L	511.45	ppb	09:19:40
2	Ti 334.940†	171206.0	166775.6	506.27	µg/L	506.27	ppb	09:19:20
2	Tl 190.801†	2659.1	2682.6	514.53	µg/L	514.53	ppb	09:19:40
2	U 409.014†	1703.3	8509.8	514.01	µg/L	514.01	ppb	09:19:20
2	V 292.402†	47019.1	45183.9	511.50	µg/L	511.50	ppb	09:19:20
2	Zn 213.857†	76546.1	72516.6	506.56	µg/L	506.56	ppb	09:19:20
3	Sc RADIAL	16734.3	16734.3	102	%			09:18:46
3	Al 396.153Radial†	12520.5	11935.7	4990.6	µg/L	4990.6	ppb	09:18:26
3	Ca 317.933Radial†	12542.6	12187.5	5167.9	µg/L	5167.9	ppb	09:18:46
3	Fe 238.204 Radial†	10182.0	9924.6	5168.8	µg/L	5168.8	ppb	09:18:46
3	K 766.490 Radial†	12212.8	9300.0	5064.7	µg/L	5064.7	ppb	09:18:26
3	Mg 279.077 IEC†	1319.4	1277.9	5146.8	µg/L	5146.8	ppb	09:18:46
3	Na 589.592 Radial†	59958.8	58263.7	10306	µg/L	10306	ppb	09:18:26
3	Sr 421.552†	182848.0	178756.2	501.36	µg/L	501.36	ppb	09:18:26
3	Sc 361.383	518397.7	518397.7	103.57	%			09:19:46
3	Y 371.029	451510.5	451510.5	102.31	%			09:19:46
3	Ag 328.068†	62834.4	60968.8	512.77	µg/L	512.77	ppb	09:19:46
3	As 188.979†	1579.9	1523.5	521.54	µg/L	521.54	ppb	09:20:06
3	B 249.677†	18223.4	17647.4	506.01	µg/L	506.01	ppb	09:19:46
3	Ba 233.527†	68234.4	66135.3	509.07	µg/L	509.07	ppb	09:19:46
3	Be 313.107†	952912.4	924595.4	507.90	µg/L	507.90	ppb	09:19:46
3	Cd 226.502†	55725.0	54158.5	511.87	µg/L	511.87	ppb	09:19:46
3	Co 228.616†	28360.6	27463.2	502.49	µg/L	502.49	ppb	09:20:06
3	Cr 267.716†	36245.4	34839.4	507.53	µg/L	507.53	ppb	09:19:46
3	Cu 324.752†	96312.1	88779.9	506.21	µg/L	506.21	ppb	09:19:46
3	Mn 257.610†	395870.3	381938.8	508.31	µg/L	508.31	ppb	09:19:46
3	Mo 202.031†	10405.4	10091.0	511.63	µg/L	511.63	ppb	09:20:06
3	Ni 231.604†	20585.8	20075.2	506.04	µg/L	506.04	ppb	09:20:06
3	P 214.914†	6283.8	5519.9	2377.5	µg/L	2377.5	ppb	09:20:06
3	Pb 220.353†	5821.7	5311.4	515.45	µg/L	515.45	ppb	09:20:06
3	S 181.975 Axial†	998.3	923.1	1035.8	µg/L	1035.8	ppb	09:20:06
3	Sb 206.836†	2100.2	1947.8	514.90	µg/L	514.90	ppb	09:20:06
3	Se 196.026†	1317.9	1376.6	511.02	µg/L	511.02	ppb	09:20:06
3	SiO2†	54940.9	50372.0	5443.2	µg/L	5443.2	ppb	09:19:46
3	Si 251.611†	70021.1	67137.1	2540.6	µg/L	2540.6	ppb	09:19:46
3	Sn 189.927†	5413.1	5150.5	513.80	µg/L	513.80	ppb	09:20:06
3	Ti 334.940†	170543.1	166649.1	505.89	µg/L	505.89	ppb	09:19:46
3	Tl 190.801†	2651.7	2683.4	514.68	µg/L	514.68	ppb	09:20:06
3	U 409.014†	1586.7	8402.2	507.54	µg/L	507.54	ppb	09:19:46
3	V 292.402†	46893.7	45203.9	511.72	µg/L	511.72	ppb	09:19:46
3	Zn 213.857†	76430.4	72634.5	507.37	µg/L	507.37	ppb	09:19:46

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	519085.6	103.71	%	0.167				0.16%
Sc RADIAL	16699.8	102	%	0.2				0.18%
Y 371.029	452126.1	102.45	%	0.141				0.14%
Ag 328.068†	60944.9	512.57	µg/L	0.495	512.57	ppb	0.495	0.10%
QC value within limits for Ag 328.068 Recovery = 102.51%								
Al 396.153Radial†	11936.0	4990.7	µg/L	25.49	4990.7	ppb	25.49	0.51%
QC value within limits for Al 396.153Radial Recovery = 99.81%								
As 188.979†	1514.1	518.36	µg/L	3.166	518.36	ppb	3.166	0.61%
QC value within limits for As 188.979 Recovery = 103.67%								
B 249.677†	17608.7	504.90	µg/L	1.514	504.90	ppb	1.514	0.30%
QC value within limits for B 249.677 Recovery = 100.98%								
Ba 233.527†	66077.7	508.62	µg/L	0.770	508.62	ppb	0.770	0.15%
QC value within limits for Ba 233.527 Recovery = 101.72%								
Be 313.107†	924392.9	507.79	µg/L	0.120	507.79	ppb	0.120	0.02%
QC value within limits for Be 313.107 Recovery = 101.56%								
Ca 317.933Radial†	12180.9	5165.1	µg/L	3.49	5165.1	ppb	3.49	0.07%
QC value within limits for Ca 317.933Radial Recovery = 103.30%								
Cd 226.502†	54171.7	512.00	µg/L	0.272	512.00	ppb	0.272	0.05%
QC value within limits for Cd 226.502 Recovery = 102.40%								
Co 228.616†	27468.6	502.58	µg/L	1.016	502.58	ppb	1.016	0.20%

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   QC value within limits for Co 228.616  Recovery = 100.52%
Cr 267.716†            34795.3      506.89 µg/L         0.968      506.89 ppb          0.968   0.19%
   QC value within limits for Cr 267.716  Recovery = 101.38%
Cu 324.752†            88741.5      505.99 µg/L         0.586      505.99 ppb          0.586   0.12%
   QC value within limits for Cu 324.752  Recovery = 101.20%
Fe 238.204 Radial†      9893.1      5152.4 µg/L         14.23      5152.4 ppb          14.23   0.28%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.05%
K 766.490 Radial†       9217.7      5019.9 µg/L         55.24      5019.9 ppb          55.24   1.10%
   QC value within limits for K 766.490 Radial  Recovery = 100.40%
Mg 279.077 IEC†         1284.6      5173.7 µg/L         24.89      5173.7 ppb          24.89   0.48%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.47%
Mn 257.610†           382022.4      508.42 µg/L         0.140      508.42 ppb          0.140   0.03%
   QC value within limits for Mn 257.610  Recovery = 101.68%
Mo 202.031†            10097.8      511.97 µg/L         1.640      511.97 ppb          1.640   0.32%
   QC value within limits for Mo 202.031  Recovery = 102.39%
Na 589.592 Radial†     58026.0       10264 µg/L          71.7       10264 ppb           71.7   0.70%
   QC value within limits for Na 589.592 Radial  Recovery = 102.64%
Ni 231.604†            20020.6      504.66 µg/L         1.588      504.66 ppb          1.588   0.31%
   QC value within limits for Ni 231.604  Recovery = 100.93%
P 214.914†              5498.1      2367.5 µg/L         12.37      2367.5 ppb          12.37   0.52%
   QC value within limits for P 214.914  Recovery = 94.70%
Pb 220.353†             5296.1      513.96 µg/L         2.267      513.96 ppb          2.267   0.44%
   QC value within limits for Pb 220.353  Recovery = 102.79%
S 181.975 Axial†         915.4      1027.2 µg/L          7.49      1027.2 ppb           7.49   0.73%
   QC value within limits for S 181.975 Axial  Recovery = 102.72%
Sb 206.836†             1942.4      513.48 µg/L         1.226      513.48 ppb          1.226   0.24%
   QC value within limits for Sb 206.836  Recovery = 102.70%
Se 196.026†             1384.0      513.73 µg/L         2.666      513.73 ppb          2.666   0.52%
   QC value within limits for Se 196.026  Recovery = 102.75%
SiO2†                  50417.8      5448.1 µg/L          4.76      5448.1 ppb           4.76   0.09%
   QC value within limits for SiO2  Recovery = 101.88%
Si 251.611†            67091.6      2538.9 µg/L          2.40      2538.9 ppb           2.40   0.09%
   QC value within limits for Si 251.611  Recovery = 101.55%
Sn 189.927†             5140.8      512.84 µg/L         1.232      512.84 ppb          1.232   0.24%
   QC value within limits for Sn 189.927  Recovery = 102.57%
Sr 421.552†           178122.3      499.58 µg/L         3.359      499.58 ppb          3.359   0.67%
   QC value within limits for Sr 421.552  Recovery = 99.92%
Ti 334.940†           166757.7      506.22 µg/L         0.303      506.22 ppb          0.303   0.06%
   QC value within limits for Ti 334.940  Recovery = 101.24%
Tl 190.801†             2679.7      513.96 µg/L         1.121      513.96 ppb          1.121   0.22%
   QC value within limits for Tl 190.801  Recovery = 102.79%
U 409.014†              8463.7      511.24 µg/L         3.336      511.24 ppb          3.336   0.65%
   QC value within limits for U 409.014  Recovery = 102.25%
V 292.402†             45222.2      511.93 µg/L         0.572      511.93 ppb          0.572   0.11%
   QC value within limits for V 292.402  Recovery = 102.39%
Zn 213.857†            72574.6      506.96 µg/L         0.404      506.96 ppb          0.404   0.08%
   QC value within limits for Zn 213.857  Recovery = 101.39%
All analyte(s) passed QC.
```

Sequence No.: 11 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 09:20:14**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16638.9	16638.9	102	%			09:20:42
1	Al 396.153Radial†	312.3	3.0	1.2438	µg/L	1.2438	ppb	09:20:42
1	Ca 317.933Radial†	61.1	-13.9	-5.8832	µg/L	-5.8832	ppb	09:21:02
1	Fe 238.204 Radial†	28.8	-0.8	-0.4368	µg/L	-0.4368	ppb	09:21:02
1	K 766.490 Radial†	2555.1	-126.8	-69.082	µg/L	-69.082	ppb	09:20:42
1	Mg 279.077 IEC†	6.3	-5.7	-22.770	µg/L	-22.770	ppb	09:21:02
1	Na 589.592 Radial†	229.5	-125.2	-22.152	µg/L	-22.152	ppb	09:20:42
1	Sr 421.552†	-5.4	2.1	0.0060	µg/L	0.0060	ppb	09:20:42
1	Sc 361.383	517907.6	517907.6	103.48	%			09:22:00
1	Y 371.029	455838.1	455838.1	103.29	%			09:22:00
1	Ag 328.068†	-299.2	13.0	0.0873	µg/L	0.0873	ppb	09:22:00
1	As 188.979†	4.7	2.6	0.9002	µg/L	0.9002	ppb	09:22:20
1	B 249.677†	19.1	71.2	2.0499	µg/L	2.0499	ppb	09:22:20
1	Ba 233.527†	-242.6	20.5	0.1566	µg/L	0.1566	ppb	09:22:20
1	Be 313.107†	-4625.3	87.2	0.0480	µg/L	0.0480	ppb	09:22:00
1	Cd 226.502†	-347.2	20.3	0.1924	µg/L	0.1924	ppb	09:22:20
1	Co 228.616†	-88.5	-4.5	-0.0811	µg/L	-0.0811	ppb	09:22:20
1	Cr 267.716†	199.3	37.0	0.5333	µg/L	0.5333	ppb	09:22:20
1	Cu 324.752†	4351.1	-4.7	-0.0337	µg/L	-0.0337	ppb	09:22:00
1	Mn 257.610†	303.5	18.9	0.0261	µg/L	0.0261	ppb	09:22:20
1	Mo 202.031†	-37.6	8.2	0.4179	µg/L	0.4179	ppb	09:22:20
1	Ni 231.604†	-198.6	7.7	0.1934	µg/L	0.1934	ppb	09:22:20
1	P 214.914†	557.5	-8.3	-3.8493	µg/L	-3.8493	ppb	09:22:20
1	Pb 220.353†	304.4	-15.3	-1.4896	µg/L	-1.4896	ppb	09:22:20
1	S 181.975 Axial†	50.8	8.3	9.3049	µg/L	9.3049	ppb	09:22:20
1	Sb 206.836†	81.2	-1.4	-0.3675	µg/L	-0.3675	ppb	09:22:20
1	Se 196.026†	-112.9	-5.0	-1.8447	µg/L	-1.8447	ppb	09:22:20
1	SiO2†	2799.0	31.5	3.4017	µg/L	3.4017	ppb	09:22:00
1	Si 251.611†	538.6	52.1	1.9727	µg/L	1.9727	ppb	09:22:20
1	Sn 189.927†	82.1	3.5	0.3452	µg/L	0.3452	ppb	09:22:20
1	Ti 334.940†	-2100.4	-40.3	-0.1252	µg/L	-0.1252	ppb	09:22:00
1	Tl 190.801†	-118.6	8.6	1.6542	µg/L	1.6542	ppb	09:22:20
1	U 409.014†	-6961.1	143.0	8.6190	µg/L	8.6190	ppb	09:22:00
1	V 292.402†	-67.1	-136.9	-1.5101	µg/L	-1.5101	ppb	09:22:00
1	Zn 213.857†	1232.0	31.4	0.2198	µg/L	0.2198	ppb	09:22:20
2	Sc RADIAL	17046.9	17046.9	104	%			09:21:08
2	Al 396.153Radial†	375.8	56.5	23.676	µg/L	23.676	ppb	09:21:08
2	Ca 317.933Radial†	62.5	-14.0	-5.9303	µg/L	-5.9303	ppb	09:21:28
2	Fe 238.204 Radial†	37.0	6.3	3.2787	µg/L	3.2787	ppb	09:21:28
2	K 766.490 Radial†	2572.3	-170.5	-92.883	µg/L	-92.883	ppb	09:21:08
2	Mg 279.077 IEC†	13.9	1.4	5.6930	µg/L	5.6930	ppb	09:21:28
2	Na 589.592 Radial†	365.2	-0.4	-0.0775	µg/L	-0.0775	ppb	09:21:08
2	Sr 421.552†	85.1	89.1	0.2501	µg/L	0.2501	ppb	09:21:08
2	Sc 361.383	512812.8	512812.8	102.46	%			09:22:25
2	Y 371.029	451392.8	451392.8	102.28	%			09:22:25
2	Ag 328.068†	-259.4	49.0	0.4067	µg/L	0.4067	ppb	09:22:25
2	As 188.979†	-4.1	-5.9	-2.0049	µg/L	-2.0049	ppb	09:22:45
2	B 249.677†	-9.6	43.3	1.2466	µg/L	1.2466	ppb	09:22:45
2	Ba 233.527†	-250.2	10.6	0.0822	µg/L	0.0822	ppb	09:22:45
2	Be 313.107†	-4641.1	27.4	0.0151	µg/L	0.0151	ppb	09:22:25
2	Cd 226.502†	-346.4	17.8	0.1678	µg/L	0.1678	ppb	09:22:45
2	Co 228.616†	-94.0	-10.7	-0.1932	µg/L	-0.1932	ppb	09:22:45
2	Cr 267.716†	175.6	15.8	0.2327	µg/L	0.2327	ppb	09:22:45
2	Cu 324.752†	4336.0	22.4	0.1308	µg/L	0.1308	ppb	09:22:25
2	Mn 257.610†	250.1	-30.3	-0.0407	µg/L	-0.0407	ppb	09:22:45
2	Mo 202.031†	-11.3	33.6	1.7022	µg/L	1.7022	ppb	09:22:45
2	Ni 231.604†	-213.5	-8.7	-0.2205	µg/L	-0.2205	ppb	09:22:45
2	P 214.914†	554.1	-6.3	-2.9599	µg/L	-2.9599	ppb	09:22:45
2	Pb 220.353†	339.1	21.5	2.0827	µg/L	2.0827	ppb	09:22:45

2	S 181.975 Axial†	44.2	2.3	2.6355	µg/L	2.6355	ppb	09:22:45
2	Sb 206.836†	89.2	7.1	1.8738	µg/L	1.8738	ppb	09:22:45
2	Se 196.026†	-106.1	0.5	0.2091	µg/L	0.2091	ppb	09:22:45
2	SiO2†	2739.0	-0.2	0.0018	µg/L	0.0018	ppb	09:22:25
2	Si 251.611†	510.6	30.0	1.1164	µg/L	1.1164	ppb	09:22:45
2	Sn 189.927†	84.0	6.1	0.6064	µg/L	0.6064	ppb	09:22:45
2	Ti 334.940†	-2060.9	-21.9	-0.0659	µg/L	-0.0659	ppb	09:22:25
2	Tl 190.801†	-106.3	19.6	3.7379	µg/L	3.7379	ppb	09:22:45
2	U 409.014†	-7115.5	-74.6	-4.4938	µg/L	-4.4938	ppb	09:22:25
2	V 292.402†	56.0	-17.3	-0.1799	µg/L	-0.1799	ppb	09:22:25
2	Zn 213.857†	1217.2	28.8	0.2038	µg/L	0.2038	ppb	09:22:45
3	Sc RADIAL	16957.9	16957.9	104	%			09:21:33
3	Al 396.153Radial†	351.9	35.4	14.831	µg/L	14.831	ppb	09:21:33
3	Ca 317.933Radial†	96.0	18.7	7.9130	µg/L	7.9130	ppb	09:21:53
3	Fe 238.204 Radial†	34.2	3.9	2.0054	µg/L	2.0054	ppb	09:21:53
3	K 766.490 Radial†	2673.6	-59.8	-32.586	µg/L	-32.586	ppb	09:21:33
3	Mg 279.077 IEC†	0.1	-11.9	-47.710	µg/L	-47.710	ppb	09:21:53
3	Na 589.592 Radial†	276.7	-84.0	-14.860	µg/L	-14.860	ppb	09:21:33
3	Sr 421.552†	128.2	131.1	0.3677	µg/L	0.3677	ppb	09:21:33
3	Sc 361.383	512329.2	512329.2	102.36	%			09:22:50
3	Y 371.029	450997.0	450997.0	102.19	%			09:22:50
3	Ag 328.068†	-369.5	-58.9	-0.4868	µg/L	-0.4868	ppb	09:22:50
3	As 188.979†	-2.5	-4.3	-1.4627	µg/L	-1.4627	ppb	09:23:10
3	B 249.677†	-40.4	13.3	0.3814	µg/L	0.3814	ppb	09:23:10
3	Ba 233.527†	-248.3	12.2	0.0944	µg/L	0.0944	ppb	09:23:10
3	Be 313.107†	-4744.0	-77.3	-0.0425	µg/L	-0.0425	ppb	09:22:50
3	Cd 226.502†	-359.6	4.6	0.0428	µg/L	0.0428	ppb	09:23:10
3	Co 228.616†	-82.3	0.6	0.0112	µg/L	0.0112	ppb	09:23:10
3	Cr 267.716†	162.6	3.3	0.0490	µg/L	0.0490	ppb	09:23:10
3	Cu 324.752†	4268.9	-39.1	-0.2224	µg/L	-0.2224	ppb	09:22:50
3	Mn 257.610†	272.7	-8.1	-0.0088	µg/L	-0.0088	ppb	09:23:10
3	Mo 202.031†	-42.8	2.8	0.1415	µg/L	0.1415	ppb	09:23:10
3	Ni 231.604†	-224.6	-19.8	-0.4991	µg/L	-0.4991	ppb	09:23:10
3	P 214.914†	563.7	3.5	1.7331	µg/L	1.7331	ppb	09:23:10
3	Pb 220.353†	308.1	-8.5	-0.8308	µg/L	-0.8308	ppb	09:23:10
3	S 181.975 Axial†	42.7	0.9	1.0029	µg/L	1.0029	ppb	09:23:10
3	Sb 206.836†	77.2	-4.5	-1.1857	µg/L	-1.1857	ppb	09:23:10
3	Se 196.026†	-119.1	-12.3	-4.5144	µg/L	-4.5144	ppb	09:23:10
3	SiO2†	2832.2	93.4	10.083	µg/L	10.083	ppb	09:22:50
3	Si 251.611†	527.2	46.7	1.7694	µg/L	1.7694	ppb	09:23:10
3	Sn 189.927†	72.7	-4.9	-0.4836	µg/L	-0.4836	ppb	09:23:10
3	Ti 334.940†	-2050.8	-14.0	-0.0371	µg/L	-0.0371	ppb	09:22:50
3	Tl 190.801†	-110.0	15.8	3.0169	µg/L	3.0169	ppb	09:23:10
3	U 409.014†	-7049.2	-16.4	-0.9870	µg/L	-0.9870	ppb	09:22:50
3	V 292.402†	92.7	18.5	0.2068	µg/L	0.2068	ppb	09:22:50
3	Zn 213.857†	1228.3	40.7	0.2900	µg/L	0.2900	ppb	09:23:10

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	514349.9	102.76	%	0.617				0.60%
Sc RADIAL	16881.3	103	%	1.3				1.27%
Y 371.029	452742.6	102.59	%	0.609				0.59%
Ag 328.068†	1.0	0.0024	µg/L	0.45275	0.0024	ppb	0.45275	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	31.6	13.250	µg/L	11.2992	13.250	ppb	11.2992	85.28%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-2.5	-0.8558	µg/L	1.54471	-0.8558	ppb	1.54471	180.50%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	42.6	1.2260	µg/L	0.83443	1.2260	ppb	0.83443	68.06%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	14.4	0.1111	µg/L	0.03992	0.1111	ppb	0.03992	35.94%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	12.5	0.0069	µg/L	0.04578	0.0069	ppb	0.04578	667.33%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.1	-1.3002	µg/L	7.97890	-1.3002	ppb	7.97890	613.67%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	14.2	0.1343	µg/L	0.08018	0.1343	ppb	0.08018	59.68%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-4.9	-0.0877	µg/L	0.10236	-0.0877	ppb	0.10236	116.75%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                18.7      0.2716 µg/L       0.24449      0.2716 ppb        0.24449  90.00%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -7.1     -0.0417 µg/L       0.17676     -0.0417 ppb        0.17676 423.39%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.1      1.6158 µg/L       1.88813      1.6158 ppb        1.88813 116.86%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -119.0     -64.850 µg/L       30.3705     -64.850 ppb        30.3705  46.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -5.4     -21.596 µg/L       26.7208     -21.596 ppb        26.7208 123.73%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -6.5     -0.0078 µg/L       0.03337     -0.0078 ppb        0.03337 427.25%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                14.9      0.7539 µg/L       0.83286      0.7539 ppb        0.83286 110.48%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -69.9     -12.363 µg/L       11.2471     -12.363 ppb        11.2471  90.97%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                -7.0     -0.1754 µg/L       0.34845     -0.1754 ppb        0.34845 198.69%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -3.7     -1.6920 µg/L       2.99943     -1.6920 ppb        2.99943 177.27%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -0.7     -0.0792 µg/L       1.90107     -0.0792 ppb        1.90107 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            3.8      4.3144 µg/L       4.39825      4.3144 ppb        4.39825 101.94%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 0.4      0.1069 µg/L       1.58394      0.1069 ppb        1.58394 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -5.6     -2.0500 µg/L       2.36843     -2.0500 ppb        2.36843 115.53%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      41.6      4.4954 µg/L       5.12861      4.4954 ppb        5.12861 114.09%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                42.9      1.6195 µg/L       0.44738      1.6195 ppb        0.44738  27.62%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.6      0.1560 µg/L       0.56909      0.1560 ppb        0.56909 364.88%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                74.1      0.2079 µg/L       0.18451      0.2079 ppb        0.18451  88.74%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -25.4     -0.0761 µg/L       0.04493     -0.0761 ppb        0.04493  59.08%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                14.7      2.8030 µg/L       1.05819      2.8030 ppb        1.05819  37.75%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 17.3      1.0461 µg/L       6.78873      1.0461 ppb        6.78873 648.98%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -45.2     -0.4944 µg/L       0.90058     -0.4944 ppb        0.90058 182.15%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                33.6      0.2379 µg/L       0.04588      0.2379 ppb        0.04588  19.29%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 12 **Autosampler Location: 308**
Sample ID: 1202266499|1049744|1 **Date Collected: 12/3/2010 09:23:18**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1202266499|1049744|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16300.4	16300.4	99.6	%			09:23:49
1	Al 396.153Radial†	389.7	87.0	36.491	µg/L	36.491	ppb	09:23:49
1	Ca 317.933Radial†	101.7	28.1	11.897	µg/L	11.897	ppb	09:24:09
1	Fe 238.204 Radial†	41.5	12.5	6.5175	µg/L	6.5175	ppb	09:24:09
1	K 766.490 Radial†	2656.7	27.3	14.884	µg/L	14.884	ppb	09:23:49
1	Mg 279.077 IEC†	4.2	-7.7	-30.875	µg/L	-30.875	ppb	09:24:09
1	Na 589.592 Radial†	349.7	0.0	0.0073	µg/L	0.0073	ppb	09:23:49
1	Sr 421.552†	-26.0	-18.7	-0.0528	µg/L	-0.0528	ppb	09:23:49
1	Sc 361.383	513674.3	513674.3	102.63	%			09:25:06
1	Y 371.029	451877.6	451877.6	102.39	%			09:25:06
1	Ag 328.068†	-330.1	-19.5	-0.1671	µg/L	-0.1671	ppb	09:25:06
1	As 188.979†	6.1	4.0	1.3726	µg/L	1.3726	ppb	09:25:27
1	B 249.677†	-14.4	38.7	1.1135	µg/L	1.1135	ppb	09:25:27
1	Ba 233.527†	-244.0	17.1	0.1324	µg/L	0.1324	ppb	09:25:27
1	Be 313.107†	-4479.5	192.5	0.1057	µg/L	0.1057	ppb	09:25:06
1	Cd 226.502†	-351.6	13.2	0.1243	µg/L	0.1243	ppb	09:25:27
1	Co 228.616†	-84.2	-1.0	-0.0200	µg/L	-0.0200	ppb	09:25:27
1	Cr 267.716†	167.3	7.5	0.1077	µg/L	0.1077	ppb	09:25:27
1	Cu 324.752†	4343.7	22.8	0.1300	µg/L	0.1300	ppb	09:25:06
1	Mn 257.610†	331.7	48.7	0.0661	µg/L	0.0661	ppb	09:25:27
1	Mo 202.031†	-62.2	-16.0	-0.8086	µg/L	-0.8086	ppb	09:25:27
1	Ni 231.604†	-220.0	-14.8	-0.3724	µg/L	-0.3724	ppb	09:25:27
1	P 214.914†	566.3	4.7	2.1504	µg/L	2.1504	ppb	09:25:27
1	Pb 220.353†	310.5	-6.9	-0.6979	µg/L	-0.6979	ppb	09:25:27
1	S 181.975 Axial†	46.2	4.2	4.7143	µg/L	4.7143	ppb	09:25:27
1	Sb 206.836†	91.8	9.5	2.4734	µg/L	2.4734	ppb	09:25:27
1	Se 196.026†	-101.8	4.9	1.8192	µg/L	1.8192	ppb	09:25:27
1	SiO2†	2871.0	123.9	13.370	µg/L	13.370	ppb	09:25:06
1	Si 251.611†	604.1	120.3	4.5725	µg/L	4.5725	ppb	09:25:27
1	Sn 189.927†	88.9	10.7	1.0693	µg/L	1.0693	ppb	09:25:27
1	Ti 334.940†	-1922.4	116.4	0.3568	µg/L	0.3568	ppb	09:25:06
1	Tl 190.801†	-123.8	2.6	0.5084	µg/L	0.5084	ppb	09:25:27
1	U 409.014†	-7028.9	21.4	1.2931	µg/L	1.2931	ppb	09:25:06
1	V 292.402†	33.0	-39.9	-0.4527	µg/L	-0.4527	ppb	09:25:06
1	Zn 213.857†	1463.9	267.2	1.8834	µg/L	1.8834	ppb	09:25:27
2	Sc RADIAL	16969.2	16969.2	104	%			09:24:14
2	Al 396.153Radial†	350.2	33.6	14.077	µg/L	14.077	ppb	09:24:14
2	Ca 317.933Radial†	108.9	31.0	13.146	µg/L	13.146	ppb	09:24:35
2	Fe 238.204 Radial†	39.1	8.5	4.4257	µg/L	4.4257	ppb	09:24:35
2	K 766.490 Radial†	2720.2	-16.6	-9.0512	µg/L	-9.0512	ppb	09:24:14
2	Mg 279.077 IEC†	0.5	-11.4	-45.975	µg/L	-45.975	ppb	09:24:35
2	Na 589.592 Radial†	292.8	-68.7	-12.149	µg/L	-12.149	ppb	09:24:14
2	Sr 421.552†	112.2	115.6	0.3239	µg/L	0.3239	ppb	09:24:14
2	Sc 361.383	514602.7	514602.7	102.81	%			09:25:32
2	Y 371.029	452650.6	452650.6	102.57	%			09:25:32
2	Ag 328.068†	-285.7	24.3	0.1914	µg/L	0.1914	ppb	09:25:32
2	As 188.979†	-1.3	-3.2	-1.0678	µg/L	-1.0678	ppb	09:25:52
2	B 249.677†	-33.7	19.9	0.5723	µg/L	0.5723	ppb	09:25:52
2	Ba 233.527†	-235.1	26.2	0.2014	µg/L	0.2014	ppb	09:25:52
2	Be 313.107†	-4670.9	14.2	0.0078	µg/L	0.0078	ppb	09:25:32
2	Cd 226.502†	-376.1	-9.9	-0.0942	µg/L	-0.0942	ppb	09:25:52
2	Co 228.616†	-81.1	2.1	0.0388	µg/L	0.0388	ppb	09:25:52
2	Cr 267.716†	199.2	38.2	0.5541	µg/L	0.5541	ppb	09:25:52
2	Cu 324.752†	4220.4	-104.8	-0.6004	µg/L	-0.6004	ppb	09:25:32
2	Mn 257.610†	300.0	17.3	0.0249	µg/L	0.0249	ppb	09:25:52
2	Mo 202.031†	-47.7	-1.8	-0.0921	µg/L	-0.0921	ppb	09:25:52
2	Ni 231.604†	-208.6	-3.3	-0.0831	µg/L	-0.0831	ppb	09:25:52
2	P 214.914†	560.2	-2.2	-0.8038	µg/L	-0.8038	ppb	09:25:52
2	Pb 220.353†	317.0	-1.1	-0.1140	µg/L	-0.1140	ppb	09:25:52

2	S 181.975 Axial†	40.5	-1.4	-1.5856	µg/L	-1.5856	ppb	09:25:52
2	Sb 206.836†	86.4	4.1	1.0799	µg/L	1.0799	ppb	09:25:52
2	Se 196.026†	-99.9	6.9	2.5323	µg/L	2.5323	ppb	09:25:52
2	SiO2†	2886.5	133.9	14.459	µg/L	14.459	ppb	09:25:32
2	Si 251.611†	615.2	129.9	4.9306	µg/L	4.9306	ppb	09:25:52
2	Sn 189.927†	84.1	6.0	0.5953	µg/L	0.5953	ppb	09:25:52
2	Ti 334.940†	-2035.7	9.5	0.0325	µg/L	0.0325	ppb	09:25:32
2	Tl 190.801†	-118.4	8.1	1.5504	µg/L	1.5504	ppb	09:25:52
2	U 409.014†	-6999.9	62.0	3.7386	µg/L	3.7386	ppb	09:25:32
2	V 292.402†	-1.0	-73.0	-0.8096	µg/L	-0.8096	ppb	09:25:32
2	Zn 213.857†	1427.2	228.9	1.6132	µg/L	1.6132	ppb	09:25:52
3	Sc RADIAL	16907.6	16907.6	103	%			09:24:40
3	Al 396.153Radial†	359.2	43.4	18.211	µg/L	18.211	ppb	09:24:40
3	Ca 317.933Radial†	80.2	3.6	1.5230	µg/L	1.5230	ppb	09:25:00
3	Fe 238.204 Radial†	40.1	9.6	5.0037	µg/L	5.0037	ppb	09:25:00
3	K 766.490 Radial†	2495.3	-224.6	-122.39	µg/L	-122.39	ppb	09:24:40
3	Mg 279.077 IEC†	9.5	-2.7	-10.973	µg/L	-10.973	ppb	09:25:00
3	Na 589.592 Radial†	314.7	-46.4	-8.2147	µg/L	-8.2147	ppb	09:24:40
3	Sr 421.552†	75.1	80.1	0.2246	µg/L	0.2246	ppb	09:24:40
3	Sc 361.383	517125.0	517125.0	103.32	%			09:25:57
3	Y 371.029	455019.4	455019.4	103.10	%			09:25:57
3	Ag 328.068†	-311.7	0.5	-0.0049	µg/L	-0.0049	ppb	09:25:57
3	As 188.979†	2.4	0.5	0.1607	µg/L	0.1607	ppb	09:26:17
3	B 249.677†	-12.0	41.1	1.1836	µg/L	1.1836	ppb	09:26:17
3	Ba 233.527†	-226.5	35.6	0.2741	µg/L	0.2741	ppb	09:26:17
3	Be 313.107†	-4510.7	191.4	0.1051	µg/L	0.1051	ppb	09:25:57
3	Cd 226.502†	-380.3	-12.3	-0.1161	µg/L	-0.1161	ppb	09:26:17
3	Co 228.616†	-99.9	-15.7	-0.2875	µg/L	-0.2875	ppb	09:26:17
3	Cr 267.716†	168.8	7.8	0.1091	µg/L	0.1091	ppb	09:26:17
3	Cu 324.752†	4285.7	-61.6	-0.3570	µg/L	-0.3570	ppb	09:25:57
3	Mn 257.610†	313.9	29.3	0.0395	µg/L	0.0395	ppb	09:26:17
3	Mo 202.031†	-46.6	-0.5	-0.0274	µg/L	-0.0274	ppb	09:26:17
3	Ni 231.604†	-200.2	5.8	0.1472	µg/L	0.1472	ppb	09:26:17
3	P 214.914†	545.9	-18.8	-8.5786	µg/L	-8.5786	ppb	09:26:17
3	Pb 220.353†	305.6	-13.7	-1.3400	µg/L	-1.3400	ppb	09:26:17
3	S 181.975 Axial†	48.7	6.3	7.0258	µg/L	7.0258	ppb	09:26:17
3	Sb 206.836†	93.9	10.9	2.8513	µg/L	2.8513	ppb	09:26:17
3	Se 196.026†	-114.9	-7.1	-2.6207	µg/L	-2.6207	ppb	09:26:17
3	SiO2†	2818.0	54.0	5.8257	µg/L	5.8257	ppb	09:25:57
3	Si 251.611†	630.1	141.5	5.3681	µg/L	5.3681	ppb	09:26:17
3	Sn 189.927†	93.7	14.9	1.4819	µg/L	1.4819	ppb	09:26:17
3	Ti 334.940†	-1949.8	102.3	0.3085	µg/L	0.3085	ppb	09:25:57
3	Tl 190.801†	-115.9	11.0	2.1150	µg/L	2.1150	ppb	09:26:17
3	U 409.014†	-6969.3	124.9	7.5283	µg/L	7.5283	ppb	09:25:57
3	V 292.402†	23.0	-49.8	-0.5470	µg/L	-0.5470	ppb	09:25:57
3	Zn 213.857†	1458.5	252.5	1.7772	µg/L	1.7772	ppb	09:26:17

Mean Data: 1202266499|1049744|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	515134.0	102.92	%	0.357				0.35%
Sc RADIAL	16725.7	102	%	2.3				2.21%
Y 371.029	453182.5	102.69	%	0.371				0.36%
Ag 328.068†	1.7	0.0065	µg/L	0.17952	0.0065	ppb	0.17952	>999.9%
Al 396.153Radial†	54.7	22.927	µg/L	11.9279	22.927	ppb	11.9279	52.03%
As 188.979†	0.5	0.1552	µg/L	1.22023	0.1552	ppb	1.22023	786.43%
B 249.677†	33.2	0.9565	µg/L	0.33457	0.9565	ppb	0.33457	34.98%
Ba 233.527†	26.3	0.2026	µg/L	0.07084	0.2026	ppb	0.07084	34.96%
Be 313.107†	132.7	0.0729	µg/L	0.05636	0.0729	ppb	0.05636	77.36%
Ca 317.933Radial†	20.9	8.8556	µg/L	6.38089	8.8556	ppb	6.38089	72.05%
Cd 226.502†	-3.0	-0.0287	µg/L	0.13291	-0.0287	ppb	0.13291	463.63%
Co 228.616†	-4.8	-0.0895	µg/L	0.17390	-0.0895	ppb	0.17390	194.21%
Cr 267.716†	17.8	0.2570	µg/L	0.25731	0.2570	ppb	0.25731	100.14%
Cu 324.752†	-47.8	-0.2758	µg/L	0.37189	-0.2758	ppb	0.37189	134.84%
Fe 238.204 Radial†	10.2	5.3156	µg/L	1.08024	5.3156	ppb	1.08024	20.32%
K 766.490 Radial†	-71.3	-38.852	µg/L	73.3279	-38.852	ppb	73.3279	188.74%
Mg 279.077 IEC†	-7.3	-29.274	µg/L	17.5557	-29.274	ppb	17.5557	59.97%
Mn 257.610†	31.8	0.0435	µg/L	0.02091	0.0435	ppb	0.02091	48.11%
Mo 202.031†	-6.1	-0.3094	µg/L	0.43355	-0.3094	ppb	0.43355	140.14%
Na 589.592 Radial†	-38.4	-6.7855	µg/L	6.20296	-6.7855	ppb	6.20296	91.41%

Ni 231.604†	-4.1	-0.1028 µg/L	0.26034	-0.1028 ppb	0.26034	253.33%
P 214.914†	-5.4	-2.4107 µg/L	5.54205	-2.4107 ppb	5.54205	229.90%
Pb 220.353†	-7.2	-0.7173 µg/L	0.61327	-0.7173 ppb	0.61327	85.50%
S 181.975 Axial†	3.0	3.3848 µg/L	4.45698	3.3848 ppb	4.45698	131.68%
Sb 206.836†	8.2	2.1349 µg/L	0.93299	2.1349 ppb	0.93299	43.70%
Se 196.026†	1.6	0.5770 µg/L	2.79210	0.5770 ppb	2.79210	483.94%
SiO2†	104.0	11.218 µg/L	4.7015	11.218 ppb	4.7015	41.91%
Si 251.611†	130.6	4.9571 µg/L	0.39849	4.9571 ppb	0.39849	8.04%
Sn 189.927†	10.5	1.0489 µg/L	0.44367	1.0489 ppb	0.44367	42.30%
Sr 421.552†	59.0	0.1652 µg/L	0.19524	0.1652 ppb	0.19524	118.15%
Ti 334.940†	76.1	0.2326 µg/L	0.17497	0.2326 ppb	0.17497	75.22%
Tl 190.801†	7.3	1.3913 µg/L	0.81502	1.3913 ppb	0.81502	58.58%
U 409.014†	69.4	4.1867 µg/L	3.14165	4.1867 ppb	3.14165	75.04%
V 292.402†	-54.2	-0.6031 µg/L	0.18495	-0.6031 ppb	0.18495	30.67%
Zn 213.857†	249.5	1.7579 µg/L	0.13612	1.7579 ppb	0.13612	7.74%

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Sequence No.: 13 **Autosampler Location: 309**
Sample ID: 1202266500|1049744|1 **Date Collected: 12/3/2010 09:26:25**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1202266500|1049744|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16679.1	16679.1	102	%			09:27:14
1	Al 396.153Radial†	12495.5	11951.8	4996.9	µg/L	4996.9	ppb	09:26:54
1	Ca 317.933Radial†	12891.6	12570.4	5330.3	µg/L	5330.3	ppb	09:27:14
1	Fe 238.204 Radial†	10215.9	9990.8	5203.4	µg/L	5203.4	ppb	09:27:14
1	K 766.490 Radial†	12030.9	9161.2	4989.8	µg/L	4989.8	ppb	09:26:54
1	Mg 279.077 IEC†	1367.2	1329.0	5352.8	µg/L	5352.8	ppb	09:27:14
1	Na 589.592 Radial†	29951.6	29026.2	5134.2	µg/L	5134.2	ppb	09:26:54
1	Sr 421.552†	183865.8	180346.7	505.82	µg/L	505.82	ppb	09:26:54
1	Sc 361.383	519716.0	519716.0	103.84	%			09:28:12
1	Y 371.029	453041.3	453041.3	102.66	%			09:28:12
1	Ag 328.068†	63504.3	61460.1	516.87	µg/L	516.87	ppb	09:28:12
1	As 188.979†	1587.5	1527.0	522.83	µg/L	522.83	ppb	09:28:17
1	B 249.677†	18548.4	17915.8	513.70	µg/L	513.70	ppb	09:28:17
1	Ba 233.527†	69730.7	67409.2	518.86	µg/L	518.86	ppb	09:28:12
1	Be 313.107†	971843.5	940493.4	516.63	µg/L	516.63	ppb	09:28:12
1	Cd 226.502†	55929.4	54218.8	512.46	µg/L	512.46	ppb	09:28:17
1	Co 228.616†	29141.7	28146.1	514.98	µg/L	514.98	ppb	09:28:17
1	Cr 267.716†	37170.3	35641.4	519.19	µg/L	519.19	ppb	09:28:17
1	Cu 324.752†	101169.9	93222.3	531.51	µg/L	531.51	ppb	09:28:12
1	Mn 257.610†	403484.7	388302.4	516.77	µg/L	516.77	ppb	09:28:12
1	Mo 202.031†	10741.3	10389.0	526.73	µg/L	526.73	ppb	09:28:17
1	Ni 231.604†	21556.6	20959.8	528.34	µg/L	528.34	ppb	09:28:17
1	P 214.914†	2012.5	1391.0	447.47	µg/L	447.47	ppb	09:28:17
1	Pb 220.353†	5957.2	5427.6	526.80	µg/L	526.80	ppb	09:28:17
1	S 181.975 Axial†	4942.1	4718.7	5296.8	µg/L	5296.8	ppb	09:28:17
1	Sb 206.836†	2155.8	1996.2	527.71	µg/L	527.71	ppb	09:28:17
1	Se 196.026†	1315.3	1370.8	508.96	µg/L	508.96	ppb	09:28:17
1	SiO2†	108229.5	101557.2	10969	µg/L	10969	ppb	09:28:12
1	Si 251.611†	140341.4	134687.7	5103.0	µg/L	5103.0	ppb	09:28:12
1	Sn 189.927†	5647.3	5362.8	534.98	µg/L	534.98	ppb	09:28:17
1	Ti 334.940†	175078.4	170599.1	517.87	µg/L	517.87	ppb	09:28:12
1	Tl 190.801†	2775.6	2796.3	536.30	µg/L	536.30	ppb	09:28:17
1	U 409.014†	2403.6	9185.1	554.73	µg/L	554.73	ppb	09:28:12
1	V 292.402†	47315.4	45495.2	515.23	µg/L	515.23	ppb	09:28:17
1	Zn 213.857†	77652.9	73624.6	514.17	µg/L	514.17	ppb	09:28:12
2	Sc RADIAL	16755.9	16755.9	102	%			09:27:40
2	Al 396.153Radial†	12880.4	12271.4	5130.8	µg/L	5130.8	ppb	09:27:20
2	Ca 317.933Radial†	12899.3	12519.9	5308.9	µg/L	5308.9	ppb	09:27:40
2	Fe 238.204 Radial†	10277.5	10005.0	5210.8	µg/L	5210.8	ppb	09:27:40
2	K 766.490 Radial†	12435.3	9502.0	5175.4	µg/L	5175.4	ppb	09:27:20
2	Mg 279.077 IEC†	1365.2	1321.0	5320.5	µg/L	5320.5	ppb	09:27:40
2	Na 589.592 Radial†	30740.5	29661.8	5246.6	µg/L	5246.6	ppb	09:27:20
2	Sr 421.552†	190080.5	185587.7	520.52	µg/L	520.52	ppb	09:27:20
2	Sc 361.383	516219.7	516219.7	103.14	%			09:28:23
2	Y 371.029	450050.6	450050.6	101.98	%			09:28:23
2	Ag 328.068†	63151.4	61532.1	517.53	µg/L	517.53	ppb	09:28:23
2	As 188.979†	1624.1	1572.7	538.39	µg/L	538.39	ppb	09:28:28
2	B 249.677†	18578.2	18065.6	518.00	µg/L	518.00	ppb	09:28:28
2	Ba 233.527†	69344.9	67489.9	519.49	µg/L	519.49	ppb	09:28:23
2	Be 313.107†	965941.4	941109.9	516.97	µg/L	516.97	ppb	09:28:23
2	Cd 226.502†	56024.6	54675.9	516.78	µg/L	516.78	ppb	09:28:28
2	Co 228.616†	29187.6	28380.6	519.28	µg/L	519.28	ppb	09:28:28
2	Cr 267.716†	37239.9	35951.3	523.71	µg/L	523.71	ppb	09:28:28
2	Cu 324.752†	100297.0	93035.9	530.46	µg/L	530.46	ppb	09:28:23
2	Mn 257.610†	401032.8	388556.9	517.11	µg/L	517.11	ppb	09:28:23
2	Mo 202.031†	10731.6	10449.7	529.81	µg/L	529.81	ppb	09:28:28
2	Ni 231.604†	21618.6	21160.5	533.39	µg/L	533.39	ppb	09:28:28
2	P 214.914†	2018.0	1409.5	456.51	µg/L	456.51	ppb	09:28:28
2	Pb 220.353†	6035.7	5542.6	537.91	µg/L	537.91	ppb	09:28:28

2	S 181.975 Axial†	4919.0	4728.5	5307.7	µg/L	5307.7	ppb	09:28:28
2	Sb 206.836†	2188.2	2041.7	539.61	µg/L	539.61	ppb	09:28:28
2	Se 196.026†	1334.9	1398.4	519.12	µg/L	519.12	ppb	09:28:28
2	SiO2†	107533.7	101588.5	10972	µg/L	10972	ppb	09:28:23
2	Si 251.611†	139416.1	134706.0	5103.6	µg/L	5103.6	ppb	09:28:23
2	Sn 189.927†	5642.7	5395.1	538.20	µg/L	538.20	ppb	09:28:28
2	Ti 334.940†	173842.0	170542.4	517.70	µg/L	517.70	ppb	09:28:23
2	Tl 190.801†	2762.1	2801.3	537.23	µg/L	537.23	ppb	09:28:28
2	U 409.014†	2191.0	8994.6	543.25	µg/L	543.25	ppb	09:28:23
2	V 292.402†	47465.8	45949.6	520.34	µg/L	520.34	ppb	09:28:28
2	Zn 213.857†	77356.0	73843.3	515.68	µg/L	515.68	ppb	09:28:23
3	Sc RADIAL	16783.2	16783.2	103	%			09:28:05
3	Al 396.153Radial†	12803.0	12175.4	5090.8	µg/L	5090.8	ppb	09:27:45
3	Ca 317.933Radial†	12910.0	12509.8	5304.6	µg/L	5304.6	ppb	09:28:05
3	Fe 238.204 Radial†	10308.5	10018.9	5218.0	µg/L	5218.0	ppb	09:28:05
3	K 766.490 Radial†	12373.3	9421.6	5131.7	µg/L	5131.7	ppb	09:27:45
3	Mg 279.077 IEC†	1349.9	1303.9	5251.7	µg/L	5251.7	ppb	09:28:05
3	Na 589.592 Radial†	30635.4	29510.4	5219.9	µg/L	5219.9	ppb	09:27:45
3	Sr 421.552†	189370.3	184593.1	517.73	µg/L	517.73	ppb	09:27:45
3	Sc 361.383	522657.3	522657.3	104.42	%			09:28:34
3	Y 371.029	455231.2	455231.2	103.15	%			09:28:34
3	Ag 328.068†	64014.4	61604.4	518.03	µg/L	518.03	ppb	09:28:34
3	As 188.979†	1598.9	1529.2	523.56	µg/L	523.56	ppb	09:28:39
3	B 249.677†	18517.9	17786.0	509.97	µg/L	509.97	ppb	09:28:39
3	Ba 233.527†	70381.1	67654.1	520.74	µg/L	520.74	ppb	09:28:34
3	Be 313.107†	979524.1	942581.4	517.78	µg/L	517.78	ppb	09:28:34
3	Cd 226.502†	55707.8	53703.5	507.58	µg/L	507.58	ppb	09:28:39
3	Co 228.616†	29121.5	27968.7	511.73	µg/L	511.73	ppb	09:28:39
3	Cr 267.716†	36987.8	35265.2	513.71	µg/L	513.71	ppb	09:28:39
3	Cu 324.752†	101694.1	93176.0	531.26	µg/L	531.26	ppb	09:28:34
3	Mn 257.610†	406856.7	389344.8	518.16	µg/L	518.16	ppb	09:28:34
3	Mo 202.031†	10703.4	10294.5	521.94	µg/L	521.94	ppb	09:28:39
3	Ni 231.604†	21475.1	20764.9	523.42	µg/L	523.42	ppb	09:28:39
3	P 214.914†	1997.7	1366.0	435.85	µg/L	435.85	ppb	09:28:39
3	Pb 220.353†	5976.3	5413.7	525.38	µg/L	525.38	ppb	09:28:39
3	S 181.975 Axial†	4933.0	4683.2	5256.9	µg/L	5256.9	ppb	09:28:39
3	Sb 206.836†	2128.1	1958.0	517.69	µg/L	517.69	ppb	09:28:39
3	Se 196.026†	1339.0	1386.3	514.67	µg/L	514.67	ppb	09:28:39
3	SiO2†	109029.8	101737.0	10988	µg/L	10988	ppb	09:28:34
3	Si 251.611†	141395.6	134936.6	5112.5	µg/L	5112.5	ppb	09:28:34
3	Sn 189.927†	5603.9	5290.6	527.78	µg/L	527.78	ppb	09:28:39
3	Ti 334.940†	176407.8	170923.4	518.87	µg/L	518.87	ppb	09:28:34
3	Tl 190.801†	2713.8	2722.1	522.14	µg/L	522.14	ppb	09:28:39
3	U 409.014†	2197.5	8974.6	542.05	µg/L	542.05	ppb	09:28:34
3	V 292.402†	47238.5	45165.1	511.45	µg/L	511.45	ppb	09:28:39
3	Zn 213.857†	78344.2	73865.7	515.90	µg/L	515.90	ppb	09:28:34

Mean Data: 1202266500|1049744|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	519531.0	103.80	%	0.644				0.62%
Sc RADIAL	16739.4	102	%	0.3				0.32%
Y 371.029	452774.4	102.60	%	0.589				0.57%
Ag 328.068†	61532.2	517.48	µg/L	0.584	517.48	ppb	0.584	0.11%
Al 396.153Radial†	12132.9	5072.8	µg/L	68.77	5072.8	ppb	68.77	1.36%
As 188.979†	1543.0	528.26	µg/L	8.783	528.26	ppb	8.783	1.66%
B 249.677†	17922.5	513.89	µg/L	4.017	513.89	ppb	4.017	0.78%
Ba 233.527†	67517.7	519.70	µg/L	0.959	519.70	ppb	0.959	0.18%
Be 313.107†	941394.9	517.13	µg/L	0.589	517.13	ppb	0.589	0.11%
Ca 317.933Radial†	12533.4	5314.6	µg/L	13.76	5314.6	ppb	13.76	0.26%
Cd 226.502†	54199.4	512.27	µg/L	4.603	512.27	ppb	4.603	0.90%
Co 228.616†	28165.1	515.33	µg/L	3.785	515.33	ppb	3.785	0.73%
Cr 267.716†	35619.3	518.87	µg/L	5.006	518.87	ppb	5.006	0.96%
Cu 324.752†	93144.7	531.08	µg/L	0.552	531.08	ppb	0.552	0.10%
Fe 238.204 Radial†	10004.9	5210.7	µg/L	7.29	5210.7	ppb	7.29	0.14%
K 766.490 Radial†	9361.6	5099.0	µg/L	97.05	5099.0	ppb	97.05	1.90%
Mg 279.077 IEC†	1318.0	5308.4	µg/L	51.63	5308.4	ppb	51.63	0.97%
Mn 257.610†	388734.7	517.35	µg/L	0.726	517.35	ppb	0.726	0.14%
Mo 202.031†	10377.8	526.16	µg/L	3.964	526.16	ppb	3.964	0.75%
Na 589.592 Radial†	29399.5	5200.2	µg/L	58.72	5200.2	ppb	58.72	1.13%

Ni 231.604†	20961.7	528.38 µg/L	4.986	528.38 ppb	4.986	0.94%
P 214.914†	1388.8	446.61 µg/L	10.357	446.61 ppb	10.357	2.32%
Pb 220.353†	5461.3	530.03 µg/L	6.863	530.03 ppb	6.863	1.29%
S 181.975 Axial†	4710.1	5287.1 µg/L	26.76	5287.1 ppb	26.76	0.51%
Sb 206.836†	1998.7	528.34 µg/L	10.973	528.34 ppb	10.973	2.08%
Se 196.026†	1385.2	514.25 µg/L	5.093	514.25 ppb	5.093	0.99%
SiO2†	101627.6	10976 µg/L	10.3	10976 ppb	10.3	0.09%
Si 251.611†	134776.8	5106.4 µg/L	5.31	5106.4 ppb	5.31	0.10%
Sn 189.927†	5349.5	533.65 µg/L	5.334	533.65 ppb	5.334	1.00%
Sr 421.552†	183509.2	514.69 µg/L	7.810	514.69 ppb	7.810	1.52%
Ti 334.940†	170688.3	518.14 µg/L	0.631	518.14 ppb	0.631	0.12%
Tl 190.801†	2773.2	531.89 µg/L	8.456	531.89 ppb	8.456	1.59%
U 409.014†	9051.4	546.68 µg/L	7.000	546.68 ppb	7.000	1.28%
V 292.402†	45536.6	515.67 µg/L	4.459	515.67 ppb	4.459	0.86%
Zn 213.857†	73777.9	515.25 µg/L	0.941	515.25 ppb	0.941	0.18%

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Sequence No.: 14 **Autosampler Location: 310**
Sample ID: 266878005|1049744|1 **Date Collected: 12/3/2010 09:28:47**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 266878005|1049744|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16418.0	16418.0	100	%			09:29:17
1	Al 396.153Radial†	318.7	13.4	-6.6883	µg/L	-6.6883	ppb	09:29:17
1	Ca 317.933Radial†	53128.9	52864.4	22416	µg/L	22416	ppb	09:29:17
1	Fe 238.204 Radial†	49.8	20.4	10.642	µg/L	10.642	ppb	09:29:37
1	K 766.490 Radial†	8358.5	5689.5	3084.2	µg/L	3084.2	ppb	09:29:17
1	Mg 279.077 IEC†	917.7	902.5	3633.3	µg/L	3633.3	ppb	09:29:37
1	Na 589.592 Radial†	564207.9	561833.9	99378	µg/L	99378	ppb	09:29:17
1	Sr 421.552†	191187.3	190509.2	533.89	µg/L	533.89	ppb	09:29:17
1	Sc 361.383	511105.4	511105.4	102.12	%			09:30:34
1	Y 371.029	442695.1	442695.1	100.31	%			09:30:34
1	Ag 328.068†	-411.9	-101.2	-0.4736	µg/L	-0.4736	ppb	09:30:34
1	As 188.979†	25.9	23.5	8.0080	µg/L	8.0080	ppb	09:30:54
1	B 249.677†	3459.1	3440.1	99.035	µg/L	99.035	ppb	09:30:54
1	Ba 233.527†	8670.5	8745.7	67.218	µg/L	67.218	ppb	09:30:54
1	Be 313.107†	-5261.7	-595.5	-0.3271	µg/L	-0.3271	ppb	09:30:34
1	Cd 226.502†	-347.5	15.6	0.1470	µg/L	0.1470	ppb	09:30:54
1	Co 228.616†	-118.2	-34.7	-0.5497	µg/L	-0.5497	ppb	09:30:54
1	Cr 267.716†	590.6	422.8	6.1691	µg/L	6.1691	ppb	09:30:54
1	Cu 324.752†	8608.4	4220.4	24.066	µg/L	24.066	ppb	09:30:34
1	Mn 257.610†	845.8	553.7	0.5887	µg/L	0.5887	ppb	09:30:54
1	Mo 202.031†	7.4	51.8	2.7479	µg/L	2.7479	ppb	09:30:54
1	Ni 231.604†	-184.0	19.4	0.4905	µg/L	0.4905	ppb	09:30:54
1	P 214.914†	626.7	66.6	21.702	µg/L	21.702	ppb	09:30:54
1	Pb 220.353†	313.4	-2.5	1.2459	µg/L	1.2459	ppb	09:30:54
1	S 181.975 Axial†	4426.3	4293.7	4820.2	µg/L	4820.2	ppb	09:30:54
1	Sb 206.836†	92.7	10.9	2.8899	µg/L	2.8899	ppb	09:30:54
1	Se 196.026†	-108.8	-2.4	-0.8719	µg/L	-0.8719	ppb	09:30:54
1	SiO2†	372774.3	362375.7	39118	µg/L	39118	ppb	09:30:34
1	Si 251.611†	487515.3	476944.1	18093	µg/L	18093	ppb	09:30:34
1	Sn 189.927†	-1.6	-77.4	-6.1316	µg/L	-6.1316	ppb	09:30:54
1	Ti 334.940†	-2195.6	-160.6	1.7378	µg/L	1.7378	ppb	09:30:54
1	Tl 190.801†	-128.7	-2.7	-0.5843	µg/L	-0.5843	ppb	09:30:54
1	U 409.014†	-6754.7	255.6	15.406	µg/L	15.406	ppb	09:30:34
1	V 292.402†	3437.8	3294.5	36.858	µg/L	36.858	ppb	09:30:54
1	Zn 213.857†	1990.2	789.8	5.5341	µg/L	5.5341	ppb	09:30:54
2	Sc RADIAL	16685.9	16685.9	102	%			09:29:42
2	Al 396.153Radial†	312.9	2.7	-11.226	µg/L	-11.226	ppb	09:29:42
2	Ca 317.933Radial†	54195.4	53060.3	22499	µg/L	22499	ppb	09:29:42
2	Fe 238.204 Radial†	52.9	22.7	11.821	µg/L	11.821	ppb	09:30:02
2	K 766.490 Radial†	8353.9	5551.3	3008.9	µg/L	3008.9	ppb	09:29:42
2	Mg 279.077 IEC†	918.1	888.2	3575.5	µg/L	3575.5	ppb	09:30:02
2	Na 589.592 Radial†	575027.4	563418.0	99658	µg/L	99658	ppb	09:29:42
2	Sr 421.552†	195224.4	191409.5	536.41	µg/L	536.41	ppb	09:29:42
2	Sc 361.383	503245.0	503245.0	100.55	%			09:31:00
2	Y 371.029	436230.6	436230.6	98.847	%			09:31:00
2	Ag 328.068†	-327.1	-23.2	0.1806	µg/L	0.1806	ppb	09:31:00
2	As 188.979†	35.2	33.1	11.285	µg/L	11.285	ppb	09:31:20
2	B 249.677†	3423.6	3457.7	99.541	µg/L	99.541	ppb	09:31:20
2	Ba 233.527†	8596.4	8804.6	67.671	µg/L	67.671	ppb	09:31:20
2	Be 313.107†	-5174.0	-588.7	-0.3234	µg/L	-0.3234	ppb	09:31:00
2	Cd 226.502†	-335.4	22.3	0.2097	µg/L	0.2097	ppb	09:31:20
2	Co 228.616†	-108.9	-27.3	-0.4148	µg/L	-0.4148	ppb	09:31:20
2	Cr 267.716†	589.0	430.3	6.2790	µg/L	6.2790	ppb	09:31:20
2	Cu 324.752†	8607.4	4351.1	24.814	µg/L	24.814	ppb	09:31:00
2	Mn 257.610†	869.6	590.4	0.6399	µg/L	0.6399	ppb	09:31:20
2	Mo 202.031†	-6.1	38.5	2.0737	µg/L	2.0737	ppb	09:31:20
2	Ni 231.604†	-187.0	13.7	0.3443	µg/L	0.3443	ppb	09:31:20
2	P 214.914†	598.9	48.5	13.026	µg/L	13.026	ppb	09:31:20
2	Pb 220.353†	270.6	-40.3	-2.4218	µg/L	-2.4218	ppb	09:31:20

2	S 181.975 Axial†	4412.6	4347.8	4880.8	µg/L	4880.8	ppb	09:31:20
2	Sb 206.836†	90.1	9.7	2.5800	µg/L	2.5800	ppb	09:31:20
2	Se 196.026†	-102.7	1.9	0.7183	µg/L	0.7183	ppb	09:31:20
2	SiO2†	366682.0	362018.3	39079	µg/L	39079	ppb	09:31:00
2	Si 251.611†	479546.4	476475.3	18075	µg/L	18075	ppb	09:31:00
2	Sn 189.927†	-2.0	-77.8	-6.1667	µg/L	-6.1667	ppb	09:31:20
2	Ti 334.940†	-2119.8	-118.8	1.8800	µg/L	1.8800	ppb	09:31:20
2	Tl 190.801†	-130.1	-6.2	-1.2394	µg/L	-1.2394	ppb	09:31:20
2	U 409.014†	-6683.3	223.3	13.462	µg/L	13.462	ppb	09:31:00
2	V 292.402†	3427.9	3337.3	37.326	µg/L	37.326	ppb	09:31:20
2	Zn 213.857†	1960.4	790.5	5.5395	µg/L	5.5395	ppb	09:31:20
3	Sc RADIAL	16629.4	16629.4	102	%			09:30:07
3	Al 396.153Radial†	320.2	10.9	-7.8465	µg/L	-7.8465	ppb	09:30:07
3	Ca 317.933Radial†	54350.9	53393.8	22641	µg/L	22641	ppb	09:30:07
3	Fe 238.204 Radial†	54.0	24.0	12.481	µg/L	12.481	ppb	09:30:27
3	K 766.490 Radial†	8363.1	5588.2	3028.9	µg/L	3028.9	ppb	09:30:07
3	Mg 279.077 IEC†	916.2	889.4	3580.4	µg/L	3580.4	ppb	09:30:27
3	Na 589.592 Radial†	576512.0	566793.4	100260	µg/L	100260	ppb	09:30:07
3	Sr 421.552†	195679.3	192507.2	539.49	µg/L	539.49	ppb	09:30:07
3	Sc 361.383	502807.9	502807.9	100.46	%			09:31:25
3	Y 371.029	435867.8	435867.8	98.765	%			09:31:25
3	Ag 328.068†	-362.9	-59.1	-0.1118	µg/L	-0.1118	ppb	09:31:25
3	As 188.979†	30.8	28.7	9.7941	µg/L	9.7941	ppb	09:31:45
3	B 249.677†	3436.4	3473.5	99.994	µg/L	99.994	ppb	09:31:45
3	Ba 233.527†	8656.5	8871.8	68.188	µg/L	68.188	ppb	09:31:45
3	Be 313.107†	-5097.3	-516.8	-0.2838	µg/L	-0.2838	ppb	09:31:25
3	Cd 226.502†	-346.6	10.8	0.1010	µg/L	0.1010	ppb	09:31:45
3	Co 228.616†	-102.7	-21.2	-0.3035	µg/L	-0.3035	ppb	09:31:45
3	Cr 267.716†	601.9	443.6	6.4772	µg/L	6.4772	ppb	09:31:45
3	Cu 324.752†	8578.5	4329.8	24.697	µg/L	24.697	ppb	09:31:25
3	Mn 257.610†	846.8	568.4	0.6104	µg/L	0.6104	ppb	09:31:45
3	Mo 202.031†	-5.7	38.9	2.0934	µg/L	2.0934	ppb	09:31:45
3	Ni 231.604†	-195.1	5.4	0.1369	µg/L	0.1369	ppb	09:31:45
3	P 214.914†	601.4	51.6	14.489	µg/L	14.489	ppb	09:31:45
3	Pb 220.353†	305.4	-5.5	0.9745	µg/L	0.9745	ppb	09:31:45
3	S 181.975 Axial†	4424.9	4363.9	4898.9	µg/L	4898.9	ppb	09:31:45
3	Sb 206.836†	78.2	-2.1	-0.5064	µg/L	-0.5064	ppb	09:31:45
3	Se 196.026†	-99.1	5.5	2.0238	µg/L	2.0238	ppb	09:31:45
3	SiO2†	367072.1	362723.7	39155	µg/L	39155	ppb	09:31:25
3	Si 251.611†	479943.6	477285.3	18106	µg/L	18106	ppb	09:31:25
3	Sn 189.927†	-1.7	-77.6	-6.1309	µg/L	-6.1309	ppb	09:31:45
3	Ti 334.940†	-2195.0	-195.5	1.6651	µg/L	1.6651	ppb	09:31:45
3	Tl 190.801†	-112.7	11.0	2.0452	µg/L	2.0452	ppb	09:31:45
3	U 409.014†	-6773.2	128.0	7.7192	µg/L	7.7192	ppb	09:31:25
3	V 292.402†	3458.1	3370.3	37.689	µg/L	37.689	ppb	09:31:45
3	Zn 213.857†	2010.1	841.8	5.9019	µg/L	5.9019	ppb	09:31:45

Mean Data: 266878005|1049744|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	505719.4	101.04	%	0.933				0.92%
Sc RADIAL	16577.8	101	%	0.9				0.85%
Y 371.029	438264.5	99.308	%	0.8704				0.88%
Ag 328.068†	-61.2	-0.1349	µg/L	0.32771	-0.1349	ppb	0.32771	242.94%
Al 396.153Radial†	9.0	-8.5871	µg/L	2.35798	-8.5871	ppb	2.35798	27.46%
As 188.979†	28.5	9.6958	µg/L	1.64092	9.6958	ppb	1.64092	16.92%
B 249.677†	3457.1	99.523	µg/L	0.4798	99.523	ppb	0.4798	0.48%
Ba 233.527†	8807.4	67.693	µg/L	0.4852	67.693	ppb	0.4852	0.72%
Be 313.107†	-567.0	-0.3114	µg/L	0.02397	-0.3114	ppb	0.02397	7.70%
Ca 317.933Radial†	53106.2	22519	µg/L	113.5	22519	ppb	113.5	0.50%
Cd 226.502†	16.2	0.1525	µg/L	0.05456	0.1525	ppb	0.05456	35.77%
Co 228.616†	-27.7	-0.4227	µg/L	0.12326	-0.4227	ppb	0.12326	29.16%
Cr 267.716†	432.2	6.3084	µg/L	0.15615	6.3084	ppb	0.15615	2.48%
Cu 324.752†	4300.4	24.526	µg/L	0.4023	24.526	ppb	0.4023	1.64%
Fe 238.204 Radial†	22.4	11.648	µg/L	0.9317	11.648	ppb	0.9317	8.00%
K 766.490 Radial†	5609.7	3040.7	µg/L	39.02	3040.7	ppb	39.02	1.28%
Mg 279.077 IEC†	893.4	3596.4	µg/L	32.02	3596.4	ppb	32.02	0.89%
Mn 257.610†	570.9	0.6130	µg/L	0.02570	0.6130	ppb	0.02570	4.19%
Mo 202.031†	43.1	2.3050	µg/L	0.38368	2.3050	ppb	0.38368	16.65%
Na 589.592 Radial†	564015.1	99764	µg/L	448.0	99764	ppb	448.0	0.45%

Ni 231.604†	12.8	0.3239	µg/L	0.17768	0.3239	ppb	0.17768	54.86%
P 214.914†	55.6	16.406	µg/L	4.6445	16.406	ppb	4.6445	28.31%
Pb 220.353†	-16.1	-0.0671	µg/L	2.04370	-0.0671	ppb	2.04370	>999.9%
S 181.975 Axial†	4335.1	4866.6	µg/L	41.24	4866.6	ppb	41.24	0.85%
Sb 206.836†	6.2	1.6545	µg/L	1.87779	1.6545	ppb	1.87779	113.50%
Se 196.026†	1.7	0.6234	µg/L	1.45017	0.6234	ppb	1.45017	232.62%
SiO2†	362372.6	39117	µg/L	38.1	39117	ppb	38.1	0.10%
Si 251.611†	476901.6	18092	µg/L	15.4	18092	ppb	15.4	0.09%
Sn 189.927†	-77.6	-6.1431	µg/L	0.02047	-6.1431	ppb	0.02047	0.33%
Sr 421.552†	191475.3	536.60	µg/L	2.804	536.60	ppb	2.804	0.52%
Ti 334.940†	-158.3	1.7610	µg/L	0.10932	1.7610	ppb	0.10932	6.21%
Tl 190.801†	0.7	0.0738	µg/L	1.73840	0.0738	ppb	1.73840	>999.9%
U 409.014†	202.3	12.196	µg/L	3.9968	12.196	ppb	3.9968	32.77%
V 292.402†	3334.0	37.291	µg/L	0.4164	37.291	ppb	0.4164	1.12%
Zn 213.857†	807.3	5.6585	µg/L	0.21078	5.6585	ppb	0.21078	3.72%

Sequence No.: 15 **Autosampler Location: 311**
Sample ID: 1202266501|1049744|1 **Date Collected: 12/3/2010 09:31:53**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1202266501|1049744|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16486.7	16486.7	101	%			09:32:23
1	Al 396.153Radial†	335.2	28.6	-0.4732	µg/L	-0.4732	ppb	09:32:23
1	Ca 317.933Radial†	54014.0	53522.2	22695	µg/L	22695	ppb	09:32:23
1	Fe 238.204 Radial†	47.1	17.6	9.1414	µg/L	9.1414	ppb	09:32:43
1	K 766.490 Radial†	8354.8	5651.2	3063.1	µg/L	3063.1	ppb	09:32:23
1	Mg 279.077 IEC†	947.3	928.1	3736.1	µg/L	3736.1	ppb	09:32:43
1	Na 589.592 Radial†	573994.3	569202.8	100680	µg/L	100680	ppb	09:32:23
1	Sr 421.552†	194184.6	192689.8	540.00	µg/L	540.00	ppb	09:32:23
1	Sc 361.383	507875.2	507875.2	101.47	%			09:33:40
1	Y 371.029	439890.6	439890.6	99.676	%			09:33:40
1	Ag 328.068†	-337.5	-30.4	0.1250	µg/L	0.1250	ppb	09:33:40
1	As 188.979†	28.2	25.9	8.8224	µg/L	8.8224	ppb	09:34:00
1	B 249.677†	3461.9	3464.5	99.734	µg/L	99.734	ppb	09:34:00
1	Ba 233.527†	8739.7	8867.8	68.157	µg/L	68.157	ppb	09:34:00
1	Be 313.107†	-5197.9	-565.3	-0.3105	µg/L	-0.3105	ppb	09:33:40
1	Cd 226.502†	-380.1	-18.7	-0.1778	µg/L	-0.1778	ppb	09:34:00
1	Co 228.616†	-82.4	-0.2	0.0803	µg/L	0.0803	ppb	09:34:00
1	Cr 267.716†	597.0	432.8	6.3227	µg/L	6.3227	ppb	09:34:00
1	Cu 324.752†	8680.6	4345.2	24.789	µg/L	24.789	ppb	09:33:40
1	Mn 257.610†	817.4	531.0	0.5543	µg/L	0.5543	ppb	09:34:00
1	Mo 202.031†	-20.5	24.4	1.3601	µg/L	1.3601	ppb	09:34:00
1	Ni 231.604†	-186.7	15.7	0.3954	µg/L	0.3954	ppb	09:34:00
1	P 214.914†	608.5	52.6	14.912	µg/L	14.912	ppb	09:34:00
1	Pb 220.353†	294.4	-19.3	-0.3778	µg/L	-0.3778	ppb	09:34:00
1	S 181.975 Axial†	4478.6	4372.9	4909.0	µg/L	4909.0	ppb	09:34:00
1	Sb 206.836†	70.2	-10.8	-2.7743	µg/L	-2.7743	ppb	09:34:00
1	Se 196.026†	-109.6	-3.9	-1.4272	µg/L	-1.4272	ppb	09:34:00
1	SiO2†	375885.3	367763.5	39699	µg/L	39699	ppb	09:33:40
1	Si 251.611†	491766.5	484170.1	18367	µg/L	18367	ppb	09:33:40
1	Sn 189.927†	-18.6	-94.2	-7.7841	µg/L	-7.7841	ppb	09:34:00
1	Ti 334.940†	-2169.9	-148.9	1.8015	µg/L	1.8015	ppb	09:34:00
1	Tl 190.801†	-112.5	12.4	2.3058	µg/L	2.3058	ppb	09:34:00
1	U 409.014†	-6911.0	59.5	3.5883	µg/L	3.5883	ppb	09:33:40
1	V 292.402†	3469.9	3347.6	37.423	µg/L	37.423	ppb	09:34:00
1	Zn 213.857†	1863.3	677.1	4.7408	µg/L	4.7408	ppb	09:34:00
2	Sc RADIAL	16817.2	16817.2	103	%			09:32:48
2	Al 396.153Radial†	315.4	2.7	-11.359	µg/L	-11.359	ppb	09:32:48
2	Ca 317.933Radial†	55282.5	53703.0	22772	µg/L	22772	ppb	09:32:48
2	Fe 238.204 Radial†	55.4	24.7	12.860	µg/L	12.860	ppb	09:33:08
2	K 766.490 Radial†	8622.3	5748.5	3116.1	µg/L	3116.1	ppb	09:32:48
2	Mg 279.077 IEC†	934.6	897.3	3612.0	µg/L	3612.0	ppb	09:33:08
2	Na 589.592 Radial†	586608.6	570281.4	100870	µg/L	100870	ppb	09:32:48
2	Sr 421.552†	199209.2	193791.2	543.09	µg/L	543.09	ppb	09:32:48
2	Sc 361.383	504260.1	504260.1	100.75	%			09:34:05
2	Y 371.029	436697.5	436697.5	98.953	%			09:34:05
2	Ag 328.068†	-542.8	-236.7	-1.5914	µg/L	-1.5914	ppb	09:34:05
2	As 188.979†	22.6	20.5	7.0045	µg/L	7.0045	ppb	09:34:26
2	B 249.677†	3452.5	3479.6	100.17	µg/L	100.17	ppb	09:34:26
2	Ba 233.527†	8713.9	8904.0	68.436	µg/L	68.436	ppb	09:34:26
2	Be 313.107†	-5097.9	-502.8	-0.2761	µg/L	-0.2761	ppb	09:34:05
2	Cd 226.502†	-348.2	10.2	0.0958	µg/L	0.0958	ppb	09:34:26
2	Co 228.616†	-84.7	-3.0	0.0294	µg/L	0.0294	ppb	09:34:26
2	Cr 267.716†	596.3	436.3	6.3650	µg/L	6.3650	ppb	09:34:26
2	Cu 324.752†	8540.7	4267.6	24.335	µg/L	24.335	ppb	09:34:05
2	Mn 257.610†	882.2	601.1	0.6526	µg/L	0.6526	ppb	09:34:26
2	Mo 202.031†	-13.0	31.7	1.7307	µg/L	1.7307	ppb	09:34:26
2	Ni 231.604†	-178.0	23.0	0.5796	µg/L	0.5796	ppb	09:34:26
2	P 214.914†	613.3	61.6	19.275	µg/L	19.275	ppb	09:34:26
2	Pb 220.353†	304.1	-7.6	0.7729	µg/L	0.7729	ppb	09:34:26

2	S 181.975 Axial†	4456.2	4382.2	4919.5	µg/L	4919.5	ppb	09:34:26
2	Sb 206.836†	71.0	-9.5	-2.4383	µg/L	-2.4383	ppb	09:34:26
2	Se 196.026†	-108.3	-3.4	-1.2447	µg/L	-1.2447	ppb	09:34:26
2	SiO2†	371749.7	366314.3	39543	µg/L	39543	ppb	09:34:05
2	Si 251.611†	486044.6	481965.1	18284	µg/L	18284	ppb	09:34:05
2	Sn 189.927†	-9.0	-84.8	-6.8406	µg/L	-6.8406	ppb	09:34:26
2	Ti 334.940†	-2171.3	-165.6	1.7639	µg/L	1.7639	ppb	09:34:26
2	Tl 190.801†	-134.3	-10.1	-1.9871	µg/L	-1.9871	ppb	09:34:26
2	U 409.014†	-6634.1	285.5	17.211	µg/L	17.211	ppb	09:34:05
2	V 292.402†	3468.7	3370.9	37.703	µg/L	37.703	ppb	09:34:26
2	Zn 213.857†	1841.0	668.2	4.6767	µg/L	4.6767	ppb	09:34:26
3	Sc RADIAL	16882.4	16882.4	103	%			09:33:13
3	Al 396.153Radial†	300.8	-12.6	-17.823	µg/L	-17.823	ppb	09:33:13
3	Ca 317.933Radial†	55765.6	53963.2	22882	µg/L	22882	ppb	09:33:13
3	Fe 238.204 Radial†	53.0	22.2	11.551	µg/L	11.551	ppb	09:33:33
3	K 766.490 Radial†	8599.6	5694.1	3086.4	µg/L	3086.4	ppb	09:33:13
3	Mg 279.077 IEC†	929.0	888.3	3576.1	µg/L	3576.1	ppb	09:33:33
3	Na 589.592 Radial†	590177.1	571533.4	101090	µg/L	101090	ppb	09:33:13
3	Sr 421.552†	200260.1	194060.4	543.84	µg/L	543.84	ppb	09:33:13
3	Sc 361.383	506271.6	506271.6	101.15	%			09:34:31
3	Y 371.029	438700.0	438700.0	99.407	%			09:34:31
3	Ag 328.068†	-423.7	-116.7	-0.5913	µg/L	-0.5913	ppb	09:34:31
3	As 188.979†	19.1	17.0	5.7960	µg/L	5.7960	ppb	09:34:51
3	B 249.677†	3471.5	3484.7	100.32	µg/L	100.32	ppb	09:34:51
3	Ba 233.527†	8732.3	8887.8	68.311	µg/L	68.311	ppb	09:34:51
3	Be 313.107†	-5184.4	-568.2	-0.3121	µg/L	-0.3121	ppb	09:34:31
3	Cd 226.502†	-364.3	-4.3	-0.0413	µg/L	-0.0413	ppb	09:34:51
3	Co 228.616†	-81.0	0.9	0.1004	µg/L	0.1004	ppb	09:34:51
3	Cr 267.716†	617.4	454.8	6.6410	µg/L	6.6410	ppb	09:34:51
3	Cu 324.752†	8626.6	4318.9	24.636	µg/L	24.636	ppb	09:34:31
3	Mn 257.610†	824.6	540.8	0.5738	µg/L	0.5738	ppb	09:34:51
3	Mo 202.031†	-18.6	26.2	1.4529	µg/L	1.4529	ppb	09:34:51
3	Ni 231.604†	-192.5	9.3	0.2347	µg/L	0.2347	ppb	09:34:51
3	P 214.914†	605.2	51.2	14.357	µg/L	14.357	ppb	09:34:51
3	Pb 220.353†	299.4	-13.4	0.2182	µg/L	0.2182	ppb	09:34:51
3	S 181.975 Axial†	4476.1	4384.4	4921.9	µg/L	4921.9	ppb	09:34:51
3	Sb 206.836†	89.5	8.6	2.2727	µg/L	2.2727	ppb	09:34:51
3	Se 196.026†	-92.3	12.9	4.7369	µg/L	4.7369	ppb	09:34:51
3	SiO2†	373533.1	366611.3	39575	µg/L	39575	ppb	09:34:31
3	Si 251.611†	488386.3	482363.4	18299	µg/L	18299	ppb	09:34:31
3	Sn 189.927†	3.2	-72.8	-5.6348	µg/L	-5.6348	ppb	09:34:51
3	Ti 334.940†	-2146.7	-132.8	1.8839	µg/L	1.8839	ppb	09:34:51
3	Tl 190.801†	-124.3	0.4	0.0139	µg/L	0.0139	ppb	09:34:51
3	U 409.014†	-6850.2	98.0	5.9094	µg/L	5.9094	ppb	09:34:31
3	V 292.402†	3476.0	3364.5	37.616	µg/L	37.616	ppb	09:34:51
3	Zn 213.857†	1828.7	648.7	4.5417	µg/L	4.5417	ppb	09:34:51

Mean Data: 1202266501|1049744|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	506135.6	101.12	%	0.362				0.36%
Sc RADIAL	16728.8	102	%	1.3				1.27%
Y 371.029	438429.4	99.345	%	0.3657				0.37%
Ag 328.068†	-128.0	-0.6859	µg/L	0.86208	-0.6859	ppb	0.86208	125.69%
Al 396.153Radial†	6.2	-9.8850	µg/L	8.76825	-9.8850	ppb	8.76825	88.70%
As 188.979†	21.1	7.2077	µg/L	1.52340	7.2077	ppb	1.52340	21.14%
B 249.677†	3476.2	100.07	µg/L	0.302	100.07	ppb	0.302	0.30%
Ba 233.527†	8886.6	68.301	µg/L	0.1396	68.301	ppb	0.1396	0.20%
Be 313.107†	-545.5	-0.2996	µg/L	0.02032	-0.2996	ppb	0.02032	6.78%
Ca 317.933Radial†	53729.4	22783	µg/L	94.0	22783	ppb	94.0	0.41%
Cd 226.502†	-4.3	-0.0411	µg/L	0.13681	-0.0411	ppb	0.13681	332.62%
Co 228.616†	-0.8	0.0700	µg/L	0.03663	0.0700	ppb	0.03663	52.31%
Cr 267.716†	441.3	6.4429	µg/L	0.17286	6.4429	ppb	0.17286	2.68%
Cu 324.752†	4310.6	24.587	µg/L	0.2308	24.587	ppb	0.2308	0.94%
Fe 238.204 Radial†	21.5	11.184	µg/L	1.8861	11.184	ppb	1.8861	16.86%
K 766.490 Radial†	5697.9	3088.6	µg/L	26.56	3088.6	ppb	26.56	0.86%
Mg 279.077 IEC†	904.6	3641.4	µg/L	83.95	3641.4	ppb	83.95	2.31%
Mn 257.610†	557.6	0.5935	µg/L	0.05208	0.5935	ppb	0.05208	8.78%
Mo 202.031†	27.5	1.5146	µg/L	0.19284	1.5146	ppb	0.19284	12.73%
Na 589.592 Radial†	570339.2	100880	µg/L	206.3	100880	ppb	206.3	0.20%

Ni 231.604†	16.0	0.4032	µg/L	0.17260	0.4032	ppb	0.17260	42.80%
P 214.914†	55.2	16.181	µg/L	2.6936	16.181	ppb	2.6936	16.65%
Pb 220.353†	-13.5	0.2044	µg/L	0.57545	0.2044	ppb	0.57545	281.48%
S 181.975 Axial†	4379.8	4916.8	µg/L	6.88	4916.8	ppb	6.88	0.14%
Sb 206.836†	-3.9	-0.9800	µg/L	2.82191	-0.9800	ppb	2.82191	287.96%
Se 196.026†	1.8	0.6883	µg/L	3.50733	0.6883	ppb	3.50733	509.55%
SiO2†	366896.4	39606	µg/L	82.6	39606	ppb	82.6	0.21%
Si 251.611†	482832.9	18317	µg/L	44.6	18317	ppb	44.6	0.24%
Sn 189.927†	-83.9	-6.7532	µg/L	1.07728	-6.7532	ppb	1.07728	15.95%
Sr 421.552†	193513.8	542.31	µg/L	2.035	542.31	ppb	2.035	0.38%
Ti 334.940†	-149.1	1.8164	µg/L	0.06139	1.8164	ppb	0.06139	3.38%
Tl 190.801†	0.9	0.1108	µg/L	2.14811	0.1108	ppb	2.14811	>999.9%
U 409.014†	147.7	8.9028	µg/L	7.28779	8.9028	ppb	7.28779	81.86%
V 292.402†	3361.0	37.581	µg/L	0.1430	37.581	ppb	0.1430	0.38%
Zn 213.857†	664.7	4.6531	µg/L	0.10162	4.6531	ppb	0.10162	2.18%

Sequence No.: 16 **Autosampler Location: 312**
Sample ID: 1202266502|1049744|1 **Date Collected: 12/3/2010 09:34:59**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1202266502|1049744|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16615.9	16615.9	102	%			09:35:49
1	Al 396.153Radial†	11945.0	11456.3	4777.3	µg/L	4777.3	ppb	09:35:29
1	Ca 317.933Radial†	64886.7	63810.0	27058	µg/L	27058	ppb	09:35:29
1	Fe 238.204 Radial†	10074.8	9890.0	5150.8	µg/L	5150.8	ppb	09:35:49
1	K 766.490 Radial†	17128.6	14225.0	7733.6	µg/L	7733.6	ppb	09:35:29
1	Mg 279.077 IEC†	2226.6	2180.3	8779.7	µg/L	8779.7	ppb	09:35:49
1	Na 589.592 Radial†	585492.6	576094.6	101900	µg/L	101900	ppb	09:35:29
1	Sr 421.552†	365065.9	359432.3	1007.7	µg/L	1007.7	ppb	09:35:29
1	Sc 361.383	506920.4	506920.4	101.28	%			09:36:48
1	Y 371.029	437965.4	437965.4	99.240	%			09:36:48
1	Ag 328.068†	61613.0	61136.4	514.52	µg/L	514.52	ppb	09:36:48
1	As 188.979†	1636.9	1614.3	552.38	µg/L	552.38	ppb	09:36:53
1	B 249.677†	21807.3	21584.4	619.33	µg/L	619.33	ppb	09:36:53
1	Ba 233.527†	75760.9	75058.2	577.64	µg/L	577.64	ppb	09:36:48
1	Be 313.107†	947065.7	939653.4	516.17	µg/L	516.17	ppb	09:36:48
1	Cd 226.502†	54394.2	54062.6	510.98	µg/L	510.98	ppb	09:36:53
1	Co 228.616†	28053.5	27779.9	508.37	µg/L	508.37	ppb	09:36:53
1	Cr 267.716†	35756.8	35149.3	512.05	µg/L	512.05	ppb	09:36:53
1	Cu 324.752†	105563.7	100019.9	570.31	µg/L	570.31	ppb	09:36:48
1	Mn 257.610†	379616.6	374544.3	498.31	µg/L	498.31	ppb	09:36:48
1	Mo 202.031†	10376.6	10290.1	521.83	µg/L	521.83	ppb	09:36:53
1	Ni 231.604†	20462.8	20403.8	514.32	µg/L	514.32	ppb	09:36:53
1	P 214.914†	2071.6	1498.3	482.39	µg/L	482.39	ppb	09:36:53
1	Pb 220.353†	5675.1	5293.9	515.36	µg/L	515.36	ppb	09:36:53
1	S 181.975 Axial†	9216.9	9059.6	10170	µg/L	10170	ppb	09:36:53
1	Sb 206.836†	2088.5	1982.2	524.00	µg/L	524.00	ppb	09:36:53
1	Se 196.026†	1276.3	1364.2	506.48	µg/L	506.48	ppb	09:36:53
1	SiO2†	475361.7	466680.4	50383	µg/L	50383	ppb	09:36:48
1	Si 251.611†	623800.1	615447.8	23341	µg/L	23341	ppb	09:36:48
1	Sn 189.927†	5358.6	5215.0	521.78	µg/L	521.78	ppb	09:36:53
1	Ti 334.940†	168585.0	168443.9	513.51	µg/L	513.51	ppb	09:36:48
1	Tl 190.801†	2631.8	2721.8	521.96	µg/L	521.96	ppb	09:36:53
1	U 409.014†	1939.2	8785.0	530.61	µg/L	530.61	ppb	09:36:48
1	V 292.402†	49168.7	48475.3	548.40	µg/L	548.40	ppb	09:36:53
1	Zn 213.857†	76603.0	74475.7	520.22	µg/L	520.22	ppb	09:36:48
2	Sc RADIAL	16569.4	16569.4	101	%			09:36:15
2	Al 396.153Radial†	12285.4	11825.4	4931.6	µg/L	4931.6	ppb	09:35:55
2	Ca 317.933Radial†	66956.4	66032.9	28000	µg/L	28000	ppb	09:35:55
2	Fe 238.204 Radial†	10038.5	9881.9	5146.6	µg/L	5146.6	ppb	09:36:15
2	K 766.490 Radial†	17781.7	14917.1	8110.1	µg/L	8110.1	ppb	09:35:55
2	Mg 279.077 IEC†	2201.7	2161.9	8705.5	µg/L	8705.5	ppb	09:36:15
2	Na 589.592 Radial†	603697.0	595686.5	105370	µg/L	105370	ppb	09:35:55
2	Sr 421.552†	377303.6	372523.9	1044.4	µg/L	1044.4	ppb	09:35:55
2	Sc 361.383	510528.2	510528.2	102.00	%			09:36:59
2	Y 371.029	440897.3	440897.3	99.904	%			09:36:59
2	Ag 328.068†	62044.3	61129.4	514.43	µg/L	514.43	ppb	09:36:59
2	As 188.979†	1646.5	1612.4	551.71	µg/L	551.71	ppb	09:37:04
2	B 249.677†	21856.3	21480.2	616.35	µg/L	616.35	ppb	09:37:04
2	Ba 233.527†	76347.9	75105.2	578.00	µg/L	578.00	ppb	09:36:59
2	Be 313.107†	953524.2	939377.1	516.02	µg/L	516.02	ppb	09:36:59
2	Cd 226.502†	54505.4	53792.0	508.42	µg/L	508.42	ppb	09:37:04
2	Co 228.616†	28070.9	27601.3	505.10	µg/L	505.10	ppb	09:37:04
2	Cr 267.716†	35835.4	34976.9	509.54	µg/L	509.54	ppb	09:37:04
2	Cu 324.752†	106167.8	99875.6	569.50	µg/L	569.50	ppb	09:36:59
2	Mn 257.610†	382261.6	374488.6	498.24	µg/L	498.24	ppb	09:36:59
2	Mo 202.031†	10437.7	10277.6	521.20	µg/L	521.20	ppb	09:37:04
2	Ni 231.604†	20570.8	20366.9	513.39	µg/L	513.39	ppb	09:37:04
2	P 214.914†	2057.5	1470.0	469.55	µg/L	469.55	ppb	09:37:04
2	Pb 220.353†	5673.6	5252.9	511.33	µg/L	511.33	ppb	09:37:04

2	S 181.975 Axial†	9232.5	9010.5	10115	µg/L	10115	ppb	09:37:04
2	Sb 206.836†	2091.0	1970.1	520.83	µg/L	520.83	ppb	09:37:04
2	Se 196.026†	1280.6	1359.6	504.79	µg/L	504.79	ppb	09:37:04
2	SiO2†	478725.8	466661.6	50381	µg/L	50381	ppb	09:36:59
2	Si 251.611†	628521.4	615723.9	23351	µg/L	23351	ppb	09:36:59
2	Sn 189.927†	5364.2	5183.1	518.68	µg/L	518.68	ppb	09:37:04
2	Ti 334.940†	169801.0	168459.7	513.67	µg/L	513.67	ppb	09:36:59
2	Tl 190.801†	2600.2	2672.4	512.54	µg/L	512.54	ppb	09:37:04
2	U 409.014†	1838.2	8672.4	523.82	µg/L	523.82	ppb	09:36:59
2	V 292.402†	49227.4	48189.7	545.19	µg/L	545.19	ppb	09:37:04
2	Zn 213.857†	76986.5	74317.1	519.11	µg/L	519.11	ppb	09:36:59
3	Sc RADIAL	16631.9	16631.9	102	%			09:36:41
3	Al 396.153Radial†	12214.0	11709.6	4883.1	µg/L	4883.1	ppb	09:36:21
3	Ca 317.933Radial†	66538.0	65372.9	27720	µg/L	27720	ppb	09:36:21
3	Fe 238.204 Radial†	10126.9	9931.7	5172.6	µg/L	5172.6	ppb	09:36:41
3	K 766.490 Radial†	17730.2	14800.5	8046.7	µg/L	8046.7	ppb	09:36:21
3	Mg 279.077 IEC†	2221.2	2172.9	8749.9	µg/L	8749.9	ppb	09:36:41
3	Na 589.592 Radial†	599686.9	589501.7	104270	µg/L	104270	ppb	09:36:21
3	Sr 421.552†	375423.2	369274.0	1035.3	µg/L	1035.3	ppb	09:36:21
3	Sc 361.383	509581.3	509581.3	101.81	%			09:37:10
3	Y 371.029	440147.8	440147.8	99.735	%			09:37:10
3	Ag 328.068†	61912.9	61113.3	514.33	µg/L	514.33	ppb	09:37:10
3	As 188.979†	1624.3	1593.5	545.34	µg/L	545.34	ppb	09:37:15
3	B 249.677†	21928.6	21591.1	619.52	µg/L	619.52	ppb	09:37:15
3	Ba 233.527†	76174.5	75073.9	577.77	µg/L	577.77	ppb	09:37:10
3	Be 313.107†	951790.0	939410.8	516.04	µg/L	516.04	ppb	09:37:10
3	Cd 226.502†	54705.3	54087.7	511.21	µg/L	511.21	ppb	09:37:15
3	Co 228.616†	28265.2	27843.2	509.53	µg/L	509.53	ppb	09:37:15
3	Cr 267.716†	35950.4	35155.2	512.14	µg/L	512.14	ppb	09:37:15
3	Cu 324.752†	106017.9	99921.8	569.76	µg/L	569.76	ppb	09:37:10
3	Mn 257.610†	381371.3	374310.6	498.00	µg/L	498.00	ppb	09:37:10
3	Mo 202.031†	10485.1	10343.1	524.53	µg/L	524.53	ppb	09:37:15
3	Ni 231.604†	20612.3	20445.1	515.36	µg/L	515.36	ppb	09:37:15
3	P 214.914†	2042.7	1459.2	464.47	µg/L	464.47	ppb	09:37:15
3	Pb 220.353†	5746.5	5334.8	519.32	µg/L	519.32	ppb	09:37:15
3	S 181.975 Axial†	9262.5	9056.8	10167	µg/L	10167	ppb	09:37:15
3	Sb 206.836†	2115.8	1998.3	528.22	µg/L	528.22	ppb	09:37:15
3	Se 196.026†	1273.6	1355.0	503.13	µg/L	503.13	ppb	09:37:15
3	SiO2†	477791.9	466616.4	50376	µg/L	50376	ppb	09:37:10
3	Si 251.611†	627099.2	615472.0	23342	µg/L	23342	ppb	09:37:10
3	Sn 189.927†	5397.6	5225.7	522.90	µg/L	522.90	ppb	09:37:15
3	Ti 334.940†	169284.7	168261.9	513.04	µg/L	513.04	ppb	09:37:10
3	Tl 190.801†	2660.6	2736.5	524.76	µg/L	524.76	ppb	09:37:15
3	U 409.014†	1835.6	8673.2	523.87	µg/L	523.87	ppb	09:37:10
3	V 292.402†	49397.7	48446.7	548.10	µg/L	548.10	ppb	09:37:15
3	Zn 213.857†	77129.5	74597.8	521.07	µg/L	521.07	ppb	09:37:10

Mean Data: 1202266502|1049744|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	509010.0	101.70	%	0.374				0.37%
Sc RADIAL	16605.7	102	%	0.2				0.20%
Y 371.029	439670.1	99.626	%	0.3451				0.35%
Ag 328.068†	61126.4	514.42	µg/L	0.096	514.42	ppb	0.096	0.02%
Al 396.153Radial†	11663.8	4864.0	µg/L	78.89	4864.0	ppb	78.89	1.62%
As 188.979†	1606.7	549.81	µg/L	3.886	549.81	ppb	3.886	0.71%
B 249.677†	21551.9	618.40	µg/L	1.782	618.40	ppb	1.782	0.29%
Ba 233.527†	75079.1	577.80	µg/L	0.182	577.80	ppb	0.182	0.03%
Be 313.107†	939480.4	516.08	µg/L	0.083	516.08	ppb	0.083	0.02%
Ca 317.933Radial†	65071.9	27593	µg/L	484.1	27593	ppb	484.1	1.75%
Cd 226.502†	53980.8	510.20	µg/L	1.550	510.20	ppb	1.550	0.30%
Co 228.616†	27741.5	507.67	µg/L	2.297	507.67	ppb	2.297	0.45%
Cr 267.716†	35093.8	511.25	µg/L	1.476	511.25	ppb	1.476	0.29%
Cu 324.752†	99939.1	569.86	µg/L	0.418	569.86	ppb	0.418	0.07%
Fe 238.204 Radial†	9901.2	5156.7	µg/L	13.90	5156.7	ppb	13.90	0.27%
K 766.490 Radial†	14647.5	7963.4	µg/L	201.59	7963.4	ppb	201.59	2.53%
Mg 279.077 IEC†	2171.7	8745.0	µg/L	37.35	8745.0	ppb	37.35	0.43%
Mn 257.610†	374447.8	498.19	µg/L	0.163	498.19	ppb	0.163	0.03%
Mo 202.031†	10303.6	522.52	µg/L	1.765	522.52	ppb	1.765	0.34%
Na 589.592 Radial†	587094.3	103850	µg/L	1771.5	103850	ppb	1771.5	1.71%

Ni 231.604†	20405.3	514.36	µg/L	0.987	514.36	ppb	0.987	0.19%
P 214.914†	1475.8	472.14	µg/L	9.238	472.14	ppb	9.238	1.96%
Pb 220.353†	5293.9	515.34	µg/L	3.992	515.34	ppb	3.992	0.77%
S 181.975 Axial†	9042.3	10150	µg/L	31.0	10150	ppb	31.0	0.31%
Sb 206.836†	1983.5	524.35	µg/L	3.705	524.35	ppb	3.705	0.71%
Se 196.026†	1359.6	504.80	µg/L	1.677	504.80	ppb	1.677	0.33%
SiO2†	466652.8	50380	µg/L	3.5	50380	ppb	3.5	0.01%
Si 251.611†	615547.9	23345	µg/L	5.8	23345	ppb	5.8	0.02%
Sn 189.927†	5207.9	521.12	µg/L	2.188	521.12	ppb	2.188	0.42%
Sr 421.552†	367076.7	1029.1	µg/L	19.11	1029.1	ppb	19.11	1.86%
Ti 334.940†	168388.5	513.41	µg/L	0.331	513.41	ppb	0.331	0.06%
Tl 190.801†	2710.3	519.75	µg/L	6.403	519.75	ppb	6.403	1.23%
U 409.014†	8710.2	526.10	µg/L	3.902	526.10	ppb	3.902	0.74%
V 292.402†	48370.5	547.23	µg/L	1.775	547.23	ppb	1.775	0.32%
Zn 213.857†	74463.5	520.13	µg/L	0.984	520.13	ppb	0.984	0.19%

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Sequence No.: 17 **Autosampler Location: 313**
Sample ID: 1202266503|1049744|5 **Date Collected: 12/3/2010 09:37:23**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1202266503|1049744|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	17005.1	17005.1	104	%			09:37:52
1	Al 396.153Radial†	1132.4	785.3	326.93	µg/L	326.93	ppb	09:37:52
1	Ca 317.933Radial†	10893.9	10406.1	4412.6	µg/L	4412.6	ppb	09:38:12
1	Fe 238.204 Radial†	35.6	5.1	2.6483	µg/L	2.6483	ppb	09:38:12
1	K 766.490 Radial†	3922.3	1134.3	614.84	µg/L	614.84	ppb	09:37:52
1	Mg 279.077 IEC†	191.6	172.4	694.20	µg/L	694.20	ppb	09:38:12
1	Na 589.592 Radial†	119450.7	114562.5	20264	µg/L	20264	ppb	09:37:52
1	Sr 421.552†	40179.2	38660.5	108.35	µg/L	108.35	ppb	09:37:52
1	Sc 361.383	518035.2	518035.2	103.50	%			09:39:09
1	Y 371.029	451824.5	451824.5	102.38	%			09:39:09
1	Ag 328.068†	-357.6	-43.4	-0.2913	µg/L	-0.2913	ppb	09:39:09
1	As 188.979†	1.0	-0.9	-0.3020	µg/L	-0.3020	ppb	09:39:30
1	B 249.677†	644.5	675.4	19.444	µg/L	19.444	ppb	09:39:30
1	Ba 233.527†	1605.8	1806.3	13.883	µg/L	13.883	ppb	09:39:30
1	Be 313.107†	-4704.8	11.6	0.0062	µg/L	0.0062	ppb	09:39:09
1	Cd 226.502†	-364.8	3.4	0.0323	µg/L	0.0323	ppb	09:39:30
1	Co 228.616†	-115.1	-30.2	-0.5371	µg/L	-0.5371	ppb	09:39:30
1	Cr 267.716†	273.5	108.7	1.5802	µg/L	1.5802	ppb	09:39:30
1	Cu 324.752†	5187.1	802.1	4.5676	µg/L	4.5676	ppb	09:39:09
1	Mn 257.610†	633.6	337.7	0.4212	µg/L	0.4212	ppb	09:39:30
1	Mo 202.031†	-47.7	-1.5	-0.0506	µg/L	-0.0506	ppb	09:39:30
1	Ni 231.604†	-212.5	-5.7	-0.1435	µg/L	-0.1435	ppb	09:39:30
1	P 214.914†	577.7	11.0	3.4186	µg/L	3.4186	ppb	09:39:30
1	Pb 220.353†	312.4	-7.6	-0.6508	µg/L	-0.6508	ppb	09:39:30
1	S 181.975 Axial†	912.5	840.8	943.85	µg/L	943.85	ppb	09:39:30
1	Sb 206.836†	85.3	2.5	0.6399	µg/L	0.6399	ppb	09:39:30
1	Se 196.026†	-94.8	12.5	4.6157	µg/L	4.6157	ppb	09:39:30
1	SiO2†	77521.1	72225.6	7796.6	µg/L	7796.6	ppb	09:39:09
1	Si 251.611†	99498.4	95664.7	3629.1	µg/L	3629.1	ppb	09:39:09
1	Sn 189.927†	48.8	-28.7	-2.5480	µg/L	-2.5480	ppb	09:39:30
1	Ti 334.940†	-1861.3	191.1	1.0168	µg/L	1.0168	ppb	09:39:30
1	Tl 190.801†	-122.2	5.2	0.9890	µg/L	0.9890	ppb	09:39:30
1	U 409.014†	-6920.0	184.3	11.112	µg/L	11.112	ppb	09:39:09
1	V 292.402†	745.7	648.5	7.2591	µg/L	7.2591	ppb	09:39:30
1	Zn 213.857†	1392.3	186.0	1.3060	µg/L	1.3060	ppb	09:39:30
2	Sc RADIAL	17042.6	17042.6	104	%			09:38:17
2	Al 396.153Radial†	1146.6	796.6	331.63	µg/L	331.63	ppb	09:38:17
2	Ca 317.933Radial†	10944.3	10431.5	4423.3	µg/L	4423.3	ppb	09:38:37
2	Fe 238.204 Radial†	44.8	13.9	7.2293	µg/L	7.2293	ppb	09:38:37
2	K 766.490 Radial†	4050.7	1249.3	677.47	µg/L	677.47	ppb	09:38:17
2	Mg 279.077 IEC†	188.0	168.6	678.55	µg/L	678.55	ppb	09:38:37
2	Na 589.592 Radial†	120049.2	114884.3	20321	µg/L	20321	ppb	09:38:17
2	Sr 421.552†	40448.1	38833.5	108.83	µg/L	108.83	ppb	09:38:17
2	Sc 361.383	518633.8	518633.8	103.62	%			09:39:35
2	Y 371.029	452257.5	452257.5	102.48	%			09:39:35
2	Ag 328.068†	-239.7	70.8	0.6542	µg/L	0.6542	ppb	09:39:35
2	As 188.979†	1.9	-0.1	-0.0177	µg/L	-0.0177	ppb	09:39:55
2	B 249.677†	662.0	691.6	19.909	µg/L	19.909	ppb	09:39:55
2	Ba 233.527†	1588.1	1787.5	13.739	µg/L	13.739	ppb	09:39:55
2	Be 313.107†	-4710.4	11.4	0.0061	µg/L	0.0061	ppb	09:39:35
2	Cd 226.502†	-349.9	18.2	0.1710	µg/L	0.1710	ppb	09:39:55
2	Co 228.616†	-82.8	1.1	0.0365	µg/L	0.0365	ppb	09:39:55
2	Cr 267.716†	254.0	89.6	1.3020	µg/L	1.3020	ppb	09:39:55
2	Cu 324.752†	5248.5	855.5	4.8724	µg/L	4.8724	ppb	09:39:35
2	Mn 257.610†	673.7	375.6	0.4724	µg/L	0.4724	ppb	09:39:55
2	Mo 202.031†	-38.4	7.5	0.4043	µg/L	0.4043	ppb	09:39:55
2	Ni 231.604†	-214.2	-7.1	-0.1791	µg/L	-0.1791	ppb	09:39:55
2	P 214.914†	562.4	-4.4	-3.8735	µg/L	-3.8735	ppb	09:39:55
2	Pb 220.353†	315.6	-4.9	-0.3844	µg/L	-0.3844	ppb	09:39:55

2	S 181.975 Axial†	914.1	841.4	944.50	µg/L	944.50	ppb	09:39:55
2	Sb 206.836†	81.3	-1.5	-0.3763	µg/L	-0.3763	ppb	09:39:55
2	Se 196.026†	-129.6	-20.9	-7.6627	µg/L	-7.6627	ppb	09:39:55
2	SiO2†	77595.5	72211.0	7795.0	µg/L	7795.0	ppb	09:39:35
2	Si 251.611†	99730.2	95777.4	3633.4	µg/L	3633.4	ppb	09:39:35
2	Sn 189.927†	52.9	-24.8	-2.1589	µg/L	-2.1589	ppb	09:39:55
2	Ti 334.940†	-1866.3	188.4	1.0109	µg/L	1.0109	ppb	09:39:55
2	Tl 190.801†	-112.9	14.3	2.7219	µg/L	2.7219	ppb	09:39:55
2	U 409.014†	-6925.6	186.7	11.255	µg/L	11.255	ppb	09:39:35
2	V 292.402†	709.6	612.8	6.8640	µg/L	6.8640	ppb	09:39:55
2	Zn 213.857†	1409.3	200.8	1.4101	µg/L	1.4101	ppb	09:39:55
3	Sc RADIAL	17061.6	17061.6	104	%			09:38:42
3	Al 396.153Radial†	1128.4	777.9	323.78	µg/L	323.78	ppb	09:38:42
3	Ca 317.933Radial†	10947.4	10422.7	4419.6	µg/L	4419.6	ppb	09:39:03
3	Fe 238.204 Radial†	30.7	0.3	0.1420	µg/L	0.1420	ppb	09:39:03
3	K 766.490 Radial†	3962.1	1160.0	628.83	µg/L	628.83	ppb	09:38:42
3	Mg 279.077 IEC†	195.9	175.9	708.23	µg/L	708.23	ppb	09:39:03
3	Na 589.592 Radial†	120192.9	114893.4	20323	µg/L	20323	ppb	09:38:42
3	Sr 421.552†	40293.0	38641.5	108.29	µg/L	108.29	ppb	09:38:42
3	Sc 361.383	513840.0	513840.0	102.66	%			09:40:00
3	Y 371.029	448038.6	448038.6	101.52	%			09:40:00
3	Ag 328.068†	-447.2	-133.5	-1.0412	µg/L	-1.0412	ppb	09:40:00
3	As 188.979†	7.9	5.8	1.9833	µg/L	1.9833	ppb	09:40:20
3	B 249.677†	645.1	681.0	19.606	µg/L	19.606	ppb	09:40:20
3	Ba 233.527†	1594.7	1808.2	13.897	µg/L	13.897	ppb	09:40:20
3	Be 313.107†	-4850.3	-167.3	-0.0920	µg/L	-0.0920	ppb	09:40:00
3	Cd 226.502†	-370.4	-5.0	-0.0467	µg/L	-0.0467	ppb	09:40:20
3	Co 228.616†	-94.6	-11.1	-0.1865	µg/L	-0.1865	ppb	09:40:20
3	Cr 267.716†	253.1	91.0	1.3279	µg/L	1.3279	ppb	09:40:20
3	Cu 324.752†	5225.9	880.8	5.0233	µg/L	5.0233	ppb	09:40:00
3	Mn 257.610†	670.6	378.7	0.4753	µg/L	0.4753	ppb	09:40:20
3	Mo 202.031†	-35.5	10.1	0.5333	µg/L	0.5333	ppb	09:40:20
3	Ni 231.604†	-193.4	11.2	0.2837	µg/L	0.2837	ppb	09:40:20
3	P 214.914†	567.2	5.4	0.6102	µg/L	0.6102	ppb	09:40:20
3	Pb 220.353†	295.7	-21.4	-1.9853	µg/L	-1.9853	ppb	09:40:20
3	S 181.975 Axial†	916.9	852.3	956.76	µg/L	956.76	ppb	09:40:20
3	Sb 206.836†	78.1	-3.9	-1.0106	µg/L	-1.0106	ppb	09:40:20
3	Se 196.026†	-110.8	-3.8	-1.3811	µg/L	-1.3811	ppb	09:40:20
3	SiO2†	77144.8	72470.5	7823.0	µg/L	7823.0	ppb	09:40:00
3	Si 251.611†	98933.4	95899.2	3638.0	µg/L	3638.0	ppb	09:40:00
3	Sn 189.927†	50.1	-27.0	-2.3825	µg/L	-2.3825	ppb	09:40:20
3	Ti 334.940†	-1921.2	118.2	0.7988	µg/L	0.7988	ppb	09:40:20
3	Tl 190.801†	-111.8	14.4	2.7403	µg/L	2.7403	ppb	09:40:20
3	U 409.014†	-7016.6	35.6	2.1477	µg/L	2.1477	ppb	09:40:00
3	V 292.402†	705.0	614.7	6.8769	µg/L	6.8769	ppb	09:40:20
3	Zn 213.857†	1423.1	227.0	1.5917	µg/L	1.5917	ppb	09:40:20

Mean Data: 1202266503|1049744|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	516836.3	103.26	%	0.522				0.51%
Sc RADIAL	17036.4	104	%	0.2				0.17%
Y 371.029	450706.8	102.13	%	0.526				0.51%
Ag 328.068†	-35.3	-0.2261	µg/L	0.84956	-0.2261	ppb	0.84956	375.73%
Al 396.153Radial†	786.6	327.45	µg/L	3.950	327.45	ppb	3.950	1.21%
As 188.979†	1.6	0.5545	µg/L	1.24546	0.5545	ppb	1.24546	224.60%
B 249.677†	682.7	19.653	µg/L	0.2358	19.653	ppb	0.2358	1.20%
Ba 233.527†	1800.7	13.840	µg/L	0.0876	13.840	ppb	0.0876	0.63%
Be 313.107†	-48.1	-0.0266	µg/L	0.05668	-0.0266	ppb	0.05668	213.40%
Ca 317.933Radial†	10420.1	4418.5	µg/L	5.46	4418.5	ppb	5.46	0.12%
Cd 226.502†	5.5	0.0522	µg/L	0.11019	0.0522	ppb	0.11019	211.06%
Co 228.616†	-13.4	-0.2291	µg/L	0.28915	-0.2291	ppb	0.28915	126.23%
Cr 267.716†	96.4	1.4034	µg/L	0.15367	1.4034	ppb	0.15367	10.95%
Cu 324.752†	846.1	4.8211	µg/L	0.23215	4.8211	ppb	0.23215	4.82%
Fe 238.204 Radial†	6.4	3.3399	µg/L	3.59389	3.3399	ppb	3.59389	107.61%
K 766.490 Radial†	1181.2	640.38	µg/L	32.869	640.38	ppb	32.869	5.13%
Mg 279.077 IEC†	172.3	693.66	µg/L	14.848	693.66	ppb	14.848	2.14%
Mn 257.610†	364.0	0.4563	µg/L	0.03042	0.4563	ppb	0.03042	6.67%
Mo 202.031†	5.4	0.2957	µg/L	0.30675	0.2957	ppb	0.30675	103.74%
Na 589.592 Radial†	114780.1	20303	µg/L	33.3	20303	ppb	33.3	0.16%

Ni 231.604†	-0.5	-0.0130	µg/L	0.25751	-0.0130	ppb	0.25751	>999.9%
P 214.914†	4.0	0.0518	µg/L	3.67799	0.0518	ppb	3.67799	>999.9%
Pb 220.353†	-11.3	-1.0068	µg/L	0.85778	-1.0068	ppb	0.85778	85.20%
S 181.975 Axial†	844.8	948.37	µg/L	7.273	948.37	ppb	7.273	0.77%
Sb 206.836†	-1.0	-0.2490	µg/L	0.83258	-0.2490	ppb	0.83258	334.32%
Se 196.026†	-4.1	-1.4761	µg/L	6.13976	-1.4761	ppb	6.13976	415.95%
SiO2†	72302.4	7804.9	µg/L	15.74	7804.9	ppb	15.74	0.20%
Si 251.611†	95780.4	3633.5	µg/L	4.45	3633.5	ppb	4.45	0.12%
Sn 189.927†	-26.8	-2.3631	µg/L	0.19530	-2.3631	ppb	0.19530	8.26%
Sr 421.552†	38711.8	108.49	µg/L	0.297	108.49	ppb	0.297	0.27%
Ti 334.940†	165.9	0.9422	µg/L	0.12419	0.9422	ppb	0.12419	13.18%
Tl 190.801†	11.3	2.1504	µg/L	1.00582	2.1504	ppb	1.00582	46.77%
U 409.014†	135.6	8.1717	µg/L	5.21742	8.1717	ppb	5.21742	63.85%
V 292.402†	625.3	7.0000	µg/L	0.22448	7.0000	ppb	0.22448	3.21%
Zn 213.857†	204.6	1.4359	µg/L	0.14462	1.4359	ppb	0.14462	10.07%

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Sequence No.: 20 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 09:46:40**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16852.9	16852.9	103	%			09:47:31
1	Al 396.153Radial†	12486.6	11816.7	4940.7	µg/L	4940.7	ppb	09:47:11
1	Ca 317.933Radial†	12576.2	12133.8	5145.1	µg/L	5145.1	ppb	09:47:31
1	Fe 238.204 Radial†	10162.0	9835.1	5122.2	µg/L	5122.2	ppb	09:47:31
1	K 766.490 Radial†	12196.5	9200.1	5010.3	µg/L	5010.3	ppb	09:47:11
1	Mg 279.077 IEC†	1347.1	1295.7	5218.6	µg/L	5218.6	ppb	09:47:31
1	Na 589.592 Radial†	59973.1	57865.0	10235	µg/L	10235	ppb	09:47:11
1	Sr 421.552†	181962.9	176639.0	495.42	µg/L	495.42	ppb	09:47:11
1	Sc 361.383	518595.5	518595.5	103.61	%			09:48:29
1	Y 371.029	451940.8	451940.8	102.41	%			09:48:29
1	Ag 328.068†	62799.4	60911.9	512.30	µg/L	512.30	ppb	09:48:29
1	As 188.979†	1565.3	1508.8	516.57	µg/L	516.57	ppb	09:48:49
1	B 249.677†	18202.6	17620.6	505.25	µg/L	505.25	ppb	09:48:29
1	Ba 233.527†	68124.1	66003.7	508.05	µg/L	508.05	ppb	09:48:29
1	Be 313.107†	952052.2	923414.4	507.25	µg/L	507.25	ppb	09:48:29
1	Cd 226.502†	55612.6	54029.4	510.66	µg/L	510.66	ppb	09:48:29
1	Co 228.616†	28292.2	27386.8	501.09	µg/L	501.09	ppb	09:48:49
1	Cr 267.716†	36296.3	34875.2	508.05	µg/L	508.05	ppb	09:48:29
1	Cu 324.752†	96174.0	88611.1	505.24	µg/L	505.24	ppb	09:48:29
1	Mn 257.610†	395432.8	381370.8	507.55	µg/L	507.55	ppb	09:48:29
1	Mo 202.031†	10391.2	10073.5	510.74	µg/L	510.74	ppb	09:48:49
1	Ni 231.604†	20440.2	19927.1	502.30	µg/L	502.30	ppb	09:48:49
1	P 214.914†	6240.0	5475.3	2357.1	µg/L	2357.1	ppb	09:48:49
1	Pb 220.353†	5796.3	5284.8	512.88	µg/L	512.88	ppb	09:48:49
1	S 181.975 Axial†	979.7	904.7	1015.2	µg/L	1015.2	ppb	09:48:49
1	Sb 206.836†	2087.6	1934.9	511.52	µg/L	511.52	ppb	09:48:49
1	Se 196.026†	1329.9	1387.6	515.04	µg/L	515.04	ppb	09:48:49
1	SiO2†	55041.0	50448.4	5451.4	µg/L	5451.4	ppb	09:48:29
1	Si 251.611†	69987.4	67078.8	2538.4	µg/L	2538.4	ppb	09:48:29
1	Sn 189.927†	5368.6	5105.6	509.32	µg/L	509.32	ppb	09:48:49
1	Ti 334.940†	170525.1	166569.0	505.64	µg/L	505.64	ppb	09:48:29
1	Tl 190.801†	2615.3	2647.4	507.79	µg/L	507.79	ppb	09:48:49
1	U 409.014†	1638.6	8451.8	510.51	µg/L	510.51	ppb	09:48:29
1	V 292.402†	46986.1	45275.8	512.53	µg/L	512.53	ppb	09:48:29
1	Zn 213.857†	76126.2	72312.7	505.13	µg/L	505.13	ppb	09:48:29
2	Sc RADIAL	16817.1	16817.1	103	%			09:47:56
2	Al 396.153Radial†	12671.6	12022.5	5027.0	µg/L	5027.0	ppb	09:47:36
2	Ca 317.933Radial†	12524.2	12109.2	5134.7	µg/L	5134.7	ppb	09:47:56
2	Fe 238.204 Radial†	10136.1	9830.9	5120.1	µg/L	5120.1	ppb	09:47:56
2	K 766.490 Radial†	12301.1	9327.2	5079.5	µg/L	5079.5	ppb	09:47:36
2	Mg 279.077 IEC†	1338.5	1290.1	5196.1	µg/L	5196.1	ppb	09:47:56
2	Na 589.592 Radial†	60713.6	58709.5	10385	µg/L	10385	ppb	09:47:36
2	Sr 421.552†	185174.3	180139.3	505.24	µg/L	505.24	ppb	09:47:36
2	Sc 361.383	517772.4	517772.4	103.45	%			09:48:55
2	Y 371.029	451456.5	451456.5	102.30	%			09:48:55
2	Ag 328.068†	62477.0	60696.6	510.50	µg/L	510.50	ppb	09:48:55
2	As 188.979†	1571.4	1517.2	519.38	µg/L	519.38	ppb	09:49:15
2	B 249.677†	18097.3	17546.8	503.12	µg/L	503.12	ppb	09:48:55
2	Ba 233.527†	67932.8	65923.3	507.43	µg/L	507.43	ppb	09:48:55
2	Be 313.107†	948970.0	921895.5	506.42	µg/L	506.42	ppb	09:48:55
2	Cd 226.502†	55356.0	53866.7	509.12	µg/L	509.12	ppb	09:48:55
2	Co 228.616†	28301.6	27439.3	502.05	µg/L	502.05	ppb	09:49:15
2	Cr 267.716†	36059.8	34702.3	505.53	µg/L	505.53	ppb	09:48:55
2	Cu 324.752†	95794.5	88391.8	503.99	µg/L	503.99	ppb	09:48:55
2	Mn 257.610†	394464.3	381041.3	507.11	µg/L	507.11	ppb	09:48:55
2	Mo 202.031†	10394.3	10092.4	511.70	µg/L	511.70	ppb	09:49:15
2	Ni 231.604†	20448.4	19966.5	503.29	µg/L	503.29	ppb	09:49:15
2	P 214.914†	6250.1	5494.7	2366.6	µg/L	2366.6	ppb	09:49:15
2	Pb 220.353†	5746.9	5245.9	509.05	µg/L	509.05	ppb	09:49:15

2	S 181.975 Axial†	992.3	918.4	1030.5	µg/L	1030.5	ppb	09:49:15
2	Sb 206.836†	2077.5	1928.3	509.79	µg/L	509.79	ppb	09:49:15
2	Se 196.026†	1334.1	1393.8	517.30	µg/L	517.30	ppb	09:49:15
2	SiO2†	54837.1	50335.7	5439.2	µg/L	5439.2	ppb	09:48:55
2	Si 251.611†	69796.6	67001.7	2535.5	µg/L	2535.5	ppb	09:48:55
2	Sn 189.927†	5393.3	5137.6	512.52	µg/L	512.52	ppb	09:49:15
2	Ti 334.940†	170049.3	166370.6	505.04	µg/L	505.04	ppb	09:48:55
2	Tl 190.801†	2624.5	2660.2	510.24	µg/L	510.24	ppb	09:49:15
2	U 409.014†	1705.6	8519.1	514.57	µg/L	514.57	ppb	09:48:55
2	V 292.402†	46834.4	45201.2	511.70	µg/L	511.70	ppb	09:48:55
2	Zn 213.857†	75990.8	72298.6	505.03	µg/L	505.03	ppb	09:48:55
3	Sc RADIAL	16788.2	16788.2	103	%			09:48:21
3	Al 396.153Radial†	12579.1	11953.6	4998.1	µg/L	4998.1	ppb	09:48:01
3	Ca 317.933Radial†	12523.7	12129.7	5143.4	µg/L	5143.4	ppb	09:48:21
3	Fe 238.204 Radial†	10194.2	9904.5	5158.4	µg/L	5158.4	ppb	09:48:21
3	K 766.490 Radial†	12225.5	9274.1	5050.6	µg/L	5050.6	ppb	09:48:01
3	Mg 279.077 IEC†	1327.1	1281.2	5160.3	µg/L	5160.3	ppb	09:48:21
3	Na 589.592 Radial†	60100.4	58213.6	10297	µg/L	10297	ppb	09:48:01
3	Sr 421.552†	183555.5	178871.9	501.69	µg/L	501.69	ppb	09:48:01
3	Sc 361.383	515512.4	515512.4	103.00	%			09:49:21
3	Y 371.029	449068.0	449068.0	101.76	%			09:49:21
3	Ag 328.068†	62408.0	60894.4	512.14	µg/L	512.14	ppb	09:49:21
3	As 188.979†	1556.0	1508.8	516.54	µg/L	516.54	ppb	09:49:41
3	B 249.677†	18037.3	17565.2	503.64	µg/L	503.64	ppb	09:49:21
3	Ba 233.527†	67706.3	65991.3	507.96	µg/L	507.96	ppb	09:49:21
3	Be 313.107†	944895.3	921961.0	506.45	µg/L	506.45	ppb	09:49:21
3	Cd 226.502†	55168.3	53919.0	509.61	µg/L	509.61	ppb	09:49:21
3	Co 228.616†	28208.7	27469.0	502.59	µg/L	502.59	ppb	09:49:41
3	Cr 267.716†	35961.9	34760.0	506.38	µg/L	506.38	ppb	09:49:21
3	Cu 324.752†	95732.7	88737.8	505.97	µg/L	505.97	ppb	09:49:21
3	Mn 257.610†	392783.0	381080.6	507.16	µg/L	507.16	ppb	09:49:21
3	Mo 202.031†	10335.1	10079.0	511.02	µg/L	511.02	ppb	09:49:41
3	Ni 231.604†	20316.3	19924.9	502.24	µg/L	502.24	ppb	09:49:41
3	P 214.914†	6203.3	5475.7	2357.0	µg/L	2357.0	ppb	09:49:41
3	Pb 220.353†	5755.3	5278.4	512.23	µg/L	512.23	ppb	09:49:41
3	S 181.975 Axial†	988.7	919.1	1031.4	µg/L	1031.4	ppb	09:49:41
3	Sb 206.836†	2075.8	1935.5	511.66	µg/L	511.66	ppb	09:49:41
3	Se 196.026†	1325.0	1390.6	516.15	µg/L	516.15	ppb	09:49:41
3	SiO2†	54650.6	50387.0	5444.8	µg/L	5444.8	ppb	09:49:21
3	Si 251.611†	69688.3	67192.3	2542.7	µg/L	2542.7	ppb	09:49:21
3	Sn 189.927†	5341.4	5110.2	509.78	µg/L	509.78	ppb	09:49:41
3	Ti 334.940†	169336.4	166399.1	505.13	µg/L	505.13	ppb	09:49:21
3	Tl 190.801†	2621.3	2668.3	511.77	µg/L	511.77	ppb	09:49:41
3	U 409.014†	1529.5	8355.3	504.70	µg/L	504.70	ppb	09:49:21
3	V 292.402†	46591.6	45164.0	511.27	µg/L	511.27	ppb	09:49:21
3	Zn 213.857†	75757.0	72393.7	505.70	µg/L	505.70	ppb	09:49:21

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	517293.4	103.35	%	0.319				0.31%
Sc RADIAL	16819.4	103	%	0.2				0.19%
Y 371.029	450821.7	102.15	%	0.348				0.34%
Ag 328.068†	60834.3	511.64	µg/L	0.998	511.64	ppb	0.998	0.20%
QC value within limits for Ag 328.068 Recovery = 102.33%								
Al 396.153Radial†	11930.9	4988.6	µg/L	43.92	4988.6	ppb	43.92	0.88%
QC value within limits for Al 396.153Radial Recovery = 99.77%								
As 188.979†	1511.6	517.49	µg/L	1.629	517.49	ppb	1.629	0.31%
QC value within limits for As 188.979 Recovery = 103.50%								
B 249.677†	17577.5	504.00	µg/L	1.108	504.00	ppb	1.108	0.22%
QC value within limits for B 249.677 Recovery = 100.80%								
Ba 233.527†	65972.8	507.81	µg/L	0.334	507.81	ppb	0.334	0.07%
QC value within limits for Ba 233.527 Recovery = 101.56%								
Be 313.107†	922423.6	506.71	µg/L	0.472	506.71	ppb	0.472	0.09%
QC value within limits for Be 313.107 Recovery = 101.34%								
Ca 317.933Radial†	12124.2	5141.1	µg/L	5.59	5141.1	ppb	5.59	0.11%
QC value within limits for Ca 317.933Radial Recovery = 102.82%								
Cd 226.502†	53938.4	509.79	µg/L	0.785	509.79	ppb	0.785	0.15%
QC value within limits for Cd 226.502 Recovery = 101.96%								
Co 228.616†	27431.7	501.91	µg/L	0.763	501.91	ppb	0.763	0.15%

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   QC value within limits for Co 228.616  Recovery = 100.38%
Cr 267.716†            34779.2      506.65 µg/L         1.284      506.65 ppb          1.284   0.25%
   QC value within limits for Cr 267.716  Recovery = 101.33%
Cu 324.752†            88580.2      505.07 µg/L         1.004      505.07 ppb          1.004   0.20%
   QC value within limits for Cu 324.752  Recovery = 101.01%
Fe 238.204 Radial†      9856.8      5133.6 µg/L         21.53      5133.6 ppb          21.53   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.67%
K 766.490 Radial†       9267.1      5046.8 µg/L         34.75      5046.8 ppb          34.75   0.69%
   QC value within limits for K 766.490 Radial  Recovery = 100.94%
Mg 279.077 IEC†         1289.0      5191.6 µg/L         29.40      5191.6 ppb          29.40   0.57%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.83%
Mn 257.610†           381164.2      507.27 µg/L         0.239      507.27 ppb          0.239   0.05%
   QC value within limits for Mn 257.610  Recovery = 101.45%
Mo 202.031†            10081.6      511.15 µg/L         0.494      511.15 ppb          0.494   0.10%
   QC value within limits for Mo 202.031  Recovery = 102.23%
Na 589.592 Radial†     58262.7       10306 µg/L          75.1       10306 ppb           75.1   0.73%
   QC value within limits for Na 589.592 Radial  Recovery = 103.06%
Ni 231.604†            19939.5      502.61 µg/L         0.590      502.61 ppb          0.590   0.12%
   QC value within limits for Ni 231.604  Recovery = 100.52%
P 214.914†              5481.9      2360.3 µg/L          5.52      2360.3 ppb           5.52   0.23%
   QC value within limits for P 214.914  Recovery = 94.41%
Pb 220.353†             5269.7      511.39 µg/L         2.050      511.39 ppb          2.050   0.40%
   QC value within limits for Pb 220.353  Recovery = 102.28%
S 181.975 Axial†         914.1      1025.7 µg/L          9.10      1025.7 ppb           9.10   0.89%
   QC value within limits for S 181.975 Axial  Recovery = 102.57%
Sb 206.836†             1932.9      510.99 µg/L         1.040      510.99 ppb          1.040   0.20%
   QC value within limits for Sb 206.836  Recovery = 102.20%
Se 196.026†             1390.7      516.17 µg/L         1.130      516.17 ppb          1.130   0.22%
   QC value within limits for Se 196.026  Recovery = 103.23%
SiO2†                  50390.4      5445.1 µg/L          6.09      5445.1 ppb           6.09   0.11%
   QC value within limits for SiO2  Recovery = 101.83%
Si 251.611†            67091.0      2538.8 µg/L          3.64      2538.8 ppb           3.64   0.14%
   QC value within limits for Si 251.611  Recovery = 101.55%
Sn 189.927†             5117.8      510.54 µg/L         1.729      510.54 ppb          1.729   0.34%
   QC value within limits for Sn 189.927  Recovery = 102.11%
Sr 421.552†           178550.1      500.78 µg/L         4.972      500.78 ppb          4.972   0.99%
   QC value within limits for Sr 421.552  Recovery = 100.16%
Ti 334.940†           166446.2      505.27 µg/L         0.324      505.27 ppb          0.324   0.06%
   QC value within limits for Ti 334.940  Recovery = 101.05%
Tl 190.801†             2658.6      509.93 µg/L         2.006      509.93 ppb          2.006   0.39%
   QC value within limits for Tl 190.801  Recovery = 101.99%
U 409.014†              8442.0      509.93 µg/L         4.959      509.93 ppb          4.959   0.97%
   QC value within limits for U 409.014  Recovery = 101.99%
V 292.402†             45213.7      511.83 µg/L         0.641      511.83 ppb          0.641   0.13%
   QC value within limits for V 292.402  Recovery = 102.37%
Zn 213.857†            72335.0      505.28 µg/L         0.361      505.28 ppb          0.361   0.07%
   QC value within limits for Zn 213.857  Recovery = 101.06%
All analyte(s) passed QC.
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Sequence No.: 21 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 09:49:49**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16904.0	16904.0	103	%			09:50:17
1	Al 396.153Radial†	362.8	47.0	19.709	µg/L	19.709	ppb	09:50:17
1	Ca 317.933Radial†	70.8	-5.4	-2.3030	µg/L	-2.3030	ppb	09:50:38
1	Fe 238.204 Radial†	37.2	6.8	3.5648	µg/L	3.5648	ppb	09:50:38
1	K 766.490 Radial†	2538.5	-182.3	-99.306	µg/L	-99.306	ppb	09:50:17
1	Mg 279.077 IEC†	8.9	-3.3	-13.173	µg/L	-13.173	ppb	09:50:38
1	Na 589.592 Radial†	389.2	25.7	4.5517	µg/L	4.5517	ppb	09:50:17
1	Sr 421.552†	154.2	156.6	0.4395	µg/L	0.4395	ppb	09:50:17
1	Sc 361.383	516996.4	516996.4	103.29	%			09:51:35
1	Y 371.029	455233.3	455233.3	103.15	%			09:51:35
1	Ag 328.068†	-434.9	-118.9	-0.9865	µg/L	-0.9865	ppb	09:51:35
1	As 188.979†	-0.4	-2.3	-0.7632	µg/L	-0.7632	ppb	09:51:55
1	B 249.677†	14.7	66.9	1.9267	µg/L	1.9267	ppb	09:51:55
1	Ba 233.527†	-253.1	9.9	0.0763	µg/L	0.0763	ppb	09:51:55
1	Be 313.107†	-4681.0	25.5	0.0139	µg/L	0.0139	ppb	09:51:35
1	Cd 226.502†	-355.3	11.9	0.1121	µg/L	0.1121	ppb	09:51:55
1	Co 228.616†	-92.6	-8.6	-0.1580	µg/L	-0.1580	ppb	09:51:55
1	Cr 267.716†	186.1	24.6	0.3534	µg/L	0.3534	ppb	09:51:55
1	Cu 324.752†	4275.5	-70.4	-0.4085	µg/L	-0.4085	ppb	09:51:35
1	Mn 257.610†	265.3	-17.7	-0.0230	µg/L	-0.0230	ppb	09:51:55
1	Mo 202.031†	-46.7	-0.6	-0.0302	µg/L	-0.0302	ppb	09:51:55
1	Ni 231.604†	-195.3	10.6	0.2674	µg/L	0.2674	ppb	09:51:55
1	P 214.914†	542.7	-21.8	-9.9673	µg/L	-9.9673	ppb	09:51:55
1	Pb 220.353†	297.0	-21.9	-2.1448	µg/L	-2.1448	ppb	09:51:55
1	S 181.975 Axial†	49.0	6.6	7.4534	µg/L	7.4534	ppb	09:51:55
1	Sb 206.836†	95.9	13.0	3.3793	µg/L	3.3793	ppb	09:51:55
1	Se 196.026†	-111.5	-3.9	-1.4113	µg/L	-1.4113	ppb	09:51:55
1	SiO2†	2684.1	-74.9	-8.0902	µg/L	-8.0902	ppb	09:51:35
1	Si 251.611†	549.2	63.3	2.4004	µg/L	2.4004	ppb	09:51:55
1	Sn 189.927†	73.4	-4.8	-0.4793	µg/L	-0.4793	ppb	09:51:55
1	Ti 334.940†	-1941.6	109.8	0.3303	µg/L	0.3303	ppb	09:51:35
1	Tl 190.801†	-120.7	6.4	1.2191	µg/L	1.2191	ppb	09:51:55
1	U 409.014†	-6945.6	146.1	8.8071	µg/L	8.8071	ppb	09:51:35
1	V 292.402†	112.0	36.3	0.4166	µg/L	0.4166	ppb	09:51:35
1	Zn 213.857†	1193.3	-3.9	-0.0293	µg/L	-0.0293	ppb	09:51:55
2	Sc RADIAL	16775.0	16775.0	103	%			09:50:43
2	Al 396.153Radial†	313.9	2.1	0.8492	µg/L	0.8492	ppb	09:50:43
2	Ca 317.933Radial†	78.8	2.9	1.2251	µg/L	1.2251	ppb	09:51:03
2	Fe 238.204 Radial†	37.9	7.8	4.0826	µg/L	4.0826	ppb	09:51:03
2	K 766.490 Radial†	2660.2	-44.7	-24.374	µg/L	-24.374	ppb	09:50:43
2	Mg 279.077 IEC†	7.4	-4.7	-18.779	µg/L	-18.779	ppb	09:51:03
2	Na 589.592 Radial†	388.0	27.4	4.8513	µg/L	4.8513	ppb	09:50:43
2	Sr 421.552†	68.5	74.2	0.2082	µg/L	0.2082	ppb	09:50:43
2	Sc 361.383	514463.4	514463.4	102.79	%			09:52:00
2	Y 371.029	452667.8	452667.8	102.57	%			09:52:00
2	Ag 328.068†	-184.4	122.7	1.0179	µg/L	1.0179	ppb	09:52:00
2	As 188.979†	0.6	-1.3	-0.4494	µg/L	-0.4494	ppb	09:52:20
2	B 249.677†	-7.6	45.3	1.3028	µg/L	1.3028	ppb	09:52:20
2	Ba 233.527†	-271.3	-9.1	-0.0694	µg/L	-0.0694	ppb	09:52:20
2	Be 313.107†	-4618.6	63.9	0.0350	µg/L	0.0350	ppb	09:52:00
2	Cd 226.502†	-364.7	1.1	0.0096	µg/L	0.0096	ppb	09:52:20
2	Co 228.616†	-71.9	11.1	0.2030	µg/L	0.2030	ppb	09:52:20
2	Cr 267.716†	184.4	23.8	0.3439	µg/L	0.3439	ppb	09:52:20
2	Cu 324.752†	4300.4	-25.8	-0.1507	µg/L	-0.1507	ppb	09:52:00
2	Mn 257.610†	291.4	9.0	0.0127	µg/L	0.0127	ppb	09:52:20
2	Mo 202.031†	-34.1	11.4	0.5797	µg/L	0.5797	ppb	09:52:20
2	Ni 231.604†	-207.0	-1.8	-0.0452	µg/L	-0.0452	ppb	09:52:20
2	P 214.914†	536.7	-24.9	-11.540	µg/L	-11.540	ppb	09:52:20
2	Pb 220.353†	330.4	12.0	1.1703	µg/L	1.1703	ppb	09:52:20

2	S 181.975 Axial†	47.7	5.6	6.2878	µg/L	6.2878	ppb	09:52:20
2	Sb 206.836†	86.1	3.8	1.0090	µg/L	1.0090	ppb	09:52:20
2	Se 196.026†	-101.4	5.4	1.9988	µg/L	1.9988	ppb	09:52:20
2	SiO2†	2830.2	80.0	8.6373	µg/L	8.6373	ppb	09:52:00
2	Si 251.611†	503.2	21.1	0.7952	µg/L	0.7952	ppb	09:52:20
2	Sn 189.927†	83.5	5.3	0.5318	µg/L	0.5318	ppb	09:52:20
2	Ti 334.940†	-1865.8	174.3	0.5290	µg/L	0.5290	ppb	09:52:00
2	Tl 190.801†	-116.3	10.1	1.9386	µg/L	1.9386	ppb	09:52:20
2	U 409.014†	-6984.1	75.5	4.5533	µg/L	4.5533	ppb	09:52:00
2	V 292.402†	65.1	-8.7	-0.0847	µg/L	-0.0847	ppb	09:52:00
2	Zn 213.857†	1207.0	15.1	0.1061	µg/L	0.1061	ppb	09:52:20
3	Sc RADIAL	16855.6	16855.6	103	%			09:51:08
3	Al 396.153Radial†	351.4	37.0	15.523	µg/L	15.523	ppb	09:51:08
3	Ca 317.933Radial†	81.7	5.3	2.2502	µg/L	2.2502	ppb	09:51:28
3	Fe 238.204 Radial†	31.9	1.8	0.9556	µg/L	0.9556	ppb	09:51:28
3	K 766.490 Radial†	2667.7	-49.9	-27.175	µg/L	-27.175	ppb	09:51:08
3	Mg 279.077 IEC†	4.6	-7.5	-30.013	µg/L	-30.013	ppb	09:51:28
3	Na 589.592 Radial†	449.1	85.0	15.028	µg/L	15.028	ppb	09:51:08
3	Sr 421.552†	19.4	26.3	0.0737	µg/L	0.0737	ppb	09:51:08
3	Sc 361.383	517812.2	517812.2	103.46	%			09:52:25
3	Y 371.029	455714.9	455714.9	103.26	%			09:52:25
3	Ag 328.068†	-344.7	-31.0	-0.2621	µg/L	-0.2621	ppb	09:52:25
3	As 188.979†	4.1	2.1	0.6949	µg/L	0.6949	ppb	09:52:45
3	B 249.677†	4.7	57.2	1.6473	µg/L	1.6473	ppb	09:52:45
3	Ba 233.527†	-269.8	-5.9	-0.0453	µg/L	-0.0453	ppb	09:52:45
3	Be 313.107†	-4565.5	144.3	0.0792	µg/L	0.0792	ppb	09:52:25
3	Cd 226.502†	-339.7	27.5	0.2601	µg/L	0.2601	ppb	09:52:45
3	Co 228.616†	-97.8	-13.6	-0.2485	µg/L	-0.2485	ppb	09:52:45
3	Cr 267.716†	140.4	-19.8	-0.2978	µg/L	-0.2978	ppb	09:52:45
3	Cu 324.752†	4305.1	-48.3	-0.2872	µg/L	-0.2872	ppb	09:52:25
3	Mn 257.610†	238.1	-44.4	-0.0579	µg/L	-0.0579	ppb	09:52:45
3	Mo 202.031†	-46.4	-0.3	-0.0149	µg/L	-0.0149	ppb	09:52:45
3	Ni 231.604†	-188.3	17.6	0.4436	µg/L	0.4436	ppb	09:52:45
3	P 214.914†	548.7	-16.7	-7.6605	µg/L	-7.6605	ppb	09:52:45
3	Pb 220.353†	319.2	-0.9	-0.0951	µg/L	-0.0951	ppb	09:52:45
3	S 181.975 Axial†	48.4	5.9	6.6635	µg/L	6.6635	ppb	09:52:45
3	Sb 206.836†	80.7	-2.0	-0.5082	µg/L	-0.5082	ppb	09:52:45
3	Se 196.026†	-116.8	-8.8	-3.2177	µg/L	-3.2177	ppb	09:52:45
3	SiO2†	2744.2	-20.9	-2.2606	µg/L	-2.2606	ppb	09:52:25
3	Si 251.611†	549.2	62.4	2.3688	µg/L	2.3688	ppb	09:52:45
3	Sn 189.927†	93.7	14.7	1.4668	µg/L	1.4668	ppb	09:52:45
3	Ti 334.940†	-1954.1	100.7	0.3025	µg/L	0.3025	ppb	09:52:25
3	Tl 190.801†	-106.1	20.7	3.9584	µg/L	3.9584	ppb	09:52:45
3	U 409.014†	-6861.0	238.5	14.379	µg/L	14.379	ppb	09:52:25
3	V 292.402†	83.1	8.2	0.1071	µg/L	0.1071	ppb	09:52:25
3	Zn 213.857†	1181.7	-17.0	-0.1221	µg/L	-0.1221	ppb	09:52:45

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	516424.0	103.18	%	0.349				0.34%
Sc RADIAL	16844.8	103	%	0.4				0.39%
Y 371.029	454538.7	103.00	%	0.371				0.36%
Ag 328.068†	-9.1	-0.0769	µg/L	1.01495	-0.0769	ppb	1.01495	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	28.7	12.027	µg/L	9.9038	12.027	ppb	9.9038	82.35%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.5	-0.1726	µg/L	0.76747	-0.1726	ppb	0.76747	444.75%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	56.5	1.6256	µg/L	0.31252	1.6256	ppb	0.31252	19.23%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-1.7	-0.0128	µg/L	0.07810	-0.0128	ppb	0.07810	611.31%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	77.9	0.0427	µg/L	0.03332	0.0427	ppb	0.03332	78.03%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.9	0.3908	µg/L	2.38852	0.3908	ppb	2.38852	611.20%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	13.5	0.1273	µg/L	0.12592	0.1273	ppb	0.12592	98.92%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-3.7	-0.0678	µg/L	0.23887	-0.0678	ppb	0.23887	352.10%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 9.5      0.1332 µg/L       0.37328      0.1332 ppb        0.37328 280.26%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -48.2     -0.2821 µg/L       0.12898     -0.2821 ppb        0.12898  45.72%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          5.5      2.8677 µg/L       1.67600      2.8677 ppb        1.67600  58.44%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -92.3     -50.285 µg/L       42.4764     -50.285 ppb        42.4764  84.47%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -5.1     -20.655 µg/L        8.5753     -20.655 ppb         8.5753  41.52%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -17.7     -0.0227 µg/L       0.03529     -0.0227 ppb        0.03529 155.40%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 3.5      0.1782 µg/L       0.34779      0.1782 ppb        0.34779 195.16%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         46.0      8.1437 µg/L       5.96389      8.1437 ppb        5.96389  73.23%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 8.8      0.2219 µg/L       0.24753      0.2219 ppb        0.24753 111.53%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -21.1     -9.7226 µg/L       1.95125     -9.7226 ppb        1.95125  20.07%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -3.6     -0.3565 µg/L       1.67292     -0.3565 ppb        1.67292 469.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            6.1      6.8016 µg/L       0.59491      6.8016 ppb        0.59491   8.75%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 4.9      1.2934 µg/L       1.95927      1.2934 ppb        1.95927 151.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.4     -0.8767 µg/L       2.64900     -0.8767 ppb        2.64900 302.14%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      -5.3     -0.5712 µg/L       8.49078     -0.5712 ppb        8.49078 >999.9%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                49.0      1.8548 µg/L       0.91781      1.8548 ppb        0.91781  49.48%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.1      0.5065 µg/L       0.97329      0.5065 ppb        0.97329 192.17%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                85.7      0.2405 µg/L       0.18502      0.2405 ppb        0.18502  76.94%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               128.3      0.3873 µg/L       0.12353      0.3873 ppb        0.12353  31.90%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                12.4      2.3720 µg/L       1.42017      2.3720 ppb        1.42017  59.87%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                153.4      9.2465 µg/L       4.92760      9.2465 ppb        4.92760  53.29%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 12.0      0.1463 µg/L       0.25297      0.1463 ppb        0.25297 172.89%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                -1.9     -0.0151 µg/L       0.11477     -0.0151 ppb        0.11477 759.96%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 22 **Autosampler Location: 316**
Sample ID: 1202262892|1048315|1 **Date Collected: 12/3/2010 09:52:53**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1202262892|1048315|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16619.4	16619.4	102	%			09:53:24
1	Al 396.153Radial†	347.7	38.2	16.006	µg/L	16.006	ppb	09:53:24
1	Ca 317.933Radial†	102.6	27.0	11.446	µg/L	11.446	ppb	09:53:44
1	Fe 238.204 Radial†	46.0	16.1	8.3803	µg/L	8.3803	ppb	09:53:44
1	K 766.490 Radial†	2646.8	-33.6	-18.321	µg/L	-18.321	ppb	09:53:24
1	Mg 279.077 IEC†	-0.2	-12.1	-48.866	µg/L	-48.866	ppb	09:53:44
1	Na 589.592 Radial†	331.1	-25.0	-4.4160	µg/L	-4.4160	ppb	09:53:24
1	Sr 421.552†	88.1	94.2	0.2639	µg/L	0.2639	ppb	09:53:24
1	Sc 361.383	515093.5	515093.5	102.91	%			09:54:41
1	Y 371.029	453471.2	453471.2	102.75	%			09:54:41
1	Ag 328.068†	-196.8	110.9	0.9255	µg/L	0.9255	ppb	09:54:41
1	As 188.979†	-5.1	-6.9	-2.3240	µg/L	-2.3240	ppb	09:55:01
1	B 249.677†	11.4	63.8	1.8363	µg/L	1.8363	ppb	09:55:01
1	Ba 233.527†	-233.1	28.3	0.2191	µg/L	0.2191	ppb	09:55:01
1	Be 313.107†	-4650.2	38.7	0.0211	µg/L	0.0211	ppb	09:54:41
1	Cd 226.502†	-372.1	-5.7	-0.0553	µg/L	-0.0553	ppb	09:55:01
1	Co 228.616†	-83.8	-0.4	-0.0080	µg/L	-0.0080	ppb	09:55:01
1	Cr 267.716†	191.8	30.8	0.4434	µg/L	0.4434	ppb	09:55:01
1	Cu 324.752†	4395.0	61.0	0.3404	µg/L	0.3404	ppb	09:54:41
1	Mn 257.610†	329.5	45.7	0.0628	µg/L	0.0628	ppb	09:55:01
1	Mo 202.031†	-41.0	4.7	0.2409	µg/L	0.2409	ppb	09:55:01
1	Ni 231.604†	-233.0	-26.8	-0.6754	µg/L	-0.6754	ppb	09:55:01
1	P 214.914†	567.1	3.9	1.6968	µg/L	1.6968	ppb	09:55:01
1	Pb 220.353†	305.3	-12.8	-1.2560	µg/L	-1.2560	ppb	09:55:01
1	S 181.975 Axial†	52.0	9.7	10.856	µg/L	10.856	ppb	09:55:01
1	Sb 206.836†	73.9	-8.1	-2.1014	µg/L	-2.1014	ppb	09:55:01
1	Se 196.026†	-117.4	-10.0	-3.6750	µg/L	-3.6750	ppb	09:55:01
1	SiO2†	2863.8	109.2	11.790	µg/L	11.790	ppb	09:54:41
1	Si 251.611†	593.8	108.6	4.1177	µg/L	4.1177	ppb	09:55:01
1	Sn 189.927†	87.3	9.0	0.8950	µg/L	0.8950	ppb	09:55:01
1	Ti 334.940†	-1861.7	180.5	0.5491	µg/L	0.5491	ppb	09:54:41
1	Tl 190.801†	-119.0	7.6	1.4611	µg/L	1.4611	ppb	09:55:01
1	U 409.014†	-6894.6	170.9	10.300	µg/L	10.300	ppb	09:54:41
1	V 292.402†	126.0	50.4	0.5771	µg/L	0.5771	ppb	09:54:41
1	Zn 213.857†	1373.9	175.8	1.2416	µg/L	1.2416	ppb	09:55:01
2	Sc RADIAL	16817.8	16817.8	103	%			09:53:49
2	Al 396.153Radial†	386.1	71.5	29.992	µg/L	29.992	ppb	09:53:49
2	Ca 317.933Radial†	106.5	29.6	12.563	µg/L	12.563	ppb	09:54:09
2	Fe 238.204 Radial†	52.0	21.5	11.176	µg/L	11.176	ppb	09:54:09
2	K 766.490 Radial†	2636.9	-74.0	-40.288	µg/L	-40.288	ppb	09:53:49
2	Mg 279.077 IEC†	13.6	1.3	5.4089	µg/L	5.4089	ppb	09:54:09
2	Na 589.592 Radial†	363.5	2.7	0.4768	µg/L	0.4768	ppb	09:53:49
2	Sr 421.552†	-50.5	-41.7	-0.1174	µg/L	-0.1174	ppb	09:53:49
2	Sc 361.383	512666.8	512666.8	102.43	%			09:55:06
2	Y 371.029	450845.4	450845.4	102.16	%			09:55:06
2	Ag 328.068†	-347.9	-37.5	-0.3241	µg/L	-0.3241	ppb	09:55:06
2	As 188.979†	-5.2	-6.9	-2.3484	µg/L	-2.3484	ppb	09:55:26
2	B 249.677†	-30.6	22.8	0.6556	µg/L	0.6556	ppb	09:55:26
2	Ba 233.527†	-261.0	0.0	0.0015	µg/L	0.0015	ppb	09:55:26
2	Be 313.107†	-4606.1	60.3	0.0331	µg/L	0.0331	ppb	09:55:06
2	Cd 226.502†	-357.5	6.9	0.0642	µg/L	0.0642	ppb	09:55:26
2	Co 228.616†	-86.6	-3.5	-0.0647	µg/L	-0.0647	ppb	09:55:26
2	Cr 267.716†	177.8	18.0	0.2566	µg/L	0.2566	ppb	09:55:26
2	Cu 324.752†	4184.8	-124.0	-0.7136	µg/L	-0.7136	ppb	09:55:06
2	Mn 257.610†	320.0	37.9	0.0502	µg/L	0.0502	ppb	09:55:26
2	Mo 202.031†	-46.8	-1.0	-0.0527	µg/L	-0.0527	ppb	09:55:26
2	Ni 231.604†	-190.6	13.6	0.3416	µg/L	0.3416	ppb	09:55:26
2	P 214.914†	573.8	13.0	6.3407	µg/L	6.3407	ppb	09:55:26
2	Pb 220.353†	280.0	-36.0	-3.5240	µg/L	-3.5240	ppb	09:55:26

2	S 181.975 Axial†	50.9	8.8	9.9161	µg/L	9.9161	ppb	09:55:26
2	Sb 206.836†	85.8	3.8	0.9895	µg/L	0.9895	ppb	09:55:26
2	Se 196.026†	-111.5	-4.7	-1.7283	µg/L	-1.7283	ppb	09:55:26
2	SiO2†	2771.1	32.0	3.4496	µg/L	3.4496	ppb	09:55:06
2	Si 251.611†	617.2	134.1	5.0897	µg/L	5.0897	ppb	09:55:26
2	Sn 189.927†	80.4	2.6	0.2580	µg/L	0.2580	ppb	09:55:26
2	Ti 334.940†	-2005.9	31.2	0.0919	µg/L	0.0919	ppb	09:55:06
2	Tl 190.801†	-109.9	15.9	3.0451	µg/L	3.0451	ppb	09:55:26
2	U 409.014†	-6890.5	143.2	8.6317	µg/L	8.6317	ppb	09:55:06
2	V 292.402†	-6.4	-78.3	-0.8639	µg/L	-0.8639	ppb	09:55:06
2	Zn 213.857†	1360.6	169.1	1.1886	µg/L	1.1886	ppb	09:55:26
3	Sc RADIAL	17008.5	17008.5	104	%			09:54:14
3	Al 396.153Radial†	429.6	109.2	45.753	µg/L	45.753	ppb	09:54:14
3	Ca 317.933Radial†	112.7	34.4	14.604	µg/L	14.604	ppb	09:54:34
3	Fe 238.204 Radial†	38.5	7.9	4.1172	µg/L	4.1172	ppb	09:54:34
3	K 766.490 Radial†	2653.0	-87.3	-47.538	µg/L	-47.538	ppb	09:54:14
3	Mg 279.077 IEC†	-2.6	-14.4	-57.794	µg/L	-57.794	ppb	09:54:34
3	Na 589.592 Radial†	398.0	31.8	5.6328	µg/L	5.6328	ppb	09:54:14
3	Sr 421.552†	30.9	37.2	0.1039	µg/L	0.1039	ppb	09:54:14
3	Sc 361.383	514081.4	514081.4	102.71	%			09:55:32
3	Y 371.029	452552.7	452552.7	102.55	%			09:55:32
3	Ag 328.068†	-306.2	4.0	0.0238	µg/L	0.0238	ppb	09:55:32
3	As 188.979†	5.3	3.2	1.1017	µg/L	1.1017	ppb	09:55:52
3	B 249.677†	-4.6	48.2	1.3875	µg/L	1.3875	ppb	09:55:52
3	Ba 233.527†	-241.6	19.7	0.1515	µg/L	0.1515	ppb	09:55:52
3	Be 313.107†	-4540.2	136.9	0.0752	µg/L	0.0752	ppb	09:55:32
3	Cd 226.502†	-344.0	20.9	0.1970	µg/L	0.1970	ppb	09:55:52
3	Co 228.616†	-85.1	-1.8	-0.0332	µg/L	-0.0332	ppb	09:55:52
3	Cr 267.716†	166.2	6.3	0.0887	µg/L	0.0887	ppb	09:55:52
3	Cu 324.752†	4228.8	-92.4	-0.5299	µg/L	-0.5299	ppb	09:55:32
3	Mn 257.610†	302.4	20.0	0.0289	µg/L	0.0289	ppb	09:55:52
3	Mo 202.031†	-34.4	11.1	0.5638	µg/L	0.5638	ppb	09:55:52
3	Ni 231.604†	-212.1	-6.8	-0.1723	µg/L	-0.1723	ppb	09:55:52
3	P 214.914†	562.8	0.9	0.6068	µg/L	0.6068	ppb	09:55:52
3	Pb 220.353†	285.8	-31.2	-3.0649	µg/L	-3.0649	ppb	09:55:52
3	S 181.975 Axial†	52.1	9.9	11.120	µg/L	11.120	ppb	09:55:52
3	Sb 206.836†	99.1	16.6	4.3357	µg/L	4.3357	ppb	09:55:52
3	Se 196.026†	-101.3	5.4	2.0026	µg/L	2.0026	ppb	09:55:52
3	SiO2†	2846.3	97.7	10.553	µg/L	10.553	ppb	09:55:32
3	Si 251.611†	590.6	106.6	4.0377	µg/L	4.0377	ppb	09:55:52
3	Sn 189.927†	76.1	-1.7	-0.1726	µg/L	-0.1726	ppb	09:55:52
3	Ti 334.940†	-1994.3	47.8	0.1503	µg/L	0.1503	ppb	09:55:32
3	Tl 190.801†	-133.8	-7.0	-1.3401	µg/L	-1.3401	ppb	09:55:52
3	U 409.014†	-6999.8	55.3	3.3325	µg/L	3.3325	ppb	09:55:32
3	V 292.402†	3.7	-68.4	-0.7543	µg/L	-0.7543	ppb	09:55:32
3	Zn 213.857†	1347.3	152.5	1.0753	µg/L	1.0753	ppb	09:55:52

Mean Data: 1202262892|1048315|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	513947.3	102.68	%	0.244				0.24%
Sc RADIAL	16815.2	103	%	1.2				1.16%
Y 371.029	452289.8	102.49	%	0.302				0.29%
Ag 328.068†	25.8	0.2084	µg/L	0.64489	0.2084	ppb	0.64489	309.42%
Al 396.153Radial†	73.0	30.584	µg/L	14.8823	30.584	ppb	14.8823	48.66%
As 188.979†	-3.5	-1.1902	µg/L	1.98488	-1.1902	ppb	1.98488	166.76%
B 249.677†	44.9	1.2931	µg/L	0.59596	1.2931	ppb	0.59596	46.09%
Ba 233.527†	16.0	0.1241	µg/L	0.11136	0.1241	ppb	0.11136	89.76%
Be 313.107†	78.6	0.0431	µg/L	0.02839	0.0431	ppb	0.02839	65.83%
Ca 317.933Radial†	30.4	12.871	µg/L	1.6013	12.871	ppb	1.6013	12.44%
Cd 226.502†	7.3	0.0686	µg/L	0.12619	0.0686	ppb	0.12619	183.93%
Co 228.616†	-1.9	-0.0353	µg/L	0.02839	-0.0353	ppb	0.02839	80.43%
Cr 267.716†	18.4	0.2629	µg/L	0.17743	0.2629	ppb	0.17743	67.49%
Cu 324.752†	-51.8	-0.3010	µg/L	0.56302	-0.3010	ppb	0.56302	187.04%
Fe 238.204 Radial†	15.2	7.8911	µg/L	3.55463	7.8911	ppb	3.55463	45.05%
K 766.490 Radial†	-64.9	-35.382	µg/L	15.2135	-35.382	ppb	15.2135	43.00%
Mg 279.077 IEC†	-8.4	-33.750	µg/L	34.2055	-33.750	ppb	34.2055	101.35%
Mn 257.610†	34.5	0.0473	µg/L	0.01712	0.0473	ppb	0.01712	36.21%
Mo 202.031†	4.9	0.2506	µg/L	0.30837	0.2506	ppb	0.30837	123.03%
Na 589.592 Radial†	3.2	0.5645	µg/L	5.02494	0.5645	ppb	5.02494	890.13%

Ni 231.604†	-6.7	-0.1687 µg/L	0.50855	-0.1687 ppb	0.50855	301.47%
P 214.914†	5.9	2.8814 µg/L	3.04497	2.8814 ppb	3.04497	105.68%
Pb 220.353†	-26.7	-2.6150 µg/L	1.19906	-2.6150 ppb	1.19906	45.85%
S 181.975 Axial†	9.5	10.631 µg/L	0.6328	10.631 ppb	0.6328	5.95%
Sb 206.836†	4.1	1.0746 µg/L	3.21943	1.0746 ppb	3.21943	299.59%
Se 196.026†	-3.1	-1.1336 µg/L	2.88517	-1.1336 ppb	2.88517	254.52%
SiO2†	79.6	8.5975 µg/L	4.50097	8.5975 ppb	4.50097	52.35%
Si 251.611†	116.5	4.4150 µg/L	0.58564	4.4150 ppb	0.58564	13.26%
Sn 189.927†	3.3	0.3268 µg/L	0.53709	0.3268 ppb	0.53709	164.34%
Sr 421.552†	29.9	0.0835 µg/L	0.19145	0.0835 ppb	0.19145	229.41%
Ti 334.940†	86.5	0.2637 µg/L	0.24883	0.2637 ppb	0.24883	94.35%
Tl 190.801†	5.5	1.0554 µg/L	2.22060	1.0554 ppb	2.22060	210.41%
U 409.014†	123.1	7.4215 µg/L	3.63819	7.4215 ppb	3.63819	49.02%
V 292.402†	-32.1	-0.3470 µg/L	0.80219	-0.3470 ppb	0.80219	231.16%
Zn 213.857†	165.8	1.1685 µg/L	0.08496	1.1685 ppb	0.08496	7.27%

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Sequence No.: 23 **Autosampler Location: 317**
Sample ID: 1202262893|1048315|1 **Date Collected: 12/3/2010 09:56:00**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1202262893|1048315|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16624.2	16624.2	102	%			09:56:49
1	Al 396.153Radial†	12261.3	11761.7	4917.6	µg/L	4917.6	ppb	09:56:29
1	Ca 317.933Radial†	12597.4	12322.6	5225.2	µg/L	5225.2	ppb	09:56:49
1	Fe 238.204 Radial†	10023.2	9834.2	5121.8	µg/L	5121.8	ppb	09:56:49
1	K 766.490 Radial†	11955.2	9125.5	4970.4	µg/L	4970.4	ppb	09:56:29
1	Mg 279.077 IEC†	1328.6	1295.5	5217.8	µg/L	5217.8	ppb	09:56:49
1	Na 589.592 Radial†	29341.2	28522.4	5045.1	µg/L	5045.1	ppb	09:56:29
1	Sr 421.552†	180370.7	177502.2	497.84	µg/L	497.84	ppb	09:56:29
1	Sc 361.383	512445.4	512445.4	102.38	%			09:57:47
1	Y 371.029	447616.0	447616.0	101.43	%			09:57:47
1	Ag 328.068†	61628.5	60495.7	508.73	µg/L	508.73	ppb	09:57:47
1	As 188.979†	1528.6	1491.1	510.56	µg/L	510.56	ppb	09:57:52
1	B 249.677†	17864.4	17501.2	501.80	µg/L	501.80	ppb	09:57:52
1	Ba 233.527†	67477.3	66161.0	509.26	µg/L	509.26	ppb	09:57:47
1	Be 313.107†	939055.4	921747.8	506.34	µg/L	506.34	ppb	09:57:47
1	Cd 226.502†	54028.1	53126.0	502.12	µg/L	502.12	ppb	09:57:52
1	Co 228.616†	28202.8	27627.2	505.49	µg/L	505.49	ppb	09:57:52
1	Cr 267.716†	35861.9	34871.3	507.97	µg/L	507.97	ppb	09:57:52
1	Cu 324.752†	97504.8	91024.9	518.99	µg/L	518.99	ppb	09:57:47
1	Mn 257.610†	387987.2	378678.8	503.96	µg/L	503.96	ppb	09:57:47
1	Mo 202.031†	10284.5	10089.6	511.56	µg/L	511.56	ppb	09:57:52
1	Ni 231.604†	20621.2	20340.7	512.73	µg/L	512.73	ppb	09:57:52
1	P 214.914†	1890.5	1299.4	409.50	µg/L	409.50	ppb	09:57:52
1	Pb 220.353†	5696.0	5254.0	509.91	µg/L	509.91	ppb	09:57:52
1	S 181.975 Axial†	4750.8	4599.4	5162.8	µg/L	5162.8	ppb	09:57:52
1	Sb 206.836†	2073.7	1945.5	514.27	µg/L	514.27	ppb	09:57:52
1	Se 196.026†	1218.1	1293.8	480.57	µg/L	480.57	ppb	09:57:52
1	SiO2†	104078.3	98981.5	10690	µg/L	10690	ppb	09:57:47
1	Si 251.611†	134992.6	131381.1	4977.7	µg/L	4977.7	ppb	09:57:47
1	Sn 189.927†	5411.7	5209.9	519.73	µg/L	519.73	ppb	09:57:52
1	Ti 334.940†	168523.1	166588.8	505.70	µg/L	505.70	ppb	09:57:47
1	Tl 190.801†	2679.0	2739.9	525.45	µg/L	525.45	ppb	09:57:52
1	U 409.014†	2075.5	8897.4	537.38	µg/L	537.38	ppb	09:57:47
1	V 292.402†	45668.1	44532.7	504.28	µg/L	504.28	ppb	09:57:52
1	Zn 213.857†	74585.5	71689.7	500.66	µg/L	500.66	ppb	09:57:47
2	Sc RADIAL	16633.0	16633.0	102	%			09:57:15
2	Al 396.153Radial†	12515.2	12005.1	5019.6	µg/L	5019.6	ppb	09:56:55
2	Ca 317.933Radial†	12597.3	12316.0	5222.4	µg/L	5222.4	ppb	09:57:15
2	Fe 238.204 Radial†	10047.6	9853.0	5131.6	µg/L	5131.6	ppb	09:57:15
2	K 766.490 Radial†	12112.3	9273.9	5051.2	µg/L	5051.2	ppb	09:56:55
2	Mg 279.077 IEC†	1329.9	1296.1	5220.3	µg/L	5220.3	ppb	09:57:15
2	Na 589.592 Radial†	30309.2	29459.3	5210.8	µg/L	5210.8	ppb	09:56:55
2	Sr 421.552†	185323.8	182280.4	511.25	µg/L	511.25	ppb	09:56:55
2	Sc 361.383	513975.3	513975.3	102.69	%			09:57:58
2	Y 371.029	448165.2	448165.2	101.55	%			09:57:58
2	Ag 328.068†	61719.6	60405.2	507.98	µg/L	507.98	ppb	09:57:58
2	As 188.979†	1546.1	1503.7	514.83	µg/L	514.83	ppb	09:58:03
2	B 249.677†	17999.6	17580.9	504.10	µg/L	504.10	ppb	09:58:03
2	Ba 233.527†	67610.7	66094.8	508.75	µg/L	508.75	ppb	09:57:58
2	Be 313.107†	940268.5	920198.9	505.48	µg/L	505.48	ppb	09:57:58
2	Cd 226.502†	54061.6	53001.5	500.94	µg/L	500.94	ppb	09:58:03
2	Co 228.616†	28133.9	27478.1	502.76	µg/L	502.76	ppb	09:58:03
2	Cr 267.716†	35938.8	34842.0	507.55	µg/L	507.55	ppb	09:58:03
2	Cu 324.752†	97591.6	90826.0	517.85	µg/L	517.85	ppb	09:57:58
2	Mn 257.610†	388963.7	378501.8	503.73	µg/L	503.73	ppb	09:57:58
2	Mo 202.031†	10366.5	10139.6	514.09	µg/L	514.09	ppb	09:58:03
2	Ni 231.604†	20708.6	20365.8	513.36	µg/L	513.36	ppb	09:58:03
2	P 214.914†	1998.2	1398.7	456.18	µg/L	456.18	ppb	09:58:03
2	Pb 220.353†	5763.8	5303.4	514.66	µg/L	514.66	ppb	09:58:03

2	S 181.975 Axial†	4734.6	4569.7	5129.6	µg/L	5129.6	ppb	09:58:03
2	Sb 206.836†	2083.0	1948.5	515.09	µg/L	515.09	ppb	09:58:03
2	Se 196.026†	1273.5	1344.2	499.12	µg/L	499.12	ppb	09:58:03
2	SiO2†	104305.6	98900.2	10682	µg/L	10682	ppb	09:57:58
2	Si 251.611†	135248.7	131238.0	4972.3	µg/L	4972.3	ppb	09:57:58
2	Sn 189.927†	5445.4	5226.9	521.42	µg/L	521.42	ppb	09:58:03
2	Ti 334.940†	168925.2	166490.4	505.40	µg/L	505.40	ppb	09:57:58
2	Tl 190.801†	2625.1	2679.6	513.94	µg/L	513.94	ppb	09:58:03
2	U 409.014†	2105.3	8920.5	538.77	µg/L	538.77	ppb	09:57:58
2	V 292.402†	45810.7	44538.8	504.37	µg/L	504.37	ppb	09:58:03
2	Zn 213.857†	74797.4	71679.2	500.58	µg/L	500.58	ppb	09:57:58
3	Sc RADIAL	16640.5	16640.5	102	%			09:57:40
3	Al 396.153Radial†	12498.8	11983.5	5010.5	µg/L	5010.5	ppb	09:57:20
3	Ca 317.933Radial†	12581.4	12294.8	5213.4	µg/L	5213.4	ppb	09:57:40
3	Fe 238.204 Radial†	10005.0	9806.7	5107.5	µg/L	5107.5	ppb	09:57:40
3	K 766.490 Radial†	12157.0	9312.5	5072.2	µg/L	5072.2	ppb	09:57:20
3	Mg 279.077 IEC†	1323.4	1289.1	5192.0	µg/L	5192.0	ppb	09:57:40
3	Na 589.592 Radial†	30155.8	29295.2	5181.8	µg/L	5181.8	ppb	09:57:20
3	Sr 421.552†	184257.4	181150.2	508.08	µg/L	508.08	ppb	09:57:20
3	Sc 361.383	513608.5	513608.5	102.62	%			09:58:09
3	Y 371.029	448155.7	448155.7	101.55	%			09:58:09
3	Ag 328.068†	61788.7	60515.5	508.91	µg/L	508.91	ppb	09:58:09
3	As 188.979†	1527.3	1486.4	508.97	µg/L	508.97	ppb	09:58:14
3	B 249.677†	18006.4	17600.0	504.64	µg/L	504.64	ppb	09:58:14
3	Ba 233.527†	67787.2	66313.8	510.43	µg/L	510.43	ppb	09:58:09
3	Be 313.107†	943263.8	923771.9	507.45	µg/L	507.45	ppb	09:58:09
3	Cd 226.502†	54114.5	53090.7	501.79	µg/L	501.79	ppb	09:58:14
3	Co 228.616†	28247.5	27608.4	505.15	µg/L	505.15	ppb	09:58:14
3	Cr 267.716†	35973.8	34901.0	508.41	µg/L	508.41	ppb	09:58:14
3	Cu 324.752†	97931.0	91224.6	520.13	µg/L	520.13	ppb	09:58:09
3	Mn 257.610†	390111.6	379891.0	505.58	µg/L	505.58	ppb	09:58:09
3	Mo 202.031†	10354.2	10134.8	513.84	µg/L	513.84	ppb	09:58:14
3	Ni 231.604†	20864.6	20532.3	517.56	µg/L	517.56	ppb	09:58:14
3	P 214.914†	1962.1	1364.9	439.60	µg/L	439.60	ppb	09:58:14
3	Pb 220.353†	5749.0	5293.0	513.65	µg/L	513.65	ppb	09:58:14
3	S 181.975 Axial†	4734.1	4572.6	5132.8	µg/L	5132.8	ppb	09:58:14
3	Sb 206.836†	2075.9	1943.1	513.68	µg/L	513.68	ppb	09:58:14
3	Se 196.026†	1303.1	1374.0	510.02	µg/L	510.02	ppb	09:58:14
3	SiO2†	104638.0	99296.7	10724	µg/L	10724	ppb	09:58:09
3	Si 251.611†	135575.1	131650.2	4987.9	µg/L	4987.9	ppb	09:58:09
3	Sn 189.927†	5442.2	5227.6	521.50	µg/L	521.50	ppb	09:58:14
3	Ti 334.940†	169256.0	166930.2	506.73	µg/L	506.73	ppb	09:58:09
3	Tl 190.801†	2650.8	2706.5	519.09	µg/L	519.09	ppb	09:58:14
3	U 409.014†	2130.5	8946.5	540.33	µg/L	540.33	ppb	09:58:09
3	V 292.402†	45869.8	44628.3	505.37	µg/L	505.37	ppb	09:58:14
3	Zn 213.857†	75156.7	72081.3	503.39	µg/L	503.39	ppb	09:58:09

Mean Data: 1202262893|1048315|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	513343.1	102.56	%	0.160				0.16%
Sc RADIAL	16632.6	102	%	0.0				0.05%
Y 371.029	447979.0	101.51	%	0.071				0.07%
Ag 328.068†	60472.1	508.54	µg/L	0.492	508.54	ppb	0.492	0.10%
Al 396.153Radial†	11916.8	4982.6	µg/L	56.46	4982.6	ppb	56.46	1.13%
As 188.979†	1493.8	511.45	µg/L	3.029	511.45	ppb	3.029	0.59%
B 249.677†	17560.7	503.51	µg/L	1.511	503.51	ppb	1.511	0.30%
Ba 233.527†	66189.8	509.48	µg/L	0.861	509.48	ppb	0.861	0.17%
Be 313.107†	921906.2	506.42	µg/L	0.984	506.42	ppb	0.984	0.19%
Ca 317.933Radial†	12311.1	5220.3	µg/L	6.16	5220.3	ppb	6.16	0.12%
Cd 226.502†	53072.7	501.62	µg/L	0.608	501.62	ppb	0.608	0.12%
Co 228.616†	27571.2	504.46	µg/L	1.484	504.46	ppb	1.484	0.29%
Cr 267.716†	34871.4	507.97	µg/L	0.430	507.97	ppb	0.430	0.08%
Cu 324.752†	91025.2	518.99	µg/L	1.136	518.99	ppb	1.136	0.22%
Fe 238.204 Radial†	9831.3	5120.3	µg/L	12.14	5120.3	ppb	12.14	0.24%
K 766.490 Radial†	9237.3	5031.3	µg/L	53.76	5031.3	ppb	53.76	1.07%
Mg 279.077 IEC†	1293.6	5210.0	µg/L	15.65	5210.0	ppb	15.65	0.30%
Mn 257.610†	379023.9	504.42	µg/L	1.008	504.42	ppb	1.008	0.20%
Mo 202.031†	10121.3	513.16	µg/L	1.397	513.16	ppb	1.397	0.27%
Na 589.592 Radial†	29092.3	5145.9	µg/L	88.50	5145.9	ppb	88.50	1.72%

Ni 231.604†	20412.9	514.55	µg/L	2.625	514.55	ppb	2.625	0.51%
P 214.914†	1354.3	435.09	µg/L	23.664	435.09	ppb	23.664	5.44%
Pb 220.353†	5283.4	512.74	µg/L	2.502	512.74	ppb	2.502	0.49%
S 181.975 Axial†	4580.6	5141.7	µg/L	18.36	5141.7	ppb	18.36	0.36%
Sb 206.836†	1945.7	514.35	µg/L	0.709	514.35	ppb	0.709	0.14%
Se 196.026†	1337.3	496.57	µg/L	14.888	496.57	ppb	14.888	3.00%
SiO2†	99059.5	10699	µg/L	22.6	10699	ppb	22.6	0.21%
Si 251.611†	131423.1	4979.3	µg/L	7.94	4979.3	ppb	7.94	0.16%
Sn 189.927†	5221.4	520.88	µg/L	1.001	520.88	ppb	1.001	0.19%
Sr 421.552†	180310.9	505.72	µg/L	7.006	505.72	ppb	7.006	1.39%
Ti 334.940†	166669.8	505.94	µg/L	0.701	505.94	ppb	0.701	0.14%
Tl 190.801†	2708.6	519.49	µg/L	5.764	519.49	ppb	5.764	1.11%
U 409.014†	8921.5	538.82	µg/L	1.478	538.82	ppb	1.478	0.27%
V 292.402†	44566.6	504.67	µg/L	0.608	504.67	ppb	0.608	0.12%
Zn 213.857†	71816.7	501.54	µg/L	1.598	501.54	ppb	1.598	0.32%

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Sequence No.: 24 **Autosampler Location: 318**
Sample ID: 266878001|1048315|1 **Date Collected: 12/3/2010 09:58:22**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 266878001|1048315|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16419.7	16419.7	100	%			09:58:52
1	Al 396.153Radial†	491.7	185.8	73.704	µg/L	73.704	ppb	09:58:52
1	Ca 317.933Radial†	18053.4	17912.8	7595.6	µg/L	7595.6	ppb	09:58:52
1	Fe 238.204 Radial†	49.2	19.8	10.335	µg/L	10.335	ppb	09:59:12
1	K 766.490 Radial†	6492.4	3829.4	2071.7	µg/L	2071.7	ppb	09:58:52
1	Mg 279.077 IEC†	105.4	93.1	374.69	µg/L	374.69	ppb	09:59:12
1	Na 589.592 Radial†	556168.1	553765.8	97951	µg/L	97951	ppb	09:58:52
1	Sr 421.552†	48839.6	48666.9	136.34	µg/L	136.34	ppb	09:58:52
1	Sc 361.383	501528.4	501528.4	100.20	%			10:00:09
1	Y 371.029	435161.2	435161.2	98.605	%			10:00:09
1	Ag 328.068†	-406.0	-103.0	-0.4490	µg/L	-0.4490	ppb	10:00:09
1	As 188.979†	28.9	26.9	9.1989	µg/L	9.1989	ppb	10:00:29
1	B 249.677†	3898.6	3943.4	113.52	µg/L	113.52	ppb	10:00:29
1	Ba 233.527†	2530.3	2780.0	21.377	µg/L	21.377	ppb	10:00:29
1	Be 313.107†	-4788.1	-221.1	-0.1215	µg/L	-0.1215	ppb	10:00:09
1	Cd 226.502†	-367.2	-10.6	-0.1013	µg/L	-0.1013	ppb	10:00:29
1	Co 228.616†	-98.1	-16.9	-0.2822	µg/L	-0.2822	ppb	10:00:29
1	Cr 267.716†	795.3	638.1	9.3049	µg/L	9.3049	ppb	10:00:29
1	Cu 324.752†	6783.2	2559.9	14.591	µg/L	14.591	ppb	10:00:09
1	Mn 257.610†	521.2	245.7	0.3117	µg/L	0.3117	ppb	10:00:29
1	Mo 202.031†	19.3	63.9	3.2802	µg/L	3.2802	ppb	10:00:29
1	Ni 231.604†	-200.2	-0.1	-0.0029	µg/L	-0.0029	ppb	10:00:29
1	P 214.914†	581.9	33.6	10.057	µg/L	10.057	ppb	10:00:29
1	Pb 220.353†	312.7	2.6	0.7187	µg/L	0.7187	ppb	10:00:29
1	S 181.975 Axial†	3924.7	3875.9	4351.1	µg/L	4351.1	ppb	10:00:29
1	Sb 206.836†	93.2	13.0	3.4606	µg/L	3.4606	ppb	10:00:29
1	Se 196.026†	-108.0	-3.7	-1.3280	µg/L	-1.3280	ppb	10:00:29
1	SiO2†	376140.6	372706.1	40233	µg/L	40233	ppb	10:00:09
1	Si 251.611†	492295.3	490830.9	18620	µg/L	18620	ppb	10:00:09
1	Sn 189.927†	58.7	-17.3	-1.1860	µg/L	-1.1860	ppb	10:00:29
1	Ti 334.940†	-1969.8	23.7	0.8909	µg/L	0.8909	ppb	10:00:29
1	Tl 190.801†	-141.8	-18.3	-3.5476	µg/L	-3.5476	ppb	10:00:29
1	U 409.014†	-6607.0	276.6	16.676	µg/L	16.676	ppb	10:00:09
1	V 292.402†	3451.1	3372.0	37.723	µg/L	37.723	ppb	10:00:29
1	Zn 213.857†	2196.6	1033.0	7.2600	µg/L	7.2600	ppb	10:00:29
2	Sc RADIAL	16542.7	16542.7	101	%			09:59:17
2	Al 396.153Radial†	440.9	132.0	51.119	µg/L	51.119	ppb	09:59:17
2	Ca 317.933Radial†	18165.9	17890.4	7586.1	µg/L	7586.1	ppb	09:59:17
2	Fe 238.204 Radial†	48.5	18.8	9.7935	µg/L	9.7935	ppb	09:59:37
2	K 766.490 Radial†	6510.5	3799.2	2055.2	µg/L	2055.2	ppb	09:59:17
2	Mg 279.077 IEC†	111.0	97.8	393.90	µg/L	393.90	ppb	09:59:37
2	Na 589.592 Radial†	560016.4	553450.8	97895	µg/L	97895	ppb	09:59:17
2	Sr 421.552†	49280.4	48740.9	136.55	µg/L	136.55	ppb	09:59:17
2	Sc 361.383	502046.0	502046.0	100.31	%			10:00:35
2	Y 371.029	435684.7	435684.7	98.723	%			10:00:35
2	Ag 328.068†	-401.1	-97.8	-0.3980	µg/L	-0.3980	ppb	10:00:35
2	As 188.979†	35.8	33.8	11.541	µg/L	11.541	ppb	10:00:55
2	B 249.677†	3912.2	3953.0	113.80	µg/L	113.80	ppb	10:00:55
2	Ba 233.527†	2499.4	2746.6	21.120	µg/L	21.120	ppb	10:00:55
2	Be 313.107†	-4682.1	-110.6	-0.0608	µg/L	-0.0608	ppb	10:00:35
2	Cd 226.502†	-352.6	4.3	0.0399	µg/L	0.0399	ppb	10:00:55
2	Co 228.616†	-101.5	-20.1	-0.3418	µg/L	-0.3418	ppb	10:00:55
2	Cr 267.716†	790.6	632.7	9.2297	µg/L	9.2297	ppb	10:00:55
2	Cu 324.752†	6863.3	2632.7	15.012	µg/L	15.012	ppb	10:00:35
2	Mn 257.610†	532.7	256.6	0.3255	µg/L	0.3255	ppb	10:00:55
2	Mo 202.031†	19.9	64.4	3.3068	µg/L	3.3068	ppb	10:00:55
2	Ni 231.604†	-197.9	2.4	0.0594	µg/L	0.0594	ppb	10:00:55
2	P 214.914†	596.4	47.4	16.290	µg/L	16.290	ppb	10:00:55
2	Pb 220.353†	340.9	30.4	3.4366	µg/L	3.4366	ppb	10:00:55

2	S 181.975 Axial†	3946.7	3893.8	4371.2	µg/L	4371.2	ppb	10:00:55
2	Sb 206.836†	92.2	12.0	3.1908	µg/L	3.1908	ppb	10:00:55
2	Se 196.026†	-118.7	-14.3	-5.2174	µg/L	-5.2174	ppb	10:00:55
2	SiO2†	377260.5	373435.6	40311	µg/L	40311	ppb	10:00:35
2	Si 251.611†	493227.1	491253.3	18636	µg/L	18636	ppb	10:00:35
2	Sn 189.927†	23.0	-53.0	-4.7432	µg/L	-4.7432	ppb	10:00:55
2	Ti 334.940†	-1932.5	62.9	1.0101	µg/L	1.0101	ppb	10:00:55
2	Tl 190.801†	-125.4	-1.8	-0.4027	µg/L	-0.4027	ppb	10:00:55
2	U 409.014†	-6728.4	162.4	9.7911	µg/L	9.7911	ppb	10:00:35
2	V 292.402†	3492.7	3409.9	38.138	µg/L	38.138	ppb	10:00:55
2	Zn 213.857†	2179.3	1013.5	7.1219	µg/L	7.1219	ppb	10:00:55
3	Sc RADIAL	16599.1	16599.1	101	%			09:59:42
3	Al 396.153Radial†	456.8	146.2	57.055	µg/L	57.055	ppb	09:59:42
3	Ca 317.933Radial†	18236.7	17899.1	7589.8	µg/L	7589.8	ppb	09:59:42
3	Fe 238.204 Radial†	49.2	19.3	10.046	µg/L	10.046	ppb	10:00:02
3	K 766.490 Radial†	6480.1	3747.5	2027.0	µg/L	2027.0	ppb	09:59:42
3	Mg 279.077 IEC†	105.8	92.4	371.80	µg/L	371.80	ppb	10:00:02
3	Na 589.592 Radial†	562393.3	553914.7	97977	µg/L	97977	ppb	09:59:42
3	Sr 421.552†	49380.6	48674.4	136.36	µg/L	136.36	ppb	09:59:42
3	Sc 361.383	506585.3	506585.3	101.21	%			10:01:00
3	Y 371.029	439607.2	439607.2	99.612	%			10:01:00
3	Ag 328.068†	-327.0	-21.0	0.2334	µg/L	0.2334	ppb	10:01:00
3	As 188.979†	40.7	38.3	13.059	µg/L	13.059	ppb	10:01:20
3	B 249.677†	3856.5	3863.0	111.21	µg/L	111.21	ppb	10:01:20
3	Ba 233.527†	2521.8	2746.4	21.119	µg/L	21.119	ppb	10:01:20
3	Be 313.107†	-4822.2	-207.2	-0.1139	µg/L	-0.1139	ppb	10:01:00
3	Cd 226.502†	-335.8	24.1	0.2272	µg/L	0.2272	ppb	10:01:20
3	Co 228.616†	-107.2	-24.9	-0.4291	µg/L	-0.4291	ppb	10:01:20
3	Cr 267.716†	785.0	620.0	9.0396	µg/L	9.0396	ppb	10:01:20
3	Cu 324.752†	6792.6	2501.6	14.256	µg/L	14.256	ppb	10:01:00
3	Mn 257.610†	488.6	208.2	0.2620	µg/L	0.2620	ppb	10:01:20
3	Mo 202.031†	26.7	71.0	3.6396	µg/L	3.6396	ppb	10:01:20
3	Ni 231.604†	-180.4	21.4	0.5400	µg/L	0.5400	ppb	10:01:20
3	P 214.914†	603.4	49.1	17.352	µg/L	17.352	ppb	10:01:20
3	Pb 220.353†	301.5	-11.6	-0.6519	µg/L	-0.6519	ppb	10:01:20
3	S 181.975 Axial†	3915.6	3827.8	4297.1	µg/L	4297.1	ppb	10:01:20
3	Sb 206.836†	94.2	13.2	3.4958	µg/L	3.4958	ppb	10:01:20
3	Se 196.026†	-133.1	-27.4	-10.050	µg/L	-10.050	ppb	10:01:20
3	SiO2†	379662.8	372438.9	40204	µg/L	40204	ppb	10:01:00
3	Si 251.611†	496543.4	490123.7	18593	µg/L	18593	ppb	10:01:00
3	Sn 189.927†	34.1	-42.2	-3.6693	µg/L	-3.6693	ppb	10:01:20
3	Ti 334.940†	-1929.2	83.5	1.0706	µg/L	1.0706	ppb	10:01:20
3	Tl 190.801†	-127.3	-2.5	-0.5366	µg/L	-0.5366	ppb	10:01:20
3	U 409.014†	-6623.0	326.7	19.693	µg/L	19.693	ppb	10:01:00
3	V 292.402†	3496.2	3382.3	37.843	µg/L	37.843	ppb	10:01:20
3	Zn 213.857†	2185.2	999.8	7.0230	µg/L	7.0230	ppb	10:01:20

Mean Data: 266878001|1048315|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	503386.6	100.57	%	0.556				0.55%
Sc RADIAL	16520.5	101	%	0.6				0.56%
Y 371.029	436817.7	98.980	%	0.5506				0.56%
Ag 328.068†	-73.9	-0.2045	µg/L	0.38012	-0.2045	ppb	0.38012	185.86%
Al 396.153Radial†	154.7	60.626	µg/L	11.7082	60.626	ppb	11.7082	19.31%
As 188.979†	33.0	11.266	µg/L	1.9445	11.266	ppb	1.9445	17.26%
B 249.677†	3919.8	112.84	µg/L	1.423	112.84	ppb	1.423	1.26%
Ba 233.527†	2757.7	21.205	µg/L	0.1485	21.205	ppb	0.1485	0.70%
Be 313.107†	-179.7	-0.0988	µg/L	0.03307	-0.0988	ppb	0.03307	33.49%
Ca 317.933Radial†	17900.8	7590.5	µg/L	4.80	7590.5	ppb	4.80	0.06%
Cd 226.502†	5.9	0.0553	µg/L	0.16481	0.0553	ppb	0.16481	298.30%
Co 228.616†	-20.6	-0.3511	µg/L	0.07390	-0.3511	ppb	0.07390	21.05%
Cr 267.716†	630.3	9.1914	µg/L	0.13677	9.1914	ppb	0.13677	1.49%
Cu 324.752†	2564.7	14.620	µg/L	0.3790	14.620	ppb	0.3790	2.59%
Fe 238.204 Radial†	19.3	10.058	µg/L	0.2707	10.058	ppb	0.2707	2.69%
K 766.490 Radial†	3792.1	2051.3	µg/L	22.59	2051.3	ppb	22.59	1.10%
Mg 279.077 IEC†	94.4	380.13	µg/L	12.012	380.13	ppb	12.012	3.16%
Mn 257.610†	236.9	0.2998	µg/L	0.03341	0.2998	ppb	0.03341	11.15%
Mo 202.031†	66.4	3.4089	µg/L	0.20029	3.4089	ppb	0.20029	5.88%
Na 589.592 Radial†	553710.4	97941	µg/L	41.9	97941	ppb	41.9	0.04%

Ni 231.604†	7.9	0.1988	µg/L	0.29706	0.1988	ppb	0.29706	149.40%
P 214.914†	43.4	14.566	µg/L	3.9412	14.566	ppb	3.9412	27.06%
Pb 220.353†	7.1	1.1678	µg/L	2.08090	1.1678	ppb	2.08090	178.19%
S 181.975 Axial†	3865.9	4339.8	µg/L	38.31	4339.8	ppb	38.31	0.88%
Sb 206.836†	12.7	3.3824	µg/L	0.16685	3.3824	ppb	0.16685	4.93%
Se 196.026†	-15.1	-5.5317	µg/L	4.36940	-5.5317	ppb	4.36940	78.99%
SiO2†	372860.2	40249	µg/L	55.7	40249	ppb	55.7	0.14%
Si 251.611†	490736.0	18616	µg/L	21.7	18616	ppb	21.7	0.12%
Sn 189.927†	-37.5	-3.1995	µg/L	1.82455	-3.1995	ppb	1.82455	57.03%
Sr 421.552†	48694.1	136.41	µg/L	0.114	136.41	ppb	0.114	0.08%
Ti 334.940†	56.7	0.9905	µg/L	0.09147	0.9905	ppb	0.09147	9.23%
Tl 190.801†	-7.5	-1.4956	µg/L	1.77831	-1.4956	ppb	1.77831	118.90%
U 409.014†	255.2	15.387	µg/L	5.0753	15.387	ppb	5.0753	32.98%
V 292.402†	3388.1	37.901	µg/L	0.2134	37.901	ppb	0.2134	0.56%
Zn 213.857†	1015.4	7.1350	µg/L	0.11904	7.1350	ppb	0.11904	1.67%

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Sequence No.: 25 **Autosampler Location: 319**
Sample ID: 1202262894|1048315|1 **Date Collected: 12/3/2010 10:01:28**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1202262894|1048315|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16310.4	16310.4	99.7	%			10:01:58
1	Al 396.153Radial†	424.0	121.2	46.597	µg/L	46.597	ppb	10:01:58
1	Ca 317.933Radial†	17890.5	17869.9	7577.5	µg/L	7577.5	ppb	10:01:58
1	Fe 238.204 Radial†	54.8	25.8	13.446	µg/L	13.446	ppb	10:02:18
1	K 766.490 Radial†	6352.3	3732.3	2018.8	µg/L	2018.8	ppb	10:01:58
1	Mg 279.077 IEC†	118.3	106.7	429.59	µg/L	429.59	ppb	10:02:18
1	Na 589.592 Radial†	550900.1	552195.0	97673	µg/L	97673	ppb	10:01:58
1	Sr 421.552†	48375.1	48527.0	135.95	µg/L	135.95	ppb	10:01:58
1	Sc 361.383	503939.6	503939.6	100.68	%			10:03:15
1	Y 371.029	437483.8	437483.8	99.131	%			10:03:15
1	Ag 328.068†	-445.4	-140.3	-0.7590	µg/L	-0.7590	ppb	10:03:15
1	As 188.979†	36.1	34.0	11.591	µg/L	11.591	ppb	10:03:36
1	B 249.677†	3881.0	3907.3	112.48	µg/L	112.48	ppb	10:03:36
1	Ba 233.527†	2523.6	2761.3	21.234	µg/L	21.234	ppb	10:03:36
1	Be 313.107†	-4883.7	-293.3	-0.1612	µg/L	-0.1612	ppb	10:03:15
1	Cd 226.502†	-341.1	17.1	0.1606	µg/L	0.1606	ppb	10:03:36
1	Co 228.616†	-100.9	-19.2	-0.3244	µg/L	-0.3244	ppb	10:03:36
1	Cr 267.716†	788.9	628.0	9.1542	µg/L	9.1542	ppb	10:03:36
1	Cu 324.752†	6455.8	2202.3	12.546	µg/L	12.546	ppb	10:03:15
1	Mn 257.610†	480.1	202.4	0.2518	µg/L	0.2518	ppb	10:03:36
1	Mo 202.031†	16.4	60.9	3.1291	µg/L	3.1291	ppb	10:03:36
1	Ni 231.604†	-197.8	3.2	0.0813	µg/L	0.0813	ppb	10:03:36
1	P 214.914†	599.9	48.7	17.856	µg/L	17.856	ppb	10:03:36
1	Pb 220.353†	293.4	-18.0	-1.2734	µg/L	-1.2734	ppb	10:03:36
1	S 181.975 Axial†	3925.9	3858.3	4331.4	µg/L	4331.4	ppb	10:03:36
1	Sb 206.836†	88.3	7.8	2.0878	µg/L	2.0878	ppb	10:03:36
1	Se 196.026†	-108.8	-4.0	-1.4342	µg/L	-1.4342	ppb	10:03:36
1	SiO2†	378714.4	373466.3	40315	µg/L	40315	ppb	10:03:15
1	Si 251.611†	494968.9	491135.5	18631	µg/L	18631	ppb	10:03:15
1	Sn 189.927†	58.1	-18.2	-1.2760	µg/L	-1.2760	ppb	10:03:36
1	Ti 334.940†	-1974.2	28.8	0.8969	µg/L	0.8969	ppb	10:03:36
1	Tl 190.801†	-123.9	0.2	-0.0150	µg/L	-0.0150	ppb	10:03:36
1	U 409.014†	-6540.9	373.8	22.536	µg/L	22.536	ppb	10:03:15
1	V 292.402†	3478.9	3383.2	37.852	µg/L	37.852	ppb	10:03:36
1	Zn 213.857†	1953.2	780.7	5.4843	µg/L	5.4843	ppb	10:03:36
2	Sc RADIAL	16573.1	16573.1	101	%			10:02:23
2	Al 396.153Radial†	440.6	130.8	50.633	µg/L	50.633	ppb	10:02:23
2	Ca 317.933Radial†	18173.6	17865.0	7575.4	µg/L	7575.4	ppb	10:02:23
2	Fe 238.204 Radial†	47.9	18.1	9.4433	µg/L	9.4433	ppb	10:02:43
2	K 766.490 Radial†	6391.6	3670.1	1984.9	µg/L	1984.9	ppb	10:02:23
2	Mg 279.077 IEC†	111.8	98.5	396.45	µg/L	396.45	ppb	10:02:43
2	Na 589.592 Radial†	560563.0	552976.4	97811	µg/L	97811	ppb	10:02:23
2	Sr 421.552†	49338.4	48709.0	136.46	µg/L	136.46	ppb	10:02:23
2	Sc 361.383	501537.6	501537.6	100.20	%			10:03:41
2	Y 371.029	435121.2	435121.2	98.596	%			10:03:41
2	Ag 328.068†	-355.1	-52.3	-0.0221	µg/L	-0.0221	ppb	10:03:41
2	As 188.979†	46.9	44.9	15.299	µg/L	15.299	ppb	10:04:01
2	B 249.677†	3817.9	3862.8	111.20	µg/L	111.20	ppb	10:04:01
2	Ba 233.527†	2503.5	2753.2	21.171	µg/L	21.171	ppb	10:04:01
2	Be 313.107†	-4752.1	-185.2	-0.1018	µg/L	-0.1018	ppb	10:03:41
2	Cd 226.502†	-359.2	-2.6	-0.0255	µg/L	-0.0255	ppb	10:04:01
2	Co 228.616†	-74.6	6.6	0.1472	µg/L	0.1472	ppb	10:04:01
2	Cr 267.716†	760.8	603.7	8.8066	µg/L	8.8066	ppb	10:04:01
2	Cu 324.752†	6378.8	2156.2	12.292	µg/L	12.292	ppb	10:03:41
2	Mn 257.610†	522.3	246.8	0.3123	µg/L	0.3123	ppb	10:04:01
2	Mo 202.031†	18.6	63.2	3.2442	µg/L	3.2442	ppb	10:04:01
2	Ni 231.604†	-204.0	-4.0	-0.0999	µg/L	-0.0999	ppb	10:04:01
2	P 214.914†	598.0	49.6	18.371	µg/L	18.371	ppb	10:04:01
2	Pb 220.353†	308.9	-1.2	0.3640	µg/L	0.3640	ppb	10:04:01

2	S 181.975 Axial†	3910.7	3861.9	4335.4	µg/L	4335.4	ppb	10:04:01
2	Sb 206.836†	80.0	-0.1	0.0284	µg/L	0.0284	ppb	10:04:01
2	Se 196.026†	-100.5	3.8	1.4048	µg/L	1.4048	ppb	10:04:01
2	SiO2†	376762.3	373319.6	40299	µg/L	40299	ppb	10:03:41
2	Si 251.611†	492315.5	490842.0	18620	µg/L	18620	ppb	10:03:41
2	Sn 189.927†	55.2	-20.8	-1.5361	µg/L	-1.5361	ppb	10:04:01
2	Ti 334.940†	-1958.5	35.0	0.9234	µg/L	0.9234	ppb	10:04:01
2	Tl 190.801†	-116.0	7.5	1.3651	µg/L	1.3651	ppb	10:04:01
2	U 409.014†	-6687.5	196.4	11.840	µg/L	11.840	ppb	10:03:41
2	V 292.402†	3475.6	3396.5	37.987	µg/L	37.987	ppb	10:04:01
2	Zn 213.857†	1977.1	813.8	5.7194	µg/L	5.7194	ppb	10:04:01
3	Sc RADIAL	16604.1	16604.1	101	%			10:02:49
3	Al 396.153Radial†	362.6	53.2	18.049	µg/L	18.049	ppb	10:02:49
3	Ca 317.933Radial†	18261.6	17918.2	7597.9	µg/L	7597.9	ppb	10:02:49
3	Fe 238.204 Radial†	47.4	17.6	9.1546	µg/L	9.1546	ppb	10:03:09
3	K 766.490 Radial†	6427.0	3693.2	1997.5	µg/L	1997.5	ppb	10:02:49
3	Mg 279.077 IEC†	111.8	98.2	395.44	µg/L	395.44	ppb	10:03:09
3	Na 589.592 Radial†	560804.4	552180.7	97671	µg/L	97671	ppb	10:02:49
3	Sr 421.552†	49296.3	48576.5	136.08	µg/L	136.08	ppb	10:02:49
3	Sc 361.383	502992.1	502992.1	100.50	%			10:04:06
3	Y 371.029	436558.0	436558.0	98.921	%			10:04:06
3	Ag 328.068†	-337.5	-33.7	0.1234	µg/L	0.1234	ppb	10:04:06
3	As 188.979†	33.7	31.6	10.795	µg/L	10.795	ppb	10:04:26
3	B 249.677†	3849.0	3882.7	111.77	µg/L	111.77	ppb	10:04:26
3	Ba 233.527†	2536.7	2779.0	21.369	µg/L	21.369	ppb	10:04:26
3	Be 313.107†	-4656.1	-75.9	-0.0418	µg/L	-0.0418	ppb	10:04:06
3	Cd 226.502†	-371.9	-14.2	-0.1350	µg/L	-0.1350	ppb	10:04:26
3	Co 228.616†	-94.4	-12.9	-0.2095	µg/L	-0.2095	ppb	10:04:26
3	Cr 267.716†	772.5	613.1	8.9373	µg/L	8.9373	ppb	10:04:26
3	Cu 324.752†	6353.1	2112.2	12.032	µg/L	12.032	ppb	10:04:06
3	Mn 257.610†	488.9	212.0	0.2660	µg/L	0.2660	ppb	10:04:26
3	Mo 202.031†	26.8	71.3	3.6532	µg/L	3.6532	ppb	10:04:26
3	Ni 231.604†	-205.9	-5.2	-0.1318	µg/L	-0.1318	ppb	10:04:26
3	P 214.914†	596.2	46.2	16.844	µg/L	16.844	ppb	10:04:26
3	Pb 220.353†	313.6	2.6	0.7544	µg/L	0.7544	ppb	10:04:26
3	S 181.975 Axial†	3910.1	3850.0	4322.0	µg/L	4322.0	ppb	10:04:26
3	Sb 206.836†	83.2	2.9	0.8160	µg/L	0.8160	ppb	10:04:26
3	Se 196.026†	-116.3	-11.6	-4.2613	µg/L	-4.2613	ppb	10:04:26
3	SiO2†	377254.2	372721.8	40234	µg/L	40234	ppb	10:04:06
3	Si 251.611†	493255.6	490356.7	18602	µg/L	18602	ppb	10:04:06
3	Sn 189.927†	36.0	-40.0	-3.4551	µg/L	-3.4551	ppb	10:04:26
3	Ti 334.940†	-1922.6	76.4	1.0473	µg/L	1.0473	ppb	10:04:26
3	Tl 190.801†	-133.0	-9.0	-1.7845	µg/L	-1.7845	ppb	10:04:26
3	U 409.014†	-6540.8	361.8	21.807	µg/L	21.807	ppb	10:04:06
3	V 292.402†	3445.9	3356.9	37.562	µg/L	37.562	ppb	10:04:26
3	Zn 213.857†	1964.6	795.7	5.5920	µg/L	5.5920	ppb	10:04:26

Mean Data: 1202262894|1048315|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	502823.1	100.46	%	0.242				0.24%
Sc RADIAL	16495.9	101	%	1.0				0.98%
Y 371.029	436387.7	98.883	%	0.2698				0.27%
Ag 328.068†	-75.4	-0.2193	µg/L	0.47307	-0.2193	ppb	0.47307	215.76%
Al 396.153Radial†	101.7	38.426	µg/L	17.7623	38.426	ppb	17.7623	46.22%
As 188.979†	36.8	12.562	µg/L	2.4037	12.562	ppb	2.4037	19.14%
B 249.677†	3884.3	111.82	µg/L	0.642	111.82	ppb	0.642	0.57%
Ba 233.527†	2764.5	21.258	µg/L	0.1012	21.258	ppb	0.1012	0.48%
Be 313.107†	-184.8	-0.1016	µg/L	0.05969	-0.1016	ppb	0.05969	58.76%
Ca 317.933Radial†	17884.4	7583.6	µg/L	12.47	7583.6	ppb	12.47	0.16%
Cd 226.502†	0.1	0.0000	µg/L	0.14944	0.0000	ppb	0.14944	>999.9%
Co 228.616†	-8.5	-0.1289	µg/L	0.24593	-0.1289	ppb	0.24593	190.79%
Cr 267.716†	614.9	8.9660	µg/L	0.17558	8.9660	ppb	0.17558	1.96%
Cu 324.752†	2156.9	12.290	µg/L	0.2570	12.290	ppb	0.2570	2.09%
Fe 238.204 Radial†	20.5	10.681	µg/L	2.3984	10.681	ppb	2.3984	22.45%
K 766.490 Radial†	3698.5	2000.4	µg/L	17.15	2000.4	ppb	17.15	0.86%
Mg 279.077 IEC†	101.1	407.16	µg/L	19.428	407.16	ppb	19.428	4.77%
Mn 257.610†	220.4	0.2767	µg/L	0.03164	0.2767	ppb	0.03164	11.43%
Mo 202.031†	65.1	3.3422	µg/L	0.27546	3.3422	ppb	0.27546	8.24%
Na 589.592 Radial†	552450.7	97719	µg/L	80.5	97719	ppb	80.5	0.08%

Ni 231.604†	-2.0	-0.0502	µg/L	0.11492	-0.0502	ppb	0.11492	229.11%
P 214.914†	48.2	17.690	µg/L	0.7772	17.690	ppb	0.7772	4.39%
Pb 220.353†	-5.5	-0.0517	µg/L	1.07589	-0.0517	ppb	1.07589	>999.9%
S 181.975 Axial†	3856.8	4329.6	µg/L	6.84	4329.6	ppb	6.84	0.16%
Sb 206.836†	3.5	0.9774	µg/L	1.03915	0.9774	ppb	1.03915	106.32%
Se 196.026†	-3.9	-1.4303	µg/L	2.83302	-1.4303	ppb	2.83302	198.08%
SiO2†	373169.2	40283	µg/L	42.6	40283	ppb	42.6	0.11%
Si 251.611†	490778.1	18618	µg/L	14.9	18618	ppb	14.9	0.08%
Sn 189.927†	-26.3	-2.0891	µg/L	1.19017	-2.0891	ppb	1.19017	56.97%
Sr 421.552†	48604.1	136.16	µg/L	0.264	136.16	ppb	0.264	0.19%
Ti 334.940†	46.7	0.9559	µg/L	0.08028	0.9559	ppb	0.08028	8.40%
Tl 190.801†	-0.4	-0.1448	µg/L	1.57883	-0.1448	ppb	1.57883	>999.9%
U 409.014†	310.7	18.728	µg/L	5.9761	18.728	ppb	5.9761	31.91%
V 292.402†	3378.9	37.801	µg/L	0.2172	37.801	ppb	0.2172	0.57%
Zn 213.857†	796.7	5.5986	µg/L	0.11772	5.5986	ppb	0.11772	2.10%

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Sequence No.: 26 **Autosampler Location: 320**
Sample ID: 1202262895|1048315|1 **Date Collected: 12/3/2010 10:04:34**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1202262895|1048315|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16352.2	16352.2	100.0	%			10:05:24
1	Al 396.153Radial†	11727.4	11428.4	4773.6	µg/L	4773.6	ppb	10:05:04
1	Ca 317.933Radial†	29520.0	29458.6	12491	µg/L	12491	ppb	10:05:24
1	Fe 238.204 Radial†	9786.4	9761.4	5083.9	µg/L	5083.9	ppb	10:05:24
1	K 766.490 Radial†	15160.6	12528.1	6809.8	µg/L	6809.8	ppb	10:05:04
1	Mg 279.077 IEC†	1366.1	1354.7	5456.3	µg/L	5456.3	ppb	10:05:24
1	Na 589.592 Radial†	571496.3	571390.2	101070	µg/L	101070	ppb	10:05:04
1	Sr 421.552†	221362.4	221464.6	620.99	µg/L	620.99	ppb	10:05:04
1	Sc 361.383	505098.1	505098.1	100.92	%			10:06:22
1	Y 371.029	437309.7	437309.7	99.091	%			10:06:22
1	Ag 328.068†	60425.4	60179.0	506.53	µg/L	506.53	ppb	10:06:22
1	As 188.979†	1579.3	1563.1	534.99	µg/L	534.99	ppb	10:06:27
1	B 249.677†	21817.7	21672.3	621.90	µg/L	621.90	ppb	10:06:27
1	Ba 233.527†	68265.4	67900.7	522.63	µg/L	522.63	ppb	10:06:22
1	Be 313.107†	927251.6	923392.7	507.24	µg/L	507.24	ppb	10:06:22
1	Cd 226.502†	53400.9	53272.1	503.50	µg/L	503.50	ppb	10:06:27
1	Co 228.616†	27492.9	27324.4	499.97	µg/L	499.97	ppb	10:06:27
1	Cr 267.716†	35447.5	34970.2	509.43	µg/L	509.43	ppb	10:06:27
1	Cu 324.752†	102133.7	96997.1	553.06	µg/L	553.06	ppb	10:06:22
1	Mn 257.610†	373888.6	370220.6	492.69	µg/L	492.69	ppb	10:06:22
1	Mo 202.031†	10271.8	10223.2	518.36	µg/L	518.36	ppb	10:06:27
1	Ni 231.604†	19952.2	19970.8	503.40	µg/L	503.40	ppb	10:06:27
1	P 214.914†	2007.1	1441.8	462.68	µg/L	462.68	ppb	10:06:27
1	Pb 220.353†	5540.0	5180.3	503.34	µg/L	503.34	ppb	10:06:27
1	S 181.975 Axial†	8523.7	8405.5	9435.6	µg/L	9435.6	ppb	10:06:27
1	Sb 206.836†	2063.9	1965.2	519.53	µg/L	519.53	ppb	10:06:27
1	Se 196.026†	1231.5	1324.4	491.78	µg/L	491.78	ppb	10:06:27
1	SiO2†	481842.1	474795.2	51259	µg/L	51259	ppb	10:06:22
1	Si 251.611†	632190.0	625983.6	23741	µg/L	23741	ppb	10:06:22
1	Sn 189.927†	5264.3	5140.6	513.34	µg/L	513.34	ppb	10:06:27
1	Ti 334.940†	166852.7	167327.8	508.74	µg/L	508.74	ppb	10:06:22
1	Tl 190.801†	2564.1	2664.1	510.94	µg/L	510.94	ppb	10:06:27
1	U 409.014†	2097.0	8948.3	540.43	µg/L	540.43	ppb	10:06:22
1	V 292.402†	48609.4	48096.2	544.12	µg/L	544.12	ppb	10:06:27
1	Zn 213.857†	75475.6	73631.3	514.37	µg/L	514.37	ppb	10:06:22
2	Sc RADIAL	16471.6	16471.6	101	%			10:05:49
2	Al 396.153Radial†	12007.6	11621.6	4854.7	µg/L	4854.7	ppb	10:05:29
2	Ca 317.933Radial†	29664.4	29387.9	12461	µg/L	12461	ppb	10:05:49
2	Fe 238.204 Radial†	9835.9	9739.6	5072.5	µg/L	5072.5	ppb	10:05:49
2	K 766.490 Radial†	15478.6	12733.9	6921.8	µg/L	6921.8	ppb	10:05:29
2	Mg 279.077 IEC†	1379.8	1358.5	5471.4	µg/L	5471.4	ppb	10:05:49
2	Na 589.592 Radial†	582365.3	578038.1	102240	µg/L	102240	ppb	10:05:29
2	Sr 421.552†	225621.8	224088.8	628.35	µg/L	628.35	ppb	10:05:29
2	Sc 361.383	506578.4	506578.4	101.21	%			10:06:33
2	Y 371.029	438260.2	438260.2	99.307	%			10:06:33
2	Ag 328.068†	60687.5	60263.1	507.19	µg/L	507.19	ppb	10:06:33
2	As 188.979†	1582.3	1561.5	534.44	µg/L	534.44	ppb	10:06:38
2	B 249.677†	21750.7	21543.0	618.18	µg/L	618.18	ppb	10:06:38
2	Ba 233.527†	68559.3	67993.3	523.34	µg/L	523.34	ppb	10:06:33
2	Be 313.107†	930268.5	923688.6	507.40	µg/L	507.40	ppb	10:06:33
2	Cd 226.502†	53233.2	52951.8	500.47	µg/L	500.47	ppb	10:06:38
2	Co 228.616†	27440.9	27193.4	497.57	µg/L	497.57	ppb	10:06:38
2	Cr 267.716†	35477.6	34897.3	508.37	µg/L	508.37	ppb	10:06:38
2	Cu 324.752†	102307.4	96873.0	552.35	µg/L	552.35	ppb	10:06:33
2	Mn 257.610†	375277.8	370510.5	493.08	µg/L	493.08	ppb	10:06:33
2	Mo 202.031†	10252.4	10174.3	515.88	µg/L	515.88	ppb	10:06:38
2	Ni 231.604†	20006.7	19966.8	503.30	µg/L	503.30	ppb	10:06:38
2	P 214.914†	1990.7	1419.8	452.73	µg/L	452.73	ppb	10:06:38
2	Pb 220.353†	5553.7	5177.8	503.03	µg/L	503.03	ppb	10:06:38

2	S 181.975 Axial†	8510.7	8368.0	9393.5	µg/L	9393.5	ppb	10:06:38
2	Sb 206.836†	2022.1	1917.9	507.16	µg/L	507.16	ppb	10:06:38
2	Se 196.026†	1255.3	1344.4	499.12	µg/L	499.12	ppb	10:06:38
2	SiO2†	483643.6	475180.0	51300	µg/L	51300	ppb	10:06:33
2	Si 251.611†	634753.1	626685.5	23767	µg/L	23767	ppb	10:06:33
2	Sn 189.927†	5282.3	5143.2	513.60	µg/L	513.60	ppb	10:06:38
2	Ti 334.940†	167369.6	167355.4	508.82	µg/L	508.82	ppb	10:06:33
2	Tl 190.801†	2561.0	2653.6	508.96	µg/L	508.96	ppb	10:06:38
2	U 409.014†	2090.9	8936.2	539.70	µg/L	539.70	ppb	10:06:33
2	V 292.402†	48399.5	47748.0	540.21	µg/L	540.21	ppb	10:06:38
2	Zn 213.857†	75799.3	73732.6	515.08	µg/L	515.08	ppb	10:06:33
3	Sc RADIAL	16352.2	16352.2	100.0	%			10:06:14
3	Al 396.153Radial†	12069.0	11770.1	4917.0	µg/L	4917.0	ppb	10:05:54
3	Ca 317.933Radial†	29439.6	29378.2	12457	µg/L	12457	ppb	10:06:14
3	Fe 238.204 Radial†	9792.3	9767.3	5086.9	µg/L	5086.9	ppb	10:06:14
3	K 766.490 Radial†	15427.6	12795.2	6955.0	µg/L	6955.0	ppb	10:05:54
3	Mg 279.077 IEC†	1350.4	1339.1	5393.4	µg/L	5393.4	ppb	10:06:14
3	Na 589.592 Radial†	582700.7	582598.7	103050	µg/L	103050	ppb	10:05:54
3	Sr 421.552†	225839.3	225943.2	633.55	µg/L	633.55	ppb	10:05:54
3	Sc 361.383	506544.1	506544.1	101.20	%			10:06:43
3	Y 371.029	438111.9	438111.9	99.273	%			10:06:43
3	Ag 328.068†	60612.1	60192.6	506.62	µg/L	506.62	ppb	10:06:43
3	As 188.979†	1604.3	1583.4	541.87	µg/L	541.87	ppb	10:06:48
3	B 249.677†	21851.2	21643.8	621.08	µg/L	621.08	ppb	10:06:48
3	Ba 233.527†	68447.3	67887.3	522.53	µg/L	522.53	ppb	10:06:43
3	Be 313.107†	929450.8	922942.9	506.99	µg/L	506.99	ppb	10:06:43
3	Cd 226.502†	53632.5	53349.8	504.24	µg/L	504.24	ppb	10:06:48
3	Co 228.616†	27552.3	27305.3	499.62	µg/L	499.62	ppb	10:06:48
3	Cr 267.716†	35634.3	35054.5	510.66	µg/L	510.66	ppb	10:06:48
3	Cu 324.752†	102326.6	96898.8	552.50	µg/L	552.50	ppb	10:06:43
3	Mn 257.610†	374915.0	370177.1	492.64	µg/L	492.64	ppb	10:06:43
3	Mo 202.031†	10286.6	10208.8	517.63	µg/L	517.63	ppb	10:06:48
3	Ni 231.604†	20119.5	20079.6	506.15	µg/L	506.15	ppb	10:06:48
3	P 214.914†	2041.5	1470.1	476.05	µg/L	476.05	ppb	10:06:48
3	Pb 220.353†	5577.0	5201.2	505.27	µg/L	505.27	ppb	10:06:48
3	S 181.975 Axial†	8591.7	8448.6	9484.0	µg/L	9484.0	ppb	10:06:48
3	Sb 206.836†	2059.9	1955.5	516.97	µg/L	516.97	ppb	10:06:48
3	Se 196.026†	1245.8	1335.0	495.71	µg/L	495.71	ppb	10:06:48
3	SiO2†	482885.6	474463.3	51223	µg/L	51223	ppb	10:06:43
3	Si 251.611†	633926.6	625911.3	23738	µg/L	23738	ppb	10:06:43
3	Sn 189.927†	5275.1	5136.4	512.92	µg/L	512.92	ppb	10:06:48
3	Ti 334.940†	167217.0	167215.7	508.41	µg/L	508.41	ppb	10:06:43
3	Tl 190.801†	2584.9	2677.4	513.48	µg/L	513.48	ppb	10:06:48
3	U 409.014†	2045.2	8891.1	536.99	µg/L	536.99	ppb	10:06:43
3	V 292.402†	48538.9	47889.0	541.80	µg/L	541.80	ppb	10:06:48
3	Zn 213.857†	75697.6	73637.2	514.39	µg/L	514.39	ppb	10:06:43

Mean Data: 1202262895|1048315|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	506073.6	101.11	%	0.169				0.17%
Sc RADIAL	16392.0	100	%	0.4				0.42%
Y 371.029	437893.9	99.224	%	0.1159				0.12%
Ag 328.068†	60211.6	506.78	µg/L	0.355	506.78	ppb	0.355	0.07%
Al 396.153Radial†	11606.7	4848.5	µg/L	71.87	4848.5	ppb	71.87	1.48%
As 188.979†	1569.3	537.10	µg/L	4.140	537.10	ppb	4.140	0.77%
B 249.677†	21619.7	620.38	µg/L	1.952	620.38	ppb	1.952	0.31%
Ba 233.527†	67927.1	522.83	µg/L	0.442	522.83	ppb	0.442	0.08%
Be 313.107†	923341.4	507.21	µg/L	0.206	507.21	ppb	0.206	0.04%
Ca 317.933Radial†	29408.2	12470	µg/L	18.6	12470	ppb	18.6	0.15%
Cd 226.502†	53191.2	502.74	µg/L	1.995	502.74	ppb	1.995	0.40%
Co 228.616†	27274.4	499.05	µg/L	1.296	499.05	ppb	1.296	0.26%
Cr 267.716†	34974.0	509.49	µg/L	1.148	509.49	ppb	1.148	0.23%
Cu 324.752†	96923.0	552.63	µg/L	0.372	552.63	ppb	0.372	0.07%
Fe 238.204 Radial†	9756.1	5081.1	µg/L	7.60	5081.1	ppb	7.60	0.15%
K 766.490 Radial†	12685.7	6895.5	µg/L	76.07	6895.5	ppb	76.07	1.10%
Mg 279.077 IEC†	1350.8	5440.4	µg/L	41.40	5440.4	ppb	41.40	0.76%
Mn 257.610†	370302.7	492.80	µg/L	0.240	492.80	ppb	0.240	0.05%
Mo 202.031†	10202.1	517.29	µg/L	1.274	517.29	ppb	1.274	0.25%
Na 589.592 Radial†	577342.4	102120	µg/L	997.0	102120	ppb	997.0	0.98%

Ni 231.604†	20005.8	504.29	µg/L	1.614	504.29	ppb	1.614	0.32%
P 214.914†	1443.9	463.82	µg/L	11.701	463.82	ppb	11.701	2.52%
Pb 220.353†	5186.4	503.88	µg/L	1.215	503.88	ppb	1.215	0.24%
S 181.975 Axial†	8407.4	9437.7	µg/L	45.31	9437.7	ppb	45.31	0.48%
Sb 206.836†	1946.2	514.55	µg/L	6.527	514.55	ppb	6.527	1.27%
Se 196.026†	1334.6	495.54	µg/L	3.673	495.54	ppb	3.673	0.74%
SiO2†	474812.8	51260	µg/L	38.7	51260	ppb	38.7	0.08%
Si 251.611†	626193.5	23749	µg/L	16.2	23749	ppb	16.2	0.07%
Sn 189.927†	5140.1	513.28	µg/L	0.342	513.28	ppb	0.342	0.07%
Sr 421.552†	223832.2	627.63	µg/L	6.314	627.63	ppb	6.314	1.01%
Ti 334.940†	167299.6	508.66	µg/L	0.222	508.66	ppb	0.222	0.04%
Tl 190.801†	2665.1	511.13	µg/L	2.267	511.13	ppb	2.267	0.44%
U 409.014†	8925.2	539.04	µg/L	1.816	539.04	ppb	1.816	0.34%
V 292.402†	47911.1	542.04	µg/L	1.969	542.04	ppb	1.969	0.36%
Zn 213.857†	73667.0	514.61	µg/L	0.406	514.61	ppb	0.406	0.08%

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Sequence No.: 27 **Autosampler Location: 321**
Sample ID: 1202262896|1048315|5 **Date Collected: 12/3/2010 10:06:56**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1202262896|1048315|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16423.8	16423.8	100	%			10:07:25
1	Al 396.153Radial†	293.6	-11.7	-5.7222	µg/L	-5.7222	ppb	10:07:25
1	Ca 317.933Radial†	3549.3	3461.4	1467.7	µg/L	1467.7	ppb	10:07:45
1	Fe 238.204 Radial†	38.8	9.5	4.9514	µg/L	4.9514	ppb	10:07:45
1	K 766.490 Radial†	3456.6	804.0	435.09	µg/L	435.09	ppb	10:07:25
1	Mg 279.077 IEC†	31.0	19.0	76.363	µg/L	76.363	ppb	10:07:45
1	Na 589.592 Radial†	112462.8	111669.0	19752	µg/L	19752	ppb	10:07:25
1	Sr 421.552†	9808.2	9777.0	27.391	µg/L	27.391	ppb	10:07:25
1	Sc 361.383	513445.8	513445.8	102.58	%			10:08:42
1	Y 371.029	448686.3	448686.3	101.67	%			10:08:42
1	Ag 328.068†	-292.2	17.3	0.2143	µg/L	0.2143	ppb	10:08:42
1	As 188.979†	12.2	10.0	3.3906	µg/L	3.3906	ppb	10:09:02
1	B 249.677†	789.7	822.5	23.678	µg/L	23.678	ppb	10:09:02
1	Ba 233.527†	329.6	576.1	4.4301	µg/L	4.4301	ppb	10:09:02
1	Be 313.107†	-4542.0	129.6	0.0711	µg/L	0.0711	ppb	10:08:42
1	Cd 226.502†	-346.6	18.0	0.1694	µg/L	0.1694	ppb	10:09:02
1	Co 228.616†	-83.1	0.0	0.0058	µg/L	0.0058	ppb	10:09:02
1	Cr 267.716†	277.1	114.6	1.6615	µg/L	1.6615	ppb	10:09:02
1	Cu 324.752†	4614.6	288.8	1.6335	µg/L	1.6335	ppb	10:08:42
1	Mn 257.610†	293.7	11.8	0.0126	µg/L	0.0126	ppb	10:09:02
1	Mo 202.031†	-26.5	18.8	0.9616	µg/L	0.9616	ppb	10:09:02
1	Ni 231.604†	-214.0	-9.0	-0.2261	µg/L	-0.2261	ppb	10:09:02
1	P 214.914†	546.5	-14.3	-7.3058	µg/L	-7.3058	ppb	10:09:02
1	Pb 220.353†	292.6	-24.3	-2.2575	µg/L	-2.2575	ppb	10:09:02
1	S 181.975 Axial†	796.0	735.1	825.20	µg/L	825.20	ppb	10:09:02
1	Sb 206.836†	69.6	-12.1	-3.1457	µg/L	-3.1457	ppb	10:09:02
1	Se 196.026†	-106.5	0.3	0.1171	µg/L	0.1171	ppb	10:09:02
1	SiO2†	77364.0	72741.9	7852.3	µg/L	7852.3	ppb	10:08:42
1	Si 251.611†	99302.7	96333.2	3654.4	µg/L	3654.4	ppb	10:08:42
1	Sn 189.927†	73.2	-4.5	-0.3475	µg/L	-0.3475	ppb	10:09:02
1	Ti 334.940†	-1880.4	156.5	0.6270	µg/L	0.6270	ppb	10:09:02
1	Tl 190.801†	-117.8	8.4	1.5954	µg/L	1.5954	ppb	10:09:02
1	U 409.014†	-6749.2	291.1	17.546	µg/L	17.546	ppb	10:08:42
1	V 292.402†	713.8	623.7	6.9978	µg/L	6.9978	ppb	10:09:02
1	Zn 213.857†	1473.0	276.7	1.9485	µg/L	1.9485	ppb	10:09:02
2	Sc RADIAL	16716.2	16716.2	102	%			10:07:50
2	Al 396.153Radial†	271.9	-38.0	-16.756	µg/L	-16.756	ppb	10:07:50
2	Ca 317.933Radial†	3539.8	3390.2	1437.6	µg/L	1437.6	ppb	10:08:10
2	Fe 238.204 Radial†	35.4	5.5	2.8694	µg/L	2.8694	ppb	10:08:10
2	K 766.490 Radial†	3456.4	743.6	402.18	µg/L	402.18	ppb	10:07:50
2	Mg 279.077 IEC†	26.2	13.7	55.189	µg/L	55.189	ppb	10:08:10
2	Na 589.592 Radial†	114378.6	111585.0	19737	µg/L	19737	ppb	10:07:50
2	Sr 421.552†	10082.0	9874.1	27.664	µg/L	27.664	ppb	10:07:50
2	Sc 361.383	511074.7	511074.7	102.11	%			10:09:08
2	Y 371.029	446860.7	446860.7	101.26	%			10:09:08
2	Ag 328.068†	-351.8	-42.4	-0.2808	µg/L	-0.2808	ppb	10:09:08
2	As 188.979†	3.5	1.5	0.5186	µg/L	0.5186	ppb	10:09:28
2	B 249.677†	798.8	835.0	24.039	µg/L	24.039	ppb	10:09:28
2	Ba 233.527†	321.9	570.1	4.3837	µg/L	4.3837	ppb	10:09:28
2	Be 313.107†	-4500.9	149.4	0.0819	µg/L	0.0819	ppb	10:09:08
2	Cd 226.502†	-333.9	28.8	0.2725	µg/L	0.2725	ppb	10:09:28
2	Co 228.616†	-81.1	1.6	0.0338	µg/L	0.0338	ppb	10:09:28
2	Cr 267.716†	284.5	123.1	1.7842	µg/L	1.7842	ppb	10:09:28
2	Cu 324.752†	4705.6	398.8	2.2591	µg/L	2.2591	ppb	10:09:08
2	Mn 257.610†	299.4	18.8	0.0227	µg/L	0.0227	ppb	10:09:28
2	Mo 202.031†	-20.4	24.6	1.2549	µg/L	1.2549	ppb	10:09:28
2	Ni 231.604†	-207.4	-3.5	-0.0872	µg/L	-0.0872	ppb	10:09:28
2	P 214.914†	568.3	9.4	3.4904	µg/L	3.4904	ppb	10:09:28
2	Pb 220.353†	311.8	-4.1	-0.2870	µg/L	-0.2870	ppb	10:09:28

2	S 181.975 Axial†	801.7	744.3	835.61	µg/L	835.61	ppb	10:09:28
2	Sb 206.836†	92.9	11.1	2.9134	µg/L	2.9134	ppb	10:09:28
2	Se 196.026†	-110.7	-4.3	-1.5814	µg/L	-1.5814	ppb	10:09:28
2	SiO2†	77029.7	72764.4	7854.7	µg/L	7854.7	ppb	10:09:08
2	Si 251.611†	98713.3	96205.0	3649.6	µg/L	3649.6	ppb	10:09:08
2	Sn 189.927†	68.5	-8.8	-0.7789	µg/L	-0.7789	ppb	10:09:28
2	Ti 334.940†	-1836.8	190.6	0.7282	µg/L	0.7282	ppb	10:09:28
2	Tl 190.801†	-116.8	8.9	1.6864	µg/L	1.6864	ppb	10:09:28
2	U 409.014†	-6686.5	322.0	19.409	µg/L	19.409	ppb	10:09:08
2	V 292.402†	728.6	641.5	7.2020	µg/L	7.2020	ppb	10:09:28
2	Zn 213.857†	1463.1	273.7	1.9258	µg/L	1.9258	ppb	10:09:28
3	Sc RADIAL	16727.9	16727.9	102	%			10:08:15
3	Al 396.153Radial†	333.0	21.6	8.2499	µg/L	8.2499	ppb	10:08:15
3	Ca 317.933Radial†	3531.7	3379.9	1433.2	µg/L	1433.2	ppb	10:08:36
3	Fe 238.204 Radial†	35.8	5.9	3.0470	µg/L	3.0470	ppb	10:08:36
3	K 766.490 Radial†	3479.1	763.4	412.95	µg/L	412.95	ppb	10:08:15
3	Mg 279.077 IEC†	28.9	16.3	65.737	µg/L	65.737	ppb	10:08:36
3	Na 589.592 Radial†	115018.8	112132.3	19834	µg/L	19834	ppb	10:08:15
3	Sr 421.552†	10055.8	9841.5	27.573	µg/L	27.573	ppb	10:08:15
3	Sc 361.383	512145.0	512145.0	102.32	%			10:09:33
3	Y 371.029	447708.8	447708.8	101.45	%			10:09:33
3	Ag 328.068†	-266.8	41.4	0.4137	µg/L	0.4137	ppb	10:09:33
3	As 188.979†	5.8	3.8	1.2849	µg/L	1.2849	ppb	10:09:53
3	B 249.677†	730.5	766.6	22.069	µg/L	22.069	ppb	10:09:53
3	Ba 233.527†	337.0	584.2	4.4918	µg/L	4.4918	ppb	10:09:53
3	Be 313.107†	-4587.3	74.1	0.0406	µg/L	0.0406	ppb	10:09:33
3	Cd 226.502†	-373.5	-9.1	-0.0863	µg/L	-0.0863	ppb	10:09:53
3	Co 228.616†	-86.1	-3.1	-0.0533	µg/L	-0.0533	ppb	10:09:53
3	Cr 267.716†	272.6	110.8	1.6023	µg/L	1.6023	ppb	10:09:53
3	Cu 324.752†	4770.4	452.5	2.5609	µg/L	2.5609	ppb	10:09:33
3	Mn 257.610†	302.6	21.2	0.0256	µg/L	0.0256	ppb	10:09:53
3	Mo 202.031†	-37.0	8.4	0.4338	µg/L	0.4338	ppb	10:09:53
3	Ni 231.604†	-210.0	-5.6	-0.1402	µg/L	-0.1402	ppb	10:09:53
3	P 214.914†	574.7	14.5	5.7658	µg/L	5.7658	ppb	10:09:53
3	Pb 220.353†	311.7	-4.8	-0.3769	µg/L	-0.3769	ppb	10:09:53
3	S 181.975 Axial†	804.0	744.9	836.21	µg/L	836.21	ppb	10:09:53
3	Sb 206.836†	76.3	-5.4	-1.3868	µg/L	-1.3868	ppb	10:09:53
3	Se 196.026†	-113.1	-6.4	-2.3441	µg/L	-2.3441	ppb	10:09:53
3	SiO2†	77192.3	72765.7	7854.9	µg/L	7854.9	ppb	10:09:33
3	Si 251.611†	99124.9	96405.3	3657.2	µg/L	3657.2	ppb	10:09:33
3	Sn 189.927†	66.6	-10.8	-0.9777	µg/L	-0.9777	ppb	10:09:53
3	Ti 334.940†	-1850.7	180.8	0.6942	µg/L	0.6942	ppb	10:09:53
3	Tl 190.801†	-124.1	1.9	0.3654	µg/L	0.3654	ppb	10:09:53
3	U 409.014†	-6592.8	427.2	25.751	µg/L	25.751	ppb	10:09:33
3	V 292.402†	733.9	645.2	7.2411	µg/L	7.2411	ppb	10:09:53
3	Zn 213.857†	1475.4	282.7	1.9893	µg/L	1.9893	ppb	10:09:53

Mean Data: 1202262896|1048315|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	512221.8	102.34	%	0.237				0.23%
Sc RADIAL	16622.6	102	%	1.1				1.04%
Y 371.029	447751.9	101.46	%	0.207				0.20%
Ag 328.068†	5.4	0.1157	µg/L	0.35763	0.1157	ppb	0.35763	309.01%
Al 396.153Radial†	-9.4	-4.7427	µg/L	12.53150	-4.7427	ppb	12.53150	264.23%
As 188.979†	5.1	1.7313	µg/L	1.48712	1.7313	ppb	1.48712	85.89%
B 249.677†	808.0	23.262	µg/L	1.0486	23.262	ppb	1.0486	4.51%
Ba 233.527†	576.8	4.4352	µg/L	0.05422	4.4352	ppb	0.05422	1.22%
Be 313.107†	117.7	0.0645	µg/L	0.02143	0.0645	ppb	0.02143	33.21%
Ca 317.933Radial†	3410.5	1446.2	µg/L	18.82	1446.2	ppb	18.82	1.30%
Cd 226.502†	12.5	0.1186	µg/L	0.18472	0.1186	ppb	0.18472	155.81%
Co 228.616†	-0.5	-0.0046	µg/L	0.04452	-0.0046	ppb	0.04452	977.87%
Cr 267.716†	116.1	1.6826	µg/L	0.09276	1.6826	ppb	0.09276	5.51%
Cu 324.752†	380.0	2.1511	µg/L	0.47304	2.1511	ppb	0.47304	21.99%
Fe 238.204 Radial†	7.0	3.6226	µg/L	1.15418	3.6226	ppb	1.15418	31.86%
K 766.490 Radial†	770.3	416.74	µg/L	16.779	416.74	ppb	16.779	4.03%
Mg 279.077 IEC†	16.3	65.763	µg/L	10.5868	65.763	ppb	10.5868	16.10%
Mn 257.610†	17.3	0.0203	µg/L	0.00682	0.0203	ppb	0.00682	33.63%
Mo 202.031†	17.3	0.8835	µg/L	0.41608	0.8835	ppb	0.41608	47.10%
Na 589.592 Radial†	111795.4	19775	µg/L	52.1	19775	ppb	52.1	0.26%

Ni 231.604†	-6.0	-0.1512 µg/L	0.07010	-0.1512 ppb	0.07010	46.37%
P 214.914†	3.2	0.6501 µg/L	6.98337	0.6501 ppb	6.98337	>999.9%
Pb 220.353†	-11.0	-0.9738 µg/L	1.11263	-0.9738 ppb	1.11263	114.26%
S 181.975 Axial†	741.4	832.34 µg/L	6.190	832.34 ppb	6.190	0.74%
Sb 206.836†	-2.1	-0.5397 µg/L	3.11710	-0.5397 ppb	3.11710	577.55%
Se 196.026†	-3.5	-1.2695 µg/L	1.25990	-1.2695 ppb	1.25990	99.25%
SiO2†	72757.3	7854.0 µg/L	1.44	7854.0 ppb	1.44	0.02%
Si 251.611†	96314.5	3653.7 µg/L	3.85	3653.7 ppb	3.85	0.11%
Sn 189.927†	-8.1	-0.7014 µg/L	0.32218	-0.7014 ppb	0.32218	45.94%
Sr 421.552†	9830.9	27.543 µg/L	0.1390	27.543 ppb	0.1390	0.50%
Ti 334.940†	176.0	0.6831 µg/L	0.05147	0.6831 ppb	0.05147	7.54%
Tl 190.801†	6.4	1.2157 µg/L	0.73780	1.2157 ppb	0.73780	60.69%
U 409.014†	346.8	20.902 µg/L	4.3015	20.902 ppb	4.3015	20.58%
V 292.402†	636.8	7.1469 µg/L	0.13061	7.1469 ppb	0.13061	1.83%
Zn 213.857†	277.7	1.9545 µg/L	0.03218	1.9545 ppb	0.03218	1.65%

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Sequence No.: 28 **Autosampler Location: 322**
Sample ID: 266878003|1048315|1 **Date Collected: 12/3/2010 10:10:01**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 266878003|1048315|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16192.8	16192.8	99.0	%			10:10:31
1	Al 396.153Radial†	305.0	4.1	-30.406	µg/L	-30.406	ppb	10:10:31
1	Ca 317.933Radial†	136732.6	138063.6	58544	µg/L	58544	ppb	10:10:31
1	Fe 238.204 Radial†	48.5	19.8	10.336	µg/L	10.336	ppb	10:10:51
1	K 766.490 Radial†	10915.4	8388.5	4556.9	µg/L	4556.9	ppb	10:10:31
1	Mg 279.077 IEC†	1970.6	1979.0	7966.5	µg/L	7966.5	ppb	10:10:51
1	Na 589.592 Radial†	412980.1	416872.9	73737	µg/L	73737	ppb	10:10:31
1	Sr 421.552†	439490.1	444013.7	1244.2	µg/L	1244.2	ppb	10:10:31
1	Sc 361.383	504671.1	504671.1	100.83	%			10:11:48
1	Y 371.029	438328.0	438328.0	99.322	%			10:11:48
1	Ag 328.068†	-424.1	-118.4	-0.9348	µg/L	-0.9348	ppb	10:11:48
1	As 188.979†	34.6	32.4	11.034	µg/L	11.034	ppb	10:12:08
1	B 249.677†	2921.0	2949.7	84.915	µg/L	84.915	ppb	10:12:08
1	Ba 233.527†	24377.0	24431.1	187.74	µg/L	187.74	ppb	10:12:08
1	Be 313.107†	-5800.4	-1195.4	-0.6564	µg/L	-0.6564	ppb	10:11:48
1	Cd 226.502†	-338.3	20.3	0.1914	µg/L	0.1914	ppb	10:12:08
1	Co 228.616†	-109.6	-27.6	-0.2686	µg/L	-0.2686	ppb	10:12:08
1	Cr 267.716†	503.7	344.0	5.0270	µg/L	5.0270	ppb	10:12:08
1	Cu 324.752†	13608.1	9286.4	52.994	µg/L	52.994	ppb	10:11:48
1	Mn 257.610†	383.2	105.6	-0.1852	µg/L	-0.1852	ppb	10:12:08
1	Mo 202.031†	15.4	59.9	3.3509	µg/L	3.3509	ppb	10:12:08
1	Ni 231.604†	-182.5	18.6	0.4691	µg/L	0.4691	ppb	10:12:08
1	P 214.914†	619.2	66.9	10.753	µg/L	10.753	ppb	10:12:08
1	Pb 220.353†	236.5	-74.9	-3.3982	µg/L	-3.3982	ppb	10:12:08
1	S 181.975 Axial†	6376.2	6282.8	7053.1	µg/L	7053.1	ppb	10:12:08
1	Sb 206.836†	73.6	-7.0	-1.7942	µg/L	-1.7942	ppb	10:12:08
1	Se 196.026†	-103.8	1.1	0.4306	µg/L	0.4306	ppb	10:12:08
1	SiO2†	352298.6	346722.9	37428	µg/L	37428	ppb	10:11:48
1	Si 251.611†	460716.7	456453.0	17316	µg/L	17316	ppb	10:11:48
1	Sn 189.927†	-88.2	-163.3	-12.144	µg/L	-12.144	ppb	10:12:08
1	Ti 334.940†	-2586.3	-575.5	4.2211	µg/L	4.2211	ppb	10:12:08
1	Tl 190.801†	-118.0	6.3	1.1601	µg/L	1.1601	ppb	10:12:08
1	U 409.014†	-7164.6	-235.3	-14.179	µg/L	-14.179	ppb	10:11:48
1	V 292.402†	1373.5	1290.1	14.488	µg/L	14.488	ppb	10:12:08
1	Zn 213.857†	1688.3	515.1	3.5710	µg/L	3.5710	ppb	10:12:08
2	Sc RADIAL	16689.9	16689.9	102	%			10:10:56
2	Al 396.153Radial†	292.2	-17.7	-39.654	µg/L	-39.654	ppb	10:10:56
2	Ca 317.933Radial†	141428.7	138552.5	58751	µg/L	58751	ppb	10:10:56
2	Fe 238.204 Radial†	38.0	8.1	4.2123	µg/L	4.2123	ppb	10:11:16
2	K 766.490 Radial†	11179.4	8318.9	4519.0	µg/L	4519.0	ppb	10:10:56
2	Mg 279.077 IEC†	1976.5	1925.4	7751.0	µg/L	7751.0	ppb	10:11:16
2	Na 589.592 Radial†	425100.5	416326.8	73641	µg/L	73641	ppb	10:10:56
2	Sr 421.552†	454345.0	445350.2	1247.9	µg/L	1247.9	ppb	10:10:56
2	Sc 361.383	503781.4	503781.4	100.65	%			10:12:14
2	Y 371.029	437255.2	437255.2	99.079	%			10:12:14
2	Ag 328.068†	-311.7	-7.6	-0.0089	µg/L	-0.0089	ppb	10:12:14
2	As 188.979†	32.0	29.9	10.180	µg/L	10.180	ppb	10:12:34
2	B 249.677†	2935.8	2969.5	85.485	µg/L	85.485	ppb	10:12:34
2	Ba 233.527†	24371.9	24468.6	188.03	µg/L	188.03	ppb	10:12:34
2	Be 313.107†	-5829.8	-1234.8	-0.6780	µg/L	-0.6780	ppb	10:12:14
2	Cd 226.502†	-337.3	20.7	0.1955	µg/L	0.1955	ppb	10:12:34
2	Co 228.616†	-94.3	-12.6	0.0083	µg/L	0.0083	ppb	10:12:34
2	Cr 267.716†	473.9	315.2	4.6074	µg/L	4.6074	ppb	10:12:34
2	Cu 324.752†	13494.1	9197.0	52.481	µg/L	52.481	ppb	10:12:14
2	Mn 257.610†	375.2	98.3	-0.1861	µg/L	-0.1861	ppb	10:12:34
2	Mo 202.031†	36.8	81.2	4.4314	µg/L	4.4314	ppb	10:12:34
2	Ni 231.604†	-194.0	6.9	0.1751	µg/L	0.1751	ppb	10:12:34
2	P 214.914†	645.8	94.5	23.746	µg/L	23.746	ppb	10:12:34
2	Pb 220.353†	260.1	-51.0	-1.0513	µg/L	-1.0513	ppb	10:12:34

2	S 181.975 Axial†	6349.8	6267.8	7036.2	µg/L	7036.2	ppb	10:12:34
2	Sb 206.836†	80.4	-0.1	0.0134	µg/L	0.0134	ppb	10:12:34
2	Se 196.026†	-88.7	16.0	5.8808	µg/L	5.8808	ppb	10:12:34
2	SiO2†	351317.9	346365.6	37389	µg/L	37389	ppb	10:12:14
2	Si 251.611†	459226.9	455779.9	17290	µg/L	17290	ppb	10:12:14
2	Sn 189.927†	-93.5	-168.8	-12.671	µg/L	-12.671	ppb	10:12:34
2	Ti 334.940†	-2576.0	-569.8	4.2795	µg/L	4.2795	ppb	10:12:34
2	Tl 190.801†	-114.4	9.6	1.8018	µg/L	1.8018	ppb	10:12:34
2	U 409.014†	-7123.7	-207.2	-12.490	µg/L	-12.490	ppb	10:12:14
2	V 292.402†	1415.4	1334.2	14.990	µg/L	14.990	ppb	10:12:34
2	Zn 213.857†	1700.0	529.8	3.6769	µg/L	3.6769	ppb	10:12:34
3	Sc RADIAL	16630.6	16630.6	102	%			10:11:21
3	Al 396.153Radial†	363.2	53.2	-9.7440	µg/L	-9.7440	ppb	10:11:21
3	Ca 317.933Radial†	140243.6	137880.6	58466	µg/L	58466	ppb	10:11:21
3	Fe 238.204 Radial†	37.9	8.1	4.2323	µg/L	4.2323	ppb	10:11:41
3	K 766.490 Radial†	11258.2	8435.5	4582.5	µg/L	4582.5	ppb	10:11:21
3	Mg 279.077 IEC†	1964.5	1920.5	7731.3	µg/L	7731.3	ppb	10:11:41
3	Na 589.592 Radial†	421885.1	414648.1	73344	µg/L	73344	ppb	10:11:21
3	Sr 421.552†	451060.6	443705.7	1243.3	µg/L	1243.3	ppb	10:11:21
3	Sc 361.383	504771.9	504771.9	100.85	%			10:12:39
3	Y 371.029	438276.1	438276.1	99.310	%			10:12:39
3	Ag 328.068†	-272.8	31.7	0.3141	µg/L	0.3141	ppb	10:12:39
3	As 188.979†	25.2	23.1	7.8663	µg/L	7.8663	ppb	10:12:59
3	B 249.677†	2912.3	2940.4	84.650	µg/L	84.650	ppb	10:12:59
3	Ba 233.527†	24349.4	24398.9	187.49	µg/L	187.49	ppb	10:12:59
3	Be 313.107†	-5705.7	-1100.3	-0.6042	µg/L	-0.6042	ppb	10:12:39
3	Cd 226.502†	-360.4	-1.5	-0.0147	µg/L	-0.0147	ppb	10:12:59
3	Co 228.616†	-106.2	-24.3	-0.2069	µg/L	-0.2069	ppb	10:12:59
3	Cr 267.716†	500.4	340.6	4.9705	µg/L	4.9705	ppb	10:12:59
3	Cu 324.752†	13752.6	9426.9	53.785	µg/L	53.785	ppb	10:12:39
3	Mn 257.610†	362.2	84.6	-0.2034	µg/L	-0.2034	ppb	10:12:59
3	Mo 202.031†	18.6	63.1	3.5110	µg/L	3.5110	ppb	10:12:59
3	Ni 231.604†	-180.1	21.1	0.5318	µg/L	0.5318	ppb	10:12:59
3	P 214.914†	614.8	62.5	8.3745	µg/L	8.3745	ppb	10:12:59
3	Pb 220.353†	254.9	-56.7	-1.6396	µg/L	-1.6396	ppb	10:12:59
3	S 181.975 Axial†	6376.6	6281.9	7052.1	µg/L	7052.1	ppb	10:12:59
3	Sb 206.836†	71.7	-8.8	-2.2705	µg/L	-2.2705	ppb	10:12:59
3	Se 196.026†	-106.0	-1.0	-0.3632	µg/L	-0.3632	ppb	10:12:59
3	SiO2†	352265.7	346620.5	37417	µg/L	37417	ppb	10:12:39
3	Si 251.611†	460822.6	456466.7	17316	µg/L	17316	ppb	10:12:39
3	Sn 189.927†	-83.9	-159.1	-11.726	µg/L	-11.726	ppb	10:12:59
3	Ti 334.940†	-2580.0	-568.7	4.2473	µg/L	4.2473	ppb	10:12:59
3	Tl 190.801†	-128.4	-4.1	-0.8124	µg/L	-0.8124	ppb	10:12:59
3	U 409.014†	-6955.8	-26.9	-1.6177	µg/L	-1.6177	ppb	10:12:39
3	V 292.402†	1420.7	1336.7	15.023	µg/L	15.023	ppb	10:12:59
3	Zn 213.857†	1667.5	494.2	3.4228	µg/L	3.4228	ppb	10:12:59

Mean Data: 266878003|1048315|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	504408.1	100.78	%	0.109				0.11%
Sc RADIAL	16504.4	101	%	1.7				1.65%
Y 371.029	437953.1	99.237	%	0.1371				0.14%
Ag 328.068†	-31.4	-0.2099	µg/L	0.64826	-0.2099	ppb	0.64826	308.89%
Al 396.153Radial†	13.2	-26.601	µg/L	15.3137	-26.601	ppb	15.3137	57.57%
As 188.979†	28.5	9.6936	µg/L	1.63913	9.6936	ppb	1.63913	16.91%
B 249.677†	2953.2	85.017	µg/L	0.4270	85.017	ppb	0.4270	0.50%
Ba 233.527†	24432.9	187.76	µg/L	0.268	187.76	ppb	0.268	0.14%
Be 313.107†	-1176.8	-0.6462	µg/L	0.03797	-0.6462	ppb	0.03797	5.88%
Ca 317.933Radial†	138165.6	58587	µg/L	147.3	58587	ppb	147.3	0.25%
Cd 226.502†	13.2	0.1241	µg/L	0.12020	0.1241	ppb	0.12020	96.88%
Co 228.616†	-21.5	-0.1557	µg/L	0.14538	-0.1557	ppb	0.14538	93.34%
Cr 267.716†	333.3	4.8683	µg/L	0.22771	4.8683	ppb	0.22771	4.68%
Cu 324.752†	9303.5	53.087	µg/L	0.6567	53.087	ppb	0.6567	1.24%
Fe 238.204 Radial†	12.0	6.2603	µg/L	3.52993	6.2603	ppb	3.52993	56.39%
K 766.490 Radial†	8381.0	4552.8	µg/L	31.97	4552.8	ppb	31.97	0.70%
Mg 279.077 IEC†	1941.6	7816.3	µg/L	130.48	7816.3	ppb	130.48	1.67%
Mn 257.610†	96.2	-0.1916	µg/L	0.01028	-0.1916	ppb	0.01028	5.36%
Mo 202.031†	68.1	3.7644	µg/L	0.58310	3.7644	ppb	0.58310	15.49%
Na 589.592 Radial†	415949.3	73574	µg/L	205.1	73574	ppb	205.1	0.28%

Ni 231.604†	15.5	0.3920	µg/L	0.19045	0.3920	ppb	0.19045	48.58%
P 214.914†	74.6	14.291	µg/L	8.2742	14.291	ppb	8.2742	57.90%
Pb 220.353†	-60.9	-2.0297	µg/L	1.22112	-2.0297	ppb	1.22112	60.16%
S 181.975 Axial†	6277.5	7047.1	µg/L	9.49	7047.1	ppb	9.49	0.13%
Sb 206.836†	-5.3	-1.3505	µg/L	1.20490	-1.3505	ppb	1.20490	89.22%
Se 196.026†	5.4	1.9828	µg/L	3.39909	1.9828	ppb	3.39909	171.43%
SiO2†	346569.7	37411	µg/L	19.9	37411	ppb	19.9	0.05%
Si 251.611†	456233.2	17307	µg/L	14.9	17307	ppb	14.9	0.09%
Sn 189.927†	-163.7	-12.181	µg/L	0.4733	-12.181	ppb	0.4733	3.89%
Sr 421.552†	444356.5	1245.1	µg/L	2.45	1245.1	ppb	2.45	0.20%
Ti 334.940†	-571.3	4.2493	µg/L	0.02925	4.2493	ppb	0.02925	0.69%
Tl 190.801†	3.9	0.7165	µg/L	1.36236	0.7165	ppb	1.36236	190.14%
U 409.014†	-156.4	-9.4290	µg/L	6.81730	-9.4290	ppb	6.81730	72.30%
V 292.402†	1320.3	14.834	µg/L	0.3001	14.834	ppb	0.3001	2.02%
Zn 213.857†	513.0	3.5569	µg/L	0.12762	3.5569	ppb	0.12762	3.59%

Sequence No.: 29 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 10:13:07**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16575.2	16575.2	101	%			10:13:58
1	Al 396.153Radial†	12208.9	11745.7	4911.1	µg/L	4911.1	ppb	10:13:38
1	Ca 317.933Radial†	12170.1	11937.5	5061.9	µg/L	5061.9	ppb	10:13:58
1	Fe 238.204 Radial†	9887.3	9729.3	5067.1	µg/L	5067.1	ppb	10:13:58
1	K 766.490 Radial†	12014.5	9218.9	5020.5	µg/L	5020.5	ppb	10:13:38
1	Mg 279.077 IEC†	1280.3	1251.7	5041.4	µg/L	5041.4	ppb	10:13:58
1	Na 589.592 Radial†	58950.0	57830.7	10229	µg/L	10229	ppb	10:13:38
1	Sr 421.552†	178270.1	175953.8	493.50	µg/L	493.50	ppb	10:13:38
1	Sc 361.383	514474.5	514474.5	102.79	%			10:14:56
1	Y 371.029	449188.3	449188.3	101.78	%			10:14:56
1	Ag 328.068†	61895.1	60517.6	508.96	µg/L	508.96	ppb	10:14:56
1	As 188.979†	1521.2	1478.0	506.06	µg/L	506.06	ppb	10:15:16
1	B 249.677†	17704.3	17276.5	495.37	µg/L	495.37	ppb	10:14:56
1	Ba 233.527†	66843.9	65284.9	502.52	µg/L	502.52	ppb	10:14:56
1	Be 313.107†	930786.6	910085.9	499.93	µg/L	499.93	ppb	10:14:56
1	Cd 226.502†	54178.1	53063.8	501.53	µg/L	501.53	ppb	10:14:56
1	Co 228.616†	27740.5	27068.7	495.27	µg/L	495.27	ppb	10:15:16
1	Cr 267.716†	35521.1	34401.6	501.14	µg/L	501.14	ppb	10:14:56
1	Cu 324.752†	94472.0	87698.8	500.02	µg/L	500.02	ppb	10:14:56
1	Mn 257.610†	387914.3	377113.3	501.89	µg/L	501.89	ppb	10:14:56
1	Mo 202.031†	10214.7	9982.1	506.10	µg/L	506.10	ppb	10:15:16
1	Ni 231.604†	20113.0	19766.9	498.26	µg/L	498.26	ppb	10:15:16
1	P 214.914†	6106.2	5393.4	2321.0	µg/L	2321.0	ppb	10:15:16
1	Pb 220.353†	5688.0	5224.2	506.99	µg/L	506.99	ppb	10:15:16
1	S 181.975 Axial†	965.4	898.4	1008.1	µg/L	1008.1	ppb	10:15:16
1	Sb 206.836†	2065.7	1929.8	510.11	µg/L	510.11	ppb	10:15:16
1	Se 196.026†	1286.8	1356.0	503.36	µg/L	503.36	ppb	10:15:16
1	SiO2†	53866.2	49731.0	5373.9	µg/L	5373.9	ppb	10:14:56
1	Si 251.611†	68416.8	66091.8	2501.0	µg/L	2501.0	ppb	10:14:56
1	Sn 189.927†	5292.1	5072.6	506.03	µg/L	506.03	ppb	10:15:16
1	Ti 334.940†	167768.8	165205.7	501.50	µg/L	501.50	ppb	10:14:56
1	Tl 190.801†	2570.3	2623.8	503.27	µg/L	503.27	ppb	10:15:16
1	U 409.014†	1855.6	8675.6	523.99	µg/L	523.99	ppb	10:14:56
1	V 292.402†	46228.8	44902.3	508.30	µg/L	508.30	ppb	10:14:56
1	Zn 213.857†	74487.5	71307.0	498.08	µg/L	498.08	ppb	10:14:56
2	Sc RADIAL	16551.0	16551.0	101	%			10:14:24
2	Al 396.153Radial†	12450.7	12002.2	5018.7	µg/L	5018.7	ppb	10:14:04
2	Ca 317.933Radial†	12119.8	11905.4	5048.3	µg/L	5048.3	ppb	10:14:24
2	Fe 238.204 Radial†	9839.7	9696.4	5050.0	µg/L	5050.0	ppb	10:14:24
2	K 766.490 Radial†	12150.9	9371.1	5103.4	µg/L	5103.4	ppb	10:14:04
2	Mg 279.077 IEC†	1277.1	1250.4	5036.1	µg/L	5036.1	ppb	10:14:24
2	Na 589.592 Radial†	60363.3	59312.6	10491	µg/L	10491	ppb	10:14:04
2	Sr 421.552†	182488.4	180380.1	505.92	µg/L	505.92	ppb	10:14:04
2	Sc 361.383	514996.9	514996.9	102.89	%			10:15:22
2	Y 371.029	449493.7	449493.7	101.85	%			10:15:22
2	Ag 328.068†	61743.4	60309.2	507.22	µg/L	507.22	ppb	10:15:22
2	As 188.979†	1524.3	1479.5	506.55	µg/L	506.55	ppb	10:15:43
2	B 249.677†	17734.7	17288.6	495.72	µg/L	495.72	ppb	10:15:22
2	Ba 233.527†	66936.7	65309.1	502.70	µg/L	502.70	ppb	10:15:22
2	Be 313.107†	932515.0	910847.2	500.35	µg/L	500.35	ppb	10:15:22
2	Cd 226.502†	54257.3	53087.2	501.75	µg/L	501.75	ppb	10:15:22
2	Co 228.616†	27682.5	26985.0	493.73	µg/L	493.73	ppb	10:15:43
2	Cr 267.716†	35522.3	34367.7	500.65	µg/L	500.65	ppb	10:15:22
2	Cu 324.752†	94687.3	87814.8	500.69	µg/L	500.69	ppb	10:15:22
2	Mn 257.610†	388336.7	377141.1	501.93	µg/L	501.93	ppb	10:15:22
2	Mo 202.031†	10201.5	9959.2	504.94	µg/L	504.94	ppb	10:15:43
2	Ni 231.604†	20033.3	19669.6	495.81	µg/L	495.81	ppb	10:15:43
2	P 214.914†	6083.7	5365.5	2307.8	µg/L	2307.8	ppb	10:15:43
2	Pb 220.353†	5665.7	5196.9	504.27	µg/L	504.27	ppb	10:15:43

2	S 181.975 Axial†	967.8	899.7	1009.6	µg/L	1009.6	ppb	10:15:43
2	Sb 206.836†	2044.2	1906.8	504.10	µg/L	504.10	ppb	10:15:43
2	Se 196.026†	1308.7	1376.0	510.72	µg/L	510.72	ppb	10:15:43
2	SiO2†	53819.3	49632.2	5363.2	µg/L	5363.2	ppb	10:15:22
2	Si 251.611†	68568.5	66171.7	2504.1	µg/L	2504.1	ppb	10:15:22
2	Sn 189.927†	5252.2	5028.6	501.64	µg/L	501.64	ppb	10:15:43
2	Ti 334.940†	167785.7	165056.6	501.05	µg/L	501.05	ppb	10:15:22
2	Tl 190.801†	2570.9	2621.9	502.91	µg/L	502.91	ppb	10:15:43
2	U 409.014†	1779.6	8599.9	519.43	µg/L	519.43	ppb	10:15:22
2	V 292.402†	46188.8	44817.8	507.34	µg/L	507.34	ppb	10:15:22
2	Zn 213.857†	74623.8	71366.0	498.51	µg/L	498.51	ppb	10:15:22
3	Sc RADIAL	16508.1	16508.1	101	%			10:14:49
3	Al 396.153Radial†	12384.5	11968.7	5004.6	µg/L	5004.6	ppb	10:14:29
3	Ca 317.933Radial†	12116.5	11933.2	5060.1	µg/L	5060.1	ppb	10:14:49
3	Fe 238.204 Radial†	9854.7	9736.7	5071.0	µg/L	5071.0	ppb	10:14:49
3	K 766.490 Radial†	12127.7	9379.3	5107.9	µg/L	5107.9	ppb	10:14:29
3	Mg 279.077 IEC†	1297.0	1273.4	5128.6	µg/L	5128.6	ppb	10:14:49
3	Na 589.592 Radial†	59681.0	58791.7	10399	µg/L	10399	ppb	10:14:29
3	Sr 421.552†	180913.4	179288.7	502.86	µg/L	502.86	ppb	10:14:29
3	Sc 361.383	513855.0	513855.0	102.67	%			10:15:49
3	Y 371.029	448729.2	448729.2	101.68	%			10:15:49
3	Ag 328.068†	61762.4	60460.9	508.49	µg/L	508.49	ppb	10:15:49
3	As 188.979†	1519.3	1477.9	506.03	µg/L	506.03	ppb	10:16:09
3	B 249.677†	17804.5	17394.9	498.77	µg/L	498.77	ppb	10:15:49
3	Ba 233.527†	66768.8	65290.1	502.56	µg/L	502.56	ppb	10:15:49
3	Be 313.107†	930909.5	911297.4	500.59	µg/L	500.59	ppb	10:15:49
3	Cd 226.502†	54050.5	53003.0	500.95	µg/L	500.95	ppb	10:15:49
3	Co 228.616†	27686.6	27048.8	494.90	µg/L	494.90	ppb	10:16:09
3	Cr 267.716†	35521.0	34443.2	501.75	µg/L	501.75	ppb	10:15:49
3	Cu 324.752†	94458.4	87796.4	500.59	µg/L	500.59	ppb	10:15:49
3	Mn 257.610†	387175.5	376848.7	501.53	µg/L	501.53	ppb	10:15:49
3	Mo 202.031†	10179.4	9959.7	504.97	µg/L	504.97	ppb	10:16:09
3	Ni 231.604†	20012.2	19692.2	496.38	µg/L	496.38	ppb	10:16:09
3	P 214.914†	6091.7	5386.4	2317.5	µg/L	2317.5	ppb	10:16:09
3	Pb 220.353†	5654.7	5198.5	504.43	µg/L	504.43	ppb	10:16:09
3	S 181.975 Axial†	965.3	899.4	1009.2	µg/L	1009.2	ppb	10:16:09
3	Sb 206.836†	2046.2	1913.2	505.77	µg/L	505.77	ppb	10:16:09
3	Se 196.026†	1287.5	1358.1	504.16	µg/L	504.16	ppb	10:16:09
3	SiO2†	53846.6	49775.1	5378.7	µg/L	5378.7	ppb	10:15:49
3	Si 251.611†	68517.0	66269.7	2507.8	µg/L	2507.8	ppb	10:15:49
3	Sn 189.927†	5248.5	5036.4	502.42	µg/L	502.42	ppb	10:16:09
3	Ti 334.940†	167544.2	165183.8	501.43	µg/L	501.43	ppb	10:15:49
3	Tl 190.801†	2577.4	2633.8	505.18	µg/L	505.18	ppb	10:16:09
3	U 409.014†	1721.5	8547.1	516.25	µg/L	516.25	ppb	10:15:49
3	V 292.402†	46101.1	44832.1	507.50	µg/L	507.50	ppb	10:15:49
3	Zn 213.857†	74391.5	71300.9	498.05	µg/L	498.05	ppb	10:15:49

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	514442.1	102.78	%	0.114				0.11%
Sc RADIAL	16544.8	101	%	0.2				0.21%
Y 371.029	449137.1	101.77	%	0.087				0.09%
Ag 328.068†	60429.2	508.22	µg/L	0.901	508.22	ppb	0.901	0.18%
QC value within limits for Ag 328.068 Recovery = 101.64%								
Al 396.153Radial†	11905.5	4978.1	µg/L	58.49	4978.1	ppb	58.49	1.17%
QC value within limits for Al 396.153Radial Recovery = 99.56%								
As 188.979†	1478.5	506.21	µg/L	0.293	506.21	ppb	0.293	0.06%
QC value within limits for As 188.979 Recovery = 101.24%								
B 249.677†	17320.0	496.62	µg/L	1.875	496.62	ppb	1.875	0.38%
QC value within limits for B 249.677 Recovery = 99.32%								
Ba 233.527†	65294.7	502.59	µg/L	0.096	502.59	ppb	0.096	0.02%
QC value within limits for Ba 233.527 Recovery = 100.52%								
Be 313.107†	910743.5	500.29	µg/L	0.336	500.29	ppb	0.336	0.07%
QC value within limits for Be 313.107 Recovery = 100.06%								
Ca 317.933Radial†	11925.4	5056.8	µg/L	7.40	5056.8	ppb	7.40	0.15%
QC value within limits for Ca 317.933Radial Recovery = 101.14%								
Cd 226.502†	53051.4	501.41	µg/L	0.412	501.41	ppb	0.412	0.08%
QC value within limits for Cd 226.502 Recovery = 100.28%								
Co 228.616†	27034.2	494.63	µg/L	0.800	494.63	ppb	0.800	0.16%

