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**CST-12 VOLATILE ORGANIC ANALYSIS
SUMMARY OF ANALYTICAL RESULTS**

TO: Dustie L. Stephens
THRU: Anthony Lombardo, CST-12 Organic Analysis Task Area Leader
FROM: Michael Guttman, CST-12 Organic Analysis Section

DATE: 3-Jan-95

MATRIX: MISCELLANEOUS LIQUID

REQUEST NUMBER: 20278

Results Summary

Attached is a tabulation of samples submitted for volatiles analysis, their analytical results, and their dates collected and analyzed (see Table 1).

Method Summary

Samples were analyzed using EPA Method 8260. In summary, a measured volume of sample, usually 5 mL, is analyzed using the purge and trap method combined with capillary column GC/MS. A Delta Perspective PTA-30 Autosampler and a Tekmar 3000 Purge and Trap Concentrator are interfaced to a Hewlett-Packard 5890 Gas Chromatograph / 5971 Mass Selective Detector to perform the analyses. The analytical column used is a J&W Scientific DB624, 75 m by 0.53 mm ID, 3 micron film or equivalent.

Anomalies And Analysis Notes

Below is a summary of QA/QC criteria as outlined in EPA SW-846 and LANL SOPs and a summary of any anomalies which occurred during the analyses.

Calibration QC were within criteria for all analyses.

Surrogate recoveries were within criteria for all analyses, except for 4-Bromofluorobenzene, which was outside criteria for the sample analysis. The sample was reanalyzed, and the same surrogate was just within criteria, suggesting sample matrix effects as the probable cause of the anomaly.

Internal standard responses were within criteria for all analyses, except for 1,4-Dichlorobenzene-d4, which was outside criteria for the sample analysis. The sample was reanalyzed, and the same internal standard was outside criteria again, suggesting sample matrix effects as the probable cause of the anomaly.

Matrix spike and matrix spike duplicate were not analyzed.

Holding times were not met for all sample analyses. The sample was originally analyzed within the holding time, but the sample required several reanalyses all of which were performed outside the holding time. The results reported here are from analyses performed outside of the hold time.



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One additional ~~inlet~~ of note which occurred during the sample analyses was that because the sample consisted of two ~~lots~~ there was some inconsistency in the analytical results between the two analyses which are being ~~reported~~ here. The sample was analyzed on 12-DEC-1994 and was found to contain Acetone, Toluene, and Tetrachloroethene. The reanalysis on 13-DEC-1994 showed Methylene Chloride, Toluene, and Tetrachloroethene. All four compounds are reported here since the difference in results are likely due to ~~sample~~ inhomogeneity.

If you have ~~any~~ questions regarding this data, please call Anthony Lombardo at 667-5889.

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**CST-12 VOLATILE ORGANIC ANALYSIS
SUMMARY OF ANALYTICAL RESULTS**

TABLE 1. Summary of results of sample analyses for volatiles, dates collected and dates analyzed.

REQUEST NUMBER: 20278

<u>SAMPLE ID</u>	<u>TARGET COMPOUNDS FOUND</u>	<u>AMOUNT (ug/L)</u>	<u>LOQ (ug/L)</u>	<u>DATE COLLECTED</u>	<u>DATE ANALYZED</u>
B94.30610	None			NA	12-Dec-94
B94.30611	None			NA	13-Dec-94
S94.30609	Acetone	2500	2000	16-Nov-94	12-Dec-94
	Methylene Chloride	2100	500		&
	Toluene	4100	500		13-Dec-94
	Tetrachloroethene	550	500		

Sample IDs beginning with the letter S are samples; those beginning with the letter B are blanks.

LOQ: Limit of Quantitation. LOQs normally range between 5 and 20 ug/L, depending on the compound, unless otherwise noted.

NA: Not Applicable

TICs (tentatively identified compounds) were found in the samples reported here.

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LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY AND ENVIRONMENT DIVISION
HSE-9
SURROGATE RECOVERIES FOR VOLATILES
IN WATER TYPE MATRICES :

REQUEST #: 20278
NUMBER OF SAMPLES: 3
MATRIX: NOL
ANALYST: MG
Date: 01/03/95

SURROGATE RECOVERIES

SURROGATE
RECOVERIES IN PERCENT (SD)

SAMPLE NUMBERS	TYPE	di-1,2- dichloro- ethane	toluene- (dB)	4-bromo- fluoro- benzene
1	• 894.30610 BLANK	95	95	98
2	• 894.30611 BLANK	87	107	100
3	• 894.30609 SAMPLE	92	98	140 *
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

Average % Surrogate Recovery...	92	100	112
Defined Lower QC Limits (SD)....	67	76	77
Defined Upper QC Limits (SD)....	149	119	133
Observed Lower QC Limits (SD)...	87	95	98
Observed Upper QC Limits (SD)...	95	107	140

If % Surrogate Recovery is followed by a "*", it is out of QC Limits.

Reviewed By:

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LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY AND ENVIRONMENT DIVISION
HSE-9
MATRIX SPIKE RECOVERIES FOR VOLATILES

REQUEST #:	20278	DRY WT/VOL (G or ML)	DILUTION FACTOR	AMOUNT SPIKED	LOG (UG/KG OR UG/
NUMBER OF SAMPLES:	3				
SPIKE ID: (STARTS M OR E)		SPIKE	ERR	ERR	
SPIKE DUP ID: (STARTS D OR F)		SPIKE-DUP	ERR	ERR	
RAW DATA WITH:	---				
ANALYST:	MS				

	SPIKE REC.	SPIKE-DUP REC.	SPIKE % REC.	SPIKE-DUP % REC.	RPD	LOW. REC. LIM.	UPP. REC. LIM.	RPD LIM.
1,1-Dichloroethane	<LOQ	<LOQ			ERR	61	145	14
Benzene	<LOQ	<LOQ			ERR	76	127	11
Trichloroethane	<LOQ	<LOQ			ERR	71	120	14
Toluene	<LOQ	<LOQ			ERR	76	125	13
Chlorobenzene	<LOQ	<LOQ			ERR	75	130	13

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1/4/95

"*" If % Matrix Recovery is Followed by a "**", it is out of QC Limits.

