US EPA RECORDS CENTER REGION 5
472745

SAMPLING DATA

RECEIVED
MAY 6 1994

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 4/29/94

SUBJECT: Review of Region V CLP Data Received for Review on April 18, 1994

FROM: Charles T. Elly, Director (SL-10C) MSP for CTE
Central Regional Laboratory

TO: Data User: B+V

We have reviewed the data for the following case.

SITE NAME: Perma-Treat of Ill. (Ill)

CASE and/or SAS NUMBER: 21095 SDG NUMBER: ESE47

Number and Type of Samples: 8 (Soil)

CLP Sample Numbers: ESE 47-53 ESE99

CLP Laboratory: Enviro-tech Hrs. for Review 12

Following are our findings:

The data are acceptable for use with qualification.

Mumtaz Pasha
4/29/94

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualification.
( ) Data are preliminary, pending verification by laboratory.
( ) Data are unacceptable.

cc: Edward Kantor, EMSL-Las Vegas
Julie Frankel, VIAR & Co. (SMO)

Site: Lorma Treat of Ill. (IL)

DATA QUALIFIERS

CONTRACTOR: ENCOTEC **CASE** 21795

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

This review covers eight soil samples (ESE47 through ESE53 and ESE99) for complete organic analysis at low levels.

The reviewer's narrative and data qualifiers follow.

Reviewed by: Al Venuto (Lockheed/ESAT)

Date: 20 April 1994 **Hrs. Required for Review:** 12

1. Holding Times:

All samples were very promptly analyzed for volatiles and easily met the fourteen day holding time from date of sampling for volatiles in soils.

All samples were very promptly extracted for both semi-volatiles and pesticides/PCBs and easily met the fourteen day holding times for these fractions. All extracts were promptly analyzed.

2. GC/MS Tuning and GC Instrument Performance:

The GC tuning and mass calibration were all within the required Q.C. limits. All pesticide breakdown results were below the maximum permissible limits. All pesticide resolution checks were at or very near the ideal 100%.

3. Calibration:

The semi-volatile calibration outliers are listed on the outliers forms; there were no volatile or pesticide outliers, but the forms are included for reference. All RPDs in the pesticide calibration verification summaries (Pest-1) were far below the maximum permissible 25%.

4. Method Blanks:

Each of the two volatile method blanks contained only the common contaminants methylene chloride and acetone; methylene chloride was also found in each of the samples, but only ESE50MS and ESE50MSD contained acetone.

The semi-volatile method blank was found to contain the two common phthalate esters di-n-butyl phthalate and bis(2-ethylhexyl) phthalate plus five TICs; most of the samples also contained both phthalate esters, but only two of the five TICs (although ESE49 and ESE50 contained none of these TICs).

The pesticide method blank contained no target analytes.

Al Nemuto
20 April 1994

Case 21795
Site: Perma-Treat of Ill. (IL)

ENCOTEC

5. Surrogate Recoveries:

All volatile and semi-volatile surrogate recoveries were well within the Q.C. limits.

For the pesticide fraction, all tetrachloro-m-xylene recoveries were within the Q.C. limits except for that in ESE50 (column 1 only), which was marginally below the lower limit. All recoveries of decachlorobiphenyl (both columns) for all samples were below the lower limit. Since no target analytes were found in any of the samples, the pesticide results for all samples should be considered UJ, estimated quantitation limits.

6. Matrix Spikes and Matrix Spike Duplicates:

All MS and MSD recoveries and RPDs for all fractions were generally well within the Q.C. limits.

7. Field Duplicates and Field Blanks:

No samples in this case were identified as field duplicates or field blanks.

8. Internal Standards Performance:

All volatile IS areas were within the Q.C. limits except for ESE50MSD (where all three IS areas were below the lower limit) and ESE50MS (where all areas excluding bromochloromethane were below the lower limit). No qualification of the regular sample results is recommended on this basis.

All semi-volatile IS areas were well within the Q.C. limits.

9. Compound Identification:

The compound identifications for all fractions appear to be satisfactory.

10. Compound Quantitation and Reported Detection Limits:

The correct limits were used and the proper adjustments were made for percent moisture.

11. System Performance:

All aspects of the system performance appear to be satisfactory.

12. Additional Case-Specific Problems:

None noted.

Al Venuto
20 April 1994

CALIBRATION OUTLIERS
VOLATILE TCL COMPOUNDS
(Page 1 of 1)

CASE\SAS#: 21795
COLUMN: cap

CONTRACTOR: ENCOTEC
SITE NAME: ~~Lenz - Treat. f. Ill.~~ (IL)

Instrument# C26		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time: 3-27-94		3-27-94 12:34			3-28-94 16:32											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Chloromethane	0.01															
Bromomethane	0.10															
Vinyl chloride	0.10															
Chloroethane	0.01															
Methylene chloride	0.01															
Acetone	0.01															
Carbon disulfide	0.01															
1,1-Dichloroethene	0.10															
1,1-Dichloroethane	0.20															
1,2-Dichloroethene (total)																
Chloroform	0.20															
1,2-Dichloroethane	0.10															
2-Butanone	0.01															
1,1,1-Trichloroethane	0.10															
Carbon tetrachloride	0.10															
Bromodichloromethane	0.20															
1,2-Dichloropropane																
cis-1,3-Dichloropropene	0.20															
Trichloroethene	0.30															
Dibromochloromethane	0.10															
1,1,2-Trichloroethane	0.10															
Benzene	0.50															
tran-1,3-Dichloropropene	0.10															
Bromoform	0.10															
4-Methyl-2-pentanone	0.01															
2-Hexanone	0.01															
Tetrachloroethene	0.20															
1,1,2,2-Tetrachloroethane	0.50															
Toluene	0.40															
Chlorobenzene	0.50															
Ethylbenzene	0.10															
Styrene	0.30															
Xylene (total)	0.30															
Toluene-d8																
Bromofluorobenzene																
1,2-Dichloroethane-d4																

Samples affected:

ESE47	ESE48
ESE51	ESE49
ESE52	ESE50
ESE99	ESE53
ESE50MS	VBLK28
ESE50MSD	
VBLK27	

Reviewer's Init/Date: AV 4-19-94

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

CALIBRATION OUTLIER
SEMIVOLATILE TCL COMPOUNDS
(Page 1 of 2)

CASE\SAS#: 21795
COLUMN: —

CONTRACTOR: ENCOTEC
SITE NAME: ~~Forma Treat of Ill~~ (IL,

Instrument#		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:	3-31-94	3-31-94 18:55			4-5-94 7:38											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Phenol	0.80															
bis(2-chloroethyl) Ether	0.70															
2-Chlorophenol	0.70															
1,3-Dichlorobenzene																
1,4-Dichlorobenzene																
1,2-Dichlorobenzene																
2-Methylphenol	0.70															
2,2'-Oxybis(1-chl-propane)	0.01															
4-Methylphenol	0.60															
N-nitroso-di-n-propylamine	0.50															
Hexachloroethane	0.30															
Nitrobenzene	0.20															
Isophorone	0.40															
2-Nitrophenol	0.10															
2,4-Dimethylphenol	0.20															
bis-(2-chloroethoxy)methane	0.30															
2,4-Dichlorophenol	0.20															
1,2,4-Trichlorobenzene	0.20															
Naphthalene	0.70															
4-Chloroaniline	0.01	.537			.229	57.4	J									
Hexachlorobutadiene	0.01															
4-Chloro-3-methylphenol	0.20															
2-Methylnaphthalene	0.40															
Hexachlorocyclopentadiene	0.01															
2,4,6-Trichlorophenol	0.20															
2,4,5-Trichlorophenol	0.20															
2-Chloronaphthalene	0.80															
2-Nitroaniline	0.01															
Dimethyl phthlate	0.01															
Acenaphthylene	1.30															
2,6-Dinitrotoluene	0.20															
3-Nitroaniline	0.01	.389			.165	57.6	J									
Acenaphthene	0.30															
2,4-Dinitrophenol	0.01	.218			.163	25.2	J									
4-Nitrophenol	0.01															
Dibenzofuran	0.80															
2,4-Dinitrotoluene	0.20															

Affected samples: SBLKYB, ESE47 ~~through~~ ESE53, ESE99, ESE50MS, ESE50MSD

Reviewer's Init/Date: AV 4-19-94

*These flags should be applied to the analytes on the sample data sheets.
Minimum Relative Response Factor

CALIBRATION OUTLIER
SEMIVOLATILE TCL COMPOUNDS
(Page 2 of 2)

CASE\SAS#: 21795
COLUMN: —

CONTRACTOR: ENCOTEC
SITE NAME: Sauna-Treat of Ill. (IL)

Instrument# 025		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time: 3-31-94		3-31-94 18:55			4-5-94 7:38											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Diethylphthalate	0.01															
4-Chlorophenyl-phenylether	0.40															
Fluorene	0.90															
4-Nitroaniline	0.01	.324			.108	66.7	J									
4,6-Dinitro-2-methylphenol	0.01															
N-nitrosodiphenylamine	0.01															
4-Bromophenyl-phenylether	0.10															
Hexachlorobenzene	0.10															
Pentachlorophenol	0.05															
Phenanthrene	0.70															
Anthracene	0.70															
Carbazole																
Di-n-butylphthalate	0.01															
Fluoranthene	0.60															
Pyrene	0.60															
Butylbenzylphthalate	0.01															
3,3'-Dichlorobenzidine	0.01	.298			.187	37.2	J									
Benzo(a)anthracene	0.80															
Chrysene	0.70															
bis(2-Ethylhexyl)phthalate	0.01															
Di-n-octyl phthalate	0.01	3.933			5.016	27.5	J									
Benzo(b)fluoranthene	0.70															
Benzo(k)fluoranthene	0.70															
Benzo(a)pyrene	0.70															
Indeno(1,2,3-cd)pyrene	0.50															
Dibenz(a,h)anthrancene	0.40															
Benzo(g,h,i)perylene	0.50	.564			.755	33.9	J									
Nitrobenzene-d5	0.01															
2-Fluorobiphenyl	0.70															
Terphenyl-d14	0.50															
Phenol-d5	0.80															
2-Fluorophenol	0.60															
2,4,6-Tribromophenol	0.01															
2-Chlorophenol-d4																
1,2-Dichlorobenzene-d4																

Reviewer's Initials/Date: AV 4-19-94

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

CALIBRATION OUTLIER
PESTICIDE/PCB TCL COMPOUNDS
(Page 1 of 1)

CASE\SAS#: 21795
COLUMN: DB 1701

CONTRACTOR: ENCOTEC
SITE NAME: Lemont Tract of Lot. (IL)

Instrument# 3400A		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time: 4-6-94		4-6-94 2016			4-7-94 1:56											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
alpha-BHC	0.01															
beta-BHC	0.40															
delta-BHC	0.90															
gamma-BHC	0.01															
Heptachlor	0.01															
Aldrin	0.01															
Heptachlor epoxide	0.10															
Endosulfan I	0.10															
Dieldrin	0.05															
4, 4'-DDE	0.70															
Endrin	0.70															
Endosulfan II	0.01															
4, 4'-DDD	0.60															
Endosulfan sulfate	0.60															
4, 4'-DDT	0.01															
Methoxychlor	0.01															
Endrin ketone	0.80															
Endrin aldehyde	0.70															
alpha chlordane	0.01															
gamma chlordane	0.01															
Arochlor 1016																
Arochlor 1221																
Arochlor 1232																
Arochlor 1242																
Arochlor 1248																
Arochlor 1254																
Arochlor 1260																

Affected samples:

PBLKL1
ESE47
through
ESE53
ESE99
ESE50MS
ESE50MSD

Reviewer's Init/Date: AV 4-19-94

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

CALIBRATION OUTLIER
PESTICIDE/PCB TCL COMPOUNDS
(Page 1 of 1)

CASE\SAS#: 21795
COLUMN: DB17

CONTRACTOR: ENCOTEC
SITE NAME: Lemma Treatment (IL)

Instrument#	3400 B		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:	4-6-94		4-6-94 20:16			4-7-94 9:56											
		#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
alpha-BHC		0.01															
beta-BHC		0.40															
delta-BHC		0.90															
gamma-BHC		0.01															
Heptachlor		0.01															
Aldrin		0.01															
Heptachlor epoxide		0.10															
Endosulfan I		0.10															
Dieldrin		0.05															
4, 4'-DDE		0.70															
Endrin		0.70															
Endosulfan II		0.01															
4, 4'-DDD		0.60															
Endosulfan sulfate		0.60															
4, 4'-DDT		0.01															
Methoxychlor		0.01															
Endrin ketone		0.80															
Endrin aldehyde		0.70															
alpha chlordane		0.01															
gamma chlordane		0.01															
Arochlor 1016																	
Arochlor 1221																	
Arochlor 1232																	
Arochlor 1242																	
Arochlor 1248																	
Arochlor 1254																	
Arochlor 1260																	

Affected samples:

PBLKL1
ESE47
through
ESE53
ESE50MS
ESE50MSD

Reviewer's Init/Date: AV 4-19-94

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

DATA REPORTING QUALIFIERS
(page 1)

For reporting results to EPA, the following result qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE-if the results is a value greater than or equal to the Contract Required Quantitation Limit (CRQL), report the value.

U - Indicates compound was analyzed for but not detected. The sample Quantitation Limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if thee sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the Sample Quantitation Limit for phenol (330 U) would be corrected to:

$$\frac{(330\ U) \times df}{D} \qquad \text{where } D = \frac{100 - \%\ moisture}{100}$$

and df = dilution factor

at 24% moisture, $D = \frac{100 - 24}{100} = 0.76$

$$\frac{(330\ U) \times 10}{.76} = 4300\ U \text{ rounded to the appropriate number of significant figures}$$

For soil samples subjected to GPC clean-up procedures, the extract must be concentrated to 0.5 ml, and the sensitivity of the analysis is not compromised by the cleanup procedures. Therefore, the CRQL values will apply to all samples, regardless of cleanup. However, if a sample extract cannot be concentrated to the protocol-specified volume, this fact be accounted for in reporting the Sample Quantitation Limit.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit bur greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it is as 3J. The Sample Quantitation Limit must be adjusted for dilution as discussed for the U flag. The J flag is also applied to pesticide/Aroclor results where the pesticide/Aroclor is confirmed to be present but the concentration is less than the CRQL.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds. Where the identification is based on a mass spectral library search. It is applied to all TIC results.

DATA REPORTING QUALIFIERS
(page 2)

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two columns (see Form X). The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but unsuccessful, do not apply this flag, instead use a laboratory-defined, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for the specific analysis. This flag will not apply to pesticide/PCBs analyzed by GC/MS methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Form I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the SDG Narrative. If more than one flag is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B" and "D" flags for some sample. The laboratory-defined are limited to letters "X", "Y" and "Z".

SDG NARRATIVE

CASE 21795

A total of eight samples were received by ENCOTEC on March 25, 1994, and were scheduled for Organics Analysis under Contract #68-D2-0012, first bid lot. Please refer to the following table for vital information that pertains to this case.

Table 1.0

SDG #: ESE47

	SAMPLE ANALYZED			
	Actual Samples	QC Samples	Re-Run Samples	Total Billable Analyses
Volatile Analyses	8	2	0	10
Semivolatile Analyses	8	2	0	10
Pesticide/PCB Analyses	8	2	0	10

Total Billable Analyses: 10 FULL

This Deliverables Package is assembled in accordance with instructions in Section B, OLM01.8 revision of the Contract Laboratory Program - Statement of Work. A copy of this deliverable has been distributed to the Sample Management Office (SMO), EMSL-LV and Region V. In addition a sample Summary Data Package has been sent to SMO.

The following is a detailed description of quality control, shipment, and/or analytical problems that were encountered in the processing of these samples.

Sample Login

ENCOTEC received eight samples from Federal Express on March 25, 1994. Standard Chain of Custody procedures were followed. The samples were stored at 4°C and/or chemically preserved as required by EPA protocol. The samples were scheduled for Full Organic Analysis.

Sample Analysis - Volatile

Sample analysis was performed without incident and within holding times. Chain of custody was maintained, and samples were analyzed according to EPA SOW OLM01.8. Quality control results are summarized as follows:

- Analyses of surrogates were performed on all samples; please see FORM'S II VOA-2 for results.

- The method blanks contained the following target analytes: Methylene Chloride and Acetone near or below the CRQL. No Tentatively Identified Compounds (TICs) were detected. Please see method blank Forms I VOA for results.

- A matrix spike and matrix spike duplicate was analyzed on sample ESE50. Please see FORM III VOA-2 for results.

- All EICP areas and retention times were within QA/QC windows except samples ESE50MS and ESE50MSD. These samples did not require reanalysis. Please see FORM's VIII VOA for results.

Summary

The samples did not reveal many positively detected Target Compounds. No Tentatively Identified Compounds were detected in the samples. Please see FORM's I VOA for results.

Sample Extraction

Soil Samples were sonication extracted for Pesticide/PCBs and Semivolatiles on March 28, 1994. All soil samples were screened by GC(FID) and were found to be low level extracts. All extracts were processed according to CLP protocol without incident. Final extracts were given to the GC and GC/MS groups on March 31, 1994.

Sample Analysis - Semivolatile

Sample analysis was performed without incident and within holding times. Chain of custody was maintained, and samples were analyzed according to EPA SOW OLM01.8. Quality control results are summarized as follows:

- Analyses of surrogates were performed on all samples; please see FORM'S II SV-2 for results.

- The method blank revealed Di-n-butylphthalate and bis(2-Ethylhexyl)phthalate as target Compounds detected at concentrations less than the CRQL. Several TICs were also identified. Please see method blank FORM's I SV-1 and SV-TIC for results.

- A matrix spike and matrix spike duplicate was analyzed on sample ESE50. Please see FORM III SV-2 for results.

- All EICP areas and retention times were within QA/QC windows. Please see FORM's VIII SV-1 and SV-2 for results.

Summary

The sample did not reveal many positively detected Target compounds. Several TIC's were detected in the sample. Please see FORM's I SV-1, SV-2, and SV-TIC for results.

Sample Analysis - Pesticide/PCB

Sample analysis was performed without incident and within holding times. Chain of custody was maintained, and samples were analyzed according to EPA SOW OLM01.8. Quality control results are summarized as follows:

- Analyses of surrogates were performed on all samples; please see FORM II PEST-2 and for results.

- The method blank did not contain any target analytes at or above the CRQL's.

- A matrix spike and matrix spike duplicate was analyzed on sample ESE50. Please see FORM III PEST-2 for results.

Summary

Target analytes were not found in any of the samples above the CRQL. Please see all FORM I PEST's for results.

Any technical questions regarding the data present in this deliverable should be addressed to the individual whose name appears at the end of this case narrative. Please note that the "Run Logs" contained in the miscellaneous data section may be copies. The location of the original documents, along with any other corresponding original documents, are listed on the "Run Logs".

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions implied or detailed above. Release of the information contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature:

Thomas H. Marshall

Thomas H. Marshall
CLP Project Manager
THM
75100

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Level:(low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	ESE47	108	89	108	0	0
02	ESE48	110	86	100	0	0
03	ESE49	110	89	113	0	0
04	ESE50	110	90	105	0	0
05	ESE51	109	94	107	0	0
06	ESE52	107	88	108	0	0
07	ESE53	112	99	114	0	0
08	ESE99	110	102	111	0	0
09	ESE50MS	105	78	97	0	0
10	ESE50MSD	121	101	115	0	0
11	VBLK27	99	97	105	0	0
12	VBLK28	92	88	97	0	0

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(84-138)
SMC2 (BFB) = Bromofluorobenzene	(59-113)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix Spike - EPA Sample No.: ESE50 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	55.60	0	48.56	87	59-172
Trichloroethene	55.60	0	52.61	95	62-137
Benzene	55.60	0	59.30	107	66-142
Toluene	55.60	0	64.82	117	59-139
Chlorobenzene	55.60	0	59.51	107	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	55.60	51.92	93	7	22	59-172
Trichloroethene	55.60	60.39	109	14	24	62-137
Benzene	55.60	66.72	120	11	21	66-142
Toluene	55.60	75.29	135	14	21	59-139
Chlorobenzene	55.60	71.33	128	18	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK27

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Lab File ID: VSB0327Z Lab Sample ID: VSB0327Z

Date Analyzed: 03/27/94 Time Analyzed: 1511

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) Y

Instrument ID: 026

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	ESE47	ESE47V	ESE47V	1617
02	ESE51	ESE51V	ESE51V	1828
03	ESE52	ESE52V	ESE52V	1900
04	ESE99	ESE99V	ESE99V	2005
05	ESE50MS	ESE50VM	ESE50VM	2038
06	ESE50MSD	ESE50VD	ESE50VD	2111

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK28

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Lab File ID: VSB0328 Lab Sample ID: VSB0328

Date Analyzed: 03/28/94 Time Analyzed: 1725

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) Y

Instrument ID: 026

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	ESE48	ESE48VR	ESE48VR	2303
02	ESE49	ESE49VR	ESE49VR	1912
03	ESE50	ESE50VR	ESE50VR	1945
04	ESE53	ESE53VR	ESE53VR	2018

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK27

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: VSB0327Z

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VSB0327Z

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 03/27/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	8	J
67-64-1	Acetone	3	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK27

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: VSB0327Z

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VSB0327Z

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 03/27/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK28

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: VSB0328

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VSB0328

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 03/28/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	J
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK28

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: VSB0328

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VSB0328

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 03/28/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE47

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE47V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE47V

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 19 Date Analyzed: 03/27/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	15	B U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

AV
4-19-94

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE47

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE47V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE47V

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 19 Date Analyzed: 03/27/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE48

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE48VR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE48VR

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 55 Date Analyzed: 03/28/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	22	U
74-83-9	Bromomethane	22	U
75-01-4	Vinyl Chloride	22	U
75-00-3	Chloroethane	22	U
75-09-2	Methylene Chloride	30	BU
67-64-1	Acetone	22	U
75-15-0	Carbon Disulfide	22	U
75-35-4	1,1-Dichloroethene	22	U
75-34-3	1,1-Dichloroethane	22	U
540-59-0	1,2-Dichloroethene (total)	22	U
67-66-3	Chloroform	22	U
107-06-2	1,2-Dichloroethane	22	U
78-93-3	2-Butanone	22	U
71-55-6	1,1,1-Trichloroethane	22	U
56-23-5	Carbon Tetrachloride	22	U
75-27-4	Bromodichloromethane	22	U
78-87-5	1,2-Dichloropropane	22	U
10061-01-5	cis-1,3-Dichloropropene	22	U
79-01-6	Trichloroethene	22	U
124-48-1	Dibromochloromethane	22	U
79-00-5	1,1,2-Trichloroethane	22	U
71-43-2	Benzene	22	U
10061-02-6	trans-1,3-Dichloropropene	22	U
75-25-2	Bromoform	22	U
108-10-1	4-Methyl-2-Pentanone	22	U
591-78-6	2-Hexanone	22	U
127-18-4	Tetrachloroethene	22	U
79-34-5	1,1,2,2-Tetrachloroethane	22	U
108-88-3	Toluene	22	U
108-90-7	Chlorobenzene	22	U
100-41-4	Ethylbenzene	22	U
100-42-5	Styrene	22	U
1330-20-7	Xylene (total)	22	U