```
   QC value within limits for Co 228.616  Recovery = 98.93%
Cr 267.716†            34404.2      501.18 µg/L         0.552      501.18 ppb          0.552   0.11%
   QC value within limits for Cr 267.716  Recovery = 100.24%
Cu 324.752†            87770.0      500.43 µg/L         0.358      500.43 ppb          0.358   0.07%
   QC value within limits for Cu 324.752  Recovery = 100.09%
Fe 238.204 Radial†      9720.8      5062.7 µg/L         11.16      5062.7 ppb          11.16   0.22%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.25%
K 766.490 Radial†       9323.1      5077.3 µg/L         49.20      5077.3 ppb          49.20   0.97%
   QC value within limits for K 766.490 Radial  Recovery = 101.55%
Mg 279.077 IEC†         1258.5      5068.7 µg/L         51.96      5068.7 ppb          51.96   1.03%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.37%
Mn 257.610†           377034.4      501.78 µg/L         0.217      501.78 ppb          0.217   0.04%
   QC value within limits for Mn 257.610  Recovery = 100.36%
Mo 202.031†             9967.0      505.34 µg/L         0.662      505.34 ppb          0.662   0.13%
   QC value within limits for Mo 202.031  Recovery = 101.07%
Na 589.592 Radial†     58645.0       10373 µg/L         133.0       10373 ppb          133.0   1.28%
   QC value within limits for Na 589.592 Radial  Recovery = 103.73%
Ni 231.604†            19709.6      496.82 µg/L         1.283      496.82 ppb          1.283   0.26%
   QC value within limits for Ni 231.604  Recovery = 99.36%
P 214.914†              5381.8      2315.4 µg/L          6.87      2315.4 ppb           6.87   0.30%
   QC value within limits for P 214.914  Recovery = 92.62%
Pb 220.353†             5206.5      505.23 µg/L         1.526      505.23 ppb          1.526   0.30%
   QC value within limits for Pb 220.353  Recovery = 101.05%
S 181.975 Axial†         899.2      1009.0 µg/L          0.77      1009.0 ppb           0.77   0.08%
   QC value within limits for S 181.975 Axial  Recovery = 100.90%
Sb 206.836†             1916.6      506.66 µg/L         3.105      506.66 ppb          3.105   0.61%
   QC value within limits for Sb 206.836  Recovery = 101.33%
Se 196.026†             1363.4      506.08 µg/L         4.041      506.08 ppb          4.041   0.80%
   QC value within limits for Se 196.026  Recovery = 101.22%
SiO2†                  49712.8      5371.9 µg/L          7.90      5371.9 ppb           7.90   0.15%
   QC value within limits for SiO2  Recovery = 100.46%
Si 251.611†            66177.7      2504.3 µg/L          3.39      2504.3 ppb           3.39   0.14%
   QC value within limits for Si 251.611  Recovery = 100.17%
Sn 189.927†             5045.9      503.37 µg/L         2.343      503.37 ppb          2.343   0.47%
   QC value within limits for Sn 189.927  Recovery = 100.67%
Sr 421.552†           178540.9      500.76 µg/L         6.469      500.76 ppb          6.469   1.29%
   QC value within limits for Sr 421.552  Recovery = 100.15%
Ti 334.940†           165148.7      501.33 µg/L         0.243      501.33 ppb          0.243   0.05%
   QC value within limits for Ti 334.940  Recovery = 100.27%
Tl 190.801†             2626.5      503.79 µg/L         1.219      503.79 ppb          1.219   0.24%
   QC value within limits for Tl 190.801  Recovery = 100.76%
U 409.014†              8607.5      519.89 µg/L         3.893      519.89 ppb          3.893   0.75%
   QC value within limits for U 409.014  Recovery = 103.98%
V 292.402†             44850.7      507.72 µg/L         0.515      507.72 ppb          0.515   0.10%
   QC value within limits for V 292.402  Recovery = 101.54%
Zn 213.857†            71324.6      498.22 µg/L         0.259      498.22 ppb          0.259   0.05%
   QC value within limits for Zn 213.857  Recovery = 99.64%
All analyte(s) passed QC.
```

Sequence No.: 30 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 10:16:17**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16574.1	16574.1	101	%			10:16:46
1	Al 396.153Radial†	311.9	3.8	1.5760	µg/L	1.5760	ppb	10:16:46
1	Ca 317.933Radial†	86.8	11.7	4.9449	µg/L	4.9449	ppb	10:17:06
1	Fe 238.204 Radial†	35.0	5.4	2.7881	µg/L	2.7881	ppb	10:17:06
1	K 766.490 Radial†	2590.8	-81.8	-44.571	µg/L	-44.571	ppb	10:16:46
1	Mg 279.077 IEC†	11.7	-0.4	-1.4433	µg/L	-1.4433	ppb	10:17:06
1	Na 589.592 Radial†	532.7	174.9	30.929	µg/L	30.929	ppb	10:16:46
1	Sr 421.552†	27.4	34.5	0.0966	µg/L	0.0966	ppb	10:16:46
1	Sc 361.383	516450.2	516450.2	103.18	%			10:18:03
1	Y 371.029	455853.1	455853.1	103.29	%			10:18:03
1	Ag 328.068†	-265.5	44.8	0.3641	µg/L	0.3641	ppb	10:18:03
1	As 188.979†	-3.2	-5.0	-1.6920	µg/L	-1.6920	ppb	10:18:23
1	B 249.677†	10.0	62.4	1.7958	µg/L	1.7958	ppb	10:18:23
1	Ba 233.527†	-231.5	30.6	0.2351	µg/L	0.2351	ppb	10:18:23
1	Be 313.107†	-4462.6	232.3	0.1276	µg/L	0.1276	ppb	10:18:03
1	Cd 226.502†	-340.0	26.4	0.2494	µg/L	0.2494	ppb	10:18:23
1	Co 228.616†	-89.5	-5.7	-0.1046	µg/L	-0.1046	ppb	10:18:23
1	Cr 267.716†	173.9	13.0	0.1786	µg/L	0.1786	ppb	10:18:23
1	Cu 324.752†	4243.9	-96.6	-0.5650	µg/L	-0.5650	ppb	10:18:03
1	Mn 257.610†	279.4	-3.7	-0.0048	µg/L	-0.0048	ppb	10:18:23
1	Mo 202.031†	-44.6	1.4	0.0709	µg/L	0.0709	ppb	10:18:23
1	Ni 231.604†	-209.1	-3.0	-0.0761	µg/L	-0.0761	ppb	10:18:23
1	P 214.914†	519.9	-43.2	-19.909	µg/L	-19.909	ppb	10:18:23
1	Pb 220.353†	315.2	-4.0	-0.3851	µg/L	-0.3851	ppb	10:18:23
1	S 181.975 Axial†	50.5	8.1	9.0930	µg/L	9.0930	ppb	10:18:23
1	Sb 206.836†	94.5	11.7	3.0529	µg/L	3.0529	ppb	10:18:23
1	Se 196.026†	-111.8	-4.3	-1.5680	µg/L	-1.5680	ppb	10:18:23
1	SiO2†	2733.1	-24.8	-2.6740	µg/L	-2.6740	ppb	10:18:03
1	Si 251.611†	523.7	39.1	1.4840	µg/L	1.4840	ppb	10:18:23
1	Sn 189.927†	75.5	-2.7	-0.2652	µg/L	-0.2652	ppb	10:18:23
1	Ti 334.940†	-1962.5	87.6	0.2590	µg/L	0.2590	ppb	10:18:03
1	Tl 190.801†	-104.9	21.6	4.1342	µg/L	4.1342	ppb	10:18:23
1	U 409.014†	-6795.5	284.5	17.151	µg/L	17.151	ppb	10:18:03
1	V 292.402†	53.0	-20.7	-0.2092	µg/L	-0.2092	ppb	10:18:03
1	Zn 213.857†	1194.3	-1.8	-0.0117	µg/L	-0.0117	ppb	10:18:23
2	Sc RADIAL	16734.7	16734.7	102	%			10:17:11
2	Al 396.153Radial†	357.4	45.3	18.979	µg/L	18.979	ppb	10:17:11
2	Ca 317.933Radial†	82.0	6.2	2.6109	µg/L	2.6109	ppb	10:17:31
2	Fe 238.204 Radial†	29.1	-0.8	-0.3942	µg/L	-0.3942	ppb	10:17:31
2	K 766.490 Radial†	2685.9	-13.4	-7.2875	µg/L	-7.2875	ppb	10:17:11
2	Mg 279.077 IEC†	5.0	-7.0	-28.260	µg/L	-28.260	ppb	10:17:31
2	Na 589.592 Radial†	436.6	75.9	13.427	µg/L	13.427	ppb	10:17:11
2	Sr 421.552†	153.9	157.9	0.4429	µg/L	0.4429	ppb	10:17:11
2	Sc 361.383	514150.8	514150.8	102.72	%			10:18:28
2	Y 371.029	453355.5	453355.5	102.73	%			10:18:28
2	Ag 328.068†	-294.3	15.7	0.1153	µg/L	0.1153	ppb	10:18:28
2	As 188.979†	-2.0	-3.8	-1.2950	µg/L	-1.2950	ppb	10:18:48
2	B 249.677†	15.3	67.6	1.9470	µg/L	1.9470	ppb	10:18:48
2	Ba 233.527†	-225.0	35.8	0.2749	µg/L	0.2749	ppb	10:18:48
2	Be 313.107†	-4498.3	178.3	0.0979	µg/L	0.0979	ppb	10:18:28
2	Cd 226.502†	-342.3	22.6	0.2143	µg/L	0.2143	ppb	10:18:48
2	Co 228.616†	-89.8	-6.4	-0.1158	µg/L	-0.1158	ppb	10:18:48
2	Cr 267.716†	176.1	15.8	0.2163	µg/L	0.2163	ppb	10:18:48
2	Cu 324.752†	4288.0	-35.3	-0.2198	µg/L	-0.2198	ppb	10:18:28
2	Mn 257.610†	250.0	-31.1	-0.0403	µg/L	-0.0403	ppb	10:18:48
2	Mo 202.031†	-36.4	9.1	0.4622	µg/L	0.4622	ppb	10:18:48
2	Ni 231.604†	-201.4	3.6	0.0915	µg/L	0.0915	ppb	10:18:48
2	P 214.914†	541.9	-19.6	-9.0410	µg/L	-9.0410	ppb	10:18:48
2	Pb 220.353†	317.6	-0.2	-0.0337	µg/L	-0.0337	ppb	10:18:48

2	S 181.975 Axial†	43.5	1.6	1.7431	µg/L	1.7431	ppb	10:18:48
2	Sb 206.836†	87.6	5.3	1.3927	µg/L	1.3927	ppb	10:18:48
2	Se 196.026†	-95.3	11.4	4.1747	µg/L	4.1747	ppb	10:18:48
2	SiO2†	2694.6	-50.4	-5.4340	µg/L	-5.4340	ppb	10:18:28
2	Si 251.611†	538.9	56.2	2.1253	µg/L	2.1253	ppb	10:18:48
2	Sn 189.927†	72.9	-4.9	-0.4882	µg/L	-0.4882	ppb	10:18:48
2	Ti 334.940†	-2011.9	31.0	0.0869	µg/L	0.0869	ppb	10:18:28
2	Tl 190.801†	-126.0	0.6	0.1187	µg/L	0.1187	ppb	10:18:48
2	U 409.014†	-6674.6	372.7	22.468	µg/L	22.468	ppb	10:18:28
2	V 292.402†	19.4	-53.2	-0.5608	µg/L	-0.5608	ppb	10:18:28
2	Zn 213.857†	1189.3	-1.4	-0.0103	µg/L	-0.0103	ppb	10:18:48
3	Sc RADIAL	16711.9	16711.9	102	%			10:17:36
3	Al 396.153Radial†	317.8	7.0	2.9508	µg/L	2.9508	ppb	10:17:36
3	Ca 317.933Radial†	74.7	-0.8	-0.3474	µg/L	-0.3474	ppb	10:17:56
3	Fe 238.204 Radial†	32.0	2.2	1.1337	µg/L	1.1337	ppb	10:17:56
3	K 766.490 Radial†	2653.3	-41.7	-22.741	µg/L	-22.741	ppb	10:17:36
3	Mg 279.077 IEC†	14.3	2.1	8.4009	µg/L	8.4009	ppb	10:17:56
3	Na 589.592 Radial†	527.9	165.9	29.340	µg/L	29.340	ppb	10:17:36
3	Sr 421.552†	18.9	25.9	0.0728	µg/L	0.0728	ppb	10:17:36
3	Sc 361.383	514953.2	514953.2	102.88	%			10:18:53
3	Y 371.029	454445.1	454445.1	102.97	%			10:18:53
3	Ag 328.068†	-312.3	-1.4	-0.0144	µg/L	-0.0144	ppb	10:18:53
3	As 188.979†	-6.4	-8.1	-2.7609	µg/L	-2.7609	ppb	10:19:13
3	B 249.677†	-29.4	24.1	0.6944	µg/L	0.6944	ppb	10:19:13
3	Ba 233.527†	-252.0	9.9	0.0762	µg/L	0.0762	ppb	10:19:13
3	Be 313.107†	-4472.3	210.4	0.1155	µg/L	0.1155	ppb	10:18:53
3	Cd 226.502†	-328.1	37.0	0.3499	µg/L	0.3499	ppb	10:19:13
3	Co 228.616†	-102.7	-18.8	-0.3441	µg/L	-0.3441	ppb	10:19:13
3	Cr 267.716†	178.2	17.6	0.2477	µg/L	0.2477	ppb	10:19:13
3	Cu 324.752†	4198.6	-128.7	-0.7459	µg/L	-0.7459	ppb	10:18:53
3	Mn 257.610†	257.9	-23.8	-0.0320	µg/L	-0.0320	ppb	10:19:13
3	Mo 202.031†	-43.5	2.3	0.1163	µg/L	0.1163	ppb	10:19:13
3	Ni 231.604†	-199.2	6.1	0.1527	µg/L	0.1527	ppb	10:19:13
3	P 214.914†	526.5	-35.3	-16.170	µg/L	-16.170	ppb	10:19:13
3	Pb 220.353†	306.6	-11.5	-1.1161	µg/L	-1.1161	ppb	10:19:13
3	S 181.975 Axial†	48.5	6.3	7.0685	µg/L	7.0685	ppb	10:19:13
3	Sb 206.836†	92.5	10.0	2.6046	µg/L	2.6046	ppb	10:19:13
3	Se 196.026†	-94.3	12.4	4.5645	µg/L	4.5645	ppb	10:19:13
3	SiO2†	2737.9	-12.3	-1.3292	µg/L	-1.3292	ppb	10:18:53
3	Si 251.611†	536.6	53.2	2.0149	µg/L	2.0149	ppb	10:19:13
3	Sn 189.927†	63.1	-14.5	-1.4502	µg/L	-1.4502	ppb	10:19:13
3	Ti 334.940†	-1898.3	144.5	0.4316	µg/L	0.4316	ppb	10:18:53
3	Tl 190.801†	-116.4	10.1	1.9387	µg/L	1.9387	ppb	10:19:13
3	U 409.014†	-6822.2	239.4	14.430	µg/L	14.430	ppb	10:18:53
3	V 292.402†	93.0	18.3	0.2233	µg/L	0.2233	ppb	10:18:53
3	Zn 213.857†	1203.2	10.3	0.0719	µg/L	0.0719	ppb	10:19:13

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	515184.7	102.93	%	0.233				0.23%
Sc RADIAL	16673.6	102	%	0.5				0.52%
Y 371.029	454551.2	103.00	%	0.284				0.28%
Ag 328.068†	19.7	0.1550	µg/L	0.19234	0.1550	ppb	0.19234	124.08%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	18.7	7.8353	µg/L	9.67533	7.8353	ppb	9.67533	123.48%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-5.7	-1.9160	µg/L	0.75820	-1.9160	ppb	0.75820	39.57%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	51.4	1.4791	µg/L	0.68371	1.4791	ppb	0.68371	46.23%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.4	0.1954	µg/L	0.10512	0.1954	ppb	0.10512	53.81%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	207.0	0.1137	µg/L	0.01491	0.1137	ppb	0.01491	13.12%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.7	2.4028	µg/L	2.65229	2.4028	ppb	2.65229	110.38%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	28.7	0.2712	µg/L	0.07039	0.2712	ppb	0.07039	25.95%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-10.3	-0.1882	µg/L	0.13516	-0.1882	ppb	0.13516	71.83%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                15.5      0.2142 µg/L       0.03461      0.2142 ppb        0.03461  16.16%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -86.9     -0.5103 µg/L       0.26728     -0.5103 ppb        0.26728  52.38%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          2.3      1.1759 µg/L       1.59157      1.1759 ppb        1.59157 135.35%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -45.6     -24.866 µg/L       18.7325     -24.866 ppb        18.7325  75.33%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.8     -7.1007 µg/L      18.97378     -7.1007 ppb       18.97378 267.21%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -19.5     -0.0257 µg/L       0.01854     -0.0257 ppb        0.01854  72.13%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 4.3      0.2164 µg/L       0.21404      0.2164 ppb        0.21404  98.89%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        138.9      24.566 µg/L        9.6788      24.566 ppb         9.6788  39.40%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 2.2      0.0560 µg/L       0.11845      0.0560 ppb        0.11845 211.34%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -32.7     -15.040 µg/L        5.5213     -15.040 ppb         5.5213  36.71%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -5.2     -0.5116 µg/L       0.55215     -0.5116 ppb        0.55215 107.92%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.3      5.9682 µg/L       3.79646      5.9682 ppb        3.79646  63.61%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 9.0      2.3501 µg/L       0.85887      2.3501 ppb        0.85887  36.55%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 6.5      2.3904 µg/L       3.43363      2.3904 ppb        3.43363 143.64%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     -29.2     -3.1457 µg/L       2.09266     -3.1457 ppb        2.09266  66.52%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                49.5      1.8747 µg/L       0.34289      1.8747 ppb        0.34289  18.29%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -7.4     -0.7345 µg/L       0.62970     -0.7345 ppb        0.62970  85.73%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                72.8      0.2041 µg/L       0.20715      0.2041 ppb        0.20715 101.49%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                87.7      0.2591 µg/L       0.17235      0.2591 ppb        0.17235  66.51%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                10.8      2.0639 µg/L       2.01064      2.0639 ppb        2.01064  97.42%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                298.9      18.016 µg/L        4.0880      18.016 ppb         4.0880  22.69%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -18.5     -0.1822 µg/L       0.39274     -0.1822 ppb        0.39274 215.54%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 2.4      0.0167 µg/L       0.04788      0.0167 ppb        0.04788 287.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 8 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 10:47:54**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16354.8	16354.8	100.0	%			10:48:45
1	Al 396.153Radial†	11693.0	11392.1	4762.9	µg/L	4762.9	ppb	10:48:25
1	Ca 317.933Radial†	11862.2	11791.4	5000.0	µg/L	5000.0	ppb	10:48:45
1	Fe 238.204 Radial†	9684.9	9658.3	5030.2	µg/L	5030.2	ppb	10:48:45
1	K 766.490 Radial†	11431.7	8795.7	4790.1	µg/L	4790.1	ppb	10:48:25
1	Mg 279.077 IEC†	1250.2	1238.6	4988.6	µg/L	4988.6	ppb	10:48:45
1	Na 589.592 Radial†	56290.3	55954.5	9897.3	µg/L	9897.3	ppb	10:48:25
1	Sr 421.552†	169851.9	169905.0	476.53	µg/L	476.53	ppb	10:48:25
1	Sc 361.383	513813.2	513813.2	102.66	%			10:49:43
1	Y 371.029	449077.2	449077.2	101.76	%			10:49:43
1	Ag 328.068†	61443.2	60155.0	505.91	µg/L	505.91	ppb	10:49:43
1	As 188.979†	1495.1	1454.5	498.05	µg/L	498.05	ppb	10:50:03
1	B 249.677†	17557.0	17155.3	491.89	µg/L	491.89	ppb	10:49:43
1	Ba 233.527†	66075.4	64620.0	497.40	µg/L	497.40	ppb	10:49:43
1	Be 313.107†	919648.9	900402.0	494.61	µg/L	494.61	ppb	10:49:43
1	Cd 226.502†	53494.7	52465.9	495.88	µg/L	495.88	ppb	10:49:43
1	Co 228.616†	27472.6	26842.5	491.13	µg/L	491.13	ppb	10:50:03
1	Cr 267.716†	35246.3	34178.4	497.90	µg/L	497.90	ppb	10:49:43
1	Cu 324.752†	93946.9	87305.6	497.79	µg/L	497.79	ppb	10:49:43
1	Mn 257.610†	383010.6	372822.4	496.18	µg/L	496.18	ppb	10:49:43
1	Mo 202.031†	10123.3	9905.9	502.24	µg/L	502.24	ppb	10:50:03
1	Ni 231.604†	19766.1	19454.1	490.38	µg/L	490.38	ppb	10:50:03
1	P 214.914†	6040.7	5337.2	2295.6	µg/L	2295.6	ppb	10:50:03
1	Pb 220.353†	5604.4	5149.9	499.84	µg/L	499.84	ppb	10:50:03
1	S 181.975 Axial†	948.4	883.0	990.85	µg/L	990.85	ppb	10:50:03
1	Sb 206.836†	2039.2	1906.5	504.00	µg/L	504.00	ppb	10:50:03
1	Se 196.026†	1283.5	1354.4	502.74	µg/L	502.74	ppb	10:50:03
1	SiO2†	53101.3	49053.4	5300.7	µg/L	5300.7	ppb	10:49:43
1	Si 251.611†	67627.7	65408.8	2475.1	µg/L	2475.1	ppb	10:49:43
1	Sn 189.927†	5218.4	5007.5	499.53	µg/L	499.53	ppb	10:50:03
1	Ti 334.940†	165917.8	163612.7	496.67	µg/L	496.67	ppb	10:49:43
1	Tl 190.801†	2551.0	2608.2	500.27	µg/L	500.27	ppb	10:50:03
1	U 409.014†	1658.6	8486.0	512.56	µg/L	512.56	ppb	10:49:43
1	V 292.402†	45878.8	44619.2	505.08	µg/L	505.08	ppb	10:49:43
1	Zn 213.857†	73636.0	70570.8	492.95	µg/L	492.95	ppb	10:49:43
2	Sc RADIAL	16283.0	16283.0	99.5	%			10:49:10
2	Al 396.153Radial†	12068.0	11820.4	4942.6	µg/L	4942.6	ppb	10:48:50
2	Ca 317.933Radial†	11820.8	11802.1	5004.5	µg/L	5004.5	ppb	10:49:10
2	Fe 238.204 Radial†	9629.7	9645.6	5023.6	µg/L	5023.6	ppb	10:49:10
2	K 766.490 Radial†	11868.3	9284.9	5056.5	µg/L	5056.5	ppb	10:48:50
2	Mg 279.077 IEC†	1247.1	1241.0	4998.3	µg/L	4998.3	ppb	10:49:10
2	Na 589.592 Radial†	58326.9	58249.0	10303	µg/L	10303	ppb	10:48:50
2	Sr 421.552†	176147.4	176979.3	496.38	µg/L	496.38	ppb	10:48:50
2	Sc 361.383	514338.5	514338.5	102.76	%			10:50:09
2	Y 371.029	449589.3	449589.3	101.87	%			10:50:09
2	Ag 328.068†	61371.1	60023.7	504.82	µg/L	504.82	ppb	10:50:09
2	As 188.979†	1497.1	1455.0	498.19	µg/L	498.19	ppb	10:50:29
2	B 249.677†	17598.6	17178.3	492.57	µg/L	492.57	ppb	10:50:09
2	Ba 233.527†	66204.4	64679.7	497.86	µg/L	497.86	ppb	10:50:09
2	Be 313.107†	921093.2	900892.4	494.88	µg/L	494.88	ppb	10:50:09
2	Cd 226.502†	53540.0	52456.8	495.79	µg/L	495.79	ppb	10:50:09
2	Co 228.616†	27264.8	26613.0	486.92	µg/L	486.92	ppb	10:50:29
2	Cr 267.716†	35213.4	34111.4	496.92	µg/L	496.92	ppb	10:50:09
2	Cu 324.752†	93939.1	87204.5	497.22	µg/L	497.22	ppb	10:50:09
2	Mn 257.610†	383963.4	373368.4	496.90	µg/L	496.90	ppb	10:50:09
2	Mo 202.031†	10041.9	9816.6	497.72	µg/L	497.72	ppb	10:50:29
2	Ni 231.604†	19624.9	19297.0	486.42	µg/L	486.42	ppb	10:50:29
2	P 214.914†	5988.9	5280.8	2269.6	µg/L	2269.6	ppb	10:50:29
2	Pb 220.353†	5557.8	5099.0	494.76	µg/L	494.76	ppb	10:50:29

2	S 181.975 Axial†	948.6	882.3	990.07	µg/L	990.07 ppb	10:50:29
2	Sb 206.836†	2021.6	1887.3	498.93	µg/L	498.93 ppb	10:50:29
2	Se 196.026†	1270.7	1340.6	497.67	µg/L	497.67 ppb	10:50:29
2	SiO2†	53319.0	49212.3	5317.8	µg/L	5317.8 ppb	10:50:09
2	Si 251.611†	67749.2	65459.8	2477.1	µg/L	2477.1 ppb	10:50:09
2	Sn 189.927†	5172.3	4957.4	494.55	µg/L	494.55 ppb	10:50:29
2	Ti 334.940†	166071.3	163597.0	496.62	µg/L	496.62 ppb	10:50:09
2	Tl 190.801†	2529.4	2584.7	495.80	µg/L	495.80 ppb	10:50:29
2	U 409.014†	1561.9	8390.2	506.78	µg/L	506.78 ppb	10:50:09
2	V 292.402†	45908.3	44602.3	504.84	µg/L	504.84 ppb	10:50:09
2	Zn 213.857†	73746.9	70605.5	493.22	µg/L	493.22 ppb	10:50:09
3	Sc RADIAL	16282.2	16282.2	99.5	%		10:49:35
3	Al 396.153Radial†	12154.2	11907.6	4979.1	µg/L	4979.1 ppb	10:49:15
3	Ca 317.933Radial†	11791.2	11773.0	4992.1	µg/L	4992.1 ppb	10:49:35
3	Fe 238.204 Radial†	9643.6	9660.0	5031.1	µg/L	5031.1 ppb	10:49:35
3	K 766.490 Radial†	11890.7	9307.9	5069.0	µg/L	5069.0 ppb	10:49:15
3	Mg 279.077 IEC†	1254.5	1248.5	5028.6	µg/L	5028.6 ppb	10:49:35
3	Na 589.592 Radial†	58742.3	58669.2	10378	µg/L	10378 ppb	10:49:15
3	Sr 421.552†	177710.1	178558.0	500.81	µg/L	500.81 ppb	10:49:15
3	Sc 361.383	512121.5	512121.5	102.32	%		10:50:35
3	Y 371.029	447472.8	447472.8	101.39	%		10:50:35
3	Ag 328.068†	60981.1	59901.0	503.79	µg/L	503.79 ppb	10:50:35
3	As 188.979†	1489.3	1453.7	497.76	µg/L	497.76 ppb	10:50:55
3	B 249.677†	17497.4	17153.5	491.84	µg/L	491.84 ppb	10:50:35
3	Ba 233.527†	65837.9	64600.5	497.25	µg/L	497.25 ppb	10:50:35
3	Be 313.107†	916025.2	899819.7	494.29	µg/L	494.29 ppb	10:50:35
3	Cd 226.502†	53189.7	52340.0	494.68	µg/L	494.68 ppb	10:50:35
3	Co 228.616†	27312.8	26774.8	489.89	µg/L	489.89 ppb	10:50:55
3	Cr 267.716†	35058.8	34108.6	496.88	µg/L	496.88 ppb	10:50:35
3	Cu 324.752†	93339.7	87014.5	496.13	µg/L	496.13 ppb	10:50:35
3	Mn 257.610†	381935.0	373003.5	496.42	µg/L	496.42 ppb	10:50:35
3	Mo 202.031†	10063.9	9880.3	500.94	µg/L	500.94 ppb	10:50:55
3	Ni 231.604†	19656.5	19410.6	489.28	µg/L	489.28 ppb	10:50:55
3	P 214.914†	6014.2	5330.8	2293.3	µg/L	2293.3 ppb	10:50:55
3	Pb 220.353†	5539.8	5104.7	495.31	µg/L	495.31 ppb	10:50:55
3	S 181.975 Axial†	947.8	885.5	993.67	µg/L	993.67 ppb	10:50:55
3	Sb 206.836†	2027.7	1901.8	502.74	µg/L	502.74 ppb	10:50:55
3	Se 196.026†	1262.8	1338.3	496.84	µg/L	496.84 ppb	10:50:55
3	SiO2†	53079.6	49203.0	5316.9	µg/L	5316.9 ppb	10:50:35
3	Si 251.611†	67424.5	65427.8	2475.9	µg/L	2475.9 ppb	10:50:35
3	Sn 189.927†	5181.1	4987.8	497.58	µg/L	497.58 ppb	10:50:55
3	Ti 334.940†	165416.6	163656.8	496.80	µg/L	496.80 ppb	10:50:35
3	Tl 190.801†	2549.2	2614.7	501.51	µg/L	501.51 ppb	10:50:55
3	U 409.014†	1626.1	8459.6	510.97	µg/L	510.97 ppb	10:50:35
3	V 292.402†	45596.0	44490.5	503.63	µg/L	503.63 ppb	10:50:35
3	Zn 213.857†	73303.9	70483.2	492.34	µg/L	492.34 ppb	10:50:35

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	513424.4	102.58	%	0.231				0.23%
Sc RADIAL	16306.6	99.7	%	0.25				0.26%
Y 371.029	448713.1	101.68	%	0.250				0.25%
Ag 328.068†	60026.5	504.84	µg/L	1.064	504.84	ppb	1.064	0.21%
QC value within limits for Ag 328.068 Recovery = 100.97%								
Al 396.153Radial†	11706.7	4894.9	µg/L	115.75	4894.9	ppb	115.75	2.36%
QC value within limits for Al 396.153Radial Recovery = 97.90%								
As 188.979†	1454.4	498.00	µg/L	0.217	498.00	ppb	0.217	0.04%
QC value within limits for As 188.979 Recovery = 99.60%								
B 249.677†	17162.4	492.10	µg/L	0.404	492.10	ppb	0.404	0.08%
QC value within limits for B 249.677 Recovery = 98.42%								
Ba 233.527†	64633.4	497.51	µg/L	0.317	497.51	ppb	0.317	0.06%
QC value within limits for Ba 233.527 Recovery = 99.50%								
Be 313.107†	900371.4	494.59	µg/L	0.295	494.59	ppb	0.295	0.06%
QC value within limits for Be 313.107 Recovery = 98.92%								
Ca 317.933Radial†	11788.8	4998.9	µg/L	6.24	4998.9	ppb	6.24	0.12%
QC value within limits for Ca 317.933Radial Recovery = 99.98%								
Cd 226.502†	52420.9	495.45	µg/L	0.664	495.45	ppb	0.664	0.13%
QC value within limits for Cd 226.502 Recovery = 99.09%								
Co 228.616†	26743.4	489.31	µg/L	2.160	489.31	ppb	2.160	0.44%

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   QC value within limits for Co 228.616  Recovery = 97.86%
Cr 267.716†            34132.8      497.23 µg/L         0.575      497.23 ppb          0.575   0.12%
   QC value within limits for Cr 267.716  Recovery = 99.45%
Cu 324.752†            87174.9      497.05 µg/L         0.843      497.05 ppb          0.843   0.17%
   QC value within limits for Cu 324.752  Recovery = 99.41%
Fe 238.204 Radial†      9654.6      5028.3 µg/L          4.11      5028.3 ppb           4.11   0.08%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.57%
K 766.490 Radial†       9129.5      4971.9 µg/L        157.57      4971.9 ppb         157.57   3.17%
   QC value within limits for K 766.490 Radial  Recovery = 99.44%
Mg 279.077 IEC†         1242.7      5005.2 µg/L         20.87      5005.2 ppb          20.87   0.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.10%
Mn 257.610†           373064.8      496.50 µg/L         0.370      496.50 ppb          0.370   0.07%
   QC value within limits for Mn 257.610  Recovery = 99.30%
Mo 202.031†             9867.6      500.30 µg/L         2.330      500.30 ppb          2.330   0.47%
   QC value within limits for Mo 202.031  Recovery = 100.06%
Na 589.592 Radial†     57624.3       10193 µg/L         258.5       10193 ppb          258.5   2.54%
   QC value within limits for Na 589.592 Radial  Recovery = 101.93%
Ni 231.604†            19387.2      488.69 µg/L         2.045      488.69 ppb          2.045   0.42%
   QC value within limits for Ni 231.604  Recovery = 97.74%
P 214.914†              5316.3      2286.2 µg/L         14.40      2286.2 ppb          14.40   0.63%
   QC value within limits for P 214.914  Recovery = 91.45%
Pb 220.353†             5117.9      496.64 µg/L         2.784      496.64 ppb          2.784   0.56%
   QC value within limits for Pb 220.353  Recovery = 99.33%
S 181.975 Axial†         883.6      991.53 µg/L         1.893      991.53 ppb          1.893   0.19%
   QC value within limits for S 181.975 Axial  Recovery = 99.15%
Sb 206.836†             1898.5      501.89 µg/L         2.641      501.89 ppb          2.641   0.53%
   QC value within limits for Sb 206.836  Recovery = 100.38%
Se 196.026†             1344.4      499.08 µg/L         3.195      499.08 ppb          3.195   0.64%
   QC value within limits for Se 196.026  Recovery = 99.82%
SiO2†                  49156.2      5311.8 µg/L          9.61      5311.8 ppb           9.61   0.18%
   QC value within limits for SiO2  Recovery = 99.33%
Si 251.611†            65432.2      2476.1 µg/L          1.01      2476.1 ppb           1.01   0.04%
   QC value within limits for Si 251.611  Recovery = 99.04%
Sn 189.927†             4984.2      497.22 µg/L         2.512      497.22 ppb          2.512   0.51%
   QC value within limits for Sn 189.927  Recovery = 99.44%
Sr 421.552†           175147.4      491.24 µg/L        12.928      491.24 ppb         12.928   2.63%
   QC value within limits for Sr 421.552  Recovery = 98.25%
Ti 334.940†           163622.2      496.70 µg/L         0.091      496.70 ppb          0.091   0.02%
   QC value within limits for Ti 334.940  Recovery = 99.34%
Tl 190.801†             2602.5      499.19 µg/L         3.004      499.19 ppb          3.004   0.60%
   QC value within limits for Tl 190.801  Recovery = 99.84%
U 409.014†              8445.3      510.10 µg/L         2.982      510.10 ppb          2.982   0.58%
   QC value within limits for U 409.014  Recovery = 102.02%
V 292.402†             44570.7      504.52 µg/L         0.779      504.52 ppb          0.779   0.15%
   QC value within limits for V 292.402  Recovery = 100.90%
Zn 213.857†            70553.2      492.84 µg/L         0.450      492.84 ppb          0.450   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.57%
All analyte(s) passed QC.
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Sequence No.: 9 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 10:51:03**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15748.2	15748.2	96.3	%			10:51:31
1	Al 396.153Radial†	386.0	96.9	40.618	µg/L	40.618	ppb	10:51:31
1	Ca 317.933Radial†	84.9	14.2	6.0122	µg/L	6.0122	ppb	10:51:51
1	Fe 238.204 Radial†	38.1	10.4	5.4108	µg/L	5.4108	ppb	10:51:51
1	K 766.490 Radial†	2644.7	108.3	59.023	µg/L	59.023	ppb	10:51:31
1	Mg 279.077 IEC†	10.3	-1.2	-4.9703	µg/L	-4.9703	ppb	10:51:51
1	Na 589.592 Radial†	367.7	31.1	5.4995	µg/L	5.4995	ppb	10:51:31
1	Sr 421.552†	97.4	108.5	0.3044	µg/L	0.3044	ppb	10:51:31
1	Sc 361.383	510515.7	510515.7	102.00	%			10:52:49
1	Y 371.029	451329.3	451329.3	102.27	%			10:52:49
1	Ag 328.068†	-283.2	24.5	0.1829	µg/L	0.1829	ppb	10:52:49
1	As 188.979†	-0.3	-2.2	-0.7310	µg/L	-0.7310	ppb	10:53:09
1	B 249.677†	48.2	100.0	2.8773	µg/L	2.8773	ppb	10:53:09
1	Ba 233.527†	-206.8	52.1	0.4008	µg/L	0.4008	ppb	10:53:09
1	Be 313.107†	-4391.3	251.9	0.1383	µg/L	0.1383	ppb	10:52:49
1	Cd 226.502†	-334.8	27.6	0.2608	µg/L	0.2608	ppb	10:53:09
1	Co 228.616†	-79.6	3.0	0.0536	µg/L	0.0536	ppb	10:53:09
1	Cr 267.716†	172.9	14.0	0.1889	µg/L	0.1889	ppb	10:53:09
1	Cu 324.752†	4160.2	-130.9	-0.7641	µg/L	-0.7641	ppb	10:52:49
1	Mn 257.610†	257.4	-22.1	-0.0292	µg/L	-0.0292	ppb	10:53:09
1	Mo 202.031†	-46.7	-1.2	-0.0608	µg/L	-0.0608	ppb	10:53:09
1	Ni 231.604†	-187.5	15.8	0.3983	µg/L	0.3983	ppb	10:53:09
1	P 214.914†	549.3	-8.6	-3.7039	µg/L	-3.7039	ppb	10:53:09
1	Pb 220.353†	304.2	-11.2	-1.1134	µg/L	-1.1134	ppb	10:53:09
1	S 181.975 Axial†	46.2	4.4	4.9870	µg/L	4.9870	ppb	10:53:09
1	Sb 206.836†	83.2	1.6	0.4295	µg/L	0.4295	ppb	10:53:09
1	Se 196.026†	-101.7	4.3	1.6036	µg/L	1.6036	ppb	10:53:09
1	SiO2†	2612.0	-112.7	-12.167	µg/L	-12.167	ppb	10:52:49
1	Si 251.611†	570.5	91.0	3.4518	µg/L	3.4518	ppb	10:53:09
1	Sn 189.927†	85.5	8.0	0.7934	µg/L	0.7934	ppb	10:53:09
1	Ti 334.940†	-1890.9	135.7	0.4033	µg/L	0.4033	ppb	10:52:49
1	Tl 190.801†	-114.2	11.3	2.1727	µg/L	2.1727	ppb	10:53:09
1	U 409.014†	-6629.1	371.1	22.370	µg/L	22.370	ppb	10:52:49
1	V 292.402†	-32.1	-103.5	-1.1293	µg/L	-1.1293	ppb	10:52:49
1	Zn 213.857†	1202.3	19.5	0.1352	µg/L	0.1352	ppb	10:53:09
2	Sc RADIAL	16553.2	16553.2	101	%			10:51:57
2	Al 396.153Radial†	352.3	44.1	18.459	µg/L	18.459	ppb	10:51:57
2	Ca 317.933Radial†	100.2	25.1	10.644	µg/L	10.644	ppb	10:52:17
2	Fe 238.204 Radial†	32.2	2.7	1.3987	µg/L	1.3987	ppb	10:52:17
2	K 766.490 Radial†	2523.3	-145.3	-79.170	µg/L	-79.170	ppb	10:51:57
2	Mg 279.077 IEC†	-1.6	-13.5	-54.340	µg/L	-54.340	ppb	10:52:17
2	Na 589.592 Radial†	323.6	-31.1	-5.5044	µg/L	-5.5044	ppb	10:51:57
2	Sr 421.552†	116.9	122.9	0.3445	µg/L	0.3445	ppb	10:51:57
2	Sc 361.383	513099.3	513099.3	102.51	%			10:53:14
2	Y 371.029	453098.9	453098.9	102.67	%			10:53:14
2	Ag 328.068†	-263.4	45.2	0.3641	µg/L	0.3641	ppb	10:53:14
2	As 188.979†	2.4	0.5	0.1701	µg/L	0.1701	ppb	10:53:34
2	B 249.677†	-3.5	49.3	1.4177	µg/L	1.4177	ppb	10:53:34
2	Ba 233.527†	-213.1	47.0	0.3611	µg/L	0.3611	ppb	10:53:34
2	Be 313.107†	-4358.7	305.4	0.1678	µg/L	0.1678	ppb	10:53:14
2	Cd 226.502†	-361.6	3.1	0.0300	µg/L	0.0300	ppb	10:53:34
2	Co 228.616†	-73.8	9.0	0.1668	µg/L	0.1668	ppb	10:53:34
2	Cr 267.716†	197.0	36.6	0.5188	µg/L	0.5188	ppb	10:53:34
2	Cu 324.752†	4163.2	-148.5	-0.8651	µg/L	-0.8651	ppb	10:53:14
2	Mn 257.610†	284.8	3.4	0.0067	µg/L	0.0067	ppb	10:53:34
2	Mo 202.031†	-31.9	13.5	0.6834	µg/L	0.6834	ppb	10:53:34
2	Ni 231.604†	-201.0	3.5	0.0893	µg/L	0.0893	ppb	10:53:34
2	P 214.914†	543.2	-17.3	-7.7022	µg/L	-7.7022	ppb	10:53:34
2	Pb 220.353†	326.0	8.6	0.8245	µg/L	0.8245	ppb	10:53:34

2	S 181.975 Axial†	46.2	4.3	4.8073	µg/L	4.8073	ppb	10:53:34
2	Sb 206.836†	88.5	6.4	1.6844	µg/L	1.6844	ppb	10:53:34
2	Se 196.026†	-98.4	8.1	2.9925	µg/L	2.9925	ppb	10:53:34
2	SiO2†	2695.5	-44.1	-4.7549	µg/L	-4.7549	ppb	10:53:14
2	Si 251.611†	520.7	39.6	1.4925	µg/L	1.4925	ppb	10:53:34
2	Sn 189.927†	83.2	5.3	0.5284	µg/L	0.5284	ppb	10:53:34
2	Ti 334.940†	-2052.1	-12.2	-0.0411	µg/L	-0.0411	ppb	10:53:14
2	Tl 190.801†	-123.6	2.7	0.5161	µg/L	0.5161	ppb	10:53:34
2	U 409.014†	-6673.7	360.3	21.720	µg/L	21.720	ppb	10:53:14
2	V 292.402†	43.3	-29.8	-0.2971	µg/L	-0.2971	ppb	10:53:14
2	Zn 213.857†	1197.7	9.1	0.0644	µg/L	0.0644	ppb	10:53:34
3	Sc RADIAL	16444.5	16444.5	101	%			10:52:22
3	Al 396.153Radial†	340.1	34.2	14.372	µg/L	14.372	ppb	10:52:22
3	Ca 317.933Radial†	83.0	8.6	3.6517	µg/L	3.6517	ppb	10:52:42
3	Fe 238.204 Radial†	36.3	6.9	3.6143	µg/L	3.6143	ppb	10:52:42
3	K 766.490 Radial†	2524.0	-128.0	-69.755	µg/L	-69.755	ppb	10:52:22
3	Mg 279.077 IEC†	6.7	-5.3	-21.158	µg/L	-21.158	ppb	10:52:42
3	Na 589.592 Radial†	314.0	-38.6	-6.8240	µg/L	-6.8240	ppb	10:52:22
3	Sr 421.552†	124.6	131.4	0.3686	µg/L	0.3686	ppb	10:52:22
3	Sc 361.383	509197.6	509197.6	101.73	%			10:53:39
3	Y 371.029	450239.6	450239.6	102.02	%			10:53:39
3	Ag 328.068†	-319.6	-12.0	-0.1081	µg/L	-0.1081	ppb	10:53:39
3	As 188.979†	-3.0	-4.9	-1.6498	µg/L	-1.6498	ppb	10:53:59
3	B 249.677†	-22.3	30.8	0.8869	µg/L	0.8869	ppb	10:53:59
3	Ba 233.527†	-239.0	19.9	0.1535	µg/L	0.1535	ppb	10:53:59
3	Be 313.107†	-4349.9	281.5	0.1546	µg/L	0.1546	ppb	10:53:39
3	Cd 226.502†	-352.0	9.8	0.0927	µg/L	0.0927	ppb	10:53:59
3	Co 228.616†	-80.7	1.7	0.0301	µg/L	0.0301	ppb	10:53:59
3	Cr 267.716†	173.3	14.8	0.2041	µg/L	0.2041	ppb	10:53:59
3	Cu 324.752†	4065.3	-213.7	-1.2329	µg/L	-1.2329	ppb	10:53:39
3	Mn 257.610†	247.4	-31.3	-0.0409	µg/L	-0.0409	ppb	10:53:59
3	Mo 202.031†	-55.6	-10.1	-0.5118	µg/L	-0.5118	ppb	10:53:59
3	Ni 231.604†	-214.7	-11.4	-0.2876	µg/L	-0.2876	ppb	10:53:59
3	P 214.914†	536.5	-19.8	-8.7471	µg/L	-8.7471	ppb	10:53:59
3	Pb 220.353†	293.2	-21.2	-2.0759	µg/L	-2.0759	ppb	10:53:59
3	S 181.975 Axial†	50.9	9.2	10.357	µg/L	10.357	ppb	10:53:59
3	Sb 206.836†	83.7	2.4	0.6144	µg/L	0.6144	ppb	10:53:59
3	Se 196.026†	-103.3	2.6	0.9489	µg/L	0.9489	ppb	10:53:59
3	SiO2†	2672.7	-46.3	-5.0071	µg/L	-5.0071	ppb	10:53:39
3	Si 251.611†	534.7	57.2	2.1750	µg/L	2.1750	ppb	10:53:59
3	Sn 189.927†	64.0	-13.0	-1.2969	µg/L	-1.2969	ppb	10:53:59
3	Ti 334.940†	-1887.6	134.1	0.4015	µg/L	0.4015	ppb	10:53:39
3	Tl 190.801†	-117.0	8.3	1.5889	µg/L	1.5889	ppb	10:53:59
3	U 409.014†	-6687.7	296.6	17.880	µg/L	17.880	ppb	10:53:39
3	V 292.402†	55.4	-17.6	-0.1805	µg/L	-0.1805	ppb	10:53:39
3	Zn 213.857†	1207.3	27.5	0.1967	µg/L	0.1967	ppb	10:53:59

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	510937.5	102.08	%	0.397				0.39%
Sc RADIAL	16248.6	99.3	%	2.67				2.69%
Y 371.029	451555.9	102.32	%	0.327				0.32%
Ag 328.068†	19.2	0.1463	µg/L	0.23821	0.1463	ppb	0.23821	162.84%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	58.4	24.483	µg/L	14.1219	24.483	ppb	14.1219	57.68%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-2.2	-0.7369	µg/L	0.90996	-0.7369	ppb	0.90996	123.49%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	60.0	1.7273	µg/L	1.03066	1.7273	ppb	1.03066	59.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	39.7	0.3051	µg/L	0.13282	0.3051	ppb	0.13282	43.53%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	279.6	0.1536	µg/L	0.01478	0.1536	ppb	0.01478	9.62%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	16.0	6.7691	µg/L	3.55684	6.7691	ppb	3.55684	52.54%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	13.5	0.1278	µg/L	0.11934	0.1278	ppb	0.11934	93.36%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	4.6	0.0835	µg/L	0.07309	0.0835	ppb	0.07309	87.56%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                21.8      0.3039 µg/L       0.18627      0.3039 ppb        0.18627  61.29%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -164.4     -0.9540 µg/L       0.24672     -0.9540 ppb        0.24672  25.86%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          6.7      3.4746 µg/L       2.00969      3.4746 ppb        2.00969  57.84%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -55.0     -29.967 µg/L       77.2117     -29.967 ppb        77.2117 257.65%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -6.7     -26.823 µg/L       25.1678     -26.823 ppb        25.1678  93.83%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -16.7     -0.0212 µg/L       0.02480     -0.0212 ppb        0.02480 117.23%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 0.7      0.0369 µg/L       0.60353      0.0369 ppb        0.60353 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -12.9     -2.2763 µg/L       6.76631     -2.2763 ppb        6.76631 297.25%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 2.6      0.0667 µg/L       0.34350      0.0667 ppb        0.34350 515.13%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -15.2     -6.7177 µg/L       2.66183     -6.7177 ppb        2.66183  39.62%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -8.0     -0.7883 µg/L       1.47728     -0.7883 ppb        1.47728 187.41%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            6.0      6.7172 µg/L       3.15365      6.7172 ppb        3.15365  46.95%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 3.5      0.9094 µg/L       0.67750      0.9094 ppb        0.67750  74.50%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      1.8483 µg/L       1.04352      1.8483 ppb        1.04352  56.46%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     -67.7     -7.3096 µg/L       4.20839     -7.3096 ppb        4.20839  57.57%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                62.6      2.3731 µg/L       0.99454      2.3731 ppb        0.99454  41.91%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.1      0.0083 µg/L       1.13807      0.0083 ppb        1.13807 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               121.0      0.3392 µg/L       0.03245      0.3392 ppb        0.03245   9.57%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                85.8      0.2545 µg/L       0.25603      0.2545 ppb        0.25603 100.58%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 7.4      1.4259 µg/L       0.84025      1.4259 ppb        0.84025  58.93%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                342.7      20.656 µg/L        2.4265      20.656 ppb         2.4265  11.75%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -50.3     -0.5356 µg/L       0.51742     -0.5356 ppb        0.51742  96.60%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                18.7      0.1321 µg/L       0.06617      0.1321 ppb        0.06617  50.10%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 16 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 11:12:47**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16154.7	16154.7	98.8	%			11:13:37
1	Al 396.153Radial†	11654.2	11497.6	4807.1	µg/L	4807.1	ppb	11:13:17
1	Ca 317.933Radial†	11856.7	11932.8	5059.9	µg/L	5059.9	ppb	11:13:37
1	Fe 238.204 Radial†	9675.9	9769.2	5087.9	µg/L	5087.9	ppb	11:13:37
1	K 766.490 Radial†	11413.4	8918.8	4857.1	µg/L	4857.1	ppb	11:13:17
1	Mg 279.077 IEC†	1262.4	1266.4	5100.7	µg/L	5100.7	ppb	11:13:37
1	Na 589.592 Radial†	56115.8	56475.2	9989.4	µg/L	9989.4	ppb	11:13:17
1	Sr 421.552†	169746.8	171902.9	482.14	µg/L	482.14	ppb	11:13:17
1	Sc 361.383	512469.1	512469.1	102.39	%			11:14:35
1	Y 371.029	447596.9	447596.9	101.42	%			11:14:35
1	Ag 328.068†	61802.8	60663.1	510.19	µg/L	510.19	ppb	11:14:35
1	As 188.979†	1501.4	1464.5	501.47	µg/L	501.47	ppb	11:14:55
1	B 249.677†	17664.7	17305.3	496.20	µg/L	496.20	ppb	11:14:35
1	Ba 233.527†	66707.8	65406.4	503.45	µg/L	503.45	ppb	11:14:35
1	Be 313.107†	928597.8	911491.7	500.70	µg/L	500.70	ppb	11:14:35
1	Cd 226.502†	54141.5	53234.3	503.14	µg/L	503.14	ppb	11:14:35
1	Co 228.616†	27559.3	26997.4	493.95	µg/L	493.95	ppb	11:14:55
1	Cr 267.716†	35558.4	34573.3	503.65	µg/L	503.65	ppb	11:14:35
1	Cu 324.752†	94489.8	88075.9	502.18	µg/L	502.18	ppb	11:14:35
1	Mn 257.610†	386661.8	377366.9	502.22	µg/L	502.22	ppb	11:14:35
1	Mo 202.031†	10095.5	9904.5	502.17	µg/L	502.17	ppb	11:14:55
1	Ni 231.604†	19769.5	19507.9	491.73	µg/L	491.73	ppb	11:14:55
1	P 214.914†	6075.0	5386.2	2316.8	µg/L	2316.8	ppb	11:14:55
1	Pb 220.353†	5624.4	5183.7	503.11	µg/L	503.11	ppb	11:14:55
1	S 181.975 Axial†	959.7	896.4	1005.9	µg/L	1005.9	ppb	11:14:55
1	Sb 206.836†	2037.0	1909.6	504.80	µg/L	504.80	ppb	11:14:55
1	Se 196.026†	1273.0	1347.4	500.20	µg/L	500.20	ppb	11:14:55
1	SiO2†	53686.6	49760.6	5377.1	µg/L	5377.1	ppb	11:14:35
1	Si 251.611†	68227.7	66167.6	2503.9	µg/L	2503.9	ppb	11:14:35
1	Sn 189.927†	5259.4	5060.8	504.86	µg/L	504.86	ppb	11:14:55
1	Ti 334.940†	167205.7	165294.4	501.77	µg/L	501.77	ppb	11:14:35
1	Tl 190.801†	2547.3	2611.2	500.87	µg/L	500.87	ppb	11:14:55
1	U 409.014†	1733.6	8563.4	517.24	µg/L	517.24	ppb	11:14:35
1	V 292.402†	46197.4	45047.6	509.88	µg/L	509.88	ppb	11:14:35
1	Zn 213.857†	74382.0	71487.5	499.39	µg/L	499.39	ppb	11:14:35
2	Sc RADIAL	16191.6	16191.6	99.0	%			11:14:03
2	Al 396.153Radial†	12154.8	11976.5	5007.9	µg/L	5007.9	ppb	11:13:42
2	Ca 317.933Radial†	11900.5	11949.7	5067.1	µg/L	5067.1	ppb	11:14:03
2	Fe 238.204 Radial†	9701.9	9773.2	5090.0	µg/L	5090.0	ppb	11:14:03
2	K 766.490 Radial†	11964.9	9449.8	5146.3	µg/L	5146.3	ppb	11:13:42
2	Mg 279.077 IEC†	1249.2	1250.2	5035.3	µg/L	5035.3	ppb	11:14:03
2	Na 589.592 Radial†	59184.8	59446.6	10515	µg/L	10515	ppb	11:13:42
2	Sr 421.552†	178714.9	180572.4	506.46	µg/L	506.46	ppb	11:13:42
2	Sc 361.383	514702.2	514702.2	102.83	%			11:15:01
2	Y 371.029	449366.6	449366.6	101.82	%			11:15:01
2	Ag 328.068†	62080.2	60671.0	510.27	µg/L	510.27	ppb	11:15:01
2	As 188.979†	1519.5	1475.7	505.27	µg/L	505.27	ppb	11:15:22
2	B 249.677†	17800.9	17362.9	497.85	µg/L	497.85	ppb	11:15:01
2	Ba 233.527†	67037.5	65444.4	503.75	µg/L	503.75	ppb	11:15:01
2	Be 313.107†	935164.7	913942.8	502.05	µg/L	502.05	ppb	11:15:01
2	Cd 226.502†	54596.9	53447.7	505.15	µg/L	505.15	ppb	11:15:01
2	Co 228.616†	27715.4	27032.4	494.60	µg/L	494.60	ppb	11:15:22
2	Cr 267.716†	35674.8	34535.8	503.11	µg/L	503.11	ppb	11:15:01
2	Cu 324.752†	94890.3	88064.9	502.13	µg/L	502.13	ppb	11:15:01
2	Mn 257.610†	389163.1	378160.8	503.28	µg/L	503.28	ppb	11:15:01
2	Mo 202.031†	10162.1	9926.6	503.29	µg/L	503.29	ppb	11:15:22
2	Ni 231.604†	19951.5	19601.2	494.09	µg/L	494.09	ppb	11:15:22
2	P 214.914†	6133.5	5417.3	2331.3	µg/L	2331.3	ppb	11:15:22
2	Pb 220.353†	5648.0	5182.8	502.90	µg/L	502.90	ppb	11:15:22

2	S 181.975 Axial†	959.7	892.5	1001.4 µg/L	1001.4 ppb		11:15:22
2	Sb 206.836†	2027.7	1891.9	500.21 µg/L	500.21 ppb		11:15:22
2	Se 196.026†	1298.7	1367.0	507.41 µg/L	507.41 ppb		11:15:22
2	SiO2†	53951.0	49790.3	5380.3 µg/L	5380.3 ppb		11:15:01
2	Si 251.611†	68680.7	66319.0	2509.7 µg/L	2509.7 ppb		11:15:01
2	Sn 189.927†	5277.7	5056.3	504.41 µg/L	504.41 ppb		11:15:22
2	Ti 334.940†	167987.5	165346.2	501.94 µg/L	501.94 ppb		11:15:01
2	Tl 190.801†	2581.4	2633.5	505.14 µg/L	505.14 ppb		11:15:22
2	U 409.014†	1569.6	8396.6	507.18 µg/L	507.18 ppb		11:15:01
2	V 292.402†	46469.4	45116.3	510.65 µg/L	510.65 ppb		11:15:01
2	Zn 213.857†	74964.7	71739.0	501.15 µg/L	501.15 ppb		11:15:01
3	Sc RADIAL	16221.2	16221.2	99.2 %			11:14:28
3	Al 396.153Radial†	12261.8	12062.0	5043.8 µg/L	5043.8 ppb		11:14:08
3	Ca 317.933Radial†	11937.6	11965.1	5073.6 µg/L	5073.6 ppb		11:14:28
3	Fe 238.204 Radial†	9730.3	9783.8	5095.6 µg/L	5095.6 ppb		11:14:28
3	K 766.490 Radial†	11895.2	9357.3	5095.9 µg/L	5095.9 ppb		11:14:08
3	Mg 279.077 IEC†	1264.7	1263.6	5089.1 µg/L	5089.1 ppb		11:14:28
3	Na 589.592 Radial†	59046.7	59197.9	10471 µg/L	10471 ppb		11:14:08
3	Sr 421.552†	178895.2	180424.0	506.04 µg/L	506.04 ppb		11:14:08
3	Sc 361.383	514327.7	514327.7	102.76 %			11:15:28
3	Y 371.029	449163.6	449163.6	101.78 %			11:15:28
3	Ag 328.068†	62064.2	60699.4	510.51 µg/L	510.51 ppb		11:15:28
3	As 188.979†	1530.7	1487.6	509.33 µg/L	509.33 ppb		11:15:48
3	B 249.677†	17868.6	17441.4	500.11 µg/L	500.11 ppb		11:15:28
3	Ba 233.527†	67189.4	65639.7	505.25 µg/L	505.25 ppb		11:15:28
3	Be 313.107†	935848.9	915270.7	502.78 µg/L	502.78 ppb		11:15:28
3	Cd 226.502†	54586.9	53476.6	505.43 µg/L	505.43 ppb		11:15:28
3	Co 228.616†	27684.0	27021.5	494.40 µg/L	494.40 ppb		11:15:48
3	Cr 267.716†	35701.8	34587.3	503.86 µg/L	503.86 ppb		11:15:28
3	Cu 324.752†	94791.6	88036.1	501.96 µg/L	501.96 ppb		11:15:28
3	Mn 257.610†	389197.4	378469.7	503.69 µg/L	503.69 ppb		11:15:28
3	Mo 202.031†	10160.0	9931.7	503.55 µg/L	503.55 ppb		11:15:48
3	Ni 231.604†	19941.3	19605.4	494.19 µg/L	494.19 ppb		11:15:48
3	P 214.914†	6114.0	5402.7	2324.6 µg/L	2324.6 ppb		11:15:48
3	Pb 220.353†	5647.6	5186.4	503.23 µg/L	503.23 ppb		11:15:48
3	S 181.975 Axial†	966.3	899.6	1009.4 µg/L	1009.4 ppb		11:15:48
3	Sb 206.836†	2040.0	1905.3	503.70 µg/L	503.70 ppb		11:15:48
3	Se 196.026†	1280.5	1350.2	501.26 µg/L	501.26 ppb		11:15:48
3	SiO2†	54065.9	49940.3	5396.5 µg/L	5396.5 ppb		11:15:28
3	Si 251.611†	68691.4	66378.1	2511.9 µg/L	2511.9 ppb		11:15:28
3	Sn 189.927†	5274.9	5057.3	504.51 µg/L	504.51 ppb		11:15:48
3	Ti 334.940†	167784.6	165267.6	501.69 µg/L	501.69 ppb		11:15:28
3	Tl 190.801†	2581.3	2635.2	505.46 µg/L	505.46 ppb		11:15:48
3	U 409.014†	1649.3	8475.3	511.93 µg/L	511.93 ppb		11:15:28
3	V 292.402†	46472.8	45152.6	511.06 µg/L	511.06 ppb		11:15:28
3	Zn 213.857†	74980.1	71807.0	501.63 µg/L	501.63 ppb		11:15:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	513833.0	102.66	%	0.239				0.23%
Sc RADIAL	16189.2	99.0	%	0.20				0.21%
Y 371.029	448709.0	101.67	%	0.219				0.22%
Ag 328.068†	60677.8	510.33	µg/L	0.165	510.33	ppb	0.165	0.03%
QC value within limits for Ag 328.068 Recovery = 102.07%								
Al 396.153Radial†	11845.4	4953.0	µg/L	127.55	4953.0	ppb	127.55	2.58%
QC value within limits for Al 396.153Radial Recovery = 99.06%								
As 188.979†	1475.9	505.36	µg/L	3.935	505.36	ppb	3.935	0.78%
QC value within limits for As 188.979 Recovery = 101.07%								
B 249.677†	17369.9	498.05	µg/L	1.965	498.05	ppb	1.965	0.39%
QC value within limits for B 249.677 Recovery = 99.61%								
Ba 233.527†	65496.8	504.15	µg/L	0.962	504.15	ppb	0.962	0.19%
QC value within limits for Ba 233.527 Recovery = 100.83%								
Be 313.107†	913568.4	501.84	µg/L	1.053	501.84	ppb	1.053	0.21%
QC value within limits for Be 313.107 Recovery = 100.37%								
Ca 317.933Radial†	11949.2	5066.9	µg/L	6.85	5066.9	ppb	6.85	0.14%
QC value within limits for Ca 317.933Radial Recovery = 101.34%								
Cd 226.502†	53386.2	504.57	µg/L	1.252	504.57	ppb	1.252	0.25%
QC value within limits for Cd 226.502 Recovery = 100.91%								
Co 228.616†	27017.1	494.32	µg/L	0.329	494.32	ppb	0.329	0.07%

```
   QC value within limits for Co 228.616  Recovery = 98.86%
Cr 267.716†            34565.5      503.54 µg/L         0.386      503.54 ppb          0.386   0.08%
   QC value within limits for Cr 267.716  Recovery = 100.71%
Cu 324.752†            88058.9      502.09 µg/L         0.116      502.09 ppb          0.116   0.02%
   QC value within limits for Cu 324.752  Recovery = 100.42%
Fe 238.204 Radial†      9775.4      5091.2 µg/L          3.93      5091.2 ppb           3.93   0.08%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.82%
K 766.490 Radial†       9242.0      5033.1 µg/L        154.49      5033.1 ppb         154.49   3.07%
   QC value within limits for K 766.490 Radial  Recovery = 100.66%
Mg 279.077 IEC†         1260.1      5075.0 µg/L         34.86      5075.0 ppb          34.86   0.69%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.50%
Mn 257.610†           377999.1      503.07 µg/L         0.758      503.07 ppb          0.758   0.15%
   QC value within limits for Mn 257.610  Recovery = 100.61%
Mo 202.031†             9920.9      503.00 µg/L         0.732      503.00 ppb          0.732   0.15%
   QC value within limits for Mo 202.031  Recovery = 100.60%
Na 589.592 Radial†     58373.3       10325 µg/L         291.6       10325 ppb          291.6   2.82%
   QC value within limits for Na 589.592 Radial  Recovery = 103.25%
Ni 231.604†            19571.5      493.34 µg/L         1.389      493.34 ppb          1.389   0.28%
   QC value within limits for Ni 231.604  Recovery = 98.67%
P 214.914†              5402.0      2324.2 µg/L          7.26      2324.2 ppb           7.26   0.31%
   QC value within limits for P 214.914  Recovery = 92.97%
Pb 220.353†             5184.3      503.08 µg/L         0.168      503.08 ppb          0.168   0.03%
   QC value within limits for Pb 220.353  Recovery = 100.62%
S 181.975 Axial†         896.2      1005.6 µg/L          3.99      1005.6 ppb           3.99   0.40%
   QC value within limits for S 181.975 Axial  Recovery = 100.56%
Sb 206.836†             1902.3      502.90 µg/L         2.397      502.90 ppb          2.397   0.48%
   QC value within limits for Sb 206.836  Recovery = 100.58%
Se 196.026†             1354.8      502.96 µg/L         3.895      502.96 ppb          3.895   0.77%
   QC value within limits for Se 196.026  Recovery = 100.59%
SiO2†                  49830.4      5384.6 µg/L         10.40      5384.6 ppb          10.40   0.19%
   QC value within limits for SiO2  Recovery = 100.69%
Si 251.611†            66288.2      2508.5 µg/L          4.11      2508.5 ppb           4.11   0.16%
   QC value within limits for Si 251.611  Recovery = 100.34%
Sn 189.927†             5058.2      504.59 µg/L         0.235      504.59 ppb          0.235   0.05%
   QC value within limits for Sn 189.927  Recovery = 100.92%
Sr 421.552†           177633.1      498.21 µg/L        13.924      498.21 ppb         13.924   2.79%
   QC value within limits for Sr 421.552  Recovery = 99.64%
Ti 334.940†           165302.8      501.80 µg/L         0.125      501.80 ppb          0.125   0.02%
   QC value within limits for Ti 334.940  Recovery = 100.36%
Tl 190.801†             2626.7      503.82 µg/L         2.565      503.82 ppb          2.565   0.51%
   QC value within limits for Tl 190.801  Recovery = 100.76%
U 409.014†              8478.4      512.12 µg/L         5.028      512.12 ppb          5.028   0.98%
   QC value within limits for U 409.014  Recovery = 102.42%
V 292.402†             45105.5      510.53 µg/L         0.598      510.53 ppb          0.598   0.12%
   QC value within limits for V 292.402  Recovery = 102.11%
Zn 213.857†            71677.8      500.72 µg/L         1.176      500.72 ppb          1.176   0.23%
   QC value within limits for Zn 213.857  Recovery = 100.14%
All analyte(s) passed QC.
```

Sequence No.: 17 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 11:15:56**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15833.0	15833.0	96.8	%			11:16:24
1	Al 396.153Radial†	309.1	15.3	6.4049	µg/L	6.4049	ppb	11:16:24
1	Ca 317.933Radial†	85.8	14.7	6.2434	µg/L	6.2434	ppb	11:16:45
1	Fe 238.204 Radial†	34.5	6.5	3.3719	µg/L	3.3719	ppb	11:16:45
1	K 766.490 Radial†	2573.9	20.5	11.152	µg/L	11.152	ppb	11:16:24
1	Mg 279.077 IEC†	9.6	-1.9	-7.7782	µg/L	-7.7782	ppb	11:16:45
1	Na 589.592 Radial†	301.6	-39.3	-6.9472	µg/L	-6.9472	ppb	11:16:24
1	Sr 421.552†	-33.1	-26.7	-0.0752	µg/L	-0.0752	ppb	11:16:24
1	Sc 361.383	505834.1	505834.1	101.06	%			11:17:42
1	Y 371.029	446666.8	446666.8	101.21	%			11:17:42
1	Ag 328.068†	-181.1	123.0	1.0155	µg/L	1.0155	ppb	11:17:42
1	As 188.979†	3.8	1.9	0.6355	µg/L	0.6355	ppb	11:18:02
1	B 249.677†	3.9	56.5	1.6280	µg/L	1.6280	ppb	11:18:02
1	Ba 233.527†	-243.6	13.9	0.1069	µg/L	0.1069	ppb	11:18:02
1	Be 313.107†	-4484.7	119.7	0.0657	µg/L	0.0657	ppb	11:17:42
1	Cd 226.502†	-347.9	11.6	0.1100	µg/L	0.1100	ppb	11:18:02
1	Co 228.616†	-90.4	-8.4	-0.1542	µg/L	-0.1542	ppb	11:18:02
1	Cr 267.716†	179.8	22.4	0.3234	µg/L	0.3234	ppb	11:18:02
1	Cu 324.752†	4192.9	-60.8	-0.3499	µg/L	-0.3499	ppb	11:17:42
1	Mn 257.610†	287.1	9.6	0.0131	µg/L	0.0131	ppb	11:18:02
1	Mo 202.031†	-37.4	7.6	0.3865	µg/L	0.3865	ppb	11:18:02
1	Ni 231.604†	-176.8	24.7	0.6238	µg/L	0.6238	ppb	11:18:02
1	P 214.914†	548.9	-3.9	-1.7056	µg/L	-1.7056	ppb	11:18:02
1	Pb 220.353†	307.8	-4.9	-0.4760	µg/L	-0.4760	ppb	11:18:02
1	S 181.975 Axial†	42.6	1.3	1.5026	µg/L	1.5026	ppb	11:18:02
1	Sb 206.836†	80.9	0.1	0.0378	µg/L	0.0378	ppb	11:18:02
1	Se 196.026†	-123.5	-18.1	-6.6615	µg/L	-6.6615	ppb	11:18:02
1	SiO2†	2688.5	-13.2	-1.4250	µg/L	-1.4250	ppb	11:17:42
1	Si 251.611†	550.2	76.0	2.8802	µg/L	2.8802	ppb	11:18:02
1	Sn 189.927†	73.6	-3.1	-0.3058	µg/L	-0.3058	ppb	11:18:02
1	Ti 334.940†	-1929.2	80.6	0.2444	µg/L	0.2444	ppb	11:17:42
1	Tl 190.801†	-102.8	21.6	4.1286	µg/L	4.1286	ppb	11:18:02
1	U 409.014†	-6883.2	59.5	3.5896	µg/L	3.5896	ppb	11:17:42
1	V 292.402†	28.2	-44.2	-0.4834	µg/L	-0.4834	ppb	11:17:42
1	Zn 213.857†	1225.3	53.2	0.3708	µg/L	0.3708	ppb	11:18:02
2	Sc RADIAL	16412.2	16412.2	100	%			11:16:50
2	Al 396.153Radial†	372.5	67.2	28.180	µg/L	28.180	ppb	11:16:50
2	Ca 317.933Radial†	77.0	2.7	1.1656	µg/L	1.1656	ppb	11:17:10
2	Fe 238.204 Radial†	36.2	6.9	3.5984	µg/L	3.5984	ppb	11:17:10
2	K 766.490 Radial†	2705.3	57.6	31.355	µg/L	31.355	ppb	11:16:50
2	Mg 279.077 IEC†	3.3	-8.6	-34.602	µg/L	-34.602	ppb	11:17:10
2	Na 589.592 Radial†	362.8	10.7	1.8939	µg/L	1.8939	ppb	11:16:50
2	Sr 421.552†	19.2	26.6	0.0745	µg/L	0.0745	ppb	11:16:50
2	Sc 361.383	508037.1	508037.1	101.50	%			11:18:07
2	Y 371.029	448489.0	448489.0	101.62	%			11:18:07
2	Ag 328.068†	-227.6	77.9	0.6442	µg/L	0.6442	ppb	11:18:07
2	As 188.979†	0.6	-1.3	-0.4531	µg/L	-0.4531	ppb	11:18:27
2	B 249.677†	-23.4	29.6	0.8527	µg/L	0.8527	ppb	11:18:27
2	Ba 233.527†	-273.9	-15.0	-0.1145	µg/L	-0.1145	ppb	11:18:27
2	Be 313.107†	-4373.4	248.6	0.1366	µg/L	0.1366	ppb	11:18:07
2	Cd 226.502†	-345.1	15.9	0.1500	µg/L	0.1500	ppb	11:18:27
2	Co 228.616†	-80.9	1.4	0.0257	µg/L	0.0257	ppb	11:18:27
2	Cr 267.716†	173.5	15.4	0.2227	µg/L	0.2227	ppb	11:18:27
2	Cu 324.752†	4145.5	-125.5	-0.7176	µg/L	-0.7176	ppb	11:18:07
2	Mn 257.610†	284.0	5.3	0.0084	µg/L	0.0084	ppb	11:18:27
2	Mo 202.031†	-33.1	12.0	0.6076	µg/L	0.6076	ppb	11:18:27
2	Ni 231.604†	-179.5	22.8	0.5738	µg/L	0.5738	ppb	11:18:27
2	P 214.914†	540.8	-14.3	-6.3750	µg/L	-6.3750	ppb	11:18:27
2	Pb 220.353†	285.7	-28.0	-2.7397	µg/L	-2.7397	ppb	11:18:27

Uploaded Data CCB 03-DEC-2010 11:15:00

Run Level

Attribute	Value	Units
Dilution	1	num
Spike Refmat Id	1491907	num
Serial Number	1491907	text

Parmname Level

Details	Parmname	Status	Initial Result ug/L	Intensity none
View	Aluminum	LOAD	18.643	44.492548
View	Antimony	LOAD	-.0193	-.093831
View	Arsenic	LOAD	-.6121	-1.81415
View	Barium	LOAD	.0311	4.010301
View	Beryllium	LOAD	.0857	156.118264
View	Boron	LOAD	1.1773	40.906414
View	Cadmium	LOAD	.1174	12.414914
View	Calcium	LOAD	4.4662	10.532588
View	Chromium	LOAD	.2932	20.24414
View	Cobalt	LOAD	.0114	.596857
View	Copper	LOAD	-.4603	-80.317692
View	Iron	LOAD	2.8535	5.47919
View	Lead	LOAD	-.5415	-5.466707
View	Magnesium	LOAD	-17.381	-4.318543
View	Manganese	LOAD	.0027	1.531329
View	Molybdenum	LOAD	.5722	11.287826
View	Nickel	LOAD	.3959	15.704132
View	Phosphorous	LOAD	-5.4359	-12.062698
View	Potassium	LOAD	3.3482	6.145803
View	Selenium	LOAD	-1.5527	-4.239325
View	Silica	LOAD	3.4787	32.167354
View	Silicon	LOAD	2.2219	58.755932
View	Silver	LOAD	.5678	68.9161
View	Sodium	LOAD	-3.3798	-19.107706
View	Strontium	LOAD	.0311	11.132848
View	Sulfur	LOAD	7.8645	7.007058
View	Thallium	LOAD	3.3554	17.552334
View	Tin	LOAD	-.1896	-1.904706
View	Titanium	LOAD	.1427	46.727302
View	Total Uranium	LOAD		
View	Uranium	LOAD	2.4895	41.291887
View	Vanadium	LOAD	-.3787	-34.824287
View	Zinc	LOAD	.2519	36.099327

Remove Empty Parmnames

Fire Calculation

```
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                20.2      0.2932 µg/L       0.06122      0.2932 ppb        0.06122  20.88%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -80.3     -0.4603 µg/L       0.22353     -0.4603 ppb        0.22353  48.56%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          5.5      2.8535 µg/L       1.09974      2.8535 ppb        1.09974  38.54%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†           6.1      3.3482 µg/L      32.61667      3.3482 ppb       32.61667 974.16%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -4.3     -17.381 µg/L       14.9468     -17.381 ppb        14.9468  86.00%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                 1.5      0.0027 µg/L       0.01412      0.0027 ppb        0.01412 517.22%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                11.3      0.5722 µg/L       0.17079      0.5722 ppb        0.17079  29.85%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -19.1     -3.3798 µg/L       4.66096     -3.3798 ppb        4.66096 137.91%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                15.7      0.3959 µg/L       0.35227      0.3959 ppb        0.35227  88.97%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -12.1     -5.4359 µg/L       3.36065     -5.4359 ppb        3.36065  61.82%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -5.5     -0.5415 µg/L       2.16618     -0.5415 ppb        2.16618 400.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.0      7.8645 µg/L       6.12214      7.8645 ppb        6.12214  77.84%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.1     -0.0193 µg/L       0.71258     -0.0193 ppb        0.71258 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -4.2     -1.5527 µg/L       4.43055     -1.5527 ppb        4.43055 285.35%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      32.2      3.4787 µg/L       7.35147      3.4787 ppb        7.35147 211.33%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                58.8      2.2219 µg/L       0.57640      2.2219 ppb        0.57640  25.94%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.9     -0.1896 µg/L       0.17640     -0.1896 ppb        0.17640  93.05%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                11.1      0.0311 µg/L       0.09259      0.0311 ppb        0.09259 297.54%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                46.7      0.1427 µg/L       0.22462      0.1427 ppb        0.22462 157.41%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                17.6      3.3554 µg/L       0.71292      3.3554 ppb        0.71292  21.25%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 41.3      2.4895 µg/L       0.95571      2.4895 ppb        0.95571  38.39%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -34.8     -0.3787 µg/L       0.14320     -0.3787 ppb        0.14320  37.81%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                36.1      0.2519 µg/L       0.10843      0.2519 ppb        0.10843  43.04%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 25 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 11:39:11**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16427.9	16427.9	100	%			11:40:02
1	Al 396.153Radial†	12084.5	11729.9	4904.5	µg/L	4904.5	ppb	11:39:42
1	Ca 317.933Radial†	12016.9	11892.6	5042.9	µg/L	5042.9	ppb	11:40:02
1	Fe 238.204 Radial†	9767.5	9697.5	5050.6	µg/L	5050.6	ppb	11:40:02
1	K 766.490 Radial†	12022.9	9333.7	5083.1	µg/L	5083.1	ppb	11:39:42
1	Mg 279.077 IEC†	1283.9	1266.6	5101.3	µg/L	5101.3	ppb	11:40:02
1	Na 589.592 Radial†	58559.8	57963.9	10253	µg/L	10253	ppb	11:39:42
1	Sr 421.552†	177368.1	176633.5	495.41	µg/L	495.41	ppb	11:39:42
1	Sc 361.383	517301.8	517301.8	103.35	%			11:41:00
1	Y 371.029	451926.1	451926.1	102.40	%			11:41:00
1	Ag 328.068†	62033.9	60322.9	507.33	µg/L	507.33	ppb	11:41:00
1	As 188.979†	1518.6	1467.5	502.46	µg/L	502.46	ppb	11:41:20
1	B 249.677†	17742.0	17218.9	493.72	µg/L	493.72	ppb	11:41:00
1	Ba 233.527†	66999.3	65079.9	500.94	µg/L	500.94	ppb	11:41:00
1	Be 313.107†	933631.6	907889.5	498.72	µg/L	498.72	ppb	11:41:00
1	Cd 226.502†	54275.2	52869.6	499.69	µg/L	499.69	ppb	11:41:00
1	Co 228.616†	27707.7	26889.5	491.98	µg/L	491.98	ppb	11:41:20
1	Cr 267.716†	35649.9	34337.3	500.21	µg/L	500.21	ppb	11:41:00
1	Cu 324.752†	94909.0	87619.3	499.57	µg/L	499.57	ppb	11:41:00
1	Mn 257.610†	388890.6	375995.4	500.40	µg/L	500.40	ppb	11:41:00
1	Mo 202.031†	10221.1	9934.0	503.66	µg/L	503.66	ppb	11:41:20
1	Ni 231.604†	20008.3	19558.6	493.01	µg/L	493.01	ppb	11:41:20
1	P 214.914†	6083.0	5338.5	2295.6	µg/L	2295.6	ppb	11:41:20
1	Pb 220.353†	5636.6	5144.3	499.21	µg/L	499.21	ppb	11:41:20
1	S 181.975 Axial†	954.7	882.9	990.69	µg/L	990.69	ppb	11:41:20
1	Sb 206.836†	2049.4	1902.9	503.08	µg/L	503.08	ppb	11:41:20
1	Se 196.026†	1288.1	1350.4	501.29	µg/L	501.29	ppb	11:41:20
1	SiO2†	53934.5	49510.6	5350.1	µg/L	5350.1	ppb	11:41:00
1	Si 251.611†	68652.4	65956.1	2495.9	µg/L	2495.9	ppb	11:41:00
1	Sn 189.927†	5275.7	5028.6	501.65	µg/L	501.65	ppb	11:41:20
1	Ti 334.940†	168234.9	164764.7	500.16	µg/L	500.16	ppb	11:41:00
1	Tl 190.801†	2573.3	2613.1	501.23	µg/L	501.23	ppb	11:41:20
1	U 409.014†	1825.7	8636.8	521.65	µg/L	521.65	ppb	11:41:00
1	V 292.402†	46352.3	44775.9	506.86	µg/L	506.86	ppb	11:41:00
1	Zn 213.857†	74732.6	71148.1	497.00	µg/L	497.00	ppb	11:41:00
2	Sc RADIAL	16449.6	16449.6	101	%			11:40:27
2	Al 396.153Radial†	12328.2	11956.4	4999.6	µg/L	4999.6	ppb	11:40:07
2	Ca 317.933Radial†	12030.6	11890.5	5042.0	µg/L	5042.0	ppb	11:40:27
2	Fe 238.204 Radial†	9815.3	9732.2	5068.7	µg/L	5068.7	ppb	11:40:27
2	K 766.490 Radial†	12053.2	9348.0	5090.8	µg/L	5090.8	ppb	11:40:07
2	Mg 279.077 IEC†	1279.3	1260.3	5076.1	µg/L	5076.1	ppb	11:40:27
2	Na 589.592 Radial†	59868.9	59189.0	10469	µg/L	10469	ppb	11:40:07
2	Sr 421.552†	181075.3	180087.8	505.10	µg/L	505.10	ppb	11:40:07
2	Sc 361.383	517274.4	517274.4	103.35	%			11:41:26
2	Y 371.029	451528.9	451528.9	102.31	%			11:41:26
2	Ag 328.068†	62010.9	60303.8	507.18	µg/L	507.18	ppb	11:41:26
2	As 188.979†	1513.1	1462.2	500.67	µg/L	500.67	ppb	11:41:46
2	B 249.677†	17837.0	17311.7	496.39	µg/L	496.39	ppb	11:41:26
2	Ba 233.527†	66934.6	65020.7	500.49	µg/L	500.49	ppb	11:41:26
2	Be 313.107†	933742.6	908044.8	498.81	µg/L	498.81	ppb	11:41:26
2	Cd 226.502†	54433.0	53025.1	501.16	µg/L	501.16	ppb	11:41:26
2	Co 228.616†	27689.9	26873.7	491.69	µg/L	491.69	ppb	11:41:46
2	Cr 267.716†	35666.5	34355.2	500.48	µg/L	500.48	ppb	11:41:26
2	Cu 324.752†	95017.2	87728.9	500.21	µg/L	500.21	ppb	11:41:26
2	Mn 257.610†	388515.0	375651.9	499.94	µg/L	499.94	ppb	11:41:26
2	Mo 202.031†	10183.6	9898.3	501.85	µg/L	501.85	ppb	11:41:46
2	Ni 231.604†	19956.5	19509.5	491.77	µg/L	491.77	ppb	11:41:46
2	P 214.914†	6107.7	5362.6	2306.6	µg/L	2306.6	ppb	11:41:46
2	Pb 220.353†	5639.9	5147.7	499.49	µg/L	499.49	ppb	11:41:46

