TA 49

Los Alamos
NATIONAL LABORATORY

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Date: November 7, 1996
In Reply Refer To: ESH-18/WQ&H:96- 0574
Mail Stop: K497
Telephone: (505) 667-3040

NOV 1996
RECEIVED
HAZARDOUS WASTE
PROGRAM

Teri Davis
LANL Facility Manager
New Mexico Environment Department
Hazardous & Radioactive Waste Bureau
P.O. Box 26110
Santa Fe, New Mexico

SUBJ: 1994 ORGANIC ANALYTICAL RESULTS FROM DT WELLS, TA-49

Dear Ms. Davis:

At our 24 October 1996 meeting to discuss NMED's concerns regarding TA-49 and TA-21, you expressed an interest in receiving a copy of the 1994 Environmental Surveillance organic analytical results from the DT series main aquifer wells at TA-49. Attached for your information are data packages for both Volatile Organic and Semi-Volatile Organic Analyses. For your convenience, I noted on the summary sheets the correlation between the sample (well) location and the sample ID.

Organic compounds were reported to be present in two of the three DT Wells. Most of the detected compounds, such as acetone and phthalates, are recognized to be common analytical laboratory contaminants and thus the data should be viewed with caution. In Well DT-5A, acetone was reported at trace levels near the limit of quantification. In Well DT-9, trichlorobenzene, some phthalate compounds and non-target Tentatively Identified Compounds (TICs) were reported, but the phthalates and TICs are suspect because of indications of method blank contamination. No organic compounds were detected in Well DT-10.

None of the organic compounds detected in a 1993 sampling of these wells were found to be present in 1994, except for acetone.

Please feel free to call me at (505) 667-3040 should you have questions pertaining to these data.

Sincerely,

Bruce Gallaher

Bruce Gallaher
Water Quality and Hydrology Group

3977

BG/em

Attach: a/s

Cy: Don Krier, EES-1, w/att., MS D462
Dave McInroy, EM/ER, w/att., MS M992
Steve Rae, ESH-18, w/o att., MS K497
Bonnie Koch, DOE LAAO, w/o att., MS A316
WQ&H File, w/att., MS K497
CRM-4, w/att., MS A150

CST-12 VOLATILE ORGANIC ANALYSIS
SUMMARY OF ANALYTICAL RESULTS

TO: Max Maes **DATE:** Nov 15, 1994
THRU: Anthony Lombardo, CST-12 Organic Analysis Task Area Leader
FROM: Michael Guttman, CST-12 Organic Section

MATRIX: WATER **REQUEST NUMBER:** 18986

Results Summary
Below is a tabulation of samples submitted for volatiles analysis, their analytical results, and their dates collected and analyzed.

SAMPLE ID	TARGET COMPOUNDS FOUND	AMOUNT (ug/L)	LOQ (ug/L)	DATE COLLECTED	DATE ANALYZED	
B94.22106	None			NA	13-Sep-94	Method Blank
S94.22105	None			8-Sep-94	13-Sep-94	Trip Blank
S94.22101	Acetone	22	20	8-Sep-94	13-Sep-94	DT-5A
S94.22103	None			8-Sep-94	13-Sep-94	DT-9
S94.22104	None			8-Sep-94	13-Sep-94	DT-10

Sample IDs beginning with the letter S are samples; those beginning with the letter B are blanks.
LOQ: Limit of Quantitation
NA: Not Applicable

No TICs (tentatively identified compounds) were found in the samples submitted.

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 occured during the analyses.

Surrogate recoveries were within criteria for all analyses.
Internal standard responses were within criteria for all analyses.
Matrix spike and matrix spike duplicate were analyzed. Matrix spike recoveries and relative percent differences were all within criteria.
Holding times were met for all sample analyses.

MG 11/23/94

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

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

REQUEST #: 18986

NUMBER OF SAMPLES: 7
MATRIX WU
ANALYST: MG
Date: 11/02/94

SURROGATE RECOVERIES

SURROGATE
RECOVERIES IN PERCENT (%)

	SAMPLE NUMBERS	TYPE	d4-1,2-dichloro-ethene	toluene-(d8)	4-bromo-fluoro-benzene
1	B94.22106	BLANK	90	84	109
2	S94.22101	SAMPLE	95	87	104
3	S94.22103	SAMPLE	100	85	107
4	S94.22104	SAMPLE	95	88	104
5	M94.22104	MATRIX SPIK	99	87	107
6	D94.22104	MATRIX SP-D	96	86	109
7	S94.22105	SAMPLE	86	88	111
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Average % Surrogate Recovery...	94	87	107
Defined Lower QC Limits (%)....	67	76	77
Defined Upper QC Limits (%)....	149	119	133
Observed Lower QC Limits (%)...	86	84	104
Observed Upper QC Limits (%)...	100	88	111

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

Reviewed By:

11/23/94

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

		DRY WT/VOL (G or ML)		DILUTION FACTOR	AMOUNT SPIKED	LOQ (UG/KG OR UG/
REQUEST #:	18986					
NUMBER OF SAMPLES:	7					
SPIKE ID: (STARTS M OR E)	M94.22104	SPIKE	5	1	50	5
SPIKE DUP ID: (STARTS D OR F)	D94.22104	SPIKE-DUP	5	1	50	5
RAW DATA WITH:	18986					
ANALYST:	MG					

	SPIKE REC.	SPIKE-DUP REC.	SPIKE % REC.	SPIKE-DUP % REC.	RPD	LOW. REC. LIM.	UPP. REC. LIM.	RPD LIM.
1,1-Dichlorethene	59	57	118%	114%	3%	61	145	14
Benzene	46	44	92%	88%	4%	76	127	11
Trichlorethene	50	49	100%	98%	2%	71	120	14
Toluene	42	42	84%	84%	0%	76	125	13
Chlorobenzene	47	46	94%	92%	2%	75	130	13

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

Reviewed By:

82
11/23/94

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

EPA VOLATILES Prepared by: JDT on 23-Nov-1994

REQUEST NUMBER: 18986 MATRIX: W ANALYST: MICHAEL GUTTMAN PROGRAM CODE: WE1C NOTEBOOK: PAGE:

OWNER: Max Maes GROUP: ESH-18 MAIL-STOP: K497 PHONE: 7-0817 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA SW-846 3RD

Customer Sample Results, Sample # 94.22101 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: Date Analyzed: 9/13/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT5AMAUNF	94.22101	67641	22.	6.6	UG/L	11/23/94	Y	Acetone
DT5AMAUNF	94.22101	71432	< 5.		UG/L	11/23/94	Y	Benzene
DT5AMAUNF	94.22101	108861	< 5.		UG/L	11/23/94	Y	Bromobenzene
DT5AMAUNF	94.22101	74975	< 5.		UG/L	11/23/94	Y	Bromochloromethane
DT5AMAUNF	94.22101	75274	< 5.		UG/L	11/23/94	Y	Bromodichloromethane
DT5AMAUNF	94.22101	75252	< 5.		UG/L	11/23/94	Y	Bromoform
DT5AMAUNF	94.22101	74839	< 10.		UG/L	11/23/94	Y	Bromomethane
DT5AMAUNF	94.22101	78933	< 20.		UG/L	11/23/94	Y	2-Butanone
DT5AMAUNF	94.22101	104518	< 5.		UG/L	11/23/94	Y	n-Butylbenzene
DT5AMAUNF	94.22101	135988	< 5.		UG/L	11/23/94	Y	sec-Butylbenzene
DT5AMAUNF	94.22101	98066	< 5.		UG/L	11/23/94	Y	tert-Butylbenzene
DT5AMAUNF	94.22101	75150	< 5.		UG/L	11/23/94	Y	Carbon disulfide
DT5AMAUNF	94.22101	56235	< 5.		UG/L	11/23/94	Y	Carbon tetrachloride
DT5AMAUNF	94.22101	108907	< 5.		UG/L	11/23/94	Y	Chlorobenzene
DT5AMAUNF	94.22101	124481	< 5.		UG/L	11/23/94	Y	Chlorodibromomethane
DT5AMAUNF	94.22101	75003	< 10.		UG/L	11/23/94	Y	Chloroethane
DT5AMAUNF	94.22101	67663	< 5.		UG/L	11/23/94	Y	Chloroform
DT5AMAUNF	94.22101	74873	< 10.		UG/L	11/23/94	Y	Chloromethane
DT5AMAUNF	94.22101	95498	< 5.		UG/L	11/23/94	Y	o-Chlorotoluene
DT5AMAUNF	94.22101	106434	< 5.		UG/L	11/23/94	Y	p-Chlorotoluene
DT5AMAUNF	94.22101	96128	< 10.		UG/L	11/23/94	Y	1,2-Dibromo-3-chloropropane
DT5AMAUNF	94.22101	74953	< 5.		UG/L	11/23/94	Y	Dibromomethane
DT5AMAUNF	94.22101	95501	< 5.		UG/L	11/23/94	Y	o-Dichlorobenzene (1,2)
DT5AMAUNF	94.22101	541731	< 5.		UG/L	11/23/94	Y	m-Dichlorobenzene (1,3)
DT5AMAUNF	94.22101	106467	< 5.		UG/L	11/23/94	Y	p-Dichlorobenzene (1,4)
DT5AMAUNF	94.22101	75718	< 10.		UG/L	11/23/94	Y	Dichlorodifluoromethane