Reviewed By:

***** CST ANALYTICAL REPORT *****

EPA VOLATILES

Prepared by: JDT

on 6-Jan-1995

REQUEST NUMBER: 20278 MATRIX: NDL ANALYST: MICHAEL GUTTMAN PROGRAM CODE: KB12 NOTEBOOK: PAGE:

OWNER: Dustie L. Stephens GROUP: ESN-19 MAIL-STOP: K498 PHONE: 5-0792 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA 846-300

Customer Sample Results, Sample # 94.30609 Date Collected: 11/16/94 Date Received: 11/21/94 Date Extracted: Date Analyzed: 12/12/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
94.DS129	94.30609	67641	2500	750	UG/L	1/04/95	N	Acetone
94.DS129	94.30609	71432	< 500		UG/L	1/04/95	N	Benzene
94.DS129	94.30609	108861	< 500		UG/L	1/04/95	N	Bromobenzene
94.DS129	94.30609	74975	< 500		UG/L	1/04/95	N	Bromochloromethane
94.DS129	94.30609	75274	< 500		UG/L	1/04/95	N	Bromodichloromethane
94.DS129	94.30609	75252	< 500		UG/L	1/04/95	N	Bromoform
94.DS129	94.30609	74839	< 1000		UG/L	1/04/95	N	Bromomethane
94.DS129	94.30609	78933	< 2000		UG/L	1/04/95	N	2-Butanone
94.DS129	94.30609	104518	< 500		UG/L	1/04/95	N	n-Butylbenzene
94.DS129	94.30609	135908	< 500		UG/L	1/04/95	N	sec-Butylbenzene
94.DS129	94.30609	98066	< 500		UG/L	1/04/95	N	tert-Butylbenzene
94.DS129	94.30609	79150	< 500		UG/L	1/04/95	N	Carbon disulfide
94.DS129	94.30609	56239	< 500		UG/L	1/04/95	N	Carbon tetrachloride
94.DS129	94.30609	108907	< 500		UG/L	1/04/95	N	Chlorobenzene
94.DS129	94.30609	124481	< 500		UG/L	1/04/95	N	Chlorodibromomethane
94.DS129	94.30609	77023	< 1000		UG/L	1/04/95	N	Chloroethane
94.DS129	94.30609	77023	< 500		UG/L	1/04/95	N	Chloroform
94.DS129	94.30609	77023	< 1000		UG/L	1/04/95	N	Chloromethane
94.DS129	94.30609	106434	< 500		UG/L	1/04/95	N	o-Chlorotoluene
94.DS129	94.30609	86128	< 1000		UG/L	1/04/95	N	p-Chlorotoluene
94.DS129	94.30609	74953	< 500		UG/L	1/04/95	N	1,2-Dibromo-3-chloropropane
94.DS129	94.30609	95501	< 500		UG/L	1/04/95	N	Dibromomethane
94.DS129	94.30609	941731	< 500		UG/L	1/04/95	N	o-Dichlorobenzene (1,2)
94.DS129	94.30609	106467	< 500		UG/L	1/04/95	N	m-Dichlorobenzene (1,3)
94.DS129	94.30609	75718	< 1000		UG/L	1/04/95	N	p-Dichlorobenzene (1,4)
					UG/L	1/04/95	N	Dichlorodifluoromethane

***** CST ANALYTICAL REPORT *****

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
94.DS129	94.30609	75343	< 500.		UG/L	1/04/95	N	1,1-Dichloroethane
94.DS129	94.30609	107062	< 500.		UG/L	1/04/95	N	1,2-Dichloroethane
94.DS129	94.30609	75354	< 500.		UG/L	1/04/95	N	1,1-Dichloroethane
94.DS129	94.30609	156605	< 500.		UG/L	1/04/95	N	trans-1,2-Dichloroethane
94.DS129	94.30609	156592	< 500.		UG/L	1/04/95	N	cis-1,2-Dichloroethylene
94.DS129	94.30609	78875	< 500.		UG/L	1/04/95	N	1,2-Dichloropropane
94.DS129	94.30609	142289	< 500.		UG/L	1/04/95	N	1,3-Dichloropropane
94.DS129	94.30609	594207	< 500.		UG/L	1/04/95	N	2,2-Dichloropropane
94.DS129	94.30609	563586	< 500.		UG/L	1/04/95	N	1,1-Dichloropropane
94.DS129	94.30609	10061015	< 500.		UG/L	1/04/95	N	cis-1,3-Dichloropropane
94.DS129	94.30609	10061026	< 500.		UG/L	1/04/95	N	trans-1,3-Dichloropropane
94.DS129	94.30609	100414	< 500.		UG/L	1/04/95	N	Ethylbenzene
94.DS129	94.30609	106934	< 500.		UG/L	1/04/95	N	Ethylene dibromide
94.DS129	94.30609	591786	< 2000.		UG/L	1/04/95	N	2-Hexanone
94.DS129	94.30609	98828	< 500.		UG/L	1/04/95	N	Isopropylbenzene
94.DS129	94.30609	99876	< 500.		UG/L	1/04/95	N	4-Isopropyltoluene
94.DS129	94.30609	74884	< 500.		UG/L	1/04/95	N	Methyl iodide
94.DS129	94.30609	108101	< 2000.		UG/L	1/04/95	N	4-Methyl-2-pentanone
94.DS129	94.30609	75092	2100.	630.	UG/L	1/04/95	N	Methylene chloride
94.DS129	94.30609	103651	< 500.		UG/L	1/04/95	N	Propylbenzene
94.DS129	94.30609	100425	< 500.		UG/L	1/04/95	N	Styrene
94.DS129	94.30609	630206	< 500.		UG/L	1/04/95	N	1,1,1,2-Tetrachloroethane
94.DS129	94.30609	79345	< 500.		UG/L	1/04/95	N	1,1,2,2-Tetrachloroethane
94.DS129	94.30609	127184	550.	165.	UG/L	1/04/95	N	Tetrachloroethylene
94.DS129	94.30609	108883	4100.	1230.	UG/L	1/04/95	N	Toluene
94.DS129	94.30609	76131	< 500.		UG/L	1/04/95	N	1,1,2-Trichloro-1,2,2-trifluoroethane
94.DS129	94.30609	71556	< 500.		UG/L	1/04/95	N	1,1,1-Trichloroethane
94.DS129	94.30609	79005	< 500.		UG/L	1/04/95	N	1,1,2-Trichloroethane
94.DS129	94.30609	79016	< 500.		UG/L	1/04/95	N	Trichloroethane
94.DS129	94.30609	75694	< 500.		UG/L	1/04/95	N	Trichlorofluoromethane
94.DS129	94.30609	96184	< 500.		UG/L	1/04/95	N	1,2,3-Trichloropropane
94.DS129	94.30609	95636	< 500.		UG/L	1/04/95	N	1,2,4-Trimethylbenzene
94.DS129	94.30609	108678	< 500.		UG/L	1/04/95	N	1,3,5-Trimethylbenzene
94.DS129	94.30609	75014	< 1000.		UG/L	1/04/95	N	Vinyl chloride
94.DS129	94.30609	1330207	< 500.		UG/L	1/04/95	N	Mixed-Nylones (o s m s p)