2	S 181.975 Axial†	955.3	883.5	991.42 µg/L	991.42 ppb		11:41:46
2	Sb 206.836†	2043.0	1896.9	501.49 µg/L	501.49 ppb		11:41:46
2	Se 196.026†	1290.8	1353.0	502.28 µg/L	502.28 ppb		11:41:46
2	SiO2†	53907.2	49487.0	5347.5 µg/L	5347.5 ppb		11:41:26
2	Si 251.611†	68466.5	65779.7	2489.2 µg/L	2489.2 ppb		11:41:26
2	Sn 189.927†	5278.7	5031.7	501.96 µg/L	501.96 ppb		11:41:46
2	Ti 334.940†	168329.5	164864.9	500.47 µg/L	500.47 ppb		11:41:26
2	Tl 190.801†	2568.2	2608.2	500.30 µg/L	500.30 ppb		11:41:46
2	U 409.014†	1591.9	8410.7	508.02 µg/L	508.02 ppb		11:41:26
2	V 292.402†	46409.2	44833.4	507.47 µg/L	507.47 ppb		11:41:26
2	Zn 213.857†	74771.5	71189.5	497.30 µg/L	497.30 ppb		11:41:26
3	Sc RADIAL	16399.2	16399.2	100 %			11:40:52
3	Al 396.153Radial†	12276.7	11942.6	4993.8 µg/L	4993.8 ppb		11:40:32
3	Ca 317.933Radial†	12018.9	11915.6	5052.6 µg/L	5052.6 ppb		11:40:52
3	Fe 238.204 Radial†	9791.9	9738.8	5072.1 µg/L	5072.1 ppb		11:40:52
3	K 766.490 Radial†	12155.9	9487.2	5166.7 µg/L	5166.7 ppb		11:40:32
3	Mg 279.077 IEC†	1262.7	1247.7	5025.3 µg/L	5025.3 ppb		11:40:52
3	Na 589.592 Radial†	59642.7	59146.2	10462 µg/L	10462 ppb		11:40:32
3	Sr 421.552†	180320.0	179887.3	504.54 µg/L	504.54 ppb		11:40:32
3	Sc 361.383	518238.8	518238.8	103.54 %			11:41:52
3	Y 371.029	452231.1	452231.1	102.47 %			11:41:52
3	Ag 328.068†	62280.5	60452.5	508.41 µg/L	508.41 ppb		11:41:52
3	As 188.979†	1535.1	1480.7	506.96 µg/L	506.96 ppb		11:42:12
3	B 249.677†	17942.3	17381.4	498.39 µg/L	498.39 ppb		11:41:52
3	Ba 233.527†	67348.5	65299.9	502.63 µg/L	502.63 ppb		11:41:52
3	Be 313.107†	937292.0	909791.4	499.77 µg/L	499.77 ppb		11:41:52
3	Cd 226.502†	54642.3	53129.3	502.14 µg/L	502.14 ppb		11:41:52
3	Co 228.616†	27705.7	26839.2	491.06 µg/L	491.06 ppb		11:42:12
3	Cr 267.716†	35743.9	34365.8	500.63 µg/L	500.63 ppb		11:41:52
3	Cu 324.752†	95156.9	87692.7	500.00 µg/L	500.00 ppb		11:41:52
3	Mn 257.610†	390173.7	376554.3	501.14 µg/L	501.14 ppb		11:41:52
3	Mo 202.031†	10165.1	9862.1	500.02 µg/L	500.02 ppb		11:42:12
3	Ni 231.604†	19990.8	19506.7	491.70 µg/L	491.70 ppb		11:42:12
3	P 214.914†	6106.1	5350.1	2300.8 µg/L	2300.8 ppb		11:42:12
3	Pb 220.353†	5640.8	5138.4	498.58 µg/L	498.58 ppb		11:42:12
3	S 181.975 Axial†	954.2	880.7	988.25 µg/L	988.25 ppb		11:42:12
3	Sb 206.836†	2063.2	1912.7	505.59 µg/L	505.59 ppb		11:42:12
3	Se 196.026†	1295.6	1355.4	503.14 µg/L	503.14 ppb		11:42:12
3	SiO2†	54174.1	49647.7	5364.8 µg/L	5364.8 ppb		11:41:52
3	Si 251.611†	68893.8	66069.0	2500.2 µg/L	2500.2 ppb		11:41:52
3	Sn 189.927†	5261.9	5006.1	499.40 µg/L	499.40 ppb		11:42:12
3	Ti 334.940†	168658.5	164879.5	500.52 µg/L	500.52 ppb		11:41:52
3	Tl 190.801†	2590.6	2625.3	503.57 µg/L	503.57 ppb		11:42:12
3	U 409.014†	1603.0	8418.4	508.49 µg/L	508.49 ppb		11:41:52
3	V 292.402†	46427.2	44767.2	506.71 µg/L	506.71 ppb		11:41:52
3	Zn 213.857†	75072.2	71345.4	498.39 µg/L	498.39 ppb		11:41:52

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	517605.0	103.41	%	0.110				0.11%
Sc RADIAL	16425.5	100	%	0.2				0.15%
Y 371.029	451895.3	102.40	%	0.080				0.08%
Ag 328.068†	60359.7	507.64	µg/L	0.671	507.64	ppb	0.671	0.13%
QC value within limits for Ag 328.068 Recovery = 101.53%								
Al 396.153Radial†	11876.3	4966.0	µg/L	53.30	4966.0	ppb	53.30	1.07%
QC value within limits for Al 396.153Radial Recovery = 99.32%								
As 188.979†	1470.1	503.36	µg/L	3.239	503.36	ppb	3.239	0.64%
QC value within limits for As 188.979 Recovery = 100.67%								
B 249.677†	17304.0	496.17	µg/L	2.346	496.17	ppb	2.346	0.47%
QC value within limits for B 249.677 Recovery = 99.23%								
Ba 233.527†	65133.5	501.35	µg/L	1.131	501.35	ppb	1.131	0.23%
QC value within limits for Ba 233.527 Recovery = 100.27%								
Be 313.107†	908575.2	499.10	µg/L	0.580	499.10	ppb	0.580	0.12%
QC value within limits for Be 313.107 Recovery = 99.82%								
Ca 317.933Radial†	11899.6	5045.8	µg/L	5.91	5045.8	ppb	5.91	0.12%
QC value within limits for Ca 317.933Radial Recovery = 100.92%								
Cd 226.502†	53008.0	501.00	µg/L	1.234	501.00	ppb	1.234	0.25%
QC value within limits for Cd 226.502 Recovery = 100.20%								
Co 228.616†	26867.5	491.58	µg/L	0.473	491.58	ppb	0.473	0.10%

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   QC value within limits for Co 228.616  Recovery = 98.32%
Cr 267.716†            34352.8      500.44 µg/L         0.214      500.44 ppb          0.214   0.04%
   QC value within limits for Cr 267.716  Recovery = 100.09%
Cu 324.752†            87680.3      499.93 µg/L         0.326      499.93 ppb          0.326   0.07%
   QC value within limits for Cu 324.752  Recovery = 99.99%
Fe 238.204 Radial†      9722.8      5063.8 µg/L         11.57      5063.8 ppb          11.57   0.23%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.28%
K 766.490 Radial†       9389.6      5113.5 µg/L         46.20      5113.5 ppb          46.20   0.90%
   QC value within limits for K 766.490 Radial  Recovery = 102.27%
Mg 279.077 IEC†         1258.2      5067.6 µg/L         38.74      5067.6 ppb          38.74   0.76%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.35%
Mn 257.610†           376067.2      500.49 µg/L         0.608      500.49 ppb          0.608   0.12%
   QC value within limits for Mn 257.610  Recovery = 100.10%
Mo 202.031†             9898.1      501.85 µg/L         1.822      501.85 ppb          1.822   0.36%
   QC value within limits for Mo 202.031  Recovery = 100.37%
Na 589.592 Radial†     58766.4       10395 µg/L         123.0       10395 ppb          123.0   1.18%
   QC value within limits for Na 589.592 Radial  Recovery = 103.95%
Ni 231.604†            19524.9      492.16 µg/L         0.736      492.16 ppb          0.736   0.15%
   QC value within limits for Ni 231.604  Recovery = 98.43%
P 214.914†              5350.4      2301.0 µg/L          5.51      2301.0 ppb           5.51   0.24%
   QC value within limits for P 214.914  Recovery = 92.04%
Pb 220.353†             5143.5      499.09 µg/L         0.466      499.09 ppb          0.466   0.09%
   QC value within limits for Pb 220.353  Recovery = 99.82%
S 181.975 Axial†         882.4      990.12 µg/L         1.657      990.12 ppb          1.657   0.17%
   QC value within limits for S 181.975 Axial  Recovery = 99.01%
Sb 206.836†             1904.2      503.39 µg/L         2.071      503.39 ppb          2.071   0.41%
   QC value within limits for Sb 206.836  Recovery = 100.68%
Se 196.026†             1352.9      502.24 µg/L         0.926      502.24 ppb          0.926   0.18%
   QC value within limits for Se 196.026  Recovery = 100.45%
SiO2†                  49548.4      5354.2 µg/L          9.35      5354.2 ppb           9.35   0.17%
   QC value within limits for SiO2  Recovery = 100.12%
Si 251.611†            65934.9      2495.1 µg/L          5.54      2495.1 ppb           5.54   0.22%
   QC value within limits for Si 251.611  Recovery = 99.80%
Sn 189.927†             5022.1      501.00 µg/L         1.397      501.00 ppb          1.397   0.28%
   QC value within limits for Sn 189.927  Recovery = 100.20%
Sr 421.552†           178869.5      501.68 µg/L         5.440      501.68 ppb          5.440   1.08%
   QC value within limits for Sr 421.552  Recovery = 100.34%
Ti 334.940†           164836.3      500.38 µg/L         0.196      500.38 ppb          0.196   0.04%
   QC value within limits for Ti 334.940  Recovery = 100.08%
Tl 190.801†             2615.5      501.70 µg/L         1.683      501.70 ppb          1.683   0.34%
   QC value within limits for Tl 190.801  Recovery = 100.34%
U 409.014†              8488.6      512.72 µg/L         7.735      512.72 ppb          7.735   1.51%
   QC value within limits for U 409.014  Recovery = 102.54%
V 292.402†             44792.2      507.01 µg/L         0.400      507.01 ppb          0.400   0.08%
   QC value within limits for V 292.402  Recovery = 101.40%
Zn 213.857†            71227.7      497.56 µg/L         0.735      497.56 ppb          0.735   0.15%
   QC value within limits for Zn 213.857  Recovery = 99.51%
All analyte(s) passed QC.
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Sequence No.: 26 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 11:42:20**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16402.5	16402.5	100	%			11:42:49
1	Al 396.153Radial†	374.5	69.5	29.115	µg/L	29.115	ppb	11:42:49
1	Ca 317.933Radial†	88.7	14.5	6.1363	µg/L	6.1363	ppb	11:43:09
1	Fe 238.204 Radial†	40.2	10.9	5.6791	µg/L	5.6791	ppb	11:43:09
1	K 766.490 Radial†	2561.4	-84.4	-45.975	µg/L	-45.975	ppb	11:42:49
1	Mg 279.077 IEC†	2.7	-9.2	-37.147	µg/L	-37.147	ppb	11:43:09
1	Na 589.592 Radial†	313.3	-38.5	-6.8065	µg/L	-6.8065	ppb	11:42:49
1	Sr 421.552†	29.9	37.2	0.1042	µg/L	0.1042	ppb	11:42:49
1	Sc 361.383	507287.0	507287.0	101.35	%			11:44:06
1	Y 371.029	448057.3	448057.3	101.53	%			11:44:06
1	Ag 328.068†	-289.4	16.6	0.1354	µg/L	0.1354	ppb	11:44:06
1	As 188.979†	-7.9	-9.6	-3.2742	µg/L	-3.2742	ppb	11:44:26
1	B 249.677†	32.3	84.5	2.4321	µg/L	2.4321	ppb	11:44:26
1	Ba 233.527†	-210.0	47.7	0.3669	µg/L	0.3669	ppb	11:44:26
1	Be 313.107†	-4393.5	222.4	0.1222	µg/L	0.1222	ppb	11:44:06
1	Cd 226.502†	-341.0	19.4	0.1829	µg/L	0.1829	ppb	11:44:26
1	Co 228.616†	-66.5	15.4	0.2835	µg/L	0.2835	ppb	11:44:26
1	Cr 267.716†	136.8	-20.6	-0.3010	µg/L	-0.3010	ppb	11:44:26
1	Cu 324.752†	4248.3	-18.0	-0.1045	µg/L	-0.1045	ppb	11:44:06
1	Mn 257.610†	270.5	-7.6	-0.0086	µg/L	-0.0086	ppb	11:44:26
1	Mo 202.031†	-38.1	7.1	0.3576	µg/L	0.3576	ppb	11:44:26
1	Ni 231.604†	-211.5	-9.0	-0.2269	µg/L	-0.2269	ppb	11:44:26
1	P 214.914†	529.2	-25.0	-11.603	µg/L	-11.603	ppb	11:44:26
1	Pb 220.353†	288.3	-25.0	-2.4440	µg/L	-2.4440	ppb	11:44:26
1	S 181.975 Axial†	41.3	-0.0	-0.0379	µg/L	-0.0379	ppb	11:44:26
1	Sb 206.836†	85.8	4.7	1.2389	µg/L	1.2389	ppb	11:44:26
1	Se 196.026†	-118.4	-12.7	-4.6516	µg/L	-4.6516	ppb	11:44:26
1	SiO2†	2754.1	43.9	4.7397	µg/L	4.7397	ppb	11:44:06
1	Si 251.611†	522.9	47.5	1.7983	µg/L	1.7983	ppb	11:44:26
1	Sn 189.927†	59.2	-17.5	-1.7424	µg/L	-1.7424	ppb	11:44:26
1	Ti 334.940†	-1999.9	16.3	0.0524	µg/L	0.0524	ppb	11:44:06
1	Tl 190.801†	-118.9	5.9	1.1272	µg/L	1.1272	ppb	11:44:26
1	U 409.014†	-6919.8	42.9	2.5888	µg/L	2.5888	ppb	11:44:06
1	V 292.402†	58.9	-13.9	-0.1501	µg/L	-0.1501	ppb	11:44:06
1	Zn 213.857†	1209.2	33.8	0.2392	µg/L	0.2392	ppb	11:44:26
2	Sc RADIAL	16761.8	16761.8	102	%			11:43:14
2	Al 396.153Radial†	333.0	20.9	8.7339	µg/L	8.7339	ppb	11:43:14
2	Ca 317.933Radial†	94.6	18.3	7.7753	µg/L	7.7753	ppb	11:43:34
2	Fe 238.204 Radial†	29.7	-0.2	-0.0955	µg/L	-0.0955	ppb	11:43:34
2	K 766.490 Radial†	2577.9	-123.1	-67.042	µg/L	-67.042	ppb	11:43:14
2	Mg 279.077 IEC†	12.4	0.2	0.7222	µg/L	0.7222	ppb	11:43:34
2	Na 589.592 Radial†	338.0	-21.0	-3.7196	µg/L	-3.7196	ppb	11:43:14
2	Sr 421.552†	-23.4	-15.4	-0.0435	µg/L	-0.0435	ppb	11:43:14
2	Sc 361.383	514844.4	514844.4	102.86	%			11:44:31
2	Y 371.029	454794.0	454794.0	103.05	%			11:44:31
2	Ag 328.068†	-335.5	-24.1	-0.2115	µg/L	-0.2115	ppb	11:44:31
2	As 188.979†	1.3	-0.6	-0.2125	µg/L	-0.2125	ppb	11:44:51
2	B 249.677†	22.3	74.4	2.1409	µg/L	2.1409	ppb	11:44:51
2	Ba 233.527†	-252.4	9.5	0.0730	µg/L	0.0730	ppb	11:44:51
2	Be 313.107†	-4427.0	253.4	0.1392	µg/L	0.1392	ppb	11:44:31
2	Cd 226.502†	-340.7	24.6	0.2328	µg/L	0.2328	ppb	11:44:51
2	Co 228.616†	-79.6	3.7	0.0689	µg/L	0.0689	ppb	11:44:51
2	Cr 267.716†	166.9	6.7	0.0902	µg/L	0.0902	ppb	11:44:51
2	Cu 324.752†	4156.1	-169.2	-0.9742	µg/L	-0.9742	ppb	11:44:31
2	Mn 257.610†	259.2	-22.5	-0.0300	µg/L	-0.0300	ppb	11:44:51
2	Mo 202.031†	-21.2	24.0	1.2150	µg/L	1.2150	ppb	11:44:51
2	Ni 231.604†	-197.7	7.4	0.1866	µg/L	0.1866	ppb	11:44:51
2	P 214.914†	535.1	-26.9	-12.132	µg/L	-12.132	ppb	11:44:51
2	Pb 220.353†	301.9	-16.0	-1.5583	µg/L	-1.5583	ppb	11:44:51

2	S 181.975 Axial†	41.1	-0.9	-1.0170	µg/L	-1.0170	ppb	11:44:51
2	Sb 206.836†	79.3	-2.8	-0.7243	µg/L	-0.7243	ppb	11:44:51
2	Se 196.026†	-117.2	-9.9	-3.6178	µg/L	-3.6178	ppb	11:44:51
2	SiO2†	2743.4	-6.5	-0.6841	µg/L	-0.6841	ppb	11:44:31
2	Si 251.611†	519.1	36.3	1.3616	µg/L	1.3616	ppb	11:44:51
2	Sn 189.927†	73.1	-4.8	-0.4743	µg/L	-0.4743	ppb	11:44:51
2	Ti 334.940†	-1951.4	92.4	0.2769	µg/L	0.2769	ppb	11:44:31
2	Tl 190.801†	-106.3	19.9	3.8016	µg/L	3.8016	ppb	11:44:51
2	U 409.014†	-6888.6	173.5	10.455	µg/L	10.455	ppb	11:44:31
2	V 292.402†	12.6	-59.8	-0.6419	µg/L	-0.6419	ppb	11:44:31
2	Zn 213.857†	1209.8	17.0	0.1193	µg/L	0.1193	ppb	11:44:51
3	Sc RADIAL	16735.7	16735.7	102	%			11:43:39
3	Al 396.153Radial†	342.7	30.9	12.934	µg/L	12.934	ppb	11:43:39
3	Ca 317.933Radial†	84.8	8.9	3.7937	µg/L	3.7937	ppb	11:43:59
3	Fe 238.204 Radial†	38.6	8.6	4.4566	µg/L	4.4566	ppb	11:43:59
3	K 766.490 Radial†	2499.4	-195.8	-106.68	µg/L	-106.68	ppb	11:43:39
3	Mg 279.077 IEC†	0.5	-11.4	-45.859	µg/L	-45.859	ppb	11:43:59
3	Na 589.592 Radial†	369.7	10.4	1.8455	µg/L	1.8455	ppb	11:43:39
3	Sr 421.552†	16.3	23.4	0.0655	µg/L	0.0655	ppb	11:43:39
3	Sc 361.383	512141.5	512141.5	102.32	%			11:44:56
3	Y 371.029	452010.6	452010.6	102.42	%			11:44:56
3	Ag 328.068†	-253.3	54.5	0.4428	µg/L	0.4428	ppb	11:44:56
3	As 188.979†	-9.5	-11.2	-3.7801	µg/L	-3.7801	ppb	11:45:16
3	B 249.677†	-4.0	48.7	1.4018	µg/L	1.4018	ppb	11:45:16
3	Ba 233.527†	-259.6	1.1	0.0092	µg/L	0.0092	ppb	11:45:16
3	Be 313.107†	-4460.2	198.2	0.1089	µg/L	0.1089	ppb	11:44:56
3	Cd 226.502†	-338.9	24.6	0.2329	µg/L	0.2329	ppb	11:45:16
3	Co 228.616†	-66.7	15.8	0.2905	µg/L	0.2905	ppb	11:45:16
3	Cr 267.716†	182.9	23.2	0.3315	µg/L	0.3315	ppb	11:45:16
3	Cu 324.752†	4177.0	-127.4	-0.7349	µg/L	-0.7349	ppb	11:44:56
3	Mn 257.610†	310.9	29.4	0.0410	µg/L	0.0410	ppb	11:45:16
3	Mo 202.031†	-22.8	22.3	1.1299	µg/L	1.1299	ppb	11:45:16
3	Ni 231.604†	-182.1	21.7	0.5470	µg/L	0.5470	ppb	11:45:16
3	P 214.914†	533.8	-25.4	-11.541	µg/L	-11.541	ppb	11:45:16
3	Pb 220.353†	317.3	0.6	0.0579	µg/L	0.0579	ppb	11:45:16
3	S 181.975 Axial†	52.2	10.2	11.407	µg/L	11.407	ppb	11:45:16
3	Sb 206.836†	92.5	10.5	2.7545	µg/L	2.7545	ppb	11:45:16
3	Se 196.026†	-124.9	-17.9	-6.5816	µg/L	-6.5816	ppb	11:45:16
3	SiO2†	2732.3	-3.3	-0.3385	µg/L	-0.3385	ppb	11:44:56
3	Si 251.611†	564.8	83.6	3.1589	µg/L	3.1589	ppb	11:45:16
3	Sn 189.927†	78.7	1.0	0.1039	µg/L	0.1039	ppb	11:45:16
3	Ti 334.940†	-2009.8	25.3	0.0769	µg/L	0.0769	ppb	11:44:56
3	Tl 190.801†	-110.5	15.3	2.9239	µg/L	2.9239	ppb	11:45:16
3	U 409.014†	-6864.2	161.9	9.7625	µg/L	9.7625	ppb	11:44:56
3	V 292.402†	13.9	-58.5	-0.6282	µg/L	-0.6282	ppb	11:44:56
3	Zn 213.857†	1203.3	16.8	0.1149	µg/L	0.1149	ppb	11:45:16

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	511424.3	102.18	%	0.765				0.75%
Sc RADIAL	16633.3	102	%	1.2				1.20%
Y 371.029	451620.6	102.33	%	0.767				0.75%
Ag 328.068†	15.7	0.1222	µg/L	0.32737	0.1222	ppb	0.32737	267.84%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	40.4	16.928	µg/L	10.7614	16.928	ppb	10.7614	63.57%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-7.1	-2.4223	µg/L	1.93037	-2.4223	ppb	1.93037	79.69%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	69.2	1.9916	µg/L	0.53113	1.9916	ppb	0.53113	26.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	19.4	0.1497	µg/L	0.19079	0.1497	ppb	0.19079	127.46%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	224.7	0.1234	µg/L	0.01517	0.1234	ppb	0.01517	12.29%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.9	5.9018	µg/L	2.00112	5.9018	ppb	2.00112	33.91%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	22.9	0.2162	µg/L	0.02885	0.2162	ppb	0.02885	13.34%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	11.6	0.2143	µg/L	0.12598	0.2143	ppb	0.12598	58.79%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                3.1      0.0402 µg/L       0.31922      0.0402 ppb        0.31922 793.46%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -104.8     -0.6045 µg/L       0.44928     -0.6045 ppb        0.44928  74.32%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         6.4      3.3467 µg/L       3.04311      3.3467 ppb        3.04311  90.93%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -134.4     -73.233 µg/L       30.8245     -73.233 ppb        30.8245  42.09%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -6.8     -27.428 µg/L       24.7647     -27.428 ppb        24.7647  90.29%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -0.2      0.0008 µg/L       0.03639      0.0008 ppb        0.03639 >999.9%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               17.8      0.9008 µg/L       0.47234      0.9008 ppb        0.47234  52.43%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -16.4     -2.8935 µg/L       4.38480     -2.8935 ppb        4.38480 151.54%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                6.7      0.1689 µg/L       0.38722      0.1689 ppb        0.38722 229.25%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -25.8     -11.759 µg/L        0.3247     -11.759 ppb         0.3247   2.76%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -13.4     -1.3148 µg/L       1.26861     -1.3148 ppb        1.26861  96.49%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           3.1      3.4507 µg/L       6.90774      3.4507 ppb        6.90774 200.18%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.1      1.0897 µg/L       1.74416      1.0897 ppb        1.74416 160.06%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -13.5     -4.9503 µg/L       1.50426     -4.9503 ppb        1.50426  30.39%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     11.4      1.2390 µg/L       3.03656      1.2390 ppb        3.03656 245.08%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               55.8      2.1063 µg/L       0.93738      2.1063 ppb        0.93738  44.50%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -7.1     -0.7042 µg/L       0.94442     -0.7042 ppb        0.94442 134.10%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               15.1      0.0421 µg/L       0.07658      0.0421 ppb        0.07658 181.90%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               44.7      0.1354 µg/L       0.12316      0.1354 ppb        0.12316  90.96%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               13.7      2.6175 µg/L       1.36326      2.6175 ppb        1.36326  52.08%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               126.1      7.6022 µg/L       4.35551      7.6022 ppb        4.35551  57.29%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -44.1     -0.4734 µg/L       0.28008     -0.4734 ppb        0.28008  59.16%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               22.5      0.1578 µg/L       0.07054      0.1578 ppb        0.07054  44.71%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 8 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 12:09:50**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16204.1	16204.1	99.1	%			12:10:41
1	Al 396.153Radial†	11740.8	11549.1	4828.8	µg/L	4828.8	ppb	12:10:21
1	Ca 317.933Radial†	11815.3	11854.4	5026.7	µg/L	5026.7	ppb	12:10:41
1	Fe 238.204 Radial†	9597.6	9660.3	5031.2	µg/L	5031.2	ppb	12:10:41
1	K 766.490 Radial†	11702.6	9175.6	4996.9	µg/L	4996.9	ppb	12:10:21
1	Mg 279.077 IEC†	1251.4	1251.5	5040.4	µg/L	5040.4	ppb	12:10:41
1	Na 589.592 Radial†	57355.2	57553.1	10180	µg/L	10180	ppb	12:10:21
1	Sr 421.552†	172793.5	174454.4	489.30	µg/L	489.30	ppb	12:10:21
1	Sc 361.383	512960.9	512960.9	102.49	%			12:11:39
1	Y 371.029	448461.8	448461.8	101.62	%			12:11:39
1	Ag 328.068†	61743.6	60547.5	509.22	µg/L	509.22	ppb	12:11:39
1	As 188.979†	1503.2	1464.8	501.56	µg/L	501.56	ppb	12:11:59
1	B 249.677†	17715.6	17338.5	497.17	µg/L	497.17	ppb	12:11:39
1	Ba 233.527†	66672.1	65309.1	502.70	µg/L	502.70	ppb	12:11:39
1	Be 313.107†	927212.0	909270.0	499.48	µg/L	499.48	ppb	12:11:39
1	Cd 226.502†	53829.8	52879.5	499.79	µg/L	499.79	ppb	12:11:39
1	Co 228.616†	27408.1	26824.0	490.78	µg/L	490.78	ppb	12:11:59
1	Cr 267.716†	35322.8	34310.1	499.81	µg/L	499.81	ppb	12:11:39
1	Cu 324.752†	94345.9	87847.0	500.87	µg/L	500.87	ppb	12:11:39
1	Mn 257.610†	386201.0	376555.2	501.14	µg/L	501.14	ppb	12:11:39
1	Mo 202.031†	10088.6	9888.4	501.35	µg/L	501.35	ppb	12:11:59
1	Ni 231.604†	19739.3	19459.9	490.53	µg/L	490.53	ppb	12:11:59
1	P 214.914†	6004.6	5311.8	2282.6	µg/L	2282.6	ppb	12:11:59
1	Pb 220.353†	5548.5	5104.4	495.38	µg/L	495.38	ppb	12:11:59
1	S 181.975 Axial†	942.1	878.4	985.67	µg/L	985.67	ppb	12:11:59
1	Sb 206.836†	2034.6	1905.3	503.67	µg/L	503.67	ppb	12:11:59
1	Se 196.026†	1275.5	1348.6	500.61	µg/L	500.61	ppb	12:11:59
1	SiO2†	53763.7	49785.6	5379.7	µg/L	5379.7	ppb	12:11:39
1	Si 251.611†	68411.3	66282.9	2508.3	µg/L	2508.3	ppb	12:11:39
1	Sn 189.927†	5162.9	4961.7	494.98	µg/L	494.98	ppb	12:11:59
1	Ti 334.940†	167231.7	165163.2	501.37	µg/L	501.37	ppb	12:11:39
1	Tl 190.801†	2535.4	2597.1	498.19	µg/L	498.19	ppb	12:11:59
1	U 409.014†	1741.6	8569.7	517.60	µg/L	517.60	ppb	12:11:39
1	V 292.402†	46152.8	44960.8	508.90	µg/L	508.90	ppb	12:11:39
1	Zn 213.857†	75049.3	72069.0	503.50	µg/L	503.50	ppb	12:11:39
2	Sc RADIAL	16244.1	16244.1	99.3	%			12:11:06
2	Al 396.153Radial†	12232.3	12014.9	5024.0	µg/L	5024.0	ppb	12:10:46
2	Ca 317.933Radial†	11831.7	11841.5	5021.2	µg/L	5021.2	ppb	12:11:06
2	Fe 238.204 Radial†	9700.5	9740.0	5072.7	µg/L	5072.7	ppb	12:11:06
2	K 766.490 Radial†	12033.3	9479.5	5162.5	µg/L	5162.5	ppb	12:10:46
2	Mg 279.077 IEC†	1265.9	1263.0	5086.8	µg/L	5086.8	ppb	12:11:06
2	Na 589.592 Radial†	59347.8	59417.2	10510	µg/L	10510	ppb	12:10:46
2	Sr 421.552†	179595.1	180874.6	507.31	µg/L	507.31	ppb	12:10:46
2	Sc 361.383	509454.3	509454.3	101.79	%			12:12:05
2	Y 371.029	445337.6	445337.6	100.91	%			12:12:05
2	Ag 328.068†	61179.8	60408.2	508.05	µg/L	508.05	ppb	12:12:05
2	As 188.979†	1508.7	1480.3	506.82	µg/L	506.82	ppb	12:12:25
2	B 249.677†	17549.8	17294.5	495.89	µg/L	495.89	ppb	12:12:05
2	Ba 233.527†	66015.2	65111.5	501.19	µg/L	501.19	ppb	12:12:05
2	Be 313.107†	919822.8	908237.7	498.91	µg/L	498.91	ppb	12:12:05
2	Cd 226.502†	53371.6	52790.8	498.94	µg/L	498.94	ppb	12:12:05
2	Co 228.616†	27392.6	26992.9	493.88	µg/L	493.88	ppb	12:12:25
2	Cr 267.716†	35059.8	34289.0	499.50	µg/L	499.50	ppb	12:12:05
2	Cu 324.752†	93695.3	87841.4	500.84	µg/L	500.84	ppb	12:12:05
2	Mn 257.610†	383391.1	376388.3	500.92	µg/L	500.92	ppb	12:12:05
2	Mo 202.031†	10084.0	9951.6	504.56	µg/L	504.56	ppb	12:12:25
2	Ni 231.604†	19726.7	19580.2	493.56	µg/L	493.56	ppb	12:12:25
2	P 214.914†	5998.9	5346.5	2298.8	µg/L	2298.8	ppb	12:12:25
2	Pb 220.353†	5577.7	5170.4	501.68	µg/L	501.68	ppb	12:12:25

2	S 181.975 Axial†	947.9	890.4	999.14 µg/L	999.14 ppb	12:12:25
2	Sb 206.836†	2029.4	1913.9	505.94 µg/L	505.94 ppb	12:12:25
2	Se 196.026†	1277.2	1358.9	504.43 µg/L	504.43 ppb	12:12:25
2	SiO2†	53484.0	49871.9	5389.1 µg/L	5389.1 ppb	12:12:05
2	Si 251.611†	68068.6	66405.6	2512.9 µg/L	2512.9 ppb	12:12:05
2	Sn 189.927†	5186.4	5019.5	500.74 µg/L	500.74 ppb	12:12:25
2	Ti 334.940†	165898.7	164976.8	500.80 µg/L	500.80 ppb	12:12:05
2	Tl 190.801†	2557.7	2636.1	505.62 µg/L	505.62 ppb	12:12:25
2	U 409.014†	1732.0	8571.9	517.74 µg/L	517.74 ppb	12:12:05
2	V 292.402†	45696.9	44822.9	507.39 µg/L	507.39 ppb	12:12:05
2	Zn 213.857†	74405.9	71940.9	502.58 µg/L	502.58 ppb	12:12:05
3	Sc RADIAL	16251.0	16251.0	99.3 %		12:11:31
3	Al 396.153Radial†	12110.7	11887.2	4970.5 µg/L	4970.5 ppb	12:11:11
3	Ca 317.933Radial†	11913.7	11919.0	5054.1 µg/L	5054.1 ppb	12:11:31
3	Fe 238.204 Radial†	9708.5	9744.0	5074.8 µg/L	5074.8 ppb	12:11:31
3	K 766.490 Radial†	11906.4	9346.6	5090.1 µg/L	5090.1 ppb	12:11:11
3	Mg 279.077 IEC†	1266.2	1262.7	5085.6 µg/L	5085.6 ppb	12:11:31
3	Na 589.592 Radial†	58900.3	58941.3	10426 µg/L	10426 ppb	12:11:11
3	Sr 421.552†	178040.4	179232.5	502.70 µg/L	502.70 ppb	12:11:11
3	Sc 361.383	508204.5	508204.5	101.54 %		12:12:31
3	Y 371.029	444155.7	444155.7	100.64 %		12:12:31
3	Ag 328.068†	61065.3	60443.3	508.32 µg/L	508.32 ppb	12:12:31
3	As 188.979†	1488.2	1463.7	501.20 µg/L	501.20 ppb	12:12:51
3	B 249.677†	17601.9	17388.2	498.58 µg/L	498.58 ppb	12:12:31
3	Ba 233.527†	65927.0	65184.2	501.74 µg/L	501.74 ppb	12:12:31
3	Be 313.107†	916791.5	907474.5	498.49 µg/L	498.49 ppb	12:12:31
3	Cd 226.502†	53127.8	52679.6	497.89 µg/L	497.89 ppb	12:12:31
3	Co 228.616†	27388.1	27054.7	495.01 µg/L	495.01 ppb	12:12:51
3	Cr 267.716†	35003.9	34318.7	499.93 µg/L	499.93 ppb	12:12:31
3	Cu 324.752†	93418.4	87795.1	500.57 µg/L	500.57 ppb	12:12:31
3	Mn 257.610†	382158.6	376100.8	500.54 µg/L	500.54 ppb	12:12:31
3	Mo 202.031†	10071.9	9964.1	505.19 µg/L	505.19 ppb	12:12:51
3	Ni 231.604†	19748.3	19649.1	495.29 µg/L	495.29 ppb	12:12:51
3	P 214.914†	6033.1	5394.6	2321.3 µg/L	2321.3 ppb	12:12:51
3	Pb 220.353†	5597.9	5203.7	504.96 µg/L	504.96 ppb	12:12:51
3	S 181.975 Axial†	944.2	889.1	997.67 µg/L	997.67 ppb	12:12:51
3	Sb 206.836†	2026.3	1915.7	506.44 µg/L	506.44 ppb	12:12:51
3	Se 196.026†	1278.0	1362.8	505.86 µg/L	505.86 ppb	12:12:51
3	SiO2†	53364.0	49882.9	5390.3 µg/L	5390.3 ppb	12:12:31
3	Si 251.611†	67887.7	66392.0	2512.4 µg/L	2512.4 ppb	12:12:31
3	Sn 189.927†	5165.9	5011.9	499.98 µg/L	499.98 ppb	12:12:51
3	Ti 334.940†	165726.0	165207.5	501.50 µg/L	501.50 ppb	12:12:31
3	Tl 190.801†	2558.1	2642.6	506.87 µg/L	506.87 ppb	12:12:51
3	U 409.014†	1807.9	8650.8	522.50 µg/L	522.50 ppb	12:12:31
3	V 292.402†	45476.0	44715.8	506.21 µg/L	506.21 ppb	12:12:31
3	Zn 213.857†	74222.4	71939.9	502.56 µg/L	502.56 ppb	12:12:31

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	510206.6	101.94	%	0.493				0.48%
Sc RADIAL	16233.1	99.2	%	0.15				0.16%
Y 371.029	445985.0	101.06	%	0.504				0.50%
Ag 328.068†	60466.4	508.53	µg/L	0.613	508.53	ppb	0.613	0.12%
QC value within limits for Ag 328.068 Recovery = 101.71%								
Al 396.153Radial†	11817.1	4941.1	µg/L	100.89	4941.1	ppb	100.89	2.04%
QC value within limits for Al 396.153Radial Recovery = 98.82%								
As 188.979†	1469.6	503.19	µg/L	3.145	503.19	ppb	3.145	0.63%
QC value within limits for As 188.979 Recovery = 100.64%								
B 249.677†	17340.4	497.21	µg/L	1.347	497.21	ppb	1.347	0.27%
QC value within limits for B 249.677 Recovery = 99.44%								
Ba 233.527†	65201.6	501.88	µg/L	0.765	501.88	ppb	0.765	0.15%
QC value within limits for Ba 233.527 Recovery = 100.38%								
Be 313.107†	908327.4	498.96	µg/L	0.495	498.96	ppb	0.495	0.10%
QC value within limits for Be 313.107 Recovery = 99.79%								
Ca 317.933Radial†	11871.7	5034.0	µg/L	17.62	5034.0	ppb	17.62	0.35%
QC value within limits for Ca 317.933Radial Recovery = 100.68%								
Cd 226.502†	52783.3	498.88	µg/L	0.948	498.88	ppb	0.948	0.19%
QC value within limits for Cd 226.502 Recovery = 99.78%								
Co 228.616†	26957.2	493.22	µg/L	2.186	493.22	ppb	2.186	0.44%