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT5AMAUNF	94.22101	75343	< 5.		UG/L	11/23/94	Y	1,1-Dichloroethane
DT5AMAUNF	94.22101	107062	< 5.		UG/L	11/23/94	Y	1,2-Dichloroethane
DT5AMAUNF	94.22101	75354	< 5.		UG/L	11/23/94	Y	1,1-Dichloroethene
DT5AMAUNF	94.22101	156605	< 5.		UG/L	11/23/94	Y	trans-1,2-Dichloroethene
DT5AMAUNF	94.22101	156592	< 5.		UG/L	11/23/94	Y	cis-1,2-Dichloroethylene
DT5AMAUNF	94.22101	78875	< 5.		UG/L	11/23/94	Y	1,2-Dichloropropane
DT5AMAUNF	94.22101	142289	< 5.		UG/L	11/23/94	Y	1,3-Dichloropropane
DT5AMAUNF	94.22101	594207	< 5.		UG/L	11/23/94	Y	2,2-Dichloropropane
DT5AMAUNF	94.22101	563586	< 5.		UG/L	11/23/94	Y	1,1-Dichloropropene
DT5AMAUNF	94.22101	10061015	< 5.		UG/L	11/23/94	Y	cis-1,3-Dichloropropene
DT5AMAUNF	94.22101	10061026	< 5.		UG/L	11/23/94	Y	trans-1,3-Dichloropropene
DT5AMAUNF	94.22101	100414	< 5.		UG/L	11/23/94	Y	Ethylbenzene
DT5AMAUNF	94.22101	106934	< 5.		UG/L	11/23/94	Y	Ethylene dibromide
DT5AMAUNF	94.22101	591786	< 20.		UG/L	11/23/94	Y	2-Hexanone
DT5AMAUNF	94.22101	98828	< 5.		UG/L	11/23/94	Y	Isopropylbenzene
DT5AMAUNF	94.22101	99876	< 5.		UG/L	11/23/94	Y	4-Isopropyltoluene
DT5AMAUNF	94.22101	74884	< 5.		UG/L	11/23/94	Y	Methyl iodide
DT5AMAUNF	94.22101	108101	< 20.		UG/L	11/23/94	Y	4-Methyl-2-pentanone
DT5AMAUNF	94.22101	75092	< 5.		UG/L	11/23/94	Y	Methylene chloride
DT5AMAUNF	94.22101	103651	< 5.		UG/L	11/23/94	Y	Propylbenzene
DT5AMAUNF	94.22101	100425	< 5.		UG/L	11/23/94	Y	Styrene
DT5AMAUNF	94.22101	630206	< 5.		UG/L	11/23/94	Y	1,1,1,2-Tetrachloroethane
DT5AMAUNF	94.22101	79345	< 5.		UG/L	11/23/94	Y	1,1,2,2-Tetrachloroethane
DT5AMAUNF	94.22101	127184	< 5.		UG/L	11/23/94	Y	Tetrachloroethylene
DT5AMAUNF	94.22101	108883	< 5.		UG/L	11/23/94	Y	Toluene
DT5AMAUNF	94.22101	76131	< 5.		UG/L	11/23/94	Y	1,1,2-Trichloro-1,2,2-trifluoroethane
DT5AMAUNF	94.22101	71556	< 5.		UG/L	11/23/94	Y	1,1,1-Trichloroethane
DT5AMAUNF	94.22101	79005	< 5.		UG/L	11/23/94	Y	1,1,2-Trichloroethane
DT5AMAUNF	94.22101	79016	< 5.		UG/L	11/23/94	Y	Trichloroethene
DT5AMAUNF	94.22101	75694	< 5.		UG/L	11/23/94	Y	Trichlorofluoromethane
DT5AMAUNF	94.22101	96184	< 5.		UG/L	11/23/94	Y	1,2,3-Trichloropropane
DT5AMAUNF	94.22101	95636	< 5.		UG/L	11/23/94	Y	1,2,4-Trimethylbenzene
DT5AMAUNF	94.22101	108678	< 5.		UG/L	11/23/94	Y	1,3,5-Trimethylbenzene
DT5AMAUNF	94.22101	75014	< 10.		UG/L	11/23/94	Y	Vinyl chloride
DT5AMAUNF	94.22101	1330207	< 5.		UG/L	11/23/94	Y	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 94.22101

none

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

EPA VOLATILES Prepared by: JDT on 23-Nov-1994

REQUEST NUMBER: 18986 MATRIX: W ANALYST: MICHAEL GUTTMAN PROGRAM CODE: WE1C NOTEBOOK: PAGE:

OWNER: Max Maes GROUP: ESH-18 MAIL-STOP: K497 PHONE: 7-0817 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA SW-846 3RD

Customer Sample Results, Sample # 94.22103 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: Date Analyzed: 9/13/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT9MA	94.22103	67641	< 20.		UG/L	11/23/94	Y	Acetone
DT9MA	94.22103	71432	< 5.		UG/L	11/23/94	Y	Benzene
DT9MA	94.22103	108861	< 5.		UG/L	11/23/94	Y	Bromobenzene
DT9MA	94.22103	74975	< 5.		UG/L	11/23/94	Y	Bromochloromethane
DT9MA	94.22103	75274	< 5.		UG/L	11/23/94	Y	Bromodichloromethane
DT9MA	94.22103	75252	< 5.		UG/L	11/23/94	Y	Bromoform
DT9MA	94.22103	74839	< 10.		UG/L	11/23/94	Y	Bromomethane
DT9MA	94.22103	78933	< 20.		UG/L	11/23/94	Y	2-Butanone
DT9MA	94.22103	104518	< 5.		UG/L	11/23/94	Y	n-Butylbenzene
DT9MA	94.22103	135988	< 5.		UG/L	11/23/94	Y	sec-Butylbenzene
DT9MA	94.22103	98066	< 5.		UG/L	11/23/94	Y	tert-Butylbenzene
DT9MA	94.22103	75150	< 5.		UG/L	11/23/94	Y	Carbon disulfide
DT9MA	94.22103	56235	< 5.		UG/L	11/23/94	Y	Carbon tetrachloride
DT9MA	94.22103	108907	< 5.		UG/L	11/23/94	Y	Chlorobenzene
DT9MA	94.22103	124481	< 5.		UG/L	11/23/94	Y	Chlorodibromomethane
DT9MA	94.22103	75003	< 10.		UG/L	11/23/94	Y	Chloroethane
DT9MA	94.22103	67663	< 5.		UG/L	11/23/94	Y	Chloroform
DT9MA	94.22103	74873	< 10.		UG/L	11/23/94	Y	Chloromethane
DT9MA	94.22103	95498	< 5.		UG/L	11/23/94	Y	o-Chlorotoluene
DT9MA	94.22103	106434	< 5.		UG/L	11/23/94	Y	p-Chlorotoluene
DT9MA	94.22103	96128	< 10.		UG/L	11/23/94	Y	1,2-Dibromo-3-chloropropane
DT9MA	94.22103	74953	< 5.		UG/L	11/23/94	Y	Dibromomethane
DT9MA	94.22103	95501	< 5.		UG/L	11/23/94	Y	o-Dichlorobenzene (1,2)
DT9MA	94.22103	541731	< 5.		UG/L	11/23/94	Y	m-Dichlorobenzene (1,3)
DT9MA	94.22103	106467	< 5.		UG/L	11/23/94	Y	p-Dichlorobenzene (1,4)
DT9MA	94.22103	75718	< 10.		UG/L	11/23/94	Y	Dichlorodifluoromethane

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT9MA	94.22103	75343	< 5.		UG/L	11/23/94	Y	1,1-Dichloroethane
DT9MA	94.22103	107062	< 5.		UG/L	11/23/94	Y	1,2-Dichloroethane
DT9MA	94.22103	75354	< 5.		UG/L	11/23/94	Y	1,1-Dichloroethene
DT9MA	94.22103	156605	< 5.		UG/L	11/23/94	Y	trans-1,2-Dichloroethene
DT9MA	94.22103	156592	< 5.		UG/L	11/23/94	Y	cis-1,2-Dichloroethylene
DT9MA	94.22103	78875	< 5.		UG/L	11/23/94	Y	1,2-Dichloropropane
DT9MA	94.22103	142289	< 5.		UG/L	11/23/94	Y	1,3-Dichloropropane
DT9MA	94.22103	594207	< 5.		UG/L	11/23/94	Y	2,2-Dichloropropane
DT9MA	94.22103	563586	< 5.		UG/L	11/23/94	Y	1,1-Dichloropropene
DT9MA	94.22103	10061015	< 5.		UG/L	11/23/94	Y	cis-1,3-Dichloropropene
DT9MA	94.22103	10061026	< 5.		UG/L	11/23/94	Y	trans-1,3-Dichloropropene
DT9MA	94.22103	100414	< 5.		UG/L	11/23/94	Y	Ethylbenzene
DT9MA	94.22103	106934	< 5.		UG/L	11/23/94	Y	Ethylene dibromide
DT9MA	94.22103	591786	< 20.		UG/L	11/23/94	Y	2-Hexanone
DT9MA	94.22103	98828	< 5.		UG/L	11/23/94	Y	Isopropylbenzene
DT9MA	94.22103	99876	< 5.		UG/L	11/23/94	Y	4-Isopropyltoluene
DT9MA	94.22103	74884	< 5.		UG/L	11/23/94	Y	Methyl iodide
DT9MA	94.22103	108101	< 20.		UG/L	11/23/94	Y	4-Methyl-2-pentanone
DT9MA	94.22103	75092	< 5.		UG/L	11/23/94	Y	Methylene chloride
DT9MA	94.22103	103651	< 5.		UG/L	11/23/94	Y	Propylbenzene
DT9MA	94.22103	100425	< 5.		UG/L	11/23/94	Y	Styrene
DT9MA	94.22103	630206	< 5.		UG/L	11/23/94	Y	1,1,1,2-Tetrachloroethane
DT9MA	94.22103	79345	< 5.		UG/L	11/23/94	Y	1,1,2,2-Tetrachloroethane
DT9MA	94.22103	127184	< 5.		UG/L	11/23/94	Y	Tetrachloroethylene
DT9MA	94.22103	108883	< 5.		UG/L	11/23/94	Y	Toluene
DT9MA	94.22103	76131	< 5.		UG/L	11/23/94	Y	1,1,2-Trichloro-1,2,2-trifluoroethane
DT9MA	94.22103	71556	< 5.		UG/L	11/23/94	Y	1,1,1-Trichloroethane
DT9MA	94.22103	79005	< 5.		UG/L	11/23/94	Y	1,1,2-Trichloroethane
DT9MA	94.22103	79016	< 5.		UG/L	11/23/94	Y	Trichloroethene
DT9MA	94.22103	75694	< 5.		UG/L	11/23/94	Y	Trichlorofluoromethane
DT9MA	94.22103	96184	< 5.		UG/L	11/23/94	Y	1,2,3-Trichloropropane
DT9MA	94.22103	95636	< 5.		UG/L	11/23/94	Y	1,2,4-Trimethylbenzene
DT9MA	94.22103	108678	< 5.		UG/L	11/23/94	Y	1,3,5-Trimethylbenzene
DT9MA	94.22103	75014	< 10.		UG/L	11/23/94	Y	Vinyl chloride
DT9MA	94.22103	1330207	< 5.		UG/L	11/23/94	Y	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 94.22103

none

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

EPA VOLATILES Prepared by: JDT on 23-Nov-1994

REQUEST NUMBER: 18986 MATRIX: W ANALYST: MICHAEL GUTTMAN PROGRAM CODE: WE1C NOTEBOOK: PAGE:

OWNER: Max Maes GROUP: ESH-18 MAIL-STOP: K497 PHONE: 7-0817 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA SW-846 3RD