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4-19-94

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE48

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE48VR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE48VR

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 55 Date Analyzed: 03/28/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE49

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE49VR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE49VR

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 17 Date Analyzed: 03/28/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12 ~~9~~	BJU
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

AV
4-19-94

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE49

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE49VR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE49VR

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 17 Date Analyzed: 03/28/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE50

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE50VR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE50VR

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 10 Date Analyzed: 03/28/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	BJ V
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

AV
4-19-94

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE50

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE50VR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE50VR

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 10 Date Analyzed: 03/28/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE51

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE51V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE51V

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 21 Date Analyzed: 03/27/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	14	BV
67-64-1	Acetone	13	U
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

AV
4-19-94

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE51

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE51V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE51V

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 21 Date Analyzed: 03/27/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE52

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE52V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE52V

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 17 Date Analyzed: 03/27/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	15	B U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

AV
4-19-94

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE52

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE52V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE52V

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 17 Date Analyzed: 03/27/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE53

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE53VR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE53VR

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 14 Date Analyzed: 03/28/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12 ~~8~~	BJ V
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

AV
4-19-94

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE53

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE53VR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE53VR

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 14 Date Analyzed: 03/28/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE99

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE99V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE99V

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 21 Date Analyzed: 03/27/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	13	BU
67-64-1	Acetone	13	U
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

AV
4-19-94

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE99

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE99V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESE99V

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 21 Date Analyzed: 03/27/94

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT OUT
01	ESE47	73	83	85	87	91	83	75	80	0
02	ESE48	67	75	83	80	84	72	68	71	0
03	ESE49	74	81	82	87	91	40	74	76	0
04	ESE50	72	83	107	83	89	71	71	73	0
05	ESE51	74	76	78	84	85	68	71	77	0
06	ESE52	67	73	79	80	81	67	67	69	0
07	ESE53	70	77	78	82	82	71	68	68	0
08	ESE99	79	80	81	94	101	79	79	81	0
09	ESE50MS	80	86	80	91	89	60	77	80	0
10	ESE50MSD	77	82	76	87	89	72	74	74	0
11	SBLKYB	82	85	87	88	88	82	77	85	0

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S3 (TPH)	= Terphenyl-d14	(18-137)	
S4 (PHL)	= Phenol-d5	(24-113)	
S5 (2FP)	= 2-Fluorophenol	(25-121)	
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)	
S7 (2CP)	= 2-Chlorophenol-d4	(20-130)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(20-130)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix Spike - EPA Sample No.: ESE50 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	2780	20.47	2316	83	26- 90
2-Chlorophenol	2780	0	2178	78	25-102
1,4-Dichlorobenzene	1860	0	1418	76	28-104
N-Nitroso-di-n-prop.(1)	1860	0	1376	74	41-126
1,2,4-Trichlorobenzene	1860	0	1464	79	38-107
4-Chloro-3-methylphenol	2780	0	2180	78	26-103
Acenaphthene	1860	0	1628	88	31-137
4-Nitrophenol	2780	0	1794	65	11-114
2,4-Dinitrotoluene	1860	0	1528	82	28- 89
Pentachlorophenol	2780	0	2329	84	17-109
Pyrene	1860	101.1	1606	81	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	2780	2206	79	5	35	26- 90
2-Chlorophenol	2780	2097	75	4	50	25-102
1,4-Dichlorobenzene	1860	1312	71	7	27	28-104
N-Nitroso-di-n-prop.(1)	1860	1311	70	6	38	41-126
1,2,4-Trichlorobenzene	1860	1384	74	7	23	38-107
4-Chloro-3-methylphenol	2780	2115	76	3	33	26-103
Acenaphthene	1860	1545	83	6	19	31-137
4-Nitrophenol	2780	1715	62	5	50	11-114
2,4-Dinitrotoluene	1860	1428	77	6	47	28- 89
Pentachlorophenol	2780	2165	78	7	47	17-109
Pyrene	1860	1483	74	9	36	35-142

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLKYB

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Lab File ID: LSB0328 Lab Sample ID: LSB0328

Instrument ID: 025 Date Extracted: 03/28/94

Matrix: (soil/water) SOIL Date Analyzed: 04/05/94

Level:(low/med) LOW Time Analyzed: 0919

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	ESE47	ESE47B	ESE47B	04/05/94
02	ESE48	ESE48B	ESE48B	04/05/94
03	ESE49	ESE49B	ESE49B	04/05/94
04	ESE50	ESE50B	ESE50B	04/05/94
05	ESE51	ESE51B	ESE51B	04/05/94
06	ESE52	ESE52B	ESE52B	04/05/94
07	ESE53	ESE53B	ESE53B	04/05/94
08	ESE99	ESE99B	ESE99B	04/05/94
09	ESE50MS	ESE50BM	ESE50BM	04/05/94
10	ESE50MSD	ESE50BD	ESE50BD	04/05/94

COMMENTS:

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKYB

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: LSB0328

Sample wt/vol: 30.0 (g/mL) G Lab File ID: LSB0328

Level: (low/med) LOW Date Received:

% Moisture: decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-Propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)Methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	800	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	800	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	800	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKYB

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: LSB0328

Sample wt/vol: 30.0 (g/mL) G Lab File ID: LSB0328

Level: (low/med) LOW Date Received:

% Moisture: decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	800	U
100-02-7	4-Nitrophenol	800	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	800	U
534-52-1	4,6-Dinitro-2-Methylphenol	800	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	800	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-Butylphthalate	27	J
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(A) anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)Phthalate	35	J
117-84-0	Di-n-Octylphthalate	330	U
205-99-2	Benzo(b)Fluoranthene	330	U
207-08-9	Benzo(k)Fluoranthene	330	U
50-32-8	Benzo(a)Pyrene	330	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3	Dibenz(a,h)Anthracene	330	U
191-24-2	Benzo(g,h,i)Perylene	330	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKYB

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: LSB0328

Sample wt/vol: 30.0 (g/mL) G Lab File ID: LSB0328

Level: (low/med) LOW Date Received:

% Moisture: decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 822-67-3	2-CYCLOHEXEN-1-OL	5.48	110	JN
2. 930-68-7	2-CYCLOHEXEN-1-ONE	6.35	92	JN
3.	UNKNOWN	10.50	180	J
4. 74381-40-1	1-(1,1-DIEMTHYLETHYL)-2-METH	17.67	150	JN
5.	UNKNOWN ORGANIC ACID	26.40	260	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE47

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE47B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE47B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 19 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	29	J	SM 6/30/94
111-44-4	bis(2-Chloroethyl)Ether	410	U	
95-57-8	2-Chlorophenol	410	U	
541-73-1	1,3-Dichlorobenzene	410	U	
106-46-7	1,4-Dichlorobenzene	410	U	
95-50-1	1,2-Dichlorobenzene	410	U	
95-48-7	2-Methylphenol	410	U	
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U	
106-44-5	4-Methylphenol	410	U	
621-64-7	N-Nitroso-Di-n-Propylamine	410	U	
67-72-1	Hexachloroethane	410	U	
98-95-3	Nitrobenzene	410	U	
78-59-1	Isophorone	410	U	
88-75-5	2-Nitrophenol	410	U	
105-67-9	2,4-Dimethylphenol	410	U	
111-91-1	bis(2-Chloroethoxy)Methane	410	U	
120-83-2	2,4-Dichlorophenol	410	U	
120-82-1	1,2,4-Trichlorobenzene	410	U	
91-20-3	Naphthalene	410	U	
106-47-8	4-Chloroaniline	410	U J	unk
87-68-3	Hexachlorobutadiene	410	U	
59-50-7	4-Chloro-3-Methylphenol	410	U	
91-57-6	2-Methylnaphthalene	410	U	
77-47-4	Hexachlorocyclopentadiene	410	U	
88-06-2	2,4,6-Trichlorophenol	410	U	
95-95-4	2,4,5-Trichlorophenol	990	U	
91-58-7	2-Chloronaphthalene	410	U	
88-74-4	2-Nitroaniline	990	U	
131-11-3	Dimethylphthalate	410	U	
208-96-8	Acenaphthylene	410	U	
606-20-2	2,6-Dinitrotoluene	410	U	
99-09-2	3-Nitroaniline	990	U J	unk
83-32-9	Acenaphthene	410	U	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE47

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE47B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE47B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 19 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	990	U J	unk
100-02-7	4-Nitrophenol	990	U	
132-64-9	Dibenzofuran	410	U	
121-14-2	2,4-Dinitrotoluene	410	U	
84-66-2	Diethylphthalate	410	U	
7005-72-3	4-Chlorophenyl-phenylether	410	U	
86-73-7	Fluorene	410	U	
100-01-6	4-Nitroaniline	990	U J	unk
534-52-1	4,6-Dinitro-2-Methylphenol	990	U	
86-30-6	N-Nitrosodiphenylamine (1)	410	U	
101-55-3	4-Bromophenyl-phenylether	410	U	
118-74-1	Hexachlorobenzene	410	U	
87-86-5	Pentachlorophenol	990	U	
85-01-8	Phenanthrene	25	J	
120-12-7	Anthracene	410	U	
86-74-8	Carbazole	410	U	
84-74-2	Di-n-Butylphthalate	410 ~~90~~	BJ U	
206-44-0	Fluoranthene	39	J	
129-00-0	Pyrene	39	J	
85-68-7	Butylbenzylphthalate	410	U	AV
91-94-1	3,3'-Dichlorobenzidine	410	U J	unk 4-19-94
56-55-3	Benzo(A) anthracene	410	U	
218-01-9	Chrysene	31	J	
117-81-7	bis(2-Ethylhexyl)Phthalate	410 ~~49~~	BJU	
117-84-0	Di-n-Octylphthalate	410	U J	unk
205-99-2	Benzo(b)Fluoranthene	24	J	
207-08-9	Benzo(k)Fluoranthene	24	J	
50-32-8	Benzo(a)Pyrene	21	J	
193-39-5	Indeno(1,2,3-cd)Pyrene	410	U	
53-70-3	Dibenz(a,h)Anthracene	410	U	
191-24-2	Benzo(g,h,i)Perylene	410	U J	unk

(1) - Cannot be separated from Diphenylamine

SM 4/30/94

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE47

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE47B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE47B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 19 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2

Number TICs found: 13

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 822-67-3	2-CYCLOHEXE-1-OL	5.53	130	JNB
2.	UNKNOWN	6.02	640	J
3.	UNKNOWN	6.08	520	J
4.	UNKNOWN	6.38	170	J
5. 20019-64-1	5,5-DIMETHYLETHYL-2(5H)-FURA	6.72	520	JN
6. 98-86-2	1-PHENYL ETHANONE	9.08	120	JN
7. 91-64-5	2H-1-BENZOPYRAN-2-ONE	15.48	310	JN
8. 74381-40-1	1-(1,1-DIMETHYLETHYL)-2-METH	17.70	210	JNB
9.	UNKNOWN	18.92	140	J
10.	UNKNOWN ALKANE	28.92	52	J
11.	UNKNOWN	29.60	95	J
12.	UNKNOWN ALKANE	30.87	120	J
13.	UNKNOWN ALKANE	31.97	93	J

4-19-94

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE48

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE48B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE48B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 55 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

SVM 4/30/94

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	37	J	
111-44-4	bis(2-Chloroethyl)Ether	730	U	
95-57-8	2-Chlorophenol	730	U	
541-73-1	1,3-Dichlorobenzene	730	U	
106-46-7	1,4-Dichlorobenzene	730	U	
95-50-1	1,2-Dichlorobenzene	730	U	
95-48-7	2-Methylphenol	730	U	
108-60-1	2,2'-oxybis(1-Chloropropane)	730	U	
106-44-5	4-Methylphenol	730	U	
621-64-7	N-Nitroso-Di-n-Propylamine	730	U	
67-72-1	Hexachloroethane	730	U	
98-95-3	Nitrobenzene	730	U	
78-59-1	Isophorone	730	U	
88-75-5	2-Nitrophenol	730	U	
105-67-9	2,4-Dimethylphenol	730	U	
111-91-1	bis(2-Chloroethoxy)Methane	730	U	
120-83-2	2,4-Dichlorophenol	730	U	
120-82-1	1,2,4-Trichlorobenzene	730	U	
91-20-3	Naphthalene	730	U	
106-47-8	4-Chloroaniline	730	U J	unk
87-68-3	Hexachlorobutadiene	730	U	
59-50-7	4-Chloro-3-Methylphenol	730	U	
91-57-6	2-Methylnaphthalene	730	U	
77-47-4	Hexachlorocyclopentadiene	730	U	
88-06-2	2,4,6-Trichlorophenol	730	U	
95-95-4	2,4,5-Trichlorophenol	1800	U	
91-58-7	2-Chloronaphthalene	730	U	
88-74-4	2-Nitroaniline	1800	U	
131-11-3	Dimethylphthalate	730	U	
208-96-8	Acenaphthylene	730	U	
606-20-2	2,6-Dinitrotoluene	730	U	
99-09-2	3-Nitroaniline	1800	U J	unk
83-32-9	Acenaphthene	730	U	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE48

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE48B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE48B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 55 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	1800	U J	Sm 6/3/94 unk
100-02-7	4-Nitrophenol	1800	U	
132-64-9	Dibenzofuran	730	U	
121-14-2	2,4-Dinitrotoluene	730	U	
84-66-2	Diethylphthalate	730	U	
7005-72-3	4-Chlorophenyl-phenylether	730	U	
86-73-7	Fluorene	730	U	
100-01-6	4-Nitroaniline	1800	U J	unk
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U	
86-30-6	N-Nitrosodiphenylamine (1)	730	U	
101-55-3	4-Bromophenyl-phenylether	730	U	
118-74-1	Hexachlorobenzene	730	U	
87-86-5	Pentachlorophenol	1800	U	
85-01-8	Phenanthrene	730	U	
120-12-7	Anthracene	730	U	
86-74-8	Carbazole	730	U	
84-74-2	Di-n-Butylphthalate	730 ~~46~~	BJ U	
206-44-0	Fluoranthene	64	J	
129-00-0	Pyrene	58	J	AV
85-68-7	Butylbenzylphthalate	730	U	unk
91-94-1	3,3'-Dichlorobenzidine	730	U J	4-19-94
56-55-3	Benzo(A) anthracene	730	U	
218-01-9	Chrysene	37	J	
117-81-7	bis(2-Ethylhexyl)Phthalate	730 ~~210~~	BJ U	
117-84-0	Di-n-Octylphthalate	730	U J	unk
205-99-2	Benzo(b)Fluoranthene	60	J	
207-08-9	Benzo(k)Fluoranthene	730	U	
50-32-8	Benzo(a)Pyrene	730	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	730	U	
53-70-3	Dibenz(a,h)Anthracene	730	U	
191-24-2	Benzo(g,h,i)Perylene	730	U J	unk

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE48

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE48B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE48B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 55 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

Number TICs found: 14

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 822-67-3	2-CYCLOHEXEN-1-OL	5.47	170	BJNU
2.	UNKNOWN	6.00	1900	J
3.	UNKNOWN	6.30	440	J
4. 20019-64-1	5,5-DIEMTHY-2(5H)-FURANONE	6.63	1300	JN
5.	UNKNOWN	8.65	200	J
6.	1-(1,1-DIEMTHYLETHYL)-2-METH	17.63	300	BJU
7.	UNKNOWN	18.03	250	J
8.	UNKNOWN	18.83	330	J
9.	UNKNOWN ORGANIC ACID	26.35	260	JBU
10.	UNKNOWN	29.50	290	J
11.	UNKNOWN ALKANE	30.32	670	J
12.	UNKNOWN ALKANE	31.87	850	J
13.	UNKNOWN	37.58	560	J
14.	UNKNOWN	37.82	160	J

AV 4-19-94

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE49

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE49B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE49B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	20	J	SM 6/30/94
111-44-4	bis(2-Chloroethyl)Ether	400	U	
95-57-8	2-Chlorophenol	400	U	
541-73-1	1,3-Dichlorobenzene	400	U	
106-46-7	1,4-Dichlorobenzene	400	U	
95-50-1	1,2-Dichlorobenzene	400	U	
95-48-7	2-Methylphenol	400	U	
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U	
106-44-5	4-Methylphenol	400	U	
621-64-7	N-Nitroso-Di-n-Propylamine	400	U	
67-72-1	Hexachloroethane	400	U	
98-95-3	Nitrobenzene	400	U	
78-59-1	Isophorone	400	U	
88-75-5	2-Nitrophenol	400	U	
105-67-9	2,4-Dimethylphenol	400	U	
111-91-1	bis(2-Chloroethoxy)Methane	400	U	
120-83-2	2,4-Dichlorophenol	400	U	
120-82-1	1,2,4-Trichlorobenzene	400	U	
91-20-3	Naphthalene	42	J	
106-47-8	4-Chloroaniline	400	U J	unk
87-68-3	Hexachlorobutadiene	400	U	
59-50-7	4-Chloro-3-Methylphenol	400	U	
91-57-6	2-Methylnaphthalene	46	J	
77-47-4	Hexachlorocyclopentadiene	400	U	
88-06-2	2,4,6-Trichlorophenol	400	U	
95-95-4	2,4,5-Trichlorophenol	960	U	
91-58-7	2-Chloronaphthalene	400	U	
88-74-4	2-Nitroaniline	960	U	
131-11-3	Dimethylphthalate	400	U	
208-96-8	Acenaphthylene	400	U	
606-20-2	2,6-Dinitrotoluene	400	U	
99-09-2	3-Nitroaniline	960	U J	unk
83-32-9	Acenaphthene	400	U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE49

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE49B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE49B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
				SM 04/30/94
51-28-5	2,4-Dinitrophenol	960	U J	unk
100-02-7	4-Nitrophenol	960	U	
132-64-9	Dibenzofuran	84	J	
121-14-2	2,4-Dinitrotoluene	400	U	
84-66-2	Diethylphthalate	400	U	
7005-72-3	4-Chlorophenyl-phenylether	400	U	
86-73-7	Fluorene	400	U	
100-01-6	4-Nitroaniline	960	U J	unk
534-52-1	4,6-Dinitro-2-Methylphenol	960	U	
86-30-6	N-Nitrosodiphenylamine (1)	400	U	
101-55-3	4-Bromophenyl-phenylether	400	U	
118-74-1	Hexachlorobenzene	400	U	
87-86-5	Pentachlorophenol	960	U	
85-01-8	Phenanthrene	86	J	
120-12-7	Anthracene	400	U	
86-74-8	Carbazole	400	U	
84-74-2	Di-n-Butylphthalate	400 ~~33~~	BJ U	
206-44-0	Fluoranthene	24	J	
129-00-0	Pyrene	70	J	unk
85-68-7	Butylbenzylphthalate	98	J	AV
91-94-1	3,3'-Dichlorobenzidine	400	U J	4-19-94
56-55-3	Benzo(A) anthracene	400	U	
218-01-9	Chrysene	400	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	2000	B	OK
117-84-0	Di-n-Octylphthalate	400	U J	unk
205-99-2	Benzo(b)Fluoranthene	400	U	
207-08-9	Benzo(k)Fluoranthene	400	U	
50-32-8	Benzo(a)Pyrene	400	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	400	U	
53-70-3	Dibenz(a,h)Anthracene	400	U	
191-24-2	Benzo(g,h,i)Perylene	400	U J	unk

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE49

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE49B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE49B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKANE	27.10	2300	J
2.	UNKNOWN	27.38	880	J
3.	UNKNOWN	27.50	950	J
4.	UNKNOWN ALKANE	27.95	1400	J
5.	UNKNOWN ALKANE	28.22	900	J
6.	UNKNOWN ALKANE	28.42	1900	J
7.	UNKNOWN ALKANE	28.62	1200	J
8.	UNKNOWN ALKANE	28.68	1100	J
9.	UNKNOWN ALKANE	28.75	1300	J
10.	UNKNOWN ALKANE	28.97	1400	J
11.	UNKNOWN ALKANE	29.05	1100	J
12.	UNKNOWN ALKANE	29.15	1100	J
13.	UNKNOWN ALKANE	29.22	1000	J
14.	UNKNOWN	29.28	990	J
15.	UNKNOWN	29.37	940	J
16.	UNKNOWN	29.53	810	J
17.	UNKNOWN	29.67	760	J
18.	UNKNOWN	29.88	720	J
19.	UNKNOWN ALKANE	29.98	970	J
20.	UNKNOWN	30.28	740	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE50

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE50B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE50B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 10 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	20	J	SM 6/30/94
111-44-4	bis(2-Chloroethyl)Ether	370	U	
95-57-8	2-Chlorophenol	370	U	
541-73-1	1,3-Dichlorobenzene	370	U	
106-46-7	1,4-Dichlorobenzene	370	U	
95-50-1	1,2-Dichlorobenzene	370	U	
95-48-7	2-Methylphenol	370	U	
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U	
106-44-5	4-Methylphenol	370	U	
621-64-7	N-Nitroso-Di-n-Propylamine	370	U	
67-72-1	Hexachloroethane	370	U	
98-95-3	Nitrobenzene	370	U	
78-59-1	Isophorone	370	U	
88-75-5	2-Nitrophenol	370	U	
105-67-9	2,4-Dimethylphenol	370	U	
111-91-1	bis(2-Chloroethoxy)Methane	370	U	
120-83-2	2,4-Dichlorophenol	370	U	
120-82-1	1,2,4-Trichlorobenzene	370	U	
91-20-3	Naphthalene	70	J	
106-47-8	4-Chloroaniline	370	U J	unk
87-68-3	Hexachlorobutadiene	370	U	
59-50-7	4-Chloro-3-Methylphenol	370	U	
91-57-6	2-Methylnaphthalene	85	J	
77-47-4	Hexachlorocyclopentadiene	370	U	
88-06-2	2,4,6-Trichlorophenol	370	U	
95-95-4	2,4,5-Trichlorophenol	890	U	
91-58-7	2-Chloronaphthalene	370	U	
88-74-4	2-Nitroaniline	890	U	
131-11-3	Dimethylphthalate	370	U	
208-96-8	Acenaphthylene	370	U	
606-20-2	2,6-Dinitrotoluene	370	U	
99-09-2	3-Nitroaniline	890	U J	unk
83-32-9	Acenaphthene	370	U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE50