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   QC value within limits for Co 228.616  Recovery = 98.64%
Cr 267.716†            34305.9      499.75 µg/L         0.221      499.75 ppb          0.221   0.04%
   QC value within limits for Cr 267.716  Recovery = 99.95%
Cu 324.752†            87827.8      500.76 µg/L         0.164      500.76 ppb          0.164   0.03%
   QC value within limits for Cu 324.752  Recovery = 100.15%
Fe 238.204 Radial†      9714.8      5059.6 µg/L         24.59      5059.6 ppb          24.59   0.49%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.19%
K 766.490 Radial†       9333.9      5083.2 µg/L         82.99      5083.2 ppb          82.99   1.63%
   QC value within limits for K 766.490 Radial  Recovery = 101.66%
Mg 279.077 IEC†         1259.0      5070.9 µg/L         26.47      5070.9 ppb          26.47   0.52%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.42%
Mn 257.610†           376348.1      500.87 µg/L         0.307      500.87 ppb          0.307   0.06%
   QC value within limits for Mn 257.610  Recovery = 100.17%
Mo 202.031†             9934.7      503.70 µg/L         2.057      503.70 ppb          2.057   0.41%
   QC value within limits for Mo 202.031  Recovery = 100.74%
Na 589.592 Radial†     58637.2       10372 µg/L         171.3       10372 ppb          171.3   1.65%
   QC value within limits for Na 589.592 Radial  Recovery = 103.72%
Ni 231.604†            19563.1      493.12 µg/L         2.413      493.12 ppb          2.413   0.49%
   QC value within limits for Ni 231.604  Recovery = 98.62%
P 214.914†              5351.0      2300.9 µg/L         19.44      2300.9 ppb          19.44   0.84%
   QC value within limits for P 214.914  Recovery = 92.04%
Pb 220.353†             5159.5      500.67 µg/L         4.871      500.67 ppb          4.871   0.97%
   QC value within limits for Pb 220.353  Recovery = 100.13%
S 181.975 Axial†         886.0      994.16 µg/L         7.389      994.16 ppb          7.389   0.74%
   QC value within limits for S 181.975 Axial  Recovery = 99.42%
Sb 206.836†             1911.6      505.35 µg/L         1.477      505.35 ppb          1.477   0.29%
   QC value within limits for Sb 206.836  Recovery = 101.07%
Se 196.026†             1356.7      503.63 µg/L         2.713      503.63 ppb          2.713   0.54%
   QC value within limits for Se 196.026  Recovery = 100.73%
SiO2†                  49846.8      5386.4 µg/L          5.78      5386.4 ppb           5.78   0.11%
   QC value within limits for SiO2  Recovery = 100.73%
Si 251.611†            66360.2      2511.2 µg/L          2.53      2511.2 ppb           2.53   0.10%
   QC value within limits for Si 251.611  Recovery = 100.45%
Sn 189.927†             4997.7      498.56 µg/L         3.127      498.56 ppb          3.127   0.63%
   QC value within limits for Sn 189.927  Recovery = 99.71%
Sr 421.552†           178187.2      499.77 µg/L         9.357      499.77 ppb          9.357   1.87%
   QC value within limits for Sr 421.552  Recovery = 99.95%
Ti 334.940†           165115.9      501.23 µg/L         0.373      501.23 ppb          0.373   0.07%
   QC value within limits for Ti 334.940  Recovery = 100.25%
Tl 190.801†             2625.3      503.56 µg/L         4.691      503.56 ppb          4.691   0.93%
   QC value within limits for Tl 190.801  Recovery = 100.71%
U 409.014†              8597.4      519.28 µg/L         2.789      519.28 ppb          2.789   0.54%
   QC value within limits for U 409.014  Recovery = 103.86%
V 292.402†             44833.2      507.50 µg/L         1.349      507.50 ppb          1.349   0.27%
   QC value within limits for V 292.402  Recovery = 101.50%
Zn 213.857†            71983.3      502.88 µg/L         0.540      502.88 ppb          0.540   0.11%
   QC value within limits for Zn 213.857  Recovery = 100.58%
All analyte(s) passed QC.
```

Sequence No.: 9 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 12:12:59**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15639.3	15639.3	95.6	%			12:13:27
1	Al 396.153Radial†	291.7	1.0	0.4017	µg/L	0.4017	ppb	12:13:27
1	Ca 317.933Radial†	82.9	12.7	5.3980	µg/L	5.3980	ppb	12:13:48
1	Fe 238.204 Radial†	35.8	8.3	4.3302	µg/L	4.3302	ppb	12:13:48
1	K 766.490 Radial†	2635.5	117.8	64.192	µg/L	64.192	ppb	12:13:27
1	Mg 279.077 IEC†	0.5	-11.4	-45.734	µg/L	-45.734	ppb	12:13:48
1	Na 589.592 Radial†	287.3	-50.4	-8.9168	µg/L	-8.9168	ppb	12:13:27
1	Sr 421.552†	61.6	71.8	0.2013	µg/L	0.2013	ppb	12:13:27
1	Sc 361.383	508377.2	508377.2	101.57	%			12:14:45
1	Y 371.029	448923.8	448923.8	101.72	%			12:14:45
1	Ag 328.068†	-289.0	17.6	0.1372	µg/L	0.1372	ppb	12:14:45
1	As 188.979†	-4.2	-6.0	-2.0287	µg/L	-2.0287	ppb	12:15:05
1	B 249.677†	-5.6	47.2	1.3566	µg/L	1.3566	ppb	12:15:05
1	Ba 233.527†	-227.9	30.5	0.2347	µg/L	0.2347	ppb	12:15:05
1	Be 313.107†	-4355.1	269.5	0.1480	µg/L	0.1480	ppb	12:14:45
1	Cd 226.502†	-311.2	49.4	0.4674	µg/L	0.4674	ppb	12:15:05
1	Co 228.616†	-59.0	23.0	0.4213	µg/L	0.4213	ppb	12:15:05
1	Cr 267.716†	166.4	8.2	0.1138	µg/L	0.1138	ppb	12:15:05
1	Cu 324.752†	4265.1	-10.4	-0.0673	µg/L	-0.0673	ppb	12:14:45
1	Mn 257.610†	320.6	41.2	0.0567	µg/L	0.0567	ppb	12:15:05
1	Mo 202.031†	-28.1	16.9	0.8582	µg/L	0.8582	ppb	12:15:05
1	Ni 231.604†	-183.3	19.2	0.4845	µg/L	0.4845	ppb	12:15:05
1	P 214.914†	533.0	-22.4	-10.397	µg/L	-10.397	ppb	12:15:05
1	Pb 220.353†	349.0	34.2	3.3274	µg/L	3.3274	ppb	12:15:05
1	S 181.975 Axial†	40.9	-0.6	-0.6324	µg/L	-0.6324	ppb	12:15:05
1	Sb 206.836†	83.4	2.1	0.5676	µg/L	0.5676	ppb	12:15:05
1	Se 196.026†	-101.8	3.8	1.4128	µg/L	1.4128	ppb	12:15:05
1	SiO2†	2762.5	46.3	5.0037	µg/L	5.0037	ppb	12:14:45
1	Si 251.611†	652.9	174.5	6.6077	µg/L	6.6077	ppb	12:15:05
1	Sn 189.927†	67.3	-9.6	-0.9565	µg/L	-0.9565	ppb	12:15:05
1	Ti 334.940†	-1911.1	108.0	0.3283	µg/L	0.3283	ppb	12:14:45
1	Tl 190.801†	-127.2	-1.9	-0.3668	µg/L	-0.3668	ppb	12:15:05
1	U 409.014†	-6817.8	157.9	9.5212	µg/L	9.5212	ppb	12:14:45
1	V 292.402†	23.7	-48.7	-0.5232	µg/L	-0.5232	ppb	12:14:45
1	Zn 213.857†	1945.7	756.4	5.3239	µg/L	5.3239	ppb	12:15:05
2	Sc RADIAL	16311.1	16311.1	99.7	%			12:13:53
2	Al 396.153Radial†	366.9	63.9	26.796	µg/L	26.796	ppb	12:13:53
2	Ca 317.933Radial†	76.4	2.6	1.1073	µg/L	1.1073	ppb	12:14:13
2	Fe 238.204 Radial†	31.1	2.0	1.0327	µg/L	1.0327	ppb	12:14:13
2	K 766.490 Radial†	2418.1	-213.8	-116.46	µg/L	-116.46	ppb	12:13:53
2	Mg 279.077 IEC†	19.0	7.1	28.674	µg/L	28.674	ppb	12:14:13
2	Na 589.592 Radial†	296.7	-53.4	-9.4428	µg/L	-9.4428	ppb	12:13:53
2	Sr 421.552†	115.6	123.4	0.3461	µg/L	0.3461	ppb	12:13:53
2	Sc 361.383	507484.1	507484.1	101.39	%			12:15:10
2	Y 371.029	448120.8	448120.8	101.54	%			12:15:10
2	Ag 328.068†	-343.3	-36.4	-0.3192	µg/L	-0.3192	ppb	12:15:10
2	As 188.979†	2.1	0.2	0.0558	µg/L	0.0558	ppb	12:15:30
2	B 249.677†	-9.4	43.4	1.2487	µg/L	1.2487	ppb	12:15:30
2	Ba 233.527†	-231.4	26.7	0.2045	µg/L	0.2045	ppb	12:15:30
2	Be 313.107†	-4378.4	238.9	0.1313	µg/L	0.1313	ppb	12:15:10
2	Cd 226.502†	-311.2	48.9	0.4627	µg/L	0.4627	ppb	12:15:30
2	Co 228.616†	-75.9	6.1	0.1119	µg/L	0.1119	ppb	12:15:30
2	Cr 267.716†	154.8	-2.9	-0.0452	µg/L	-0.0452	ppb	12:15:30
2	Cu 324.752†	4210.7	-56.7	-0.3269	µg/L	-0.3269	ppb	12:15:10
2	Mn 257.610†	268.3	-9.8	-0.0143	µg/L	-0.0143	ppb	12:15:30
2	Mo 202.031†	-46.8	-1.6	-0.0801	µg/L	-0.0801	ppb	12:15:30
2	Ni 231.604†	-197.8	4.6	0.1159	µg/L	0.1159	ppb	12:15:30
2	P 214.914†	528.5	-25.9	-11.903	µg/L	-11.903	ppb	12:15:30
2	Pb 220.353†	299.5	-14.0	-1.3825	µg/L	-1.3825	ppb	12:15:30

2	S 181.975 Axial†	44.1	2.7	3.0273	µg/L	3.0273	ppb	12:15:30
2	Sb 206.836†	85.9	4.7	1.2366	µg/L	1.2366	ppb	12:15:30
2	Se 196.026†	-124.2	-18.4	-6.7577	µg/L	-6.7577	ppb	12:15:30
2	SiO2†	2726.4	15.5	1.6728	µg/L	1.6728	ppb	12:15:10
2	Si 251.611†	625.3	148.4	5.6293	µg/L	5.6293	ppb	12:15:30
2	Sn 189.927†	76.6	-0.3	-0.0290	µg/L	-0.0290	ppb	12:15:30
2	Ti 334.940†	-1973.1	43.5	0.1279	µg/L	0.1279	ppb	12:15:10
2	Tl 190.801†	-99.7	24.9	4.7587	µg/L	4.7587	ppb	12:15:30
2	U 409.014†	-6892.3	72.7	4.3825	µg/L	4.3825	ppb	12:15:10
2	V 292.402†	-46.1	-117.5	-1.3069	µg/L	-1.3069	ppb	12:15:10
2	Zn 213.857†	1909.6	724.2	5.1003	µg/L	5.1003	ppb	12:15:30
3	Sc RADIAL	16194.6	16194.6	99.0	%			12:14:18
3	Al 396.153Radial†	362.2	61.8	25.892	µg/L	25.892	ppb	12:14:18
3	Ca 317.933Radial†	78.8	5.6	2.3699	µg/L	2.3699	ppb	12:14:38
3	Fe 238.204 Radial†	34.2	5.4	2.7952	µg/L	2.7952	ppb	12:14:38
3	K 766.490 Radial†	2589.6	-23.0	-12.542	µg/L	-12.542	ppb	12:14:18
3	Mg 279.077 IEC†	11.9	0.1	0.5248	µg/L	0.5248	ppb	12:14:38
3	Na 589.592 Radial†	297.0	-50.9	-8.9966	µg/L	-8.9966	ppb	12:14:18
3	Sr 421.552†	58.6	66.6	0.1868	µg/L	0.1868	ppb	12:14:18
3	Sc 361.383	507064.4	507064.4	101.31	%			12:15:35
3	Y 371.029	447870.1	447870.1	101.48	%			12:15:35
3	Ag 328.068†	-264.6	41.0	0.3336	µg/L	0.3336	ppb	12:15:35
3	As 188.979†	-0.1	-2.0	-0.6878	µg/L	-0.6878	ppb	12:15:55
3	B 249.677†	-4.4	48.4	1.3921	µg/L	1.3921	ppb	12:15:55
3	Ba 233.527†	-247.0	11.0	0.0851	µg/L	0.0851	ppb	12:15:55
3	Be 313.107†	-4309.5	303.4	0.1666	µg/L	0.1666	ppb	12:15:35
3	Cd 226.502†	-327.3	32.8	0.3097	µg/L	0.3097	ppb	12:15:55
3	Co 228.616†	-83.8	-1.7	-0.0311	µg/L	-0.0311	ppb	12:15:55
3	Cr 267.716†	161.7	4.1	0.0509	µg/L	0.0509	ppb	12:15:55
3	Cu 324.752†	4169.7	-93.7	-0.5455	µg/L	-0.5455	ppb	12:15:35
3	Mn 257.610†	292.8	14.5	0.0193	µg/L	0.0193	ppb	12:15:55
3	Mo 202.031†	-31.0	14.0	0.7118	µg/L	0.7118	ppb	12:15:55
3	Ni 231.604†	-201.3	1.0	0.0240	µg/L	0.0240	ppb	12:15:55
3	P 214.914†	539.5	-14.6	-6.5927	µg/L	-6.5927	ppb	12:15:55
3	Pb 220.353†	316.9	3.3	0.3098	µg/L	0.3098	ppb	12:15:55
3	S 181.975 Axial†	41.6	0.2	0.2761	µg/L	0.2761	ppb	12:15:55
3	Sb 206.836†	74.1	-6.8	-1.7606	µg/L	-1.7606	ppb	12:15:55
3	Se 196.026†	-106.3	-0.8	-0.2918	µg/L	-0.2918	ppb	12:15:55
3	SiO2†	2817.1	107.2	11.576	µg/L	11.576	ppb	12:15:35
3	Si 251.611†	670.2	193.2	7.3195	µg/L	7.3195	ppb	12:15:55
3	Sn 189.927†	77.9	1.0	0.1020	µg/L	0.1020	ppb	12:15:55
3	Ti 334.940†	-1874.6	139.1	0.4171	µg/L	0.4171	ppb	12:15:35
3	Tl 190.801†	-129.2	-4.3	-0.8092	µg/L	-0.8092	ppb	12:15:55
3	U 409.014†	-6739.5	217.9	13.134	µg/L	13.134	ppb	12:15:35
3	V 292.402†	55.0	-17.7	-0.1749	µg/L	-0.1749	ppb	12:15:35
3	Zn 213.857†	1855.2	672.0	4.7335	µg/L	4.7335	ppb	12:15:55

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	507641.9	101.42	%	0.134				0.13%
Sc RADIAL	16048.3	98.1	%	2.19				2.24%
Y 371.029	448304.9	101.58	%	0.125				0.12%
Ag 328.068†	7.4	0.0505	µg/L	0.33496	0.0505	ppb	0.33496	662.78%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	42.2	17.697	µg/L	14.9848	17.697	ppb	14.9848	84.68%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-2.6	-0.8869	µg/L	1.05640	-0.8869	ppb	1.05640	119.11%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	46.3	1.3325	µg/L	0.07472	1.3325	ppb	0.07472	5.61%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.7	0.1748	µg/L	0.07913	0.1748	ppb	0.07913	45.28%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	270.6	0.1486	µg/L	0.01769	0.1486	ppb	0.01769	11.90%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	7.0	2.9584	µg/L	2.20505	2.9584	ppb	2.20505	74.53%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	43.7	0.4133	µg/L	0.08973	0.4133	ppb	0.08973	21.71%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	9.1	0.1674	µg/L	0.23127	0.1674	ppb	0.23127	138.18%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 3.1      0.0398 µg/L       0.08007      0.0398 ppb        0.08007 201.12%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -53.6     -0.3132 µg/L       0.23938     -0.3132 ppb        0.23938  76.42%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          5.2      2.7194 µg/L       1.65005      2.7194 ppb        1.65005  60.68%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -39.7     -21.602 µg/L      90.6651     -21.602 ppb       90.6651 419.70%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.4     -5.5117 µg/L      37.56993     -5.5117 ppb       37.56993 681.64%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                15.3      0.0206 µg/L       0.03548      0.0206 ppb        0.03548 172.62%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 9.8      0.4966 µg/L       0.50481      0.4966 ppb        0.50481 101.65%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -51.6     -9.1188 µg/L       0.28348     -9.1188 ppb        0.28348   3.11%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 8.3      0.2082 µg/L       0.24372      0.2082 ppb        0.24372 117.08%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -21.0     -9.6308 µg/L       2.73675     -9.6308 ppb        2.73675  28.42%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 7.8      0.7516 µg/L       2.38586      0.7516 ppb        2.38586 317.45%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            0.8      0.8903 µg/L       1.90561      0.8903 ppb        1.90561 214.04%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 0.0      0.0146 µg/L       1.57329      0.0146 ppb        1.57329 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -5.1     -1.8789 µg/L       4.31027     -1.8789 ppb        4.31027 229.41%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      56.3      6.0841 µg/L       5.03910      6.0841 ppb        5.03910  82.82%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               172.0      6.5188 µg/L       0.84859      6.5188 ppb        0.84859  13.02%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -3.0     -0.2945 µg/L       0.57705     -0.2945 ppb        0.57705 195.94%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                87.3      0.2448 µg/L       0.08808      0.2448 ppb        0.08808  35.98%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                96.9      0.2911 µg/L       0.14814      0.2911 ppb        0.14814  50.89%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.2      1.1943 µg/L       3.09482      1.1943 ppb        3.09482 259.14%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                149.5      9.0126 µg/L       4.39794      9.0126 ppb        4.39794  48.80%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -61.3     -0.6683 µg/L       0.57979     -0.6683 ppb        0.57979  86.75%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               717.5      5.0525 µg/L       0.29811      5.0525 ppb        0.29811   5.90%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 8 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 12:32:30**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16070.7	16070.7	98.2	%			12:33:21
1	Al 396.153Radial†	11890.6	11800.0	4933.9	µg/L	4933.9	ppb	12:33:01
1	Ca 317.933Radial†	11872.8	12012.0	5093.5	µg/L	5093.5	ppb	12:33:21
1	Fe 238.204 Radial†	9678.0	9822.5	5115.7	µg/L	5115.7	ppb	12:33:21
1	K 766.490 Radial†	11821.2	9394.4	5116.1	µg/L	5116.1	ppb	12:33:01
1	Mg 279.077 IEC†	1267.4	1278.2	5148.1	µg/L	5148.1	ppb	12:33:21
1	Na 589.592 Radial†	57939.8	58628.8	10370	µg/L	10370	ppb	12:33:01
1	Sr 421.552†	174237.9	177372.7	497.48	µg/L	497.48	ppb	12:33:01
1	Sc 361.383	507003.1	507003.1	101.30	%			12:34:19
1	Y 371.029	442841.7	442841.7	100.34	%			12:34:19
1	Ag 328.068†	61448.5	60964.1	512.72	µg/L	512.72	ppb	12:34:19
1	As 188.979†	1491.3	1470.3	503.47	µg/L	503.47	ppb	12:34:39
1	B 249.677†	17452.8	17282.1	495.52	µg/L	495.52	ppb	12:34:19
1	Ba 233.527†	66201.9	65609.5	505.02	µg/L	505.02	ppb	12:34:19
1	Be 313.107†	922451.1	915201.4	502.74	µg/L	502.74	ppb	12:34:19
1	Cd 226.502†	53443.6	53115.4	502.01	µg/L	502.01	ppb	12:34:19
1	Co 228.616†	27251.7	26983.9	493.71	µg/L	493.71	ppb	12:34:39
1	Cr 267.716†	35259.1	34652.2	504.80	µg/L	504.80	ppb	12:34:19
1	Cu 324.752†	94039.5	88626.2	505.32	µg/L	505.32	ppb	12:34:19
1	Mn 257.610†	384354.3	379160.3	504.61	µg/L	504.61	ppb	12:34:19
1	Mo 202.031†	10028.3	9944.5	504.20	µg/L	504.20	ppb	12:34:39
1	Ni 231.604†	19680.9	19628.6	494.78	µg/L	494.78	ppb	12:34:39
1	P 214.914†	6012.3	5388.2	2316.5	µg/L	2316.5	ppb	12:34:39
1	Pb 220.353†	5556.9	5176.3	502.32	µg/L	502.32	ppb	12:34:39
1	S 181.975 Axial†	940.2	887.4	995.74	µg/L	995.74	ppb	12:34:39
1	Sb 206.836†	2024.1	1918.3	507.11	µg/L	507.11	ppb	12:34:39
1	Se 196.026†	1275.2	1363.0	505.96	µg/L	505.96	ppb	12:34:39
1	SiO2†	53271.3	49915.9	5393.8	µg/L	5393.8	ppb	12:34:19
1	Si 251.611†	67892.3	66554.9	2518.6	µg/L	2518.6	ppb	12:34:19
1	Sn 189.927†	5182.3	5040.1	502.79	µg/L	502.79	ppb	12:34:39
1	Ti 334.940†	166379.3	166239.2	504.64	µg/L	504.64	ppb	12:34:19
1	Tl 190.801†	2521.9	2612.9	501.23	µg/L	501.23	ppb	12:34:39
1	U 409.014†	1759.6	8607.4	519.89	µg/L	519.89	ppb	12:34:19
1	V 292.402†	45839.5	45180.7	511.39	µg/L	511.39	ppb	12:34:19
1	Zn 213.857†	73879.8	71775.0	501.39	µg/L	501.39	ppb	12:34:19
2	Sc RADIAL	16054.8	16054.8	98.1	%			12:33:46
2	Al 396.153Radial†	12157.2	12083.6	5052.8	µg/L	5052.8	ppb	12:33:26
2	Ca 317.933Radial†	11894.0	12045.6	5107.7	µg/L	5107.7	ppb	12:33:46
2	Fe 238.204 Radial†	9690.6	9845.2	5127.5	µg/L	5127.5	ppb	12:33:46
2	K 766.490 Radial†	11923.8	9510.9	5179.5	µg/L	5179.5	ppb	12:33:26
2	Mg 279.077 IEC†	1249.3	1261.1	5079.2	µg/L	5079.2	ppb	12:33:46
2	Na 589.592 Radial†	59121.9	59892.0	10594	µg/L	10594	ppb	12:33:26
2	Sr 421.552†	178394.7	181784.6	509.86	µg/L	509.86	ppb	12:33:26
2	Sc 361.383	508366.9	508366.9	101.57	%			12:34:45
2	Y 371.029	444222.9	444222.9	100.66	%			12:34:45
2	Ag 328.068†	61367.7	60721.8	510.70	µg/L	510.70	ppb	12:34:45
2	As 188.979†	1488.5	1463.6	501.17	µg/L	501.17	ppb	12:35:05
2	B 249.677†	17664.0	17443.8	500.18	µg/L	500.18	ppb	12:34:45
2	Ba 233.527†	66411.4	65640.3	505.26	µg/L	505.26	ppb	12:34:45
2	Be 313.107†	925413.8	915675.2	503.00	µg/L	503.00	ppb	12:34:45
2	Cd 226.502†	53651.6	53178.7	502.61	µg/L	502.61	ppb	12:34:45
2	Co 228.616†	27320.5	26979.5	493.62	µg/L	493.62	ppb	12:35:05
2	Cr 267.716†	35246.3	34546.2	503.25	µg/L	503.25	ppb	12:34:45
2	Cu 324.752†	94020.1	88358.0	503.79	µg/L	503.79	ppb	12:34:45
2	Mn 257.610†	385076.2	378853.1	504.20	µg/L	504.20	ppb	12:34:45
2	Mo 202.031†	10031.4	9921.0	503.01	µg/L	503.01	ppb	12:35:05
2	Ni 231.604†	19704.9	19600.1	494.06	µg/L	494.06	ppb	12:35:05
2	P 214.914†	5985.5	5345.9	2297.4	µg/L	2297.4	ppb	12:35:05
2	Pb 220.353†	5582.7	5187.0	503.29	µg/L	503.29	ppb	12:35:05

2	S 181.975 Axial†	949.2	893.7	1002.9	µg/L	1002.9 ppb	12:35:05
2	Sb 206.836†	2032.1	1920.8	507.75	µg/L	507.75 ppb	12:35:05
2	Se 196.026†	1253.9	1338.6	497.04	µg/L	497.04 ppb	12:35:05
2	SiO2†	53535.2	50034.7	5406.7	µg/L	5406.7 ppb	12:34:45
2	Si 251.611†	68097.0	66576.6	2519.4	µg/L	2519.4 ppb	12:34:45
2	Sn 189.927†	5169.7	5013.9	500.19	µg/L	500.19 ppb	12:35:05
2	Ti 334.940†	166685.8	166100.3	504.22	µg/L	504.22 ppb	12:34:45
2	Tl 190.801†	2544.5	2628.5	504.20	µg/L	504.20 ppb	12:35:05
2	U 409.014†	1895.8	8736.8	527.69	µg/L	527.69 ppb	12:34:45
2	V 292.402†	45958.2	45176.2	511.33	µg/L	511.33 ppb	12:34:45
2	Zn 213.857†	74143.1	71838.6	501.84	µg/L	501.84 ppb	12:34:45
3	Sc RADIAL	16020.3	16020.3	97.9	%		12:34:11
3	Al 396.153Radial†	12117.6	12069.8	5047.0	µg/L	5047.0 ppb	12:33:51
3	Ca 317.933Radial†	11833.9	12010.2	5092.7	µg/L	5092.7 ppb	12:34:11
3	Fe 238.204 Radial†	9659.4	9834.5	5121.9	µg/L	5121.9 ppb	12:34:11
3	K 766.490 Radial†	12037.4	9653.1	5257.0	µg/L	5257.0 ppb	12:33:51
3	Mg 279.077 IEC†	1250.0	1264.6	5093.1	µg/L	5093.1 ppb	12:34:11
3	Na 589.592 Radial†	59409.2	60314.9	10669	µg/L	10669 ppb	12:33:51
3	Sr 421.552†	179185.8	182983.3	513.22	µg/L	513.22 ppb	12:33:51
3	Sc 361.383	506927.7	506927.7	101.28	%		12:35:11
3	Y 371.029	443529.4	443529.4	100.50	%		12:35:11
3	Ag 328.068†	61374.1	60899.7	512.17	µg/L	512.17 ppb	12:35:11
3	As 188.979†	1509.6	1488.6	509.67	µg/L	509.67 ppb	12:35:31
3	B 249.677†	17530.3	17361.2	497.79	µg/L	497.79 ppb	12:35:11
3	Ba 233.527†	66143.6	65561.5	504.65	µg/L	504.65 ppb	12:35:11
3	Be 313.107†	921707.0	914602.1	502.41	µg/L	502.41 ppb	12:35:11
3	Cd 226.502†	53325.9	53007.0	500.99	µg/L	500.99 ppb	12:35:11
3	Co 228.616†	27387.9	27122.4	496.24	µg/L	496.24 ppb	12:35:31
3	Cr 267.716†	35095.5	34495.9	502.52	µg/L	502.52 ppb	12:35:11
3	Cu 324.752†	93759.0	88363.1	503.83	µg/L	503.83 ppb	12:35:11
3	Mn 257.610†	383560.1	378432.5	503.64	µg/L	503.64 ppb	12:35:11
3	Mo 202.031†	10043.7	9961.2	505.05	µg/L	505.05 ppb	12:35:31
3	Ni 231.604†	19753.8	19703.5	496.66	µg/L	496.66 ppb	12:35:31
3	P 214.914†	6012.2	5389.0	2317.5	µg/L	2317.5 ppb	12:35:31
3	Pb 220.353†	5553.3	5173.5	501.98	µg/L	501.98 ppb	12:35:31
3	S 181.975 Axial†	948.0	895.2	1004.5	µg/L	1004.5 ppb	12:35:31
3	Sb 206.836†	2018.5	1913.1	505.75	µg/L	505.75 ppb	12:35:31
3	Se 196.026†	1273.2	1361.2	505.31	µg/L	505.31 ppb	12:35:31
3	SiO2†	53363.9	50015.2	5404.6	µg/L	5404.6 ppb	12:35:11
3	Si 251.611†	67740.9	66415.5	2513.3	µg/L	2513.3 ppb	12:35:11
3	Sn 189.927†	5178.9	5037.5	502.54	µg/L	502.54 ppb	12:35:31
3	Ti 334.940†	166294.8	166180.2	504.47	µg/L	504.47 ppb	12:35:11
3	Tl 190.801†	2539.9	2631.1	504.68	µg/L	504.68 ppb	12:35:31
3	U 409.014†	1665.7	8514.9	514.32	µg/L	514.32 ppb	12:35:11
3	V 292.402†	45743.2	45092.3	510.40	µg/L	510.40 ppb	12:35:11
3	Zn 213.857†	73712.5	71620.6	500.29	µg/L	500.29 ppb	12:35:11

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	507432.6	101.38	%	0.162				0.16%
Sc RADIAL	16048.6	98.1	%	0.16				0.16%
Y 371.029	443531.4	100.50	%	0.156				0.16%
Ag 328.068†	60861.9	511.86	µg/L	1.044	511.86	ppb	1.044	0.20%
QC value within limits for Ag 328.068 Recovery = 102.37%								
Al 396.153Radial†	11984.5	5011.2	µg/L	67.07	5011.2	ppb	67.07	1.34%
QC value within limits for Al 396.153Radial Recovery = 100.22%								
As 188.979†	1474.2	504.77	µg/L	4.395	504.77	ppb	4.395	0.87%
QC value within limits for As 188.979 Recovery = 100.95%								
B 249.677†	17362.4	497.83	µg/L	2.327	497.83	ppb	2.327	0.47%
QC value within limits for B 249.677 Recovery = 99.57%								
Ba 233.527†	65603.8	504.98	µg/L	0.306	504.98	ppb	0.306	0.06%
QC value within limits for Ba 233.527 Recovery = 101.00%								
Be 313.107†	915159.6	502.72	µg/L	0.296	502.72	ppb	0.296	0.06%
QC value within limits for Be 313.107 Recovery = 100.54%								
Ca 317.933Radial†	12022.6	5098.0	µg/L	8.44	5098.0	ppb	8.44	0.17%
QC value within limits for Ca 317.933Radial Recovery = 101.96%								
Cd 226.502†	53100.4	501.87	µg/L	0.820	501.87	ppb	0.820	0.16%
QC value within limits for Cd 226.502 Recovery = 100.37%								
Co 228.616†	27028.6	494.52	µg/L	1.488	494.52	ppb	1.488	0.30%

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   QC value within limits for Co 228.616  Recovery = 98.90%
Cr 267.716†            34564.8      503.52 µg/L         1.161      503.52 ppb          1.161   0.23%
   QC value within limits for Cr 267.716  Recovery = 100.70%
Cu 324.752†            88449.1      504.31 µg/L         0.875      504.31 ppb          0.875   0.17%
   QC value within limits for Cu 324.752  Recovery = 100.86%
Fe 238.204 Radial†      9834.1      5121.7 µg/L          5.92      5121.7 ppb           5.92   0.12%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.43%
K 766.490 Radial†       9519.4      5184.2 µg/L         70.56      5184.2 ppb          70.56   1.36%
   QC value within limits for K 766.490 Radial  Recovery = 103.68%
Mg 279.077 IEC†         1268.0      5106.8 µg/L         36.44      5106.8 ppb          36.44   0.71%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.14%
Mn 257.610†           378815.3      504.15 µg/L         0.485      504.15 ppb          0.485   0.10%
   QC value within limits for Mn 257.610  Recovery = 100.83%
Mo 202.031†             9942.2      504.09 µg/L         1.024      504.09 ppb          1.024   0.20%
   QC value within limits for Mo 202.031  Recovery = 100.82%
Na 589.592 Radial†     59611.9       10544 µg/L         155.2       10544 ppb          155.2   1.47%
   QC value within limits for Na 589.592 Radial  Recovery = 105.44%
Ni 231.604†            19644.1      495.17 µg/L         1.346      495.17 ppb          1.346   0.27%
   QC value within limits for Ni 231.604  Recovery = 99.03%
P 214.914†              5374.4      2310.5 µg/L         11.31      2310.5 ppb          11.31   0.49%
   QC value within limits for P 214.914  Recovery = 92.42%
Pb 220.353†             5179.0      502.53 µg/L         0.677      502.53 ppb          0.677   0.13%
   QC value within limits for Pb 220.353  Recovery = 100.51%
S 181.975 Axial†         892.1      1001.0 µg/L          4.65      1001.0 ppb           4.65   0.46%
   QC value within limits for S 181.975 Axial  Recovery = 100.10%
Sb 206.836†             1917.4      506.87 µg/L         1.021      506.87 ppb          1.021   0.20%
   QC value within limits for Sb 206.836  Recovery = 101.37%
Se 196.026†             1354.3      502.77 µg/L         4.974      502.77 ppb          4.974   0.99%
   QC value within limits for Se 196.026  Recovery = 100.55%
SiO2†                  49988.6      5401.7 µg/L          6.87      5401.7 ppb           6.87   0.13%
   QC value within limits for SiO2  Recovery = 101.01%
Si 251.611†            66515.7      2517.1 µg/L          3.33      2517.1 ppb           3.33   0.13%
   QC value within limits for Si 251.611  Recovery = 100.68%
Sn 189.927†             5030.5      501.84 µg/L         1.437      501.84 ppb          1.437   0.29%
   QC value within limits for Sn 189.927  Recovery = 100.37%
Sr 421.552†           180713.6      506.85 µg/L         8.289      506.85 ppb          8.289   1.64%
   QC value within limits for Sr 421.552  Recovery = 101.37%
Ti 334.940†           166173.2      504.44 µg/L         0.210      504.44 ppb          0.210   0.04%
   QC value within limits for Ti 334.940  Recovery = 100.89%
Tl 190.801†             2624.2      503.37 µg/L         1.870      503.37 ppb          1.870   0.37%
   QC value within limits for Tl 190.801  Recovery = 100.67%
U 409.014†              8619.7      520.64 µg/L         6.717      520.64 ppb          6.717   1.29%
   QC value within limits for U 409.014  Recovery = 104.13%
V 292.402†             45149.8      511.04 µg/L         0.557      511.04 ppb          0.557   0.11%
   QC value within limits for V 292.402  Recovery = 102.21%
Zn 213.857†            71744.7      501.18 µg/L         0.798      501.18 ppb          0.798   0.16%
   QC value within limits for Zn 213.857  Recovery = 100.24%
All analyte(s) passed QC.
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Sequence No.: 9 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 12:35:39**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15877.5	15877.5	97.1	%			12:36:08
1	Al 396.153Radial†	316.0	21.5	9.0014	µg/L	9.0014	ppb	12:36:08
1	Ca 317.933Radial†	74.8	3.1	1.3182	µg/L	1.3182	ppb	12:36:28
1	Fe 238.204 Radial†	32.5	4.3	2.2299	µg/L	2.2299	ppb	12:36:28
1	K 766.490 Radial†	2518.8	-43.7	-23.835	µg/L	-23.835	ppb	12:36:08
1	Mg 279.077 IEC†	14.9	3.5	13.994	µg/L	13.994	ppb	12:36:28
1	Na 589.592 Radial†	325.0	-16.1	-2.8403	µg/L	-2.8403	ppb	12:36:08
1	Sr 421.552†	122.2	133.3	0.3740	µg/L	0.3740	ppb	12:36:08
1	Sc 361.383	511246.4	511246.4	102.14	%			12:37:25
1	Y 371.029	451859.1	451859.1	102.39	%			12:37:25
1	Ag 328.068†	-373.3	-63.4	-0.5373	µg/L	-0.5373	ppb	12:37:25
1	As 188.979†	-2.4	-4.3	-1.4513	µg/L	-1.4513	ppb	12:37:45
1	B 249.677†	16.9	69.3	1.9928	µg/L	1.9928	ppb	12:37:45
1	Ba 233.527†	-243.6	16.4	0.1263	µg/L	0.1263	ppb	12:37:45
1	Be 313.107†	-4324.5	323.5	0.1776	µg/L	0.1776	ppb	12:37:25
1	Cd 226.502†	-324.0	38.6	0.3652	µg/L	0.3652	ppb	12:37:45
1	Co 228.616†	-68.4	14.1	0.2573	µg/L	0.2573	ppb	12:37:45
1	Cr 267.716†	190.0	30.5	0.4359	µg/L	0.4359	ppb	12:37:45
1	Cu 324.752†	4060.0	-234.9	-1.3500	µg/L	-1.3500	ppb	12:37:25
1	Mn 257.610†	300.3	19.5	0.0253	µg/L	0.0253	ppb	12:37:45
1	Mo 202.031†	-28.9	16.3	0.8259	µg/L	0.8259	ppb	12:37:45
1	Ni 231.604†	-192.0	11.7	0.2955	µg/L	0.2955	ppb	12:37:45
1	P 214.914†	535.9	-22.4	-9.9315	µg/L	-9.9315	ppb	12:37:45
1	Pb 220.353†	278.8	-36.5	-3.5574	µg/L	-3.5574	ppb	12:37:45
1	S 181.975 Axial†	43.0	1.2	1.3928	µg/L	1.3928	ppb	12:37:45
1	Sb 206.836†	81.6	-0.0	0.0060	µg/L	0.0060	ppb	12:37:45
1	Se 196.026†	-108.8	-2.4	-0.8934	µg/L	-0.8934	ppb	12:37:45
1	SiO2†	2691.3	-38.7	-4.1635	µg/L	-4.1635	ppb	12:37:25
1	Si 251.611†	574.3	93.8	3.5494	µg/L	3.5494	ppb	12:37:45
1	Sn 189.927†	70.2	-7.1	-0.7107	µg/L	-0.7107	ppb	12:37:45
1	Ti 334.940†	-1829.5	198.4	0.5961	µg/L	0.5961	ppb	12:37:25
1	Tl 190.801†	-108.3	17.2	3.2985	µg/L	3.2985	ppb	12:37:45
1	U 409.014†	-6813.0	200.3	12.076	µg/L	12.076	ppb	12:37:25
1	V 292.402†	22.8	-49.7	-0.5302	µg/L	-0.5302	ppb	12:37:25
1	Zn 213.857†	1394.9	206.4	1.4528	µg/L	1.4528	ppb	12:37:45
2	Sc RADIAL	16387.4	16387.4	100	%			12:36:33
2	Al 396.153Radial†	396.5	91.7	38.450	µg/L	38.450	ppb	12:36:33
2	Ca 317.933Radial†	80.4	6.3	2.6696	µg/L	2.6696	ppb	12:36:53
2	Fe 238.204 Radial†	31.9	2.7	1.3968	µg/L	1.3968	ppb	12:36:53
2	K 766.490 Radial†	2702.5	58.9	32.072	µg/L	32.072	ppb	12:36:33
2	Mg 279.077 IEC†	15.0	3.1	12.551	µg/L	12.551	ppb	12:36:53
2	Na 589.592 Radial†	345.2	-6.3	-1.1139	µg/L	-1.1139	ppb	12:36:33
2	Sr 421.552†	81.4	88.7	0.2487	µg/L	0.2487	ppb	12:36:33
2	Sc 361.383	506770.1	506770.1	101.25	%			12:37:50
2	Y 371.029	447735.4	447735.4	101.45	%			12:37:50
2	Ag 328.068†	-331.2	-25.0	-0.2076	µg/L	-0.2076	ppb	12:37:50
2	As 188.979†	-8.2	-10.0	-3.3908	µg/L	-3.3908	ppb	12:38:10
2	B 249.677†	-21.3	31.7	0.9108	µg/L	0.9108	ppb	12:38:10
2	Ba 233.527†	-217.2	40.3	0.3100	µg/L	0.3100	ppb	12:38:10
2	Be 313.107†	-4442.8	169.3	0.0930	µg/L	0.0930	ppb	12:37:50
2	Cd 226.502†	-324.1	35.7	0.3378	µg/L	0.3378	ppb	12:38:10
2	Co 228.616†	-75.2	6.7	0.1238	µg/L	0.1238	ppb	12:38:10
2	Cr 267.716†	187.8	30.0	0.4283	µg/L	0.4283	ppb	12:38:10
2	Cu 324.752†	4084.6	-175.4	-1.0117	µg/L	-1.0117	ppb	12:37:50
2	Mn 257.610†	317.2	38.8	0.0511	µg/L	0.0511	ppb	12:38:10
2	Mo 202.031†	-36.3	8.7	0.4424	µg/L	0.4424	ppb	12:38:10
2	Ni 231.604†	-206.3	-4.1	-0.1037	µg/L	-0.1037	ppb	12:38:10
2	P 214.914†	554.2	0.2	0.4974	µg/L	0.4974	ppb	12:38:10
2	Pb 220.353†	286.5	-26.5	-2.5998	µg/L	-2.5998	ppb	12:38:10

2	S 181.975 Axial†	45.1	3.7	4.1455	µg/L	4.1455	ppb	12:38:10
2	Sb 206.836†	83.2	2.2	0.5790	µg/L	0.5790	ppb	12:38:10
2	Se 196.026†	-120.3	-14.7	-5.4123	µg/L	-5.4123	ppb	12:38:10
2	SiO2†	2649.0	-57.2	-6.1709	µg/L	-6.1709	ppb	12:37:50
2	Si 251.611†	546.6	71.5	2.7071	µg/L	2.7071	ppb	12:38:10
2	Sn 189.927†	86.8	9.9	0.9841	µg/L	0.9841	ppb	12:38:10
2	Ti 334.940†	-1991.7	22.4	0.0615	µg/L	0.0615	ppb	12:37:50
2	Tl 190.801†	-120.8	3.9	0.7534	µg/L	0.7534	ppb	12:38:10
2	U 409.014†	-6735.0	218.4	13.168	µg/L	13.168	ppb	12:37:50
2	V 292.402†	110.3	36.9	0.4343	µg/L	0.4343	ppb	12:37:50
2	Zn 213.857†	1379.5	203.3	1.4335	µg/L	1.4335	ppb	12:38:10
3	Sc RADIAL	16276.4	16276.4	99.5	%			12:36:58
3	Al 396.153Radial†	361.2	59.0	24.717	µg/L	24.717	ppb	12:36:58
3	Ca 317.933Radial†	84.8	11.3	4.7810	µg/L	4.7810	ppb	12:37:18
3	Fe 238.204 Radial†	39.0	10.0	5.2280	µg/L	5.2280	ppb	12:37:18
3	K 766.490 Radial†	2521.2	-104.9	-57.174	µg/L	-57.174	ppb	12:36:58
3	Mg 279.077 IEC†	7.8	-4.0	-16.263	µg/L	-16.263	ppb	12:37:18
3	Na 589.592 Radial†	337.0	-12.2	-2.1612	µg/L	-2.1612	ppb	12:36:58
3	Sr 421.552†	16.7	24.2	0.0679	µg/L	0.0679	ppb	12:36:58
3	Sc 361.383	508081.6	508081.6	101.51	%			12:38:15
3	Y 371.029	449045.4	449045.4	101.75	%			12:38:15
3	Ag 328.068†	-344.0	-36.7	-0.3163	µg/L	-0.3163	ppb	12:38:15
3	As 188.979†	-3.1	-4.9	-1.6751	µg/L	-1.6751	ppb	12:38:35
3	B 249.677†	-17.1	35.8	1.0308	µg/L	1.0308	ppb	12:38:35
3	Ba 233.527†	-247.0	11.6	0.0894	µg/L	0.0894	ppb	12:38:35
3	Be 313.107†	-4372.7	249.6	0.1371	µg/L	0.1371	ppb	12:38:15
3	Cd 226.502†	-338.8	22.1	0.2088	µg/L	0.2088	ppb	12:38:35
3	Co 228.616†	-76.9	5.3	0.0977	µg/L	0.0977	ppb	12:38:35
3	Cr 267.716†	153.5	-4.4	-0.0738	µg/L	-0.0738	ppb	12:38:35
3	Cu 324.752†	4110.1	-160.7	-0.9299	µg/L	-0.9299	ppb	12:38:15
3	Mn 257.610†	287.7	8.9	0.0125	µg/L	0.0125	ppb	12:38:35
3	Mo 202.031†	-27.2	17.8	0.9033	µg/L	0.9033	ppb	12:38:35
3	Ni 231.604†	-212.8	-10.0	-0.2518	µg/L	-0.2518	ppb	12:38:35
3	P 214.914†	546.2	-9.1	-3.8600	µg/L	-3.8600	ppb	12:38:35
3	Pb 220.353†	288.4	-25.3	-2.4779	µg/L	-2.4779	ppb	12:38:35
3	S 181.975 Axial†	45.3	3.8	4.2497	µg/L	4.2497	ppb	12:38:35
3	Sb 206.836†	84.3	3.1	0.8211	µg/L	0.8211	ppb	12:38:35
3	Se 196.026†	-120.2	-14.3	-5.2605	µg/L	-5.2605	ppb	12:38:35
3	SiO2†	2718.6	4.6	0.5024	µg/L	0.5024	ppb	12:38:15
3	Si 251.611†	552.7	76.1	2.8746	µg/L	2.8746	ppb	12:38:35
3	Sn 189.927†	76.9	-0.1	-0.0122	µg/L	-0.0122	ppb	12:38:35
3	Ti 334.940†	-1888.8	128.9	0.3864	µg/L	0.3864	ppb	12:38:15
3	Tl 190.801†	-119.5	5.6	1.0683	µg/L	1.0683	ppb	12:38:35
3	U 409.014†	-6705.4	264.8	15.962	µg/L	15.962	ppb	12:38:15
3	V 292.402†	28.5	-43.9	-0.4629	µg/L	-0.4629	ppb	12:38:15
3	Zn 213.857†	1390.3	210.4	1.4840	µg/L	1.4840	ppb	12:38:35

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	508699.4	101.64	%	0.460				0.45%
Sc RADIAL	16180.4	98.9	%	1.64				1.66%
Y 371.029	449546.7	101.86	%	0.477				0.47%
Ag 328.068†	-41.7	-0.3537	µg/L	0.16798	-0.3537	ppb	0.16798	47.49%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	57.4	24.056	µg/L	14.7353	24.056	ppb	14.7353	61.25%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-6.4	-2.1724	µg/L	1.06104	-2.1724	ppb	1.06104	48.84%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	45.6	1.3115	µg/L	0.59311	1.3115	ppb	0.59311	45.22%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.8	0.1753	µg/L	0.11817	0.1753	ppb	0.11817	67.43%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	247.5	0.1359	µg/L	0.04231	0.1359	ppb	0.04231	31.14%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	6.9	2.9229	µg/L	1.74526	2.9229	ppb	1.74526	59.71%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	32.2	0.3039	µg/L	0.08353	0.3039	ppb	0.08353	27.48%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	8.7	0.1596	µg/L	0.08561	0.1596	ppb	0.08561	53.64%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                18.7      0.2635 µg/L       0.29211      0.2635 ppb        0.29211 110.87%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -190.3     -1.0972 µg/L       0.22272     -1.0972 ppb        0.22272  20.30%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          5.7      2.9516 µg/L       2.01499      2.9516 ppb        2.01499  68.27%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -29.9     -16.313 µg/L       45.0960     -16.313 ppb        45.0960 276.45%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.8      3.4272 µg/L      17.06788      3.4272 ppb       17.06788 498.01%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                22.4      0.0296 µg/L       0.01967      0.0296 ppb        0.01967  66.37%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                14.3      0.7238 µg/L       0.24682      0.7238 ppb        0.24682  34.10%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -11.5     -2.0385 µg/L       0.86971     -2.0385 ppb        0.86971  42.66%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                -0.8     -0.0200 µg/L       0.28308     -0.0200 ppb        0.28308 >999.9%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -10.4     -4.4314 µg/L       5.23785     -4.4314 ppb        5.23785 118.20%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -29.5     -2.8784 µg/L       0.59123     -2.8784 ppb        0.59123  20.54%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            2.9      3.2627 µg/L       1.62023      3.2627 ppb        1.62023  49.66%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 1.8      0.4687 µg/L       0.41856      0.4687 ppb        0.41856  89.30%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -10.5     -3.8554 µg/L       2.56629     -3.8554 ppb        2.56629  66.56%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     -30.4     -3.2773 µg/L       3.42379     -3.2773 ppb        3.42379 104.47%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                80.5      3.0437 µg/L       0.44587      3.0437 ppb        0.44587  14.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.9      0.0871 µg/L       0.85175      0.0871 ppb        0.85175 978.19%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                82.1      0.2302 µg/L       0.15390      0.2302 ppb        0.15390  66.85%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               116.6      0.3480 µg/L       0.26936      0.3480 ppb        0.26936  77.41%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 8.9      1.7067 µg/L       1.38750      1.7067 ppb        1.38750  81.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                227.9      13.735 µg/L        2.0040      13.735 ppb         2.0040  14.59%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -18.9     -0.1863 µg/L       0.53844     -0.1863 ppb        0.53844 289.08%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               206.7      1.4567 µg/L       0.02549      1.4567 ppb        0.02549   1.75%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 2 **Autosampler Location: 302**
Sample ID: 266878003|1048315|5 **Date Collected: 12/3/2010 12:42:21**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 266878003|1048315|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	15861.4	15861.4	97.0	%			12:42:50
1	Al 396.153Radial†	443.9	153.8	58.136	µg/L	58.136	ppb	12:42:50
1	Ca 317.933Radial†	26567.8	27327.6	11588	µg/L	11588	ppb	12:42:50
1	Fe 238.204 Radial†	40.4	12.5	6.5133	µg/L	6.5133	ppb	12:43:10
1	K 766.490 Radial†	4352.7	1850.3	1005.3	µg/L	1005.3	ppb	12:42:50
1	Mg 279.077 IEC†	399.0	399.6	1608.6	µg/L	1608.6	ppb	12:43:10
1	Na 589.592 Radial†	83864.4	86145.4	15238	µg/L	15238	ppb	12:42:50
1	Sr 421.552†	87502.6	90256.1	252.91	µg/L	252.91	ppb	12:42:50
1	Sc 361.383	502306.5	502306.5	100.36	%			12:44:07
1	Y 371.029	439638.1	439638.1	99.619	%			12:44:07
1	Ag 328.068†	-284.3	18.9	0.1666	µg/L	0.1666	ppb	12:44:07
1	As 188.979†	-2.8	-4.7	-1.5872	µg/L	-1.5872	ppb	12:44:27
1	B 249.677†	529.0	579.9	16.693	µg/L	16.693	ppb	12:44:27
1	Ba 233.527†	4811.8	5049.5	38.804	µg/L	38.804	ppb	12:44:27
1	Be 313.107†	-4677.7	-103.7	-0.0570	µg/L	-0.0570	ppb	12:44:07
1	Cd 226.502†	-343.3	13.8	0.1297	µg/L	0.1297	ppb	12:44:27
1	Co 228.616†	-94.2	-12.9	-0.1875	µg/L	-0.1875	ppb	12:44:27
1	Cr 267.716†	234.3	77.9	1.1330	µg/L	1.1330	ppb	12:44:27
1	Cu 324.752†	5836.8	1606.4	9.1612	µg/L	9.1612	ppb	12:44:07
1	Mn 257.610†	335.9	60.2	0.0143	µg/L	0.0143	ppb	12:44:27
1	Mo 202.031†	-35.9	8.8	0.5109	µg/L	0.5109	ppb	12:44:27
1	Ni 231.604†	-193.5	6.8	0.1713	µg/L	0.1713	ppb	12:44:27
1	P 214.914†	560.2	11.1	1.6022	µg/L	1.6022	ppb	12:44:27
1	Pb 220.353†	304.1	-6.4	0.1052	µg/L	0.1052	ppb	12:44:27
1	S 181.975 Axial†	1260.3	1215.0	1364.0	µg/L	1364.0	ppb	12:44:27
1	Sb 206.836†	82.9	2.6	0.6881	µg/L	0.6881	ppb	12:44:27
1	Se 196.026†	-110.4	-5.9	-2.1639	µg/L	-2.1639	ppb	12:44:27
1	SiO2†	70981.7	68054.8	7346.3	µg/L	7346.3	ppb	12:44:07
1	Si 251.611†	91011.1	90217.9	3422.5	µg/L	3422.5	ppb	12:44:07
1	Sn 189.927†	16.0	-59.9	-5.1516	µg/L	-5.1516	ppb	12:44:27
1	Ti 334.940†	-1991.8	4.8	1.1899	µg/L	1.1899	ppb	12:44:27
1	Tl 190.801†	-116.7	7.0	1.3388	µg/L	1.3388	ppb	12:44:27
1	U 409.014†	-6811.5	83.1	5.0098	µg/L	5.0098	ppb	12:44:07
1	V 292.402†	347.7	274.4	3.0878	µg/L	3.0878	ppb	12:44:27
1	Zn 213.857†	1450.3	286.0	2.0032	µg/L	2.0032	ppb	12:44:27
2	Sc RADIAL	16287.4	16287.4	99.6	%			12:43:15
2	Al 396.153Radial†	384.0	81.6	27.850	µg/L	27.850	ppb	12:43:15
2	Ca 317.933Radial†	27321.3	27367.7	11605	µg/L	11605	ppb	12:43:15
2	Fe 238.204 Radial†	34.1	5.1	2.6347	µg/L	2.6347	ppb	12:43:35
2	K 766.490 Radial†	4472.7	1853.4	1007.0	µg/L	1007.0	ppb	12:43:15
2	Mg 279.077 IEC†	384.7	374.5	1507.4	µg/L	1507.4	ppb	12:43:35
2	Na 589.592 Radial†	85910.9	85938.6	15201	µg/L	15201	ppb	12:43:15
2	Sr 421.552†	89804.1	90207.2	252.77	µg/L	252.77	ppb	12:43:15
2	Sc 361.383	500335.9	500335.9	99.964	%			12:44:33
2	Y 371.029	437721.0	437721.0	99.185	%			12:44:33
2	Ag 328.068†	-376.5	-74.5	-0.6066	µg/L	-0.6066	ppb	12:44:33
2	As 188.979†	3.9	2.0	0.6738	µg/L	0.6738	ppb	12:44:53
2	B 249.677†	536.8	589.7	16.975	µg/L	16.975	ppb	12:44:53
2	Ba 233.527†	4811.0	5067.6	38.942	µg/L	38.942	ppb	12:44:53
2	Be 313.107†	-4542.2	13.4	0.0074	µg/L	0.0074	ppb	12:44:33
2	Cd 226.502†	-364.2	-8.5	-0.0800	µg/L	-0.0800	ppb	12:44:53
2	Co 228.616†	-64.1	16.9	0.3570	µg/L	0.3570	ppb	12:44:53
2	Cr 267.716†	240.8	85.3	1.2512	µg/L	1.2512	ppb	12:44:53
2	Cu 324.752†	5953.2	1745.7	9.9683	µg/L	9.9683	ppb	12:44:33
2	Mn 257.610†	333.4	59.1	0.0170	µg/L	0.0170	ppb	12:44:53
2	Mo 202.031†	-37.1	7.4	0.4399	µg/L	0.4399	ppb	12:44:53
2	Ni 231.604†	-165.8	33.8	0.8521	µg/L	0.8521	ppb	12:44:53
2	P 214.914†	577.8	30.9	10.506	µg/L	10.506	ppb	12:44:53
2	Pb 220.353†	328.5	19.2	2.6129	µg/L	2.6129	ppb	12:44:53

2	S 181.975 Axial†	1268.6	1228.2	1378.8	µg/L	1378.8	ppb	12:44:53
2	Sb 206.836†	79.4	-0.5	-0.1296	µg/L	-0.1296	ppb	12:44:53
2	Se 196.026†	-96.9	7.1	2.6174	µg/L	2.6174	ppb	12:44:53
2	SiO2†	70375.3	67726.9	7310.9	µg/L	7310.9	ppb	12:44:33
2	Si 251.611†	90223.8	89787.5	3406.1	µg/L	3406.1	ppb	12:44:33
2	Sn 189.927†	16.7	-59.2	-5.0802	µg/L	-5.0802	ppb	12:44:53
2	Ti 334.940†	-2007.6	-18.8	1.1353	µg/L	1.1353	ppb	12:44:53
2	Tl 190.801†	-112.1	11.1	2.1206	µg/L	2.1206	ppb	12:44:53
2	U 409.014†	-7041.2	-173.4	-10.451	µg/L	-10.451	ppb	12:44:33
2	V 292.402†	329.5	257.5	2.8806	µg/L	2.8806	ppb	12:44:53
2	Zn 213.857†	1460.0	301.3	2.1068	µg/L	2.1068	ppb	12:44:53
3	Sc RADIAL	16256.5	16256.5	99.4	%			12:43:40
3	Al 396.153Radial†	390.9	89.2	31.045	µg/L	31.045	ppb	12:43:40
3	Ca 317.933Radial†	27331.3	27429.9	11631	µg/L	11631	ppb	12:43:40
3	Fe 238.204 Radial†	39.6	10.7	5.5840	µg/L	5.5840	ppb	12:44:01
3	K 766.490 Radial†	4251.7	1639.6	890.53	µg/L	890.53	ppb	12:43:40
3	Mg 279.077 IEC†	387.4	377.9	1521.3	µg/L	1521.3	ppb	12:44:01
3	Na 589.592 Radial†	86030.5	86223.0	15251	µg/L	15251	ppb	12:43:40
3	Sr 421.552†	89889.7	90464.8	253.50	µg/L	253.50	ppb	12:43:40
3	Sc 361.383	506749.4	506749.4	101.25	%			12:44:58
3	Y 371.029	443145.6	443145.6	100.41	%			12:44:58
3	Ag 328.068†	-428.4	-121.0	-1.0012	µg/L	-1.0012	ppb	12:44:58
3	As 188.979†	2.4	0.5	0.1731	µg/L	0.1731	ppb	12:45:18
3	B 249.677†	583.5	629.0	18.109	µg/L	18.109	ppb	12:45:18
3	Ba 233.527†	4804.9	5000.6	38.428	µg/L	38.428	ppb	12:45:18
3	Be 313.107†	-4680.8	-66.0	-0.0363	µg/L	-0.0363	ppb	12:44:58
3	Cd 226.502†	-345.8	14.3	0.1344	µg/L	0.1344	ppb	12:45:18
3	Co 228.616†	-119.6	-37.1	-0.6310	µg/L	-0.6310	ppb	12:45:18
3	Cr 267.716†	224.6	66.3	0.9650	µg/L	0.9650	ppb	12:45:18
3	Cu 324.752†	5975.1	1692.0	9.6505	µg/L	9.6505	ppb	12:44:58
3	Mn 257.610†	340.2	61.6	0.0197	µg/L	0.0197	ppb	12:45:18
3	Mo 202.031†	-32.1	12.9	0.7187	µg/L	0.7187	ppb	12:45:18
3	Ni 231.604†	-201.8	0.4	0.0090	µg/L	0.0090	ppb	12:45:18
3	P 214.914†	550.9	-3.0	-5.1176	µg/L	-5.1176	ppb	12:45:18
3	Pb 220.353†	289.9	-23.1	-1.4967	µg/L	-1.4967	ppb	12:45:18
3	S 181.975 Axial†	1267.3	1210.9	1359.4	µg/L	1359.4	ppb	12:45:18
3	Sb 206.836†	76.3	-4.6	-1.1911	µg/L	-1.1911	ppb	12:45:18
3	Se 196.026†	-111.4	-6.0	-2.1834	µg/L	-2.1834	ppb	12:45:18
3	SiO2†	71586.0	68031.6	7343.8	µg/L	7343.8	ppb	12:44:58
3	Si 251.611†	91576.8	89981.5	3413.5	µg/L	3413.5	ppb	12:44:58
3	Sn 189.927†	17.5	-58.6	-5.0191	µg/L	-5.0191	ppb	12:45:18
3	Ti 334.940†	-1976.4	37.4	1.3019	µg/L	1.3019	ppb	12:45:18
3	Tl 190.801†	-129.0	-4.2	-0.7948	µg/L	-0.7948	ppb	12:45:18
3	U 409.014†	-6894.0	61.1	3.6863	µg/L	3.6863	ppb	12:44:58
3	V 292.402†	310.0	234.2	2.6381	µg/L	2.6381	ppb	12:45:18
3	Zn 213.857†	1447.1	270.0	1.8917	µg/L	1.8917	ppb	12:45:18

Mean Data: 266878003|1048315|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	503130.6	100.52	%	0.656				0.65%
Sc RADIAL	16135.1	98.6	%	1.45				1.47%
Y 371.029	440168.2	99.739	%	0.6233				0.62%
Ag 328.068†	-58.9	-0.4804	µg/L	0.59404	-0.4804	ppb	0.59404	123.66%
Al 396.153Radial†	108.2	39.010	µg/L	16.6402	39.010	ppb	16.6402	42.66%
As 188.979†	-0.8	-0.2468	µg/L	1.18750	-0.2468	ppb	1.18750	481.20%
B 249.677†	599.5	17.259	µg/L	0.7495	17.259	ppb	0.7495	4.34%
Ba 233.527†	5039.2	38.725	µg/L	0.2662	38.725	ppb	0.2662	0.69%
Be 313.107†	-52.1	-0.0286	µg/L	0.03286	-0.0286	ppb	0.03286	114.74%
Ca 317.933Radial†	27375.1	11608	µg/L	21.9	11608	ppb	21.9	0.19%
Cd 226.502†	6.5	0.0614	µg/L	0.12247	0.0614	ppb	0.12247	199.57%
Co 228.616†	-11.0	-0.1539	µg/L	0.49485	-0.1539	ppb	0.49485	321.63%
Cr 267.716†	76.5	1.1164	µg/L	0.14385	1.1164	ppb	0.14385	12.89%
Cu 324.752†	1681.3	9.5933	µg/L	0.40658	9.5933	ppb	0.40658	4.24%
Fe 238.204 Radial†	9.4	4.9107	µg/L	2.02511	4.9107	ppb	2.02511	41.24%
K 766.490 Radial†	1781.1	967.63	µg/L	66.779	967.63	ppb	66.779	6.90%
Mg 279.077 IEC†	384.0	1545.8	µg/L	54.83	1545.8	ppb	54.83	3.55%
Mn 257.610†	60.3	0.0170	µg/L	0.00270	0.0170	ppb	0.00270	15.85%
Mo 202.031†	9.7	0.5565	µg/L	0.14492	0.5565	ppb	0.14492	26.04%
Na 589.592 Radial†	86102.3	15230	µg/L	26.0	15230	ppb	26.0	0.17%

Ni 231.604†	13.6	0.3441	µg/L	0.44737	0.3441	ppb	0.44737 130.00%
P 214.914†	13.0	2.3302	µg/L	7.83725	2.3302	ppb	7.83725 336.33%
Pb 220.353†	-3.5	0.4071	µg/L	2.07138	0.4071	ppb	2.07138 508.76%
S 181.975 Axial†	1218.0	1367.4	µg/L	10.15	1367.4	ppb	10.15 0.74%
Sb 206.836†	-0.8	-0.2109	µg/L	0.94225	-0.2109	ppb	0.94225 446.81%
Se 196.026†	-1.6	-0.5766	µg/L	2.76610	-0.5766	ppb	2.76610 479.71%
SiO2†	67937.7	7333.7	µg/L	19.76	7333.7	ppb	19.76 0.27%
Si 251.611†	89995.6	3414.0	µg/L	8.18	3414.0	ppb	8.18 0.24%
Sn 189.927†	-59.2	-5.0836	µg/L	0.06630	-5.0836	ppb	0.06630 1.30%
Sr 421.552†	90309.4	253.06	µg/L	0.383	253.06	ppb	0.383 0.15%
Ti 334.940†	7.8	1.2090	µg/L	0.08494	1.2090	ppb	0.08494 7.03%
Tl 190.801†	4.7	0.8882	µg/L	1.50903	0.8882	ppb	1.50903 169.90%
U 409.014†	-9.7	-0.5849	µg/L	8.56978	-0.5849	ppb	8.56978 >999.9%
V 292.402†	255.4	2.8688	µg/L	0.22509	2.8688	ppb	0.22509 7.85%
Zn 213.857†	285.8	2.0006	µg/L	0.10754	2.0006	ppb	0.10754 5.38%

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Sequence No.: 3 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/3/2010 12:45:26**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16089.4	16089.4	98.4	%			12:46:17
1	Al 396.153Radial†	11806.0	11699.9	4891.9	µg/L	4891.9	ppb	12:45:57
1	Ca 317.933Radial†	11799.6	11923.5	5056.0	µg/L	5056.0	ppb	12:46:17
1	Fe 238.204 Radial†	9593.5	9725.2	5065.0	µg/L	5065.0	ppb	12:46:17
1	K 766.490 Radial†	11726.8	9284.4	5056.2	µg/L	5056.2	ppb	12:45:57
1	Mg 279.077 IEC†	1260.1	1269.4	5112.5	µg/L	5112.5	ppb	12:46:17
1	Na 589.592 Radial†	57873.8	58493.2	10346	µg/L	10346	ppb	12:45:57
1	Sr 421.552†	174124.9	177051.6	496.58	µg/L	496.58	ppb	12:45:57
1	Sc 361.383	506800.5	506800.5	101.26	%			12:47:15
1	Y 371.029	443324.0	443324.0	100.45	%			12:47:15
1	Ag 328.068†	60928.2	60474.5	508.61	µg/L	508.61	ppb	12:47:15
1	As 188.979†	1509.7	1489.1	509.81	µg/L	509.81	ppb	12:47:35
1	B 249.677†	17444.0	17280.3	495.47	µg/L	495.47	ppb	12:47:15
1	Ba 233.527†	65762.6	65201.7	501.88	µg/L	501.88	ppb	12:47:15
1	Be 313.107†	916668.3	909854.4	499.80	µg/L	499.80	ppb	12:47:15
1	Cd 226.502†	53307.5	53002.1	500.95	µg/L	500.95	ppb	12:47:15
1	Co 228.616†	27349.3	27091.1	495.67	µg/L	495.67	ppb	12:47:35
1	Cr 267.716†	35026.9	34436.9	501.66	µg/L	501.66	ppb	12:47:15
1	Cu 324.752†	93253.1	87886.7	501.10	µg/L	501.10	ppb	12:47:15
1	Mn 257.610†	381446.3	376440.0	500.99	µg/L	500.99	ppb	12:47:15
1	Mo 202.031†	10060.4	9980.2	506.01	µg/L	506.01	ppb	12:47:35
1	Ni 231.604†	19755.8	19710.4	496.84	µg/L	496.84	ppb	12:47:35
1	P 214.914†	6026.8	5404.9	2325.9	µg/L	2325.9	ppb	12:47:35
1	Pb 220.353†	5565.6	5187.1	503.39	µg/L	503.39	ppb	12:47:35
1	S 181.975 Axial†	951.0	898.4	1008.1	µg/L	1008.1	ppb	12:47:35
1	Sb 206.836†	2015.8	1910.9	505.18	µg/L	505.18	ppb	12:47:35
1	Se 196.026†	1283.6	1371.8	509.17	µg/L	509.17	ppb	12:47:35
1	SiO2†	53038.2	49706.7	5371.3	µg/L	5371.3	ppb	12:47:15
1	Si 251.611†	67420.5	66115.8	2501.9	µg/L	2501.9	ppb	12:47:15
1	Sn 189.927†	5178.6	5038.5	502.64	µg/L	502.64	ppb	12:47:35
1	Ti 334.940†	165182.5	165123.0	501.25	µg/L	501.25	ppb	12:47:15
1	Tl 190.801†	2528.8	2620.7	502.68	µg/L	502.68	ppb	12:47:35
1	U 409.014†	1689.9	8539.2	515.77	µg/L	515.77	ppb	12:47:15
1	V 292.402†	45519.1	44882.4	508.07	µg/L	508.07	ppb	12:47:15
1	Zn 213.857†	73393.4	71323.8	498.21	µg/L	498.21	ppb	12:47:15
2	Sc RADIAL	16046.3	16046.3	98.1	%			12:46:42
2	Al 396.153Radial†	12047.9	11978.8	5008.8	µg/L	5008.8	ppb	12:46:22
2	Ca 317.933Radial†	11782.2	11937.9	5062.1	µg/L	5062.1	ppb	12:46:42
2	Fe 238.204 Radial†	9589.0	9746.8	5076.2	µg/L	5076.2	ppb	12:46:42
2	K 766.490 Radial†	11983.6	9578.3	5216.3	µg/L	5216.3	ppb	12:46:22
2	Mg 279.077 IEC†	1250.2	1262.7	5085.7	µg/L	5085.7	ppb	12:46:42
2	Na 589.592 Radial†	59025.9	59826.0	10582	µg/L	10582	ppb	12:46:22
2	Sr 421.552†	177994.6	181472.8	508.98	µg/L	508.98	ppb	12:46:22
2	Sc 361.383	507630.9	507630.9	101.42	%			12:47:41
2	Y 371.029	443868.7	443868.7	100.58	%			12:47:41
2	Ag 328.068†	61165.3	60609.9	509.73	µg/L	509.73	ppb	12:47:41
2	As 188.979†	1492.1	1469.3	503.09	µg/L	503.09	ppb	12:48:01
2	B 249.677†	17425.3	17233.7	494.14	µg/L	494.14	ppb	12:47:41
2	Ba 233.527†	65915.3	65246.0	502.22	µg/L	502.22	ppb	12:47:41
2	Be 313.107†	918925.2	910598.8	500.21	µg/L	500.21	ppb	12:47:41
2	Cd 226.502†	53282.6	52891.4	499.90	µg/L	499.90	ppb	12:47:41
2	Co 228.616†	27295.1	26993.5	493.89	µg/L	493.89	ppb	12:48:01
2	Cr 267.716†	35020.9	34374.4	500.74	µg/L	500.74	ppb	12:47:41
2	Cu 324.752†	93361.4	87842.9	500.84	µg/L	500.84	ppb	12:47:41
2	Mn 257.610†	382523.5	376885.9	501.58	µg/L	501.58	ppb	12:47:41
2	Mo 202.031†	10060.6	9964.1	505.19	µg/L	505.19	ppb	12:48:01
2	Ni 231.604†	19754.6	19677.3	496.01	µg/L	496.01	ppb	12:48:01
2	P 214.914†	6003.3	5372.0	2310.7	µg/L	2310.7	ppb	12:48:01
2	Pb 220.353†	5585.3	5197.6	504.34	µg/L	504.34	ppb	12:48:01

2	S 181.975 Axial†	935.0	881.1	988.70 µg/L	988.70 ppb		12:48:01
2	Sb 206.836†	2021.9	1913.6	505.90 µg/L	505.90 ppb		12:48:01
2	Se 196.026†	1276.3	1362.5	505.79 µg/L	505.79 ppb		12:48:01
2	SiO2†	53057.5	49640.1	5364.1 µg/L	5364.1 ppb		12:47:41
2	Si 251.611†	67494.9	66080.2	2500.6 µg/L	2500.6 ppb		12:47:41
2	Sn 189.927†	5200.1	5051.3	503.91 µg/L	503.91 ppb		12:48:01
2	Ti 334.940†	165461.6	165131.3	501.27 µg/L	501.27 ppb		12:47:41
2	Tl 190.801†	2524.6	2612.5	501.11 µg/L	501.11 ppb		12:48:01
2	U 409.014†	1866.1	8710.2	526.08 µg/L	526.08 ppb		12:47:41
2	V 292.402†	45615.1	44903.5	508.31 µg/L	508.31 ppb		12:47:41
2	Zn 213.857†	73437.4	71248.6	497.68 µg/L	497.68 ppb		12:47:41
3	Sc RADIAL	16060.4	16060.4	98.2 %			12:47:07
3	Al 396.153Radial†	12003.1	11922.3	4985.2 µg/L	4985.2 ppb		12:46:47
3	Ca 317.933Radial†	11750.6	11895.2	5044.0 µg/L	5044.0 ppb		12:47:07
3	Fe 238.204 Radial†	9585.3	9734.5	5069.8 µg/L	5069.8 ppb		12:47:07
3	K 766.490 Radial†	11972.2	9556.0	5204.1 µg/L	5204.1 ppb		12:46:47
3	Mg 279.077 IEC†	1247.5	1258.8	5070.1 µg/L	5070.1 ppb		12:47:07
3	Na 589.592 Radial†	58839.2	59582.9	10539 µg/L	10539 ppb		12:46:47
3	Sr 421.552†	177221.2	180525.8	506.33 µg/L	506.33 ppb		12:46:47
3	Sc 361.383	507500.6	507500.6	101.40 %			12:48:07
3	Y 371.029	443208.7	443208.7	100.43 %			12:48:07
3	Ag 328.068†	61098.7	60559.6	509.30 µg/L	509.30 ppb		12:48:07
3	As 188.979†	1508.2	1485.5	508.60 µg/L	508.60 ppb		12:48:27
3	B 249.677†	17509.8	17321.4	496.66 µg/L	496.66 ppb		12:48:07
3	Ba 233.527†	65976.4	65323.0	502.81 µg/L	502.81 ppb		12:48:07
3	Be 313.107†	918360.1	910274.0	500.03 µg/L	500.03 ppb		12:48:07
3	Cd 226.502†	53374.3	52995.4	500.88 µg/L	500.88 ppb		12:48:07
3	Co 228.616†	27327.0	27031.8	494.59 µg/L	494.59 ppb		12:48:27
3	Cr 267.716†	35034.5	34396.6	501.07 µg/L	501.07 ppb		12:48:07
3	Cu 324.752†	93268.1	87774.4	500.46 µg/L	500.46 ppb		12:48:07
3	Mn 257.610†	382362.8	376824.3	501.50 µg/L	501.50 ppb		12:48:07
3	Mo 202.031†	10067.8	9973.8	505.68 µg/L	505.68 ppb		12:48:27
3	Ni 231.604†	19755.6	19683.3	496.16 µg/L	496.16 ppb		12:48:27
3	P 214.914†	6028.4	5398.3	2323.1 µg/L	2323.1 ppb		12:48:27
3	Pb 220.353†	5548.8	5163.0	500.99 µg/L	500.99 ppb		12:48:27
3	S 181.975 Axial†	946.3	892.4	1001.4 µg/L	1001.4 ppb		12:48:27
3	Sb 206.836†	2008.1	1900.5	502.47 µg/L	502.47 ppb		12:48:27
3	Se 196.026†	1273.2	1359.7	504.75 µg/L	504.75 ppb		12:48:27
3	SiO2†	53030.0	49626.4	5362.6 µg/L	5362.6 ppb		12:48:07
3	Si 251.611†	67543.4	66145.1	2503.0 µg/L	2503.0 ppb		12:48:07
3	Sn 189.927†	5162.9	5016.0	500.39 µg/L	500.39 ppb		12:48:27
3	Ti 334.940†	165332.0	165045.4	501.01 µg/L	501.01 ppb		12:48:07
3	Tl 190.801†	2547.2	2635.4	505.48 µg/L	505.48 ppb		12:48:27
3	U 409.014†	1740.7	8587.0	518.66 µg/L	518.66 ppb		12:48:07
3	V 292.402†	45519.5	44820.8	507.38 µg/L	507.38 ppb		12:48:07
3	Zn 213.857†	73617.5	71444.8	499.07 µg/L	499.07 ppb		12:48:07

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	507310.6	101.36	%	0.089				0.09%
Sc RADIAL	16065.4	98.2	%	0.13				0.14%
Y 371.029	443467.1	100.49	%	0.080				0.08%
Ag 328.068†	60548.0	509.21	µg/L	0.568	509.21	ppb	0.568	0.11%
QC value within limits for Ag 328.068 Recovery = 101.84%								
Al 396.153Radial†	11867.0	4962.0	µg/L	61.84	4962.0	ppb	61.84	1.25%
QC value within limits for Al 396.153Radial Recovery = 99.24%								
As 188.979†	1481.3	507.17	µg/L	3.585	507.17	ppb	3.585	0.71%
QC value within limits for As 188.979 Recovery = 101.43%								
B 249.677†	17278.5	495.42	µg/L	1.262	495.42	ppb	1.262	0.25%
QC value within limits for B 249.677 Recovery = 99.08%								
Ba 233.527†	65256.9	502.30	µg/L	0.472	502.30	ppb	0.472	0.09%
QC value within limits for Ba 233.527 Recovery = 100.46%								
Be 313.107†	910242.4	500.01	µg/L	0.205	500.01	ppb	0.205	0.04%
QC value within limits for Be 313.107 Recovery = 100.00%								
Ca 317.933Radial†	11918.9	5054.0	µg/L	9.21	5054.0	ppb	9.21	0.18%
QC value within limits for Ca 317.933Radial Recovery = 101.08%								
Cd 226.502†	52963.0	500.57	µg/L	0.587	500.57	ppb	0.587	0.12%
QC value within limits for Cd 226.502 Recovery = 100.11%								
Co 228.616†	27038.8	494.72	µg/L	0.900	494.72	ppb	0.900	0.18%

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   QC value within limits for Co 228.616  Recovery = 98.94%
Cr 267.716†            34402.6      501.16 µg/L         0.464      501.16 ppb          0.464   0.09%
   QC value within limits for Cr 267.716  Recovery = 100.23%
Cu 324.752†            87834.7      500.80 µg/L         0.323      500.80 ppb          0.323   0.06%
   QC value within limits for Cu 324.752  Recovery = 100.16%
Fe 238.204 Radial†      9735.5      5070.4 µg/L          5.65      5070.4 ppb           5.65   0.11%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.41%
K 766.490 Radial†       9472.9      5158.9 µg/L         89.12      5158.9 ppb          89.12   1.73%
   QC value within limits for K 766.490 Radial  Recovery = 103.18%
Mg 279.077 IEC†         1263.6      5089.4 µg/L         21.46      5089.4 ppb          21.46   0.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.79%
Mn 257.610†           376716.7      501.36 µg/L         0.322      501.36 ppb          0.322   0.06%
   QC value within limits for Mn 257.610  Recovery = 100.27%
Mo 202.031†             9972.7      505.63 µg/L         0.411      505.63 ppb          0.411   0.08%
   QC value within limits for Mo 202.031  Recovery = 101.13%
Na 589.592 Radial†     59300.7       10489 µg/L         125.6       10489 ppb          125.6   1.20%
   QC value within limits for Na 589.592 Radial  Recovery = 104.89%
Ni 231.604†            19690.3      496.33 µg/L         0.444      496.33 ppb          0.444   0.09%
   QC value within limits for Ni 231.604  Recovery = 99.27%
P 214.914†              5391.7      2319.9 µg/L          8.08      2319.9 ppb           8.08   0.35%
   QC value within limits for P 214.914  Recovery = 92.80%
Pb 220.353†             5182.5      502.91 µg/L         1.727      502.91 ppb          1.727   0.34%
   QC value within limits for Pb 220.353  Recovery = 100.58%
S 181.975 Axial†         890.6      999.40 µg/L         9.852      999.40 ppb          9.852   0.99%
   QC value within limits for S 181.975 Axial  Recovery = 99.94%
Sb 206.836†             1908.3      504.51 µg/L         1.808      504.51 ppb          1.808   0.36%
   QC value within limits for Sb 206.836  Recovery = 100.90%
Se 196.026†             1364.7      506.57 µg/L         2.310      506.57 ppb          2.310   0.46%
   QC value within limits for Se 196.026  Recovery = 101.31%
SiO2†                  49657.8      5366.0 µg/L          4.64      5366.0 ppb           4.64   0.09%
   QC value within limits for SiO2  Recovery = 100.35%
Si 251.611†            66113.7      2501.8 µg/L          1.23      2501.8 ppb           1.23   0.05%
   QC value within limits for Si 251.611  Recovery = 100.07%
Sn 189.927†             5035.3      502.31 µg/L         1.783      502.31 ppb          1.783   0.35%
   QC value within limits for Sn 189.927  Recovery = 100.46%
Sr 421.552†           179683.4      503.96 µg/L         6.531      503.96 ppb          6.531   1.30%
   QC value within limits for Sr 421.552  Recovery = 100.79%
Ti 334.940†           165099.9      501.18 µg/L         0.143      501.18 ppb          0.143   0.03%
   QC value within limits for Ti 334.940  Recovery = 100.24%
Tl 190.801†             2622.8      503.09 µg/L         2.214      503.09 ppb          2.214   0.44%
   QC value within limits for Tl 190.801  Recovery = 100.62%
U 409.014†              8612.2      520.17 µg/L         5.320      520.17 ppb          5.320   1.02%
   QC value within limits for U 409.014  Recovery = 104.03%
V 292.402†             44868.9      507.92 µg/L         0.481      507.92 ppb          0.481   0.09%
   QC value within limits for V 292.402  Recovery = 101.58%
Zn 213.857†            71339.1      498.32 µg/L         0.698      498.32 ppb          0.698   0.14%
   QC value within limits for Zn 213.857  Recovery = 99.66%
All analyte(s) passed QC.
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Sequence No.: 4 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/3/2010 12:48:35**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	16372.4	16372.4	100	%			12:49:04
1	Al 396.153Radial†	304.3	-0.0	-0.0294	µg/L	-0.0294	ppb	12:49:04
1	Ca 317.933Radial†	90.6	16.5	7.0056	µg/L	7.0056	ppb	12:49:24
1	Fe 238.204 Radial†	42.9	13.7	7.1346	µg/L	7.1346	ppb	12:49:24
1	K 766.490 Radial†	2629.6	-11.5	-6.2868	µg/L	-6.2868	ppb	12:49:04
1	Mg 279.077 IEC†	8.7	-3.2	-12.903	µg/L	-12.903	ppb	12:49:24
1	Na 589.592 Radial†	315.3	-35.9	-6.3527	µg/L	-6.3527	ppb	12:49:04
1	Sr 421.552†	71.3	78.6	0.2205	µg/L	0.2205	ppb	12:49:04
1	Sc 361.383	505181.4	505181.4	100.93	%			12:50:21
1	Y 371.029	446401.4	446401.4	101.15	%			12:50:21
1	Ag 328.068†	-285.8	18.9	0.1468	µg/L	0.1468	ppb	12:50:21
1	As 188.979†	-4.1	-6.0	-2.0287	µg/L	-2.0287	ppb	12:50:41
1	B 249.677†	-7.2	45.5	1.3093	µg/L	1.3093	ppb	12:50:41
1	Ba 233.527†	-240.6	16.5	0.1276	µg/L	0.1276	ppb	12:50:41
1	Be 313.107†	-4430.8	167.4	0.0919	µg/L	0.0919	ppb	12:50:21
1	Cd 226.502†	-339.5	19.4	0.1830	µg/L	0.1830	ppb	12:50:41
1	Co 228.616†	-74.9	6.9	0.1251	µg/L	0.1251	ppb	12:50:41
1	Cr 267.716†	192.7	35.3	0.5123	µg/L	0.5123	ppb	12:50:41
1	Cu 324.752†	4284.0	34.8	0.1965	µg/L	0.1965	ppb	12:50:21
1	Mn 257.610†	318.1	40.6	0.0546	µg/L	0.0546	ppb	12:50:41
1	Mo 202.031†	-35.5	9.5	0.4804	µg/L	0.4804	ppb	12:50:41
1	Ni 231.604†	-207.9	-6.3	-0.1598	µg/L	-0.1598	ppb	12:50:41
1	P 214.914†	529.2	-22.8	-10.690	µg/L	-10.690	ppb	12:50:41
1	Pb 220.353†	316.5	4.1	0.3991	µg/L	0.3991	ppb	12:50:41
1	S 181.975 Axial†	41.1	-0.1	-0.1115	µg/L	-0.1115	ppb	12:50:41
1	Sb 206.836†	82.6	1.9	0.5088	µg/L	0.5088	ppb	12:50:41
1	Se 196.026†	-92.8	12.1	4.4635	µg/L	4.4635	ppb	12:50:41
1	SiO2†	2650.5	-47.5	-5.1179	µg/L	-5.1179	ppb	12:50:21
1	Si 251.611†	576.9	103.2	3.9080	µg/L	3.9080	ppb	12:50:41
1	Sn 189.927†	67.4	-9.1	-0.9078	µg/L	-0.9078	ppb	12:50:41
1	Ti 334.940†	-1883.0	123.9	0.3767	µg/L	0.3767	ppb	12:50:21
1	Tl 190.801†	-112.2	12.1	2.3241	µg/L	2.3241	ppb	12:50:41
1	U 409.014†	-6882.5	51.4	3.1013	µg/L	3.1013	ppb	12:50:21
1	V 292.402†	-7.6	-79.6	-0.8781	µg/L	-0.8781	ppb	12:50:21
1	Zn 213.857†	1335.7	164.2	1.1564	µg/L	1.1564	ppb	12:50:41
2	Sc RADIAL	16135.5	16135.5	98.6	%			12:49:29
2	Al 396.153Radial†	288.1	-12.0	-5.0461	µg/L	-5.0461	ppb	12:49:29
2	Ca 317.933Radial†	87.7	14.9	6.3256	µg/L	6.3256	ppb	12:49:49
2	Fe 238.204 Radial†	36.5	7.9	4.0900	µg/L	4.0900	ppb	12:49:49
2	K 766.490 Radial†	2510.3	-93.9	-51.148	µg/L	-51.148	ppb	12:49:29
2	Mg 279.077 IEC†	7.0	-4.8	-19.464	µg/L	-19.464	ppb	12:49:49
2	Na 589.592 Radial†	400.5	55.1	9.7525	µg/L	9.7525	ppb	12:49:29
2	Sr 421.552†	41.8	49.8	0.1395	µg/L	0.1395	ppb	12:49:29
2	Sc 361.383	503052.1	503052.1	100.51	%			12:50:46
2	Y 371.029	444484.7	444484.7	100.72	%			12:50:46
2	Ag 328.068†	-199.5	103.6	0.8396	µg/L	0.8396	ppb	12:50:46
2	As 188.979†	-5.9	-7.7	-2.6249	µg/L	-2.6249	ppb	12:51:06
2	B 249.677†	38.9	91.4	2.6310	µg/L	2.6310	ppb	12:51:06
2	Ba 233.527†	-229.5	26.5	0.2038	µg/L	0.2038	ppb	12:51:06
2	Be 313.107†	-4269.8	309.0	0.1697	µg/L	0.1697	ppb	12:50:46
2	Cd 226.502†	-339.6	18.0	0.1699	µg/L	0.1699	ppb	12:51:06
2	Co 228.616†	-63.9	17.5	0.3191	µg/L	0.3191	ppb	12:51:06
2	Cr 267.716†	171.0	14.5	0.2070	µg/L	0.2070	ppb	12:51:06
2	Cu 324.752†	4062.0	-168.1	-0.9641	µg/L	-0.9641	ppb	12:50:46
2	Mn 257.610†	242.6	-33.2	-0.0434	µg/L	-0.0434	ppb	12:51:06
2	Mo 202.031†	-41.0	3.8	0.1909	µg/L	0.1909	ppb	12:51:06
2	Ni 231.604†	-198.3	2.4	0.0592	µg/L	0.0592	ppb	12:51:06
2	P 214.914†	537.9	-12.0	-5.1916	µg/L	-5.1916	ppb	12:51:06
2	Pb 220.353†	332.0	20.9	2.0330	µg/L	2.0330	ppb	12:51:06

2	S 181.975 Axial†	46.6	5.6	6.2663	µg/L	6.2663	ppb	12:51:06
2	Sb 206.836†	67.8	-12.4	-3.2465	µg/L	-3.2465	ppb	12:51:06
2	Se 196.026†	-111.8	-7.1	-2.6173	µg/L	-2.6173	ppb	12:51:06
2	SiO2†	2774.1	86.6	9.3510	µg/L	9.3510	ppb	12:50:46
2	Si 251.611†	543.5	72.4	2.7427	µg/L	2.7427	ppb	12:51:06
2	Sn 189.927†	80.2	3.9	0.3892	µg/L	0.3892	ppb	12:51:06
2	Ti 334.940†	-1869.0	130.0	0.3942	µg/L	0.3942	ppb	12:50:46
2	Tl 190.801†	-105.7	18.1	3.4684	µg/L	3.4684	ppb	12:51:06
2	U 409.014†	-6797.8	106.8	6.4402	µg/L	6.4402	ppb	12:50:46
2	V 292.402†	-82.5	-154.1	-1.7101	µg/L	-1.7101	ppb	12:50:46
2	Zn 213.857†	1349.5	183.5	1.2925	µg/L	1.2925	ppb	12:51:06
3	Sc RADIAL	16254.0	16254.0	99.4	%			12:49:54
3	Al 396.153Radial†	292.4	-9.8	-4.1296	µg/L	-4.1296	ppb	12:49:54
3	Ca 317.933Radial†	75.8	2.3	0.9832	µg/L	0.9832	ppb	12:50:14
3	Fe 238.204 Radial†	32.8	3.9	2.0180	µg/L	2.0180	ppb	12:50:14
3	K 766.490 Radial†	2613.9	-8.2	-4.4523	µg/L	-4.4523	ppb	12:49:54
3	Mg 279.077 IEC†	18.0	6.2	25.115	µg/L	25.115	ppb	12:50:14
3	Na 589.592 Radial†	332.0	-16.8	-2.9685	µg/L	-2.9685	ppb	12:49:54
3	Sr 421.552†	47.0	54.7	0.1534	µg/L	0.1534	ppb	12:49:54
3	Sc 361.383	503781.2	503781.2	100.65	%			12:51:11
3	Y 371.029	444720.2	444720.2	100.77	%			12:51:11
3	Ag 328.068†	-173.0	130.3	1.0748	µg/L	1.0748	ppb	12:51:11
3	As 188.979†	-1.1	-3.0	-1.0133	µg/L	-1.0133	ppb	12:51:31
3	B 249.677†	-7.2	45.5	1.3094	µg/L	1.3094	ppb	12:51:31
3	Ba 233.527†	-242.4	14.0	0.1080	µg/L	0.1080	ppb	12:51:31
3	Be 313.107†	-4346.2	239.2	0.1314	µg/L	0.1314	ppb	12:51:11
3	Cd 226.502†	-339.3	18.7	0.1776	µg/L	0.1776	ppb	12:51:31
3	Co 228.616†	-69.7	11.8	0.2166	µg/L	0.2166	ppb	12:51:31
3	Cr 267.716†	191.1	34.3	0.4910	µg/L	0.4910	ppb	12:51:31
3	Cu 324.752†	4183.9	-52.8	-0.3117	µg/L	-0.3117	ppb	12:51:11
3	Mn 257.610†	298.1	21.7	0.0279	µg/L	0.0279	ppb	12:51:31
3	Mo 202.031†	-35.9	9.0	0.4542	µg/L	0.4542	ppb	12:51:31
3	Ni 231.604†	-173.6	27.2	0.6847	µg/L	0.6847	ppb	12:51:31
3	P 214.914†	542.9	-7.7	-3.4885	µg/L	-3.4885	ppb	12:51:31
3	Pb 220.353†	305.8	-5.6	-0.5431	µg/L	-0.5431	ppb	12:51:31
3	S 181.975 Axial†	42.6	1.5	1.6319	µg/L	1.6319	ppb	12:51:31
3	Sb 206.836†	89.9	9.4	2.4664	µg/L	2.4664	ppb	12:51:31
3	Se 196.026†	-96.3	8.4	3.1033	µg/L	3.1033	ppb	12:51:31
3	SiO2†	2673.8	-17.0	-1.8324	µg/L	-1.8324	ppb	12:51:11
3	Si 251.611†	539.1	67.2	2.5441	µg/L	2.5441	ppb	12:51:31
3	Sn 189.927†	72.4	-3.9	-0.3905	µg/L	-0.3905	ppb	12:51:31
3	Ti 334.940†	-1958.6	43.6	0.1245	µg/L	0.1245	ppb	12:51:11
3	Tl 190.801†	-109.6	14.4	2.7512	µg/L	2.7512	ppb	12:51:31
3	U 409.014†	-6698.5	215.2	12.972	µg/L	12.972	ppb	12:51:11
3	V 292.402†	42.5	-29.8	-0.3104	µg/L	-0.3104	ppb	12:51:11
3	Zn 213.857†	1332.8	165.0	1.1578	µg/L	1.1578	ppb	12:51:31

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	504004.9	100.70	%	0.216				0.21%
Sc RADIAL	16254.0	99.4	%	0.72				0.73%
Y 371.029	445202.1	100.88	%	0.237				0.23%
Ag 328.068†	84.3	0.6871	µg/L	0.48245	0.6871	ppb	0.48245	70.22%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-7.3	-3.0684	µg/L	2.67144	-3.0684	ppb	2.67144	87.06%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-5.6	-1.8890	µg/L	0.81483	-1.8890	ppb	0.81483	43.14%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	60.8	1.7499	µg/L	0.76308	1.7499	ppb	0.76308	43.61%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	19.0	0.1464	µg/L	0.05061	0.1464	ppb	0.05061	34.56%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	238.5	0.1310	µg/L	0.03889	0.1310	ppb	0.03889	29.69%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.3	4.7715	µg/L	3.29833	4.7715	ppb	3.29833	69.13%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	18.7	0.1768	µg/L	0.00662	0.1768	ppb	0.00662	3.74%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	12.0	0.2203	µg/L	0.09702	0.2203	ppb	0.09702	44.04%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                28.0      0.4034 µg/L       0.17044      0.4034 ppb        0.17044  42.25%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -62.0     -0.3598 µg/L       0.58181     -0.3598 ppb        0.58181 161.72%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          8.5      4.4142 µg/L       2.57367      4.4142 ppb        2.57367  58.30%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -37.9     -20.629 µg/L       26.4460     -20.629 ppb        26.4460 128.20%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.6     -2.4173 µg/L      24.06809     -2.4173 ppb       24.06809 995.65%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                 9.7      0.0130 µg/L       0.05065      0.0130 ppb        0.05065 388.73%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 7.4      0.3752 µg/L       0.16013      0.3752 ppb        0.16013  42.68%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†          0.8      0.1438 µg/L       8.49168      0.1438 ppb        8.49168 >999.9%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 7.7      0.1947 µg/L       0.43827      0.1947 ppb        0.43827 225.09%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -14.2     -6.4565 µg/L       3.76349     -6.4565 ppb        3.76349  58.29%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 6.4      0.6297 µg/L       1.30346      0.6297 ppb        1.30346 207.00%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            2.3      2.5956 µg/L       3.29632      2.5956 ppb        3.29632 127.00%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.4     -0.0904 µg/L       2.90321     -0.0904 ppb        2.90321 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 4.5      1.6498 µg/L       3.75752      1.6498 ppb        3.75752 227.75%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                       7.4      0.8003 µg/L       7.58520      0.8003 ppb        7.58520 947.83%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                80.9      3.0649 µg/L       0.73683      3.0649 ppb        0.73683  24.04%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -3.0     -0.3030 µg/L       0.65290     -0.3030 ppb        0.65290 215.46%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                61.0      0.1711 µg/L       0.04328      0.1711 ppb        0.04328  25.29%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                99.2      0.2985 µg/L       0.15094      0.2985 ppb        0.15094  50.57%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                14.9      2.8479 µg/L       0.57826      2.8479 ppb        0.57826  20.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                124.5      7.5045 µg/L       5.02066      7.5045 ppb        5.02066  66.90%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -87.8     -0.9662 µg/L       0.70403     -0.9662 ppb        0.70403  72.87%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               170.9      1.2022 µg/L       0.07821      1.2022 ppb        0.07821   6.51%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Thursday, December 02, 2010 10:33:16
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.2889
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	6479.5	6479.469	94.935	1.5
	Mg	24.0	57898.7	57898.722	1042.332	1.8
	Co	58.9	105039.1	105039.051	1932.017	1.8
	Rh	102.9	209029.0	209028.984	1081.311	0.5
	In	114.9	242176.4	242176.354	1698.964	0.7
	Pb	208.0	249472.2	249472.165	4478.334	1.8
⌈>	Ba	137.9	240625.6	240625.590	2366.256	1.0
⌊	Ba++	69.0	7945.3	0.033	0.001	2.0
⌈>	Ce	139.9	309965.4	309965.396	2245.764	0.7
⌊	CeO	155.9	7480.6	0.024	0.000	1.5
	Bkgd	220.0	21.9	21.900	2.608	11.9

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
5.75	Lens Voltage
1450.00	ICP RF Power
-1875.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
200.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	13	8.0	6635.9
Co	59	13	8.8	108184.4
In	115	13	9.3	259430.8

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	603	2065	0.616
Be	9.0	9.1	2052	2090	0.613
Mg	24.0	24.0	5693	2075	0.638
Mg	25.0	25.0	5941	2090	0.608
Mg	26.0	25.9	6162	2090	0.626
Co	58.9	58.9	14184	2115	0.608
Rh	102.9	102.9	24871	2170	0.625
In	114.9	114.9	27785	2195	0.611
Ce	139.9	139.9	33869	2220	0.611
Pb	206.0	206.0	49948	2315	0.604
Pb	207.0	207.0	50171	2250	0.660
Pb	208.0	208.0	50450	2280	0.714
U	238.1	238.0	57731	2295	0.739

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Thursday, December 02, 2010 18:15:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\Blank.204

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		29	
	Be	9		ug/L		15	
	B	11		ug/L		426	
	Na	23		ug/L		79554	
	Mg	24		ug/L		4001	
	Al	27		ug/L		9336	
	P	31		ug/L		10005	
	K	39		ug/L		498964	
	Ca	43		ug/L		624	
>	Sc	45		ug/L		1044370	
	Ti	47		ug/L		732	
	V	51		ug/L		3653	
	Cr	52		ug/L		1720	
	Cr	53		ug/L		154706	
	Mn	55		ug/L		1319	
	Fe	57		ug/L		7405	
	Co	59		ug/L		252	
	Ni	60		ug/L		418	
	Cu	63		ug/L		410	
	Cu	65		ug/L		285	
	Zn	66		ug/L		741	
	Zn	67		ug/L		27130	
	Zn	68		ug/L		2091	
>	Ge	74		ug/L		573993	
	As	75		ug/L		211	
	Se	77		ug/L		8047	
	Se	82		ug/L		-25	
	Kr	83		ug/L		146	
	Sr	88		ug/L		330	
	Y	89		ug/L		78	
	Mo	98		ug/L		231	
	Ag	107		ug/L		74	
	Cd	111		ug/L		31	
	Cd	114		ug/L		138	
>	In	115		ug/L		327214	
	Sn	120		ug/L		448	
	Sb	121		ug/L		109	
	Sb	123		ug/L		104	
	Ba	135		ug/L		42	
	Ba	137		ug/L		61	
	Ho	165		ug/L		83	
>	Lu	175		ug/L		554142	
	Tl	205		ug/L		1884	
	Pb	208		ug/L		8195	
	Bi	209		ug/L		1006	
	Th	232		ug/L		825	
	U	238		ug/L		214	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Simple Linear	
Be	9	Simple Linear	
B	11	Simple Linear	
Na	23	Simple Linear	
Mg	24	Simple Linear	
Al	27	Simple Linear	
P	31	Simple Linear	
K	39	Simple Linear	
Ca	43	Simple Linear	
Sc	45	Simple Linear	
Ti	47	Simple Linear	
V	51	Simple Linear	
Cr	52	Simple Linear	
Cr	53	Simple Linear	
Mn	55	Simple Linear	
Fe	57	Simple Linear	
Co	59	Simple Linear	
Ni	60	Simple Linear	
Cu	63	Simple Linear	
Cu	65	Simple Linear	
Zn	66	Simple Linear	
Zn	67	Simple Linear	
Zn	68	Simple Linear	
Ge	74	Simple Linear	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	82	Simple Linear	
Kr	83	Simple Linear	
Sr	88	Simple Linear	
Y	89	Simple Linear	
Mo	98	Simple Linear	
Ag	107	Simple Linear	
Cd	111	Simple Linear	
Cd	114	Simple Linear	
In	115	Simple Linear	
Sn	120	Simple Linear	
Sb	121	Simple Linear	
Sb	123	Simple Linear	
Ba	135	Simple Linear	
Ba	137	Simple Linear	
Ho	165	Simple Linear	
Lu	175	Linear Thru Zero	
Tl	205	Simple Linear	
Pb	208	Simple Linear	
Bi	209	Simple Linear	
Th	232	Simple Linear	
U	238	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Thursday, December 02, 2010 18:22:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\Standard 1.205

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	1.239	29008	0.027
	Be	9	**10.000**	**ug/L**	1.515	7367	0.007
	B	11	**20.000**	**ug/L**	3.611	15052	0.014
	Na	23	**1000.000**	**ug/L**	7.683	6078113	5.675
	Mg	24	**1000.000**	**ug/L**	9.339	4040040	3.824
	Al	27	**1000.000**	**ug/L**	9.248	5312174	5.023
	P	31	**1000.000**	**ug/L**	3.522	363537	0.335
	K	39	**1000.000**	**ug/L**	1.399	6838540	5.999
	Ca	43	**1000.000**	**ug/L**	3.626	15335	0.014
>	Sc	45		**ug/L**		1055920	1055920.077
	Ti	47	**10.000**	**ug/L**	3.881	8791	0.008
	V	51	**10.000**	**ug/L**	12.243	93643	0.085
	Cr	52	**10.000**	**ug/L**	4.919	80643	0.075
	Cr	53		**ug/L**		136917	-0.018
	Mn	55	**10.000**	**ug/L**	1.428	121884	0.114
	Fe	57	**1000.000**	**ug/L**	3.061	245214	0.225
	Co	59	**10.000**	**ug/L**	3.950	98626	0.093
	Ni	60	**10.000**	**ug/L**	4.827	21858	0.020
	Cu	63		**ug/L**		50870	0.048
	Cu	65	**10.000**	**ug/L**	1.368	25239	0.024
	Zn	66	**10.000**	**ug/L**	2.191	17040	0.028
	Zn	67		**ug/L**		22665	-0.008
	Zn	68		**ug/L**		14668	0.022
>	Ge	74		**ug/L**		576782	576781.829
	As	75	**10.000**	**ug/L**	3.037	16747	0.029
	Se	77		**ug/L**		7733	-0.001
	Se	82	**10.000**	**ug/L**	3.052	1635	0.003
	Kr	83		**ug/L**		145	-0.000
	Sr	88	**10.000**	**ug/L**	2.516	191114	0.562
	Y	89		**ug/L**		122	0.000
	Mo	98	**10.000**	**ug/L**	2.789	46975	0.138
	Ag	107	**10.000**	**ug/L**	1.565	84746	0.249
	Cd	111	**10.000**	**ug/L**	5.230	19872	0.058
	Cd	114		**ug/L**		47125	0.138
>	In	115		**ug/L**		339694	339694.481
	Sn	120	**10.000**	**ug/L**	2.887	75518	0.221
	Sb	121	**10.000**	**ug/L**	3.473	66827	0.197
	Sb	123		**ug/L**		51946	0.153
	Ba	135		**ug/L**		19774	0.035
	Ba	137	**10.000**	**ug/L**	0.541	35367	0.062
	Ho	165		**ug/L**		82	-0.000
>	Lu	175		**ug/L**		569700	569700.136
	Tl	205	**10.000**	**ug/L**	1.236	239907	0.418
	Pb	208	**10.000**	**ug/L**	0.493	438426	0.755
	Bi	209		**ug/L**		991	-0.000
	Th	232	**10.000**	**ug/L**	5.968	445126	0.779
	U	238	**10.000**	**ug/L**	1.405	557413	0.978

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Thursday, December 02, 2010 18:28:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\Standard 2.206

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**99.930**	**ug/L**	3.380	276956	0.256
	Be	9	**99.923**	**ug/L**	4.144	69790	0.065
	B	11	**199.844**	**ug/L**	5.038	139056	0.128
	Na	23	**9983.889**	**ug/L**	2.355	52823028	48.798
	Mg	24	**9995.602**	**ug/L**	11.105	39570366	36.617
	Al	27	**9998.778**	**ug/L**	10.485	53660744	49.621
	P	31	**9983.268**	**ug/L**	3.051	3102984	2.863
	K	39	**9993.071**	**ug/L**	13.051	61079349	56.068
	Ca	43	**9997.619**	**ug/L**	4.621	147536	0.136
>	Sc	45		**ug/L**		1080616	1080616.143
	Ti	47	**99.968**	**ug/L**	5.428	80550	0.074
	V	51	**99.930**	**ug/L**	2.728	863937	0.796
	Cr	52	**99.935**	**ug/L**	2.687	759717	0.702
	Cr	53		**ug/L**		212718	0.049
	Mn	55	**99.932**	**ug/L**	2.999	1155293	1.068
	Fe	57	**9989.145**	**ug/L**	4.808	2198658	2.029
	Co	59	**99.936**	**ug/L**	3.539	945895	0.876
	Ni	60	**99.973**	**ug/L**	3.006	213982	0.198
	Cu	63		**ug/L**		489102	0.452
	Cu	65	**99.958**	**ug/L**	2.522	245268	0.227
	Zn	66	**99.941**	**ug/L**	1.941	159805	0.267
	Zn	67		**ug/L**		47041	0.032
	Zn	68		**ug/L**		125327	0.206
>	Ge	74		**ug/L**		596682	596682.485
	As	75	**100.030**	**ug/L**	0.653	176601	0.296
	Se	77		**ug/L**		19610	0.019
	Se	82	**100.023**	**ug/L**	3.297	17550	0.029
	Kr	83		**ug/L**		163	0.000
	Sr	88	**99.905**	**ug/L**	1.988	1735779	5.126
	Y	89		**ug/L**		432	0.001
	Mo	98	**100.038**	**ug/L**	1.613	484791	1.431
	Ag	107	**99.965**	**ug/L**	0.569	815622	2.409
	Cd	111	**100.003**	**ug/L**	1.018	198707	0.587
	Cd	114		**ug/L**		454648	1.342
>	In	115		**ug/L**		338589	338589.204
	Sn	120	**100.007**	**ug/L**	1.975	754733	2.228
	Sb	121	**99.999**	**ug/L**	1.146	665245	1.965
	Sb	123		**ug/L**		520209	1.536
	Ba	135		**ug/L**		195789	0.339
	Ba	137	**99.975**	**ug/L**	2.544	349442	0.605
	Ho	165		**ug/L**		108	0.000
>	Lu	175		**ug/L**		577899	577898.575
	Tl	205	**99.825**	**ug/L**	0.888	2053432	3.550
	Pb	208	**99.880**	**ug/L**	1.876	3899534	6.734
	Bi	209		**ug/L**		1831	0.001
	Th	232	**99.999**	**ug/L**	3.300	4502895	7.788
	U	238	**99.837**	**ug/L**	1.888	4850467	8.395

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Thursday, December 02, 2010 18:34:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 1.207

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.193**	**ug/L**	0.971	142586	0.134
	Be	9	**51.276**	**ug/L**	1.887	35308	0.033
	B	11	**103.319**	**ug/L**	4.596	71065	0.066
	Na	23	**5722.681**	**ug/L**	8.663	29835229	27.971
	Mg	24	**4998.156**	**ug/L**	12.896	19466158	18.310
	Al	27	**4876.451**	**ug/L**	11.638	25758355	24.201
	P	31	**5395.941**	**ug/L**	4.175	1657110	1.548
	K	39	**5688.878**	**ug/L**	7.394	34460308	31.918
	Ca	43	**5143.640**	**ug/L**	3.417	75122	0.070
>	Sc	45		**ug/L**		1064765	1064764.730
	Ti	47	**53.337**	**ug/L**	1.584	42705	0.039
	V	51	**52.204**	**ug/L**	0.579	446712	0.416
	Cr	52	**51.537**	**ug/L**	1.075	386987	0.362
	Cr	53		**ug/L**		171436	0.013
	Mn	55	**52.060**	**ug/L**	3.388	593705	0.557
	Fe	57	**5306.701**	**ug/L**	3.750	1154752	1.078
	Co	59	**49.935**	**ug/L**	2.459	466006	0.438
	Ni	60	**50.018**	**ug/L**	1.820	105724	0.099
	Cu	63		**ug/L**		252656	0.237
	Cu	65	**52.327**	**ug/L**	3.093	126650	0.119
	Zn	66	**49.352**	**ug/L**	3.282	81584	0.132
	Zn	67		**ug/L**		34344	0.009
	Zn	68		**ug/L**		65474	0.103
>	Ge	74		**ug/L**		613887	613886.789
	As	75	**48.613**	**ug/L**	1.878	88407	0.144
	Se	77		**ug/L**		12707	0.007
	Se	82	**48.998**	**ug/L**	1.196	8832	0.014
	Kr	83		**ug/L**		164	0.000
	Sr	88	**53.160**	**ug/L**	1.950	931366	2.728
	Y	89		**ug/L**		134	0.000
	Mo	98	**49.534**	**ug/L**	1.774	242148	0.709
	Ag	107	**50.823**	**ug/L**	0.258	418110	1.225
	Cd	111	**50.635**	**ug/L**	1.186	101451	0.297
	Cd	114		**ug/L**		234284	0.686
>	In	115		**ug/L**		341376	341375.634
	Sn	120	**49.987**	**ug/L**	1.133	380566	1.113
	Sb	121	**47.695**	**ug/L**	0.903	320002	0.937
	Sb	123		**ug/L**		254809	0.746
	Ba	135		**ug/L**		96240	0.166
	Ba	137	**48.944**	**ug/L**	0.638	171582	0.296
	Ho	165		**ug/L**		100	0.000
>	Lu	175		**ug/L**		579319	579318.870
	Tl	205	**52.736**	**ug/L**	0.424	1088375	1.875
	Pb	208	**53.190**	**ug/L**	2.006	2085846	3.586
	Bi	209		**ug/L**		901	-0.000
	Th	232	**48.447**	**ug/L**	3.085	2187017	3.773
	U	238	**52.474**	**ug/L**	0.953	2556489	4.412

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	104.386				
	Be	9	102.552				
	B	11	103.319				
	Na	23	114.454				
	Mg	24	99.963				
	Al	27	96.563				
	P	31	107.919				
	K	39	113.778				
	Ca	43	102.873				
>	Sc	45		102.0			
	Ti	47	106.673				
	V	51	104.409				
	Cr	52	103.074				
	Cr	53					
	Mn	55	104.120				
	Fe	57	106.134				
	Co	59	99.870				
	Ni	60	100.036				
	Cu	63					
	Cu	65	104.655				
	Zn	66	98.704				
	Zn	67					
	Zn	68					
>	Ge	74		107.0			
	As	75	97.226				
	Se	77					
	Se	82	97.996				
	Kr	83					
	Sr	88	106.321				
	Y	89					
	Mo	98	99.068				
	Ag	107	101.646				
	Cd	111	101.270				
	Cd	114					
>	In	115		104.3			
	Sn	120	99.974				
	Sb	121	95.390				
	Sb	123					
	Ba	135					
	Ba	137	97.888				
	Ho	165					
>	Lu	175		104.5			
	Tl	205	105.472				
	Pb	208	106.381				
	Bi	209					
	Th	232	96.895				
	U	238	104.948				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Na	23	ICV is out of limits (+/- 10%)
QC Std 1	K	39	ICV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Thursday, December 02, 2010 18:40:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 2.208

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.020**	**ug/L**	20.661	84	0.000
	Be	9	**0.002**	**ug/L**	54.104	16	0.000
	B	11	**3.095**	**ug/L**	10.405	2511	0.002
	Na	23	**-0.616**	**ug/L**	610.314	76883	-0.003
	Mg	24	**0.521**	**ug/L**	87.958	6001	0.002
	Al	27	**-0.255**	**ug/L**	402.411	8003	-0.001
	P	31	**2.544**	**ug/L**	117.364	10803	0.001
	K	39	**10.462**	**ug/L**	23.085	561496	0.059
	Ca	43	**2.742**	**ug/L**	87.964	664	0.000
>	Sc	45		**ug/L**		1046749	1046748.764
	Ti	47	**0.065**	**ug/L**	60.931	784	0.000
	V	51	**-0.764**	**ug/L**	131.439	-2581	-0.006
	Cr	52	**0.084**	**ug/L**	64.669	2337	0.001
	Cr	53		**ug/L**		158380	0.003
	Mn	55	**0.008**	**ug/L**	30.038	1412	0.000
	Fe	57	**2.814**	**ug/L**	39.575	8024	0.001
	Co	59	**0.005**	**ug/L**	28.825	300	0.000
	Ni	60	**-0.006**	**ug/L**	257.932	407	-0.000
	Cu	63		**ug/L**		484	0.000
	Cu	65	**0.024**	**ug/L**	7.236	343	0.000
	Zn	66	**0.015**	**ug/L**	136.169	779	0.000
	Zn	67		**ug/L**		26799	-0.001
	Zn	68		**ug/L**		2142	0.000
>	Ge	74		**ug/L**		585160	585160.476
	As	75	**-0.075**	**ug/L**	249.835	89	-0.000
	Se	77		**ug/L**		7859	-0.001
	Se	82	**0.068**	**ug/L**	37.329	-14	0.000
	Kr	83		**ug/L**		149	0.000
	Sr	88	**0.003**	**ug/L**	57.653	392	0.000
	Y	89		**ug/L**		75	-0.000
	Mo	98	**0.221**	**ug/L**	26.322	1309	0.003
	Ag	107	**0.016**	**ug/L**	12.635	210	0.000
	Cd	111	**0.022**	**ug/L**	20.605	77	0.000
	Cd	114		**ug/L**		167	0.000
>	In	115		**ug/L**		338119	338119.007
	Sn	120	**0.680**	**ug/L**	20.997	5584	0.015
	Sb	121	**0.419**	**ug/L**	30.550	2896	0.008
	Sb	123		**ug/L**		2275	0.006
	Ba	135		**ug/L**		50	0.000
	Ba	137	**0.001**	**ug/L**	322.361	66	0.000
	Ho	165		**ug/L**		81	-0.000
>	Lu	175		**ug/L**		568962	568962.056
	Tl	205	**0.303**	**ug/L**	27.462	8022	0.011
	Pb	208	**0.003**	**ug/L**	172.047	8535	0.000
	Bi	209		**ug/L**		1022	-0.000
	Th	232	**1.271**	**ug/L**	30.788	56785	0.099
	U	238	**0.073**	**ug/L**	30.339	3688	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		102.7			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 2	Th	232	ICB is out of limits (+/-PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Thursday, December 02, 2010 18:46:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 3.209

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**12.268**	**ug/L**	1.409	32936	0.031
	Be	9	**0.543**	**ug/L**	5.884	382	0.000
	B	11	**18.556**	**ug/L**	2.874	12888	0.012
	Na	23	**301.298**	**ug/L**	4.652	1619684	1.473
	Mg	24	**18.418**	**ug/L**	9.187	74528	0.067
	Al	27	**36.560**	**ug/L**	2.163	199044	0.181
	P	31	**60.730**	**ug/L**	6.579	28223	0.017
	K	39	**330.332**	**ug/L**	0.863	2437499	1.853
	Ca	43	**228.089**	**ug/L**	4.431	3869	0.003
>	Sc	45		**ug/L**		1045641	1045640.714
	Ti	47	**9.303**	**ug/L**	1.887	7919	0.007
	V	51	**11.270**	**ug/L**	13.089	97645	0.090
	Cr	52	**11.882**	**ug/L**	0.887	88957	0.083
	Cr	53		**ug/L**		168989	0.013
	Mn	55	**6.191**	**ug/L**	3.394	70514	0.066
	Fe	57	**126.477**	**ug/L**	2.642	34272	0.026
	Co	59	**1.207**	**ug/L**	2.998	11308	0.011
	Ni	60	**2.276**	**ug/L**	2.080	5124	0.005
	Cu	63		**ug/L**		6314	0.006
	Cu	65	**1.200**	**ug/L**	2.161	3131	0.003
	Zn	66	**10.715**	**ug/L**	2.837	17408	0.029
	Zn	67		**ug/L**		29050	0.003
	Zn	68		**ug/L**		14802	0.022
>	Ge	74		**ug/L**		582949	582949.250
	As	75	**5.242**	**ug/L**	5.846	9244	0.015
	Se	77		**ug/L**		8482	0.001
	Se	82	**5.026**	**ug/L**	0.475	837	0.001
	Kr	83		**ug/L**		156	0.000
	Sr	88	**12.174**	**ug/L**	1.151	213079	0.625
	Y	89		**ug/L**		97	0.000
	Mo	98	**0.558**	**ug/L**	2.327	2959	0.008
	Ag	107	**1.045**	**ug/L**	1.253	8649	0.025
	Cd	111	**1.127**	**ug/L**	4.284	2284	0.007
	Cd	114		**ug/L**		5091	0.015
>	In	115		**ug/L**		340590	340590.269
	Sn	120	**5.458**	**ug/L**	3.055	41868	0.122
	Sb	121	**2.398**	**ug/L**	11.264	16166	0.047
	Sb	123		**ug/L**		12786	0.037
	Ba	135		**ug/L**		4344	0.008
	Ba	137	**2.234**	**ug/L**	3.250	7790	0.014
	Ho	165		**ug/L**		82	-0.000
>	Lu	175		**ug/L**		571881	571880.861
	Tl	205	**1.346**	**ug/L**	2.892	29313	0.048
	Pb	208	**2.487**	**ug/L**	4.122	104296	0.168
	Bi	209		**ug/L**		1061	0.000
	Th	232	**1.705**	**ug/L**	2.497	76777	0.133
	U	238	**0.303**	**ug/L**	1.929	14799	0.025

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	122.680				
	Be	9	108.655				
	B	11	123.707				
	Na	23	120.519				
	Mg	24	122.789				
	Al	27	121.868				
	P	31	121.459				
	K	39	110.111				
	Ca	43	114.044				
>	Sc	45		100.1			
	Ti	47	93.034				
	V	51	112.699				
	Cr	52	118.819				
	Cr	53					
	Mn	55	123.824				
	Fe	57	126.477				
	Co	59	120.709				
	Ni	60	113.791				
	Cu	63					
	Cu	65	119.968				
	Zn	66	107.147				
	Zn	67					
	Zn	68					
>	Ge	74		101.6			
	As	75	104.838				
	Se	77					
	Se	82	100.515				
	Kr	83					
	Sr	88	121.735				
	Y	89					
	Mo	98	111.560				
	Ag	107	104.470				
	Cd	111	112.670				
	Cd	114					
>	In	115		104.1			
	Sn	120	109.162				
	Sb	121	79.947				
	Sb	123					
	Ba	135					
	Ba	137	111.722				
	Ho	165					
>	Lu	175		103.2			
	Tl	205	134.627				
	Pb	208	124.343				
	Bi	209					
	Th	232	170.496				
	U	238	151.612				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Tl	205	CRDL is out of limits
QC Std 3	Th	232	CRDL is out of limits
QC Std 3	U	238	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Thursday, December 02, 2010 18:52:35
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 4.210

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.225**	**ug/L**	9.118	592	0.001
	Be	9	**0.071**	**ug/L**	18.493	59	0.000
	B	11	**1.959**	**ug/L**	6.608	1632	0.001
	Na	23	**92767.084**	**ug/L**	8.306	444430788	453.415
	Mg	24	**90169.078**	**ug/L**	4.132	323609707	330.314
	Al	27	**88003.193**	**ug/L**	8.344	427752790	436.738
	P	31	**87188.690**	**ug/L**	1.482	24509022	25.006
	K	39	**108883.164**	**ug/L**	7.001	598825236	610.905
	Ca	43	**95510.448**	**ug/L**	1.356	1273791	1.300
>	Sc	45		**ug/L**		979796	979795.967
	Ti	47	**1789.999**	**ug/L**	1.236	1296240	1.322
	V	51	**-0.630**	**ug/L**	123.640	-1495	-0.005
	Cr	52	**2.295**	**ug/L**	3.701	17397	0.016
	Cr	53		**ug/L**		101304	-0.045
	Mn	55	**1.782**	**ug/L**	0.867	19903	0.019
	Fe	57	**101757.780**	**ug/L**	0.834	20258342	20.669
	Co	59	**0.344**	**ug/L**	2.550	3193	0.003
	Ni	60	**2.842**	**ug/L**	1.046	5899	0.006
	Cu	63		**ug/L**		7740	0.008
	Cu	65	**2.503**	**ug/L**	3.548	5830	0.006
	Zn	66	**6.438**	**ug/L**	1.512	10136	0.017
	Zn	67		**ug/L**		19711	-0.011
	Zn	68		**ug/L**		5463	0.006
>	Ge	74		**ug/L**		549011	549010.632
	As	75	**-0.284**	**ug/L**	118.032	-259	-0.001
	Se	77		**ug/L**		7766	0.000
	Se	82	**-1.009**	**ug/L**	6.034	-187	-0.000
	Kr	83		**ug/L**		463	0.001
	Sr	88	**3.046**	**ug/L**	1.481	49273	0.156
	Y	89		**ug/L**		754	0.002
	Mo	98	**1987.903**	**ug/L**	1.582	8907960	28.440
	Ag	107	**0.144**	**ug/L**	11.940	1159	0.003
	Cd	111	**0.295**	**ug/L**	60.360	572	0.002
	Cd	114		**ug/L**		12482	0.039
>	In	115		**ug/L**		313205	313204.804
	Sn	120	**0.677**	**ug/L**	3.430	5154	0.015
	Sb	121	**0.297**	**ug/L**	25.928	1933	0.006
	Sb	123		**ug/L**		1517	0.005
	Ba	135		**ug/L**		1018	0.002
	Ba	137	**0.516**	**ug/L**	3.155	1725	0.003
	Ho	165		**ug/L**		515	0.001
>	Lu	175		**ug/L**		533701	533701.500
	Tl	205	**0.116**	**ug/L**	5.520	4011	0.004
	Pb	208	**0.399**	**ug/L**	2.071	22253	0.027
	Bi	209		**ug/L**		7971	0.013
	Th	232	**0.975**	**ug/L**	38.556	41161	0.076
	U	238	**0.016**	**ug/L**	10.498	913	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	92.767				
	Mg	24	90.169				
	Al	27	88.003				
	P	31	87.189				
	K	39	108.883				
	Ca	43	95.510				
>	Sc	45		93.8			
	Ti	47	89.500				
	V	51					
	Cr	52	74.475				
	Cr	53					
	Mn	55	119.274				
	Fe	57	101.758				
	Co	59	119.191				
	Ni	60	93.126				
	Cu	63					
	Cu	65	88.397				
	Zn	66	109.647				
	Zn	67					
	Zn	68					
>	Ge	74		95.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	121.664				
	Y	89					
	Mo	98	99.395				
	Ag	107					
	Cd	111	491.019				
	Cd	114					
>	In	115		95.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137	160.768				
	Ho	165					
>	Lu	175		96.3			
	Tl	205					
	Pb	208	143.578				
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Thursday, December 02, 2010 18:58:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 5.211

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.339**	**ug/L**	2.203	51891	0.055
	Be	9	**18.524**	**ug/L**	1.311	11361	0.012
	B	11	**18.753**	**ug/L**	2.357	11799	0.012
	Na	23	**101395.188**	**ug/L**	4.630	469864098	495.586
	Mg	24	**97686.987**	**ug/L**	3.891	338968068	357.854
	Al	27	**87308.769**	**ug/L**	3.949	410696339	433.291
	P	31	**87430.396**	**ug/L**	2.221	23765468	25.076
	K	39	**103369.434**	**ug/L**	9.822	549507788	579.970
	Ca	43	**96247.125**	**ug/L**	1.104	1241349	1.310
>	Sc	45		**ug/L**		947555	947555.202
	Ti	47	**1802.868**	**ug/L**	1.004	1262488	1.332
	V	51	**22.471**	**ug/L**	2.283	172958	0.179
	Cr	52	**24.325**	**ug/L**	2.349	163364	0.171
	Cr	53		**ug/L**		116398	-0.025
	Mn	55	**24.659**	**ug/L**	1.391	250967	0.264
	Fe	57	**104602.949**	**ug/L**	2.863	20134324	21.247
	Co	59	**21.999**	**ug/L**	1.931	182829	0.193
	Ni	60	**23.498**	**ug/L**	0.853	44409	0.046
	Cu	63		**ug/L**		94919	0.100
	Cu	65	**22.454**	**ug/L**	3.121	48519	0.051
	Zn	66	**24.625**	**ug/L**	3.747	36303	0.066
	Zn	67		**ug/L**		23556	-0.004
	Zn	68		**ug/L**		26179	0.045
>	Ge	74		**ug/L**		542329	542328.976
	As	75	**20.610**	**ug/L**	2.694	33222	0.061
	Se	77		**ug/L**		9974	0.004
	Se	82	**19.115**	**ug/L**	3.908	3029	0.006
	Kr	83		**ug/L**		453	0.001
	Sr	88	**26.598**	**ug/L**	0.770	424224	1.365
	Y	89		**ug/L**		736	0.002
	Mo	98	**1997.526**	**ug/L**	0.372	8878001	28.578
	Ag	107	**19.863**	**ug/L**	0.753	148740	0.479
	Cd	111	**19.662**	**ug/L**	1.522	35870	0.115
	Cd	114		**ug/L**		94146	0.303
>	In	115		**ug/L**		310661	310660.621
	Sn	120	**21.574**	**ug/L**	0.995	149730	0.481
	Sb	121	**20.528**	**ug/L**	1.297	125376	0.403
	Sb	123		**ug/L**		98440	0.317
	Ba	135		**ug/L**		39189	0.074
	Ba	137	**21.349**	**ug/L**	0.626	68642	0.129
	Ho	165		**ug/L**		547	0.001
>	Lu	175		**ug/L**		531084	531084.388
	Tl	205	**22.053**	**ug/L**	1.290	418305	0.784
	Pb	208	**22.361**	**ug/L**	1.805	808431	1.508
	Bi	209		**ug/L**		8126	0.013
	Th	232	**23.261**	**ug/L**	0.151	962908	1.812
	U	238	**24.236**	**ug/L**	2.029	1082565	2.038

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	106.697				
	Be	9	92.618				
	B	11	93.766				
	Na	23	101.395				
	Mg	24	97.687				
	Al	27	87.309				
	P	31	87.430				
	K	39	103.369				
	Ca	43	96.247				
>	Sc	45		90.7			
	Ti	47	90.143				
	V	51	112.355				
	Cr	52	105.388				
	Cr	53					
	Mn	55	114.725				
	Fe	57	104.603				
	Co	59	108.427				
	Ni	60	100.828				
	Cu	63					
	Cu	65	98.350				
	Zn	66	95.180				
	Zn	67					
	Zn	68					
>	Ge	74		94.5			
	As	75	103.050				
	Se	77					
	Se	82	95.573				
	Kr	83					
	Sr	88	118.190				
	Y	89					
	Mo	98	99.876				
	Ag	107	99.315				
	Cd	111	98.016				
	Cd	114					
>	In	115		94.9			
	Sn	120	107.872				
	Sb	121	102.638				
	Sb	123					
	Ba	135					
	Ba	137	105.060				
	Ho	165					
>	Lu	175		95.8			
	Tl	205	110.263				
	Pb	208	110.272				
	Bi	209					
	Th	232	116.304				
	U	238	121.182				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	U	238	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, December 02, 2010 19:04:48
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 6.212

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.648**	**ug/L**	1.297	132120	0.133
	Be	9	**48.733**	**ug/L**	1.741	31425	0.032
	B	11	**93.503**	**ug/L**	2.566	60291	0.060
	Na	23	**4706.225**	**ug/L**	9.394	23008179	23.002
	Mg	24	**4483.726**	**ug/L**	2.250	16380370	16.425
	Al	27	**4413.254**	**ug/L**	15.238	21862561	21.902
	P	31	**5246.616**	**ug/L**	1.671	1509863	1.505
	K	39	**5411.081**	**ug/L**	1.554	30746023	30.360
	Ca	43	**5193.062**	**ug/L**	2.749	71049	0.071
>	Sc	45		**ug/L**		996959	996959.026
	Ti	47	**56.566**	**ug/L**	2.941	42350	0.042
	V	51	**52.011**	**ug/L**	1.132	416703	0.414
	Cr	52	**52.233**	**ug/L**	0.886	367261	0.367
	Cr	53		**ug/L**		160848	0.013
	Mn	55	**52.677**	**ug/L**	2.442	562642	0.563
	Fe	57	**5375.092**	**ug/L**	1.693	1095443	1.092
	Co	59	**51.124**	**ug/L**	0.880	446780	0.448
	Ni	60	**51.366**	**ug/L**	1.195	101672	0.102
	Cu	63		**ug/L**		241650	0.242
	Cu	65	**52.935**	**ug/L**	0.312	120003	0.120
	Zn	66	**49.691**	**ug/L**	1.362	77188	0.133
	Zn	67		**ug/L**		32066	0.008
	Zn	68		**ug/L**		61558	0.103
>	Ge	74		**ug/L**		576765	576764.635
	As	75	**49.267**	**ug/L**	2.825	84194	0.146
	Se	77		**ug/L**		11756	0.006
	Se	82	**49.561**	**ug/L**	1.245	8394	0.015
	Kr	83		**ug/L**		145	-0.000
	Sr	88	**52.181**	**ug/L**	0.180	898035	2.677
	Y	89		**ug/L**		128	0.000
	Mo	98	**49.341**	**ug/L**	1.834	236911	0.706
	Ag	107	**50.785**	**ug/L**	1.519	410343	1.224
	Cd	111	**49.914**	**ug/L**	1.089	98230	0.293
	Cd	114		**ug/L**		225530	0.672
>	In	115		**ug/L**		335304	335304.395
	Sn	120	**49.360**	**ug/L**	1.736	369100	1.100
	Sb	121	**48.076**	**ug/L**	2.640	316769	0.945
	Sb	123		**ug/L**		248907	0.742
	Ba	135		**ug/L**		92253	0.161
	Ba	137	**47.305**	**ug/L**	2.482	164011	0.286
	Ho	165		**ug/L**		107	0.000
>	Lu	175		**ug/L**		573096	573095.836
	Tl	205	**52.924**	**ug/L**	1.602	1080645	1.882
	Pb	208	**53.648**	**ug/L**	1.180	2081091	3.617
	Bi	209		**ug/L**		952	-0.000
	Th	232	**49.919**	**ug/L**	1.585	2229087	3.888
	U	238	**52.808**	**ug/L**	2.160	2544511	4.440

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	103.296				
	Be	9	97.466				
	B	11	93.503				
	Na	23	94.124				
	Mg	24	89.675				
	Al	27	87.391				
	P	31	104.932				
	K	39	108.222				
	Ca	43	103.861				
>	Sc	45		95.5			
	Ti	47	113.132				
	V	51	104.022				
	Cr	52	104.466				
	Cr	53					
	Mn	55	105.354				
	Fe	57	107.502				
	Co	59	102.249				
	Ni	60	102.733				
	Cu	63					
	Cu	65	105.870				
	Zn	66	99.382				
	Zn	67					
	Zn	68					
>	Ge	74		100.5			
	As	75	98.534				
	Se	77					
	Se	82	99.123				
	Kr	83					
	Sr	88	104.361				
	Y	89					
	Mo	98	98.681				
	Ag	107	101.570				
	Cd	111	99.829				
	Cd	114					
>	In	115		102.5			
	Sn	120	98.719				
	Sb	121	96.152				
	Sb	123					
	Ba	135					
	Ba	137	94.611				
	Ho	165					
>	Lu	175		103.4			
	Tl	205	105.848				
	Pb	208	107.295				
	Bi	209					
	Th	232	99.838				
	U	238	105.615				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mg	24	CCV is out of limits (+/- 10%)
QC Std 6	Al	27	CCV is out of limits (+/- 10%)
QC Std 6	Ti	47	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, December 02, 2010 19:10:56
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 7.213

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.012**	**ug/L**	47.121	58	0.000
	Be	9	**0.004**	**ug/L**	186.461	17	0.000
	B	11	**1.966**	**ug/L**	14.331	1671	0.001
	Na	23	**-4.198**	**ug/L**	59.271	55779	-0.021
	Mg	24	**1.868**	**ug/L**	31.393	10671	0.007
	Al	27	**1.158**	**ug/L**	67.938	14675	0.006
	P	31	**4.584**	**ug/L**	55.783	10894	0.001
	K	39	**11.637**	**ug/L**	77.970	542831	0.065
	Ca	43	**3.146**	**ug/L**	39.894	641	0.000
>	Sc	45		**ug/L**		1000408	1000408.000
	Ti	47	**1.697**	**ug/L**	13.634	1955	0.001
	V	51	**-0.761**	**ug/L**	115.765	-2624	-0.006
	Cr	52	**-0.095**	**ug/L**	65.278	978	-0.001
	Cr	53		**ug/L**		151759	0.004
	Mn	55	**0.004**	**ug/L**	70.811	1309	0.000
	Fe	57	**5.143**	**ug/L**	38.638	8136	0.001
	Co	59	**0.000**	**ug/L**	378.309	245	0.000
	Ni	60	**-0.011**	**ug/L**	73.979	378	-0.000
	Cu	63		**ug/L**		467	0.000
	Cu	65	**0.019**	**ug/L**	55.007	317	0.000
	Zn	66	**0.027**	**ug/L**	25.738	759	0.000
	Zn	67		**ug/L**		25023	-0.002
	Zn	68		**ug/L**		2020	-0.000
>	Ge	74		**ug/L**		556907	556907.244
	As	75	**-0.288**	**ug/L**	79.509	-273	-0.001
	Se	77		**ug/L**		7337	-0.001
	Se	82	**-0.005**	**ug/L**	2853.328	-25	-0.000
	Kr	83		**ug/L**		156	0.000
	Sr	88	**0.001**	**ug/L**	142.802	357	0.000
	Y	89		**ug/L**		92	0.000
	Mo	98	**0.335**	**ug/L**	16.585	1818	0.005
	Ag	107	**0.012**	**ug/L**	16.143	170	0.000
	Cd	111	**0.023**	**ug/L**	51.567	76	0.000
	Cd	114		**ug/L**		148	0.000
>	In	115		**ug/L**		330306	330306.176
	Sn	120	**0.566**	**ug/L**	19.329	4619	0.013
	Sb	121	**0.448**	**ug/L**	27.278	3021	0.009
	Sb	123		**ug/L**		2384	0.007
	Ba	135		**ug/L**		50	0.000
	Ba	137	**0.002**	**ug/L**	21.682	70	0.000
	Ho	165		**ug/L**		74	-0.000
>	Lu	175		**ug/L**		566985	566985.474
	Tl	205	**0.294**	**ug/L**	28.392	7852	0.010
	Pb	208	**0.017**	**ug/L**	18.050	9042	0.001
	Bi	209		**ug/L**		971	-0.000
	Th	232	**1.047**	**ug/L**	33.088	47021	0.082
	U	238	**0.053**	**ug/L**	29.998	2740	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		95.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		102.3			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Th	232	CCB is out of limits (+-/ PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Thursday, December 02, 2010 19:17:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 10.214

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**1004.455**	**ug/L**	0.585	2365043	2.577
	Be	9	**928.162**	**ug/L**	1.214	550749	0.600
	B	11	**0.966**	**ug/L**	3.585	944	0.001
	Na	23	**50086.695**	**ug/L**	3.284	224823939	244.807
	Mg	24	**46692.549**	**ug/L**	1.589	157016658	171.047
	Al	27	**46070.776**	**ug/L**	1.937	209851839	228.638
	P	31	**23129.328**	**ug/L**	3.120	6095657	6.634
	K	39	**51469.300**	**ug/L**	6.190	265365008	288.776
	Ca	43	**49815.648**	**ug/L**	1.953	622541	0.678
>	Sc	45		**ug/L**		917818	917817.585
	Ti	47	**42.524**	**ug/L**	3.226	29466	0.031
	V	51	**938.543**	**ug/L**	2.864	6865822	7.479
	Cr	52	**918.194**	**ug/L**	3.237	5916659	6.447
	Cr	53		**ug/L**		859087	0.788
	Mn	55	**949.309**	**ug/L**	1.614	9314551	10.149
	Fe	57	**50830.282**	**ug/L**	0.894	9481898	10.325
	Co	59	**891.346**	**ug/L**	1.131	7167924	7.809
	Ni	60	**867.937**	**ug/L**	1.263	1575584	1.716
	Cu	63		**ug/L**		3790606	4.130
	Cu	65	**871.145**	**ug/L**	1.765	1814097	1.976
	Zn	66	**2289.195**	**ug/L**	1.709	3209267	6.106
	Zn	67		**ug/L**		549037	0.998
	Zn	68		**ug/L**		2441892	4.643
>	Ge	74		**ug/L**		525543	525543.467
	As	75	**902.125**	**ug/L**	0.917	1401208	2.666
	Se	77		**ug/L**		62581	0.105
	Se	82	**473.346**	**ug/L**	1.593	73243	0.139
	Kr	83		**ug/L**		269	0.000
	Sr	88	**977.573**	**ug/L**	0.609	15616373	50.157
	Y	89		**ug/L**		592	0.002
	Mo	98	**951.397**	**ug/L**	0.671	4237990	13.611
	Ag	107	**220.377**	**ug/L**	2.715	1653050	5.310
	Cd	111	**882.371**	**ug/L**	2.027	1611819	5.177
	Cd	114		**ug/L**		3852773	12.375
>	In	115		**ug/L**		311349	311348.901
	Sn	120	**884.663**	**ug/L**	0.899	6135755	19.706
	Sb	121	**228.915**	**ug/L**	0.355	1400343	4.497
	Sb	123		**ug/L**		1106171	3.553
	Ba	135		**ug/L**		1586310	2.879
	Ba	137	**893.858**	**ug/L**	0.639	2979522	5.407
	Ho	165		**ug/L**		375	0.001
>	Lu	175		**ug/L**		551058	551058.334
	Tl	205	**491.541**	**ug/L**	0.741	9634134	17.479
	Pb	208	**4846.996**	**ug/L**	2.806	180062015	326.786
	Bi	209		**ug/L**		3561	0.005
	Th	232	**2565.456**	**ug/L**	1.590	110102114	199.802
	U	238	**5443.287**	**ug/L**	1.248	252202670	457.698

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	100.446				
	Be	9	92.816				
	B	11					
	Na	23	100.173				
	Mg	24	93.385				
	Al	27	92.142				
	P	31	92.517				
	K	39	102.939				
	Ca	43	99.631				
>	Sc	45		87.9			
	Ti	47					
	V	51	93.854				
	Cr	52	91.819				
	Cr	53					
	Mn	55	94.931				
	Fe	57	101.661				
	Co	59	89.135				
	Ni	60	86.794				
	Cu	63					
	Cu	65	87.114				
	Zn	66	91.568				
	Zn	67					
	Zn	68					
>	Ge	74		91.6			
	As	75	90.213				
	Se	77					
	Se	82	94.669				
	Kr	83					
	Sr	88	97.757				
	Y	89					
	Mo	98	95.140				
	Ag	107	88.151				
	Cd	111	88.237				
	Cd	114					
>	In	115		95.2			
	Sn	120	88.466				
	Sb	121	91.566				
	Sb	123					
	Ba	135					
	Ba	137	89.386				
	Ho	165					
>	Lu	175		99.4			
	Tl	205	98.308				
	Pb	208	96.940				
	Bi	209					
	Th	232	102.618				
	U	238	108.866				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Co	59	LRS is out of limits (+/- 10%)
QC Std 10	Ni	60	LRS is out of limits (+/- 10%)
QC Std 10	Cu	65	LRS is out of limits (+/- 10%)
QC Std 10	Ag	107	LRS is out of limits (+/- 10%)
QC Std 10	Cd	111	LRS is out of limits (+/- 10%)
QC Std 10	Sn	120	LRS is out of limits (+/- 10%)
QC Std 10	Ba	137	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Thursday, December 02, 2010 19:23:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 11.215

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.677**	**ug/L**	0.474	135358	0.138
	Be	9	**50.838**	**ug/L**	2.886	32313	0.033
	B	11	**98.742**	**ug/L**	1.229	62730	0.063
	Na	23	**6027.049**	**ug/L**	5.566	29020059	29.458
	Mg	24	**5637.849**	**ug/L**	13.614	20284894	20.653
	Al	27	**5478.758**	**ug/L**	6.067	26737544	27.190
	P	31	**5395.539**	**ug/L**	2.064	1530016	1.547
	K	39	**5564.642**	**ug/L**	3.747	31158722	31.221
	Ca	43	**5191.304**	**ug/L**	0.551	70002	0.071
>	Sc	45		**ug/L**		982752	982751.964
	Ti	47	**53.651**	**ug/L**	2.027	39634	0.040
	V	51	**52.931**	**ug/L**	2.102	417905	0.422
	Cr	52	**52.202**	**ug/L**	1.873	361780	0.367
	Cr	53		**ug/L**		156412	0.011
	Mn	55	**53.037**	**ug/L**	3.141	558385	0.567
	Fe	57	**5430.230**	**ug/L**	3.155	1090711	1.103
	Co	59	**51.758**	**ug/L**	1.153	445857	0.453
	Ni	60	**51.526**	**ug/L**	1.554	100529	0.102
	Cu	63		**ug/L**		240669	0.245
	Cu	65	**53.337**	**ug/L**	2.561	119172	0.121
	Zn	66	**50.959**	**ug/L**	0.671	78094	0.136
	Zn	67		**ug/L**		32444	0.010
	Zn	68		**ug/L**		61266	0.104
>	Ge	74		**ug/L**		569125	569124.636
	As	75	**49.881**	**ug/L**	0.829	84105	0.147
	Se	77		**ug/L**		11164	0.006
	Se	82	**50.496**	**ug/L**	0.300	8440	0.015
	Kr	83		**ug/L**		150	0.000
	Sr	88	**53.755**	**ug/L**	1.391	903726	2.758
	Y	89		**ug/L**		130	0.000
	Mo	98	**50.238**	**ug/L**	1.456	235644	0.719
	Ag	107	**51.025**	**ug/L**	1.183	402765	1.229
	Cd	111	**51.082**	**ug/L**	0.583	98204	0.300
	Cd	114		**ug/L**		226607	0.691
>	In	115		**ug/L**		327547	327547.096
	Sn	120	**55.367**	**ug/L**	1.636	404406	1.233
	Sb	121	**49.431**	**ug/L**	0.729	318204	0.971
	Sb	123		**ug/L**		249230	0.761
	Ba	135		**ug/L**		92384	0.161
	Ba	137	**47.392**	**ug/L**	2.523	164604	0.287
	Ho	165		**ug/L**		102	0.000
>	Lu	175		**ug/L**		574148	574147.592
	Tl	205	**54.109**	**ug/L**	1.483	1106504	1.924
	Pb	208	**54.002**	**ug/L**	1.718	2098447	3.641
	Bi	209		**ug/L**		929	-0.000
	Th	232	**56.841**	**ug/L**	3.914	2541454	4.427
	U	238	**54.238**	**ug/L**	2.318	2618115	4.561

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	107.355				
	Be	9	101.676				
	B	11	98.742				
	Na	23	120.541				
	Mg	24	112.757				
	Al	27	108.490				
	P	31	107.911				
	K	39	111.293				
	Ca	43	103.826				
>	Sc	45		94.1			
	Ti	47	107.302				
	V	51	105.861				
	Cr	52	104.404				
	Cr	53					
	Mn	55	106.075				
	Fe	57	108.605				
	Co	59	103.516				
	Ni	60	103.051				
	Cu	63					
	Cu	65	106.673				
	Zn	66	101.919				
	Zn	67					
	Zn	68					
>	Ge	74		99.2			
	As	75	99.761				
	Se	77					
	Se	82	100.992				
	Kr	83					
	Sr	88	107.510				
	Y	89					
	Mo	98	100.476				
	Ag	107	102.050				
	Cd	111	102.163				
	Cd	114					
>	In	115		100.1			
	Sn	120	110.735				
	Sb	121	98.863				
	Sb	123					
	Ba	135					
	Ba	137	94.783				
	Ho	165					
>	Lu	175		103.6			
	Tl	205	108.218				
	Pb	208	108.004				
	Bi	209					
	Th	232	113.683				
	U	238	108.477				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Na	23	CCV is out of limits (+/- 10%)
QC Std 11	Mg	24	CCV is out of limits (+/- 10%)
QC Std 11	K	39	CCV is out of limits (+/- 10%)
QC Std 11	Sn	120	CCV is out of limits (+/- 10%)
QC Std 11	Th	232	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Thursday, December 02, 2010 19:29:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 12.216

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.092**	**ug/L**	9.198	263	0.000
	Be	9	**0.023**	**ug/L**	73.031	29	0.000
	B	11	**2.017**	**ug/L**	16.785	1688	0.001
	Na	23	**-0.386**	**ug/L**	761.405	73863	-0.002
	Mg	24	**1.432**	**ug/L**	19.667	9003	0.005
	Al	27	**1.247**	**ug/L**	4.994	15008	0.006
	P	31	**5.807**	**ug/L**	9.090	11159	0.002
	K	39	**9.026**	**ug/L**	28.507	524109	0.051
	Ca	43	**2.099**	**ug/L**	48.606	621	0.000
>	Sc	45		**ug/L**		992172	992171.641
	Ti	47	**0.388**	**ug/L**	17.455	980	0.000
	V	51	**-0.412**	**ug/L**	108.169	192	-0.003
	Cr	52	**0.028**	**ug/L**	192.503	1826	0.000
	Cr	53		**ug/L**		145786	-0.001
	Mn	55	**0.020**	**ug/L**	26.777	1459	0.000
	Fe	57	**5.980**	**ug/L**	34.783	8237	0.001
	Co	59	**0.019**	**ug/L**	27.760	406	0.000
	Ni	60	**0.013**	**ug/L**	123.741	422	0.000
	Cu	63		**ug/L**		688	0.000
	Cu	65	**0.069**	**ug/L**	14.198	427	0.000
	Zn	66	**0.134**	**ug/L**	26.091	918	0.000
	Zn	67		**ug/L**		26005	-0.001
	Zn	68		**ug/L**		2356	0.001
>	Ge	74		**ug/L**		557119	557119.393
	As	75	**-0.089**	**ug/L**	114.241	59	-0.000
	Se	77		**ug/L**		6689	-0.002
	Se	82	**0.122**	**ug/L**	37.487	-5	0.000
	Kr	83		**ug/L**		144	0.000
	Sr	88	**0.016**	**ug/L**	25.677	605	0.001
	Y	89		**ug/L**		90	0.000
	Mo	98	**0.531**	**ug/L**	17.776	2710	0.008
	Ag	107	**0.029**	**ug/L**	21.008	300	0.001
	Cd	111	**0.060**	**ug/L**	41.768	147	0.000
	Cd	114		**ug/L**		202	0.000
>	In	115		**ug/L**		326602	326601.943
	Sn	120	**4.411**	**ug/L**	8.823	32524	0.098
	Sb	121	**0.705**	**ug/L**	19.503	4631	0.014
	Sb	123		**ug/L**		3710	0.011
	Ba	135		**ug/L**		76	0.000
	Ba	137	**0.017**	**ug/L**	36.135	122	0.000
	Ho	165		**ug/L**		84	-0.000
>	Lu	175		**ug/L**		574617	574617.003
	Tl	205	**0.567**	**ug/L**	16.722	13521	0.020
	Pb	208	**0.211**	**ug/L**	15.424	16669	0.014
	Bi	209		**ug/L**		992	-0.000
	Th	232	**3.796**	**ug/L**	17.904	170543	0.296
	U	238	**0.434**	**ug/L**	17.958	21150	0.036

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		95.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		103.7			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 12	Mo	98	CCB is out of limits (+/- PQL)
QC Std 12	Th	232	CCB is out of limits (+/- PQL)
QC Std 12	U	238	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, December 02, 2010 19:53:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 8.220

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.932**	**ug/L**	0.653	129455	0.131
	Be	9	**48.888**	**ug/L**	1.781	31318	0.032
	B	11	**93.037**	**ug/L**	2.540	59584	0.060
	Na	23	**5174.486**	**ug/L**	2.148	25127621	25.291
	Mg	24	**4896.314**	**ug/L**	15.133	17743989	17.937
	Al	27	**4887.804**	**ug/L**	8.264	24024562	24.257
	P	31	**5299.864**	**ug/L**	2.676	1514698	1.520
	K	39	**5222.205**	**ug/L**	8.946	29507929	29.300
	Ca	43	**5145.728**	**ug/L**	2.341	69931	0.070
>	Sc	45		**ug/L**		990515	990515.134
	Ti	47	**55.614**	**ug/L**	2.172	41377	0.041
	V	51	**52.032**	**ug/L**	3.879	414001	0.415
	Cr	52	**51.275**	**ug/L**	2.236	358152	0.360
	Cr	53		**ug/L**		159417	0.013
	Mn	55	**52.062**	**ug/L**	1.755	552456	0.557
	Fe	57	**5394.478**	**ug/L**	1.248	1092224	1.096
	Co	59	**50.120**	**ug/L**	0.465	435223	0.439
	Ni	60	**50.699**	**ug/L**	0.572	99706	0.100
	Cu	63		**ug/L**		236529	0.238
	Cu	65	**52.663**	**ug/L**	1.198	118602	0.119
	Zn	66	**50.986**	**ug/L**	2.160	76753	0.136
	Zn	67		**ug/L**		32504	0.011
	Zn	68		**ug/L**		60257	0.104
>	Ge	74		**ug/L**		559138	559138.149
	As	75	**50.206**	**ug/L**	0.382	83165	0.148
	Se	77		**ug/L**		11116	0.006
	Se	82	**49.556**	**ug/L**	1.433	8137	0.015
	Kr	83		**ug/L**		145	0.000
	Sr	88	**50.547**	**ug/L**	6.088	860259	2.593
	Y	89		**ug/L**		122	0.000
	Mo	98	**48.519**	**ug/L**	1.667	230368	0.694
	Ag	107	**49.914**	**ug/L**	1.444	398788	1.203
	Cd	111	**49.829**	**ug/L**	0.663	96960	0.292
	Cd	114		**ug/L**		226253	0.682
>	In	115		**ug/L**		331530	331530.013
	Sn	120	**50.268**	**ug/L**	0.612	371694	1.120
	Sb	121	**48.123**	**ug/L**	1.841	313561	0.945
	Sb	123		**ug/L**		245424	0.740
	Ba	135		**ug/L**		93062	0.164
	Ba	137	**48.088**	**ug/L**	0.237	165509	0.291
	Ho	165		**ug/L**		106	0.000
>	Lu	175		**ug/L**		568771	568771.482
	Tl	205	**53.621**	**ug/L**	0.266	1086423	1.907
	Pb	208	**53.729**	**ug/L**	0.060	2068763	3.622
	Bi	209		**ug/L**		1276	0.000
	Th	232	**49.787**	**ug/L**	2.217	2206222	3.878
	U	238	**54.155**	**ug/L**	2.550	2590134	4.554

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	101.863				
	Be	9	97.775				
	B	11	93.037				
	Na	23	103.490				
	Mg	24	97.926				
	Al	27	96.788				
	P	31	105.997				
	K	39	104.444				
	Ca	43	102.915				
>	Sc	45		94.8			
	Ti	47	111.228				
	V	51	104.063				
	Cr	52	102.550				
	Cr	53					
	Mn	55	104.125				
	Fe	57	107.890				
	Co	59	100.241				
	Ni	60	101.399				
	Cu	63					
	Cu	65	105.327				
	Zn	66	101.973				
	Zn	67					
	Zn	68					
>	Ge	74		97.4			
	As	75	100.412				
	Se	77					
	Se	82	99.112				
	Kr	83					
	Sr	88	101.093				
	Y	89					
	Mo	98	97.038				
	Ag	107	99.828				
	Cd	111	99.658				
	Cd	114					
>	In	115		101.3			
	Sn	120	100.536				
	Sb	121	96.246				
	Sb	123					
	Ba	135					
	Ba	137	96.177				
	Ho	165					
>	Lu	175		102.6			
	Tl	205	107.241				
	Pb	208	107.459				
	Bi	209					
	Th	232	99.575				
	U	238	108.309				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Ti	47	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, December 02, 2010 19:59:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 9.221

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.045**	**ug/L**	9.880	140	0.000
	Be	9	**0.004**	**ug/L**	160.611	16	0.000
	B	11	**2.420**	**ug/L**	9.114	1917	0.002
	Na	23	**-1.379**	**ug/L**	57.433	67828	-0.007
	Mg	24	**0.916**	**ug/L**	111.374	7002	0.003
	Al	27	**0.129**	**ug/L**	617.829	9337	0.001
	P	31	**5.010**	**ug/L**	63.094	10761	0.001
	K	39	**14.766**	**ug/L**	51.956	547668	0.083
	Ca	43	**6.786**	**ug/L**	29.185	674	0.000
>	Sc	45		**ug/L**		977159	977158.835
	Ti	47	**0.184**	**ug/L**	20.223	817	0.000
	V	51	**-1.300**	**ug/L**	76.398	-6723	-0.010
	Cr	52	**-0.109**	**ug/L**	24.205	863	-0.001
	Cr	53		**ug/L**		147136	0.002
	Mn	55	**0.087**	**ug/L**	153.386	2137	0.001
	Fe	57	**3.119**	**ug/L**	57.291	7545	0.001
	Co	59	**0.003**	**ug/L**	46.359	263	0.000
	Ni	60	**-0.014**	**ug/L**	135.093	364	-0.000
	Cu	63		**ug/L**		549	0.000
	Cu	65	**0.032**	**ug/L**	27.006	338	0.000
	Zn	66	**0.076**	**ug/L**	35.070	819	0.000
	Zn	67		**ug/L**		25409	-0.001
	Zn	68		**ug/L**		2360	0.001
>	Ge	74		**ug/L**		548642	548641.911
	As	75	**-0.194**	**ug/L**	87.449	-111	-0.001
	Se	77		**ug/L**		6554	-0.002
	Se	82	**0.093**	**ug/L**	219.471	-9	0.000
	Kr	83		**ug/L**		141	0.000
	Sr	88	**0.007**	**ug/L**	30.200	433	0.000
	Y	89		**ug/L**		83	0.000
	Mo	98	**0.213**	**ug/L**	17.936	1207	0.003
	Ag	107	**0.015**	**ug/L**	7.235	191	0.000
	Cd	111	**0.036**	**ug/L**	31.020	99	0.000
	Cd	114		**ug/L**		149	0.000
>	In	115		**ug/L**		322229	322229.331
	Sn	120	**1.577**	**ug/L**	9.057	11747	0.035
	Sb	121	**0.498**	**ug/L**	23.726	3255	0.010
	Sb	123		**ug/L**		2445	0.007
	Ba	135		**ug/L**		50	0.000
	Ba	137	**0.003**	**ug/L**	152.019	73	0.000
	Ho	165		**ug/L**		81	-0.000
>	Lu	175		**ug/L**		571323	571323.135
	Tl	205	**0.436**	**ug/L**	15.126	10799	0.016
	Pb	208	**0.037**	**ug/L**	6.546	9856	0.002
	Bi	209		**ug/L**		1339	0.001
	Th	232	**1.643**	**ug/L**	20.847	73903	0.128
	U	238	**0.082**	**ug/L**	19.689	4178	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		93.6			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		103.1			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 9	Th	232	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, December 02, 2010 20:18:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 8.224

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.979**	**ug/L**	2.494	120068	0.131
	Be	9	**48.859**	**ug/L**	2.032	29014	0.032
	B	11	**95.347**	**ug/L**	1.236	56605	0.061
	Na	23	**4660.061**	**ug/L**	3.417	20972801	22.777
	Mg	24	**4917.634**	**ug/L**	11.404	16515885	18.015
	Al	27	**5038.540**	**ug/L**	20.873	22895650	25.005
	P	31	**5284.597**	**ug/L**	1.699	1400115	1.516
	K	39	**5726.740**	**ug/L**	8.268	29920627	32.131
	Ca	43	**5091.561**	**ug/L**	1.231	64152	0.069
>	Sc	45		**ug/L**		918192	918191.674
	Ti	47	**53.924**	**ug/L**	3.399	37200	0.040
	V	51	**51.310**	**ug/L**	4.363	378399	0.409
	Cr	52	**50.761**	**ug/L**	2.861	328622	0.356
	Cr	53		**ug/L**		149967	0.015
	Mn	55	**52.535**	**ug/L**	3.237	516640	0.562
	Fe	57	**5432.618**	**ug/L**	2.375	1019364	1.103
	Co	59	**49.635**	**ug/L**	4.659	399251	0.435
	Ni	60	**49.448**	**ug/L**	3.738	90106	0.098
	Cu	63		**ug/L**		216931	0.236
	Cu	65	**50.903**	**ug/L**	2.939	106243	0.115
	Zn	66	**50.272**	**ug/L**	3.201	70037	0.134
	Zn	67		**ug/L**		29558	0.010
	Zn	68		**ug/L**		55937	0.104
>	Ge	74		**ug/L**		517426	517426.483
	As	75	**49.933**	**ug/L**	2.398	76533	0.148
	Se	77		**ug/L**		10301	0.006
	Se	82	**51.219**	**ug/L**	1.801	7784	0.015
	Kr	83		**ug/L**		144	0.000
	Sr	88	**52.336**	**ug/L**	1.912	829775	2.685
	Y	89		**ug/L**		110	0.000
	Mo	98	**47.574**	**ug/L**	0.752	210473	0.681
	Ag	107	**50.057**	**ug/L**	3.701	372600	1.206
	Cd	111	**49.408**	**ug/L**	1.480	89584	0.290
	Cd	114		**ug/L**		210634	0.681
>	In	115		**ug/L**		308926	308925.923
	Sn	120	**49.991**	**ug/L**	2.127	344406	1.114
	Sb	121	**48.785**	**ug/L**	3.042	296142	0.958
	Sb	123		**ug/L**		231313	0.749
	Ba	135		**ug/L**		85720	0.159
	Ba	137	**47.077**	**ug/L**	0.425	153052	0.285
	Ho	165		**ug/L**		100	0.000
>	Lu	175		**ug/L**		537264	537264.303
	Tl	205	**53.533**	**ug/L**	1.124	1024519	1.904
	Pb	208	**53.338**	**ug/L**	0.932	1939919	3.596
	Bi	209		**ug/L**		2019	0.002
	Th	232	**49.159**	**ug/L**	1.928	2057839	3.829
	U	238	**53.361**	**ug/L**	2.239	2410644	4.487

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	101.958				
	Be	9	97.717				
	B	11	95.347				
	Na	23	93.201				
	Mg	24	98.353				
	Al	27	99.773				
	P	31	105.692				
	K	39	114.535				
	Ca	43	101.831				
>	Sc	45		87.9			
	Ti	47	107.849				
	V	51	102.619				
	Cr	52	101.522				
	Cr	53					
	Mn	55	105.070				
	Fe	57	108.652				
	Co	59	99.271				
	Ni	60	98.895				
	Cu	63					
	Cu	65	101.805				
	Zn	66	100.545				
	Zn	67					
	Zn	68					
>	Ge	74		90.1			
	As	75	99.866				
	Se	77					
	Se	82	102.439				
	Kr	83					
	Sr	88	104.673				
	Y	89					
	Mo	98	95.147				
	Ag	107	100.114				
	Cd	111	98.817				
	Cd	114					
>	In	115		94.4			
	Sn	120	99.983				
	Sb	121	97.569				
	Sb	123					
	Ba	135					
	Ba	137	94.154				
	Ho	165					
>	Lu	175		97.0			
	Tl	205	107.066				
	Pb	208	106.677				
	Bi	209					
	Th	232	98.319				
	U	238	106.722				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, December 02, 2010 20:24:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 9.225

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.042**	**ug/L**	12.770	126	0.000
	Be	9	**0.010**	**ug/L**	41.082	19	0.000
	B	11	**3.177**	**ug/L**	8.471	2259	0.002
	Na	23	**0.724**	**ug/L**	162.189	73523	0.004
	Mg	24	**0.040**	**ug/L**	1140.937	3667	0.000
	Al	27	**-0.059**	**ug/L**	1569.513	8003	-0.000
	P	31	**5.329**	**ug/L**	8.692	10245	0.002
	K	39	**25.562**	**ug/L**	20.316	572950	0.143
	Ca	43	**3.476**	**ug/L**	10.047	595	0.000
>	Sc	45		**ug/L**		922228	922228.433
	Ti	47	**0.154**	**ug/L**	79.133	752	0.000
	V	51	**-1.335**	**ug/L**	40.156	-6568	-0.011
	Cr	52	**-0.155**	**ug/L**	14.363	513	-0.001
	Cr	53		**ug/L**		141363	0.005
	Mn	55	**0.015**	**ug/L**	25.194	1309	0.000
	Fe	57	**3.518**	**ug/L**	24.305	7198	0.001
	Co	59	**0.004**	**ug/L**	55.702	254	0.000
	Ni	60	**-0.009**	**ug/L**	74.327	352	-0.000
	Cu	63		**ug/L**		462	0.000
	Cu	65	**0.021**	**ug/L**	41.093	296	0.000
	Zn	66	**0.057**	**ug/L**	18.916	739	0.000
	Zn	67		**ug/L**		23595	-0.001
	Zn	68		**ug/L**		2322	0.001
>	Ge	74		**ug/L**		511932	511931.861
	As	75	**-0.261**	**ug/L**	51.776	-209	-0.001
	Se	77		**ug/L**		6113	-0.002
	Se	82	**0.112**	**ug/L**	139.065	-6	0.000
	Kr	83		**ug/L**		126	-0.000
	Sr	88	**0.006**	**ug/L**	22.402	401	0.000
	Y	89		**ug/L**		83	0.000
	Mo	98	**0.191**	**ug/L**	19.290	1053	0.003
	Ag	107	**0.018**	**ug/L**	19.633	202	0.000
	Cd	111	**0.031**	**ug/L**	44.550	86	0.000
	Cd	114		**ug/L**		147	0.000
>	In	115		**ug/L**		306304	306304.037
	Sn	120	**1.167**	**ug/L**	10.859	8381	0.026
	Sb	121	**0.497**	**ug/L**	23.113	3090	0.010
	Sb	123		**ug/L**		2411	0.008
	Ba	135		**ug/L**		50	0.000
	Ba	137	**0.005**	**ug/L**	83.146	74	0.000
	Ho	165		**ug/L**		74	-0.000
>	Lu	175		**ug/L**		534544	534543.531
	Tl	205	**0.511**	**ug/L**	14.663	11543	0.018
	Pb	208	**0.033**	**ug/L**	9.455	9080	0.002
	Bi	209		**ug/L**		1825	0.002
	Th	232	**1.455**	**ug/L**	22.915	61428	0.113
	U	238	**0.074**	**ug/L**	22.407	3528	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		88.3			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		89.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		96.5			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 9	Th	232	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, December 02, 2010 20:48:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 8.229

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.585**	**ug/L**	2.151	126862	0.132
	Be	9	**48.706**	**ug/L**	3.474	30191	0.031
	B	11	**96.131**	**ug/L**	3.412	59562	0.062
	Na	23	**5720.592**	**ug/L**	17.812	26920996	27.960
	Mg	24	**4891.437**	**ug/L**	6.785	17193460	17.919
	Al	27	**4720.464**	**ug/L**	3.224	22473431	23.426
	P	31	**5261.946**	**ug/L**	1.347	1455687	1.509
	K	39	**5208.389**	**ug/L**	3.213	28476183	29.222
	Ca	43	**5104.515**	**ug/L**	3.414	67125	0.069
>	Sc	45		**ug/L**		958621	958621.318
	Ti	47	**55.645**	**ug/L**	1.327	40071	0.041
	V	51	**51.780**	**ug/L**	2.182	398818	0.413
	Cr	52	**50.292**	**ug/L**	1.122	340040	0.353
	Cr	53		**ug/L**		153498	0.012
	Mn	55	**51.751**	**ug/L**	1.573	531478	0.553
	Fe	57	**5317.291**	**ug/L**	1.772	1041932	1.080
	Co	59	**49.356**	**ug/L**	2.056	414664	0.432
	Ni	60	**48.756**	**ug/L**	1.722	92798	0.096
	Cu	63		**ug/L**		222534	0.232
	Cu	65	**51.145**	**ug/L**	1.515	111481	0.116
	Zn	66	**51.106**	**ug/L**	2.074	73690	0.136
	Zn	67		**ug/L**		30658	0.010
	Zn	68		**ug/L**		58344	0.105
>	Ge	74		**ug/L**		535527	535527.321
	As	75	**49.264**	**ug/L**	0.200	78164	0.146
	Se	77		**ug/L**		10746	0.006
	Se	82	**50.034**	**ug/L**	2.139	7869	0.015
	Kr	83		**ug/L**		164	0.000
	Sr	88	**53.057**	**ug/L**	1.319	854330	2.722
	Y	89		**ug/L**		123	0.000
	Mo	98	**48.210**	**ug/L**	1.525	216608	0.690
	Ag	107	**49.919**	**ug/L**	1.267	377395	1.203
	Cd	111	**50.519**	**ug/L**	1.161	93031	0.296
	Cd	114		**ug/L**		214677	0.684
>	In	115		**ug/L**		313741	313740.686
	Sn	120	**50.370**	**ug/L**	2.999	352389	1.122
	Sb	121	**48.929**	**ug/L**	1.613	301665	0.961
	Sb	123		**ug/L**		237712	0.757
	Ba	135		**ug/L**		88360	0.161
	Ba	137	**47.067**	**ug/L**	2.059	156529	0.285
	Ho	165		**ug/L**		89	0.000
>	Lu	175		**ug/L**		549619	549619.165
	Tl	205	**53.015**	**ug/L**	0.935	1038026	1.885
	Pb	208	**53.464**	**ug/L**	0.725	1989215	3.605
	Bi	209		**ug/L**		1254	0.000
	Th	232	**48.382**	**ug/L**	4.578	2071623	3.768
	U	238	**53.842**	**ug/L**	1.334	2488462	4.527

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	103.169				
	Be	9	97.412				
	B	11	96.131				
	Na	23	114.412				
	Mg	24	97.829				
	Al	27	93.475				
	P	31	105.239				
	K	39	104.168				
	Ca	43	102.090				
>	Sc	45		91.8			
	Ti	47	111.290				
	V	51	103.560				
	Cr	52	100.584				
	Cr	53					
	Mn	55	103.501				
	Fe	57	106.346				
	Co	59	98.711				
	Ni	60	97.512				
	Cu	63					
	Cu	65	102.291				
	Zn	66	102.212				
	Zn	67					
	Zn	68					
>	Ge	74		93.3			
	As	75	98.527				
	Se	77					
	Se	82	100.068				
	Kr	83					
	Sr	88	106.114				
	Y	89					
	Mo	98	96.420				
	Ag	107	99.837				
	Cd	111	101.038				
	Cd	114					
>	In	115		95.9			
	Sn	120	100.739				
	Sb	121	97.859				
	Sb	123					
	Ba	135					
	Ba	137	94.133				
	Ho	165					
>	Lu	175		99.2			
	Tl	205	106.031				
	Pb	208	106.928				
	Bi	209					
	Th	232	96.764				
	U	238	107.684				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Na	23	CCV is out of limits (+/- 10%)
QC Std 8	Ti	47	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, December 02, 2010 20:54:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 9.230

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.031**	**ug/L**	18.096	101	0.000
	Be	9	**0.011**	**ug/L**	43.182	20	0.000
	B	11	**2.467**	**ug/L**	14.213	1897	0.002
	Na	23	**0.720**	**ug/L**	51.093	75868	0.004
	Mg	24	**0.771**	**ug/L**	107.527	6335	0.003
	Al	27	**-0.108**	**ug/L**	1087.115	8003	-0.001
	P	31	**5.948**	**ug/L**	21.826	10745	0.002
	K	39	**25.465**	**ug/L**	52.463	590740	0.143
	Ca	43	**1.843**	**ug/L**	128.757	593	0.000
>	Sc	45		**ug/L**		952011	952011.180
	Ti	47	**0.069**	**ug/L**	30.855	715	0.000
	V	51	**-1.161**	**ug/L**	85.488	-5464	-0.009
	Cr	52	**-0.155**	**ug/L**	11.246	532	-0.001
	Cr	53		**ug/L**		144168	0.003
	Mn	55	**0.007**	**ug/L**	65.094	1271	0.000
	Fe	57	**1.343**	**ug/L**	40.678	7010	0.000
	Co	59	**0.002**	**ug/L**	97.794	245	0.000
	Ni	60	**-0.024**	**ug/L**	7.496	336	-0.000
	Cu	63		**ug/L**		449	0.000
	Cu	65	**0.016**	**ug/L**	2.338	294	0.000
	Zn	66	**0.035**	**ug/L**	53.040	724	0.000
	Zn	67		**ug/L**		24615	-0.000
	Zn	68		**ug/L**		2386	0.001
>	Ge	74		**ug/L**		523971	523971.346
	As	75	**-0.302**	**ug/L**	6.088	-275	-0.001
	Se	77		**ug/L**		6509	-0.002
	Se	82	**-0.060**	**ug/L**	184.320	-32	-0.000
	Kr	83		**ug/L**		152	0.000
	Sr	88	**0.007**	**ug/L**	10.200	419	0.000
	Y	89		**ug/L**		83	0.000
	Mo	98	**0.187**	**ug/L**	28.232	1048	0.003
	Ag	107	**0.015**	**ug/L**	8.570	180	0.000
	Cd	111	**0.027**	**ug/L**	71.843	79	0.000
	Cd	114		**ug/L**		173	0.000
>	In	115		**ug/L**		309877	309876.840
	Sn	120	**0.848**	**ug/L**	14.202	6278	0.019
	Sb	121	**0.444**	**ug/L**	28.673	2808	0.009
	Sb	123		**ug/L**		2259	0.007
	Ba	135		**ug/L**		50	0.000
	Ba	137	**0.002**	**ug/L**	57.940	66	0.000
	Ho	165		**ug/L**		73	-0.000
>	Lu	175		**ug/L**		544534	544534.348
	Tl	205	**0.349**	**ug/L**	19.167	8622	0.012
	Pb	208	**0.010**	**ug/L**	76.662	8409	0.001
	Bi	209		**ug/L**		1364	0.001
	Th	232	**1.242**	**ug/L**	26.621	53532	0.097
	U	238	**0.066**	**ug/L**	28.338	3231	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		91.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		91.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.3			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 9	Th	232	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, December 02, 2010 21:13:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 8.233

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.071**	**ug/L**	1.283	125593	0.134
	Be	9	**48.611**	**ug/L**	1.645	29555	0.031
	B	11	**97.514**	**ug/L**	1.400	59261	0.063
	Na	23	**5454.117**	**ug/L**	5.678	25130169	26.658
	Mg	24	**4999.035**	**ug/L**	2.644	17216045	18.313
	Al	27	**4710.231**	**ug/L**	14.421	21985334	23.376
	P	31	**5214.678**	**ug/L**	0.489	1414836	1.496
	K	39	**5595.572**	**ug/L**	15.975	29949645	31.395
	Ca	43	**5013.276**	**ug/L**	0.412	64679	0.068
>	Sc	45		**ug/L**		939963	939962.602
	Ti	47	**54.581**	**ug/L**	1.765	38555	0.040
	V	51	**51.160**	**ug/L**	1.778	386503	0.408
	Cr	52	**49.661**	**ug/L**	1.070	329316	0.349
	Cr	53		**ug/L**		161531	0.024
	Mn	55	**51.720**	**ug/L**	2.160	520887	0.553
	Fe	57	**5243.956**	**ug/L**	1.837	1007847	1.065
	Co	59	**49.024**	**ug/L**	0.182	403962	0.430
	Ni	60	**49.173**	**ug/L**	1.665	91784	0.097
	Cu	63		**ug/L**		219428	0.233
	Cu	65	**51.523**	**ug/L**	1.934	110124	0.117
	Zn	66	**51.102**	**ug/L**	0.620	72035	0.136
	Zn	67		**ug/L**		33205	0.016
	Zn	68		**ug/L**		56385	0.104
>	Ge	74		**ug/L**		523536	523535.516
	As	75	**49.667**	**ug/L**	0.738	77038	0.147
	Se	77		**ug/L**		10772	0.007
	Se	82	**49.490**	**ug/L**	0.342	7609	0.015
	Kr	83		**ug/L**		152	0.000
	Sr	88	**52.593**	**ug/L**	0.192	844072	2.698
	Y	89		**ug/L**		122	0.000
	Mo	98	**47.910**	**ug/L**	0.571	214548	0.685
	Ag	107	**49.520**	**ug/L**	1.434	373134	1.193
	Cd	111	**49.544**	**ug/L**	1.370	90923	0.291
	Cd	114		**ug/L**		213499	0.682
>	In	115		**ug/L**		312684	312684.317
	Sn	120	**49.604**	**ug/L**	0.926	345925	1.105
	Sb	121	**48.293**	**ug/L**	0.567	296776	0.949
	Sb	123		**ug/L**		235574	0.753
	Ba	135		**ug/L**		88209	0.162
	Ba	137	**46.790**	**ug/L**	2.208	154262	0.283
	Ho	165		**ug/L**		91	0.000
>	Lu	175		**ug/L**		544966	544965.538
	Tl	205	**54.160**	**ug/L**	2.711	1051039	1.926
	Pb	208	**54.046**	**ug/L**	1.843	1993338	3.644
	Bi	209		**ug/L**		1876	0.002
	Th	232	**49.285**	**ug/L**	6.382	2091055	3.838
	U	238	**53.326**	**ug/L**	4.817	2442237	4.484

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	104.143				
	Be	9	97.223				
	B	11	97.514				
	Na	23	109.082				
	Mg	24	99.981				
	Al	27	93.272				
	P	31	104.294				
	K	39	111.911				
	Ca	43	100.266				
>	Sc	45		90.0			
	Ti	47	109.162				
	V	51	102.319				
	Cr	52	99.323				
	Cr	53					
	Mn	55	103.440				
	Fe	57	104.879				
	Co	59	98.047				
	Ni	60	98.346				
	Cu	63					
	Cu	65	103.046				
	Zn	66	102.205				
	Zn	67					
	Zn	68					
>	Ge	74		91.2			
	As	75	99.334				
	Se	77					
	Se	82	98.981				
	Kr	83					
	Sr	88	105.187				
	Y	89					
	Mo	98	95.819				
	Ag	107	99.039				
	Cd	111	99.089				
	Cd	114					
>	In	115		95.6			
	Sn	120	99.209				
	Sb	121	96.586				
	Sb	123					
	Ba	135					
	Ba	137	93.580				
	Ho	165					
>	Lu	175		98.3			
	Tl	205	108.321				
	Pb	208	108.092				
	Bi	209					
	Th	232	98.571				
	U	238	106.651				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, December 02, 2010 21:19:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 9.234

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.030**	**ug/L**	4.621	100	0.000
	Be	9	**0.006**	**ug/L**	21.530	17	0.000
	B	11	**2.819**	**ug/L**	8.611	2100	0.002
	Na	23	**-2.658**	**ug/L**	79.801	59794	-0.013
	Mg	24	**0.780**	**ug/L**	112.231	6335	0.003
	Al	27	**-0.175**	**ug/L**	382.399	7669	-0.001
	P	31	**4.886**	**ug/L**	38.879	10396	0.001
	K	39	**36.252**	**ug/L**	13.257	644909	0.203
	Ca	43	**2.447**	**ug/L**	125.119	597	0.000
>	Sc	45		**ug/L**		947075	947074.508
	Ti	47	**0.103**	**ug/L**	31.726	736	0.000
	V	51	**-0.800**	**ug/L**	44.277	-2707	-0.006
	Cr	52	**-0.146**	**ug/L**	23.226	586	-0.001
	Cr	53		**ug/L**		141062	0.001
	Mn	55	**0.012**	**ug/L**	45.395	1316	0.000
	Fe	57	**0.560**	**ug/L**	431.408	6820	0.000
	Co	59	**0.003**	**ug/L**	92.816	249	0.000
	Ni	60	**-0.010**	**ug/L**	94.705	360	-0.000
	Cu	63		**ug/L**		434	0.000
	Cu	65	**0.016**	**ug/L**	117.541	292	0.000
	Zn	66	**0.041**	**ug/L**	93.860	723	0.000
	Zn	67		**ug/L**		25422	0.002
	Zn	68		**ug/L**		2445	0.001
>	Ge	74		**ug/L**		516702	516701.669
	As	75	**-0.077**	**ug/L**	190.791	74	-0.000
	Se	77		**ug/L**		5974	-0.002
	Se	82	**-0.017**	**ug/L**	616.326	-25	-0.000
	Kr	83		**ug/L**		145	0.000
	Sr	88	**0.004**	**ug/L**	56.380	374	0.000
	Y	89		**ug/L**		88	0.000
	Mo	98	**0.187**	**ug/L**	25.638	1044	0.003
	Ag	107	**0.017**	**ug/L**	26.123	199	0.000
	Cd	111	**0.036**	**ug/L**	24.132	94	0.000
	Cd	114		**ug/L**		131	0.000
>	In	115		**ug/L**		309131	309130.596
	Sn	120	**0.692**	**ug/L**	20.040	5174	0.015
	Sb	121	**0.477**	**ug/L**	27.704	2988	0.009
	Sb	123		**ug/L**		2350	0.007
	Ba	135		**ug/L**		46	0.000
	Ba	137	**0.005**	**ug/L**	76.648	76	0.000
	Ho	165		**ug/L**		77	-0.000
>	Lu	175		**ug/L**		550889	550888.700
	Tl	205	**0.560**	**ug/L**	14.921	12838	0.020
	Pb	208	**0.005**	**ug/L**	41.172	8348	0.000
	Bi	209		**ug/L**		1792	0.001
	Th	232	**1.424**	**ug/L**	24.964	61842	0.111
	U	238	**0.061**	**ug/L**	23.395	3035	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		90.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		90.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 9	Th	232	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, December 02, 2010 22:08:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 8.242

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**46.637**	**ug/L**	1.280	122656	0.120
	Be	9	**49.344**	**ug/L**	2.831	32712	0.032
	B	11	**90.963**	**ug/L**	2.307	60300	0.058
	Na	23	**5096.380**	**ug/L**	12.375	25596344	24.909
	Mg	24	**4817.238**	**ug/L**	8.335	18088423	17.647
	Al	27	**4870.625**	**ug/L**	2.523	24788150	24.172
	P	31	**5453.267**	**ug/L**	0.595	1612973	1.564
	K	39	**5008.533**	**ug/L**	10.274	29301579	28.101
	Ca	43	**5105.632**	**ug/L**	3.419	71804	0.069
>	Sc	45		**ug/L**		1024970	1024969.944
	Ti	47	**52.206**	**ug/L**	0.872	40243	0.039
	V	51	**51.412**	**ug/L**	2.149	423467	0.410
	Cr	52	**51.088**	**ug/L**	0.446	369337	0.359
	Cr	53		**ug/L**		206055	0.053
	Mn	55	**51.580**	**ug/L**	0.801	566458	0.551
	Fe	57	**5203.465**	**ug/L**	1.781	1090499	1.057
	Co	59	**47.350**	**ug/L**	2.556	425391	0.415
	Ni	60	**47.158**	**ug/L**	1.354	95992	0.093
	Cu	63		**ug/L**		228573	0.223
	Cu	65	**48.787**	**ug/L**	1.608	113721	0.111
	Zn	66	**48.233**	**ug/L**	2.224	75289	0.129
	Zn	67		**ug/L**		37729	0.018
	Zn	68		**ug/L**		61372	0.102
>	Ge	74		**ug/L**		579467	579467.039
	As	75	**49.926**	**ug/L**	1.116	85704	0.148
	Se	77		**ug/L**		13823	0.010
	Se	82	**48.521**	**ug/L**	0.800	8256	0.014
	Kr	83		**ug/L**		197	0.000
	Sr	88	**55.249**	**ug/L**	2.409	876667	2.835
	Y	89		**ug/L**		161	0.000
	Mo	98	**51.751**	**ug/L**	2.215	229140	0.740
	Ag	107	**51.832**	**ug/L**	2.622	386157	1.249
	Cd	111	**51.669**	**ug/L**	2.483	93757	0.303
	Cd	114		**ug/L**		212907	0.688
>	In	115		**ug/L**		309192	309192.049
	Sn	120	**50.145**	**ug/L**	1.988	345760	1.117
	Sb	121	**50.097**	**ug/L**	1.967	304386	0.984
	Sb	123		**ug/L**		240207	0.777
	Ba	135		**ug/L**		88336	0.171
	Ba	137	**50.391**	**ug/L**	1.401	157389	0.305
	Ho	165		**ug/L**		101	0.000
>	Lu	175		**ug/L**		516222	516221.960
	Tl	205	**53.735**	**ug/L**	2.308	987935	1.911
	Pb	208	**54.242**	**ug/L**	1.747	1895189	3.657
	Bi	209		**ug/L**		1417	0.001
	Th	232	**49.106**	**ug/L**	4.358	1974267	3.824
	U	238	**53.305**	**ug/L**	3.120	2313409	4.482

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	93.274				
	Be	9	98.687				
	B	11	90.963				
	Na	23	101.928				
	Mg	24	96.345				
	Al	27	96.448				
	P	31	109.065				
	K	39	100.171				
	Ca	43	102.113				
>	Sc	45		98.1			
	Ti	47	104.412				
	V	51	102.825				
	Cr	52	102.176				
	Cr	53					
	Mn	55	103.159				
	Fe	57	104.069				
	Co	59	94.701				
	Ni	60	94.316				
	Cu	63					
	Cu	65	97.575				
	Zn	66	96.466				
	Zn	67					
	Zn	68					
>	Ge	74		101.0			
	As	75	99.851				
	Se	77					
	Se	82	97.042				
	Kr	83					
	Sr	88	110.498				
	Y	89					
	Mo	98	103.503				
	Ag	107	103.663				
	Cd	111	103.338				
	Cd	114					
>	In	115		94.5			
	Sn	120	100.290				
	Sb	121	100.193				
	Sb	123					
	Ba	135					
	Ba	137	100.782				
	Ho	165					
>	Lu	175		93.2			
	Tl	205	107.469				
	Pb	208	108.485				
	Bi	209					
	Th	232	98.213				
	U	238	106.609				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Sr	88	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, December 02, 2010 22:14:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 9.243

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.023**	**ug/L**	10.021	88	0.000
	Be	9	**0.011**	**ug/L**	58.414	21	0.000
	B	11	**2.205**	**ug/L**	17.146	1822	0.001
	Na	23	**2.628**	**ug/L**	107.667	88947	0.013
	Mg	24	**0.046**	**ug/L**	580.418	4001	0.000
	Al	27	**1.025**	**ug/L**	79.868	14007	0.005
	P	31	**-0.265**	**ug/L**	1073.390	9497	-0.000
	K	39	**34.672**	**ug/L**	14.760	671779	0.195
	Ca	43	**7.165**	**ug/L**	31.907	695	0.000
>	Sc	45		**ug/L**		999373	999373.195
	Ti	47	**0.246**	**ug/L**	30.545	881	0.000
	V	51	**-0.953**	**ug/L**	88.762	-4119	-0.008
	Cr	52	**-0.074**	**ug/L**	46.338	1124	-0.001
	Cr	53		**ug/L**		181563	0.034
	Mn	55	**0.029**	**ug/L**	12.329	1571	0.000
	Fe	57	**1.321**	**ug/L**	168.260	7352	0.000
	Co	59	**0.005**	**ug/L**	40.452	283	0.000
	Ni	60	**-0.001**	**ug/L**	990.741	398	-0.000
	Cu	63		**ug/L**		525	0.000
	Cu	65	**0.025**	**ug/L**	14.021	329	0.000
	Zn	66	**0.056**	**ug/L**	77.797	800	0.000
	Zn	67		**ug/L**		29251	0.005
	Zn	68		**ug/L**		2492	0.001
>	Ge	74		**ug/L**		556200	556200.498
	As	75	**0.192**	**ug/L**	107.669	520	0.001
	Se	77		**ug/L**		8666	0.002
	Se	82	**0.110**	**ug/L**	137.247	-7	0.000
	Kr	83		**ug/L**		149	0.000
	Sr	88	**0.006**	**ug/L**	19.270	393	0.000
	Y	89		**ug/L**		88	0.000
	Mo	98	**0.182**	**ug/L**	23.227	1009	0.003
	Ag	107	**0.017**	**ug/L**	12.593	196	0.000
	Cd	111	**0.034**	**ug/L**	14.657	90	0.000
	Cd	114		**ug/L**		206	0.000
>	In	115		**ug/L**		303927	303927.409
	Sn	120	**0.580**	**ug/L**	26.084	4348	0.013
	Sb	121	**0.429**	**ug/L**	26.487	2666	0.008
	Sb	123		**ug/L**		2069	0.006
	Ba	135		**ug/L**		53	0.000
	Ba	137	**0.008**	**ug/L**	16.937	82	0.000
	Ho	165		**ug/L**		78	0.000
>	Lu	175		**ug/L**		514101	514100.581
	Tl	205	**0.482**	**ug/L**	19.513	10552	0.017
	Pb	208	**-0.007**	**ug/L**	97.051	7373	-0.000
	Bi	209		**ug/L**		1567	0.001
	Th	232	**1.299**	**ug/L**	29.901	52695	0.101
	U	238	**0.055**	**ug/L**	30.362	2590	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		95.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		92.8			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 9	Th	232	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, December 02, 2010 22:32:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 8.246

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**47.088**	**ug/L**	0.895	121117	0.121
	Be	9	**47.553**	**ug/L**	1.148	30834	0.031
	B	11	**96.127**	**ug/L**	0.981	62304	0.062
	Na	23	**5276.127**	**ug/L**	7.789	25922412	25.788
	Mg	24	**4874.336**	**ug/L**	9.285	17899267	17.856
	Al	27	**4931.284**	**ug/L**	9.889	24536615	24.473
	P	31	**5414.567**	**ug/L**	0.236	1566229	1.553
	K	39	**5233.939**	**ug/L**	9.128	29920627	29.366
	Ca	43	**5032.034**	**ug/L**	2.136	69226	0.068
>	Sc	45		**ug/L**		1002376	1002375.844
	Ti	47	**50.941**	**ug/L**	0.676	38421	0.038
	V	51	**51.766**	**ug/L**	1.599	417000	0.413
	Cr	52	**50.141**	**ug/L**	1.453	354530	0.352
	Cr	53		**ug/L**		181704	0.033
	Mn	55	**51.199**	**ug/L**	0.652	549915	0.547
	Fe	57	**5196.497**	**ug/L**	0.490	1065137	1.056
	Co	59	**47.270**	**ug/L**	1.260	415390	0.414
	Ni	60	**47.299**	**ug/L**	0.469	94163	0.094
	Cu	63		**ug/L**		224718	0.224
	Cu	65	**48.994**	**ug/L**	1.734	111688	0.111
	Zn	66	**47.997**	**ug/L**	1.425	72404	0.128
	Zn	67		**ug/L**		34353	0.014
	Zn	68		**ug/L**		59332	0.102
>	Ge	74		**ug/L**		559978	559977.887
	As	75	**48.930**	**ug/L**	1.225	81173	0.145
	Se	77		**ug/L**		12593	0.008
	Se	82	**49.449**	**ug/L**	0.395	8132	0.015
	Kr	83		**ug/L**		183	0.000
	Sr	88	**53.998**	**ug/L**	2.533	861045	2.771
	Y	89		**ug/L**		152	0.000
	Mo	98	**50.046**	**ug/L**	1.937	222722	0.716
	Ag	107	**49.983**	**ug/L**	2.036	374243	1.204
	Cd	111	**49.718**	**ug/L**	1.752	90674	0.292
	Cd	114		**ug/L**		210581	0.677
>	In	115		**ug/L**		310772	310771.618
	Sn	120	**49.167**	**ug/L**	1.977	340721	1.095
	Sb	121	**48.491**	**ug/L**	1.416	296142	0.953
	Sb	123		**ug/L**		232400	0.748
	Ba	135		**ug/L**		87107	0.168
	Ba	137	**49.685**	**ug/L**	1.891	156172	0.301
	Ho	165		**ug/L**		93	0.000
>	Lu	175		**ug/L**		519516	519515.785
	Tl	205	**54.384**	**ug/L**	1.035	1006467	1.934
	Pb	208	**54.067**	**ug/L**	1.120	1901357	3.645
	Bi	209		**ug/L**		1837	0.002
	Th	232	**49.155**	**ug/L**	1.698	1989848	3.828
	U	238	**52.882**	**ug/L**	1.501	2310245	4.447

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	94.175				
	Be	9	95.106				
	B	11	96.127				
	Na	23	105.523				
	Mg	24	97.487				
	Al	27	97.649				
	P	31	108.291				
	K	39	104.679				
	Ca	43	100.641				
>	Sc	45		96.0			
	Ti	47	101.882				
	V	51	103.532				
	Cr	52	100.282				
	Cr	53					
	Mn	55	102.398				
	Fe	57	103.930				
	Co	59	94.541				
	Ni	60	94.597				
	Cu	63					
	Cu	65	97.988				
	Zn	66	95.993				
	Zn	67					
	Zn	68					
>	Ge	74		97.6			
	As	75	97.860				
	Se	77					
	Se	82	98.898				
	Kr	83					
	Sr	88	107.997				
	Y	89					
	Mo	98	100.092				
	Ag	107	99.966				
	Cd	111	99.436				
	Cd	114					
>	In	115		95.0			
	Sn	120	98.333				
	Sb	121	96.983				
	Sb	123					
	Ba	135					
	Ba	137	99.370				
	Ho	165					
>	Lu	175		93.8			
	Tl	205	108.768				
	Pb	208	108.133				
	Bi	209					
	Th	232	98.311				
	U	238	105.765				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, December 02, 2010 22:38:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 9.247

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.023**	**ug/L**	8.354	86	0.000
	Be	9	**0.007**	**ug/L**	48.888	18	0.000
	B	11	**2.655**	**ug/L**	12.541	2087	0.002
	Na	23	**0.747**	**ug/L**	173.029	78885	0.004
	Mg	24	**-0.498**	**ug/L**	93.346	2000	-0.002
	Al	27	**0.098**	**ug/L**	633.512	9337	0.000
	P	31	**2.307**	**ug/L**	11.843	10111	0.001
	K	39	**19.764**	**ug/L**	72.639	582138	0.111
	Ca	43	**2.307**	**ug/L**	233.252	621	0.000
>	Sc	45		**ug/L**		987310	987309.870
	Ti	47	**0.161**	**ug/L**	53.021	809	0.000
	V	51	**-0.937**	**ug/L**	140.332	-4003	-0.007
	Cr	52	**-0.001**	**ug/L**	12238.883	1619	-0.000
	Cr	53		**ug/L**		154674	0.009
	Mn	55	**0.011**	**ug/L**	54.912	1365	0.000
	Fe	57	**-2.315**	**ug/L**	51.932	6535	-0.000
	Co	59	**0.006**	**ug/L**	59.687	289	0.000
	Ni	60	**-0.016**	**ug/L**	96.826	363	-0.000
	Cu	63		**ug/L**		478	0.000
	Cu	65	**0.014**	**ug/L**	39.849	300	0.000
	Zn	66	**0.047**	**ug/L**	113.458	763	0.000
	Zn	67		**ug/L**		25806	0.001
	Zn	68		**ug/L**		2203	0.000
>	Ge	74		**ug/L**		539043	539042.585
	As	75	**-0.083**	**ug/L**	283.251	65	-0.000
	Se	77		**ug/L**		7615	0.000
	Se	82	**0.013**	**ug/L**	818.550	-22	0.000
	Kr	83		**ug/L**		146	0.000
	Sr	88	**0.005**	**ug/L**	40.088	385	0.000
	Y	89		**ug/L**		99	0.000
	Mo	98	**0.181**	**ug/L**	27.227	1008	0.003
	Ag	107	**0.012**	**ug/L**	18.306	161	0.000
	Cd	111	**0.030**	**ug/L**	44.658	83	0.000
	Cd	114		**ug/L**		144	0.000
>	In	115		**ug/L**		305818	305817.612
	Sn	120	**0.530**	**ug/L**	23.420	4036	0.012
	Sb	121	**0.456**	**ug/L**	25.523	2842	0.009
	Sb	123		**ug/L**		2149	0.007
	Ba	135		**ug/L**		51	0.000
	Ba	137	**0.002**	**ug/L**	116.822	65	0.000
	Ho	165		**ug/L**		66	-0.000
>	Lu	175		**ug/L**		529166	529165.658
	Tl	205	**0.585**	**ug/L**	17.840	12782	0.021
	Pb	208	**-0.012**	**ug/L**	41.044	7378	-0.001
	Bi	209		**ug/L**		1719	0.001
	Th	232	**1.383**	**ug/L**	28.873	57546	0.108
	U	238	**0.060**	**ug/L**	30.987	2885	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		94.5			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		93.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		95.5			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 9	Th	232	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, December 02, 2010 23:15:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 8.253

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**45.897**	**ug/L**	1.090	119919	0.118
	Be	9	**47.858**	**ug/L**	2.457	31516	0.031
	B	11	**94.139**	**ug/L**	4.468	61967	0.060
	Na	23	**5423.537**	**ug/L**	7.525	27063650	26.508
	Mg	24	**5265.881**	**ug/L**	7.518	19652491	19.290
	Al	27	**4804.465**	**ug/L**	10.998	24300052	23.843
	P	31	**5495.773**	**ug/L**	0.513	1614583	1.576
	K	39	**5187.554**	**ug/L**	5.701	30126976	29.106
	Ca	43	**5038.959**	**ug/L**	1.009	70410	0.069
>	Sc	45		**ug/L**		1018143	1018143.259
	Ti	47	**50.779**	**ug/L**	1.800	38901	0.038
	V	51	**50.893**	**ug/L**	2.081	416437	0.406
	Cr	52	**50.515**	**ug/L**	2.007	362753	0.355
	Cr	53		**ug/L**		184286	0.033
	Mn	55	**51.637**	**ug/L**	1.157	563314	0.552
	Fe	57	**5071.011**	**ug/L**	2.468	1055808	1.030
	Co	59	**46.855**	**ug/L**	1.114	418187	0.411
	Ni	60	**46.263**	**ug/L**	0.433	93559	0.091
	Cu	63		**ug/L**		225131	0.221
	Cu	65	**47.939**	**ug/L**	1.412	111004	0.109
	Zn	66	**47.688**	**ug/L**	1.069	72746	0.127
	Zn	67		**ug/L**		32305	0.010
	Zn	68		**ug/L**		59055	0.101
>	Ge	74		**ug/L**		566201	566200.568
	As	75	**49.159**	**ug/L**	1.303	82460	0.145
	Se	77		**ug/L**		13729	0.010
	Se	82	**48.357**	**ug/L**	2.533	8038	0.014
	Kr	83		**ug/L**		150	0.000
	Sr	88	**55.556**	**ug/L**	1.520	860911	2.850
	Y	89		**ug/L**		130	0.000
	Mo	98	**51.722**	**ug/L**	1.435	223672	0.740
	Ag	107	**51.543**	**ug/L**	1.148	375034	1.242
	Cd	111	**50.374**	**ug/L**	1.786	89268	0.296
	Cd	114		**ug/L**		205148	0.679
>	In	115		**ug/L**		301968	301968.411
	Sn	120	**50.234**	**ug/L**	1.654	338347	1.119
	Sb	121	**48.855**	**ug/L**	0.891	289923	0.960
	Sb	123		**ug/L**		228121	0.755
	Ba	135		**ug/L**		86900	0.170
	Ba	137	**49.745**	**ug/L**	3.548	153471	0.301
	Ho	165		**ug/L**		104	0.000
>	Lu	175		**ug/L**		509997	509996.807
	Tl	205	**53.784**	**ug/L**	1.031	977033	1.913
	Pb	208	**53.774**	**ug/L**	1.123	1856347	3.625
	Bi	209		**ug/L**		1231	0.001
	Th	232	**48.765**	**ug/L**	5.048	1936869	3.798
	U	238	**52.437**	**ug/L**	2.015	2248462	4.409

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	91.794				
	Be	9	95.715				
	B	11	94.139				
	Na	23	108.471				
	Mg	24	105.318				
	Al	27	95.138				
	P	31	109.915				
	K	39	103.751				
	Ca	43	100.779				
>	Sc	45		97.5			
	Ti	47	101.559				
	V	51	101.786				
	Cr	52	101.030				
	Cr	53					
	Mn	55	103.273				
	Fe	57	101.420				
	Co	59	93.710				
	Ni	60	92.525				
	Cu	63					
	Cu	65	95.878				
	Zn	66	95.376				
	Zn	67					
	Zn	68					
>	Ge	74		98.6			
	As	75	98.319				
	Se	77					
	Se	82	96.714				
	Kr	83					
	Sr	88	111.112				
	Y	89					
	Mo	98	103.445				
	Ag	107	103.086				
	Cd	111	100.748				
	Cd	114					
>	In	115		92.3			
	Sn	120	100.468				
	Sb	121	97.710				
	Sb	123					
	Ba	135					
	Ba	137	99.490				
	Ho	165					
>	Lu	175		92.0			
	Tl	205	107.568				
	Pb	208	107.548				
	Bi	209					
	Th	232	97.530				
	U	238	104.874				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Sr	88	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, December 02, 2010 23:21:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 9.254

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.021**	**ug/L**	13.992	83	0.000
	Be	9	**0.003**	**ug/L**	214.836	16	0.000
	B	11	**2.251**	**ug/L**	10.081	1880	0.001
	Na	23	**-0.078**	**ug/L**	3868.052	76878	-0.000
	Mg	24	**0.839**	**ug/L**	32.486	7002	0.003
	Al	27	**0.186**	**ug/L**	183.761	10004	0.001
	P	31	**0.209**	**ug/L**	708.497	9776	0.000
	K	39	**9.515**	**ug/L**	10.625	538634	0.053
	Ca	43	**4.545**	**ug/L**	65.528	669	0.000
>	Sc	45		**ug/L**		1014096	1014096.495
	Ti	47	**0.117**	**ug/L**	31.062	798	0.000
	V	51	**-1.139**	**ug/L**	115.976	-5645	-0.009
	Cr	52	**0.147**	**ug/L**	10.979	2719	0.001
	Cr	53		**ug/L**		174753	0.024
	Mn	55	**0.024**	**ug/L**	5.469	1544	0.000
	Fe	57	**-1.381**	**ug/L**	89.930	6906	-0.000
	Co	59	**0.005**	**ug/L**	53.959	289	0.000
	Ni	60	**-0.020**	**ug/L**	3.759	365	-0.000
	Cu	63		**ug/L**		445	0.000
	Cu	65	**-0.009**	**ug/L**	116.694	257	-0.000
	Zn	66	**0.036**	**ug/L**	181.195	768	0.000
	Zn	67		**ug/L**		25536	-0.001
	Zn	68		**ug/L**		2173	0.000
>	Ge	74		**ug/L**		553216	553215.612
	As	75	**0.162**	**ug/L**	110.276	470	0.000
	Se	77		**ug/L**		9807	0.004
	Se	82	**0.020**	**ug/L**	220.423	-21	0.000
	Kr	83		**ug/L**		151	0.000
	Sr	88	**0.005**	**ug/L**	23.326	389	0.000
	Y	89		**ug/L**		92	0.000
	Mo	98	**0.182**	**ug/L**	27.239	997	0.003
	Ag	107	**0.011**	**ug/L**	11.152	151	0.000
	Cd	111	**0.025**	**ug/L**	26.337	73	0.000
	Cd	114		**ug/L**		157	0.000
>	In	115		**ug/L**		301703	301703.128
	Sn	120	**0.499**	**ug/L**	25.411	3762	0.011
	Sb	121	**0.436**	**ug/L**	29.329	2679	0.009
	Sb	123		**ug/L**		2107	0.007
	Ba	135		**ug/L**		52	0.000
	Ba	137	**0.006**	**ug/L**	27.376	75	0.000
	Ho	165		**ug/L**		78	0.000
>	Lu	175		**ug/L**		510195	510195.364
	Tl	205	**0.582**	**ug/L**	15.615	12277	0.021
	Pb	208	**-0.013**	**ug/L**	7.236	7089	-0.001
	Bi	209		**ug/L**		1310	0.001
	Th	232	**1.295**	**ug/L**	30.848	52059	0.101
	U	238	**0.057**	**ug/L**	34.799	2641	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.1		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			96.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			92.2		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			92.1		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 9	Th	232	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202262897
Sample Date/Time: Thursday, December 02, 2010 23:27:46
Sample Type:
Sample Description: ARSL 6020 MB
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\1202262897.255

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.043**	**ug/L**	12.048	136	0.000
	Be	9	**0.001**	**ug/L**	956.316	14	0.000
	B	11	**1.677**	**ug/L**	1.710	1476	0.001
	Na	23	**-1.964**	**ug/L**	24.420	66153	-0.010
	Mg	24	**-0.309**	**ug/L**	188.501	2667	-0.001
	Al	27	**0.366**	**ug/L**	260.518	10671	0.002
	P	31	**-5.824**	**ug/L**	22.707	7859	-0.002
	K	39	**32.804**	**ug/L**	68.778	657812	0.184
	Ca	43	**31.243**	**ug/L**	8.556	1016	0.000
>	Sc	45		**ug/L**		993937	993937.109
	Ti	47	**0.309**	**ug/L**	22.051	923	0.000
	V	51	**-2.908**	**ug/L**	22.850	-19609	-0.023
	Cr	52	**1.943**	**ug/L**	11.179	15180	0.014
	Cr	53		**ug/L**		391173	0.246
	Mn	55	**0.177**	**ug/L**	7.561	3132	0.002
	Fe	57	**3.906**	**ug/L**	38.257	7834	0.001
	Co	59	**-0.011**	**ug/L**	6.332	140	-0.000
	Ni	60	**-0.070**	**ug/L**	5.567	259	-0.000
	Cu	63		**ug/L**		599	0.000
	Cu	65	**0.054**	**ug/L**	13.485	393	0.000
	Zn	66	**4.499**	**ug/L**	1.406	7316	0.012
	Zn	67		**ug/L**		91496	0.119
	Zn	68		**ug/L**		9256	0.013
>	Ge	74		**ug/L**		550517	550516.912
	As	75	**-0.257**	**ug/L**	106.803	-216	-0.001
	Se	77		**ug/L**		27041	0.035
	Se	82	**0.146**	**ug/L**	102.957	-1	0.000
	Kr	83		**ug/L**		150	0.000
	Sr	88	**0.018**	**ug/L**	15.540	561	0.001
	Y	89		**ug/L**		79	0.000
	Mo	98	**0.213**	**ug/L**	9.982	1093	0.003
	Ag	107	**0.013**	**ug/L**	8.865	154	0.000
	Cd	111	**0.085**	**ug/L**	16.506	174	0.001
	Cd	114		**ug/L**		259	0.000
>	In	115		**ug/L**		290828	290827.680
	Sn	120	**0.491**	**ug/L**	19.720	3578	0.011
	Sb	121	**0.160**	**ug/L**	15.818	1012	0.003
	Sb	123		**ug/L**		788	0.002
	Ba	135		**ug/L**		69	0.000
	Ba	137	**0.018**	**ug/L**	9.067	108	0.000
	Ho	165		**ug/L**		64	-0.000
>	Lu	175		**ug/L**		493635	493635.398
	Tl	205	**0.232**	**ug/L**	4.294	5751	0.008
	Pb	208	**0.152**	**ug/L**	3.207	12365	0.010
	Bi	209		**ug/L**		7593	0.014
	Th	232	**0.553**	**ug/L**	14.447	21989	0.043
	U	238	**0.011**	**ug/L**	5.784	666	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		95.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		88.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		89.1			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202262898
Sample Date/Time: Thursday, December 02, 2010 23:33:54
Sample Type:
Sample Description: ARSL 6020 LCS
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\1202262898.256

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**45.682**	**ug/L**	0.250	118766	0.117
	Be	9	**47.723**	**ug/L**	0.551	31275	0.031
	B	11	**101.446**	**ug/L**	1.468	66429	0.065
	Na	23	**2119.912**	**ug/L**	8.797	10574286	10.361
	Mg	24	**2030.694**	**ug/L**	11.891	7540842	7.439
	Al	27	**2006.233**	**ug/L**	8.084	10091334	9.956
	P	31	**2266.554**	**ug/L**	1.329	668263	0.650
	K	39	**2024.483**	**ug/L**	7.571	11987596	11.359
	Ca	43	**2055.325**	**ug/L**	1.144	28936	0.028
>	Sc	45		**ug/L**		1013128	1013127.904
	Ti	47	**45.333**	**ug/L**	2.198	34633	0.033
	V	51	**42.815**	**ug/L**	6.491	349132	0.341
	Cr	52	**51.953**	**ug/L**	2.177	371204	0.365
	Cr	53		**ug/L**		437455	0.284
	Mn	55	**50.404**	**ug/L**	2.139	547146	0.539
	Fe	57	**2095.427**	**ug/L**	2.007	438364	0.426
	Co	59	**47.180**	**ug/L**	2.624	419011	0.413
	Ni	60	**46.489**	**ug/L**	0.720	93546	0.092
	Cu	63		**ug/L**		221116	0.218
	Cu	65	**47.378**	**ug/L**	1.135	109172	0.107
	Zn	66	**47.209**	**ug/L**	0.558	70494	0.126
	Zn	67		**ug/L**		107150	0.146
	Zn	68		**ug/L**		59646	0.104
>	Ge	74		**ug/L**		554154	554154.410
	As	75	**46.854**	**ug/L**	3.727	76933	0.138
	Se	77		**ug/L**		31776	0.043
	Se	82	**45.335**	**ug/L**	1.185	7376	0.013
	Kr	83		**ug/L**		188	0.000
	Sr	88	**54.866**	**ug/L**	2.317	806472	2.815
	Y	89		**ug/L**		147	0.000
	Mo	98	**52.484**	**ug/L**	1.149	215230	0.751
	Ag	107	**52.550**	**ug/L**	1.174	362661	1.266
	Cd	111	**49.619**	**ug/L**	2.098	83397	0.291
	Cd	114		**ug/L**		189972	0.663
>	In	115		**ug/L**		286365	286365.269
	Sn	120	**51.076**	**ug/L**	1.367	326209	1.138
	Sb	121	**48.998**	**ug/L**	0.732	275753	0.963
	Sb	123		**ug/L**		217131	0.758
	Ba	135		**ug/L**		83454	0.169
	Ba	137	**49.255**	**ug/L**	1.456	146930	0.298
	Ho	165		**ug/L**		168	0.000
>	Lu	175		**ug/L**		492970	492969.837
	Tl	205	**49.856**	**ug/L**	1.261	875727	1.773
	Pb	208	**53.182**	**ug/L**	1.197	1774822	3.586
	Bi	209		**ug/L**		1449981	2.940
	Th	232	**48.667**	**ug/L**	2.195	1869544	3.790
	U	238	**51.107**	**ug/L**	0.685	2118583	4.297

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		97.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		87.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		89.0			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, December 02, 2010 23:40:01
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 8.257

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**45.504**	**ug/L**	2.431	119620	0.117
	Be	9	**46.581**	**ug/L**	2.576	30870	0.030
	B	11	**93.709**	**ug/L**	4.074	62070	0.060
	Na	23	**5848.868**	**ug/L**	2.236	29369054	28.587
	Mg	24	**4880.162**	**ug/L**	5.677	18328397	17.877
	Al	27	**5013.324**	**ug/L**	7.685	25485859	24.880
	P	31	**5462.222**	**ug/L**	1.872	1614682	1.567
	K	39	**5374.483**	**ug/L**	8.219	31365071	30.154
	Ca	43	**5014.116**	**ug/L**	1.816	70503	0.068
>	Sc	45		**ug/L**		1024571	1024570.573
	Ti	47	**50.984**	**ug/L**	2.023	39300	0.038
	V	51	**50.547**	**ug/L**	3.778	416156	0.403
	Cr	52	**50.092**	**ug/L**	1.780	361988	0.352
	Cr	53		**ug/L**		191887	0.039
	Mn	55	**50.722**	**ug/L**	1.932	556802	0.542
	Fe	57	**5086.858**	**ug/L**	3.197	1065699	1.033
	Co	59	**46.535**	**ug/L**	2.159	417901	0.408
	Ni	60	**46.284**	**ug/L**	1.033	94188	0.092
	Cu	63		**ug/L**		225141	0.219
	Cu	65	**48.025**	**ug/L**	1.811	111912	0.109
	Zn	66	**47.997**	**ug/L**	2.286	73512	0.128
	Zn	67		**ug/L**		33780	0.012
	Zn	68		**ug/L**		59293	0.101
>	Ge	74		**ug/L**		568519	568518.854
	As	75	**49.098**	**ug/L**	0.852	82702	0.145
	Se	77		**ug/L**		13924	0.010
	Se	82	**48.311**	**ug/L**	3.111	8065	0.014
	Kr	83		**ug/L**		163	0.000
	Sr	88	**54.934**	**ug/L**	0.319	859055	2.819
	Y	89		**ug/L**		130	0.000
	Mo	98	**51.140**	**ug/L**	0.212	223135	0.732
	Ag	107	**50.785**	**ug/L**	1.004	372876	1.224
	Cd	111	**49.787**	**ug/L**	1.852	89035	0.292
	Cd	114		**ug/L**		204998	0.672
>	In	115		**ug/L**		304681	304680.848
	Sn	120	**49.378**	**ug/L**	2.032	335530	1.100
	Sb	121	**48.806**	**ug/L**	1.471	292236	0.959
	Sb	123		**ug/L**		227302	0.746
	Ba	135		**ug/L**		87938	0.172
	Ba	137	**50.000**	**ug/L**	3.038	154258	0.302
	Ho	165		**ug/L**		106	0.000
>	Lu	175		**ug/L**		510036	510035.661
	Tl	205	**53.811**	**ug/L**	1.907	977434	1.913
	Pb	208	**53.274**	**ug/L**	1.769	1839033	3.592
	Bi	209		**ug/L**		1856	0.002
	Th	232	**48.834**	**ug/L**	2.308	1940374	3.803
	U	238	**52.339**	**ug/L**	2.431	2244136	4.401

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	91.007				
	Be	9	93.162				
	B	11	93.709				
	Na	23	116.977				
	Mg	24	97.603				
	Al	27	99.274				
	P	31	109.244				
	K	39	107.490				
	Ca	43	100.282				
>	Sc	45		98.1			
	Ti	47	101.969				
	V	51	101.094				
	Cr	52	100.184				
	Cr	53					
	Mn	55	101.443				
	Fe	57	101.737				
	Co	59	93.070				
	Ni	60	92.568				
	Cu	63					
	Cu	65	96.049				
	Zn	66	95.994				
	Zn	67					
	Zn	68					
>	Ge	74		99.0			
	As	75	98.196				
	Se	77					
	Se	82	96.622				
	Kr	83					
	Sr	88	109.868				
	Y	89					
	Mo	98	102.281				
	Ag	107	101.570				
	Cd	111	99.574				
	Cd	114					
>	In	115		93.1			
	Sn	120	98.756				
	Sb	121	97.612				
	Sb	123					
	Ba	135					
	Ba	137	100.001				
	Ho	165					
>	Lu	175		92.0			
	Tl	205	107.621				
	Pb	208	106.547				
	Bi	209					
	Th	232	97.669				
	U	238	104.678				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Na	23	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, December 02, 2010 23:46:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 9.258

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.023**	**ug/L**	15.049	87	0.000
	Be	9	**0.007**	**ug/L**	112.902	19	0.000
	B	11	**2.710**	**ug/L**	7.892	2186	0.002
	Na	23	**-2.413**	**ug/L**	24.946	65483	-0.012
	Mg	24	**0.301**	**ug/L**	325.838	5001	0.001
	Al	27	**0.048**	**ug/L**	263.627	9336	0.000
	P	31	**4.382**	**ug/L**	86.614	11020	0.001
	K	39	**14.544**	**ug/L**	33.423	569135	0.082
	Ca	43	**2.721**	**ug/L**	114.113	645	0.000
>	Sc	45		**ug/L**		1017342	1017341.519
	Ti	47	**0.165**	**ug/L**	19.132	837	0.000
	V	51	**-1.209**	**ug/L**	81.419	-6273	-0.010
	Cr	52	**0.136**	**ug/L**	16.383	2647	0.001
	Cr	53		**ug/L**		172756	0.022
	Mn	55	**0.021**	**ug/L**	39.882	1509	0.000
	Fe	57	**-1.276**	**ug/L**	55.421	6949	-0.000
	Co	59	**0.006**	**ug/L**	9.131	299	0.000
	Ni	60	**-0.024**	**ug/L**	49.944	360	-0.000
	Cu	63		**ug/L**		444	0.000
	Cu	65	**0.002**	**ug/L**	517.008	282	0.000
	Zn	66	**0.051**	**ug/L**	55.211	797	0.000
	Zn	67		**ug/L**		25586	-0.001
	Zn	68		**ug/L**		2301	0.000
>	Ge	74		**ug/L**		559071	559070.623
	As	75	**0.413**	**ug/L**	54.251	888	0.001
	Se	77		**ug/L**		9144	0.002
	Se	82	**-0.016**	**ug/L**	108.300	-27	-0.000
	Kr	83		**ug/L**		139	-0.000
	Sr	88	**0.006**	**ug/L**	27.722	393	0.000
	Y	89		**ug/L**		95	0.000
	Mo	98	**0.189**	**ug/L**	22.264	1028	0.003
	Ag	107	**0.013**	**ug/L**	17.716	161	0.000
	Cd	111	**0.026**	**ug/L**	17.345	75	0.000
	Cd	114		**ug/L**		139	0.000
>	In	115		**ug/L**		301325	301324.818
	Sn	120	**0.521**	**ug/L**	21.504	3905	0.012
	Sb	121	**0.457**	**ug/L**	25.459	2804	0.009
	Sb	123		**ug/L**		2208	0.007
	Ba	135		**ug/L**		53	0.000
	Ba	137	**0.005**	**ug/L**	19.225	72	0.000
	Ho	165		**ug/L**		73	-0.000
>	Lu	175		**ug/L**		510510	510510.333
	Tl	205	**0.653**	**ug/L**	14.775	13584	0.023
	Pb	208	**-0.024**	**ug/L**	10.584	6711	-0.002
	Bi	209		**ug/L**		1598	0.001
	Th	232	**1.414**	**ug/L**	25.787	56990	0.110
	U	238	**0.059**	**ug/L**	27.986	2744	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.4		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			97.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			92.1		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			92.1		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 9	Th	232	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 266878001
Sample Date/Time: Thursday, December 02, 2010 23:52:18
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\266878001.259

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**61.400**	**ug/L**	1.997	160793	0.158
	Be	9	**-0.001**	**ug/L**	1046.381	14	-0.000
	B	11	**107.367**	**ug/L**	1.329	70804	0.069
	Na	23	**101099.707**	**ug/L**	8.345	504427315	494.142
	Mg	24	**358.946**	**ug/L**	12.449	1346150	1.315
	Al	27	**1.429**	**ug/L**	57.268	16343	0.007
	P	31	**10.880**	**ug/L**	18.560	12964	0.003
	K	39	**2340.625**	**ug/L**	7.808	13886653	13.132
	Ca	43	**7109.824**	**ug/L**	1.754	99340	0.097
>	Sc	45		**ug/L**		1020644	1020644.261
	Ti	47	**2.900**	**ug/L**	3.172	2902	0.002
	V	51	**29.569**	**ug/L**	3.699	244030	0.236
	Cr	52	**10.930**	**ug/L**	0.903	80011	0.077
	Cr	53		**ug/L**		372751	0.217
	Mn	55	**0.361**	**ug/L**	3.738	5224	0.004
	Fe	57	**25.630**	**ug/L**	4.753	12549	0.005
	Co	59	**0.005**	**ug/L**	18.821	286	0.000
	Ni	60	**0.208**	**ug/L**	10.186	827	0.000
	Cu	63		**ug/L**		51418	0.050
	Cu	65	**10.535**	**ug/L**	1.240	24672	0.024
	Zn	66	**5.006**	**ug/L**	3.380	7910	0.013
	Zn	67		**ug/L**		87548	0.115
	Zn	68		**ug/L**		10221	0.015
>	Ge	74		**ug/L**		540264	540263.780
	As	75	**11.549**	**ug/L**	2.006	18638	0.034
	Se	77		**ug/L**		28522	0.039
	Se	82	**0.348**	**ug/L**	40.073	32	0.000
	Kr	83		**ug/L**		196	0.000
	Sr	88	**136.935**	**ug/L**	0.732	1956695	7.026
	Y	89		**ug/L**		344	0.001
	Mo	98	**3.794**	**ug/L**	0.913	15312	0.054
	Ag	107	**0.024**	**ug/L**	38.858	221	0.001
	Cd	111	**-0.003**	**ug/L**	559.377	22	-0.000
	Cd	114		**ug/L**		314	0.001
>	In	115		**ug/L**		278489	278489.354
	Sn	120	**0.644**	**ug/L**	18.423	4369	0.014
	Sb	121	**0.249**	**ug/L**	8.191	1455	0.005
	Sb	123		**ug/L**		1219	0.004
	Ba	135		**ug/L**		33500	0.070
	Ba	137	**20.554**	**ug/L**	1.830	59796	0.124
	Ho	165		**ug/L**		85	0.000
>	Lu	175		**ug/L**		480647	480646.704
	Tl	205	**0.283**	**ug/L**	8.539	6470	0.010
	Pb	208	**1.113**	**ug/L**	2.476	43180	0.075
	Bi	209		**ug/L**		7872	0.015
	Th	232	**0.882**	**ug/L**	20.987	33688	0.069
	U	238	**19.837**	**ug/L**	2.613	801623	1.668

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		97.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		85.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		86.7			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Na	23	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202262899
Sample Date/Time: Thursday, December 02, 2010 23:58:26
Sample Type:
Sample Description: ARSL 6020 DUP
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\1202262899.260

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**61.122**	**ug/L**	2.261	161680	0.157
	Be	9	**0.000**	**ug/L**	601.989	15	0.000
	B	11	**107.364**	**ug/L**	0.462	71520	0.069
	Na	23	**105088.974**	**ug/L**	5.516	529534557	513.640
	Mg	24	**393.251**	**ug/L**	5.875	1488875	1.441
	Al	27	**2.308**	**ug/L**	26.257	21016	0.011
	P	31	**10.064**	**ug/L**	19.007	12851	0.003
	K	39	**2217.052**	**ug/L**	5.786	13319193	12.439
	Ca	43	**6880.833**	**ug/L**	1.038	97132	0.094
>	Sc	45		**ug/L**		1030946	1030945.809
	Ti	47	**2.730**	**ug/L**	1.788	2801	0.002
	V	51	**28.601**	**ug/L**	6.484	238617	0.228
	Cr	52	**10.918**	**ug/L**	2.292	80724	0.077
	Cr	53		**ug/L**		410466	0.250
	Mn	55	**0.354**	**ug/L**	2.414	5201	0.004
	Fe	57	**25.904**	**ug/L**	1.513	12734	0.005
	Co	59	**0.001**	**ug/L**	329.048	258	0.000
	Ni	60	**0.188**	**ug/L**	10.809	795	0.000
	Cu	63		**ug/L**		51105	0.049
	Cu	65	**10.288**	**ug/L**	2.082	24344	0.023
	Zn	66	**4.954**	**ug/L**	2.501	7918	0.013
	Zn	67		**ug/L**		93848	0.125
	Zn	68		**ug/L**		10408	0.015
>	Ge	74		**ug/L**		545999	545999.182
	As	75	**11.480**	**ug/L**	2.741	18724	0.034
	Se	77		**ug/L**		33039	0.046
	Se	82	**0.353**	**ug/L**	24.934	33	0.000
	Kr	83		**ug/L**		200	0.000
	Sr	88	**134.182**	**ug/L**	0.970	1946251	6.885
	Y	89		**ug/L**		341	0.001
	Mo	98	**3.651**	**ug/L**	1.948	14962	0.052
	Ag	107	**0.011**	**ug/L**	12.033	142	0.000
	Cd	111	**-0.026**	**ug/L**	41.169	-17	-0.000
	Cd	114		**ug/L**		301	0.001
>	In	115		**ug/L**		282666	282665.979
	Sn	120	**0.401**	**ug/L**	2.033	2911	0.009
	Sb	121	**0.160**	**ug/L**	1.574	982	0.003
	Sb	123		**ug/L**		867	0.003
	Ba	135		**ug/L**		32846	0.067
	Ba	137	**19.677**	**ug/L**	0.654	58481	0.119
	Ho	165		**ug/L**		81	0.000
>	Lu	175		**ug/L**		490869	490868.572
	Tl	205	**0.158**	**ug/L**	5.865	4429	0.006
	Pb	208	**1.031**	**ug/L**	1.038	41364	0.069
	Bi	209		**ug/L**		7783	0.014
	Th	232	**0.377**	**ug/L**	16.109	15150	0.029
	U	238	**19.141**	**ug/L**	0.996	790243	1.609

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		98.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		86.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		88.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Na	23	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202262900
Sample Date/Time: Friday, December 03, 2010 00:04:34
Sample Type:
Sample Description: ARSL 6020 MS
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\1202262900.261

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**102.016**	**ug/L**	0.621	262910	0.262
	Be	9	**46.090**	**ug/L**	2.182	29943	0.030
	B	11	**201.046**	**ug/L**	2.924	130093	0.129
	Na	23	**100550.545**	**ug/L**	10.995	493177966	491.458
	Mg	24	**2411.890**	**ug/L**	8.961	8873406	8.835
	Al	27	**1893.193**	**ug/L**	2.865	9447525	9.395
	P	31	**2139.477**	**ug/L**	1.575	625901	0.614
	K	39	**4183.077**	**ug/L**	7.050	24039676	23.470
	Ca	43	**8936.764**	**ug/L**	1.366	122736	0.122
>	Sc	45		**ug/L**		1004500	1004499.904
	Ti	47	**45.905**	**ug/L**	2.517	34758	0.034
	V	51	**76.967**	**ug/L**	3.843	619416	0.613
	Cr	52	**57.925**	**ug/L**	1.713	410132	0.407
	Cr	53		**ug/L**		404565	0.255
	Mn	55	**47.789**	**ug/L**	1.375	514397	0.511
	Fe	57	**2002.547**	**ug/L**	2.157	415621	0.407
	Co	59	**44.558**	**ug/L**	2.355	392297	0.390
	Ni	60	**42.927**	**ug/L**	2.286	85656	0.085
	Cu	63		**ug/L**		245059	0.244
	Cu	65	**53.401**	**ug/L**	0.952	121960	0.121
	Zn	66	**47.977**	**ug/L**	0.806	68504	0.128
	Zn	67		**ug/L**		99766	0.141
	Zn	68		**ug/L**		58791	0.107
>	Ge	74		**ug/L**		530016	530016.022
	As	75	**85.371**	**ug/L**	2.998	133882	0.252
	Se	77		**ug/L**		30824	0.044
	Se	82	**16.986**	**ug/L**	5.312	2629	0.005
	Kr	83		**ug/L**		284	0.000
	Sr	88	**189.719**	**ug/L**	0.486	2632728	9.734
	Y	89		**ug/L**		369	0.001
	Mo	98	**56.555**	**ug/L**	1.026	219013	0.809
	Ag	107	**51.116**	**ug/L**	0.940	333131	1.232
	Cd	111	**10.065**	**ug/L**	1.615	15997	0.059
	Cd	114		**ug/L**		35817	0.132
>	In	115		**ug/L**		270442	270442.389
	Sn	120	**51.821**	**ug/L**	0.387	312554	1.154
	Sb	121	**187.658**	**ug/L**	0.479	997123	3.687
	Sb	123		**ug/L**		789143	2.918
	Ba	135		**ug/L**		108695	0.232
	Ba	137	**68.061**	**ug/L**	1.193	192665	0.412
	Ho	165		**ug/L**		135	0.000
>	Lu	175		**ug/L**		467890	467890.129
	Tl	205	**93.125**	**ug/L**	2.235	1550802	3.311
	Pb	208	**43.041**	**ug/L**	1.370	1364547	2.902
	Bi	209		**ug/L**		7481	0.014
	Th	232	**49.823**	**ug/L**	2.428	1815987	3.880
	U	238	**68.020**	**ug/L**	0.409	2676174	5.719

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		96.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		82.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		84.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	B	11	Sample is out of limits (over linear range)
	Na	23	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202262901
Sample Date/Time: Friday, December 03, 2010 00:10:43
Sample Type:
Sample Description: ARSL 6020 SDILT
Number of Replicates: 3
Batch ID: 1048319|5|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\1202262901.262

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**12.631**	**ug/L**	0.624	29789	0.032
	Be	9	**0.009**	**ug/L**	20.623	18	0.000
	B	11	**24.592**	**ug/L**	5.203	14877	0.016
	Na	23	**22214.677**	**ug/L**	2.304	99776831	108.578
	Mg	24	**70.729**	**ug/L**	10.191	241367	0.259
	Al	27	**1.209**	**ug/L**	131.671	13674	0.006
	P	31	**1.975**	**ug/L**	70.723	9319	0.001
	K	39	**479.967**	**ug/L**	4.720	2911458	2.693
	Ca	43	**1490.060**	**ug/L**	1.886	19167	0.020
>	Sc	45		**ug/L**		918470	918470.129
	Ti	47	**0.702**	**ug/L**	10.204	1119	0.001
	V	51	**6.345**	**ug/L**	8.875	49643	0.051
	Cr	52	**2.157**	**ug/L**	5.931	15413	0.015
	Cr	53		**ug/L**		231727	0.104
	Mn	55	**0.116**	**ug/L**	7.695	2297	0.001
	Fe	57	**3.629**	**ug/L**	42.132	7186	0.001
	Co	59	**-0.004**	**ug/L**	77.303	186	-0.000
	Ni	60	**0.041**	**ug/L**	16.211	441	0.000
	Cu	63		**ug/L**		10062	0.011
	Cu	65	**2.168**	**ug/L**	1.053	4768	0.005
	Zn	66	**1.207**	**ug/L**	5.501	2288	0.003
	Zn	67		**ug/L**		35110	0.022
	Zn	68		**ug/L**		3862	0.004
>	Ge	74		**ug/L**		507378	507378.223
	As	75	**2.276**	**ug/L**	24.078	3597	0.007
	Se	77		**ug/L**		15302	0.016
	Se	82	**0.089**	**ug/L**	105.595	-9	0.000
	Kr	83		**ug/L**		155	0.000
	Sr	88	**30.366**	**ug/L**	2.599	418339	1.558
	Y	89		**ug/L**		130	0.000
	Mo	98	**0.780**	**ug/L**	3.682	3185	0.011
	Ag	107	**0.006**	**ug/L**	3.472	100	0.000
	Cd	111	**-0.006**	**ug/L**	46.294	16	-0.000
	Cd	114		**ug/L**		154	0.000
>	In	115		**ug/L**		268429	268428.512
	Sn	120	**0.132**	**ug/L**	6.594	1157	0.003
	Sb	121	**0.253**	**ug/L**	15.232	1422	0.005
	Sb	123		**ug/L**		1103	0.004
	Ba	135		**ug/L**		6459	0.014
	Ba	137	**4.075**	**ug/L**	2.379	11398	0.025
	Ho	165		**ug/L**		77	0.000
>	Lu	175		**ug/L**		460505	460505.150
	Tl	205	**1.211**	**ug/L**	21.291	21354	0.043
	Pb	208	**0.215**	**ug/L**	3.133	13483	0.014
	Bi	209		**ug/L**		2614	0.004
	Th	232	**0.591**	**ug/L**	26.778	21801	0.046
	U	238	**4.101**	**ug/L**	2.586	158930	0.345

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		87.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		88.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		82.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		83.1			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 266878003
Sample Date/Time: Friday, December 03, 2010 00:16:51
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\266878003.263

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**65.503**	**ug/L**	1.558	166864	0.168
	Be	9	**0.008**	**ug/L**	59.590	19	0.000
	B	11	**82.617**	**ug/L**	2.009	53095	0.053
	Na	23	**83484.203**	**ug/L**	3.628	405139585	408.043
	Mg	24	**8441.685**	**ug/L**	6.395	30716723	30.924
	Al	27	**0.637**	**ug/L**	66.246	12005	0.003
	P	31	**13.740**	**ug/L**	5.172	13425	0.004
	K	39	**5032.142**	**ug/L**	2.258	28505201	28.234
	Ca	43	**55971.467**	**ug/L**	0.375	756713	0.762
>	Sc	45		**ug/L**		992867	992866.581
	Ti	47	**2.895**	**ug/L**	0.973	2819	0.002
	V	51	**6.997**	**ug/L**	16.809	58880	0.056
	Cr	52	**6.917**	**ug/L**	3.072	49849	0.049
	Cr	53		**ug/L**		422134	0.277
	Mn	55	**0.291**	**ug/L**	4.337	4339	0.003
	Fe	57	**193.751**	**ug/L**	5.693	46114	0.039
	Co	59	**0.095**	**ug/L**	5.934	1064	0.001
	Ni	60	**1.370**	**ug/L**	3.460	3088	0.003
	Cu	63		**ug/L**		202226	0.203
	Cu	65	**44.782**	**ug/L**	1.426	101143	0.102
	Zn	66	**4.440**	**ug/L**	0.935	6981	0.012
	Zn	67		**ug/L**		84391	0.112
	Zn	68		**ug/L**		14491	0.024
>	Ge	74		**ug/L**		531507	531506.523
	As	75	**9.343**	**ug/L**	4.770	14876	0.028
	Se	77		**ug/L**		42029	0.065
	Se	82	**0.767**	**ug/L**	10.105	97	0.000
	Kr	83		**ug/L**		224	0.000
	Sr	88	**1315.689**	**ug/L**	1.425	18105976	67.504
	Y	89		**ug/L**		1024	0.004
	Mo	98	**4.732**	**ug/L**	0.753	18348	0.068
	Ag	107	**0.016**	**ug/L**	16.492	165	0.000
	Cd	111	**0.008**	**ug/L**	59.751	39	0.000
	Cd	114		**ug/L**		339	0.001
>	In	115		**ug/L**		268208	268208.042
	Sn	120	**1.125**	**ug/L**	1.851	7089	0.025
	Sb	121	**0.162**	**ug/L**	7.945	941	0.003
	Sb	123		**ug/L**		1637	0.006
	Ba	135		**ug/L**		294527	0.657
	Ba	137	**192.908**	**ug/L**	3.790	523025	1.167
	Ho	165		**ug/L**		97	0.000
>	Lu	175		**ug/L**		448496	448495.964
	Tl	205	**0.451**	**ug/L**	7.599	8708	0.016
	Pb	208	**2.549**	**ug/L**	3.109	83675	0.172
	Bi	209		**ug/L**		7258	0.014
	Th	232	**0.453**	**ug/L**	19.404	16455	0.035
	U	238	**6.115**	**ug/L**	2.070	230694	0.514

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		95.1			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		82.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		80.9			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Na	23	Sample is out of limits (over linear range)
	Ca	43	Sample is out of limits (over linear range)
	Sr	88	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 266878004
Sample Date/Time: Friday, December 03, 2010 00:23:00
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\266878004.264

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**63.156**	**ug/L**	3.201	166121	0.162
	Be	9	**0.008**	**ug/L**	45.217	20	0.000
	B	11	**81.453**	**ug/L**	2.593	54054	0.052
	Na	23	**78705.079**	**ug/L**	6.465	394542373	384.684
	Mg	24	**7741.218**	**ug/L**	10.122	29090543	28.358
	Al	27	**1.539**	**ug/L**	44.481	17010	0.008
	P	31	**12.195**	**ug/L**	15.433	13404	0.003
	K	39	**5080.408**	**ug/L**	2.820	29714278	28.504
	Ca	43	**54324.644**	**ug/L**	2.049	758241	0.739
>	Sc	45		**ug/L**		1025100	1025100.371
	Ti	47	**2.976**	**ug/L**	3.649	2972	0.002
	V	51	**6.852**	**ug/L**	44.125	59545	0.055
	Cr	52	**6.337**	**ug/L**	3.078	47290	0.044
	Cr	53		**ug/L**		436908	0.278
	Mn	55	**1.464**	**ug/L**	1.848	17345	0.016
	Fe	57	**204.160**	**ug/L**	4.407	49789	0.041
	Co	59	**0.632**	**ug/L**	0.526	5925	0.006
	Ni	60	**1.509**	**ug/L**	3.857	3469	0.003
	Cu	63		**ug/L**		211192	0.206
	Cu	65	**45.019**	**ug/L**	0.181	104981	0.102
	Zn	66	**14.734**	**ug/L**	1.587	21859	0.039
	Zn	67		**ug/L**		94244	0.128
	Zn	68		**ug/L**		26383	0.045
>	Ge	74		**ug/L**		538521	538521.074
	As	75	**9.773**	**ug/L**	11.684	15753	0.029
	Se	77		**ug/L**		42588	0.065
	Se	82	**0.642**	**ug/L**	16.710	78	0.000
	Kr	83		**ug/L**		242	0.000
	Sr	88	**1303.938**	**ug/L**	1.535	18124738	66.902
	Y	89		**ug/L**		1357	0.005
	Mo	98	**4.695**	**ug/L**	2.739	18384	0.067
	Ag	107	**0.012**	**ug/L**	5.343	139	0.000
	Cd	111	**0.009**	**ug/L**	95.190	41	0.000
	Cd	114		**ug/L**		312	0.001
>	In	115		**ug/L**		270973	270973.245
	Sn	120	**0.802**	**ug/L**	1.803	5212	0.018
	Sb	121	**0.223**	**ug/L**	2.750	1279	0.004
	Sb	123		**ug/L**		2012	0.007
	Ba	135		**ug/L**		298987	0.656
	Ba	137	**191.105**	**ug/L**	1.051	527038	1.156
	Ho	165		**ug/L**		104	0.000
>	Lu	175		**ug/L**		455940	455939.809
	Tl	205	**0.274**	**ug/L**	6.124	5992	0.010
	Pb	208	**4.397**	**ug/L**	1.539	141890	0.296
	Bi	209		**ug/L**		7014	0.014
	Th	232	**0.261**	**ug/L**	12.028	9936	0.020
	U	238	**6.037**	**ug/L**	1.382	231597	0.508

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		98.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		93.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		82.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		82.3			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Na	23	Sample is out of limits (over linear range)
	Ca	43	Sample is out of limits (over linear range)
	Sr	88	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 266878006
Sample Date/Time: Friday, December 03, 2010 00:29:08
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\266878006.265

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**77.682**	**ug/L**	2.580	198425	0.199
	Be	9	**0.018**	**ug/L**	20.382	26	0.000
	B	11	**92.741**	**ug/L**	0.740	59749	0.060
	Na	23	**104445.912**	**ug/L**	6.341	508340132	510.497
	Mg	24	**3673.665**	**ug/L**	7.518	13410334	13.458
	Al	27	**1.663**	**ug/L**	71.293	17011	0.008
	P	31	**21.653**	**ug/L**	3.240	15725	0.006
	K	39	**3208.811**	**ug/L**	1.033	18406989	18.004
	Ca	43	**21153.453**	**ug/L**	1.289	287197	0.288
>	Sc	45		**ug/L**		996010	996009.665
	Ti	47	**3.048**	**ug/L**	4.267	2940	0.002
	V	51	**26.110**	**ug/L**	3.377	210615	0.208
	Cr	52	**7.499**	**ug/L**	1.273	54086	0.053
	Cr	53		**ug/L**		438799	0.292
	Mn	55	**2.987**	**ug/L**	2.619	33081	0.032
	Fe	57	**107.627**	**ug/L**	2.540	28836	0.022
	Co	59	**1.099**	**ug/L**	1.069	9825	0.010
	Ni	60	**0.722**	**ug/L**	6.763	1819	0.001
	Cu	63		**ug/L**		42248	0.042
	Cu	65	**8.686**	**ug/L**	1.992	19893	0.020
	Zn	66	**8.396**	**ug/L**	2.188	12674	0.022
	Zn	67		**ug/L**		91618	0.124
	Zn	68		**ug/L**		15668	0.026
>	Ge	74		**ug/L**		535232	535231.635
	As	75	**8.438**	**ug/L**	10.651	13548	0.025
	Se	77		**ug/L**		38047	0.057
	Se	82	**0.058**	**ug/L**	92.373	-15	0.000
	Kr	83		**ug/L**		228	0.000
	Sr	88	**549.893**	**ug/L**	2.269	7623408	28.214
	Y	89		**ug/L**		1062	0.004
	Mo	98	**2.475**	**ug/L**	1.153	9760	0.035
	Ag	107	**0.008**	**ug/L**	35.283	112	0.000
	Cd	111	**-0.079**	**ug/L**	55.611	-98	-0.000
	Cd	114		**ug/L**		289	0.001
>	In	115		**ug/L**		270253	270252.592
	Sn	120	**0.384**	**ug/L**	4.438	2681	0.009
	Sb	121	**0.241**	**ug/L**	3.858	1371	0.005
	Sb	123		**ug/L**		1474	0.005
	Ba	135		**ug/L**		103540	0.229
	Ba	137	**66.779**	**ug/L**	1.413	182881	0.404
	Ho	165		**ug/L**		96	0.000
>	Lu	175		**ug/L**		452706	452705.924
	Tl	205	**0.193**	**ug/L**	4.181	4640	0.007
	Pb	208	**4.514**	**ug/L**	1.125	144453	0.304
	Bi	209		**ug/L**		6886	0.013
	Th	232	**0.182**	**ug/L**	14.052	7083	0.014
	U	238	**21.949**	**ug/L**	0.738	835799	1.846

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			95.4		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			93.2		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			82.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			81.7		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Na	23	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, December 03, 2010 00:35:16
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 6.266

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**43.430**	**ug/L**	0.807	112040	0.111
	Be	9	**46.480**	**ug/L**	0.695	30227	0.030
	B	11	**91.007**	**ug/L**	2.132	59180	0.058
	Na	23	**5491.300**	**ug/L**	5.897	27063650	26.840
	Mg	24	**5178.843**	**ug/L**	5.474	19079376	18.971
	Al	27	**5193.777**	**ug/L**	3.844	25920056	25.775
	P	31	**5586.162**	**ug/L**	1.354	1620275	1.602
	K	39	**5256.939**	**ug/L**	5.275	30126976	29.495
	Ca	43	**5006.338**	**ug/L**	2.492	69076	0.068
>	Sc	45		**ug/L**		1005311	1005310.598
	Ti	47	**52.825**	**ug/L**	2.332	39937	0.039
	V	51	**50.536**	**ug/L**	4.279	408340	0.403
	Cr	52	**51.186**	**ug/L**	1.482	362949	0.359
	Cr	53		**ug/L**		203208	0.054
	Mn	55	**52.040**	**ug/L**	0.652	560580	0.556
	Fe	57	**5293.433**	**ug/L**	0.386	1088038	1.075
	Co	59	**47.420**	**ug/L**	1.413	417911	0.415
	Ni	60	**46.486**	**ug/L**	2.500	92816	0.092
	Cu	63		**ug/L**		220240	0.219
	Cu	65	**48.134**	**ug/L**	0.874	110056	0.109
	Zn	66	**47.469**	**ug/L**	1.193	71725	0.127
	Zn	67		**ug/L**		35827	0.017
	Zn	68		**ug/L**		60135	0.104
>	Ge	74		**ug/L**		560784	560783.514
	As	75	**50.320**	**ug/L**	0.245	83600	0.149
	Se	77		**ug/L**		14538	0.012
	Se	82	**48.813**	**ug/L**	2.397	8039	0.014
	Kr	83		**ug/L**		169	0.000
	Sr	88	**56.970**	**ug/L**	0.558	854902	2.923
	Y	89		**ug/L**		139	0.000
	Mo	98	**53.558**	**ug/L**	1.476	224251	0.766
	Ag	107	**52.150**	**ug/L**	0.979	367441	1.257
	Cd	111	**51.185**	**ug/L**	1.080	87838	0.300
	Cd	114		**ug/L**		202019	0.691
>	In	115		**ug/L**		292370	292370.133
	Sn	120	**50.959**	**ug/L**	0.915	332271	1.135
	Sb	121	**49.811**	**ug/L**	1.431	286210	0.979
	Sb	123		**ug/L**		223332	0.764
	Ba	135		**ug/L**		85284	0.175
	Ba	137	**51.129**	**ug/L**	2.491	150569	0.309
	Ho	165		**ug/L**		94	0.000
>	Lu	175		**ug/L**		486711	486710.963
	Tl	205	**54.282**	**ug/L**	0.301	941130	1.930
	Pb	208	**54.277**	**ug/L**	0.361	1788286	3.659
	Bi	209		**ug/L**		1284	0.001
	Th	232	**49.165**	**ug/L**	2.819	1864407	3.829
	U	238	**53.171**	**ug/L**	2.276	2175942	4.471

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	86.860				
	Be	9	92.960				
	B	11	91.007				
	Na	23	109.826				
	Mg	24	103.577				
	Al	27	102.847				
	P	31	111.723				
	K	39	105.139				
	Ca	43	100.127				
>	Sc	45		96.3			
	Ti	47	105.650				
	V	51	101.072				
	Cr	52	102.372				
	Cr	53					
	Mn	55	104.080				
	Fe	57	105.869				
	Co	59	94.840				
	Ni	60	92.972				
	Cu	63					
	Cu	65	96.267				
	Zn	66	94.939				
	Zn	67					
	Zn	68					
>	Ge	74		97.7			
	As	75	100.640				
	Se	77					
	Se	82	97.627				
	Kr	83					
	Sr	88	113.941				
	Y	89					
	Mo	98	107.116				
	Ag	107	104.300				
	Cd	111	102.370				
	Cd	114					
>	In	115		89.4			
	Sn	120	101.918				
	Sb	121	99.622				
	Sb	123					
	Ba	135					
	Ba	137	102.258				
	Ho	165					
>	Lu	175		87.8			
	Tl	205	108.564				
	Pb	208	108.554				
	Bi	209					
	Th	232	98.329				
	U	238	106.341				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
QC Std 6	P	31	CCV is out of limits (+/- 10%)
QC Std 6	Sr	88	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, December 03, 2010 00:41:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 7.267

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.033**	**ug/L**	8.209	112	0.000
	Be	9	**0.004**	**ug/L**	129.045	16	0.000
	B	11	**3.151**	**ug/L**	10.337	2429	0.002
	Na	23	**6.746**	**ug/L**	68.251	109095	0.033
	Mg	24	**0.593**	**ug/L**	158.175	6002	0.002
	Al	27	**0.218**	**ug/L**	84.409	10004	0.001
	P	31	**7.087**	**ug/L**	17.634	11585	0.002
	K	39	**22.741**	**ug/L**	20.919	603839	0.128
	Ca	43	**5.493**	**ug/L**	27.949	671	0.000
>	Sc	45		**ug/L**		997871	997870.507
	Ti	47	**0.109**	**ug/L**	57.032	779	0.000
	V	51	**-0.939**	**ug/L**	102.698	-3930	-0.007
	Cr	52	**0.112**	**ug/L**	43.660	2433	0.001
	Cr	53		**ug/L**		179326	0.032
	Mn	55	**0.031**	**ug/L**	6.744	1591	0.000
	Fe	57	**1.671**	**ug/L**	106.125	7415	0.000
	Co	59	**0.002**	**ug/L**	68.350	255	0.000
	Ni	60	**-0.003**	**ug/L**	291.903	394	-0.000
	Cu	63		**ug/L**		443	0.000
	Cu	65	**0.006**	**ug/L**	46.007	287	0.000
	Zn	66	**0.019**	**ug/L**	133.274	742	0.000
	Zn	67		**ug/L**		26843	0.001
	Zn	68		**ug/L**		2425	0.001
>	Ge	74		**ug/L**		553076	553075.643
	As	75	**0.045**	**ug/L**	218.336	275	0.000
	Se	77		**ug/L**		9802	0.004
	Se	82	**0.007**	**ug/L**	981.912	-23	0.000
	Kr	83		**ug/L**		155	0.000
	Sr	88	**0.010**	**ug/L**	12.257	444	0.001
	Y	89		**ug/L**		99	0.000
	Mo	98	**0.173**	**ug/L**	21.709	923	0.002
	Ag	107	**0.012**	**ug/L**	31.615	147	0.000
	Cd	111	**0.018**	**ug/L**	34.829	58	0.000
	Cd	114		**ug/L**		152	0.000
>	In	115		**ug/L**		290232	290232.387
	Sn	120	**0.515**	**ug/L**	22.560	3730	0.011
	Sb	121	**0.407**	**ug/L**	28.466	2417	0.008
	Sb	123		**ug/L**		2017	0.007
	Ba	135		**ug/L**		61	0.000
	Ba	137	**0.006**	**ug/L**	26.233	71	0.000
	Ho	165		**ug/L**		70	-0.000
>	Lu	175		**ug/L**		486047	486046.730
	Tl	205	**0.430**	**ug/L**	15.845	9090	0.015
	Pb	208	**-0.032**	**ug/L**	15.292	6142	-0.002
	Bi	209		**ug/L**		1346	0.001
	Th	232	**1.249**	**ug/L**	26.824	48095	0.097
	U	238	**0.059**	**ug/L**	29.459	2588	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		95.5			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		88.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		87.7			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Th	232	CCB is out of limits (+-/ PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Friday, December 03, 2010 07:25:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\Blank.333

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		86	
	Be	9		ug/L		18	
	B	11		ug/L		849	
	Na	23		ug/L		64482	
	Mg	24		ug/L		5001	
	Al	27		ug/L		12006	
	P	31		ug/L		9793	
	K	39		ug/L		500970	
	Ca	43		ug/L		594	
>	Sc	45		ug/L		919012	
	Ti	47		ug/L		646	
	V	51		ug/L		-2901	
	Cr	52		ug/L		2558	
	Cr	53		ug/L		135402	
	Mn	55		ug/L		1279	
	Fe	57		ug/L		5849	
	Co	59		ug/L		221	
	Ni	60		ug/L		338	
	Cu	63		ug/L		402	
	Cu	65		ug/L		240	
	Zn	66		ug/L		662	
	Zn	67		ug/L		21869	
	Zn	68		ug/L		2081	
>	Ge	74		ug/L		503307	
	As	75		ug/L		151	
	Se	77		ug/L		6754	
	Se	82		ug/L		-26	
	Kr	83		ug/L		128	
	Sr	88		ug/L		386	
	Y	89		ug/L		82	
	Mo	98		ug/L		318	
	Ag	107		ug/L		112	
	Cd	111		ug/L		43	
	Cd	114		ug/L		129	
>	In	115		ug/L		286063	
	Sn	120		ug/L		1094	
	Sb	121		ug/L		444	
	Sb	123		ug/L		330	
	Ba	135		ug/L		46	
	Ba	137		ug/L		69	
	Ho	165		ug/L		71	
>	Lu	175		ug/L		496217	
	Tl	205		ug/L		5101	
	Pb	208		ug/L		7032	
	Bi	209		ug/L		1097	
	Th	232		ug/L		8695	
	U	238		ug/L		895	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Friday, December 03, 2010 07:31:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\Standard 1.334

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	1.486	25059	0.027
	Be	9	**10.000**	**ug/L**	2.999	6108	0.007
	B	11	**20.000**	**ug/L**	0.808	12860	0.013
	Na	23	**1000.000**	**ug/L**	4.595	5293511	5.622
	Mg	24	**1000.000**	**ug/L**	2.026	3438692	3.692
	Al	27	**1000.000**	**ug/L**	9.551	4386886	4.706
	P	31	**1000.000**	**ug/L**	1.562	323257	0.337
	K	39	**1000.000**	**ug/L**	6.454	5745534	5.637
	Ca	43	**1000.000**	**ug/L**	2.055	13275	0.014
>	Sc	45		**ug/L**		929971	929971.156
	Ti	47	**10.000**	**ug/L**	1.260	7617	0.007
	V	51	**10.000**	**ug/L**	9.272	79950	0.089
	Cr	52	**10.000**	**ug/L**	2.945	69171	0.072
	Cr	53		**ug/L**		119409	-0.019
	Mn	55	**10.000**	**ug/L**	2.077	108036	0.115
	Fe	57	**1000.000**	**ug/L**	2.172	216901	0.227
	Co	59	**10.000**	**ug/L**	4.396	84087	0.090
	Ni	60	**10.000**	**ug/L**	2.411	18560	0.020
	Cu	63		**ug/L**		44723	0.048
	Cu	65	**10.000**	**ug/L**	1.036	21995	0.023
	Zn	66	**10.000**	**ug/L**	1.554	15261	0.028
	Zn	67		**ug/L**		19426	-0.006
	Zn	68		**ug/L**		13202	0.022
>	Ge	74		**ug/L**		514386	514385.941
	As	75	**10.000**	**ug/L**	1.980	15309	0.029
	Se	77		**ug/L**		6466	-0.001
	Se	82	**10.000**	**ug/L**	4.685	1530	0.003
	Kr	83		**ug/L**		126	-0.000
	Sr	88	**10.000**	**ug/L**	1.871	169496	0.585
	Y	89		**ug/L**		103	0.000
	Mo	98	**10.000**	**ug/L**	4.357	42330	0.145
	Ag	107	**10.000**	**ug/L**	0.887	74993	0.259
	Cd	111	**10.000**	**ug/L**	0.675	17719	0.061
	Cd	114		**ug/L**		41756	0.144
>	In	115		**ug/L**		288893	288893.326
	Sn	120	**10.000**	**ug/L**	2.349	67535	0.230
	Sb	121	**10.000**	**ug/L**	1.296	59645	0.205
	Sb	123		**ug/L**		47050	0.162
	Ba	135		**ug/L**		17825	0.034
	Ba	137	**10.000**	**ug/L**	2.938	31550	0.061
	Ho	165		**ug/L**		73	-0.000
>	Lu	175		**ug/L**		518478	518477.597
	Tl	205	**10.000**	**ug/L**	1.633	222338	0.419
	Pb	208	**10.000**	**ug/L**	1.297	408209	0.773
	Bi	209		**ug/L**		1063	-0.000
	Th	232	**10.000**	**ug/L**	4.892	444214	0.839
	U	238	**10.000**	**ug/L**	1.397	504617	0.972

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Friday, December 03, 2010 07:37:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\Standard 2.335

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**99.977**	**ug/L**	2.579	241389	0.263
	Be	9	**99.955**	**ug/L**	3.958	57555	0.063
	B	11	**199.935**	**ug/L**	4.080	115650	0.125
	Na	23	**9997.040**	**ug/L**	3.912	50214484	54.583
	Mg	24	**10002.170**	**ug/L**	5.072	34691828	37.746
	Al	27	**10004.692**	**ug/L**	3.619	45419987	49.402
	P	31	**9983.110**	**ug/L**	3.827	2654281	2.878
	K	39	**10001.192**	**ug/L**	7.712	53031732	57.054
	Ca	43	**9999.604**	**ug/L**	4.040	125337	0.136
>	Sc	45		**ug/L**		919486	919486.423
	Ti	47	**100.003**	**ug/L**	2.137	69669	0.075
	V	51	**99.905**	**ug/L**	3.462	745057	0.814
	Cr	52	**99.969**	**ug/L**	2.897	640966	0.695
	Cr	53		**ug/L**		176765	0.045
	Mn	55	**99.927**	**ug/L**	2.662	983722	1.069
	Fe	57	**9985.654**	**ug/L**	3.616	1826723	1.982
	Co	59	**99.951**	**ug/L**	2.682	790153	0.860
	Ni	60	**99.958**	**ug/L**	3.880	173055	0.188
	Cu	63		**ug/L**		407590	0.443
	Cu	65	**99.943**	**ug/L**	2.947	203420	0.221
	Zn	66	**99.937**	**ug/L**	2.033	136126	0.267
	Zn	67		**ug/L**		38910	0.033
	Zn	68		**ug/L**		107937	0.208
>	Ge	74		**ug/L**		508375	508374.863
	As	75	**99.983**	**ug/L**	0.908	147376	0.290
	Se	77		**ug/L**		16461	0.019
	Se	82	**99.960**	**ug/L**	2.449	14754	0.029
	Kr	83		**ug/L**		190	0.000
	Sr	88	**99.894**	**ug/L**	1.611	1506258	5.289
	Y	89		**ug/L**		370	0.001
	Mo	98	**99.996**	**ug/L**	0.788	412914	1.449
	Ag	107	**99.921**	**ug/L**	1.220	683402	2.400
	Cd	111	**99.970**	**ug/L**	1.000	169172	0.594
	Cd	114		**ug/L**		383227	1.346
>	In	115		**ug/L**		284774	284774.020
	Sn	120	**99.980**	**ug/L**	1.252	643165	2.255
	Sb	121	**99.971**	**ug/L**	2.588	567167	1.990
	Sb	123		**ug/L**		450507	1.581
	Ba	135		**ug/L**		169294	0.337
	Ba	137	**99.972**	**ug/L**	3.399	296559	0.590
	Ho	165		**ug/L**		98	0.000
>	Lu	175		**ug/L**		502529	502528.660
	Tl	205	**99.888**	**ug/L**	1.091	1893699	3.759
	Pb	208	**99.902**	**ug/L**	2.759	3540481	7.034
	Bi	209		**ug/L**		1782	0.001
	Th	232	**99.960**	**ug/L**	2.218	4063001	8.069
	U	238	**99.879**	**ug/L**	3.024	4348448	8.655

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Friday, December 03, 2010 07:43:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 1.336

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.908**	**ug/L**	1.680	122150	0.136
	Be	9	**50.741**	**ug/L**	1.025	28480	0.032
	B	11	**101.659**	**ug/L**	1.005	57709	0.064
	Na	23	**5160.994**	**ug/L**	0.656	25295750	28.179
	Mg	24	**4798.800**	**ug/L**	3.133	16222269	18.110
	Al	27	**4815.747**	**ug/L**	7.731	21308586	23.779
	P	31	**5429.123**	**ug/L**	2.023	1410755	1.565
	K	39	**5494.639**	**ug/L**	14.331	28534219	31.345
	Ca	43	**4972.912**	**ug/L**	1.658	61025	0.068
>	Sc	45		**ug/L**		895397	895397.441
	Ti	47	**50.733**	**ug/L**	1.020	34742	0.038
	V	51	**51.046**	**ug/L**	3.152	369519	0.416
	Cr	52	**51.113**	**ug/L**	1.169	320480	0.355
	Cr	53		**ug/L**		134754	0.003
	Mn	55	**51.600**	**ug/L**	1.083	495455	0.552
	Fe	57	**5410.295**	**ug/L**	1.023	967049	1.074
	Co	59	**49.880**	**ug/L**	2.360	384206	0.429
	Ni	60	**51.207**	**ug/L**	1.824	86539	0.096
	Cu	63		**ug/L**		207500	0.231
	Cu	65	**51.809**	**ug/L**	2.262	102842	0.115
	Zn	66	**50.262**	**ug/L**	1.705	68743	0.134
	Zn	67		**ug/L**		26899	0.010
	Zn	68		**ug/L**		54853	0.104
>	Ge	74		**ug/L**		507949	507949.438
	As	75	**49.321**	**ug/L**	2.253	72702	0.143
	Se	77		**ug/L**		10772	0.008
	Se	82	**50.025**	**ug/L**	1.509	7366	0.015
	Kr	83		**ug/L**		156	0.000
	Sr	88	**52.729**	**ug/L**	0.437	791286	2.792
	Y	89		**ug/L**		137	0.000
	Mo	98	**49.532**	**ug/L**	2.216	203637	0.718
	Ag	107	**51.416**	**ug/L**	1.884	349898	1.235
	Cd	111	**49.666**	**ug/L**	1.412	83636	0.295
	Cd	114		**ug/L**		195414	0.689
>	In	115		**ug/L**		283303	283303.124
	Sn	120	**50.606**	**ug/L**	0.245	324433	1.141
	Sb	121	**49.058**	**ug/L**	1.609	277168	0.977
	Sb	123		**ug/L**		217779	0.767
	Ba	135		**ug/L**		80683	0.160
	Ba	137	**47.949**	**ug/L**	1.470	142593	0.283
	Ho	165		**ug/L**		90	0.000
>	Lu	175		**ug/L**		503469	503468.694
	Tl	205	**50.993**	**ug/L**	1.348	971088	1.919
	Pb	208	**52.406**	**ug/L**	1.943	1864447	3.690
	Bi	209		**ug/L**		944	-0.000
	Th	232	**48.968**	**ug/L**	1.357	1998914	3.953
	U	238	**51.762**	**ug/L**	1.940	2258809	4.486

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	103.815				
	Be	9	101.483				
	B	11	101.659				
	Na	23	103.220				
	Mg	24	95.976				
	Al	27	95.361				
	P	31	108.582				
	K	39	109.893				
	Ca	43	99.458				
>	Sc	45		97.4			
	Ti	47	101.466				
	V	51	102.091				
	Cr	52	102.225				
	Cr	53					
	Mn	55	103.200				
	Fe	57	108.206				
	Co	59	99.761				
	Ni	60	102.414				
	Cu	63					
	Cu	65	103.618				
	Zn	66	100.523				
	Zn	67					
	Zn	68					
>	Ge	74		100.9			
	As	75	98.643				
	Se	77					
	Se	82	100.050				
	Kr	83					
	Sr	88	105.458				
	Y	89					
	Mo	98	99.064				
	Ag	107	102.832				
	Cd	111	99.332				
	Cd	114					
>	In	115		99.0			
	Sn	120	101.212				
	Sb	121	98.115				
	Sb	123					
	Ba	135					
	Ba	137	95.898				
	Ho	165					
>	Lu	175		101.5			
	Tl	205	101.986				
	Pb	208	104.813				
	Bi	209					
	Th	232	97.936				
	U	238	103.525				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Friday, December 03, 2010 07:49:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 2.337

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.007**	**ug/L**	41.841	99	0.000
	Be	9	**0.002**	**ug/L**	77.507	19	0.000
	B	11	**2.806**	**ug/L**	11.591	2370	0.002
	Na	23	**4.858**	**ug/L**	37.048	85591	0.027
	Mg	24	**0.053**	**ug/L**	952.305	5001	0.000
	Al	27	**0.707**	**ug/L**	174.699	14675	0.003
	P	31	**1.697**	**ug/L**	204.153	9867	0.000
	K	39	**-3.329**	**ug/L**	195.308	465482	-0.019
	Ca	43	**-6.945**	**ug/L**	36.358	489	-0.000
>	Sc	45		**ug/L**		884977	884977.245
	Ti	47	**0.052**	**ug/L**	58.659	656	0.000
	V	51	**-0.174**	**ug/L**	395.047	-4040	-0.001
	Cr	52	**0.026**	**ug/L**	179.261	2622	0.000
	Cr	53		**ug/L**		118564	-0.013
	Mn	55	**0.002**	**ug/L**	167.633	1253	0.000
	Fe	57	**2.981**	**ug/L**	30.299	6155	0.001
	Co	59	**0.007**	**ug/L**	20.842	264	0.000
	Ni	60	**0.011**	**ug/L**	119.757	345	0.000
	Cu	63		**ug/L**		465	0.000
	Cu	65	**0.015**	**ug/L**	14.368	262	0.000
	Zn	66	**0.023**	**ug/L**	8.674	669	0.000
	Zn	67		**ug/L**		19832	-0.003
	Zn	68		**ug/L**		1977	-0.000
>	Ge	74		**ug/L**		486407	486406.846
	As	75	**-0.060**	**ug/L**	509.751	60	-0.000
	Se	77		**ug/L**		6101	-0.001
	Se	82	**0.045**	**ug/L**	84.200	-19	0.000
	Kr	83		**ug/L**		137	0.000
	Sr	88	**0.000**	**ug/L**	239.738	384	0.000
	Y	89		**ug/L**		89	0.000
	Mo	98	**0.175**	**ug/L**	25.124	1027	0.003
	Ag	107	**0.008**	**ug/L**	27.228	163	0.000
	Cd	111	**0.014**	**ug/L**	71.868	65	0.000
	Cd	114		**ug/L**		132	0.000
>	In	115		**ug/L**		282505	282505.428
	Sn	120	**0.571**	**ug/L**	19.653	4714	0.013
	Sb	121	**0.306**	**ug/L**	32.854	2159	0.006
	Sb	123		**ug/L**		1685	0.005
	Ba	135		**ug/L**		38	-0.000
	Ba	137	**0.001**	**ug/L**	366.702	72	0.000
	Ho	165		**ug/L**		75	0.000
>	Lu	175		**ug/L**		507900	507900.419
	Tl	205	**0.315**	**ug/L**	24.854	11245	0.012
	Pb	208	**0.008**	**ug/L**	43.641	7499	0.001
	Bi	209		**ug/L**		1054	-0.000
	Th	232	**0.794**	**ug/L**	31.133	41486	0.064
	U	238	**0.060**	**ug/L**	27.647	3542	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		96.3			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		102.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Friday, December 03, 2010 07:55:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 3.338

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**11.948**	**ug/L**	3.146	27787	0.031
	Be	9	**0.568**	**ug/L**	3.440	332	0.000
	B	11	**17.791**	**ug/L**	2.270	10633	0.011
	Na	23	**303.903**	**ug/L**	1.637	1527159	1.659
	Mg	24	**18.413**	**ug/L**	11.156	66154	0.069
	Al	27	**40.024**	**ug/L**	13.597	186221	0.198
	P	31	**61.813**	**ug/L**	6.281	25139	0.018
	K	39	**310.982**	**ug/L**	10.013	2046820	1.774
	Ca	43	**221.254**	**ug/L**	0.604	3224	0.003
>	Sc	45		**ug/L**		883120	883119.564
	Ti	47	**9.056**	**ug/L**	2.046	6626	0.007
	V	51	**11.468**	**ug/L**	7.881	79742	0.093
	Cr	52	**11.444**	**ug/L**	0.911	72681	0.080
	Cr	53		**ug/L**		132501	0.003
	Mn	55	**6.116**	**ug/L**	1.438	59001	0.065
	Fe	57	**126.731**	**ug/L**	3.221	27825	0.025
	Co	59	**1.149**	**ug/L**	2.223	8938	0.010
	Ni	60	**2.286**	**ug/L**	1.079	4122	0.004
	Cu	63		**ug/L**		5164	0.005
	Cu	65	**1.197**	**ug/L**	2.940	2568	0.003
	Zn	66	**11.017**	**ug/L**	1.212	15020	0.029
	Zn	67		**ug/L**		23064	0.004
	Zn	68		**ug/L**		12885	0.022
>	Ge	74		**ug/L**		489349	489349.390
	As	75	**5.282**	**ug/L**	6.748	7635	0.015
	Se	77		**ug/L**		6645	0.000
	Se	82	**5.492**	**ug/L**	3.845	757	0.002
	Kr	83		**ug/L**		127	0.000
	Sr	88	**12.180**	**ug/L**	1.370	181944	0.645
	Y	89		**ug/L**		91	0.000
	Mo	98	**0.530**	**ug/L**	3.874	2475	0.008
	Ag	107	**1.040**	**ug/L**	1.293	7142	0.025
	Cd	111	**1.093**	**ug/L**	2.136	1870	0.006
	Cd	114		**ug/L**		4284	0.015
>	In	115		**ug/L**		281529	281528.839
	Sn	120	**5.496**	**ug/L**	0.417	35972	0.124
	Sb	121	**2.607**	**ug/L**	7.633	15056	0.052
	Sb	123		**ug/L**		11813	0.041
	Ba	135		**ug/L**		3711	0.007
	Ba	137	**2.146**	**ug/L**	3.089	6532	0.013
	Ho	165		**ug/L**		68	-0.000
>	Lu	175		**ug/L**		510212	510212.191
	Tl	205	**1.251**	**ug/L**	2.203	29261	0.047
	Pb	208	**2.393**	**ug/L**	2.273	93189	0.169
	Bi	209		**ug/L**		1107	-0.000
	Th	232	**1.364**	**ug/L**	1.958	65107	0.110
	U	238	**0.273**	**ug/L**	3.253	13008	0.024

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	119.478				
	Be	9	113.615				
	B	11	118.605				
	Na	23	121.561				
	Mg	24	122.755				
	Al	27	133.413				
	P	31	123.625				
	K	39	103.661				
	Ca	43	110.627				
>	Sc	45		96.1			
	Ti	47	90.560				
	V	51	114.683				
	Cr	52	114.437				
	Cr	53					
	Mn	55	122.315				
	Fe	57	126.731				
	Co	59	114.884				
	Ni	60	114.316				
	Cu	63					
	Cu	65	119.663				
	Zn	66	110.170				
	Zn	67					
	Zn	68					
>	Ge	74		97.2			
	As	75	105.635				
	Se	77					
	Se	82	109.839				
	Kr	83					
	Sr	88	121.805				
	Y	89					
	Mo	98	106.028				
	Ag	107	103.985				
	Cd	111	109.309				
	Cd	114					
>	In	115		98.4			
	Sn	120	109.913				
	Sb	121	86.914				
	Sb	123					
	Ba	135					
	Ba	137	107.284				
	Ho	165					
>	Lu	175		102.8			
	Tl	205	125.121				
	Pb	208	119.665				
	Bi	209					
	Th	232	136.400				
	U	238	136.750				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Al	27	CRDL is out of limits
QC Std 3	Th	232	CRDL is out of limits
QC Std 3	U	238	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Friday, December 03, 2010 08:01:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 4.339

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.217**	**ug/L**	5.587	550	0.001
	Be	9	**0.066**	**ug/L**	19.780	51	0.000
	B	11	**1.677**	**ug/L**	3.818	1636	0.001
	Na	23	**92305.652**	**ug/L**	0.919	418019274	503.982
	Mg	24	**98108.072**	**ug/L**	4.274	306986539	370.242
	Al	27	**93841.700**	**ug/L**	2.753	384249258	463.375
	P	31	**89713.916**	**ug/L**	0.941	21459067	25.865
	K	39	**94450.774**	**ug/L**	5.655	447364959	538.817
	Ca	43	**94866.890**	**ug/L**	1.888	1068719	1.288
>	Sc	45		**ug/L**		829348	829347.965
	Ti	47	**1731.494**	**ug/L**	1.443	1078859	1.300
	V	51	**0.165**	**ug/L**	301.547	-1519	0.001
	Cr	52	**1.791**	**ug/L**	3.123	12630	0.012
	Cr	53		**ug/L**		73856	-0.058
	Mn	55	**1.684**	**ug/L**	1.319	16093	0.018
	Fe	57	**100651.717**	**ug/L**	0.654	16571069	19.975
	Co	59	**0.311**	**ug/L**	2.282	2420	0.003
	Ni	60	**2.627**	**ug/L**	5.283	4402	0.005
	Cu	63		**ug/L**		6906	0.008
	Cu	65	**2.394**	**ug/L**	3.185	4609	0.005
	Zn	66	**6.354**	**ug/L**	1.372	8458	0.017
	Zn	67		**ug/L**		14323	-0.013
	Zn	68		**ug/L**		4600	0.006
>	Ge	74		**ug/L**		463211	463210.869
	As	75	**0.106**	**ug/L**	224.224	281	0.000
	Se	77		**ug/L**		5827	-0.001
	Se	82	**-1.118**	**ug/L**	25.200	-175	-0.000
	Kr	83		**ug/L**		389	0.001
	Sr	88	**2.910**	**ug/L**	1.488	40326	0.154
	Y	89		**ug/L**		570	0.002
	Mo	98	**1976.210**	**ug/L**	0.934	7429908	28.633
	Ag	107	**0.119**	**ug/L**	3.491	845	0.003
	Cd	111	**0.170**	**ug/L**	93.773	299	0.001
	Cd	114		**ug/L**		8771	0.033
>	In	115		**ug/L**		259450	259449.935
	Sn	120	**0.594**	**ug/L**	6.229	4464	0.013
	Sb	121	**0.193**	**ug/L**	27.074	1399	0.004
	Sb	123		**ug/L**		1096	0.003
	Ba	135		**ug/L**		820	0.002
	Ba	137	**0.512**	**ug/L**	1.957	1429	0.003
	Ho	165		**ug/L**		431	0.001
>	Lu	175		**ug/L**		452134	452134.205
	Tl	205	**0.017**	**ug/L**	4.901	4941	0.001
	Pb	208	**0.391**	**ug/L**	0.187	18859	0.028
	Bi	209		**ug/L**		7003	0.013
	Th	232	**0.576**	**ug/L**	41.871	28932	0.046
	U	238	**-0.002**	**ug/L**	39.164	753	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	92.306				
	Mg	24	98.108				
	Al	27	93.842				
	P	31	89.714				
	K	39	94.451				
	Ca	43	94.867				
>	Sc	45		90.2			
	Ti	47	86.575				
	V	51					
	Cr	52	58.137				
	Cr	53					
	Mn	55	112.708				
	Fe	57	100.652				
	Co	59	107.682				
	Ni	60	86.069				
	Cu	63					
	Cu	65	84.567				
	Zn	66	108.213				
	Zn	67					
	Zn	68					
>	Ge	74		92.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	116.233				
	Y	89					
	Mo	98	98.810				
	Ag	107					
	Cd	111	284.105				
	Cd	114					
>	In	115		90.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137	159.492				
	Ho	165					
>	Lu	175		91.1			
	Tl	205					
	Pb	208	140.696				
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Friday, December 03, 2010 08:08:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 5.340

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.478**	**ug/L**	1.726	45139	0.056
	Be	9	**18.979**	**ug/L**	1.964	9515	0.012
	B	11	**18.849**	**ug/L**	0.945	10149	0.012
	Na	23	**93127.255**	**ug/L**	6.558	406443858	508.468
	Mg	24	**93945.889**	**ug/L**	4.271	283316594	354.535
	Al	27	**95179.190**	**ug/L**	7.093	375625210	469.980
	P	31	**87503.278**	**ug/L**	0.439	20163614	25.228
	K	39	**97670.420**	**ug/L**	6.489	445507817	557.184
	Ca	43	**92392.264**	**ug/L**	0.988	1002704	1.254
>	Sc	45		**ug/L**		798932	798931.687
	Ti	47	**1725.399**	**ug/L**	2.142	1035601	1.296
	V	51	**21.899**	**ug/L**	3.398	140003	0.178
	Cr	52	**22.761**	**ug/L**	0.138	128591	0.158
	Cr	53		**ug/L**		84554	-0.042
	Mn	55	**23.506**	**ug/L**	1.744	201990	0.251
	Fe	57	**99456.195**	**ug/L**	2.070	15772566	19.738
	Co	59	**20.910**	**ug/L**	0.480	143864	0.180
	Ni	60	**22.541**	**ug/L**	0.355	34160	0.042
	Cu	63		**ug/L**		74520	0.093
	Cu	65	**21.627**	**ug/L**	0.613	38433	0.048
	Zn	66	**24.170**	**ug/L**	1.562	29592	0.064
	Zn	67		**ug/L**		17440	-0.005
	Zn	68		**ug/L**		21331	0.043
>	Ge	74		**ug/L**		449969	449969.473
	As	75	**20.018**	**ug/L**	2.473	26225	0.058
	Se	77		**ug/L**		7638	0.004
	Se	82	**18.497**	**ug/L**	3.818	2398	0.005
	Kr	83		**ug/L**		391	0.001
	Sr	88	**24.913**	**ug/L**	2.584	341714	1.319
	Y	89		**ug/L**		560	0.002
	Mo	98	**1906.779**	**ug/L**	2.006	7151056	27.627
	Ag	107	**18.930**	**ug/L**	2.962	117751	0.455
	Cd	111	**18.821**	**ug/L**	2.094	28982	0.112
	Cd	114		**ug/L**		74775	0.288
>	In	115		**ug/L**		258887	258886.725
	Sn	120	**21.018**	**ug/L**	1.779	123682	0.474
	Sb	121	**20.221**	**ug/L**	2.905	104594	0.403
	Sb	123		**ug/L**		80884	0.311
	Ba	135		**ug/L**		31926	0.070
	Ba	137	**21.081**	**ug/L**	1.490	56645	0.124
	Ho	165		**ug/L**		472	0.001
>	Lu	175		**ug/L**		454589	454588.751
	Tl	205	**20.666**	**ug/L**	1.949	358150	0.778
	Pb	208	**21.549**	**ug/L**	1.339	696153	1.517
	Bi	209		**ug/L**		7021	0.013
	Th	232	**22.772**	**ug/L**	1.213	843573	1.838
	U	238	**23.715**	**ug/L**	2.317	934956	2.055

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	107.392				
	Be	9	94.897				
	B	11	94.245				
	Na	23	93.127				
	Mg	24	93.946				
	Al	27	95.179				
	P	31	87.503				
	K	39	97.670				
	Ca	43	92.392				
>	Sc	45		86.9			
	Ti	47	86.270				
	V	51	109.494				
	Cr	52	98.615				
	Cr	53					
	Mn	55	109.360				
	Fe	57	99.456				
	Co	59	103.062				
	Ni	60	96.720				
	Cu	63					
	Cu	65	94.727				
	Zn	66	93.422				
	Zn	67					
	Zn	68					
>	Ge	74		89.4			
	As	75	100.088				
	Se	77					
	Se	82	92.487				
	Kr	83					
	Sr	88	110.705				
	Y	89					
	Mo	98	95.339				
	Ag	107	94.651				
	Cd	111	93.824				
	Cd	114					
>	In	115		90.5			
	Sn	120	105.089				
	Sb	121	101.103				
	Sb	123					
	Ba	135					
	Ba	137	103.741				
	Ho	165					
>	Lu	175		91.6			
	Tl	205	103.328				
	Pb	208	106.270				
	Bi	209					
	Th	232	113.859				
	U	238	118.577				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, December 03, 2010 08:14:11
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 6.341

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.672**	**ug/L**	1.444	110756	0.138
	Be	9	**48.973**	**ug/L**	3.000	24565	0.031
	B	11	**93.175**	**ug/L**	5.413	47328	0.058
	Na	23	**4668.610**	**ug/L**	8.278	20455677	25.490
	Mg	24	**4642.136**	**ug/L**	5.656	14020151	17.519
	Al	27	**4554.115**	**ug/L**	6.017	18005695	22.487
	P	31	**5040.203**	**ug/L**	0.843	1171279	1.453
	K	39	**4798.888**	**ug/L**	2.593	22343744	27.376
	Ca	43	**4683.052**	**ug/L**	0.944	51398	0.064
>	Sc	45		**ug/L**		800180	800180.036
	Ti	47	**50.848**	**ug/L**	1.507	31115	0.038
	V	51	**49.542**	**ug/L**	2.524	320448	0.404
	Cr	52	**48.328**	**ug/L**	2.136	270950	0.336
	Cr	53		**ug/L**		112870	-0.006
	Mn	55	**49.799**	**ug/L**	2.486	427354	0.533
	Fe	57	**5385.873**	**ug/L**	2.174	860343	1.069
	Co	59	**48.429**	**ug/L**	1.621	333472	0.416
	Ni	60	**50.058**	**ug/L**	0.871	75625	0.094
	Cu	63		**ug/L**		182210	0.227
	Cu	65	**51.040**	**ug/L**	0.740	90560	0.113
	Zn	66	**50.232**	**ug/L**	0.897	60431	0.134
	Zn	67		**ug/L**		22619	0.007
	Zn	68		**ug/L**		46276	0.099
>	Ge	74		**ug/L**		446739	446738.701
	As	75	**48.819**	**ug/L**	0.535	63298	0.141
	Se	77		**ug/L**		8467	0.006
	Se	82	**49.717**	**ug/L**	1.273	6439	0.014
	Kr	83		**ug/L**		108	-0.000
	Sr	88	**48.872**	**ug/L**	0.978	698979	2.588
	Y	89		**ug/L**		106	0.000
	Mo	98	**44.772**	**ug/L**	2.662	175424	0.649
	Ag	107	**47.654**	**ug/L**	1.841	309074	1.144
	Cd	111	**47.149**	**ug/L**	1.409	75667	0.280
	Cd	114		**ug/L**		174919	0.647
>	In	115		**ug/L**		269998	269998.455
	Sn	120	**47.218**	**ug/L**	1.043	288573	1.065
	Sb	121	**46.950**	**ug/L**	1.450	252795	0.935
	Sb	123		**ug/L**		197827	0.732
	Ba	135		**ug/L**		72390	0.143
	Ba	137	**42.928**	**ug/L**	0.740	128050	0.253
	Ho	165		**ug/L**		76	0.000
>	Lu	175		**ug/L**		504927	504927.387
	Tl	205	**47.517**	**ug/L**	1.465	908078	1.788
	Pb	208	**49.737**	**ug/L**	1.124	1775186	3.502
	Bi	209		**ug/L**		942	-0.000
	Th	232	**46.811**	**ug/L**	2.493	1917310	3.779
	U	238	**49.188**	**ug/L**	0.464	2153251	4.262

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	105.345				
	Be	9	97.946				
	B	11	93.175				
	Na	23	93.372				
	Mg	24	92.843				
	Al	27	90.180				
	P	31	100.804				
	K	39	95.978				
	Ca	43	93.661				
>	Sc	45		87.1			
	Ti	47	101.697				
	V	51	99.083				
	Cr	52	96.656				
	Cr	53					
	Mn	55	99.597				
	Fe	57	107.717				
	Co	59	96.859				
	Ni	60	100.117				
	Cu	63					
	Cu	65	102.080				
	Zn	66	100.464				
	Zn	67					
	Zn	68					
>	Ge	74		88.8			
	As	75	97.638				
	Se	77					
	Se	82	99.434				
	Kr	83					
	Sr	88	97.743				
	Y	89					
	Mo	98	89.543				
	Ag	107	95.307				
	Cd	111	94.298				
	Cd	114					
>	In	115		94.4			
	Sn	120	94.437				
	Sb	121	93.900				
	Sb	123					
	Ba	135					
	Ba	137	85.855				
	Ho	165					
>	Lu	175		101.8			
	Tl	205	95.034				
	Pb	208	99.475				
	Bi	209					
	Th	232	93.623				
	U	238	98.376				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mo	98	CCV is out of limits (+/- 10%)
QC Std 6	Ba	137	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, December 03, 2010 08:20:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 7.342

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.017**	**ug/L**	21.873	111	0.000
	Be	9	**-0.001**	**ug/L**	1176.928	15	-0.000
	B	11	**1.477**	**ug/L**	18.117	1474	0.001
	Na	23	**1.189**	**ug/L**	279.197	61135	0.006
	Mg	24	**1.435**	**ug/L**	12.180	8669	0.005
	Al	27	**0.485**	**ug/L**	439.300	12340	0.002
	P	31	**2.328**	**ug/L**	155.969	9045	0.001
	K	39	**-1.180**	**ug/L**	648.077	429727	-0.007
	Ca	43	**-3.176**	**ug/L**	144.336	481	-0.000
>	Sc	45		**ug/L**		798230	798230.399
	Ti	47	**1.212**	**ug/L**	13.119	1287	0.001
	V	51	**0.076**	**ug/L**	872.434	-2040	0.001
	Cr	52	**-0.270**	**ug/L**	14.510	728	-0.002
	Cr	53		**ug/L**		99557	-0.023
	Mn	55	**-0.004**	**ug/L**	101.293	1074	-0.000
	Fe	57	**5.933**	**ug/L**	25.272	6019	0.001
	Co	59	**0.004**	**ug/L**	104.496	221	0.000
	Ni	60	**0.011**	**ug/L**	31.704	310	0.000
	Cu	63		**ug/L**		393	0.000
	Cu	65	**0.027**	**ug/L**	21.422	257	0.000
	Zn	66	**0.231**	**ug/L**	15.600	851	0.001
	Zn	67		**ug/L**		17002	-0.005
	Zn	68		**ug/L**		1816	-0.000
>	Ge	74		**ug/L**		441190	441190.226
	As	75	**-0.297**	**ug/L**	57.719	-245	-0.001
	Se	77		**ug/L**		4490	-0.003
	Se	82	**0.160**	**ug/L**	79.762	-2	0.000
	Kr	83		**ug/L**		117	0.000
	Sr	88	**-0.001**	**ug/L**	157.384	341	-0.000
	Y	89		**ug/L**		74	-0.000
	Mo	98	**0.252**	**ug/L**	20.315	1276	0.004
	Ag	107	**0.006**	**ug/L**	11.595	146	0.000
	Cd	111	**0.014**	**ug/L**	17.379	62	0.000
	Cd	114		**ug/L**		111	-0.000
>	In	115		**ug/L**		268885	268885.285
	Sn	120	**0.463**	**ug/L**	31.423	3824	0.010
	Sb	121	**0.215**	**ug/L**	28.191	1564	0.004
	Sb	123		**ug/L**		1232	0.003
	Ba	135		**ug/L**		55	0.000
	Ba	137	**-0.002**	**ug/L**	89.439	63	-0.000
	Ho	165		**ug/L**		68	-0.000
>	Lu	175		**ug/L**		502787	502786.559
	Tl	205	**0.389**	**ug/L**	25.271	12527	0.015
	Pb	208	**0.022**	**ug/L**	29.179	7916	0.002
	Bi	209		**ug/L**		931	-0.000
	Th	232	**0.637**	**ug/L**	40.338	34641	0.051
	U	238	**0.045**	**ug/L**	37.689	2850	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		86.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		87.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		101.3			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202266504
Sample Date/Time: Friday, December 03, 2010 08:26:26
Sample Type:
Sample Description: ARSL 6020 MB
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\1202266504.343

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.051**	**ug/L**	4.951	182	0.000
	Be	9	**0.003**	**ug/L**	192.871	17	0.000
	B	11	**0.847**	**ug/L**	4.289	1161	0.001
	Na	23	**-0.289**	**ug/L**	41.357	54771	-0.002
	Mg	24	**-0.231**	**ug/L**	500.881	3667	-0.001
	Al	27	**-1.124**	**ug/L**	1.232	6001	-0.006
	P	31	**-7.817**	**ug/L**	28.954	6713	-0.002
	K	39	**8.665**	**ug/L**	13.102	474760	0.049
	Ca	43	**29.808**	**ug/L**	15.432	839	0.000
>	Sc	45		**ug/L**		798561	798560.515
	Ti	47	**1.017**	**ug/L**	7.059	1171	0.001
	V	51	**-4.946**	**ug/L**	21.717	-34663	-0.040
	Cr	52	**0.396**	**ug/L**	27.123	4420	0.003
	Cr	53		**ug/L**		243030	0.157
	Mn	55	**0.139**	**ug/L**	14.252	2298	0.001
	Fe	57	**6.132**	**ug/L**	24.256	6053	0.001
	Co	59	**-0.013**	**ug/L**	6.551	106	-0.000
	Ni	60	**-0.059**	**ug/L**	21.757	205	-0.000
	Cu	63		**ug/L**		523	0.000
	Cu	65	**0.074**	**ug/L**	23.345	340	0.000
	Zn	66	**2.044**	**ug/L**	1.307	2976	0.005
	Zn	67		**ug/L**		61417	0.096
	Zn	68		**ug/L**		4909	0.007
>	Ge	74		**ug/L**		439885	439885.333
	As	75	**-1.369**	**ug/L**	13.833	-1612	-0.004
	Se	77		**ug/L**		13393	0.017
	Se	82	**0.055**	**ug/L**	304.188	-16	0.000
	Kr	83		**ug/L**		117	0.000
	Sr	88	**0.008**	**ug/L**	10.422	448	0.000
	Y	89		**ug/L**		73	-0.000
	Mo	98	**0.101**	**ug/L**	9.021	660	0.001
	Ag	107	**0.006**	**ug/L**	59.223	135	0.000
	Cd	111	**0.061**	**ug/L**	13.641	130	0.000
	Cd	114		**ug/L**		215	0.000
>	In	115		**ug/L**		255767	255767.464
	Sn	120	**0.789**	**ug/L**	14.793	5528	0.018
	Sb	121	**0.062**	**ug/L**	23.757	711	0.001
	Sb	123		**ug/L**		569	0.001
	Ba	135		**ug/L**		145	0.000
	Ba	137	**0.061**	**ug/L**	15.193	238	0.000
	Ho	165		**ug/L**		81	0.000
>	Lu	175		**ug/L**		477238	477238.387
	Tl	205	**0.006**	**ug/L**	233.216	5011	0.000
	Pb	208	**0.146**	**ug/L**	2.144	11654	0.010
	Bi	209		**ug/L**		7194	0.013
	Th	232	**0.097**	**ug/L**	44.930	12087	0.008
	U	238	**-0.008**	**ug/L**	7.718	545	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		86.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		87.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		89.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		96.2			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202266505
Sample Date/Time: Friday, December 03, 2010 08:32:33
Sample Type:
Sample Description: ARSL 6020 LCS
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\1202266505.344

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.937**	**ug/L**	0.901	110205	0.136
	Be	9	**50.794**	**ug/L**	0.850	25711	0.032
	B	11	**98.322**	**ug/L**	2.896	50356	0.061
	Na	23	**1819.994**	**ug/L**	6.190	8077827	9.937
	Mg	24	**1889.232**	**ug/L**	6.781	5759385	7.130
	Al	27	**1716.874**	**ug/L**	4.549	6854322	8.478
	P	31	**1951.227**	**ug/L**	0.724	462817	0.563
	K	39	**1805.025**	**ug/L**	3.859	8753718	10.297
	Ca	43	**1956.511**	**ug/L**	0.928	21971	0.027
>	Sc	45		**ug/L**		807437	807437.189
	Ti	47	**42.970**	**ug/L**	1.201	26621	0.032
	V	51	**40.890**	**ug/L**	0.336	266466	0.333
	Cr	52	**48.500**	**ug/L**	0.621	274371	0.337
	Cr	53		**ug/L**		284853	0.205
	Mn	55	**49.446**	**ug/L**	1.386	428226	0.529
	Fe	57	**2168.882**	**ug/L**	2.419	352648	0.430
	Co	59	**49.479**	**ug/L**	1.254	343762	0.426
	Ni	60	**51.309**	**ug/L**	1.200	78204	0.096
	Cu	63		**ug/L**		184515	0.228
	Cu	65	**51.098**	**ug/L**	2.443	91494	0.113
	Zn	66	**48.856**	**ug/L**	0.683	58518	0.130
	Zn	67		**ug/L**		75090	0.125
	Zn	68		**ug/L**		47411	0.102
>	Ge	74		**ug/L**		444664	444663.856
	As	75	**43.584**	**ug/L**	2.170	56261	0.126
	Se	77		**ug/L**		18177	0.027
	Se	82	**46.316**	**ug/L**	0.417	5969	0.013
	Kr	83		**ug/L**		129	0.000
	Sr	88	**49.338**	**ug/L**	1.395	664364	2.612
	Y	89		**ug/L**		87	0.000
	Mo	98	**46.112**	**ug/L**	0.797	170107	0.668
	Ag	107	**50.335**	**ug/L**	1.474	307341	1.209
	Cd	111	**46.444**	**ug/L**	0.454	70174	0.276
	Cd	114		**ug/L**		164724	0.648
>	In	115		**ug/L**		254183	254183.456
	Sn	120	**49.101**	**ug/L**	0.428	282462	1.107
	Sb	121	**46.791**	**ug/L**	1.347	237198	0.932
	Sb	123		**ug/L**		187511	0.737
	Ba	135		**ug/L**		71506	0.149
	Ba	137	**44.629**	**ug/L**	1.848	126252	0.264
	Ho	165		**ug/L**		150	0.000
>	Lu	175		**ug/L**		478896	478895.990
	Tl	205	**46.047**	**ug/L**	2.240	834630	1.733
	Pb	208	**50.694**	**ug/L**	0.486	1716034	3.569
	Bi	209		**ug/L**		1404850	2.932
	Th	232	**47.252**	**ug/L**	2.600	1834934	3.814
	U	238	**50.431**	**ug/L**	0.841	2093770	4.370

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		87.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		88.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		88.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		96.5			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Friday, December 03, 2010 08:38:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 8.345

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.998**	**ug/L**	2.407	109869	0.134
	Be	9	**49.221**	**ug/L**	0.913	25299	0.031
	B	11	**90.675**	**ug/L**	2.597	47213	0.057
	Na	23	**4529.732**	**ug/L**	10.374	20313022	24.732
	Mg	24	**4517.974**	**ug/L**	9.806	13974979	17.050
	Al	27	**4441.002**	**ug/L**	4.684	17984734	21.929
	P	31	**4911.460**	**ug/L**	1.863	1169531	1.416
	K	39	**4413.945**	**ug/L**	0.953	21092752	25.180
	Ca	43	**4628.899**	**ug/L**	0.938	52061	0.063
>	Sc	45		**ug/L**		819919	819918.667
	Ti	47	**47.924**	**ug/L**	2.840	30079	0.036
	V	51	**47.369**	**ug/L**	3.674	313743	0.386
	Cr	52	**46.806**	**ug/L**	5.166	268840	0.325
	Cr	53		**ug/L**		125105	0.005
	Mn	55	**48.868**	**ug/L**	3.194	429624	0.523
	Fe	57	**5191.203**	**ug/L**	1.712	849771	1.030
	Co	59	**47.307**	**ug/L**	3.368	333667	0.407
	Ni	60	**49.045**	**ug/L**	2.247	75908	0.092
	Cu	63		**ug/L**		185670	0.226
	Cu	65	**49.788**	**ug/L**	2.368	90499	0.110
	Zn	66	**48.172**	**ug/L**	0.990	59096	0.128
	Zn	67		**ug/L**		25371	0.012
	Zn	68		**ug/L**		46717	0.098
>	Ge	74		**ug/L**		455382	455382.360
	As	75	**47.732**	**ug/L**	2.820	63090	0.138
	Se	77		**ug/L**		8807	0.006
	Se	82	**49.426**	**ug/L**	1.919	6524	0.014
	Kr	83		**ug/L**		130	0.000
	Sr	88	**47.420**	**ug/L**	3.633	691762	2.511
	Y	89		**ug/L**		113	0.000
	Mo	98	**43.392**	**ug/L**	1.975	173447	0.629
	Ag	107	**47.030**	**ug/L**	1.529	311167	1.129
	Cd	111	**46.215**	**ug/L**	2.176	75655	0.275
	Cd	114		**ug/L**		173038	0.628
>	In	115		**ug/L**		275424	275423.652
	Sn	120	**46.181**	**ug/L**	2.879	287890	1.042
	Sb	121	**46.167**	**ug/L**	2.463	253566	0.919
	Sb	123		**ug/L**		197042	0.714
	Ba	135		**ug/L**		72619	0.142
	Ba	137	**42.454**	**ug/L**	1.940	128061	0.251
	Ho	165		**ug/L**		86	0.000
>	Lu	175		**ug/L**		510691	510691.156
	Tl	205	**47.695**	**ug/L**	2.609	921500	1.795
	Pb	208	**49.419**	**ug/L**	3.052	1783582	3.479
	Bi	209		**ug/L**		1412	0.001
	Th	232	**45.891**	**ug/L**	4.840	1899824	3.705
	U	238	**48.468**	**ug/L**	2.741	2145215	4.200

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	101.997				
	Be	9	98.442				
	B	11	90.675				
	Na	23	90.595				
	Mg	24	90.359				
	Al	27	87.941				
	P	31	98.229				
	K	39	88.279				
	Ca	43	92.578				
>	Sc	45		89.2			
	Ti	47	95.848				
	V	51	94.739				
	Cr	52	93.612				
	Cr	53					
	Mn	55	97.736				
	Fe	57	103.824				
	Co	59	94.614				
	Ni	60	98.089				
	Cu	63					
	Cu	65	99.576				
	Zn	66	96.343				
	Zn	67					
	Zn	68					
>	Ge	74		90.5			
	As	75	95.463				
	Se	77					
	Se	82	98.852				
	Kr	83					
	Sr	88	94.839				
	Y	89					
	Mo	98	86.783				
	Ag	107	94.060				
	Cd	111	92.430				
	Cd	114					
>	In	115		96.3			
	Sn	120	92.363				
	Sb	121	92.335				
	Sb	123					
	Ba	135					
	Ba	137	84.908				
	Ho	165					
>	Lu	175		102.9			
	Tl	205	95.390				
	Pb	208	98.837				
	Bi	209					
	Th	232	91.781				
	U	238	96.935				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Al	27	CCV is out of limits (+/- 10%)
QC Std 8	K	39	CCV is out of limits (+/- 10%)
QC Std 8	Mo	98	CCV is out of limits (+/- 10%)
QC Std 8	Ba	137	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Friday, December 03, 2010 08:44:48
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 9.346

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.002**	**ug/L**	340.520	78	0.000
	Be	9	**0.009**	**ug/L**	79.446	20	0.000
	B	11	**1.852**	**ug/L**	18.689	1649	0.001
	Na	23	**1.664**	**ug/L**	205.112	62809	0.009
	Mg	24	**0.117**	**ug/L**	431.377	4667	0.000
	Al	27	**-0.682**	**ug/L**	157.037	7669	-0.003
	P	31	**2.839**	**ug/L**	59.923	9097	0.001
	K	39	**7.692**	**ug/L**	105.026	466868	0.044
	Ca	43	**-3.444**	**ug/L**	41.893	475	-0.000
>	Sc	45		**ug/L**		792730	792730.089
	Ti	47	**0.147**	**ug/L**	52.236	645	0.000
	V	51	**0.009**	**ug/L**	2553.346	-2445	0.000
	Cr	52	**-0.207**	**ug/L**	22.406	1069	-0.001
	Cr	53		**ug/L**		106838	-0.013
	Mn	55	**-0.001**	**ug/L**	234.424	1094	-0.000
	Fe	57	**4.587**	**ug/L**	24.048	5766	0.001
	Co	59	**0.004**	**ug/L**	83.297	218	0.000
	Ni	60	**0.015**	**ug/L**	130.697	314	0.000
	Cu	63		**ug/L**		389	0.000
	Cu	65	**0.015**	**ug/L**	54.208	234	0.000
	Zn	66	**0.046**	**ug/L**	11.068	636	0.000
	Zn	67		**ug/L**		18449	-0.002
	Zn	68		**ug/L**		1784	-0.000
>	Ge	74		**ug/L**		442319	442319.403
	As	75	**-0.258**	**ug/L**	143.636	-193	-0.001
	Se	77		**ug/L**		4754	-0.003
	Se	82	**0.140**	**ug/L**	92.302	-5	0.000
	Kr	83		**ug/L**		120	0.000
	Sr	88	**-0.001**	**ug/L**	74.044	346	-0.000
	Y	89		**ug/L**		73	-0.000
	Mo	98	**0.136**	**ug/L**	26.511	817	0.002
	Ag	107	**0.006**	**ug/L**	30.659	141	0.000
	Cd	111	**0.020**	**ug/L**	40.112	71	0.000
	Cd	114		**ug/L**		127	0.000
>	In	115		**ug/L**		265050	265049.928
	Sn	120	**0.428**	**ug/L**	30.794	3572	0.010
	Sb	121	**0.231**	**ug/L**	24.689	1633	0.005
	Sb	123		**ug/L**		1296	0.004
	Ba	135		**ug/L**		48	0.000
	Ba	137	**0.000**	**ug/L**	840.439	72	0.000
	Ho	165		**ug/L**		78	0.000
>	Lu	175		**ug/L**		509153	509152.867
	Tl	205	**0.591**	**ug/L**	20.639	16536	0.022
	Pb	208	**-0.009**	**ug/L**	33.393	6894	-0.001
	Bi	209		**ug/L**		1333	0.000
	Th	232	**0.864**	**ug/L**	31.760	44362	0.070
	U	238	**0.043**	**ug/L**	33.834	2821	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		86.3			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		87.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		102.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 266878002
Sample Date/Time: Friday, December 03, 2010 08:50:55
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\266878002.347

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**70.651**	**ug/L**	0.715	156825	0.186
	Be	9	**-0.000**	**ug/L**	954.462	16	-0.000
	B	11	**106.176**	**ug/L**	2.198	56842	0.066
	Na	23	**86516.150**	**ug/L**	3.555	399107326	472.372
	Mg	24	**361.583**	**ug/L**	0.477	1157396	1.365
	Al	27	**1.117**	**ug/L**	107.857	15676	0.006
	P	31	**4.281**	**ug/L**	56.376	10039	0.001
	K	39	**2050.182**	**ug/L**	1.408	10343251	11.696
	Ca	43	**6676.019**	**ug/L**	1.982	77113	0.091
>	Sc	45		**ug/L**		844863	844862.750
	Ti	47	**2.994**	**ug/L**	7.347	2492	0.002
	V	51	**29.042**	**ug/L**	8.563	197074	0.237
	Cr	52	**10.464**	**ug/L**	3.327	63762	0.073
	Cr	53		**ug/L**		280572	0.185
	Mn	55	**1.771**	**ug/L**	3.330	17177	0.019
	Fe	57	**51.602**	**ug/L**	10.383	14020	0.010
	Co	59	**0.796**	**ug/L**	3.632	5988	0.007
	Ni	60	**0.445**	**ug/L**	5.340	1018	0.001
	Cu	63		**ug/L**		11922	0.014
	Cu	65	**2.493**	**ug/L**	4.074	4879	0.006
	Zn	66	**3.930**	**ug/L**	1.819	5149	0.010
	Zn	67		**ug/L**		70358	0.118
	Zn	68		**ug/L**		7373	0.013
>	Ge	74		**ug/L**		436535	436535.168
	As	75	**9.154**	**ug/L**	1.774	11704	0.027
	Se	77		**ug/L**		19286	0.031
	Se	82	**0.160**	**ug/L**	122.549	-2	0.000
	Kr	83		**ug/L**		179	0.000
	Sr	88	**123.061**	**ug/L**	1.327	1648631	6.516
	Y	89		**ug/L**		502	0.002
	Mo	98	**3.246**	**ug/L**	1.810	12179	0.047
	Ag	107	**0.024**	**ug/L**	40.662	242	0.001
	Cd	111	**-0.034**	**ug/L**	43.049	-14	-0.000
	Cd	114		**ug/L**		219	0.000
>	In	115		**ug/L**		252984	252984.441
	Sn	120	**0.669**	**ug/L**	21.742	4780	0.015
	Sb	121	**0.176**	**ug/L**	5.369	1281	0.004
	Sb	123		**ug/L**		1077	0.003
	Ba	135		**ug/L**		28730	0.059
	Ba	137	**17.932**	**ug/L**	4.190	51819	0.106
	Ho	165		**ug/L**		68	-0.000
>	Lu	175		**ug/L**		489002	489001.864
	Tl	205	**0.086**	**ug/L**	34.477	6601	0.003
	Pb	208	**0.749**	**ug/L**	4.937	32690	0.053
	Bi	209		**ug/L**		7440	0.013
	Th	232	**0.430**	**ug/L**	37.951	25478	0.035
	U	238	**19.142**	**ug/L**	1.730	811899	1.659

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		91.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		86.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		88.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.5			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Na 23 Upper, S, EE	Na	23	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 266878005
Sample Date/Time: Friday, December 03, 2010 08:56:59
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\266878005.348

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**97.758**	**ug/L**	0.934	223124	0.257
	Be	9	**-0.007**	**ug/L**	118.637	13	-0.000
	B	11	**101.227**	**ug/L**	1.509	55759	0.063
	Na	23	**86577.099**	**ug/L**	4.093	410519709	472.705
	Mg	24	**3518.280**	**ug/L**	4.846	11535710	13.277
	Al	27	**0.685**	**ug/L**	128.057	14341	0.003
	P	31	**11.124**	**ug/L**	20.034	12048	0.003
	K	39	**3026.990**	**ug/L**	9.965	15492307	17.268
	Ca	43	**21318.530**	**ug/L**	1.437	252001	0.289
>	Sc	45		**ug/L**		868832	868831.635
	Ti	47	**3.559**	**ug/L**	4.331	2932	0.003
	V	51	**27.636**	**ug/L**	2.511	192934	0.225
	Cr	52	**7.736**	**ug/L**	0.701	49127	0.054
	Cr	53		**ug/L**		312528	0.212
	Mn	55	**0.816**	**ug/L**	1.821	8796	0.009
	Fe	57	**91.848**	**ug/L**	3.269	21368	0.018
	Co	59	**0.041**	**ug/L**	10.660	516	0.000
	Ni	60	**0.834**	**ug/L**	2.867	1682	0.002
	Cu	63		**ug/L**		90887	0.104
	Cu	65	**22.590**	**ug/L**	2.849	43631	0.050
	Zn	66	**5.408**	**ug/L**	4.739	6861	0.014
	Zn	67		**ug/L**		82296	0.145
	Zn	68		**ug/L**		10075	0.019
>	Ge	74		**ug/L**		436442	436442.283
	As	75	**6.738**	**ug/L**	7.714	8637	0.020
	Se	77		**ug/L**		23701	0.041
	Se	82	**0.332**	**ug/L**	23.021	20	0.000
	Kr	83		**ug/L**		177	0.000
	Sr	88	**511.015**	**ug/L**	1.716	6913819	27.056
	Y	89		**ug/L**		731	0.003
	Mo	98	**2.263**	**ug/L**	4.336	8656	0.033
	Ag	107	**0.008**	**ug/L**	80.159	152	0.000
	Cd	111	**-0.102**	**ug/L**	37.644	-119	-0.001
	Cd	114		**ug/L**		274	0.001
>	In	115		**ug/L**		255639	255639.013
	Sn	120	**1.078**	**ug/L**	4.459	7188	0.024
	Sb	121	**0.114**	**ug/L**	3.363	978	0.002
	Sb	123		**ug/L**		1124	0.003
	Ba	135		**ug/L**		98651	0.199
	Ba	137	**60.361**	**ug/L**	4.286	176349	0.356
	Ho	165		**ug/L**		81	0.000
>	Lu	175		**ug/L**		495353	495353.313
	Tl	205	**0.011**	**ug/L**	203.365	5284	0.000
	Pb	208	**1.933**	**ug/L**	5.152	74321	0.136
	Bi	209		**ug/L**		7843	0.014
	Th	232	**0.030**	**ug/L**	109.188	9844	0.002
	U	238	**22.447**	**ug/L**	3.674	963241	1.945

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			94.5		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			86.7		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			89.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.8		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Na 23 Upper, S, EE	Na	23	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202266506
Sample Date/Time: Friday, December 03, 2010 09:03:04
Sample Type:
Sample Description: ARSL 6020 DUP
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\1202266506.349

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.839**	**ug/L**	2.510	233727	0.265
	Be	9	**-0.005**	**ug/L**	184.459	14	-0.000
	B	11	**105.306**	**ug/L**	4.396	58891	0.066
	Na	23	**102368.581**	**ug/L**	4.916	492851898	558.925
	Mg	24	**3721.442**	**ug/L**	7.963	12396795	14.044
	Al	27	**0.187**	**ug/L**	256.400	12339	0.001
	P	31	**12.819**	**ug/L**	29.179	12663	0.004
	K	39	**3103.783**	**ug/L**	7.934	16108131	17.706
	Ca	43	**21323.760**	**ug/L**	1.505	255964	0.290
>	Sc	45		**ug/L**		882069	882069.386
	Ti	47	**3.460**	**ug/L**	2.362	2912	0.003
	V	51	**27.229**	**ug/L**	9.095	192952	0.222
	Cr	52	**8.335**	**ug/L**	6.762	53558	0.058
	Cr	53		**ug/L**		327335	0.224
	Mn	55	**0.861**	**ug/L**	0.953	9357	0.009
	Fe	57	**93.952**	**ug/L**	4.650	22062	0.019
	Co	59	**0.047**	**ug/L**	4.867	566	0.000
	Ni	60	**0.799**	**ug/L**	4.372	1649	0.002
	Cu	63		**ug/L**		93863	0.106
	Cu	65	**23.202**	**ug/L**	2.517	45517	0.051
	Zn	66	**5.423**	**ug/L**	2.679	7019	0.014
	Zn	67		**ug/L**		87420	0.153
	Zn	68		**ug/L**		10320	0.019
>	Ge	74		**ug/L**		444941	444941.183
	As	75	**6.661**	**ug/L**	6.640	8722	0.019
	Se	77		**ug/L**		25294	0.043
	Se	82	**0.216**	**ug/L**	74.594	5	0.000
	Kr	83		**ug/L**		184	0.000
	Sr	88	**519.229**	**ug/L**	2.207	7137529	27.491
	Y	89		**ug/L**		802	0.003
	Mo	98	**2.333**	**ug/L**	4.563	9064	0.034
	Ag	107	**0.008**	**ug/L**	19.096	152	0.000
	Cd	111	**-0.104**	**ug/L**	27.091	-121	-0.001
	Cd	114		**ug/L**		288	0.001
>	In	115		**ug/L**		259648	259647.533
	Sn	120	**1.083**	**ug/L**	1.757	7333	0.024
	Sb	121	**0.098**	**ug/L**	14.508	908	0.002
	Sb	123		**ug/L**		1101	0.003
	Ba	135		**ug/L**		102240	0.205
	Ba	137	**62.144**	**ug/L**	1.714	183252	0.367
	Ho	165		**ug/L**		102	0.000
>	Lu	175		**ug/L**		499115	499115.188
	Tl	205	**-0.035**	**ug/L**	11.843	4467	-0.001
	Pb	208	**1.970**	**ug/L**	1.105	76329	0.139
	Bi	209		**ug/L**		8343	0.014
	Th	232	**-0.040**	**ug/L**	32.574	7107	-0.003
	U	238	**23.105**	**ug/L**	0.638	1000214	2.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		96.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		88.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		90.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Na 23 Upper, S, EE	Na	23	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202266507
Sample Date/Time: Friday, December 03, 2010 09:09:09
Sample Type:
Sample Description: ARSL 6020 MS
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\1202266507.350

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**154.601**	**ug/L**	1.295	406722	0.406
	Be	9	**52.110**	**ug/L**	2.395	32710	0.033
	B	11	**222.520**	**ug/L**	2.164	140207	0.139
	Na	23	**93309.736**	**ug/L**	5.906	510622608	509.465
	Mg	24	**5431.052**	**ug/L**	6.436	20530515	20.496
	Al	27	**1917.416**	**ug/L**	8.447	9495436	9.468
	P	31	**2017.516**	**ug/L**	1.444	593173	0.582
	K	39	**5073.085**	**ug/L**	0.360	29533722	28.941
	Ca	43	**22462.724**	**ug/L**	2.013	306044	0.305
>	Sc	45		**ug/L**		1001688	1001688.008
	Ti	47	**48.115**	**ug/L**	3.156	36880	0.036
	V	51	**67.452**	**ug/L**	4.997	547171	0.550
	Cr	52	**55.885**	**ug/L**	3.081	391635	0.388
	Cr	53		**ug/L**		390852	0.243
	Mn	55	**48.976**	**ug/L**	2.462	526041	0.524
	Fe	57	**2257.316**	**ug/L**	3.794	454967	0.448
	Co	59	**49.540**	**ug/L**	3.004	426812	0.426
	Ni	60	**50.596**	**ug/L**	3.112	95627	0.095
	Cu	63		**ug/L**		318217	0.317
	Cu	65	**71.089**	**ug/L**	1.696	157764	0.157
	Zn	66	**55.223**	**ug/L**	3.937	73401	0.147
	Zn	67		**ug/L**		121372	0.202
	Zn	68		**ug/L**		60501	0.118
>	Ge	74		**ug/L**		494408	494407.727
	As	75	**84.453**	**ug/L**	3.662	121005	0.245
	Se	77		**ug/L**		26512	0.040
	Se	82	**19.381**	**ug/L**	2.461	2761	0.006
	Kr	83		**ug/L**		283	0.000
	Sr	88	**540.833**	**ug/L**	1.683	8501595	28.635
	Y	89		**ug/L**		903	0.003
	Mo	98	**51.310**	**ug/L**	1.623	221050	0.743
	Ag	107	**50.200**	**ug/L**	3.520	357902	1.206
	Cd	111	**10.218**	**ug/L**	5.262	18058	0.061
	Cd	114		**ug/L**		40586	0.136
>	In	115		**ug/L**		296958	296957.601
	Sn	120	**52.318**	**ug/L**	2.644	351376	1.180
	Sb	121	**182.248**	**ug/L**	2.861	1077478	3.629
	Sb	123		**ug/L**		861426	2.901
	Ba	135		**ug/L**		193320	0.342
	Ba	137	**103.052**	**ug/L**	3.733	344468	0.608
	Ho	165		**ug/L**		185	0.000
>	Lu	175		**ug/L**		566485	566484.813
	Tl	205	**89.869**	**ug/L**	2.171	1920199	3.382
	Pb	208	**44.054**	**ug/L**	3.093	1763386	3.102
	Bi	209		**ug/L**		9120	0.014
	Th	232	**49.766**	**ug/L**	2.356	2283924	4.017
	U	238	**76.101**	**ug/L**	3.082	3733409	6.595

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		109.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		114.2			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
B 11 Upper, S, EEE	B	11	Sample is out of limits (over linear range)