Customer Sample Results, Sample # 94.22104 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: Date Analyzed: 9/13/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT10MA	94.22104	67641	< 20.		UG/L	11/23/94	Y	Acetone
DT10MA	94.22104	71432	< 5.		UG/L	11/23/94	Y	Benzene
DT10MA	94.22104	108861	< 5.		UG/L	11/23/94	Y	Bromobenzene
DT10MA	94.22104	74975	< 5.		UG/L	11/23/94	Y	Bromochloromethane
DT10MA	94.22104	75274	< 5.		UG/L	11/23/94	Y	Bromodichloromethane
DT10MA	94.22104	75252	< 5.		UG/L	11/23/94	Y	Bromoform
DT10MA	94.22104	74839	< 10.		UG/L	11/23/94	Y	Bromomethane
DT10MA	94.22104	78933	< 20.		UG/L	11/23/94	Y	2-Butanone
DT10MA	94.22104	104518	< 5.		UG/L	11/23/94	Y	n-Butylbenzene
DT10MA	94.22104	135988	< 5.		UG/L	11/23/94	Y	sec-Butylbenzene
DT10MA	94.22104	98066	< 5.		UG/L	11/23/94	Y	tert-Butylbenzene
DT10MA	94.22104	75150	< 5.		UG/L	11/23/94	Y	Carbon disulfide
DT10MA	94.22104	56235	< 5.		UG/L	11/23/94	Y	Carbon tetrachloride
DT10MA	94.22104	108907	< 5.		UG/L	11/23/94	Y	Chlorobenzene
DT10MA	94.22104	124481	< 5.		UG/L	11/23/94	Y	Chlorodibromomethane
DT10MA	94.22104	75003	< 10.		UG/L	11/23/94	Y	Chloroethane
DT10MA	94.22104	67663	< 5.		UG/L	11/23/94	Y	Chloroform
DT10MA	94.22104	74873	< 10.		UG/L	11/23/94	Y	Chloromethane
DT10MA	94.22104	95498	< 5.		UG/L	11/23/94	Y	o-Chlorotoluene
DT10MA	94.22104	106434	< 5.		UG/L	11/23/94	Y	p-Chlorotoluene
DT10MA	94.22104	96128	< 10.		UG/L	11/23/94	Y	1,2-Dibromo-3-chloropropane
DT10MA	94.22104	74953	< 5.		UG/L	11/23/94	Y	Dibromomethane
DT10MA	94.22104	95501	< 5.		UG/L	11/23/94	Y	o-Dichlorobenzene (1,2)
DT10MA	94.22104	541731	< 5.		UG/L	11/23/94	Y	m-Dichlorobenzene (1,3)
DT10MA	94.22104	106467	< 5.		UG/L	11/23/94	Y	p-Dichlorobenzene (1,4)
DT10MA	94.22104	75718	< 10.		UG/L	11/23/94	Y	Dichlorodifluoromethane

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT10MA	94.22104	75343	< 5.		UG/L	11/23/94	Y	1,1-Dichloroethane
DT10MA	94.22104	107062	< 5.		UG/L	11/23/94	Y	1,2-Dichloroethane
DT10MA	94.22104	75354	< 5.		UG/L	11/23/94	Y	1,1-Dichloroethene
DT10MA	94.22104	156605	< 5.		UG/L	11/23/94	Y	trans-1,2-Dichloroethene
DT10MA	94.22104	156592	< 5.		UG/L	11/23/94	Y	cis-1,2-Dichloroethylene
DT10MA	94.22104	78875	< 5.		UG/L	11/23/94	Y	1,2-Dichloropropane
DT10MA	94.22104	142289	< 5.		UG/L	11/23/94	Y	1,3-Dichloropropane
DT10MA	94.22104	594207	< 5.		UG/L	11/23/94	Y	2,2-Dichloropropane
DT10MA	94.22104	563586	< 5.		UG/L	11/23/94	Y	1,1-Dichloropropene
DT10MA	94.22104	10061015	< 5.		UG/L	11/23/94	Y	cis-1,3-Dichloropropene
DT10MA	94.22104	10061026	< 5.		UG/L	11/23/94	Y	trans-1,3-Dichloropropene
DT10MA	94.22104	100414	< 5.		UG/L	11/23/94	Y	Ethylbenzene
DT10MA	94.22104	106934	< 5.		UG/L	11/23/94	Y	Ethylene dibromide
DT10MA	94.22104	591786	< 20.		UG/L	11/23/94	Y	2-Hexanone
DT10MA	94.22104	98828	< 5.		UG/L	11/23/94	Y	Isopropylbenzene
DT10MA	94.22104	99876	< 5.		UG/L	11/23/94	Y	4-Isopropyltoluene
DT10MA	94.22104	74884	< 5.		UG/L	11/23/94	Y	Methyl iodide
DT10MA	94.22104	108101	< 20.		UG/L	11/23/94	Y	4-Methyl-2-pentanone
DT10MA	94.22104	75092	< 5.		UG/L	11/23/94	Y	Methylene chloride
DT10MA	94.22104	103651	< 5.		UG/L	11/23/94	Y	Propylbenzene
DT10MA	94.22104	100425	< 5.		UG/L	11/23/94	Y	Styrene
DT10MA	94.22104	630206	< 5.		UG/L	11/23/94	Y	1,1,1,2-Tetrachloroethane
DT10MA	94.22104	79345	< 5.		UG/L	11/23/94	Y	1,1,2,2-Tetrachloroethane
DT10MA	94.22104	127184	< 5.		UG/L	11/23/94	Y	Tetrachloroethylene
DT10MA	94.22104	108883	< 5.		UG/L	11/23/94	Y	Toluene
DT10MA	94.22104	76131	< 5.		UG/L	11/23/94	Y	1,1,2-Trichloro-1,2,2-trifluoroethane
DT10MA	94.22104	71556	< 5.		UG/L	11/23/94	Y	1,1,1-Trichloroethane
DT10MA	94.22104	79005	< 5.		UG/L	11/23/94	Y	1,1,2-Trichloroethane
DT10MA	94.22104	79016	< 5.		UG/L	11/23/94	Y	Trichloroethene
DT10MA	94.22104	75694	< 5.		UG/L	11/23/94	Y	Trichlorofluoromethane
DT10MA	94.22104	96184	< 5.		UG/L	11/23/94	Y	1,2,3-Trichloropropane
DT10MA	94.22104	95636	< 5.		UG/L	11/23/94	Y	1,2,4-Trimethylbenzene
DT10MA	94.22104	108678	< 5.		UG/L	11/23/94	Y	1,3,5-Trimethylbenzene
DT10MA	94.22104	75014	< 10.		UG/L	11/23/94	Y	Vinyl chloride
DT10MA	94.22104	1330207	< 5.		UG/L	11/23/94	Y	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 94.22104

none

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

Matrix Spike Results for Sample # 94.22104 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: Date Analyzed: 9/13/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT10MA	94.22104	71432	50.	46.	UG/L	11/23/94		Benzene
DT10MA	94.22104	108907	50.	47.	UG/L	11/23/94		Chlorobenzene
DT10MA	94.22104	75354	50.	59.	UG/L	11/23/94		1,1-Dichloroethene
DT10MA	94.22104	108883	50.	42.	UG/L	11/23/94		Toluene
DT10MA	94.22104	79016	50.	50.	UG/L	11/23/94		Trichloroethene

Matrix Spike Duplicate Results for Sample # 94.22104 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: Date Analyzed: 9/13/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT10MA	94.22104	71432	50.	44.	UG/L	11/23/94		Benzene
DT10MA	94.22104	108907	50.	46.	UG/L	11/23/94		Chlorobenzene
DT10MA	94.22104	75354	50.	57.	UG/L	11/23/94		1,1-Dichloroethene
DT10MA	94.22104	108883	50.	42.	UG/L	11/23/94		Toluene
DT10MA	94.22104	79016	50.	49.	UG/L	11/23/94		Trichloroethene

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

EPA VOLATILES Prepared by: JDT on 23-Nov-1994

REQUEST NUMBER: 18986 MATRIX: W ANALYST: MICHAEL GUTTMAN PROGRAM CODE: WE1C NOTEBOOK: PAGE:

OWNER: Max Maes GROUP: ESH-18 MAIL-STOP: K497 PHONE: 7-0817 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA SW-846 3RD

Customer Sample Results, Sample # 94.22105 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: Date Analyzed: 9/13/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
TRIPBLANK	94.22105	67641	< 20.		UG/L	11/23/94	Y	Acetone
TRIPBLANK	94.22105	71432	< 5.		UG/L	11/23/94	Y	Benzene
TRIPBLANK	94.22105	108861	< 5.		UG/L	11/23/94	Y	Bromobenzene
TRIPBLANK	94.22105	74975	< 5.		UG/L	11/23/94	Y	Bromochloromethane
TRIPBLANK	94.22105	75274	< 5.		UG/L	11/23/94	Y	Bromodichloromethane
TRIPBLANK	94.22105	75252	< 5.		UG/L	11/23/94	Y	Bromoform
TRIPBLANK	94.22105	74839	< 10.		UG/L	11/23/94	Y	Bromomethane
TRIPBLANK	94.22105	78933	< 20.		UG/L	11/23/94	Y	2-Butanone
TRIPBLANK	94.22105	104518	< 5.		UG/L	11/23/94	Y	n-Butylbenzene
TRIPBLANK	94.22105	135988	< 5.		UG/L	11/23/94	Y	sec-Butylbenzene
TRIPBLANK	94.22105	98066	< 5.		UG/L	11/23/94	Y	tert-Butylbenzene
TRIPBLANK	94.22105	75150	< 5.		UG/L	11/23/94	Y	Carbon disulfide
TRIPBLANK	94.22105	56235	< 5.		UG/L	11/23/94	Y	Carbon tetrachloride
TRIPBLANK	94.22105	108907	< 5.		UG/L	11/23/94	Y	Chlorobenzene
TRIPBLANK	94.22105	124481	< 5.		UG/L	11/23/94	Y	Chlorodibromomethane
TRIPBLANK	94.22105	75003	< 10.		UG/L	11/23/94	Y	Chloroethane
TRIPBLANK	94.22105	67663	< 5.		UG/L	11/23/94	Y	Chloroform
TRIPBLANK	94.22105	74873	< 10.		UG/L	11/23/94	Y	Chloromethane
TRIPBLANK	94.22105	95498	< 5.		UG/L	11/23/94	Y	o-Chlorotoluene
TRIPBLANK	94.22105	106434	< 5.		UG/L	11/23/94	Y	p-Chlorotoluene
TRIPBLANK	94.22105	96128	< 10.		UG/L	11/23/94	Y	1,2-Dibromo-3-chloropropane
TRIPBLANK	94.22105	74953	< 5.		UG/L	11/23/94	Y	Dibromomethane
TRIPBLANK	94.22105	95501	< 5.		UG/L	11/23/94	Y	o-Dichlorobenzene (1,2)
TRIPBLANK	94.22105	541731	< 5.		UG/L	11/23/94	Y	m-Dichlorobenzene (1,3)
TRIPBLANK	94.22105	106467	< 5.		UG/L	11/23/94	Y	p-Dichlorobenzene (1,4)
TRIPBLANK	94.22105	75718	< 10.		UG/L	11/23/94	Y	Dichlorodifluoromethane