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE50B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE50B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 10 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	890	U J	unk
100-02-7	4-Nitrophenol	890	U	
132-64-9	Dibenzofuran	170	J	
121-14-2	2,4-Dinitrotoluene	370	U	
84-66-2	Diethylphthalate	370	U	
7005-72-3	4-Chlorophenyl-phenylether	370	U	
86-73-7	Fluorene	370	U	
100-01-6	4-Nitroaniline	890	U J	unk
534-52-1	4,6-Dinitro-2-Methylphenol	890	U	
86-30-6	N-Nitrosodiphenylamine (1)	370	U	
101-55-3	4-Bromophenyl-phenylether	370	U	
118-74-1	Hexachlorobenzene	370	U	
87-86-5	Pentachlorophenol	890	U	
85-01-8	Phenanthrene	150	J	
120-12-7	Anthracene	370	U	
86-74-8	Carbazole	370	U	
84-74-2	Di-n-Butylphthalate	370 ~~25~~	BJ V	
206-44-0	Fluoranthene	63	J	
129-00-0	Pyrene	100	J	AV
85-68-7	Butylbenzylphthalate	130	J	
91-94-1	3,3'-Dichlorobenzidine	370	U J	4-19-94
56-55-3	Benzo(A) anthracene	38	J	unk
218-01-9	Chrysene	64	J	
117-81-7	bis(2-Ethylhexyl)Phthalate	370	U	
117-84-0	Di-n-Octylphthalate	370	U J	unk
205-99-2	Benzo(b)Fluoranthene	61	J	
207-08-9	Benzo(k)Fluoranthene	370	U	
50-32-8	Benzo(a)Pyrene	63	J	
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U	
53-70-3	Dibenz(a,h)Anthracene	370	U	
191-24-2	Benzo(g,h,i)Perylene	370	U J	unk

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE50

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE50B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE50B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 10 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.2

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.07	840	J
2.	UNKNOWN ALKANE	24.97	660	J
3.	UNKNOWN ALKANE	25.55	860	J
4.	UNKNOWN ALKANE	25.88	950	J
5.	UNKNOWN ALKANE	26.47	1800	J
6.	UNKNOWN ALKANE	26.67	920	J
7.	UNKNOWN ALKANE	27.33	2600	J
8.	UNKNOWN ALKANE	27.63	1000	J
9.	UNKNOWN ALKANE	27.80	1800	J
10.	UNKNOWN ALKANE	28.17	1500	J
11.	UNKNOWN ALKANE	28.47	980	J
12.	UNKNOWN ALKANE	28.65	1800	J
13.	UNKNOWN ALKANE	28.90	950	J
14.	UNKNOWN ALKANE	28.97	1200	J
15.	UNKNOWN ALKANE	29.28	1200	J
16.	UNKNOWN ALKANE	29.40	980	J
17.	UNKNOWN ALKANE	29.50	910	J
18.	UNKNOWN ALKANE	30.22	1300	J
19.	UNKNOWN	30.52	1100	J
20.	UNKNOWN ALKANE	30.60	940	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE51

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE51B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE51B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	27	J	SM 6/30/94
111-44-4	bis(2-Chloroethyl)Ether	420	U	
95-57-8	2-Chlorophenol	420	U	
541-73-1	1,3-Dichlorobenzene	420	U	
106-46-7	1,4-Dichlorobenzene	420	U	
95-50-1	1,2-Dichlorobenzene	420	U	
95-48-7	2-Methylphenol	420	U	
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U	
106-44-5	4-Methylphenol	420	U	
621-64-7	N-Nitroso-Di-n-Propylamine	420	U	
67-72-1	Hexachloroethane	420	U	
98-95-3	Nitrobenzene	420	U	
78-59-1	Isophorone	420	U	
88-75-5	2-Nitrophenol	420	U	
105-67-9	2,4-Dimethylphenol	420	U	
111-91-1	bis(2-Chloroethoxy)Methane	420	U	
120-83-2	2,4-Dichlorophenol	420	U	
120-82-1	1,2,4-Trichlorobenzene	420	U	
91-20-3	Naphthalene	420	U	
106-47-8	4-Chloroaniline	420	U J	unk
87-68-3	Hexachlorobutadiene	420	U	
59-50-7	4-Chloro-3-Methylphenol	420	U	
91-57-6	2-Methylnaphthalene	420	U	
77-47-4	Hexachlorocyclopentadiene	420	U	
88-06-2	2,4,6-Trichlorophenol	420	U	
95-95-4	2,4,5-Trichlorophenol	1000	U	
91-58-7	2-Chloronaphthalene	420	U	
88-74-4	2-Nitroaniline	1000	U	
131-11-3	Dimethylphthalate	420	U	
208-96-8	Acenaphthylene	420	U	
606-20-2	2,6-Dinitrotoluene	420	U	
99-09-2	3-Nitroaniline	1000	U J	unk
83-32-9	Acenaphthene	420	U	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE51

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE51B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE51B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	1000	U J	SM 6/30/94 unk
100-02-7	4-Nitrophenol	1000	U	
132-64-9	Dibenzofuran	420	U	
121-14-2	2,4-Dinitrotoluene	420	U	
84-66-2	Diethylphthalate	420	U	
7005-72-3	4-Chlorophenyl-phenylether	420	U	
86-73-7	Fluorene	420	U	
100-01-6	4-Nitroaniline	1000	U J	unk
534-52-1	4,6-Dinitro-2-Methylphenol	1000	U	
86-30-6	N-Nitrosodiphenylamine (1)	420	U	
101-55-3	4-Bromophenyl-phenylether	420	U	
118-74-1	Hexachlorobenzene	420	U	
87-86-5	Pentachlorophenol	1000	U	
85-01-8	Phenanthrene	420	U	
120-12-7	Anthracene	420	U	
86-74-8	Carbazole	420	U	
84-74-2	Di-n-Butylphthalate	420 ~~23~~	BJ U	
206-44-0	Fluoranthene	22	J	
129-00-0	Pyrene	32	J	
85-68-7	Butylbenzylphthalate	420	U	unKAV 4-19-94
91-94-1	3,3'-Dichlorobenzidine	420	U J	
56-55-3	Benzo(A) anthracene	420	U	
218-01-9	Chrysene	420	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	420 ~~67~~	BJ U	
117-84-0	Di-n-Octylphthalate	420	U J	unk
205-99-2	Benzo(b)Fluoranthene	26	J	
207-08-9	Benzo(k)Fluoranthene	420	U	
50-32-8	Benzo(a)Pyrene	420	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	420	U	
53-70-3	Dibenz(a,h)Anthracene	420	U	
191-24-2	Benzo(g,h,i)Perylene	420	U J	unk

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE51

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE51B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE51B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5

Number TICs found: 12

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 822-67-3	2-CYCLOHEXEN-1-OL	5.55	93	JNB U
2.	UNKNOWN	6.10	1200	J
3.	UNKNOWN	6.40	210	J
4. 20019-64-1	5,5-DIMETHYL-2(5H)-FURNAONE	6.73	690	JN
5.	UNKNOWN	8.73	120	J
6. 74381-40-1	1,(1,1-DIEMTHYLETHYL)-2-METH	17.72	210	JNB U
7.	UNKNOWN	29.63	120	J
8.	UNKNOWN	30.60	120	J
9.	UNKNOWN ALKANE	32.02	150	J
10.	UNKNOWN	32.32	110	J
11.	UNKNOWN	33.15	120	J
12.	UNKNOWN	37.78	300	J

AV
4-19-94

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE52

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE52B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE52B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	400	U	SM 6/30/94
111-44-4	bis(2-Chloroethyl)Ether	400	U	
95-57-8	2-Chlorophenol	400	U	
541-73-1	1,3-Dichlorobenzene	400	U	
106-46-7	1,4-Dichlorobenzene	400	U	
95-50-1	1,2-Dichlorobenzene	400	U	
95-48-7	2-Methylphenol	400	U	
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U	
106-44-5	4-Methylphenol	400	U	
621-64-7	N-Nitroso-Di-n-Propylamine	400	U	
67-72-1	Hexachloroethane	400	U	
98-95-3	Nitrobenzene	400	U	
78-59-1	Isophorone	400	U	
88-75-5	2-Nitrophenol	400	U	
105-67-9	2,4-Dimethylphenol	400	U	
111-91-1	bis(2-Chloroethoxy)Methane	400	U	
120-83-2	2,4-Dichlorophenol	400	U	
120-82-1	1,2,4-Trichlorobenzene	400	U	
91-20-3	Naphthalene	400	U	
106-47-8	4-Chloroaniline	400	U J	unk
87-68-3	Hexachlorobutadiene	400	U	
59-50-7	4-Chloro-3-Methylphenol	400	U	
91-57-6	2-Methylnaphthalene	400	U	
77-47-4	Hexachlorocyclopentadiene	400	U	
88-06-2	2,4,6-Trichlorophenol	400	U	
95-95-4	2,4,5-Trichlorophenol	960	U	
91-58-7	2-Chloronaphthalene	400	U	
88-74-4	2-Nitroaniline	960	U	
131-11-3	Dimethylphthalate	400	U	
208-96-8	Acenaphthylene	400	U	
606-20-2	2,6-Dinitrotoluene	400	U	
99-09-2	3-Nitroaniline	960	U J	unk
83-32-9	Acenaphthene	400	U	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE52

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE52B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE52B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	SM 6/30/94
51-28-5	2,4-Dinitrophenol	960	U J	unk
100-02-7	4-Nitrophenol	960	U	
132-64-9	Dibenzofuran	400	U	
121-14-2	2,4-Dinitrotoluene	400	U	
84-66-2	Diethylphthalate	400	U	
7005-72-3	4-Chlorophenyl-phenylether	400	U	
86-73-7	Fluorene	400	U	
100-01-6	4-Nitroaniline	960	U J	unk
534-52-1	4,6-Dinitro-2-Methylphenol	960	U	
86-30-6	N-Nitrosodiphenylamine (1)	400	U	
101-55-3	4-Bromophenyl-phenylether	400	U	
118-74-1	Hexachlorobenzene	400	U	
87-86-5	Pentachlorophenol	960	U	
85-01-8	Phenanthrene	400	U	
120-12-7	Anthracene	400	U	
86-74-8	Carbazole	400	U	
84-74-2	Di-n-Butylphthalate	400	U	
206-44-0	Fluoranthene	400	U	
129-00-0	Pyrene	400	U	
85-68-7	Butylbenzylphthalate	400	U	AV
91-94-1	3,3'-Dichlorobenzidine	400	U J unk	4-19-94
56-55-3	Benzo(A) anthracene	400	U	
218-01-9	Chrysene	400	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	400 ~~44~~	BJU	
117-84-0	Di-n-Octylphthalate	400	U J	unk
205-99-2	Benzo(b)Fluoranthene	400	U	
207-08-9	Benzo(k)Fluoranthene	400	U	
50-32-8	Benzo(a)Pyrene	400	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	400	U	
53-70-3	Dibenz(a,h)Anthracene	400	U	
191-24-2	Benzo(g,h,i)Perylene	400	U J	unk

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE52

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE52B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE52B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 822-67-3	2-CYCLOHEXEN-1-OL	5.47	100	JNB V
2.	UNKNOWN	6.02	1100	J
3.	UNKNOWN	6.32	210	J
4. 20019-64-1	5,5-DIMETHYL-2(5H)-FURANONE	6.65	370	JN
5.	UNKNOWN	8.65	150	J
6. 74381-40-1	1-(1,1-DIEMTHYLETHYL)-2-METH	17.62	180	JNB V
7.	UNKNOWN	18.83	100	J
8.	UNKNOWN ALKANE	30.35	110	J
9.	UNKNOWN ALKANE	31.92	140	J

AV
4-19-94

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE53

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE53B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE53B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 14 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	380	U	
111-44-4	bis(2-Chloroethyl)Ether	380	U	
95-57-8	2-Chlorophenol	380	U	
541-73-1	1,3-Dichlorobenzene	380	U	
106-46-7	1,4-Dichlorobenzene	380	U	
95-50-1	1,2-Dichlorobenzene	380	U	
95-48-7	2-Methylphenol	380	U	
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U	
106-44-5	4-Methylphenol	380	U	
621-64-7	N-Nitroso-Di-n-Propylamine	380	U	
67-72-1	Hexachloroethane	380	U	
98-95-3	Nitrobenzene	380	U	
78-59-1	Isophorone	380	U	
88-75-5	2-Nitrophenol	380	U	
105-67-9	2,4-Dimethylphenol	380	U	
111-91-1	bis(2-Chloroethoxy)Methane	380	U	
120-83-2	2,4-Dichlorophenol	380	U	
120-82-1	1,2,4-Trichlorobenzene	380	U	
91-20-3	Naphthalene	380	U	
106-47-8	4-Chloroaniline	380	U J	unk
87-68-3	Hexachlorobutadiene	380	U	
59-50-7	4-Chloro-3-Methylphenol	380	U	
91-57-6	2-Methylnaphthalene	380	U	
77-47-4	Hexachlorocyclopentadiene	380	U	
88-06-2	2,4,6-Trichlorophenol	380	U	
95-95-4	2,4,5-Trichlorophenol	930	U	
91-58-7	2-Chloronaphthalene	380	U	
88-74-4	2-Nitroaniline	930	U	
131-11-3	Dimethylphthalate	380	U	
208-96-8	Acenaphthylene	380	U	
606-20-2	2,6-Dinitrotoluene	380	U	
99-09-2	3-Nitroaniline	930	U J	unk
83-32-9	Acenaphthene	380	U	

6/1 soil/gt

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE53

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE53B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE53B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 14 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9

SM 6/30/94

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	930	U J	unk
100-02-7	4-Nitrophenol	930	U	
132-64-9	Dibenzofuran	380	U	
121-14-2	2,4-Dinitrotoluene	380	U	
84-66-2	Diethylphthalate	380	U	
7005-72-3	4-Chlorophenyl-phenylether	380	U	
86-73-7	Fluorene	380	U	
100-01-6	4-Nitroaniline	930	U J	unk
534-52-1	4,6-Dinitro-2-Methylphenol	930	U	
86-30-6	N-Nitrosodiphenylamine (1)	380	U	
101-55-3	4-Bromophenyl-phenylether	380	U	
118-74-1	Hexachlorobenzene	380	U	
87-86-5	Pentachlorophenol	930	U	
85-01-8	Phenanthrene	380	U	
120-12-7	Anthracene	380	U	
86-74-8	Carbazole	380	U	
84-74-2	Di-n-Butylphthalate	380	U	
206-44-0	Fluoranthene	380	U	
129-00-0	Pyrene	380	U	
85-68-7	Butylbenzylphthalate	380	U	
91-94-1	3,3'-Dichlorobenzidine	380	U J	unk
56-55-3	Benzo(A) anthracene	380	U	
218-01-9	Chrysene	380	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	380 ~~67~~	BJ U	unk
117-84-0	Di-n-Octylphthalate	380	U J	AI
205-99-2	Benzo(b)Fluoranthene	380	U	
207-08-9	Benzo(k)Fluoranthene	380	U	4-19-94
50-32-8	Benzo(a)Pyrene	380	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U	
53-70-3	Dibenz(a,h)Anthracene	380	U	
191-24-2	Benzo(g,h,i)Perylene	380	U J	unk

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE53

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE53B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE53B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 14 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 822-67-3	2-CYCLOHEXEN-1-OL	5.53	89	JNBU
2.	UNKNOWN	6.07	1000	J
3.	UNKNOWN	6.37	330	J
4. 20019-64-1	5,5-DIEMTHY-2(5H)-FURANONE	6.70	350	JN
5.	UNKNOWN	8.72	160	J
6. 74381-40-1	1-(1,1-DIEMETHYLETHYL)-METHY	17.70	220	JNBU
7.	UNKNOWN ALKANE	28.20	87	J
8.	UNKNOWN ALKANE	28.95	120	J
9.	UNKNOWN ALKANE	29.72	100	J
10.	UNKNOWN	30.35	210	J
11.	UNKNOWN ALKANE	30.45	440	J
12.	UNKNOWN ALKANE	30.58	170	J
13.	UNKNOWN ALKANE	31.02	100	J
14.	UNKNOWN ALKANE	31.70	160	J
15.	UNKNOWN	32.03	310	J
16.	UNKNOWN	32.32	130	J
17.	UNKNOWN	33.17	120	J
18.	UNKNOWN ALKANE	34.10	91	J
19.	UNKNOWN	34.57	130	J
20.	UNKNOWN	35.30	110	J

AL 4-19-94

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE99

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE99B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE99B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	420	U	SM 6/30/94
111-44-4	bis(2-Chloroethyl)Ether	420	U	
95-57-8	2-Chlorophenol	420	U	
541-73-1	1,3-Dichlorobenzene	420	U	
106-46-7	1,4-Dichlorobenzene	420	U	
95-50-1	1,2-Dichlorobenzene	420	U	
95-48-7	2-Methylphenol	420	U	
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U	
106-44-5	4-Methylphenol	29	J	
621-64-7	N-Nitroso-Di-n-Propylamine	420	U	
67-72-1	Hexachloroethane	420	U	
98-95-3	Nitrobenzene	420	U	
78-59-1	Isophorone	420	U	
88-75-5	2-Nitrophenol	420	U	
105-67-9	2,4-Dimethylphenol	420	U	
111-91-1	bis(2-Chloroethoxy)Methane	420	U	
120-83-2	2,4-Dichlorophenol	420	U	
120-82-1	1,2,4-Trichlorobenzene	420	U	
91-20-3	Naphthalene	31	J	
106-47-8	4-Chloroaniline	420	U J	unk
87-68-3	Hexachlorobutadiene	420	U	
59-50-7	4-Chloro-3-Methylphenol	420	U	
91-57-6	2-Methylnaphthalene	61	J	
77-47-4	Hexachlorocyclopentadiene	420	U	
88-06-2	2,4,6-Trichlorophenol	420	U	
95-95-4	2,4,5-Trichlorophenol	1000	U	
91-58-7	2-Chloronaphthalene	420	U	
88-74-4	2-Nitroaniline	1000	U	
131-11-3	Dimethylphthalate	420	U	
208-96-8	Acenaphthylene	420	U	
606-20-2	2,6-Dinitrotoluene	420	U	
99-09-2	3-Nitroaniline	1000	U J	unk
83-32-9	Acenaphthene	420	U	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE99

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE99B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE99B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
				SM 01/30/94
51-28-5	2,4-Dinitrophenol	1000	U J	unk
100-02-7	4-Nitrophenol	1000	U	
132-64-9	Dibenzofuran	420	U	
121-14-2	2,4-Dinitrotoluene	420	U	
84-66-2	Diethylphthalate	420	U	
7005-72-3	4-Chlorophenyl-phenylether	420	U	
86-73-7	Fluorene	420	U	
100-01-6	4-Nitroaniline	1000	U J	unk
534-52-1	4,6-Dinitro-2-Methylphenol	1000	U	
86-30-6	N-Nitrosodiphenylamine (1)	420	U	
101-55-3	4-Bromophenyl-phenylether	420	U	
118-74-1	Hexachlorobenzene	420	U	
87-86-5	Pentachlorophenol	1000	U	
85-01-8	Phenanthrene	120	J	
120-12-7	Anthracene	420	U	
86-74-8	Carbazole	420	U	
84-74-2	Di-n-Butylphthalate	420 ~~30~~	BJ U	
206-44-0	Fluoranthene	170	J	
129-00-0	Pyrene	180	J	
85-68-7	Butylbenzylphthalate	420	U	unk AV
91-94-1	3,3'-Dichlorobenzidine	420	U J	4-19-94
56-55-3	Benzo(A) anthracene	69	J	
218-01-9	Chrysene	140	J	
117-81-7	bis(2-Ethylhexyl)Phthalate	420 ~~110~~	BJ U	
117-84-0	Di-n-Octylphthalate	420	U J	unk
205-99-2	Benzo(b)Fluoranthene	92	J	
207-08-9	Benzo(k)Fluoranthene	100	J	
50-32-8	Benzo(a)Pyrene	82	J	
193-39-5	Indeno(1,2,3-cd)Pyrene	53	J	
53-70-3	Dibenz(a,h)Anthracene	420	U	
191-24-2	Benzo(g,h,i)Perylene	73	J	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESE99

Lab Name: ENCOTEC Contract: 68-D2-0012
Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: ESE99B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ESE99B

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 03/28/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 04/05/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.07	1100	J
2.		UNKNOWN	6.37	610	BJU
3.	20019-64-1	5,5-DIMETHYL-2(5H)-FURANONE	6.70	370	JN
4.		UNKNOWN	8.72	190	J
5.	74381-40-1	1-(1,1-DIEMETHYLETHYL)-METHY	17.70	240	JNBU
6.		UNKNOWN	19.78	210	J
7.		UNKNOWN	23.08	150	J
8.		UNKNOWN	23.15	150	J
9.		UNKNOWN ALKANE	26.47	120	J
10.		UNKNOWN ALKANE	28.93	120	J
11.		UNKNOWN	29.38	110	J
12.		UNKNOWN	29.72	110	J
13.		UNKNOWN ALKANE	30.45	290	J
14.		UNKNOWN	30.62	210	J
15.		UNKNOWN	30.97	180	J
16.		UNKNOWN ALKANE	32.02	220	J
17.		UNKNOWN	32.58	360	J
18.		UNKNOWN ALKANE	32.67	230	J
19.		UNKNOWN	34.73	180	J
20.		UNKNOWN	34.87	150	J

AV 4-19-9

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

GC Column(1): DB-1701 ID: 0.32(mm) GC Column(2): DB-17 ID: 0.32(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKL1	79	74	60	60			0
02	ESE47	70	78	49*	53*			2
03	ESE48	68	78	51*	50*			2
04	ESE49	74	92	9*	9*			2
05	ESE50	59*	70	9*	10*			3
06	ESE51	73	80	45*	46*			2
07	ESE52	70	75	52*	53*			2
08	ESE53	70	76	32*	32*			2
09	ESE99	80	89	23*	25*			2
10	ESE50MS	70	83	11*	11*			2
11	ESE50MSD	72	84	17*	17*			2

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix Spike - EPA Sample No.: ESE50