Tentatively Identified Compounds in Customer Sample # 96,30609

none

***** EN-9 QUALITY ASSURANCE REPORT *****

EPA VOLATILES

Prepared by: JOT

on 6-Jan-1995

REQUEST NUMBER: 20278 MATRIX: NOL ANALYST: MICHAEL GUTTMAN PROGRAM CODE: KB12 NOTEBOOK: PAGE:
OWNER: Dustie L. Stephens GROUP: ESH-19 MAIL-STOP: K498 PHONE: 5-0792 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA 81-846 3RD

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) QA SAMPLES RUN WITH THIS BATCH

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

- Only qualitative data requested
- Only Blind QC samples run with this batch.
- No QC samples run with this sample batch.
- No QC samples for this constituent and matrix type available within CST

***** EN-9 QUALITY ASSURANCE REPORT *****

SUMMARY OF CONTROL STATUS OF BLANK QC SAMPLES RUN WITH THIS BATCH

Blank Results, Sample # 94.30610

Date Collected: 11/16/94

Date Received: 11/21/94

Date Extracted:

Date Analyzed: 12/12/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	GC VALUE	GC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.30367	94.30610	67641	< 20.		UG/L	0.0		1/04/95	UNDER CONTROL	Acetone
00.30367	94.30610	71432	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Benzene
00.30367	94.30610	108861	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Bromobenzene
00.30367	94.30610	74975	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Bromochloromethane
00.30367	94.30610	75274	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Bromodichloromethane
00.30367	94.30610	75252	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Bromoform
00.30367	94.30610	74839	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	Bromomethane
00.30367	94.30610	78933	< 20.		UG/L	0.0		1/04/95	UNDER CONTROL	2-Butanone
00.30367	94.30610	104518	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	n-Butylbenzene
00.30367	94.30610	135988	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	sec-Butylbenzene
00.30367	94.30610	98066	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	tert-Butylbenzene
00.30367	94.30610	75150	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Carbon disulfide
00.30367	94.30610	56235	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Carbon tetrachloride
00.30367	94.30610	108907	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Chlorobenzene
00.30367	94.30610	124481	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Chlorodibromomethane
00.30367	94.30610	75003	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	Chloroethane
00.30367	94.30610	67663	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Chloroform
00.30367	94.30610	74873	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	Chloromethane
00.30367	94.30610	99498	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	o-Chlorotoluene
00.30367	94.30610	104486	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	p-Chlorotoluene
00.30367	94.30610	98128	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	1,2-Dibromo-3-chloropropane

***** EM-9 QUALITY ASSURANCE REPORT *****

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.30367	94.30610	74953	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Dibromomethane
00.30367	94.30610	95501	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.30367	94.30610	541731	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.30367	94.30610	106467	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.30367	94.30610	75718	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	Dichlorodifluoromethane
00.30367	94.30610	75343	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1-Dichloroethane
00.30367	94.30610	107062	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,2-Dichloroethane
00.30367	94.30610	75354	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1-Dichloroethane
00.30367	94.30610	156605	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	trans-1,2-Dichloroethane
00.30367	94.30610	156592	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	cis-1,2-Dichloroethylene
00.30367	94.30610	78875	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,2-Dichloropropane
00.30367	94.30610	142289	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,3-Dichloropropane
00.30367	94.30610	594207	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	2,2-Dichloropropane
00.30367	94.30610	563586	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1-Dichloropropane
00.30367	94.30610	10061015	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	cis-1,3-Dichloropropane
00.30367	94.30610	10061026	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	trans-1,3-Dichloropropane
00.30367	94.30610	100414	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Ethylbenzene
00.30367	94.30610	106934	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Ethylene dibromide
00.30367	94.30610	591786	< 20.		UG/L	0.0		1/04/95	UNDER CONTROL	2-Hexanone
00.30367	94.30610	98828	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Isopropylbenzene
00.30367	94.30610	99876	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	4-Isopropyltoluene
00.30367	94.30610	74884	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Methyl iodide
00.30367	94.30610	108101	< 20.		UG/L	0.0		1/04/95	UNDER CONTROL	4-Methyl-2-pentanone
00.30367	94.30610	75092	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Methylene chloride
00.30367	94.30610	103651	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Propylbenzene
00.30367	94.30610	100425	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Styrene
00.30367	94.30610	630206	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1,1,2-Tetrachloroethane
00.30367	94.30610	79345	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1,2,2-Tetrachloroethane
00.30367	94.30610	127184	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Tetrachloroethylene
00.30367	94.30610	108883	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Toluene
00.30367	94.30610	76131	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroethane
00.30367	94.30610	71556	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1,1-Trichloroethane
00.30367	94.30610	79005	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1,2-Trichloroethane
00.30367	94.30610	79016	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Trichloroethane
00.30367	94.30610	75694	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Trichlorofluoromethane
00.30367	94.30610	96184	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,2,3-Trichloropropane

***** EM-9 QUALITY ASSURANCE REPORT *****

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	GC VALUE	GC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.30367	94.30610	95636	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,2,4-Trimethylbenzene
00.30367	94.30610	108678	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,3,5-Trimethylbenzene
00.30367	94.30610	75014	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	Vinyl chloride
00.30367	94.30610	1330207	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Mixed-Nylones (o ± n ± p)