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
TRIPBLANK	94.22105	75343	< 5.		UG/L	11/23/94	Y	1,1-Dichloroethane
TRIPBLANK	94.22105	107062	< 5.		UG/L	11/23/94	Y	1,2-Dichloroethane
TRIPBLANK	94.22105	75354	< 5.		UG/L	11/23/94	Y	1,1-Dichloroethene
TRIPBLANK	94.22105	156605	< 5.		UG/L	11/23/94	Y	trans-1,2-Dichloroethene
TRIPBLANK	94.22105	156592	< 5.		UG/L	11/23/94	Y	cis-1,2-Dichloroethylene
TRIPBLANK	94.22105	78875	< 5.		UG/L	11/23/94	Y	1,2-Dichloropropane
TRIPBLANK	94.22105	142289	< 5.		UG/L	11/23/94	Y	1,3-Dichloropropane
TRIPBLANK	94.22105	594207	< 5.		UG/L	11/23/94	Y	2,2-Dichloropropane
TRIPBLANK	94.22105	563586	< 5.		UG/L	11/23/94	Y	1,1-Dichloropropene
TRIPBLANK	94.22105	10061015	< 5.		UG/L	11/23/94	Y	cis-1,3-Dichloropropene
TRIPBLANK	94.22105	10061026	< 5.		UG/L	11/23/94	Y	trans-1,3-Dichloropropene
TRIPBLANK	94.22105	100414	< 5.		UG/L	11/23/94	Y	Ethylbenzene
TRIPBLANK	94.22105	106934	< 5.		UG/L	11/23/94	Y	Ethylene dibromide
TRIPBLANK	94.22105	591786	< 20.		UG/L	11/23/94	Y	2-Hexanone
TRIPBLANK	94.22105	98828	< 5.		UG/L	11/23/94	Y	Isopropylbenzene
TRIPBLANK	94.22105	99876	< 5.		UG/L	11/23/94	Y	4-Isopropyltoluene
TRIPBLANK	94.22105	74884	< 5.		UG/L	11/23/94	Y	Methyl iodide
TRIPBLANK	94.22105	108101	< 20.		UG/L	11/23/94	Y	4-Methyl-2-pentanone
TRIPBLANK	94.22105	75092	< 5.		UG/L	11/23/94	Y	Methylene chloride
TRIPBLANK	94.22105	103651	< 5.		UG/L	11/23/94	Y	Propylbenzene
TRIPBLANK	94.22105	100425	< 5.		UG/L	11/23/94	Y	Styrene
TRIPBLANK	94.22105	630206	< 5.		UG/L	11/23/94	Y	1,1,1,2-Tetrachloroethane
TRIPBLANK	94.22105	79345	< 5.		UG/L	11/23/94	Y	1,1,2,2-Tetrachloroethane
TRIPBLANK	94.22105	127184	< 5.		UG/L	11/23/94	Y	Tetrachloroethylene
TRIPBLANK	94.22105	108883	< 5.		UG/L	11/23/94	Y	Toluene
TRIPBLANK	94.22105	76131	< 5.		UG/L	11/23/94	Y	1,1,2-Trichloro-1,2,2-trifluoroethane
TRIPBLANK	94.22105	71556	< 5.		UG/L	11/23/94	Y	1,1,1-Trichloroethane
TRIPBLANK	94.22105	79005	< 5.		UG/L	11/23/94	Y	1,1,2-Trichloroethane
TRIPBLANK	94.22105	79016	< 5.		UG/L	11/23/94	Y	Trichloroethene
TRIPBLANK	94.22105	75694	< 5.		UG/L	11/23/94	Y	Trichlorofluoromethane
TRIPBLANK	94.22105	96184	< 5.		UG/L	11/23/94	Y	1,2,3-Trichloropropane
TRIPBLANK	94.22105	95636	< 5.		UG/L	11/23/94	Y	1,2,4-Trimethylbenzene
TRIPBLANK	94.22105	108678	< 5.		UG/L	11/23/94	Y	1,3,5-Trimethylbenzene
TRIPBLANK	94.22105	75014	< 10.		UG/L	11/23/94	Y	Vinyl chloride
TRIPBLANK	94.22105	1330207	< 5.		UG/L	11/23/94	Y	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 94.22105

none

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

EPA VOLATILES Prepared by: JDT on 23-Nov-1994

REQUEST NUMBER: 18986 MATRIX: W ANALYST: MICHAEL GUTTMAN PROGRAM CODE: WE1C NOTEBOOK: PAGE:

OWNER: Max Maes GROUP: ESH-18 MAIL-STOP: K497 PHONE: 7-0817 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA SW-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 EM-9

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

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

Blank Results, Sample # 94.22106 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: Date Analyzed: 9/13/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.20226	94.22106	67641	< 20.		UG/L	0.0		11/23/94	UNDER CONTROL	Acetone
00.20226	94.22106	71432	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Benzene
00.20226	94.22106	108861	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Bromobenzene
00.20226	94.22106	74975	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Bromochloromethane
00.20226	94.22106	75274	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Bromodichloromethane
00.20226	94.22106	75252	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Bromoform
00.20226	94.22106	74839	< 10.		UG/L	0.0		11/23/94	UNDER CONTROL	Bromomethane
00.20226	94.22106	78933	< 20.		UG/L	0.0		11/23/94	UNDER CONTROL	2-Butanone
00.20226	94.22106	104518	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	n-Butylbenzene
00.20226	94.22106	135988	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	sec-Butylbenzene
00.20226	94.22106	98066	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	tert-Butylbenzene
00.20226	94.22106	75150	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Carbon disulfide
00.20226	94.22106	56235	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Carbon tetrachloride
00.20226	94.22106	108907	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Chlorobenzene
00.20226	94.22106	124481	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Chlorodibromomethane
00.20226	94.22106	75003	< 10.		UG/L	0.0		11/23/94	UNDER CONTROL	Chloroethane
00.20226	94.22106	67663	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Chloroform
00.20226	94.22106	74873	< 10.		UG/L	0.0		11/23/94	UNDER CONTROL	Chloromethane
00.20226	94.22106	95498	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	o-Chlorotoluene
00.20226	94.22106	106434	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	p-Chlorotoluene
00.20226	94.22106	96128	< 10.		UG/L	0.0		11/23/94	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
00.20226	94.22106	74953	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Dibromomethane
00.20226	94.22106	95501	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.20226	94.22106	541731	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.20226	94.22106	106467	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.20226	94.22106	75718	< 10.		UG/L	0.0		11/23/94	UNDER CONTROL	Dichlorodifluoromethane
00.20226	94.22106	75343	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,1-Dichloroethane
00.20226	94.22106	107062	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,2-Dichloroethane
00.20226	94.22106	75354	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,1-Dichloroethene
00.20226	94.22106	156605	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	trans-1,2-Dichloroethene
00.20226	94.22106	156592	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	cis-1,2-Dichloroethylene
00.20226	94.22106	78875	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,2-Dichloropropane
00.20226	94.22106	142289	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,3-Dichloropropane
00.20226	94.22106	594207	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	2,2-Dichloropropane
00.20226	94.22106	563586	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,1-Dichloropropene
00.20226	94.22106	10061015	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	cis-1,3-Dichloropropene
00.20226	94.22106	10061026	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	trans-1,3-Dichloropropene
00.20226	94.22106	100414	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Ethylbenzene
00.20226	94.22106	106934	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Ethylene dibromide
00.20226	94.22106	591786	< 20.		UG/L	0.0		11/23/94	UNDER CONTROL	2-Hexanone
00.20226	94.22106	98828	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Isopropylbenzene
00.20226	94.22106	99876	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	4-Isopropyltoluene
00.20226	94.22106	74884	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Methyl iodide
00.20226	94.22106	108101	< 20.		UG/L	0.0		11/23/94	UNDER CONTROL	4-Methyl-2-pentanone
00.20226	94.22106	75092	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Methylene chloride
00.20226	94.22106	103651	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Propylbenzene
00.20226	94.22106	100425	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Styrene
00.20226	94.22106	630206	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,1,1,2-Tetrachloroethane
00.20226	94.22106	79345	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,1,2,2-Tetrachloroethane
00.20226	94.22106	127184	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Tetrachloroethylene
00.20226	94.22106	108883	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Toluene
00.20226	94.22106	76131	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroetha
00.20226	94.22106	71556	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,1,1-Trichloroethane
00.20226	94.22106	79005	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,1,2-Trichloroethane
00.20226	94.22106	79016	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Trichloroethene
00.20226	94.22106	75694	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	Trichlorofluoromethane
00.20226	94.22106	96184	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,2,3-Trichloropropane

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.20226	94.22106	95636	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,2,4-Trimethylbenzene
00.20226	94.22106	108678	< 5.		UG/L	0.0		11/23/94	UNDER CONTROL	1,3,5-Trimethylbenzene
00.20226	94.22106	75014	< 10.		UG/L	0.0		11/23/94	UNDER CONTROL	Vinyl chloride
00.20226	94.22106	1330207	< 5.		UG/L	0.0		11/23/94	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 EM-9

********** 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
94.22101	%	94.72	87.32	104.12		0.0	23-Nov-1994	
94.22103	%	100.02	85.24	106.64		0.0	23-Nov-1994	
94.22104	%	98.76	87.3	107.22		0.0	23-Nov-1994	MS
94.22104	%	96.06	86.1	108.88		0.0	23-Nov-1994	MSD
94.22104	%	95.46	88.22	104.28		0.0	23-Nov-1994	
94.22105	%	86.14	87.66	111.22		0.0	23-Nov-1994	
94.22106	%	90.14	84.48	108.54		0.0	23-Nov-1994	B
EPA Limits:								
Water	%	76 - 114	88 - 110	86 - 115	86 - 115	86 - 118		
Soil	%	70 - 121	81 - 117	74 - 121	74 - 121			

REPORT NUMBER: 29651

Analyst	Reviewer	Section Leader	QA Officer
11/23/94	11/23/94		11/28/94
Date	Date	Date	Date

No Sample Discrepancies Noted by Sample Management Section

The control status of the preceeding 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

****

CST-12 SEMIVOLATILE ORGANIC ANALYSIS
SUMMARY OF ANALYTICAL RESULTS

TO: Max Maes ESH-18
FROM: Anthony Lombardo, CST-12 Organic section 1/25/95

REQUEST NUMBER: 18986
MATRIX: Water
SUMMARY DATE: January 19, 1995

1. Results Summary

Three water sample were received fo semivolatile analysis. Samples were collected on September 8, 1994. Sample extraction was started on September 14, 1994. The samples were analyzed on October 19, 1994. All hold times were met. Below is a tabulation of the analytical results:

SAMPLE ID	TARGET COMPOUNDS FOUND	AMOUNT (ug/L)	LOQ (ug/L)	TICs	
94.22108 (Blank)	Bis(2-ethylhexyl)-phthalate	88	10	Y	Method Blank
94.22101	NONE	<10	10	Y	DT-5A
94.22103	1,2,4-Trichlorobenzene	37	10	Y	DT-9
	Di-n-butylphthalate	13			
	Butylbenzylphthalate	55			
	Bis(2-ethylhexyl)-phthalate	290*	10	Y	
94.22104	NONE	<10	10	Y	DT-10

LOQ: Limit Of Quantitation
TICs: Tentatively identified compounds

Non-target peaks were not identified or quantitated for this request. Further information on TICs can be provided at customer request.