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	18.500	0	14.4	78	46-127
Heptachlor	18.500	0	14.2	77	35-130
Aldrin	18.500	0	14.3	77	34-132
Dieldrin	37.000	0	20.1	54	31-134
Endrin	37.000	0	21.4	58	42-139
4,4'-DDT	37.000	0	12.1	33	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	18.500	15.2	82	5	50	46-127
Heptachlor	18.500	15.1	82	6	31	35-130
Aldrin	18.500	15.0	81	5	43	34-132
Dieldrin	37.000	23.0	62	14	38	31-134
Endrin	37.000	25.6	69	17	45	42-139
4,4'-DDT	37.000	16.0	43	26	50	23-134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKL1

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Lab Sample ID: MB032894-5 Lab File ID:

Matrix:(soil/water) SOIL Extraction:(SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) Y Date Extracted: 03/28/94

Date Analyzed (1): 04/07/94 Date Analyzed (2): 04/07/94

Time Analyzed (1): 0515 Time Analyzed (2): 0515

Instrument ID (1): 3400-A Instrument ID (2): 3400-B

GC Column (1): DB-1701 ID: 0.32 (mm) GC Column (2): DB-17 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	ESE47	32457	04/07/94	04/07/94
02	ESE48	32458	04/07/94	04/07/94
03	ESE49	32459	04/07/94	04/07/94
04	ESE50	32460	04/07/94	04/07/94
05	ESE51	32461	04/07/94	04/07/94
06	ESE52	32462	04/07/94	04/07/94
07	ESE53	32463	04/07/94	04/07/94
08	ESE99	32464	04/07/94	04/07/94
09	ESE50MS	32460MS	04/07/94	04/07/94
10	ESE50MSD	32460MSD	04/07/94	04/07/94

COMMENTS:

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKL1

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: MB032894-5

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: decanted: (Y/N) Date Received:

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/28/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/07/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.3	U
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	3.3	U
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE47

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: 32457

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 19 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/28/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/07/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.2 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	4.1	U
72-55-9	4,4'-DDE	4.1	U
72-20-8	Endrin	4.1	U
33213-65-9	Endosulfan II	4.1	U
72-54-8	4,4'-DDD	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
50-29-3	4,4'-DDT	4.1	U
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	4.1	U
7421-93-4	Endrin aldehyde	4.1	U
5103-71-9	alpha-Chlordane	2.1	U
5103-74-2	gamma-Chlordane	2.1	U
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	83	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE48

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: 32458

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 55 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/28/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/07/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.8	U J
319-85-7	beta-BHC	3.8	U
319-86-8	delta-BHC	3.8	U
58-89-9	gamma-BHC (Lindane)	3.8	U
76-44-8	Heptachlor	3.8	U
309-00-2	Aldrin	3.8	U
1024-57-3	Heptachlor epoxide	3.8	U
959-98-8	Endosulfan I	3.8	U
60-57-1	Dieldrin	7.3	U
72-55-9	4,4'-DDE	7.3	U
72-20-8	Endrin	7.3	U
33213-65-9	Endosulfan II	7.3	U
72-54-8	4,4'-DDD	7.3	U
1031-07-8	Endosulfan sulfate	7.3	U
50-29-3	4,4'-DDT	7.3	U
72-43-5	Methoxychlor	38	U
53494-70-5	Endrin ketone	7.3	U
7421-93-4	Endrin aldehyde	7.3	U
5103-71-9	alpha-Chlordane	3.8	U
5103-74-2	gamma-Chlordane	3.8	U
8001-35-2	Toxaphene	380	U
12674-11-2	Aroclor-1016	73	U
11104-28-2	Aroclor-1221	150	U
11141-16-5	Aroclor-1232	73	U
53469-21-9	Aroclor-1242	73	U
12672-29-6	Aroclor-1248	73	U
11097-69-1	Aroclor-1254	73	U
11096-82-5	Aroclor-1260	73	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE49

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: 32459

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 17 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/28/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/07/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	4.0	U
72-55-9	4,4'-DDE	4.0	U
72-20-8	Endrin	4.0	U
33213-65-9	Endosulfan II	4.0	U
72-54-8	4,4'-DDD	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
50-29-3	4,4'-DDT	4.0	U
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	4.0	U
7421-93-4	Endrin aldehyde	4.0	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	81	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE50

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: 32460

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 10 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/28/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/07/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 9.2 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	3.7	U
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	3.7	U
1031-07-8	Endosulfan sulfate	3.7	U
50-29-3	4,4'-DDT	3.7	U
72-43-5	Methoxychlor	19	U
53494-70-5	Endrin ketone	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	1.9	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	74	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE51

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: 32461

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 21 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/28/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/07/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.5 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U J↓
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.2	U
72-55-9	4,4'-DDE	4.2	U
72-20-8	Endrin	4.2	U
33213-65-9	Endosulfan II	4.2	U
72-54-8	4,4'-DDD	4.2	U
1031-07-8	Endosulfan sulfate	4.2	U
50-29-3	4,4'-DDT	4.2	U
72-43-5	Methoxychlor	22	U
53494-70-5	Endrin ketone	4.2	U
7421-93-4	Endrin aldehyde	4.2	U
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	2.2	U
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	85	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE52

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: 32462

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 17 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/28/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/07/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.8 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U J↓
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	4.0	U
72-55-9	4,4'-DDE	4.0	U
72-20-8	Endrin	4.0	U
33213-65-9	Endosulfan II	4.0	U
72-54-8	4,4'-DDD	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
50-29-3	4,4'-DDT	4.0	U
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	4.0	U
7421-93-4	Endrin aldehyde	4.0	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	81	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE53

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: 32463

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 14 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/28/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/07/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.8	U
72-55-9	4,4'-DDE	3.8	U
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESE99

Lab Name: ENCOTEC Contract: 68-D2-0012

Lab Code: ENCOT Case No.: 21795 SAS No.: SDG No.: ESE47

Matrix: (soil/water) SOIL Lab Sample ID: 32464

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 21 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/28/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/07/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.2	U
72-55-9	4,4'-DDE	4.2	U
72-20-8	Endrin	4.2	U
33213-65-9	Endosulfan II	4.2	U
72-54-8	4,4'-DDD	4.2	U
1031-07-8	Endosulfan sulfate	4.2	U
50-29-3	4,4'-DDT	4.2	U
72-43-5	Methoxychlor	22	U
53494-70-5	Endrin ketone	4.2	U
7421-93-4	Endrin aldehyde	4.2	U
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	2.2	U
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	85	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No. _____ CERCLIS No. IL

Case No. 21795 Site Name Location: Perma - Treat of Ill.

Contractor or EPA Lab: Encotec Data User: B+V

No. of Samples: 8 Date Samples or Data Received: 4-18-94

Have Chain-of-Custody records been received? YES ✓ NO ___
Have traffic reports or packing lists been received? YES ✓ NO ___
If no, are traffic report or packing list numbers written on the chain-of-custody record? YES ✓ NO ___
If no, which traffic report or packing list numbers are missing?

Are basic data forms in? YES ✓ NO ___
No. of samples claimed: 8 No. of samples received: 8

Received by: Lynette Burnett Date: 4-18-94

Received by LSSS: _____ Date: _____

Review started: 19 April 1994 Reviewer Signature: Al Venuto

Total time spent on review: 12 Date review completed: 4-20-94

Copied by: Marvin Date: 04-29-94

Mailed to user by: Lynette Burnett Date: 5-3-94

DATA USERS:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, SSCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____
Inorganic Data Complete( ] Suitable for Intended Purpose( ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose( ] list
Dioxin Data Complete [ ] Suitable for Intended Purpose( ] prblms
SAS Data Complete [ ] Suitable for Intended Purpose( ] below.
PROBLEMS: Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files Date: _____

RECEIVED
MAY 3 1994

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data
Received for Review on April 21, 1994

FROM: Charles T. Elly, Director (SL-10C)
Central Regional Laboratory
BP Gleeson for C T Elly 4/29/94

TO: Data User: BTV

We have reviewed the data for the following case.

SITE NAME: Perma-Treat of Ill. (Ill)

CASE and/or SAS NUMBER: 21795 SDG NUMBER: MEW444

Number and Type of Samples: 8 (Soil)

CLP Sample Numbers: MEW444-45 MEW267-72

CLP Laboratory: Weyer Hrs. for Review 7

Following are our findings:
All As results are estimated due to poor precision (-0.9 in). All Cu and Zn results are estimated due to poor laboratory precision. All Fe and Mn results are estimated due to interference. All other results are acceptable for use with qualification. See attached data review for detail.
BP Gleeson 4/29/94

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualification.
( ) Data are preliminary, pending verification by laboratory.
( ) Data are unacceptable.

cc: Edward Kantor, EMSL-Las Vegas
Julie Frankel, VIAR & Co. (SMO)

NARRATIVE

SITE : PERMA-TREAT OF IL. (IL.) CASE: 21795
CONTRACTOR: WEYER SDG : MEWY44

The laboratory's portion of this case contains 8 low level water samples analyzed for total metals and cyanide. Below is a summary of the out of control audits and their possible effects on the data for this case.

EVIDENTIAL AUDIT: The original Hg raw data are with case 21785, SDG: MCPL38. All of the remaining raw data, forms and documents are originals and are present in the order indicated on the DC-2 form (inventory sheet). All original sample tags are included in the case and their numbers match the numbers on the DC-1 form (log-in sheet).

ICP ANALYSES: The duplicate audit for Zn (68.0% RPD) , the matrix spike recovery for Zn (57.4%) and the ICP serial dilution audit for Zn (13.7% difference) are out of control. All Zn results are estimated (J) due to poor precision, high bias and interference.

The matrix spike recovery for Sb (44.7%) is out of control. The Sb results for MEWZ69 and 71 are estimated (J) due to low bias. All of the remaining Sb results are estimated (UJ) due to a possible elevated detection limit.

The matrix spike recovery for Cu (-2.5%) is out of control. All Cu results are estimated (J) due to low bias.

The ICP serial dilution audits for Fe (12.6% difference) and Mn (11.5% difference) are out of control. All Fe and Mn results are estimated (J) due to interference.

The matrix spike recovery for Cr (-67.9%) was not flagged by the lab because the sample concentration is greater than four times the spike added. All Cr results are acceptable.

GFAA ANALYSES: The duplicate audit for As (38.5% RPD) is out of control. All As results are estimated (J) due to poor precision.

The duplicate audit for Tl (200.0% RPD) was not flagged by the lab because the duplicate difference did not exceed the technical

Reviewed by: Lockheed/ESAT
Date: 4-26-94

criterion (+/- 2xCRDL) for soil samples. All Tl results are not qualified on this basis. The Tl result for MEWZ70 was flagged (W) by the lab and is estimated (J) due to interference.

The matrix spike recovery for Se (70.7%) is out of control. The Se results for MEWZ70 and 71 were flagged (W) by the lab and are estimated (J) due to low bias and interference. All of the remaining Se results are estimated (J) due to low bias.

OTHER QUALIFIERS: The matrix spike recovery for Hg (67.0%) is out of control. The Hg results for MEWY44, MEWZ68, 69 and 71 are estimated (J) due to low bias. All of the remaining Hg results are estimated (UJ) due to a possible elevated detection limit.

All CN results are acceptable.

Reviewed by: Bri Yun Lockheed/ESAT
Date: 4-26-94

QC EXCEPTION SUMMARY REPORT

CASE\SAS#: 21795
SITE: Perma-Treat of IL. (IL.)
MATRIX: Soil
WATER SAMPLE SPK:
DATA SET:
LAB: Weyer
CONC: Low
WATER SAMPLE DUP:
LAB QC # MEN Y44
REVIEWED BY: Bri Lyne
SOIL SAMPLE SPK:
DATE: 4-26-94
SOIL SAMPLE DUP:

FORM #		FORM 2	FORM 2	FORM 3	FORM 3	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	FORM 7	FORM 9	FORM 9	FORM 6	FORM 5	FIELD	FIELD	FIELD	FIELD	COMMENTS
ELEMENT	HOLD TIME	INITIAL CALIB	CONTIN CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOIL BLANK	ICS %R	SOIL SPIKE %R	SOIL DUP RPD	ICS AQ	ICS SOIL	SERIAL DILUTION AQUEOUS	SERIAL DILUTION SOIL	AQ DUP %R	AQ SPIKE %R	BLANK	DUP RPD	BLANK	DUP RPD	
ALUMINUM																				
ANTIMONY								44.7												
ARSENIC									38.5											
BARIUM																				
BERYLLIUM																				
CADMIUM																				
CALCIUM																				
CHROMIUM																				
COBALT																				
COPPER								-2.5												
IRON													12.6							
LEAD																				
MAGNESIUM																				
MANGANESE													11.5							
MERCURY								67.0												
NICKEL																				
POTASSIUM																				
SELENIUM								70.7												
SILVER																				
SODIUM																				
THALLIUM																				
TIN																				
VANADIUM																				
ZINC								57.4	68.0				13.7							
CYANIDE																				

GLOSSARY A

Data Qualifier Definitions

For the purpose of defining the flagging nomenclature utilized in this document, the following code letters and associated definitions are provided:

U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

J - The associated value is an estimated quantity.

R - The data are unusable. (Note: The analyte may or may not be present.)

UJ - The material was analyzed for, but was not detected . The associated value is an estimate and may be inaccurate or imprecise.

E - The reported value is estimated because of the presence of interferences. An explanatory note shall be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem).

M - Duplicate injection precision not met.

N - Spiked sample recovery not within control limits.

S - The reported value was determined by the Method of Standard Addition (MSA).

W - Post-digestion spike for furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of the spike absorbance.

+ - Correlation coefficient for the MSA is less than 0.995.

* - Duplicate analysis not within control limits.

Note: Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report & Chain of Custody Record

For Inorganic CLP Analysis

SAS No. (if applicable)

Case No. 21795

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (Specify)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO_3
   3. NaOH
   4. H_2SO_4
   5. $K_2CR_2O_7$
   6. Ice only
   7. Other (Specify)
   N. Not preserved

3. Region No. V

Sampling Co. BVWST

Sampler (Name) John Chiwood

Sampler Signature John Chiwood

Type of Activity

	Lead	Pre-Remedial	Remedial	Removal
SF			RIFS	CLEM
PRP		PA	RD	REMA
ST		SSI	RA	REM
FED		LSI	O&M	OIL
			NPLD	UIS

5. Date Shipped 3/24 94 Carrier Federal Express

Airbill Number 0C 71 7

6. Ship To
Weyerhaeuser Analytical & Testing Services
32901 Weyerhaeuser Way South
WTC 2F25
Federal Way, WA 98003
ATTN: Bonnie Ch 06 92 -62

7. Date Received -- Received by 2 (

Date Received -- Received by Ur

8. Transfer to

Date Received

Received by

Contract Number

Price

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc Low Med High	C Sample Type: Comp./ Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc Nitrate/ Nitrite	Fluoride	pH	High Conc Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/ Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - MIS Liq.	Non Water - Mis Liq.
MEWZ67		L	G	6								5-0233	PT-SS01-001			ESE				
WZ68	5	L	G	6								5-023374	-SS02-00			ESE4				
WZ69	5	L	G	6								-023375	-SS03-00			ESE4				
WZ70	5	L	G	6								5-0233 6	PT-SS04-001			ESES				
MEWZ 1	5	L	G	6								5-02337	PT-SS05-001			ESES1				
JZ	5	L	G	6								5-0233	- 06-001			-E				
EW 1	5	L	G	6								5-02337	-SS0 -00			ESE53				
W 1	5	L	G									5-0 80	PT-SS08-00			ESE				

Shipment for Case complete? (Y/N) Y

Page 1 of 1

Sample used for a spike and/or duplicate MEWZ70 JJC 3/23/94 ~~ESE50~~

Additional Sampler Signatures

Chain of Custody Seal Number 166177 / 166178

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
John Chiwood	3/24/94 1200				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	
		Bonnie Chappel	3/25/94 1080		

Split Samples ☐ Accepted (Signature)
☐ Declined

EPA Form 9110-1 (Rev. 5-91) Replaces EPA Form (2075-6), previous edition which may be used

DISTRIBUTION:
Green - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

Inorg-2

1 345595

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

SOW No.: ILM02.0

EPA Sample No.	Lab Sample ID.
MEWY44	25847
MEWY45	25848
MEWZ67	25849
MEWZ68	25850
MEWZ69	25851
MEWZ70	25852
MEWZ70D	25852D
MEWZ70S	25852S
MEWZ71	25853
MEWZ72	25854

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APR 2 1994
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES
If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:
DILUTIONS FOR AS ANALYSIS BY GFAAS WERE DETERMINED FROM A GFAAS RUN WHICH WAS NOT REPORTED BUT IS INCLUDED IN THE RAW DATA. INSTRUMENTS ICAP61A AND ICAP61B ARE THE SAME INSTRUMENT, ICAP61, BUT REPRESENT 1ST QTR AND 2ND QTR IDLS RESPECTIVELY.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kuri Doxsee Name: Kuri Doxsee

Date: 4-20-94 Title: Lab Mgr

U.S. EPA - CLP

1A

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEWY44

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Lab Sample ID: 25847

Level (low/med): LOW Date Received: 03/25/94

% Solids: 85.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	15200			P	
7440-36-0	Antimony	5.2	U	N	P	UJ ↓ - SM 6/30/94
7440-38-2	Arsenic	636		*	F	J UNK
7440-39-3	Barium	124			P	
7440-41-7	Beryllium	0.73	B		P	
7440-43-9	Cadmium	1.0	U		P	
7440-70-2	Calcium	10700			P	
7440-47-3	Chromium	266			P	
7440-48-4	Cobalt	7.8	B		P	
7440-50-8	Copper	427		N	P	J ↓
7439-89-6	Iron	19400		E	P	J UNK
7439-92-1	Lead	15.9			F	
7439-95-4	Magnesium	3960			P	
7439-96-5	Manganese	375		E	P	J UNK
7439-97-6	Mercury	0.06	B	N	CV	UJ
7440-02-0	Nickel	18.3			P	
7440-09-7	Potassium	1240			P	
7782-49-2	Selenium	0.52	B	N	F	J ↓
7440-22-4	Silver	1.00	U		P	
7440-23-5	Sodium	73.5	B		P	
7440-28-0	Thallium	0.18	B		F	~~J UNK~~ SM
7440-62-2	Vanadium	30.8			P	
7440-66-6	Zinc	49.3		EN*	P	J ↑
	Cyanide	0.58	U		CA	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

000002

U.S. EPA - CLP

EPA SAMPLE NO.

1B

INORGANIC ANALYSIS DATA SHEET

MEWY45

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Lab Sample ID: 25848

Level (low/med): LOW Date Received: 03/25/94

% Solids: 76.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5450			P	
7440-36-0	Antimony	5.0	U	N	P	UJ
7440-38-2	Arsenic	11.5		*	F	J UNC
7440-39-3	Barium	74.9			P	
7440-41-7	Beryllium	0.81	B		P	
7440-43-9	Cadmium	1.00	U		P	
7440-70-2	Calcium	24700			P	
7440-47-3	Chromium	14.2			P	
7440-48-4	Cobalt	10.7	B		P	
7440-50-8	Copper	8.2		N	P	J ↓
7439-89-6	Iron	20100		E	P	J UNC
7439-92-1	Lead	22.5			F	
7439-95-4	Magnesium	3170			P	
7439-96-5	Manganese	1000		E	P	J UNC
7439-97-6	Mercury	0.06	U	N	CV	UJ
7440-02-0	Nickel	14.4			P	
7440-09-7	Potassium	356	U		P	
7782-49-2	Selenium	0.34	B	N	F	J ↓
7440-22-4	Silver	0.95	U		P	
7440-23-5	Sodium	114	B		P	
7440-28-0	Thallium	0.16	U		F	~~J UNC~~ SM
7440-62-2	Vanadium	28.0			P	
7440-66-6	Zinc	84.8		EN*	P	J ↑
	Cyanide	0.66	U		CA	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

AAL003

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEWZ67

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Lab Sample ID: 25849

Level (low/med): LOW Date Received: 03/25/94

% Solids: 79.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	17200			P	
7440-36-0	Antimony	4.2	U	N	P	UJ ↓ sm 6/30/94
7440-38-2	Arsenic	11.1		S*	F	J UNC
7440-39-3	Barium	403			P	
7440-41-7	Beryllium	0.87	B		P	
7440-43-9	Cadmium	0.83	U		P	
7440-70-2	Calcium	11100			P	
7440-47-3	Chromium	26.1			P	
7440-48-4	Cobalt	21.3			P	
7440-50-8	Copper	19.0		N	P	J ↓
7439-89-6	Iron	22200		E	P	J UNC
7439-92-1	Lead	16.7			F	
7439-95-4	Magnesium	2740			P	
7439-96-5	Manganese	2780		E	P	J UNC
7439-97-6	Mercury	0.06	U	N	CV	J ↓ - sm
7440-02-0	Nickel	19.6			P	
7440-09-7	Potassium	1570			P	
7782-49-2	Selenium	0.41	B	N	F	J ↓
7440-22-4	Silver	0.79	U		P	
7440-23-5	Sodium	107	B		P	
7440-28-0	Thallium	0.27	B		F	~~J UNC~~ sm
7440-62-2	Vanadium	39.1			P	
7440-66-6	Zinc	56.4		EN*	P	J ↑
	Cyanide	0.63	U		CA	

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts:

Comments:

000004

U.S. EPA - CLP

1D

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEWZ68

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Lab Sample ID: 25850

Level (low/med): LOW Date Received: 03/25/94

% Solids: 53.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	16800			P	
7440-36-0	Antimony	7.2	U	N	P	UJ ↓ - SM 6/30/94
7440-38-2	Arsenic	46.9		*	F	J UNC
7440-39-3	Barium	136			P	
7440-41-7	Beryllium	0.82	B		P	
7440-43-9	Cadmium	1.4	U		P	
7440-70-2	Calcium	5320			P	
7440-47-3	Chromium	39.0			P	SM
7440-48-4	Cobalt	9.5	B		P	~~J↓~~
7440-50-8	Copper	45.1		N	P	J↓
7439-89-6	Iron	20900		E	P	J UNC
7439-92-1	Lead	25.0			F	
7439-95-4	Magnesium	2460			P	
7439-96-5	Manganese	526		E	P	J UNC
7439-97-6	Mercury	0.09	B	N	CV	J↓
7440-02-0	Nickel	24.5			P	
7440-09-7	Potassium	1610			P	
7782-49-2	Selenium	0.54	B	N	F	J↓
7440-22-4	Silver	1.4	U		P	
7440-23-5	Sodium	64.8	B		P	
7440-28-0	Thallium	0.30	B		F	~~J UNC~~ SM
7440-62-2	Vanadium	32.2			P	
7440-66-6	Zinc	75.1		EN*	P	J↑
	Cyanide	0.93	U		CA	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

000005

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEWZ69

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Lab Sample ID: 25851

Level (low/med): LOW Date Received: 03/25/94

% Solids: 80.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	10900			P	
7440-36-0	Antimony	18.9		N	P	J ↓
7440-38-2	Arsenic	5490		*	F	J UNC
7440-39-3	Barium	112			P	
7440-41-7	Beryllium	0.52	B		P	
7440-43-9	Cadmium	1.0	U		P	
7440-70-2	Calcium	102000			P	
7440-47-3	Chromium	2640			P	
7440-48-4	Cobalt	6.1	B		P	
7440-50-8	Copper	2510		N	P	J ↓
7439-89-6	Iron	13200		E	P	J UNC
7439-92-1	Lead	31.7			F	
7439-95-4	Magnesium	7910			P	
7439-96-5	Manganese	529		E	P	J UNC
7439-97-6	Mercury	0.10	B	N	CV	J ↓
7440-02-0	Nickel	14.7			P	
7440-09-7	Potassium	1490			P	
7782-49-2	Selenium	0.81	B	N	F	J ↓
7440-22-4	Silver	0.99	U		P	
7440-23-5	Sodium	152	B		P	
7440-28-0	Thallium	0.16	U		F	~~Func~~ sm
7440-62-2	Vanadium	24.0			P	
7440-66-6	Zinc	126		EN*	P	J ↑
	Cyanide	0.62	U		CA	

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEWZ70

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Lab Sample ID: 25852

Level (low/med): LOW Date Received: 03/25/94

% Solids: 83.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6750			P	
7440-36-0	Antimony	8.3	U	N	P	UJ ↓ sm 6/30/94
7440-38-2	Arsenic	193		S*	F	J UNC
7440-39-3	Barium	69.5			P	
7440-41-7	Beryllium	0.38	B		P	
7440-43-9	Cadmium	0.77	U		P	
7440-70-2	Calcium	167000			P	
7440-47-3	Chromium	159			P	
7440-48-4	Cobalt	4.7	B		P	
7440-50-8	Copper	132		N	P	J ↓
7439-89-6	Iron	9760		E	P	J UNC
7439-92-1	Lead	11.2			F	
7439-95-4	Magnesium	11500			P	
7439-96-5	Manganese	332		E	P	J UNC
7439-97-6	Mercury	0.05	U	N	CV	UJ ↓ = sm
7440-02-0	Nickel	14.3			P	
7440-09-7	Potassium	1570			P	
7782-49-2	Selenium	0.43	B	NW	F	J UNC
7440-22-4	Silver	0.73	U		P	
7440-23-5	Sodium	177	B		P	
7440-28-0	Thallium	0.12	B	W	F	J UNC
7440-62-2	Vanadium	14.2			P	
7440-66-6	Zinc	79.3		EN*	P	J ↑
	Cyanide	0.60	U		CA	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:
SAMPLE MEWZ70 PLUS ITS QC WAS FLAGGED FOR INTERFERENCES BY THE ICP FOR SB, MG, AND ZN WHICH ARE REPORTED FROM DILUTIONS.