Na 23 Upper, S, EEE	Na	23	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202266508
Sample Date/Time: Friday, December 03, 2010 09:15:15
Sample Type:
Sample Description: ARSL 6020 SDILT
Number of Replicates: 3
Batch ID: 1049747|5|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\1202266508.351

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.461**	**ug/L**	1.718	58718	0.056
	Be	9	**-0.007**	**ug/L**	66.956	16	-0.000
	B	11	**24.153**	**ug/L**	1.901	16662	0.015
	Na	23	**20737.344**	**ug/L**	4.396	117873610	113.224
	Mg	24	**685.730**	**ug/L**	2.071	2696183	2.588
	Al	27	**1.834**	**ug/L**	12.276	23019	0.009
	P	31	**13.071**	**ug/L**	55.144	15039	0.004
	K	39	**615.586**	**ug/L**	9.327	4214037	3.512
	Ca	43	**4369.223**	**ug/L**	1.510	62375	0.059
>	Sc	45		**ug/L**		1039822	1039821.980
	Ti	47	**0.941**	**ug/L**	3.540	1465	0.001
	V	51	**4.904**	**ug/L**	46.246	38486	0.040
	Cr	52	**2.212**	**ug/L**	4.332	18887	0.015
	Cr	53		**ug/L**		212359	0.057
	Mn	55	**0.232**	**ug/L**	4.239	4032	0.002
	Fe	57	**20.617**	**ug/L**	7.731	10871	0.004
	Co	59	**-0.001**	**ug/L**	391.401	245	-0.000
	Ni	60	**0.223**	**ug/L**	16.919	819	0.000
	Cu	63		**ug/L**		23477	0.022
	Cu	65	**4.902**	**ug/L**	0.668	11546	0.011
	Zn	66	**1.601**	**ug/L**	1.746	3008	0.004
	Zn	67		**ug/L**		45815	0.042
	Zn	68		**ug/L**		5427	0.006
>	Ge	74		**ug/L**		538482	538482.039
	As	75	**1.017**	**ug/L**	16.169	1742	0.003
	Se	77		**ug/L**		12312	0.009
	Se	82	**0.168**	**ug/L**	28.679	-1	0.000
	Kr	83		**ug/L**		128	-0.000
	Sr	88	**97.840**	**ug/L**	0.685	1757088	5.180
	Y	89		**ug/L**		279	0.001
	Mo	98	**0.445**	**ug/L**	2.637	2564	0.006
	Ag	107	**-0.004**	**ug/L**	27.266	97	-0.000
	Cd	111	**-0.036**	**ug/L**	12.479	-22	-0.000
	Cd	114		**ug/L**		144	-0.000
>	In	115		**ug/L**		339091	339091.005
	Sn	120	**0.182**	**ug/L**	7.570	2688	0.004
	Sb	121	**0.195**	**ug/L**	22.731	1836	0.004
	Sb	123		**ug/L**		1521	0.003
	Ba	135		**ug/L**		25129	0.038
	Ba	137	**11.718**	**ug/L**	1.599	45375	0.069
	Ho	165		**ug/L**		88	-0.000
>	Lu	175		**ug/L**		654938	654937.615
	Tl	205	**1.051**	**ug/L**	25.325	32358	0.040
	Pb	208	**0.351**	**ug/L**	3.714	25428	0.025
	Bi	209		**ug/L**		3346	0.003
	Th	232	**0.342**	**ug/L**	41.236	29244	0.028
	U	238	**4.621**	**ug/L**	2.312	263366	0.400

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		113.1			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		107.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		118.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		132.0			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for sa	Lu	175	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Friday, December 03, 2010 09:33:35
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 8.354

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.838**	**ug/L**	1.590	136260	0.147
	Be	9	**54.358**	**ug/L**	0.334	31642	0.034
	B	11	**101.130**	**ug/L**	1.098	59546	0.063
	Na	23	**4846.833**	**ug/L**	8.771	24618140	26.463
	Mg	24	**5024.692**	**ug/L**	4.412	17605651	18.962
	Al	27	**4870.140**	**ug/L**	6.344	22356647	24.048
	P	31	**5133.376**	**ug/L**	1.882	1384123	1.480
	K	39	**5172.521**	**ug/L**	7.635	27882929	29.508
	Ca	43	**4836.110**	**ug/L**	1.941	61566	0.066
>	Sc	45		**ug/L**		928554	928553.616
	Ti	47	**50.901**	**ug/L**	0.383	36145	0.038
	V	51	**49.197**	**ug/L**	2.403	369216	0.401
	Cr	52	**50.490**	**ug/L**	0.779	328373	0.351
	Cr	53		**ug/L**		156820	0.022
	Mn	55	**51.180**	**ug/L**	1.984	509583	0.548
	Fe	57	**5440.260**	**ug/L**	1.689	1008256	1.080
	Co	59	**50.277**	**ug/L**	0.450	401686	0.432
	Ni	60	**52.292**	**ug/L**	0.697	91651	0.098
	Cu	63		**ug/L**		220182	0.237
	Cu	65	**53.235**	**ug/L**	1.118	109584	0.118
	Zn	66	**52.030**	**ug/L**	0.604	71184	0.139
	Zn	67		**ug/L**		33147	0.022
	Zn	68		**ug/L**		55152	0.104
>	Ge	74		**ug/L**		508216	508215.947
	As	75	**49.677**	**ug/L**	0.473	73276	0.144
	Se	77		**ug/L**		11570	0.009
	Se	82	**51.054**	**ug/L**	0.682	7522	0.015
	Kr	83		**ug/L**		134	0.000
	Sr	88	**50.067**	**ug/L**	1.671	810737	2.651
	Y	89		**ug/L**		140	0.000
	Mo	98	**46.722**	**ug/L**	2.506	207263	0.677
	Ag	107	**50.024**	**ug/L**	0.646	367392	1.201
	Cd	111	**49.212**	**ug/L**	2.785	89421	0.292
	Cd	114		**ug/L**		210469	0.688
>	In	115		**ug/L**		305718	305718.003
	Sn	120	**48.395**	**ug/L**	2.267	334813	1.092
	Sb	121	**47.845**	**ug/L**	1.780	291672	0.953
	Sb	123		**ug/L**		227745	0.744
	Ba	135		**ug/L**		83574	0.149
	Ba	137	**44.422**	**ug/L**	0.583	147515	0.262
	Ho	165		**ug/L**		108	0.000
>	Lu	175		**ug/L**		562077	562077.406
	Tl	205	**50.618**	**ug/L**	2.312	1076020	1.905
	Pb	208	**52.410**	**ug/L**	0.927	2081852	3.690
	Bi	209		**ug/L**		1333	0.000
	Th	232	**46.922**	**ug/L**	5.253	2138001	3.788
	U	238	**52.718**	**ug/L**	2.193	2568152	4.568

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7	111.675				
	Be	9	108.717				
	B	11	101.130				
	Na	23	96.937				
	Mg	24	100.494				
	Al	27	96.438				
	P	31	102.668				
	K	39	103.450				
	Ca	43	96.722				
>	Sc	45		101.0			
	Ti	47	101.801				
	V	51	98.393				
	Cr	52	100.979				
	Cr	53					
	Mn	55	102.360				
	Fe	57	108.805				
	Co	59	100.554				
	Ni	60	104.584				
	Cu	63					
	Cu	65	106.470				
	Zn	66	104.061				
	Zn	67					
	Zn	68					
>	Ge	74		101.0			
	As	75	99.354				
	Se	77					
	Se	82	102.108				
	Kr	83					
	Sr	88	100.133				
	Y	89					
	Mo	98	93.444				
	Ag	107	100.048				
	Cd	111	98.424				
	Cd	114					
>	In	115		106.9			
	Sn	120	96.791				
	Sb	121	95.689				
	Sb	123					
	Ba	135					
	Ba	137	88.843				
	Ho	165					
>	Lu	175		113.3			
	Tl	205	101.237				
	Pb	208	104.821				
	Bi	209					
	Th	232	93.844				
	U	238	105.436				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Li	7	CCV is out of limits (+/- 10%)
QC Std 8	Ba	137	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Friday, December 03, 2010 09:39:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\101202\QC Std 9.355

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.007**	**ug/L**	40.797	104	0.000
	Be	9	**-0.001**	**ug/L**	277.449	17	-0.000
	B	11	**1.753**	**ug/L**	12.280	1868	0.001
	Na	23	**3.828**	**ug/L**	65.479	84251	0.021
	Mg	24	**0.566**	**ug/L**	396.504	7003	0.002
	Al	27	**0.865**	**ug/L**	287.485	16012	0.004
	P	31	**3.922**	**ug/L**	29.945	10906	0.001
	K	39	**-0.305**	**ug/L**	1820.023	502709	-0.002
	Ca	43	**-5.359**	**ug/L**	62.552	531	-0.000
>	Sc	45		**ug/L**		925252	925252.138
	Ti	47	**0.039**	**ug/L**	38.316	677	0.000
	V	51	**-0.273**	**ug/L**	49.037	-4979	-0.002
	Cr	52	**0.239**	**ug/L**	14.429	4110	0.002
	Cr	53		**ug/L**		141908	0.006
	Mn	55	**0.013**	**ug/L**	49.248	1418	0.000
	Fe	57	**2.553**	**ug/L**	69.761	6357	0.001
	Co	59	**0.003**	**ug/L**	18.106	246	0.000
	Ni	60	**0.019**	**ug/L**	17.719	374	0.000
	Cu	63		**ug/L**		427	0.000
	Cu	65	**0.008**	**ug/L**	134.825	258	0.000
	Zn	66	**0.058**	**ug/L**	33.998	734	0.000
	Zn	67		**ug/L**		26298	0.009
	Zn	68		**ug/L**		2464	0.001
>	Ge	74		**ug/L**		499645	499644.564
	As	75	**-0.305**	**ug/L**	58.081	-289	-0.001
	Se	77		**ug/L**		6914	0.000
	Se	82	**0.141**	**ug/L**	93.400	-5	0.000
	Kr	83		**ug/L**		116	-0.000
	Sr	88	**0.001**	**ug/L**	260.310	412	0.000
	Y	89		**ug/L**		91	0.000
	Mo	98	**0.136**	**ug/L**	34.772	911	0.002
	Ag	107	**0.007**	**ug/L**	23.271	165	0.000
	Cd	111	**0.020**	**ug/L**	35.454	79	0.000
	Cd	114		**ug/L**		113	-0.000
>	In	115		**ug/L**		296102	296101.601
	Sn	120	**0.445**	**ug/L**	30.766	4098	0.010
	Sb	121	**0.220**	**ug/L**	26.904	1754	0.004
	Sb	123		**ug/L**		1441	0.004
	Ba	135		**ug/L**		47	-0.000
	Ba	137	**-0.001**	**ug/L**	115.494	76	-0.000
	Ho	165		**ug/L**		71	-0.000
>	Lu	175		**ug/L**		577561	577560.566
	Tl	205	**0.525**	**ug/L**	21.871	17317	0.020
	Pb	208	**-0.027**	**ug/L**	6.887	7088	-0.002
	Bi	209		**ug/L**		1290	0.000
	Th	232	**0.962**	**ug/L**	37.841	54769	0.078
	U	238	**0.047**	**ug/L**	38.246	3371	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		116.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Friday, December 03, 2010 10:15:03
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.2892
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	5050.5	5050.493	81.814	1.6
	Mg	24.0	57509.3	57509.334	596.482	1.0
	Co	58.9	87775.0	87775.035	413.625	0.5
	Rh	102.9	181652.2	181652.221	371.966	0.2
	In	114.9	221165.7	221165.658	606.084	0.3
	Pb	208.0	216236.2	216236.226	2598.790	1.2
⌈>	Ba	137.9	213100.4	213100.386	2010.416	0.9
⌊	Ba++	69.0	6442.3	0.030	0.001	1.9
⌈>	Ce	139.9	267197.2	267197.203	2369.640	0.9
⌊	CeO	155.9	5780.0	0.022	0.000	1.3
	Bkgd	220.0	22.4	22.400	2.815	12.6

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
5.75	Lens Voltage
1450.00	ICP RF Power
-1875.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
200.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	19	7.3	5603.4
Co	59	19	7.8	89810.4
In	115	19	8.8	200268.0

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	594	2065	0.595
Be	9.0	9.0	2044	2090	0.608
Mg	24.0	24.0	5691	2075	0.607
Mg	25.0	25.0	5939	2090	0.602
Mg	26.0	26.0	6161	2090	0.586
Co	58.9	58.9	14182	2115	0.584
Rh	102.9	103.0	24888	2170	0.601
In	114.9	115.0	27802	2195	0.589
Ce	139.9	139.9	33874	2220	0.586
Pb	206.0	206.0	49948	2315	0.565
Pb	207.0	207.0	50171	2250	0.626
Pb	208.0	208.0	50450	2280	0.687
U	238.1	238.1	57737	2295	0.709

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Friday, December 03, 2010 14:41:11
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\Blank.414

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98		**ug/L**		165	
>	In	115		**ug/L**		245546	
>	Lu	175		**ug/L**		398135	
	Tl	205		**ug/L**		1851	
	U	238		**ug/L**		452	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	
U	238	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115					
>	Lu	175					
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Friday, December 03, 2010 14:43:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\Standard 1.415

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**10.000**	**ug/L**	2.118	33210	0.132
>	In	115		**ug/L**		251248	251248.359
>	Lu	175		**ug/L**		408162	408162.146
	Tl	205	**10.000**	**ug/L**	3.032	173821	0.421
	U	238	**10.000**	**ug/L**	4.366	416909	1.021

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115					
>	Lu	175					
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Friday, December 03, 2010 14:45:58
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\Standard 2.416

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**100.012**	**ug/L**	1.765	327166	1.331
>	In	115		**ug/L**		245717	245716.519
>	Lu	175		**ug/L**		393008	393007.549
	Tl	205	**99.923**	**ug/L**	0.973	1538750	3.911
	U	238	**99.910**	**ug/L**	2.203	3676308	9.354

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115					
>	Lu	175					
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Friday, December 03, 2010 14:48:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 1.417

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**48.970**	**ug/L**	2.836	162213	0.652
>	In	115		**ug/L**		248696	248696.245
>	Lu	175		**ug/L**		397571	397570.849
	Tl	205	**50.098**	**ug/L**	1.599	781296	1.961
	U	238	**51.424**	**ug/L**	0.915	1914426	4.814

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	97.940				
>	In	115		101.3			
>	Lu	175		99.9			
	Tl	205	100.196				
	U	238	102.848				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Friday, December 03, 2010 14:50:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 2.418

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.224**	**ug/L**	6.573	902	0.003
>	In	115		**ug/L**		246868	246867.721
>	Lu	175		**ug/L**		405806	405806.444
	Tl	205	**0.124**	**ug/L**	0.480	3849	0.005
	U	238	**0.076**	**ug/L**	5.512	3331	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		100.5			
>	Lu	175		101.9			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Friday, December 03, 2010 14:53:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 3.419

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.587**	**ug/L**	5.219	2120	0.008
>	In	115		**ug/L**		250104	250103.843
>	Lu	175		**ug/L**		400643	400643.054
	Tl	205	**1.201**	**ug/L**	1.065	20700	0.047
	U	238	**0.287**	**ug/L**	3.938	11224	0.027

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	117.351				
>	In	115		101.9			
>	Lu	175		100.6			
	Tl	205	120.136				
	U	238	143.561				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	U	238	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Friday, December 03, 2010 14:55:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 4.420

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**2063.984**	**ug/L**	0.760	6081176	27.468
>	In	115		**ug/L**		221375	221375.482
>	Lu	175		**ug/L**		346746	346745.578
	Tl	205	**0.081**	**ug/L**	5.724	2717	0.003
	U	238	**0.019**	**ug/L**	10.336	1003	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	103.199				
>	In	115		90.2			
>	Lu	175		87.1			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Friday, December 03, 2010 14:58:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 5.421

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**2000.753**	**ug/L**	1.592	6001258	26.627
>	In	115		**ug/L**		225363	225363.392
>	Lu	175		**ug/L**		348784	348783.764
	Tl	205	**20.850**	**ug/L**	0.407	286240	0.816
	U	238	**25.606**	**ug/L**	1.337	836501	2.397

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	100.038				
>	In	115		91.8			
>	Lu	175		87.6			
	Tl	205	104.249				
	U	238	128.029				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	U	238	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, December 03, 2010 15:00:25
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 6.422

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**49.045**	**ug/L**	1.791	165028	0.653
>	In	115		**ug/L**		252596	252596.097
>	Lu	175		**ug/L**		401103	401102.886
	Tl	205	**49.392**	**ug/L**	1.121	777211	1.933
	U	238	**50.560**	**ug/L**	0.565	1899117	4.734

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	98.089				
>	In	115		102.9			
>	Lu	175		100.7			
	Tl	205	98.785				
	U	238	101.120				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, December 03, 2010 15:02:51
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 7.423

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.409**	**ug/L**	1.843	1533	0.005
>	In	115		**ug/L**		250511	250510.834
>	Lu	175		**ug/L**		401157	401157.442
	Tl	205	**0.150**	**ug/L**	2.757	4225	0.006
	U	238	**0.057**	**ug/L**	1.958	2593	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		102.0			
>	Lu	175		100.8			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, December 03, 2010 15:10:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 6.426

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**48.019**	**ug/L**	1.280	161424	0.639
>	In	115		**ug/L**		252319	252319.483
>	Lu	175		**ug/L**		398730	398729.823
	Tl	205	**49.938**	**ug/L**	0.782	781165	1.954
	U	238	**50.491**	**ug/L**	1.102	1885215	4.727

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	96.037				
>	In	115		102.8			
>	Lu	175		100.1			
	Tl	205	99.877				
	U	238	100.982				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, December 03, 2010 15:12:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 7.427

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.207**	**ug/L**	5.067	870	0.003
>	In	115		**ug/L**		253797	253797.445
>	Lu	175		**ug/L**		404248	404248.446
	Tl	205	**0.296**	**ug/L**	5.660	6564	0.012
	U	238	**0.059**	**ug/L**	5.329	2692	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		103.4			
>	Lu	175		101.5			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, December 03, 2010 15:31:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 6.435

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**48.912**	**ug/L**	1.806	167952	0.651
>	In	115		**ug/L**		257760	257760.473
>	Lu	175		**ug/L**		417739	417738.518
	Tl	205	**49.811**	**ug/L**	1.224	816252	1.949
	U	238	**50.234**	**ug/L**	1.684	1964887	4.703

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	97.823				
>	In	115		105.0			
>	Lu	175		104.9			
	Tl	205	99.621				
	U	238	100.467				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, December 03, 2010 15:34:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 7.436

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.170**	**ug/L**	7.619	754	0.002
>	In	115		**ug/L**		257129	257129.117
>	Lu	175		**ug/L**		417585	417585.075
	Tl	205	**0.193**	**ug/L**	5.224	5103	0.008
	U	238	**0.057**	**ug/L**	5.141	2688	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		104.7			
>	Lu	175		104.9			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, December 03, 2010 15:56:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 6.445

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**49.327**	**ug/L**	1.061	168951	0.656
>	In	115		**ug/L**		257100	257100.270
>	Lu	175		**ug/L**		411330	411329.763
	Tl	205	**49.456**	**ug/L**	1.667	798076	1.936
	U	238	**50.524**	**ug/L**	0.555	1946135	4.730

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	98.653				
>	In	115		104.7			
>	Lu	175		103.3			
	Tl	205	98.913				
	U	238	101.048				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, December 03, 2010 15:58:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 7.446

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.165**	**ug/L**	10.818	742	0.002
>	In	115		**ug/L**		258860	258860.441
>	Lu	175		**ug/L**		421136	421135.953
	Tl	205	**0.480**	**ug/L**	4.735	9865	0.019
	U	238	**0.056**	**ug/L**	6.971	2703	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		105.4			
>	Lu	175		105.8			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202262897
Sample Date/Time: Friday, December 03, 2010 16:00:58
Sample Type:
Sample Description: ARSL 6020 MB
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\1202262897.447

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.302**	**ug/L**	4.946	1167	0.004
>	In	115		**ug/L**		249092	249092.068
>	Lu	175		**ug/L**		403083	403082.926
	Tl	205	**0.170**	**ug/L**	4.743	4558	0.007
	U	238	**0.010**	**ug/L**	6.246	831	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		101.4			
>	Lu	175		101.2			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202262898
Sample Date/Time: Friday, December 03, 2010 16:03:24
Sample Type:
Sample Description: ARSL 6020 LCS
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\1202262898.448

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**53.176**	**ug/L**	0.342	175078	0.708
>	In	115		**ug/L**		247157	247156.570
>	Lu	175		**ug/L**		405872	405872.336
	Tl	205	**45.738**	**ug/L**	1.301	728403	1.790
	U	238	**51.030**	**ug/L**	2.127	1938919	4.778

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		100.7			
>	Lu	175		101.9			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, December 03, 2010 16:05:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 6.449

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**48.764**	**ug/L**	1.496	165979	0.649
>	In	115		**ug/L**		255515	255514.595
>	Lu	175		**ug/L**		411851	411851.351
	Tl	205	**49.788**	**ug/L**	0.128	804451	1.949
	U	238	**51.129**	**ug/L**	2.869	1972074	4.787

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	97.528				
>	In	115		104.1			
>	Lu	175		103.4			
	Tl	205	99.576				
	U	238	102.257				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, December 03, 2010 16:08:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 7.450

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.195**	**ug/L**	3.247	826	0.003
>	In	115		**ug/L**		253220	253220.204
>	Lu	175		**ug/L**		412710	412710.065
	Tl	205	**0.569**	**ug/L**	0.207	11113	0.022
	U	238	**0.062**	**ug/L**	5.425	2859	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		103.1			
>	Lu	175		103.7			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 266878001
Sample Date/Time: Friday, December 03, 2010 16:18:21
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\266878001.451

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**3.798**	**ug/L**	1.297	12447	0.051
>	In	115		**ug/L**		243032	243032.336
>	Lu	175		**ug/L**		399232	399232.286
	Tl	205	**0.052**	**ug/L**	20.673	2663	0.002
	U	238	**19.620**	**ug/L**	1.031	733790	1.837

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		99.0			
>	Lu	175		100.3			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202262899
Sample Date/Time: Friday, December 03, 2010 16:20:47
Sample Type:
Sample Description: ARSL 6020 DUP
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\1202262899.452

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**3.798**	**ug/L**	1.970	12588	0.051
>	In	115		**ug/L**		245784	245783.674
>	Lu	175		**ug/L**		422235	422235.308
	Tl	205	**0.029**	**ug/L**	17.809	2447	0.001
	U	238	**18.965**	**ug/L**	3.545	749715	1.776

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		100.1			
>	Lu	175		106.1			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202262900
Sample Date/Time: Friday, December 03, 2010 16:23:13
Sample Type:
Sample Description: ARSL 6020 MS
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\1202262900.453

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**56.872**	**ug/L**	0.732	190056	0.757
>	In	115		**ug/L**		250887	250887.268
>	Lu	175		**ug/L**		416872	416871.604
	Tl	205	**86.445**	**ug/L**	2.852	1411917	3.383
	U	238	**67.688**	**ug/L**	2.720	2641547	6.337

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		102.2			
>	Lu	175		104.7			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202262901
Sample Date/Time: Friday, December 03, 2010 16:25:40
Sample Type:
Sample Description: ARSL 6020 SDILT
Number of Replicates: 3
Batch ID: 1048319|5|baj
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\1202262901.454

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.789**	**ug/L**	1.855	2968	0.010
>	In	115		**ug/L**		265783	265783.192
>	Lu	175		**ug/L**		441034	441033.760
	Tl	205	**1.040**	**ug/L**	4.342	20016	0.041
	U	238	**3.920**	**ug/L**	0.940	162383	0.367

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		108.2			
>	Lu	175		110.8			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 266878003
Sample Date/Time: Friday, December 03, 2010 16:28:07
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1048319|1|baj
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\266878003.455

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**4.724**	**ug/L**	3.382	15402	0.063
>	In	115		**ug/L**		242473	242472.981
>	Lu	175		**ug/L**		405471	405471.433
	Tl	205	**0.283**	**ug/L**	3.077	6382	0.011
	U	238	**5.900**	**ug/L**	0.623	224438	0.552

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		98.7			
>	Lu	175		101.8			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, December 03, 2010 16:35:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 6.458

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**47.506**	**ug/L**	0.652	178479	0.632
>	In	115		**ug/L**		282004	282003.506
>	Lu	175		**ug/L**		454612	454612.091
	Tl	205	**47.758**	**ug/L**	0.549	851820	1.869
	U	238	**49.929**	**ug/L**	1.065	2125424	4.675

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	95.013				
>	In	115		114.8			
>	Lu	175		114.2			
	Tl	205	95.516				
	U	238	99.858				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, December 03, 2010 16:37:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and u.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 7.459

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.171**	**ug/L**	6.697	814	0.002
>	In	115		**ug/L**		275511	275511.045
>	Lu	175		**ug/L**		444755	444755.183
	Tl	205	**0.370**	**ug/L**	3.297	8512	0.014
	U	238	**0.057**	**ug/L**	5.125	2881	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		112.2			
>	Lu	175		111.7			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Monday, December 06, 2010 09:19:01
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.2895
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	5591.5	5591.494	121.282	2.2
	Mg	24.0	53197.5	53197.491	971.066	1.8
	Co	58.9	85393.9	85393.905	1225.706	1.4
	Rh	102.9	171478.8	171478.848	697.259	0.4
	In	114.9	218643.6	218643.609	2261.085	1.0
	Pb	208.0	246714.0	246713.978	1271.574	0.5
⌈>	Ba	137.9	216190.1	216190.111	2544.460	1.2
⌊	Ba++	69.0	4383.6	0.020	0.000	0.7
⌈>	Ce	139.9	276263.0	276262.968	4313.498	1.6
⌊	CeO	155.9	5601.7	0.020	0.000	1.7
	Bkgd	220.0	12.5	12.500	1.871	15.0

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
5.75	Lens Voltage
1450.00	ICP RF Power
-1875.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
200.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	19	7.3	6118.3
Co	59	19	7.8	86778.1
In	115	19	8.8	224853.8

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	587	2065	0.594
Be	9.0	9.0	2051	2090	0.609
Mg	24.0	24.0	5687	2075	0.623
Mg	25.0	25.0	5947	2090	0.638
Mg	26.0	26.0	6158	2090	0.618
Co	58.9	59.0	14190	2115	0.612
Rh	102.9	103.0	24886	2170	0.618
In	114.9	114.9	27800	2195	0.609
Ce	139.9	139.9	33872	2220	0.602
Pb	206.0	206.0	49948	2315	0.581
Pb	207.0	207.0	50171	2250	0.628
Pb	208.0	208.0	50450	2280	0.700
U	238.1	238.1	57736	2295	0.705

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Monday, December 06, 2010 13:47:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\Blank.874

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98		**ug/L**		178	
>	In	115		**ug/L**		216542	
>	Lu	175		**ug/L**		404228	
	Tl	205		**ug/L**		3265	
	Pb	208		**ug/L**		6365	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Simple Linear	
In	115	Linear Thru Zero	
Lu	175	Simple Linear	
Tl	205	Simple Linear	
Pb	208	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Monday, December 06, 2010 13:49:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\Standard 1.875

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**10.000**	**ug/L**	2.660	27179	0.125
>	In	115		**ug/L**		216507	216507.028
>	Lu	175		**ug/L**		404653	404653.255
	Tl	205	**10.000**	**ug/L**	0.292	164444	0.398
	Pb	208	**10.000**	**ug/L**	2.085	302093	0.731

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Monday, December 06, 2010 13:52:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\Standard 2.876

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**99.986**	**ug/L**	0.708	263916	1.230
>	In	115		**ug/L**		214480	214479.839
>	Lu	175		**ug/L**		395776	395776.026
	Tl	205	**99.899**	**ug/L**	1.147	1433608	3.614
	Pb	208	**99.907**	**ug/L**	1.320	2651367	6.683

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Monday, December 06, 2010 13:54:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 1.877

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**48.530**	**ug/L**	0.875	129524	0.597
>	In	115		**ug/L**		216718	216717.739
>	Lu	175		**ug/L**		409539	409538.570
	Tl	205	**50.213**	**ug/L**	3.470	746839	1.817
	Pb	208	**51.445**	**ug/L**	4.121	1414913	3.442

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	97.061				
>	In	115		100.1			
>	Lu	175		101.3			
	Tl	205	100.425				
	Pb	208	102.891				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Monday, December 06, 2010 13:57:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 2.878

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.183**	**ug/L**	10.077	663	0.002
>	In	115		**ug/L**		215442	215442.004
>	Lu	175		**ug/L**		402751	402751.105
	Tl	205	**0.212**	**ug/L**	7.568	6336	0.008
	Pb	208	**0.021**	**ug/L**	27.090	6905	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		99.5			
>	Lu	175		99.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Monday, December 06, 2010 13:59:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 3.879

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.525**	**ug/L**	1.538	1626	0.006
>	In	115		**ug/L**		223350	223349.925
>	Lu	175		**ug/L**		413779	413779.215
	Tl	205	**1.193**	**ug/L**	1.048	21197	0.043
	Pb	208	**2.495**	**ug/L**	1.372	75562	0.167

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	104.997				
>	In	115		103.1			
>	Lu	175		102.4			
	Tl	205	119.278				
	Pb	208	124.727				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Monday, December 06, 2010 14:02:11
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 4.880

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**1870.770**	**ug/L**	0.476	4374722	23.008
>	In	115		**ug/L**		190130	190129.773
>	Lu	175		**ug/L**		342613	342612.840
	Tl	205	**0.068**	**ug/L**	10.252	3614	0.002
	Pb	208	**0.423**	**ug/L**	3.361	15085	0.028

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	93.538				
>	In	115		87.8			
>	Lu	175		84.8			
	Tl	205					
	Pb	208	152.101				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Monday, December 06, 2010 14:04:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 5.881

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**1870.837**	**ug/L**	1.783	4406824	23.009
>	In	115		**ug/L**		191557	191557.427
>	Lu	175		**ug/L**		346116	346116.056
	Tl	205	**21.148**	**ug/L**	0.325	267620	0.765
	Pb	208	**22.143**	**ug/L**	0.880	518139	1.481

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	93.542				
>	In	115		88.5			
>	Lu	175		85.6			
	Tl	205	105.741				
	Pb	208	109.198				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, December 06, 2010 14:07:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 6.882

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**48.576**	**ug/L**	2.732	129879	0.597
>	In	115		**ug/L**		217134	217134.243
>	Lu	175		**ug/L**		401669	401668.895
	Tl	205	**50.632**	**ug/L**	2.439	738907	1.832
	Pb	208	**51.880**	**ug/L**	2.265	1400132	3.471

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	97.152				
>	In	115		100.3			
>	Lu	175		99.4			
	Tl	205	101.265				
	Pb	208	103.759				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, December 06, 2010 14:09:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 7.883

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.406**	**ug/L**	6.400	1245	0.005
>	In	115		**ug/L**		213932	213931.906
>	Lu	175		**ug/L**		400826	400826.191
	Tl	205	**0.188**	**ug/L**	2.545	5963	0.007
	Pb	208	**0.029**	**ug/L**	20.948	7085	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		98.8			
>	Lu	175		99.2			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202266504
Sample Date/Time: Monday, December 06, 2010 14:12:18
Sample Type:
Sample Description: ARSL 6020 MB
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\1202266504.884

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.135**	**ug/L**	16.165	529	0.002
>	In	115		**ug/L**		212434	212434.057
>	Lu	175		**ug/L**		390832	390831.711
	Tl	205	**-0.066**	**ug/L**	6.897	2224	-0.002
	Pb	208	**0.056**	**ug/L**	20.672	7608	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		98.1			
>	Lu	175		96.7			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202266505
Sample Date/Time: Monday, December 06, 2010 14:14:52
Sample Type:
Sample Description: ARSL 6020 LCS
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\1202266505.885

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**55.682**	**ug/L**	1.532	146365	0.685
>	In	115		**ug/L**		213502	213501.862
>	Lu	175		**ug/L**		393178	393178.241
	Tl	205	**49.757**	**ug/L**	2.256	710953	1.800
	Pb	208	**56.491**	**ug/L**	0.309	1492020	3.779

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		98.6			
>	Lu	175		97.3			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Monday, December 06, 2010 14:17:25
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 8.886

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**48.597**	**ug/L**	1.547	128479	0.598
>	In	115		**ug/L**		214666	214665.785
>	Lu	175		**ug/L**		396225	396224.536
	Tl	205	**51.554**	**ug/L**	1.141	742170	1.865
	Pb	208	**52.506**	**ug/L**	1.176	1397850	3.512

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	97.195				
>	In	115		99.1			
>	Lu	175		98.0			
	Tl	205	103.109				
	Pb	208	105.011				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Monday, December 06, 2010 14:19:57
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 9.887

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.181**	**ug/L**	4.971	648	0.002
>	In	115		**ug/L**		212725	212724.651
>	Lu	175		**ug/L**		399453	399452.631
	Tl	205	**0.392**	**ug/L**	1.872	8889	0.014
	Pb	208	**0.014**	**ug/L**	12.282	6653	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		98.2			
>	Lu	175		98.8			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 266878005
Sample Date/Time: Monday, December 06, 2010 14:25:02
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\266878005.889

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**3.027**	**ug/L**	1.271	7600	0.037
>	In	115		**ug/L**		199749	199748.948
>	Lu	175		**ug/L**		372718	372718.072
	Tl	205	**-0.023**	**ug/L**	2.896	2696	-0.001
	Pb	208	**2.307**	**ug/L**	1.288	63394	0.154

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		92.2			
>	Lu	175		92.2			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202266506
Sample Date/Time: Monday, December 06, 2010 14:27:31
Sample Type:
Sample Description: ARSL 6020 DUP
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\1202266506.890

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**2.908**	**ug/L**	1.327	7415	0.036
>	In	115		**ug/L**		202635	202635.375
>	Lu	175		**ug/L**		377297	377296.978
	Tl	205	**-0.049**	**ug/L**	4.306	2380	-0.002
	Pb	208	**2.290**	**ug/L**	1.400	63733	0.153

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		93.6			
>	Lu	175		93.3			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202266507
Sample Date/Time: Monday, December 06, 2010 14:30:01
Sample Type:
Sample Description: ARSL 6020 MS
Number of Replicates: 3
Batch ID: 1049747|1|baj
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\1202266507.891

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**69.642**	**ug/L**	2.812	173111	0.857
>	In	115		**ug/L**		201952	201951.985
>	Lu	175		**ug/L**		378490	378490.290
	Tl	205	**108.410**	**ug/L**	0.572	1487509	3.922
	Pb	208	**52.190**	**ug/L**	1.836	1327063	3.491

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		93.3			
>	Lu	175		93.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202266508
Sample Date/Time: Monday, December 06, 2010 14:32:31
Sample Type:
Sample Description: ARSL 6020 SDILT
Number of Replicates: 3
Batch ID: 1049747|5|baj
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\1202266508.892

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.627**	**ug/L**	3.847	1829	0.008
>	In	115		**ug/L**		214213	214212.920
>	Lu	175		**ug/L**		397971	397971.306
	Tl	205	**1.220**	**ug/L**	4.929	20769	0.044
	Pb	208	**0.443**	**ug/L**	5.131	18048	0.030

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		98.9			
>	Lu	175		98.5			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Monday, December 06, 2010 14:35:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 8.893

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**49.233**	**ug/L**	2.750	132804	0.606
>	In	115		**ug/L**		219053	219053.072
>	Lu	175		**ug/L**		406111	406110.952
	Tl	205	**50.987**	**ug/L**	3.283	752143	1.845
	Pb	208	**51.923**	**ug/L**	0.758	1416917	3.473

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98	98.466				
>	In	115		101.2			
>	Lu	175		100.5			
	Tl	205	101.973				
	Pb	208	103.846				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Monday, December 06, 2010 14:37:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\mo tl and pb.mth
Dataset File: c:\elandata\Dataset\101201\QC Std 9.894

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Mo	98	**0.155**	**ug/L**	7.417	586	0.002
>	In	115		**ug/L**		214641	214640.746
>	Lu	175		**ug/L**		398728	398727.863
	Tl	205	**0.417**	**ug/L**	5.769	9233	0.015
	Pb	208	**-0.002**	**ug/L**	299.950	6213	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Mo	98	Linear Thru Zero	1.0000
In	115	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Mo	98					
>	In	115		99.1			
>	Lu	175		98.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, December 07, 2010 09:44:12
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.2910
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	5463.0	5463.045	97.284	1.8
	Mg	24.0	55159.5	55159.507	883.795	1.6
	Co	58.9	90053.2	90053.150	500.802	0.6
	Rh	102.9	177971.7	177971.730	405.857	0.2
	In	114.9	220141.1	220141.086	3209.800	1.5
	Pb	208.0	228815.4	228815.409	3261.391	1.4
⌈>	Ba	137.9	217633.9	217633.864	1283.336	0.6
⌊	Ba++	69.0	6039.8	0.028	0.000	0.9
⌈>	Ce	139.9	275488.6	275488.638	3409.245	1.2
⌊	CeO	155.9	6273.1	0.023	0.000	1.7
	Bkgd	220.0	18.9	18.900	1.025	5.4

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
5.75	Lens Voltage
1450.00	ICP RF Power
-1875.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
200.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	13	8.0	6138.7
Co	59	13	8.3	96959.6
In	115	13	9.3	232119.6

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	600	2065	0.612
Be	9.0	9.0	2057	2090	0.588
Mg	24.0	24.0	5683	2075	0.632
Mg	25.0	25.0	5943	2090	0.627
Mg	26.0	26.0	6179	2090	0.612
Co	58.9	58.9	14186	2115	0.601
Rh	102.9	102.9	24872	2170	0.625
In	114.9	114.9	27798	2195	0.609
Ce	139.9	139.9	33870	2220	0.610
Pb	206.0	206.0	49948	2315	0.595
Pb	207.0	207.0	50171	2250	0.655
Pb	208.0	208.0	50450	2280	0.716
U	238.1	238.1	57735	2295	0.731

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, December 07, 2010 23:50:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\Blank.300

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		413202	
	U	238		**ug/L**		699	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Simple Linear	
U	238	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, December 07, 2010 23:52:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\Standard 1.301

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		407007	407007.328
	U	238	**10.000**	**ug/L**	1.566	427893	1.050

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, December 07, 2010 23:54:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\Standard 2.302

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		405951	405951.061
	U	238	**99.860**	**ug/L**	0.806	3733192	9.194

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, December 07, 2010 23:56:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 1.303

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		410769	410768.722
	U	238	**52.244**	**ug/L**	1.446	1976254	4.810

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		99.4			
	U	238	104.489				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, December 07, 2010 23:58:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 2.304

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		409115	409114.806
	U	238	**0.092**	**ug/L**	1.820	4159	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		99.0			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, December 08, 2010 00:00:48
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 3.305

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		417347	417347.275
	U	238	**0.218**	**ug/L**	4.521	9077	0.020

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		101.0			
	U	238	109.028				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, December 08, 2010 00:02:57
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 4.306

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		373173	373173.436
	U	238	**0.004**	**ug/L**	20.311	775	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		90.3			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, December 08, 2010 00:05:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 5.307

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		388953	388952.639
	U	238	**23.290**	**ug/L**	0.649	834609	2.144

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		94.1			
	U	238	116.449				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, December 08, 2010 00:07:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 6.308

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		401439	401438.909
	U	238	**53.075**	**ug/L**	1.891	1962266	4.887

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		97.2			
	U	238	106.150				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, December 08, 2010 00:09:25
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 7.309

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		405304	405304.069
	U	238	**0.096**	**ug/L**	3.838	4280	0.009

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		98.1			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, December 08, 2010 00:26:58
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 8.317

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		399461	399460.574
	U	238	**52.859**	**ug/L**	1.893	1944384	4.867

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		96.7			
	U	238	105.718				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, December 08, 2010 00:29:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 9.318

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		402847	402847.397
	U	238	**0.079**	**ug/L**	2.012	3626	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		97.5			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202278966
Sample Date/Time: Wednesday, December 08, 2010 00:31:20
Sample Type:
Sample Description: ARSL 6020 MB
Number of Replicates: 3
Batch ID: 1054715|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\1202278966.319

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		394896	394896.331
	U	238	**-0.000**	**ug/L**	84.788	660	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		95.6			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202278967
Sample Date/Time: Wednesday, December 08, 2010 00:33:32
Sample Type:
Sample Description: ARSL 6020 LCS
Number of Replicates: 3
Batch ID: 1054715|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\1202278967.320

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		396277	396277.446
	U	238	**50.178**	**ug/L**	0.010	1831413	4.620

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		95.9			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 266878001
Sample Date/Time: Wednesday, December 08, 2010 00:35:44
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1054715|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\266878001.321

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		391845	391845.395
	U	238	**18.758**	**ug/L**	0.425	677358	1.727

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		94.8			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202278968
Sample Date/Time: Wednesday, December 08, 2010 00:37:53
Sample Type:
Sample Description: ARSL 6020 DUP
Number of Replicates: 3
Batch ID: 1054715|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\1202278968.322

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		394292	394292.194
	U	238	**18.426**	**ug/L**	2.249	669410	1.696

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		95.4			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202278969
Sample Date/Time: Wednesday, December 08, 2010 00:40:01
Sample Type:
Sample Description: ARSL 6020 MS
Number of Replicates: 3
Batch ID: 1054715|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\1202278969.323

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		393660	393660.147
	U	238	**62.474**	**ug/L**	0.904	2265095	5.752

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		95.3			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202278970
Sample Date/Time: Wednesday, December 08, 2010 00:42:09
Sample Type:
Sample Description: ARSL 6020 SDILT
Number of Replicates: 3
Batch ID: 1054715|5|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\1202278970.324

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		412090	412090.457
	U	238	**3.742**	**ug/L**	0.887	142640	0.344

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		99.7			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 266878003
Sample Date/Time: Wednesday, December 08, 2010 00:44:17
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1054715|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\266878003.325

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		393232	393231.789
	U	238	**5.435**	**ug/L**	1.285	197393	0.500

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		95.2			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, December 08, 2010 00:50:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 6.328

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		416771	416770.965
	U	238	**51.350**	**ug/L**	1.366	1971112	4.728

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		100.9			
	U	238	102.700				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, December 08, 2010 00:52:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 7.329

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		414637	414637.075
	U	238	**0.078**	**ug/L**	3.657	3688	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		100.3			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, December 08, 2010 01:01:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\Blank.331

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		411609	
	U	238		**ug/L**		949	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, December 08, 2010 01:03:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\Standard 1.332

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		410514	410514.007
	U	238	**10.000**	**ug/L**	1.360	425952	1.035

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, December 08, 2010 01:05:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\Standard 2.333

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		411879	411879.213
	U	238	**99.838**	**ug/L**	1.801	3663183	8.894

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, December 08, 2010 01:07:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 1.334

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		415113	415112.772
	U	238	**52.848**	**ug/L**	1.721	1954920	4.708

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		100.9			
	U	238	105.696				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, December 08, 2010 01:09:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 2.335

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		409736	409735.825
	U	238	**0.089**	**ug/L**	0.716	4184	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		99.5			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, December 08, 2010 01:11:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 3.336

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		420224	420223.853
	U	238	**0.214**	**ug/L**	1.198	8995	0.019

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		102.1			
	U	238	107.201				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, December 08, 2010 01:14:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 4.337

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		379619	379619.362
	U	238	**0.001**	**ug/L**	73.955	901	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		92.2			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, December 08, 2010 01:16:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 5.338

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		397618	397618.175
	U	238	**23.599**	**ug/L**	2.190	836802	2.102

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		96.6			
	U	238	117.993				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, December 08, 2010 01:18:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 6.339

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		411076	411076.122
	U	238	**53.774**	**ug/L**	0.944	1970275	4.791

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		99.9			
	U	238	107.548				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, December 08, 2010 01:20:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 7.340

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		407870	407869.735
	U	238	**0.070**	**ug/L**	2.821	3470	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		99.1			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, December 08, 2010 01:37:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 8.348

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		408484	408483.903
	U	238	**51.942**	**ug/L**	1.212	1891175	4.627

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		99.2			
	U	238	103.884				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, December 08, 2010 01:39:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 9.349

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		404869	404869.157
	U	238	**0.071**	**ug/L**	4.680	3509	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		98.4			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, December 08, 2010 01:56:57
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 8.357

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		408987	408987.234
	U	238	**51.634**	**ug/L**	0.234	1882251	4.600

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		99.4			
	U	238	103.268				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, December 08, 2010 01:59:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 9.358

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		403364	403364.221
	U	238	**0.070**	**ug/L**	3.475	3450	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		98.0			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202279258
Sample Date/Time: Wednesday, December 08, 2010 02:01:17
Sample Type:
Sample Description: ARSL 6020 MB
Number of Replicates: 3
Batch ID: 1054826|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\1202279258.359

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		399806	399805.665
	U	238	**-0.012**	**ug/L**	3.590	504	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		97.1			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202279259
Sample Date/Time: Wednesday, December 08, 2010 02:03:25
Sample Type:
Sample Description: ARSL 6020 LCS
Number of Replicates: 3
Batch ID: 1054826|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\1202279259.360

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		395888	395888.413
	U	238	**50.592**	**ug/L**	0.296	1785243	4.507

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		96.2			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 266878005
Sample Date/Time: Wednesday, December 08, 2010 02:07:43
Sample Type:
Sample Description: ARSL 6020
Number of Replicates: 3
Batch ID: 1054826|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\266878005.362

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		390973	390972.838
	U	238	**21.179**	**ug/L**	1.530	738533	1.887

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		95.0			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202279260
Sample Date/Time: Wednesday, December 08, 2010 02:09:52
Sample Type:
Sample Description: ARSL 6020 DUP
Number of Replicates: 3
Batch ID: 1054826|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\1202279260.363

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		391162	391162.463
	U	238	**21.040**	**ug/L**	1.247	734030	1.874

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		95.0			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202279261
Sample Date/Time: Wednesday, December 08, 2010 02:12:02
Sample Type:
Sample Description: ARSL 6020 MS
Number of Replicates: 3
Batch ID: 1054826|1|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\1202279261.364

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		382696	382695.542
	U	238	**69.387**	**ug/L**	1.992	2366137	6.181

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		93.0			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202279262
Sample Date/Time: Wednesday, December 08, 2010 02:14:11
Sample Type:
Sample Description: ARSL 6020 SDILT
Number of Replicates: 3
Batch ID: 1054826|5|baj
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\1202279262.365

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		412525	412525.169
	U	238	**4.258**	**ug/L**	1.492	157422	0.379

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		100.2			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, December 08, 2010 02:18:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 8.367

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		399840	399839.912
	U	238	**51.796**	**ug/L**	1.767	1845955	4.614

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		97.1			
	U	238	103.593				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, December 08, 2010 02:20:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only.mth
Dataset File: C:\elandata\Dataset\101207\QC Std 9.368

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		397051	397050.890
	U	238	**0.075**	**ug/L**	4.604	3560	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Lu	175		96.5			
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

==========

Analysis Begun

Logged In Analyst: Administrator **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: S10**

Sample Information File: C:\data-AA\Administrator\Sample Information\120110W1.SIF
Batch ID:
Results Data Set: 120110W1
Results Library: C:\data-AA\Administrator\Results\Results.mdb

==========

Method Loaded
Method Name: WATER **Method Last Saved: 10/19/2010 06:23:02**
Method Description: 7470A, 245.2, ILM04 ANALYST JXL1

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: Calib Blank **Date Collected: 12/1/2010 06:24:29**
Analyst: **Data Type: Original**

Replicate Data: Calib Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0004	0.0020	0.0004	06:25:21	Yes
2		[0.00]	0.0003	0.0017	0.0003	06:25:51	Yes
Mean:		[0.00]	0.0004				
SD:		0.00	0.0000				
%RSD:		0.00	8.42				

Auto-zero performed.

==========

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S0.2 **Date Collected: 12/1/2010 06:26:09**
Analyst: **Data Type: Original**

Replicate Data: S0.2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0021	0.0150	0.0025	06:27:00	Yes
2		[0.2]	0.0021	0.0145	0.0025	06:27:30	Yes
Mean:		[0.2]	0.0021				
SD:		0.0	0.0000				
%RSD:		0.0	1.32				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.01054 Intercept: 0.00000

==========

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S0.5 **Date Collected: 12/1/2010 06:27:49**
Analyst: **Data Type: Original**

Replicate Data: S0.5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0054	0.0351	0.0058	06:28:39	Yes
2		[0.5]	0.0054	0.0344	0.0058	06:29:09	Yes
Mean:		[0.5]	0.0054				
SD:		0.0	0.0000				
%RSD:		0.0	0.31				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999922 Slope: 0.01085 Intercept: -0.00002

==========

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: S2.0 **Date Collected: 12/1/2010 06:29:29**
Analyst: **Data Type: Original**

Replicate Data: S2.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0232	0.1276	0.0236	06:30:20	Yes
2		[2.0]	0.0230	0.1243	0.0234	06:30:50	Yes
Mean:		[2.0]	0.0231				
SD:		0.0	0.0001				
%RSD:		0.0	0.55				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999880 Slope: 0.01161 Intercept: -0.00018

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S5.0 **Date Collected: 12/1/2010 06:31:10**
Analyst: **Data Type: Original**

Replicate Data: S5.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0568	0.3006	0.0572	06:32:01	Yes
2		[5.0]	0.0564	0.2958	0.0568	06:32:31	Yes
Mean:		[5.0]	0.0566				
SD:		0.0	0.0003				
%RSD:		0.0	0.51				

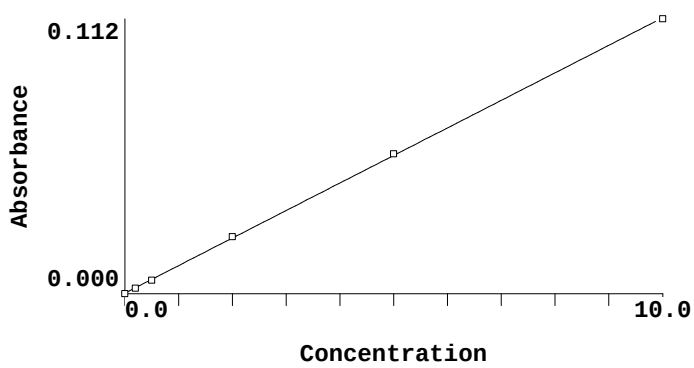
Standard number 4 applied. [5.0]
Correlation Coef.: 0.999944 Slope: 0.01137 Intercept: -0.00005

Sequence No.: 6 **Autosampler Location: 6**
Sample ID: S10.0 **Date Collected: 12/1/2010 06:32:51**
Analyst: **Data Type: Original**

Replicate Data: S10.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1123	0.5889	0.1126	06:33:41	Yes
2		[10.0]	0.1108	0.5747	0.1112	06:34:11	Yes
Mean:		[10.0]	0.1115				
SD:		0.0	0.0010				
%RSD:		0.0	0.92				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999945 Slope: 0.01118 Intercept: 0.00016



Calibration data for Hg 253.7 **Equation: Linear, Calculated Intercept**

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	-0.014	0.00	8.4
S0.2	0.0021	0.2	0.174	0.00	1.3
S0.5	0.0054	0.5	0.470	0.00	0.3
S2.0	0.0231	2.0	2.052	0.00	0.6

S5.0	0.0566	5.0	5.053	0.00	0.5
S10.0	0.1115	10.0	9.965	0.00	0.9

Correlation Coef.: 0.999945 Slope: 0.01118 Intercept: 0.00016

==========

Sequence No.: 7 **Autosampler Location: 9**
Sample ID: ICV **Date Collected: 12/1/2010 06:34:30**
Analyst: **Data Type: Original**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.091	5.091	0.0571	0.2937	0.0574	06:35:21	Yes
2	5.080	5.080	0.0569	0.2899	0.0573	06:35:51	Yes
Mean:	5.085	5.085	0.0570				
SD:	0.008	0.008	0.0001				
%RSD:	0.152	0.152	0.15				

QC value within limits for Hg 253.7 Recovery = 101.71%
All analyte(s) passed QC.

==========

Sequence No.: 8 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 12/1/2010 06:36:11**
Analyst: **Data Type: Original**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.008	-0.008	0.0001	0.0016	0.0004	06:37:02	Yes
2	-0.006	-0.006	0.0001	0.0021	0.0005	06:37:32	Yes
Mean:	-0.007	-0.007	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	18.27	18.27	15.80				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 9 **Autosampler Location: 11**
Sample ID: CRDL **Date Collected: 12/1/2010 06:37:52**
Analyst: **Data Type: Original**

Replicate Data: CRDL

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.202	0.202	0.0024	0.0137	0.0028	06:38:43	Yes
2	0.201	0.201	0.0024	0.0136	0.0028	06:39:13	Yes
Mean:	0.202	0.202	0.0024				
SD:	0.001	0.001	0.0000				
%RSD:	0.302	0.302	0.28				

QC value within limits for Hg 253.7 Recovery = 100.96%
All analyte(s) passed QC.

==========

Sequence No.: 10 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/1/2010 06:39:33**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.060	5.060	0.0567	0.2849	0.0571	06:40:23	Yes
2	5.020	5.020	0.0563	0.2799	0.0566	06:40:53	Yes
Mean:	5.040	5.040	0.0565				
SD:	0.028	0.028	0.0003				
%RSD:	0.558	0.558	0.56				

QC value within limits for Hg 253.7 Recovery = 100.80%
All analyte(s) passed QC.

==========

Sequence No.: 11 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/1/2010 06:41:12**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.004	-0.004	0.0001	0.0018	0.0005	06:42:03	Yes
2	-0.004	-0.004	0.0001	0.0022	0.0005	06:42:33	Yes
Mean:	-0.004	-0.004	0.0001				
SD:	0.000	0.000	0.0000				
%RSD:	8.517	8.517	3.08				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 12 **Autosampler Location: 12**
Sample ID: 1202265723|1049385|1 **Date Collected: 12/1/2010 06:42:52**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 1202265723|1049385|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.005	-0.005	0.0001	0.0021	0.0005	06:43:44	Yes
2	-0.003	-0.003	0.0001	0.0021	0.0005	06:44:14	Yes
Mean:	-0.004	-0.004	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	23.84	23.84	9.05				

==========

Sequence No.: 13 **Autosampler Location: 13**
Sample ID: 1202265724|1049385|1 **Date Collected: 12/1/2010 06:44:34**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 1202265724|1049385|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.056	2.056	0.0231	0.1155	0.0235	06:45:26	Yes
2	2.037	2.037	0.0229	0.1135	0.0233	06:45:56	Yes
Mean:	2.046	2.046	0.0230				
SD:	0.014	0.014	0.0002				
%RSD:	0.670	0.670	0.66				

==========

Sequence No.: 14 **Autosampler Location: 14**
Sample ID: 266878001|1049385|1 **Date Collected: 12/1/2010 06:46:16**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 266878001|1049385|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.005	-0.005	0.0001	0.0020	0.0005	06:47:06	Yes
2	-0.007	-0.007	0.0001	0.0020	0.0004	06:47:36	Yes
Mean:	-0.006	-0.006	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	21.29	21.29	17.29				

==========

Sequence No.: 15 **Autosampler Location: 15**
Sample ID: 1202265725|1049385|1 **Date Collected: 12/1/2010 06:47:55**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 1202265725|1049385|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.000	0.000	0.0002	0.0027	0.0005	06:48:46	Yes
2	0.000	0.000	0.0002	0.0024	0.0005	06:49:16	Yes
Mean:	0.000	0.000	0.0002				
SD:	0.000	0.000	0.0000				
%RSD:	248.5	248.5	0.76				

==========

Sequence No.: 16 **Autosampler Location: 16**
Sample ID: 1202265726|1049385|1 **Date Collected: 12/1/2010 06:49:35**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 1202265726|1049385|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.048	2.048	0.0230	0.1138	0.0234	06:50:25	Yes
2	2.038	2.038	0.0229	0.1126	0.0233	06:50:55	Yes
Mean:	2.043	2.043	0.0230				
SD:	0.007	0.007	0.0001				
%RSD:	0.331	0.331	0.33				

==========

Sequence No.: 17 **Autosampler Location: 17**
Sample ID: 1202265731|1049385|5 **Date Collected: 12/1/2010 06:51:14**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 1202265731|1049385|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.003	-0.003	0.0001	0.0023	0.0005	06:52:04	Yes
2	-0.005	-0.005	0.0001	0.0020	0.0005	06:52:33	Yes
Mean:	-0.004	-0.004	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	36.96	36.96	14.55				

==========

Sequence No.: 18 **Autosampler Location: 18**
Sample ID: 266878003|1049385|1 **Date Collected: 12/1/2010 06:52:52**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 266878003|1049385|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.004	-0.004	0.0001	0.0020	0.0005	06:53:43	Yes
2	-0.005	-0.005	0.0001	0.0021	0.0005	06:54:13	Yes
Mean:	-0.004	-0.004	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	11.50	11.50	5.04				

==========

Sequence No.: 19 **Autosampler Location: 19**
Sample ID: 266878005|1049385|1 **Date Collected: 12/1/2010 06:54:32**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 266878005|1049385|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.007	-0.007	0.0001	0.0022	0.0005	06:55:22	Yes
2	-0.004	-0.004	0.0001	0.0018	0.0005	06:55:52	Yes
Mean:	-0.005	-0.005	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	41.19	41.19	22.32				

==========

Sequence No.: 20 **Autosampler Location: 20**
Sample ID: 266881001|1049385|1 **Date Collected: 12/1/2010 06:56:11**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 266881001|1049385|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.003	-0.003	0.0001	0.0025	0.0005	06:57:03	Yes
2	-0.001	-0.001	0.0001	0.0026	0.0005	06:57:33	Yes
Mean:	-0.002	-0.002	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	47.75	47.75	8.44				

==========

Sequence No.: 21 **Autosampler Location: 21**
Sample ID: 266881002|1049385|1 **Date Collected: 12/1/2010 06:57:52**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 266881002|1049385|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000	0.000	0.0002	0.0026	0.0005	06:58:43	Yes
2	-0.003	-0.003	0.0001	0.0024	0.0005	06:59:13	Yes
Mean:	-0.002	-0.002	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	133.9	133.9	16.76				

==========

Sequence No.: 22 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/1/2010 06:59:33**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.155	5.155	0.0578	0.2783	0.0581	07:00:23	Yes
2	5.111	5.111	0.0573	0.2738	0.0577	07:00:53	Yes
Mean:	5.133	5.133	0.0575				
SD:	0.031	0.031	0.0003				
%RSD:	0.597	0.597	0.60				

QC value within limits for Hg 253.7 Recovery = 102.66%
All analyte(s) passed QC.

==========

Sequence No.: 23 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/1/2010 07:01:12**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.001	0.001	0.0002	0.0020	0.0005	07:02:02	Yes
2	-0.007	-0.007	0.0001	0.0014	0.0005	07:02:32	Yes
Mean:	-0.003	-0.003	0.0001				
SD:	0.005	0.005	0.0001				
%RSD:	186.7	186.7	45.35				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 24 **Autosampler Location: 22**
Sample ID: 266881003|1049385|1 **Date Collected: 12/1/2010 07:02:51**
Analyst: JXL1 **Data Type: Original**

Replicate Data: 266881003|1049385|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.006	-0.006	0.0001	0.0021	0.0005	07:03:43	Yes
2	-0.001	-0.001	0.0002	0.0027	0.0005	07:04:13	Yes

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **1048312.0** Verified by: _____

Analyst: Barry Audain

Method: SW846 3005A

Lab SOP: GL-MA-E-006 REV# 9

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202262893	Metals Spike Mix I	UI1473398-01	.25	mL
LCS	1202262893	Metals Spike Mix II	UI1474646-06	.25	mL
MS	1202262895	Metals Spike Mix I	UI1473398-01	.25	mL
MS	1202262895	Metals Spike Mix II	UI1474646-06	.25	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202262892 MB	17-NOV-2010 16:07:00	Water	50	50	1	<2
1202262893 LCS	17-NOV-2010 16:07:00	Water	50	50	1	<2
266878001	17-NOV-2010 16:07:00	Water	50	50	1	<2
1202262894 DUP (266878001)	17-NOV-2010 16:07:00	Water	50	50	1	<2
1202262895 MS (266878001)	17-NOV-2010 16:07:00	Water	50	50	1	<2
1202262896 SDILT (266878001)	17-NOV-2010 16:07:00	Water	50	50	1	<2
266878003	17-NOV-2010 16:07:00	Water	50	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
1478044	Nitric Acid CONC.	1 mL
1479383	HYDROCHLORIC ACID	2.5 mL

Comments:

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **1049743.0** Verified by: _____

Analyst: Bryan Davis

Method: SW846 3005A

Lab SOP: GL-MA-E-006 REV# 9

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202266500	Metals Spike Mix I	UI1473398-01	.25	mL
LCS	1202266500	Metals Spike Mix II	UI1474646-06	.25	mL
MS	1202266502	Metals Spike Mix I	UI1473398-01	.25	mL
MS	1202266502	Metals Spike Mix II	UI1474646-06	.25	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202266499 MB	18-NOV-2010 09:00:00	Water	50	50	1	<2
1202266500 LCS	18-NOV-2010 09:00:00	Water	50	50	1	<2
266878005	18-NOV-2010 09:00:00	Water	50	50	1	<2
1202266501 DUP (266878005)	18-NOV-2010 09:00:00	Water	50	50	1	<2
1202266502 MS (266878005)	18-NOV-2010 09:00:00	Water	50	50	1	<2
1202266503 SDILT (266878005)	18-NOV-2010 09:00:00	Water	50	50	1	<2
267130001	18-NOV-2010 09:00:00	Water	50	50	1	<2
267130002	18-NOV-2010 09:00:00	Water	50	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
1455429	Nitric Acid CONC.	1 mL
1479383	HYDROCHLORIC ACID	2.5 mL

Comments:

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **1048317.0** Verified by: _____

Analyst: Barry Audain

Method: SW846 3005A

Lab SOP: GL-MA-E-006 REV# 9

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202262898	ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).	UI1455432-A	.5	mL
LCS	1202262898	MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).	UI1455444-B	.5	mL
MS	1202262900	ICP-MS DOE liquid Spike Solution A	UI1438775-A	.5	mL
MS	1202262900	ICP-MS DOE Liquid Spike Solution B	UI1438780-B	.5	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202262897 MB	17-NOV-2010 16:06:00	Water	50	50	1	<2
1202262898 LCS	17-NOV-2010 16:06:00	Water	50	50	1	<2
266878001	17-NOV-2010 16:06:00	Water	50	50	1	<2
1202262899 DUP (266878001)	17-NOV-2010 16:06:00	Water	50	50	1	<2
1202262900 MS (266878001)	17-NOV-2010 16:06:00	Water	50	50	1	<2
1202262901 SDILT (266878001)	17-NOV-2010 16:06:00	Water	50	50	1	<2
266878003	17-NOV-2010 16:06:00	Water	50	50	1	<2
266878004	17-NOV-2010 16:06:00	Water	50	50	1	<2
266878006	17-NOV-2010 16:06:00	Water	50	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
1478044	Nitric Acid CONC.	1 mL
1479383	HYDROCHLORIC ACID	2.5 mL

Comments:

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **1049746.0** Verified by: _____

Analyst: Bryan Davis

Method: SW846 3005A

Lab SOP: GL-MA-E-006 REV# 9

Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202266505	ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).	UI1474709-A	.5	mL
LCS	1202266505	MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).	UI1474717-B	.5	mL
MS	1202266507	ICP-MS DOE liquid Spike Solution A	UI1438775-A	.5	mL
MS	1202266507	ICP-MS DOE Liquid Spike Solution B	UI1438780-B	.5	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202266504 MB	18-NOV-2010 09:00:00	Water	50	50	1	<2
1202266505 LCS	18-NOV-2010 09:00:00	Water	50	50	1	<2
266878002	18-NOV-2010 09:00:00	Water	50	50	1	<2
266878005	18-NOV-2010 09:00:00	Water	50	50	1	<2
1202266506 DUP (266878005)	18-NOV-2010 09:00:00	Water	50	50	1	<2
1202266507 MS (266878005)	18-NOV-2010 09:00:00	Water	50	50	1	<2
1202266508 SDILT (266878005)	18-NOV-2010 09:00:00	Water	50	50	1	<2
267130001	18-NOV-2010 09:00:00	Water	50	50	1	<2
267130002	18-NOV-2010 09:00:00	Water	50	50	1	<2
267132003	18-NOV-2010 09:00:00	Water	50	50	1	<2
267132005	18-NOV-2010 09:00:00	Water	50	50	1	<2
267132007	18-NOV-2010 09:00:00	Water	50	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
1455429	Nitric Acid CONC.	1 mL
1479383	HYDROCHLORIC ACID	2.5 mL

Comments:

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **1054713.0** Verified by: _____

Analyst: Jeremy Johnson

Method: SW846 3005A

Lab SOP: GL-MA-E-006 REV# 9

Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202278967	ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).	UI1474709-A	.5	mL
LCS	1202278967	MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).	UI1474717-B	.5	mL
MS	1202278969	ICP-MS DOE liquid Spike Solution A	UI1438775-A	.5	mL
MS	1202278969	ICP-MS DOE Liquid Spike Solution B	UI1438780-B	.5	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202278966 MB	06-DEC-2010 17:15:00	Water	50	50	1	<2
1202278967 LCS	06-DEC-2010 17:15:00	Water	50	50	1	<2
266878001 - 2	06-DEC-2010 17:15:00	Water	50	50	1	<2
1202278968 - 2 DUP (266878001)	06-DEC-2010 17:15:00	Water	50	50	1	<2
1202278969 - 2 MS (266878001)	06-DEC-2010 17:15:00	Water	50	50	1	<2
1202278970 - 2 SDILT (266878001)	06-DEC-2010 17:15:00	Water	50	50	1	<2
266878003 - 2	06-DEC-2010 17:15:00	Water	50	50	1	<2
266878004 - 2	06-DEC-2010 17:15:00	Water	50	50	1	<2
266878006 - 2	06-DEC-2010 17:15:00	Water	50	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
1488148	HYDROCHLORIC ACID	2.5 mL
1488152	Nitric Acid CONC.	1 mL

Comments:

Reprep -- original batch had high LCS -

Batch concentrated over weekend

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **1054824.0** Verified by: _____

Analyst: Jeremy Johnson

Method: SW846 3005A

Lab SOP: GL-MA-E-006 REV# 9

Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202279259	ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).	UI1474709-A	.5	mL
LCS	1202279259	MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).	UI1474717-B	.5	mL
MS	1202279261	ICP-MS DOE liquid Spike Solution A	UI1438775-A	.5	mL
MS	1202279261	ICP-MS DOE Liquid Spike Solution B	UI1438780-B	.5	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202279258 MB	06-DEC-2010 17:20:00	Water	50	50	1	<2
1202279259 LCS	06-DEC-2010 17:20:00	Water	50	50	1	<2
266878002 - 2	06-DEC-2010 17:20:00	Water	50	50	1	<2
266878005 - 2	06-DEC-2010 17:20:00	Water	50	50	1	<2
1202279260 - 2 DUP (266878005)	06-DEC-2010 17:20:00	Water	50	50	1	<2
1202279261 - 2 MS (266878005)	06-DEC-2010 17:20:00	Water	50	50	1	<2
1202279262 - 2 SDILT (266878005)	06-DEC-2010 17:20:00	Water	50	50	1	<2
267130001 - 2	06-DEC-2010 17:20:00	Water	50	50	1	<2
267130002 - 2	06-DEC-2010 17:20:00	Water	50	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
1488148	HYDROCHLORIC ACID	2.5 mL
1488152	Nitric Acid CONC.	1 mL

Comments:

Reprep -- original batch had high LCS -

Batch concentrated over weekend

Prep Logbook

Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Batch ID: **1049383.0** Verified by: _____

Analyst: Tara Griffin

Method: EPA 245.1/245.2 Prep

Lab SOP: GL-MA-E-010 REV# 23

Instrument: No analytical instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202265724	Mercury working intermediate standard for LCS/MS	WHG101130-13	.2	mL
MS	1202265726	Mercury working intermediate standard for LCS/MS	WHG101130-13	.2	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202265723 MB	30-NOV-2010 12:50:00	Water	20	20	1	<2
1202265724 LCS	30-NOV-2010 12:50:00	Water	20	20	1	<2
266878001	30-NOV-2010 12:50:00	Water	20	20	1	<2
1202265725 DUP (266878001)	30-NOV-2010 12:50:00	Water	20	20	1	<2
1202265726 MS (266878001)	30-NOV-2010 12:50:00	Water	20	20	1	<2
1202265731 SDILT (266878001)	30-NOV-2010 12:50:00	Water	20	20	1	<2
266878003	30-NOV-2010 12:50:00	Water	20	20	1	<2
266878005	30-NOV-2010 12:50:00	Water	20	20	1	<2
266881001	30-NOV-2010 12:50:00	Water	20	20	1	<2
266881002	30-NOV-2010 12:50:00	Water	20	20	1	<2
266881003	30-NOV-2010 12:50:00	Water	20	20	1	<2
266881004	30-NOV-2010 12:50:00	Water	20	20	1	<2

Reagent/Solvent Lot ID	Description	Amount
1409906	Sulfuric Acid, Concentrated	1 mL
1450613-C	5% Potassium Persulfate	1.5 mL
1454159-C	5% KMnO4 solution	3 mL
1480690-C	Hg reducing agent	1 mL
1487832-1	NITRIC ACID	.5 mL
WHG101130-01a	Mercury Working 1st Source CAL 0.2/CRA	20 uL
WHG101130-02	Mercury Working 1st Source CAL 0.5	50 mL
WHG101130-03	Mercury Working 1st Source CAL 2.0	200 uL
WHG101130-04	Mercury Working 1st Source CAL 5.0/CCV	500 uL
WHG101130-05	Mercury Working 1st Source CAL 10.0	1 mL

Comments:

Digestion Start Date: 30-NOV-10 12:50

Digestion End Date: 30-NOV-10 14:50

Prep Logbook

Batch ID: **1049383.0** Verified by: _____

Analyst: Tara Griffin

Method: EPA 245.1/245.2 Prep

Lab SOP: GL-MA-E-010 REV# 23

Instrument: No analytical instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202265724	Mercury working intermediate standard for LCS/MS	WHG101130-13	.2	mL
MS	1202265726	Mercury working intermediate standard for LCS/MS	WHG101130-13	.2	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check

Reagent/Solvent Lot ID	Description	Amount
WHG101130-06	Mercury Working 2nd Source 5.0/ICV	500 uL

Comments:

Digestion Start Date: 30-NOV-10 12:50

Digestion End Date: 30-NOV-10 14:50

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
06-DEC-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3005/6020 DOE-AL	Liquid	ESHL
Batch ID:	**Sample Numbers:**		
1049747	See Below		

Potentially affected work order(s)(SDG): 266878(11-464),267130(11-531),267132(11-539)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MS/PS: QC 1202266507MS	The matrix spike recovery failed outside of the control limits for Mo due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Elizabeth Janssen 08-DEC-10

Data Validator/Group Leader:

Kristen Parson 08-DEC-10

Standard Logbook

Serial ID: UHG100806-01 **Opened:** 06-AUG-10 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 15-JUN-10 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 15-JUN-11 **Lot Number :** 16-18HG
Employee: Eric Lawson **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG100806-02 **Opened:** 06-AUG-10 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 15-JUN-10 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 14-APR-11 **Lot Number :** 4004509
Employee: Eric Lawson **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI100325-42 **Opened:** 22-APR-10 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 25-MAR-10 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 22-APR-11 **Lot Number :** 1018562
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI100510-40 **Opened:** 10-MAY-10 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 07-MAY-10 **Catalog Number :** 160358-01-03
Type: Source Material **Expires:** 10-MAY-11 **Lot Number :** 1019867
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: 02si
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L

Analyte	Concentration	Analyte	Concentration
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI100510-41 **Opened:** 10-MAY-10 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 07-MAY-10 **Catalog Number :** 130358-01-03
Type: Source Material **Expires:** 10-MAY-11 **Lot Number :** 1019867
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: 02si
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI100513-09 **Opened:** 14-MAY-10 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 13-MAY-10 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 14-MAY-11 **Lot Number :** 1019962
Employee: Bryan Davis **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Standard Logbook

Serial ID:	UI100513-10	**Opened:**	14-MAY-10	**Amount :**	250 mL
Name:	ICP-MS CRDL Master #2	**Received:**	13-MAY-10	**Catalog Number :**	160044-08-02
Type:	Source Material	**Expires:**	14-MAY-11	**Lot Number :**	1019963
Employee:	Bryan Davis			**Solvent :**	+/- 0.5% IN 2% HNO3
Supplier:	02SI				
Description:	ICPMS CRDL Soln #2				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID:	UI100630-40	**Opened:**	30-JUN-10	**Amount :**	500 mL
Name:	TRACE ICP Stock PQL Sta	**Received:**	29-JUN-10	**Catalog Number :**	160543-01-03
Type:	Source Material	**Expires:**	30-JUN-11	**Lot Number :**	1020479
Employee:	Helen Camello			**Solvent :**	+/-0.5%in2%HNO3+TrHF
Supplier:	02si				
Description:	TRACE ICP Stock PQL Standard				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID:	UI100820-07	**Opened:**	20-AUG-10	**Amount :**	250 mL
Name:	ICP-MS ICV/CCV Master B	**Received:**	20-AUG-10	**Catalog Number :**	160054-02
Type:	Source Material	**Expires:**	20-AUG-11	**Lot Number :**	1020986
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% in 5% HNO3 100 cm2
Supplier:	02SI				

Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI100820-08 **Opened:** 20-AUG-10 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 20-AUG-10 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 20-AUG-11 **Lot Number :** 1020987
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI100820-09 **Opened:** 20-AUG-10 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 20-AUG-10 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 20-AUG-11 **Lot Number :** 1020985
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Standard Logbook

Serial ID:	UI100908-42	**Opened:**	27-SEP-10	**Amount :**	500 mL
Name:	SI 1000mg/L	**Received:**	08-SEP-10	**Catalog Number :**	060014-02-03
Type:	Source Material	**Expires:**	27-SEP-11	**Lot Number :**	1021185
Employee:	Helen Camello			**Solvent :**	0.3%H2O(NH4)2SiF6
Supplier:	o2si				
Description:	Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID:	UI100915-40	**Opened:**	27-SEP-10	**Amount :**	500 mL
Name:	TRACE CALSTD#1A SOUR	**Received:**	14-SEP-10	**Catalog Number :**	HP2270-1-500
Type:	Source Material	**Expires:**	09-SEP-11	**Lot Number :**	1025144
Employee:	Helen Camello			**Solvent :**	HNO3
Supplier:	Environmental Express				
Description:	Trace Calibration Std #1A				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID:	UI100915-41	**Opened:**	27-SEP-10	**Amount :**	500 mL
Name:	TRACE CALSTD#1B SOUR	**Received:**	14-SEP-10	**Catalog Number :**	HP2270-2-500
Type:	Source Material	**Expires:**	09-SEP-11	**Lot Number :**	1025145
Employee:	Helen Camello			**Solvent :**	HNO3
Supplier:	Environmental Express				
Description:	Trace Calibration Standard #1B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Standard Logbook

Serial ID:	UI100915-42	**Opened:**	07-OCT-10	**Amount :**	200 mL
Name:	SILICON	**Received:**	14-SEP-10	**Catalog Number :**	HP100050-4F
Type:	Source Material	**Expires:**	07-OCT-11	**Lot Number :**	1012501
Employee:	Helen Camello			**Solvent :**	H20/tr HF
Supplier:	ENVIRNMENTAL EXPRESS				
Description:	SILICON 1000mg/L H20/tr HF				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID:	UI100915-43	**Opened:**		**Amount :**	250 mL
Name:	TRACE ICP Na-1000SOUR	**Received:**	14-SEP-10	**Catalog Number :**	HP100052-1
Type:	Source Material	**Expires:**	09-MAR-12	**Lot Number :**	1014419
Employee:	Helen Camello			**Solvent :**	1%HNO3
Supplier:	ENVIRONMENTAL EXPRESS				
Description:	Sodium 1000 +/- 3 ug/mL in 1% HNO3				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID:	UI100917-12	**Opened:**	17-SEP-10	**Amount :**	250 mL
Name:	ICP-MS ICSAB Master B	**Received:**	17-SEP-10	**Catalog Number :**	160033-02
Type:	Source Material	**Expires:**	17-SEP-11	**Lot Number :**	1021353
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% in 2% HNO3
Supplier:	02SI				
Description:	ICPMS ICSAB Master B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Standard Logbook

Serial ID: UI100917-13 **Opened:** 17-SEP-10 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 17-SEP-10 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 17-SEP-11 **Lot Number :** 1021339
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI101105-11 **Opened:** 05-NOV-10 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 05-NOV-10 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 05-NOV-11 **Lot Number :** 1020259
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI101119-48 **Opened:** 24-NOV-10 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 19-NOV-10 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 24-NOV-11 **Lot Number :** 1022752
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI101119-49.9 **Opened:** 03-DEC-10 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 19-NOV-10 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 04-DEC-10 **Lot Number :** 1022753
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si

Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI101201-40 **Opened:** 01-DEC-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 30-NOV-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 01-DEC-11 **Lot Number :** 1022520
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Standard Logbook

Serial ID: UI101201-41 **Opened:** 01-DEC-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 30-NOV-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 01-DEC-11 **Lot Number :** 1022520
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI101203-11 **Opened:** 03-DEC-10 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-DEC-10 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-DEC-11 **Lot Number :** 1020259
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI1401400-02 **Opened:** 30-JUN-10 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 30-JUN-10 **Lot Number :** 1020408
Type: Source Material **Expires:** 30-JUN-11 **Solvent :** 2% HNO3
Employee: Anthony Green
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI1438775-A **Opened:** 14-SEP-10 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 14-SEP-10 **Lot Number :** 1021073
Type: Source Material **Expires:** 14-SEP-11
Employee: Bryan Davis
Supplier: O2Si
Description: ICP-MS DOE liquid Spike Solution A

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Cesium	5 mg/L
Chromium	5 mg/L	Cobalt	5 mg/L
Copper	5 mg/L	Iron	200 mg/L
Lead	4 mg/L	Lithium	5 mg/L
Magnesium	200 mg/L	Manganese	5 mg/L
Nickel	5 mg/L	Phosphorus, Total as P	200 mg/L
Potassium	200 mg/L	Selenium	2 mg/L
Silicon	200 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Total Uranium	5 mg/L
Uranium	5 mg/L	Uranium-235	.0364 mg/L
Uranium-238	4.96 mg/L	Vanadium	5 mg/L
Zinc	5 mg/L		

Serial ID: UI1438780-B **Opened:** 14-SEP-10 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 14-SEP-10 **Lot Number :** 1020237
Type: Source Material **Expires:** 14-SEP-11
Employee: Bryan Davis
Supplier: O2Si
Description: ICP-MS DOE Liquid Spike Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI1455432-A **Opened:** 22-OCT-10 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-OCT-10 **Lot Number :** 1021935
Type: Source Material **Expires:** 22-OCT-11
Employee: Bryan Davis
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L

Analyte	Concentration	Analyte	Concentration
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI1455444-B **Opened:** 22-OCT-10 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-OCT-10 **Lot Number :** 1021935
Type: Source Material **Expires:** 22-OCT-11
Employee: Bryan Davis
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI1473398-01 **Opened:** 25-OCT-10 **Lot Number :** 1022197
Name: METALSPIKE-1 **Received:** 25-OCT-10
Type: Source Material **Expires:** 25-OCT-11
Employee: Bryan Davis
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Standard Logbook

Serial ID: UI1474646-06 **Opened:** 25-OCT-10 **Lot Number :** 1021910
Name: METALSPIKE-2 **Received:** 25-OCT-10
Type: Source Material **Expires:** 25-OCT-11
Employee: Bryan Davis
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Uranium-235	.72 ug/mL	Uranium-238	99.28 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI1474709-A **Opened:** 25-OCT-10 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 25-OCT-10 **Lot Number :** 1021935
Type: Source Material **Expires:** 25-OCT-11
Employee: Bryan Davis
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Standard Logbook

Serial ID: UI1474717-B **Opened:** 25-OCT-10 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 25-OCT-10 **Lot Number :** 1021935
Type: Source Material **Expires:** 25-OCT-11
Employee: Bryan Davis
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UMS100529-01 **Opened:** 29-MAY-10 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 29-MAY-10 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 15-MAY-11 **Lot Number :** 23-107JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS100529-02 **Opened:** 29-MAY-10 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 29-MAY-10 **Lot Number :** 23-109JB
Type: Source Material **Expires:** 15-MAY-11
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Standard Logbook

Serial ID: UMS100529-03 **Opened:** 29-MAY-10 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 29-MAY-10 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 15-MAY-11 **Lot Number :** 23-108JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG101130-01 **Opened:** 30-NOV-10 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 30-NOV-10 **Pipet Id :** Minou1
Type: Intermediate **Expires:** 01-DEC-10 **Solvent :** 1mL HNO3 + TypeI H2O
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG100806-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG101130-02 **Opened:** 30-NOV-10 **Pipet Id :** Minou1
Name: MHGINTER2 **Received:** 30-NOV-10 **Solvent :** 2% HNO3-1487832
Type: Intermediate **Expires:** 01-DEC-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG100806-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG101130-01a **Opened:** 30-NOV-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL0.2CRA **Received:** 30-NOV-10 **Solvent :** 2% HNO3-1450611
Type: Working **Expires:** 06-DEC-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG101130-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

Standard Logbook

Serial ID: WHG101130-02 **Opened:** 30-NOV-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL0.5 **Received:** 30-NOV-10 **Solvent :** 2% HNO3-1450611
Type: Working **Expires:** 06-DEC-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG101130-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG101130-03 **Opened:** 30-NOV-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL2.0 **Received:** 30-NOV-10 **Solvent :** 2% HNO3-1450611
Type: Working **Expires:** 06-DEC-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG101130-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Serial ID: WHG101130-04 **Opened:** 30-NOV-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL5.0CCV **Received:** 30-NOV-10 **Solvent :** 2% HNO3-1450611
Type: Working **Expires:** 06-DEC-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG101130-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG101130-05 **Opened:** 30-NOV-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL10.0 **Received:** 30-NOV-10 **Solvent :** 2% HNO3-1450611
Type: Working **Expires:** 06-DEC-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG101130-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Standard Logbook

Serial ID: WHG101130-06 **Opened:** 30-NOV-10 **Pipet Id :** Hg1289245
Name: MHGWORK5.0ICV **Received:** 30-NOV-10 **Solvent :** 2% HNO3-1450611
Type: Working **Expires:** 06-DEC-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG101130-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG101130-13 **Opened:** 30-NOV-10 **Pipet Id :** Hg1289245
Name: MHGLIQLCSMSSPIKE **Received:** 30-NOV-10 **Solvent :** 2% HNO3-1487832
Type: Working **Expires:** 06-DEC-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury working intermediate standard for LCS/MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG100806-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI101203-42 **Opened:** 03-DEC-10 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 15-SEP-10 **Pipet Id :** 3581809
Type: Working **Expires:** 04-DEC-10 **Solvent :** 3%HCL and 1%HNO3 -1491907
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI101203-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI101203-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI101203-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI101203-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI101203-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI101203-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI101203-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI101203-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI101203-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI101203-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI101203-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI101203-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI101203-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI101203-43 **Opened:** 03-DEC-10 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 15-SEP-10 **Pipet Id :** 3581809
Type: Working **Expires:** 04-DEC-10 **Solvent :** 3%HCL and 1%HNO3 -1491907
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP O.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100908-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI100908-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI100915-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI100915-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI100915-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI100915-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI100915-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100915-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI100915-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI100915-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI100915-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI100915-43	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI101203-44 **Opened:** 03-DEC-10 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 15-SEP-10 **Pipet Id :** 3581809
Type: Working **Expires:** 04-DEC-10 **Solvent :** 3%HCL and 1 %HNO3-1491907
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100908-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI100908-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI100915-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI100915-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI100915-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI100915-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI100915-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI100915-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI100915-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100915-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI100915-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI100915-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI100915-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI101203-45 **Opened:** 03-DEC-10 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 25-MAR-10 **Pipet Id :** 3581809
Type: Working **Expires:** 04-DEC-10 **Solvent :** 3%HCL and 1%HNO3 -1491907
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100325-42	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI100325-42	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI100325-42	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI100325-42	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI100915-43	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI101203-46 **Opened:** 03-DEC-10 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 09-MAY-10 **Pipet Id :** 3581809
Type: Working **Expires:** 04-DEC-10 **Solvent :** 3%HCL AND 1%HNO3 -1491907
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100510-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI100510-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI100510-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100510-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI100510-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI100510-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI100510-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI100510-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI100510-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI100510-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI100510-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI100510-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI100510-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100510-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI100915-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI100915-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI101203-47 **Opened:** 03-DEC-10 **Balance Id :** 216
Name: PQL Working Standard **Received:** 29-JUN-10 **Pipet Id :** 3581809
Type: Working **Expires:** 04-DEC-10 **Solvent :** 3%HCL &1%HNO3-1491907
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100630-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI100630-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI100630-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI100630-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI100630-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI100630-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI100630-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI100630-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI100630-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI100630-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI100630-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100630-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI100630-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI100630-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI100630-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI100630-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI100630-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI100630-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI100630-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI100630-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI100630-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI100630-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI100630-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI100630-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI100630-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI100630-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI100630-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI100630-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI100630-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI100630-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI100630-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS101202-04 **Opened:** 02-DEC-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 02-DEC-10 **Balance Id :** 4025216
Type: Working **Expires:** 03-DEC-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1491790
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI1401400-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100529-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS100529-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS100529-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS101202-04A **Opened:** 02-DEC-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 02-DEC-10 **Pipet Id :** 3541598
Type: Working **Expires:** 03-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1491790
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS101202-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101202-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS101202-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101202-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101202-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101202-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS101202-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101202-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101202-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101202-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS101202-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS101202-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS101202-05 **Opened:** 02-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 02-DEC-10 **Pipet Id :** 3541598
Type: Working **Expires:** 03-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1491790
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100820-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI100820-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100820-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-09	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI100820-09	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L

Serial ID: WMS101202-06 **Opened:** 02-DEC-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 02-DEC-10 **Pipet Id :** 3820544
Type: Working **Expires:** 03-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1491790
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100513-09	Aluminum	15 mg/L	.05 mL	50 mL	30 ug/L
UI100513-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI100513-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI100513-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Calcium	100 mg/L	.05 mL	50 mL	200 ug/L
UI100513-09	Chromium	3 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Iron	25 mg/L	.05 mL	50 mL	100 ug/L
UI100513-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI100513-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI100513-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI100513-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI100513-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100513-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI100513-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-10	Antimony	2 mg/L	.05 mL	50 mL	3 ug/L
UI100513-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI100513-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI100513-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS101202-07 **Opened:** 02-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 02-DEC-10 **Lot Number :** 1010773
Type: Working **Expires:** 03-DEC-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1491790
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI101105-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Carbon	2000 mg/L	5 mL	50 mL	200000 ug/L
UI101105-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI101105-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI101105-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS101202-08 **Opened:** 02-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 02-DEC-10 **Pipet Id :** 1758088
Type: Working **Expires:** 03-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1491790
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100917-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100917-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI100917-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI100917-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI100917-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI100917-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI100917-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI100917-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI100917-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI100917-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI101105-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Carbon	2000 mg/L	5 mL	50 mL	200000 ug/L
UI101105-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI101105-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI101105-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS101203-04 **Opened:** 03-DEC-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 03-DEC-10 **Balance Id :** 4025216
Type: Working **Expires:** 04-DEC-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1491790
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI1401400-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100529-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS100529-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS101203-04A **Opened:** 03-DEC-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 03-DEC-10 **Pipet Id :** 3541598
Type: Working **Expires:** 04-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1491790
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS101203-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101203-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS101203-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS101203-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101203-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101203-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101203-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101203-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101203-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101203-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS101203-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS101203-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS101203-05 **Opened:** 03-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 03-DEC-10 **Pipet Id :** 3541598
Type: Working **Expires:** 04-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1491790
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100820-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100820-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-09	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI100820-09	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L

Serial ID: WMS101203-06 **Opened:** 03-DEC-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 03-DEC-10 **Pipet Id :** 3820544
Type: Working **Expires:** 04-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1491790
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100513-09	Aluminum	15 mg/L	.05 mL	50 mL	30 ug/L
UI100513-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI100513-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI100513-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100513-09	Calcium	100 mg/L	.05 mL	50 mL	200 ug/L
UI100513-09	Chromium	3 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Iron	25 mg/L	.05 mL	50 mL	100 ug/L
UI100513-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI100513-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI100513-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI100513-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI100513-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI100513-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-10	Antimony	2 mg/L	.05 mL	50 mL	3 ug/L
UI100513-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI100513-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI100513-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS101203-07 **Opened:** 03-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 03-DEC-10 **Lot Number :** 1010773
Type: Working **Expires:** 04-DEC-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1491790
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI101105-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Carbon	2000 mg/L	5 mL	50 mL	200000 ug/L
UI101105-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI101105-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI101105-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI101105-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS101203-08 **Opened:** 03-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 03-DEC-10 **Pipet Id :** 1758088
Type: Working **Expires:** 04-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1491790
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100917-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI100917-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI100917-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI100917-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI100917-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI100917-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI100917-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI100917-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI100917-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI101105-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Carbon	2000 mg/L	5 mL	50 mL	200000 ug/L
UI101105-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI101105-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

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Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI101105-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101105-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS101206-04 **Opened:** 06-DEC-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 06-DEC-10 **Balance Id :** 4025216
Type: Working **Expires:** 07-DEC-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1495289
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI1401400-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100529-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS100529-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS100529-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS101206-04A **Opened:** 06-DEC-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 06-DEC-10 **Pipet Id :** 3541598
Type: Working **Expires:** 07-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1495289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS101206-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101206-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS101206-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101206-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101206-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101206-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101206-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101206-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101206-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS101206-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101206-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS101206-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS101206-05 **Opened:** 06-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 06-DEC-10 **Pipet Id :** 3541598
Type: Working **Expires:** 07-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1495289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100820-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI100820-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-09	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI100820-09	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L

Standard Logbook

Serial ID: WMS101206-06 **Opened:** 06-DEC-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 06-DEC-10 **Pipet Id :** 3820544
Type: Working **Expires:** 07-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1495289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100513-09	Aluminum	15 mg/L	.05 mL	50 mL	30 ug/L
UI100513-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI100513-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI100513-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Calcium	100 mg/L	.05 mL	50 mL	200 ug/L
UI100513-09	Chromium	3 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Iron	25 mg/L	.05 mL	50 mL	100 ug/L
UI100513-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI100513-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI100513-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI100513-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI100513-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI100513-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-10	Antimony	2 mg/L	.05 mL	50 mL	3 ug/L
UI100513-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI100513-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI100513-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS101206-07 **Opened:** 06-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 06-DEC-10 **Lot Number :** 1010773
Type: Working **Expires:** 07-DEC-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1495289
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI101203-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Carbon	2000 mg/L	5 mL	50 mL	200000 ug/L
UI101203-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI101203-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI101203-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS101206-08 **Opened:** 06-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 06-DEC-10 **Pipet Id :** 1758088
Type: Working **Expires:** 07-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1495289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100917-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI100917-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI100917-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI100917-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI100917-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI100917-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI100917-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100917-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI100917-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI100917-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI101203-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Carbon	2000 mg/L	5 mL	50 mL	200000 ug/L
UI101203-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI101203-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI101203-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS101207-04 **Opened:** 07-DEC-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 07-DEC-10 **Balance Id :** 4025216
Type: Working **Expires:** 08-DEC-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1495289
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI1401400-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100529-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS100529-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS100529-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100529-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100529-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS101207-04A **Opened:** 07-DEC-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 07-DEC-10 **Pipet Id :** 3541598
Type: Working **Expires:** 08-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1495289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS101207-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101207-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS101207-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101207-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101207-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101207-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS101207-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101207-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101207-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS101207-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS101207-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS101207-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS101207-05 **Opened:** 07-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 07-DEC-10 **Pipet Id :** 3541598
Type: Working **Expires:** 08-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1495289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100820-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI100820-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100820-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100820-09	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI100820-09	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100820-09	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L

Serial ID: WMS101207-06 **Opened:** 07-DEC-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 07-DEC-10 **Pipet Id :** 3820544
Type: Working **Expires:** 08-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1495289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100513-09	Aluminum	15 mg/L	.05 mL	50 mL	30 ug/L
UI100513-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI100513-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI100513-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Calcium	100 mg/L	.05 mL	50 mL	200 ug/L
UI100513-09	Chromium	3 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Iron	25 mg/L	.05 mL	50 mL	100 ug/L
UI100513-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI100513-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI100513-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI100513-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI100513-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI100513-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100513-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI100513-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-10	Antimony	2 mg/L	.05 mL	50 mL	3 ug/L
UI100513-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI100513-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI100513-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI100513-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI100513-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI100513-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS101207-07 **Opened:** 07-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 07-DEC-10 **Lot Number :** 1010773
Type: Working **Expires:** 08-DEC-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1495289
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI101203-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Carbon	2000 mg/L	5 mL	50 mL	200000 ug/L
UI101203-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI101203-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI101203-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS101207-08 **Opened:** 07-DEC-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 07-DEC-10 **Pipet Id :** 1758088
Type: Working **Expires:** 08-DEC-10 **Solvent :** 2%HNO3/1%HCl - 1495289
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100917-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100917-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI100917-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI100917-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI100917-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI100917-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI100917-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI100917-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI100917-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI100917-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI100917-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI101203-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Carbon	2000 mg/L	5 mL	50 mL	200000 ug/L
UI101203-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI101203-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI101203-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI101203-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1215906 **Opened:** 06-NOV-09 **Lot Number :** H44465
Name: B-K2S2O8S-MER **Received:** 06-NOV-09
Type: Reagent/Solvent **Expires:** 06-NOV-10
Employee: Tara Griffin
Supplier: J.T BAKER
Description: Potassium Persulfate Concentrate.
Comments: None

Standard Logbook

Serial ID: 1298755-A **Opened:** 08-APR-10 **Lot Number :** 096637
Name: B-NH2OH.HCl-MER **Received:** 08-APR-10
Type: Reagent/Solvent **Expires:** 08-APR-11
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

Serial ID: 1308327-A **Opened:** 28-APR-10 **Lot Number :** TB09AZEMS
Name: B-KMnO4(VWR)-MER **Received:** 28-APR-10
Type: Reagent/Solvent **Expires:** 28-APR-12
Employee: Tara Griffin
Supplier: J T Baker
Description: Potassium Permanganate
Comments: None

Serial ID: 1409906 **Opened:** 20-JUL-10 **Lot Number :** J19002
Name: B-H2SO4-MER **Received:** 20-JUL-10
Type: Reagent/Solvent **Expires:** 20-JUL-11
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Sulfuric Acid, Concentrated
Comments: None

Serial ID: 1450613-C **Opened:** 11-OCT-10 **Balance Id :** BAL-002
Name: B-K2S2O8-MER **Received:** 11-OCT-10
Type: Reagent/Solvent **Expires:** 11-APR-11
Employee: Tara Griffin
Supplier: GEL
Description: 5% Potassium Persulfate
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1215906	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1454159-C **Opened:** 19-OCT-10 **Balance Id :** BAL-002
Name: B-KMnO4-MER **Received:** 19-OCT-10
Type: Reagent/Solvent **Expires:** 19-APR-11
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1308327-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1455429 **Opened:** 09-NOV-10 **Lot Number :** J30033 L
Name: I-HNO3 **Received:** 09-NOV-10
Type: Reagent/Solvent **Expires:** 09-NOV-11
Employee: Bryan Davis
Supplier: Mallinchrodt Chemicals
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1455429tclp **Opened:** 22-OCT-10 **Lot Number :** J30033 L
Name: I-HNO3 **Received:** 22-OCT-10
Type: Reagent/Solvent **Expires:** 22-OCT-11
Employee: Edmund Frampton
Supplier: Mallinchrodt Chemicals
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1478044 **Opened:** 27-OCT-10 **Lot Number :** J39031 L
Name: I-HNO3 **Received:** 27-OCT-10
Type: Reagent/Solvent **Expires:** 27-OCT-11
Employee: Anthony Green
Supplier: Mallinchrodt Chemicals
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1479383 **Opened:** 29-OCT-10 **Lot Number :** J32030
Name: I-HCL **Received:** 29-OCT-10 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 29-OCT-11
Employee: Anthony Green
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1480690-C **Opened:** 02-NOV-10 **Balance Id :** BAL-002
Name: B-NaCl.NH2OH.HCl-MER **Received:** 02-NOV-10
Type: Reagent/Solvent **Expires:** 08-APR-11
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1298755-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1487832-1 **Opened:** 18-NOV-10 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 18-NOV-10 **Lot Number :** J39031
Type: Reagent/Solvent **Expires:** 18-NOV-11
Employee: Tara Griffin
Supplier: Mallinckrodt Chemicals
Description: NITRIC ACID
Comments: None

Serial ID: 1488148 **Opened:** 18-NOV-10 **Lot Number :** J37036
Name: I-HCL **Received:** 18-NOV-10 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 18-NOV-11
Employee: Anthony Green
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1488152 **Opened:** 18-NOV-10 **Lot Number :** J44036 L
Name: I-HNO3 **Received:** 18-NOV-10
Type: Reagent/Solvent **Expires:** 18-NOV-11
Employee: Anthony Green
Supplier: Mallinchrodt Chemicals
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1491790 **Opened:** 29-NOV-10 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 29-NOV-10
Type: Reagent/Solvent **Expires:** 05-DEC-10
Employee: Paul Boyd
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1455429tclp	I-HNO3	69.0-70.0	160 mL	8 l	N/A
1479383	I-HCL	36.5-38.0	80 mL	8 l	N/A

Standard Logbook

Serial ID: 1491907 **Opened:** 29-NOV-10 **Amount :** 8 L
Name: B-ICP-RINSE SOLN **Received:** 29-NOV-10 **Solvent :** 3%HCL+1%HNO3
Type: Reagent/Solvent **Expires:** 05-DEC-10
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1455429tclp	I-HNO3	69.0-70.0	80 mL		N/A
1479383	I-HCL	36.5-38.0	240 mL		N/A

Serial ID: 1495289 **Opened:** 06-DEC-10 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 06-DEC-10
Type: Reagent/Solvent **Expires:** 13-DEC-10
Employee: Paul Boyd
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1455429tclp	I-HNO3	69.0-70.0	160 mL	8 l	N/A
1488148	I-HCL	36.5-38.0	80 mL	8 l	N/A

General Chem Analysis

Case Narrative

General Chemistry Narrative
ARS International (ARSL)
SDG 11-464

Method/Analysis Information

Product: **Carbon, Total Organic**

Analytical Batch: 1048084 **Method:** SW 9060 Total Organic Carbon

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9060:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202262321	Method Blank (MB)
1202262322	266779001(CASA-11-1332) Sample Duplicate (DUP)
1202262323	266879001(WTBKGD-10-27063) Sample Duplicate (DUP)
1202262324	266779001(CASA-11-1332) Post Spike (PS)
1202262325	266879001(WTBKGD-10-27063) Post Spike (PS)
1202262326	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-093 REV# 9.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Carbon analysis was performed on a O-I Analytical Model 1010 Total Organic Carbon Analyzer.

Initial Calibration
All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks
All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266779001 (CASA-11-1332) and 266879001 (WTBKGD-10-27063).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Data Exception (DER) Documentation
A DER was not required for this SDG.

Additional Comments
A 15 mg/L Total Inorganic Carbon check standard is analyzed with each analytical run to prove that the instrument is effectively sparging away the inorganic carbon.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Specific Conductivity**		
Analytical Batch:	1048674 and 1052275	**Method:**	EPA120.1 Specific Conductivity

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 120.1:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202263884	266481001(WST60-11-1292) Sample Duplicate (DUP)
1202263885	266494002(WST60-10-26068) Sample Duplicate (DUP)
1202263886	Laboratory Control Sample (LCS)
1202272577	266985002(CAMO-11-1290) Sample Duplicate (DUP)
1202272578	266988002(CAMO-11-1241) Sample Duplicate (DUP)
1202272579	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-009 REV# 9.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Conductivity analysis was performed on a Orion 160 Conductivity Meter.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266481001 (WST60-11-1292), 266494002 (WST60-10-26068)- Batch 1048674, 266985002 (CAMO-11-1290) and 266988002 (CAMO-11-1241)- Batch 1052275.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Data Exception (DER) Documentation
A DER was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product: **pH**

Analytical Batch: 1051602 and 1052259 **Method:** EPA 150.1 pH

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 150.1:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202271063	266878001(Buckman1-11-1944) Sample Duplicate (DUP)
1202271065	Laboratory Control Sample (LCS)
1202272548	266878003(Buckman06-11-1970) Sample Duplicate (DUP)
1202272549	267237004(CASA-11-1381) Sample Duplicate (DUP)
1202272550	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHecT LogR pH/ISE.

The Electrode analysis was performed on a PerpHect pH Meter Orion 370.

Initial Calibration
All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266878001 (Buckman1-11-1944)- Batch 1051602, 266878003 (Buckman06-11-1970) and 267237004 (CASA-11-1381)- Batch 1052259.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 266878001 (Buckman1-11-1944)- Batch 1051602, 266878003 (Buckman06-11-1970) and 266878005 (Buckman08-11-2042)- Batch 1052259.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Data Exception (DER) Documentation
The following DER was generated for this SDG: 901265 266878001 (Buckman1-11-1944)- Batch 1051602. The following DER was generated for this SDG: 901662 266878003 (Buckman06-11-1970) and 266878005 (Buckman08-11-2042)- Batch 1052259.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are

present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	1048531	**Method:**	WSP-CN(T)
Prep Batch :	1048529	**Method:**	EPA 335.4

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 335.4:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202263532	Method Blank (MB)
1202263533	266878001(Buckman1-11-1944) Sample Duplicate (DUP)
1202263534	266878003(Buckman06-11-1970) Sample Duplicate (DUP)
1202263535	266878001(Buckman1-11-1944) Matrix Spike (MS)
1202263536	266878003(Buckman06-11-1970) Matrix Spike (MS)
1202263537	266878001(Buckman1-11-1944) Matrix Spike Duplicate (MSD)
1202263538	266878003(Buckman06-11-1970) Matrix Spike Duplicate (MSD)
1202263539	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 14.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration
All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks
All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266878001 (Buckman1-11-1944) and 266878003 (Buckman06-11-1970).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Data Exception (DER) Documentation
A DER was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	1048124 and 1049189	**Method:**	EPA 300.0 Anions Liquid 28 day

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202262439	Method Blank (MB)
1202262440	Laboratory Control Sample (LCS)
1202262441	266878001(Buckman1-11-1944) Sample Duplicate (DUP)
1202262442	266878001(Buckman1-11-1944) Post Spike (PS)
1202265269	Method Blank (MB)
1202265270	266878005(Buckman08-11-2042) Sample Duplicate (DUP)
1202265271	266878005(Buckman08-11-2042) Post Spike (PS)
1202265272	Laboratory Control Sample (LCS)
1202265282	267028002(CAWR-10-23737) Sample Duplicate (DUP)
1202265283	267028002(CAWR-10-23737) Post Spike (PS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 18.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration
All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks
All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266878001 (Buckman1-11-1944)- Batch 1048124, 266878005 (Buckman08-11-2042) and 267028002 (CAWR-10-23737)- Batch 1049189.

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1202265283 (CAWR-10-23737)- Batch 1049189.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Dilutions
The following samples in this sample group were diluted due to high concentration: 1202265282 (CAWR-10-23737) and 1202265283 (CAWR-10-23737)- Batch 1049189.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Data Exception (DER) Documentation
The following DER was generated for this SDG: 900106 1202265283 (CAWR-10-23737)- Batch 1049189.

Manual Integrations
The following samples from this sample group had to be manually integrated due to errors in the instrument software peak integration: 1202262441 (Buckman1-11-1944), 1202262442 (Buckman1-11-1944), 266878001 (Buckman1-11-1944), 266878003 (Buckman06-11-1970)- Batch 1048124, 1202265270 (Buckman08-11-2042), 1202265271 (Buckman08-11-2042), 1202265282 (CAWR-10-23737), 1202265283 (CAWR-10-23737) and 266878005 (Buckman08-11-2042)- Batch 1049189.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ammonia Nitrogen**		
Analytical Batch:	1048029 and 1048508	**Method:**	EPA 350.1 Nitrogen and Ammonia L
Prep Batch :	1048028 and 1048507	**Method:**	EEPA 350.2 Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 350.1:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202262146	Method Blank (MB)
1202262147	266778002(CASA-11-1333) Sample Duplicate (DUP)
1202262148	266778004(CASA-11-1339) Sample Duplicate (DUP)
1202262149	266778002(CASA-11-1333) Matrix Spike (MS)
1202262150	266778004(CASA-11-1339) Matrix Spike (MS)
1202262151	266778002(CASA-11-1333) Matrix Spike Duplicate (MSD)
1202262152	266778004(CASA-11-1339) Matrix Spike Duplicate (MSD)
1202262153	Laboratory Control Sample (LCS)
1202263469	Method Blank (MB)
1202263470	266881002(CAMO-11-1272) Sample Duplicate (DUP)
1202263471	266881004(CAMO-11-1274) Sample Duplicate (DUP)
1202263472	266881002(CAMO-11-1272) Matrix Spike (MS)
1202263473	266881004(CAMO-11-1274) Matrix Spike (MS)
1202263474	266881002(CAMO-11-1272) Matrix Spike Duplicate (MSD)
1202263475	266881004(CAMO-11-1274) Matrix Spike Duplicate (MSD)
1202263476	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-106 REV# 6.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Continuing Calibration Blanks
All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266778002 (CASA-11-1333), 266778004 (CASA-11-1339)- Batch 1048029, 266881002 (CAMO-11-1272) and 266881004 (CAMO-11-1274)- Batch 1048508.

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1202263473 (CAMO-11-1274)- Batch 1048508.

Matrix Spike Duplicate (MSD) Recovery Statement
The spike duplicate recovery falls outside of the GEL acceptance limits but within the client specified limits. 1202262151 (CASA-11-1333)- Batch 1048029. The spike duplicate recovery falls outside of the established acceptance limits due to matrix interference: 1202263475 (CAMO-11-1274)- Batch 1048508.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
One or more of the values for the sample and/or duplicate are less than 5 times the Practical Quantitation Limit (PQL), and the difference is within one PQL value; therefore, the RPD is not applicable. 1202262147 (CASA-11-1333)- Batch 1048029. The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202263470 (CAMO-11-1272) and 1202263471 (CAMO-11-1274)- Batch

1048508.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The following sample was re-analyzed due to instrument failure: 1202262146 (MB)- Batch 1048029. The following samples were re-analyzed to verify the results: 1202262148 (CASA-11-1339), 1202262150 (CASA-11-1339), 1202262152 (CASA-11-1339)- Batch 1048029, 1202263470 (CAMO-11-1272), 1202263472 (CAMO-11-1272) and 1202263474 (CAMO-11-1272)- Batch 1048508.

Miscellaneous Information

Data Exception (DER) Documentation
The following DER was generated for this SDG: 897632 1202262151 (CASA-11-1333)- Batch 1048029. The following DER was generated for this SDG: 898728 1202263473 (CAMO-11-1274) and 1202263475 (CAMO-11-1274)- Batch 1048508.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Total Kjeldahl Nitrogen**		
Analytical Batch:	1048033 and 1048512	**Method:**	Nitrogen and Total Kjeldahl (TKN)
Prep Batch :	1048032 and 1048511	**Method:**	EEPA 351.2 Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 351.2:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202262159	Method Blank (MB)
1202262160	266779001(CASA-11-1332) Sample Duplicate (DUP)
1202262161	266779001(CASA-11-1332) Matrix Spike (MS)
1202262162	266779001(CASA-11-1332) Matrix Spike Duplicate (MSD)
1202262163	Laboratory Control Sample (LCS)
1202263478	Method Blank (MB)
1202263479	266983002(CASA-11-1373) Sample Duplicate (DUP)
1202263480	266983002(CASA-11-1373) Matrix Spike (MS)
1202263481	266983002(CASA-11-1373) Matrix Spike Duplicate (MSD)
1202263482	Laboratory Control Sample (LCS)
1202263483	266779002(CASA-11-1337) Sample Duplicate (DUP)
1202263484	266779002(CASA-11-1337) Matrix Spike (MS)
1202263485	266779002(CASA-11-1337) Matrix Spike Duplicate (MSD)
1202265217	267030002(CAMO-11-1262) Sample Duplicate (DUP)
1202265218	267030002(CAMO-11-1262) Matrix Spike (MS)
1202265219	267030002(CAMO-11-1262) Matrix Spike Duplicate (MSD)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-104 REV# 9.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Continuing Calibration Blanks
All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266779001 (CASA-11-1332), 266779002 (CASA-11-1337)- Batch 1048033, 266983002 (CASA-11-1373) and 267030002 (CAMO-11-1262)- Batch 1048512.

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1202262161 (CASA-11-1332)- Batch 1048033.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202263479 (CASA-11-1373) and 1202265217 (CAMO-11-1262)- Batch 1048512.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The following sample was re-analyzed due to instrument failure: 1202262159 (MB)- Batch 1048033. The following sample was re-analyzed due to CCV failure: 266878005 (Buckman08-11-2042)- Batch 1048512.

Miscellaneous Information

Data Exception (DER) Documentation
The following DER was generated for this SDG: 897513 1202262161 (CASA-11-1332)- Batch 1048033.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Nitrate Nitrite by Cadmium Reduction**		
Analytical Batch:	1048516 and 1049064	**Method:**	EPA 353.2 Nitrogen and Nitrate/Nitrite

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 353.2:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202263489	Method Blank (MB)
1202263492	266878001(Buckman1-11-1944) Sample Duplicate (DUP)
1202263495	266878001(Buckman1-11-1944) Post Spike (PS)
1202263496	Laboratory Control Sample (LCS)
1202265043	Method Blank (MB)
1202265044	266878005(Buckman08-11-2042) Sample Duplicate (DUP)
1202265045	266878005(Buckman08-11-2042) Post Spike (PS)
1202265046	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-128 REV# 6.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8500 Series.

Continuing Calibration Blanks
All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266878001 (Buckman1-11-1944)- Batch 1048516 and 266878005 (Buckman08-11-2042)- Batch 1049064.

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following samples in this sample group were diluted due to matrix interference: 1202263492 (Buckman1-11-1944), 1202263495 (Buckman1-11-1944), 266878001 (Buckman1-11-1944), 266878003 (Buckman06-11-1970)- Batch 1048516, 1202265044 (Buckman08-11-2042), 1202265045 (Buckman08-11-2042) and 266878005 (Buckman08-11-2042)- Batch 1049064.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Data Exception (DER) Documentation
A DER was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Total Phosphorus**		
Analytical Batch:	1048031 and 1048519	**Method:**	EPA 365.4 Phosphorus and Total in
Prep Batch :	1048030 and 1048518	**Method:**	EEPA 365.4 Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 365.4:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202262154	Method Blank (MB)
1202262155	266778002(CASA-11-1333) Sample Duplicate (DUP)
1202262156	266778002(CASA-11-1333) Matrix Spike (MS)
1202262157	266778002(CASA-11-1333) Matrix Spike Duplicate (MSD)
1202262158	Laboratory Control Sample (LCS)
1202263486	266778004(CASA-11-1339) Sample Duplicate (DUP)
1202263487	266778004(CASA-11-1339) Matrix Spike (MS)
1202263488	266778004(CASA-11-1339) Matrix Spike Duplicate (MSD)
1202263508	Method Blank (MB)
1202263509	266985002(CAMO-11-1290) Sample Duplicate (DUP)
1202263510	266985002(CAMO-11-1290) Matrix Spike (MS)
1202263511	266985002(CAMO-11-1290) Matrix Spike Duplicate (MSD)
1202263512	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-103 REV# 6.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Continuing Calibration Blanks
All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266778002 (CASA-11-1333), 266778004 (CASA-11-1339)- Batch 1048031 and 266985002 (CAMO-11-1290)- Batch 1048519.

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202263509 (CAMO-11-1290)- Batch 1048519.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The following samples were re-analyzed due to instrument failure: 1202262155 (CASA-11-1333)- Batch 1048031.

Miscellaneous Information

Data Exception (DER) Documentation
A DER was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product: **Solids, Total Dissolved**

Analytical Batch: 1048619 **Method:** EPA 160.1 Solids and Dissolved-F

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 160.1:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202263743	Method Blank (MB)
1202263744	266878001(Buckman1-11-1944) Sample Duplicate (DUP)
1202263745	266892006(SWWS46-11-2073) Sample Duplicate (DUP)
1202263746	Laboratory Control Sample (LCS)
1202263747	Laboratory Control Sample Duplicate (LCSD)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-001 REV# 10.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Solids analysis was performed on a Sartorius Balance BAL216. Solids lab

Initial Calibration
All initial calibration requirements have been met for this SDG.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery
The LCSD spike recovery met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement
The RPD between the LCS and LCSD met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266878001 (Buckman1-11-1944) and 266892006 (SWWS46-11-2073).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Sample Aliquot
A sufficient amount of sample was provided by the client for analysis.

Miscellaneous Information

Data Exception (DER) Documentation
A DER was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Alkalinity**		
Analytical Batch:	1048663 and 1051147	**Method:**	EPA 310.1 Total Alkalinity

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 310.1:

Sample ID	Client ID
266878001	Buckman1-11-1944
266878003	Buckman06-11-1970
266878005	Buckman08-11-2042
1202263859	Method Blank (MB)
1202263860	266481001(WST60-11-1292) Sample Duplicate (DUP)
1202263861	266494002(WST60-10-26068) Sample Duplicate (DUP)
1202263862	266481001(WST60-11-1292) Matrix Spike (MS)
1202263863	266494002(WST60-10-26068) Matrix Spike (MS)
1202263864	Laboratory Control Sample (LCS)
1202270165	Method Blank (MB)
1202270168	266878003(Buckman06-11-1970) Sample Duplicate (DUP)
1202270170	266878003(Buckman06-11-1970) Matrix Spike (MS)
1202270171	Laboratory Control Sample (LCS)

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

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-033 REV# 6.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Titration analysis was performed on a manually operated buret.

Initial Standardization
The titrant was properly standardized

Quality Control (QC) Information

Method Blank (MB) Statement
GEL currently has not established reporting criteria for Alkalinity method blank analysis. A study is being performed to determine reasonable reporting criteria. 1202263859 (MB)- Batch 1048663 and 1202270165 (MB)- Batch 1051147.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 266481001 (WST60-11-1292), 266494002 (WST60-10-26068)- Batch 1048663 and 266878003 (Buckman06-11-1970)- Batch 1051147.

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Data Exception (DER) Documentation
A DER was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

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

Review Validation:

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

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

Reviewer:_____ **Date:** 09Dec10

Sample Data Summary

GEL LABORATORIES LLC

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

Certificate of Analysis Report
for

ARSL001 ARS International (63641-10)

Client SDG: 11-464 GEL Work Order: 266878

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

H Analytical holding time was exceeded

J Value is estimated

N Metals--The Matrix spike sample recovery is not within specified control limits

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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

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

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

Reviewed by _____

GEL LABORATORIES LLC

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

Certificate of Analysis

Company :	Los Alamos National Laboratory	Report Date:	December 8, 2010
Address :	PO Box 1663 TA-03, SM271, Drop Pt. 02U, Rm111 Los Alamos, New Mexico 87545	Client SDG:	11-464
Contact:	Ms. Joylene Valdez		
Project:	LANL-WQH Water Samples		

Client Sample ID:	Buckman1-11-1944	Project:	ESHL00210
Sample ID:	266878001	Client ID:	ARSL001
Matrix:	WG		
Collect Date:	10-NOV-10 12:00		
Receive Date:	12-NOV-10		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis											
SW 9060 Total Organic Carbon "As Received"											
Total Organic Carbon Average	J	0.429	0.330	1.00	mg/L	1	TSM	11/16/10	22:14	1048084	1
Conductivity Analysis											
EPA120.1 Specific Conductivity "As Received"											
Conductivity		432	1.00	1.00	umhos/cm	1	LXA1	11/15/10	16:30	1048674	2
Electrode Analysis											
EPA 150.1 pH "As Received"											
pH at Temp 17.8C	H	8.29	0.010	0.100	SU	1	LXA1	11/24/10	11:30	1051602	3
Flow Injection Analysis											
WSP-CN(T) "As Received"											
Cyanide, Total	U	ND	1.70	5.00	ug/L	1	SDS	11/16/10	08:31	1048531	4
Ion Chromatography											
EPA 300.0 Anions Liquid 28 day "As Received"											
Bromide	U	ND	0.066	0.200	mg/L	1	GXM3	11/18/10	00:19	1048124	5
Chloride		2.45	0.066	0.200	mg/L	1					
Fluoride		0.786	0.033	0.100	mg/L	1					
Sulfate		11.1	0.100	0.400	mg/L	1					
Nutrient Analysis											
EPA 350.1 Nitrogen, Ammonia L "As Received"											
Nitrogen, Ammonia	J	0.036	0.016	0.050	mg/L	1	AXH3	11/16/10	09:15	1048029	6
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"											
Nitrogen, Nitrate/Nitrite		0.995	0.050	0.250	mg/L	5	AXH3	11/15/10	10:48	1048516	7
EPA 365.4 Phosphorus, Total in "As Received"											
Phosphorus, Total as P	J	0.015	0.015	0.050	mg/L	1	AXH3	11/16/10	06:53	1048031	8
Nitrogen, Total Kjeldahl (TKN) "As Received"											
Nitrogen, Total Kjeldahl	U	ND	0.033	0.100	mg/L	1	AXH3	11/16/10	07:58	1048033	9
Solids Analysis											
EPA 160.1 Solids, Dissolved-F "As Received"											
Total Dissolved Solids		277	2.38	10.0	mg/L		LYG1	11/15/10	12:56	1048619	10
Titration Analysis											
EPA 310.1 Total Alkalinity "As Received"											
Alkalinity, Total as CaCO3		199	0.725	1.00	mg/L		LXA1	11/15/10	14:15	1048663	11
Carbonate alkalinity (CaCO3)	U	ND	0.725	1.00	mg/L						

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 335.4	EPA 335.4 Total Cyanide	AXS5	11/15/10	1414	1048529

GEL LABORATORIES LLC

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Certificate of Analysis

Company :	Los Alamos National Laboratory	Report Date:	December 8, 2010
Address :	PO Box 1663 TA-03, SM271, Drop Pt. 02U, Rm111 Los Alamos, New Mexico 87545	Client SDG:	11-464
Contact:	Ms. Joylene Valdez		
Project:	LANL-WQH Water Samples		

Client Sample ID:	Buckman1-11-1944	Project:	ESHL00210
Sample ID:	266878001	Client ID:	ARSL001
Matrix:	WG		
Collect Date:	10-NOV-10 12:00		
Receive Date:	12-NOV-10		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
EPA 350.2 Prep		EPA 350.1 Ammonia Nitrogen Prep					SXJ1	11/15/10	1430	1048028	
EPA 351.2 Prep		EPA 351.2 Total Kjeldahl Nitrogen Prep					SXJ1	11/15/10	1100	1048032	
EPA 365.4 Prep		EPA 365.4 Phosphorus, Total in liquid PR					SXJ1	11/15/10	1130	1048030	

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9060	
2	EPA 120.1	
3	EPA 150.1	
4	EPA 335.4	
5	EPA 300.0	
6	EPA 350.1	
7	EPA 353.2	
8	EPA 365.4	
9	EPA 351.2	
10	EPA 160.1	
11	EPA 310.1	

GEL LABORATORIES LLC

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Certificate of Analysis

Company :	Los Alamos National Laboratory	Report Date:	December 8, 2010
Address :	PO Box 1663 TA-03, SM271, Drop Pt. 02U, Rm111 Los Alamos, New Mexico 87545	Client SDG:	11-464
Contact:	Ms. Joylene Valdez		
Project:	LANL-WQH Water Samples		

Client Sample ID:	Buckman06-11-1970	Project:	ESHL00210
Sample ID:	266878003	Client ID:	ARSL001
Matrix:	WG		
Collect Date:	10-NOV-10 12:00		
Receive Date:	12-NOV-10		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis											
SW 9060 Total Organic Carbon "As Received"											
Total Organic Carbon Average		1.06	0.330	1.00	mg/L	1	TSM	11/16/10	22:48	1048084	1
Conductivity Analysis											
EPA120.1 Specific Conductivity "As Received"											
Conductivity		626	1.00	1.00	umhos/cm	1	EXF1	11/26/10	11:45	1052275	2
Electrode Analysis											
EPA 150.1 pH "As Received"											
pH at Temp 12.8C	H	7.15	0.010	0.100	SU	1	LXA1	11/26/10	11:48	1052259	3
Flow Injection Analysis											
WSP-CN(T) "As Received"											
Cyanide, Total	U	ND	1.70	5.00	ug/L	1	SDS	11/16/10	08:57	1048531	4
Ion Chromatography											
EPA 300.0 Anions Liquid 28 day "As Received"											
Bromide	U	ND	0.066	0.200	mg/L	1	GXM3	11/18/10	01:46	1048124	5
Chloride		3.60	0.066	0.200	mg/L	1					
Fluoride		0.505	0.033	0.100	mg/L	1					
Sulfate		19.4	0.100	0.400	mg/L	1					
Nutrient Analysis											
EPA 350.1 Nitrogen, Ammonia L "As Received"											
Nitrogen, Ammonia	U	ND	0.016	0.050	mg/L	1	AXH3	11/16/10	09:16	1048029	6
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"											
Nitrogen, Nitrate/Nitrite		1.45	0.050	0.250	mg/L	5	AXH3	11/15/10	10:51	1048516	7
EPA 365.4 Phosphorus, Total in "As Received"											
Phosphorus, Total as P		0.078	0.015	0.050	mg/L	1	AXH3	11/16/10	06:54	1048031	8
Nitrogen, Total Kjeldahl (TKN) "As Received"											
Nitrogen, Total Kjeldahl	U	ND	0.033	0.100	mg/L	1	AXH3	11/16/10	07:59	1048033	9
Solids Analysis											
EPA 160.1 Solids, Dissolved-F "As Received"											
Total Dissolved Solids		386	2.38	10.0	mg/L		LYG1	11/15/10	12:56	1048619	10
Titration Analysis											
EPA 310.1 Total Alkalinity "As Received"											
Alkalinity, Total as CaCO3		285	0.725	1.00	mg/L		LXA1	11/22/10	12:54	1051147	11
Carbonate alkalinity (CaCO3)	U	ND	0.725	1.00	mg/L						

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 335.4	EPA 335.4 Total Cyanide	AXS5	11/15/10	1414	1048529

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Certificate of Analysis

Company :	Los Alamos National Laboratory	Report Date:	December 8, 2010
Address :	PO Box 1663 TA-03, SM271, Drop Pt. 02U, Rm111 Los Alamos, New Mexico 87545	Client SDG:	11-464
Contact:	Ms. Joylene Valdez		
Project:	LANL-WQH Water Samples		

Client Sample ID:	Buckman06-11-1970	Project:	ESHL00210
Sample ID:	266878003	Client ID:	ARSL001
Matrix:	WG		
Collect Date:	10-NOV-10 12:00		
Receive Date:	12-NOV-10		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
EPA 350.2 Prep		EPA 350.1 Ammonia Nitrogen Prep					SXJ1	11/15/10	1430	1048028	
EPA 351.2 Prep		EPA 351.2 Total Kjeldahl Nitrogen Prep					SXJ1	11/15/10	1100	1048032	
EPA 365.4 Prep		EPA 365.4 Phosphorus, Total in liquid PR					SXJ1	11/15/10	1130	1048030	

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9060	
2	EPA 120.1	
3	EPA 150.1	
4	EPA 335.4	
5	EPA 300.0	
6	EPA 350.1	
7	EPA 353.2	
8	EPA 365.4	
9	EPA 351.2	
10	EPA 160.1	
11	EPA 310.1	

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Certificate of Analysis

Company :	Los Alamos National Laboratory	Report Date:	December 8, 2010
Address :	PO Box 1663 TA-03, SM271, Drop Pt. 02U, Rm111 Los Alamos, New Mexico 87545	Client SDG:	11-464
Contact:	Ms. Joylene Valdez		
Project:	LANL-WQH Water Samples		

Client Sample ID:	Buckman08-11-2042	Project:	ESHL00210
Sample ID:	266878005	Client ID:	ARSL001
Matrix:	WG		
Collect Date:	10-NOV-10 12:00		
Receive Date:	12-NOV-10		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis											
SW 9060 Total Organic Carbon "As Received"											
Total Organic Carbon Average	J	0.745	0.330	1.00	mg/L	1	TSM	11/16/10	23:21	1048084	1
Conductivity Analysis											
EPA120.1 Specific Conductivity "As Received"											
Conductivity		543	1.00	1.00	umhos/cm	1	EXF1	11/26/10	11:45	1052275	2
Electrode Analysis											
EPA 150.1 pH "As Received"											
pH at Temp 12.7C	H	7.84	0.010	0.100	SU	1	LXA1	11/26/10	11:48	1052259	3
Flow Injection Analysis											
WSP-CN(T) "As Received"											
Cyanide, Total	J	4.39	1.70	5.00	ug/L	1	SDS	11/16/10	08:41	1048531	4
Ion Chromatography											
EPA 300.0 Anions Liquid 28 day "As Received"											
Bromide	U	ND	0.066	0.200	mg/L	1	VH1	11/17/10	17:19	1049189	5
Chloride		2.34	0.066	0.200	mg/L	1					
Fluoride		0.484	0.033	0.100	mg/L	1					
Sulfate		13.1	0.100	0.400	mg/L	1					
Nutrient Analysis											
EPA 350.1 Nitrogen, Ammonia L "As Received"											
Nitrogen, Ammonia	J	0.032	0.016	0.050	mg/L	1	AXH3	11/18/10	07:31	1048508	6
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"											
Nitrogen, Nitrate/Nitrite		0.715	0.050	0.250	mg/L	5	AXH3	11/17/10	09:04	1049064	7
EPA 365.4 Phosphorus, Total in "As Received"											
Phosphorus, Total as P		0.062	0.015	0.050	mg/L	1	AXH3	11/17/10	08:05	1048519	8
Nitrogen, Total Kjeldahl (TKN) "As Received"											
Nitrogen, Total Kjeldahl	U	ND	0.033	0.100	mg/L	1	AXH3	11/17/10	11:17	1048512	9
Solids Analysis											
EPA 160.1 Solids, Dissolved-F "As Received"											
Total Dissolved Solids		335	2.38	10.0	mg/L		LYG1	11/15/10	12:56	1048619	10
Titration Analysis											
EPA 310.1 Total Alkalinity "As Received"											
Alkalinity, Total as CaCO3		254	0.725	1.00	mg/L		LXA1	11/22/10	13:38	1051147	11
Carbonate alkalinity (CaCO3)	U	ND	0.725	1.00	mg/L						

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 335.4	EPA 335.4 Total Cyanide	AXS5	11/15/10	1414	1048529

Certificate of Analysis

Company :	Los Alamos National Laboratory	Report Date:	December 8, 2010
Address :	PO Box 1663 TA-03, SM271, Drop Pt. 02U, Rm111 Los Alamos, New Mexico 87545	Client SDG:	11-464
Contact:	Ms. Joylene Valdez		
Project:	LANL-WQH Water Samples		

Client Sample ID:	Buckman08-11-2042	Project:	ESHL00210
Sample ID:	266878005	Client ID:	ARSL001
Matrix:	WG		
Collect Date:	10-NOV-10 12:00		
Receive Date:	12-NOV-10		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
EPA 350.2 Prep		EPA 350.1 Ammonia Nitrogen Prep					SXJ1	11/17/10	1315	1048507	
EPA 351.2 Prep		EPA 351.2 Total Kjeldahl Nitrogen Prep					SXJ1	11/16/10	1130	1048511	
EPA 365.4 Prep		EPA 365.4 Phosphorus, Total in liquid PR					SXJ1	11/16/10	1130	1048518	

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9060	
2	EPA 120.1	
3	EPA 150.1	
4	EPA 335.4	
5	EPA 300.0	
6	EPA 350.1	
7	EPA 353.2	
8	EPA 365.4	
9	EPA 351.2	
10	EPA 160.1	
11	EPA 310.1	

Quality Control Summary

QC Summary

Report Date: December 8, 2010

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

Contact: **Ms. Joylene Valdez**

Workorder: **266878**

Parmname	NOM		Sample	Qual	QC	Units	RPD%		REC%	Range	Anlst	Date Time
Carbon Analysis												
Batch 1048084												
QC1202262322 266779001 DUP												
Total Organic Carbon Average			3.98		4.00	mg/L	0.501	^		(+/-1.00)	TSM	11/16/10 17:00
QC1202262323 266879001 DUP												
Total Organic Carbon Average		J	0.843	J	0.891	mg/L	5.54	^		(+/-1.00)		11/17/10 00:28
QC1202262326 LCS												
Total Organic Carbon Average	10.0				9.62	mg/L			96.2	(85%-115%)		11/16/10 16:18
QC1202262321 MB												
Total Organic Carbon Average				U	ND	mg/L						11/16/10 16:09
QC1202262324 266779001 PS												
Total Organic Carbon Average	10.0		3.98		13.2	mg/L			92.6	(65%-121%)		11/16/10 17:20
QC1202262325 266879001 PS												
Total Organic Carbon Average	10.0	J	0.843		10.5	mg/L			96.2	(65%-121%)		11/17/10 00:48
Conductivity Analysis												
Batch 1048674												
QC1202263884 266481001 DUP												
Conductivity			802		818	umhos/cm	1.98			(0%-10%)	LXA1	11/15/10 16:27
QC1202263885 266494002 DUP												
Conductivity			560		566	umhos/cm	1.07			(0%-10%)		11/15/10 16:28
QC1202263886 LCS												
Conductivity	1410				1420	umhos/cm			101	(95%-105%)		11/15/10 16:23
Batch 1052275												
QC1202272577 266985002 DUP												
Conductivity			174		179	umhos/cm	2.94			(0%-10%)	EXF1	11/26/10 11:45
QC1202272578 266988002 DUP												
Conductivity			371		361	umhos/cm	2.73			(0%-10%)		11/26/10 11:45
QC1202272579 LCS												
Conductivity	1410				1400	umhos/cm			99.2	(95%-105%)		11/26/10 11:45
Electrode Analysis												
Batch 1051602												
QC1202271063 266878001 DUP												
pH		H	8.29	H	8.30	SU	0.121			(0%-10%)	LXA1	11/24/10 11:33
QC1202271065 LCS												
pH	7.00				7.00	SU			100	(95%-105%)		11/24/10 10:55
Batch 1052259												
QC1202272548 266878003 DUP												
pH		H	7.15	H	7.17	SU	0.279			(0%-10%)	LXA1	11/26/10 11:48
QC1202272549 267237004 DUP												
pH		H	8.69	H	8.71	SU	0.230			(0%-10%)		11/26/10 11:48
QC1202272550 LCS												
pH	7.00				7.01	SU			100	(95%-105%)		11/26/10 11:48
Flow Injection Analysis												
Batch 1048531												

QC Summary

Workorder: 266878

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Flow Injection Analysis											
Batch 1048531											
QC1202263533 266878001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A			SDS	11/16/10 08:31
QC1202263534 266878003 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A				11/16/10 08:58
QC1202263539 LCS											
Cyanide, Total	50.0				51.4	ug/L		103	(90%-110%)		11/16/10 08:30
QC1202263532 MB											
Cyanide, Total				U	ND	ug/L					11/16/10 08:29
QC1202263535 266878001 MS											
Cyanide, Total	100	U	ND		97.4	ug/L		97.4	(90%-110%)		11/16/10 08:32
QC1202263536 266878003 MS											
Cyanide, Total	100	U	ND		97.5	ug/L		97.5	(90%-110%)		11/16/10 08:59
QC1202263537 266878001 MSD											
Cyanide, Total	100	U	ND		94.1	ug/L	3.45	94.1	(0%-20%)		11/16/10 08:33
QC1202263538 266878003 MSD											
Cyanide, Total	100	U	ND		104	ug/L	6.45	104	(0%-20%)		11/16/10 09:00
Ion Chromatography											
Batch 1048124											
QC1202262441 266878001 DUP											
Bromide		U	ND	U	ND	mg/L	N/A			GXM3	11/18/10 00:48
Chloride			2.45		2.46	mg/L	0.0733		(0%-20%)		
Fluoride			0.786		0.781	mg/L	0.549		(0%-20%)		
Sulfate			11.1		11.1	mg/L	0.338		(0%-20%)		
QC1202262440 LCS											
Bromide	2.50				2.48	mg/L		99.4	(90%-110%)		11/17/10 23:50
Chloride	10.0				9.53	mg/L		95.3	(90%-110%)		
Fluoride	5.00				5.30	mg/L		106	(90%-110%)		
Sulfate	20.0				19.1	mg/L		95.6	(90%-110%)		
QC1202262439 MB											
Bromide				U	ND	mg/L					11/17/10 23:22
Chloride				U	ND	mg/L					
Fluoride				U	ND	mg/L					
Sulfate				U	ND	mg/L					
QC1202262442 266878001 PS											
Bromide	2.50	U	ND		2.44	mg/L		97.8	(90%-110%)		11/18/10 01:17
Chloride	10.0		2.45		12.2	mg/L		97.8	(90%-110%)		
Fluoride	5.00		0.786		6.06	mg/L		105	(90%-110%)		
Sulfate	20.0		11.1		31.4	mg/L		101	(90%-110%)		
Batch 1049189											
QC1202265270 266878005 DUP											
Bromide		U	ND	U	ND	mg/L	N/A			VH1	11/17/10 17:45
Chloride			2.34		2.35	mg/L	0.316		(0%-20%)		
Fluoride			0.484		0.468	mg/L	3.36 ^		(+/-0.100)		
Sulfate			13.1		13.1	mg/L	0.456		(0%-20%)		
QC1202265282 267028002 DUP											

QC Summary

Workorder: 266878

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography											
Batch 1049189											
Bromide			0.441		0.490	mg/L	10.5 ^		(+/-0.200)		11/17/10 19:04
Chloride			88.4		88.5	mg/L	0.113		(0%-20%)	VH1	11/18/10 16:48
Fluoride			1.28		1.28	mg/L	0.180		(0%-20%)		11/17/10 19:04
Sulfate			78.4		78.4	mg/L	0.088		(0%-20%)		11/18/10 16:48
QC1202265272 LCS											
Bromide	2.50				2.63	mg/L		105	(90%-110%)		11/17/10 16:53
Chloride	10.0				9.58	mg/L		95.8	(90%-110%)		
Fluoride	5.00				4.87	mg/L		97.3	(90%-110%)		
Sulfate	20.0				19.8	mg/L		98.8	(90%-110%)		
QC1202265269 MB											
Bromide				U	ND	mg/L					11/17/10 16:27
Chloride				U	ND	mg/L					
Fluoride				U	ND	mg/L					
Sulfate				U	ND	mg/L					
QC1202265271 266878005 PS											
Bromide	2.50	U	ND		2.63	mg/L		105	(90%-110%)		11/17/10 18:11
Chloride	10.0		2.34		12.5	mg/L		102	(90%-110%)		
Fluoride	5.00		0.484		5.30	mg/L		96.3	(90%-110%)		
Sulfate	20.0		13.1		35.0	mg/L		109	(90%-110%)		
QC1202265283 267028002 PS											
Bromide	2.50		0.441		3.09	mg/L		106	(90%-110%)		11/17/10 19:30
Chloride	10.0		8.84		20.1	mg/L		113*	(90%-110%)		11/18/10 17:14
Fluoride	5.00		1.28		6.30	mg/L		100	(90%-110%)		11/17/10 19:30
Sulfate	20.0		7.84		28.7	mg/L		104	(90%-110%)		11/18/10 17:14
Nutrient Analysis											
Batch 1048029											
QC1202262147 266778002 DUP											
Nitrogen, Ammonia		J	0.038		0.054	mg/L	34.8 ^		(+/-0.050)	AXH3	11/16/10 08:50
QC1202262148 266778004 DUP											
Nitrogen, Ammonia		J	0.044	J	0.045	mg/L	2.25 ^		(+/-0.050)		11/16/10 09:43
QC1202262153 LCS											
Nitrogen, Ammonia	1.00				0.913	mg/L		91.3	(90%-110%)		11/16/10 08:48
QC1202262146 MB											
Nitrogen, Ammonia				U	ND	mg/L					11/16/10 09:00
QC1202262149 266778002 MS											
Nitrogen, Ammonia	1.00	J	0.038		1.00	mg/L		96.6	(90%-110%)		11/16/10 08:51
QC1202262150 266778004 MS											
Nitrogen, Ammonia	1.00	J	0.044		1.08	mg/L		103	(90%-110%)		11/16/10 09:44
QC1202262151 266778002 MSD											
Nitrogen, Ammonia	1.00	J	0.038		0.897	mg/L	11.3	85.9*	(0%-15%)		11/16/10 08:52
QC1202262152 266778004 MSD											
Nitrogen, Ammonia	1.00	J	0.044		1.09	mg/L	1.48	105	(0%-15%)		11/16/10 09:45
Batch 1048031											
QC1202262155 266778002 DUP											
Phosphorus, Total as P			0.870		0.897	mg/L	3.06		(0%-20%)	AXH3	11/16/10 06:47

QC Summary

Workorder: 266878

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Nutrient Analysis											
Batch 1048031											
QC1202263486 266778004 DUP											
Phosphorus, Total as P			0.870		0.891	mg/L	2.39		(0%-20%)	AXH3	11/16/10 06:40
QC1202262158 LCS											
Phosphorus, Total as P	1.00				0.983	mg/L		98.3	(63%-138%)		11/16/10 06:35
QC1202262154 MB											
Phosphorus, Total as P				U	ND	mg/L					11/16/10 06:34
QC1202262156 266778002 MS											
Phosphorus, Total as P	1.00		0.870		1.86	mg/L		99.2	(35%-148%)		11/16/10 06:38
QC1202263487 266778004 MS											
Phosphorus, Total as P	1.00		0.870		1.78	mg/L		91.3	(35%-148%)		11/16/10 06:41
QC1202262157 266778002 MSD											
Phosphorus, Total as P	1.00		0.870		1.88	mg/L	0.909	101	(0%-24%)		11/16/10 06:39
QC1202263488 266778004 MSD											
Phosphorus, Total as P	1.00		0.870		1.82	mg/L	1.89	94.7	(0%-24%)		11/16/10 06:42
Batch 1048033											
QC1202262160 266779001 DUP											
Nitrogen, Total Kjeldahl			0.251		0.277	mg/L	9.85 ^		(+/-0.100)	AXH3	11/16/10 07:42
QC1202263483 266779002 DUP											
Nitrogen, Total Kjeldahl			0.625		0.570	mg/L	9.21		(0%-20%)		11/16/10 07:45
QC1202262163 LCS											
Nitrogen, Total Kjeldahl	1.00				0.977	mg/L		97.7	(90%-110%)		11/16/10 07:40
QC1202262159 MB											
Nitrogen, Total Kjeldahl				U	ND	mg/L					11/16/10 07:51
QC1202262161 266779001 MS											
Nitrogen, Total Kjeldahl	1.00		0.251		1.38	mg/L		113*	(90%-110%)		11/16/10 07:43
QC1202263484 266779002 MS											
Nitrogen, Total Kjeldahl	1.00		0.625		1.60	mg/L		97.7	(90%-110%)		11/16/10 07:46
QC1202262162 266779001 MSD											
Nitrogen, Total Kjeldahl	1.00		0.251		1.30	mg/L	6.21	105	(0%-20%)		11/16/10 07:43
QC1202263485 266779002 MSD											
Nitrogen, Total Kjeldahl	1.00		0.625		1.54	mg/L	3.95	91.5	(0%-20%)		11/16/10 07:47
Batch 1048508											
QC1202263470 266881002 DUP											
Nitrogen, Ammonia		U	ND	U	ND	mg/L	N/A			AXH3	11/18/10 07:59
QC1202263471 266881004 DUP											
Nitrogen, Ammonia		U	ND	U	ND	mg/L	N/A				11/18/10 07:36
QC1202263476 LCS											
Nitrogen, Ammonia	1.00				0.901	mg/L		90.1	(90%-110%)		11/18/10 07:30
QC1202263469 MB											
Nitrogen, Ammonia				U	ND	mg/L					11/18/10 07:29
QC1202263472 266881002 MS											
Nitrogen, Ammonia	1.00	U	ND		0.966	mg/L		96.6	(90%-110%)		11/18/10 08:00
QC1202263473 266881004 MS											
Nitrogen, Ammonia	1.00	U	ND		0.829	mg/L		82.3*	(90%-110%)		11/18/10 07:37
QC1202263474 266881002 MSD											
Nitrogen, Ammonia	1.00	U	ND		0.976	mg/L	1.03	97.6	(0%-15%)		11/18/10 08:01
QC1202263475 266881004 MSD											
Nitrogen, Ammonia	1.00	U	ND		0.724	mg/L	13.5	71.8*	(0%-15%)		11/18/10 07:41

QC Summary

Workorder: 266878

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Nutrient Analysis											
Batch 1048512											
QC1202263479 266983002 DUP											
Nitrogen, Total Kjeldahl		U	ND	U	ND	mg/L	N/A			AXH3	11/17/10 09:54
QC1202265217 267030002 DUP											
Nitrogen, Total Kjeldahl		U	ND	U	ND	mg/L	N/A				11/17/10 09:57
QC1202263482 LCS											
Nitrogen, Total Kjeldahl	1.00				1.02	mg/L		102	(90%-110%)		11/17/10 09:52
QC1202263478 MB											
Nitrogen, Total Kjeldahl				U	ND	mg/L					11/17/10 09:52
QC1202263480 266983002 MS											
Nitrogen, Total Kjeldahl	1.00	U	ND		0.963	mg/L		96.3	(90%-110%)		11/17/10 09:55
QC1202265218 267030002 MS											
Nitrogen, Total Kjeldahl	1.00	U	ND		1.05	mg/L		105	(90%-110%)		11/17/10 09:58
QC1202263481 266983002 MSD											
Nitrogen, Total Kjeldahl	1.00	U	ND		1.03	mg/L	6.72	103	(0%-20%)		11/17/10 09:56
QC1202265219 267030002 MSD											
Nitrogen, Total Kjeldahl	1.00	U	ND		1.06	mg/L	1.05	106	(0%-20%)		11/17/10 09:59
Batch 1048516											
QC1202263492 266878001 DUP											
Nitrogen, Nitrate/Nitrite			0.995		0.975	mg/L	2.03 ^		(+/-0.250)	AXH3	11/15/10 10:49
QC1202263496 LCS											
Nitrogen, Nitrate/Nitrite	1.00				1.01	mg/L		101	(90%-110%)		11/15/10 10:38
QC1202263489 MB											
Nitrogen, Nitrate/Nitrite				U	ND	mg/L					11/15/10 10:37
QC1202263495 266878001 PS											
Nitrogen, Nitrate/Nitrite	1.00		0.199		1.17	mg/L		97.1	(90%-110%)		11/15/10 10:50
Batch 1048519											
QC1202263509 266985002 DUP											
Phosphorus, Total as P		U	ND	J	0.047	mg/L	N/A		(+/-0.050)	AXH3	11/17/10 08:07
QC1202263512 LCS											
Phosphorus, Total as P	1.00				1.03	mg/L		103	(63%-138%)		11/17/10 08:05
QC1202263508 MB											
Phosphorus, Total as P				U	ND	mg/L					11/17/10 08:04
QC1202263510 266985002 MS											
Phosphorus, Total as P	1.00	U	ND		1.03	mg/L		103	(35%-148%)		11/17/10 08:08
QC1202263511 266985002 MSD											
Phosphorus, Total as P	1.00	U	ND		1.06	mg/L	2.77	106	(0%-24%)		11/17/10 08:09
Batch 1049064											
QC1202265044 266878005 DUP											
Nitrogen, Nitrate/Nitrite			0.715		0.690	mg/L	3.56 ^		(+/-0.250)	AXH3	11/17/10 09:05
QC1202265046 LCS											
Nitrogen, Nitrate/Nitrite	1.00				1.01	mg/L		101	(90%-110%)		11/17/10 09:03
QC1202265043 MB											
Nitrogen, Nitrate/Nitrite				U	ND	mg/L					11/17/10 09:01
QC1202265045 266878005 PS											
Nitrogen, Nitrate/Nitrite	1.00		0.143		1.09	mg/L		94.7	(90%-110%)		11/17/10 09:06
Solids Analysis											
Batch 1048619											
QC1202263744 266878001 DUP											

QC Summary

Workorder: 266878

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Solids Analysis										
Batch 1048619										
Total Dissolved Solids		277		275	mg/L	0.725		(0%-10%)	LYG1	11/15/10 12:56
QC1202263745 266892006 DUP										
Total Dissolved Solids		502		501	mg/L	0.199		(0%-10%)		11/15/10 12:56
QC1202263746 LCS										
Total Dissolved Solids	300			298	mg/L		99.3	(95%-105%)		11/15/10 12:56
QC1202263747 LCSD										
Total Dissolved Solids	300			297	mg/L	0.336	99	(0%-5%)		11/15/10 12:56
QC1202263743 MB										
Total Dissolved Solids			U	ND	mg/L					11/15/10 12:56
Titration Analysis										
Batch 1048663										
QC1202263860 266481001 DUP										
Alkalinity, Total as CaCO3		225		226	mg/L	0.672		(0%-20%)	LXA1	11/15/10 13:31
Carbonate alkalinity (CaCO3)		94.0		94.0	mg/L	0.00		(0%-20%)		
QC1202263861 266494002 DUP										
Alkalinity, Total as CaCO3		149		151	mg/L	1.35		(0%-20%)		11/15/10 13:51
Carbonate alkalinity (CaCO3)		80.9		80.9	mg/L	0.00		(0%-20%)		
QC1202263864 LCS										
Alkalinity, Total as CaCO3	50.0			50.6	mg/L		101	(90%-110%)		11/15/10 13:15
QC1202263859 MB										
Alkalinity, Total as CaCO3				1.52	mg/L					11/15/10 13:14
Carbonate alkalinity (CaCO3)			U	ND	mg/L					
QC1202263862 266481001 MS										
Alkalinity, Total as CaCO3	50.0	225		276	mg/L		N/A	(80%-120%)		11/15/10 13:39
QC1202263863 266494002 MS										
Alkalinity, Total as CaCO3	50.0	149		200	mg/L		102	(80%-120%)		11/15/10 14:00
Batch 1051147										
QC1202270168 266878003 DUP										
Alkalinity, Total as CaCO3		285		289	mg/L	1.41		(0%-20%)	LXA1	11/22/10 13:21
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A				
QC1202270171 LCS										
Alkalinity, Total as CaCO3	50.0			50.0	mg/L		100	(90%-110%)		11/22/10 11:59
QC1202270165 MB										
Alkalinity, Total as CaCO3				1.52	mg/L					11/22/10 11:57
Carbonate alkalinity (CaCO3)			U	ND	mg/L					
QC1202270170 266878003 MS										
Alkalinity, Total as CaCO3	50.0	285		335	mg/L		N/A	(80%-120%)		11/22/10 13:31

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

QC Summary

Workorder: 266878

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

B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	Matrix Related Failure
N	Metals--The Matrix spike sample recovery is not within specified control limits
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

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

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

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 08-DEC-2010 13:50

GEL Laboratories LLC

Contract: ESHL00210

SDG #: 11-464

Carbon Analysis

Method: SW846 9060 Concentration Units:mg/L

Instrument: O-I Analytical Model 1010 Total Organic Carbon Analyzer

Parmname: Total Organic Carbon
Average

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**16-NOV-2010 12:25:00**	**XD334.rlt**	**10.248**	**10**	**102**	**(90%-110%)**	**Yes**
CCV	16-NOV-2010 15:51:00	XD343.rlt	9.669	10	96.7	(90%-110%)	Yes
CCV	16-NOV-2010 20:16:00	XD355.rlt	10.292	10	103	(90%-110%)	Yes
CCV	17-NOV-2010 01:31:00	XD367.rlt	10	10	100	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**16-NOV-2010 12:34:00**	**XD335.rlt**	**-0.004**	**1**	**Yes**
CCB	16-NOV-2010 16:00:00	XD344.rlt	0.053	1	Yes
CCB	16-NOV-2010 20:25:00	XD356.rlt	-0.021	1	Yes
CCB	17-NOV-2010 01:39:00	XD368.rlt	-0.049	1	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 08-DEC-2010 13:50

GEL Laboratories LLC

Contract: ESHL00210

SDG #: 11-464

Flow Injection Analysis

Method: EPA 335.4 Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**16-NOV-2010 08:23:48**	**OM_11-16-2010_08-15-07**	**156**	**150**	**104**	**(90%-110%)**	**Yes**
CCV	16-NOV-2010 08:38:08	OM_11-16-2010_08-15-07	97.3	100	97.3	(90%-110%)	Yes
CCV	16-NOV-2010 08:50:34	OM_11-16-2010_08-15-07	96.7	100	96.7	(90%-110%)	Yes
CCV	16-NOV-2010 09:03:02	OM_11-16-2010_08-15-07	97.4	100	97.4	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**16-NOV-2010 08:25:39**	**OM_11-16-2010_08-15-07**	**-1.64**	**5**	**Yes**
CCB	16-NOV-2010 08:39:58	OM_11-16-2010_08-15-07	-1.97	5	Yes
CCB	16-NOV-2010 08:52:25	OM_11-16-2010_08-15-07	-1.4	5	Yes
CCB	16-NOV-2010 09:04:54	OM_11-16-2010_08-15-07	-1.86	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 08-DEC-2010 13:50

GEL Laboratories LLC

Contract: ESHL00210

SDG #: 11-464

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Bromide

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**17-NOV-2010 13:15:00**	**101117**	**2.4815**	**2.5**	**99.3**	**(90%-110%)**	**Yes**
ICV	**17-NOV-2010 14:17:00**	**101117**	**2.6183**	**2.5**	**105**	**(90%-110%)**	**Yes**
CCV	17-NOV-2010 15:35:00	101117	2.5567	2.5	102	(90%-110%)	Yes
CCV	17-NOV-2010 20:48:00	101117	3.9671	3.75	106	(90%-110%)	Yes
CCV	17-NOV-2010 22:24:00	101117	3.7057	3.75	98.8	(90%-110%)	Yes
CCV	18-NOV-2010 04:11:00	101117	2.4902	2.5	99.6	(90%-110%)	Yes
CCV	18-NOV-2010 15:04:00	101117	2.6333	2.5	105	(90%-110%)	Yes
CCV	18-NOV-2010 17:40:00	101117	2.6809	2.5	107	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**17-NOV-2010 13:43:00**	**101117**	**0**	**0.2**	**Yes**
ICB	**17-NOV-2010 14:43:00**	**101117**	**0**	**0.2**	**Yes**
CCB	17-NOV-2010 16:01:00	101117	0	0.2	Yes
CCB	17-NOV-2010 21:14:00	101117	0	0.2	Yes
CCB	17-NOV-2010 22:53:00	101117	0	0.2	Yes
CCB	18-NOV-2010 04:40:00	101117	0	0.2	Yes
CCB	18-NOV-2010 15:30:00	101117	0	0.2	Yes
CCB	18-NOV-2010 18:07:00	101117	0	0.2	Yes

Parmname: Chloride

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**17-NOV-2010 13:15:00**	**101117**	**9.5278**	**10**	**95.3**	**(90%-110%)**	**Yes**
ICV	**17-NOV-2010 14:17:00**	**101117**	**9.5625**	**10**	**95.6**	**(90%-110%)**	**Yes**
CCV	17-NOV-2010 15:35:00	101117	9.5519	10	95.5	(90%-110%)	Yes
CCV	17-NOV-2010 20:48:00	101117	15.0911	15	101	(90%-110%)	Yes
CCV	17-NOV-2010 22:24:00	101117	14.9194	15	99.5	(90%-110%)	Yes
CCV	18-NOV-2010 04:11:00	101117	9.5204	10	95.2	(90%-110%)	Yes
CCV	18-NOV-2010 15:04:00	101117	9.6357	10	96.4	(90%-110%)	Yes
CCV	18-NOV-2010 17:40:00	101117	9.626	10	96.3	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**17-NOV-2010 13:43:00**	**101117**	**0**	**0.2**	**Yes**
ICB	**17-NOV-2010 14:43:00**	**101117**	**0**	**0.2**	**Yes**
CCB	17-NOV-2010 16:01:00	101117	0	0.2	Yes
CCB	17-NOV-2010 21:14:00	101117	0	0.2	Yes
CCB	17-NOV-2010 22:53:00	101117	0	0.2	Yes
CCB	18-NOV-2010 04:40:00	101117	0	0.2	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 08-DEC-2010 13:50

GEL Laboratories LLC

Contract: ESHL00210

SDG #: 11-464

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Chloride

Sample Type	Run Date	Data File	Result	Limits	Within Limits
CCB	18-NOV-2010 15:30:00	101117	0	0.2	Yes
CCB	18-NOV-2010 18:07:00	101117	0	0.2	Yes

Parmname: Fluoride

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**17-NOV-2010 13:15:00**	**101117**	**5.3901**	**5**	**108**	**(90%-110%)**	**Yes**
ICV	**17-NOV-2010 14:17:00**	**101117**	**4.7872**	**5**	**95.7**	**(90%-110%)**	**Yes**
CCV	17-NOV-2010 15:35:00	101117	4.8357	5	96.7	(90%-110%)	Yes
CCV	17-NOV-2010 20:48:00	101117	7.5845	7.5	101	(90%-110%)	Yes
CCV	17-NOV-2010 22:24:00	101117	8.0854	7.5	108	(90%-110%)	Yes
CCV	18-NOV-2010 04:11:00	101117	5.3049	5	106	(90%-110%)	Yes
CCV	18-NOV-2010 15:04:00	101117	4.9348	5	98.7	(90%-110%)	Yes
CCV	18-NOV-2010 17:40:00	101117	4.9194	5	98.4	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**17-NOV-2010 13:43:00**	**101117**	**0**	**0.1**	**Yes**
ICB	**17-NOV-2010 14:43:00**	**101117**	**0**	**0.1**	**Yes**
CCB	17-NOV-2010 16:01:00	101117	0	0.1	Yes
CCB	17-NOV-2010 21:14:00	101117	0	0.1	Yes
CCB	17-NOV-2010 22:53:00	101117	0	0.1	Yes
CCB	18-NOV-2010 04:40:00	101117	0	0.1	Yes
CCB	18-NOV-2010 15:30:00	101117	0	0.1	Yes
CCB	18-NOV-2010 18:07:00	101117	0	0.1	Yes

Parmname: Sulfate

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**17-NOV-2010 13:15:00**	**101117**	**19.3288**	**20**	**96.6**	**(90%-110%)**	**Yes**
ICV	**17-NOV-2010 14:17:00**	**101117**	**19.7288**	**20**	**98.6**	**(90%-110%)**	**Yes**
CCV	17-NOV-2010 15:35:00	101117	19.6571	20	98.3	(90%-110%)	Yes
CCV	17-NOV-2010 20:48:00	101117	30.6704	30	102	(90%-110%)	Yes
CCV	17-NOV-2010 22:24:00	101117	29.7064	30	99	(90%-110%)	Yes
CCV	18-NOV-2010 04:11:00	101117	19.1705	20	95.9	(90%-110%)	Yes
CCV	18-NOV-2010 15:04:00	101117	19.8753	20	99.4	(90%-110%)	Yes
CCV	18-NOV-2010 17:40:00	101117	19.8133	20	99.1	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**17-NOV-2010 13:43:00**	**101117**	**0**	**0.4**	**Yes**

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 08-DEC-2010 13:50

GEL Laboratories LLC

Contract: ESHL00210

SDG #: 11-464

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Sulfate

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**17-NOV-2010 14:43:00**	**101117**	**0**	**0.4**	**Yes**
CCB	17-NOV-2010 16:01:00	101117	0	0.4	Yes
CCB	17-NOV-2010 21:14:00	101117	0	0.4	Yes
CCB	17-NOV-2010 22:53:00	101117	0	0.4	Yes
CCB	18-NOV-2010 04:40:00	101117	0	0.4	Yes
CCB	18-NOV-2010 15:30:00	101117	0	0.4	Yes
CCB	18-NOV-2010 18:07:00	101117	0	0.4	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 08-DEC-2010 13:50

GEL Laboratories LLC

Contract: ESHL00210

SDG #: 11-464

Nutrient Analysis

Method: EPA 350.1 Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8000 Series

Parmname: Nitrogen, Ammonia

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**16-NOV-2010 08:44:22**	**OM_11-16-2010_08-36-45**	**1.015**	**1**	**102**	**(90%-110%)**	**Yes**
CCV	16-NOV-2010 08:56:21	OM_11-16-2010_08-36-45	1.039	1	104	(90%-110%)	Yes
CCV	16-NOV-2010 09:08:15	OM_11-16-2010_08-36-45	1.046	1	105	(90%-110%)	Yes
CCV	16-NOV-2010 09:19:30	OM_11-16-2010_08-36-45	1.036	1	104	(90%-110%)	Yes
CCV	16-NOV-2010 09:39:05	OM_11-16-2010_09-37-33	1.049	1	105	(90%-110%)	Yes
CCV	16-NOV-2010 09:46:59	OM_11-16-2010_09-37-33	1.043	1	104	(90%-110%)	Yes
ICV	**18-NOV-2010 07:26:07**	**OM_11-18-2010_07-16-41**	**1.012**	**1**	**101**	**(90%-110%)**	**Yes**
CCV	18-NOV-2010 07:38:06	OM_11-18-2010_07-16-41	1.03	1	103	(90%-110%)	Yes
CCV	18-NOV-2010 07:49:59	OM_11-18-2010_07-16-41	1.033	1	103	(90%-110%)	Yes
CCV	18-NOV-2010 08:01:54	OM_11-18-2010_07-16-41	1.047	1	105	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**16-NOV-2010 08:46:13**	**OM_11-16-2010_08-36-45**	**-0.01**	**0.05**	**Yes**
CCB	16-NOV-2010 08:58:11	OM_11-16-2010_08-36-45	-0.009	0.05	Yes
CCB	16-NOV-2010 09:10:06	OM_11-16-2010_08-36-45	-0.009	0.05	Yes
CCB	16-NOV-2010 09:21:21	OM_11-16-2010_08-36-45	-0.009	0.05	Yes
CCB	16-NOV-2010 09:40:55	OM_11-16-2010_09-37-33	-0.011	0.05	Yes
CCB	16-NOV-2010 09:48:50	OM_11-16-2010_09-37-33	-0.01	0.05	Yes
ICB	**18-NOV-2010 07:27:58**	**OM_11-18-2010_07-16-41**	**-0.025**	**0.05**	**Yes**
CCB	18-NOV-2010 07:39:56	OM_11-18-2010_07-16-41	-0.027	0.05	Yes
CCB	18-NOV-2010 07:51:49	OM_11-18-2010_07-16-41	-0.026	0.05	Yes
CCB	18-NOV-2010 08:03:44	OM_11-18-2010_07-16-41	-0.027	0.05	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 08-DEC-2010 13:50

GEL Laboratories LLC

Contract: ESHL00210

SDG #: 11-464

Nutrient Analysis

Method: EPA 351.2 Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8000 Series

Parmname: Nitrogen, Total Kjeldahl

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**16-NOV-2010 07:35:55**	**OM_11-16-2010_07-28-21**	**1.042**	**1**	**104**	**(90%-110%)**	**Yes**
CCV	16-NOV-2010 07:48:05	OM_11-16-2010_07-28-21	1.084	1	108	(90%-110%)	Yes
CCV	16-NOV-2010 08:00:10	OM_11-16-2010_07-28-21	1.074	1	107	(90%-110%)	Yes
ICV	**17-NOV-2010 09:48:10**	**OM_11-17-2010_09-40-36**	**1.012**	**1**	**101**	**(90%-110%)**	**Yes**
CCV	17-NOV-2010 10:00:27	OM_11-17-2010_09-40-36	1.103	1	110	(90%-110%)	Yes
CCV	17-NOV-2010 11:13:24	OM_11-17-2010_11-11-52	1.083	1	108	(90%-110%)	Yes
CCV	17-NOV-2010 11:25:36	OM_11-17-2010_11-11-52	1.072	1	107	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**16-NOV-2010 07:37:51**	**OM_11-16-2010_07-28-21**	**-0.034**	**0.1**	**Yes**
CCB	16-NOV-2010 07:50:00	OM_11-16-2010_07-28-21	-0.089	0.1	Yes
CCB	16-NOV-2010 08:02:06	OM_11-16-2010_07-28-21	-0.035	0.1	Yes
ICB	**17-NOV-2010 09:50:06**	**OM_11-17-2010_09-40-36**	**-0.054**	**0.1**	**Yes**
CCB	17-NOV-2010 10:02:22	OM_11-17-2010_09-40-36	-0.075	0.1	Yes
CCB	17-NOV-2010 11:15:19	OM_11-17-2010_11-11-52	-0.048	0.1	Yes
CCB	17-NOV-2010 11:27:31	OM_11-17-2010_11-11-52	-0.056	0.1	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 08-DEC-2010 13:50

GEL Laboratories LLC

Contract: ESHL00210

SDG #: 11-464

Nutrient Analysis

Method: EPA 353.2 Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8500 Series

Parmname: Nitrogen, Nitrate/Nitrite

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**15-NOV-2010 09:47:13**	**OM_11-15-2010_09-37-01**	**1**	**1**	**100**	**(90%-110%)**	**Yes**
CCV	15-NOV-2010 10:25:27	OM_11-15-2010_09-37-01	0.986	1	98.6	(90%-110%)	Yes
CCV	15-NOV-2010 10:42:10	OM_11-15-2010_09-37-01	0.985	1	98.5	(90%-110%)	Yes
CCV	15-NOV-2010 10:58:59	OM_11-15-2010_09-37-01	0.986	1	98.6	(90%-110%)	Yes
ICV	**17-NOV-2010 08:52:29**	**OM_11-17-2010_08-42-59**	**1.01**	**1**	**101**	**(90%-110%)**	**Yes**
CCV	17-NOV-2010 09:13:57	OM_11-17-2010_08-42-59	0.988	1	98.8	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**15-NOV-2010 09:49:35**	**OM_11-15-2010_09-37-01**	**0.00205**	**0.05**	**Yes**
CCB	15-NOV-2010 10:27:49	OM_11-15-2010_09-37-01	0.00237	0.05	Yes
CCB	15-NOV-2010 10:44:33	OM_11-15-2010_09-37-01	0.00256	0.05	Yes
CCB	15-NOV-2010 11:01:21	OM_11-15-2010_09-37-01	0.00287	0.05	Yes
ICB	**17-NOV-2010 08:54:51**	**OM_11-17-2010_08-42-59**	**-0.00046**	**0.05**	**Yes**
CCB	17-NOV-2010 09:16:19	OM_11-17-2010_08-42-59	-0.00042	0.05	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 08-DEC-2010 13:50

GEL Laboratories LLC

Contract: ESHL00210

SDG #: 11-464

Nutrient Analysis

Method: EPA 365.4 Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8000 Series

Parmname: Phosphorus, Total as P

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**16-NOV-2010 06:30:49**	**OM_11-16-2010_06-23-49**	**1**	**1**	**100**	**(90%-110%)**	**Yes**
CCV	16-NOV-2010 06:43:16	OM_11-16-2010_06-23-49	1.017	1	102	(90%-110%)	Yes
CCV	16-NOV-2010 06:55:38	OM_11-16-2010_06-23-49	0.994	1	99.4	(90%-110%)	Yes
ICV	**17-NOV-2010 08:00:08**	**OM_11-17-2010_07-50-35**	**0.989**	**1**	**98.9**	**(90%-110%)**	**Yes**
CCV	17-NOV-2010 08:12:35	OM_11-17-2010_07-50-35	1	1	100	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**16-NOV-2010 06:32:54**	**OM_11-16-2010_06-23-49**	**-0.012**	**0.05**	**Yes**
CCB	16-NOV-2010 06:45:20	OM_11-16-2010_06-23-49	-0.006	0.05	Yes
CCB	16-NOV-2010 06:57:43	OM_11-16-2010_06-23-49	-0.006	0.05	Yes
ICB	**17-NOV-2010 08:02:12**	**OM_11-17-2010_07-50-35**	**-0.003**	**0.05**	**Yes**
CCB	17-NOV-2010 08:14:39	OM_11-17-2010_07-50-35	-0.002	0.05	Yes

Alkalinity

Alkalinity LogBook

Analyst:	LXA1
Batch:	1048663
Lab SOP:	GL-GC-E-033 REV# 6
SOP Description:	Alkalinity: Total, Bicarbonate, Carbonate, Hydroxide, and Phenolphthalein
Run Date:	15-NOV-2010

Type	Sample Id	Lot Id	Nc(mg/L)	Recovery(%)
LCS	1202263864	IMM100907-ALK	50	101.1
MS	1202263862	IMM100907-ALK	50	102.111
MS	1202263863	IMM100907-ALK	50	102.111

Type	Sample Id	Rpd(%)	Parmname
DUP	1202263860	.672	Alkalinity, Total as CaCO3
DUP	1202263860	0	Carbonate alkalinity (CaCO3)
DUP	1202263861	1.351	Alkalinity, Total as CaCO3
DUP	1202263861	0	Carbonate alkalinity (CaCO3)

Type	Sample id	Parent Sample Id	Time	pH	Aliquot	Units	Normality H2SO4	H2SO4 pH 8.3 (mL)	H2SO4 pH 4.5 (mL)	Alkalinity	Bicarbonate	CO2 Dissolved	CO2 Free	CO2 Total	Carbonate	Hydroxide	Phenol phthalein	Units
MB	1202263859		13:14	5.94	100	mL	0.02022	0	0.15	1.5165	1.5165				0.0000			mg/L
LCS	1202263864		13:15	9.12	100	mL	0.02022	0	5	50.550								mg/L
SAMPLE	266882011		13:17	7.64	100	mL	0.02022	0	8.25	83.408								mg/L
SAMPLE	266481001		13:23	9.48	100	mL	0.02022	4.65	22.25	224.95					94.023			mg/L
DUP	1202263860	266481001	13:31	9.48	100	mL	0.02022	4.65	22.4	226.46	132.44				94.023			mg/L
MS	1202263862	266481001	13:39	9.37	100	mL	0.02022	0	27.3	276.00								mg/L
SAMPLE	266494002		13:43	9.7	100	mL	0.02022	4	14.7	148.62					80.880			mg/L
DUP	1202263861	266494002	13:51	9.68	100	mL	0.02022	4	14.9	150.64	69.759				80.880			mg/L
MS	1202263863	266494002	14:00	9.43	100	mL	0.02022	0	19.75	199.67								mg/L
SAMPLE	266791002		14:11	8.19	100	mL	0.02022	0	6.75	68.243					0.0000			mg/L
SAMPLE	266878001		14:15	8.28	100	mL	0.02022	0	19.7	199.17					0.0000			mg/L
SAMPLE	266881002		14:20	7.76	100	mL	0.02022	0	7.1	71.781					0.0000			mg/L
SAMPLE	266881004		14:24	7.6	100	mL	0.02022	0	5.85	59.144					0.0000			mg/L
SAMPLE	266890001		14:26	7.45	100	mL	0.02022	0	9.25	93.518					0.0000			mg/L
SAMPLE	266890003		14:31	7.35	100	mL	0.02022	0	9.2	93.012					0.0000			mg/L
SAMPLE	266892002		14:37	7.82	100	mL	0.02022	0	14.75	149.12					0.0000			mg/L
SAMPLE	266971001		15:14	7.57	100	mL	0.02022	0	16.25	164.29	164.29				0.0000			mg/L
SAMPLE	266971003		15:20	7.88	100	mL	0.02022	0	17.1	172.88	172.88				0.0000			mg/L
SAMPLE	266971006		15:23	7.07	100	mL	0.02022	0	1.5	15.165	15.165				0.0000			mg/L
SAMPLE	266971007		15:27	9.59	100	mL	0.02022	3.75	4.2	42.462	0.0000				9.0990			mg/L
SAMPLE	266971008		15:30	4.62	100	mL	0.02022	0	0.05	0.50550	0.50550				0.0000			mg/L
SAMPLE	266971009		15:33	7.37	100	mL	0.02022	0	38.35	387.72	387.72				0.0000			mg/L
SAMPLE	266983001		15:57	7.93	100	mL	0.02022	0	9.9	100.09					0.0000			mg/L
SAMPLE	266983004		16:02	7.73	100	mL	0.02022	0	6.75	68.243					0.0000			mg/L
SAMPLE	266984001		16:06	7.86	100	mL	0.02022	0	6.85	69.254					0.0000			mg/L
SAMPLE	266984004		16:08	7.59	100	mL	0.02022	0	6.6	66.726					0.0000			mg/L

Run Date: 15-NOV-10 10:40 Standard Observed Theoretical %Recovery Comments:

GEL Laboratories LLC Page#_____

Alkalinity LogBook

Instrument:	PHX370	IM101115-PH5a	11.94	12	SU	99.5
Analyst:	LXA1	IM101115-PH4a	2.1	2	SU	105
		IM101115-PH1a	4.01	4	SU	100.25
		IM101115-PH6a	6.99	7	SU	99.857
		IM101115-PH2a	7.01	7	SU	100.14
		IM101115-PH3a	9.95	10	SU	99.5

Run Date: 26-OCT-2010 18:15

Instrument: TIT001 Analyst: LXA1	Na2CO3 Std. ID	Na2CO3, 0.05 N g Na2C03/L	H2SO4 N (approx.)	NA2CO3 titrated	H2SO4 to pH 3.7	Actual Normality	Normality Average
	1101346	2.5488	.02	15	35.5	.02012	.02022
		2.5488	.02	15	35.7	.02021	
		2.5488	.02	15	35.85	.02032	

Normality of H2SO4 solution
A x B / 53.00 x C
where:
A = grams of Na2CO3
B = volume (mL) of the Na2CO3 solution
C = Total volume of the 0.02 N H2SO4 acid titrant used to reach a pH of 3.7

Total Alkalinity (mg/L)
Vt x N x 50000 / Vs
Where:
Vt = volume (mL) of H2SO4 used to reach the pH 4.5 endpoint
N = normality of the H2SO4 titrant
Vs = volume (mL) of sample used

Phenolphthalein alkalinity (mg/L)
Vt x N x 50000 / Vs
Where:
Vt = volume (mL) of H2SO4 used to reach the pH 8.3 endpoint
N = normality of the H2SO4 titrant
Vs = volume (mL) of sample used

Bicarbonate Alkalinity
Relationship Table SM2320B

Carbonate Alkalinity
Relationship Table SM2320B

Hydroxide Alkalinity
Relationship Table SM2320B

Free Carbon Dioxide
mg CO2/L = 2.0 x B x 10 (6-pH)
Where B = Bicarbonate Alkalinity

Total Carbon Dioxide
mg total CO2/L = A + 0.44(2B + C)
Where:
A = mg Free CO2/L
B = Bicarbonate Alkalinity
C = Carbonate Alkalinity

Relationship Table SM2320B

Alkalinity LogBook

P = 0 then H = 0, C = 0, B = T
P < 1/2 T then H = 0, C = 2P, B = T - 2P
P = 1/2 T then H = 0, C = 2P, B = 0
P > 1/2 T then H = 2P - T, C = 2(T - P), B = 0
P = T then H = T, C = 0, B = 0

Alkalinity LogBook

Analyst:	LXA1
Batch:	1051147
Lab SOP:	GL-GC-E-033 REV# 6
SOP Description:	Alkalinity: Total, Bicarbonate, Carbonate, Hydroxide, and Phenolphthalein
Run Date:	22-NOV-2010

Type	Sample Id	Lot Id	Nc(mg/L)	Recovery(%)
LCS	1202270171	IMM100907-ALK	50	100.089
LCS	1202270172	IMM100907-ALK	50	104.45
MS	1202270169	IMM100907-ALK	50	99.228
MS	1202270170	IMM100907-ALK	50	100.089

Type	Sample Id	Rpd(%)	Parmname
DUP	1202270167	.514	Alkalinity, Total as CaCO3
DUP	1202270167	.531	Bicarbonate alkalinity (CaCO3)
DUP	1202270167	0	Carbonate alkalinity (CaCO3)
DUP	1202270168	1.408	Alkalinity, Total as CaCO3
DUP	1202270168	0	Carbonate alkalinity (CaCO3)

Type	Sample id	Parent Sample Id	Time	pH	Aliquot	Units	Normality H2SO4	H2SO4 pH 8.3 (mL)	H2SO4 pH 4.5 (mL)	Alkalinity	Bicarbonate	CO2 Dissolved	CO2 Free	CO2 Total	Carbonate	Hydroxide	Phenol phthalein	Units
MB	1202270165		11:57	6.35	100	mL	0.02022	0	0.15	1.5165	1.5165				0.0000	0.0000		mg/L
MB	1202270166		12:03	5.98	100	mL	0.10445	0	0.05	2.6113	2.6113				0.0000	0.0000		mg/L
LCS	1202270171		11:59	9.19	100	mL	0.02022	0	4.95	50.045								mg/L
LCS	1202270172		12:05	9.2	100	mL	0.10445	0	1	52.225								mg/L
SAMPLE	266810002		12:06	8.44	100	mL	0.10445	0.15	9.75	509.19	493.53				15.668			mg/L
DUP	1202270167	266810002	12:23	8.51	100	mL	0.10445	0.15	9.7	506.58	490.92				15.668	0.0000		mg/L
MS	1202270169	266810002	12:32	8.91	100	mL	0.10445	0	10.7	558.81								mg/L
SAMPLE	266878003		12:54	7.23	100	mL	0.02022	0	28.2	285.10					0.0000			mg/L
DUP	1202270168	266878003	13:21	7.12	100	mL	0.02022	0	28.6	289.15	289.15				0.0000	0.0000		mg/L
MS	1202270170	266878003	13:31	7.65	100	mL	0.02022	0	33.15	335.15								mg/L
SAMPLE	266878005		13:38	7.8	100	mL	0.02022	0	25.15	254.27					0.0000			mg/L
SAMPLE	266917002		12:44	9.34	100	mL	0.10445	0.65	5.35	279.40	211.51				67.893			mg/L
SAMPLE	266917009		12:48	8.09	100	mL	0.10445	0	2.55	133.17	133.17				0.0000			mg/L
SAMPLE	267028002		13:47	7.77	100	mL	0.02022	0	23.9	241.63					0.0000			mg/L
SAMPLE	267029002		13:55	8.24	100	mL	0.02022	0	5.7	57.627					0.0000			mg/L
SAMPLE	267029005		13:57	7.82	100	mL	0.02022	0	5.2	52.572					0.0000			mg/L
SAMPLE	267030001		14:05	7.88	100	mL	0.02022	0	6.1	61.671					0.0000			mg/L
SAMPLE	267058001		14:08	7.77	100	mL	0.02022	0	10.05	101.61	101.61				0.0000			mg/L
SAMPLE	267058002		15:28	7.57	100	mL	0.10445	0	14.55	759.87	759.87				0.0000			mg/L
SAMPLE	267058003		15:55	7.85	100	mL	0.10445	0	2	104.45	104.45				0.0000			mg/L
SAMPLE	267130002		15:57	8.11	100	mL	0.02022	0	4.65	47.012					0.0000			mg/L
SAMPLE	267385005		16:03	6.99	100	mL	0.10445	0	24.9	1300.4	1300.4				0.0000	0.0000		mg/L
SAMPLE	267385006		16:19	7.11	100	mL	0.10445	0	25.75	1344.8	1344.8				0.0000	0.0000		mg/L
SAMPLE	267385007		16:40	7.15	100	mL	0.10445	0	26	1357.9	1357.9				0.0000	0.0000		mg/L
SAMPLE	267385008		16:53	7.49	100	mL	0.10445	0	32.35	1689.5	1689.5				0.0000	0.0000		mg/L
SAMPLE	267385009		17:08	6.85	100	mL	0.10445	0	20.1	1049.7	1049.7				0.0000	0.0000		mg/L

Alkalinity LogBook

Analyst:	LXA1
Batch:	1051147
Lab SOP:	GL-GC-E-033 REV# 6
SOP Description:	Alkalinity: Total, Bicarbonate, Carbonate, Hydroxide, and Phenolphthalein
Run Date:	22-NOV-2010

Type	Sample Id	Lot Id	Nc(mg/L)	Recovery(%)
LCS	1202270171	IMM100907-ALK	50	100.089
LCS	1202270172	IMM100907-ALK	50	104.45
MS	1202270169	IMM100907-ALK	50	99.228
MS	1202270170	IMM100907-ALK	50	100.089

Type	Sample Id	Rpd(%)	Parmname
DUP	1202270167	.514	Alkalinity, Total as CaCO3
DUP	1202270167	.531	Bicarbonate alkalinity (CaCO3)
DUP	1202270167	0	Carbonate alkalinity (CaCO3)
DUP	1202270168	1.408	Alkalinity, Total as CaCO3
DUP	1202270168	0	Carbonate alkalinity (CaCO3)

Type	Sample id	Parent Sample Id	Time	pH	Aliquot	Units	Normality H2SO4	H2SO4 pH 8.3 (mL)	H2SO4 pH 4.5 (mL)	Alkalinity	Bicarbonate	CO2 Dissolved	CO2 Free	CO2 Total	Carbonate	Hydroxide	Phenol phthalein	Units
SAMPLE	267385010		17:47	7.01	100	mL	0.10445	0	19.55	1021.0	1021.0				0.0000	0.0000		mg/L
SAMPLE	267385011		18:05	5.83	100	mL	0.02022	0	0.2	2.0220	2.0220				0.0000	0.0000		mg/L

Run Date: 22-NOV-10 11:39

Instrument: PHX370
Analyst: LXA1

Standard	Observed	Theoretical		%Recovery
IM101122-PH5a	11.9	12	SU	99.167
IM101122-PH4a	2.06	2	SU	103
IM101122-PH1a	4.01	4	SU	100.25
IM101122-PH6a	6.99	7	SU	99.857
IM101122-PH2a	7.01	7	SU	100.14
IM101122-PH3a	9.95	10	SU	99.5

Comments:

Run Date: 26-OCT-2010 18:14
Instrument: TIT001
Analyst: LXA1

Na2CO3 Std. ID	Na2CO3, 0.05 N g Na2C03/L	H2SO4 N (approx.)	NA2CO3 titrated	H2SO4 to pH 3.7	Actual Normality	Normality Average
1101346	2.5488	.1	40	18.4	.10426	.10445
	2.5488	.1	40	18.4	.10454	
	2.5488	.1	40	18.45	.10454	

Run Date: 26-OCT-2010 18:15
Instrument: TIT001
Analyst: LXA1

Na2CO3 Std. ID	Na2CO3, 0.05 N g Na2C03/L	H2SO4 N (approx.)	NA2CO3 titrated	H2SO4 to pH 3.7	Actual Normality	Normality Average
1101346	2.5488	.02	15	35.5	.02012	.02022
	2.5488	.02	15	35.7	.02021	
	2.5488	.02	15	35.85	.02032	

Alkalinity LogBook

Normality of H_2SO_4 solution
A x B / 53.00 x C
where:
A = grams of Na_2CO_3
B = volume (mL) of the Na_2CO_3 solution
C = Total volume of the 0.02 N H_2SO_4 acid titrant used to reach a pH of 3.7

Total Alkalinity (mg/L)
Vt x N x 50000 / Vs
Where:
Vt = volume (mL) of H_2SO_4 used to reach the pH 4.5 endpoint
N = normality of the H_2SO_4 titrant
Vs = volume (mL) of sample used

Phenolphthalein alkalinity (mg/L)
Vt x N x 50000 / Vs
Where:
Vt = volume (mL) of H_2SO_4 used to reach the pH 8.3 endpoint
N = normality of the H_2SO_4 titrant
Vs = volume (mL) of sample used

Bicarbonate Alkalinity
Relationship Table SM2320B

Carbonate Alkalinity
Relationship Table SM2320B

Hydroxide Alkalinity
Relationship Table SM2320B

Free Carbon Dioxide
mg CO_2/L = 2.0 x B x 10 (6-pH)
Where B = Bicarbonate Alkalinity

Total Carbon Dioxide
mg total CO_2/L = A + 0.44(2B + C)
Where:
A = mg Free CO_2/L
B = Bicarbonate Alkalinity
C = Carbonate Alkalinity

Relationship Table SM2320B

P = 0	then H = 0,	C = 0,	B = T
P < 1/2 T	then H = 0,	C = 2P,	B = T - 2P
P = 1/2 T	then H = 0,	C = 2P,	B = 0
P > 1/2 T	then H = 2P - T,	C = 2(T - P),	B = 0
P = T	then H = T,	C = 0,	B = 0

Ammonia Nitrogen

Prep Logbook

Ammonia-Nitrogen Sample Preparation

Batch ID: **1048028.0** Verified by: _____

Analyst: Stephanie Jackson

Method: EPA 350.2 Prep

Lab SOP: GL-GC-E-072 REV# 13

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202262153	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MS	1202262149	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MS	1202262150	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MSD	1202262151	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MSD	1202262152	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202262146 MB	15-NOV-2010 14:30:00	Water	25	25	1	9.5
1202262153 LCS	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266778002	15-NOV-2010 14:30:00	Water	25	25	1	9.5
1202262147 DUP (266778002)	15-NOV-2010 14:30:00	Water	25	25	1	9.5
1202262149 MS (266778002)	15-NOV-2010 14:30:00	Water	25	25	1	9.5
1202262151 MSD (266778002)	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266778004	15-NOV-2010 14:30:00	Water	25	25	1	9.5
1202262148 DUP (266778004)	15-NOV-2010 14:30:00	Water	25	25	1	9.5
1202262150 MS (266778004)	15-NOV-2010 14:30:00	Water	25	25	1	9.5
1202262152 MSD (266778004)	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266778006	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266778008	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266778009	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266782001	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266782004	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266789002	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266791002	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266867001	15-NOV-2010 14:30:00	Surface Water	25	25	1	9.5
266867002	15-NOV-2010 14:30:00	Surface Water	25	25	1	9.5
266867003	15-NOV-2010 14:30:00	Surface Water	25	25	1	9.5
266867004	15-NOV-2010 14:30:00	Surface Water	25	25	1	9.5
266867005	15-NOV-2010 14:30:00	Surface Water	25	25	1	9.5
266867006	15-NOV-2010 14:30:00	Surface Water	25	25	1	9.5
266878001	15-NOV-2010 14:30:00	Water	25	25	1	9.5
266878003	15-NOV-2010 14:30:00	Water	25	25	1	9.5

Prep Logbook

Batch ID: **1048028.0** Verified by: _____

Analyst: Stephanie Jackson

Method: EPA 350.2 Prep

Lab SOP: GL-GC-E-072 REV# 13

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202262153	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MS	1202262149	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MS	1202262150	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MSD	1202262151	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MSD	1202262152	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
266913001	15-NOV-2010 14:30:00	Waste Water	10	25	2.5	9.5
266984004	15-NOV-2010 14:30:00	Water	25	25	1	9.5

Reagent/Solvent Lot ID	Description	Amount
1446549-C	Borate Buffer	1.25 mL
1446551-C	50% NaOH Solution	1 mL

Comments:

sample 266913001 prepped @10mL due to yellow color on NH3 test strip

Prep Logbook

Ammonia-Nitrogen Sample Preparation

Batch ID: **1048507.0** Verified by: _____

Analyst: Stephanie Jackson

Method: EPA 350.2 Prep

Lab SOP: GL-GC-E-072 REV# 13

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202263476	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MS	1202263472	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MS	1202263473	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MSD	1202263474	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MSD	1202263475	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202263469 MB	17-NOV-2010 13:15:00	Water	25	25	1	9.5
1202263476 LCS	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266878005	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266881002	17-NOV-2010 13:15:00	Water	25	25	1	9.5
1202263470 DUP (266881002)	17-NOV-2010 13:15:00	Water	25	25	1	9.5
1202263472 MS (266881002)	17-NOV-2010 13:15:00	Water	25	25	1	9.5
1202263474 MSD (266881002)	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266881004	17-NOV-2010 13:15:00	Water	25	25	1	9.5
1202263471 DUP (266881004)	17-NOV-2010 13:15:00	Water	25	25	1	9.5
1202263473 MS (266881004)	17-NOV-2010 13:15:00	Water	25	25	1	9.5
1202263475 MSD (266881004)	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266890001	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266890003	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266892002	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266892005	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266892006	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266983001	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266983004	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266984001	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266985002	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266988002	17-NOV-2010 13:15:00	Water	25	25	1	9.5
266990002	17-NOV-2010 13:15:00	Water	25	25	1	9.5
267028002	17-NOV-2010 13:15:00	Water	25	25	1	9.5
267029002	17-NOV-2010 13:15:00	Water	25	25	1	9.5
267029005	17-NOV-2010 13:15:00	Water	25	25	1	9.5

Prep Logbook

Batch ID: **1048507.0** Verified by: _____

Analyst: Stephanie Jackson

Method: EPA 350.2 Prep

Lab SOP: GL-GC-E-072 REV# 13

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202263476	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MS	1202263472	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MS	1202263473	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MSD	1202263474	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL
MSD	1202263475	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.25	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
267030001	17-NOV-2010 13:15:00	Water	25	25	1	9.5

Reagent/Solvent Lot ID	Description	Amount
1446549-C	Borate Buffer	1.25 mL
1446551-C	50% NaOH Solution	1 mL

Comments:

This is runlog lachat2

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
2.0 ppm Std.		1	axh3	11/16/2010 8:38:16	OM_11-16-2010_08-36-45
1.0 ppm Std.		1	axh3	11/16/2010 8:39:06	OM_11-16-2010_08-36-45
0.5 ppm Std		1	axh3	11/16/2010 8:39:56	OM_11-16-2010_08-36-45
0.1 ppm Std		1	axh3	11/16/2010 8:40:47	OM_11-16-2010_08-36-45
0.05 ppm Std		1	axh3	11/16/2010 8:41:38	OM_11-16-2010_08-36-45
ICAL-00		1	axh3	11/16/2010 8:42:31	OM_11-16-2010_08-36-45
ICV		1	axh3	11/16/2010 8:44:22	OM_11-16-2010_08-36-45
ICB		1	axh3	11/16/2010 8:46:13	OM_11-16-2010_08-36-45
1202262146*	1048029	1	axh3	11/16/2010 8:48:02	OM_11-16-2010_08-36-45
1202262153	1048029	1	axh3	11/16/2010 8:48:53	OM_11-16-2010_08-36-45
266778002	1048029	1	axh3	11/16/2010 8:49:44	OM_11-16-2010_08-36-45
1202262147	1048029	1	axh3	11/16/2010 8:50:34	OM_11-16-2010_08-36-45
1202262149	1048029	1	axh3	11/16/2010 8:51:25	OM_11-16-2010_08-36-45
1202262151	1048029	1	axh3	11/16/2010 8:52:15	OM_11-16-2010_08-36-45
266778004	1048029	1	axh3	11/16/2010 8:53:05	OM_11-16-2010_08-36-45
1202262148	1048029	1	axh3	11/16/2010 8:53:54	OM_11-16-2010_08-36-45
1202262150	1048029	1	axh3	11/16/2010 8:54:43	OM_11-16-2010_08-36-45
1202262152	1048029	1	axh3	11/16/2010 8:55:32	OM_11-16-2010_08-36-45
CCV		1	axh3	11/16/2010 8:56:21	OM_11-16-2010_08-36-45
CCB		1	axh3	11/16/2010 8:58:11	OM_11-16-2010_08-36-45
1202262146	1048029	1	axh3	11/16/2010 9:00:01	OM_11-16-2010_08-36-45
266778006	1048029	1	axh3	11/16/2010 9:00:50	OM_11-16-2010_08-36-45
266778008	1048029	1	axh3	11/16/2010 9:01:38	OM_11-16-2010_08-36-45
266778009	1048029	1	axh3	11/16/2010 9:02:27	OM_11-16-2010_08-36-45
266782001	1048029	1	axh3	11/16/2010 9:03:14	OM_11-16-2010_08-36-45
266782004	1048029	1	axh3	11/16/2010 9:04:02	OM_11-16-2010_08-36-45
266789002	1048029	1	axh3	11/16/2010 9:04:51	OM_11-16-2010_08-36-45
266791002	1048029	1	axh3	11/16/2010 9:05:43	OM_11-16-2010_08-36-45
266867001	1048029	1	axh3	11/16/2010 9:06:34	OM_11-16-2010_08-36-45
266867002	1048029	1	axh3	11/16/2010 9:07:25	OM_11-16-2010_08-36-45
CCV		1	axh3	11/16/2010 9:08:15	OM_11-16-2010_08-36-45
CCB		1	axh3	11/16/2010 9:10:06	OM_11-16-2010_08-36-45
266867003	1048029	1	axh3	11/16/2010 9:11:55	OM_11-16-2010_08-36-45
266867004	1048029	1	axh3	11/16/2010 9:12:46	OM_11-16-2010_08-36-45
266867005	1048029	1	axh3	11/16/2010 9:13:36	OM_11-16-2010_08-36-45
266867006	1048029	1	axh3	11/16/2010 9:14:25	OM_11-16-2010_08-36-45
266878001	1048029	1	axh3	11/16/2010 9:15:15	OM_11-16-2010_08-36-45
266878003	1048029	1	axh3	11/16/2010 9:16:04	OM_11-16-2010_08-36-45
266913001	1048029	1	axh3	11/16/2010 9:16:53	OM_11-16-2010_08-36-45
266984004	1048029	1	axh3	11/16/2010 9:17:41	OM_11-16-2010_08-36-45
CCV		1	axh3	11/16/2010 9:19:30	OM_11-16-2010_08-36-45
CCB		1	axh3	11/16/2010 9:21:21	OM_11-16-2010_08-36-45

Author: axh3 Date : 11/16/2010

Original Run Filename: OM_11-16-2010_08-36-45.OMN created 11/16/2010 8:36:45
Original Run Author's Signature: [axh3]
Current Run Filename: OM_11-16-2010_08-36-45.OMN last modified 11/16/2010 9:22:24
Current Run Author's Signature: [axh3]
Description: Ammonia EPA Method 350.1 GEL SOP: GL-GC-E-106
Detection Wavelength: 630nm
Sample spiked with 100ppm stock standard LCS/ICV/CCV/Spike nominal 1.0 ppm

Sample	Rep.	Cup No.	Channel 1 NH3 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR101116-03	1	S10	2.000	17.655	11/16/2010@8:38:16			2.0 ppm Std.
WTR101116-04	1	S11	1.000	9.413	11/16/2010@8:39:06			1.0 ppm Std.
WTR101116-05	1	S12	0.500	4.852	11/16/2010@8:39:56			0.5 ppm Std
WTR101116-06	1	S13	0.100	0.892	11/16/2010@8:40:47			0.1 ppm Std
WTR101116-07	1	S14	0.050	0.454	11/16/2010@8:41:38			0.05 ppm Std
WTR101116-10 0.0 ppm	1	S15	0.000	0.055	11/16/2010@8:42:31			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99931 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR101116-08 ICV	1	S16	1.015	9.162	11/16/2010@8:44:22			ICV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.015 < 1.104					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.015 > 0.895					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WTR101116-10 ICB	1	S15	-0.010	0.062	11/16/2010@8:46:13			ICB/CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.010 < 0.050					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.010 > -0.050					
		Message	ICB Passed					
		Action	Continue					
1202262146|1048029|MB	1	1	0.102	1.056	11/16/2010@8:48:02			
1202262153||LCS	1	2	0.913	8.260	11/16/2010@8:48:53			
266778002	1	3	0.038	0.490	11/16/2010@8:49:44			
1202262147||DUP	1	4	0.054	0.629	11/16/2010@8:50:34			
1202262149||MS	1	5	1.004	9.071	11/16/2010@8:51:25			
1202262151||MSD	1	6	0.897	8.120	11/16/2010@8:52:15			
266778004	1	7	0.048	0.580	11/16/2010@8:53:05			
1202262148||DUP	1	8	0.129	1.292	11/16/2010@8:53:54			
1202262150||MS	1	9	1.084	9.776	11/16/2010@8:54:43			
1202262152||MSD	1	10	1.084	9.783	11/16/2010@8:55:32			
WTR101116-04 CCV	1	S11	1.039	9.382	11/16/2010@8:56:21			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.039 < 1.104					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.039 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-10 CCB	1	S15	-0.009	0.069	11/16/2010@8:58:11			CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.009 < 0.049					

		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.009 > -0.050					
		Message	CCB Passed					
		Action	Continue					
1202262146|1048029|MB	1	1	-0.006	0.097	11/16/2010@9:00:01			
266778006	1	11	0.102	1.054	11/16/2010@9:00:50			
266778008	1	12	0.119	1.202	11/16/2010@9:01:38			
266778009	1	13	0.004	0.189	11/16/2010@9:02:27			
266782001	1	14	0.010	0.234	11/16/2010@9:03:14			
266782004	1	15	0.004	0.186	11/16/2010@9:04:02			
266789002	1	16	0.017	0.299	11/16/2010@9:04:51			
266791002	1	17	0.032	0.437	11/16/2010@9:05:43			
266867001	1	18	0.055	0.640	11/16/2010@9:06:34			
266867002	1	19	0.323	3.020	11/16/2010@9:07:25			
WTR101116-04 CCV	1	S11	1.046	9.441	11/16/2010@9:08:15			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	1.046 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.046 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-10 CCB	1	S15	-0.009	0.067	11/16/2010@9:10:06			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.009 < 0.049					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.009 > -0.050					
		Message	CCB Passed					
		Action	Continue					
266867003	1	20	0.448	4.129	11/16/2010@9:11:55			
266867004	1	21	0.301	2.819	11/16/2010@9:12:46			
266867005	1	22	0.182	1.768	11/16/2010@9:13:36			
266867006	1	23	0.223	2.129	11/16/2010@9:14:25			
266878001	1	24	0.036	0.469	11/16/2010@9:15:15			
266878003	1	25	0.002	0.169	11/16/2010@9:16:04			
266913001	1	26	1.000	9.034	11/16/2010@9:16:53			
266984004	1	27	0.021	0.334	11/16/2010@9:17:41			
WTR101116-04 CCV	1	S11	1.036	9.353	11/16/2010@9:19:30			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	1.036 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.036 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-10 CCB	1	S15	-0.009	0.072	11/16/2010@9:21:21			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.009 < 0.049					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.009 > -0.050					
		Message	CCB Passed					
		Action	Continue					

Author: axh3 Date : 11/16/2010

Channel 1 (NH3) : Current View

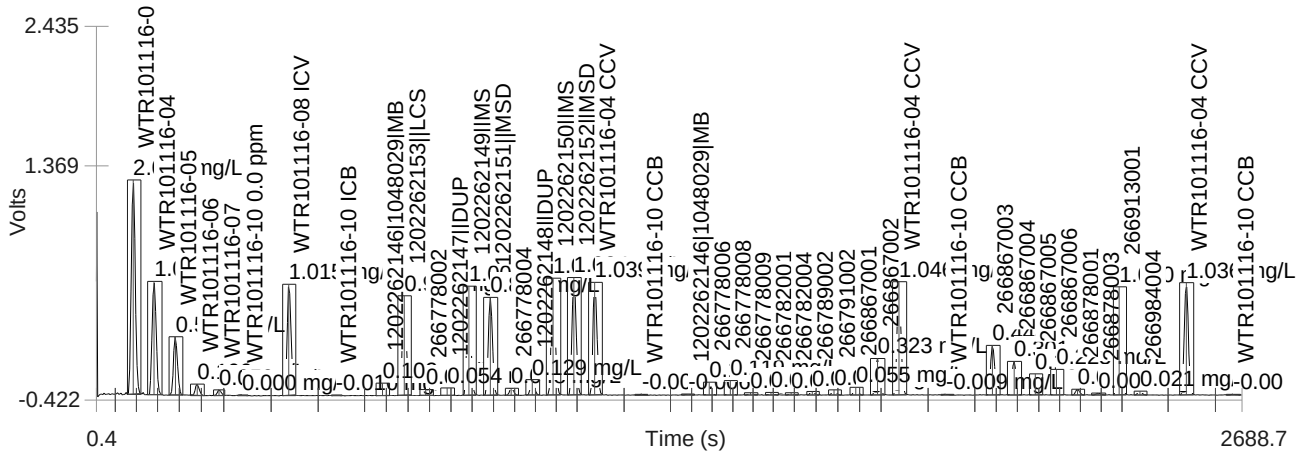
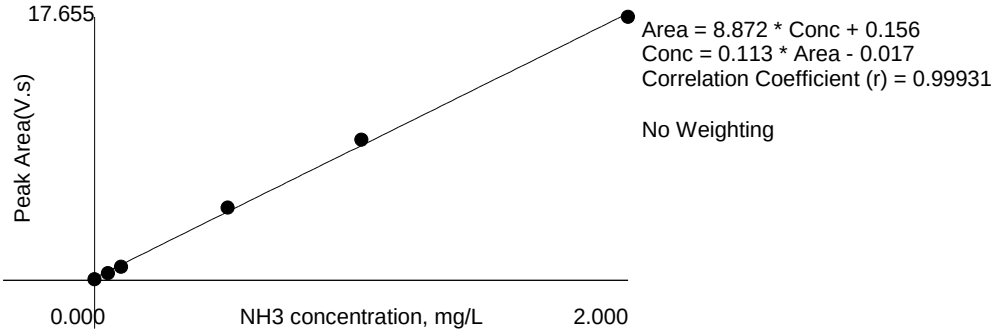


Table 1: NH3

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	2.000	1	17.655	1.635	1.4	11/16/2010	8:39:19
2	1.000	1	9.413	0.866	-4.3	11/16/2010	8:40:08
3	0.500	1	4.852	0.444	-5.7	11/16/2010	8:40:58
4	0.100	1	0.892	0.084	14.5	11/16/2010	8:41:49
5	0.050	1	0.454	0.042	24.3	11/16/2010	8:42:41
6	0.000	1	0.055	0.005		11/16/2010	8:43:34

Figure 1: NH3



This is runlog lachat2

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axh3	11/16/2010 9:39:05	OM_11-16-2010_09-37-33
CCB		1	axh3	11/16/2010 9:40:55	OM_11-16-2010_09-37-33
266778004	1048029	1	axh3	11/16/2010 9:42:44	OM_11-16-2010_09-37-33
1202262148	1048029	1	axh3	11/16/2010 9:43:33	OM_11-16-2010_09-37-33
1202262150	1048029	1	axh3	11/16/2010 9:44:22	OM_11-16-2010_09-37-33
1202262152	1048029	1	axh3	11/16/2010 9:45:11	OM_11-16-2010_09-37-33
CCV		1	axh3	11/16/2010 9:46:59	OM_11-16-2010_09-37-33
CCB		1	axh3	11/16/2010 9:48:50	OM_11-16-2010_09-37-33

Author: axh3 Date : 11/16/2010

Original Run Filename: OM_11-16-2010_09-37-33.OMN created 11/16/2010 9:37:33
Original Run Author's Signature: [axh3]
Current Run Filename: OM_11-16-2010_09-37-33.OMN last modified 11/16/2010 9:49:55
Current Run Author's Signature: [axh3]
Description: Ammonia EPA Method 350.1 GEL SOP: GL-GC-E-106
Detection Wavelength: 630nm
Sample spiked with 100ppm stock standard LCS/ICV/CCV/Spike nominal 1.0 ppm

Sample	Rep.	Cup No.	Channel 1 NH3 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR101116-04 CCV	1	S11	1.049	9.467	11/16/2010@9:39:05			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.049 < 1.104					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.049 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-10 CCB	1	S15	-0.011	0.049	11/16/2010@9:40:55			CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.011 < 0.049					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.011 > -0.050					
		Message	CCB Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
266778004|1048029|	1	7	0.044	0.539	11/16/2010@9:42:44			
1202262148||DUP	1	8	0.045	0.552	11/16/2010@9:43:33			
1202262150||MS	1	9	1.076	9.712	11/16/2010@9:44:22			
1202262152||MSD	1	10	1.092	9.854	11/16/2010@9:45:11			
WTR101116-04 CCV	1	S11	1.043	9.411	11/16/2010@9:46:59			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.043 < 1.104					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.043 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-10 CCB	1	S15	-0.010	0.058	11/16/2010@9:48:50			CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.010 < 0.049					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.010 > -0.050					
		Message	CCB Passed					
		Action	Continue					

Author: axh3 Date : 11/16/2010

Channel 1 (NH3) : Current View

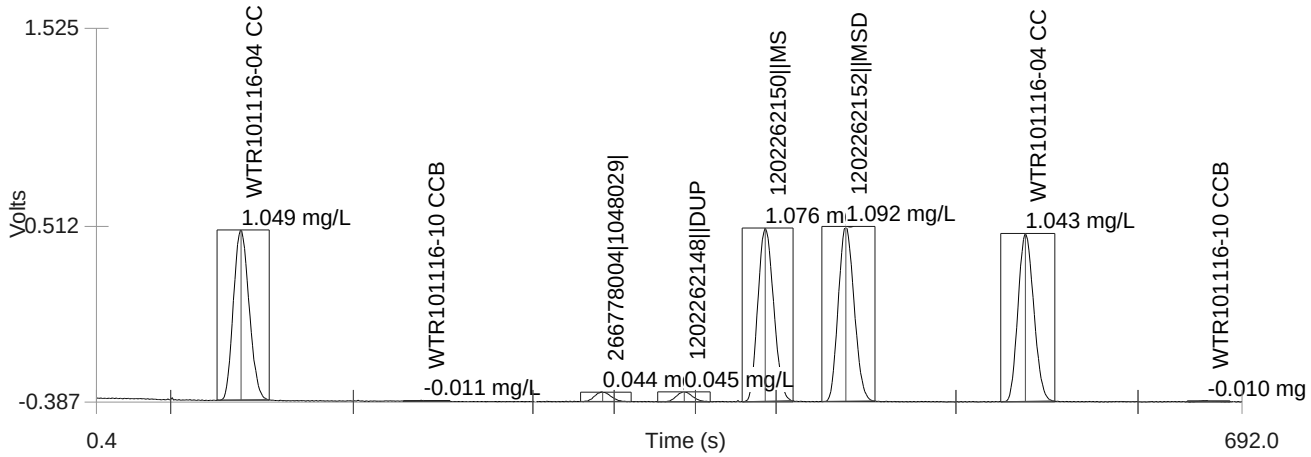
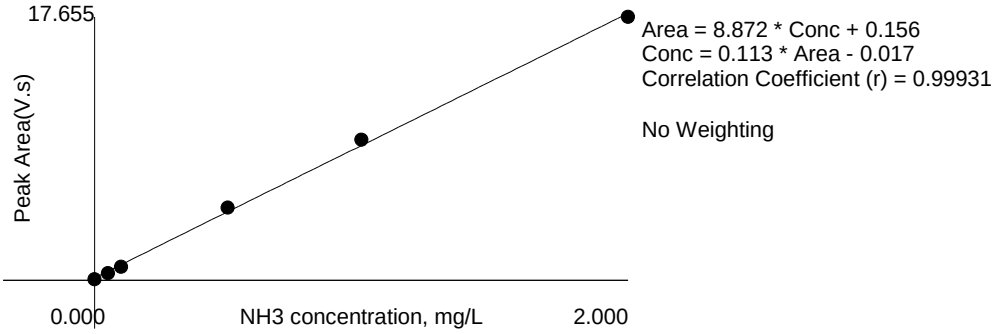


Table 1: NH3

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	2.000	1	17.655	1.635	1.4	11/16/2010	8:39:19
2	1.000	1	9.413	0.866	-4.3	11/16/2010	8:40:08
3	0.500	1	4.852	0.444	-5.7	11/16/2010	8:40:58
4	0.100	1	0.892	0.084	14.5	11/16/2010	8:41:49
5	0.050	1	0.454	0.042	24.3	11/16/2010	8:42:41
6	0.000	1	0.055	0.005		11/16/2010	8:43:34

Figure 1: NH3



This is runlog lachat2

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
2.0 ppm Std.		1	axh3	11/18/2010 7:20:01	OM_11-18-2010_07-16-41
1.0 ppm Std.		1	axh3	11/18/2010 7:20:51	OM_11-18-2010_07-16-41
0.5 ppm Std		1	axh3	11/18/2010 7:21:41	OM_11-18-2010_07-16-41
0.1 ppm Std		1	axh3	11/18/2010 7:22:32	OM_11-18-2010_07-16-41
0.05 ppm Std		1	axh3	11/18/2010 7:23:24	OM_11-18-2010_07-16-41
ICAL-00		1	axh3	11/18/2010 7:24:16	OM_11-18-2010_07-16-41
ICV		1	axh3	11/18/2010 7:26:07	OM_11-18-2010_07-16-41
ICB		1	axh3	11/18/2010 7:27:58	OM_11-18-2010_07-16-41
1202263469	1048508	1	axh3	11/18/2010 7:29:47	OM_11-18-2010_07-16-41
1202263476	1048508	1	axh3	11/18/2010 7:30:38	OM_11-18-2010_07-16-41
266878005	1048508	1	axh3	11/18/2010 7:31:29	OM_11-18-2010_07-16-41
266881002*	1048508	1	axh3	11/18/2010 7:32:20	OM_11-18-2010_07-16-41
1202263470*	1048508	1	axh3	11/18/2010 7:33:10	OM_11-18-2010_07-16-41
1202263472*	1048508	1	axh3	11/18/2010 7:34:00	OM_11-18-2010_07-16-41
1202263474*	1048508	1	axh3	11/18/2010 7:34:50	OM_11-18-2010_07-16-41
266881004	1048508	1	axh3	11/18/2010 7:35:39	OM_11-18-2010_07-16-41
1202263471	1048508	1	axh3	11/18/2010 7:36:28	OM_11-18-2010_07-16-41
1202263473	1048508	1	axh3	11/18/2010 7:37:17	OM_11-18-2010_07-16-41
CCV		1	axh3	11/18/2010 7:38:06	OM_11-18-2010_07-16-41
CCB		1	axh3	11/18/2010 7:39:56	OM_11-18-2010_07-16-41
1202263475	1048508	1	axh3	11/18/2010 7:41:44	OM_11-18-2010_07-16-41
266890001	1048508	1	axh3	11/18/2010 7:42:32	OM_11-18-2010_07-16-41
266890003	1048508	1	axh3	11/18/2010 7:43:20	OM_11-18-2010_07-16-41
266892002	1048508	1	axh3	11/18/2010 7:44:07	OM_11-18-2010_07-16-41
266892005	1048508	1	axh3	11/18/2010 7:44:55	OM_11-18-2010_07-16-41
266892006	1048508	1	axh3	11/18/2010 7:45:44	OM_11-18-2010_07-16-41
266983001	1048508	1	axh3	11/18/2010 7:46:36	OM_11-18-2010_07-16-41
266983004	1048508	1	axh3	11/18/2010 7:47:27	OM_11-18-2010_07-16-41
266984001	1048508	1	axh3	11/18/2010 7:48:18	OM_11-18-2010_07-16-41
266985002	1048508	1	axh3	11/18/2010 7:49:08	OM_11-18-2010_07-16-41
CCV		1	axh3	11/18/2010 7:49:59	OM_11-18-2010_07-16-41
CCB		1	axh3	11/18/2010 7:51:49	OM_11-18-2010_07-16-41
266988002	1048508	1	axh3	11/18/2010 7:53:37	OM_11-18-2010_07-16-41
266990002	1048508	1	axh3	11/18/2010 7:54:28	OM_11-18-2010_07-16-41
267028002	1048508	1	axh3	11/18/2010 7:55:17	OM_11-18-2010_07-16-41
267029002	1048508	1	axh3	11/18/2010 7:56:07	OM_11-18-2010_07-16-41
267029005	1048508	1	axh3	11/18/2010 7:56:56	OM_11-18-2010_07-16-41
267030001	1048508	1	axh3	11/18/2010 7:57:44	OM_11-18-2010_07-16-41
266881002	1048508	1	axh3	11/18/2010 7:58:34	OM_11-18-2010_07-16-41
1202263470	1048508	1	axh3	11/18/2010 7:59:25	OM_11-18-2010_07-16-41
1202263472	1048508	1	axh3	11/18/2010 8:00:15	OM_11-18-2010_07-16-41
1202263474	1048508	1	axh3	11/18/2010 8:01:05	OM_11-18-2010_07-16-41
CCV		1	axh3	11/18/2010 8:01:54	OM_11-18-2010_07-16-41
CCB		1	axh3	11/18/2010 8:03:44	OM_11-18-2010_07-16-41
1202266006*	1049526	1	axh3	11/18/2010 8:05:32	OM_11-18-2010_07-16-41
1202266010*	1049526	1	axh3	11/18/2010 8:06:21	OM_11-18-2010_07-16-41
267049001*	1049526	1	axh3	11/18/2010 8:07:09	OM_11-18-2010_07-16-41
1202266007*	1049526	1	axh3	11/18/2010 8:07:57	OM_11-18-2010_07-16-41
1202266008*	1049526	1	axh3	11/18/2010 8:08:47	OM_11-18-2010_07-16-41
1202266009*	1049526	1	axh3	11/18/2010 8:09:38	OM_11-18-2010_07-16-41
267117001*	1049526	1	axh3	11/18/2010 8:10:30	OM_11-18-2010_07-16-41
267117002*	1049526	1	axh3	11/18/2010 8:11:21	OM_11-18-2010_07-16-41
267117003*	1049526	1	axh3	11/18/2010 8:12:12	OM_11-18-2010_07-16-41
1202266006	1049526	1	axh3	11/18/2010 8:13:01	OM_11-18-2010_07-16-41
CCV		1	axh3	11/18/2010 8:13:50	OM_11-18-2010_07-16-41
CCB		1	axh3	11/18/2010 8:15:41	OM_11-18-2010_07-16-41
1202266010	1049526	1	axh3	11/18/2010 8:17:29	OM_11-18-2010_07-16-41
267049001	1049526	1	axh3	11/18/2010 8:18:17	OM_11-18-2010_07-16-41

1202266007	1049526	1	axh3	11/18/2010	8:19:05	OM_11-18-2010_07-16-41
1202266008	1049526	1	axh3	11/18/2010	8:19:55	OM_11-18-2010_07-16-41
1202266009	1049526	1	axh3	11/18/2010	8:20:47	OM_11-18-2010_07-16-41
267117001	1049526	1	axh3	11/18/2010	8:21:38	OM_11-18-2010_07-16-41
267117002	1049526	5	axh3	11/18/2010	8:22:29	OM_11-18-2010_07-16-41
267117003	1049526	1	axh3	11/18/2010	8:23:19	OM_11-18-2010_07-16-41
1202266011*	1049528	1	axh3	11/18/2010	8:24:10	OM_11-18-2010_07-16-41
1202266015*	1049528	1	axh3	11/18/2010	8:25:01	OM_11-18-2010_07-16-41
CCV		1	axh3	11/18/2010	8:25:50	OM_11-18-2010_07-16-41
CCB		1	axh3	11/18/2010	8:27:41	OM_11-18-2010_07-16-41
1202266011	1049528	1	axh3	11/18/2010	8:29:30	OM_11-18-2010_07-16-41
1202266015	1049528	1	axh3	11/18/2010	8:30:21	OM_11-18-2010_07-16-41
267100001	1049528	1	axh3	11/18/2010	8:31:11	OM_11-18-2010_07-16-41
1202266012	1049528	1	axh3	11/18/2010	8:32:01	OM_11-18-2010_07-16-41
1202266013	1049528	1	axh3	11/18/2010	8:32:50	OM_11-18-2010_07-16-41
1202266014	1049528	1	axh3	11/18/2010	8:33:40	OM_11-18-2010_07-16-41
CCV		1	axh3	11/18/2010	8:35:28	OM_11-18-2010_07-16-41
CCB		1	axh3	11/18/2010	8:37:18	OM_11-18-2010_07-16-41

Author: axh3 Date : 11/18/2010

Original Run Filename: OM_11-18-2010_07-16-41.OMN created 11/18/2010 7:16:41
Original Run Author's Signature: [axh3]
Current Run Filename: OM_11-18-2010_07-16-41.OMN last modified 11/18/2010 8:38:23
Current Run Author's Signature: [axh3]
Description: Ammonia EPA Method 350.1 GEL SOP: GL-GC-E-106
Detection Wavelength: 630nm
Sample spiked with 100ppm stock standard LCS/ICV/CCV/Spike nominal 1.0 ppm

Sample	Rep.	Cup No.	Channel 1 NH3 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR101118-03	1	S10	2.000	17.438	11/18/2010@7:20:01			2.0 ppm Std.
WTR101118-04	1	S11	1.000	9.139	11/18/2010@7:20:51			1.0 ppm Std.
WTR101118-05	1	S12	0.500	4.983	11/18/2010@7:21:41			0.5 ppm Std
WTR101118-06	1	S13	0.100	1.180	11/18/2010@7:22:32			0.1 ppm Std
WTR101118-07	1	S14	0.050	0.672	11/18/2010@7:23:24			0.05 ppm Std
WTR101118-10 0.0 ppm	1	S15	0.000	0.079	11/18/2010@7:24:16			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99947 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR101118-08 ICV	1	S16	1.012	9.074	11/18/2010@7:26:07			ICV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.012 < 1.104					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.012 > 0.895					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WTR101118-10 ICB	1	S15	-0.025	0.100	11/18/2010@7:27:58			ICB/CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.025 < 0.050					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.025 > -0.050					
		Message	ICB Passed					
		Action	Continue					
1202263469|1048508|MB	1	1	-0.005	0.277	11/18/2010@7:29:47			
1202263476||LCS	1	2	0.901	8.115	11/18/2010@7:30:38			
266878005	1	3	0.032	0.599	11/18/2010@7:31:29			
266881002	1	4	-0.008	0.251	11/18/2010@7:32:20			
1202263470||DUP	1	5	-0.005	0.277	11/18/2010@7:33:10			
1202263472||MS	1	6	0.810	7.326	11/18/2010@7:34:00			
1202263474||MSD	1	7	0.969	8.697	11/18/2010@7:34:50			
266881004	1	8	0.006	0.370	11/18/2010@7:35:39			
1202263471||DUP	1	9	0.010	0.411	11/18/2010@7:36:28			
1202263473||MS	1	10	0.829	7.489	11/18/2010@7:37:17			
WTR101118-04 CCV	1	S11	1.030	9.229	11/18/2010@7:38:06			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.030 < 1.104					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.030 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101118-10 CCB	1	S15	-0.027	0.085	11/18/2010@7:39:56			CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.027 < 0.049					

		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.027 > -0.050					
		Message	CCB Passed					
		Action	Continue					
1202263475||MSD	1	11	0.724	6.585	11/18/2010@7:41:44			
266890001	1	12	0.009	0.399	11/18/2010@7:42:32			
266890003	1	13	-0.004	0.284	11/18/2010@7:43:20			
266892002	1	14	0.063	0.867	11/18/2010@7:44:07			
266892005	1	15	0.060	0.842	11/18/2010@7:44:55			
266892006	1	16	0.093	1.127	11/18/2010@7:45:44			
266983001	1	17	0.008	0.386	11/18/2010@7:46:36			
266983004	1	18	-0.017	0.173	11/18/2010@7:47:27			
266984001	1	19	-0.012	0.219	11/18/2010@7:48:18			
266985002	1	20	-0.014	0.201	11/18/2010@7:49:08			
WTR101118-04 CCV	1	S11	1.033	9.251	11/18/2010@7:49:59			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	1.033 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.033 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101118-10 CCB	1	S15	-0.026	0.097	11/18/2010@7:51:49			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.026 < 0.049					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.026 > -0.050					
		Message	CCB Passed					
		Action	Continue					
266988002	1	21	0.060	0.837	11/18/2010@7:53:37			
266990002	1	22	0.093	1.128	11/18/2010@7:54:28			
267028002	1	23	0.022	0.509	11/18/2010@7:55:17			
267029002	1	24	-0.025	0.105	11/18/2010@7:56:07			
267029005	1	25	-0.005	0.276	11/18/2010@7:56:56			
267030001	1	26	8.223e-4	0.327	11/18/2010@7:57:44			
266881002	1	4	-0.005	0.274	11/18/2010@7:58:34			
1202263470||DUP	1	5	-0.002	0.300	11/18/2010@7:59:25			
1202263472||MS	1	6	0.966	8.679	11/18/2010@8:00:15			
1202263474||MSD	1	7	0.976	8.760	11/18/2010@8:01:05			
WTR101118-04 CCV	1	S11	1.047	9.377	11/18/2010@8:01:54			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	1.047 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.047 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101118-10 CCB	1	S15	-0.027	0.086	11/18/2010@8:03:44			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.027 < 0.049					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.027 > -0.050					
		Message	CCB Passed					
		Action	Continue					
1202266006|1049526|MB	1	27	-0.029	0.073	11/18/2010@8:05:32			
1202266010||LCS	1	28	0.671	6.120	11/18/2010@8:06:21			

267049001	1	29	0.179	1.872	11/18/2010@8:07:09			
1202266007||DUP	1	30	0.093	1.123	11/18/2010@8:07:57			
1202266008||MS	1	31	0.937	8.421	11/18/2010@8:08:47			
1202266009||MSD	1	32	1.039	9.305	11/18/2010@8:09:38			
267117001	1	33	0.189	1.953	11/18/2010@8:10:30			
267117002	1	34	2.250	19.785	11/18/2010@8:11:21			
267117003	1	35	0.338	3.241	11/18/2010@8:12:12			
1202266006|1049526|MB	1	27	-0.024	0.113	11/18/2010@8:13:01			
WTR101118-04 CCV	1	S11	1.036	9.277	11/18/2010@8:13:50			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	1.036 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.036 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101118-10 CCB	1	S15	-0.024	0.112	11/18/2010@8:15:41			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.024 < 0.049					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.024 > -0.050					
		Message	CCB Passed					
		Action	Continue					
1202266010||LCS	1	28	0.933	8.394	11/18/2010@8:17:29			
267049001	1	29	0.097	1.163	11/18/2010@8:18:17			
1202266007||DUP	1	30	0.093	1.127	11/18/2010@8:19:05			
1202266008||MS	1	31	0.941	8.460	11/18/2010@8:19:55			
1202266009||MSD	1	32	1.040	9.320	11/18/2010@8:20:47			
267117001	1	33	0.188	1.948	11/18/2010@8:21:38			
267117002	1	34	0.435	4.084	11/18/2010@8:22:29		5.00	
267117003	1	35	0.330	3.178	11/18/2010@8:23:19			
1202266011|1049528|MB	1	36	-0.016	0.184	11/18/2010@8:24:10			
1202266015||LCS	1	37	0.588	5.409	11/18/2010@8:25:01			
WTR101118-04 CCV	1	S11	1.049	9.394	11/18/2010@8:25:50			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	1.049 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.049 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101118-10 CCB	1	S15	-0.025	0.104	11/18/2010@8:27:41			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.025 < 0.049					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.025 > -0.050					
		Message	CCB Passed					
		Action	Continue					
1202266011|1049528|MB	1	36	-0.018	0.169	11/18/2010@8:29:30			
1202266015||LCS	1	37	0.962	8.637	11/18/2010@8:30:21			
267100001	1	38	0.028	0.565	11/18/2010@8:31:11			
1202266012||DUP	1	39	0.035	0.625	11/18/2010@8:32:01			
1202266013||MS	1	40	0.912	8.211	11/18/2010@8:32:50			
1202266014||MSD	1	41	0.961	8.632	11/18/2010@8:33:40			
WTR101118-04 CCV	1	S11	1.039	9.308	11/18/2010@8:35:28			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	1.039 < 1.104					

			Message	CCV Passed					
			Action	Continue					
			DQM Test: < - Concentration Limit						
			Result:	1.039 > 0.895					
			Message	CCV Passed					
			Action	Continue					
WTR101118-10 CCB	1	S15		-0.025	0.102	11/18/2010@8:37:18			CCB
			Known Conc:	0.000					
			DQM Test: > + Concentration Limit						
			Result:	-0.025 < 0.049					
			Message	CCB Passed					
			Action	Continue					
			DQM Test: < - Concentration Limit						
			Result:	-0.025 > -0.050					
			Message	CCB Passed					
			Action	Continue					

Channel 1 (NH3) : Current View

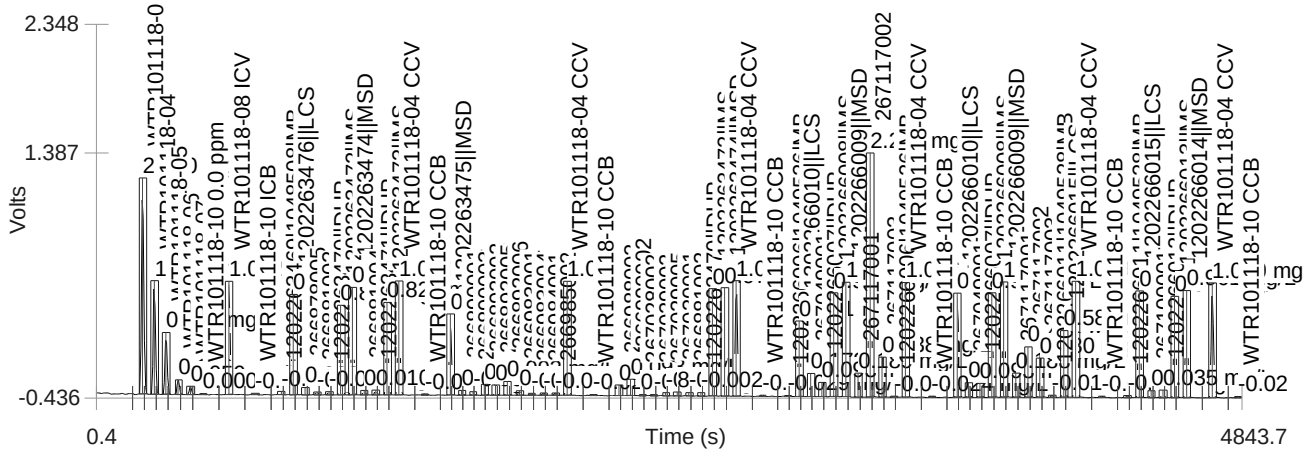
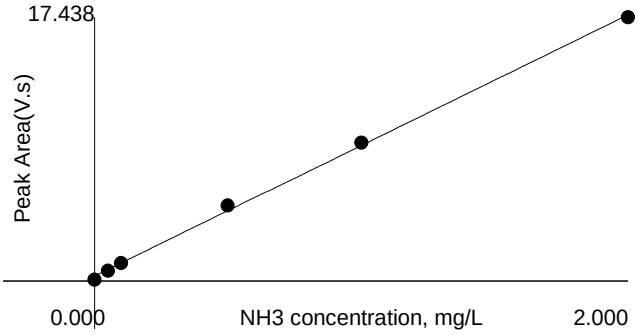


Table 1: NH3

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	2.000	1	17.438	1.605	1.0	11/18/2010	7:21:04
2	1.000	1	9.139	0.843	-1.9	11/18/2010	7:21:53
3	0.500	1	4.983	0.460	-7.3	11/18/2010	7:22:43
4	0.100	1	1.180	0.107	0.9	11/18/2010	7:23:35
5	0.050	1	0.672	0.061	11.3	11/18/2010	7:24:27
6	0.000	1	0.079	0.007		11/18/2010	7:25:19

Author: axh3 Date : 11/18/2010

Figure 1: NH3



Area = 8.640 * Conc + 0.326
Conc = 0.116 * Area - 0.037
Correlation Coefficient (r) = 0.99947

No Weighting

Carbon, Total Organic

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
ICAL-01		1	TSM	16-Nov-10 11:40	XD329.rlt
ICAL-02		1	TSM	16-Nov-10 11:49	XD330.rlt
ICAL-03		1	TSM	16-Nov-10 11:58	XD331.rlt
ICAL-04		1	TSM	16-Nov-10 12:07	XD332.rlt
ICAL-05		1	TSM	16-Nov-10 12:16	XD333.rlt
ICV		1	TSM	16-Nov-10 12:25	XD334.rlt
ICB		1	TSM	16-Nov-10 12:34	XD335.rlt
TIC	1048084	1	TSM	16-Nov-10 12:44	XD336.rlt
CCV		1	TSM	16-Nov-10 13:11	XD337.rlt
CCB		1	TSM	16-Nov-10 13:20	XD338.rlt
266770007	1047807	10	TSM	16-Nov-10 13:28	XD339.rlt
CCV		1	TSM	16-Nov-10 14:05	XD341.rlt
CCB		1	TSM	16-Nov-10 14:14	XD342.rlt
CCV		1	TSM	16-Nov-10 15:51	XD343.rlt
CCB		1	TSM	16-Nov-10 16:00	XD344.rlt
1202262321	1048084	1	TSM	16-Nov-10 16:09	XD345.rlt
1202262326	1048084	1	TSM	16-Nov-10 16:18	XD346.rlt
266779001	1048084	1	TSM	16-Nov-10 16:26	XD347.rlt
1202262322	1048084	1	TSM	16-Nov-10 17:00	XD348.rlt
1202262324	1048084	1	TSM	16-Nov-10 17:20	XD349.rlt
266779002	1048084	1	TSM	16-Nov-10 17:28	XD350.rlt
266779004	1048084	1	TSM	16-Nov-10 18:02	XD351.rlt
266779005	1048084	1	TSM	16-Nov-10 18:35	XD352.rlt
266779009	1048084	1	TSM	16-Nov-10 19:09	XD353.rlt
266782002	1048084	1	TSM	16-Nov-10 19:42	XD354.rlt
CCV		1	TSM	16-Nov-10 20:16	XD355.rlt
CCB		1	TSM	16-Nov-10 20:25	XD356.rlt
266782003	1048084	1	TSM	16-Nov-10 20:34	XD357.rlt
266789001	1048084	1	TSM	16-Nov-10 21:07	XD358.rlt
266791001	1048084	1	TSM	16-Nov-10 21:41	XD359.rlt
266878001	1048084	1	TSM	16-Nov-10 22:14	XD360.rlt
266878003	1048084	1	TSM	16-Nov-10 22:48	XD361.rlt
266878005	1048084	1	TSM	16-Nov-10 23:21	XD362.rlt
266879001	1048084	1	TSM	16-Nov-10 23:55	XD363.rlt
1202262323	1048084	1	TSM	17-Nov-10 0:28	XD364.rlt
1202262325	1048084	1	TSM	17-Nov-10 0:48	XD365.rlt
266881001	1048084	1	TSM	17-Nov-10 0:56	XD366.rlt
CCV		1	TSM	17-Nov-10 1:31	XD367.rlt
CCB		1	TSM	17-Nov-10 1:39	XD368.rlt
266881003	1048084	1	TSM	17-Nov-10 1:48	XD369.rlt
266890002	1048084	1	TSM	17-Nov-10 2:21	XD370.rlt
266890004	1048084	1	TSM	17-Nov-10 2:55	XD371.rlt
266983002	1048084	1	TSM	17-Nov-10 3:29	XD372.rlt
266983003	1048084	1	TSM	17-Nov-10 4:02	XD373.rlt
CCV		1	TSM	17-Nov-10 4:36	XD374.rlt
CCB		1	TSM	17-Nov-10 4:45	XD375.rlt
CCV		1	TSM	17-Nov-10 4:54	XD376.rlt
CCB		1	TSM	17-Nov-10 5:03	XD377.rlt
1202263843	1048660	1	TSM	17-Nov-10 5:12	XD378.rlt
1202263846	1048660	1	TSM	17-Nov-10 5:21	XD379.rlt
266984002	1048660	1	TSM	17-Nov-10 5:29	XD380.rlt
1202263844	1048660	1	TSM	17-Nov-10 6:03	XD381.rlt
1202263845	1048660	1	TSM	17-Nov-10 6:23	XD382.rlt
266984003	1048660	1	TSM	17-Nov-10 6:31	XD383.rlt
266985001	1048660	1	TSM	17-Nov-10 7:05	XD384.rlt
266988001	1048660	100	TSM	17-Nov-10 7:38	XD385.rlt
266990001	1048660	1	TSM	17-Nov-10 8:12	XD386.rlt

CCV		1	TSM	17-Nov-10 8:46	XD387.rlt
CCB		1	TSM	17-Nov-10 8:55	XD388.rlt
1202263847	1048662	1	TSM	17-Nov-10 9:04	XD389.rlt
1202263850	1048662	1	TSM	17-Nov-10 9:13	XD390.rlt
266879001	1048662	1	TSM	17-Nov-10 9:21	XD391.rlt
1202263848	1048662	1	TSM	17-Nov-10 9:55	XD392.rlt
1202263849	1048662	1	TSM	17-Nov-10 10:15	XD393.rlt
CCV		1	TSM	17-Nov-10 10:24	XD394.rlt
CCB		1	TSM	17-Nov-10 10:33	XD395.rlt
CCV		1	TSM	17-Nov-10 10:55	XD396.rlt
CCB		1	TSM	17-Nov-10 11:04	XD397.rlt
266988001	1048660	5	TSM	17-Nov-10 11:12	XD398.rlt
CCV		1	TSM	17-Nov-10 11:47	XD399.rlt
CCB		1	TSM	17-Nov-10 11:56	XD400.rlt