2. Method Summary

Samples were extracted by continuous liquid-liquid extraction method. a measured volume of sample, usually 1 liter, is placed in a continuous liquid-liquid extractor. pH is adjusted to >11 (base-neutral extraction) and the sample is extracted for 18 to 24 hours. The sample pH is then adjusted to <2 (acid extraction) and methylene chloride extraction is repeated for an additional 18 to 24 hours. Sample extracts were then combined, dried and concentrated to 1.0 ml final volume. Appropriate surrogate standards were added prior to extraction. Analysis was performed by capillary column GC/MS methods. Extraction and analysis methods are consistent with EPA SW-846 methods 3520 and 8270. Analytical column used was a J&W Scientific DB5-MS 30M by 0.25 mm ID, 0.25 micron film or equivalent.

3. Anomalies and analysis notes.

1/25/95

Sample analyses met all QA/QC criteria as outlined in EPA-SW846 methods and LANL SOPs, except where noted below.

In the blank analysis, 94.22108, internal standard Acenapthene-d10 was not seen, and internal standards Chrysene-d12 and Perylene-d12 responses were very low. Surrogates 2-Fluorophenol, Phenol-d5 and 2-Fluorobiphenyl were not recovered.

In the blank matrix spike duplicate analysis, internal standard Perylene-d12 response was out of criteria. Surrogate Phenol-d5 recovery was low. spike compounds Phenol, 4-chloro-3-methylphenol and pyrene were not recovered.

In sample 94.22103, internal standards Acenaphthene-d10, Phenanthrene-d10, Chrysene-d12 and Perylene-d12 responses were out of criteria. Five of the 6 surrogate recoveries were out of criteria. Bis(2-ethylhexyl)phthalate was seen at a concentraction which was above our upper limit of quantitation.

The blank, blank matrix spike duplicate and sample 94.22103 were re-analyzed. Similar results were obtained. There was insufficient sample to re-extract.

Surrogate recoveries and internal standard responses were in criteria for the remaining analyses. All hold times were met. If you have any question regarding this data, please call Anthony Lombardo at 667-5889.

UNCD
1/25/95

LOS ALAMOS NATIONAL LABORATORY
EM-9 ORGANIC CHEMISTRY
SEMIVOLATILE ANOMALY REPORTING FORM

Reported by: A Lombardo Date: 1/20/95
Request number: 18456

Report to (circle):
S.V. task leader Organic section leader EM-9 group leader
QA/QC Dept. Extractions Client _____

Reply needed? (Y / N) Reply Due: _____

Type of problem (circle)
Surrogate criteria Extraction problem Hold time
Internal STD criteria Calibration QC Matrix
Other Ongoing? (Y / N)

Description: Include sample numbers, dates, etc. Continue on back.

1) B94.22108 – In ISs, surrogates out of criteria. High levels of TICs. Bis-2-ethylhexylphthalate present @ 88 ppb

2) B94.22108 (blank matrix spike dup) – ISs, surrogates out of criteria. High level TICs. Some matrix spike compounds were not recovered.

3) S94.22103 – ISs, surrogates out of criteria. High level of TICs. Bis-2-ethylhexylphthalate at >200 ppb

Corrective actions taken: Include dates taken or a schedule. If problem is ongoing, address actions taken/to be taken to prevent recurrence.

- All three extracts were re-analyzed; similar results were obtained.
- These problems were probably extraction related. Insufficient sample to re-extract. Samples 94.22101 and 94.22104 were seemingly unaffected

Taken by (sign & date): A Lombardo 1/20/95

[illegible] 1/20/95

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

REQUEST #: 18986

NUMBER OF SAMPLES: 7
MATRIX WU
ANALYST: AJL
Date: 01/25/95

SURROGATE RECOVERIES

SURROGATE
RECOVERIES IN PERCENT (%)

	SAMPLE NUMBERS	TYPE	2-FLUORO-PHENOL	PHENOL (D6)	NITRO-BENZENE (D5)	2-FLUORO-BIPHENYL	2,4,6-TRIBROMO-PHENOL	TERPHENYL (D14)
1	B94.22108	BLANK	0 *	0 *	80	0 *	23	41
2	S94.22101	SAMPLE	60	59	75	80	66	57
3	S94.22103	SAMPLE	0 *	0 *	92	12484 *	169 *	2541 *
4	S94.22104	SAMPLE	43	26	68	78	44	51
5	E94.22108	BLANK SPIKE	53	56	73	77	45	66
6	F94.22108	BLANK SP-DU	21	0 *	71	81	20	58
7	S94.22394	SAMPLE	43	37	55	62	61	60
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

Average % Surrogate Recovery...	32	25	73	1837	61	410
Defined Lower QC Limits (%)....	21	10	35	43	10	33
Defined Upper QC Limits (%)....	100	94	114	116	123	141
Observed Lower QC Limits (%)...	0	0	55	0	20	41
Observed Upper QC Limits (%)...	60	59	92	12484	169	2541

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

Reviewed By:

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

		DRY WT/VOL		AMOUNT SPIKED (50 OR 100 ug/ml)		
REQUEST #:	18986	(G or L)		IN UG/KG or UG/L		
NUMBER OF SAMPLES:	7			ACIDS	BASES	LOQ (UG/KG)
SPIKE ID: (STARTS M OR E)	E94.22108	SPIKE	1	100	50	10
SPIKE DUP ID: (STARTS D OR F)	F94.22108	SPIKE-DUP	1	100	50	10
RAW DATA WITH:						
ANALYST:	AJL					

	SPIKE REC.	SPIKE-DUP REC.	SPIKE % REC.	SPIKE-DUP % REC.	RPD	LOW. REC. LIM.	UPP. REC. LIM.	RPD LIM.
PHENOL	51	<LOQ	51%	0%*	200%*	12	89	42
2-CHLOROPHENOL	62	47	62%	47%	28%	27	123	40
1,4-DICHLOROBENZENE	34	32	68%	64%	6%	36	97	28
N-NITROSO-DI-N-PROPYLAMINE	33	23	66%	46%	36%	41	116	38
1,2,4-TRICLOROBENZENE	34	33	68%	66%	3%	39	98	28
4-CHLORO-3-METHYLPHENOL	36	<LOQ	36%	0%*	200%*	23	97	42
ACENAPHTHENE	12	<LOQ	24%*	0%*	200%*	46	118	31
4-NITROPHENOL	69	49	69%	49%	34%	10	80	50
2,4-DINITROTOLUENE	36	40	72%	80%	11%	24	96	38
PENTACHLOROPHENOL	66	47	66%	47%	34%	9	103	50
PYRENE	18	<LOQ	36%	0%*	200%*	26	127	31

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

1/25/95

Reviewed By:

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

EPA SEMIVOLATILES Prepared by: LCO on 25-Jan-1995

REQUEST NUMBER: 18986 MATRIX: W ANALYST: ANTHONY LOMBARDO PROGRAM CODE: WE1C NOTEBOOK: CST9026 PAGE: 69

OWNER: Max Maes GROUP: ESH-18 MAIL-STOP: K497 PHONE: 7-0817 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA SW-846 3RD

Customer Sample Results, Sample # 94.22101 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: 9/14/94 Date Analyzed: 10/19/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT5AMAUNF	94.22101	83329	< 10.		UG/L	1/25/95		Acenaphthene
DT5AMAUNF	94.22101	208968	< 10.		UG/L	1/25/95		Acenaphthylene
DT5AMAUNF	94.22101	62533	< 10.		UG/L	1/25/95		Aniline
DT5AMAUNF	94.22101	120127	< 10.		UG/L	1/25/95		Anthracene
DT5AMAUNF	94.22101	103333	< 10.		UG/L	1/25/95		Azobenzene
DT5AMAUNF	94.22101	92875	< 10.		UG/L	1/25/95		m-Benzidine
DT5AMAUNF	94.22101	56553	< 10.		UG/L	1/25/95		Benzo[a]anthracene
DT5AMAUNF	94.22101	50328	< 10.		UG/L	1/25/95		Benzo[a]pyrene
DT5AMAUNF	94.22101	205992	< 10.		UG/L	1/25/95		Benzo[b]fluoranthene
DT5AMAUNF	94.22101	191242	< 10.		UG/L	1/25/95		Benzo[g,h,i]perylene
DT5AMAUNF	94.22101	207089	< 10.		UG/L	1/25/95		Benzo[k]fluoranthene
DT5AMAUNF	94.22101	65850	< 10.		UG/L	1/25/95		Benzoic acid
DT5AMAUNF	94.22101	100516	< 10.		UG/L	1/25/95		Benzyl alcohol
DT5AMAUNF	94.22101	111911	< 10.		UG/L	1/25/95		Bis(2-chloroethoxy)methane
DT5AMAUNF	94.22101	111444	< 10.		UG/L	1/25/95		Bis(2-chloroethyl)ether
DT5AMAUNF	94.22101	108601	< 10.		UG/L	1/25/95		Bis(2-chloroisopropyl)ether
DT5AMAUNF	94.22101	117817	< 10.		UG/L	1/25/95		Bis(2-ethylhexyl)phthalate
DT5AMAUNF	94.22101	101553	< 10.		UG/L	1/25/95		4-Bromophenylphenyl ether
DT5AMAUNF	94.22101	85687	< 10.		UG/L	1/25/95		Butyl benzyl phthalate
DT5AMAUNF	94.22101	59507	< 10.		UG/L	1/25/95		4-Chloro-3-methylphenol
DT5AMAUNF	94.22101	106478	< 10.		UG/L	1/25/95		4-Chloroaniline
DT5AMAUNF	94.22101	91587	< 10.		UG/L	1/25/95		2-Chloronaphthalene
DT5AMAUNF	94.22101	95578	< 10.		UG/L	1/25/95		o-Chlorophenol
DT5AMAUNF	94.22101	7005723	< 10.		UG/L	1/25/95		4-Chlorophenylphenyl ether
DT5AMAUNF	94.22101	218019	< 10.		UG/L	1/25/95		Chrysene
DT5AMAUNF	94.22101	84742	< 10.		UG/L	1/25/95		Di-n-butyl phthalate