007

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EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEWZ71

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Lab Sample ID: 25853

Level (low/med): LOW Date Received: 03/25/94

% Solids: 79.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11000			P	
7440-36-0	Antimony	5.1	B	N	P	J ↓
7440-38-2	Arsenic	348		*	F	J UNC
7440-39-3	Barium	205			P	
7440-41-7	Beryllium	0.80	B		P	
7440-43-9	Cadmium	0.96			P	
7440-70-2	Calcium	15700			P	
7440-47-3	Chromium	1700			P	
7440-48-4	Cobalt	27.0			P	
7440-50-8	Copper	1430		N	P	J ↓
7439-89-6	Iron	33900		E	P	J UNC
7439-92-1	Lead	114			F	
7439-95-4	Magnesium	4330			P	
7439-96-5	Manganese	1440		E	P	J UNC
7439-97-6	Mercury	0.06	B	N	CV	J ↓
7440-02-0	Nickel	33.2			P	
7440-09-7	Potassium	1100			P	
7782-49-2	Selenium	0.31	B	NW	F	J UNC
7440-22-4	Silver	0.80	U		P	
7440-23-5	Sodium	113	B		P	
7440-28-0	Thallium	0.25	B		F	~~J UNC~~ cm 6/30/94
7440-62-2	Vanadium	25.2			P	
7440-66-6	Zinc	232		EN*	P	J ↑
	Cyanide	0.63	U		CA	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

008

U.S. EPA - CLP

1H

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEWZ72

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Lab Sample ID: 25854

Level (low/med): LOW Date Received: 03/25/94

% Solids: 82.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	15100			P	
7440-36-0	Antimony	4.7	U	N	P	UJ ↓ SM 6/30/94
7440-38-2	Arsenic	175		*	F	J UNC
7440-39-3	Barium	118			P	
7440-41-7	Beryllium	0.69	B		P	
7440-43-9	Cadmium	0.94	U		P	
7440-70-2	Calcium	11200			P	
7440-47-3	Chromium	157			P	
7440-48-4	Cobalt	8.5	B		P	
7440-50-8	Copper	151		N	P	J ↓
7439-89-6	Iron	18000		E	P	J UNC
7439-92-1	Lead	14.6			F	
7439-95-4	Magnesium	2300			P	
7439-96-5	Manganese	421		E	P	J UNC
7439-97-6	Mercury	0.06	U	N	CV	UJ ↓ — SM
7440-02-0	Nickel	17.2			P	
7440-09-7	Potassium	834	B		P	
7782-49-2	Selenium	0.19	B	N	F	J ↓
7440-22-4	Silver	0.90	U		P	
7440-23-5	Sodium	54.5	B		P	
7440-28-0	Thallium	0.19	B		F	~~J UNC~~ SM
7440-62-2	Vanadium	32.8			P	
7440-66-6	Zinc	41.6		EN*	P	J ↑
	Cyanide	0.61	U		CA	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

009

U.S. EPA - CLP

3A
BLANKS

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3.	C	Prepa-ration Blank	C	M
Aluminum	20.1	U	20.1	U	20.1	U	20.1	U	4.020	U	P
Antimony	23.1	U	23.1	U	23.1	U	23.1	U	4.620	U	P
Arsenic	0.9	U	0.9	U	0.9	U			0.180	U	F
Barium	1.1	U	1.1	U	1.1	U	1.1	U	0.252	B	P
Beryllium	0.3	U	0.3	U	0.3	U	0.3	U	0.060	U	P
Cadmium	4.6	U	4.6	U	4.6	U	4.6	U	0.920	U	P
Calcium	11.9	U	11.9	U	11.9	U	11.9	U	16.692	B	P
Chromium	3.7	U	3.7	U	3.7	U	3.7	U	0.740	U	P
Cobalt	3.9	U	3.9	U	3.9	U	3.9	U	0.780	U	P
Copper	7.1	U	7.1	U	7.1	U	7.1	U	1.420	U	P
Iron	6.3	U	6.3	U	6.3	U	6.3	U	1.422	B	P
Lead	-0.8	B	-0.6	B	-0.8	B	-0.8	B	0.120	U	F
Magnesium	44.8	U	44.8	U	44.8	U	44.8	U	8.960	U	P
Manganese	0.7	U	0.7	U	0.7	U	0.7	U	0.140	U	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.050	U	CV
Nickel	19.9	U	19.9	U	19.9	U	19.9	U	3.980	U	P
Potassium	1640.7	U	1640.7	U	1640.7	U	1640.7	U	328.140	U	P
Selenium	0.6	B	0.6	U	0.6	U	0.6	U	0.120	U	F
Silver	4.4	U	4.4	U	4.4	U	4.4	U	0.880	U	P
Sodium	22.3	U	22.3	U	22.3	U	22.3	U	4.460	U	P
Thallium	0.7	U	0.7	U	0.7	U	0.7	U	0.140	U	F
Vanadium	-3.1	B	2.8	U	2.8	U	2.8	U	0.560	U	P
Zinc	1.6	U	1.9	B	1.6	U	1.6	U	0.392	B	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	0.500	U	CA

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3B
BLANKS

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			20.1	U							P
Antimony			23.1	U							P
Arsenic											
Barium			1.1	U							P
Beryllium			0.3	U							P
Cadmium			4.6	U							P
Calcium			11.9	U							P
Chromium			3.7	U							P
Cobalt			3.9	U							P
Copper			7.1	U							P
Iron			6.3	U							P
Lead			-0.7	B	-0.6	B	0.6	U			F
Magnesium			44.8	U							P
Manganese			0.7	U							P
Mercury											
Nickel			19.9	U							P
Potassium			1640.7	U							P
Selenium			0.6	U							F
Silver			4.4	U							P
Sodium			22.3	U							P
Thallium			0.7	U							F
Vanadium			2.8	U							P
Zinc			1.7	B							P
Cyanide											

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3C

BLANKS

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			-0.8	B							F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

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3D

BLANKS

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony	24.9	U	24.9	U	24.9	U	24.9	U			P
Arsenic	0.9	U	0.9	U	1.8	B	1.5	B			F
Barium											
Beryllium											
Cadmium											
Calcium	13.3	U	13.3	U	13.3	U	13.3	U			P
Chromium											
Cobalt											
Copper	5.7	U	5.7	U	5.7	U	5.7	U			P
Iron											
Lead											
Magnesium	57.6	U	57.6	U	57.6	U	57.6	U			P
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc	1.5	U	1.5	U	1.5	U	1.5	U			P
Cyanide											

U.S. EPA - CLP

3

BLANKS

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony			24.9	U							P
Arsenic											
Barium											
Beryllium											
Cadmium											
Calcium			13.3	U							P
Chromium											
Cobalt											
Copper			5.7	U							P
Iron											
Lead											
Magnesium			57.6	U							P
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc			1.5	U							P
Cyanide											

U.S. EPA - CLP

3
BLANKS

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M.
Aluminum											
Antimony											
Arsenic	0.9	U	0.9	U	-1.8	B	-1.2	B			F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead											
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

3G
BLANKS

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic			-1.7	B							F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead											
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEWZ70S

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Level (low/med): LOW
% Solids for Sample: 83.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	36.7933		8.3115	U	82.30	44.7	N	P
Arsenic		234.2619		192.5024		7.82	534.0		F
Barium	75-125	349.0770		69.5348		329.19	84.9		P
Beryllium	75-125	7.3787		0.3826	B	8.23	85.0		P
Cadmium	75-125	7.4606		0.7677	U	8.23	90.7		P
Calcium									NR
Chromium		137.0950		159.4343		32.92	-67.9		P
Cobalt	75-125	71.3396		4.6536	B	82.30	81.0		P
Copper	75-125	131.4278		132.4768		41.15	-2.5	N	P
Iron									NR
Lead	75-125	14.4763		11.1730		3.91	84.5		F
Magnesium									NR
Manganese		403.8985		331.5811		82.30	87.9		P
Mercury	75-125	0.4021		0.0477	U	0.60	67.0	N	CV
Nickel	75-125	79.7419		14.2810		82.30	79.5		P
Potassium									NR
Selenium	75-125	1.8193		0.4331	B	1.96	70.7	N	F
Silver	75-125	6.8738		0.7343	U	8.23	83.5		P
Sodium									NR
Thallium	75-125	8.0793		0.1238	B	9.78	81.3		F
Vanadium	75-125	79.8236		14.2075		82.30	79.7		P
Zinc	75-125	126.5222		79.2572		82.30	57.4	N	P
Cyanide	75-125	6.3842		0.5967	U	5.97	106.9		CA

Comments:

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEWZ70A

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony		137.72		49.80	U	120.0	73.3		P
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper		2203.15		793.76		1600.0	88.1		P
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc		1351.00		474.90		1000.0	87.6		P
Cyanide									NR

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

MEWZ70D

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 83.8 % Solids for Duplicate: 83.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		6754.8524		6164.9401		9.1		P
Antimony		8.3115	U	8.1407	U			P
Arsenic	1.8	192.5024		284.3169		38.5	*	F
Barium	33.4	69.5348		63.1171		9.7		P
Beryllium		0.3826	B	0.3637	B	5.1		P
Cadmium		0.7677	U	0.7520	U			P
Calcium		167175.9700		173028.4400		3.4		P
Chromium		159.4343		150.7072		5.6		P
Cobalt		4.6536	B	4.3832	B	6.0		P
Copper		132.4768		124.6198		6.1		P
Iron		9756.7403		9361.8162		4.1		P
Lead		11.1730		11.8247		5.7		F
Magnesium		11513.3140		11441.2610		0.6		P
Manganese		331.5811		328.4305		1.0		P
Mercury		0.0477	U	0.0542	U			CV
Nickel	6.7	14.2810		16.3524		13.5		P
Potassium	834.5	1565.7908		1408.9215		10.5		P
Selenium		0.4331	B	0.4520	B	4.3		F
Silver		0.7343	U	0.7193	U			P
Sodium		176.6659	B	172.5312	B	2.4		P
Thallium		0.1238	B	0.1266	U	200.0		F
Vanadium	8.3	14.2075		13.1856		7.5		P
Zinc		79.2572		160.9487		68.0	*	P
Cyanide	0.6	0.5967	U	0.5967	U			CA

000032

U.S. EPA - CLP

10A

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

ICP ID Number: ICAP61A Date: 01/15/94

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.15		200.0	20.1	P
Antimony	206.80		60.0	23.1	P
Arsenic			10.0		
Barium	493.41		200.0	1.1	P
Beryllium	313.04		5.0	0.3	P
Cadmium	228.80		5.0	4.6	P
Calcium	317.93		5000.0	11.9	P
Chromium	267.72		10.0	3.7	P
Cobalt	228.62		50.0	3.9	P
Copper	324.75		25.0	7.1	P
Iron	259.94		100.0	6.3	P
Lead			3.0		
Magnesium	383.20		5000.0	44.8	P
Manganese	257.61		15.0	0.7	P
Mercury			0.2		
Nickel	231.60		40.0	19.9	P
Potassium	766.49		5000.0	1640.7	P
Selenium			5.0		
Silver	328.07		10.0	4.4	P
Sodium	589.00		5000.0	22.3	P
Thallium			10.0		
Vanadium	292.40		50.0	2.8	P
Zinc	213.86		20.0	1.6	P

Comments:

036

U.S. EPA - CLP

10B

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

ICP ID Number: Date: 01/15/94

Flame AA ID Number:

Furnace AA ID Number: PE5100A

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic	193.76	BZ	10.0	0.5	F
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead			3.0		
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium	196.09	BZ	5.0	0.6	F
Silver			10.0		
Sodium			5000.0		
Thallium			10.0		
Vanadium			50.0		
Zinc			20.0		

Comments:

U.S. EPA - CLP

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

ICP ID Number: Date: 01/15/94

Flame AA ID Number: PE5000

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic			10.0		
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead			3.0		
Magnesium			5000.0		
Manganese			15.0		
Mercury	253.70		0.2	0.1	CV
Nickel			40.0		
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium			10.0		
Vanadium			50.0		
Zinc			20.0		

Comments:

038

U.S. EPA - CLP

10 V

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

ICP ID Number: Date: 01/15/94

Flame AA ID Number:

Furnace AA ID Number: PE3030

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic	193.76	BZ	10.0	0.9	F
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead	283.31	BZ	3.0	0.6	F
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium	276.79	BZ	10.0	0.7	F
Vanadium			50.0		
Zinc			20.0		

Comments:

000039

U.S. EPA - CLP

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

ICP ID Number: Date: 01/15/94

Flame AA ID Number:

Furnace AA ID Number: PE5100B

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic	193.76	BZ	10.0	0.8	F
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead			3.0		
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium			10.0		
Vanadium			50.0		
Zinc			20.0		

Comments:

00040

U.S. EPA - CLP

10F

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: WEYERHAEUSER COMPANY Contract: 68-D2-0045

Lab Code: WEYER Case No.: 21795 SAS No.: SDG No.: MEWY44

ICP ID Number: ICAP61B Date: 04/15/94

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony	206.80		60.0	24.9	P
Arsenic			10.0		
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium	317.93		5000.0	13.3	P
Chromium			10.0		
Cobalt			50.0		
Copper	324.75		25.0	5.7	P
Iron			100.0		
Lead			3.0		
Magnesium	383.20		5000.0	57.6	P
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium			10.0		
Vanadium			50.0		
Zinc	213.86		20.0	1.5	P

Comments:

000041

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No. _____ CERCLIS No. IL

Case No. 21795 Site Name Location: Perma-Treat Oil

Contractor or EPA Lab: Weyer Data User: B+V

No. of Samples: 8 Date Samples or Data Received: 4-21-94

Have Chain-of-Custody records been received? YES ✓ NO ___
Have traffic reports or packing lists been received? YES ✓ NO ___
If no, are traffic report or packing list numbers written on the chain-of-custody record? YES ✓ NO ___
If no, which traffic report or packing list numbers are missing?

Are basic data forms in? YES ✓ NO ___
No. of samples claimed: 8 No. of samples received: 8

Received by: Lynette Burnett Date: 4-21-94

Received by LSES: _____ Date: _____

Review started: 4-25-94 Reviewer Signature: B. Yuen

Total time spent on review: 7 + 0.9 hr Date review completed: 4-26-94

Copied by: Marvin Date: 04-29-94

Mailed to user by: Lynette Burnett Date: 5-2-94

DATA USERS:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ESCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____
Inorganic Data Complete( ) Suitable for Intended Purpose( ) ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose( ) list
Dioxin Data Complete [ ] Suitable for Intended Purpose( ) prblms
SAS Data Complete [ ] Suitable for Intended Purpose( ) below.
PROBLEMS: Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files Date: _____

RECEIVED
APR 25 1994

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 4/21/94

SUBJECT: Review of Region V CLP Data
Received for Review on April 14, 1994

FROM: Charles T. Elly, Director (SL-10C) Patrick J. Chenilla for C.T. Elly
Central Regional Laboratory

TO: Data User: BTV

We have reviewed the data for the following case.

SITE NAME: Perma-Treat of IL (IL)

CASE and/or SAS NUMBER: 21795 SDG NUMBER: EQT90

Number and Type of Samples: 7 (Soil)

CLP Sample Numbers: EQT90, EQT97-99, ESC23, 31, ESC46

CLP Laboratory: SWOK Hrs. for Review 14
1.5
12.5 wdw

Following are our findings:

THE DATA ARE ACCEPTABLE WITH THE QUALIFICATIONS DESCRIBED IN THE ATTACHED REVIEW. MOST OF THE SAMPLES CONTAINED PETROLEUM HYDROCARBONS

Patrick J. Chenilla
4/21/94

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualification.
( ) Data are preliminary, pending verification by laboratory.
( ) Data are unacceptable.

cc: Edward Kantor, EMSL-Las Vegas
Julie Frankel, VIAR & Co. (SMO)

NARRATIVE

CONTRACTOR: SWOK
CASE: 21795/SDG # EQT90
SITE: PERMA-TREAT OF IL (IL)

Seven (7) soil samples, numbered EQT90, 97-99, ESC23, 31 and 46, were collected March 23, 1994. The Southwest Laboratory of Oklahoma (SWOK) of Broken Arrow, Oklahoma received the samples March 25, 1994 in good condition. All seven soil samples were analyzed for all three fractions: Volatiles (VOA), Semi-Volatiles (SVOA) and Pesticide/PCB (Pest/PCB) following CLP SOW OLM01.8 (8/91).

Sample EQT99 was used as the low level soil spike for all three fractions.

There were no samples in this case identified as field blank or field duplicate.

All VOA samples were analyzed within the holding time of fourteen (14) days for soil samples; therefore, the results are acceptable. Both the SVOA and Pest/PCB samples were extracted within the fourteen (14) days holding time for soil samples and the extracts promptly analyzed; therefore, the results are acceptable.

The reviewer's narrative and data qualifiers are noted in the following pages.

Reviewed by: M. Cecilia Luckett MCL **Lockheed/ESAT**
Date: April 21, 1994

NARRATIVE

CONTRACTOR: SWOK
CASE: 21795/SDG # EQT90
SITE: PERMA-TREAT OF IL (IL)

Below is a summary of the out-of-control audits and the possible effect on the data for this case.

1. HOLDING TIME.

The Southwest Laboratory of Oklahoma (SWOK) of Broken Arrow, Oklahoma received seven (7) soil samples March 25, 1994 in good condition. All seven soil samples were analyzed for all three fractions: Volatiles (VOA), Semi-Volatiles (SVOA) and Pesticide/PCB (Pest/PCB) following CLP SOW OLM01.8 (8/91).

All VOA samples were analyzed within the holding time of fourteen (14) days for soil samples; therefore, the results are acceptable.

All SVOA and Pest/PCB samples were extracted within the fourteen (14) days holding time for soil samples and the extracts promptly analyzed; therefore, the results are acceptable.

2. GC/MS TUNING AND GC PERFORMANCE.

GC/MS tuning complied with the mass list and ion abundance criteria for BFB and DFTPP. All samples were analyzed within the twelve (12) hour periods for BFB and DFTPP instrument performance checks as well; therefore, the results are acceptable.

The DDT and Endrin degradation checks using the PEMs of the DB-17 and DB-1701 columns were both < 20.0% and the combined breakdowns were < 30.0%; therefore, the results are acceptable.

The Florisil Cartridge Check and GPC Calibration Check met the required QC criteria; therefore, the results are acceptable.

3. CALIBRATION.

Initial and continuing calibration of VOA and SVOA standards were evaluated for the Target Compounds List (TCLs) and outliers were recorded on the outlier forms included as a part of this narrative.

Reviewed by: M. Cecilia Luckett MCL **Lockheed/ESAT**
Date: April 21, 1994

3. CALIBRATION. (continued)

The retention time window, the % RSD for the initial calibration and the % RPD for the continuing calibration standards for Pest/PCB analysis met the required QC limits. The % Ds from the Individual Mix Compounds met the required QC criteria; therefore, the results are acceptable.

4. METHOD BLANK.

VBLK1 and VBLK2 are the low level soil VOA method blanks. Both VBLK1 and VBLK2 reported one (1) TCL, Chloroform, and no TICs. The presence of Chloroform in any of the samples associated with VBLK1 or VBLK2 should be qualified as non-detected (U) when the concentration is less than (<) five (5) times the blank results. Please refer to Form IV-VOA (VBLK1, VBLK2) for a list of associated samples.

SBLK1 is the low level soil SVOA method blank. SBLK1 reported one (1) TCL, bis(2-Ethylhexyl)phthalate, a common laboratory contaminant, and nine (9) TICs. The presence of bis(2-Ethylhexyl)phthalate in any of the samples associated with SBLK1 should be qualified as non-detected (U) when the concentration is less than (<) ten (10) times the blank results. The presence of any of the TICs in any of the samples associated with SBLK1 should be qualified as non-detected (U) when the concentration is less than (<) five (5) times the blank results. Please refer to Form IV-SVOA (SBLK1) for a list of associated samples.