Blank Results, Sample # 94.30611

Date Collected: 11/16/94

Date Received: 11/21/94

Date Extracted:

Date Analyzed: 12/13/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	GC VALUE	GC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.30367	94.30611	67641	< 20.		UG/L	0.0		1/04/95	UNDER CONTROL	Acetone
00.30367	94.30611	71432	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Benzene
00.30367	94.30611	100867	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Bromobenzene
00.30367	94.30611	74975	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Bromochloromethane
00.30367	94.30611	75274	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Bromodichloromethane
00.30367	94.30611	75292	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Bromoform
00.30367	94.30611	74839	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	Bromomethane
00.30367	94.30611	78933	< 20.		UG/L	0.0		1/04/95	UNDER CONTROL	2-Butanone
00.30367	94.30611	104518	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	n-Butylbenzene
00.30367	94.30611	139908	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	sec-Butylbenzene
00.30367	94.30611	98066	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	tert-Butylbenzene
00.30367	94.30611	75158	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Carbon disulfide
00.30367	94.30611	96235	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Carbon tetrachloride
00.30367	94.30611	108907	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Chlorobenzene
00.30367	94.30611	124401	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Chlorodibromomethane
00.30367	94.30611	11723	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Chloroethane
00.30367	94.30611	11723	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Chloroform

***** EN-9 QUALITY ASSURANCE REPORT *****

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.30367	94.30611	74873	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	Chloroethane
00.30367	94.30611	95498	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	o-Chlorotoluene
00.30367	94.30611	106434	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	p-Chlorotoluene
00.30367	94.30611	96128	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	1,2-Dibromo-3-chloropropane
00.30367	94.30611	74953	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Dibromomethane
00.30367	94.30611	95501	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.30367	94.30611	541731	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.30367	94.30611	106467	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.30367	94.30611	75718	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	Dichlorodifluoroethane
00.30367	94.30611	75343	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1-Dichloroethane
00.30367	94.30611	107062	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,2-Dichloroethane
00.30367	94.30611	75354	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1-Dichloroethane
00.30367	94.30611	156605	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	trans-1,2-Dichloroethane
00.30367	94.30611	156592	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	cis-1,2-Dichloroethylene
00.30367	94.30611	78875	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,2-Dichloropropane
00.30367	94.30611	142289	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,3-Dichloropropane
00.30367	94.30611	594207	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	2,2-Dichloropropane
00.30367	94.30611	563586	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1-Dichloropropane
00.30367	94.30611	10061015	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	cis-1,3-Dichloropropane
00.30367	94.30611	10061026	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	trans-1,3-Dichloropropane
00.30367	94.30611	100414	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Ethylbenzene
00.30367	94.30611	106934	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Ethylene dibromide
00.30367	94.30611	591786	< 20.		UG/L	0.0		1/04/95	UNDER CONTROL	2-Hexanone
00.30367	94.30611	98828	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Isopropylbenzene
00.30367	94.30611	99876	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	4-Isopropyltoluene
00.30367	94.30611	74884	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Methyl iodide
00.30367	94.30611	108101	< 20.		UG/L	0.0		1/04/95	UNDER CONTROL	4-Methyl-2-pentanone
00.30367	94.30611	75092	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Methylene chloride
00.30367	94.30611	103651	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Propylbenzene
00.30367	94.30611	100425	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Styrene
00.30367	94.30611	630206	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1,1,2-Tetrachloroethane
00.30367	94.30611	79345	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1,2,2-Tetrachloroethane
00.30367	94.30611	127184	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Tetrachloroethylene
00.30367	94.30611	108883	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Toluene
00.30367	94.30611	76131	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroethane
00.30367	94.30611	71556	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1,1-Trichloroethane

***** EM-9 QUALITY ASSURANCE REPORT *****

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.30367	94.30611	79005	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,1,2-Trichloroethane
00.30367	94.30611	79016	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Trichloroethane
00.30367	94.30611	75694	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Trichlorofluoromethane
00.30367	94.30611	96184	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,2,3-Trichloropropane
00.30367	94.30611	95636	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,2,4-Trimethylbenzene
00.30367	94.30611	108678	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	1,3,5-Trimethylbenzene
00.30367	94.30611	75014	< 10.		UG/L	0.0		1/04/95	UNDER CONTROL	Vinyl chloride
00.30367	94.30611	1330207	< 5.		UG/L	0.0		1/04/95	UNDER CONTROL	Mixed-Xylenes (o + m + p)

Blank Spike Results: none

Blank Spike Duplicate Results: none

***** EM-9 QUALITY ASSURANCE REPORT *****

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

There were no blind Quality Control materials run with the samples reported above for one of the following reasons:

- Only qualitative data requested
- Only Open (non-blind) QC samples run with this sample batch.
- No QC samples run with this sample batch.
- No QC samples for this constituent and matrix type available within CST

***** EM-9 QUALITY ASSURANCE REPORT *****

SURROGATE RESULTS FOR EPA VOLATILES

Surrogate 1 = 1,2-Dichloroethane d4 (CAS # = 17060070)
 Surrogate 2 = Toluene d8 (CAS # = 2037265)
 Surrogate 3 = 4-Bromofluorobenzene (CAS # = 460004)
 Surrogate 4 = 2-Chlorostyrene (CAS # = 2039874)
 Surrogate 5 = Dibromofluoromethane (CAS # = 1868537)

SAMPLE NUMBER	UNITS	Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4	Surrogate 5	COMPLETION DATE	SAMPLE TYPE
94.30609	X	92.42	97.52	140.14		0.0	4-Jan-1995	
94.30610	X	95.42	94.6	97.62		0.0	4-Jan-1995	B
94.30611	X	87.06	107.46	99.58		0.0	4-Jan-1995	B

EPA Limits:

Water	X	76 - 114	88 - 110	86 - 115	86 - 115	86 - 118
Soil	X	70 - 121	81 - 117	74 - 121	74 - 121	

REPORT NUMBER: 30672

Michael G. Huan
Analyst

Judy Dwyer
Reviewer

J. J. ...
Team Leader

mag
QA Officer

1/6/95
Date

1/6/95
Date

1/6/95
Date

1/6/95
Date

No Sample Discrepancies Noted by Sample Management Section

The control status of the preceding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1992,' LA-12790-MS, Vol. 1, pp. 19-20