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT5AMAUNF	94.22101	117840	< 10.		UG/L	1/25/95		Di-n-octyl phthalate
DT5AMAUNF	94.22101	53703	< 10.		UG/L	1/25/95		Dibenzo[a,h]anthracene
DT5AMAUNF	94.22101	132649	< 10.		UG/L	1/25/95		Dibenzofuran
DT5AMAUNF	94.22101	95501	< 10.		UG/L	1/25/95		o-Dichlorobenzene (1,2)
DT5AMAUNF	94.22101	541731	< 10.		UG/L	1/25/95		m-Dichlorobenzene (1,3)
DT5AMAUNF	94.22101	106467	< 10.		UG/L	1/25/95		p-Dichlorobenzene (1,4)
DT5AMAUNF	94.22101	91941	< 10.		UG/L	1/25/95		3,3'-Dichlorobenzidine
DT5AMAUNF	94.22101	120832	< 10.		UG/L	1/25/95		2,4-Dichlorophenol
DT5AMAUNF	94.22101	84662	< 10.		UG/L	1/25/95		Diethyl phthalate
DT5AMAUNF	94.22101	131113	< 10.		UG/L	1/25/95		Dimethyl phthalate
DT5AMAUNF	94.22101	105679	< 10.		UG/L	1/25/95		2,4-Dimethylphenol
DT5AMAUNF	94.22101	51285	< 10.		UG/L	1/25/95		2,4-Dinitrophenol
DT5AMAUNF	94.22101	121142	< 10.		UG/L	1/25/95		2,4-Dinitrotoluene
DT5AMAUNF	94.22101	606202	< 10.		UG/L	1/25/95		2,6-Dinitrotoluene
DT5AMAUNF	94.22101	206440	< 10.		UG/L	1/25/95		Fluoranthene
DT5AMAUNF	94.22101	86737	< 10.		UG/L	1/25/95		Fluorene
DT5AMAUNF	94.22101	118741	< 10.		UG/L	1/25/95		Hexachlorobenzene
DT5AMAUNF	94.22101	87683	< 10.		UG/L	1/25/95		Hexachlorobutadiene
DT5AMAUNF	94.22101	77474	< 10.		UG/L	1/25/95		Hexachlorocyclopentadiene
DT5AMAUNF	94.22101	67721	< 10.		UG/L	1/25/95		Hexachloroethane
DT5AMAUNF	94.22101	193395	< 10.		UG/L	1/25/95		Indeno[1,2,3-cd]pyrene
DT5AMAUNF	94.22101	78591	< 10.		UG/L	1/25/95		Isophorone
DT5AMAUNF	94.22101	534521	< 10.		UG/L	1/25/95		2-Methyl-4,6-dinitrophenol
DT5AMAUNF	94.22101	91576	< 10.		UG/L	1/25/95		2-Methylnaphthalene
DT5AMAUNF	94.22101	95487	< 10.		UG/L	1/25/95		2-Methylphenol
DT5AMAUNF	94.22101	106445	< 10.		UG/L	1/25/95		4-Methylphenol
DT5AMAUNF	94.22101	91203	< 10.		UG/L	1/25/95		Naphthalene
DT5AMAUNF	94.22101	88744	< 10.		UG/L	1/25/95		2-Nitroaniline
DT5AMAUNF	94.22101	99092	< 10.		UG/L	1/25/95		3-Nitroaniline
DT5AMAUNF	94.22101	100016	< 10.		UG/L	1/25/95		4-Nitroaniline
DT5AMAUNF	94.22101	98953	< 10.		UG/L	1/25/95		Nitrobenzene
DT5AMAUNF	94.22101	88755	< 10.		UG/L	1/25/95		2-Nitrophenol
DT5AMAUNF	94.22101	100027	< 10.		UG/L	1/25/95		4-Nitrophenol
DT5AMAUNF	94.22101	621647	< 10.		UG/L	1/25/95		N-Nitrosodi-n-propylamine
DT5AMAUNF	94.22101	62759	< 10.		UG/L	1/25/95		N-Nitrosodimethylamine
DT5AMAUNF	94.22101	86306	< 10.		UG/L	1/25/95		N-Nitrosodiphenylamine

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT5AMAUNF	94.22101	87865	< 10.		UG/L	1/25/95		Pentachlorophenol
DT5AMAUNF	94.22101	85018	< 10.		UG/L	1/25/95		Phenanthrene
DT5AMAUNF	94.22101	108952	< 10.		UG/L	1/25/95		Phenol
DT5AMAUNF	94.22101	129000	< 10.		UG/L	1/25/95		Pyrene
DT5AMAUNF	94.22101	120821	< 10.		UG/L	1/25/95		1,2,4-Trichlorobenzene
DT5AMAUNF	94.22101	95954	< 10.		UG/L	1/25/95		2,4,5-Trichlorophenol
DT5AMAUNF	94.22101	88062	< 10.		UG/L	1/25/95		2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 94.22101

none

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

EPA SEMIVOLATILES Prepared by: LCO on 25-Jan-1995

REQUEST NUMBER: 18986 MATRIX: W ANALYST: ANTHONY LOMBARDO PROGRAM CODE: WE1C NOTEBOOK: CST9026 PAGE: 69

OWNER: Max Maes GROUP: ESH-18 MAIL-STOP: K497 PHONE: 7-0817 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA SW-846 3RD

Customer Sample Results, Sample # 94.22103 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: 9/14/94 Date Analyzed: 10/19/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT9MA	94.22103	83329	< 10.		UG/L	1/25/95		Acenaphthene
DT9MA	94.22103	208968	< 10.		UG/L	1/25/95		Acenaphthylene
DT9MA	94.22103	62533	< 10.		UG/L	1/25/95		Aniline
DT9MA	94.22103	120127	< 10.		UG/L	1/25/95		Anthracene
DT9MA	94.22103	103333	< 10.		UG/L	1/25/95		Azobenzene
DT9MA	94.22103	92875	< 10.		UG/L	1/25/95		m-Benzidine
DT9MA	94.22103	56553	< 10.		UG/L	1/25/95		Benzo[a]anthracene
DT9MA	94.22103	50328	< 10.		UG/L	1/25/95		Benzo[a]pyrene
DT9MA	94.22103	205992	< 10.		UG/L	1/25/95		Benzo[b]fluoranthene
DT9MA	94.22103	191242	< 10.		UG/L	1/25/95		Benzo[g,h,i]perylene
DT9MA	94.22103	207089	< 10.		UG/L	1/25/95		Benzo[k]fluoranthene
DT9MA	94.22103	65850	< 10.		UG/L	1/25/95		Benzoic acid
DT9MA	94.22103	100516	< 10.		UG/L	1/25/95		Benzyl alcohol
DT9MA	94.22103	111911	< 10.		UG/L	1/25/95		Bis(2-chloroethoxy)methane
DT9MA	94.22103	111444	< 10.		UG/L	1/25/95		Bis(2-chloroethyl)ether
DT9MA	94.22103	108601	< 10.		UG/L	1/25/95		Bis(2-chloroisopropyl)ether
DT9MA	94.22103	117817	290.	87.	UG/L	1/25/95		Bis(2-ethylhexyl)phthalate
DT9MA	94.22103	101553	< 10.		UG/L	1/25/95		4-Bromophenylphenyl ether
DT9MA	94.22103	85687	55.	16.5	UG/L	1/25/95		Butyl benzyl phthalate
DT9MA	94.22103	59507	< 10.		UG/L	1/25/95		4-Chloro-3-methylphenol
DT9MA	94.22103	106478	< 10.		UG/L	1/25/95		4-Chloroaniline
DT9MA	94.22103	91587	< 10.		UG/L	1/25/95		2-Chloronaphthalene
DT9MA	94.22103	95578	< 10.		UG/L	1/25/95		o-Chlorophenol
DT9MA	94.22103	7005723	< 10.		UG/L	1/25/95		4-Chlorophenylphenyl ether
DT9MA	94.22103	218019	< 10.		UG/L	1/25/95		Chrysene
DT9MA	94.22103	84742	13.	3.9	UG/L	1/25/95		Di-n-butyl phthalate

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT9MA	94.22103	117840	< 10.		UG/L	1/25/95		Di-n-octyl phthalate
DT9MA	94.22103	53703	< 10.		UG/L	1/25/95		Dibenzo[a,h]anthracene
DT9MA	94.22103	132649	< 10.		UG/L	1/25/95		Dibenzofuran
DT9MA	94.22103	95501	< 10.		UG/L	1/25/95		o-Dichlorobenzene (1,2)
DT9MA	94.22103	541731	< 10.		UG/L	1/25/95		m-Dichlorobenzene (1,3)
DT9MA	94.22103	106467	< 10.		UG/L	1/25/95		p-Dichlorobenzene (1,4)
DT9MA	94.22103	91941	< 10.		UG/L	1/25/95		3,3'-Dichlorobenzidine
DT9MA	94.22103	120832	< 10.		UG/L	1/25/95		2,4-Dichlorophenol
DT9MA	94.22103	84662	< 10.		UG/L	1/25/95		Diethyl phthalate
DT9MA	94.22103	131113	< 10.		UG/L	1/25/95		Dimethyl phthalate
DT9MA	94.22103	105679	< 10.		UG/L	1/25/95		2,4-Dimethylphenol
DT9MA	94.22103	51285	< 10.		UG/L	1/25/95		2,4-Dinitrophenol
DT9MA	94.22103	121142	< 10.		UG/L	1/25/95		2,4-Dinitrotoluene
DT9MA	94.22103	606202	< 10.		UG/L	1/25/95		2,6-Dinitrotoluene
DT9MA	94.22103	206440	< 10.		UG/L	1/25/95		Fluoranthene
DT9MA	94.22103	86737	< 10.		UG/L	1/25/95		Fluorene
DT9MA	94.22103	118741	< 10.		UG/L	1/25/95		Hexachlorobenzene
DT9MA	94.22103	87683	< 10.		UG/L	1/25/95		Hexachlorobutadiene
DT9MA	94.22103	77474	< 10.		UG/L	1/25/95		Hexachlorocyclopentadiene
DT9MA	94.22103	67721	< 10.		UG/L	1/25/95		Hexachloroethane
DT9MA	94.22103	193395	< 10.		UG/L	1/25/95		Indeno[1,2,3-cd]pyrene
DT9MA	94.22103	78591	< 10.		UG/L	1/25/95		Isophorone
DT9MA	94.22103	534521	< 10.		UG/L	1/25/95		2-Methyl-4,6-dinitrophenol
DT9MA	94.22103	91576	< 10.		UG/L	1/25/95		2-Methylnaphthalene
DT9MA	94.22103	95487	< 10.		UG/L	1/25/95		2-Methylphenol
DT9MA	94.22103	106445	< 10.		UG/L	1/25/95		4-Methylphenol
DT9MA	94.22103	91203	< 10.		UG/L	1/25/95		Naphthalene
DT9MA	94.22103	88744	< 10.		UG/L	1/25/95		2-Nitroaniline
DT9MA	94.22103	99092	< 10.		UG/L	1/25/95		3-Nitroaniline
DT9MA	94.22103	100016	< 10.		UG/L	1/25/95		4-Nitroaniline
DT9MA	94.22103	98953	< 10.		UG/L	1/25/95		Nitrobenzene
DT9MA	94.22103	88755	< 10.		UG/L	1/25/95		2-Nitrophenol
DT9MA	94.22103	100027	< 10.		UG/L	1/25/95		4-Nitrophenol
DT9MA	94.22103	621647	< 10.		UG/L	1/25/95		N-Nitrosodi-n-propylamine
DT9MA	94.22103	62759	< 10.		UG/L	1/25/95		N-Nitrosodimethylamine
DT9MA	94.22103	86306	< 10.		UG/L	1/25/95		N-Nitrosodiphenylamine

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT9MA	94.22103	87865	< 10.		UG/L	1/25/95		Pentachlorophenol
DT9MA	94.22103	85018	< 10.		UG/L	1/25/95		Phenanthrene
DT9MA	94.22103	108952	< 10.		UG/L	1/25/95		Phenol
DT9MA	94.22103	129000	< 10.		UG/L	1/25/95		Pyrene
DT9MA	94.22103	120821	37.	11.1	UG/L	1/25/95		1,2,4-Trichlorobenzene
DT9MA	94.22103	95954	< 10.		UG/L	1/25/95		2,4,5-Trichlorophenol
DT9MA	94.22103	88062	< 10.		UG/L	1/25/95		2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 94.22103

none

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

EPA SEMIVOLATILES Prepared by: LCO on 25-Jan-1995

REQUEST NUMBER: 18986 MATRIX: W ANALYST: ANTHONY LOMBARDO PROGRAM CODE: WE1C NOTEBOOK: CST9026 PAGE: 69

OWNER: Max Maes GROUP: ESH-18 MAIL-STOP: K497 PHONE: 7-0817 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA SW-846 3RD