For the Pest/PCB fraction, there were five (5) instrument blanks each for columns DB-17 and DB-1701. PBLKSL is the low level soil Pest/PCB method blank. There were no target Pesticides or Aroclor/Toxaphene above the CRQL present in PBLKSL; therefore, the results are acceptable.

5. SURROGATE (SYSTEM MONITORING COMPOUND) RECOVERY.

The low level soil system monitoring compound recoveries for the VOA fraction and the low level surrogate recoveries for the SVOA fraction were all well within the required QC limits; therefore, the results are acceptable.

Reviewed by: M. Cecilia Luckett MCL **Lockheed/ESAT**
Date: April 21, 1994

5. SURROGATE (SYSTEM MONITORING COMPOUND) RECOVERY.
(continued)

For the Pest/PCB fraction, the retention times of Tetrachloro-m-xylene (TCX) and Decachlorobiphenyl (DCB) were well within the required ± 0.05 and ± 0.10 minutes of the mean retention time determined from the initial calibration, respectively.

In the Pest/PCB fraction, sample EQT98DL reported the % recovery for TCX1 low outside the required QC limits. Positive results associated with EQT98DL should be qualified as estimated (J) and non-detected results as estimated (UJ).

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE.

Sample EQT99 was used as the low level soil spike for all three fractions: VOA, SVOA, and Pest/PCB.

The MS/MSD recoveries and %RPD values for the low level VOA, SVOA and Pest/PCB fractions were all well within the required QC limits; therefore, the results are acceptable.

7. FIELD BLANK AND FIELD DUPLICATE.

None of the samples in this case were identified as field blank or field duplicate.

8. INTERNAL STANDARDS.

In the VOA fraction, samples EQT99 and 99MSD reported the area count for IS3(CBZ) = Chlorobenzene-d5 low outside the required QC limits. In addtion, EQT99MS reported the area counts for IS1(BCM) = Bromochloromethane, IS2(DFB) = 1,4-Difluorobenzene and IS3 low outside the required QC limits. Compounds associated with IS3 in EQT99 and EQT99MSD and compounds associated with IS1, IS2 and IS3 in sample EQT99MS should be qualified as estimated (J) and non-detected results as estimated (UJ). Please refer to Table 4 for a list of associated compounds.

The internal standards area counts and retention times for the SVOA fraction were all well within the required QC limits; therefore, the results are acceptable.

Reviewed by: M. Cecilia Luckett MCL **Lockheed/ESAT**
Date: April 21, 1994

9. COMPOUND IDENTIFICATION.

Target compounds and TICs were identified by "best fit" library search method.

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS.

VOA, SVOA, and Pest/PCB Target Compounds (TCLs) and Tentatively Identified Compounds (TICs) were properly quantitated and the CRQLs adjusted to reflect all dry weights; therefore, the results are acceptable.

11. SYSTEM PERFORMANCE.

GC/MS baseline indicated acceptable performance.

GC baseline counts indicated acceptable performance.

12. OVERALL CASE ASSESSMENT.

Please note that all of the SVOA samples reported an ~~extremely~~ excessive number of TIC compounds. In the Pest/PCB fraction, sample EQT98 reported a concentration for alpha-Chlordane which exceeded the calibration range. Accordingly, the results from the diluted reanalyses will be used to validate the data. The table below summarizes the number of target compounds, if any, outside the CRQL and the number of tentatively identified compounds, if any, associated with these samples.

Sample ID #	# of Hits				
	VOA		SVOA		Pest/PCB
	TCL	TIC	TCL	TIC	TCL
EQT90	0	0	9	29	4
EQT97	1	0	13	29	1
EQT98	0	0	12	25	5
EQT98DL	-	-	-	-	3
EQT99	0	0	4	29	0
ESC23	2	1	15	29	9
ESC31	1	0	15	30	8
ESC46	0	0	13	30	7

Reviewed by: M. Cecilia Luckett MCL **Lockheed/ESAT**
Date: April 21, 1994

CALIBRATION OUTLIERS
VOLATILE TCL COMPOUNDS
(Page 1 of 1)

CASE\SAS#: 21795
COLUMN: DB-624

CONTRACTOR: SWOK
SITE NAME: Perma-Treat of IL (IL)

Instrument# U		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		2-14-94/07:58			3-25-94/08:39			3-28-94/09:49								
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Chloromethane	0.01															
Bromomethane	0.10															
Vinyl chloride	0.10															
Chloroethane	0.01	0.427			0.514			0.298	30.2	J						
Methylene chloride	0.01															
Acetone	0.01	0.469	34.3	J	0.389			0.459								
Carbon disulfide	0.01															
1,1-Dichloroethene	0.10															
1,1-Dichloroethane	0.20															
1,2-Dichloroethene (total)																
Chloroform	0.20															
1,2-Dichloroethane	0.10															
2-Butanone	0.01	0.596			0.637			0.825	-38.3	J						
1,1,1-Trichloroethane	0.10															
Carbon tetrachloride	0.10															
Bromodichloromethane	0.20															
1,2-Dichloropropane																
cis-1,3-Dichloropropene	0.20															
Trichloroethene	0.30															
Dibromochloromethane	0.10															
1,1,2-Trichloroethane	0.10															
Benzene	0.50															
trans-1,3-Dichloropropene	0.10															
Bromoform	0.10															
4-Methyl-2-pentanone	0.01	0.342			0.415			0.523	-33.5	J						
2-Hexanone	0.01	0.287			0.306			0.384	-33.7	J						
Tetrachloroethene	0.20															
1,1,2,2-Tetrachloroethane	0.50															
Toluene	0.40															
Chlorobenzene	0.50															
Ethylbenzene	0.10															
Styrene	0.30															
Xylene (total)	0.30															
Toluene-d8																
Bromofluorobenzene																
1,2-Dichloroethane-d4																

Samples affected:

VBLK1	VBLK2
ESQT90	ESC23
97	" 31
98	
99	
99MS	
99MSD	
ESC46	

Reviewer's Init/Date: CL/4-19-94

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

CALIBRATION OUTLIER
SEMIVOLATILE TCL COMPOUNDS
(Page 1 of 2)

CASE\SAS#: 21795
COLUMN:

CONTRACTOR: SWOK
SITE NAME: Rima-Treat of LL (Lt)

Instrument# P		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		3-29-94/11:12			3-30-94/08:53			3-31-94/09:37								
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Phenol	0.80															
bis(chloroethyl) Ether	0.70															
2-Chlorophenol	0.70															
1,3-Dichlorobenzene																
1,4-Dichlorobenzene																
1,2-Dichlorobenzene																
2-Methylphenol	0.70															
2,2'-Oxybis(1-chl-propane)	0.01	1.757			2.216	-26.2	J	2.096								
4-Methylphenol	0.60															
N-nitroso-di-n-propylamine	0.50															
Hexachloroethane	0.30															
Nitrobenzene	0.20															
Isophorone	0.40															
2-Nitrophenol	0.10															
2,4-Dimethylphenol	0.20															
bis-(2-chloroethoxyl)methane	0.30															
2,4-Dichlorophenol	0.20															
1,2,4-Trichlorobenzene	0.20															
Naphthalene	0.70															
4-Chloroaniline	0.01															
Hexachlorobutadiene	0.01															
4-Chloro-3-methylphenol	0.20															
2-Methylnaphthalene	0.40															
Hexachlorocyclopentadiene	0.01	0.244			0.248			0.109	62.9	J						
2,4,6-Trichlorophenol	0.20															
2,4,5-Trichlorophenol	0.20															
2-Chloronaphthalene	0.80															
2-Nitroaniline	0.01															
Dimethyl phthlate	0.01															
Acenaphthylene	1.30															
2,6-Dinitrotoluene	0.20															
3-Nitroaniline	0.01															
Acenaphthene	0.30															
2,4-Dinitrophenol	0.01	0.142			0.112			0.105	25.9	J						
4-Nitrophenol	0.01															
Dibenzofuran	0.80															
2,4-Dinitrotoluene	0.20															

Affected samples:

SBLK1	EQT99MS
EQT90	" 99MSD
97	ESC23
98	31
↓ 99	↓ 46

Reviewer's Init/Date: CL/4-19-94

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

CALIBRATION OUTLIER
SEMIVOLATILE TCL COMPOUNDS
(Page 2 of 2)

CASE\SAS#: 21795
COLUMN:

CONTRACTOR: SWOK
SITE NAME: Perma-Treat of AL (AL)

Instrument# P		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		3-29-94/11:12			3-30-94/08:53			3-31-94/09:37								
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Diethylphthalate	0.01															
4-Chlorophenyl-phenylether	0.40															
Fluorene	0.90															
4-Nitroaniline	0.01															
4,6-Dinitro-2-methylphenol	0.01	0.125			0.105			0.092	26.8	J						
N-nitrosodiphenylamine	0.01															
4-Bromophenyl-phenylether	0.10															
Hexachlorobenzene	0.10															
Pentachlorophenol	0.05															
Phenanthrene	0.70															
Anthracene	0.70															
Carbazole																
Di-n-butylphthalate	0.01															
Fluoranthene	0.60															
Pyrene	0.60	1.339			1.344			1.698	-26.8	J						
Butylbenzylphthalate	0.01	0.793			0.901			1.028	-29.7	J						
3,3'-Dichlorobenzidine	0.01															
Benzo(a)anthracene	0.80															
Chrysene	0.70															
bis(2-Ethylhexyl)phthalate	0.01	1.056			1.160			1.354	-28.3	J						
Di-n-octyl phthalate	0.01	1.732			1.869			3.251	-87.7	J						
Benzo(b)fluoranthene	0.70															
Benzo(k)fpuoranthene	0.70															
Benzo(a)pyrene	0.70															
Indeno(1,2,3-cd)pyrene	0.50															
Dibenz(a,h)anthrancene	0.40															
Benzo(g,h,i)perylene	0.50															
Nitrobenzene-d5	0.01															
2-Fluorobiphenyl	0.70															
Terphenyl-d14	0.50	0.964			0.946			1.271	-31.7	J						
Phenol-d5	0.80															
2-Fluorophenol	0.60															
2,4,6-Tribromophenol	0.01															
2-Chlorophenol-d4																
1,2-Dichlorobenzene-d4																

Reviewer's Init/Date: CL/4-19-94

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

CALIBRATION OUTLIER
PESTICIDE/PCB TCL COMPOUNDS
(Page 1 of 1)

CASE\SAS#: 21795
COLUMN: DB-17

CONTRACTOR: SWOK
SITE NAME: Perma-Treat of AL (02)

Instrument# HP-02A		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		3-31-94/19:03			3-31-94/18:32			4-1-94/02:18			4-1-94/03:21			4-1-94/17:20		
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
alpha-BHC	0.01															
beta-BHC	0.40															
delta-BHC	0.90															
gamma-BHC	0.01															
Heptachlor	0.01															
Aldrin	0.01															
Heptachlor epoxide	0.10															
Endosulfan I	0.10															
Dieldrin	0.05															
4, 4'-DDE	0.70															
Endrin	0.70															
Endosulfan II	0.01															
4, 4'-DDD	0.60															
Endosulfan sulfate	0.60															
4, 4'-DDT	0.01															
Methoxychlor	0.01															
Endrin ketone	0.80															
Endrin aldehyde	0.70															
alpha chlordane	0.01															
gamma chlordane	0.01															
Arochlor 1016																
Arochlor 1221																
Arochlor 1232																
Arochlor 1242																
Arochlor 1248																
Arochlor 1254																
Arochlor 1260																

Affected samples:

PBLKSL
EQT98DL
90
97
98
99
99MS
99MSD
ESC23
31
46

Reviewer's Init/Date: CL/4-19-94

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

CALIBRATION OUTLIER
PESTICIDE/PCB TCL COMPOUNDS
(Page 1 of 1)

CL 4-19-94

CASE\SAS#: 21795
COLUMN: DB-1701

CONTRACTOR: SWOK ~~Perma-Treat of LL (LL)~~
SITE NAME: ~~Perma-Treat of LL (LL)~~

Instrument# HP-02B		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		3-31-94/19:03			3-31-94/18:32			4-1-94/02:18			4-1-94/03:21			4-1-94/17:20		
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
alpha-BHC	0.01															
beta-BHC	0.40															
delta-BHC	0.90															
gamma-BHC	0.01															
Heptachlor	0.01															
Aldrin	0.01															
Heptachlor epoxide	0.10															
Endosulfan I	0.10															
Dieldrin	0.05															
4, 4'-DDE	0.70															
Endrin	0.70															
Endosulfan II	0.01															
4, 4'-DDD	0.60															
Endosulfan sulfate	0.60															
4, 4'-DDT	0.01															
Methoxychlor	0.01															
Endrin ketone	0.80															
Endrin aldehyde	0.70															
alpha chlordane	0.01															
gamma chlordane	0.01															
Arochlor 1016																
Arochlor 1221																
Arochlor 1232																
Arochlor 1242																
Arochlor 1248																
Arochlor 1254																
Arochlor 1260																

Affected samples:

PBLKSL
EQT98DL
90
97
98
99
99MS
99MSD
ESC23
31
46

Reviewer's Init/Date: CL/4-19-94

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

DATA REPORTING QUALIFIERS
(page 1)

For reporting results to EPA, the following result qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE-if the results is a value greater than or equal to the Contract Required Quantitation Limit (CRQL), report the value.

U - Indicates compound was analyzed for but not detected. The sample Quantitation Limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if thee sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the Sample Quantitation Limit for phenol (330 U) would be corrected to:

$$\frac{(330\ U) \times df}{D} \qquad \text{where } D = \frac{100 - \%\ moisture}{100}$$

and df = dilution factor

at 24% moisture, $D = \frac{100 - 24}{100} = 0.76$

$$\frac{(330\ U) \times 10}{.76} = 4300\ U \text{ rounded to the appropriate number of significant figures}$$

For soil samples subjected to GPC clean-up procedures, the extract must be concentrated to 0.5 ml, and the sensitivity of the analysis is not compromised by the cleanup procedures. Therefore, the CRQL values will apply to all samples, regardless of cleanup. However, if a sample extract cannot be concentrated to the protocol-specified volume, this fact be accounted for in reporting the Sample Quantitation Limit.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit bur greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it is as 3J. The Sample Quantitation Limit must be adjusted for dilution as discussed for the U flag. The J flag is also applied to pesticide/Aroclor results where the pesticide/Aroclor is confirmed to be present but the concentration is less than the CRQL.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds. Where the identification is based on a mass spectral library search. It is applied to all TIC results.

DATA REPORTING QUALIFIERS
(page 2)

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two columns (see Form X). The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but unsuccessful, do not apply this flag, instead use a laboratory-defined, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for the specific analysis. This flag will not apply to pesticide/PCBs analyzed by GC/MS methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Form I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the SDG Narrative. If more than one flag is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B" and "D" flags for some sample. The laboratory-defined are limited to letters "X", "Y" and "Z".

TABLE 4

VOLATILE INTERNAL STANDARDS WITH CORRESPONING TCL ANALYTES ASSIGNED FOR QUANTITATION

Bromochloromathane	1,4-Difluorobenzene	Chlorobenzene-d5
Chloromethane	2-Butanone	2-Hexanone
Bromomethane	1,1,1-Trichloroethane	4-Methyl-2-pentanone
Vinyl chloride	Carbon tetrachloride	Tetrachloroethene
Chloroethane	Vinyl acetate	1,1,2,2-Tetrachloroethane
Methylene chloride	Bromodichloromethane	Toluene
Acetone	1,2-Dichloropropane	Chlorobenzene
Carbon disulfide	trans-1,3-Dichloropropane	Ethylbenzene
1,1-Dichloroethene	Trichloroethene	Styrene
1,1-Dichloroethane	Dibromochloromethane	Xylene (total)
1,2-Dichloroethene (total)	1,1,2-Trichloroethane	Bromofluorobenzene (surr)
Chloroform	Benzene	Toluene-d8 (surr)
1,2-Dichloroethane	cis-1,3-Dichloropropene	
1,2-Dichloroethane-d4 (surr)	Bromoform	

SEMIVOLATILE INTERNAL STANDARDS WITH CORRESPONING TCL ANALYTES ASSIGNED FOR QUANTITATION

1,4-Dichlorobenzene-d4	Naphthalene-d8	Acenaphthene-d10	Phenanthrene-d10	Chrysene-d12	Perylene-d12
Phenol	Nitrobenzene	Hexachlorocyclopentadiene	4,6-Dinitro-2-methylphenol	Pyrene	Di-n-octyl phthalate
bis(2-Chloroethyl)ether	Isophorone	2,4,6-Trichlorophenol	N-nitroso-di-phenylamine	Butylbenzyl phthalate	Benzo(b)fluoranthene
2-Chlorophenol	2-Nitrophenol	2,4,5-Trichlorophenol	1,2-Diphenylhydrazine	3,3'-Dichlorobenzidine	Benzo(k)fluoranthene
1,3-Dichlorobenzene	2,4-Dimethylphenol	2-Chloronaphthalene	4-Bromophenyl phenyl ether	Benz(a)anthracene	Benzo(a)pyrene
1,4-Dichlorobenzene	Benzoic acid	2-Nitroaniline	Hexachlorobenzene	bis(2-Ethylhexyl)phthalate	Indeno(1,2,3-cd)pyrene
Benzyl alcohol	bis(2-Chloroethoxy)methane	Dimethyl phthalate	Pentachlorophenol	Chrysene	Dibenz(a,h)anthracene
1,2-Dichlorobenzene	2,4-Dichlorophenol	Acenaphthylene	Phenanthrene	Terphenyl-d14 (surr)	Benzo(g,h,i)perylene
2-Methylphenol	1,2,4-Trichlorobenzene	3-Nitroaniline	Anthracene		
bis(2-Chloroisopropyl)ether	4-Chloroaniline	Acenaphthene	Di-n-butyl phthalate		
4-Methylphenol	Hexachlorobutadiene	2,4-Dinitrophenol	Fluoranthene		
N-nitroso-di-n-propylamine	4-Chloro-3-methylphenol	4-Nitrophenol			
Hexachloroethane	2-Methylnaphthalene	Dibenzofuran			
2-Fluorophenol (surr)	Nitrobenzene-d5 (surr)	2,4-Dinitrotoluene			
Phenol-d6 (surr)		2,6-Dinitrotoluene			
		Diethyl phthalate			
		4-Chlorophenyl phenyl ether			
		Fluorene			
		4-Nitroaniline			
		2-Fluorobiphenyl (surr)			
		2,4,6-Tribromophenol (surr)			

Southwest Laboratory of Oklahoma
1700 West Albany, Suite A / Broken Arrow, OK 74012
918-251-2858

SDG NARRATIVE

April 13, 1994

RECEIVED
APR 14 1994
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

CONTRACT NO.: 68-D2-0013

CASE NO.: 21795

SAMPLE NOS.: EQT90, EQT97 thru EQT99, ESC23, ESC31, ESC46

SDG NO.: EQT90

VOLATILE FRACTION

Seven soil samples were submitted for Volatile Organic Analysis. The samples were analyzed by GC/MS following the 3/90 CLP Organics Statement of Work.

No major problems were encountered during the analyses of these samples.

Blanks: VBLK1 and VBLK2 contained chloroform contamination below CRQL.

Surrogates: No problems.

Matrix Spikes: No problems.

Internal Standards: Sample EQT99 had the recovery for its third internal standard (chlorobenzene-d5) outside of QC limits, the matrix spike and matrix spike duplicate produced the same results, indicating a matrix interference problem.

SEMIVOLATILE FRACTION

Seven soil samples were submitted for Semivolatile Organic analysis. The samples were analyzed by GC/MS following the 3/90 CLP Organic Statement of Work.

No major problems occurred during the analyses of these samples.

Blanks: SBLK1 had lo level phthalate contamination below CRQL.

Surrogates: No problems.

Matrix Spikes: No problems..

Internal Standards: No problems.

Note: All manual integrations in this data package for GC/MS Volatiles/Semivolatiles have been performed for one of the following reasons:

a. Data system missed peak during acquisition.
b. Data system improperly integrated peak.

If water samples are contained in this case, their pH data is included on the page accompanying this SDG narrative.

All Volatile/Semivolatile calibrations included in data packages are copies of the originals, which are kept in the files at Southwest Laboratory of Oklahoma. All raw data for BFB, VBLK's, DFTPP, and PEST/PCB Florisil Cartridge Check included in data packages are copies of the originals, which are kept in the files at Southwest Laboratory of Oklahoma.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager, or his designee, as verified by the following signature.

Harry M. Borg

Harry M. Borg
Organic Program Manager

April 13, 1994

SOUTHWEST LABORATORY OF OKLAHOMA

SDG NARRATIVE

CASE : 21795
SDG : EQT90
SAMPLES: EQT90, EQT97, EQT98, EQT99, ESC23, ESC31, ESC46.
FRACTION: PESTICIDE/PCB
DATE : 4/6/94

SDG EQT90 consisted of 7 soil samples analyzed for pesticides/PCBs. All samples, blanks and spikes were extracted and analyzed according to EPA SOW OLM01.

Sample EQT98 required a 1:10 dilution to bring alpha chlordane within calibration range. No problems were encountered during the analyses of these samples.