5125

PRELIMINARY REPORT. CST-12 SEMIVOLATILE ORGANIC ANALYSIS
SUMMARY OF ANALYTICAL RESULTS

TO: Dustie Stephens
FROM: Anthony Lombardo CST-127

1/4/95

PRELIMINARY REPORT

REQUEST NUMBER: 20278
MATRIX: Oil
SUMMARY DATE: January 04, 1995

SAMPLE ID	TARGET COMPOUNDS FOUND	AMOUNT (ug/Kg)	LOQ (ug/Kg)	TICs
94.30613 (Blank)	NONE	<50000	50000	N
93.30612	Phenol	1100000	.500000	Y
	Butylbenzyl-phthalate	3800000		
	Bis(2-ethylhexyl)-phthalate	10000000*		
	Di-n-Octylphthalate	6900000		

LOQ: Limit Of Quantitation

TICs: Tentatively identified compounds

*: Result is above the upper limit of quantitation and should be considered an estimate.

Analysis was done by direct capillary column GC/MS analysis of the samp. after dilution in methylene chloride. A 2.0 gram aliquot of sample was weighed. Appropriate surrogates were added. The sample was then diluted to 10.0 mL with Methylene chloride. Analysis methods are consistent with EPA SW-846 methods 3640 and 8270. Analytical column used was a J&W scientific DB5.625 30 M X .25 mm ID.

Limit of Quantitation. Detection limits depend on initial weight of sample used, final volume of sample extract and dilutions used prior to analysis. The LOQ is calculated as follows:

$$LOQ(ug/Kg) = (10 ug/mL) \times (FV/SW) \times (1000g/Kg) \times DF$$

Where: 10 ug/mL = Instrument LOQ
FV = Final volume of extract (mL)
SW = Sample weight (g), half the measured weight
1000g/Kg = conversion factor
DF = Dilution factor prior to analysis

For This sample set:

Sample	FV mL	SW g	DF	LOQ
94.30613	10.0 mL	2.0 g	1	50000
93.30612	10.0 mL	2.01 g	10	500000

Non-target ~~peaks~~ were not identified or quantitated for this request.

The continuing calibration criteria was not met for Di-n-octylphthalate. Percent difference in response factors between the continuing calibration analysis and the initial calibration must be less than 30% for certain check compounds. Difference for this compound was over 30%. This compound was seen in the ~~sample~~. The sample will be re-analyzed in criteria. Those results will be reported in the final report.

The sample was taken on November 15, 1994. Sample extraction consists of diluting the sample in methylene chloride. This was done on December 15, 1994, past the 3 day extraction hold time. The sample was diluted on the day it was received by CST-12. All analytical hold times were met for this request.

The sample was analyzed undiluted and at a 10 time dilution. Both analyses were reported. In the undiluted analysis, the sample exhibited poor chromatography, high levels of TIC peaks and poor internal standard and surrogate recoveries. In the diluted analysis, chromatography, surrogate and internal standard recoveries improved, although the response for internal standard Perylene-d12 was below criteria. These problems were related to sample matrix.

At the 10 time dilution, Bis(2-ethylhexyl)phthalate concentration was above the upper limit of quantitation, and should be considered an estimate.

If you have any question regarding this data, please call Anthony Lombardo at 667-5889.

T 11/4/95

PRELIMINARY REPORT

REPORT NUMBER: 29777

***** CST ANALYTICAL REPORT *****

Prepared by: M. KOZUBAL on 30-Nov-1994

REQUEST NUMBER: 20279 MATRIX: NOL ANALYST: GES PROGRAM CODE: KB12

OWNER: Dustie L. Stephens GROUP: ESN-19 MAIL-STOP: K498 PHONE: 5-0792

NOTEBOOK: Y04156 PAGE: 252

CUSTOMER SAMPLES:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS TECHNIQUE	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
94.08131	94.30615 AB	ICPES	< 1.		UG/S	11/30/94	
94.08131	94.30615 BA	ICPES	0.56	0.14	UG/S	11/30/94	
94.08131	94.30615 CB	ICPES	< 0.4		UG/S	11/30/94	
94.08131	94.30615 CR	ICPES	3.4	1.4	UG/S	11/30/94	
94.08131	94.30615 DI	ICPES	< 2.		UG/S	11/30/94	
94.08131	94.30615 PB	ICPES	< 4.		UG/S	11/30/94	

REPORT NUMBER: 2000

CSF QUALITY ASSURANCE REPORT

Prepared by: R. HIGGINS on 30-Nov-1994

REQUEST NUMBER: 2000 INSTR: NPL ANALYST: CDE

PROGRAM CODE: K312

OWNER: Santa Barbara GROUP: EM-90 MAIL ROOM: 2400 PHONE: 8-0792

NOTEBOOK: 104-2000-200

SUMMARY OF CONTROL MATERIALS (IDE-BLIND) GC SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYST	INSTR	ANALYTICAL UNCERTAINTY	UNITS	GC VALUE	GC UNCERTAINTY	COMPLETION DATE	COMMENT
00.00400 A6		200	2%	UG/G	291.		11/30/94	UNDER CONTROL
00.00400 C2		200	2%	UG/G	290.	5.	11/30/94	UNDER CONTROL
00.00400 H1		200	2%	UG/G	303.7	7.	11/30/94	UNDER CONTROL
00.00400 P8		200	2%	UG/G	305.		11/30/94	UNDER CONTROL

SUMMARY OF CONTROL MATERIALS (IDE-BLIND) GC SAMPLES RUN WITH THIS BATCH

There were no alternative control materials run with the samples reported above for one of the following reasons:

- Only quantities requested
- Only quantities GC samples run with this sample batch.
- No GC samples with this sample batch.
- No GC samples for this constituent and matrix type available within CSF

REPORT NUMBER: 2000

R. Higgins
Analyst

R. Higgins
Reviewer

R. Higgins
Section Leader

QA Officer

11-30-94
Date

11-30-94
Date

12/23/94
Date

Date

The control status of the preceding data was evaluated using the standard statistical criteria set forth in
'Quality Assurance for Health and Environmental Chemistry: 1992,' LA-12790-MS, Vol. I, pp. 19-20.