```
*********************************************************************
**                          CONFIGURATION                          **
*********************************************************************

Analysis Mode:  TOC         Spl Intro:  Autosampler 53
Remote Start :  OFF

Loop Size:  5 mL        Actual Volume  1mL   5mL   10mL   25mL
                        -------------  ----  ----  -----  -----
                         Loop A (uL):  1000  4900  10000  25000
                         Loop B (uL):  1000  4900  10000  25000

Tray Type:             53 Vial  Vial Option:                 Neither
Needle Depth:          97 %     Preacid Volume (uL):             200
Wash Needle Depth:     94 %     Preacid Purge Time (min:sec):   0:30

            TIC    TOC    TC
Blank      ----   ----   ----            Linearization Coeff:  53000
 Average:   141    511    773

                          Sample Transfer Times (sec)
          Initial Fill      |        Loop Fill       | Sample Inject
     Non-AS    AS  AS w/Sep | Non-AS    AS  AS w/Sep |    (all)
     ------  ----- -------- | ------  ----- -------- | -------------
1mL:    6.0    4.5      3.5 |    1.2    1.2      1.0 |      4.5
5mL:    8.1    7.0      8.0 |    5.1    3.0      5.5 |     10.3
10mL:  14.2   12.2     11.0 |   10.5   10.5     11.0 |     16.5
25mL:  35.0   35.0     32.0 |    n/a    n/a      n/a |     38.0

Analog Concentration Signal indicates TOC
Analog Conc. Signal Timer is OFF, Timer duration (h:m:s): 00:00:00
Min Signal Range:   0.000 ppmC,  Max Signal Range:   0.000 ppmC

Alarms DISABLED
Alarm Relay Timer is OFF, Timer duration (h:m:s): 00:00:00
       Conc. Alarm Setpoints (ppm C)
          Low      |    High
      -----------  | -----------
TIC:     0.000          0.000
TOC:     0.000          0.000
TC:      0.000          0.000
```

```
*********************************************************************
**                          CALIBRATION                            **
*********************************************************************
```

11/16/10 Tue Nov 16 12:16:26 2010

Std. #	Used	Conc. (ppm)	Volume (mL)		
1	Yes	20.000	5.000	RF (ugC/k-cts):	1.195
2	Yes	10.000	5.000	R-Squared:	0.9999
3	Yes	1.000	5.000	Offset (cts):	1180
4	Yes	0.200	5.000	Offset (ugC):	-1.411
5	Yes	0.000	5.000	Calibration Mode:	TOC
				Allow Editing:	No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	82898	42863	5021	1980	1128
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

Pos/ Vial	Run Type	Rep #	Run Date	Run Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)	TC Area (cts)	TC Mass (ugC)	TC Conc (ppm)
1	Blk	1	16Nov2010	11:09	-	-	-	675	-	-	-	-	-
1	Blk	2	16Nov2010	11:16	-	-	-	436	-	-	-	-	-
1	Blk	3	16Nov2010	11:22	-	-	-	540	-	-	-	-	-
1	Blk	4	16Nov2010	11:31	-	-	-	457	-	-	-	-	-

** Std1 Name: ICAL-01 Data File: XD329
Remarks: 1048084|1|1| WTC101116-01 ID:TOC267

1	Std1	1	16Nov2010	11:40	-	-	-	82898	98.000	20.000	-	-	-

** Calibration: RF (ugC/k-cts): 1.189
R-Squared: 1.0000
Offset (cts): 0
Offset (ugC): 0.000

** Std2 Name: ICAL-02 Data File: XD330
Remarks: 1048084|1|1| WTC101116-02 ID:TOC267

2	Std2	1	16Nov2010	11:49	-	-	-	42863	49.000	10.000	-	-	-

** Calibration: RF (ugC/k-cts): 1.224
R-Squared: 1.0000
Offset (cts): 2827
Offset (ugC): -3.461

** Std3 Name: ICAL-03 Data File: XD331
Remarks: 1048084|1|1| WTC101116-03 ID:TOC267

3	Std3	1	16Nov2010	11:58	-	-	-	5021	4.900	1.000	-	-	-

** Calibration: RF (ugC/k-cts): 1.196
R-Squared: 0.9998
Offset (cts): 1249
Offset (ugC): -1.494

** Std4 Name: ICAL-04 Data File: XD332
Remarks: 1048084|1|1| WTC101116-04 ID:TOC267

4	Std4	1	16Nov2010	12:07	-	-	-	1980	0.980	0.200	-	-	-

** Calibration: RF (ugC/k-cts): 1.195
R-Squared: 0.9999
Offset (cts): 1206
Offset (ugC): -1.442

** Std5 Name: ICAL-05 Data File: XD333
Remarks: 1048084|1|1| ID:TOC267

5	Std5	1	16Nov2010	12:16	-	-	-	1128	0.000	0.000	-	-	-

** Calibration: RF (ugC/k-cts): 1.195
R-Squared: 0.9999
Offset (cts): 1180
Offset (ugC): -1.411

```
** Chk2     Name:    ICV                          Data File: XD334
            Remarks: 1048084|1|1| WTC101116-05 ID:TOC267

6    Chk2   1 16Nov2010 12:25      -       -          -    43217  50.213     10.248      -       -          -


** Chk5     Name:    ICB                          Data File: XD335
            Remarks: 1048084|1|1| ID:TOC267

7    Chk5   1 16Nov2010 12:34      -       -          -     1165  -0.019     -0.004      -       -          -


** Spl      Name:    TIC                          Data File: XD336
            Remarks: 1048084|1|1| WIC101116-01 ID:TOC267

8    Spl    1 16Nov2010 12:44      -       -          -     1500   1.222      0.249      -       -          -
```

```
                                |- - - - - T I C  - - - -| |- - - - - T O C  - - - -| |- - - - - - T C  - - - -|
Pos/ Run  Rep   Run     Run    Area    Mass     Conc      Area    Mass     Conc      Area    Mass    Conc
Vial Type  #    Date    Time   (cts)   (ugC)    (ppm)     (cts)   (ugC)    (ppm)     (cts)   (ugC)   (ppm)
---- ---- --- --------- ----- ------- ------- ---------- ------- ------- ---------- ------- ------- ----------

** Chk2     Name:    CCV                          Data File: XD343
            Remarks: 1048084|1|1| WTC101116-02 ID:TOC267

1    Chk2   1 16Nov2010 15:51      -       -          -    40844  47.378      9.669      -       -          -


** Chk5     Name:    CCB                          Data File: XD344
            Remarks: 1048084|1|1|  ID:TOC267

2    Chk5   1 16Nov2010 16:00      -       -          -     1397   0.258      0.053      -       -          -


** Chk5     Name:    1202262321                   Data File: XD345
            Remarks: 1048084|1|1|  MB ID:TOC267

3    Chk5   1 16Nov2010 16:09      -       -          -     1289   0.129      0.026      -       -          -


** Chk2     Name:    1202262326                   Data File: XD346
            Remarks: 1048084|1|1|  WTC101116-05:LCS ID:TOC267

4    Chk2   1 16Nov2010 16:18      -       -          -    40660  47.158      9.624      -       -          -


** Spl      Name:    266779001                    Data File: XD347
            Remarks: 1048084|1|1|  ID:TOC267

5    Spl    1 16Nov2010 16:26      -       -          -    15200  17.587      3.589      -       -          -
5    Spl    2 16Nov2010 16:34      -       -          -    17923  20.839      4.253      -       -          -
5    Spl    3 16Nov2010 16:42      -       -          -    17176  19.947      4.071      -       -          -
5    Spl    4 16Nov2010 16:51      -       -          -    16897  19.614      4.003      -       -          -
5    Spl  Avg                                           16799  19.497      3.979
5    Spl  SDev                                        1150.639
5    Spl  %RSD                                            6.85


** Spl      Name:    1202262322                   Data File: XD348
            Remarks: 1048084|1|1| 266779001:DUP ID:TOC267

6    Spl    1 16Nov2010 17:00      -       -          -    16070  18.626      3.801      -       -          -
6    Spl    2 16Nov2010 17:09      -       -          -    17694  20.566      4.197      -       -          -
6    Spl  Avg                                           16882  19.596      3.999
6    Spl  SDev                                        1148.341
6    Spl  %RSD                                            6.80


** Spl      Name:    1202262324                   Data File: XD349
            Remarks: 1048084|1|1| 266779001:PS ID:TOC267

7    Spl    1 16Nov2010 17:20      -       -          -    54777  64.862     13.237      -       -          -


** Spl      Name:    266779002                    Data File: XD350
            Remarks: 1048084|1|1|  ID:TOC267

8    Spl    1 16Nov2010 17:28      -       -          -    21481  25.090      5.120      -       -          -
8    Spl    2 16Nov2010 17:36      -       -          -    24279  28.432      5.802      -       -          -
8    Spl    3 16Nov2010 17:43      -       -          -    24076  28.189      5.753      -       -          -
8    Spl    4 16Nov2010 17:53      -       -          -    23736  27.783      5.670      -       -          -
8    Spl  Avg                                           23393  27.373      5.586
```

```
8    Spl  SDev                                          1294.202
8    Spl  %RSD                                              5.53


** Spl      Name:    266779004                    Data File: XD351
            Remarks: 1048084|1|1|  ID:TOC267

9    Spl    1 16Nov2010 18:02      -       -          -    22220  25.972      5.300      -       -          -
9    Spl    2 16Nov2010 18:09      -       -          -    24816  29.073      5.933      -       -          -
9    Spl    3 16Nov2010 18:17      -       -          -    24273  28.425      5.801      -       -          -
9    Spl    4 16Nov2010 18:27      -       -          -    24395  28.570      5.831      -       -          -
9    Spl  Avg                                           23926  28.010      5.716
9    Spl  SDev                                          1160.877
9    Spl  %RSD                                              4.85


** Spl      Name:    266779005                    Data File: XD352
            Remarks: 1048084|1|1|  ID:TOC267

10   Spl    1 16Nov2010 18:35      -       -          -    42517  50.217     10.248      -       -          -
10   Spl    2 16Nov2010 18:43      -       -          -    49021  57.986     11.834      -       -          -
10   Spl    3 16Nov2010 18:51      -       -          -    49443  58.491     11.937      -       -          -
10   Spl    4 16Nov2010 19:00      -       -          -    49243  58.252     11.888      -       -          -
10   Spl  Avg                                           47556  56.236     11.477
10   Spl  SDev                                          3363.752
10   Spl  %RSD                                              7.07


** Spl      Name:    266779009                    Data File: XD353
            Remarks: 1048084|1|1|  ID:TOC267

11   Spl    1 16Nov2010 19:09      -       -          -     2062   1.893      0.386      -       -          -
11   Spl    2 16Nov2010 19:16      -       -          -     1916   1.719      0.351      -       -          -
11   Spl    3 16Nov2010 19:24      -       -          -     1836   1.623      0.331      -       -          -
11   Spl    4 16Nov2010 19:34      -       -          -     1850   1.640      0.335      -       -          -
11   Spl  Avg                                            1916   1.719      0.351
11   Spl  SDev                                          103.396
11   Spl  %RSD                                              5.40


** Spl      Name:    266782002                    Data File: XD354
            Remarks: 1048084|1|1|  ID:TOC267

12   Spl    1 16Nov2010 19:42      -       -          -     2106   1.946      0.397      -       -          -
12   Spl    2 16Nov2010 19:50      -       -          -     2204   2.063      0.421      -       -          -
12   Spl    3 16Nov2010 19:58      -       -          -     1988   1.805      0.368      -       -          -
12   Spl    4 16Nov2010 20:07      -       -          -     2103   1.942      0.396      -       -          -
12   Spl  Avg                                            2100   1.939      0.396
12   Spl  SDev                                          88.327
12   Spl  %RSD                                              4.21


** Chk2     Name:    CCV                          Data File: XD355
            Remarks: 1048084|1|1| WTC101116-02 ID:TOC267

13   Chk2   1 16Nov2010 20:16      -       -          -    43398  50.429     10.292      -       -          -


** Chk5     Name:    CCB                          Data File: XD356
            Remarks: 1048084|1|1|  ID:TOC267

14   Chk5   1 16Nov2010 20:25      -       -          -     1095  -0.103     -0.021      -       -          -


** Spl      Name:    266782003                    Data File: XD357
```

```
            Remarks: 1048084|1|1|  ID:TOC267

15   Spl    1 16Nov2010 20:34      -       -          -     2251   2.119      0.433      -       -          -
15   Spl    2 16Nov2010 20:41      -       -          -     2290   2.166      0.442      -       -          -
15   Spl    3 16Nov2010 20:49      -       -          -     2086   1.922      0.392      -       -          -
15   Spl    4 16Nov2010 20:59      -       -          -     2111   1.952      0.398      -       -          -
15   Spl  Avg                                             2184   2.040      0.416
15   Spl  SDev                                         101.089
15   Spl  %RSD                                            4.63


** Spl      Name:    266789001                    Data File: XD358
            Remarks: 1048084|1|1|  ID:TOC267

16   Spl    1 16Nov2010 21:07      -       -          -     3240   3.300      0.674      -       -          -
16   Spl    2 16Nov2010 21:15      -       -          -     3613   3.746      0.765      -       -          -
16   Spl    3 16Nov2010 21:23      -       -          -     3266   3.331      0.680      -       -          -
16   Spl    4 16Nov2010 21:32      -       -          -     3332   3.410      0.696      -       -          -
16   Spl  Avg                                             3362   3.447      0.703
16   Spl  SDev                                         171.269
16   Spl  %RSD                                            5.09


** Spl      Name:    266791001                    Data File: XD359
            Remarks: 1048084|1|1|  ID:TOC267

17   Spl    1 16Nov2010 21:41      -       -          -     2581   2.513      0.513      -       -          -
17   Spl    2 16Nov2010 21:48      -       -          -     2416   2.316      0.473      -       -          -
17   Spl    3 16Nov2010 21:56      -       -          -     1933   1.739      0.355      -       -          -
17   Spl    4 16Nov2010 22:06      -       -          -     2141   1.988      0.406      -       -          -
17   Spl  Avg                                             2267   2.139      0.437
17   Spl  SDev                                         287.650
17   Spl  %RSD                                           12.68


** Spl      Name:    266878001                    Data File: XD360
            Remarks: 1048084|1|1|  ID:TOC267

18   Spl    1 16Nov2010 22:14      -       -          -     1993   1.811      0.370      -       -          -
18   Spl    2 16Nov2010 22:22      -       -          -     2540   2.464      0.503      -       -          -
18   Spl    3 16Nov2010 22:30      -       -          -     2064   1.896      0.387      -       -          -
18   Spl    4 16Nov2010 22:39      -       -          -     2354   2.242      0.458      -       -          -
18   Spl  Avg                                             2237   2.103      0.429
18   Spl  SDev                                         254.925
18   Spl  %RSD                                           11.39


** Spl      Name:    266878003                    Data File: XD361
            Remarks: 1048084|1|1|  ID:TOC267

19   Spl    1 16Nov2010 22:48      -       -          -     4413   4.702      0.960      -       -          -
19   Spl    2 16Nov2010 22:55      -       -          -     6065   6.675      1.362      -       -          -
19   Spl    3 16Nov2010 23:03      -       -          -     4414   4.703      0.960      -       -          -
19   Spl    4 16Nov2010 23:13      -       -          -     4478   4.779      0.975      -       -          -
19   Spl  Avg                                             4842   5.215      1.064
19   Spl  SDev                                         815.567
19   Spl  %RSD                                           16.84


** Spl      Name:    266878005                    Data File: XD362
            Remarks: 1048084|1|1|  ID:TOC267

20   Spl    1 16Nov2010 23:21      -       -          -     3107   3.142      0.641      -       -          -
20   Spl    2 16Nov2010 23:29      -       -          -     4118   4.349      0.888      -       -          -
20   Spl    3 16Nov2010 23:37      -       -          -     3324   3.401      0.694      -       -          -
```

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20   Spl    4 16Nov2010 23:46      -       -          -     3587   3.715      0.758      -       -          -
20   Spl  Avg                                            3534   3.652      0.745
20   Spl  SDev                                        436.002
20   Spl  %RSD                                          12.34


** Spl      Name:    266879001                    Data File: XD363
            Remarks: 1048084|1|1|  ID:TOC267

21   Spl    1 16Nov2010 23:55      -       -          -     4009   4.219      0.861      -       -          -
21   Spl    2 17Nov2010 00:02      -       -          -     3945   4.143      0.845      -       -          -
21   Spl    3 17Nov2010 00:10      -       -          -     3909   4.100      0.837      -       -          -
21   Spl    4 17Nov2010 00:20      -       -          -     3877   4.061      0.829      -       -          -
21   Spl  Avg                                            3935   4.131      0.843
21   Spl  SDev                                         56.616
21   Spl  %RSD                                           1.44


** Spl      Name:    1202262323                   Data File: XD364
            Remarks: 1048084|1|1| 266879001:DUP ID:TOC267

22   Spl    1 17Nov2010 00:28      -       -          -     4399   4.685      0.956      -       -          -
22   Spl    2 17Nov2010 00:38      -       -          -     3865   4.047      0.826      -       -          -
22   Spl  Avg                                            4132   4.366      0.891
22   Spl  SDev                                        377.595
22   Spl  %RSD                                           9.14


** Spl      Name:    1202262325                   Data File: XD365
            Remarks: 1048084|1|1| 266879001:PS ID:TOC267

23   Spl    1 17Nov2010 00:48      -       -          -    43401  51.273     10.464      -       -          -


** Spl      Name:    266881001                    Data File: XD366
            Remarks: 1048084|1|1| ID:TOC267

24   Spl    1 17Nov2010 00:56      -       -          -     4650   4.985      1.017      -       -          -
24   Spl    2 17Nov2010 01:04      -       -          -     4856   5.231      1.067      -       -          -
24   Spl    3 17Nov2010 01:12      -       -          -     4986   5.386      1.099      -       -          -
24   Spl    4 17Nov2010 01:22      -       -          -     4946   5.338      1.089      -       -          -
24   Spl  Avg                                            4859   5.235      1.068
24   Spl  SDev                                        149.874
24   Spl  %RSD                                           3.08


** Chk2     Name:    CCV                          Data File: XD367
            Remarks: 1048084|1|1| WTC101116-02 ID:TOC267

25   Chk2   1 17Nov2010 01:31      -       -          -    42200  48.998     10.000      -       -          -


** Chk5     Name:    CCB                          Data File: XD368
            Remarks: 1048084|1|1| ID:TOC267

26   Chk5   1 17Nov2010 01:39      -       -          -      978  -0.242     -0.049      -       -          -


** Spl      Name:    266881003                    Data File: XD369
            Remarks: 1048084|1|1| ID:TOC267

27   Spl    1 17Nov2010 01:48      -       -          -     4983   5.382      1.099      -       -          -
27   Spl    2 17Nov2010 01:56      -       -          -     5165   5.600      1.143      -       -          -
27   Spl    3 17Nov2010 02:03      -       -          -     5121   5.547      1.132      -       -          -
27   Spl    4 17Nov2010 02:13      -       -          -     5019   5.425      1.107      -       -          -
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27   Spl  Avg                                          5072   5.489      1.120
27   Spl  SDev                                       85.206
27   Spl  %RSD                                         1.68

** Spl      Name:    266890002                   Data File: XD370
            Remarks: 1048084|1|1| ID:TOC267

28   Spl    1 17Nov2010 02:21      -       -         -     7204   8.035      1.640      -       -          -
28   Spl    2 17Nov2010 02:29      -       -         -     7597   8.505      1.736      -       -          -
28   Spl    3 17Nov2010 02:37      -       -         -     7752   8.690      1.773      -       -          -
28   Spl    4 17Nov2010 02:47      -       -         -     7373   8.237      1.681      -       -          -
28   Spl  Avg                                          7481   8.367      1.707
28   Spl  SDev                                      241.722
28   Spl  %RSD                                         3.23

** Spl      Name:    266890004                   Data File: XD371
            Remarks: 1048084|1|1| ID:TOC267

29   Spl    1 17Nov2010 02:55      -       -         -     6488   7.180      1.465      -       -          -
29   Spl    2 17Nov2010 03:03      -       -         -     7122   7.938      1.620      -       -          -
29   Spl    3 17Nov2010 03:11      -       -         -     6887   7.657      1.563      -       -          -
29   Spl    4 17Nov2010 03:20      -       -         -     6732   7.472      1.525      -       -          -
29   Spl  Avg                                          6807   7.562      1.543
29   Spl  SDev                                      266.465
29   Spl  %RSD                                         3.91

** Spl      Name:    266983002                   Data File: XD372
            Remarks: 1048084|1|1| ID:TOC267

30   Spl    1 17Nov2010 03:29      -       -         -     4228   4.481      0.914      -       -          -
30   Spl    2 17Nov2010 03:36      -       -         -     3934   4.129      0.843      -       -          -
30   Spl    3 17Nov2010 03:44      -       -         -     3555   3.677      0.750      -       -          -
30   Spl    4 17Nov2010 03:54      -       -         -     3652   3.793      0.774      -       -          -
30   Spl  Avg                                          3842   4.020      0.820
30   Spl  SDev                                      303.276
30   Spl  %RSD                                         7.89

** Spl      Name:    266983003                   Data File: XD373
            Remarks: 1048084|1|1| ID:TOC267

31   Spl    1 17Nov2010 04:02      -       -         -     3290   3.360      0.686      -       -          -
31   Spl    2 17Nov2010 04:10      -       -         -     3605   3.736      0.762      -       -          -
31   Spl    3 17Nov2010 04:18      -       -         -     3321   3.397      0.693      -       -          -
31   Spl    4 17Nov2010 04:27      -       -         -     3386   3.475      0.709      -       -          -
31   Spl  Avg                                          3400   3.492      0.713
31   Spl  SDev                                      142.081
31   Spl  %RSD                                         4.18

** Chk2     Name:    CCV                         Data File: XD374
            Remarks: 1048084|1|1| WTC101116-02 ID:TOC267

32   Chk2   1 17Nov2010 04:36      -       -         -    43715  50.807     10.369      -       -          -

** Chk5     Name:    CCB                         Data File: XD375
            Remarks: 1048084|1|1| ID:TOC267

33   Chk5   1 17Nov2010 04:45      -       -         -     1070  -0.133     -0.027      -       -          -
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** Chk2     Name:    CCV                          Data File: XD376
            Remarks: 1048660|1|1| WTC101116-02 ID:TOC267

34   Chk2   1 17Nov2010 04:54      -       -          -    42969  49.916     10.187      -       -          -


** Chk5     Name:    CCB                          Data File: XD377
            Remarks: 1048660|1|1| ID:TOC267

35   Chk5   1 17Nov2010 05:03      -       -          -     1166  -0.018     -0.004      -       -          -


** Chk5     Name:    1202263843                   Data File: XD378
            Remarks: 1048660|1|1| MB ID:TOC267

36   Chk5   1 17Nov2010 05:12      -       -          -     1366   0.221      0.045      -       -          -


** Chk2     Name:    1202263846                   Data File: XD379
            Remarks: 1048660|1|1| WTC101116-05:LCS ID:TOC267

37   Chk2   1 17Nov2010 05:21      -       -          -    43897  51.025     10.413      -       -          -


** Spl      Name:    266984002                    Data File: XD380
            Remarks: 1048660|1|1| ID:TOC267

38   Spl    1 17Nov2010 05:29      -       -          -     2793   2.766      0.565      -       -          -
38   Spl    2 17Nov2010 05:37      -       -          -     3466   3.570      0.729      -       -          -
38   Spl    3 17Nov2010 05:45      -       -          -     2717   2.676      0.546      -       -          -
38   Spl    4 17Nov2010 05:54      -       -          -     2835   2.817      0.575      -       -          -
38   Spl  Avg                                           2952   2.957      0.604
38   Spl  SDev                                       345.634
38   Spl  %RSD                                         11.71


** Spl      Name:    1202263844                   Data File: XD381
            Remarks: 1048660|1|1| 266984002:DUP ID:TOC267

39   Spl    1 17Nov2010 06:03      -       -          -     2464   2.373      0.484      -       -          -
39   Spl    2 17Nov2010 06:12      -       -          -     2609   2.547      0.520      -       -          -
39   Spl  Avg                                           2536   2.460      0.502
39   Spl  SDev                                       102.530
39   Spl  %RSD                                          4.04


** Spl      Name:    1202263845                   Data File: XD382
            Remarks: 1048660|1|1| 266984002:PS ID:TOC267

40   Spl    1 17Nov2010 06:23      -       -          -    42326  49.989     10.202      -       -          -


** Spl      Name:    266984003                    Data File: XD383
            Remarks: 1048660|1|1|  ID:TOC267

41   Spl    1 17Nov2010 06:31      -       -          -     3245   3.306      0.675      -       -          -
41   Spl    2 17Nov2010 06:39      -       -          -     3630   3.766      0.769      -       -          -
41   Spl    3 17Nov2010 06:46      -       -          -     3435   3.533      0.721      -       -          -
41   Spl    4 17Nov2010 06:56      -       -          -     3474   3.580      0.731      -       -          -
41   Spl  Avg                                           3446   3.547      0.724
41   Spl  SDev                                       158.285
41   Spl  %RSD                                          4.59


** Spl      Name:    266985001                    Data File: XD384
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            Remarks: 1048660|1|1|  ID:TOC267

42   Spl    1 17Nov2010 07:05      -       -          -     2385   2.279      0.465      -       -          -
42   Spl    2 17Nov2010 07:12      -       -          -     2448   2.354      0.481      -       -          -
42   Spl    3 17Nov2010 07:20      -       -          -     2389   2.284      0.466      -       -          -
42   Spl    4 17Nov2010 07:30      -       -          -     2424   2.326      0.475      -       -          -
42   Spl  Avg                                             2411   2.311      0.472
42   Spl  SDev                                          29.983
42   Spl  %RSD                                            1.24


** Spl      Name:    266988001                    Data File: XD385
            Remarks: 1048660|100|1|  ID:TOC267

43   Spl    1 17Nov2010 07:38      -       -          -     2424   2.326      0.475      -       -          -
43   Spl    2 17Nov2010 07:46      -       -          -     2471   2.382      0.486      -       -          -
43   Spl    3 17Nov2010 07:54      -       -          -     2501   2.418      0.493      -       -          -
43   Spl    4 17Nov2010 08:03      -       -          -     2462   2.371      0.484      -       -          -
43   Spl  Avg                                             2464   2.374      0.484
43   Spl  SDev                                          31.733
43   Spl  %RSD                                            1.29


** Spl      Name:    266990001                    Data File: XD386
            Remarks: 1048660|1|1|  ID:TOC267

44   Spl    1 17Nov2010 08:12      -       -          -    17779  20.667      4.218      -       -          -
44   Spl    2 17Nov2010 08:19      -       -          -    19613  22.858      4.665      -       -          -
44   Spl    3 17Nov2010 08:27      -       -          -    20225  23.589      4.814      -       -          -
44   Spl    4 17Nov2010 08:37      -       -          -    20351  23.740      4.845      -       -          -
44   Spl  Avg                                            19492  22.714      4.635
44   Spl  SDev                                         1186.617
44   Spl  %RSD                                            6.09


** Chk2     Name:    CCV                          Data File: XD387
            Remarks: 1048660|1|1| WTC101116-02 ID:TOC267

45   Chk2   1 17Nov2010 08:46      -       -          -    43434  50.472     10.300      -       -          -


** Chk5     Name:    CCB                          Data File: XD388
            Remarks: 1048660|1|1|  ID:TOC267

46   Chk5   1 17Nov2010 08:55      -       -          -      967  -0.256     -0.052      -       -          -


** Chk5     Name:    1202263847                   Data File: XD389
            Remarks: 1048662|1|1| MB ID:TOC267

47   Chk5   1 17Nov2010 09:04      -       -          -     1249   0.081      0.017      -       -          -


** Chk2     Name:    1202263850                   Data File: XD390
            Remarks: 1048662|1|1| WTC101116-05:LCS ID:TOC267

48   Chk2   1 17Nov2010 09:13      -       -          -    44346  51.561     10.523      -       -          -


** Spl      Name:    266879001                    Data File: XD391
            Remarks: 1048662|1|1| DOC ID:TOC267

49   Spl    1 17Nov2010 09:21      -       -          -     4284   4.548      0.928      -       -          -
49   Spl    2 17Nov2010 09:29      -       -          -     4260   4.519      0.922      -       -          -
49   Spl    3 17Nov2010 09:37      -       -          -     4205   4.453      0.909      -       -          -
```

```
49   Spl    4 17Nov2010 09:46      -       -          -     4172   4.414      0.901      -       -          -
49   Spl  Avg                                                4230   4.483      0.915
49   Spl  SDev                                             51.006
49   Spl  %RSD                                               1.21


** Spl      Name:    1202263848                   Data File: XD392
            Remarks: 1048662|1|1| 266879001:DUP ID:TOC267

50   Spl    1 17Nov2010 09:55      -       -          -     4302   4.569      0.933      -       -          -
50   Spl    2 17Nov2010 10:04      -       -          -     4246   4.502      0.919      -       -          -
50   Spl  Avg                                                4274   4.536      0.926
50   Spl  SDev                                             39.598
50   Spl  %RSD                                               0.93


** Spl      Name:    1202263849                   Data File: XD393
            Remarks: 1048662|1|1| 266879001:PS ID:TOC267

51   Spl    1 17Nov2010 10:15      -       -          -    44868  53.026     10.822      -       -          -


** Chk2     Name:    CCV                          Data File: XD394
            Remarks: 1048662|1|1| WTC101116-02 ID:TOC267

52   Chk2   1 17Nov2010 10:24      -       -          -    43444  50.484     10.303      -       -          -


** Chk5     Name:    CCB                          Data File: XD395
            Remarks: 1048662|1|1|  ID:TOC267

53   Chk5   1 17Nov2010 10:33      -       -          -     1640   0.548      0.112      -       -          -
```

Cyanide, Total

Prep Logbook

Cyanide Sample Distillation

Batch ID: **1048529.0** Verified by: _____

Analyst: Alan Stanley

Method: EPA 335.4

Lab SOP: GL-GC-E-067 REV# 15

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202263539	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1414454-02	.0125	mL
MS	1202263535	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1414454-02	.025	mL
MS	1202263536	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1414454-02	.025	mL
MSD	1202263537	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1414454-02	.025	mL
MSD	1202263538	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1414454-02	.025	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202263532 MB	15-NOV-2010 14:14:00	Water	25	25	1	>12
1202263539 LCS	15-NOV-2010 14:14:00	Water	25	25	1	>12
266878001	15-NOV-2010 14:14:00	Water	25	25	1	>12
1202263533 DUP (266878001)	15-NOV-2010 14:14:00	Water	25	25	1	>12
1202263535 MS (266878001)	15-NOV-2010 14:14:00	Water	25	25	1	>12
1202263537 MSD (266878001)	15-NOV-2010 14:14:00	Water	25	25	1	>12
266878003	15-NOV-2010 14:14:00	Water	25	25	1	>12
1202263534 DUP (266878003)	15-NOV-2010 14:14:00	Water	25	25	1	>12
1202263536 MS (266878003)	15-NOV-2010 14:14:00	Water	25	25	1	>12
1202263538 MSD (266878003)	15-NOV-2010 14:14:00	Water	25	25	1	>12
266878005	15-NOV-2010 14:14:00	Water	25	25	1	>12
266881001	15-NOV-2010 14:14:00	Water	25	25	1	>12
266881003	15-NOV-2010 14:14:00	Water	25	25	1	>12
266890002	15-NOV-2010 14:14:00	Water	25	25	1	>12
266890004	15-NOV-2010 14:14:00	Water	25	25	1	>12
266892004	15-NOV-2010 14:14:00	Water	25	25	1	>12
266893002	15-NOV-2010 14:14:00	Waste Water	25	25	1	>12
266983002	15-NOV-2010 14:14:00	Water	25	25	1	>12
266983003	15-NOV-2010 14:14:00	Water	25	25	1	>12
266984002	15-NOV-2010 14:14:00	Water	25	25	1	>12
266984003	15-NOV-2010 14:14:00	Water	25	25	1	>12

Prep Logbook

Batch ID: **1048529.0** Verified by: _____

Analyst: Alan Stanley

Method: EPA 335.4

Lab SOP: GL-GC-E-067 REV# 15

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202263539	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1414454-02	.0125	mL
MS	1202263535	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1414454-02	.025	mL
MS	1202263536	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1414454-02	.025	mL
MSD	1202263537	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1414454-02	.025	mL
MSD	1202263538	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1414454-02	.025	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
266985001	15-NOV-2010 14:14:00	Water	25	25	1	>12
266988001	15-NOV-2010 14:14:00	Water	25	25	1	>12
266990001	15-NOV-2010 14:14:00	Water	25	25	1	>12

Reagent/Solvent Lot ID	Description	Amount
1410321-C	0.25N Sodium Hydroxide Solution	25 mL
1435915-C	0.8N H3NO3S	1.25 mL
1435917-C	50% H2SO4 CN Prep	2.5 mL
1435920-C	Bismuth Nitrate Solution	1.25 mL
1447601-C	51% MgCl2 Soln	1 mL
WCN101115-07	150 ppb CN Distilled ICV Standard	.0375 mL

Comments:

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	sha00813	11/16/2010 8:16:38	OM_11-16-2010_08-15-07
150 ppb		1	sha00813	11/16/2010 8:17:30	OM_11-16-2010_08-15-07
100 ppb		1	sha00813	11/16/2010 8:18:22	OM_11-16-2010_08-15-07
50 ppb		1	sha00813	11/16/2010 8:19:16	OM_11-16-2010_08-15-07
10 ppb		1	sha00813	11/16/2010 8:20:09	OM_11-16-2010_08-15-07
5.0 ppb		1	sha00813	11/16/2010 8:21:03	OM_11-16-2010_08-15-07
ICAL-00		1	sha00813	11/16/2010 8:21:57	OM_11-16-2010_08-15-07
ICV		1	sha00813	11/16/2010 8:23:48	OM_11-16-2010_08-15-07
ICB		1	sha00813	11/16/2010 8:25:39	OM_11-16-2010_08-15-07
CRDL		1	sha00813	11/16/2010 8:27:29	OM_11-16-2010_08-15-07
1202263532	1048531	1	sha00813	11/16/2010 8:29:18	OM_11-16-2010_08-15-07
1202263539	1048531	1	sha00813	11/16/2010 8:30:11	OM_11-16-2010_08-15-07
266878001	1048531	1	sha00813	11/16/2010 8:31:05	OM_11-16-2010_08-15-07
1202263533	1048531	1	sha00813	11/16/2010 8:31:58	OM_11-16-2010_08-15-07
1202263535	1048531	1	sha00813	11/16/2010 8:32:51	OM_11-16-2010_08-15-07
1202263537	1048531	1	sha00813	11/16/2010 8:33:45	OM_11-16-2010_08-15-07
266878003*	1048531	1	sha00813	11/16/2010 8:34:37	OM_11-16-2010_08-15-07
1202263534*	1048531	1	sha00813	11/16/2010 8:35:30	OM_11-16-2010_08-15-07
1202263536*	1048531	1	sha00813	11/16/2010 8:36:23	OM_11-16-2010_08-15-07
1202263538*	1048531	1	sha00813	11/16/2010 8:37:15	OM_11-16-2010_08-15-07
CCV		1	sha00813	11/16/2010 8:38:08	OM_11-16-2010_08-15-07
CCB		1	sha00813	11/16/2010 8:39:58	OM_11-16-2010_08-15-07
266878005	1048531	1	sha00813	11/16/2010 8:41:46	OM_11-16-2010_08-15-07
266881001	1048531	1	sha00813	11/16/2010 8:42:39	OM_11-16-2010_08-15-07
266881003	1048531	1	sha00813	11/16/2010 8:43:30	OM_11-16-2010_08-15-07
266890002	1048531	1	sha00813	11/16/2010 8:44:22	OM_11-16-2010_08-15-07
266890004	1048531	1	sha00813	11/16/2010 8:45:14	OM_11-16-2010_08-15-07
266892004	1048531	1	sha00813	11/16/2010 8:46:08	OM_11-16-2010_08-15-07
266893002	1048531	1	sha00813	11/16/2010 8:47:02	OM_11-16-2010_08-15-07
266983002	1048531	1	sha00813	11/16/2010 8:47:55	OM_11-16-2010_08-15-07
266983003	1048531	1	sha00813	11/16/2010 8:48:49	OM_11-16-2010_08-15-07
266984002	1048531	1	sha00813	11/16/2010 8:49:42	OM_11-16-2010_08-15-07
CCV		1	sha00813	11/16/2010 8:50:34	OM_11-16-2010_08-15-07
CCB		1	sha00813	11/16/2010 8:52:25	OM_11-16-2010_08-15-07
266984003	1048531	1	sha00813	11/16/2010 8:54:14	OM_11-16-2010_08-15-07
266985001	1048531	1	sha00813	11/16/2010 8:55:08	OM_11-16-2010_08-15-07
266988001	1048531	1	sha00813	11/16/2010 8:56:00	OM_11-16-2010_08-15-07
266990001	1048531	1	sha00813	11/16/2010 8:56:53	OM_11-16-2010_08-15-07
266878003	1048531	1	sha00813	11/16/2010 8:57:47	OM_11-16-2010_08-15-07
1202263534	1048531	1	sha00813	11/16/2010 8:58:39	OM_11-16-2010_08-15-07
1202263536	1048531	1	sha00813	11/16/2010 8:59:32	OM_11-16-2010_08-15-07
1202263538	1048531	1	sha00813	11/16/2010 9:00:24	OM_11-16-2010_08-15-07
1202263527	1048528	1	sha00813	11/16/2010 9:01:17	OM_11-16-2010_08-15-07
1202263531	1048528	25	sha00813	11/16/2010 9:02:10	OM_11-16-2010_08-15-07
CCV		1	sha00813	11/16/2010 9:03:02	OM_11-16-2010_08-15-07
CCB		1	sha00813	11/16/2010 9:04:54	OM_11-16-2010_08-15-07
266876001	1048528	1	sha00813	11/16/2010 9:06:42	OM_11-16-2010_08-15-07
1202263528	1048528	1	sha00813	11/16/2010 9:07:34	OM_11-16-2010_08-15-07
1202263529	1048528	1	sha00813	11/16/2010 9:08:27	OM_11-16-2010_08-15-07
1202263530	1048528	1	sha00813	11/16/2010 9:09:19	OM_11-16-2010_08-15-07
266876002	1048528	1	sha00813	11/16/2010 9:10:13	OM_11-16-2010_08-15-07
266876003	1048528	1	sha00813	11/16/2010 9:11:07	OM_11-16-2010_08-15-07
1202263521	1048523	1	sha00813	11/16/2010 9:12:01	OM_11-16-2010_08-15-07
1202263523	1048523	1	sha00813	11/16/2010 9:12:55	OM_11-16-2010_08-15-07
266353001	1048523	1	sha00813	11/16/2010 9:13:49	OM_11-16-2010_08-15-07
266354001	1048523	1	sha00813	11/16/2010 9:14:42	OM_11-16-2010_08-15-07
CCV		1	sha00813	11/16/2010 9:15:35	OM_11-16-2010_08-15-07
CCB		1	sha00813	11/16/2010 9:17:26	OM_11-16-2010_08-15-07

266975006	1048523	1	sha00813	11/16/2010	9:19:15	OM_11-16-2010_08-15-07
1202263522	1048523	1	sha00813	11/16/2010	9:20:09	OM_11-16-2010_08-15-07
1202263524	1048526	1	sha00813	11/16/2010	9:21:02	OM_11-16-2010_08-15-07
1202263526	1048526	250	sha00813	11/16/2010	9:21:55	OM_11-16-2010_08-15-07
1202265112	1048526	250	sha00813	11/16/2010	9:22:47	OM_11-16-2010_08-15-07
266903001	1048526	1	sha00813	11/16/2010	9:23:40	OM_11-16-2010_08-15-07
266903002	1048526	1	sha00813	11/16/2010	9:24:38	OM_11-16-2010_08-15-07
CCV		1	sha00813	11/16/2010	9:25:31	OM_11-16-2010_08-15-07
CCB		1	sha00813	11/16/2010	9:27:21	OM_11-16-2010_08-15-07

Author: sha00813 Date : 11/16/2010

Original Run Filename: OM_11-16-2010_08-15-07.OMN created 11/16/2010 08:15:07
Original Run Author's Signature: [sha00813]
Current Run Filename: OM_11-16-2010_08-15-07.OMN last modified 11/16/2010 09:28:26
Current Run Author's Signature: [sha00813]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN101116-01	1	S1	200	10.1	11/16/2010@08:16:38			200 ppb
WCN101116-02	1	S2	150	7.30	11/16/2010@08:17:30			150 ppb
WCN101116-03	1	S3	100	4.71	11/16/2010@08:18:22			100 ppb
WCN101116-04	1	S4	50.0	2.69	11/16/2010@08:19:16			50 ppb
WCN101116-05	1	S5	10.0	0.589	11/16/2010@08:20:09			10 ppb
WCN101116-06	1	S6	5.00	0.339	11/16/2010@08:21:03			5.0 ppb
WCN101116-08	1	S7	0.00	-0.0649	11/16/2010@08:21:57			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99898 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN101116-07	1	S8	156	7.77	11/16/2010@08:23:48			ICV
		Known Conc:	150					
DQM Test: > + Concentration Limit								
		Result:	156 < 165					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	156 > 135					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN101116-08	1	S7	-1.64	-0.0598	11/16/2010@08:25:39			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.64 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.64 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN101116-06	1	S6	7.23	0.380	11/16/2010@08:27:29			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	7.23 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	7.23 > 2.50					
		Message	Pass					
		Action	None					
1202263532|1048531|MB	1	1	-2.48	-0.101	11/16/2010@08:29:18			
1202263539||LCS	1	2	51.4	2.57	11/16/2010@08:30:11			
266878001	1	3	-2.35	-0.0948	11/16/2010@08:31:05			
1202263533||DUP	1	4	-2.28	-0.0914	11/16/2010@08:31:58			
1202263535||MS	1	5	97.4	4.85	11/16/2010@08:32:51			
1202263537||MSD	1	6	94.1	4.69	11/16/2010@08:33:45			
266878003	1	7	-2.19	-0.0870	11/16/2010@08:34:37			
1202263534||DUP	1	8	-2.26	-0.0907	11/16/2010@08:35:30			
1202263536||MS	1	9	99.8	4.97	11/16/2010@08:36:23			
1202263538||MSD	1	10	69.9	3.49	11/16/2010@08:37:15			
WCN101116-03	1	S3	97.3	4.85	11/16/2010@08:38:08			CCV
		Known Conc:	100					
DQM Test: > + Concentration Limit								
		Result:	97.3 < 110					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	97.3 > 90.0					
		Message	CCV Passed					
		Action	Continue					
WCN101116-08	1	S7	-1.97	-0.0761	11/16/2010@08:39:58			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.97 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.97 > -5.00					
		Message	CCB Passed					
		Action	Continue					
266878005	1	11	4.39	0.239	11/16/2010@08:41:46			
266881001	1	12	2.80	0.160	11/16/2010@08:42:39			
266881003	1	13	-2.22	-0.0886	11/16/2010@08:43:30			
266890002	1	14	-1.77	-0.0664	11/16/2010@08:44:22			
266890004	1	15	2.45	0.143	11/16/2010@08:45:14			
266892004	1	16	-1.58	-0.0567	11/16/2010@08:46:08			
266893002	1	17	-1.65	-0.0605	11/16/2010@08:47:02			
266983002	1	18	-2.60	-0.107	11/16/2010@08:47:55			
266983003	1	19	-3.00	-0.127	11/16/2010@08:48:49			
266984002	1	20	-2.66	-0.110	11/16/2010@08:49:42			
WCN101116-03	1	S3	96.7	4.82	11/16/2010@08:50:34			CCV
		Known Conc:	100					
DQM Test: > + Concentration Limit								
		Result:	96.7 < 110					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	96.7 > 90.0					
		Message	CCV Passed					
		Action	Continue					
WCN101116-08	1	S7	-1.40	-0.0481	11/16/2010@08:52:25			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.40 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.40 > -5.00					
		Message	CCB Passed					
		Action	Continue					
266984003	1	21	-2.45	-0.100	11/16/2010@08:54:14			
266985001	1	22	-1.93	-0.0744	11/16/2010@08:55:08			
266988001	1	23	-2.33	-0.0941	11/16/2010@08:56:00			
266990001	1	24	-2.28	-0.0913	11/16/2010@08:56:53			
266878003	1	7	-2.53	-0.104	11/16/2010@08:57:47			
1202263534||DUP	1	8	-2.69	-0.112	11/16/2010@08:58:39			
1202263536||MS	1	9	97.5	4.86	11/16/2010@08:59:32			
1202263538||MSD	1	10	104	5.20	11/16/2010@09:00:24			
1202263527|1048528|MB	1	25	-2.47	-0.101	11/16/2010@09:01:17			
1202263531||LCS	1	26	25.7	1.30	11/16/2010@09:02:10		25.00	
WCN101116-03	1	S3	97.4	4.85	11/16/2010@09:03:02			CCV
		Known Conc:	100					
DQM Test: > + Concentration Limit								
		Result:	97.4 < 110					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	97.4 > 90.0					
		Message	CCV Passed					
		Action	Continue					
WCN101116-08	1	S7	-1.86	-0.0706	11/16/2010@09:04:54			CCB
		Known Conc:	0.00					

DQM Test: > + Concentration Limit								
		Result:	-1.86 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.86 > -5.00					
		Message	CCB Passed					
		Action	Continue					
266876001	1	27	-2.12	-0.0834	11/16/2010@09:06:42			
1202263528||DUP	1	28	-1.99	-0.0773	11/16/2010@09:07:34			
1202263529||MS	1	29	99.6	4.96	11/16/2010@09:08:27			
1202263530||MSD	1	30	93.7	4.67	11/16/2010@09:09:19			
266876002	1	31	-1.63	-0.0592	11/16/2010@09:10:13			
266876003	1	32	-2.02	-0.0788	11/16/2010@09:11:07			
1202263521|1048523|MB	1	33	-2.80	-0.117	11/16/2010@09:12:01			
1202263523||LCS	1	34	-2.42	-0.0983	11/16/2010@09:12:55			
266353001	1	35	-2.49	-0.102	11/16/2010@09:13:49			
266354001	1	36	71.8	3.58	11/16/2010@09:14:42			
WCN101116-03	1	S3	96.7	4.82	11/16/2010@09:15:35			CCV
		Known Conc:	100					
DQM Test: > + Concentration Limit								
		Result:	96.7 < 110					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	96.7 > 90.0					
		Message	CCV Passed					
		Action	Continue					
WCN101116-08	1	S7	0.491	0.0459	11/16/2010@09:17:26			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.491 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.491 > -5.00					
		Message	CCB Passed					
		Action	Continue					
266975006	1	37	-2.37	-0.0960	11/16/2010@09:19:15			
1202263522||DUP	1	38	-2.86	-0.120	11/16/2010@09:20:09			
1202263524|1048526|MB	1	39	-2.36	-0.0957	11/16/2010@09:21:02			
1202263526||LCS	1	40	35.2	1.77	11/16/2010@09:21:55		250.00	
1202265112||LCSD	1	41	97.3	4.85	11/16/2010@09:22:47		250.00	
266903001	1	42	-1.40	-0.0478	11/16/2010@09:23:40			
266903002	1	43	-2.77	-0.116	11/16/2010@09:24:38			
WCN101116-03	1	S3	91.7	4.57	11/16/2010@09:25:31			CCV
		Known Conc:	100					
DQM Test: > + Concentration Limit								
		Result:	91.7 < 110					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	91.7 > 90.0					
		Message	CCV Passed					
		Action	Continue					
WCN101116-08	1	S7	-1.59	-0.0575	11/16/2010@09:27:21			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.59 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.59 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_11-16-2010_08-15-07.OMN

Author: sha00813 Date : 11/16/2010

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

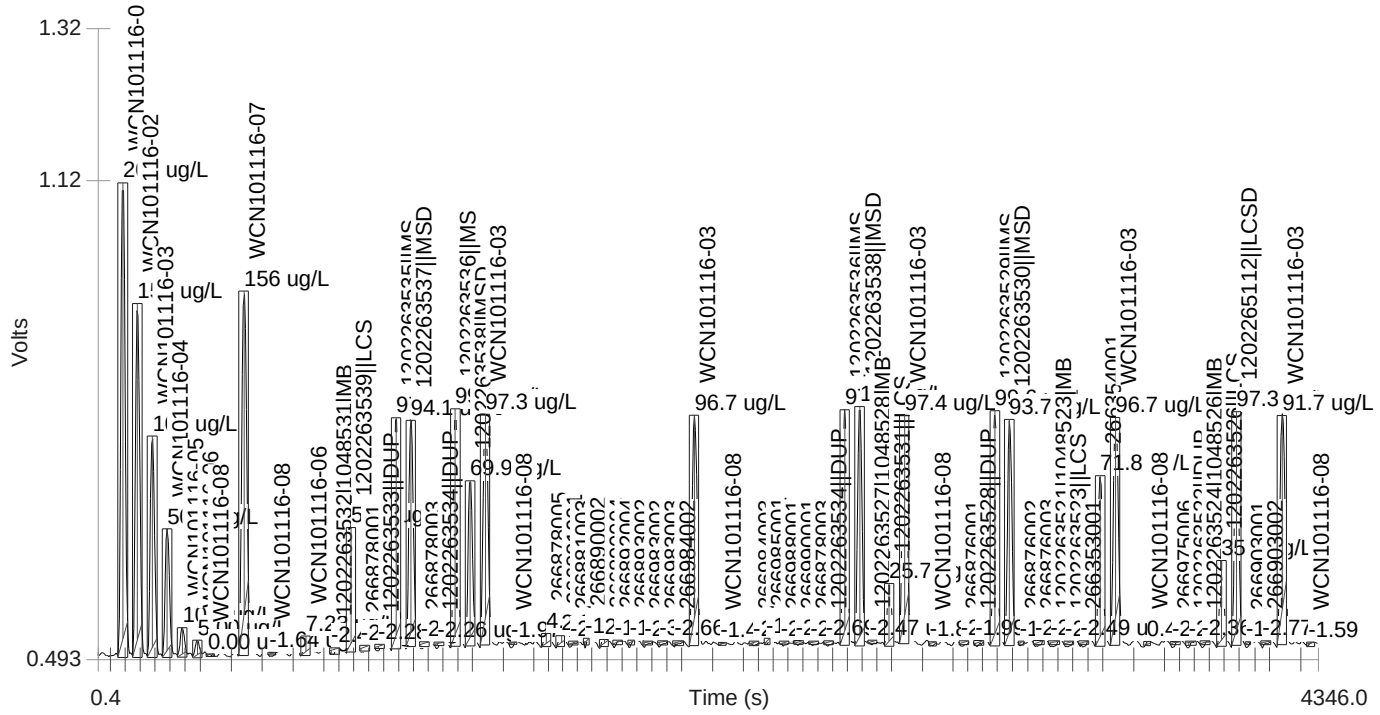
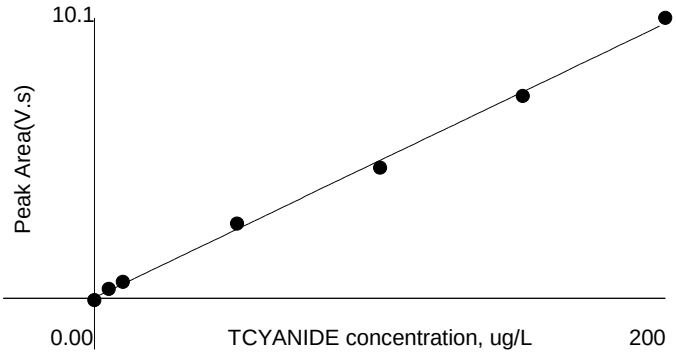


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	10.1	0.598	-2.0	11/16/2010	08:17:41
2	150	1	7.30	0.440	2.0	11/16/2010	08:18:33
3	100	1	4.71	0.278	5.4	11/16/2010	08:19:25
4	50.0	1	2.69	0.159	-7.6	11/16/2010	08:20:19
5	10.0	1	0.589	0.0341	-12.4	11/16/2010	08:21:12
6	5.00	1	0.339	0.0192	-22.6	11/16/2010	08:22:06
7	0.00	1	-0.0649	-0.00250		11/16/2010	08:23:00

Author: sha00813 Date : 11/16/2010

Figure 1: TCYANIDE



Area = 0.0495 * Conc + 0.0290
Conc = 20.2 * Area - 0.434
Correlation Coefficient (r) = 0.99898

No Weighting

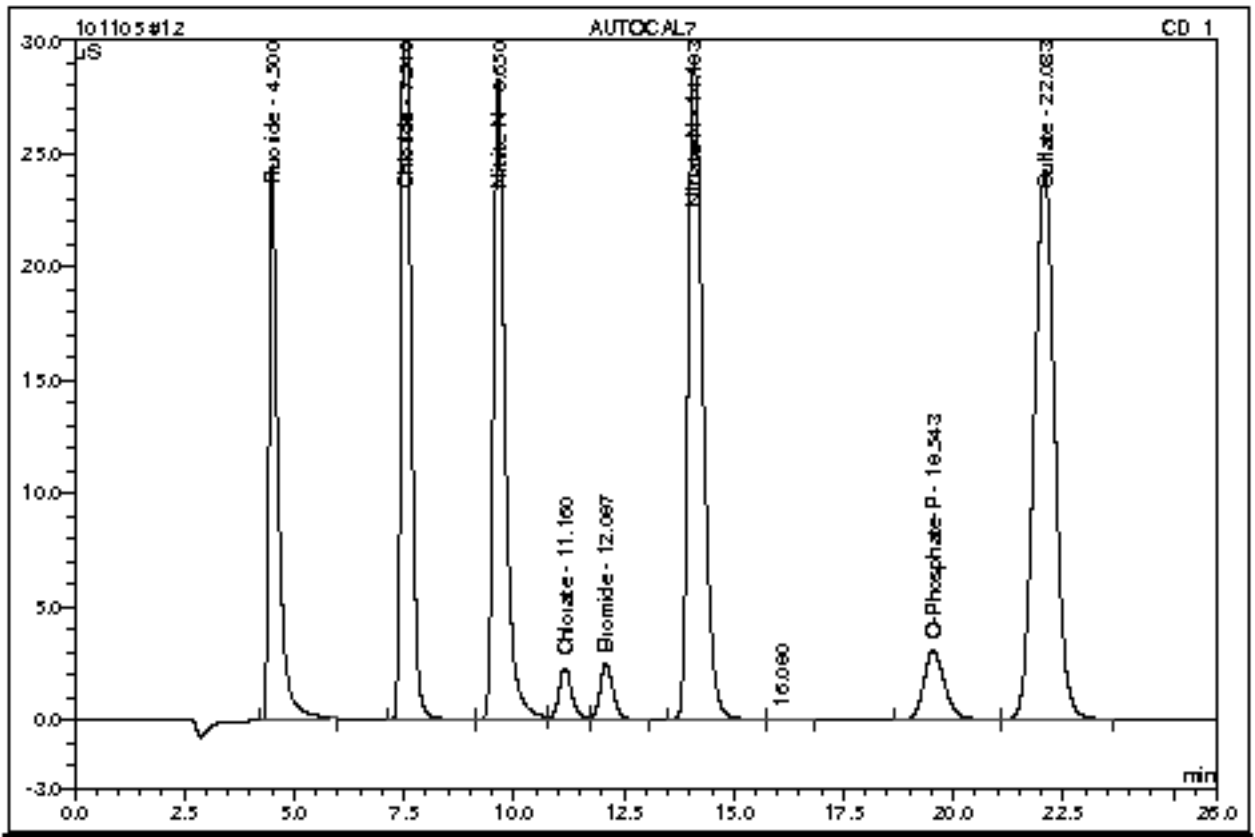
Ion Chromatography

This is runlog for Sequence 101206.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	11/05/10 17:36	1		101206	VH1
ICAL-06	11/05/10 18:02	1		101206	VH1
ICAL-05	11/05/10 18:29	1		101206	VH1
ICAL-04	11/05/10 18:55	1		101206	VH1
ICAL-03	11/05/10 19:21	1		101206	VH1
ICAL-02	11/05/10 19:47	1		101206	VH1
ICAL-01	11/05/10 20:13	1		101206	VH1

12 AUTOCAL7

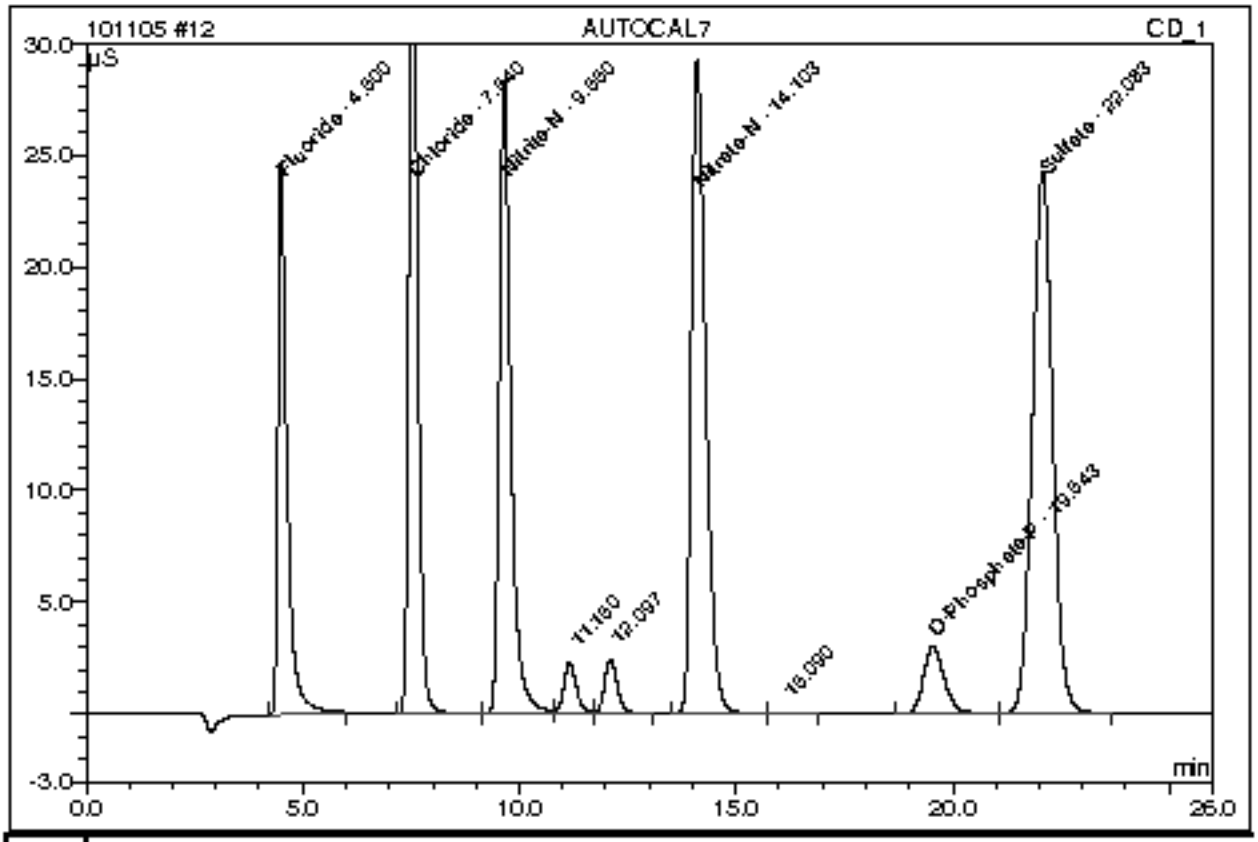
Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	53	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 17:36	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.50	Fluoride	10.0000	10.0131		5.92929	11.40
2	7.54	Chloride	20.0000	20.0234		9.67447	18.59
3	9.65	Nitrite-N	10.0000	10.0085		8.68078	16.68
4	11.16	Chlorate	5.0000	5.0000		0.77660	1.49
5	12.10	Bromide	5.0000	5.0000		0.82980	1.59
6	14.10	Nitrate-N	10.0000	10.0104		11.26715	21.65
8	19.54	O-Phosphate-P	5.0000	4.7924		1.67770	3.22
9	22.08	Sulfate	40.0000	40.0344		13.16759	25.31
Total:				104.8822	0.000	52.003	99.94

12 AUTOCAL7

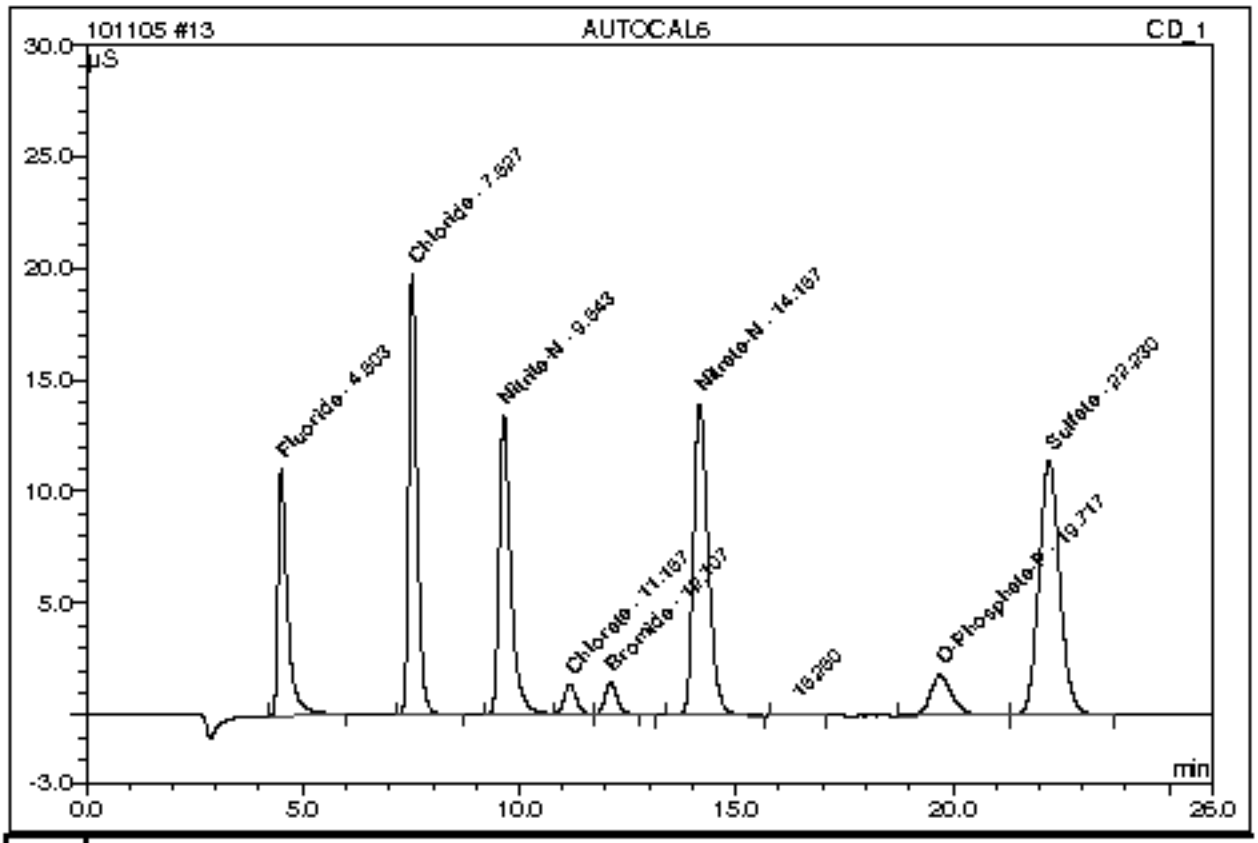
Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	53	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 17:36	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.50	Fluoride	10.0000	10.0131		5.92929	11.40
2	7.54	Chloride	20.0000	20.0234		9.67447	18.59
3	9.65	Nitrite-N	10.0000	10.0085		8.68078	16.68
n.a.	n.a.	Chlorate	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	5.0000	n.a.	n.a.	n.a.	n.a.
6	14.10	Nitrate-N	10.0000	10.0104		11.26715	21.65
8	19.54	O-Phosphate-P	5.0000	4.7924		1.67770	3.22
9	22.08	Sulfate	40.0000	40.0344		13.16759	25.31
Total:				94.8822	0.000	50.397	96.85

13 AUTOCAL6

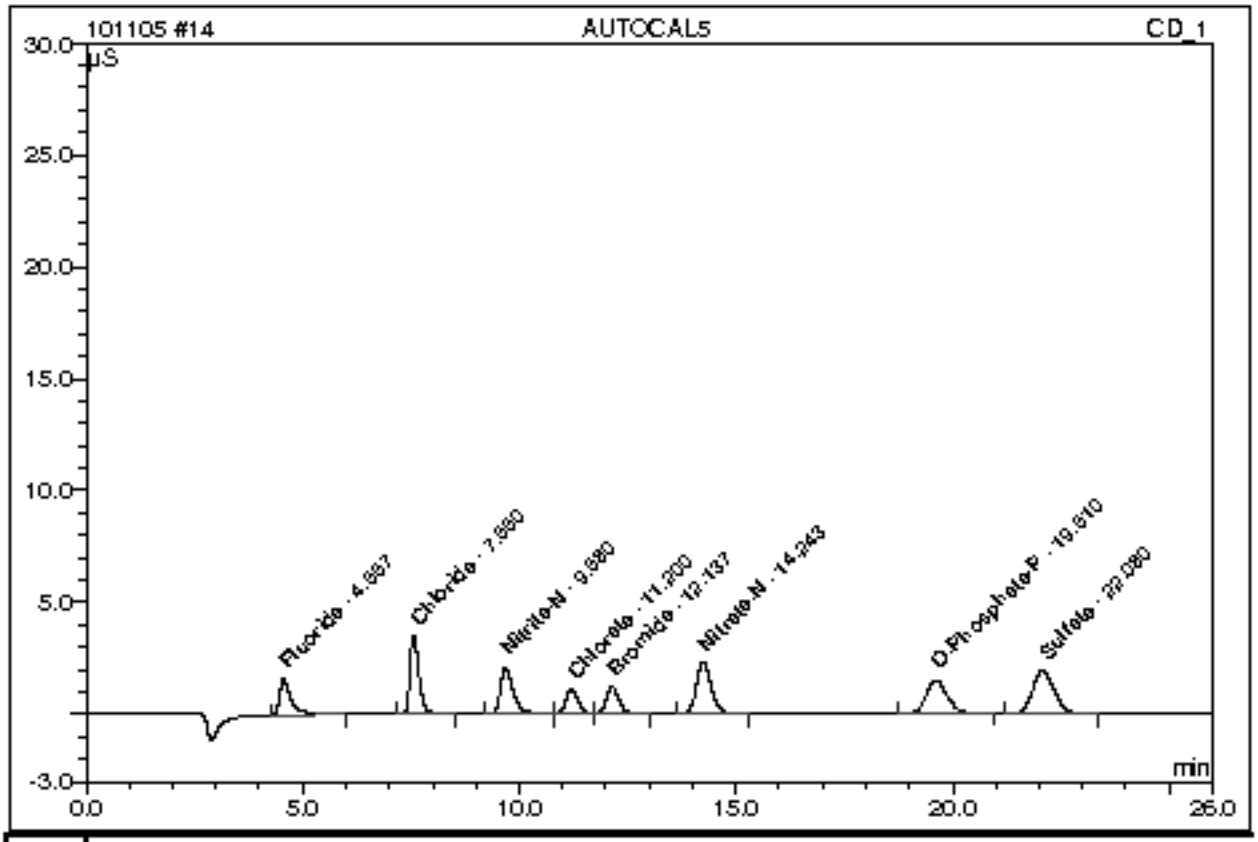
Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	54	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 18:02	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.50	Fluoride	5.0000	4.8138		2.81006	11.11
2	7.53	Chloride	10.0000	9.4426		4.47199	17.68
3	9.64	Nitrite-N	5.0000	4.9402		4.25882	16.83
4	11.17	Chlorate	3.0000	2.8183		0.42338	1.67
5	12.11	Bromide	3.0000	2.9105		0.47538	1.88
6	14.17	Nitrate-N	5.0000	4.9019		5.47317	21.63
8	19.72	O-Phosphate-P	3.0000	2.9668		1.04156	4.12
9	22.23	Sulfate	20.0000	19.4411		6.32456	25.00
Total:				52.2351	0.000	25.279	99.92

14 AUTOCAL5

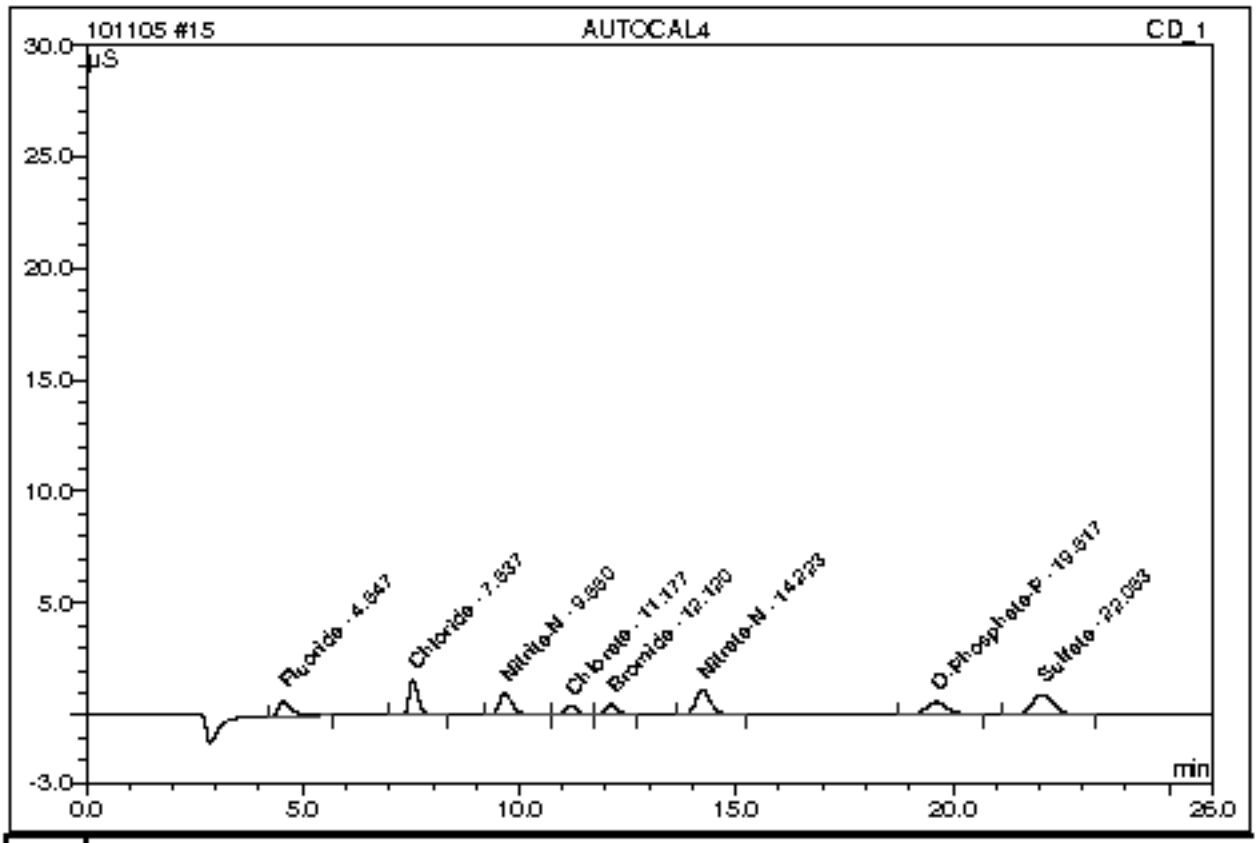
Sample Name:	AUTOCAL5	*Injection Volume:*	50.0
Vial Number:	55	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 18:29	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.56	Fluoride	1.0000	0.9268		0.50593	8.71
2	7.56	Chloride	2.0000	1.9381		0.86425	14.87
3	9.68	Nitrite-N	1.0000	0.9007		0.73736	12.69
4	11.20	Chlorate	2.5000	2.4992		0.37414	6.44
5	12.14	Bromide	2.5000	2.5878		0.42686	7.34
6	14.24	Nitrate-N	1.0000	0.8785		0.92067	15.84
7	19.61	O-Phosphate-P	2.5000	2.4843		0.87211	15.01
8	22.08	Sulfate	4.0000	3.6354		1.11053	19.11
Total:				15.8509	0.000	5.812	100.00

15 AUTOCAL4

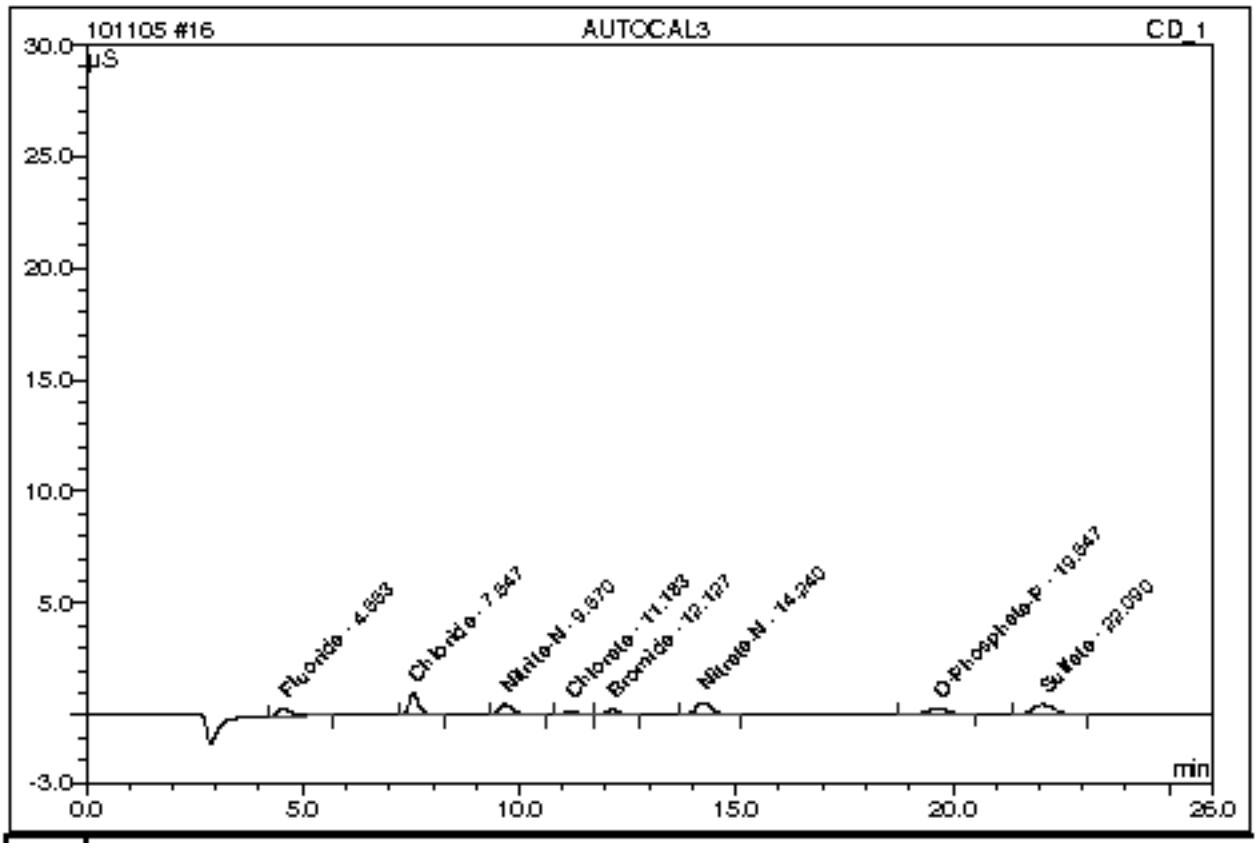
Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	55	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 18:55	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.55	Fluoride	0.5000	0.4939		0.24511	9.19
2	7.54	Chloride	1.0000	0.9881		0.39730	14.90
3	9.66	Nitrite-N	0.5000	0.4840		0.36458	13.67
4	11.18	Chlorate	1.0000	1.0072		0.14457	5.42
5	12.12	Bromide	1.0000	0.9713		0.15765	5.91
6	14.22	Nitrate-N	0.5000	0.4846		0.46026	17.26
7	19.62	O-Phosphate-P	1.0000	0.9245		0.34334	12.88
8	22.06	Sulfate	2.0000	1.9800		0.55345	20.76
Total:				7.3336	0.000	2.666	100.00

16 AUTOCAL3

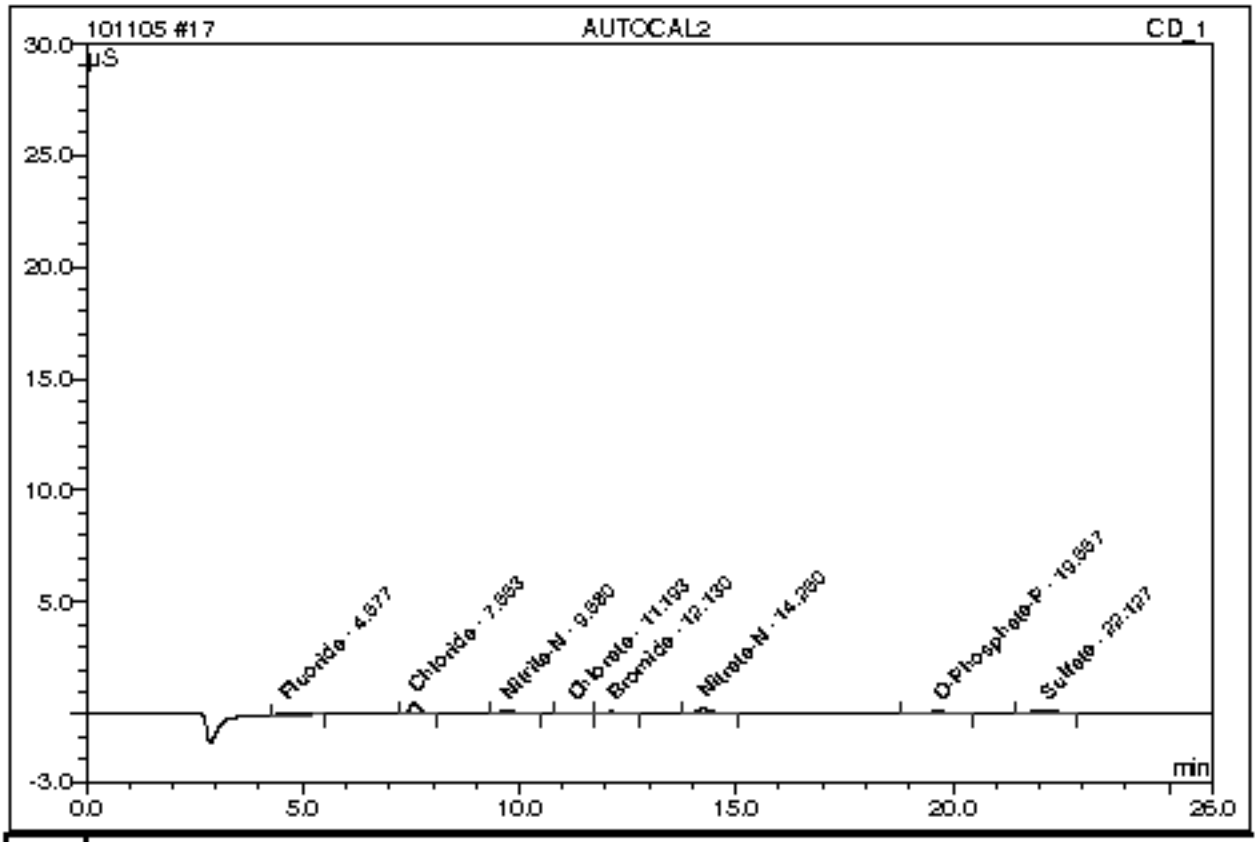
Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	55	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 19:21	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.56	Fluoride	0.2500	0.3010		0.12639	9.30
2	7.55	Chloride	0.5000	0.6817		0.25307	18.62
3	9.67	Nitrite-N	0.2500	0.2716		0.17052	12.55
4	11.18	Chlorate	0.5000	0.5133		0.06934	5.10
5	12.13	Bromide	0.5000	0.5048		0.08064	5.93
6	14.24	Nitrate-N	0.2500	0.2880		0.22419	16.50
7	19.65	O-Phosphate-P	0.5000	0.4728		0.16736	12.32
8	22.09	Sulfate	1.0000	1.1508		0.26732	19.67
Total:				4.1839	0.000	1.359	100.00

17 AUTOCAL2

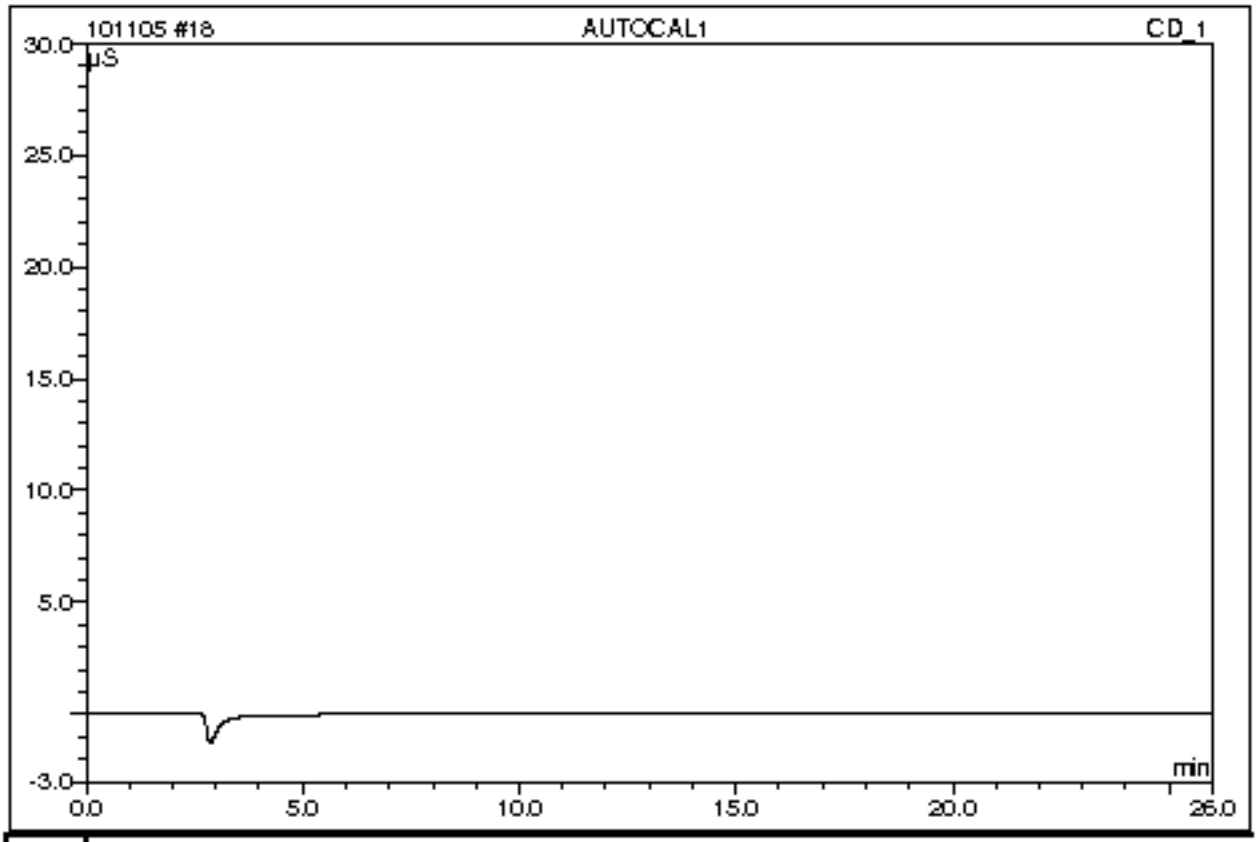
Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	54	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 19:47	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



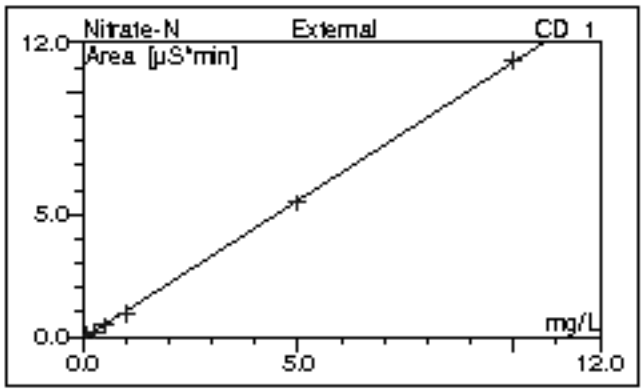
No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.58	Fluoride	0.1000	0.1607		0.05243	9.08
2	7.55	Chloride	0.2000	0.3724		0.12540	21.73
3	9.68	Nitrite-N	0.1000	0.1429		0.06788	11.76
4	11.19	Chlorate	0.2000	0.2322		0.02782	4.82
5	12.13	Bromide	0.2000	0.2145		0.03338	5.78
6	14.25	Nitrate-N	0.1000	0.1608		0.09777	16.94
7	19.67	O-Phosphate-P	0.2000	0.1790		0.06553	11.36
8	22.13	Sulfate	0.4000	0.6105		0.10686	18.52
Total:				2.0730	0.000	0.577	100.00

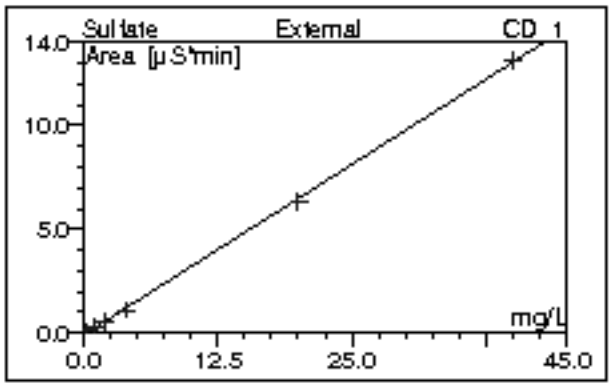
18 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	54	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 20:13	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

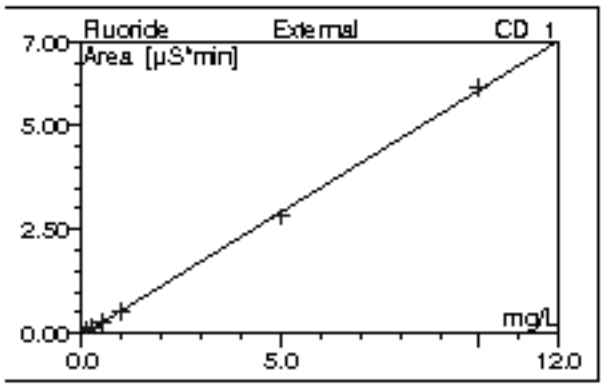


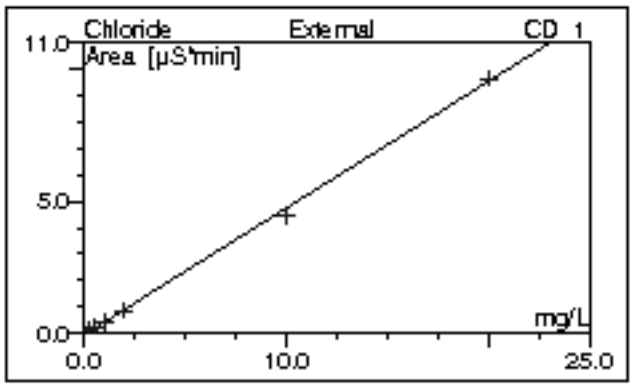


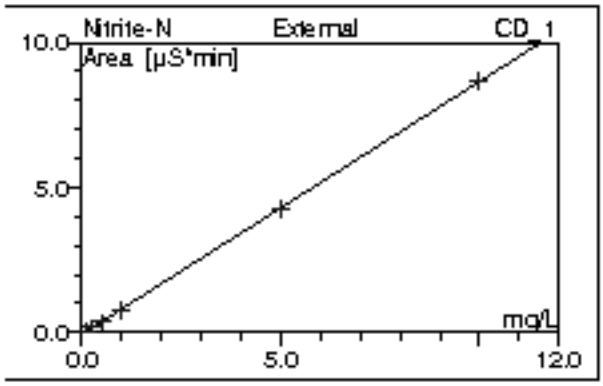
No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOtl	99.9357	-0.0427	0.5916	0.0000
n.a.	n.a.	Chloride	0LOtl	99.8554	-0.0532	0.4795	0.0000
n.a.	n.a.	Nitrite-N	0LOtl	99.9835	-0.0566	0.8710	0.0000
n.a.	n.a.	Chlorate	0LOtl	99.7062	-0.0078	0.1533	0.0000
n.a.	n.a.	Bromide	0LOtl	99.8585	-0.0021	0.1654	0.0000
n.a.	n.a.	Nitrate-N	0LOtl	99.9677	-0.0838	1.1294	0.0000
n.a.	n.a.	O-Phosphate-P	0LOtl	99.9286	0.0049	0.3388	0.0000
n.a.	n.a.	Sulfate	0LOtl	99.9603	-0.0941	0.3292	0.0000
Average:				99.8995	-0.0419	0.5073	0.0000

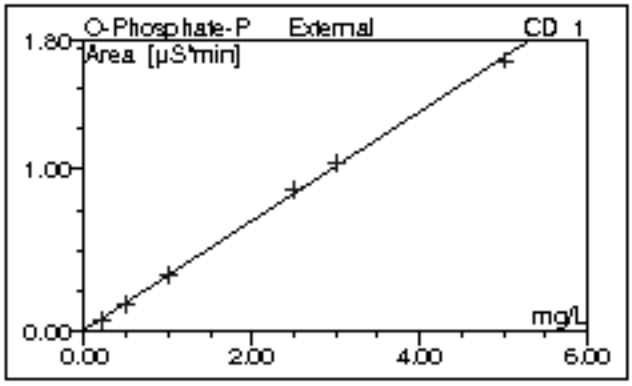
18 AUTOCAL1

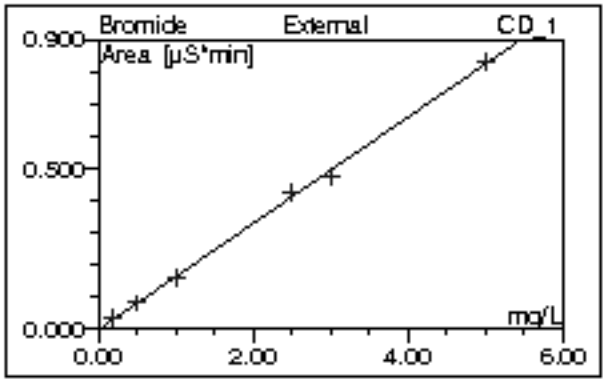
Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	54	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 20:13	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-003108; GL GCB086;300;9056

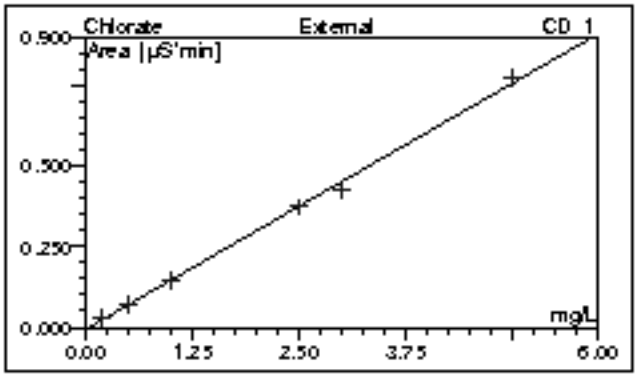










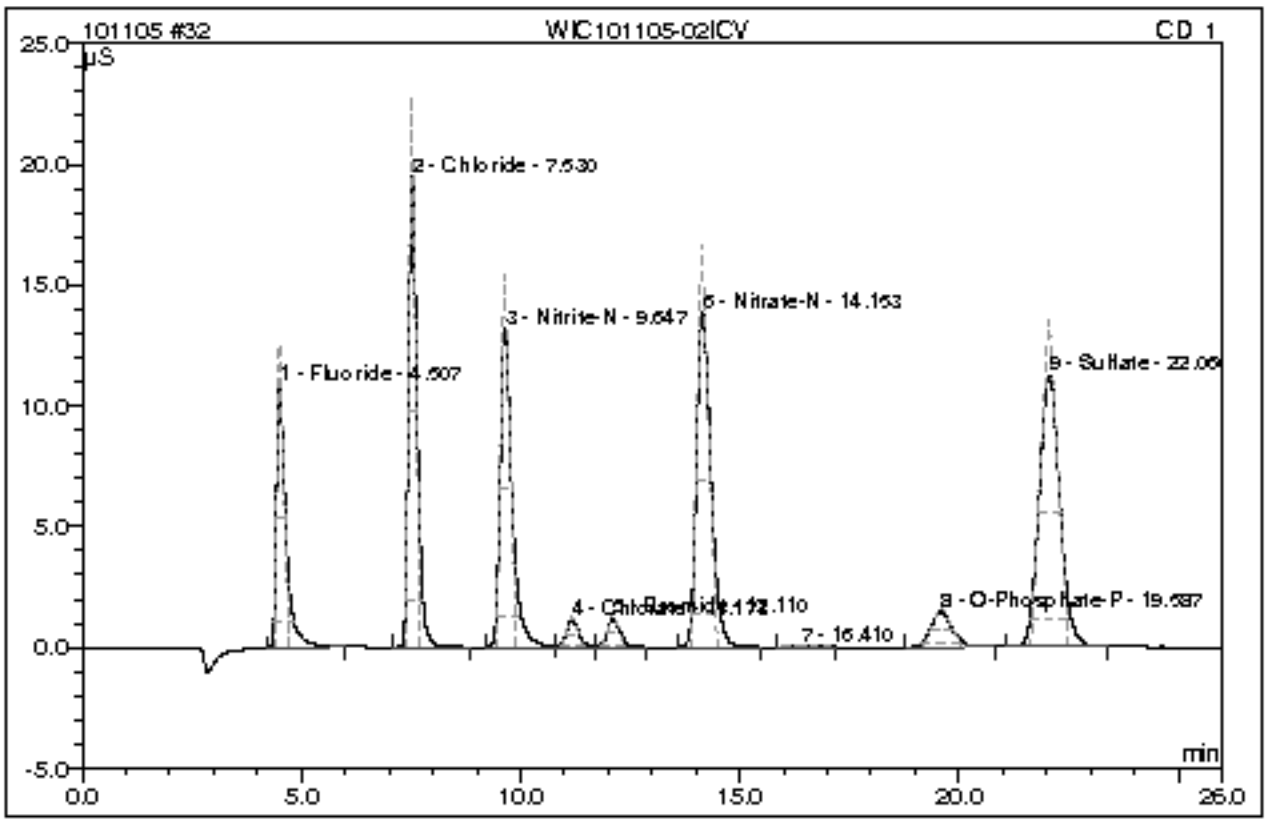


This is runlog for Sequence 101105.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	11/05/10 12:49		1	101105	VH1
BLK	11/05/10 13:15		1	101105	VH1
BLK	11/05/10 13:42		1	101105	VH1
BLK	11/05/10 14:08		1	101105	VH1
BLK	11/05/10 14:34		1	101105	VH1
BLK	11/05/10 15:00		1	101105	VH1
BLK	11/05/10 15:26		1	101105	VH1
BLK	11/05/10 16:18		1	101105	VH1
BLK	11/05/10 16:44		1	101105	VH1
BLK	11/05/10 17:10		1	101105	VH1
ICAL-07	11/05/10 17:36		1	101105	VH1
ICAL-06	11/05/10 18:02		1	101105	VH1
ICAL-05	11/05/10 18:29		1	101105	VH1
ICAL-04	11/05/10 18:55		1	101105	VH1
ICAL-03	11/05/10 19:21		1	101105	VH1
ICAL-02	11/05/10 19:47		1	101105	VH1
ICAL-01	11/05/10 20:13		1	101105	VH1
ICV	11/05/10 20:39		1	101105	VH1
ICB	11/05/10 21:05		1	101105	VH1
1202255670	11/05/10 21:31	1045217	1	101105	VH1
1202255671	11/05/10 21:57	1045217	1	101105	VH1
266228003	11/05/10 22:23	1045217	1	101105	VH1
266228002	11/05/10 22:49	1045217	1	101105	VH1
266228001	11/05/10 23:16	1045217	1	101105	VH1
266228004	11/05/10 23:42	1045217	1	101105	VH1

32 WIC101105-02ICV

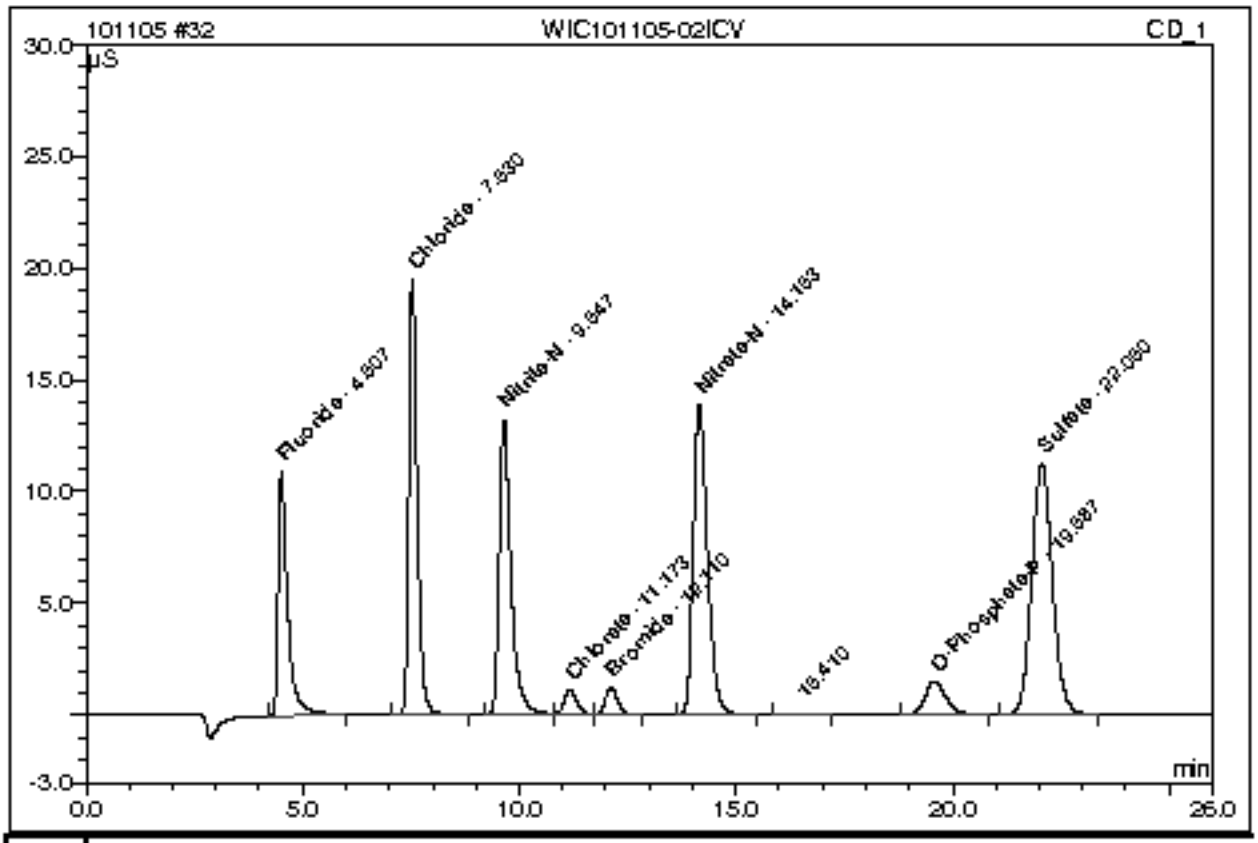
Sample Name:	WIC101105-02ICV	*Injection Volume:*	50.0
Vial Number:	97	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 20:39	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-003108; GL GCB086;300;9056



No.	Ret.Time min	Peakname min	Ret. Dev. (%) Lim: ±10%	Type	Resol. (EP)	Asym. (EP)	Plates (EP)
1	4.507	Fluoride	0.1	BMB	8.71	1.99	2580
2	7.530	Chloride	-0.1	BMB	5.33	1.37	7801
3	9.647	Nitrite-N	0.0	BM	3.12	1.54	7169
4	11.173	Chlorate	0.1	M	1.79	n.a.	7259
5	12.110	Bromide	0.1	MB	3.68	1.18	8546
6	14.153	Nitrate-N	0.4	BMB	2.46	1.32	9225
7	16.410	n.a.	n.a.	BMB	3.00	1.16	2767
8	19.587	O-Phosphate-P	0.2	BMB	2.86	1.20	8050
9	22.060	Sulfate	-0.1	BMB	n.a.	1.10	10433
Average:			0.089		3.87	1.36	7092

32 WIC101105-02ICV

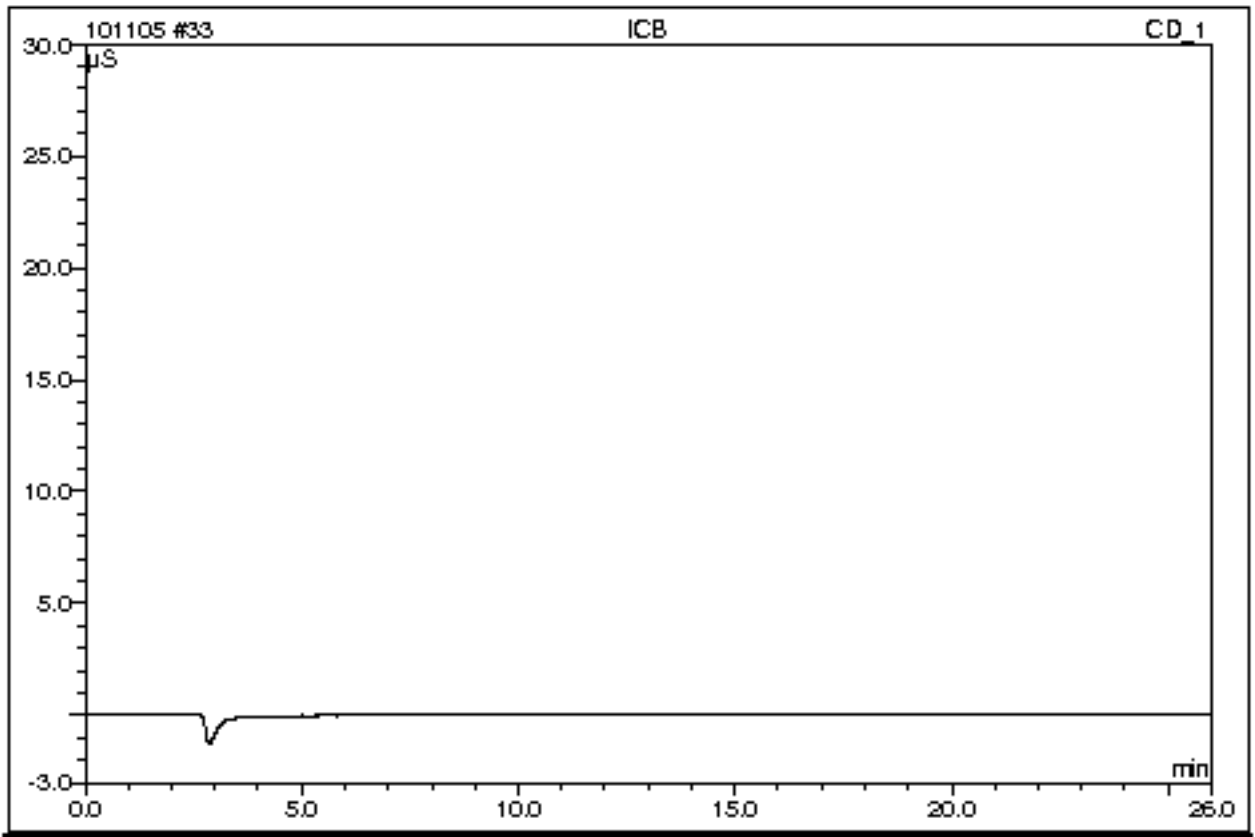
Sample Name:	WIC101105-02ICV	*Injection Volume:*	50.0
Vial Number:	97	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 20:39	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.51	Fluoride	n.a.	4.7566		2.77114	11.33
2	7.53	Chloride	n.a.	9.3226		4.41686	18.06
3	9.65	Nitrite-N	n.a.	4.8348		4.15445	16.98
4	11.17	Chlorate	n.a.	2.5188		0.37836	1.55
5	12.11	Bromide	n.a.	2.4773		0.40775	1.67
6	14.15	Nitrate-N	n.a.	4.7328		5.26134	21.51
8	19.59	O-Phosphate-P	n.a.	2.4622		0.83909	3.43
9	22.06	Sulfate	n.a.	19.1409		6.20735	25.38
Total:				50.2460	0.000	24.436	99.90

33 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	97	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/5/2010 21:05	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



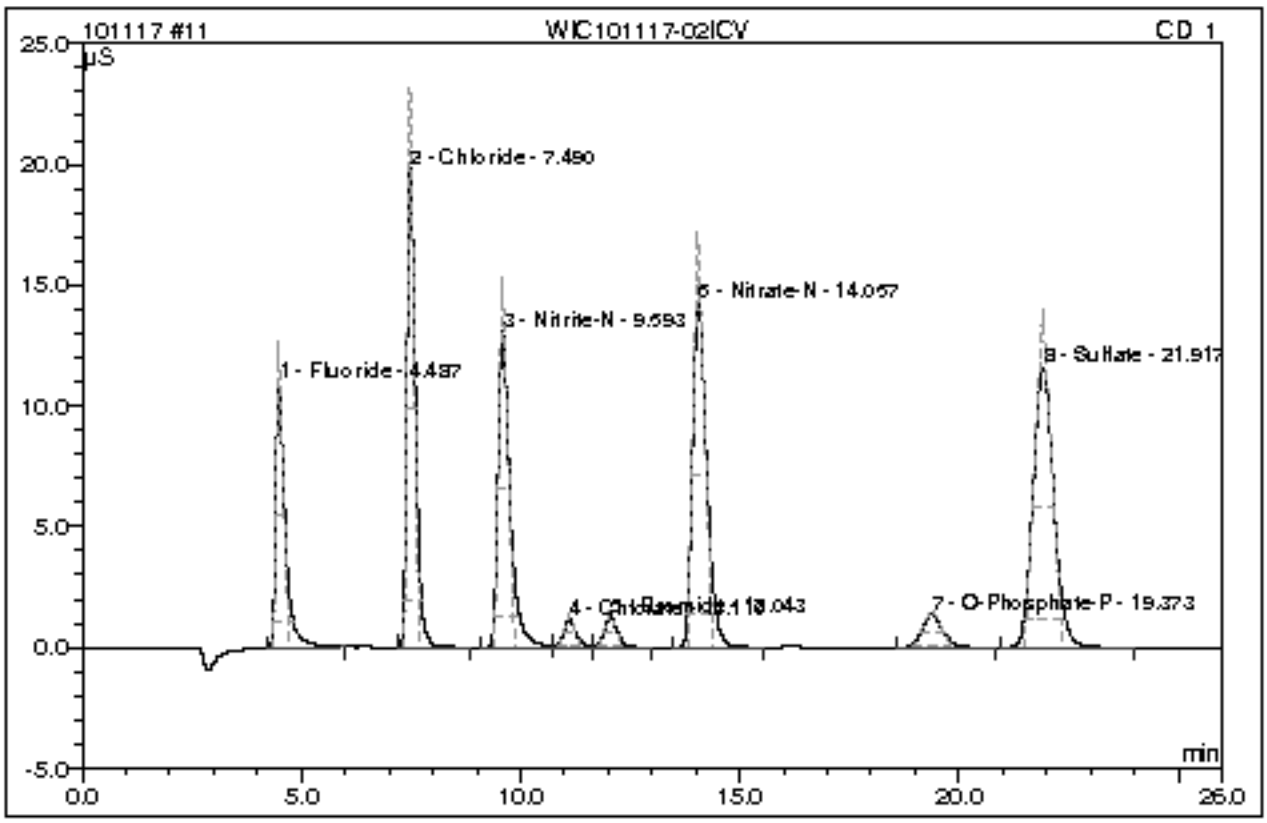
No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 101117.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	11/17/10 12:58		1	101117	VH1
BLK	11/17/10 13:24		1	101117	VH1
BLK	11/17/10 13:51		1	101117	VH1
ICV	11/17/10 14:17		1	101117	VH1
ICB	11/17/10 14:43		1	101117	VH1
267034006	11/17/10 15:09	1049186	10	101117	VH1
CCV	11/17/10 15:35		1	101117	VH1
CCB	11/17/10 16:01		1	101117	VH1
1202265269	11/17/10 16:27	1049189	1	101117	VH1
1202265272	11/17/10 16:53	1049189	1	101117	VH1
266878005	11/17/10 17:19	1049189	1	101117	VH1
1202265270	11/17/10 17:45	1049189	1	101117	VH1
1202265271	11/17/10 18:11	1049189	1	101117	VH1
267028002	11/17/10 18:38	1049189	1	101117	VH1
1202265282	11/17/10 19:04	1049189	1	101117	VH1
1202265283	11/17/10 19:30	1049189	1	101117	VH1
267029002	11/17/10 19:56	1049189	1	101117	VH1
267029005	11/17/10 20:22	1049189	1	101117	VH1
CVH	11/17/10 20:48		1	101117	VH1
CCB	11/17/10 21:14		1	101117	VH1
267030001	11/17/10 21:40	1049189	1	101117	VH1
CCV	11/17/10 22:06		1	101117	VH1
CCB	11/17/10 22:32		1	101117	VH1
1202265276	11/17/10 22:58	1049191	1	101117	VH1
1202265281	11/17/10 23:25	1049191	1	101117	VH1
267058001	11/17/10 23:51	1049191	100	101117	VH1

11 WIC101117-02ICV

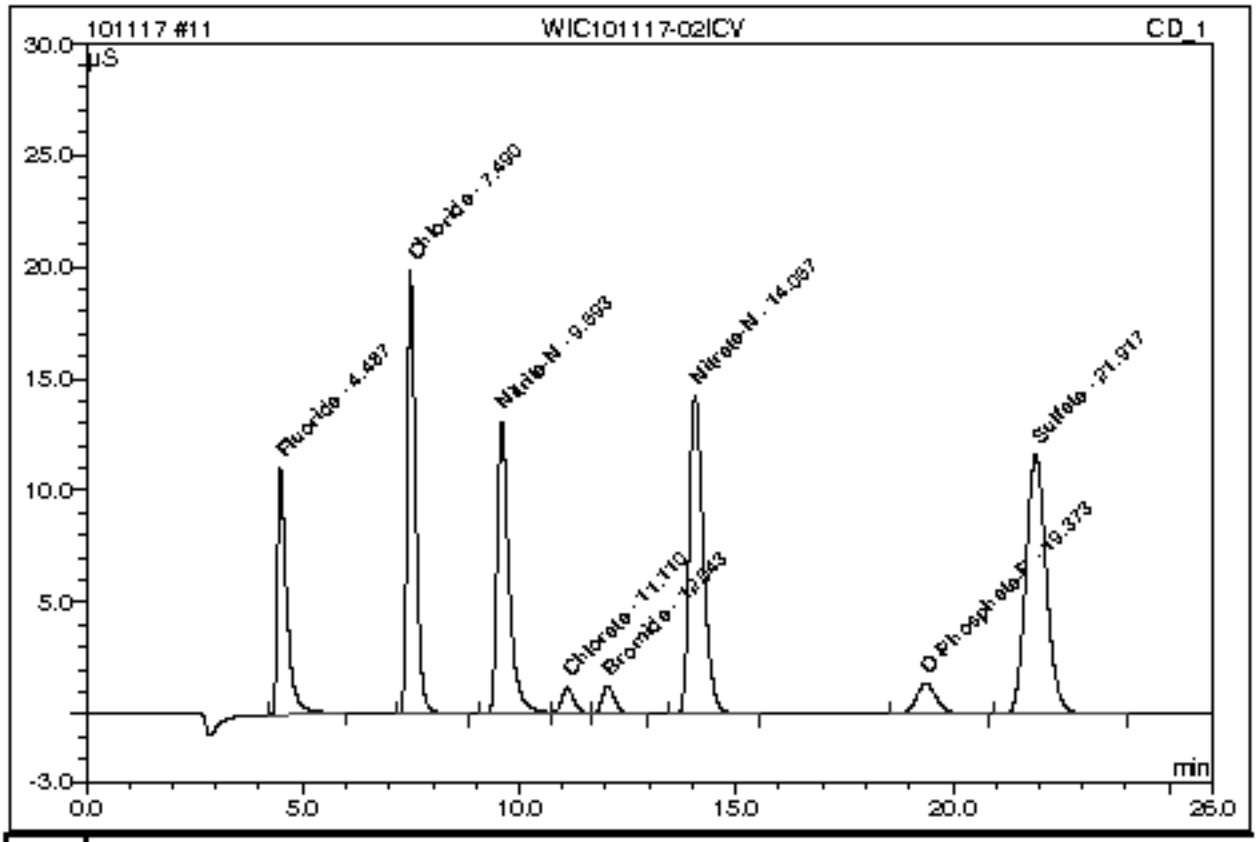
Sample Name:	WIC101117-02ICV	*Injection Volume:*	50.0
Vial Number:	98	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 14:17	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-003108; GL GCB086;300;9056