Customer Sample Results, Sample # 94.22104 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: 9/14/94 Date Analyzed: 10/19/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT10MA	94.22104	83329	< 10.		UG/L	1/25/95		Acenaphthene
DT10MA	94.22104	208968	< 10.		UG/L	1/25/95		Acenaphthylene
DT10MA	94.22104	62533	< 10.		UG/L	1/25/95		Aniline
DT10MA	94.22104	120127	< 10.		UG/L	1/25/95		Anthracene
DT10MA	94.22104	103333	< 10.		UG/L	1/25/95		Azobenzene
DT10MA	94.22104	92875	< 10.		UG/L	1/25/95		m-Benzidine
DT10MA	94.22104	56553	< 10.		UG/L	1/25/95		Benzo[a]anthracene
DT10MA	94.22104	50328	< 10.		UG/L	1/25/95		Benzo[a]pyrene
DT10MA	94.22104	205992	< 10.		UG/L	1/25/95		Benzo[b]fluoranthene
DT10MA	94.22104	191242	< 10.		UG/L	1/25/95		Benzo[g,h,i]perylene
DT10MA	94.22104	207089	< 10.		UG/L	1/25/95		Benzo[k]fluoranthene
DT10MA	94.22104	65850	< 10.		UG/L	1/25/95		Benzoic acid
DT10MA	94.22104	100516	< 10.		UG/L	1/25/95		Benzyl alcohol
DT10MA	94.22104	111911	< 10.		UG/L	1/25/95		Bis(2-chloroethoxy)methane
DT10MA	94.22104	111444	< 10.		UG/L	1/25/95		Bis(2-chloroethyl)ether
DT10MA	94.22104	108601	< 10.		UG/L	1/25/95		Bis(2-chloroisopropyl)ether
DT10MA	94.22104	117817	< 10.		UG/L	1/25/95		Bis(2-ethylhexyl)phthalate
DT10MA	94.22104	101553	< 10.		UG/L	1/25/95		4-Bromophenylphenyl ether
DT10MA	94.22104	85687	< 10.		UG/L	1/25/95		Butyl benzyl phthalate
DT10MA	94.22104	59507	< 10.		UG/L	1/25/95		4-Chloro-3-methylphenol
DT10MA	94.22104	106478	< 10.		UG/L	1/25/95		4-Chloroaniline
DT10MA	94.22104	91587	< 10.		UG/L	1/25/95		2-Chloronaphthalene
DT10MA	94.22104	95578	< 10.		UG/L	1/25/95		o-Chlorophenol
DT10MA	94.22104	7005723	< 10.		UG/L	1/25/95		4-Chlorophenylphenyl ether
DT10MA	94.22104	218019	< 10.		UG/L	1/25/95		Chrysene
DT10MA	94.22104	84742	< 10.		UG/L	1/25/95		Di-n-butyl phthalate

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT10MA	94.22104	117840	< 10.		UG/L	1/25/95		Di-n-octyl phthalate
DT10MA	94.22104	53703	< 10.		UG/L	1/25/95		Dibenzo[a,h]anthracene
DT10MA	94.22104	132649	< 10.		UG/L	1/25/95		Dibenzofuran
DT10MA	94.22104	95501	< 10.		UG/L	1/25/95		o-Dichlorobenzene (1,2)
DT10MA	94.22104	541731	< 10.		UG/L	1/25/95		m-Dichlorobenzene (1,3)
DT10MA	94.22104	106467	< 10.		UG/L	1/25/95		p-Dichlorobenzene (1,4)
DT10MA	94.22104	91941	< 10.		UG/L	1/25/95		3,3'-Dichlorobenzidine
DT10MA	94.22104	120832	< 10.		UG/L	1/25/95		2,4-Dichlorophenol
DT10MA	94.22104	84662	< 10.		UG/L	1/25/95		Diethyl phthalate
DT10MA	94.22104	131113	< 10.		UG/L	1/25/95		Dimethyl phthalate
DT10MA	94.22104	105679	< 10.		UG/L	1/25/95		2,4-Dimethylphenol
DT10MA	94.22104	51285	< 10.		UG/L	1/25/95		2,4-Dinitrophenol
DT10MA	94.22104	121142	< 10.		UG/L	1/25/95		2,4-Dinitrotoluene
DT10MA	94.22104	606202	< 10.		UG/L	1/25/95		2,6-Dinitrotoluene
DT10MA	94.22104	206440	< 10.		UG/L	1/25/95		Fluoranthene
DT10MA	94.22104	86737	< 10.		UG/L	1/25/95		Fluorene
DT10MA	94.22104	118741	< 10.		UG/L	1/25/95		Hexachlorobenzene
DT10MA	94.22104	87683	< 10.		UG/L	1/25/95		Hexachlorobutadiene
DT10MA	94.22104	77474	< 10.		UG/L	1/25/95		Hexachlorocyclopentadiene
DT10MA	94.22104	67721	< 10.		UG/L	1/25/95		Hexachloroethane
DT10MA	94.22104	193395	< 10.		UG/L	1/25/95		Indeno[1,2,3-cd]pyrene
DT10MA	94.22104	78591	< 10.		UG/L	1/25/95		Isophorone
DT10MA	94.22104	534521	< 10.		UG/L	1/25/95		2-Methyl-4,6-dinitrophenol
DT10MA	94.22104	91576	< 10.		UG/L	1/25/95		2-Methylnaphthalene
DT10MA	94.22104	95487	< 10.		UG/L	1/25/95		2-Methylphenol
DT10MA	94.22104	106445	< 10.		UG/L	1/25/95		4-Methylphenol
DT10MA	94.22104	91203	< 10.		UG/L	1/25/95		Naphthalene
DT10MA	94.22104	88744	< 10.		UG/L	1/25/95		2-Nitroaniline
DT10MA	94.22104	99092	< 10.		UG/L	1/25/95		3-Nitroaniline
DT10MA	94.22104	100016	< 10.		UG/L	1/25/95		4-Nitroaniline
DT10MA	94.22104	98953	< 10.		UG/L	1/25/95		Nitrobenzene
DT10MA	94.22104	88755	< 10.		UG/L	1/25/95		2-Nitrophenol
DT10MA	94.22104	100027	< 10.		UG/L	1/25/95		4-Nitrophenol
DT10MA	94.22104	621647	< 10.		UG/L	1/25/95		N-Nitrosodi-n-propylamine
DT10MA	94.22104	62759	< 10.		UG/L	1/25/95		N-Nitrosodimethylamine
DT10MA	94.22104	86306	< 10.		UG/L	1/25/95		N-Nitrosodiphenylamine

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DT10MA	94.22104	87865	< 10.		UG/L	1/25/95		Pentachlorophenol
DT10MA	94.22104	85018	< 10.		UG/L	1/25/95		Phenanthrene
DT10MA	94.22104	108952	< 10.		UG/L	1/25/95		Phenol
DT10MA	94.22104	129000	< 10.		UG/L	1/25/95		Pyrene
DT10MA	94.22104	120821	< 10.		UG/L	1/25/95		1,2,4-Trichlorobenzene
DT10MA	94.22104	95954	< 10.		UG/L	1/25/95		2,4,5-Trichlorophenol
DT10MA	94.22104	88062	< 10.		UG/L	1/25/95		2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 94.22104

none

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

EPA SEMIVOLATILES Prepared by: LCO on 25-Jan-1995

REQUEST NUMBER: 18986 MATRIX: W ANALYST: ANTHONY LOMBARDO PROGRAM CODE: WE1C NOTEBOOK: CST9026 PAGE: 69

OWNER: Max Maes GROUP: ESH-18 MAIL-STOP: K497 PHONE: 7-0817 TECHNIQUE: GCMS ANALYTICAL PROCEDURE: EPA SW-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

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

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

Blank Results, Sample # 94.22108 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: 9/14/94 Date Analyzed: 10/19/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.20226	94.22108	83329	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Acenaphthene
00.20226	94.22108	208968	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Acenaphthylene
00.20226	94.22108	62533	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Aniline
00.20226	94.22108	120127	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Anthracene
00.20226	94.22108	103333	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Azobenzene
00.20226	94.22108	92875	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	m-Benzidine
00.20226	94.22108	56553	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Benzo[a]anthracene
00.20226	94.22108	50328	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Benzo[a]pyrene
00.20226	94.22108	205992	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Benzo[b]fluoranthene
00.20226	94.22108	191242	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Benzo[g,h,i]perylene
00.20226	94.22108	207089	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Benzo[k]fluoranthene
00.20226	94.22108	65850	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Benzoic acid
00.20226	94.22108	100516	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Benzyl alcohol
00.20226	94.22108	111911	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Bis(2-chloroethoxy)methane
00.20226	94.22108	111444	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Bis(2-chloroethyl)ether
00.20226	94.22108	108601	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Bis(2-chloroisopropyl)ether
00.20226	94.22108	117817	88.	26.4	UG/L	0.0		1/25/95	OUT OF CONTROL	Bis(2-ethylhexyl)phthalate
00.20226	94.22108	101553	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	4-Bromophenylphenyl ether
00.20226	94.22108	85687	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Butyl benzyl phthalate
00.20226	94.22108	59507	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	4-Chloro-3-methylphenol
00.20226	94.22108	106478	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	4-Chloroaniline

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.20226	94.22108	91587	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2-Chloronaphthalene
00.20226	94.22108	95578	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	o-Chlorophenol
00.20226	94.22108	7005723	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	4-Chlorophenylphenyl ether
00.20226	94.22108	218019	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Chrysene
00.20226	94.22108	84742	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Di-n-butyl phthalate
00.20226	94.22108	117840	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Di-n-octyl phthalate
00.20226	94.22108	53703	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Dibenzo[a,h]anthracene
00.20226	94.22108	132649	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Dibenzofuran
00.20226	94.22108	95501	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.20226	94.22108	541731	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.20226	94.22108	106467	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.20226	94.22108	91941	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	3,3'-Dichlorobenzidine
00.20226	94.22108	120832	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2,4-Dichlorophenol
00.20226	94.22108	84662	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Diethyl phthalate
00.20226	94.22108	131113	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Dimethyl phthalate
00.20226	94.22108	105679	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2,4-Dimethylphenol
00.20226	94.22108	51285	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2,4-Dinitrophenol
00.20226	94.22108	121142	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2,4-Dinitrotoluene
00.20226	94.22108	606202	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2,6-Dinitrotoluene
00.20226	94.22108	206440	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Fluoranthene
00.20226	94.22108	86737	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Fluorene
00.20226	94.22108	118741	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Hexachlorobenzene
00.20226	94.22108	87683	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Hexachlorobutadiene
00.20226	94.22108	77474	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Hexachlorocyclopentadiene
00.20226	94.22108	67721	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Hexachloroethane
00.20226	94.22108	193395	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Indeno[1,2,3-cd]pyrene
00.20226	94.22108	78591	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Isophorone
00.20226	94.22108	534521	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2-Methyl-4,6-dinitrophenol
00.20226	94.22108	91576	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2-Methylnaphthalene
00.20226	94.22108	95487	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2-Methylphenol
00.20226	94.22108	106445	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	4-Methylphenol
00.20226	94.22108	91203	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Naphthalene
00.20226	94.22108	88744	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2-Nitroaniline
00.20226	94.22108	99092	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	3-Nitroaniline
00.20226	94.22108	100016	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	4-Nitroaniline
00.20226	94.22108	98953	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Nitrobenzene