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REPORT NUMBER: 3085

***** CST ANALYTICAL REPORT *****

Prepared by: NEDDY on 23-Dec-1994

REQUEST NUMBER: 20270 MATRIX: NCL ANALYST: INS PROGRAM CODE: K812

OWNER: Rustie L. Stephens GROUP: 888-19 MAIL-STOP: K498 PHONE: 9-0792

NOTEBOOK: 1082

CUSTOMER SAMPLES:

CUSTOMER ID#	SAMPLE ID#	ANALYTICAL ANALYSIS	ANALYTICAL TECHNIQUE	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
94.00131	94.3085 TL		ICPMS	< 1.2		UG/G	12/23/94	

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REPORT NUMBER: 30505 (continued)

***** CST QUALITY ASSURANCE REPORT *****

Prepared by: MKOBY on 23-Dec-1994

REQUEST NUMBER: 20279 MATRIX: NOL ANALYST: TMS PROGRAM CODE: K312

OWNER: Dustie L. Stephens GROUP: ESN-19 MAIL-STOP: K498 PHONE: 5-0792

NOTEBOOK: PAGE:

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) QC SAMPLER RUN WITH THIS BATCH

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

- Only qualitative data requested
- Only blind QC samples run with this sample batch.
- No QC samples run with this sample batch.
- No QC samples for this constituent and matrix type available within CST

*OPEN QC ANALYZED WITH JANIS BAYLEY, MONITOR. CONCENTRATION IS BELOW DET. LIMIT.
MUNEK 12/23/94*

SUMMARY OF CONTROL STATUS OF BLIND QC SAMPLER RUN WITH THIS BATCH

There were no blind Quality Control materials run with the samples reported above for one of the following reasons:

- Only qualitative data requested
- Only Open (non-blind) QC samples run with this sample batch.
- No QC samples run with this sample batch.
- No QC samples for this constituent and matrix type available within CST

REPORT NUMBER: 30505

MUNEK
Analyst

MUNEK
Reviewer

KO
Team Leader

QA Officer

12/23/94
Date

12/23/94
Date

12/23/94
Date

Date

No Sample Bioremediation by Sample Management Section

The control data and monitoring data was evaluated using the standard statistical criteria set forth in 'Guidelines for Health and Environmental Chemistry' 1992, LA-12790-MS, Vol. 1, pp. 19-20.

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REPORT NUMBER: 30239

***** CST ANALYTICAL REPORT *****

Prepared by: PEC on 15-Dec-1994

REQUEST NUMBER: 20279 MATRIX: NCL ANALYST: AAS PROGRAM CODE: K312

OWNER: Dustie L. Stephens GROUP: ESN-19 MAIL-STOP: K498 PHONE: 5-0792

NOTEBOOK: CST9002 PAGE: 17

CUSTOMER SAMPLES:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS TECHNIQUE	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
94.D8131	94.30615 AB	ETVAA	< 0.5		UG/G	12/15/94	112930510A
94.D8131	94.30615 BB	CVAA	0.02	0.01	UG/G	11/29/94	
94.D8131	94.30615 BB	ETVAA	< 0.5		UG/G	12/15/94	

CUSTOMER SAMPLE DUPLICATES:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS TECHNIQUE	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
94.D8131	94.30615 BB	CVAA	0.02	0.01	UG/G	11/29/94	
94.D8131	94.30615 BB	CVAA	0.02	0.01	UG/G	11/29/94	



REPORT NUMBER: ~~XXXXXXXXXX~~

CST QUALITY ASSURANCE REPORT

Prepared by: PEC on 15-Dec-1994

REQUEST NUMBER: 3020 PREFIX: NCL ANALYST: AAR

PROGRAM CODE: K812

OWNER: Ductile L. Boyd GROUP: EM-9 MAIL-STOP: 6488 PHONE: 5-0792

NOTEBOOK: CST002

SUMMARY OF CONTROL STANDARDS (NON-BLIND) QC SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYST	SUBSTRATE	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT
09.29657 NS		NS	2	ML/EC	25.9	13	11/29/94	UNDER CONTROL

SUMMARY OF CONTROL STANDARDS (BLIND) QC SAMPLES RUN WITH THIS BATCH

There were no blind control materials run with the samples reported above for one of the following reasons:

- Only quantities requested
- Only open available QC samples run with this sample batch.
- No QC samples with this sample batch.
- No QC samples of this constituent and matrix type available within CST

REPORT NUMBER: 3020

PEC
Analyst

PEC
Reviewer

[Signature]
Team Leader

QA Officer

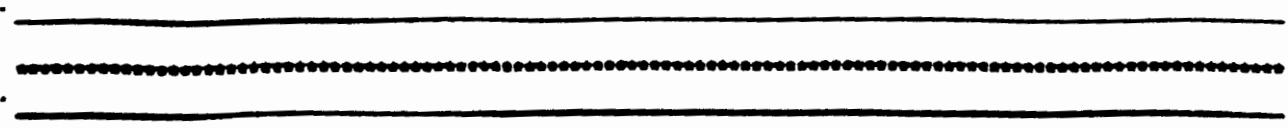
12/15/94
Date

12/19/94
Date

12/23/94
Date

Date

No Sample Discrepancies noted by Sample Management Section



REPORT NUMBER: 20766

***** EN-9 ANALYTICAL REPORT *****

Prepared by: E.M. MOORE on 22-Nov-1994

REQUEST NUMBER: 20770 MATRIX: NOL ANALYST: LET PROGRAM CODE: KB12

CLIENT: Rustie L. Stephens GROUP: EN-19 MAIL-STOP: 8498 PHONE: 5-0792

NOTEBOOK: 1878 PAGE: 74

CUSTOMER SAMPLES:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	ANALYTICAL TECHNIQUE	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
94.08130	94.0805	FLAMPT	FP	> 160.		F	11/22/94	

REPORT NUMBER: 29546 (continued)

***** EN-9 QUALITY ASSURANCE REPORT *****

Prepared by: E.N.RODGE on 22-Nov-1994

REQUEST NUMBER: 20279 MATRIX: MCL ANALYST: VET PROGRAM CODE: KB12
 OWNER: Dencie L. Stephens GROUP: ESN-19 MAIL-STOP: K698 PHONE: 5-0792
 NOTEBOOK: 1878 PAGE: 74