Brett R. Dees

Brett R Dees

Pesticide Section Group Leader

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Level:(low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK1	97	88	85		0
02	EQT90	107	83	90		0
03	EQT97	97	75	83		0
04	EQT98	103	84	90		0
05	EQT99	102	74	90		0
06	EQT99MS	107	67	87		0
07	EQT99MSD	110	74	92		0
08	ESC46	110	77	90		0
09	VBLK2	102	93	91		0
10	ESC23	110	86	90		0
11	ESC31	109	86	91		0
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(84-138)
SMC2 (BFB)	= Bromofluorobenzene	(59-113)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3B
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix Spike - EPA Sample No.: EQT99 Level (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	69	0	71	103	59-172
Trichloroethene	69	0	55	80	62-137
Benzene	69	0	58	84	66-142
Toluene	69	0	67	97	59-139
Chlorobenzene	69	0	58	84	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	69	63	91	12	22	59-172
Trichloroethene	69	51	74	8	24	62-137
Benzene	69	56	81	4	21	66-142
Toluene	69	63	91	6	21	59-139
Chlorobenzene	69	56	81	4	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Lab File ID: UD914.D Lab Sample ID: U940325A

Date Analyzed: 03/25/94 Time Analyzed: 0924

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: U

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EQT90	17973.01	UD926.D	1434
02	EQT97	17973.02	UD927.D	1500
03	EQT98	17973.03	UD928.D	1528
04	EQT99	17973.04	UD929.D	1552
05	EQT99MS	17973.04MS	UD930.D	1616
06	EQT99MSD	17973.04MSD	UD931.D	1639
07	ESC46	17973.07	UD934.D	1750
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Lab File ID: UD938.D Lab Sample ID: U940328A

Date Analyzed: 03/28/94 Time Analyzed: 1122

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: U

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	ESC23	17973.05	UD939.D	1328
02	ESC31	17973.06	UD940.D	1351
03				
04				
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: U940325A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD914.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	1	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: U940325A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD914.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: U940328A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD938.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Data Analyzed: 03/28/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	1	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: U940328A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD938.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Data Analyzed: 03/28/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT90

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD926.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 21 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
74-87-3	Chloromethane	13	U	SM 6/29/94
74-83-9	Bromomethane	13	U	
75-01-4	Vinyl Chloride	13	U	
75-00-3	Chloroethane	13	U	
75-09-2	Methylene Chloride	13	U	
67-64-1	Acetone	13	U	Junk
75-15-0	Carbon Disulfide	13	U	
75-35-4	1,1-Dichloroethene	13	U	
75-34-3	1,1-Dichloroethane	13	U	
540-59-0	1,2-Dichloroethene (total)	13	U	
67-66-3	Chloroform	13	U	
107-06-2	1,2-Dichloroethane	13	U	
78-93-3	2-Butanone	13	U	
71-55-6	1,1,1-Trichloroethane	13	U	
56-23-5	Carbon Tetrachloride	13	U	
75-27-4	Bromodichloromethane	13	U	
78-87-5	1,2-Dichloropropane	13	U	
10061-01-5	cis-1,3-Dichloropropene	13	U	
79-01-6	Trichloroethene	13	U	
124-48-1	Dibromochloromethane	13	U	
79-00-5	1,1,2-Trichloroethane	13	U	
71-43-2	Benzene	13	U	
10061-02-6	trans-1,3-Dichloropropene	13	U	
75-25-2	Bromoform	13	U	
108-10-1	4-Methyl-2-Pentanone	13	U	
591-78-6	2-Hexanone	13	U	
127-18-4	Tetrachloroethene	13	U	
79-34-5	1,1,2,2-Tetrachloroethane	13	U	
108-88-3	Toluene	13	U	
108-90-7	Chlorobenzene	13	U	
100-41-4	Ethylbenzene	13	U	
100-42-5	Styrene	13	U	
1330-20-7	Xylene (Total)	13	U	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQT90

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD926.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 21 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT97

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD927.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 33 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	15	U
67-64-1	Acetone	7	J
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene (total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-88-3	Toluene	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Xylene (Total)	15	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQT97

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD927.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 33 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT98

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD928.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 31 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	14	U
67-64-1	Acetone	14	U
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	14	U
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene (total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	14	U
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	14	U
10061-02-6	trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-88-3	Toluene	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Xylene (Total)	14	U

SM 6-29-94

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQT98

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD928.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 31 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT99

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD929.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 28 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	14	U
67-64-1	Acetone	14	U
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	14	U
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene (total)	14	U
67-66-3	Chloroform	14 ~~2~~	U JB
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	14	U
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	14	U
10061-02-6	trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-88-3	Toluene	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Xylene (Total)	14	U

SM 6/29/94

J unk

CL 4-19-94

UJ ~~unk~~ low bias

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQT99

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD929.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 28 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC23

ab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD939.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 37 Data Analyzed: 03/28/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
74-87-3	Chloromethane	16	U	SM 6/29/94
74-83-9	Bromomethane	16	U	
75-01-4	Vinyl Chloride	16	U	
75-00-3	Chloroethane	16	U	Junk
75-09-2	Methylene Chloride	16	U	
67-64-1	Acetone	11	J	
75-15-0	Carbon Disulfide	16	U	
75-35-4	1,1-Dichloroethene	2	J	
75-34-3	1,1-Dichloroethane	16	U	
540-59-0	1,2-Dichloroethene (total)	16	U	CL
67-66-3	Chloroform	16 ~~2~~	UJB	4-A-94
107-06-2	1,2-Dichloroethane	16	U	
78-93-3	2-Butanone	16	U	Junk
71-55-6	1,1,1-Trichloroethane	16	U	
56-23-5	Carbon Tetrachloride	16	U	
75-27-4	Bromodichloromethane	16	U	
78-87-5	1,2-Dichloropropane	16	U	
10061-01-5	cis-1,3-Dichloropropene	16	U	
79-01-6	Trichloroethene	16	U	
124-48-1	Dibromochloromethane	16	U	
79-00-5	1,1,2-Trichloroethane	16	U	
71-43-2	Benzene	16	U	
10061-02-6	trans-1,3-Dichloropropene	16	U	
75-25-2	Bromoform	16	U	
108-10-1	4-Methyl-2-Pentanone	16	U	J unk
591-78-6	2-Hexanone	16	U	J unk
127-18-4	Tetrachloroethene	16	U	
79-34-5	1,1,2,2-Tetrachloroethane	16	U	
108-88-3	Toluene	16	U	
108-90-7	Chlorobenzene	16	U	
100-41-4	Ethylbenzene	16	U	
100-42-5	Styrene	16	U	
1330-20-7	Xylene (Total)	16	U	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESC23

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD939.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 37 Data Analyzed: 03/28/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN SILOXANE	8.097	8	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC31

ab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD940.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 46 Data Analyzed: 03/28/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
74-87-3	Chloromethane	18	U	SM 6/29/94
74-83-9	Bromomethane	18	U	
75-01-4	Vinyl Chloride	18	U	
75-00-3	Chloroethane	18	U	J unk
75-09-2	Methylene Chloride	18	U	
67-64-1	Acetone	10	J	
75-15-0	Carbon Disulfide	18	U	
75-35-4	1,1-Dichloroethene	18	U	
75-34-3	1,1-Dichloroethane	18	U	
540-59-0	1,2-Dichloroethene (total)	18	U	CL
67-66-3	Chloroform	18 ~~2~~	UJB	4-19-94
107-06-2	1,2-Dichloroethane	18	U	
78-93-3	2-Butanone	18	U	J unk
71-55-6	1,1,1-Trichloroethane	18	U	
56-23-5	Carbon Tetrachloride	18	U	
75-27-4	Bromodichloromethane	18	U	
78-87-5	1,2-Dichloropropane	18	U	
10061-01-5	cis-1,3-Dichloropropene	18	U	
79-01-6	Trichloroethene	18	U	
124-48-1	Dibromochloromethane	18	U	
79-00-5	1,1,2-Trichloroethane	18	U	
71-43-2	Benzene	18	U	
10061-02-6	trans-1,3-Dichloropropene	18	U	
75-25-2	Bromoform	18	U	
108-10-1	4-Methyl-2-Pentanone	18	U	J unk
591-78-6	2-Hexanone	18	U	J unk
127-18-4	Tetrachloroethene	18	U	
79-34-5	1,1,2,2-Tetrachloroethane	18	U	
108-88-3	Toluene	18	U	
108-90-7	Chlorobenzene	18	U	
100-41-4	Ethylbenzene	18	U	
100-42-5	Styrene	18	U	
1330-20-7	Xylene (Total)	18	U	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESC31

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD940.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 46 Data Analyzed: 03/28/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC46

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD934.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 45 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	18	U
74-83-9	Bromomethane	18	U
75-01-4	Vinyl Chloride	18	U
75-00-3	Chloroethane	18	U
75-09-2	Methylene Chloride	18	U
67-64-1	Acetone	18	U
75-15-0	Carbon Disulfide	18	U
75-35-4	1,1-Dichloroethene	18	U
75-34-3	1,1-Dichloroethane	18	U
540-59-0	1,2-Dichloroethene (total)	18	U
67-66-3	Chloroform	18 ~~2~~	U JB
107-06-2	1,2-Dichloroethane	18	U
78-93-3	2-Butanone	18	U
71-55-6	1,1,1-Trichloroethane	18	U
56-23-5	Carbon Tetrachloride	18	U
75-27-4	Bromodichloromethane	18	U
78-87-5	1,2-Dichloropropane	18	U
10061-01-5	cis-1,3-Dichloropropene	18	U
79-01-6	Trichloroethene	18	U
124-48-1	Dibromochloromethane	18	U
79-00-5	1,1,2-Trichloroethane	18	U
71-43-2	Benzene	18	U
10061-02-6	trans-1,3-Dichloropropene	18	U
75-25-2	Bromoform	18	U
108-10-1	4-Methyl-2-Pentanone	18	U
591-78-6	2-Hexanone	18	U
127-18-4	Tetrachloroethene	18	U
79-34-5	1,1,2,2-Tetrachloroethane	18	U
108-88-3	Toluene	18	U
108-90-7	Chlorobenzene	18	U
100-41-4	Ethylbenzene	18	U
100-42-5	Styrene	18	U
1330-20-7	Xylene (Total)	18	U

BM 6/29/94

J unk

CL 4-19-94

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESC46

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: UD934.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: not dec. 45 Data Analyzed: 03/25/94

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT OUT
01	SBLK1	56	54	65	49	46	55	53	53	0
02	EQT90	62	56	87	54	51	77	59	56	0
03	EQT97	61	55	95	53	51	79	59	56	0
04	EQT98	58	53	87	48	46	73	55	54	0
05	EQT99	60	57	93	57	50	79	61	54	0
06	EQT99MS	62	59	81	53	55	76	59	58	0
07	EQT99MSD	60	54	70	52	54	73	58	55	0
08	ESC23	56	53	76	51	46	74	51	47	0
09	ESC31	48	52	84	47	42	68	48	41	0
10	ESC46	57	56	78	54	50	78	56	52	0
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		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S3 (TPH)	= Terphenyl-d14	(18-137)	
S4 (PHL)	= Phenol-d5	(24-113)	
S5 (2FP)	= 2-Fluorophenol	(25-121)	
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)	
S7 (2CP)	= 2-Chlorophenol-d4	(20-130)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(20-130)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix Spike - EPA Sample No.: EQT99 Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Phenol	3500	0	2000	57	26- 90
2-Chlorophenol	3500	0	1900	54	25-102
1,4-Dichlorobenzene	2300	0	1300	56	28-104
N-Nitroso-di-n-prop.(1)	2300	0	1400	61	41-126
1,2,4-Trichlorobenzene	2300	0	1400	61	38-107
4-Chloro-3-Methylphenol	3500	0	2400	68	26-103
Acenaphthene	2300	0	1400	61	31-137
4-Nitrophenol	3500	0	2800	80	11-114
2,4-Dinitrotoluene	2300	0	1500	65	28- 89
Pentachlorophenol	3500	0	2400	68	17-109
Pyrene	2300	43	1600	68	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	3500	1900	54	5	35	26- 90
2-Chlorophenol	3500	1900	54	0	50	25-102
1,4-Dichlorobenzene	2300	1300	56	0	27	28-104
N-Nitroso-di-n-prop.(1)	2300	1300	56	8	38	41-126
1,2,4-Trichlorobenzene	2300	1400	61	0	23	38-107
4-Chloro-3-Methylphenol	3500	2300	66	3	33	26-103
Acenaphthene	2300	1400	61	0	19	31-137
4-Nitrophenol	3500	2800	80	0	50	11-114
2,4-Dinitrotoluene	2300	1500	65	0	47	28- 89
Pentachlorophenol	3500	2300	66	3	47	17-109
Pyrene	2300	1500	63	8	36	35-142

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS: _____

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Lab File ID: P7908.D Lab Sample ID: B032503

Instrument ID: P Date Extracted: 03/25/94

Matrix: (soil/water) SOIL Date Analyzed: 03/30/94

Level:(low/med) LOW Time Analyzed: 0943

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EQT90	17973.01	P7921.D	03/30/94
02	EQT97	17973.02	P7922.D	03/30/94
03	EQT98	17973.03	P7923.D	03/30/94
04	EQT99	17973.04	P7924.D	03/30/94
05	EQT99MS	17973.04MS	P7932.D	03/31/94
06	EQT99MSD	17973.04MSD	P7933.D	03/31/94
07	ESC23	17973.05	P7934.D	03/31/94
08	ESC31	17973.06	P7935.D	03/31/94
09	ESC46	17973.07	P7936.D	03/31/94
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COMMENTS:

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: B032503

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7908.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	800	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	800	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	800	U
83-32-9	Acenaphthene	330	U

546

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: B032503

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7908.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	800	U
100-02-7	4-Nitrophenol	800	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	800	U
534-52-1	4,6-Dinitro-2-methylphenol	800	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	800	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	41	J
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: B032503

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7908.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 0 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.087	5600	J
2. 141-79-7	3-Penten-2-one, 4-methyl-	3.196	120	NJA
3. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.649	8900	NJA
4.	UNKNOWN	11.413	190	J
5.	UNKNOWN AMIDE	16.232	110	J
6.	UNKNOWN AMIDE	17.545	1600	J
7.	UNKNOWN AMIDE	20.130	690	J
8.	UNKNOWN	20.361	130	J
9.	UNKNOWN	25.582	1200	J
10.				
11.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC23

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7934.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 37 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/31/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	520	U
111-44-4	bis(2-Chloroethyl)Ether	520	U
95-57-8	2-Chlorophenol	520	U
541-73-1	1,3-Dichlorobenzene	520	U
106-46-7	1,4-Dichlorobenzene	520	U
95-50-1	1,2-Dichlorobenzene	520	U
95-48-7	2-Methylphenol	520	U
108-60-1	2,2'-oxybis(1-Chloropropane)	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-di-n-propylamine	520	U
67-72-1	Hexachloroethane	520	U
98-95-3	Nitrobenzene	520	U
78-59-1	Isophorone	520	U
88-75-5	2-Nitrophenol	520	U
105-67-9	2,4-Dimethylphenol	520	U
120-83-2	2,4-Dichlorophenol	520	U
120-82-1	1,2,4-Trichlorobenzene	520	U
91-20-3	Naphthalene	62	J
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	520	U
111-91-1	bis(2-Chloroethoxy)methane	520	U
59-50-7	4-Chloro-3-Methylphenol	520	U
91-57-6	2-Methylnaphthalene	150	J
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	520	U
95-95-4	2,4,5-Trichlorophenol	1300	U
91-58-7	2-Chloronaphthalene	520	U
88-74-4	2-Nitroaniline	1300	U
131-11-3	Dimethylphthalate	520	U
208-96-8	Acenaphthylene	520	U
606-20-2	2,6-Dinitrotoluene	520	U
99-09-2	3-Nitroaniline	1300	U
83-32-9	Acenaphthene	520	U

SKY 6/28/94

Junk

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC23

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7934.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 37 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/31/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
				8/24 6/29/94
51-28-5	2,4-Dinitrophenol	1300	U	Junk
100-02-7	4-Nitrophenol	1300	U	
132-64-9	Dibenzofuran	68	J	
121-14-2	2,4-Dinitrotoluene	520	U	
84-66-2	Diethylphthalate	520	U	
7005-72-3	4-Chlorophenyl-phenylether	520	U	
86-73-7	Fluorene	520	U	
100-01-6	4-Nitroaniline	1300	U	
534-52-1	4,6-Dinitro-2-methylphenol	1300	U	Junk
86-30-6	N-Nitrosodiphenylamine (1)	520	U	
101-55-3	4-Bromophenyl-phenylether	520	U	
118-74-1	Hexachlorobenzene	520	U	
87-86-5	Pentachlorophenol	1300	U	
85-01-8	Phenanthrene	340	J	
120-12-7	Anthracene	53	J	
86-74-8	Carbazole	54	J	
84-74-2	Di-n-butylphthalate	520	U	
206-44-0	Fluoranthene	600		
129-00-0	Pyrene	680		Junk
85-68-7	Butylbenzylphthalate	520	U	Junk
91-94-1	3,3'-Dichlorobenzidine	520	U	
56-55-3	Benzo(a)anthracene	300	J	
218-01-9	Chrysene	390	J	CL
117-81-7	bis(2-Ethylhexyl)phthalate	520 ~~240~~	UJB	4-19-94
117-84-0	Di-n-octylphthalate	520	U	Junk
205-99-2	Benzo(b)fluoranthene	420	J	
207-08-9	Benzo(k)fluoranthene	340	J	
50-32-8	Benzo(a)pyrene	340	J	
193-39-5	Indeno(1,2,3-cd)pyrene	320	J	
53-70-3	Dibenz(a,h)anthracene	520	U	
191-24-2	Benzo(g,h,i)perylene	360	J	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESC23

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7934.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 37 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/31/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

Number TICs found: 29

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CL
4-19-94

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.126	8400	uJB
2.	UNKNOWN	2.192	230	J
3. 141-79-7	3-Penten-2-one, 4-methyl-	3.217	190	uNJAB
4. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.676	10000	uNJAB
5.	Naphthalene, -dimethyl-	9.805	150	J
6.	UNKNOWN ALKANE	9.997	280	J
7.	UNKNOWN	11.414	140	uJB
8.	Dibenzofuran, -methyl-	11.964	180	J
9.	UNKNOWN	12.238	380	J
10.	UNKNOWN ALKANE	12.271	150	J
11.	UNKNOWN ALKANE	12.324	560	J
12.	UNKNOWN ORGANIC ACID	13.396	270	J
13.	UNKNOWN ALKANE	13.997	160	J
14.	UNKNOWN ORGANIC ACID	14.412	560	J
15.	UNKNOWN	14.479	200	J
16.	UNKNOWN ORGANIC ACID	14.560	910	J
17.	UNKNOWN AMIDE	14.707	170	J
18.	UNKNOWN	14.895	210	J
19.	UNKNOWN ALKANE	15.565	210	J
20.	UNKNOWN AMIDE	16.265	260	uJB
21.	UNKNOWN ALKANE	16.298	260	J
22.	UNKNOWN AMIDE	17.564	2000	uJB
23.	UNKNOWN ALKANE	18.327	280	J
24.	UNKNOWN ALKANE	19.549	300	J
25.	UNKNOWN AMIDE	20.150	1100	uJB
26.	UNKNOWN ALKANE	20.677	700	J
27.	UNKNOWN ALKANE	21.745	680	J
28.	UNKNOWN ALKANE	22.923	380	J
29.	UNKNOWN	25.604	920	uJB
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC31

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7935.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 46 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/31/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	610	U
111-44-4	bis(2-Chloroethyl)Ether	610	U
95-57-8	2-Chlorophenol	610	U
541-73-1	1,3-Dichlorobenzene	610	U
106-46-7	1,4-Dichlorobenzene	610	U
95-50-1	1,2-Dichlorobenzene	610	U
95-48-7	2-Methylphenol	610	U
108-60-1	2,2'-oxybis(1-Chloropropane)	610	U
106-44-5	4-Methylphenol	150	J
621-64-7	N-Nitroso-di-n-propylamine	610	U
67-72-1	Hexachloroethane	610	U
98-95-3	Nitrobenzene	610	U
78-59-1	Isophorone	610	U
88-75-5	2-Nitrophenol	610	U
105-67-9	2,4-Dimethylphenol	610	U
120-83-2	2,4-Dichlorophenol	610	U
120-82-1	1,2,4-Trichlorobenzene	610	U
91-20-3	Naphthalene	610	U
106-47-8	4-Chloroaniline	610	U
87-68-3	Hexachlorobutadiene	610	U
111-91-1	bis(2-Chloroethoxy)methane	610	U
59-50-7	4-Chloro-3-Methylphenol	610	U
91-57-6	2-Methylnaphthalene	56	J
77-47-4	Hexachlorocyclopentadiene	610	U
88-06-2	2,4,6-Trichlorophenol	610	U
95-95-4	2,4,5-Trichlorophenol	1500	U
91-58-7	2-Chloronaphthalene	610	U
88-74-4	2-Nitroaniline	1500	U
131-11-3	Dimethylphthalate	610	U
208-96-8	Acenaphthylene	610	U
606-20-2	2,6-Dinitrotoluene	610	U
99-09-2	3-Nitroaniline	1500	U
83-32-9	Acenaphthene	610	U

SM 6/29/94

J unk

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC31

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7935.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 46 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/31/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
				SW 6/24/94
51-28-5	2,4-Dinitrophenol	1500	U	Junk
100-02-7	4-Nitrophenol	1500	U	
132-64-9	Dibenzofuran	35	J	
121-14-2	2,4-Dinitrotoluene	610	U	
84-66-2	Diethylphthalate	610	U	
7005-72-3	4-Chlorophenyl-phenylether	610	U	
86-73-7	Fluorene	610	U	
100-01-6	4-Nitroaniline	1500	U	
534-52-1	4,6-Dinitro-2-methylphenol	1500	U	Junk
86-30-6	N-Nitrosodiphenylamine (1)	610	U	
101-55-3	4-Bromophenyl-phenylether	610	U	
118-74-1	Hexachlorobenzene	610	U	
87-86-5	Pentachlorophenol	1500	U	
85-01-8	Phenanthrene	300	J	
120-12-7	Anthracene	41	J	
86-74-8	Carbazole	58	J	
84-74-2	Di-n-butylphthalate	610	U	
206-44-0	Fluoranthene	600	J	
129-00-0	Pyrene	720		Junk
85-68-7	Butylbenzylphthalate	610	U	Junk
91-94-1	3,3'-Dichlorobenzidine	610	U	
56-55-3	Benzo(a)anthracene	240	J	CL
218-01-9	Chrysene	400	J	
117-81-7	bis(2-Ethylhexyl)phthalate	610 ~~540~~	UJB	4-19-94
117-84-0	Di-n-octylphthalate	610	U	Junk
205-99-2	Benzo(b)fluoranthene	390	J	
207-08-9	Benzo(k)fluoranthene	450	J	
50-32-8	Benzo(a)pyrene	320	J	
193-39-5	Indeno(1,2,3-cd)pyrene	270	J	
53-70-3	Dibenz(a,h)anthracene	610	U	
191-24-2	Benzo(g,h,i)perylene	330	J	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESC31

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7935.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 46 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/31/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CL
4-19-94