No.	Ret.Time min	Peakname min	Ret. Dev. (%) Lim: ±10%	Type	Resol. (EP)	Asym. (EP)	Plates (EP)
1	4.487	Fluoride	-0.3	BMB	8.55	2.04	2521
2	7.490	Chloride	-0.7	BMB	5.21	1.43	7468
3	9.593	Nitrite-N	-0.6	BM	3.10	1.64	6891
4	11.110	Chlorate	-0.4	M	1.79	n.a.	7319
5	12.043	Bromide	-0.5	MB	3.63	1.20	8443
6	14.057	Nitrate-N	-0.3	BMB	7.38	1.37	9161
7	19.373	O-Phosphate-P	-0.9	BMB	2.97	1.19	8175
8	21.917	Sulfate	-0.7	BMB	n.a.	1.13	10448
Average:			-0.545		4.66	1.43	7553

11 WIC101117-02ICV

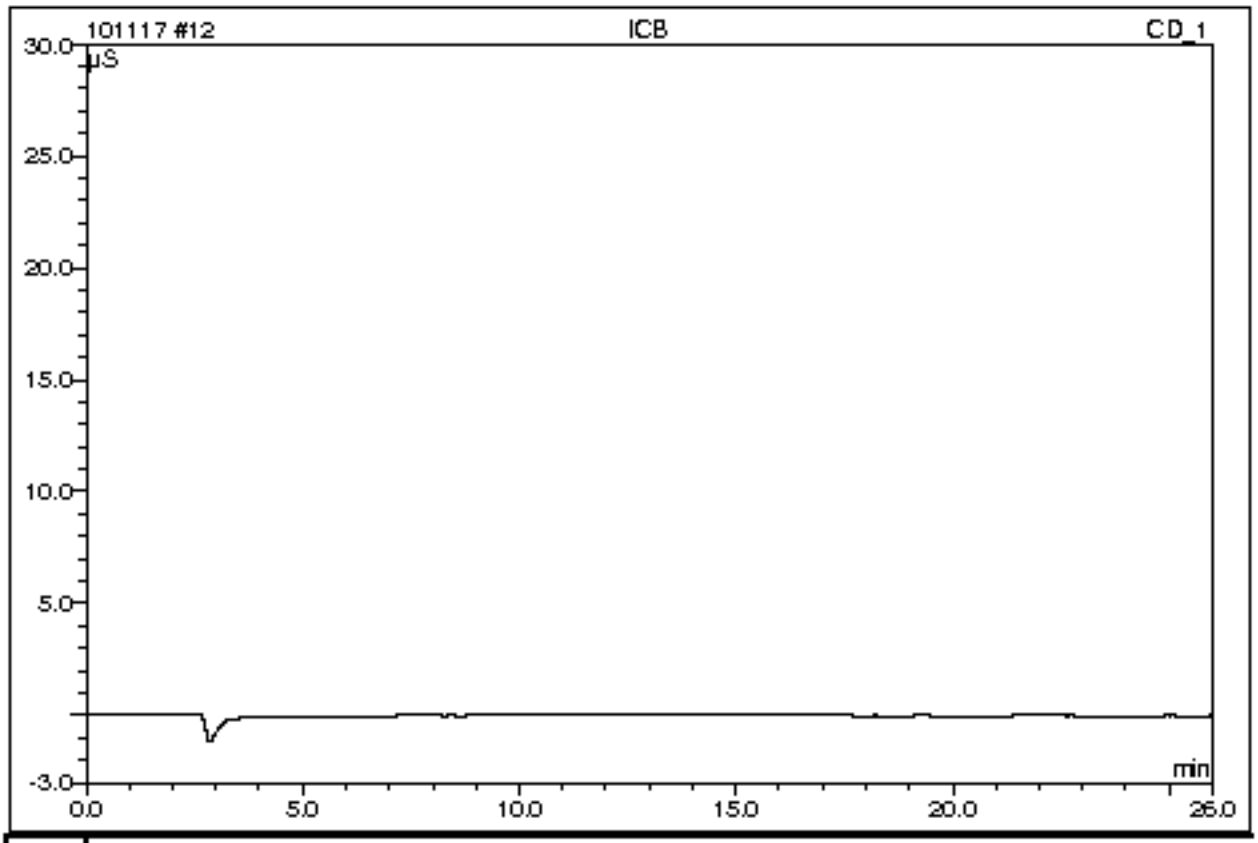
Sample Name:	WIC101117-02ICV	*Injection Volume:*	50.0
Vial Number:	98	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 14:17	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.49	Fluoride	n.a.	4.7872		2.78926	11.20
2	7.49	Chloride	n.a.	9.5625		4.53189	18.20
3	9.59	Nitrite-N	n.a.	4.8562		4.17303	16.76
4	11.11	Chlorate	n.a.	2.6862		0.40402	1.62
5	12.04	Bromide	n.a.	2.6183		0.43108	1.73
6	14.06	Nitrate-N	n.a.	4.8556		5.39994	21.69
7	19.37	O-Phosphate-P	n.a.	2.2577		0.76980	3.09
8	21.92	Sulfate	n.a.	19.7288		6.40092	25.71
Total:				51.3524	0.000	24.900	100.00

12 ICB

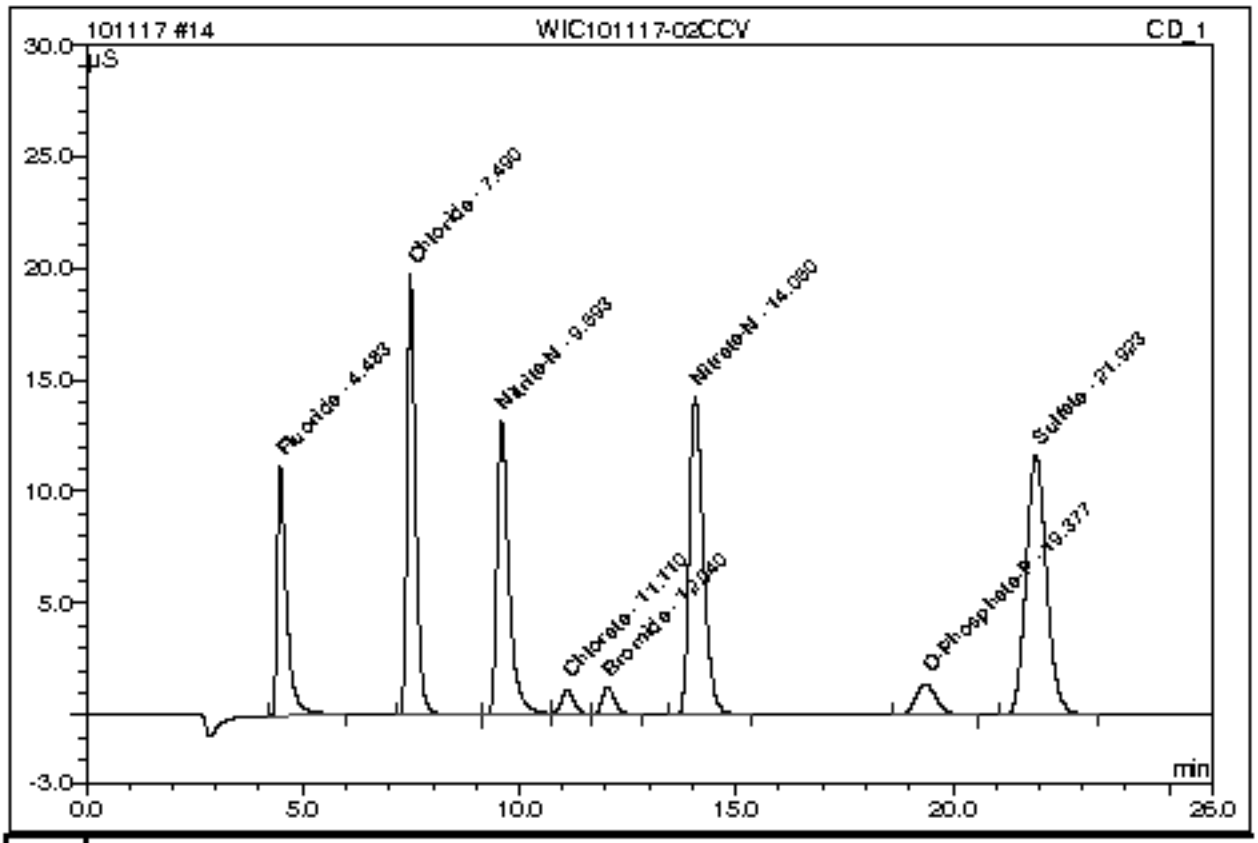
Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	97	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 14:43	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

14 WIC101117-02CCV

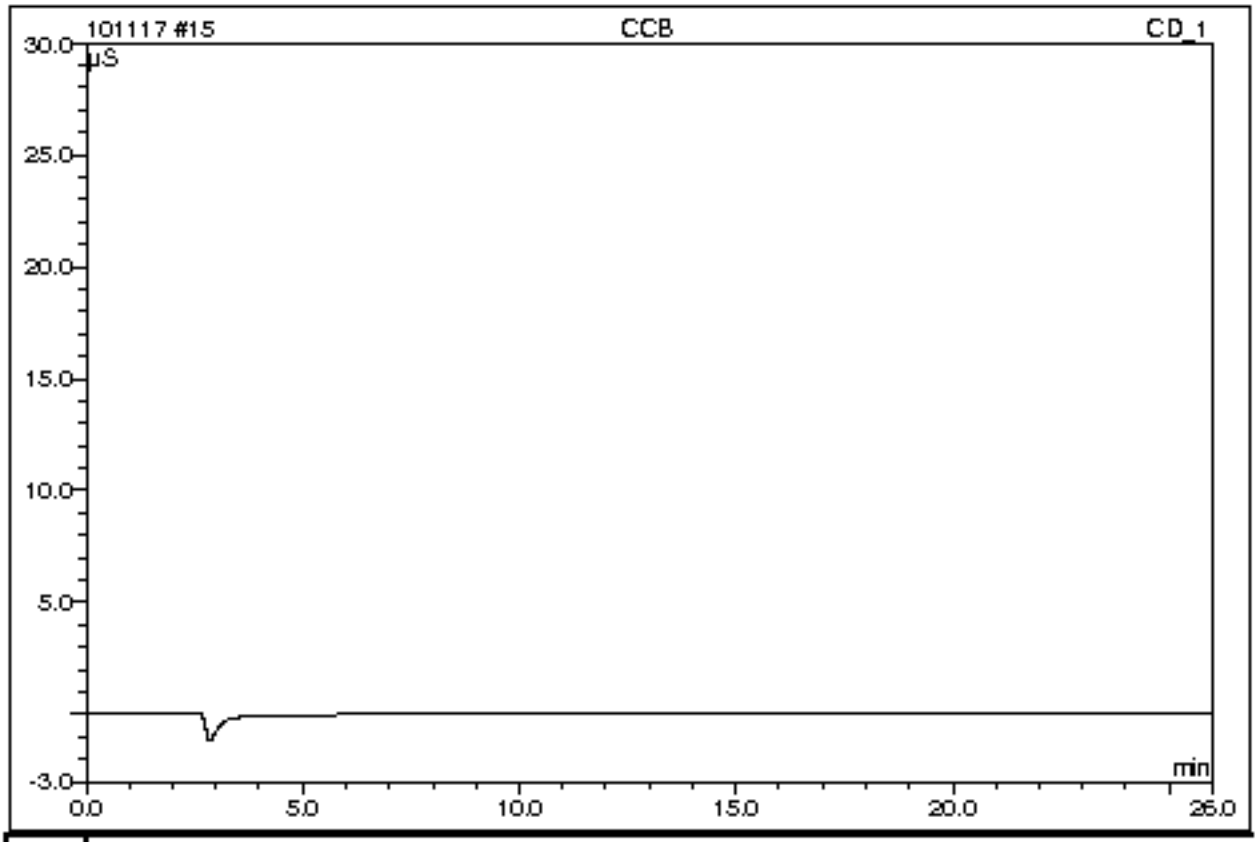
Sample Name:	WIC101117-02CCV	*Injection Volume:*	50.0
Vial Number:	278	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 15:35	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	n.a.	4.8357		2.81798	11.32
2	7.49	Chloride	n.a.	9.5519		4.52680	18.18
3	9.59	Nitrite-N	n.a.	4.8714		4.18630	16.81
4	11.11	Chlorate	n.a.	2.6069		0.39186	1.57
5	12.04	Bromide	n.a.	2.5567		0.42090	1.69
6	14.06	Nitrate-N	n.a.	4.8536		5.39772	21.68
7	19.38	O-Phosphate-P	n.a.	2.2878		0.78000	3.13
8	21.92	Sulfate	n.a.	19.6571		6.37731	25.61
Total:				51.2211	0.000	24.899	100.00

15 CCB

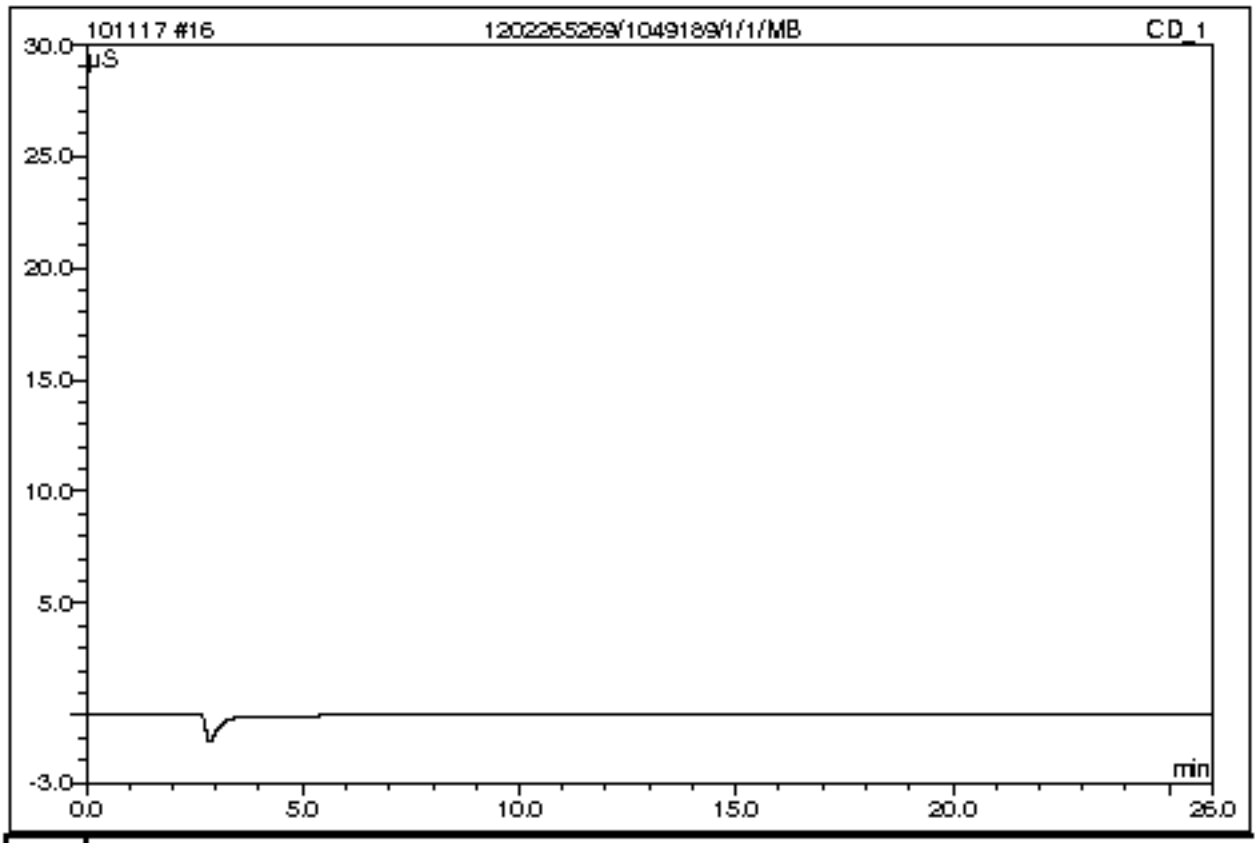
Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	279	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 16:01	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

16 1202265269/1049189/1/1/MB

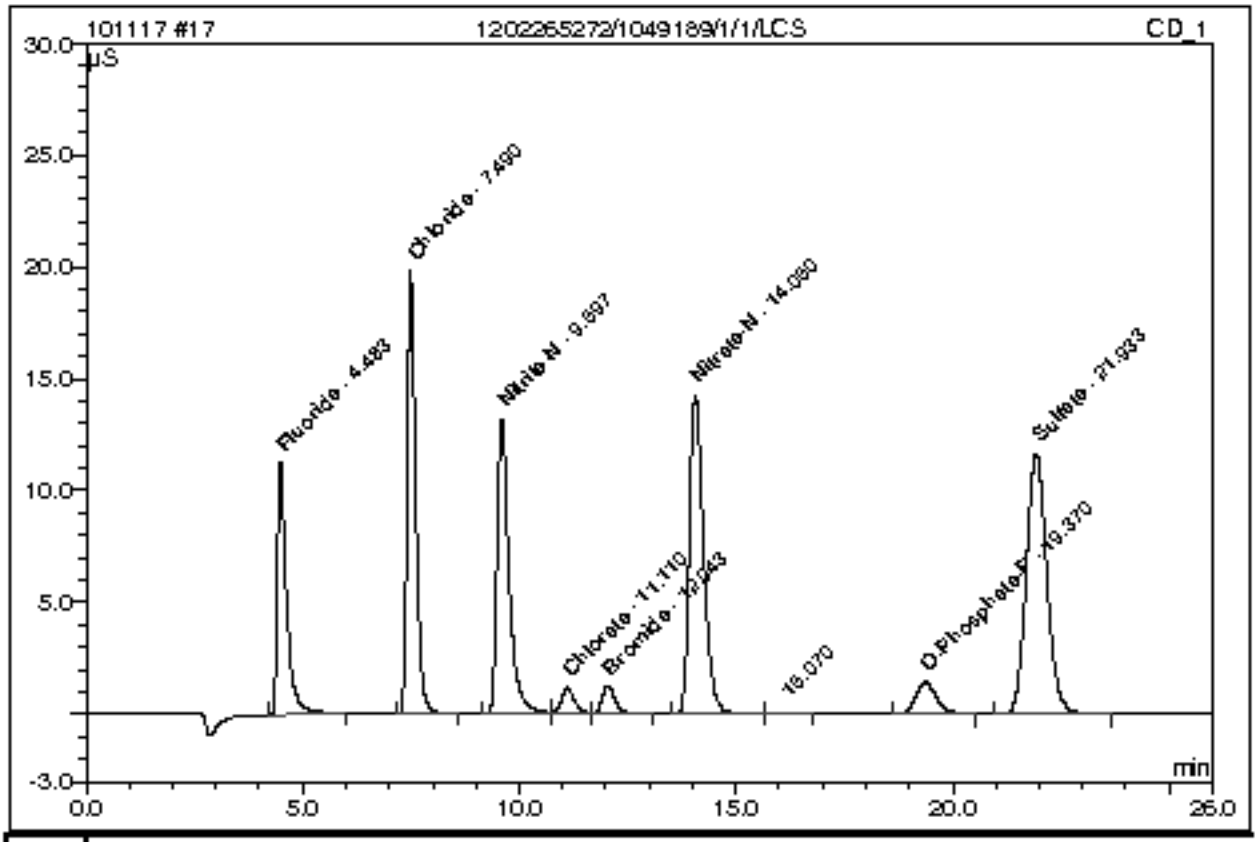
Sample Name:	1202265269/1049189/1/1/MB	*Injection Volume:*	50.0
Vial Number:	300	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 16:27	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

17 1202265272/1049189/1/1/LCS

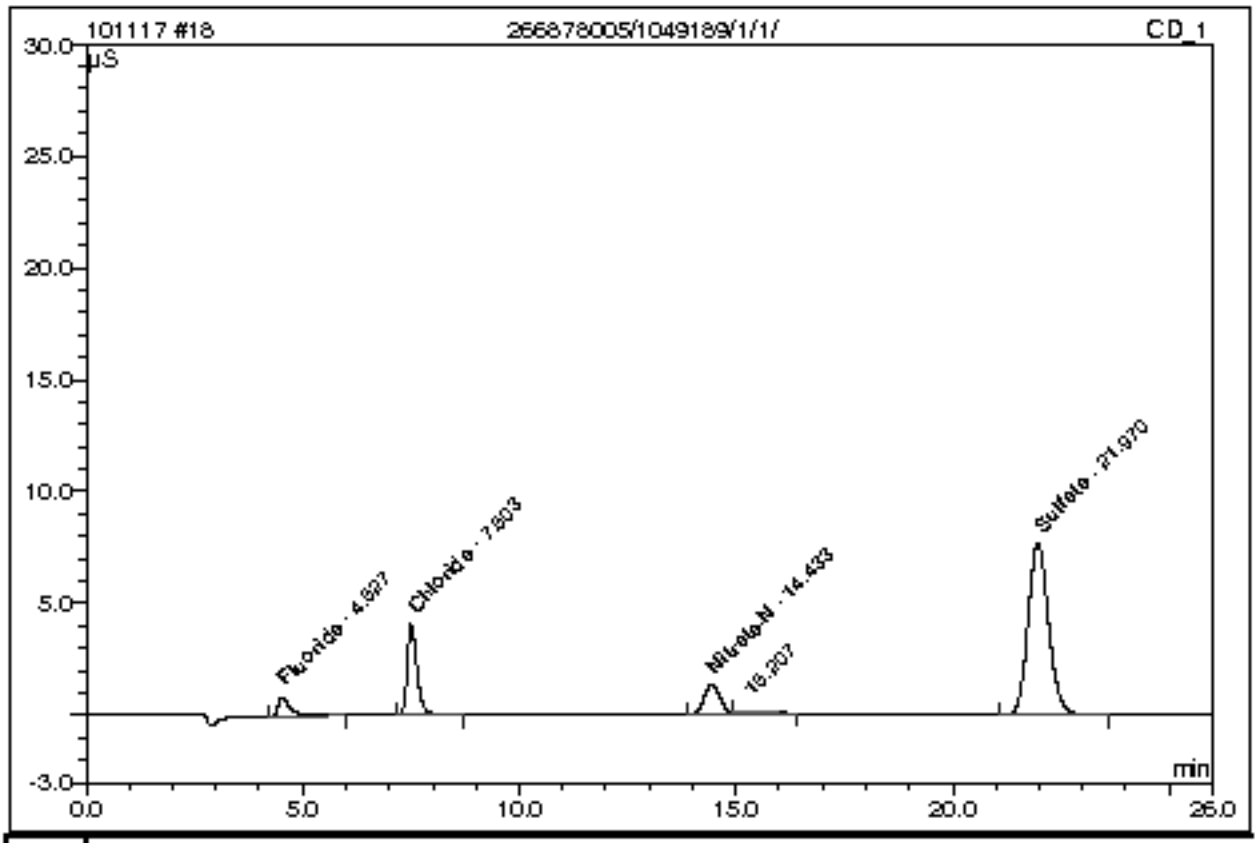
Sample Name:	1202265272/1049189/1/1/LCS	*Injection Volume:*	50.0
Vial Number:	301	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 16:53	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	n.a.	4.8665		2.83614	11.33
2	7.49	Chloride	n.a.	9.5771		4.53889	18.12
3	9.60	Nitrite-N	n.a.	4.8981		4.20955	16.81
4	11.11	Chlorate	n.a.	2.6749		0.40229	1.61
5	12.04	Bromide	n.a.	2.6318		0.43332	1.73
6	14.06	Nitrate-N	n.a.	4.8713		5.41771	21.63
8	19.37	O-Phosphate-P	n.a.	2.2691		0.77367	3.09
9	21.93	Sulfate	n.a.	19.7680		6.41382	25.61
Total:				51.5567	0.000	25.025	99.93

18 266878005/1049189/1/1/

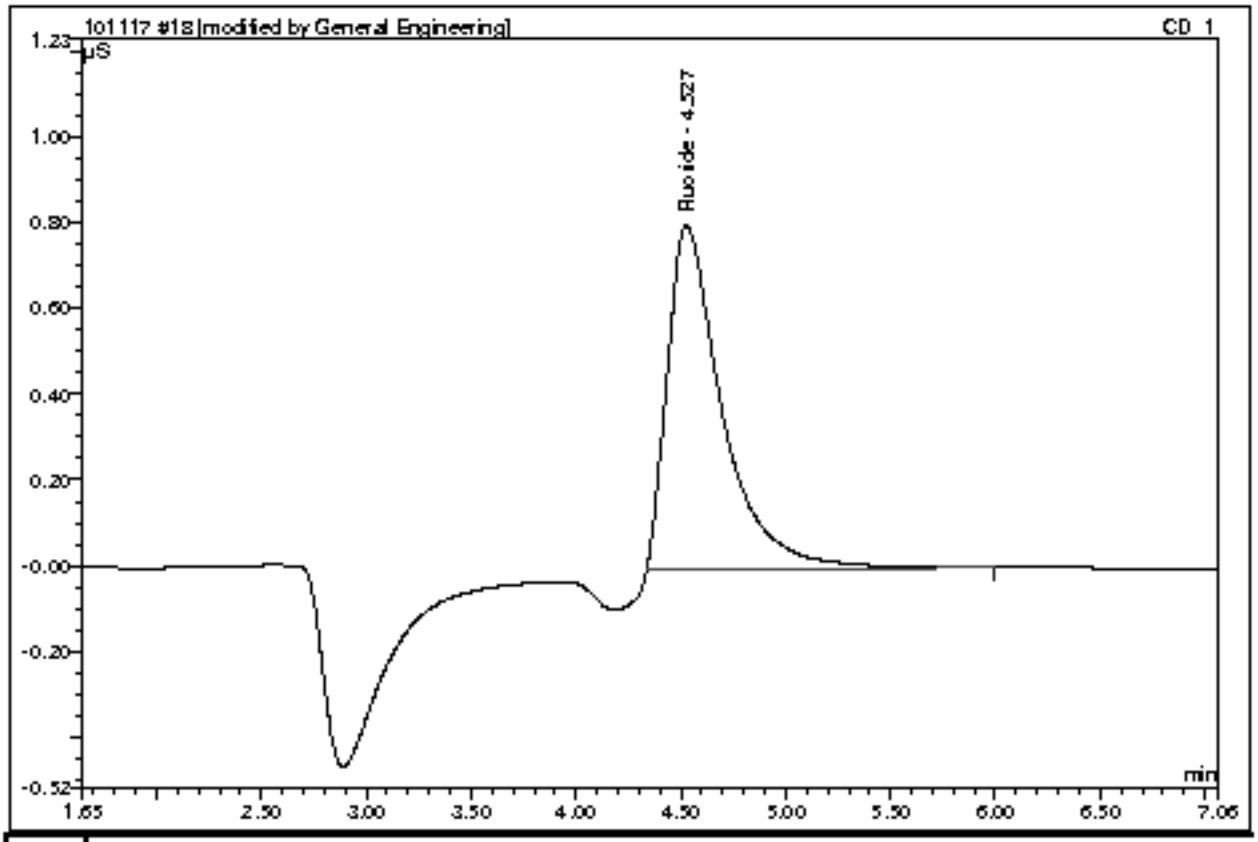
Sample Name:	266878005/1049189/1/1/	*Injection Volume:*	50.0
Vial Number:	302	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 17:19	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.53	Fluoride	n.a.	0.6080		0.31702	5.01
2	7.50	Chloride	n.a.	2.3395		1.06859	16.89
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.43	Nitrate-N	n.a.	0.6574		0.65858	10.41
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	21.97	Sulfate	n.a.	13.1408		4.23203	66.88
Total:				16.7457	0.000	6.276	99.18

18 266878005/1049189/1/1/

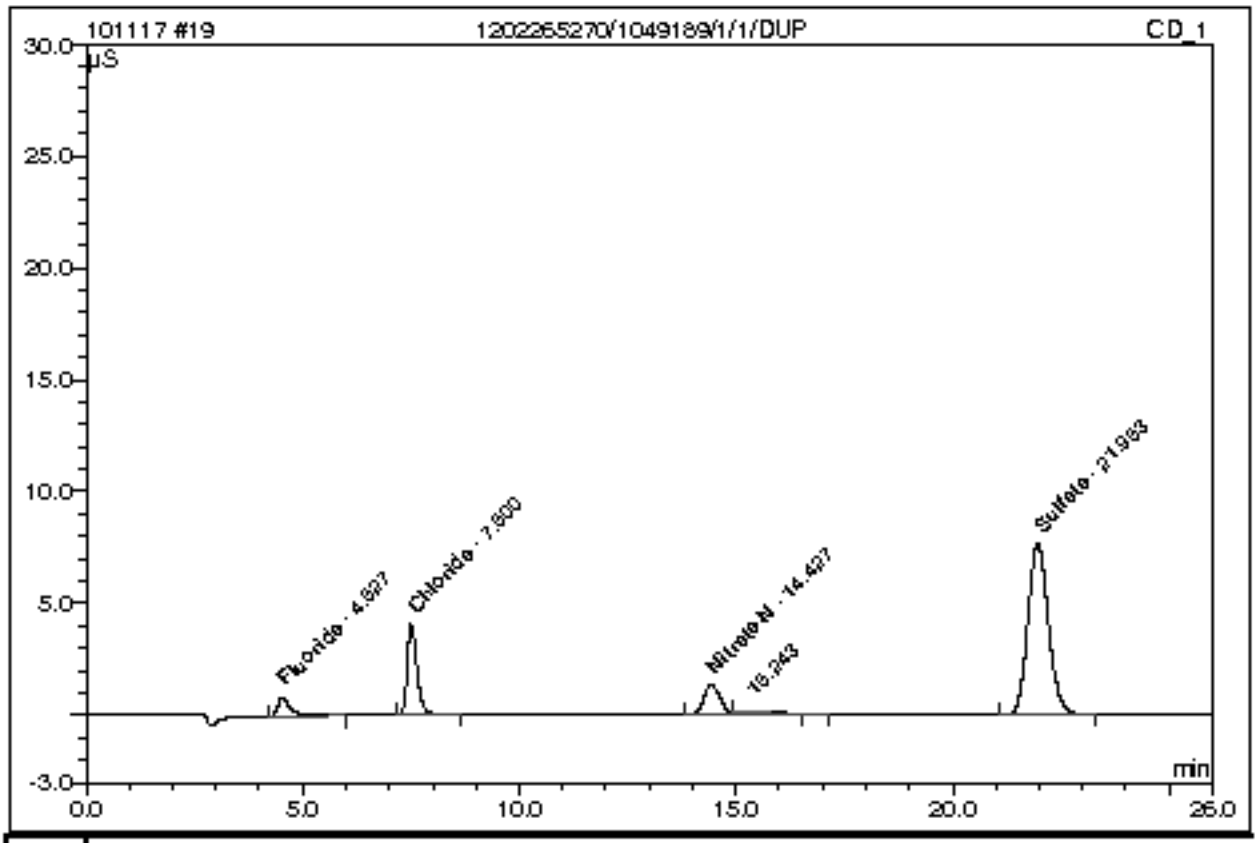
Sample Name:	266878005/1049189/1/1/	*Injection Volume:*	50.0
Vial Number:	302	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 17:19	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.53	Fluoride	n.a.	0.4843		0.24382	3.90
2	7.50	Chloride	n.a.	2.3395		1.06859	17.08
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.43	Nitrate-N	n.a.	0.6574		0.65858	10.53
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	21.97	Sulfate	n.a.	13.1408		4.23203	67.66
Total:				16.6219	0.000	6.203	99.17

19 1202265270/1049189/1/1/DUP

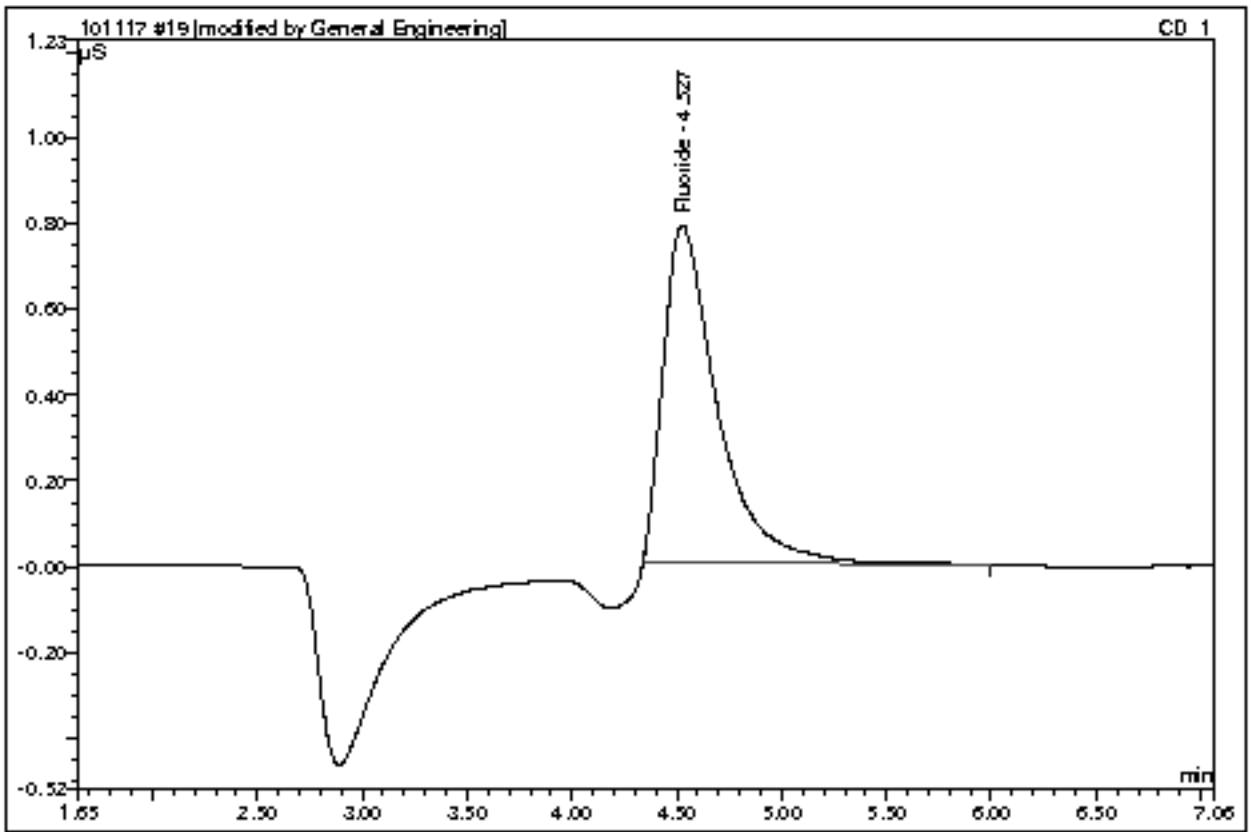
Sample Name:	1202265270/1049189/1/1/DUP	*Injection Volume:*	50.0
Vial Number:	303	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 17:45	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.53	Fluoride	n.a.	0.6152		0.32126	5.03
2	7.50	Chloride	n.a.	2.3469		1.07216	16.79
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.43	Nitrate-N	n.a.	0.7105		0.71852	11.25
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	21.96	Sulfate	n.a.	13.0810		4.21234	65.97
Total:				16.7535	0.000	6.324	99.04

19 1202265270/1049189/1/1/DUP

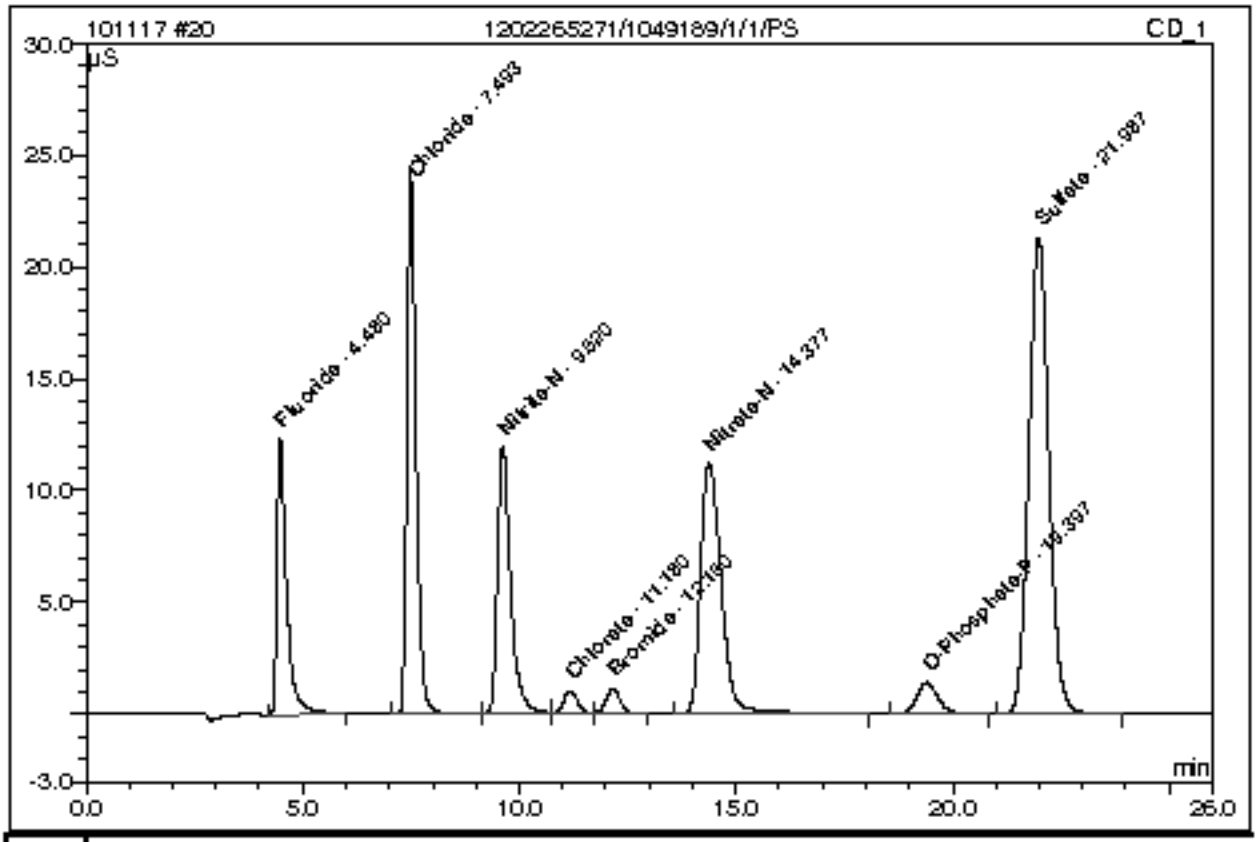
Sample Name:	1202265270/1049189/1/1/DUP	*Injection Volume:*	50.0
Vial Number:	303	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 17:45	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.53	Fluoride	n.a.	0.4683		0.23434	3.72
2	7.50	Chloride	n.a.	2.3469		1.07216	17.02
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.43	Nitrate-N	n.a.	0.7105		0.71852	11.41
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	21.96	Sulfate	n.a.	13.0810		4.21234	66.88
Total:				16.6066	0.000	6.237	99.03

20 1202265271/1049189/1/1/PS

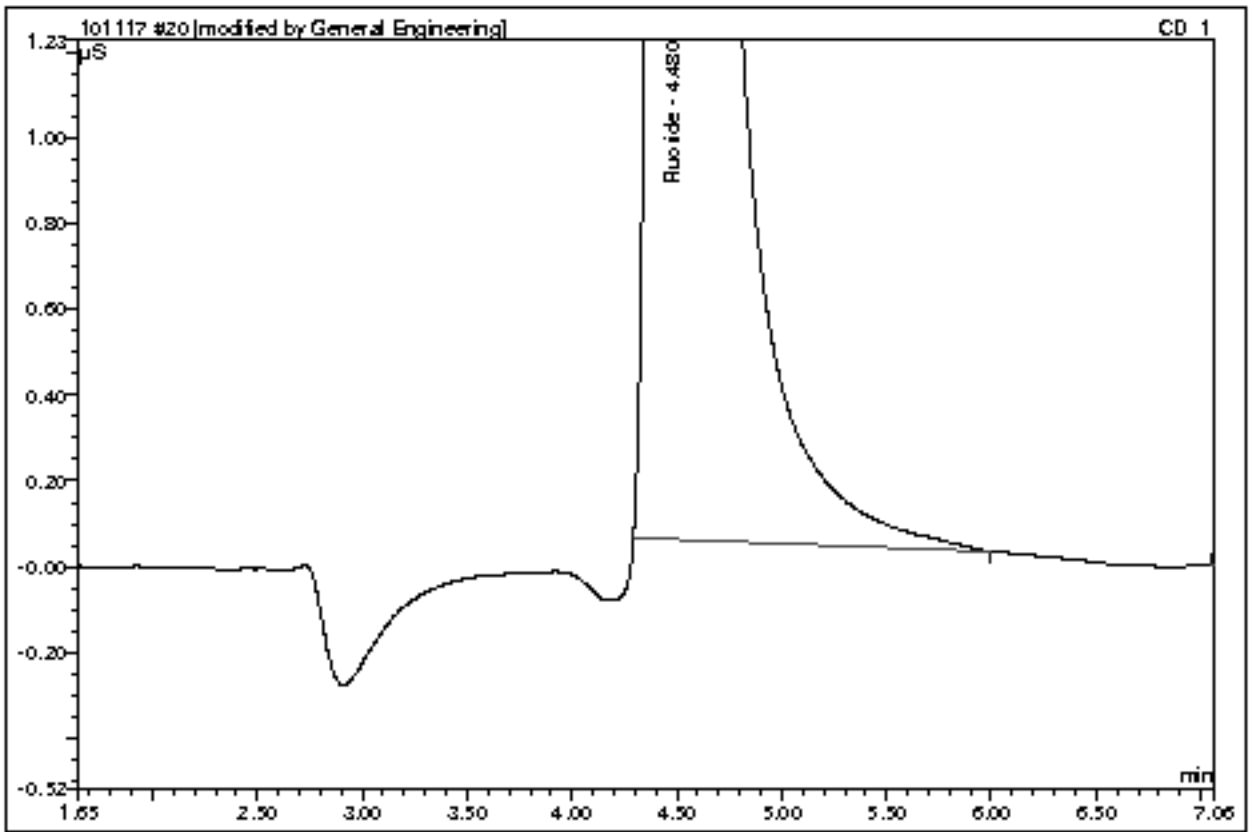
Sample Name:	1202265271/1049189/1/1/PS	*Injection Volume:*	50.0
Vial Number:	304	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 18:11	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	n.a.	5.5057		3.21430	9.86
2	7.49	Chloride	n.a.	12.4909		5.93602	18.21
3	9.62	Nitrite-N	n.a.	4.8726		4.18735	12.84
4	11.18	Chlorate	n.a.	2.6625		0.40039	1.23
5	12.16	Bromide	n.a.	2.6280		0.43269	1.33
6	14.38	Nitrate-N	n.a.	5.5864		6.22535	19.09
7	19.40	O-Phosphate-P	n.a.	2.3009		0.78443	2.41
8	21.99	Sulfate	n.a.	34.9852		11.42354	35.04
Total:				71.0322	0.000	32.604	100.00

20 1202265271/1049189/1/1/PS

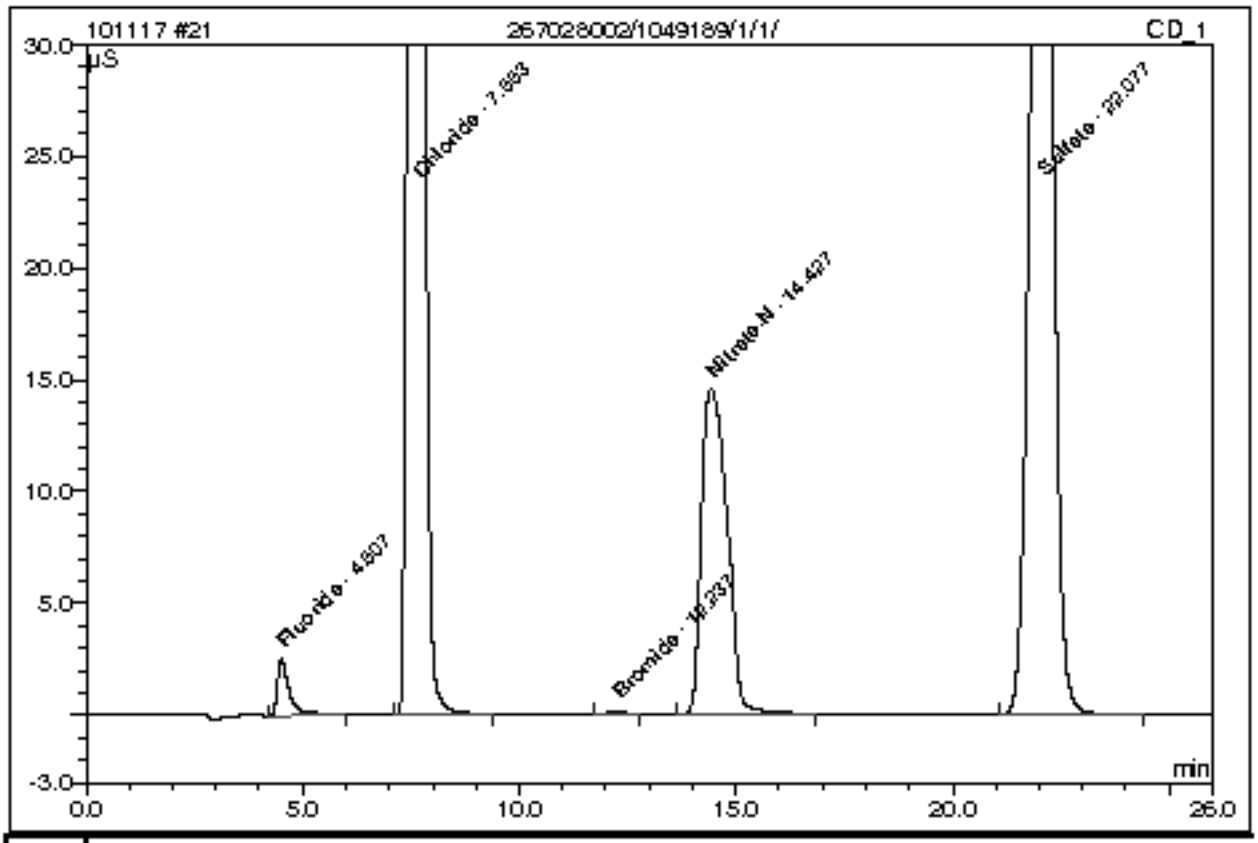
Sample Name:	1202265271/1049189/1/1/PS	*Injection Volume:*	50.0
Vial Number:	304	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 18:11	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	n.a.	5.2993		3.09222	9.52
2	7.49	Chloride	n.a.	12.4909		5.93602	18.27
3	9.62	Nitrite-N	n.a.	4.8726		4.18735	12.89
4	11.18	Chlorate	n.a.	2.6625		0.40039	1.23
5	12.16	Bromide	n.a.	2.6280		0.43269	1.33
6	14.38	Nitrate-N	n.a.	5.5864		6.22535	19.17
7	19.40	O-Phosphate-P	n.a.	2.3009		0.78443	2.41
8	21.99	Sulfate	n.a.	34.9852		11.42354	35.17
Total:				70.8258	0.000	32.482	100.00

21 267028002/1049189/1/1/

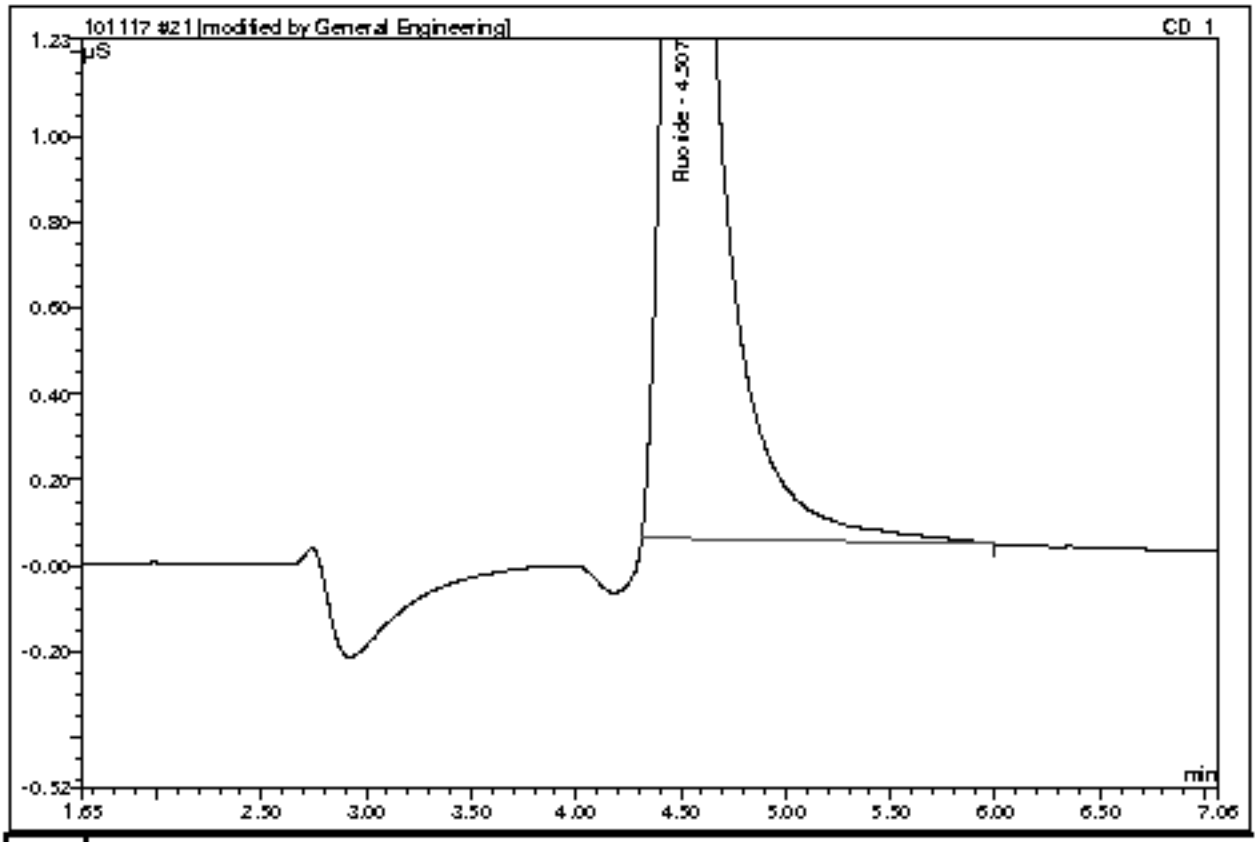
Sample Name:	267028002/1049189/1/1/	*Injection Volume:*	50.0
Vial Number:	305	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 18:38	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.51	Fluoride	n.a.	1.4570		0.81925	0.81
2	7.65	Chloride	n.a.	119.3839		57.18946	56.57
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	12.24	Bromide	n.a.	0.4411		0.07087	0.07
4	14.43	Nitrate-N	n.a.	8.9659		10.04210	9.93
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	22.08	Sulfate	n.a.	100.4393		32.97206	32.62
Total:				230.6872	0.000	101.094	100.00

21 267028002/1049189/1/1/

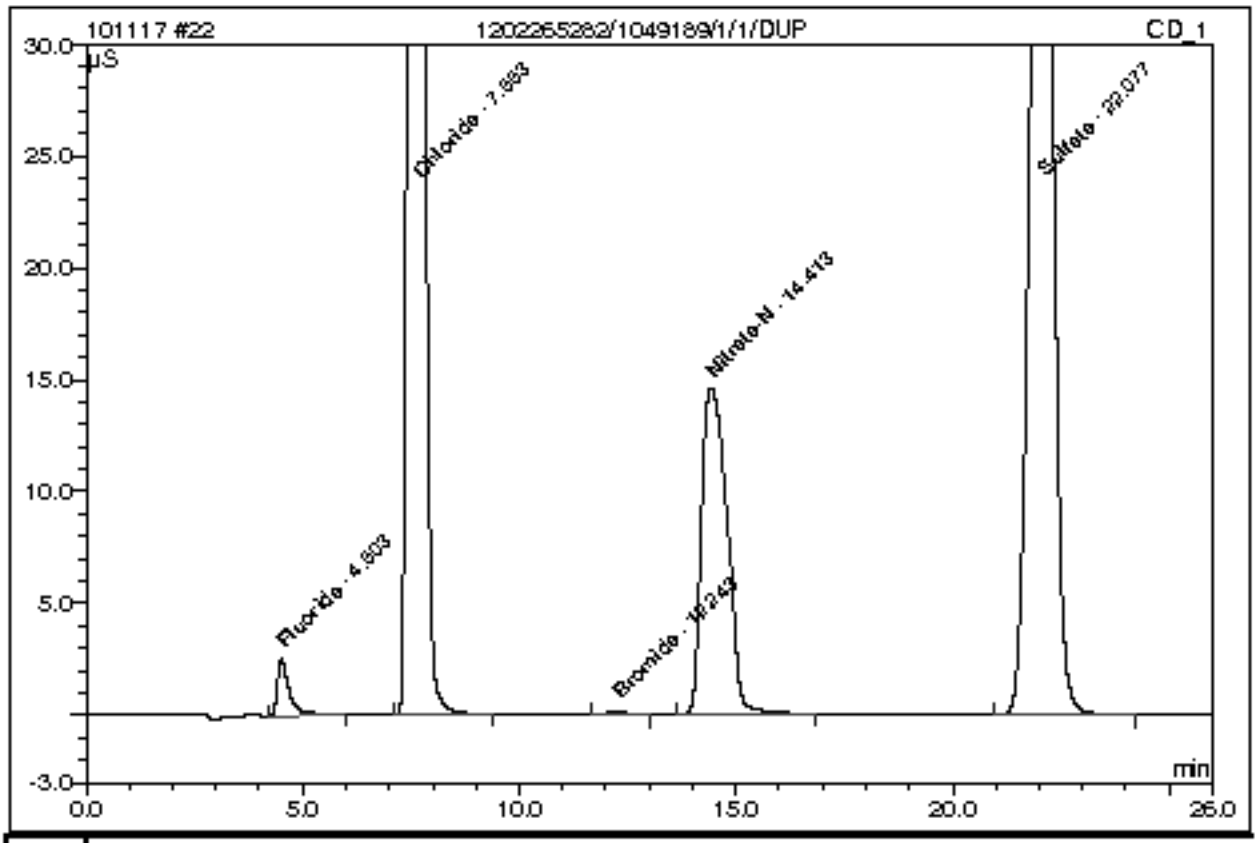
Sample Name:	267028002/1049189/1/1/	*Injection Volume:*	50.0
Vial Number:	305	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 18:38	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.51	Fluoride	n.a.	1.2811		0.71521	0.71
2	7.65	Chloride	n.a.	119.3839		57.18946	56.63
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	12.24	Bromide	n.a.	0.4411		0.07087	0.07
4	14.43	Nitrate-N	n.a.	8.9659		10.04210	9.94
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	22.08	Sulfate	n.a.	100.4393		32.97206	32.65
Total:				230.5113	0.000	100.990	100.00

22 1202265282/1049189/1/1/DUP

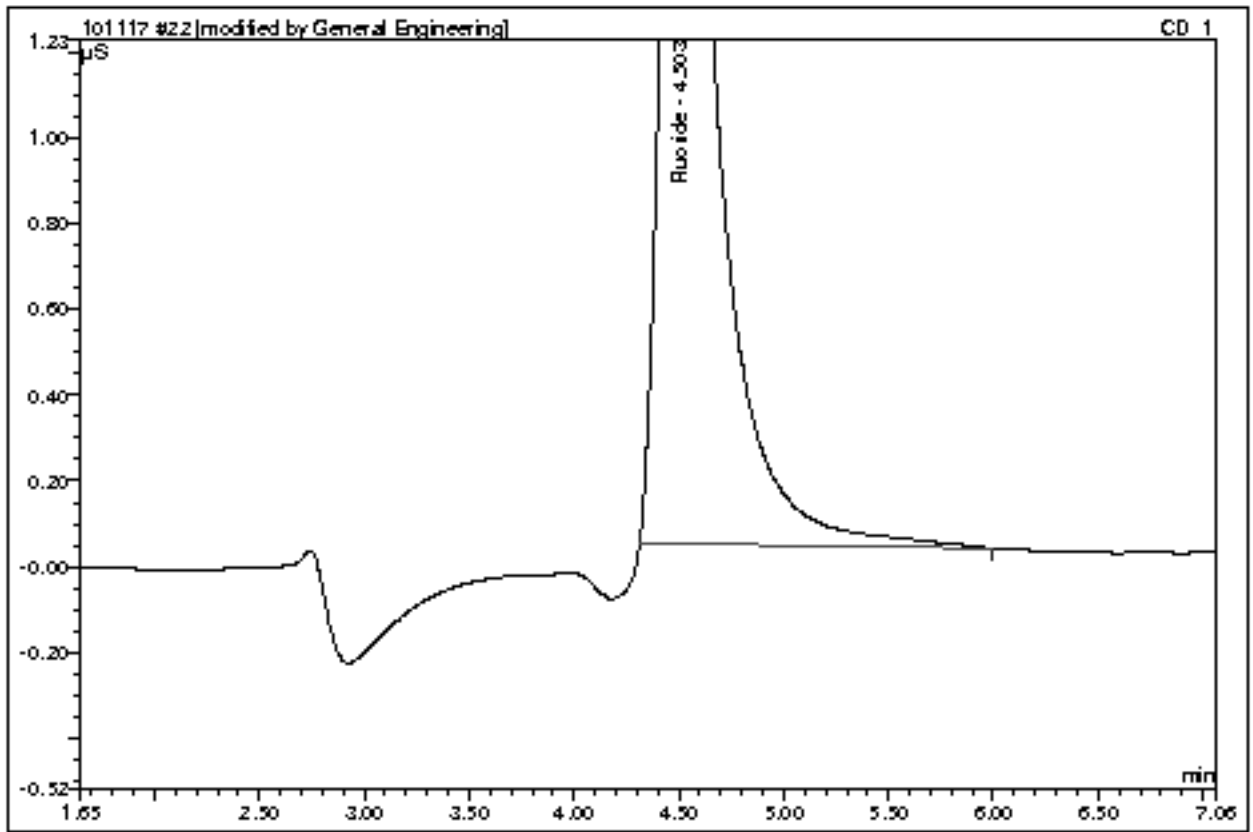
Sample Name:	1202265282/1049189/1/1/DUP	*Injection Volume:*	50.0
Vial Number:	306	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 19:04	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.50	Fluoride	n.a.	1.4548		0.81797	0.81
2	7.65	Chloride	n.a.	119.5890		57.28781	56.64
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	12.24	Bromide	n.a.	0.4902		0.07899	0.08
4	14.41	Nitrate-N	n.a.	8.9714		10.04829	9.93
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	22.08	Sulfate	n.a.	100.2654		32.91481	32.54
Total:				230.7708	0.000	101.148	100.00

22 1202265282/1049189/1/1/DUP

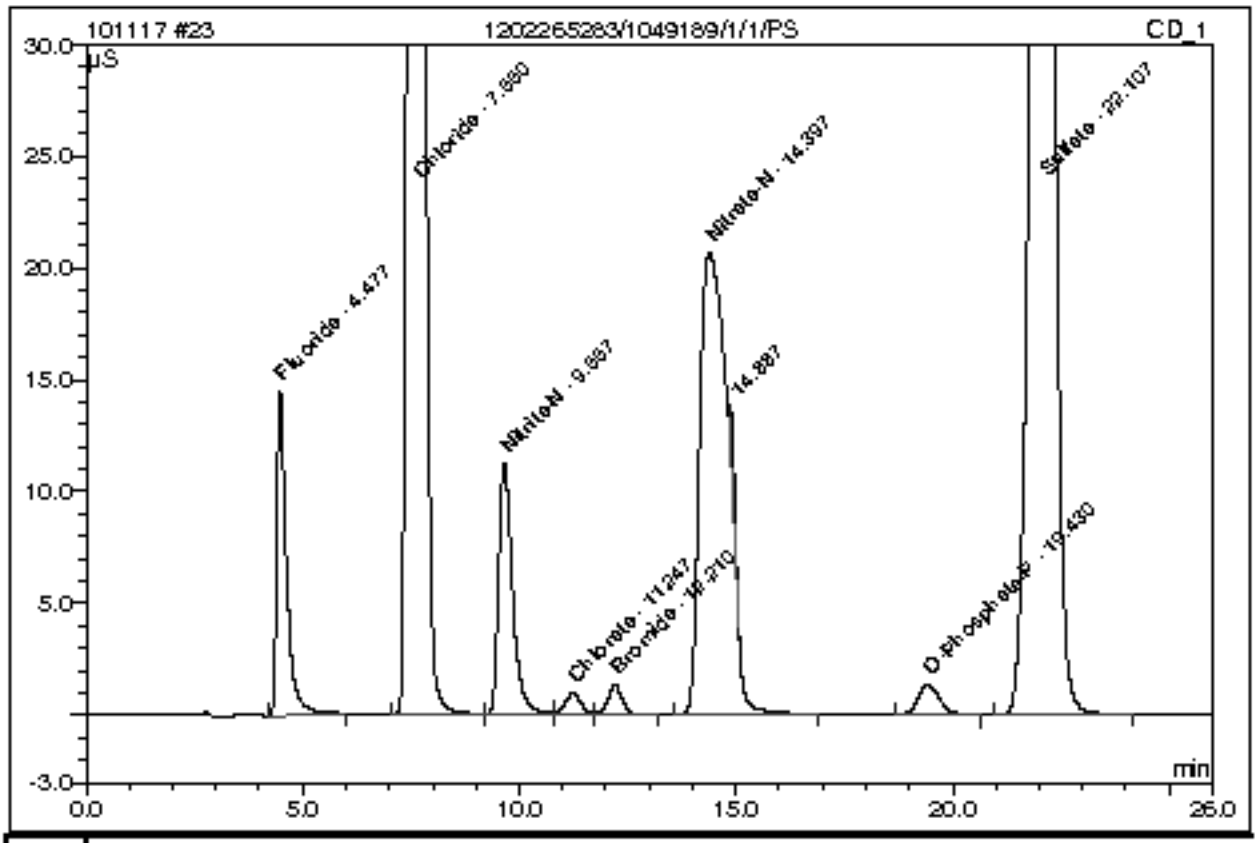
Sample Name:	1202265282/1049189/1/1/DUP	*Injection Volume:*	50.0
Vial Number:	306	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 19:04	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.50	Fluoride	n.a.	1.2788		0.71382	0.71
2	7.65	Chloride	n.a.	119.5890		57.28781	56.70
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	12.24	Bromide	n.a.	0.4902		0.07899	0.08
4	14.41	Nitrate-N	n.a.	8.9714		10.04829	9.94
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	22.08	Sulfate	n.a.	100.2654		32.91481	32.57
Total:				230.5948	0.000	101.044	100.00

23 1202265283/1049189/1/1/PS

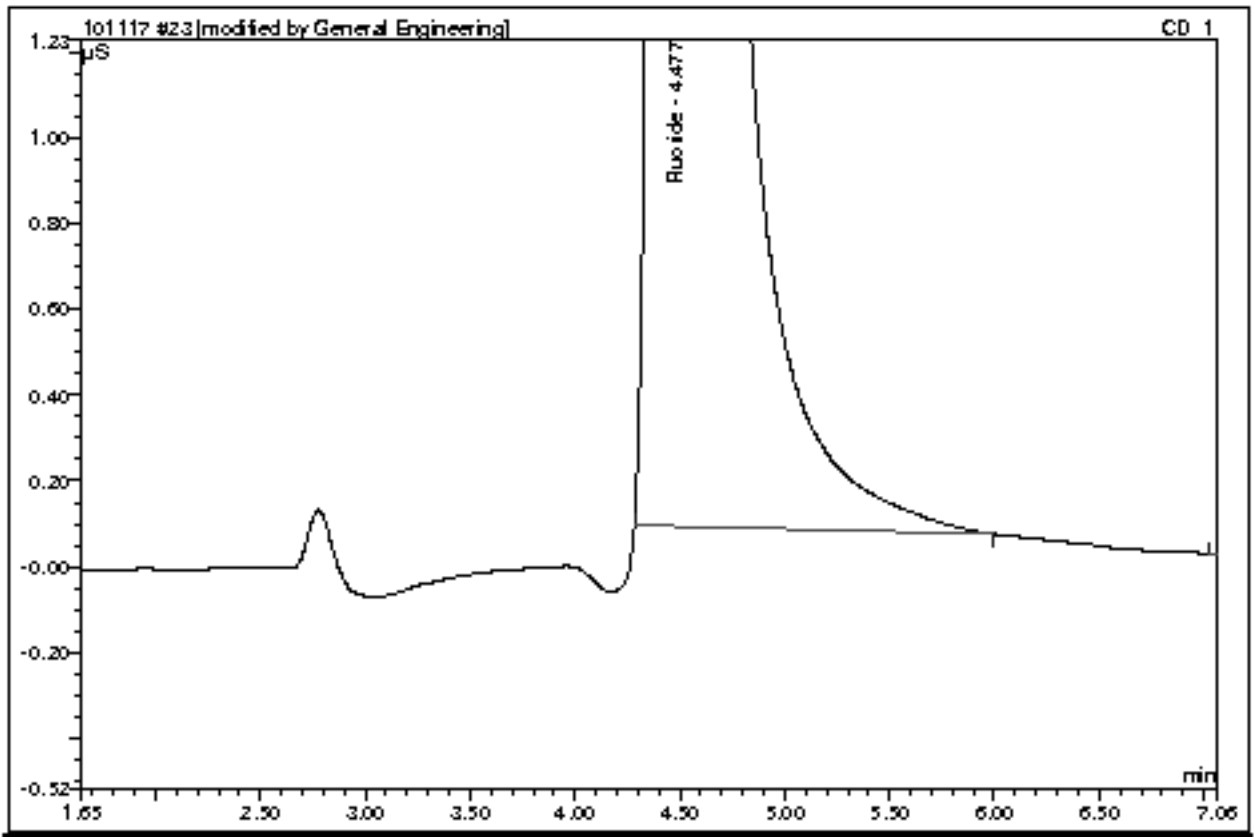
Sample Name:	1202265283/1049189/1/1/PS	*Injection Volume:*	50.0
Vial Number:	307	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 19:30	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	n.a.	6.5200		3.81432	2.94
2	7.66	Chloride	n.a.	130.6939		62.61239	48.32
3	9.66	Nitrite-N	n.a.	4.8912		4.20354	3.24
4	11.25	Chlorate	n.a.	2.7049		0.40689	0.31
5	12.21	Bromide	n.a.	3.0883		0.50885	0.39
6	14.40	Nitrate-N	n.a.	14.0851		15.82364	12.21
8	19.43	O-Phosphate-P	n.a.	2.3083		0.78696	0.61
9	22.11	Sulfate	n.a.	125.1839		41.11836	31.73
Total:				289.4756	0.000	129.275	99.76

23 1202265283/1049189/1/1/PS

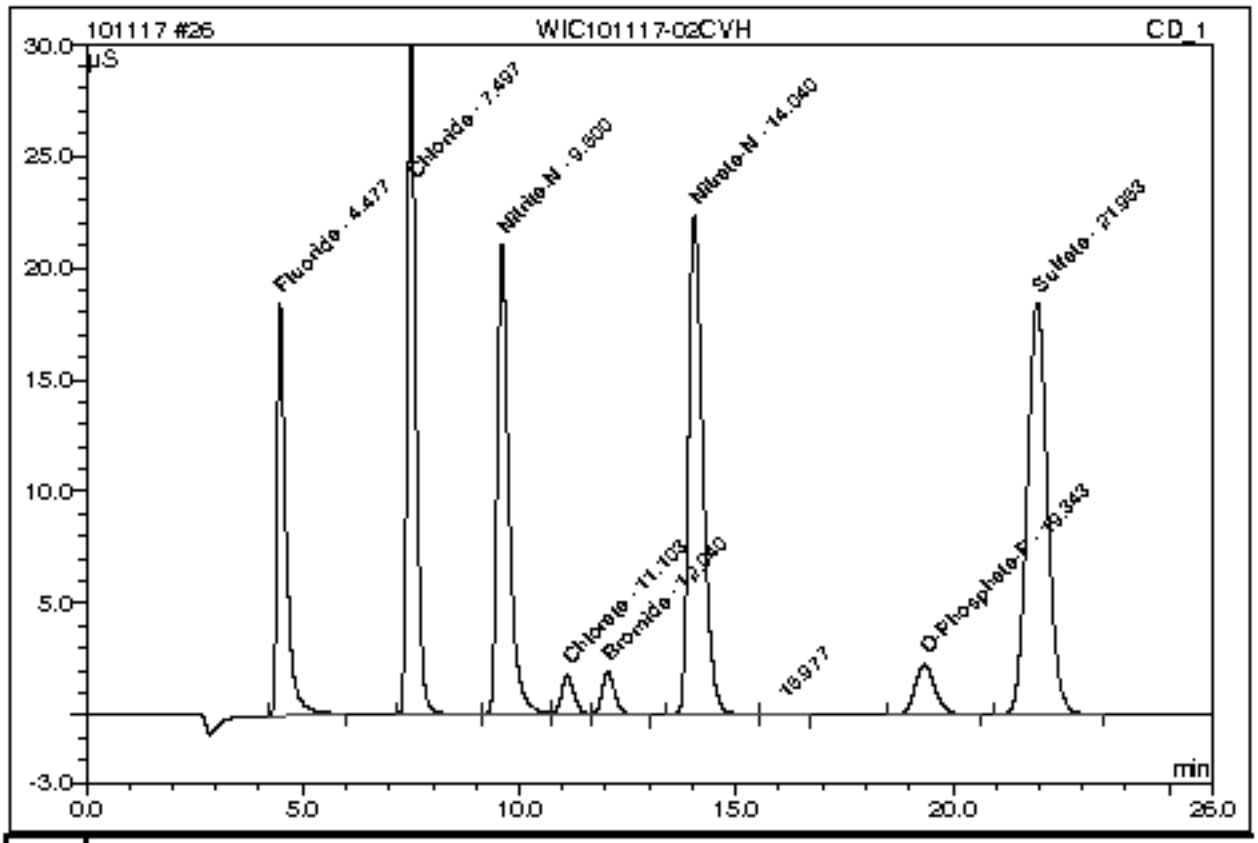
Sample Name:	1202265283/1049189/1/1/PS	*Injection Volume:*	50.0
Vial Number:	307	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 19:30	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	n.a.	6.3034		3.68617	2.85
2	7.66	Chloride	n.a.	130.6939		62.61239	48.37
3	9.66	Nitrite-N	n.a.	4.8912		4.20354	3.25
4	11.25	Chlorate	n.a.	2.7049		0.40689	0.31
5	12.21	Bromide	n.a.	3.0883		0.50885	0.39
6	14.40	Nitrate-N	n.a.	14.0851		15.82364	12.22
8	19.43	O-Phosphate-P	n.a.	2.3083		0.78696	0.61
9	22.11	Sulfate	n.a.	125.1839		41.11836	31.76
Total:				289.2590	0.000	129.147	99.76

26 WIC101117-02CVH

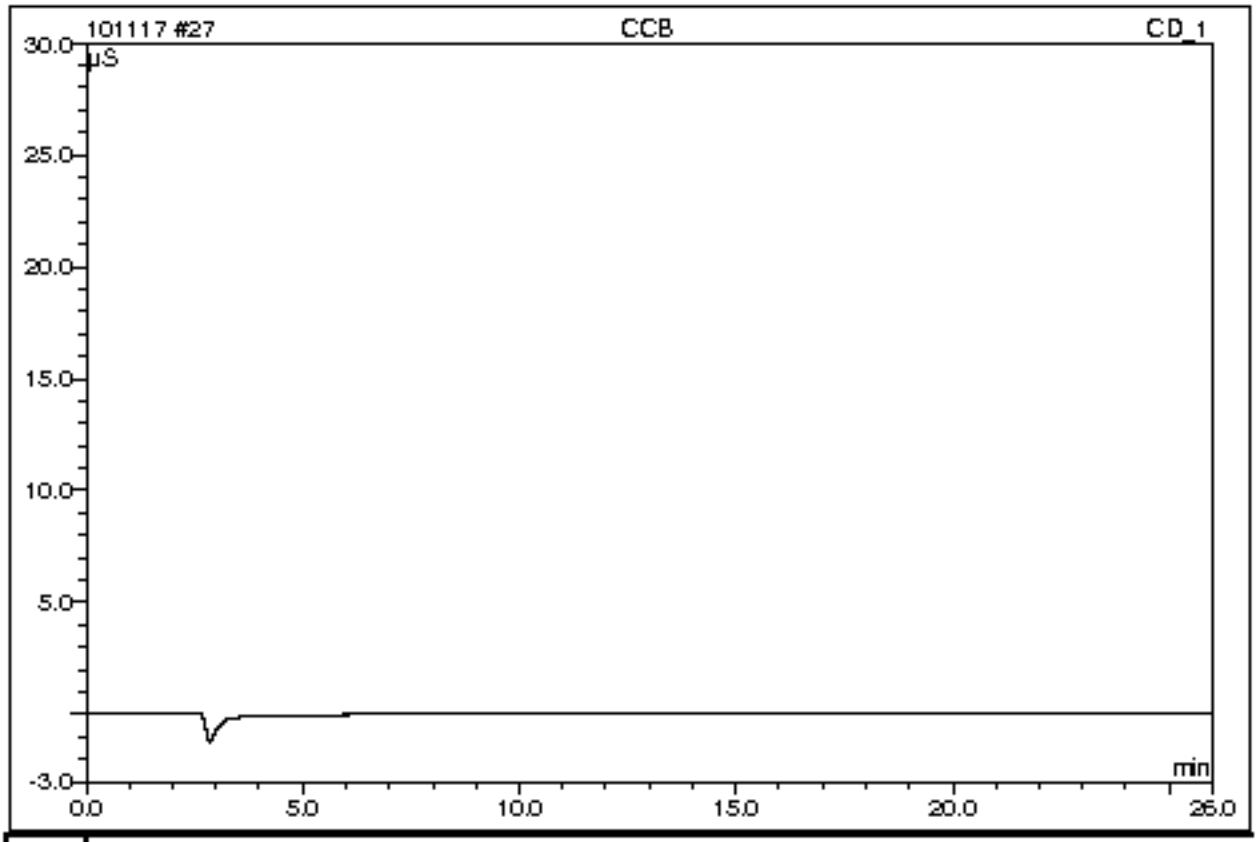
Sample Name:	WIC101117-02CVH	*Injection Volume:*	50.0
Vial Number:	310	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 20:48	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	n.a.	7.5845		4.44402	11.32
2	7.50	Chloride	n.a.	15.0911		7.18276	18.30
3	9.60	Nitrite-N	n.a.	7.6144		6.57545	16.75
4	11.10	Chlorate	n.a.	4.0090		0.60682	1.55
5	12.04	Bromide	n.a.	3.9671		0.65424	1.67
6	14.04	Nitrate-N	n.a.	7.6330		8.53675	21.75
8	19.34	O-Phosphate-P	n.a.	3.6109		1.22829	3.13
9	21.95	Sulfate	n.a.	30.6704		10.00307	25.49
Total:				80.1805	0.000	39.231	99.96

27 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	311	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 21:14	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

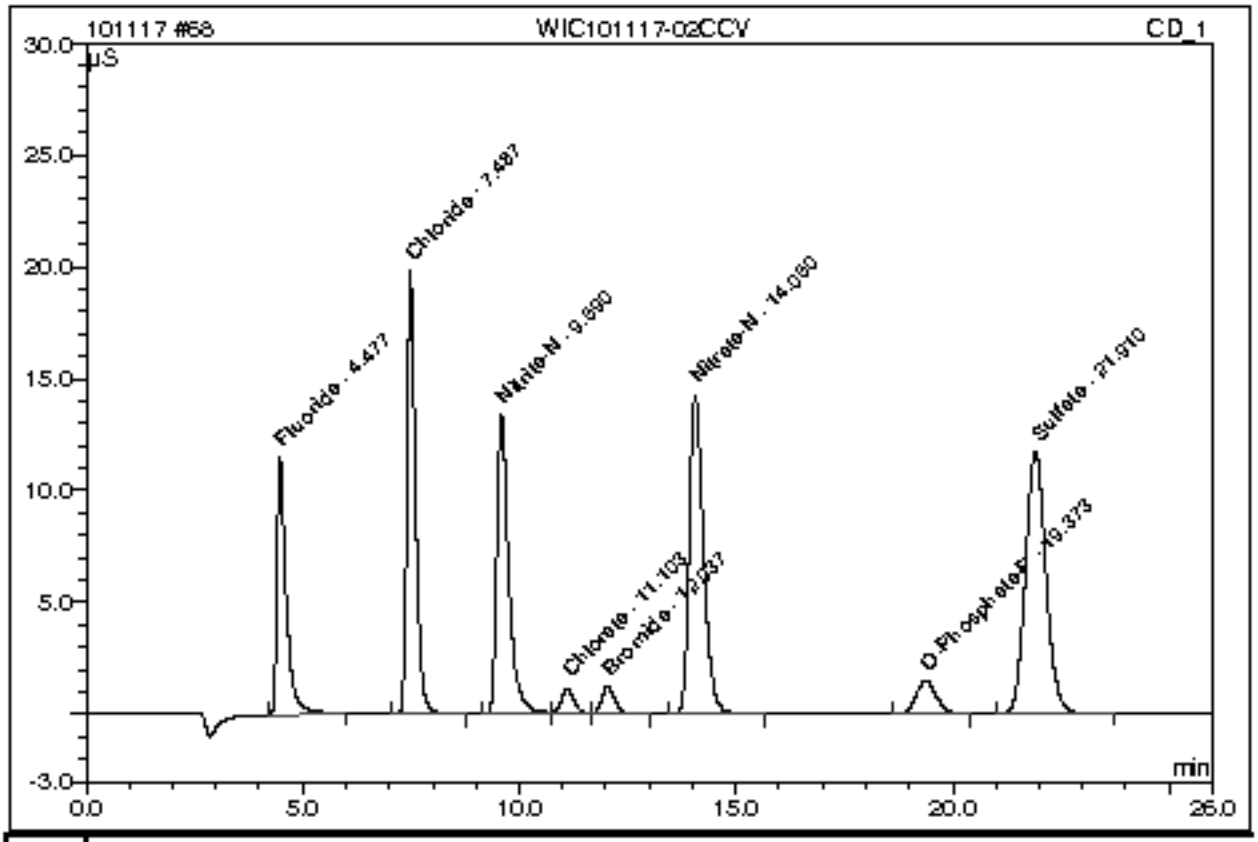
This is runlog for Sequence 101117.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
1202265277	11/18/10 00:17	1049191	100	101117	VH1
1202265279	11/18/10 00:43	1049191	100	101117	VH1
267058002	11/18/10 01:09	1049191	100	101117	VH1
267058003	11/18/10 01:35	1049191	100	101117	VH1
267062001	11/18/10 02:01	1049191	100	101117	VH1
1202265278	11/18/10 02:27	1049191	100	101117	VH1
1202265280	11/18/10 02:53	1049191	100	101117	VH1
CVH	11/18/10 03:19	1		101117	VH1
CCB	11/18/10 03:45	1		101117	VH1
267062002	11/18/10 04:12	1049191	100	101117	VH1
267062003	11/18/10 04:38	1049191	100	101117	VH1
267062004	11/18/10 05:04	1049191	100	101117	VH1
267062005	11/18/10 05:30	1049191	100	101117	VH1
267062006	11/18/10 05:56	1049191	100	101117	VH1
267062007	11/18/10 06:22	1049191	100	101117	VH1
267062008	11/18/10 06:48	1049191	100	101117	VH1
267062009	11/18/10 07:14	1049191	100	101117	VH1
267062010	11/18/10 07:40	1049191	100	101117	VH1
267062011	11/18/10 08:06	1049191	100	101117	VH1
CCV	11/18/10 08:33	1		101117	VH1
CCB	11/18/10 08:59	1		101117	VH1
1202262668	11/18/10 09:25	1048223	1	101117	VH1
1202262671	11/18/10 09:51	1048223	1	101117	VH1
266809003	11/18/10 10:17	1048223	1	101117	VH1
1202262669	11/18/10 10:43	1048223	1	101117	VH1
1202262670	11/18/10 11:09	1048223	1	101117	VH1
266809004	11/18/10 11:35	1048223	1	101117	VH1
266810002	11/18/10 12:01	1048223	1	101117	VH1

266917002	11/18/10	12:27	1048223	1	101117	VH1
1202262680	11/18/10	12:53	1048223	1	101117	VH1
1202262681	11/18/10	13:20	1048223	1	101117	VH1
CVH	11/18/10	13:46	1	101117	VH1	
CCB	11/18/10	14:12	1	101117	VH1	
266917009	11/18/10	14:38	1048223	1	101117	VH1
CCV	11/18/10	15:04	1	101117	VH1	
CCB	11/18/10	15:30	1	101117	VH1	
265371004	11/18/10	15:56	1042136	10	101117	VH1
267028002	11/18/10	16:22	1049189	10	101117	VH1
1202265282	11/18/10	16:48	1049189	10	101117	VH1
1202265283	11/18/10	17:14	1049189	10	101117	VH1
CCV	11/18/10	17:40	1	101117	VH1	
CCB	11/18/10	18:07	1	101117	VH1	

68 WIC101117-02CCV

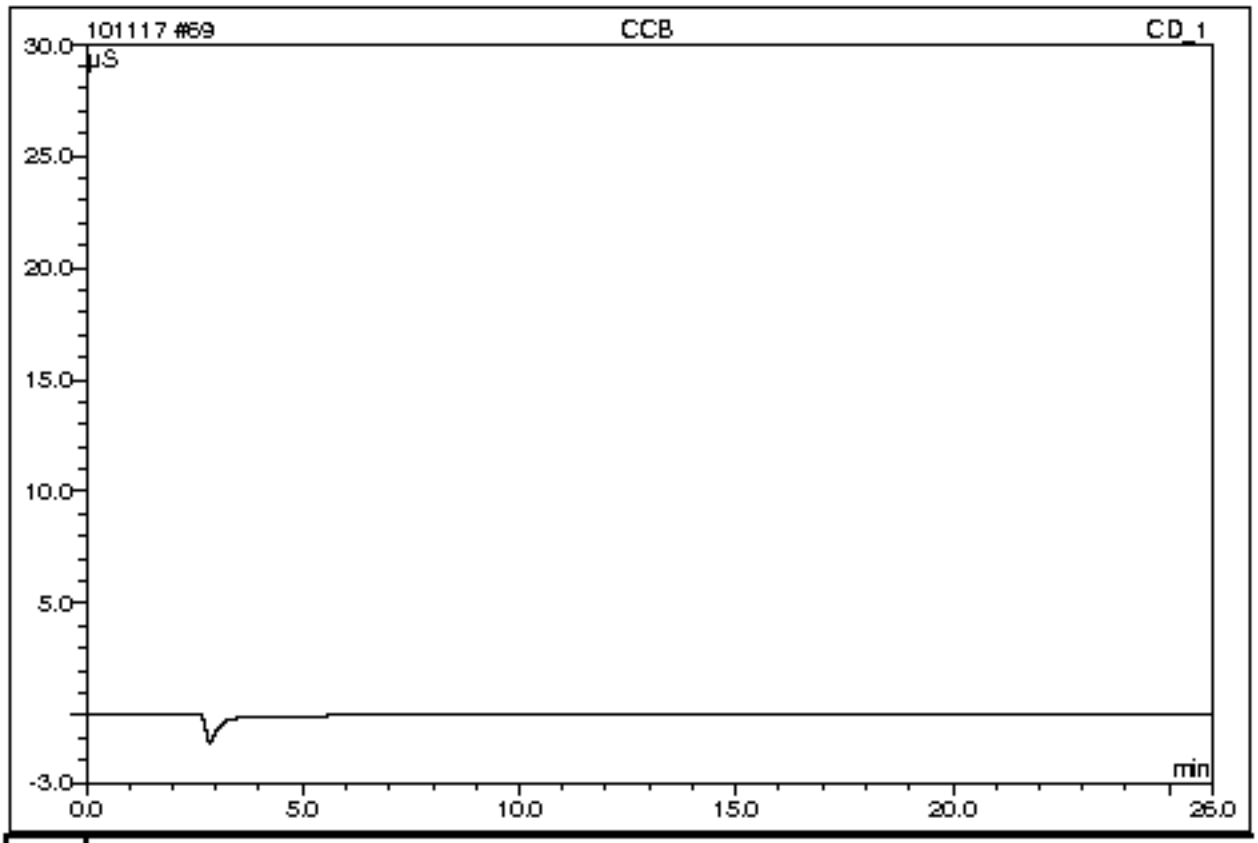
Sample Name:	WIC101117-02CCV	*Injection Volume:*	50.0
Vial Number:	296	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 15:04	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	n.a.	4.9348		2.87658	11.38
2	7.49	Chloride	n.a.	9.6357		4.56702	18.07
3	9.59	Nitrite-N	n.a.	4.9631		4.26616	16.88
4	11.10	Chlorate	n.a.	2.6953		0.40541	1.60
5	12.04	Bromide	n.a.	2.6333		0.43357	1.72
6	14.06	Nitrate-N	n.a.	4.9049		5.45565	21.59
7	19.37	O-Phosphate-P	n.a.	2.3917		0.81519	3.23
8	21.91	Sulfate	n.a.	19.8753		6.44915	25.52
Total:				52.0341	0.000	25.269	100.00

69 CCB

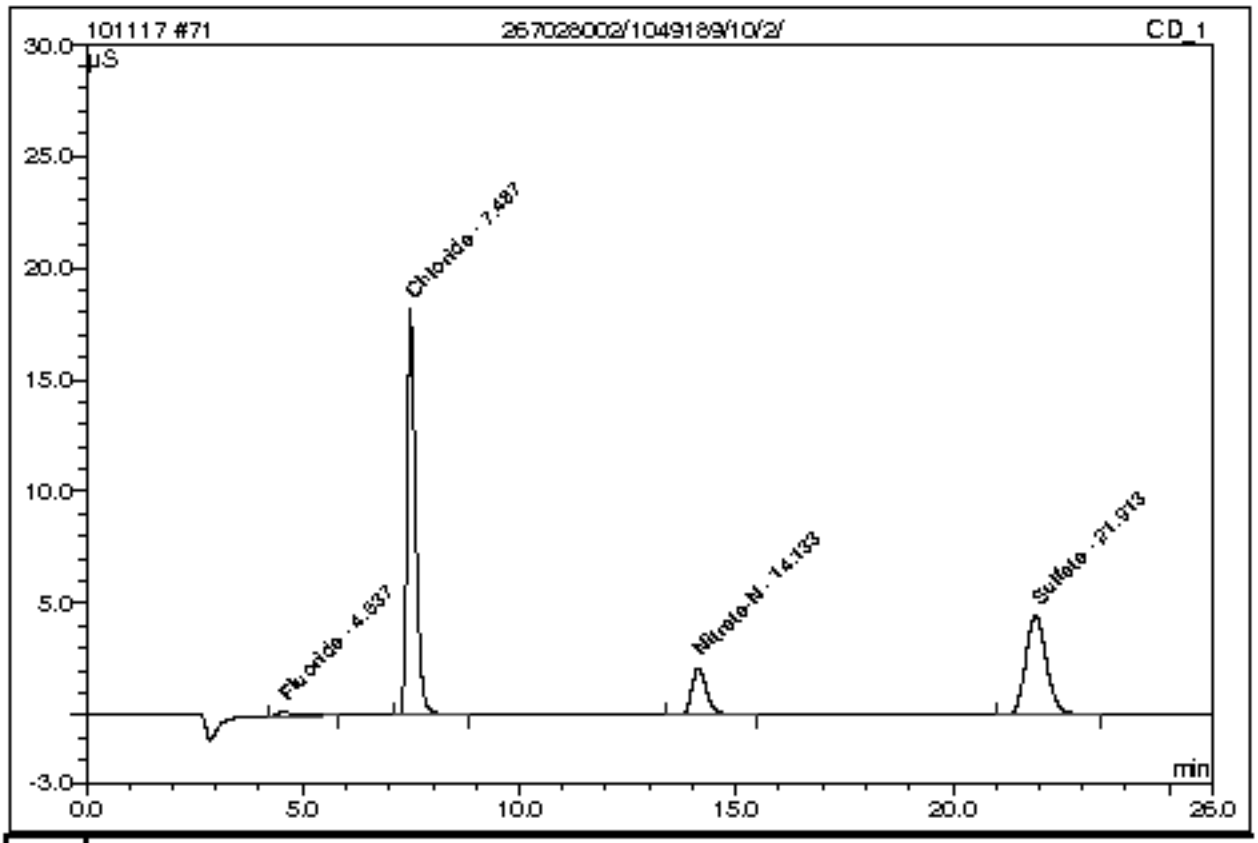
Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	297	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 15:30	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

71 267028002/1049189/10/2/

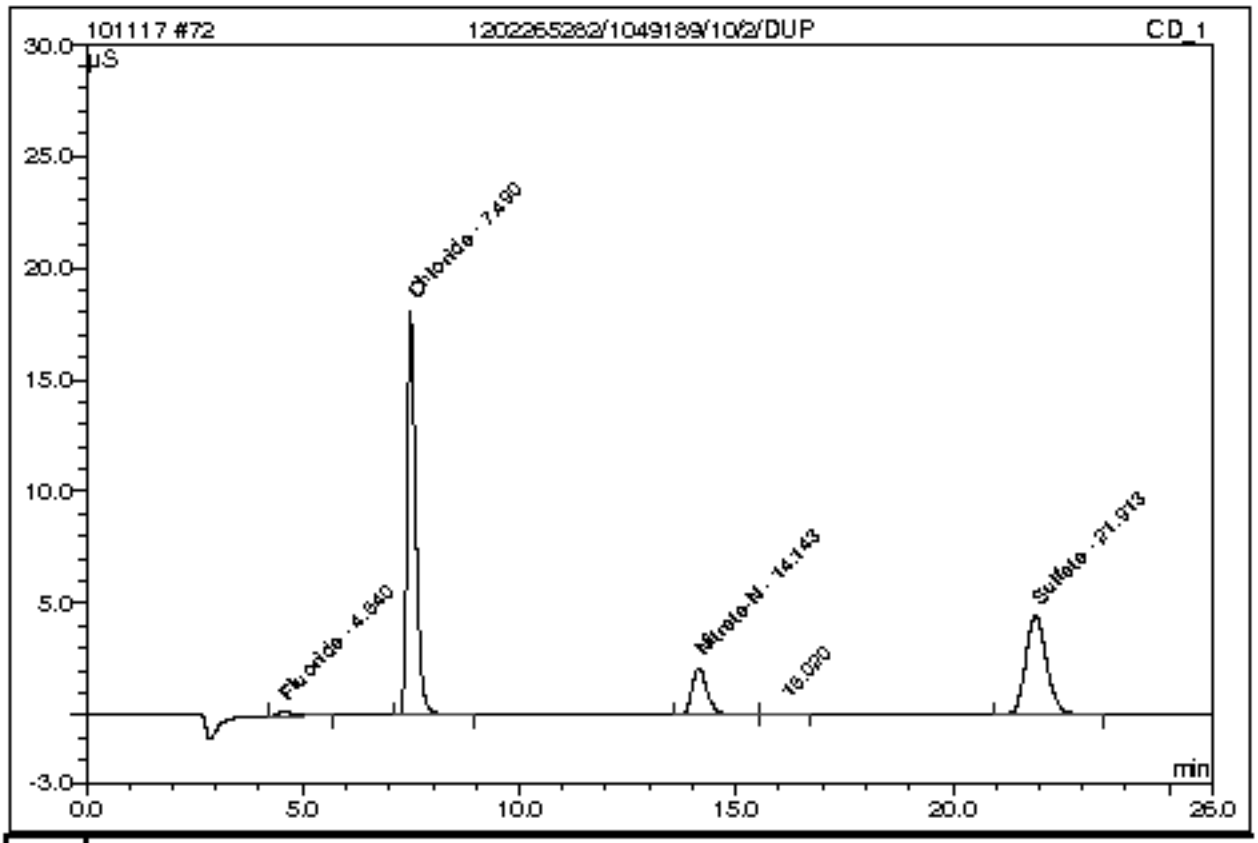
Sample Name:	267028002/1049189/10/2/	*Injection Volume:*	50.0
Vial Number:	305	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 16:22	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.54	Fluoride	n.a.	0.2138		0.08384	1.10
2	7.49	Chloride	n.a.	8.8351		4.18310	55.01
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.13	Nitrate-N	n.a.	0.8283		0.85159	11.20
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.91	Sulfate	n.a.	7.8351		2.48530	32.68
Total:				17.7122	0.000	7.604	100.00

72 1202265282/1049189/10/2/DUP

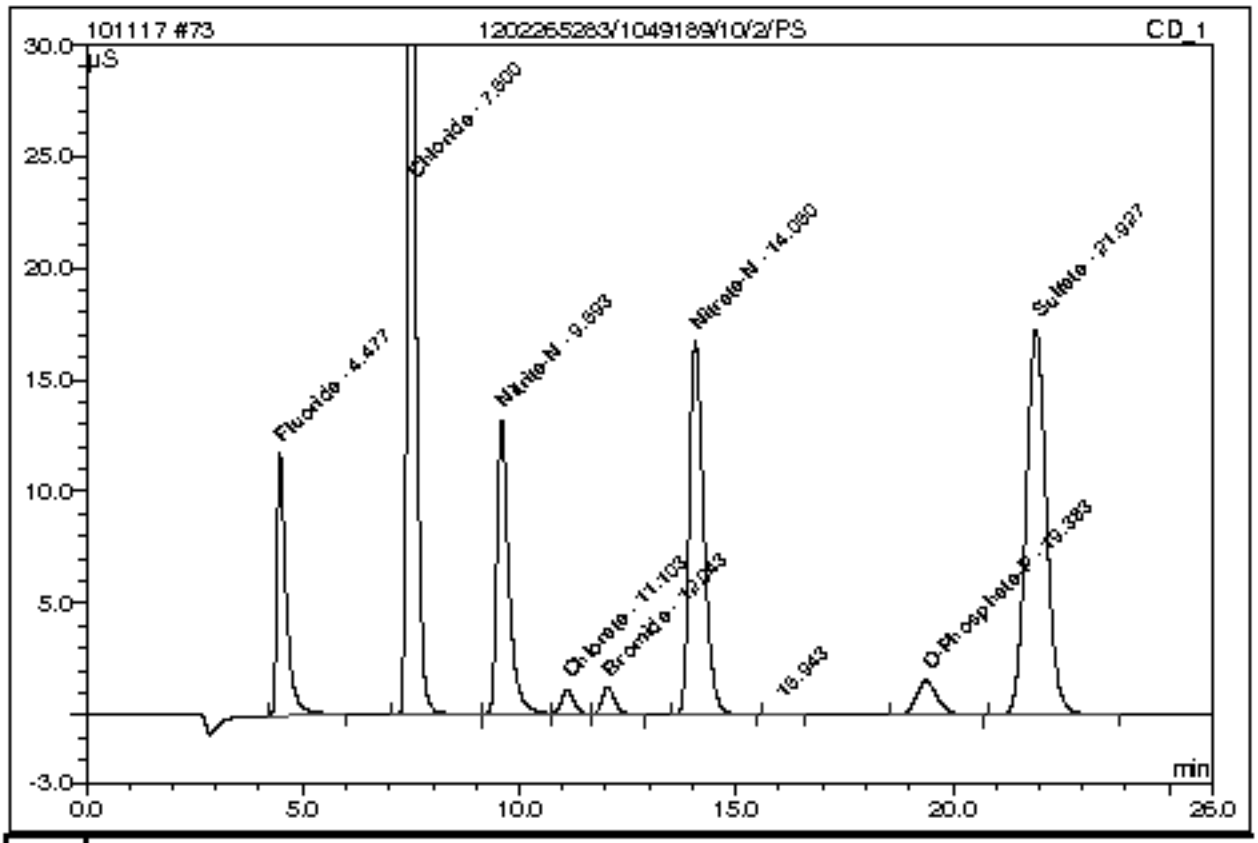
Sample Name:	1202265282/1049189/10/2/DUP	*Injection Volume:*	50.0
Vial Number:	306	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 16:48	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.54	Fluoride	n.a.	0.2173		0.08591	1.13
2	7.49	Chloride	n.a.	8.8451		4.18794	54.89
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.14	Nitrate-N	n.a.	0.8245		0.84733	11.11
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	21.91	Sulfate	n.a.	7.8420		2.48761	32.60
Total:				17.7290	0.000	7.609	99.72

73 1202265283/1049189/10/2/PS

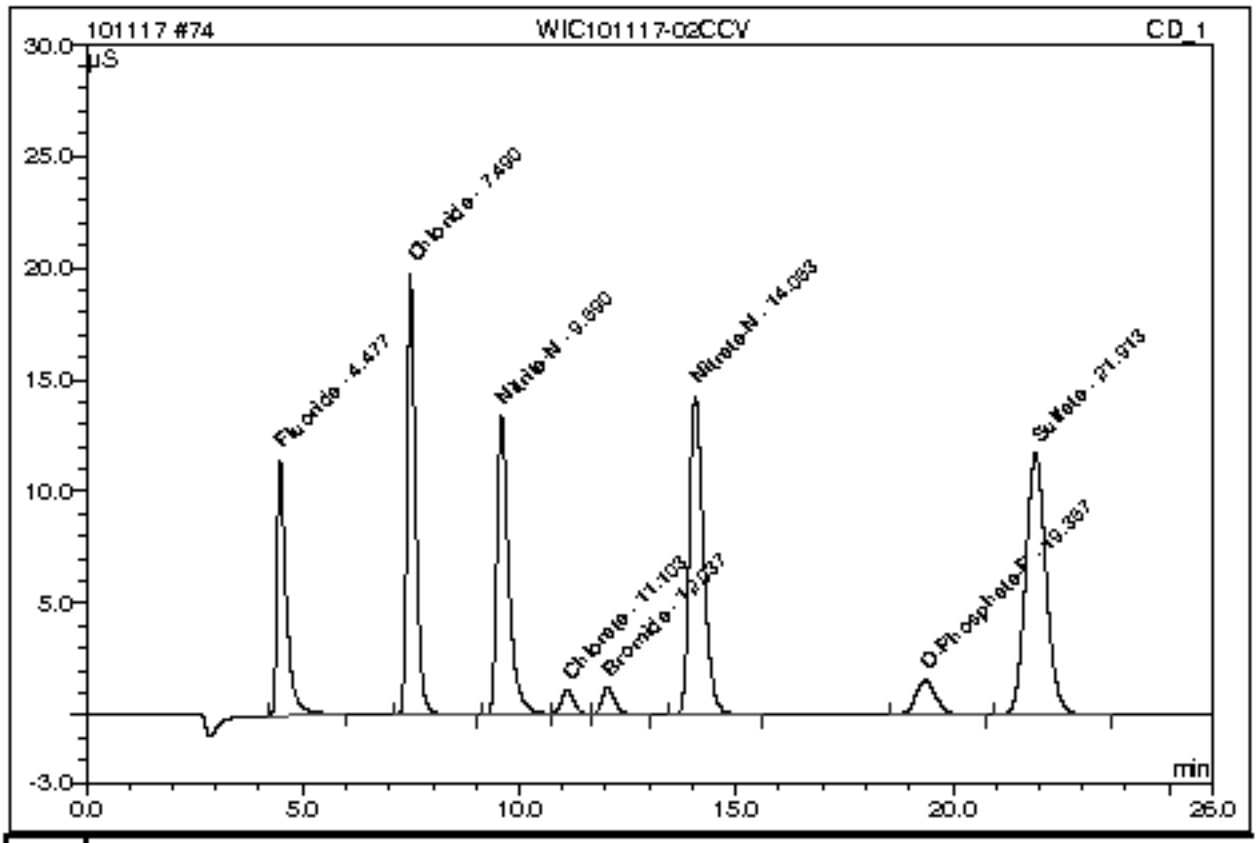
Sample Name:	1202265283/1049189/10/2/PS	*Injection Volume:*	50.0
Vial Number:	307	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 17:14	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	n.a.	5.0613		2.95141	8.61
2	7.50	Chloride	n.a.	20.1100		9.58927	27.97
3	9.59	Nitrite-N	n.a.	4.9046		4.21521	12.30
4	11.10	Chlorate	n.a.	2.6371		0.39649	1.16
5	12.04	Bromide	n.a.	2.6558		0.43728	1.28
6	14.06	Nitrate-N	n.a.	5.7857		6.45049	18.82
8	19.38	O-Phosphate-P	n.a.	2.5190		0.85834	2.50
9	21.93	Sulfate	n.a.	28.7101		9.35771	27.30
Total:				72.3836	0.000	34.256	99.93

74 WIC101117-02CCV

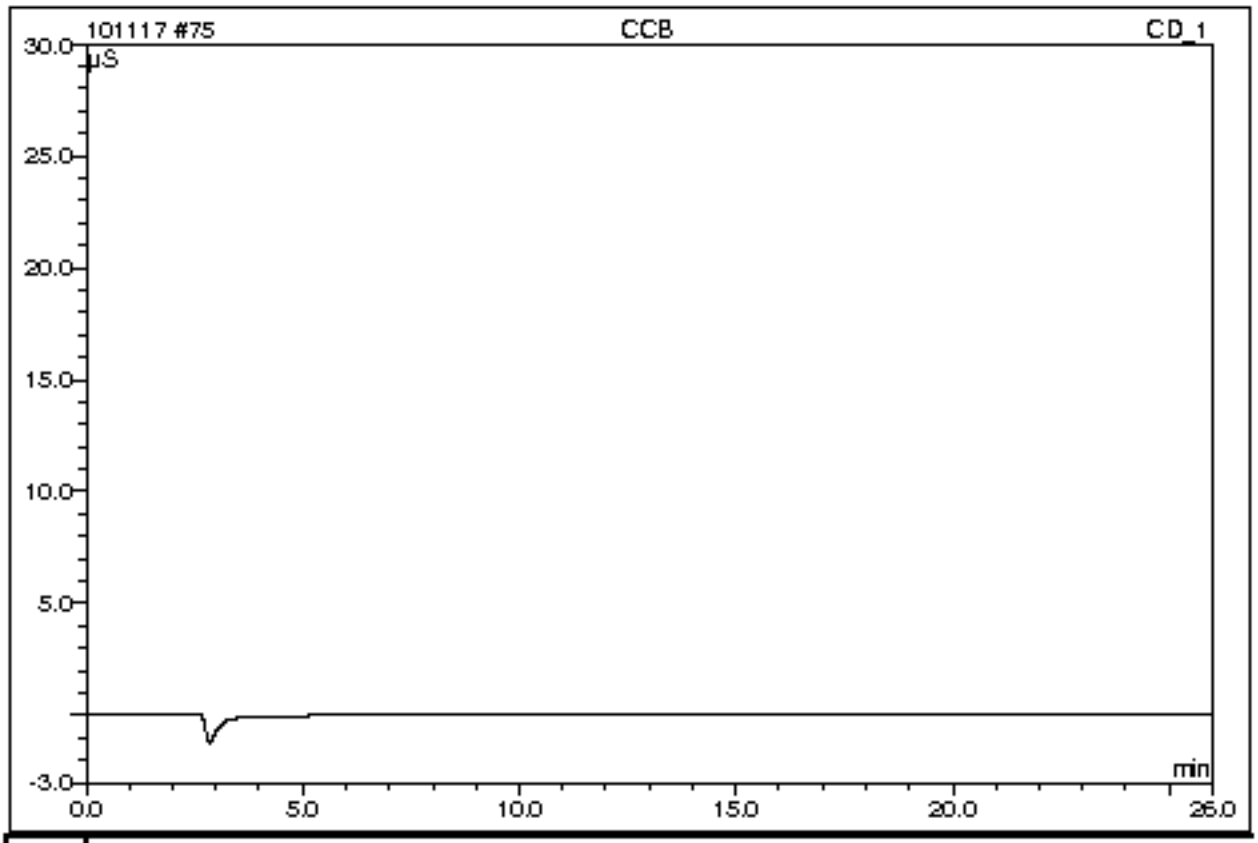
Sample Name:	WIC101117-02CCV	*Injection Volume:*	50.0
Vial Number:	278	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 17:40	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	n.a.	4.9194		2.86745	11.36
2	7.49	Chloride	n.a.	9.6260		4.56237	18.07
3	9.59	Nitrite-N	n.a.	4.9522		4.25669	16.86
4	11.10	Chlorate	n.a.	2.6412		0.39712	1.57
5	12.04	Bromide	n.a.	2.6809		0.44143	1.75
6	14.06	Nitrate-N	n.a.	4.8857		5.43395	21.53
7	19.37	O-Phosphate-P	n.a.	2.5070		0.85426	3.38
8	21.91	Sulfate	n.a.	19.8133		6.42874	25.47
Total:				52.0256	0.000	25.242	100.00

75 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	279	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	110510an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 18:07	Analyst:	VH1
Run Time (min):	26.00	Column:	AS23-002588;GLGCE086;300;9056



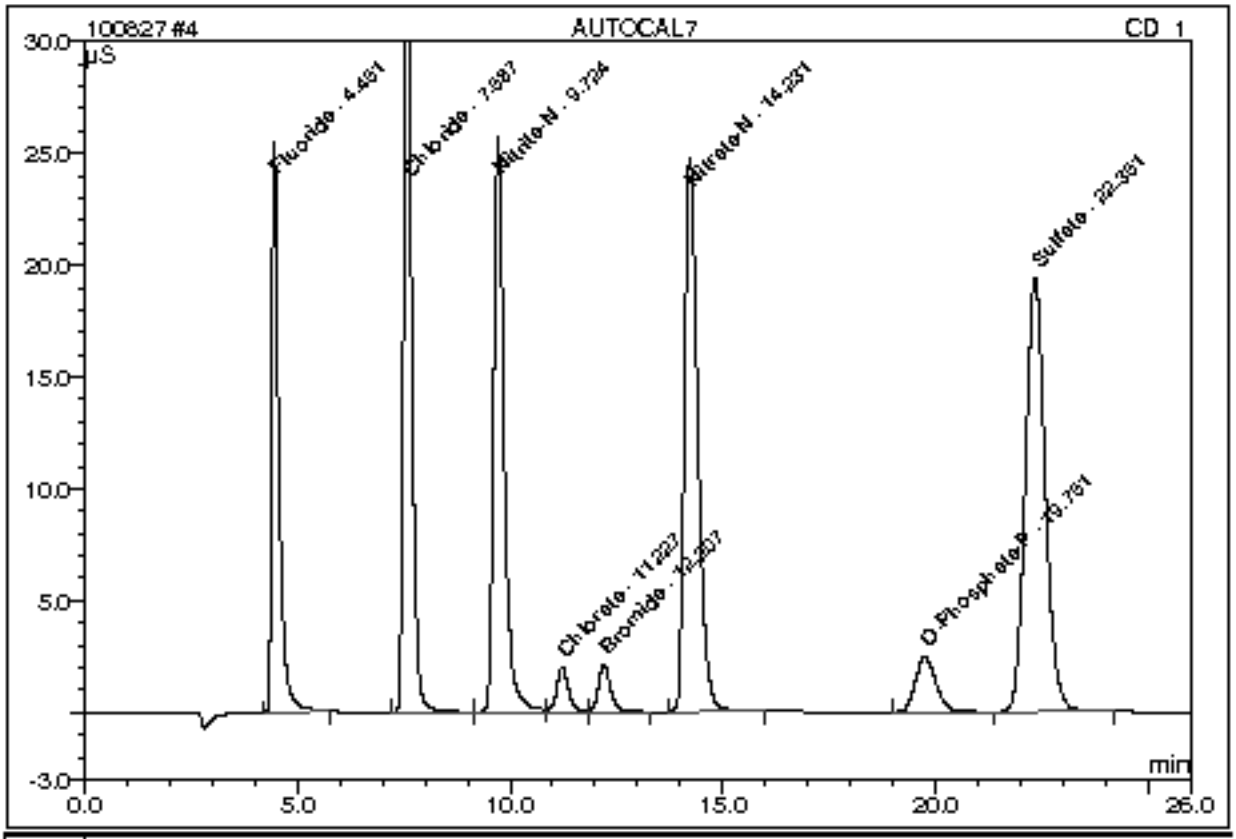
No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 101207.seq for IC7

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	08/27/10 10:22	1		101207	GXM3
ICAL-06	08/27/10 10:51	1		101207	GXM3
ICAL-05	08/27/10 11:20	1		101207	GXM3
ICAL-04	08/27/10 11:49	1		101207	GXM3
ICAL-03	08/27/10 12:17	1		101207	GXM3
ICAL-02	08/27/10 12:46	1		101207	GXM3
ICAL-01	08/27/10 13:15	1		101207	GXM3

4 AUTOCAL7

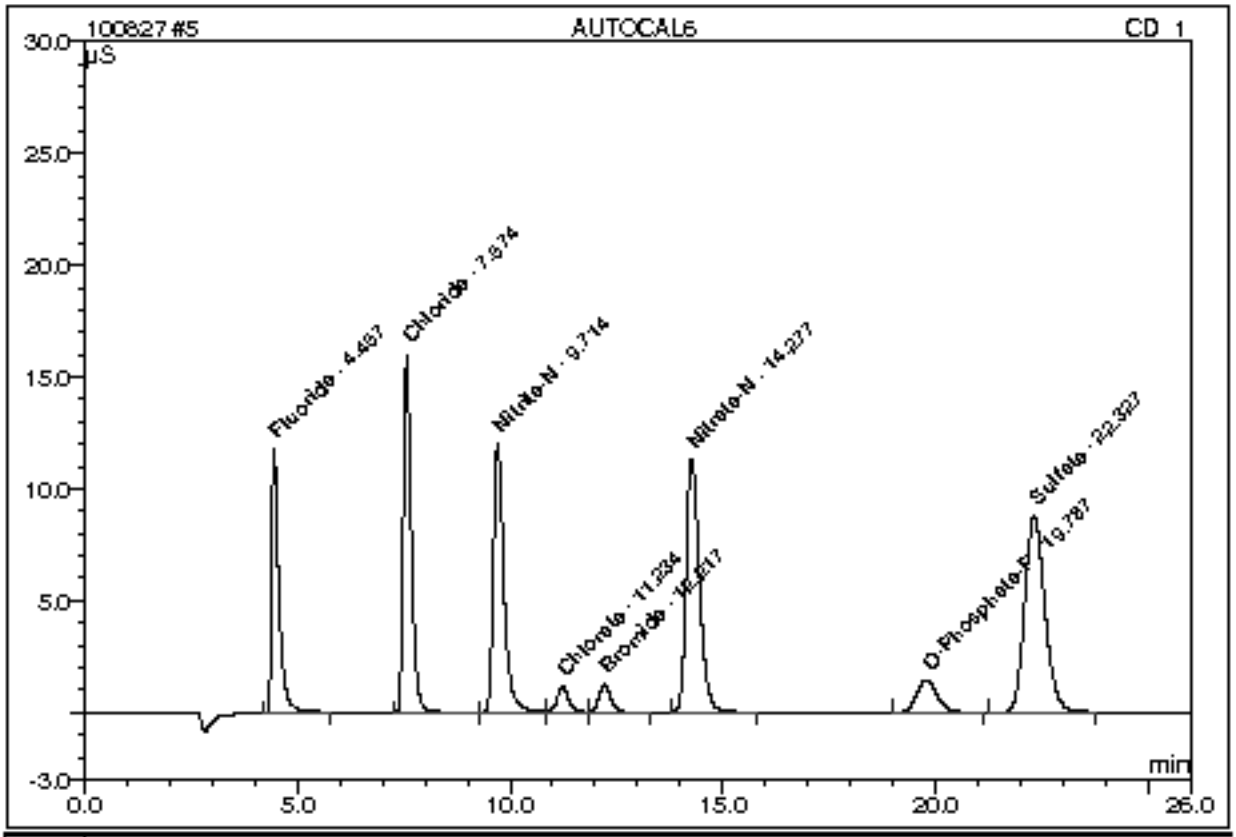
Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	4	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 10:22	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.46	Fluoride	10.0000	10.0083		4.96399	11.77
2	7.59	Chloride	20.0000	20.0274		7.66363	18.17
3	9.72	Nitrite-N	10.0000	10.0103		7.32916	17.38
4	11.23	Chlorate	5.0000	5.0976		0.64579	1.53
5	12.21	Bromide	5.0000	5.0483		0.68425	1.62
6	14.23	Nitrate-N	10.0000	10.0130		9.03361	21.42
7	19.75	O-Phosphate-P	5.0000	5.1553		1.37057	3.25
8	22.35	Sulfate	40.0000	40.0394		10.48818	24.87
Total:				105.3996	0.000	42.179	100.00

5 AUTOCAL6

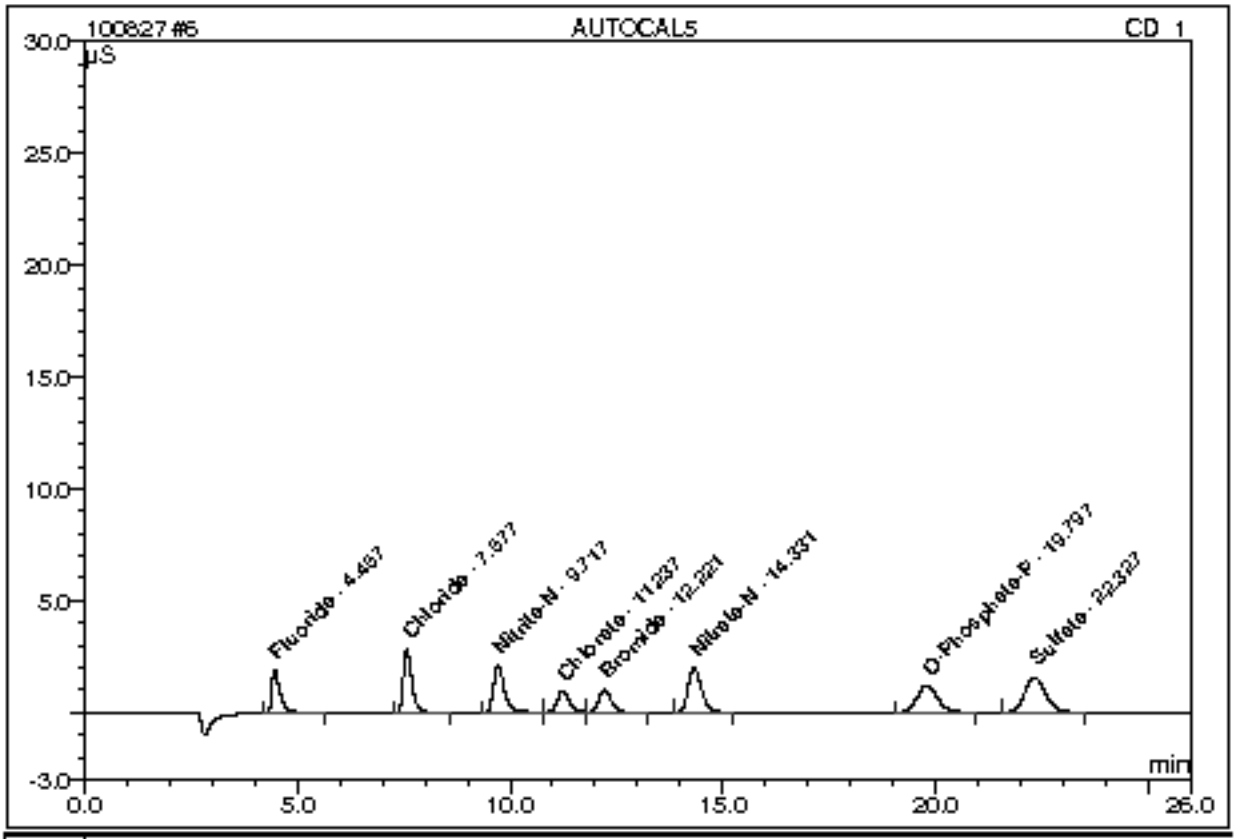
Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 10:51	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.46	Fluoride	5.0000	4.8052		2.34980	11.88
2	7.57	Chloride	10.0000	9.2843		3.45980	17.49
3	9.71	Nitrite-N	5.0000	4.7978		3.45777	17.48
4	11.23	Chlorate	3.0000	2.9487		0.37476	1.89
5	12.22	Bromide	3.0000	2.9856		0.40499	2.05
6	14.28	Nitrate-N	5.0000	4.6646		4.10231	20.74
7	19.79	O-Phosphate-P	3.0000	3.0105		0.79728	4.03
8	22.33	Sulfate	20.0000	18.8588		4.83563	24.44
Total:				51.3556	0.000	19.782	100.00

6 AUTOCAL5

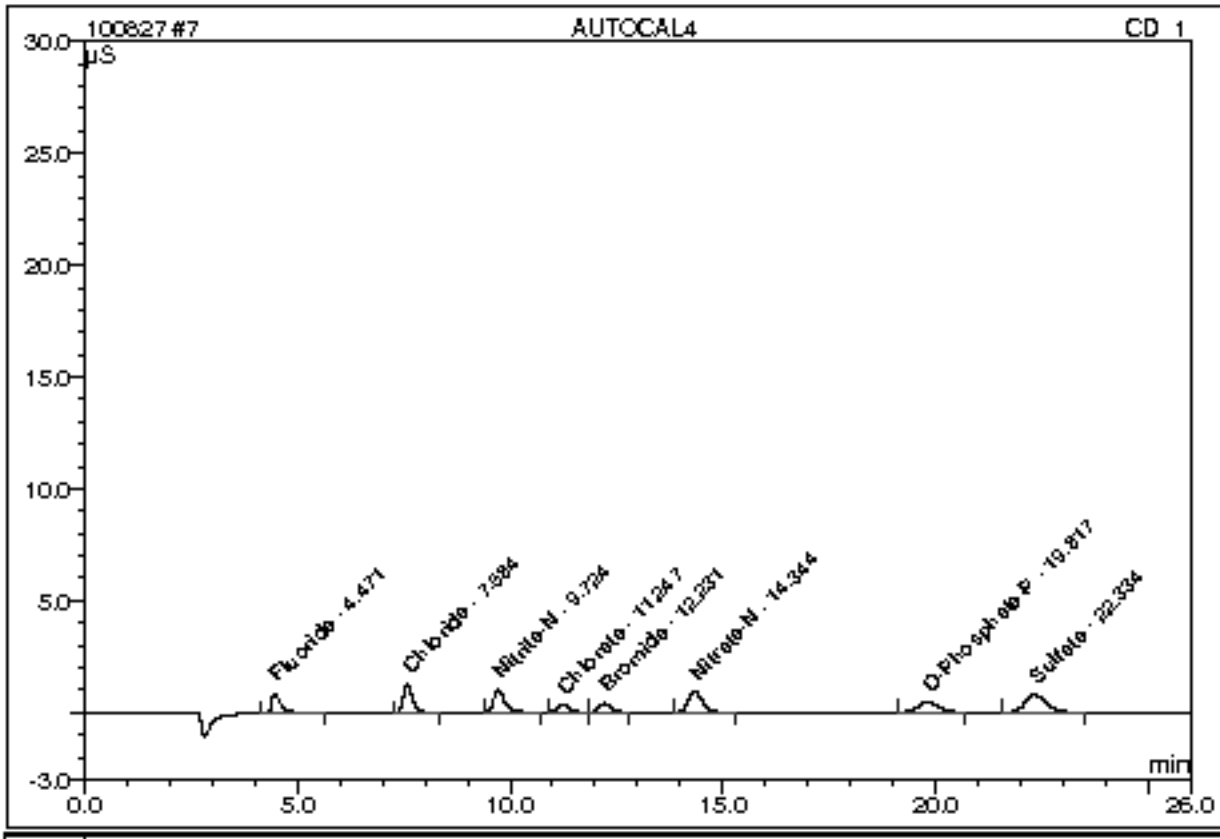
Sample Name:	AUTOCAL5	*Injection Volume:*	50.0
Vial Number:	6	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantit. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 11:20	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.47	Fluoride	1.0000	0.9584		0.44374	9.52
2	7.58	Chloride	2.0000	1.9093		0.65184	13.99
3	9.72	Nitrite-N	1.0000	0.9408		0.63445	13.61
4	11.24	Chlorate	2.5000	2.4229		0.30556	6.56
5	12.22	Bromide	2.5000	2.4648		0.33358	7.16
6	14.33	Nitrate-N	1.0000	0.9204		0.73372	15.74
7	19.80	O-Phosphate-P	2.5000	2.4946		0.65952	14.15
8	22.33	Sulfate	4.0000	3.7793		0.89831	19.27
Total:				15.8906	0.000	4.661	100.00

7 AUTOCAL4

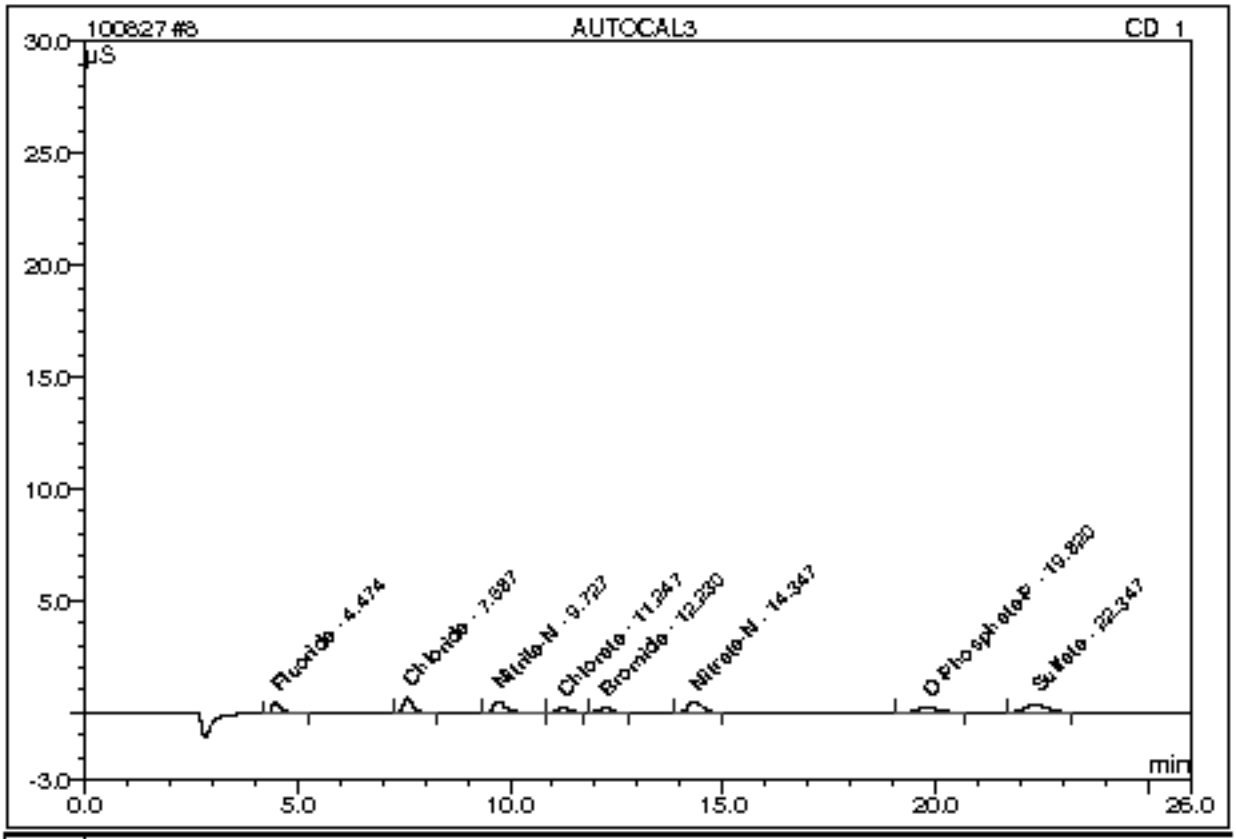
Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	7	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 11:49	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.47	Fluoride	0.5000	0.5102		0.22056	10.41
2	7.58	Chloride	1.0000	1.0261		0.30933	14.60
3	9.72	Nitrite-N	0.5000	0.4993		0.30576	14.43
4	11.25	Chlorate	1.0000	0.9452		0.11324	5.34
5	12.23	Bromide	1.0000	0.9516		0.12492	5.89
6	14.34	Nitrate-N	0.5000	0.5157		0.36117	17.04
7	19.82	O-Phosphate-P	1.0000	0.9818		0.24480	11.55
8	22.33	Sulfate	2.0000	2.0509		0.43937	20.73
Total:				7.4808	0.000	2.119	100.00

8 AUTOCAL3

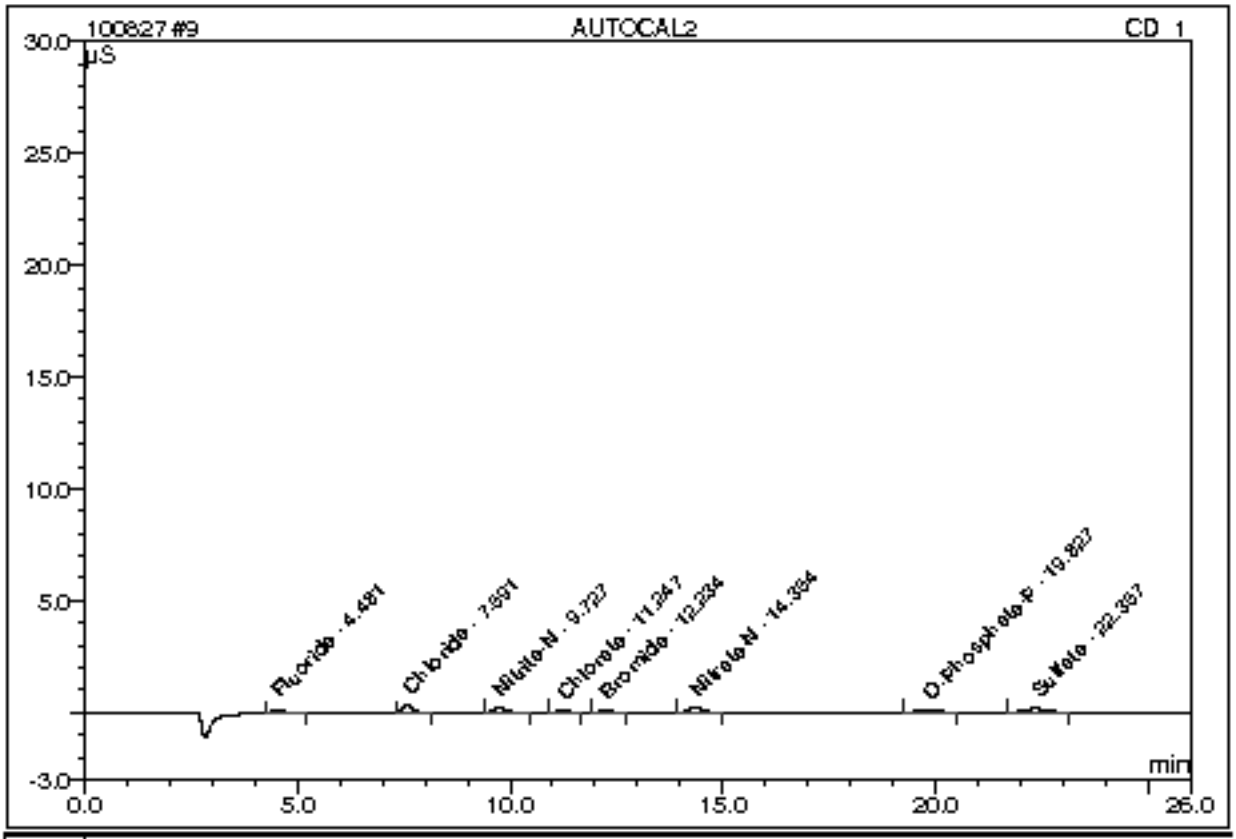
Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantit. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 12:17	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.47	Fluoride	0.2500	0.2930		0.11105	10.50
2	7.59	Chloride	0.5000	0.6457		0.16019	15.15
3	9.73	Nitrite-N	0.2500	0.2964		0.15325	14.50
4	11.25	Chlorate	0.5000	0.5050		0.05529	5.23
5	12.23	Bromide	0.5000	0.4952		0.06108	5.78
6	14.35	Nitrate-N	0.2500	0.3211		0.17860	16.90
7	19.82	O-Phosphate-P	0.5000	0.5066		0.12173	11.52
8	22.35	Sulfate	1.0000	1.2242		0.21594	20.43
Total:				4.2873	0.000	1.057	100.00

9 AUTOCAL2

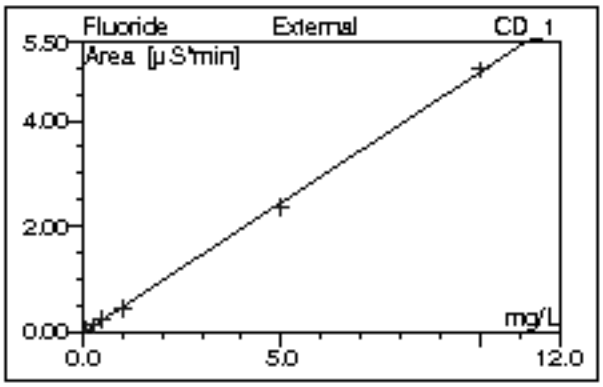
Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantit. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 12:46	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056

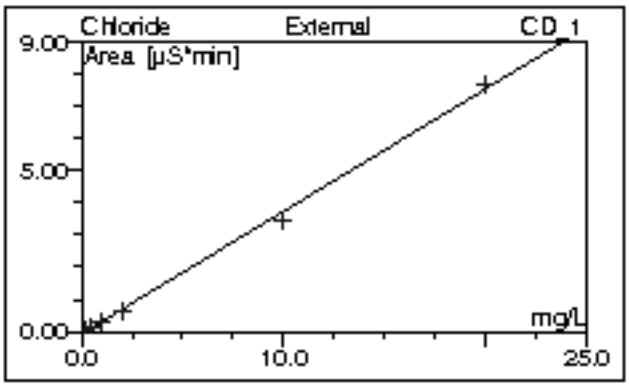


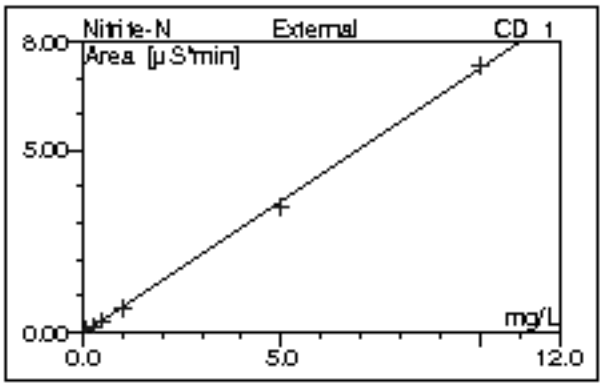
No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.48	Fluoride	0.1000	0.1545		0.04932	11.15
2	7.59	Chloride	0.2000	0.3929		0.08252	18.66
3	9.73	Nitrite-N	0.1000	0.1554		0.06046	13.67
4	11.25	Chlorate	0.2000	0.2317		0.02128	4.81
5	12.23	Bromide	0.2000	0.2208		0.02431	5.50
6	14.35	Nitrate-N	0.1000	0.1810		0.07108	16.08
7	19.83	O-Phosphate-P	0.2000	0.2201		0.04487	10.15
8	22.36	Sulfate	0.4000	0.6674		0.08831	19.97
Total:				2.2237	0.000	0.442	100.00

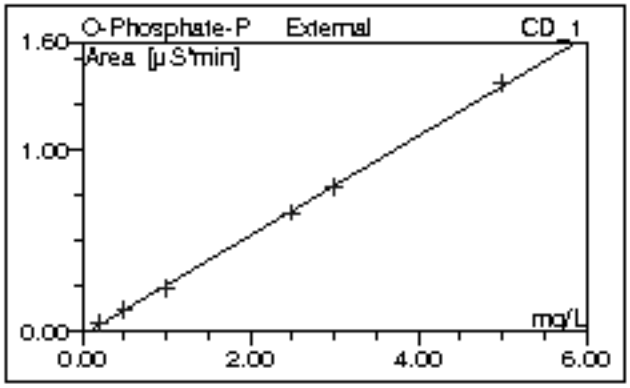
10 AUTOCAL1

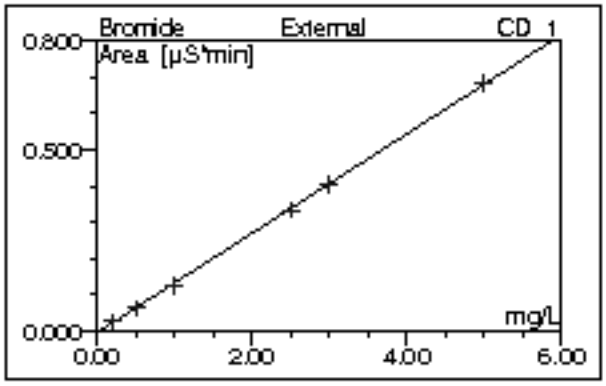
Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantit. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 13:15	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002737;GLGCE086;300;9056

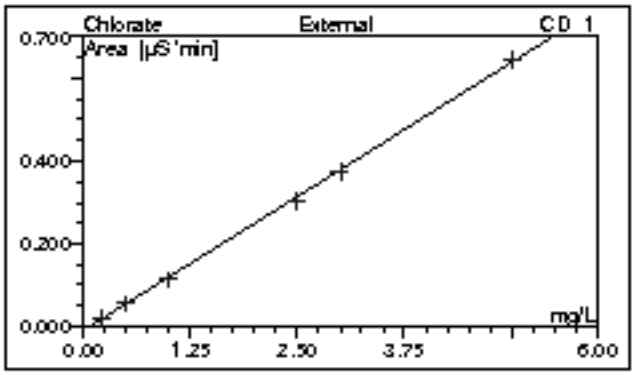


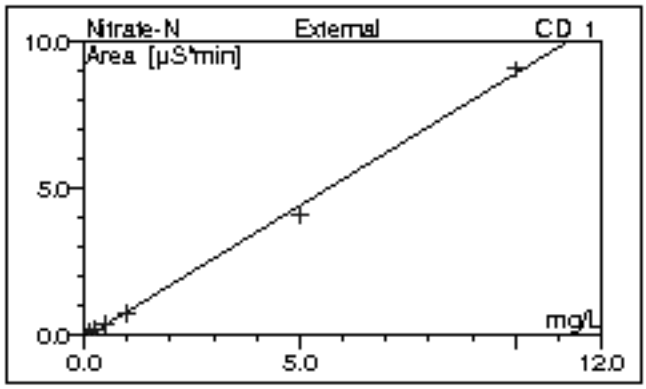


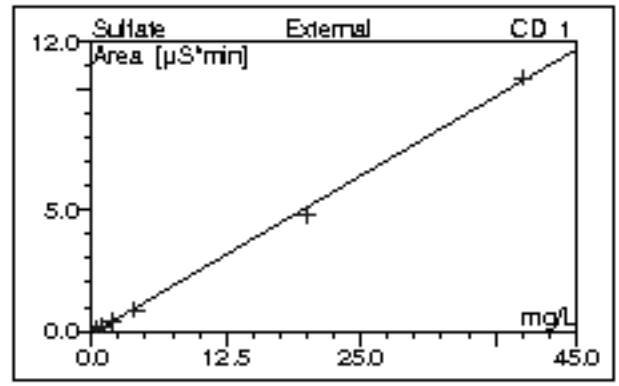








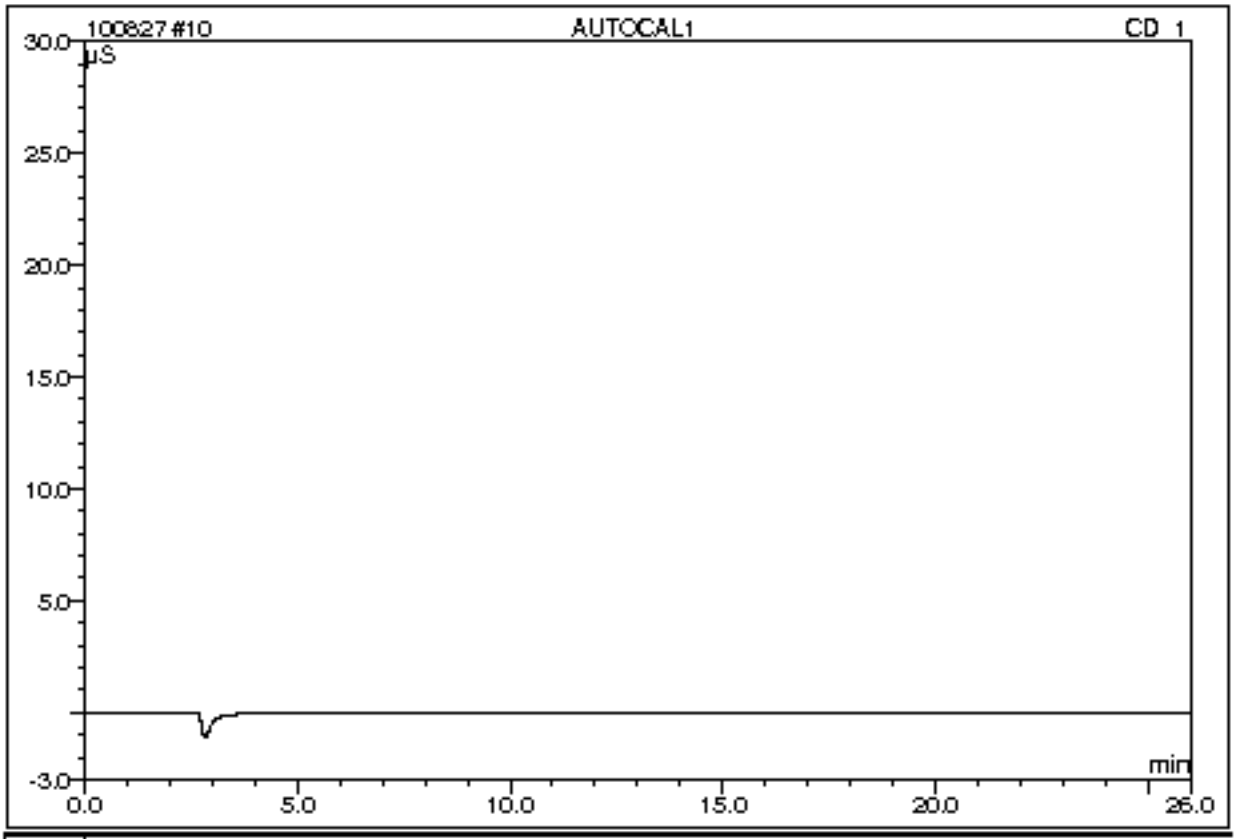




No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LO11	99.9342	-0.0270	0.4942	0.0000
n.a.	n.a.	Chloride	0LO11	99.7818	-0.0666	0.3796	0.0000
n.a.	n.a.	Nitrite-N	0LO11	99.9290	-0.0531	0.7307	0.0000
n.a.	n.a.	Chlorate	0LO11	99.9167	-0.0087	0.1292	0.0000
n.a.	n.a.	Bromide	0LO11	99.9750	-0.0060	0.1373	0.0000
n.a.	n.a.	Nitrate-N	0LO11	99.8108	-0.0914	0.8973	0.0000
n.a.	n.a.	O-Phosphate-P	0LO11	99.9487	-0.0155	0.2744	0.0000
n.a.	n.a.	Sulfate	0LO11	99.8648	-0.0856	0.2606	0.0000
Average:				99.8951	-0.0442	0.4129	0.0000

10 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 13:15	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

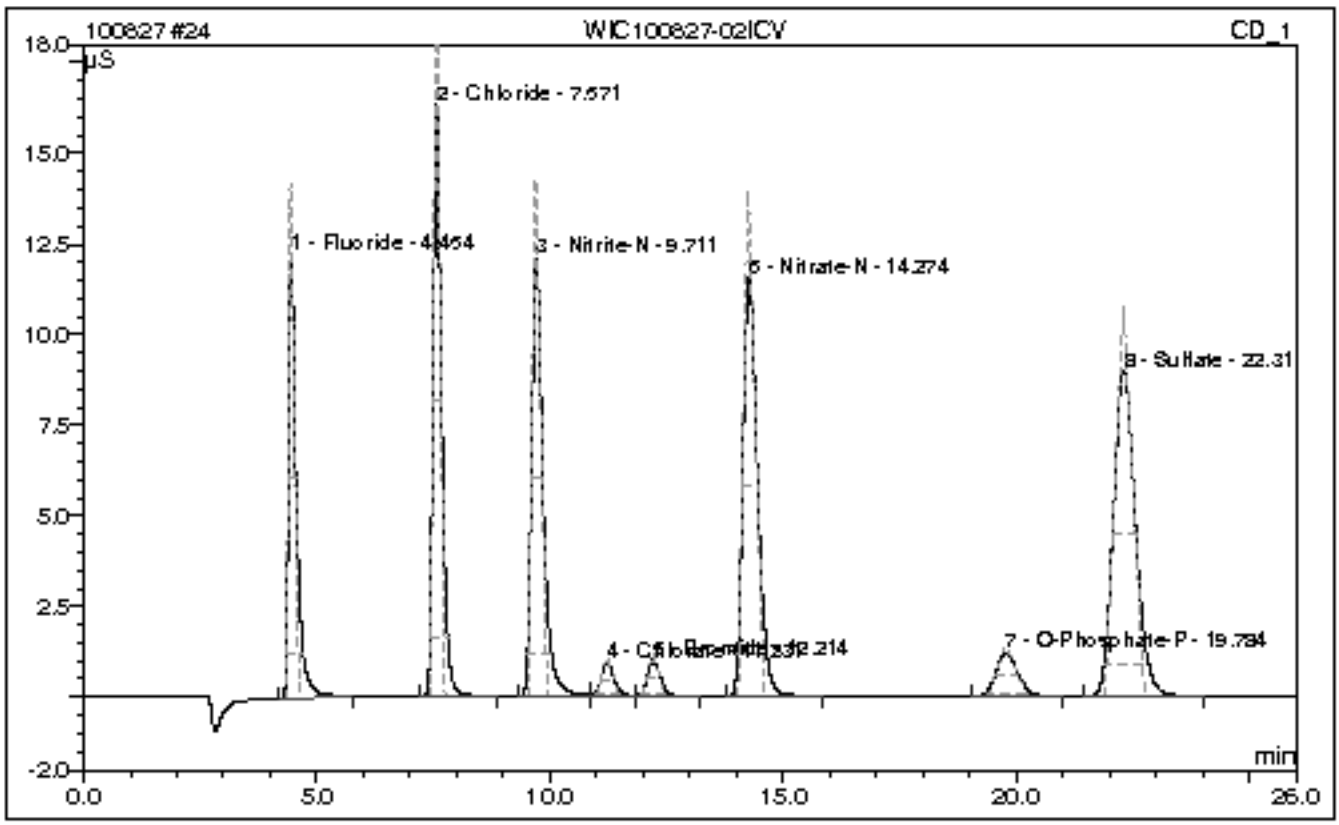
This is runlog for Sequence 100827.seq for IC7

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	08/27/10 08:56		1	100827	GXM3
BLK	08/27/10 09:24		1	100827	GXM3
BLK	08/27/10 09:53		1	100827	GXM3
ICAL-07	08/27/10 10:22		1	100827	GXM3
ICAL-06	08/27/10 10:51		1	100827	GXM3
ICAL-05	08/27/10 11:20		1	100827	GXM3
ICAL-04	08/27/10 11:49		1	100827	GXM3
ICAL-03	08/27/10 12:17		1	100827	GXM3
ICAL-02	08/27/10 12:46		1	100827	GXM3
ICAL-01	08/27/10 13:15		1	100827	GXM3
ICAL-07	08/27/10 10:22		1	100827	GXM3
ICAL-06	08/27/10 10:51		1	100827	GXM3
ICAL-05	08/27/10 11:20		1	100827	GXM3
ICAL-04	08/27/10 11:49		1	100827	GXM3
ICAL-03	08/27/10 12:17		1	100827	GXM3
ICAL-02	08/27/10 12:46		1	100827	GXM3
ICAL-01	08/27/10 13:15		1	100827	GXM3
ICV	08/27/10 13:44		1	100827	GXM3
ICB	08/27/10 14:13		1	100827	GXM3
1202152311	08/27/10 14:42	998754	1	100827	GXM3
1202152312	08/27/10 15:11	998754	1	100827	GXM3
255468001	08/27/10 15:40	998754	1	100827	GXM3
255468002	08/27/10 16:09	998754	1	100827	GXM3
255468003	08/27/10 16:37	998754	1	100827	GXM3
255468004	08/27/10 17:06	998754	1	100827	GXM3
CVH	08/27/10 17:35		1	100827	GXM3
CCB	08/27/10 18:04		1	100827	GXM3
259472001	08/27/10 18:33	1017587	5	100827	GXM3

1202198938	08/27/10	19:02	1017587	5	100827	GXM3
1202198939	08/27/10	19:31	1017587	5	100827	GXM3
259480005	08/27/10	20:00	1017587	5	100827	GXM3
CCV	08/27/10	20:29	1		100827	GXM3
CCB	08/27/10	20:58	1		100827	GXM3

24 WIC100827-02ICV

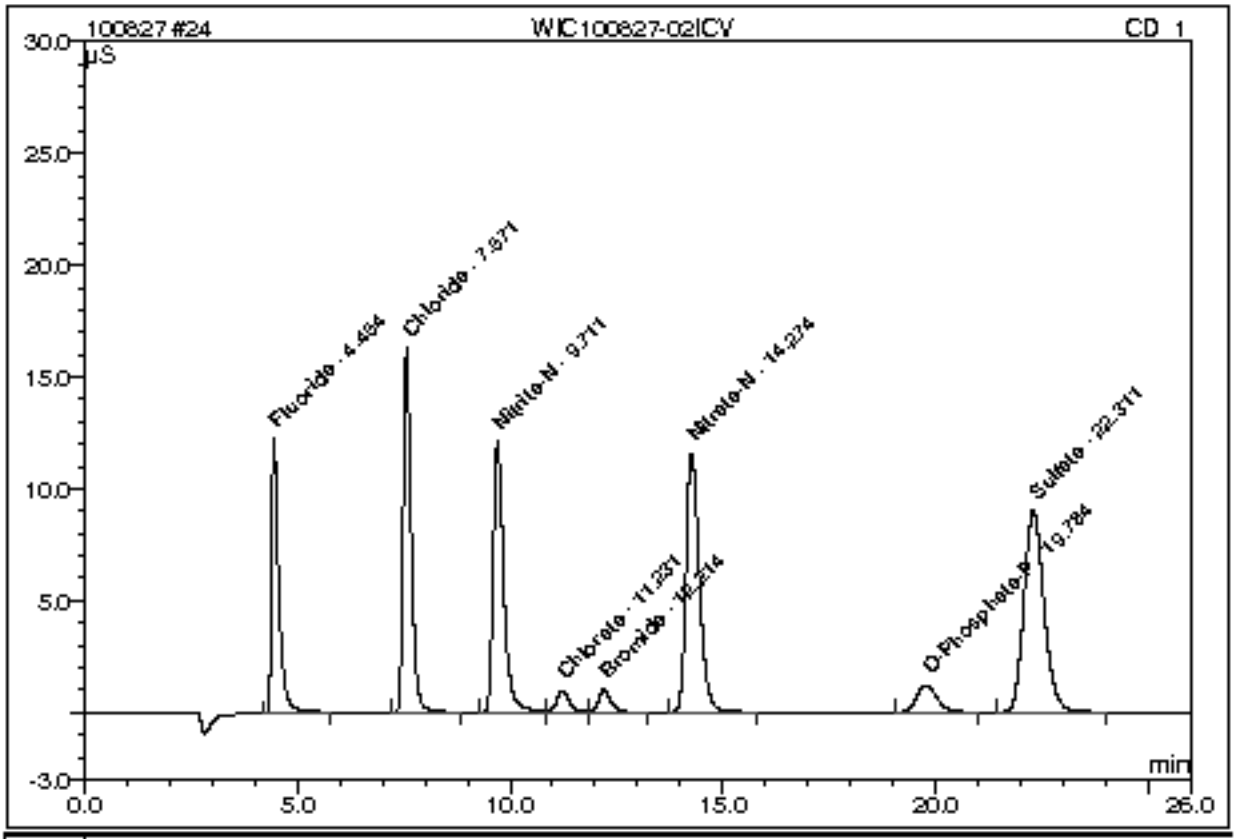
Sample Name:	WIC100827-02ICV	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 13:44	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002737;GLGCE086;300;9056



No.	Ret.Time min	Peakname min	Ret. Dev. (%) Lim: ± 10%	Type	Resol. (EP)	Asym. (EP)	Plates (EP)
1	4.454	Fluoride	-0.6	BMB	######	1.89	4329
2	7.571	Chloride	-0.3	BMB	5.79	1.39	8904
3	9.711	Nitrite-N	-0.2	BM	3.33	1.45	8562
4	11.231	Chlorate	-0.1	M	1.97	1.12	8195
5	12.214	Bromide	-0.2	MB	3.88	1.19	9369
6	14.274	Nitrate-N	-0.6	BMB	7.74	1.33	10365
7	19.784	O-Phosphate-P	-0.2	BMB	2.94	1.18	8342
8	22.311	Sulfate	-0.2	BMB	n.a.	1.16	10870
Average:			-0.292		5.17	1.34	8617

24 WIC100827-02ICV

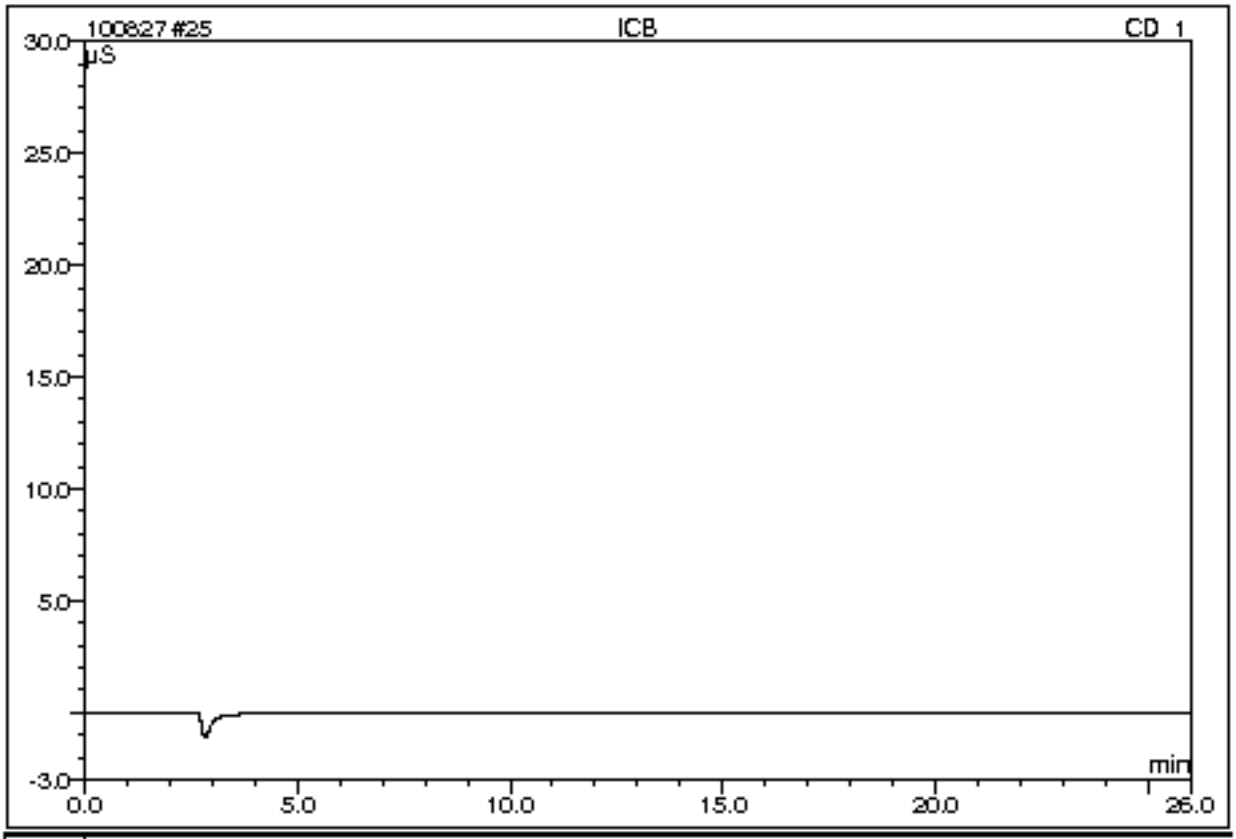
Sample Name:	WIC100827-02ICV	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 13:44	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.45	Fluoride	n.a.	4.9147		2.40190	12.10
2	7.57	Chloride	n.a.	9.4291		3.51298	17.70
3	9.71	Nitrite-N	n.a.	4.8216		3.47018	17.48
4	11.23	Chlorate	n.a.	2.5318		0.31851	1.60
5	12.21	Bromide	n.a.	2.4847		0.33517	1.69
6	14.27	Nitrate-N	n.a.	4.7835		4.20098	21.16
7	19.78	O-Phosphate-P	n.a.	2.4844		0.66613	3.36
8	22.31	Sulfate	n.a.	19.3043		4.94527	24.91
Total:				50.7541	0.000	19.851	100.00

25 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	8/27/2010 14:13	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



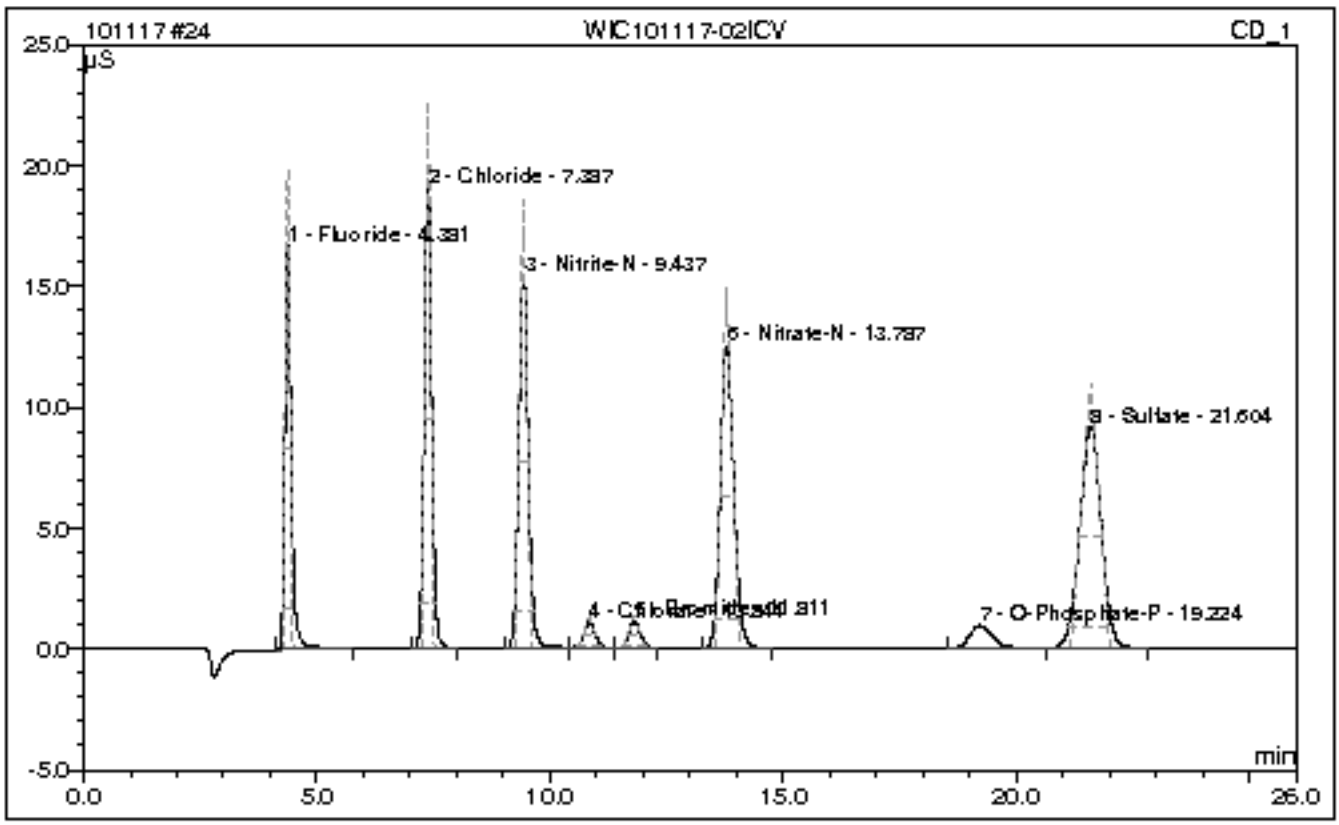
No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 101117.seq for IC7

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	11/17/10 11:48		1	101117	GXM3
BLK	11/17/10 12:17		1	101117	GXM3
BLK	11/17/10 12:46		1	101117	GXM3
ICV	11/17/10 13:15		1	101117	GXM3
ICB	11/17/10 13:43		1	101117	GXM3
266380013	11/17/10 14:12	1045633	4	101117	GXM3
266380013	11/17/10 14:41	1045633	100	101117	GXM3
CVH	11/17/10 15:10		1	101117	GXM3
CCB	11/17/10 15:39		1	101117	GXM3
1202261629	11/17/10 16:08	1047815	1	101117	GXM3
1202261630	11/17/10 16:37	1047815	1	101117	GXM3
266814001	11/17/10 17:06	1047815	1	101117	GXM3
1202261631	11/17/10 17:35	1047815	1	101117	GXM3
1202261632	11/17/10 18:04	1047815	1	101117	GXM3
266814002	11/17/10 18:33	1047815	1	101117	GXM3
266814003	11/17/10 19:01	1047815	1	101117	GXM3
266814004	11/17/10 19:30	1047815	1	101117	GXM3
266814005	11/17/10 19:59	1047815	1	101117	GXM3
266814006	11/17/10 20:28	1047815	1	101117	GXM3
CCV	11/17/10 20:57		1	101117	GXM3
CCB	11/17/10 21:26		1	101117	GXM3
266814007	11/17/10 21:55	1047815	1	101117	GXM3
CVH	11/17/10 22:24		1	101117	GXM3
CCB	11/17/10 22:53		1	101117	GXM3
1202262439	11/17/10 23:22	1048124	1	101117	GXM3
1202262440	11/17/10 23:50	1048124	1	101117	GXM3

24 WIC101117-02ICV

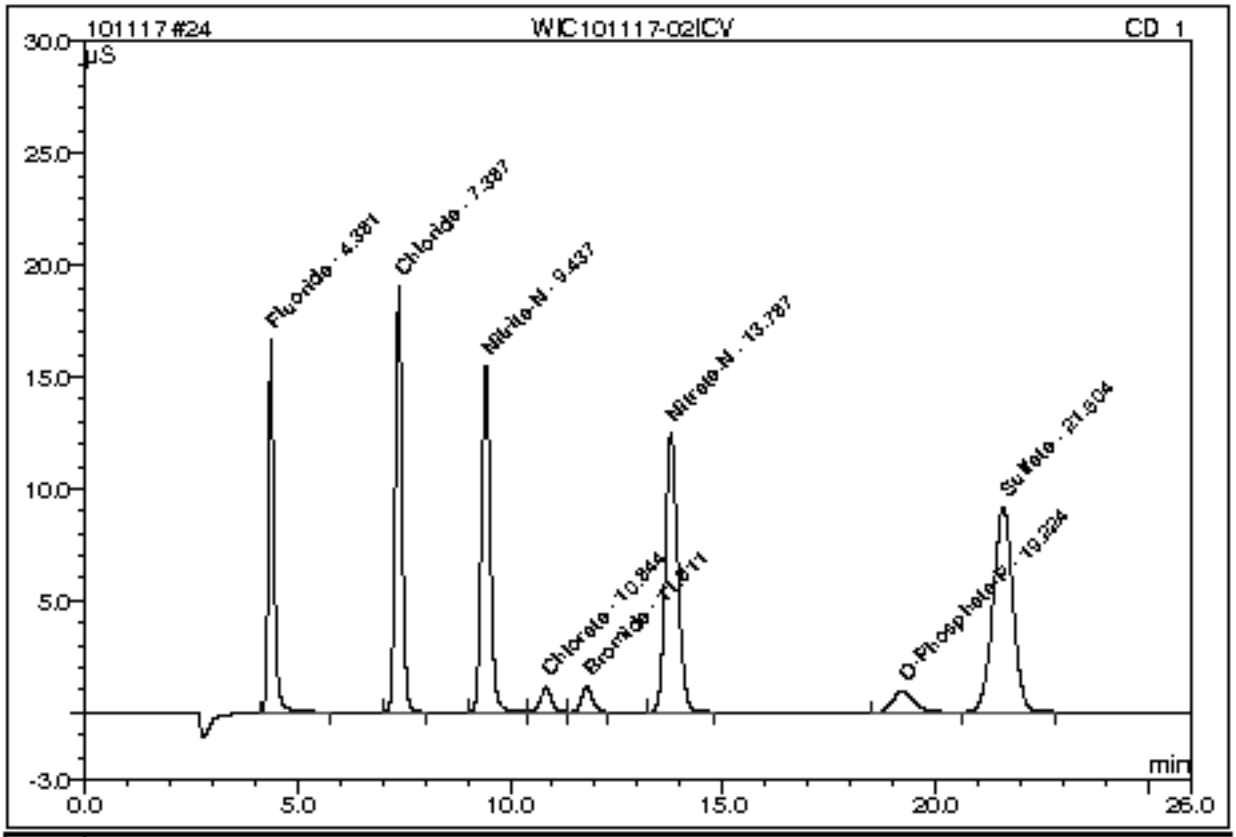
Sample Name:	WIC101117-02ICV	*Injection Volume:*	50.0
Vial Number:	4	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 13:15	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002737;GLGCE086;300;9056



No.	Ret.Time min	Peakname min	Ret. Dev. (%) Lim: ± 10%	Type	Resol. (EP)	Asym. (EP)	Plates (EP)
1	4.381	Fluoride	-2.2	BMB	######	1.28	5995
2	7.387	Chloride	-2.7	BMB	6.27	1.05	10691
3	9.437	Nitrite-N	-3.0	BM	3.45	1.07	10398
4	10.844	Chlorate	-3.6	M	2.14	1.03	9406
5	11.811	Bromide	-3.5	MB	4.03	1.08	10548
6	13.787	Nitrate-N	-3.9	BMB	######	1.17	11077
7	19.224	O-Phosphate-P	-3.0	Ru	n.a.	n.a.	n.a.
8	21.604	Sulfate	-3.4	BMB	n.a.	0.98	10447
Average:			-3.162		6.52	1.09	9795

24 WIC101117-02ICV

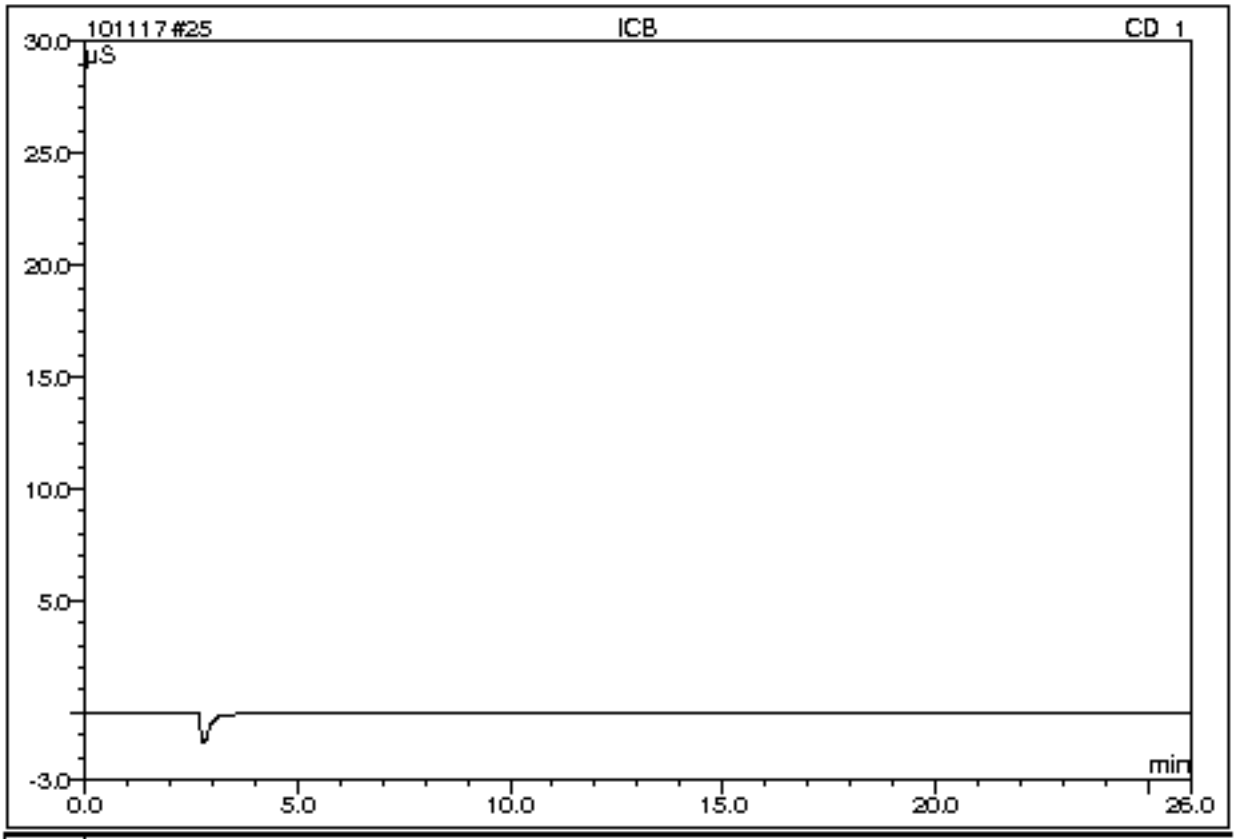
Sample Name:	WIC101117-02ICV	*Injection Volume:*	50.0
Vial Number:	4	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 13:15	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.38	Fluoride	n.a.	5.3901		2.63688	12.97
2	7.39	Chloride	n.a.	9.5278		3.55047	17.47
3	9.44	Nitrite-N	n.a.	5.2187		3.76031	18.50
4	10.84	Chlorate	n.a.	2.5508		0.32096	1.58
5	11.81	Bromide	n.a.	2.4815		0.33473	1.65
6	13.79	Nitrate-N	n.a.	4.7977		4.21378	20.73
7	19.22	O-Phosphate-P	n.a.	2.0898		0.55786	2.74
8	21.60	Sulfate	n.a.	19.3288		4.95164	24.36
Total:				51.3852	0.000	20.327	100.00

25 ICB

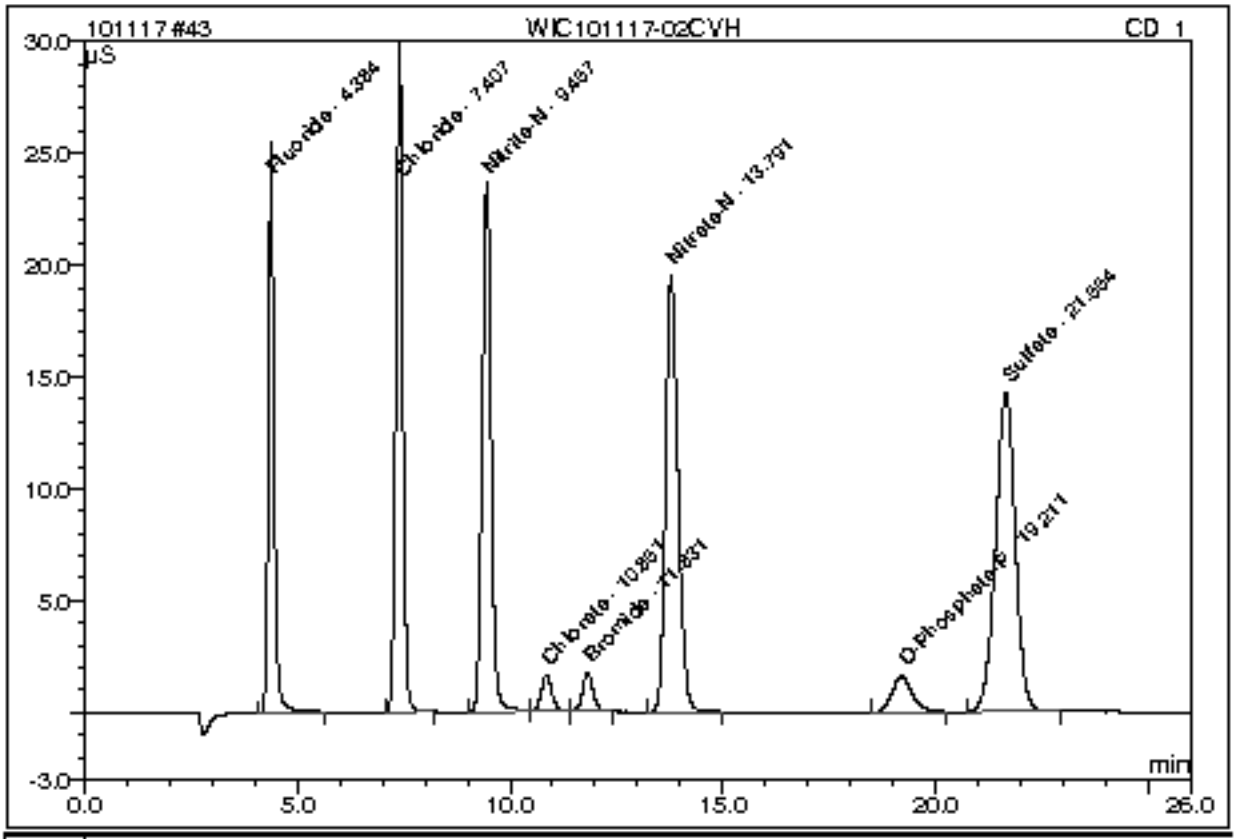
Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 13:43	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