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) QC SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT
00.06303	FLASHPT	155.	6.	DECF	145.		11/22/94	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QC SAMPLES RUN WITH THIS BATCH

There were no blind Quality Control materials run with the samples reported above for one of the following reasons:

- Only qualitative data requested
- Only Open (non-blind) QC samples run with this sample batch.
- No QC samples run with this sample batch.
- No QC samples for this constituent and matrix type available within EN-9

REPORT NUMBER: 29546

<u><i>Emet</i></u> Analyst	<u><i>Emet</i></u> Reviewer	<u><i>[Signature]</i></u> Section Leader	_____ QA Officer
<u>11/22/94</u> Date	<u>11/22/94</u> Date	<u>12/23/94</u> Date	_____ Date

No Sample Discrepancies Noted by Sample Management Section

The control status of the preceding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1992,' LA-12790-MS, Vol. 1, pp. 19-20.

REPORT NUMBER: 29777

Review

***** CST ANALYTICAL REPORT *****

Prepared by: M. KOZUBAL on 30-Nov-1994

REQUEST NUMBER: 20279 MATRIX: MOL ANALYST: OES PROGRAM CODE: KB12

OWNER: Dustie L. Stephens GROUP: ESH-19 MAIL-STOP: K498 PHONE: 5-0792

NOTEBOOK: Y04156 PAGE: 252

CUSTOMER SAMPLES:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	ANALYTICAL TECHNIQUE	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
94.DS131	94.30615	AG	ICPES	< 1.		UG/G	11/30/94	
94.DS131	94.30615	BA	ICPES	0.56	0.14	UG/G	11/30/94	
94.DS131	94.30615	CD	ICPES	< 0.4		UG/G	11/30/94	
94.DS131	94.30615	CR	ICPES	3.4	1.4	UG/G	11/30/94	
94.DS131	94.30615	NI	ICPES	< 2.		UG/G	11/30/94	
94.DS131	94.30615	PB	ICPES	< 4.		UG/G	11/30/94	



C

REPORT NUMBER: 29777 (continued)

***** CST QUALITY ASSURANCE REPORT *****

Prepared by: M. KOZUBAL on 30-Nov-1994

REQUEST NUMBER: 20279 MATRIX: MOL ANALYST: OES PROGRAM CODE: KB12
OWNER: Dustie L. Stephens GROUP: ESH-19 MAIL-STOP: K498 PHONE: 5-0792
NOTEBOOK: Y04156 PAGE: 252

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) GC SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	GC VALUE	GC UNCERTAINTY	COMPLETION DATE	COMMENT
00.00680	AG	230.	23.	UG/G	291.		11/30/94	UNDER CONTROL
00.00680	CR	260.	26.	UG/G	298.	5.	11/30/94	UNDER CONTROL
00.00680	NI	260.	26.	UG/G	303.7	7.	11/30/94	UNDER CONTROL
00.00680	PB	230.	23.	UG/G	305.		11/30/94	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND GC SAMPLES RUN WITH THIS BATCH

There were no blind Quality Control materials run with the samples reported above for one of the following reasons:

- Only qualitative data requested
- Only Open (non-blind) GC samples run with this sample batch.
- No GC samples run with this sample batch.
- No GC samples for this constituent and matrix type available within CST

REPORT NUMBER: 29777

M. Kozubal
Analyst

Paul Hill
Reviewer

R. J. Doon
Section Leader

mag
QA Officer

11-30-94
Date

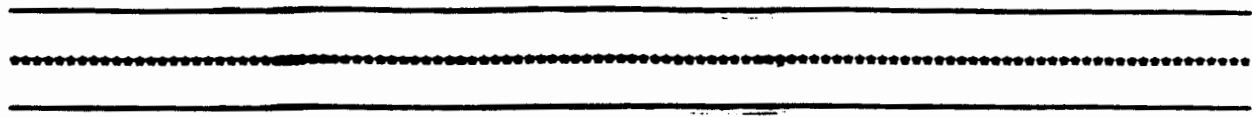
11-30-94
Date

12/23/94
Date

1/3/95
Date

No Sample Discrepancies Noted by Sample Management Section

The control status of the preceding data was evaluated using the standard statistical criteria set forth in
'Quality Assurance for Health and Environmental Chemistry: 1992,' LA-12790-MS, Vol. 1, pp. 19-20.



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C

REPORT NUMBER: 30505

***** CST ANALYTICAL REPORT *****

Prepared by: MKOBY on 23-Dec-1994

REQUEST NUMBER: 20279 MATRIX: MOL ANALYST: IMS PROGRAM CODE: KB12

OWNER: Dustie L. Stephens GROUP: ESH-19 MAIL-STOP: K498 PHONE: 5-0792

NOTEBOOK: PAGE:

CUSTOMER SAMPLES:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS TECHNIQUE	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
94.D8131	94.30615 TL	ICPMS	< 1.2		UG/G	12/23/94	

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REPORT NUMBER: 3035 (continued)

***** CST QUALITY ASSURANCE REPORT *****

Prepared by: MIOBY on 23-Dec-1994

REQUEST NUMBER: 3035 MATRIX: NGL ANALYST: IMB

PROGRAM CODE: KB12

OWNER: DUSTIE, L. GROUP: EBN-19 HALL-STORE, KAPE PHONE: 5-0792

NOTEBOOK: 1

SUMMARY OF CONTROL SAMPLES (NON-BLIND) GC SAMPLES RUN WITH THIS BATCH

There were no ~~unqualified~~ Quality Control materials run with the samples reported above for one of the following reasons:

- Only ~~unqualified~~ data requested.
- Only ~~unqualified~~ samples run with this sample batch.
- No GC samples run with this sample batch.
- No GC samples for this constituent and matrix type available within CST

*OPEN GC ANALYZED WITH SAMPLE BATCH, KNOWING, CONCENTRATION IS BELOW DET. LIMIT.
MIOBY 12/23/94*

SUMMARY OF CONTROL SAMPLES (BLIND) GC SAMPLES RUN WITH THIS BATCH

There were no ~~unqualified~~ Control materials run with the samples reported above for one of the following reasons:

- Only ~~unqualified~~ data requested.
- Only ~~unqualified~~ GC samples run with this sample batch.
- No GC samples run with this sample batch.
- No GC samples for this constituent and matrix type available within CST

REPORT NUMBER: 3035

MIOBY
Analyst

MIOBY
Reviewer

KO
Team Leader

mag
QA Officer

12/23/94
Date

12/23/94
Date

12/23/94
Date

1/3/95
Date

No Sample Discrepancies Noted by Sample Management Section

The control status of the preceding data was evaluated using the standard statistical criteria set forth in
'Quality Assurance for Health and Environmental Chemistry: 1992,' LA-12790-MS, Vol. I, pp. 19-20.