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

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.20226	94.22108	88755	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2-Nitrophenol
00.20226	94.22108	100027	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	4-Nitrophenol
00.20226	94.22108	621647	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	N-Nitrosodi-n-propylamine
00.20226	94.22108	62759	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	N-Nitrosodimethylamine
00.20226	94.22108	86306	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	N-Nitrosodiphenylamine
00.20226	94.22108	87865	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Pentachlorophenol
00.20226	94.22108	85018	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Phenanthrene
00.20226	94.22108	108952	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Phenol
00.20226	94.22108	129000	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	Pyrene
00.20226	94.22108	120821	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	1,2,4-Trichlorobenzene
00.20226	94.22108	95954	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2,4,5-Trichlorophenol
00.20226	94.22108	88062	< 10.		UG/L	0.0		1/25/95	UNDER CONTROL	2,4,6-Trichlorophenol

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

Blank Spike Results, Sample # 94.22108 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: 9/14/94 Date Analyzed: 10/19/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.20226	94.22108	83329	50.	12.	UG/L	0.0		1/25/95		Acenaphthene
00.20226	94.22108	59507	100.	36.	UG/L	0.0		1/25/95		4-Chloro-3-methylphenol
00.20226	94.22108	95578	100.	62.	UG/L	0.0		1/25/95		o-Chlorophenol
00.20226	94.22108	106467	50.	34.	UG/L	0.0		1/25/95		p-Dichlorobenzene (1,4)
00.20226	94.22108	121142	50.	36.	UG/L	0.0		1/25/95		2,4-Dinitrotoluene
00.20226	94.22108	100027	100.	69.	UG/L	0.0		1/25/95		4-Nitrophenol
00.20226	94.22108	621647	50.	33.	UG/L	0.0		1/25/95		N-Nitrosodi-n-propylamine
00.20226	94.22108	87865	100.	66.	UG/L	0.0		1/25/95		Pentachlorophenol
00.20226	94.22108	108952	100.	51.	UG/L	0.0		1/25/95		Phenol
00.20226	94.22108	129000	50.	18.	UG/L	0.0		1/25/95		Pyrene
00.20226	94.22108	120821	50.	34.	UG/L	0.0		1/25/95		1,2,4-Trichlorobenzene

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

Blank Spike Duplicate Results, Sample # 94.22108 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: 9/14/94 Date Analyzed: 10/19/94

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND NAME
00.20226	94.22108	83329	50.	10.	UG/L	0.0		1/25/95		Acenaphthene
00.20226	94.22108	59507	100.	10.	UG/L	0.0		1/25/95		4-Chloro-3-methylphenol
00.20226	94.22108	95578	100.	47.	UG/L	0.0		1/25/95		o-Chlorophenol
00.20226	94.22108	106467	50.	32.	UG/L	0.0		1/25/95		p-Dichlorobenzene (1,4)
00.20226	94.22108	121142	50.	40.	UG/L	0.0		1/25/95		2,4-Dinitrotoluene
00.20226	94.22108	100027	100.	49.	UG/L	0.0		1/25/95		4-Nitrophenol
00.20226	94.22108	621647	50.	23.	UG/L	0.0		1/25/95		N-Nitrosodi-n-propylamine
00.20226	94.22108	87865	100.	47.	UG/L	0.0		1/25/95		Pentachlorophenol
00.20226	94.22108	108952	100.	10.	UG/L	0.0		1/25/95		Phenol
00.20226	94.22108	129000	50.	10.	UG/L	0.0		1/25/95		Pyrene
00.20226	94.22108	120821	50.	33.	UG/L	0.0		1/25/95		1,2,4-Trichlorobenzene

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

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

Blind QC Results, Sample # 94.22394 Date Collected: 9/08/94 Date Received: 9/12/94 Date Extracted: 9/14/94 Date Analyzed: 10/19/94

SAMPLE NUM	ANALYSIS	ANALYTICAL RESULT	ANALYTICAL UNCERTAINTY	UNITS	QC VALUE	QC UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND-NAME
94.22394	83329	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Acenaphthene
94.22394	208968	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Acenaphthylene
94.22394	62533	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Aniline
94.22394	120127	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Anthracene
94.22394	103333	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Azobenzene
94.22394	92875	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	m-Benzidine
94.22394	56553	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Benzo[a]anthracene
94.22394	50328	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Benzo[a]pyrene
94.22394	205992	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Benzo[b]fluoranthene
94.22394	191242	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Benzo[g,h,i]perylene
94.22394	207089	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Benzo[k]fluoranthene
94.22394	65850	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Benzoic acid
94.22394	100516	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Benzyl alcohol
94.22394	111911	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Bis(2-chloroethoxy)methane
94.22394	111444	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Bis(2-chloroethyl)ether
94.22394	108601	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Bis(2-chloroisopropyl)ether
94.22394	117817	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Bis(2-ethylhexyl)phthalate
94.22394	101553	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	4-Bromophenylphenyl ether
94.22394	85687	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Butyl benzyl phthalate
94.22394	59507	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	4-Chloro-3-methylphenol
94.22394	106478	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	4-Chloroaniline
94.22394	91587	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2-Chloronaphthalene
94.22394	95578	66.	19.8	UG/L	119.	12.	12/23/94	WARNING 2-3 SIG	o-Chlorophenol
94.22394	7005723	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	4-Chlorophenylphenyl ether
94.22394	218019	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Chrysene
94.22394	84742	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Di-n-butyl phthalate

94.22394	117840	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Di-n-octyl phthalate
94.22394	53703	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Dibenzo[a,h]anthracene
94.22394	132649	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Dibenzofuran
94.22394	95501	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	o-Dichlorobenzene (1,2)
94.22394	541731	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	m-Dichlorobenzene (1,3)
94.22394	106467	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	p-Dichlorobenzene (1,4)
94.22394	91941	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	3,3'-Dichlorobenzidine
94.22394	120832	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2,4-Dichlorophenol
94.22394	84662	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Diethyl phthalate
94.22394	131113	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Dimethyl phthalate
94.22394	105679	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2,4-Dimethylphenol
94.22394	51285	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2,4-Dinitrophenol
94.22394	121142	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2,4-Dinitrotoluene
94.22394	606202	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2,6-Dinitrotoluene
94.22394	206440	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Fluoranthene
94.22394	86737	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Fluorene
94.22394	118741	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Hexachlorobenzene
94.22394	87683	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Hexachlorobutadiene
94.22394	77474	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Hexachlorocyclopentadiene
94.22394	67721	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Hexachloroethane
94.22394	193395	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Indeno[1,2,3-cd]pyrene
94.22394	78591	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Isophorone
94.22394	534521	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2-Methyl-4,6-dinitrophenol
94.22394	91576	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2-Methylnaphthalene
94.22394	95487	< 10.		UG/L	72.9	7.3	12/23/94	OUT OF CONTROL	2-Methylphenol
94.22394	106445	< 10.		UG/L	60.9	6.1	12/23/94	OUT OF CONTROL	4-Methylphenol
94.22394	91203	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Naphthalene
94.22394	88744	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2-Nitroaniline
94.22394	99092	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	3-Nitroaniline
94.22394	100016	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	4-Nitroaniline
94.22394	98953	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Nitrobenzene
94.22394	88755	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2-Nitrophenol
94.22394	100027	63.	18.9	UG/L	100.	10.	12/23/94	UNDER CONTROL	4-Nitrophenol
94.22394	621647	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	N-Nitrosodi-n-propylamine
94.22394	62759	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	N-Nitrosodimethylamine
94.22394	86306	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	N-Nitrosodiphenylamine
94.22394	87865	100.	30.	UG/L	150.	15.	12/23/94	UNDER CONTROL	Pentachlorophenol
94.22394	85018	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Phenanthrene
94.22394	108952	20.	6.	UG/L	49.4	5.	12/23/94	OUT OF CONTROL	Phenol
94.22394	129000	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	Pyrene
94.22394	120821	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	1,2,4-Trichlorobenzene
94.22394	95954	< 10.		UG/L	0.0		12/23/94	UNDER CONTROL	2,4,5-Trichlorophenol
94.22394	88062	59.	17.7	UG/L	93.7	9.4	12/23/94	UNDER CONTROL	2,4,6-Trichlorophenol

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

SURROGATE RESULTS FOR EPA SEMIVOLATILES

Surrogate 1 = 2-Fluorophenol (CAS # = 367124)
Surrogate 2 = Phenol-d5 (CAS # = 4165622)
Surrogate 3 = Nitrobenzene-d5 (CAS # = 4165600)
Surrogate 4 = 2-Fluorobiphenyl (CAS # = 321608)
Surrogate 5 = 2,4,6-Tribromophenol (CAS # = 118796)
Surrogate 6 = p-Terphenyl-d14 (CAS # = 26140603)
Surrogate 7 = 4-Chloroaniline (CAS # = 106478)

SAMPLE NUMBER	UNITS	Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4	Surrogate 5	Surrogate 6	Surrogate 7	COMPLETION DATE
94.22101	%	59.85	58.66	75.28	80.18	66.46	57.32		25-Jan-1995
94.22103	%	0.27	0.05	91.76	12483.78	168.57	2540.72		25-Jan-1995
94.22104	%	43.12	25.95	67.52	78.08	43.94	50.62		25-Jan-1995
94.22108	%	53.09	55.73	72.8	77.3	45.43	65.54		25-Jan-1995
94.22108	%	21.25	0.36	70.84	81.42	19.52	57.74		25-Jan-1995
94.22108	%	0.14		79.88		23.29	40.92		25-Jan-1995
94.22394	%	42.95	36.91	54.94	61.56	61.16	60.42		23-Dec-1994
EPA Limits:									
Water	%	21 - 100	10 - 94	35 - 114	43 - 116	10 - 123	33 - 141	34 - 120	
Soil	%	25 - 121	24 - 113	23 - 120	30 - 115	19 - 122	18 - 137		

REPORT NUMBER: 31319

Analyst	Reviewer	Team Leader	QA Officer
01/25/95	01/25/95		1/25/95
Date	Date	Date	Date

No Sample Discrepancies Noted by Sample Management Section

The control status of the preceeding 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
****