43 WIC101117-02CVH

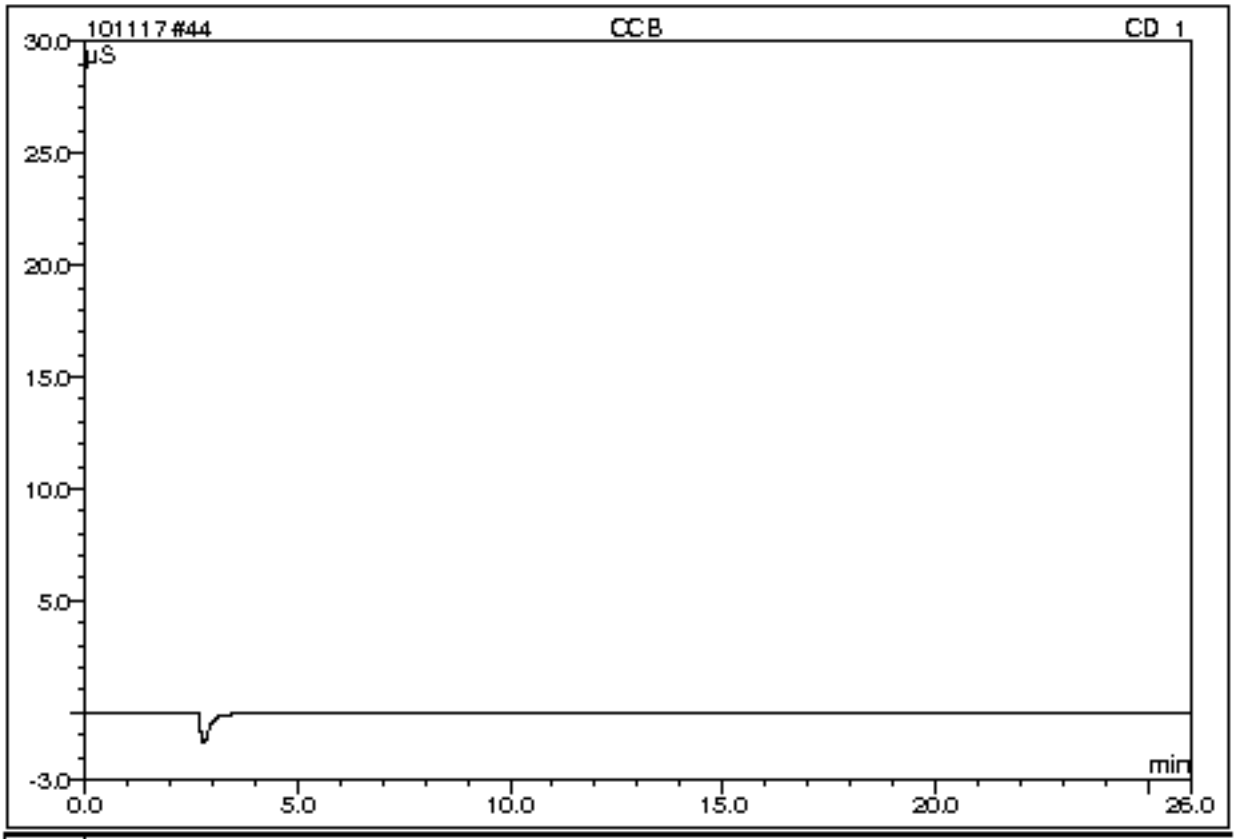
Sample Name:	WIC101117-02CVH	*Injection Volume:*	50.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 22:24	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.38	Fluoride	n.a.	8.0854		3.96895	12.61
2	7.41	Chloride	n.a.	14.9194		5.59727	17.79
3	9.46	Nitrite-N	n.a.	8.0255		5.81132	18.47
4	10.86	Chlorate	n.a.	3.8244		0.48554	1.54
5	11.83	Bromide	n.a.	3.7057		0.50281	1.60
6	13.79	Nitrate-N	n.a.	7.4132		6.56072	20.85
7	19.21	O-Phosphate-P	n.a.	3.2800		0.88444	2.81
8	21.66	Sulfate	n.a.	29.7064		7.65617	24.33
Total:				78.9600	0.000	31.467	100.00

44 CCB

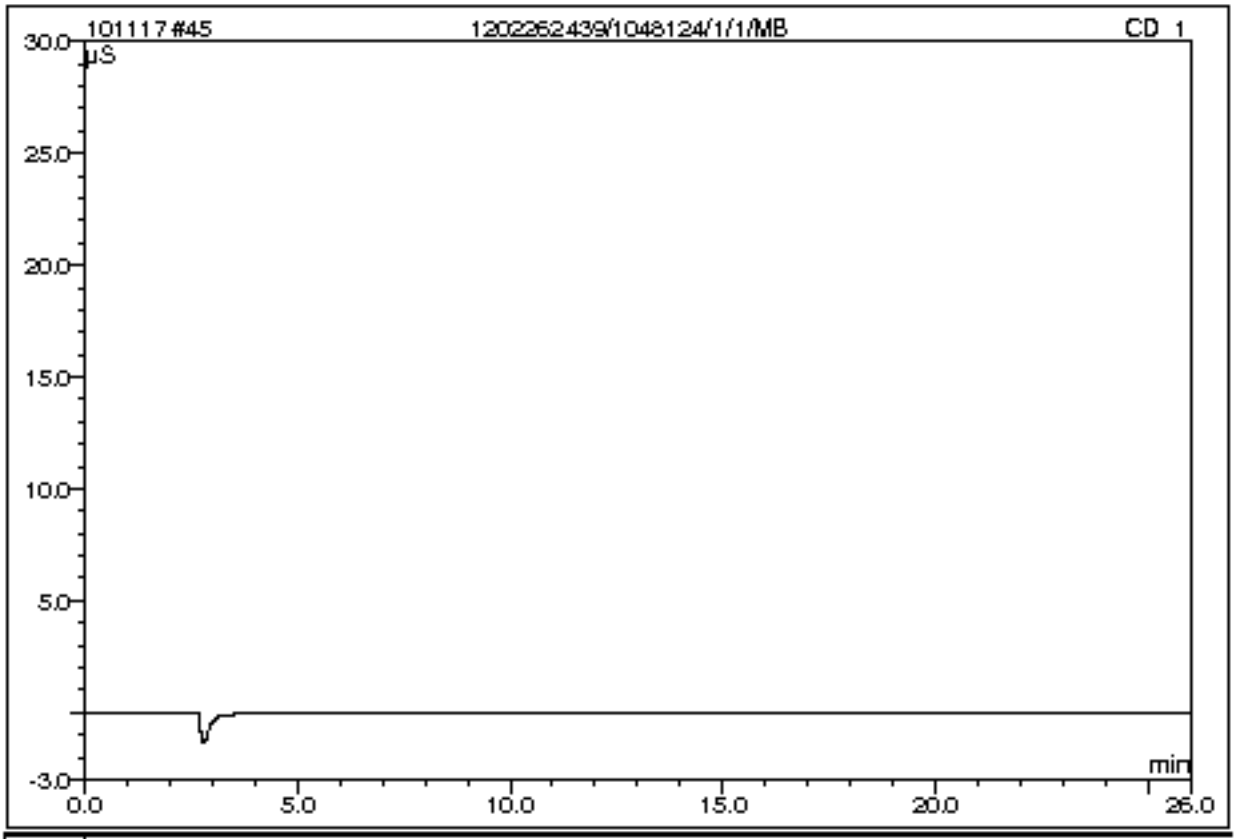
Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	24	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 22:53	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

45 1202262439/1048124/1/1/MB

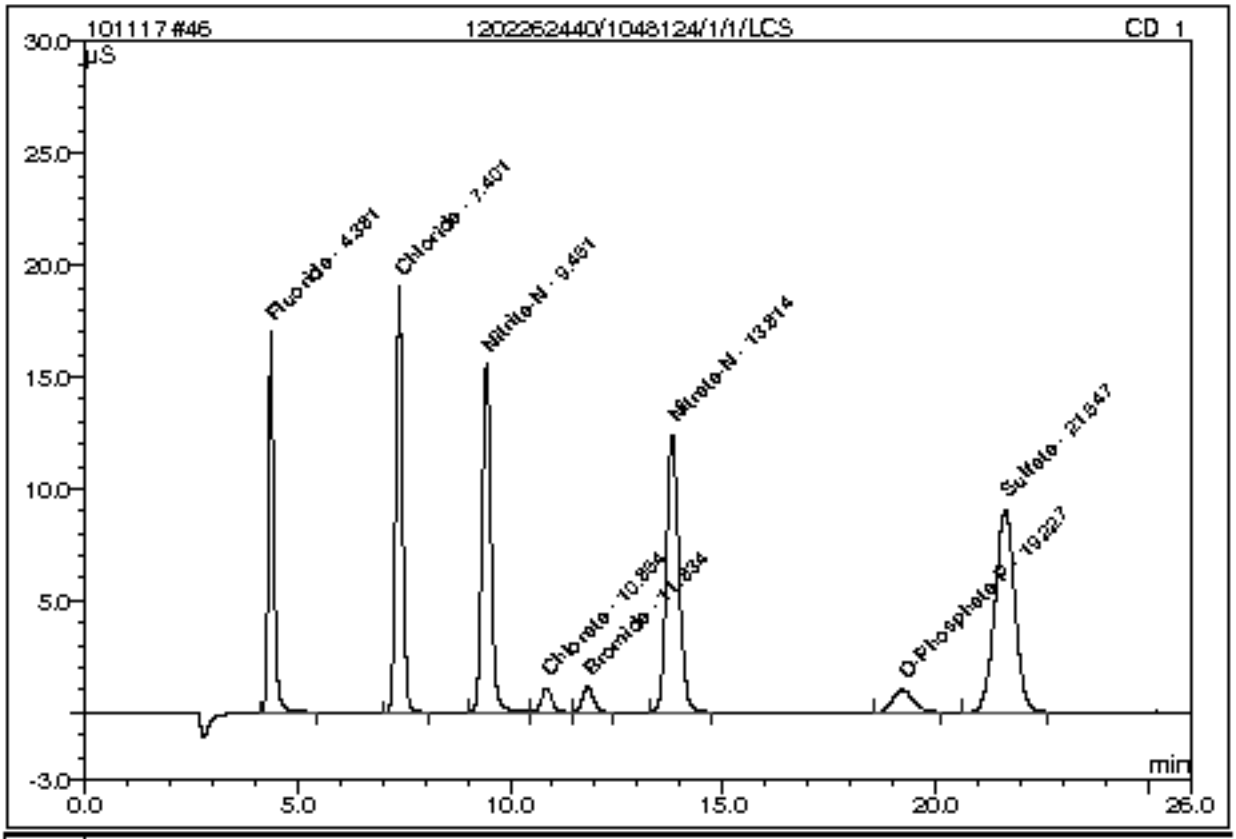
Sample Name:	1202262439/1048124/1/1/MB	*Injection Volume:*	50.0
Vial Number:	25	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 23:22	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

46 1202262440/1048124/1/1/LCS

Sample Name:	1202262440/1048124/1/1/LCS	*Injection Volume:*	50.0
Vial Number:	26	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/17/2010 23:50	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



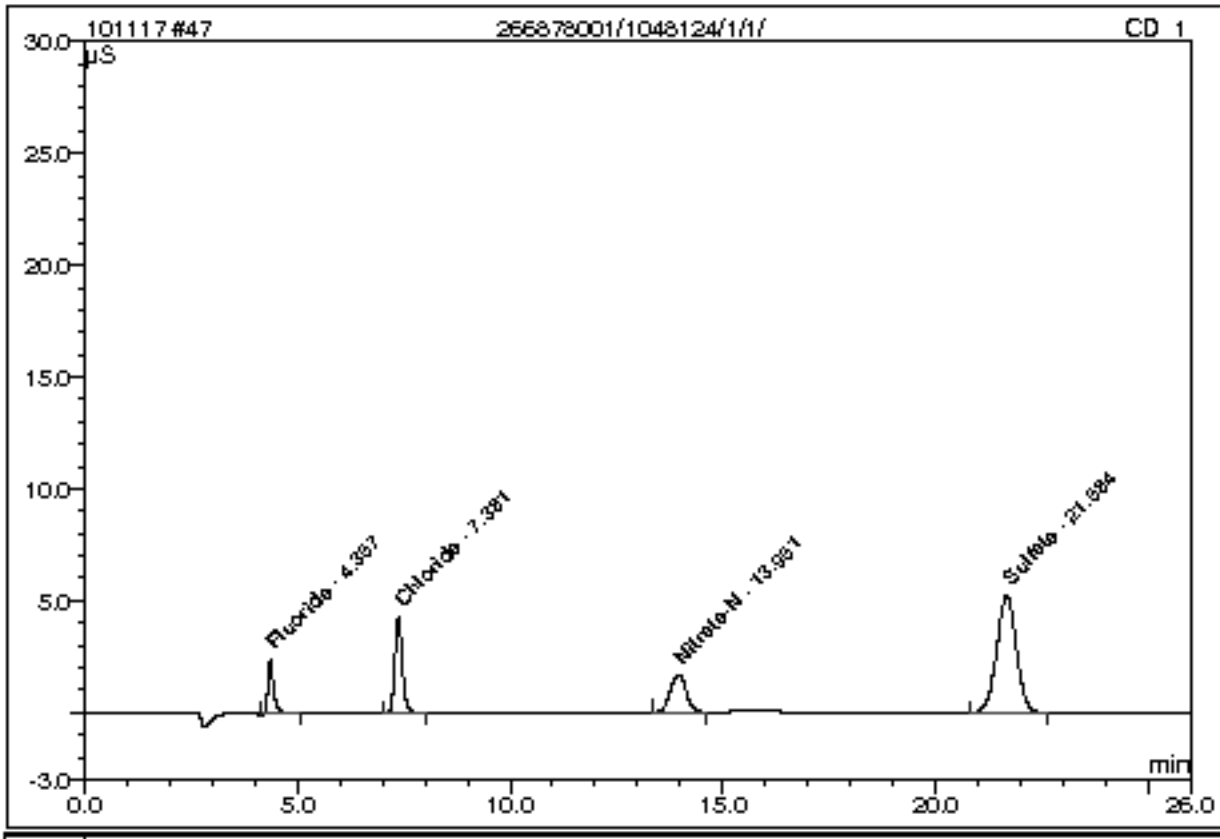
No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.38	Fluoride	n.a.	5.3020		2.59333	12.82
2	7.40	Chloride	n.a.	9.5330		3.55242	17.55
3	9.45	Nitrite-N	n.a.	5.2777		3.80344	18.79
4	10.86	Chlorate	n.a.	2.5614		0.32233	1.59
5	11.83	Bromide	n.a.	2.4841		0.33508	1.66
6	13.81	Nitrate-N	n.a.	4.7612		4.18100	20.66
7	19.23	O-Phosphate-P	n.a.	2.0595		0.54955	2.72
8	21.65	Sulfate	n.a.	19.1284		4.89942	24.21
Total:				51.1072	0.000	20.237	100.00

This is runlog for Sequence 101117.seq for IC7

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
266878001	11/18/10 00:19	1048124	1	101117	GXM3
1202262441	11/18/10 00:48	1048124	1	101117	GXM3
1202262442	11/18/10 01:17	1048124	1	101117	GXM3
266878003	11/18/10 01:46	1048124	1	101117	GXM3
266881002	11/18/10 02:15	1048124	1	101117	GXM3
266881004	11/18/10 02:44	1048124	1	101117	GXM3
266890001	11/18/10 03:13	1048124	1	101117	GXM3
266890003	11/18/10 03:42	1048124	1	101117	GXM3
CCV	11/18/10 04:11		1	101117	GXM3
CCB	11/18/10 04:40		1	101117	GXM3
266892002	11/18/10 05:08	1048124	1	101117	GXM3
266892005	11/18/10 05:37	1048124	1	101117	GXM3
266892006	11/18/10 06:06	1048124	1	101117	GXM3
CVH	11/18/10 06:35		1	101117	GXM3
CCB	11/18/10 07:04		1	101117	GXM3

47 266878001/1048124/1/1/

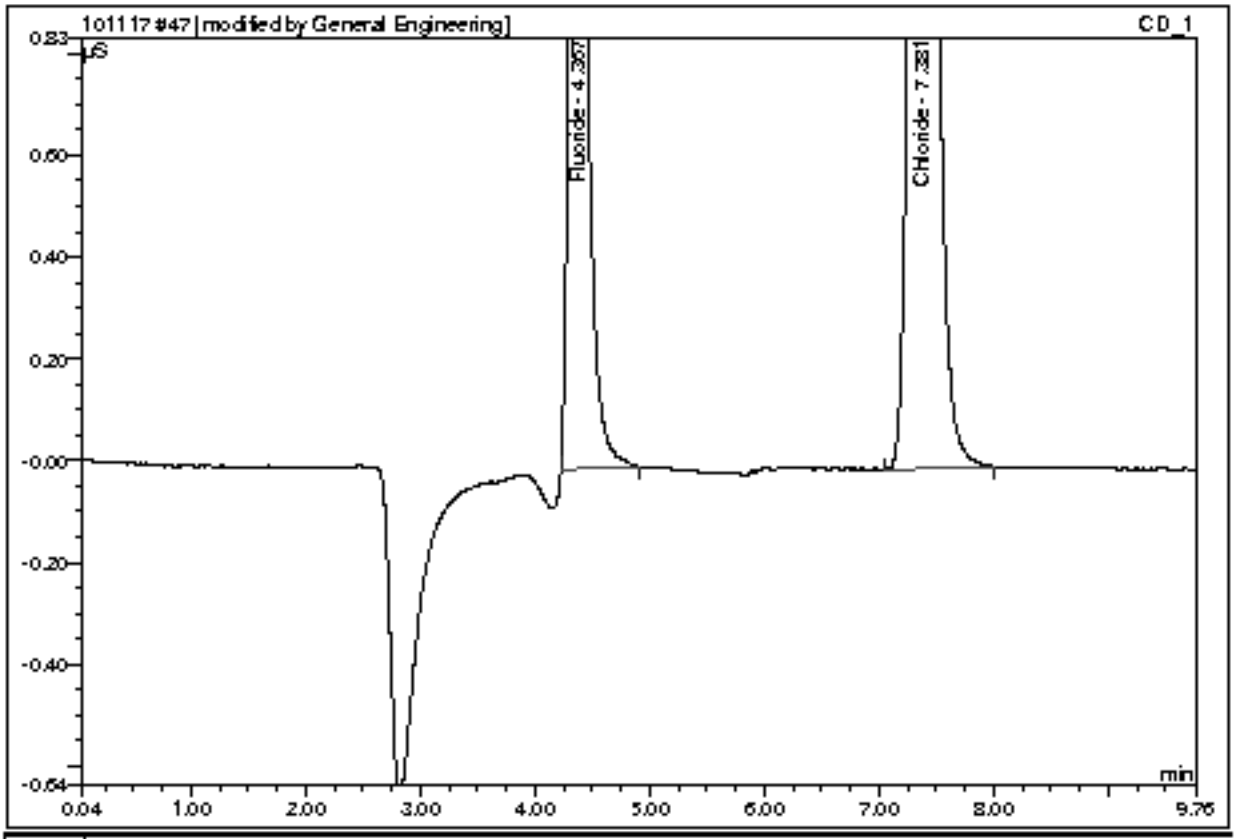
Sample Name:	266878001/1048124/1/1/	*Injection Volume:*	50.0
Vial Number:	27	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 0:19	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.37	Fluoride	n.a.	0.8514		0.39378	8.24
2	7.38	Chloride	n.a.	2.4542		0.86509	18.10
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.96	Nitrate-N	n.a.	0.9000		0.71619	14.98
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.68	Sulfate	n.a.	11.0916		2.80496	58.68
Total:				15.2972	0.000	4.780	100.00

47 266878001/1048124/1/1/

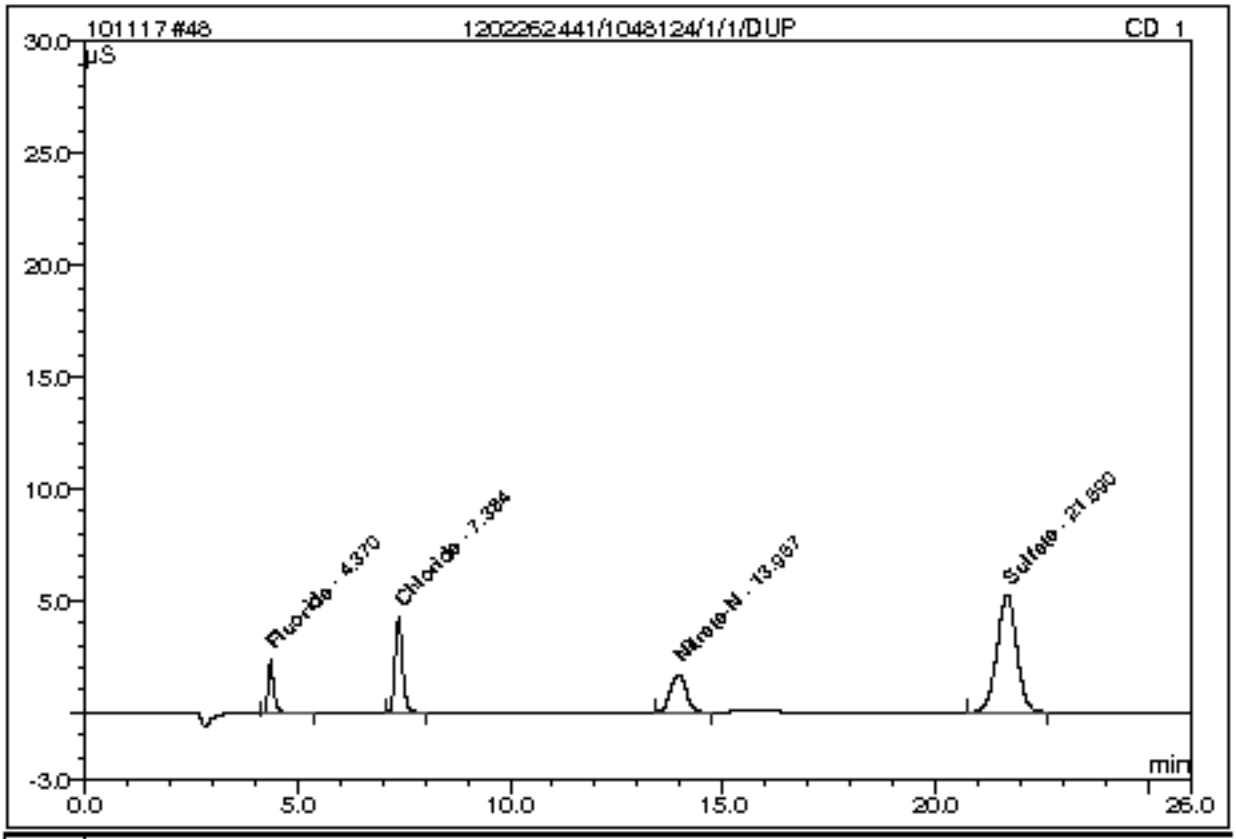
Sample Name:	266878001/1048124/1/1/	*Injection Volume:*	50.0
Vial Number:	27	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 0:19	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.37	Fluoride	n.a.	0.7856		0.36126	7.61
2	7.38	Chloride	n.a.	2.4542		0.86509	18.22
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.96	Nitrate-N	n.a.	0.9000		0.71619	15.09
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.68	Sulfate	n.a.	11.0916		2.80496	59.08
Total:				15.2314	0.000	4.747	100.00

48 1202262441/1048124/1/1/DUP

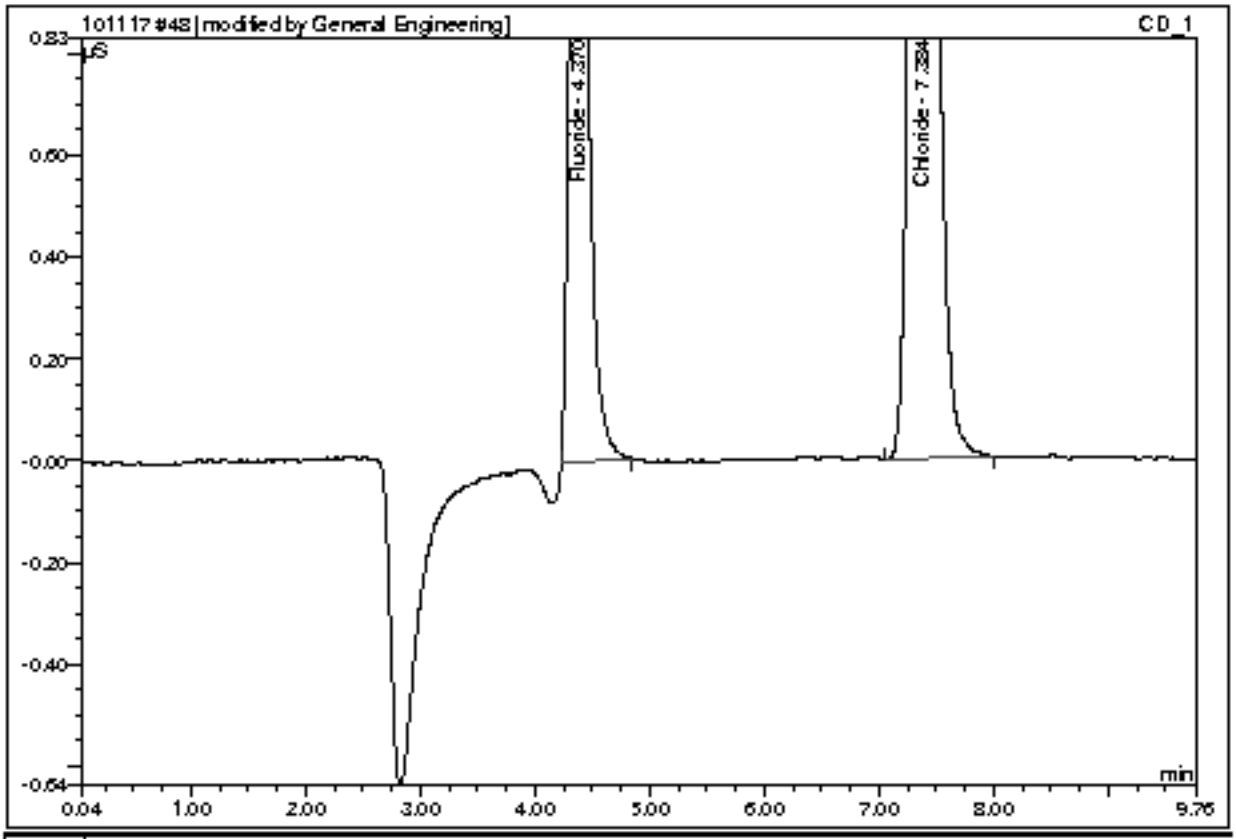
Sample Name:	1202262441/1048124/1/1/DUP	*Injection Volume:*	50.0
Vial Number:	28	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 0:48	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.37	Fluoride	n.a.	0.8788		0.40729	8.46
2	7.38	Chloride	n.a.	2.4560		0.86577	17.98
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.97	Nitrate-N	n.a.	0.9109		0.72605	15.08
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.69	Sulfate	n.a.	11.1291		2.81474	58.47
Total:				15.3749	0.000	4.814	100.00

48 1202262441/1048124/1/1/DUP

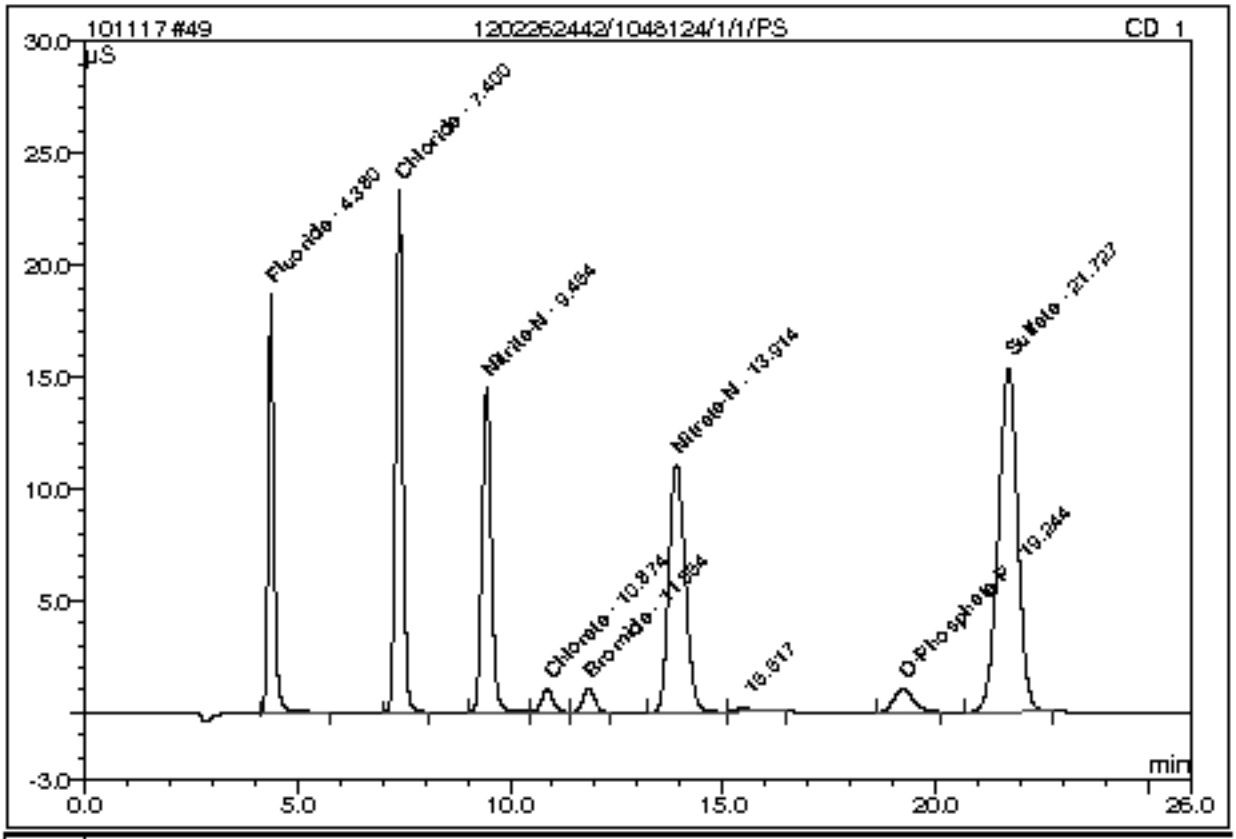
Sample Name:	1202262441/1048124/1/1/DUP	*Injection Volume:*	50.0
Vial Number:	28	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 0:48	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.37	Fluoride	n.a.	0.7813		0.35909	7.54
2	7.38	Chloride	n.a.	2.4560		0.86577	18.17
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.97	Nitrate-N	n.a.	0.9109		0.72605	15.24
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.69	Sulfate	n.a.	11.1291		2.81474	59.06
Total:				15.2773	0.000	4.766	100.00

49 1202262442/1048124/1/1/PS

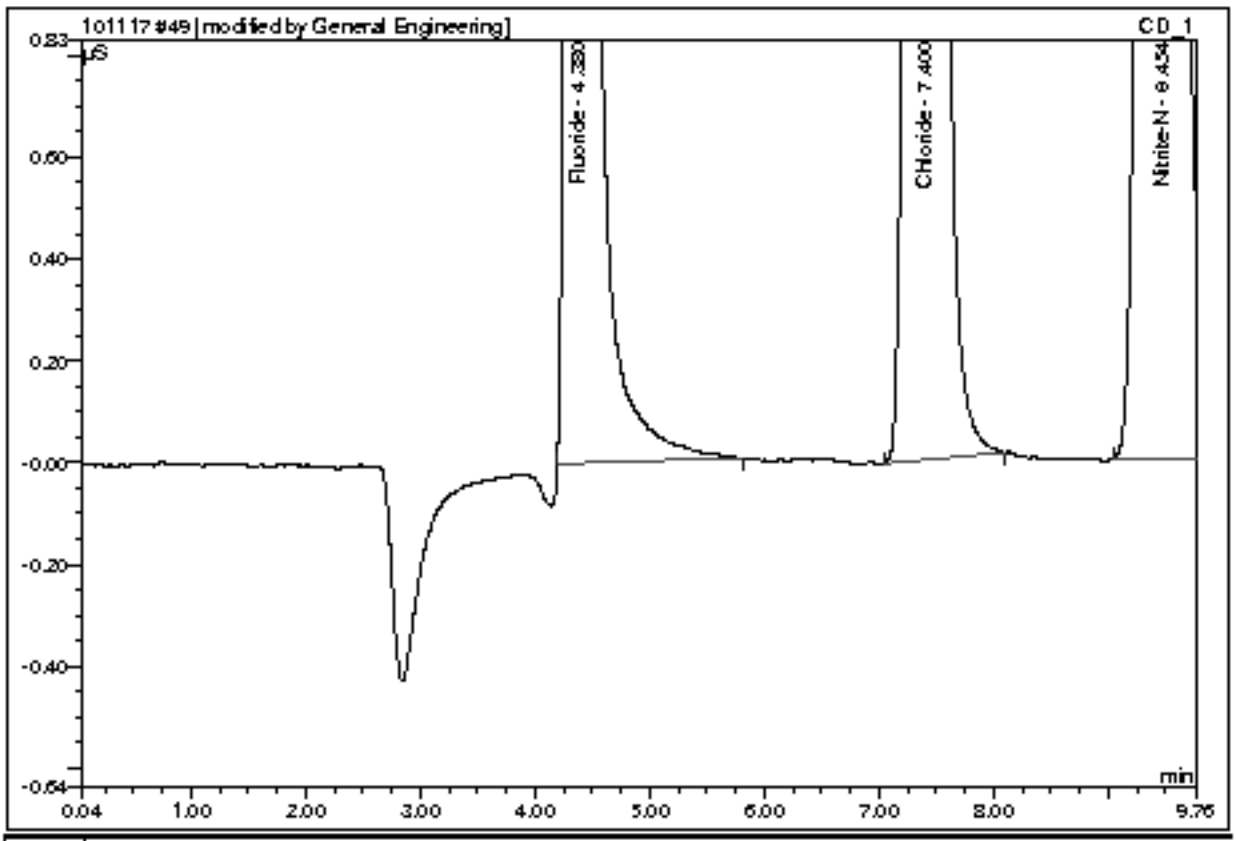
Sample Name:	1202262442/1048124/1/1/PS	*Injection Volume:*	50.0
Vial Number:	29	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 1:17	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.38	Fluoride	n.a.	6.1826		3.02854	11.83
2	7.40	Chloride	n.a.	12.2321		4.57712	17.88
3	9.45	Nitrite-N	n.a.	5.1507		3.71066	14.50
4	10.87	Chlorate	n.a.	2.4931		0.31351	1.22
5	11.85	Bromide	n.a.	2.4441		0.32959	1.29
6	13.91	Nitrate-N	n.a.	5.5528		4.89131	19.11
8	19.24	O-Phosphate-P	n.a.	2.0842		0.55634	2.17
9	21.73	Sulfate	n.a.	31.3631		8.08790	31.60
Total:				67.5028	0.000	25.495	99.61

49 1202262442/1048124/1/1/PS

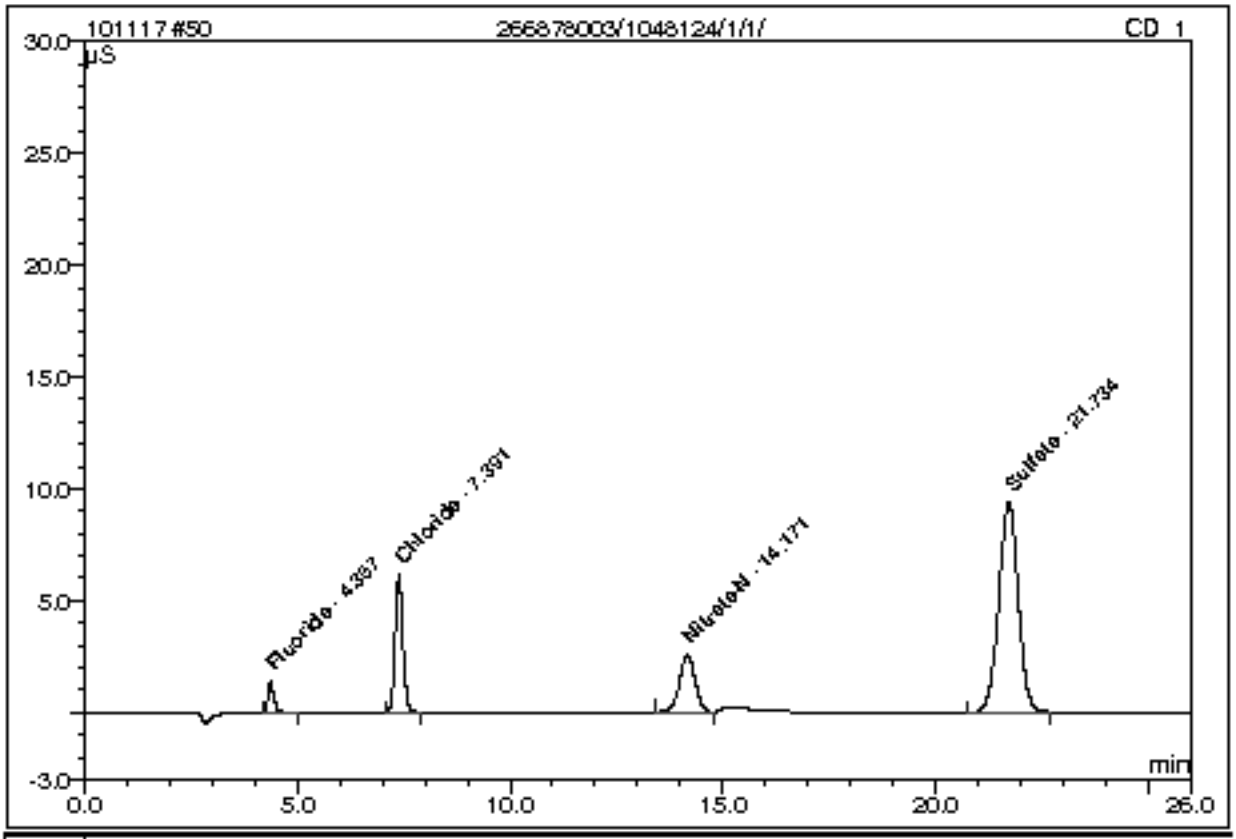
Sample Name:	1202262442/1048124/1/1/PS	*Injection Volume:*	50.0
Vial Number:	29	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 1:17	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.38	Fluoride	n.a.	6.0562		2.96605	11.62
2	7.40	Chloride	n.a.	12.2321		4.57712	17.93
3	9.45	Nitrite-N	n.a.	5.1507		3.71066	14.53
4	10.87	Chlorate	n.a.	2.4931		0.31351	1.23
5	11.85	Bromide	n.a.	2.4441		0.32959	1.29
6	13.91	Nitrate-N	n.a.	5.5528		4.89131	19.16
8	19.24	O-Phosphate-P	n.a.	2.0842		0.55634	2.18
9	21.73	Sulfate	n.a.	31.3631		8.08790	31.68
Total:				67.3763	0.000	25.432	99.61

50 266878003/1048124/1/1/

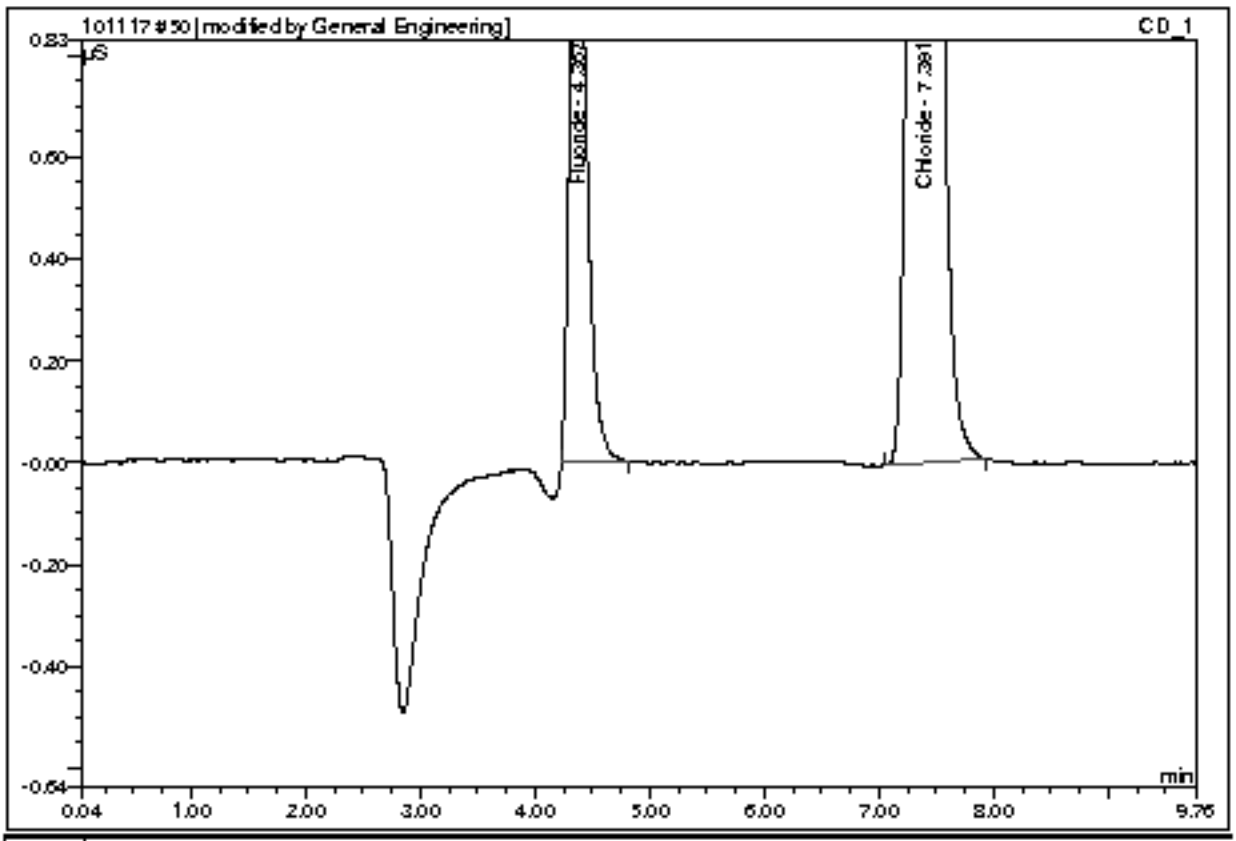
Sample Name:	266878003/1048124/1/1/	*Injection Volume:*	50.0
Vial Number:	30	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 1:46	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.37	Fluoride	n.a.	0.5601		0.24977	3.28
2	7.39	Chloride	n.a.	3.5967		1.29881	17.06
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.17	Nitrate-N	n.a.	1.3264		1.09886	14.43
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.73	Sulfate	n.a.	19.3885		4.96722	65.23
Total:				24.8717	0.000	7.615	100.00

50 266878003/1048124/1/1/

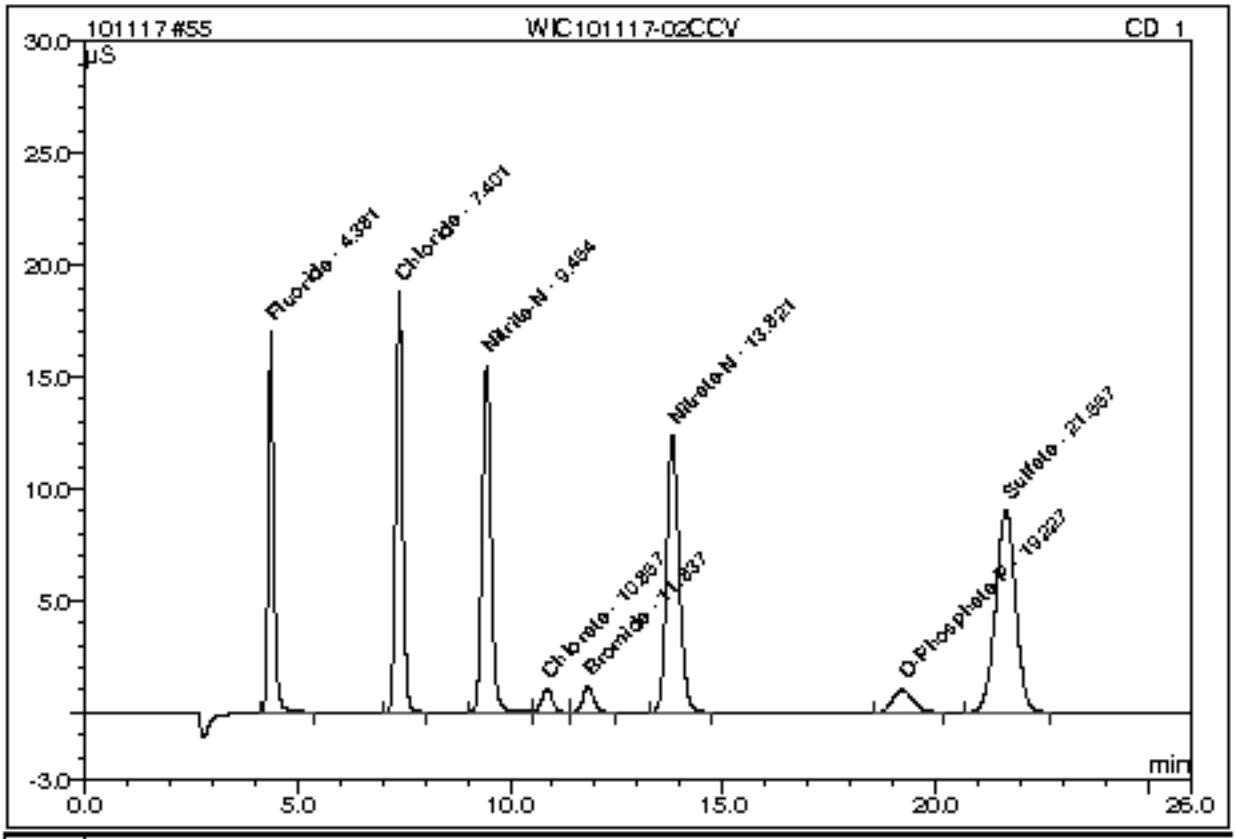
Sample Name:	266878003/1048124/1/1/	*Injection Volume:*	50.0
Vial Number:	30	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 1:46	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.37	Fluoride	n.a.	0.5047		0.22240	2.93
2	7.39	Chloride	n.a.	3.5967		1.29881	17.12
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.17	Nitrate-N	n.a.	1.3264		1.09886	14.48
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.73	Sulfate	n.a.	19.3885		4.96722	65.47
Total:				24.8163	0.000	7.587	100.00

55 WIC101117-02CCV

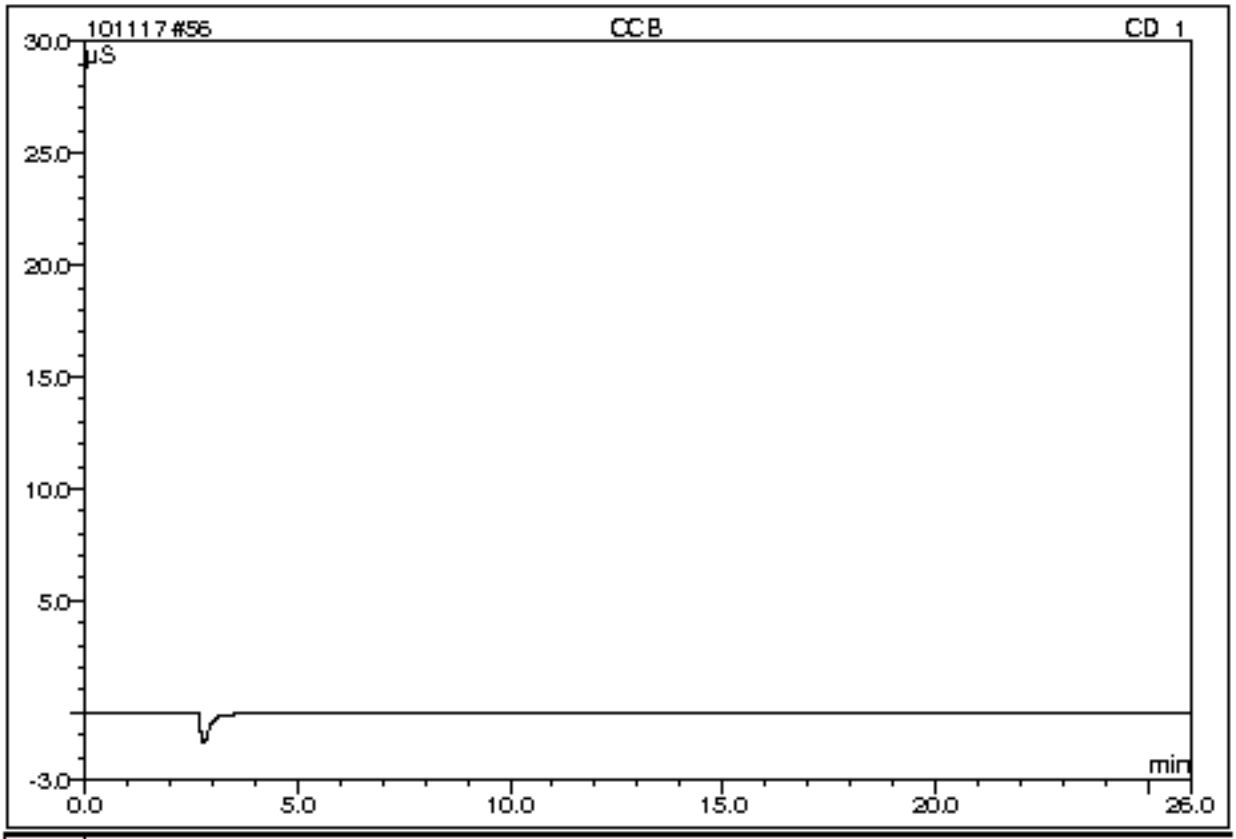
Sample Name:	WIC101117-02CCV	*Injection Volume:*	50.0
Vial Number:	35	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 4:11	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.38	Fluoride	n.a.	5.3049		2.59474	12.82
2	7.40	Chloride	n.a.	9.5204		3.54764	17.52
3	9.45	Nitrite-N	n.a.	5.2743		3.80096	18.77
4	10.87	Chlorate	n.a.	2.5372		0.31920	1.58
5	11.84	Bromide	n.a.	2.4902		0.33592	1.66
6	13.82	Nitrate-N	n.a.	4.7603		4.18016	20.65
7	19.23	O-Phosphate-P	n.a.	2.0851		0.55659	2.75
8	21.67	Sulfate	n.a.	19.1705		4.91041	24.25
Total:				51.1429	0.000	20.246	100.00

56 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	36	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	100827an	*Sample Amount:*	1.0000
Recording Time:	11/18/2010 4:40	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-002407; GL GCB086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

Nitrate Nitrite by Cadmium Reduction

This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
1.5 PPM		1	axh3	11/15/2010 9:38:45	OM_11-15-2010_09-37-01
1.0 PPM		1	axh3	11/15/2010 9:39:58	OM_11-15-2010_09-37-01
0.5 ppm		1	axh3	11/15/2010 9:41:10	OM_11-15-2010_09-37-01
0.1 ppm		1	axh3	11/15/2010 9:42:23	OM_11-15-2010_09-37-01
0.05 ppm		1	axh3	11/15/2010 9:43:37	OM_11-15-2010_09-37-01
ICAL-00		1	axh3	11/15/2010 9:44:51	OM_11-15-2010_09-37-01
1.0 ppm ICV		1	axh3	11/15/2010 9:47:13	OM_11-15-2010_09-37-01
ICB		1	axh3	11/15/2010 9:49:35	OM_11-15-2010_09-37-01
Nitrate 1.0 ppm		1	axh3	11/15/2010 9:51:54	OM_11-15-2010_09-37-01
Nitrite 1.0 ppm		1	axh3	11/15/2010 9:54:14	OM_11-15-2010_09-37-01
1202262719	1048237	1	axh3	11/15/2010 9:56:35	OM_11-15-2010_09-37-01
1202262724	1048237	1	axh3	11/15/2010 9:57:48	OM_11-15-2010_09-37-01
265997001	1048237	5	axh3	11/15/2010 9:59:01	OM_11-15-2010_09-37-01
1202262720	1048237	5	axh3	11/15/2010 10:00:14	OM_11-15-2010_09-37-01
1202262722	1048237	5	axh3	11/15/2010 10:01:26	OM_11-15-2010_09-37-01
265997002	1048237	5	axh3	11/15/2010 10:02:39	OM_11-15-2010_09-37-01
265997003	1048237	5	axh3	11/15/2010 10:03:52	OM_11-15-2010_09-37-01
265997004	1048237	5	axh3	11/15/2010 10:05:05	OM_11-15-2010_09-37-01
265997005	1048237	5	axh3	11/15/2010 10:06:16	OM_11-15-2010_09-37-01
265997006	1048237	5	axh3	11/15/2010 10:07:29	OM_11-15-2010_09-37-01
1.0 ppm CCV		1	axh3	11/15/2010 10:08:41	OM_11-15-2010_09-37-01
CCB		1	axh3	11/15/2010 10:11:03	OM_11-15-2010_09-37-01
265997007	1048237	5	axh3	11/15/2010 10:13:23	OM_11-15-2010_09-37-01
265997008	1048237	5	axh3	11/15/2010 10:14:35	OM_11-15-2010_09-37-01
265997009	1048237	5	axh3	11/15/2010 10:15:47	OM_11-15-2010_09-37-01
265997010	1048237	5	axh3	11/15/2010 10:16:58	OM_11-15-2010_09-37-01
265997011	1048237	5	axh3	11/15/2010 10:18:10	OM_11-15-2010_09-37-01
265997012	1048237	5	axh3	11/15/2010 10:19:24	OM_11-15-2010_09-37-01
265997013	1048237	5	axh3	11/15/2010 10:20:36	OM_11-15-2010_09-37-01
265997014	1048237	10	axh3	11/15/2010 10:21:50	OM_11-15-2010_09-37-01
265997015	1048237	5	axh3	11/15/2010 10:23:02	OM_11-15-2010_09-37-01
265997016	1048237	5	axh3	11/15/2010 10:24:15	OM_11-15-2010_09-37-01
1.0 ppm CCV		1	axh3	11/15/2010 10:25:27	OM_11-15-2010_09-37-01
CCB		1	axh3	11/15/2010 10:27:49	OM_11-15-2010_09-37-01
265997017	1048237	5	axh3	11/15/2010 10:30:09	OM_11-15-2010_09-37-01
266576003	1048237	50	axh3	11/15/2010 10:31:22	OM_11-15-2010_09-37-01
1202262721	1048237	50	axh3	11/15/2010 10:32:35	OM_11-15-2010_09-37-01
1202262723	1048237	50	axh3	11/15/2010 10:33:47	OM_11-15-2010_09-37-01
266576006	1048237	10	axh3	11/15/2010 10:34:59	OM_11-15-2010_09-37-01
266576009	1048237	25	axh3	11/15/2010 10:36:11	OM_11-15-2010_09-37-01
1202263489	1048516	1	axh3	11/15/2010 10:37:24	OM_11-15-2010_09-37-01
1202263496	1048516	1	axh3	11/15/2010 10:38:35	OM_11-15-2010_09-37-01
266810003	1048516	5	axh3	11/15/2010 10:39:47	OM_11-15-2010_09-37-01
1202263490	1048516	5	axh3	11/15/2010 10:40:58	OM_11-15-2010_09-37-01
1.0 ppm CCV		1	axh3	11/15/2010 10:42:10	OM_11-15-2010_09-37-01
CCB		1	axh3	11/15/2010 10:44:33	OM_11-15-2010_09-37-01
1202263493	1048516	5	axh3	11/15/2010 10:46:54	OM_11-15-2010_09-37-01
266878001	1048516	5	axh3	11/15/2010 10:48:07	OM_11-15-2010_09-37-01
1202263492	1048516	5	axh3	11/15/2010 10:49:20	OM_11-15-2010_09-37-01
1202263495	1048516	5	axh3	11/15/2010 10:50:32	OM_11-15-2010_09-37-01
266878003	1048516	5	axh3	11/15/2010 10:51:45	OM_11-15-2010_09-37-01
266881002	1048516	25	axh3	11/15/2010 10:52:58	OM_11-15-2010_09-37-01
266881004	1048516	25	axh3	11/15/2010 10:54:10	OM_11-15-2010_09-37-01
266890001	1048516	50	axh3	11/15/2010 10:55:22	OM_11-15-2010_09-37-01
266890003	1048516	50	axh3	11/15/2010 10:56:34	OM_11-15-2010_09-37-01
266917003	1048516	5	axh3	11/15/2010 10:57:47	OM_11-15-2010_09-37-01
1.0 ppm CCV		1	axh3	11/15/2010 10:58:59	OM_11-15-2010_09-37-01
CCB		1	axh3	11/15/2010 11:01:21	OM_11-15-2010_09-37-01

266917010	1048516	5	axh3	11/15/2010	11:03:42	OM_11-15-2010_09-37-01
266971001	1048516	5	axh3	11/15/2010	11:04:53	OM_11-15-2010_09-37-01
1202263491	1048516	5	axh3	11/15/2010	11:06:05	OM_11-15-2010_09-37-01
1202263494	1048516	5	axh3	11/15/2010	11:07:17	OM_11-15-2010_09-37-01
266971002	1048516	5	axh3	11/15/2010	11:08:29	OM_11-15-2010_09-37-01
266971003	1048516	5	axh3	11/15/2010	11:09:43	OM_11-15-2010_09-37-01
266971004	1048516	5	axh3	11/15/2010	11:10:56	OM_11-15-2010_09-37-01
266971005	1048516	5	axh3	11/15/2010	11:12:08	OM_11-15-2010_09-37-01
266971006	1048516	5	axh3	11/15/2010	11:13:21	OM_11-15-2010_09-37-01
266971007	1048516	5	axh3	11/15/2010	11:14:33	OM_11-15-2010_09-37-01
1.0 ppm CCV		1	axh3	11/15/2010	11:15:46	OM_11-15-2010_09-37-01
CCB		1	axh3	11/15/2010	11:18:07	OM_11-15-2010_09-37-01
266971008	1048516	5	axh3	11/15/2010	11:20:28	OM_11-15-2010_09-37-01
266971009	1048516	50	axh3	11/15/2010	11:21:41	OM_11-15-2010_09-37-01
266971010	1048516	5	axh3	11/15/2010	11:22:53	OM_11-15-2010_09-37-01
1202263497	1048517	1	axh3	11/15/2010	11:24:05	OM_11-15-2010_09-37-01
1202263502	1048517	1	axh3	11/15/2010	11:25:18	OM_11-15-2010_09-37-01
266892002	1048517	5	axh3	11/15/2010	11:26:29	OM_11-15-2010_09-37-01
1202263498	1048517	5	axh3	11/15/2010	11:27:41	OM_11-15-2010_09-37-01
1202263500	1048517	5	axh3	11/15/2010	11:28:53	OM_11-15-2010_09-37-01
266892005	1048517	5	axh3	11/15/2010	11:30:05	OM_11-15-2010_09-37-01
1202263499	1048517	5	axh3	11/15/2010	11:31:18	OM_11-15-2010_09-37-01
1.0 ppm CCV		1	axh3	11/15/2010	11:32:30	OM_11-15-2010_09-37-01
CCB		1	axh3	11/15/2010	11:34:53	OM_11-15-2010_09-37-01
1202263501	1048517	5	axh3	11/15/2010	11:37:15	OM_11-15-2010_09-37-01
266892006	1048517	5	axh3	11/15/2010	11:38:28	OM_11-15-2010_09-37-01
266983001	1048517	5	axh3	11/15/2010	11:39:40	OM_11-15-2010_09-37-01
266983004	1048517	10	axh3	11/15/2010	11:40:53	OM_11-15-2010_09-37-01
266984001	1048517	10	axh3	11/15/2010	11:42:06	OM_11-15-2010_09-37-01
266984004	1048517	5	axh3	11/15/2010	11:43:18	OM_11-15-2010_09-37-01
266985002	1048517	5	axh3	11/15/2010	11:44:32	OM_11-15-2010_09-37-01
266988002	1048517	5	axh3	11/15/2010	11:45:43	OM_11-15-2010_09-37-01
266990002	1048517	5	axh3	11/15/2010	11:46:55	OM_11-15-2010_09-37-01
1.0 ppm CCV		1	axh3	11/15/2010	11:49:15	OM_11-15-2010_09-37-01
CCB		1	axh3	11/15/2010	11:51:37	OM_11-15-2010_09-37-01

Author: lachat Date : 11/15/2010

Original Run Filename: OM_11-15-2010_09-37-01.OMN created 11/15/2010 09:37:01
Original Run Author's Signature: [lachat]
Current Run Filename: OM_11-15-2010_09-37-01.OMN last modified 11/15/2010 11:52:59
Current Run Author's Signature: [lachat]
Description: EPA 353.2
Cadmium Colum 0034ASM
LCS nominal 1.0 mg/L

Sample	Rep.	Cup No.	Channel 1 NO3 + NO2 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR101115-26	1	S9	1.50	16.8	11/15/2010@09:38:45			1.5 PPM
WTR101115-25	1	S10	1.00	11.0	11/15/2010@09:39:58			1.0 PPM
WTR101115-24	1	S11	0.500	5.65	11/15/2010@09:41:10			0.5 ppm
WTR101115-23	1	S12	0.100	1.11	11/15/2010@09:42:23			0.1 ppm
WTR101115-21	1	S13	0.0500	0.531	11/15/2010@09:43:37			0.05 ppm
0.0ppm	1	S15	0.00	1.74e-4	11/15/2010@09:44:51			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
Result:			0.99994 > 0.99500					
Message			Calibration Passed					
Action			Continue					
WTR101115-27 ICV	1	S16	1.00	11.2	11/15/2010@09:47:13			1.0 ppm ICV
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			1.00 < 1.10					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			1.00 > 0.894					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
ICB	1	S15	0.00205	0.0147	11/15/2010@09:49:35			ICB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			0.00205 < 0.0500					
Message			ICB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.00205 > -0.0500					
Message			ICB Passed					
Action			Continue					
WTR101115-22	1	S1	0.993	11.1	11/15/2010@09:51:54			Nitrate 1.0 ppm
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.993 < 1.10					
Message			Nitrate Standard Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.993 > 0.894					
Message			Nitrate Standard Passed					
Action			Continue					
WTR101115-28	1	S2	0.984	11.0	11/15/2010@09:54:14			Nitrite 1.0 ppm
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.984 < 1.10					
Message			Nitrite Standard Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.984 > 0.894					
Message			Nitrite Standard Passed					
Action			Continue					
1202262719|1048237|MB	1	1	0.00334	0.0291	11/15/2010@09:56:35			
1202262724||LCS	1	2	1.01	11.3	11/15/2010@09:57:48			
265997001	1	3	0.150	1.67	11/15/2010@09:59:01		5.00	
1202262720||DUP	1	4	0.147	1.63	11/15/2010@10:00:14		5.00	
1202262722||PS	1	5	1.10	12.3	11/15/2010@10:01:26		5.00	

265997002	1	6	0.0721	0.797	11/15/2010@10:02:39		5.00	
265997003	1	7	0.0720	0.796	11/15/2010@10:03:52		5.00	
265997004	1	8	0.176	1.96	11/15/2010@10:05:05		5.00	
265997005	1	9	0.232	2.58	11/15/2010@10:06:16		5.00	
265997006	1	10	0.103	1.15	11/15/2010@10:07:29		5.00	
WTR101115-25 CCV	1	S10	0.986	11.0	11/15/2010@10:08:41			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.986 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.986 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00258	0.0205	11/15/2010@10:11:03			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00258 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00258 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
265997007	1	11	0.188	2.09	11/15/2010@10:13:23		5.00	
265997008	1	12	0.146	1.62	11/15/2010@10:14:35		5.00	
265997009	1	13	0.115	1.28	11/15/2010@10:15:47		5.00	
265997010	1	14	0.186	2.07	11/15/2010@10:16:58		5.00	
265997011	1	15	0.163	1.81	11/15/2010@10:18:10		5.00	
265997012	1	16	0.163	1.81	11/15/2010@10:19:24		5.00	
265997013	1	17	0.0479	0.526	11/15/2010@10:20:36		5.00	
265997014	1	18	0.166	1.84	11/15/2010@10:21:50		10.00	
265997015	1	19	0.179	1.99	11/15/2010@10:23:02		5.00	
265997016	1	20	0.168	1.87	11/15/2010@10:24:15		5.00	
WTR101115-25 CCV	1	S10	0.986	11.0	11/15/2010@10:25:27			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.986 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.986 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00237	0.0182	11/15/2010@10:27:49			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00237 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00237 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
265997017	1	21	0.00309	0.0263	11/15/2010@10:30:09		5.00	
266576003	1	22	0.448	5.00	11/15/2010@10:31:22		50.00	
1202262721||DUP	1	23	0.414	4.61	11/15/2010@10:32:35		50.00	
1202262723||PS	1	24	1.38	15.4	11/15/2010@10:33:47		50.00	
266576006	1	25	0.493	5.49	11/15/2010@10:34:59		10.00	
266576009	1	26	0.405	4.51	11/15/2010@10:36:11		25.00	
1202263489|1048516|MB	1	27	0.00259	0.0207	11/15/2010@10:37:24			
1202263496||LCS	1	28	1.01	11.2	11/15/2010@10:38:35			
266810003	1	29	0.00230	0.0175	11/15/2010@10:39:47		5.00	
1202263490||DUP	1	30	0.00236	0.0180	11/15/2010@10:40:58		5.00	
WTR101115-25 CCV	1	S10	0.985	11.0	11/15/2010@10:42:10			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								

		Result:	0.985 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.985 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00256	0.0204	11/15/2010@10:44:33			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00256 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00256 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
1202263493||PS	1	31	0.937	10.5	11/15/2010@10:46:54		5.00	
266878001	1	32	0.199	2.21	11/15/2010@10:48:07		5.00	
1202263492||DUP	1	33	0.195	2.16	11/15/2010@10:49:20		5.00	
1202263495||PS	1	34	1.17	13.1	11/15/2010@10:50:32		5.00	
266878003	1	36	0.290	3.23	11/15/2010@10:51:45		5.00	
266881002	1	37	0.157	1.74	11/15/2010@10:52:58		25.00	
266881004	1	38	0.240	2.67	11/15/2010@10:54:10		25.00	
266890001	1	39	0.199	2.22	11/15/2010@10:55:22		50.00	
266890003	1	40	0.200	2.22	11/15/2010@10:56:34		50.00	
266917003	1	41	0.00275	0.0225	11/15/2010@10:57:47		5.00	
WTR101115-25 CCV	1	S10	0.986	11.0	11/15/2010@10:58:59			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.986 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.986 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00287	0.0238	11/15/2010@11:01:21			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00287 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00287 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
266917010	1	42	0.00211	0.0153	11/15/2010@11:03:42		5.00	
266971001	1	43	0.150	1.67	11/15/2010@11:04:53		5.00	
1202263491||DUP	1	44	0.146	1.63	11/15/2010@11:06:05		5.00	
1202263494||PS	1	45	1.11	12.4	11/15/2010@11:07:17		5.00	
266971002	1	46	0.00235	0.0180	11/15/2010@11:08:29		5.00	
266971003	1	47	0.153	1.70	11/15/2010@11:09:43		5.00	
266971004	1	48	0.00326	0.0282	11/15/2010@11:10:56		5.00	
266971005	1	49	0.00303	0.0256	11/15/2010@11:12:08		5.00	
266971006	1	50	0.00362	0.0321	11/15/2010@11:13:21		5.00	
266971007	1	51	0.00423	0.0390	11/15/2010@11:14:33		5.00	
WTR101115-25 CCV	1	S10	0.987	11.0	11/15/2010@11:15:46			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.987 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.987 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00290	0.0241	11/15/2010@11:18:07			CCB

		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00290 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00290 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
266971008	1	52	0.0112	0.117	11/15/2010@11:20:28		5.00	
266971009	1	53	1.04	11.6	11/15/2010@11:21:41		50.00	
266971010	1	54	0.284	3.17	11/15/2010@11:22:53		5.00	
1202263497|1048517|MB	1	55	0.00308	0.0262	11/15/2010@11:24:05			
1202263502||LCS	1	56	1.02	11.4	11/15/2010@11:25:18			
266892002	1	57	0.158	1.76	11/15/2010@11:26:29		5.00	
1202263498||DUP	1	58	0.155	1.72	11/15/2010@11:27:41		5.00	
1202263500||PS	1	59	1.12	12.5	11/15/2010@11:28:53		5.00	
266892005	1	60	0.266	2.96	11/15/2010@11:30:05		5.00	
1202263499||DUP	1	61	0.258	2.87	11/15/2010@11:31:18		5.00	
WTR101115-25 CCV	1	S10	0.990	11.1	11/15/2010@11:32:30			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.990 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.990 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00290	0.0242	11/15/2010@11:34:53			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00290 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00290 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
1202263501||PS	1	62	1.23	13.7	11/15/2010@11:37:15		5.00	
266892006	1	63	0.145	1.62	11/15/2010@11:38:28		5.00	
266983001	1	64	0.0938	1.04	11/15/2010@11:39:40		5.00	
266983004	1	65	0.116	1.29	11/15/2010@11:40:53		10.00	
266984001	1	66	0.489	5.45	11/15/2010@11:42:06		10.00	
266984004	1	67	0.451	5.03	11/15/2010@11:43:18		5.00	
266985002	1	68	0.0908	1.01	11/15/2010@11:44:32		5.00	
266988002	1	69	0.00335	0.0292	11/15/2010@11:45:43		5.00	
266990002	1	70	0.138	1.54	11/15/2010@11:46:55		5.00	
WTR101115-25 CCV	1	S10	0.990	11.0	11/15/2010@11:49:15			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.990 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.990 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00241	0.0186	11/15/2010@11:51:37			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00241 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00241 > -0.0500					
		Message	CCB Passed					
		Action	Continue					

Channel 1 (NO3 + NO2) : Current View

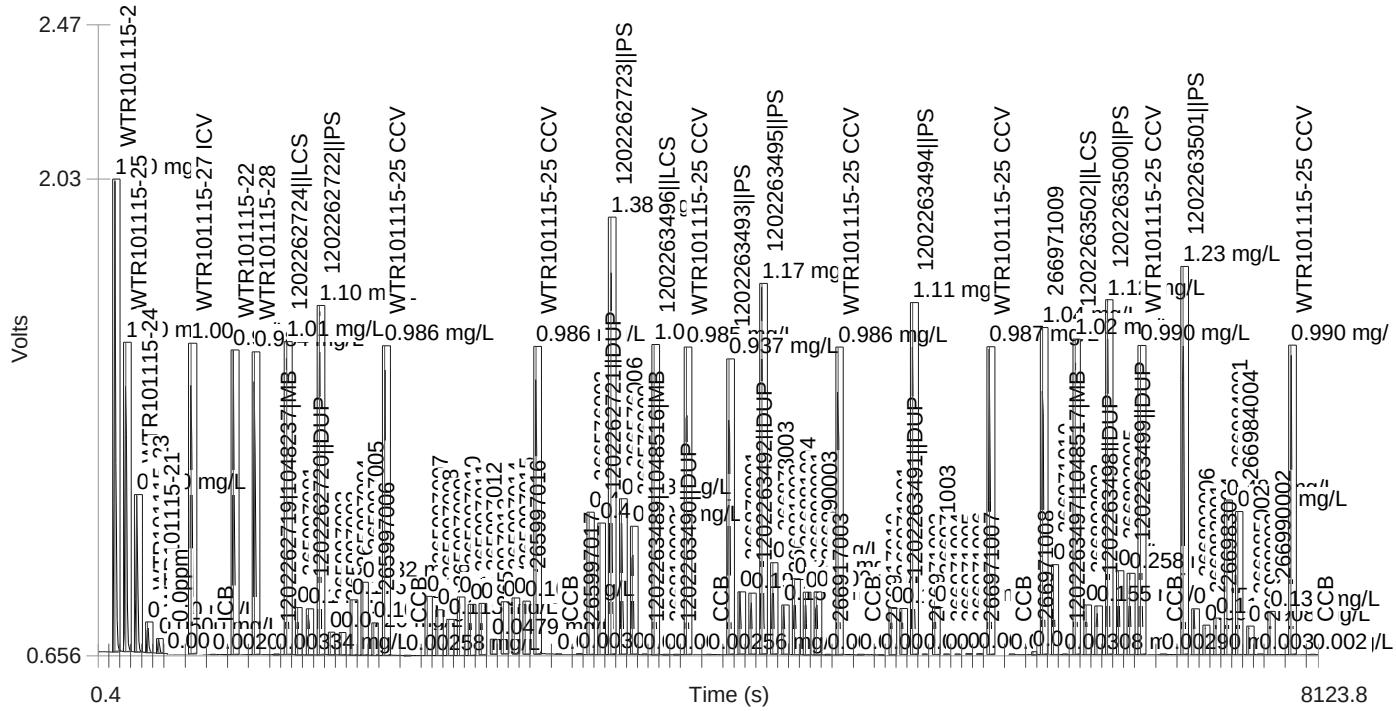
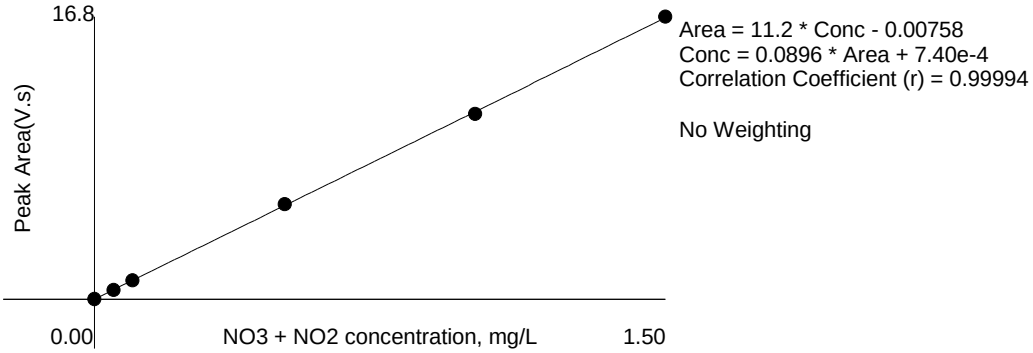


Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	16.8	1.36	-0.4	11/15/2010	09:40:05
2	1.00	1	11.0	0.890	1.2	11/15/2010	09:41:17
3	0.500	1	5.65	0.453	-1.4	11/15/2010	09:42:30
4	0.100	1	1.11	0.0885	-0.3	11/15/2010	09:43:43
5	0.0500	1	0.531	0.0421	3.5	11/15/2010	09:44:57
6	0.00	1	1.74e-4	-1.53e-4		11/15/2010	09:46:10

Figure 1: NO3 + NO2



This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
1.5 PPM		1	axh3	11/17/2010 8:44:01	OM_11-17-2010_08-42-59
1.0 PPM		1	axh3	11/17/2010 8:45:14	OM_11-17-2010_08-42-59
0.5 ppm		1	axh3	11/17/2010 8:46:26	OM_11-17-2010_08-42-59
0.1 ppm		1	axh3	11/17/2010 8:47:39	OM_11-17-2010_08-42-59
0.05 ppm		1	axh3	11/17/2010 8:48:53	OM_11-17-2010_08-42-59
ICAL-00		1	axh3	11/17/2010 8:50:06	OM_11-17-2010_08-42-59
1.0 ppm ICV		1	axh3	11/17/2010 8:52:29	OM_11-17-2010_08-42-59
ICB		1	axh3	11/17/2010 8:54:51	OM_11-17-2010_08-42-59
Nitrate 1.0 ppm		1	axh3	11/17/2010 8:57:10	OM_11-17-2010_08-42-59
Nitrite 1.0 ppm		1	axh3	11/17/2010 8:59:30	OM_11-17-2010_08-42-59
1202265043	1049064	1	axh3	11/17/2010 9:01:51	OM_11-17-2010_08-42-59
1202265046	1049064	1	axh3	11/17/2010 9:03:04	OM_11-17-2010_08-42-59
266878005	1049064	5	axh3	11/17/2010 9:04:17	OM_11-17-2010_08-42-59
1202265044	1049064	5	axh3	11/17/2010 9:05:30	OM_11-17-2010_08-42-59
1202265045	1049064	5	axh3	11/17/2010 9:06:43	OM_11-17-2010_08-42-59
267028002	1049064	25	axh3	11/17/2010 9:07:55	OM_11-17-2010_08-42-59
267029002	1049064	5	axh3	11/17/2010 9:09:08	OM_11-17-2010_08-42-59
267029005	1049064	5	axh3	11/17/2010 9:10:21	OM_11-17-2010_08-42-59
267030001	1049064	5	axh3	11/17/2010 9:11:33	OM_11-17-2010_08-42-59
267058001	1049064	50	axh3	11/17/2010 9:12:45	OM_11-17-2010_08-42-59
1.0 ppm CCV		1	axh3	11/17/2010 9:13:57	OM_11-17-2010_08-42-59
CCB		1	axh3	11/17/2010 9:16:19	OM_11-17-2010_08-42-59
1202266004	1049064	50	axh3	11/17/2010 9:18:39	OM_11-17-2010_08-42-59
1202266005	1049064	50	axh3	11/17/2010 9:19:51	OM_11-17-2010_08-42-59
267058002	1049064	250	axh3	11/17/2010 9:21:03	OM_11-17-2010_08-42-59
267058003	1049064	50	axh3	11/17/2010 9:22:14	OM_11-17-2010_08-42-59
267062001	1049064	5	axh3	11/17/2010 9:23:26	OM_11-17-2010_08-42-59
267062002	1049064	100	axh3	11/17/2010 9:24:39	OM_11-17-2010_08-42-59
267062003	1049064	5	axh3	11/17/2010 9:25:52	OM_11-17-2010_08-42-59
267062004	1049064	5	axh3	11/17/2010 9:27:05	OM_11-17-2010_08-42-59
267062005	1049064	5	axh3	11/17/2010 9:28:19	OM_11-17-2010_08-42-59
267062006	1049064	5	axh3	11/17/2010 9:29:31	OM_11-17-2010_08-42-59
1.0 ppm CCV		1	axh3	11/17/2010 9:30:43	OM_11-17-2010_08-42-59
CCB		1	axh3	11/17/2010 9:33:05	OM_11-17-2010_08-42-59
267062007	1049064	5	axh3	11/17/2010 9:35:25	OM_11-17-2010_08-42-59
267062008	1049064	5	axh3	11/17/2010 9:36:38	OM_11-17-2010_08-42-59
267062009	1049064	10	axh3	11/17/2010 9:37:51	OM_11-17-2010_08-42-59
267062010	1049064	5	axh3	11/17/2010 9:39:03	OM_11-17-2010_08-42-59
267062011	1049064	5	axh3	11/17/2010 9:40:15	OM_11-17-2010_08-42-59
267062002	1049064	500	axh3	11/17/2010 9:41:28	OM_11-17-2010_08-42-59
1.0 ppm CCV		1	axh3	11/17/2010 9:43:48	OM_11-17-2010_08-42-59
CCB		1	axh3	11/17/2010 9:46:11	OM_11-17-2010_08-42-59

Author: lachat Date : 11/17/2010

Original Run Filename: OM_11-17-2010_08-42-59.OMN created 11/17/2010 08:42:59
Original Run Author's Signature: [lachat]
Current Run Filename: OM_11-17-2010_08-42-59.OMN last modified 11/17/2010 09:47:32
Current Run Author's Signature: [lachat]
Description: EPA 353.2
Cadmium Colum 0034ASM
LCS nominal 1.0 mg/L

Sample	Rep.	Cup No.	Channel 1 NO3 + NO2 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR101117-26	1	S9	1.50	16.6	11/17/2010@08:44:01			1.5 PPM
WTR101117-25	1	S10	1.00	10.8	11/17/2010@08:45:14			1.0 PPM
WTR101117-24	1	S11	0.500	5.56	11/17/2010@08:46:26			0.5 ppm
WTR101117-23	1	S12	0.100	1.15	11/17/2010@08:47:39			0.1 ppm
WTR101117-21	1	S13	0.0500	0.473	11/17/2010@08:48:53			0.05 ppm
0.0ppm	1	S15	0.00	3.57e-4	11/17/2010@08:50:06			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99988 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR101117-27 ICV	1	S16	1.01	11.1	11/17/2010@08:52:29			1.0 ppm ICV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	1.01 < 1.10					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.01 > 0.894					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
ICB	1	S15	-4.60e-4	-0.0184	11/17/2010@08:54:51			ICB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-4.60e-4 < 0.0500					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-4.60e-4 > -0.0500					
		Message	ICB Passed					
		Action	Continue					
WTR101117-22	1	S1	0.984	10.8	11/17/2010@08:57:10			Nitrate 1.0 ppm
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.984 < 1.10					
		Message	Nitrate Standard Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.984 > 0.894					
		Message	Nitrate Standard Passed					
		Action	Continue					
WTR101117-28	1	S2	0.992	10.9	11/17/2010@08:59:30			Nitrite 1.0 ppm
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.992 < 1.10					
		Message	Nitrite Standard Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.992 > 0.894					
		Message	Nitrite Standard Passed					
		Action	Continue					
1202265043|1049064|MB	1	1	0.00380	0.0284	11/17/2010@09:01:51			
1202265046||LCS	1	2	1.01	11.1	11/17/2010@09:03:04			
266878005	1	3	0.143	1.55	11/17/2010@09:04:17		5.00	
1202265044||DUP	1	4	0.138	1.51	11/17/2010@09:05:30		5.00	
1202265045||PS	1	5	1.09	12.0	11/17/2010@09:06:43		5.00	

267028002	1	6	0.354	3.88	11/17/2010@09:07:55		25.00	
267029002	1	7	0.0621	0.670	11/17/2010@09:09:08		5.00	
267029005	1	8	0.0671	0.725	11/17/2010@09:10:21		5.00	
267030001	1	9	0.0653	0.704	11/17/2010@09:11:33		5.00	
267058001	1	10	0.436	4.78	11/17/2010@09:12:45		50.00	
WTR101117-25 CCV	1	S10	0.988	10.9	11/17/2010@09:13:57			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.988 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.988 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	-4.15e-4	-0.0179	11/17/2010@09:16:19			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-4.15e-4 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-4.15e-4 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
1202266004||DUP	1	11	0.430	4.71	11/17/2010@09:18:39		50.00	
1202266005||PS	1	12	1.36	14.9	11/17/2010@09:19:51		50.00	
267058002	1	13	1.20	13.2	11/17/2010@09:21:03		250.00	
267058003	1	14	0.455	4.98	11/17/2010@09:22:14		50.00	
267062001	1	15	0.00430	0.0338	11/17/2010@09:23:26		5.00	
267062002	1	16	5.97	65.7	11/17/2010@09:24:39		100.00	
267062003	1	17	0.00633	0.0562	11/17/2010@09:25:52		5.00	
267062004	1	18	0.0135	0.135	11/17/2010@09:27:05		5.00	
267062005	1	19	0.00349	0.0250	11/17/2010@09:28:19		5.00	
267062006	1	20	0.00486	0.0400	11/17/2010@09:29:31		5.00	
WTR101117-25 CCV	1	S10	0.983	10.8	11/17/2010@09:30:43			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.983 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.983 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	4.40e-4	-0.00855	11/17/2010@09:33:05			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	4.40e-4 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	4.40e-4 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
267062007	1	21	0.00288	0.0183	11/17/2010@09:35:25		5.00	
267062008	1	22	0.707	7.76	11/17/2010@09:36:38		5.00	
267062009	1	23	1.22	13.4	11/17/2010@09:37:51		10.00	
267062010	1	24	0.110	1.20	11/17/2010@09:39:03		5.00	
267062011	1	25	0.0139	0.139	11/17/2010@09:40:15		5.00	
267062002	1	16	1.23	13.5	11/17/2010@09:41:28		500.00	
WTR101117-25 CCV	1	S10	0.982	10.8	11/17/2010@09:43:48			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.982 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								

		Result:	0.982 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	2.52e-4	-0.0106	11/17/2010@09:46:11			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	2.52e-4 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	2.52e-4 > -0.0500					
		Message	CCB Passed					
		Action	Continue					

Channel 1 (NO3 + NO2) : Current View

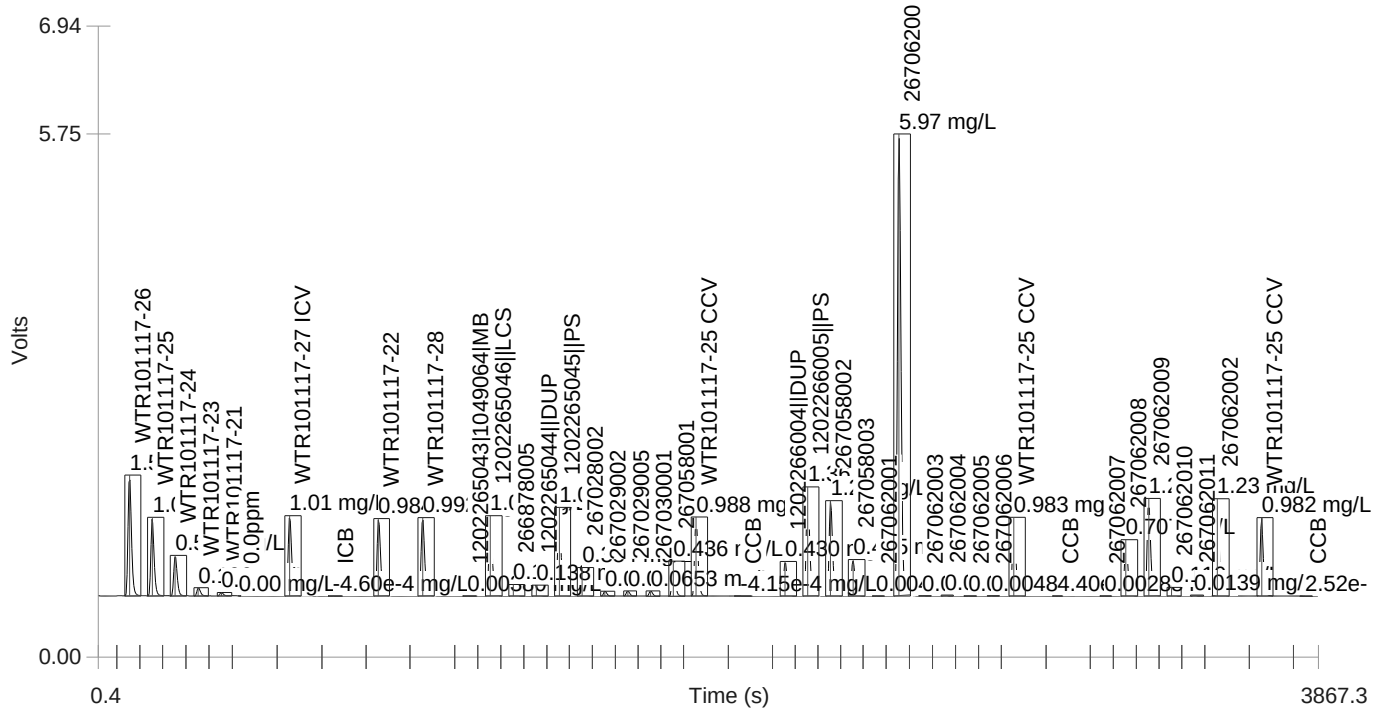


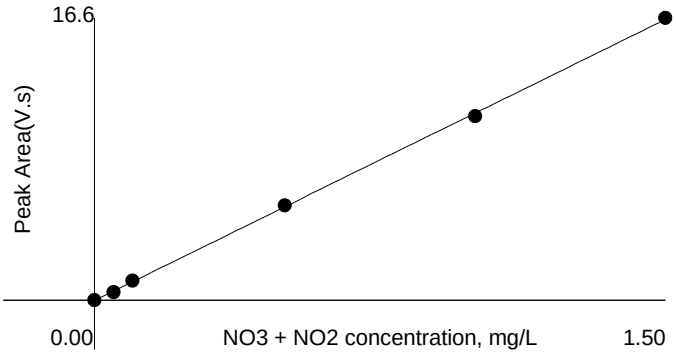
Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	16.6	1.33	-0.6	11/17/2010	08:45:21
2	1.00	1	10.8	0.865	1.6	11/17/2010	08:46:33
3	0.500	1	5.56	0.445	-1.4	11/17/2010	08:47:46
4	0.100	1	1.15	0.0916	-5.6	11/17/2010	08:48:59
5	0.0500	1	0.473	0.0365	12.0	11/17/2010	08:50:12
6	0.00	1	3.57e-4	2.33e-4		11/17/2010	08:51:26

Author: lachat

Date : 11/17/2010

Figure 1: NO3 + NO2



Area = 11.0 * Conc - 0.0120
Conc = 0.0910 * Area + 0.00122
Correlation Coefficient (r) = 0.99988

No Weighting

Solids, Total Dissolved

Batch: 1048619.0
Analyst: LYG1

TDS/TS/VS LogBook

Procedure Code BALDSEP_L
Procedure Description EPA 160.1 Solids, Dissolved
Lab Sop GL-GC-E-001

Sample Type	Sample Id	Lot Id	Nc(mg/L)	Recovery(%)
LCS	1202263746	1482742	300	99.333
LCSD	1202263747	1482742	300	99

Sample Type	Sample Id	Rpd(%)
DUP	1202263744	.72463768115942
DUP	1202263745	.19940179461615

Sample Id	Sample Type	Original Hsn	Instrument	Run Date	Crucible ID	Aliquot (L)	Crucible Wt(g)	Final Wt Event 1	Final Wt Event 2	Final Wt Event 3	Final Wt Event 4	Result	Units
1202263743	MB		BAL216	15-NOV-2010 12:56	COO	0.1	60.3408	60.3404	60.3406	60.3406		-2	mg/L
1202263746	LCS		BAL216	15-NOV-2010 12:56	KIR	0.1	64.6364	64.6662	64.6662	64.6662		298	mg/L
1202263747	LCSD		BAL216	15-NOV-2010 12:56	END	0.1	66.465	66.4947	66.4948	66.4947		297	mg/L
266878001	SAMPLE		BAL216	15-NOV-2010 12:56	RST	0.1	67.6828	67.7113	67.7106	67.7105		277	mg/L
1202263744	DUP	266878001	BAL216	15-NOV-2010 12:56	TE/	0.1	55.4787	55.5064	55.5062			275	mg/L
266878003	SAMPLE		BAL216	15-NOV-2010 12:56	AM C	0.1	66.262	66.301	66.3006			386	mg/L
266878005	SAMPLE		BAL216	15-NOV-2010 12:56	QIN	0.1	53.7809	53.8148	53.8144			335	mg/L
266881002	SAMPLE		BAL216	15-NOV-2010 12:56	TC	0.1	63.4418	63.4728	63.4728			310	mg/L
266881004	SAMPLE		BAL216	15-NOV-2010 12:56	NUT	0.1	55.6469	55.6831	55.6828			359	mg/L
266882010	SAMPLE		BAL216	15-NOV-2010 12:56	LNE	0.1	65.0873	65.1051	65.105			177	mg/L
266890001	SAMPLE		BAL216	15-NOV-2010 12:56	HU	0.1	56.7549	56.8	56.8			451	mg/L
266890003	SAMPLE		BAL216	15-NOV-2010 12:56	F5	0.1	55.3609	55.4069	55.4072			463	mg/L
266892002	SAMPLE		BAL216	15-NOV-2010 12:56	S7	0.1	48.3194	48.37	48.3697			503	mg/L
266892005	SAMPLE		BAL216	15-NOV-2010 12:56	CSI	0.1	60.6091	60.6583	60.6581			490	mg/L
266892006	SAMPLE		BAL216	15-NOV-2010 12:56	AAL	0.1	60.9047	60.9552	60.9549			502	mg/L
1202263745	DUP	266892006	BAL216	15-NOV-2010 12:56	S8	0.1	54.8119	54.862	54.862			501	mg/L
266917002	SAMPLE		BAL216	15-NOV-2010 12:56	PCA	0.05	69.7623	69.783	69.7827			408	mg/L
266917009	SAMPLE		BAL216	15-NOV-2010 12:56	LAQ	0.05	64.5446	64.5518	64.5513			134	mg/L

Comments: **All Weights are in Grams**
A) Result = (Final - Crucible)/Aliquot * 1000
B) Prep Factor = 0.5 / Aliquot

Date: 15-NOV-10 14:18:45
Date: 16-NOV-10 09:00:02
Temperature: 104 C
Temperature: 180 C

Note: Aliquot is used for the determination of the effective MDL and PQL in LIMS

Specific Conductivity

Analytical Logbook

Conductivity and Salinity

Batch ID: **1048674.0**
Analyst: **Lindsey Allen**
Method: **EPA 120.1**
Lab SOP: **GL-GC-E-009 REV# 9**
Instrument: **Orion 160 Conductivity Meter**

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
CCV	240	Conductivity LCS	WCO100518-06	25	mL
LCS	1202263886	Conductivity LCS	WCO100518-06	25	mL

Sample ID	Run Date	Dilution	Temperature (C)	Conductivity Result (umhos/cm)
1202263886 LCS	15-NOV-2010 16:23:23	1	25	1424
266481001	15-NOV-2010 16:23:27	1	25	802
1202263884 DUP (266481001)	15-NOV-2010 16:27:41	1	25	818
266494002	15-NOV-2010 16:27:44	1	25	560
1202263885 DUP (266494002)	15-NOV-2010 16:28:30	1	25	566
CCV	15-NOV-2010 16:28:33	1	25	1405
266878001	15-NOV-2010 16:30:33	1	25	432
266881002	15-NOV-2010 16:32:01	1	25	408
266881004	15-NOV-2010 16:32:38	1	25	466
266890001	15-NOV-2010 16:32:42	1	25	618
266890003	15-NOV-2010 16:33:18	1	25	616
CCV	15-NOV-2010 16:33:22	1	25	1398
266892002	15-NOV-2010 16:33:54	1	25	775
266983001	15-NOV-2010 16:35:10	1	25	250
266983004	15-NOV-2010 16:35:12	1	25	171
266984001	15-NOV-2010 16:35:15	1	25	218
266984004	15-NOV-2010 16:35:50	1	25	192.6
CCV	15-NOV-2010 16:35:54	1	25	1388

Calibration Information:

Run Date: 15-NOV-10 16:18
Instrument: CON160
Analyst: LXA1

Standard	Observed	Theoretical		%Recovery
WCO101115-05	15.12	14.5	umhos/cm	104.28
WCO101115-03	1443	1413	umhos/cm	102.12
WCO101115-04	1820	1900	umhos/cm	95.789
WCO101115-06	23500	24800	umhos/cm	94.758
WCO101115-01	267	250	umhos/cm	106.8
WCO101115-02	754	750	umhos/cm	100.53

Comments:

Analytical Logbook

Conductivity and Salinity

Batch ID: **1052275.0**
Analyst: **Edmund Frampton**
Method: **EPA 120.1**
Lab SOP: **GL-GC-E-009 REV# 9**
Instrument: **Orion 160 Conductivity Meter**

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
CCV	240	Conductivity LCS	WCO101118-06	25	mL
LCS	1202272579	Conductivity LCS	WCO101118-06	25	mL

Sample ID	Run Date	Dilution	Temperature (C)	Conductivity Result (umhos/cm)
1202272579 LCS	26-NOV-2010 11:45:28	1	25	1402
266878003	26-NOV-2010 11:45:30	1	25	626
266878005	26-NOV-2010 11:45:32	1	25	543
266985002	26-NOV-2010 11:45:35	1	25	174.1
1202272577 DUP (266985002)	26-NOV-2010 11:45:36	1	25	179.3
CCV	26-NOV-2010 11:45:41	1	25	1402
266988002	26-NOV-2010 11:45:43	1	25	371
1202272578 DUP (266988002)	26-NOV-2010 11:45:44	1	25	361
266990002	26-NOV-2010 11:45:46	1	25	590
266990003	26-NOV-2010 11:45:47	1	25	670
267028002	26-NOV-2010 11:45:48	1	25	983
CCV	26-NOV-2010 11:45:49	1	25	1400
267029002	26-NOV-2010 11:45:50	1	25	126.4
267029005	26-NOV-2010 11:45:51	1	25	121.3
267030001	26-NOV-2010 11:45:52	1	25	139.8
267130002	26-NOV-2010 11:45:53	1	25	205
267236001	26-NOV-2010 11:45:54	1	25	550
CCV	26-NOV-2010 11:45:56	1	25	1397
267236002	26-NOV-2010 11:45:57	1	25	600
267237001	26-NOV-2010 11:45:58	1	25	170.9
267237004	26-NOV-2010 11:45:59	1	25	188
CCV	26-NOV-2010 11:46:00	1	25	1388

Calibration Information:

Run Date: 26-NOV-10 10:55
Instrument: CON160
Analyst: LXA1

Standard	Observed	Theoretical		%Recovery
WCO101126-05	13.92	14.5	umhos/cm	96
WCO101126-03	1425	1413	umhos/cm	100.85
WCO101126-04	1780	1900	umhos/cm	93.684
WCO101126-06	23400	24800	umhos/cm	94.355
WCO101126-01	254	250	umhos/cm	101.6
WCO101126-02	725	750	umhos/cm	96.667

Comments:

Total Kjeldahl Nitrogen

Prep Logbook

Total Phosphorous and Total Kjeldahl Nitrogen Sample Preparation

Batch ID: **1048032.0** Verified by: _____

Analyst: Stephanie Jackson

Method: EPA 351.2 Prep

Lab SOP: GL-GC-E-071 REV# 11

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202262163	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202262161	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202263484	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202262162	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202263485	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202262159 MB	15-NOV-2010 11:00:00	Water	20	20	1	<2
1202262163 LCS	15-NOV-2010 11:00:00	Water	20	20	1	<2
266779001	15-NOV-2010 11:00:00	Water	20	20	1	<2
1202262160 DUP (266779001)	15-NOV-2010 11:00:00	Water	20	20	1	<2
1202262161 MS (266779001)	15-NOV-2010 11:00:00	Water	20	20	1	<2
1202262162 MSD (266779001)	15-NOV-2010 11:00:00	Water	20	20	1	<2
266779002	15-NOV-2010 11:00:00	Water	20	20	1	<2
1202263483 DUP (266779002)	15-NOV-2010 11:00:00	Water	20	20	1	<2
1202263484 MS (266779002)	15-NOV-2010 11:00:00	Water	20	20	1	<2
1202263485 MSD (266779002)	15-NOV-2010 11:00:00	Water	20	20	1	<2
266779004	15-NOV-2010 11:00:00	Water	20	20	1	<2
266779005	15-NOV-2010 11:00:00	Water	20	20	1	<2
266779009	15-NOV-2010 11:00:00	Water	20	20	1	<2
266782002	15-NOV-2010 11:00:00	Water	20	20	1	<2
266782003	15-NOV-2010 11:00:00	Water	20	20	1	<2
266789001	15-NOV-2010 11:00:00	Water	20	20	1	<2
266791001	15-NOV-2010 11:00:00	Water	20	20	1	<2
266878001	15-NOV-2010 11:00:00	Water	20	20	1	<2
266878003	15-NOV-2010 11:00:00	Water	20	20	1	<2
266881001	15-NOV-2010 11:00:00	Water	20	20	1	<2
266881003	15-NOV-2010 11:00:00	Water	20	20	1	<2
266890002	15-NOV-2010 11:00:00	Water	20	20	1	<2
266890004	15-NOV-2010 11:00:00	Water	20	20	1	<2
266892002	15-NOV-2010 11:00:00	Water	20	20	1	<2
266892005	15-NOV-2010 11:00:00	Water	20	20	1	<2

Prep Logbook

Batch ID: **1048032.0** Verified by: _____

Analyst: Stephanie Jackson

Method: EPA 351.2 Prep

Lab SOP: GL-GC-E-071 REV# 11

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202262163	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202262161	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202263484	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202262162	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202263485	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
266892006	15-NOV-2010 11:00:00	Water	20	20	1	<2
266985001	15-NOV-2010 11:00:00	Water	20	20	1	<2

Reagent/Solvent Lot ID	Description	Amount
1484372-C	TKN/PO4 Digestion Solution	4 mL

Comments:

Prep Logbook

Total Phosphorous and Total Kjeldahl Nitrogen Sample Preparation

Batch ID: **1048511.0** Verified by: _____

Analyst: Stephanie Jackson

Method: EPA 351.2 Prep

Lab SOP: GL-GC-E-071 REV# 11

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202263482	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202263480	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202265218	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202263481	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202265219	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202263478 MB	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202263482 LCS	16-NOV-2010 11:30:00	Water	20	20	1	<2
266878005	16-NOV-2010 11:30:00	Water	20	20	1	<2
266983002	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202263479 DUP (266983002)	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202263480 MS (266983002)	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202263481 MSD (266983002)	16-NOV-2010 11:30:00	Water	20	20	1	<2
266983003	16-NOV-2010 11:30:00	Water	20	20	1	<2
266984002	16-NOV-2010 11:30:00	Water	20	20	1	<2
266984003	16-NOV-2010 11:30:00	Water	20	20	1	<2
266988001	16-NOV-2010 11:30:00	Water	20	20	1	<2
266990001	16-NOV-2010 11:30:00	Water	20	20	1	<2
267028001	16-NOV-2010 11:30:00	Water	20	20	1	<2
267029003	16-NOV-2010 11:30:00	Water	20	20	1	<2
267029006	16-NOV-2010 11:30:00	Water	20	20	1	<2
267030002	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202265217 DUP (267030002)	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202265218 MS (267030002)	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202265219 MSD (267030002)	16-NOV-2010 11:30:00	Water	20	20	1	<2

Reagent/Solvent Lot ID	Description	Amount
1484372-C	TKN/PO4 Digestion Solution	4 mL

Comments:

This is runlog lachat2

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
5.0 ppm Std.		1	axh3	11/16/2010 7:29:51	OM_11-16-2010_07-28-21
3.0 ppm Std.		1	axh3	11/16/2010 7:30:39	OM_11-16-2010_07-28-21
1.0 ppm Std.		1	axh3	11/16/2010 7:31:28	OM_11-16-2010_07-28-21
0.5 ppm Std		1	axh3	11/16/2010 7:32:17	OM_11-16-2010_07-28-21
0.1 ppm Std		1	axh3	11/16/2010 7:33:07	OM_11-16-2010_07-28-21
ICAL-00		1	axh3	11/16/2010 7:33:59	OM_11-16-2010_07-28-21
ICV		1	axh3	11/16/2010 7:35:55	OM_11-16-2010_07-28-21
ICB		1	axh3	11/16/2010 7:37:51	OM_11-16-2010_07-28-21
1202262159*	1048033	1	axh3	11/16/2010 7:39:46	OM_11-16-2010_07-28-21
1202262163	1048033	1	axh3	11/16/2010 7:40:37	OM_11-16-2010_07-28-21
266779001	1048033	1	axh3	11/16/2010 7:41:28	OM_11-16-2010_07-28-21
1202262160	1048033	1	axh3	11/16/2010 7:42:19	OM_11-16-2010_07-28-21
1202262161	1048033	1	axh3	11/16/2010 7:43:09	OM_11-16-2010_07-28-21
1202262162	1048033	1	axh3	11/16/2010 7:43:59	OM_11-16-2010_07-28-21
266779002	1048033	1	axh3	11/16/2010 7:44:49	OM_11-16-2010_07-28-21
1202263483	1048033	1	axh3	11/16/2010 7:45:38	OM_11-16-2010_07-28-21
1202263484	1048033	1	axh3	11/16/2010 7:46:27	OM_11-16-2010_07-28-21
1202263485	1048033	1	axh3	11/16/2010 7:47:16	OM_11-16-2010_07-28-21
CCV		1	axh3	11/16/2010 7:48:05	OM_11-16-2010_07-28-21
CCB		1	axh3	11/16/2010 7:50:00	OM_11-16-2010_07-28-21
1202262159	1048033	1	axh3	11/16/2010 7:51:55	OM_11-16-2010_07-28-21
266779004	1048033	1	axh3	11/16/2010 7:52:45	OM_11-16-2010_07-28-21
266779005	1048033	1	axh3	11/16/2010 7:53:33	OM_11-16-2010_07-28-21
266779009	1048033	1	axh3	11/16/2010 7:54:22	OM_11-16-2010_07-28-21
266782002	1048033	1	axh3	11/16/2010 7:55:09	OM_11-16-2010_07-28-21
266782003	1048033	1	axh3	11/16/2010 7:55:57	OM_11-16-2010_07-28-21
266789001	1048033	1	axh3	11/16/2010 7:56:46	OM_11-16-2010_07-28-21
266791001	1048033	1	axh3	11/16/2010 7:57:38	OM_11-16-2010_07-28-21
266878001	1048033	1	axh3	11/16/2010 7:58:29	OM_11-16-2010_07-28-21
266878003	1048033	1	axh3	11/16/2010 7:59:20	OM_11-16-2010_07-28-21
CCV		1	axh3	11/16/2010 8:00:10	OM_11-16-2010_07-28-21
CCB		1	axh3	11/16/2010 8:02:06	OM_11-16-2010_07-28-21
266881001	1048033	1	axh3	11/16/2010 8:04:00	OM_11-16-2010_07-28-21
266881003	1048033	1	axh3	11/16/2010 8:04:50	OM_11-16-2010_07-28-21
266890002	1048033	1	axh3	11/16/2010 8:05:41	OM_11-16-2010_07-28-21
266890004	1048033	1	axh3	11/16/2010 8:06:31	OM_11-16-2010_07-28-21
266892002	1048033	1	axh3	11/16/2010 8:07:20	OM_11-16-2010_07-28-21
266892005	1048033	1	axh3	11/16/2010 8:08:09	OM_11-16-2010_07-28-21
266892006	1048033	1	axh3	11/16/2010 8:08:58	OM_11-16-2010_07-28-21
266985001	1048033	1	axh3	11/16/2010 8:09:46	OM_11-16-2010_07-28-21
CCV		1	axh3	11/16/2010 8:11:40	OM_11-16-2010_07-28-21
CCB		1	axh3	11/16/2010 8:13:35	OM_11-16-2010_07-28-21

Author: axh3 Date : 11/16/2010

Original Run Filename: OM_11-16-2010_07-28-21.OMN created 11/16/2010 7:28:21
Original Run Author's Signature: [axh3]
Current Run Filename: OM_11-16-2010_07-28-21.OMN last modified 11/16/2010 8:14:46
Current Run Author's Signature: [axh3]
Description: TKN EPA Method 351.2 GEL SOP: GL-GC-E-104
Detection 660 nM
Sample spiked with 100ppm stock standard LCS/ICV/CCV/Spike nominal 1.0 ppm

Sample	Rep.	Cup No.	Channel 1 TKN Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR101116-12	1	S1	5.000	8.282	11/16/2010@7:29:51			5.0 ppm Std.
WTR101116-13	1	S2	3.000	4.980	11/16/2010@7:30:39			3.0 ppm Std.
WTR101116-14	1	S3	1.000	1.742	11/16/2010@7:31:28			1.0 ppm Std.
WTR101116-15	1	S4	0.500	0.855	11/16/2010@7:32:17			0.5 ppm Std
WTR101116-16	1	S5	0.100	0.170	11/16/2010@7:33:07			0.1 ppm Std
WTR101116-19 0.0 ppm	1	S7	0.000	-0.098	11/16/2010@7:33:59			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99984 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR101116-18 ICV	1	S8	1.042	1.729	11/16/2010@7:35:55			ICV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.042 < 1.104					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.042 > 0.895					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WTR101116-19 ICB	1	S7	-0.034	-0.060	11/16/2010@7:37:51			ICB/CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.034 < 0.100					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.034 > -0.100					
		Message	ICB Passed					
		Action	Continue					
1202262159|1048033|MB	1	1	0.140	0.231	11/16/2010@7:39:46			
1202262163||LCS	1	2	0.977	1.620	11/16/2010@7:40:37			
266779001	1	3	0.251	0.414	11/16/2010@7:41:28			
1202262160||DUP	1	4	0.277	0.458	11/16/2010@7:42:19			
1202262161||MS	1	5	1.379	2.289	11/16/2010@7:43:09			
1202262162||MSD	1	6	1.296	2.150	11/16/2010@7:43:59			
266779002	1	7	0.625	1.035	11/16/2010@7:44:49			
1202263483||DUP	1	8	0.570	0.944	11/16/2010@7:45:38			
1202263484||MS	1	9	1.602	2.659	11/16/2010@7:46:27			
1202263485||MSD	1	10	1.540	2.555	11/16/2010@7:47:16			
WTR101116-14 CCV	1	S3	1.084	1.798	11/16/2010@7:48:05			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.084 < 1.104					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.084 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-19 CCB	1	S7	-0.089	-0.150	11/16/2010@7:50:00			CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.089 < 0.099					

		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.089 > -0.100					
		Message	CCB Passed					
		Action	Continue					
1202262159|1048033|MB	1	1	-0.017	-0.030	11/16/2010@7:51:55			
266779004	1	11	0.679	1.125	11/16/2010@7:52:45			
266779005	1	12	0.925	1.534	11/16/2010@7:53:33			
266779009	1	13	-0.001	-0.005	11/16/2010@7:54:22			
266782002	1	14	0.060	0.097	11/16/2010@7:55:09			
266782003	1	15	-0.025	-0.045	11/16/2010@7:55:57			
266789001	1	16	0.001	-2.74e-4	11/16/2010@7:56:46			
266791001	1	17	-0.020	-0.036	11/16/2010@7:57:38			
266878001	1	18	0.004	0.004	11/16/2010@7:58:29			
266878003	1	19	-0.025	-0.045	11/16/2010@7:59:20			
WTR101116-14 CCV	1	S3	1.074	1.782	11/16/2010@8:00:10			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.074 < 1.104					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.074 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-19 CCB	1	S7	-0.035	-0.060	11/16/2010@8:02:06			CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.035 < 0.099					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.035 > -0.100					
		Message	CCB Passed					
		Action	Continue					
266881001	1	20	0.128	0.209	11/16/2010@8:04:00			
266881003	1	21	0.168	0.276	11/16/2010@8:04:50			
266890002	1	22	0.118	0.193	11/16/2010@8:05:41			
266890004	1	23	0.139	0.228	11/16/2010@8:06:31			
266892002	1	24	0.858	1.423	11/16/2010@8:07:20			
266892005	1	25	0.937	1.554	11/16/2010@8:08:09			
266892006	1	26	0.717	1.188	11/16/2010@8:08:58			
266985001	1	27	-0.011	-0.020	11/16/2010@8:09:46			
WTR101116-14 CCV	1	S3	1.097	1.819	11/16/2010@8:11:40			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.097 < 1.104					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.097 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-19 CCB	1	S7	-0.034	-0.059	11/16/2010@8:13:35			CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.034 < 0.099					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.034 > -0.100					
		Message	CCB Passed					
		Action	Continue					

Author: axh3 Date : 11/16/2010

Channel 1 (TKN) : Current View

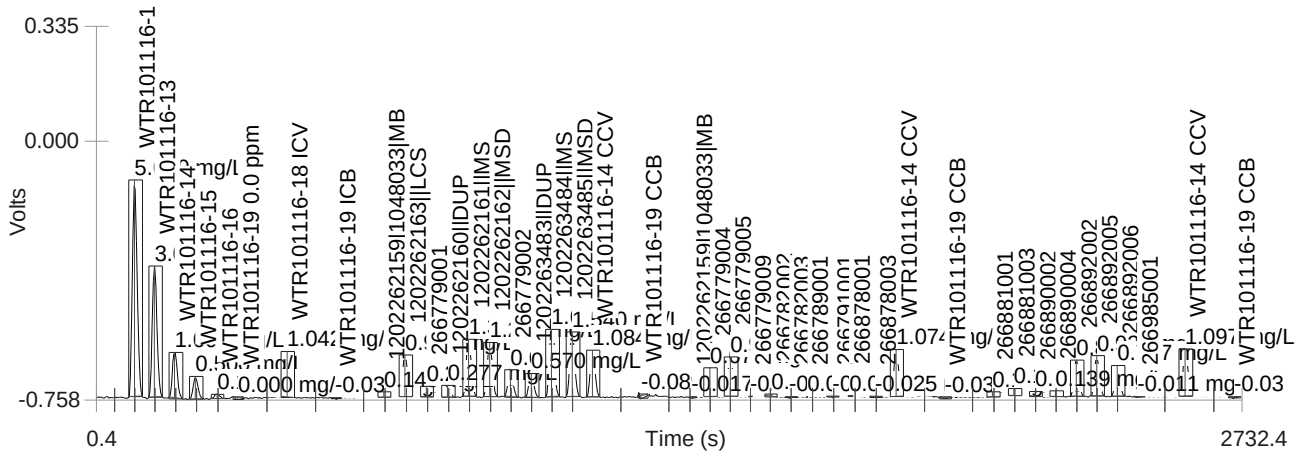
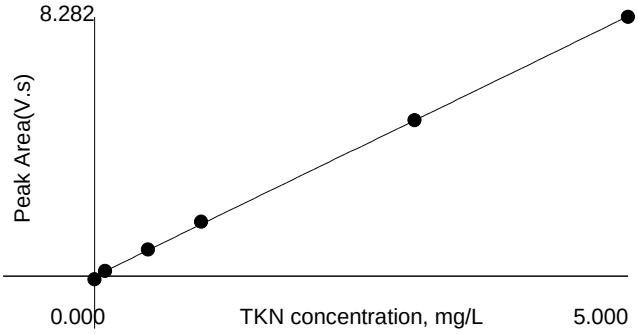


Table 1: TKN

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	5.000	1	8.282	0.632	0.2	11/16/2010	7:31:00
2	3.000	1	4.980	0.383	-0.0	11/16/2010	7:31:47
3	1.000	1	1.742	0.132	-5.0	11/16/2010	7:32:36
4	0.500	1	0.855	0.065	-3.2	11/16/2010	7:33:25
5	0.100	1	0.170	0.012	-3.5	11/16/2010	7:34:16
6	0.000	1	-0.098	-0.006		11/16/2010	7:35:07

Figure 1: TKN



Area = 1.661 * Conc - 0.002
Conc = 0.602 * Area + 0.002
Correlation Coefficient (r) = 0.99984

No Weighting

This is runlog lachat2

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
5.0 ppm Std.		1	axh3	11/17/2010 9:42:06	OM_11-17-2010_09-40-36
3.0 ppm Std.		1	axh3	11/17/2010 9:42:54	OM_11-17-2010_09-40-36
1.0 ppm Std.		1	axh3	11/17/2010 9:43:43	OM_11-17-2010_09-40-36
0.5 ppm Std		1	axh3	11/17/2010 9:44:32	OM_11-17-2010_09-40-36
0.1 ppm Std		1	axh3	11/17/2010 9:45:22	OM_11-17-2010_09-40-36
ICAL-00		1	axh3	11/17/2010 9:46:14	OM_11-17-2010_09-40-36
ICV		1	axh3	11/17/2010 9:48:10	OM_11-17-2010_09-40-36
ICB		1	axh3	11/17/2010 9:50:06	OM_11-17-2010_09-40-36
1202263478	1048512	1	axh3	11/17/2010 9:52:01	OM_11-17-2010_09-40-36
1202263482	1048512	1	axh3	11/17/2010 9:52:52	OM_11-17-2010_09-40-36
266983002	1048512	1	axh3	11/17/2010 9:53:42	OM_11-17-2010_09-40-36
1202263479	1048512	1	axh3	11/17/2010 9:54:32	OM_11-17-2010_09-40-36
1202263480	1048512	1	axh3	11/17/2010 9:55:22	OM_11-17-2010_09-40-36
1202263481	1048512	1	axh3	11/17/2010 9:56:12	OM_11-17-2010_09-40-36
267030002	1048512	1	axh3	11/17/2010 9:57:03	OM_11-17-2010_09-40-36
1202265217	1048512	1	axh3	11/17/2010 9:57:54	OM_11-17-2010_09-40-36
1202265218	1048512	1	axh3	11/17/2010 9:58:46	OM_11-17-2010_09-40-36
1202265219	1048512	1	axh3	11/17/2010 9:59:36	OM_11-17-2010_09-40-36
CCV		1	axh3	11/17/2010 10:00:27	OM_11-17-2010_09-40-36
CCB		1	axh3	11/17/2010 10:02:22	OM_11-17-2010_09-40-36
266878005*	1048512	1	axh3	11/17/2010 10:04:17	OM_11-17-2010_09-40-36
266983003*	1048512	1	axh3	11/17/2010 10:05:07	OM_11-17-2010_09-40-36
266984002*	1048512	1	axh3	11/17/2010 10:05:56	OM_11-17-2010_09-40-36
266984003*	1048512	1	axh3	11/17/2010 10:06:45	OM_11-17-2010_09-40-36
266988001*	1048512	1	axh3	11/17/2010 10:07:33	OM_11-17-2010_09-40-36
266990001*	1048512	1	axh3	11/17/2010 10:08:22	OM_11-17-2010_09-40-36
267028001*	1048512	1	axh3	11/17/2010 10:09:10	OM_11-17-2010_09-40-36
267029003*	1048512	1	axh3	11/17/2010 10:09:57	OM_11-17-2010_09-40-36
267029006*	1048512	1	axh3	11/17/2010 10:10:45	OM_11-17-2010_09-40-36
CCV		1	axh3	11/17/2010 10:12:38	OM_11-17-2010_09-40-36

Author: axh3 Date : 11/17/2010

Original Run Filename: OM_11-17-2010_09-40-36.OMN created 11/17/2010 9:40:36
Original Run Author's Signature: [axh3]
Current Run Filename: OM_11-17-2010_09-40-36.OMN last modified 11/17/2010 10:13:48
Current Run Author's Signature: [axh3]
Description: TKN EPA Method 351.2 GEL SOP: GL-GC-E-104
Detection 660 nM
Sample spiked with 100ppm stock standard LCS/ICV/CCV/Spike nominal 1.0 ppm

Sample	Rep.	Cup No.	Channel 1 TKN Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR101117-12	1	S1	5.000	7.546	11/17/2010@9:42:06			5.0 ppm Std.
WTR101117-13	1	S2	3.000	4.553	11/17/2010@9:42:54			3.0 ppm Std.
WTR101117-14	1	S3	1.000	1.538	11/17/2010@9:43:43			1.0 ppm Std.
WTR101117-15	1	S4	0.500	0.755	11/17/2010@9:44:32			0.5 ppm Std
WTR101117-16	1	S5	0.100	0.167	11/17/2010@9:45:22			0.1 ppm Std
WTR101117-19 0.0 ppm	1	S7	0.000	-0.098	11/17/2010@9:46:14			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99989 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR101117-18 ICV	1	S8	1.012	1.519	11/17/2010@9:48:10			ICV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.012 < 1.104					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.012 > 0.895					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WTR101117-19 ICB	1	S7	-0.054	-0.098	11/17/2010@9:50:06			ICB/CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.054 < 0.100					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.054 > -0.100					
		Message	ICB Passed					
		Action	Continue					
1202263478|1048512|MB	1	1	-0.056	-0.102	11/17/2010@9:52:01			
1202263482||LCS	1	2	1.017	1.526	11/17/2010@9:52:52			
266983002	1	4	-0.040	-0.078	11/17/2010@9:53:42			
1202263479||DUP	1	5	-0.051	-0.095	11/17/2010@9:54:32			
1202263480||MS	1	6	0.963	1.444	11/17/2010@9:55:22			
1202263481||MSD	1	7	1.030	1.546	11/17/2010@9:56:12			
267030002	1	16	-0.035	-0.071	11/17/2010@9:57:03			
1202265217||DUP	1	17	-0.009	-0.031	11/17/2010@9:57:54			
1202265218||MS	1	18	1.047	1.571	11/17/2010@9:58:46			
1202265219||MSD	1	19	1.058	1.588	11/17/2010@9:59:36			
WTR101117-14 CCV	1	S3	1.103	1.657	11/17/2010@10:00:27			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.103 < 1.104					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.103 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101117-19 CCB	1	S7	-0.075	-0.130	11/17/2010@10:02:22			CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.075 < 0.099					

		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.075 > -0.100					
		Message	CCB Passed					
		Action	Continue					
266878005	1	3	-0.066	-0.117	11/17/2010@10:04:17			
266983003	1	8	-0.042	-0.081	11/17/2010@10:05:07			
266984002	1	9	-0.081	-0.139	11/17/2010@10:05:56			
266984003	1	10	-0.049	-0.092	11/17/2010@10:06:45			
266988001	1	11	0.564	0.838	11/17/2010@10:07:33			
266990001	1	12	0.473	0.701	11/17/2010@10:08:22			
267028001	1	13	0.492	0.730	11/17/2010@10:09:10			
267029003	1	14	-0.025	-0.055	11/17/2010@10:09:57			
267029006	1	15	-0.012	-0.035	11/17/2010@10:10:45			
WTR101117-14 CCV	1	S3	1.105	1.660	11/17/2010@10:12:38			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.105 > 1.104					
		Message	CCV Failed					
		Action	Stop Run					
DQM Test: < - Concentration Limit								
		Result:	1.105 > 0.895					
		Message	CCV Passed					
		Action	Continue					

Channel 1 (TKN) : Current View

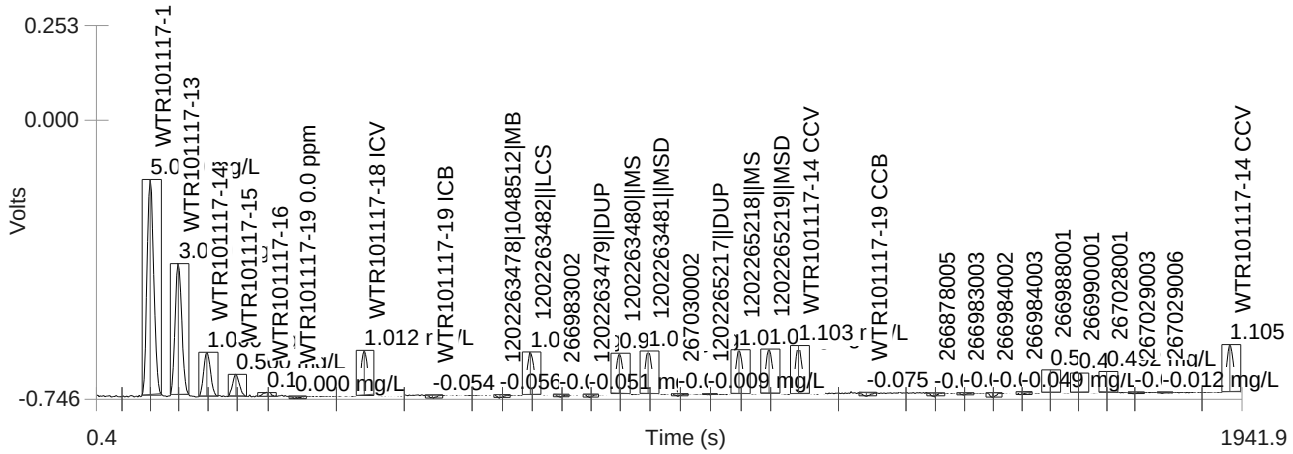
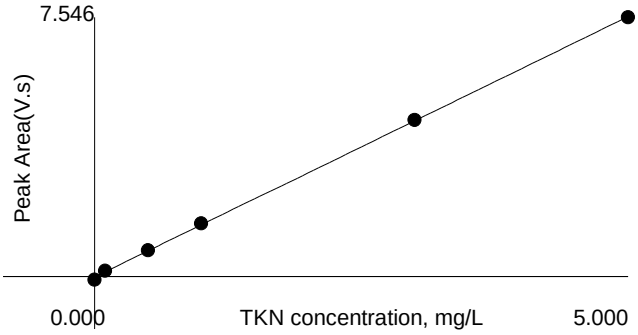


Table 1: TKN

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	5.000	1	7.546	0.575	0.3	11/17/2010	9:43:15
2	3.000	1	4.553	0.350	-0.4	11/17/2010	9:44:02
3	1.000	1	1.538	0.117	-2.5	11/17/2010	9:44:51
4	0.500	1	0.755	0.058	-1.8	11/17/2010	9:45:40
5	0.100	1	0.167	0.010	-23.5	11/17/2010	9:46:30
6	0.000	1	-0.098	-0.007		11/17/2010	9:47:22

Author: axh3 Date : 11/17/2010

Figure 1: TKN



Area = 1.517 * Conc - 0.016
Conc = 0.659 * Area + 0.011
Correlation Coefficient (r) = 0.99989

No Weighting

This is runlog lachat2

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axh3	11/17/2010 11:13:24	OM_11-17-2010_11-11-52
CCB		1	axh3	11/17/2010 11:15:19	OM_11-17-2010_11-11-52
266878005	1048512	1	axh3	11/17/2010 11:17:14	OM_11-17-2010_11-11-52
266983003	1048512	1	axh3	11/17/2010 11:18:04	OM_11-17-2010_11-11-52
266984002	1048512	1	axh3	11/17/2010 11:18:53	OM_11-17-2010_11-11-52
266984003	1048512	1	axh3	11/17/2010 11:19:42	OM_11-17-2010_11-11-52
266988001	1048512	1	axh3	11/17/2010 11:20:30	OM_11-17-2010_11-11-52
266990001	1048512	1	axh3	11/17/2010 11:21:19	OM_11-17-2010_11-11-52
267028001	1048512	1	axh3	11/17/2010 11:22:07	OM_11-17-2010_11-11-52
267029003	1048512	1	axh3	11/17/2010 11:22:54	OM_11-17-2010_11-11-52
267029006	1048512	1	axh3	11/17/2010 11:23:42	OM_11-17-2010_11-11-52
CCV		1	axh3	11/17/2010 11:25:36	OM_11-17-2010_11-11-52
CCB		1	axh3	11/17/2010 11:27:31	OM_11-17-2010_11-11-52

Author: axh3 Date : 11/17/2010

Original Run Filename: OM_11-17-2010_11-11-52.OMN created 11/17/2010 11:11:52
Original Run Author's Signature: [axh3]
Current Run Filename: OM_11-17-2010_11-11-52.OMN last modified 11/17/2010 11:28:41
Current Run Author's Signature: [axh3]
Description: TKN EPA Method 351.2 GEL SOP: GL-GC-E-104
Detection 660 nM
Sample spiked with 100ppm stock standard LCS/ICV/CCV/Spike nominal 1.0 ppm

Sample	Rep.	Cup No.	Channel 1 TKN Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR101117-14 CCV	1	S3	1.083	1.626	11/17/2010@11:13:24			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	1.083 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.083 > 0.895					
		Message	CCV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WTR101117-19 CCB	1	S7	-0.048	-0.089	11/17/2010@11:15:19			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.048 < 0.099					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.048 > -0.100					
		Message	CCB Passed					
		Action	Continue					
266878005|1048512|	1	3	-0.083	-0.143	11/17/2010@11:17:14			
266983003	1	8	-0.031	-0.063	11/17/2010@11:18:04			
266984002	1	9	-0.073	-0.127	11/17/2010@11:18:53			
266984003	1	10	-0.021	-0.049	11/17/2010@11:19:42			
266988001	1	11	0.532	0.791	11/17/2010@11:20:30			
266990001	1	12	0.447	0.662	11/17/2010@11:21:19			
267028001	1	13	0.468	0.693	11/17/2010@11:22:07			
267029003	1	14	-0.014	-0.038	11/17/2010@11:22:54			
267029006	1	15	-0.007	-0.027	11/17/2010@11:23:42			
WTR101117-14 CCV	1	S3	1.072	1.609	11/17/2010@11:25:36			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	1.072 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.072 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101117-19 CCB	1	S7	-0.056	-0.102	11/17/2010@11:27:31			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.056 < 0.099					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.056 > -0.100					
		Message	CCB Passed					
		Action	Continue					

Author: axh3 Date : 11/17/2010

Channel 1 (TKN) : Current View

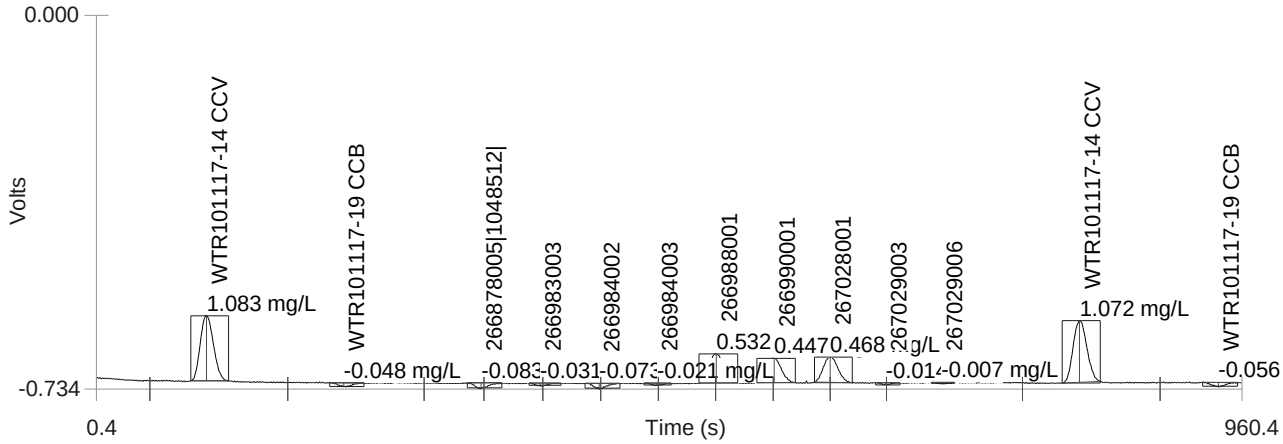
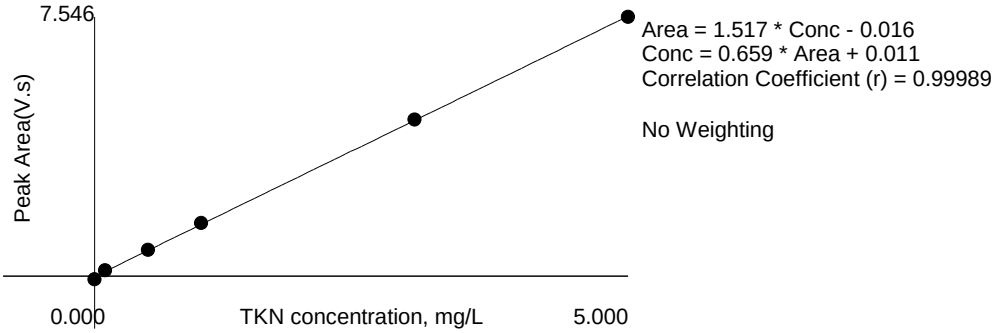


Table 1: TKN

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	5.000	1	7.546	0.575	0.3	11/17/2010	9:43:15
2	3.000	1	4.553	0.350	-0.4	11/17/2010	9:44:02
3	1.000	1	1.538	0.117	-2.5	11/17/2010	9:44:51
4	0.500	1	0.755	0.058	-1.8	11/17/2010	9:45:40
5	0.100	1	0.167	0.010	-23.5	11/17/2010	9:46:30
6	0.000	1	-0.098	-0.007		11/17/2010	9:47:22

Figure 1: TKN



Total Phosphorus

Prep Logbook

Total Phosphorous and Total Kjeldahl Nitrogen Sample Preparation

Batch ID: **1048030.0** Verified by: _____

Analyst: Stephanie Jackson

Method: EPA 365.4 Prep

Lab SOP: GL-GC-E-071 REV# 11

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202262158	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202262156	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202263487	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202262157	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202263488	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202262154 MB	15-NOV-2010 11:30:00	Water	20	20	1	<2
1202262158 LCS	15-NOV-2010 11:30:00	Water	20	20	1	<2
266778002	15-NOV-2010 11:30:00	Water	20	20	1	<2
1202262155 DUP (266778002)	15-NOV-2010 11:30:00	Water	20	20	1	<2
1202262156 MS (266778002)	15-NOV-2010 11:30:00	Water	20	20	1	<2
1202262157 MSD (266778002)	15-NOV-2010 11:30:00	Water	20	20	1	<2
266778004	15-NOV-2010 11:30:00	Water	20	20	1	<2
1202263486 DUP (266778004)	15-NOV-2010 11:30:00	Water	20	20	1	<2
1202263487 MS (266778004)	15-NOV-2010 11:30:00	Water	20	20	1	<2
1202263488 MSD (266778004)	15-NOV-2010 11:30:00	Water	20	20	1	<2
266778006	15-NOV-2010 11:30:00	Water	20	20	1	<2
266778008	15-NOV-2010 11:30:00	Water	20	20	1	<2
266778009	15-NOV-2010 11:30:00	Water	20	20	1	<2
266782001	15-NOV-2010 11:30:00	Water	20	20	1	<2
266782004	15-NOV-2010 11:30:00	Water	20	20	1	<2
266789002	15-NOV-2010 11:30:00	Water	20	20	1	<2
266791002	15-NOV-2010 11:30:00	Water	20	20	1	<2
266878001	15-NOV-2010 11:30:00	Water	20	20	1	<2
266878003	15-NOV-2010 11:30:00	Water	20	20	1	<2
266881002	15-NOV-2010 11:30:00	Water	20	20	1	<2
266881004	15-NOV-2010 11:30:00	Water	20	20	1	<2
266890001	15-NOV-2010 11:30:00	Water	20	20	1	<2
266890003	15-NOV-2010 11:30:00	Water	20	20	1	<2
266983001	15-NOV-2010 11:30:00	Water	20	20	1	<2
266983004	15-NOV-2010 11:30:00	Water	20	20	1	<2

Prep Logbook

Batch ID: **1048030.0** Verified by: _____

Analyst: Stephanie Jackson

Method: EPA 365.4 Prep

Lab SOP: GL-GC-E-071 REV# 11

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202262158	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202262156	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202263487	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202262157	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202263488	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
266984001	15-NOV-2010 11:30:00	Water	20	20	1	<2
266984004	15-NOV-2010 11:30:00	Water	20	20	1	<2

Reagent/Solvent Lot ID	Description	Amount
1484372-C	TKN/PO4 Digestion Solution	4 mL

Comments:

Prep Logbook

Total Phosphorous and Total Kjeldahl Nitrogen Sample Preparation

Batch ID: **1048518.0** Verified by: _____

Analyst: Stephanie Jackson

Method: EPA 365.4 Prep

Lab SOP: GL-GC-E-071 REV# 11

Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202263512	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MS	1202263510	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL
MSD	1202263511	NH3,TKN,TP,NO2/3 Working Standard and LCS/SPIKE	UTR1410568-01	.2	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202263508 MB	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202263512 LCS	16-NOV-2010 11:30:00	Water	20	20	1	<2
266878005	16-NOV-2010 11:30:00	Water	20	20	1	<2
266985002	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202263509 DUP (266985002)	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202263510 MS (266985002)	16-NOV-2010 11:30:00	Water	20	20	1	<2
1202263511 MSD (266985002)	16-NOV-2010 11:30:00	Water	20	20	1	<2
266988002	16-NOV-2010 11:30:00	Water	20	20	1	<2
266990002	16-NOV-2010 11:30:00	Water	20	20	1	<2
267028002	16-NOV-2010 11:30:00	Water	20	20	1	<2
267029002	16-NOV-2010 11:30:00	Water	20	20	1	<2
267029005	16-NOV-2010 11:30:00	Water	20	20	1	<2
267030001	16-NOV-2010 11:30:00	Water	20	20	1	<2

Reagent/Solvent Lot ID	Description	Amount
1484372-C	TKN/PO4 Digestion Solution	4 mL

Comments:

This is runlog lachat2

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
3.0 ppm Std.		1	axh3	11/16/2010 6:24:34	OM_11-16-2010_06-23-49
1.0 ppm Std.		1	axh3	11/16/2010 6:25:22	OM_11-16-2010_06-23-49
0.5 ppm Std		1	axh3	11/16/2010 6:26:12	OM_11-16-2010_06-23-49
0.1 ppm Std		1	axh3	11/16/2010 6:27:02	OM_11-16-2010_06-23-49
0.05 ppm Std		1	axh3	11/16/2010 6:27:53	OM_11-16-2010_06-23-49
ICAL-00		1	axh3	11/16/2010 6:28:45	OM_11-16-2010_06-23-49
ICV		1	axh3	11/16/2010 6:30:49	OM_11-16-2010_06-23-49
ICB		1	axh3	11/16/2010 6:32:54	OM_11-16-2010_06-23-49
1202262154	1048031	1	axh3	11/16/2010 6:34:58	OM_11-16-2010_06-23-49
1202262158	1048031	1	axh3	11/16/2010 6:35:49	OM_11-16-2010_06-23-49
266778002	1048031	1	axh3	11/16/2010 6:36:40	OM_11-16-2010_06-23-49
1202262155*	1048031	1	axh3	11/16/2010 6:37:31	OM_11-16-2010_06-23-49
1202262156	1048031	1	axh3	11/16/2010 6:38:21	OM_11-16-2010_06-23-49
1202262157	1048031	1	axh3	11/16/2010 6:39:10	OM_11-16-2010_06-23-49
266778004	1048031	1	axh3	11/16/2010 6:40:00	OM_11-16-2010_06-23-49
1202263486	1048031	1	axh3	11/16/2010 6:40:50	OM_11-16-2010_06-23-49
1202263487	1048031	1	axh3	11/16/2010 6:41:39	OM_11-16-2010_06-23-49
1202263488	1048031	1	axh3	11/16/2010 6:42:28	OM_11-16-2010_06-23-49
CCV		1	axh3	11/16/2010 6:43:16	OM_11-16-2010_06-23-49
CCB		1	axh3	11/16/2010 6:45:20	OM_11-16-2010_06-23-49
1202262155	1048031	1	axh3	11/16/2010 6:47:24	OM_11-16-2010_06-23-49
266778006	1048031	1	axh3	11/16/2010 6:48:14	OM_11-16-2010_06-23-49
266778008	1048031	1	axh3	11/16/2010 6:49:02	OM_11-16-2010_06-23-49
266778009	1048031	1	axh3	11/16/2010 6:49:50	OM_11-16-2010_06-23-49
266782001	1048031	1	axh3	11/16/2010 6:50:38	OM_11-16-2010_06-23-49
266782004	1048031	1	axh3	11/16/2010 6:51:25	OM_11-16-2010_06-23-49
266789002	1048031	1	axh3	11/16/2010 6:52:14	OM_11-16-2010_06-23-49
266791002	1048031	1	axh3	11/16/2010 6:53:06	OM_11-16-2010_06-23-49
266878001	1048031	1	axh3	11/16/2010 6:53:57	OM_11-16-2010_06-23-49
266878003	1048031	1	axh3	11/16/2010 6:54:48	OM_11-16-2010_06-23-49
CCV		1	axh3	11/16/2010 6:55:38	OM_11-16-2010_06-23-49
CCB		1	axh3	11/16/2010 6:57:43	OM_11-16-2010_06-23-49
266881002	1048031	1	axh3	11/16/2010 6:59:47	OM_11-16-2010_06-23-49
266881004	1048031	1	axh3	11/16/2010 7:00:38	OM_11-16-2010_06-23-49
266890001	1048031	1	axh3	11/16/2010 7:01:28	OM_11-16-2010_06-23-49
266890003	1048031	1	axh3	11/16/2010 7:02:17	OM_11-16-2010_06-23-49
266983001	1048031	1	axh3	11/16/2010 7:03:07	OM_11-16-2010_06-23-49
266983004	1048031	1	axh3	11/16/2010 7:03:56	OM_11-16-2010_06-23-49
266984001	1048031	1	axh3	11/16/2010 7:04:45	OM_11-16-2010_06-23-49
266984004	1048031	1	axh3	11/16/2010 7:05:33	OM_11-16-2010_06-23-49
CCV		1	axh3	11/16/2010 7:07:36	OM_11-16-2010_06-23-49
CCB		1	axh3	11/16/2010 7:09:40	OM_11-16-2010_06-23-49

Author: axh3 Date : 11/16/2010

Original Run Filename: OM_11-16-2010_06-23-49.OMN created 11/16/2010 6:23:49
Original Run Author's Signature: [axh3]
Current Run Filename: OM_11-16-2010_06-23-49.OMN last modified 11/16/2010 7:11:02
Current Run Author's Signature: [axh3]
Description: Total Phosphorous EPA Method 365.4 GEL SOP: GL-GC-E-103
Detection Wavelength: 880nm
Sample spiked with 100ppm stock standard LCS/ICV/CCV/Spike nominal 1.0 ppm

Sample	Rep.	Cup No.	Channel 1 TLPOS Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR101116-13	1	S2	3.000	14.347	11/16/2010@6:24:34			3.0 ppm Std.
WTR101116-14	1	S3	1.000	4.811	11/16/2010@6:25:22			1.0 ppm Std.
WTR101116-15	1	S4	0.500	2.371	11/16/2010@6:26:12			0.5 ppm Std
WTR101116-16	1	S5	0.100	0.432	11/16/2010@6:27:02			0.1 ppm Std
WTR101116-17	1	S6	0.050	0.193	11/16/2010@6:27:53			0.05 ppm Std
WTR101116-19 0.0	1	S7	0.000	-0.018	11/16/2010@6:28:45			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99999 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR101116-18 ICV	1	S8	1.000	4.766	11/16/2010@6:30:49			ICV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.000 < 1.104					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.000 > 0.895					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WTR101116-19 ICB	1	S7	-0.012	-0.087	11/16/2010@6:32:54			ICB/CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.012 < 0.050					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.012 > -0.050					
		Message	ICB Passed					
		Action	Continue					
1202262154|1048031|MB	1	1	-0.008	-0.068	11/16/2010@6:34:58			
1202262158||LCS	1	2	0.983	4.688	11/16/2010@6:35:49			
266778002	1	3	0.870	4.144	11/16/2010@6:36:40			
1202262155||DUP	1	4	2.245	10.739	11/16/2010@6:37:31			
1202262156||MS	1	5	1.862	8.905	11/16/2010@6:38:21			
1202262157||MSD	1	6	1.879	8.985	11/16/2010@6:39:10			
266778004	1	7	0.870	4.147	11/16/2010@6:40:00			
1202263486||DUP	1	8	0.891	4.244	11/16/2010@6:40:50			
1202263487||MS	1	9	1.783	8.523	11/16/2010@6:41:39			
1202263488||MSD	1	10	1.817	8.689	11/16/2010@6:42:28			
WTR101116-14 CCV	1	S3	1.017	4.849	11/16/2010@6:43:16			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.017 < 1.104					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.017 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-19 CCB	1	S7	-0.006	-0.058	11/16/2010@6:45:20			CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								

		Result:	-0.006 < 0.050					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.006 > -0.050					
		Message	CCB Passed					
		Action	Continue					
1202262155||DUP	1	4	0.897	4.275	11/16/2010@6:47:24			
266778006	1	11	0.942	4.491	11/16/2010@6:48:14			
266778008	1	12	0.672	3.196	11/16/2010@6:49:02			
266778009	1	13	0.102	0.462	11/16/2010@6:49:50			
266782001	1	14	0.109	0.494	11/16/2010@6:50:38			
266782004	1	15	0.093	0.416	11/16/2010@6:51:25			
266789002	1	16	0.038	0.156	11/16/2010@6:52:14			
266791002	1	17	0.029	0.110	11/16/2010@6:53:06			
266878001	1	18	0.015	0.043	11/16/2010@6:53:57			
266878003	1	19	0.078	0.346	11/16/2010@6:54:48			
WTR101116-14 CCV	1	S3	0.994	4.742	11/16/2010@6:55:38			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	0.994 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.994 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-19 CCB	1	S7	-0.006	-0.055	11/16/2010@6:57:43			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.006 < 0.050					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.006 > -0.050					
		Message	CCB Passed					
		Action	Continue					
266881002	1	20	0.096	0.434	11/16/2010@6:59:47			
266881004	1	21	0.034	0.137	11/16/2010@7:00:38			
266890001	1	22	0.098	0.443	11/16/2010@7:01:28			
266890003	1	23	0.063	0.274	11/16/2010@7:02:17			
266983001	1	24	0.034	0.137	11/16/2010@7:03:07			
266983004	1	25	0.054	0.231	11/16/2010@7:03:56			
266984001	1	26	0.068	0.299	11/16/2010@7:04:45			
266984004	1	27	0.039	0.160	11/16/2010@7:05:33			
WTR101116-14 CCV	1	S3	0.990	4.723	11/16/2010@7:07:36			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	0.990 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.990 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101116-19 CCB	1	S7	-0.021	-0.130	11/16/2010@7:09:40			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.021 < 0.050					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.021 > -0.050					
		Message	CCB Passed					
		Action	Continue					

Author: axh3 Date : 11/16/2010

Channel 1 (TLPOS) : Current View

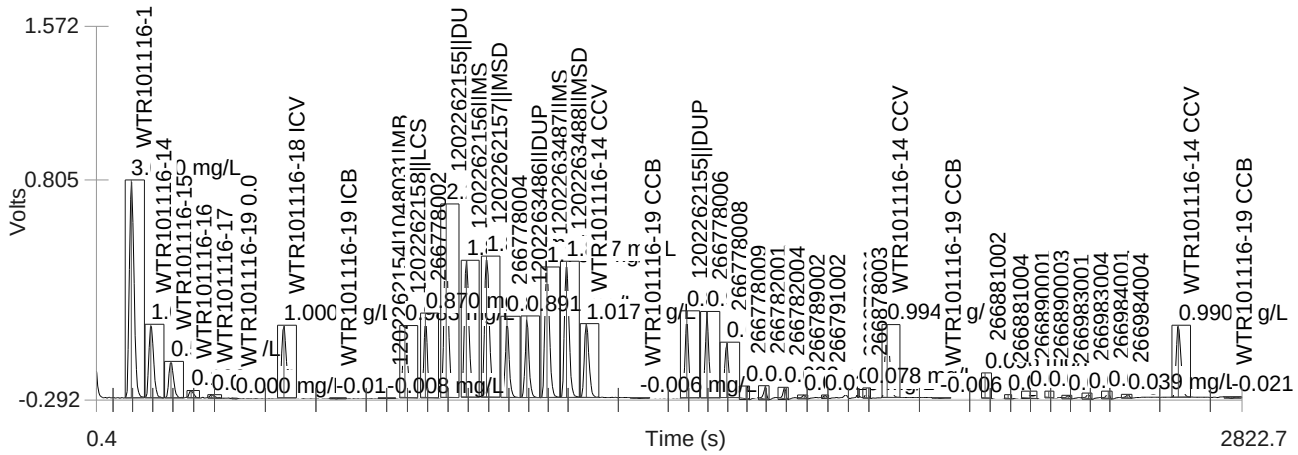
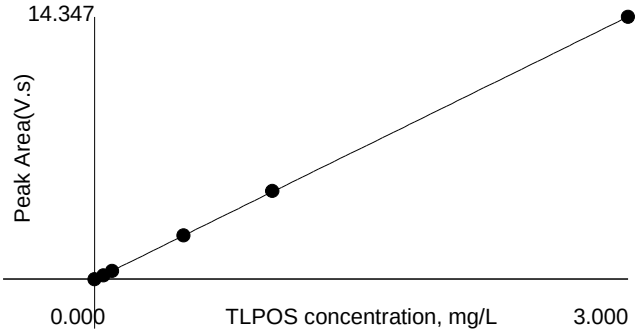


Table 1: TLPOS

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	3.000	1	14.347	1.085	0.1	11/16/2010	6:25:54
2	1.000	1	4.811	0.366	-0.9	11/16/2010	6:26:43
3	0.500	1	2.371	0.181	-0.0	11/16/2010	6:27:32
4	0.100	1	0.432	0.035	4.3	11/16/2010	6:28:22
5	0.050	1	0.193	0.016	9.3	11/16/2010	6:29:13
6	0.000	1	-0.018	-0.003		11/16/2010	6:30:05

Figure 1: TLPOS



Area = 4.796 * Conc - 0.028
Conc = 0.209 * Area + 0.006
Correlation Coefficient (r) = 0.99999

No Weighting

This is runlog lachat2

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
3.0 ppm Std.		1	axh3	11/17/2010 7:53:52	OM_11-17-2010_07-50-35
1.0 ppm Std.		1	axh3	11/17/2010 7:54:40	OM_11-17-2010_07-50-35
0.5 ppm Std		1	axh3	11/17/2010 7:55:30	OM_11-17-2010_07-50-35
0.1 ppm Std		1	axh3	11/17/2010 7:56:20	OM_11-17-2010_07-50-35
0.05 ppm Std		1	axh3	11/17/2010 7:57:11	OM_11-17-2010_07-50-35
ICAL-00		1	axh3	11/17/2010 7:58:03	OM_11-17-2010_07-50-35
ICV		1	axh3	11/17/2010 8:00:08	OM_11-17-2010_07-50-35
ICB		1	axh3	11/17/2010 8:02:12	OM_11-17-2010_07-50-35
1202263508	1048519	1	axh3	11/17/2010 8:04:16	OM_11-17-2010_07-50-35
1202263512	1048519	1	axh3	11/17/2010 8:05:08	OM_11-17-2010_07-50-35
266878005	1048519	1	axh3	11/17/2010 8:05:58	OM_11-17-2010_07-50-35
266985002	1048519	1	axh3	11/17/2010 8:06:49	OM_11-17-2010_07-50-35
1202263509	1048519	1	axh3	11/17/2010 8:07:39	OM_11-17-2010_07-50-35
1202263510	1048519	1	axh3	11/17/2010 8:08:29	OM_11-17-2010_07-50-35
1202263511	1048519	1	axh3	11/17/2010 8:09:19	OM_11-17-2010_07-50-35
266988002	1048519	1	axh3	11/17/2010 8:10:08	OM_11-17-2010_07-50-35
266990002	1048519	1	axh3	11/17/2010 8:10:58	OM_11-17-2010_07-50-35
267028002	1048519	1	axh3	11/17/2010 8:11:46	OM_11-17-2010_07-50-35
CCV		1	axh3	11/17/2010 8:12:35	OM_11-17-2010_07-50-35
CCB		1	axh3	11/17/2010 8:14:39	OM_11-17-2010_07-50-35
267029002	1048519	1	axh3	11/17/2010 8:16:42	OM_11-17-2010_07-50-35
267029005	1048519	1	axh3	11/17/2010 8:17:31	OM_11-17-2010_07-50-35
267030001*	1048519	1	axh3	11/17/2010 8:18:18	OM_11-17-2010_07-50-35
CCV		1	axh3	11/17/2010 8:20:21	OM_11-17-2010_07-50-35
CCB		1	axh3	11/17/2010 8:22:26	OM_11-17-2010_07-50-35

Author: axh3 Date : 11/17/2010

Original Run Filename: OM_11-17-2010_07-50-35.OMN created 11/17/2010 7:50:35
Original Run Author's Signature: [axh3]
Current Run Filename: OM_11-17-2010_07-50-35.OMN last modified 11/17/2010 8:23:47
Current Run Author's Signature: [axh3]
Description: Total Phosphorous EPA Method 365.4 GEL SOP: GL-GC-E-103
Detection Wavelength: 880nm
Sample spiked with 100ppm stock standard LCS/ICV/CCV/Spike nominal 1.0 ppm

Sample	Rep.	Cup No.	Channel 1 TLPOS Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR101117-13	1	S2	3.000	14.273	11/17/2010@7:53:52			3.0 ppm Std.
WTR101117-14	1	S3	1.000	4.708	11/17/2010@7:54:40			1.0 ppm Std.
WTR101117-15	1	S4	0.500	2.299	11/17/2010@7:55:30			0.5 ppm Std
WTR101117-16	1	S5	0.100	0.348	11/17/2010@7:56:20			0.1 ppm Std
WTR101117-17	1	S6	0.050	0.102	11/17/2010@7:57:11			0.05 ppm Std
WTR101117-19 0.0	1	S7	0.000	-0.119	11/17/2010@7:58:03			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99999 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR101117-18 ICV	1	S8	0.989	4.630	11/17/2010@8:00:08			ICV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	0.989 < 1.104					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.989 > 0.895					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WTR101117-19 ICB	1	S7	-0.003	-0.131	11/17/2010@8:02:12			ICB/CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								
		Result:	-0.003 < 0.050					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.003 > -0.050					
		Message	ICB Passed					
		Action	Continue					
1202263508|1048519|MB	1	1	-0.001	-0.124	11/17/2010@8:04:16			
1202263512||LCS	1	2	1.025	4.800	11/17/2010@8:05:08			
266878005	1	3	0.062	0.181	11/17/2010@8:05:58			
266985002	1	4	-6.262e-4	-0.122	11/17/2010@8:06:49			
1202263509||DUP	1	5	0.047	0.106	11/17/2010@8:07:39			
1202263510||MS	1	6	1.031	4.832	11/17/2010@8:08:29			
1202263511||MSD	1	7	1.060	4.968	11/17/2010@8:09:19			
266988002	1	8	0.049	0.118	11/17/2010@8:10:08			
266990002	1	9	1.318	6.209	11/17/2010@8:10:58			
267028002	1	10	0.063	0.185	11/17/2010@8:11:46			
WTR101117-14 CCV	1	S3	1.000	4.684	11/17/2010@8:12:35			CCV
		Known Conc:	1.000					
DQM Test: > + Concentration Limit								
		Result:	1.000 < 1.104					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.000 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101117-19 CCB	1	S7	-0.002	-0.130	11/17/2010@8:14:39			CCB
		Known Conc:	0.000					
DQM Test: > + Concentration Limit								

		Result:	-0.002 < 0.050					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.002 > -0.050					
		Message	CCB Passed					
		Action	Continue					
267029002	1	11	0.058	0.159	11/17/2010@8:16:42			
267029005	1	12	0.051	0.124	11/17/2010@8:17:31			
267030001	1	13	-0.078	-0.494	11/17/2010@8:18:18			
WTR101117-14 CCV	1	S3	0.988	4.623	11/17/2010@8:20:21			CCV
		Known Conc:	1.000					
			DQM Test: > + Concentration Limit					
		Result:	0.988 < 1.104					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.988 > 0.895					
		Message	CCV Passed					
		Action	Continue					
WTR101117-19 CCB	1	S7	-0.001	-0.124	11/17/2010@8:22:26			CCB
		Known Conc:	0.000					
			DQM Test: > + Concentration Limit					
		Result:	-0.001 < 0.050					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.001 > -0.050					
		Message	CCB Passed					
		Action	Continue					

Channel 1 (TLPOS) : Current View

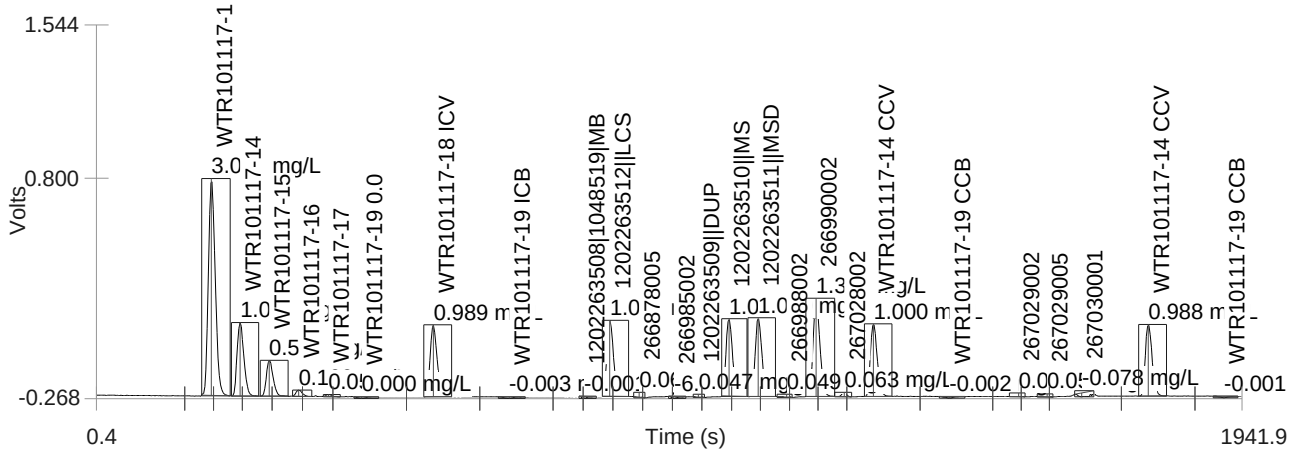
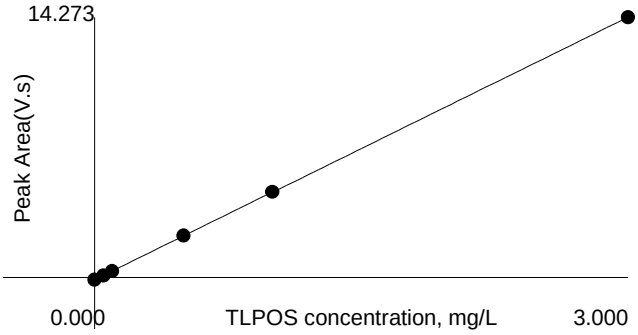


Table 1: TLPOS

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	3.000	1	14.273	1.050	0.1	11/17/2010	7:55:12
2	1.000	1	4.708	0.356	-0.6	11/17/2010	7:56:00
3	0.500	1	2.299	0.173	-0.8	11/17/2010	7:56:50
4	0.100	1	0.348	0.029	3.6	11/17/2010	7:57:40
5	0.050	1	0.102	0.010	15.7	11/17/2010	7:58:31
6	0.000	1	-0.119	-0.008		11/17/2010	7:59:23

Author: axh3 Date : 11/17/2010

Figure 1: TLPOS



Area = 4.801 * Conc - 0.119
Conc = 0.208 * Area + 0.025
Correlation Coefficient (r) = 0.99999

No Weighting

pH

pH / Corrosivity LogBook

Analyst: LXA1
Batch: 1051602
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9040C

Type	Sample Id	Serial Number	Description
CCV	240	IMM100917-PH	PH 7 BUFFER FOR PH
LCS	1202271065	IMM100802-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt()	Final Vol()	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1202271065 LCS		Water			24-NOV-10 10:55	pH			7	20.8'C	7	100	
1202271065 LCS		Water			24-NOV-10 10:55	pH 2			7	20.8'C	7	100	
266693005		Water			24-NOV-10 10:57	pH			7.56	12.6'C			
266693005		Water			24-NOV-10 10:57	pH 2			7.56	12.7'C			
1202271064 DUP	266693005	Water			24-NOV-10 10:58	pH			7.58	12.6'C			.264
1202271064 DUP	266693005	Water			24-NOV-10 10:58	pH 2			7.58	12.7'C			.264
266693006		Water			24-NOV-10 11:00	pH			7.55	14.1'C			
266693006		Water			24-NOV-10 11:00	pH 2			7.55	14.2'C			
266693007		Water			24-NOV-10 11:04	pH			7.76	17.1'C			
266693007		Water			24-NOV-10 11:04	pH 2			7.75	17.1'C			
CCV					24-NOV-10 11:16	pH			7.02	19.1'C	7	100.286	
CCV					24-NOV-10 11:16	pH 2			7.02	19.1'C	7	100.286	
266693008		Water			24-NOV-10 11:19	pH			5.67	18.8'C			
266693008		Water			24-NOV-10 11:19	pH 2			5.66	18.8'C			
266878001		Water			24-NOV-10 11:30	pH			8.29	17.8'C			
266878001		Water			24-NOV-10 11:30	pH 2			8.29	17.8'C			
1202271063 DUP	266878001	Water			24-NOV-10 11:33	pH			8.3	17.1'C			.121
1202271063 DUP	266878001	Water			24-NOV-10 11:33	pH 2			8.31	17.2'C			.241
266881002		Water			24-NOV-10 11:35	pH			7.79	17.2'C			
266881002		Water			24-NOV-10 11:35	pH 2			7.78	17.2'C			
266881004		Water			24-NOV-10 11:36	pH			7.69	17.7'C			
266881004		Water			24-NOV-10 11:36	pH 2			7.68	17.7'C			
CCV					24-NOV-10 11:40	pH			7.04	19.1'C	7	100.571	
CCV					24-NOV-10 11:40	pH 2			7.04	19.1'C	7	100.571	
266890001		Water			24-NOV-10 11:42	pH			7.47	18.0'C			
266890001		Water			24-NOV-10 11:42	pH 2			7.47	18.0'C			
266890003		Water			24-NOV-10 11:45	pH			7.47	17.6'C			
266890003		Water			24-NOV-10 11:45	pH 2			7.48	17.7'C			

pH / Corrosivity LogBook

Analyst: LXA1
Batch: 1051602
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: EPA 150.1

Type	Sample Id	Serial Number	Description
CCV	240	IMM100917-PH	PH 7 BUFFER FOR PH
LCS	1202271065	IMM100802-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt()	Final Vol()	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
266892002		Water			24-NOV-10 11:46	pH			7.87	17.6'C			
266892002		Water			24-NOV-10 11:46	pH 2			7.88	17.6'C			
266968001		Waste Water			24-NOV-10 11:51	pH			7.21	18.2'C			
266968001		Waste Water			24-NOV-10 11:51	pH 2			7.2	18.2'C			
266968002		Waste Water			24-NOV-10 11:51	pH			7.22	18.4'C			
266968002		Waste Water			24-NOV-10 11:51	pH 2			7.21	18.4'C			
CCV					24-NOV-10 11:53	pH			7.04	19.1'C	7	100.571	
CCV					24-NOV-10 11:53	pH 2			7.04	19.1'C	7	100.571	
267210002		Waste Water			24-NOV-10 12:05	pH			12.05	12.2'C			
267210002		Waste Water			24-NOV-10 12:05	pH 2			12.05	12.4'C			
CCV					24-NOV-10 12:07	pH			7.04	19.3'C	7	100.571	
CCV					24-NOV-10 12:07	pH 2			7.04	19.3'C	7	100.571	

Calibration Information:
Run Date: 24-NOV-10 10:04
Instrument: PHX370
Analyst: LXA1

	Standard	Observed	Theoretical		C	%Recovery
10:04	IM101124-PH1a	4.01	4	SU	22.3	100.25
10:04	IM101124-PH2a	7.01	7	SU	22.3	100.14
10:04	IM101124-PH3a	9.98	10	SU	22.3	99.8
10:04	IM101124-PH4a	2.09	2	SU	22.3	104.5
10:04	IM101124-PH5a	11.9	12	SU	22.3	99.167
10:04	IM101124-PH6a	7.02	7	SU	22.3	100.29

Comments:

pH / Corrosivity LogBook

Analyst: LXA1
Batch: 1052259
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: EPA 150.1

Type	Sample Id	Serial Number	Description
CCV	240	IMM100917-PH	PH 7 BUFFER FOR PH
LCS	1202272550	IMM100802-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt()	Final Vol()	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1202272550 LCS		Water			26-NOV-10 11:48	pH			7.01	21.2'C	7	100.143	
1202272550 LCS		Water			26-NOV-10 11:48	pH 2			7.01	21.1'C	7	100.143	
266878003		Water			26-NOV-10 11:48	pH			7.15	12.8'C			
266878003		Water			26-NOV-10 11:48	pH 2			7.17	12.8'C			
1202272548 DUP	266878003	Water			26-NOV-10 11:48	pH			7.17	12.4'C			.279
1202272548 DUP	266878003	Water			26-NOV-10 11:48	pH 2			7.19	12.4'C			.279
266878005		Water			26-NOV-10 11:48	pH			7.84	12.7'C			
266878005		Water			26-NOV-10 11:48	pH 2			7.85	12.8'C			
266983001		Water			26-NOV-10 11:48	pH			8.1	13.2'C			
266983001		Water			26-NOV-10 11:48	pH 2			8.1	13.3'C			
CCV					26-NOV-10 11:48	pH			7.01	20.1'C	7	100.143	
CCV					26-NOV-10 11:48	pH 2			7.01	20.1'C	7	100.143	
266983004		Water			26-NOV-10 11:48	pH			7.79	15.9'C			
266983004		Water			26-NOV-10 11:48	pH 2			7.8	15.9'C			
266984001		Water			26-NOV-10 11:48	pH			8	14.5'C			
266984001		Water			26-NOV-10 11:48	pH 2			8	14.6'C			
266984004		Water			26-NOV-10 11:48	pH			7.59	14.3'C			
266984004		Water			26-NOV-10 11:48	pH 2			7.59	14.3'C			
266985002		Water			26-NOV-10 11:48	pH			8.14	14.4'C			
266985002		Water			26-NOV-10 11:48	pH 2			8.15	14.5'C			
266988002		Water			26-NOV-10 11:48	pH			6.83	15.5'C			
266988002		Water			26-NOV-10 11:48	pH 2			6.85	15.5'C			
CCV					26-NOV-10 11:48	pH			7.02	19.4'C	7	100.286	
CCV					26-NOV-10 11:48	pH 2			7.02	19.4'C	7	100.286	
266990002		Water			26-NOV-10 11:48	pH			8.18	15.0'C			
266990002		Water			26-NOV-10 11:48	pH 2			8.18	15.0'C			
266990003		Water			26-NOV-10 11:48	pH			7.47	15.1'C			
266990003		Water			26-NOV-10 11:48	pH 2			7.48	15.1'C			

pH / Corrosivity LogBook

Analyst: LXA1
Batch: 1052259
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: EPA 150.1

Type	Sample Id	Serial Number	Description
CCV	240	IMM100917-PH	PH 7 BUFFER FOR PH
LCS	1202272550	IMM100802-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt()	Final Vol()	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
267028002		Water			26-NOV-10 11:48	pH			7.72	15.1'C			
267028002		Water			26-NOV-10 11:48	pH 2			7.72	15.1'C			
267029002		Water			26-NOV-10 11:48	pH			8.25	15.7'C			
267029002		Water			26-NOV-10 11:48	pH 2			8.25	15.7'C			
267029005		Water			26-NOV-10 11:48	pH			7.81	14.7'C			
267029005		Water			26-NOV-10 11:48	pH 2			7.81	14.6'C			
CCV					26-NOV-10 11:48	pH			7.02	19.2'C	7	100.286	
CCV					26-NOV-10 11:48	pH 2			7.02	19.2'C	7	100.286	
267030001		Water			26-NOV-10 11:48	pH			7.85	16.1'C			
267030001		Water			26-NOV-10 11:48	pH 2			7.85	16.1'C			
267130002		Water			26-NOV-10 11:48	pH			8.15	15.4'C			
267130002		Water			26-NOV-10 11:48	pH 2			8.15	15.4'C			
267236001		Water			26-NOV-10 11:48	pH			7.15	15.8'C			
267236001		Water			26-NOV-10 11:48	pH 2			7.16	15.7'C			
267236002		Water			26-NOV-10 11:48	pH			7.08	16.3'C			
267236002		Water			26-NOV-10 11:48	pH 2			7.09	16.3'C			
267237001		Water			26-NOV-10 11:48	pH			8.15	61.3'C			
267237001		Water			26-NOV-10 11:48	pH 2			8.15	16.3'C			
CCV					26-NOV-10 11:48	pH			7.03	19.0'C	7	100.429	
CCV					26-NOV-10 11:48	pH 2			7.03	19.0'C	7	100.429	
267237004		Water			26-NOV-10 11:48	pH			8.69	16.7'C			
267237004		Water			26-NOV-10 11:48	pH 2			8.69	16.8'C			
1202272549 DUP	267237004	Water			26-NOV-10 11:48	pH			8.71	16.6'C			.23
1202272549 DUP	267237004	Water			26-NOV-10 11:48	pH 2			8.71	16.6'C			.23
CCV					26-NOV-10 11:48	pH			7.02	19.0'C	7	100.286	
CCV					26-NOV-10 11:48	pH 2			7.02	19.0'C	7	100.286	

Comments:

pH / Corrosivity LogBook

Calibration Information:

Run Date: 26-NOV-10 10:58
Instrument: PHX742
Analyst: LXA1

	Standard	Observed	Theoretical		C	%Recovery
10:58	IM101126-PH1b	4.01	4	SU	22	100.25
10:58	IM101126-PH2b	7.01	7	SU	22	100.14
10:58	IM101126-PH3b	10.03	10	SU	22	100.3
10:58	IM101126-PH4b	2.04	2	SU	22	102
10:58	IM101126-PH5b	12.03	12	SU	22	100.25
10:58	IM101126-PH6b	6.95	7	SU	22	99.286

Miscellaneous

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
16-NOV-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LACHAT Flow Injection Analyzer	EPA 351.2	Liquid	ESHL
Batch ID:	**Sample Numbers:**		
1048033	See below.		

Potentially affected work order(s)(SDG): **266779(11-445),266782(11-451),266789(11-457),266791(11-459),266878(11-464),266881(11-467),266890(11-471),266892(11-472),266985(11-493)**

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MS: QC 1202262161MS	1. The spike recovery falls outside of the GEL acceptance limits but within the client specified limits.

Originator's Name:

Aubrey Kingsbury 16-NOV-10

Data Validator/Group Leader:

Julia Hamilton 03-DEC-10

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
16-NOV-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LACHAT Flow Injection Analyzer	EPA 350.1	Liquid	ESHL, INPA, WNUC
Batch ID:	**Sample Numbers:**		
1048029	See Below		

Potentially affected work order(s)(SDG): **266778(11-446),266782(11-451),266789(11-457),266791(11-459),266867,266878(11-464),266913,266984(11-492)**

Application Issues:

Failed Recovery for MSD/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MSD: QC 1202262151MSD	1. The spike duplicate recovery falls outside of the GEL acceptance limits but within the client specified limits.

Originator's Name:

Aubrey Kingsbury 16-NOV-10

Data Validator/Group Leader:

Elzbieta Szulc 19-NOV-10

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
18-NOV-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LACHAT Flow Injection Analyzer	EPA 350.1	Liquid	ESHL
Batch ID:	**Sample Numbers:**		
1048508	See below.		

Potentially affected work order(s)(SDG): **266878(11-464),266881(11-467),266890(11-471),266892(11-472),266983(11-491),266984(11-492),266985(11-493),266988(11-495),266990(11-497),267028(11-505),267029(11-507),267030(11-499)**

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MS/MSD: QC 1202263473MS, QC 1202263475MSD	1. The MS recovery falls outside of the established acceptance limits. The MSD verifies the recovery failure with a passing RPD; therefore, the failure is attributed to matrix interference. The MS recovery falls within the client specified limits.

Originator's Name:

Aubrey Kingsbury 18-NOV-10

Data Validator/Group Leader:

Julia Hamilton 03-DEC-10

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
22-NOV-10	Federal		Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
IC	ICX300_L	Liquid	ARSL001
Batch ID:	**Sample Numbers:**		
1049189	ALL		

Potentially affected work order(s)(SDG): 266878(11-464),267028(11-505),267029(11-507),267030(11-499)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MS/PS: QC 1202265283PS	1.The spike recovery for Chloride falls outside of the GEL acceptance limits but within the client specified limits.

Originator's Name:

Virginia Wininger 22-NOV-10

Data Validator/Group Leader:

Mary Sherwood 03-DEC-10

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
24-NOV-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ELECTRODE	EPA 150.1	Liquid	BETT, CGTS, ESHL
Batch ID:	**Sample Numbers:**		
1051602	See Below		

Potentially affected work order(s)(SDG): 266693,266878(11-464),266881(11-467),266890(11-471),266892(11-472),266968,267210

Application Issues:

Container scanning event for custody missed

Sample Analyzed out of Holding

Sample received out of holding

Specification and Requirements Exception Description:	DER Disposition:
1. Sample Analyzed out of Holding: 266968 001,002	1. The samples were received with insufficient time to prep and analyze within the remaining method-specified holding time. The samples were analyzed as soon as possible by the analyst.
2. Sample received out of holding: 266693 005,006,007,008 266878 001 266881 002,004 266890 001,003 266892 002 267210 002	2. Sample received out of holding.
3. Container scanning event for custody missed: 267210 002	3. The analyst neglected to scan the sample container; however, the sample was in the analyst's custody at the time of analysis.

Originator's Name:

Lindsey Allen 24-NOV-10

Data Validator/Group Leader:

Elzbieta Szulc 24-NOV-10

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
26-NOV-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ELECTRODE	EPA 150.1	Liquid	ESHL
Batch ID:	**Sample Numbers:**		
1052259	See Below		

Potentially affected work order(s)(SDG): **266878(11-464),266983(11-491),266984(11-492),266985(11-493),266988(11-495),266990(11-497),267028(11-505),267029(11-507),267030(11-499),267130(11-531),267236(11-549),267237(11-551)**

Application Issues:

Sample received out of holding

Specification and Requirements Exception Description:	DER Disposition:
1. Sample received out of holding: 266878 003,005 266983 001,004 266984 001,004 266985 002 266988 002 266990 002,003 267028 002 267029 002,005 267030 001 267130 002 267236 001,002 267237 001,004	1. Sample received out of holding.

Originator's Name:
Lindsey Allen 26-NOV-10

Data Validator/Group Leader:
Elzbieta Szulc 06-DEC-10