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REPORT NUMBER: 3088

***** CST ANALYTICAL REPORT *****

Prepared by: PEC on 15-Dec-1994

REQUEST NUMBER: 3088 MATRIX: NOL ANALYST: AAS PROGRAM CODE: KB12

OWNER: Dustie L. [unclear] GROUP: ESN-19 HALL-STOP: K498 PHONE: 5-0792

NOTEBOOK: CST908E [unclear] T7

CUSTOMER SAMPLES:

CUSTOMER NUM	NAME ANALYSIS	ANALYTICAL TECHNIQUE	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
94.D8131	94.D8131	ETVAA	< 0.5		UG/G	12/15/94	112930510A
94.D8131	94.D8131	CVAA	0.02	0.01	UG/G	11/29/94	
94.D8131	94.D8131	ETVAA	< 0.3		UG/G	12/15/94	

CUSTOMER SAMPLE SCREENING:

CUSTOMER NUM	NAME ANALYSIS	ANALYTICAL TECHNIQUE	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
94.D8131	94.D8131	CVAA	0.02	0.01	UG/G	11/29/94	
94.D8131	94.D8131	CVAA	0.02	0.01	UG/G	11/29/94	

REPORT NUMBER: 30239 (continued)

***** CST QUALITY ASSURANCE REPORT *****

Prepared by: PEC on 15-Dec-1994

REQUEST NUMBER: 20279 MATRIX: MOL ANALYST: AAS PROGRAM CODE: KB12

OWNER: Dustie L. Stephens GROUP: ESH-19 MAIL-STOP: K49B PHONE: 5-0792

NOTEBOOK: CST9002 PAGE: 17

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) GC SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	GC VALUE	GC UNCERTAINTY	COMPLETION DATE	COMMENT
00.29657	MS	23.	2.	MG/KG	25.9	13.	11/29/94	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND GC SAMPLES RUN WITH THIS BATCH

There were no blind Quality Control materials run with the samples reported above for one of the following reasons:

- Only qualitative data requested
- Only Open (non-blind) GC samples run with this sample batch.
- No GC samples run with this sample batch.
- No GC samples for this constituent and matrix type available within CST

REPORT NUMBER: 30239

PEC
Analyst

pec
Reviewer

K.O. Dan
Team Leader

mag
QA Officer

12/15/94
Date

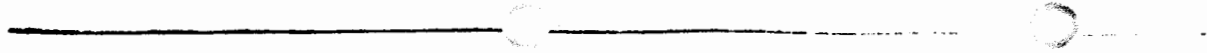
12/18/94
Date

12/23/94
Date

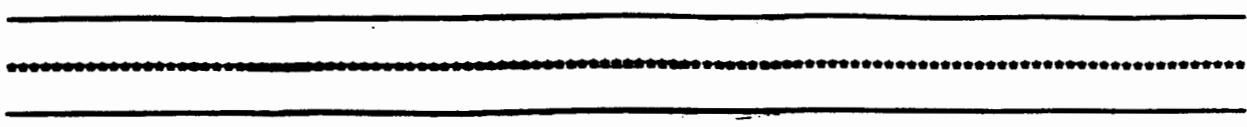
1/3/96
Date

No Sample Discrepancies Noted by Sample Management Section

The control status of the preceding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1992,' LA-12790-MS, Vol. 1, pp. 19-20.



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REPORT NUMBER: 29566

***** EM-9 ANALYTICAL REPORT *****

Prepared by: E.N.HODGE on 22-Nov-1994

REQUEST NUMBER: 20279 MATRIX: MOL ANALYST: WET PROGRAM CODE: KB12

OWNER: Dustie L. Stephens GROUP: ESH-19 MAIL-STOP: K498 PHONE: 5-0792

NOTEBOOK: 1878 PAGE: 74

CUSTOMER SAMPLES:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS TECHNIQUE	ANALYTICAL TECHNIQUE	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
94.DS130	94.30614	FLASHPT	FP	> 160.		F	11/22/94	

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REPORT NUMBER: 29566 (continued)

***** EN-9 QUALITY ASSURANCE REPORT *****

Prepared by: E.M.HODGE on 22-Nov-1994

REQUEST NUMBER: 20279 MATRIX: NOL ANALYST: MET PROGRAM CODE: KB12

OWNER: Dustie L. Stephens GROUP: ESN-19 MAIL-STOP: K498 PHONE: 5-0792

NOTEBOOK: 1878 PAGE: 26

SUMMARY OF CONTROL STATUS: OPEN (NON-BLIND) GC SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	IDENTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	GC VALUE	GC UNCERTAINTY	COMPLETION DATE	COMMENT
00.96303	FLASHPT	YES	6.	DEGP.	143.		11/22/94	UNDER CONTROL

SUMMARY OF CONTROL STATUS: BLIND GC SAMPLES RUN WITH THIS BATCH

There were no blind Quality Control materials run with the samples reported above for one of the following reasons:

- Only quantitative data requested
- Only Open (non-blind) GC samples run with this sample batch.
- No GC samples used with this sample batch.
- No GC samples for this constituent and matrix type available within EN-9

REPORT NUMBER: 29566

imet
Analyst

imet
Reviewer

[Signature]
Section Leader

mag
QA Officer

11/22/94
Date

11/22/94
Date

12/23/94
Date

12/23/94
Date

No Sample Discrepancies noted by Sample Management Section

The control status of the preceding data was evaluated using the standard statistical criteria set forth in