Number TICs found: 30

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.107	6600	UJB
2.	UNKNOWN	2.172	230	JB
3. 141-79-7	3-Penten-2-one, 4-methyl-	3.210	220	UNJAB
4. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.657	11000	UNJAB
5.	UNKNOWN ALKANE	9.994	160	J
6.	UNKNOWN CYCLOALKANE	12.236	530	J
7.	UNKNOWN ALKANE	12.269	170	J
8.	UNKNOWN ALKANE	12.322	330	J
9.	UNKNOWN ORGANIC ACID	12.839	170	J
10.	UNKNOWN	12.892	220	J
11.	UNKNOWN ALKANE	13.238	190	J
12.	UNKNOWN ORGANIC ACID	13.391	350	J
13.	UNKNOWN HYDROCARBON	13.471	230	J
14.	UNKNOWN ORGANIC ACID	14.411	690	J
15.	UNKNOWN ORGANIC ACID	14.471	220	J
16.	UNKNOWN ORGANIC ACID	14.551	1200	J
17.	UNKNOWN	15.240	210	J
18.	UNKNOWN ALKANE	15.568	190	J
19.	UNKNOWN	15.957	500	J
20.	UNKNOWN ORGANIC ACID	16.072	500	J
21.	UNKNOWN AMIDE	17.564	1600	UJB
22.	UNKNOWN ALKANE	18.324	320	J
23.	UNKNOWN ALKANE	19.543	350	J
24.	UNKNOWN AMIDE	20.149	1200	UJB
25.	UNKNOWN ALKANE	20.681	1200	J
26.	UNKNOWN ALKANE	21.743	980	J
27.	UNKNOWN	22.092	470	J
28.	UNKNOWN	23.753	530	J
29.	UNKNOWN	24.340	520	J
30.	UNKNOWN	25.598	790	UJB

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC46

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7936.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 45 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/31/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	600	U
111-44-4	bis(2-Chloroethyl)Ether	600	U
95-57-8	2-Chlorophenol	600	U
541-73-1	1,3-Dichlorobenzene	600	U
106-46-7	1,4-Dichlorobenzene	600	U
95-50-1	1,2-Dichlorobenzene	600	U
95-48-7	2-Methylphenol	600	U
108-60-1	2,2'-oxybis(1-Chloropropane)	600	U
106-44-5	4-Methylphenol	600	U
621-64-7	N-Nitroso-di-n-propylamine	600	U
67-72-1	Hexachloroethane	600	U
98-95-3	Nitrobenzene	600	U
78-59-1	Isophorone	600	U
88-75-5	2-Nitrophenol	600	U
105-67-9	2,4-Dimethylphenol	600	U
120-83-2	2,4-Dichlorophenol	600	U
120-82-1	1,2,4-Trichlorobenzene	600	U
91-20-3	Naphthalene	600	U
106-47-8	4-Chloroaniline	600	U
87-68-3	Hexachlorobutadiene	600	U
111-91-1	bis(2-Chloroethoxy)methane	600	U
59-50-7	4-Chloro-3-Methylphenol	600	U
91-57-6	2-Methylnaphthalene	72	J
77-47-4	Hexachlorocyclopentadiene	600	U
88-06-2	2,4,6-Trichlorophenol	600	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	600	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	600	U
208-96-8	Acenaphthylene	600	U
606-20-2	2,6-Dinitrotoluene	600	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	600	U

SM 6/29/94
Junk

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC46

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7936.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 45 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/31/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	SM 6/29/94
51-28-5	2,4-Dinitrophenol	1400	U	Junk
100-02-7	4-Nitrophenol	1400	U	
132-64-9	Dibenzofuran	36	J	
121-14-2	2,4-Dinitrotoluene	600	U	
84-66-2	Diethylphthalate	600	U	
7005-72-3	4-Chlorophenyl-phenylether	600	U	
86-73-7	Fluorene	600	U	
100-01-6	4-Nitroaniline	1400	U	
534-52-1	4,6-Dinitro-2-methylphenol	1400	U	Junk
86-30-6	N-Nitrosodiphenylamine (1)	600	U	
101-55-3	4-Bromophenyl-phenylether	600	U	
118-74-1	Hexachlorobenzene	600	U	
87-86-5	Pentachlorophenol	1400	U	
85-01-8	Phenanthrene	120	J	
120-12-7	Anthracene	600	U	
86-74-8	Carbazole	600	U	
84-74-2	Di-n-butylphthalate	45	J	
206-44-0	Fluoranthene	150	J	
129-00-0	Pyrene	150	J	
85-68-7	Butylbenzylphthalate	600	U	Junk
91-94-1	3,3'-Dichlorobenzidine	600	U	
56-55-3	Benzo(a)anthracene	65	J	
218-01-9	Chrysene	100	J	CL
117-81-7	bis(2-Ethylhexyl)phthalate	600 ~~200~~	UJB	
117-84-0	Di-n-octylphthalate	600	U	J 4-19-94
205-99-2	Benzo(b)fluoranthene	100	J	Junk
207-08-9	Benzo(k)fluoranthene	75	J	
50-32-8	Benzo(a)pyrene	76	J	
193-39-5	Indeno(1,2,3-cd)pyrene	61	J	
53-70-3	Dibenz(a,h)anthracene	600	U	
191-24-2	Benzo(g,h,i)perylene	70	J	

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESC46

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7936.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 45 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/31/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 30

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CL
4-19-94

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.133	9700	uJB
2.	UNKNOWN	2.330	180	J
3. 141-79-7	3-Penten-2-one, 4-methyl-	3.217	250	uNJAB
4. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.677	13000	uNJAB
5.	UNKNOWN ALKANE	9.999	210	J
6.	UNKNOWN CYCLOALKANE	12.233	430	J
7.	UNKNOWN ALKANE	12.320	510	J
8.	UNKNOWN ORGANIC ACID	13.395	400	J
9.	UNKNOWN ORGANIC ACID	13.468	220	J
10.	UNKNOWN ORGANIC ACID	14.406	460	J
11.	UNKNOWN ORGANIC ACID	14.466	190	J
12.	UNKNOWN ORGANIC ACID	14.546	740	J
13.	UNKNOWN AMIDE	14.693	170	J
14.	UNKNOWN	15.949	180	J
15.	UNKNOWN AMIDE	16.143	570	uJB
16.	UNKNOWN AMIDE	16.264	440	uJB
17.	UNKNOWN ALKANE	17.000	300	J
18.	UNKNOWN AMIDE	17.569	3800	uJB
19.	UNKNOWN ALKANE	17.677	370	J
20.	UNKNOWN ALKANE	18.326	440	J
21.	UNKNOWN ALKANE	19.545	620	J
22.	UNKNOWN AMIDE	20.148	1300	uJB
23.	UNKNOWN ALKANE	20.677	1600	J
24.	UNKNOWN HYDROCARBON	20.797	430	J
25.	UNKNOWN ALKANE	21.748	1400	J
26.	UNKNOWN ALKANE	22.925	490	J
27. 83-47-6	.gamma.-Sitosterol	23.752	850	NJ
28.	UNKNOWN	23.973	430	J
29.	UNKNOWN	24.353	730	J
30.	UNKNOWN	25.603	1000	uJB

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT90

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7921.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	28	J
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
111-91-1	bis(2-Chloroethoxy)methane	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	35	J
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	420	U
208-96-8	Acenaphthylene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	420	U

SM 6/26/94

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT90

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7921.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	62	J
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	420	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	64	J
120-12-7	Anthracene	420	U
86-74-8	Carbazole	420	U
84-74-2	Di-n-butylphthalate	420	U
206-44-0	Fluoranthene	30	J
129-00-0	Pyrene	43	J
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	420	U
56-55-3	Benzo(a)anthracene	420	U
218-01-9	Chrysene	36	J
117-81-7	bis(2-Ethylhexyl)phthalate	420 ~~200~~	U JB
117-84-0	Di-n-octylphthalate	420	U
205-99-2	Benzo(b)fluoranthene	32	J
207-08-9	Benzo(k)fluoranthene	24	J
50-32-8	Benzo(a)pyrene	420	U
193-39-5	Indeno(1,2,3-cd)pyrene	420	U
53-70-3	Dibenz(a,h)anthracene	420	U
191-24-2	Benzo(g,h,i)perylene	420	U

CL 4-19-94

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQT90

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7921.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CL 4-19-94

Number TICs found: 29

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.080	7500	uJB
2. 141-79-7	3-Penten-2-one, 4-methyl-	3.190	180	uNJAB
3. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.649	12000	uNJAB
4.	UNKNOWN ALKANE	12.261	160	J
5.	UNKNOWN ALKANE	12.314	190	J
6.	UNKNOWN ALKANE	13.232	170	J
7.	UNKNOWN ORGANIC ACID	14.512	230	J
8.	UNKNOWN ALKANE	15.559	180	J
9.	UNKNOWN AMIDE	16.243	160	uJB
10.	UNKNOWN AMIDE	17.551	1800	uJB
11.	UNKNOWN	18.092	390	J
12.	UNKNOWN ALKANE	18.330	490	J
13.	UNKNOWN ALKANE	18.676	340	J
14.	UNKNOWN ALKANE	18.975	320	J
15.	UNKNOWN ALKANE	19.308	620	J
16.	UNKNOWN	19.594	350	J
17.	UNKNOWN AMIDE	20.145	830	uJB
18.	UNKNOWN	20.377	430	uJB
19.	UNKNOWN	20.581	490	J
20.	UNKNOWN	20.690	460	J
21.	UNKNOWN	20.812	760	J
22.	UNKNOWN	21.362	470	J
23.	UNKNOWN	21.538	260	J
24.	UNKNOWN	22.100	770	J
25.	UNKNOWN	22.140	610	J
26.	UNKNOWN	22.625	800	J
27.	UNKNOWN ALKANE	23.578	240	J
28.	UNKNOWN	23.839	250	J
29.	UNKNOWN	25.578	740	uJB
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT97

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7922.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	490	U
111-44-4	bis(2-Chloroethyl)Ether	490	U
95-57-8	2-Chlorophenol	490	U
541-73-1	1,3-Dichlorobenzene	490	U
106-46-7	1,4-Dichlorobenzene	490	U
95-50-1	1,2-Dichlorobenzene	490	U
95-48-7	2-Methylphenol	490	U
108-60-1	2,2'-oxybis(1-Chloropropane)	490	U
106-44-5	4-Methylphenol	26	J
621-64-7	N-Nitroso-di-n-propylamine	490	U
67-72-1	Hexachloroethane	490	U
98-95-3	Nitrobenzene	490	U
78-59-1	Isophorone	490	U
88-75-5	2-Nitrophenol	490	U
105-67-9	2,4-Dimethylphenol	490	U
120-83-2	2,4-Dichlorophenol	490	U
120-82-1	1,2,4-Trichlorobenzene	490	U
91-20-3	Naphthalene	50	J
106-47-8	4-Chloroaniline	490	U
87-68-3	Hexachlorobutadiene	490	U
111-91-1	bis(2-Chloroethoxy)methane	490	U
59-50-7	4-Chloro-3-Methylphenol	490	U
91-57-6	2-Methylnaphthalene	68	J
77-47-4	Hexachlorocyclopentadiene	490	U
88-06-2	2,4,6-Trichlorophenol	490	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	490	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	490	U
208-96-8	Acenaphthylene	490	U
606-20-2	2,6-Dinitrotoluene	490	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	490	U

SMY 6/29/94

J vnk

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT97

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7922.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	120	J
121-14-2	2,4-Dinitrotoluene	490	U
84-66-2	Diethylphthalate	490	U
7005-72-3	4-Chlorophenyl-phenylether	490	U
86-73-7	Fluorene	490	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	490	U
101-55-3	4-Bromophenyl-phenylether	490	U
118-74-1	Hexachlorobenzene	490	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	99	J
120-12-7	Anthracene	490	U
86-74-8	Carbazole	490	U
84-74-2	Di-n-butylphthalate	490	U
206-44-0	Fluoranthene	45	J
129-00-0	Pyrene	69	J
85-68-7	Butylbenzylphthalate	490	U
91-94-1	3,3'-Dichlorobenzidine	490	U
56-55-3	Benzo(a)anthracene	30	J
218-01-9	Chrysene	55	J
117-81-7	bis(2-Ethylhexyl)phthalate	490 ~~360~~	UJB
117-84-0	Di-n-octylphthalate	490	U
205-99-2	Benzo(b)fluoranthene	46	J
207-08-9	Benzo(k)fluoranthene	39	J
50-32-8	Benzo(a)pyrene	53	J
193-39-5	Indeno(1,2,3-cd)pyrene	38	J
53-70-3	Dibenz(a,h)anthracene	490	U
191-24-2	Benzo(g,h,i)perylene	490	U

CL 4-19-94

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQT97

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7922.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 29

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CL
4-19-94

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.120	7900	UJB
2.	UNKNOWN	2.186	450	JB
3. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.671	13000	UNJAB
4.	UNKNOWN ALKANE	12.267	250	J
5.	UNKNOWN ALKANE	12.320	260	J
6.	UNKNOWN ALKANE	13.233	270	J
7.	UNKNOWN	14.398	360	J
8.	UNKNOWN ORGANIC ACID	14.552	790	J
9.	UNKNOWN	16.615	710	J
10.	UNKNOWN AMIDE	17.570	2000	UJB
11.	UNKNOWN ALKANE	18.350	810	J
12.	UNKNOWN ALKANE	19.339	930	J
13.	UNKNOWN	19.621	460	J
14.	UNKNOWN ALKANE	19.814	720	J
15.	UNKNOWN AMIDE	20.159	930	UJB
16.	UNKNOWN	20.400	750	JB
17.	UNKNOWN	20.607	980	J
18.	UNKNOWN ALKANE	20.711	860	J
19.	UNKNOWN	20.849	1300	J
20.	UNKNOWN	21.380	830	J
21.	UNKNOWN ALKANE	21.765	960	J
22.	UNKNOWN	22.127	1100	J
23.	UNKNOWN	22.168	640	J
24.	UNKNOWN	22.651	1400	J
25.	UNKNOWN	23.315	640	J
26.	UNKNOWN	23.390	810	J
27.	UNKNOWN ALKANE	24.354	660	J
28.	UNKNOWN	24.864	540	J
29.	UNKNOWN	25.594	820	UJB
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT98

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7923.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	480	U
111-44-4	bis(2-Chloroethyl)Ether	480	U
95-57-8	2-Chlorophenol	480	U
541-73-1	1,3-Dichlorobenzene	480	U
106-46-7	1,4-Dichlorobenzene	480	U
95-50-1	1,2-Dichlorobenzene	480	U
95-48-7	2-Methylphenol	480	U
108-60-1	2,2'-oxybis(1-Chloropropane)	480	U
106-44-5	4-Methylphenol	480	U
621-64-7	N-Nitroso-di-n-propylamine	480	U
67-72-1	Hexachloroethane	480	U
98-95-3	Nitrobenzene	480	U
78-59-1	Isophorone	480	U
88-75-5	2-Nitrophenol	480	U
105-67-9	2,4-Dimethylphenol	480	U
120-83-2	2,4-Dichlorophenol	480	U
120-82-1	1,2,4-Trichlorobenzene	480	U
91-20-3	Naphthalene	480	U
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	480	U
111-91-1	bis(2-Chloroethoxy)methane	480	U
59-50-7	4-Chloro-3-Methylphenol	480	U
91-57-6	2-Methylnaphthalene	26	J
77-47-4	Hexachlorocyclopentadiene	480	U
88-06-2	2,4,6-Trichlorophenol	480	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	480	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	480	U
208-96-8	Acenaphthylene	480	U
606-20-2	2,6-Dinitrotoluene	480	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	480	U

SM 6/29/94

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT98

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7923.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	480	U
121-14-2	2,4-Dinitrotoluene	480	U
84-66-2	Diethylphthalate	480	U
7005-72-3	4-Chlorophenyl-phenylether	480	U
86-73-7	Fluorene	480	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	480	U
101-55-3	4-Bromophenyl-phenylether	480	U
118-74-1	Hexachlorobenzene	480	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	100	J
120-12-7	Anthracene	32	J
86-74-8	Carbazole	480	U
84-74-2	Di-n-butylphthalate	480	U
206-44-0	Fluoranthene	200	J
129-00-0	Pyrene	250	J
85-68-7	Butylbenzylphthalate	480	U
91-94-1	3,3'-Dichlorobenzidine	480	U
56-55-3	Benzo(a)anthracene	110	J
218-01-9	Chrysene	160	J
117-81-7	bis(2-Ethylhexyl)phthalate	480 ~~92~~	UJB
117-84-0	Di-n-octylphthalate	480	U
205-99-2	Benzo(b)fluoranthene	170	J
207-08-9	Benzo(k)fluoranthene	170	J
50-32-8	Benzo(a)pyrene	120	J
193-39-5	Indeno(1,2,3-cd)pyrene	83	J
53-70-3	Dibenz(a,h)anthracene	480	U
191-24-2	Benzo(g,h,i)perylene	85	J

CL 4-19-94

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQT98

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7923.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/25/94 CL

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

Number TICs found: 25

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CL 4-19-94

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.146	7900	uJB
2.	UNKNOWN	2.212	250	J
3. 141-79-7	3-Penten-2-one, 4-methyl-	3.217	200	uNJAB
4. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.677	11000	uNJAB
5.	UNKNOWN	11.406	240	uJB
6.	UNKNOWN	12.223	190	J
7.	UNKNOWN ALKANE	12.315	130	J
8.	UNKNOWN ORGANIC ACID	13.371	120	J
9.	UNKNOWN ORGANIC ACID	14.389	290	J
10.	UNKNOWN	14.448	100	J
11.	UNKNOWN ORGANIC ACID	14.528	480	J
12.	UNKNOWN ORGANIC ACID	15.934	110	J
13.	UNKNOWN ORGANIC ACID	16.054	140	J
14.	UNKNOWN AMIDE	16.240	160	uJB
15.	UNKNOWN ALKANE	16.991	120	J
16.	UNKNOWN AMIDE	17.550	1100	uJB
17.	UNKNOWN ALKANE	17.663	130	J
18.	UNKNOWN ALKANE	19.528	160	J
19.	UNKNOWN AMIDE	20.128	1300	uJB
20.	UNKNOWN ALKANE	20.662	490	J
21.	UNKNOWN ALKANE	21.729	850	J
22.	UNKNOWN ALKANE	22.907	240	J
23.	UNKNOWN	23.240	220	J
24.	UNKNOWN	23.406	220	J
25.	UNKNOWN	25.575	1100	uJB
26.				
27.				
28.				
29.				
30.				

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT99

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7924.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 28 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	460	U
111-44-4	bis(2-Chloroethyl)Ether	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	460	U
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-oxybis(1-Chloropropane)	460	U J unk
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitroso-di-n-propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	U
87-68-3	Hexachlorobutadiene	460	U
111-91-1	bis(2-Chloroethoxy)methane	460	U
59-50-7	4-Chloro-3-Methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	460	U

SAY 4/25/94

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT99

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7924.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 28 decanted: (Y/N) N Date Extracted: 03/25/94

Concentrated Extract Volume: 500(UL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	460	U
121-14-2	2,4-Dinitrotoluene	460	U
84-66-2	Diethylphthalate	460	U
7005-72-3	4-Chlorophenyl-phenylether	460	U
86-73-7	Fluorene	460	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	460	U
101-55-3	4-Bromophenyl-phenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	26	J
120-12-7	Anthracene	460	U
86-74-8	Carbazole	460	U
84-74-2	Di-n-butylphthalate	460	U
206-44-0	Fluoranthene	37	J
129-00-0	Pyrene	43	J
85-68-7	Butylbenzylphthalate	460	U
91-94-1	3,3'-Dichlorobenzidine	460	U
56-55-3	Benzo(a)anthracene	460	U
218-01-9	Chrysene	25	J
117-81-7	bis(2-Ethylhexyl)phthalate	460 ~~93~~	UJB
117-84-0	Di-n-octylphthalate	460	U
205-99-2	Benzo(b)fluoranthene	460	U
207-08-9	Benzo(k)fluoranthene	460	U
50-32-8	Benzo(a)pyrene	460	U
193-39-5	Indeno(1,2,3-cd)pyrene	460	U
53-70-3	Dibenz(a,h)anthracene	460	U
191-24-2	Benzo(g,h,i)perylene	460	U

CL 4-19-94

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQT99

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: P7924.D

Level: (low/med) LOW Date Received: 03/25/94

% Moisture: 28 decanted: (Y/N) N Date Extracted: / /

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/30/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

Number TICs found: 29

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CL 4-19-94

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.094	6300	u JB
2. 141-79-7	3-Penten-2-one, 4-methyl-	3.197	180	u NJAB
3. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.657	11000	u NJAB
4.	UNKNOWN	11.407	260	u JB
5.	UNKNOWN CYCLOALKANE	12.223	300	J
6.	UNKNOWN ORGANIC ACID	13.373	260	J
7.	UNKNOWN HYDROCARBON	14.374	130	J
8.	UNKNOWN ORGANIC ACID	14.512	310	J
9.	UNKNOWN AMIDE	14.664	110	J
10.	UNKNOWN HYDROCARBON	14.855	110	J
11.	UNKNOWN	14.980	110	J
12.	UNKNOWN ORGANIC ACID	15.929	170	J
13.	UNKNOWN AMIDE	16.120	250	J
14.	UNKNOWN AMIDE	16.239	260	u JB
15.	UNKNOWN AMIDE	17.545	2300	u JB
16.	UNKNOWN ALKANE	17.664	160	J
17.	UNKNOWN ALKANE	18.310	140	J
18.	UNKNOWN HYDROCARBON	18.370	140	J
19.	UNKNOWN ALKANE	19.531	250	J
20.	UNKNOWN AMIDE	20.132	1400	u JB
21.	UNKNOWN ALKANE	20.661	1000	J
22.	UNKNOWN	20.807	240	J
23.	UNKNOWN ALKANE	21.734	1300	J
24.	UNKNOWN ALKANE	22.906	540	J
25.	UNKNOWN	23.370	390	J
26.	UNKNOWN	23.423	1200	J
27.	UNKNOWN	24.318	230	J
28.	UNKNOWN	24.821	180	J
29.	UNKNOWN	25.575	350	u JB
30.				

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2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

GC Column(1): DB-17 ID: 0.53(mm) GC Column(2): DB-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKSL	90	104	89	89			0
02	EQT90	90	99	82	74			0
03	EQT97	74	81	65	66			0
04	EQT98	71	86	77	65			0
05	EQT98DL	57*	66	83	70			1
06	EQT99	76	88	89	117			0
07	ESC23	84	88	109	83			0
08	ESC31	60	68	73	86			0
09	ESC46	79	94	72	105			0
10	EQT99MS	83	94	84	104			0
11	EQT99MSD	82	96	87	109			0

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

590

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

Matrix Spike - EPA Sample No.: EQT99

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	23.400	0	22.1	94	46-127
Heptachlor	23.400	0	25.9	111	35-130
Aldrin	23.400	0	24.3	104	34-132
Dieldrin	46.900	0	47.3	101	31-134
Endrin	46.900	0	50.1	107	42-139
4,4'-DDT	46.900	0	54.2	116	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	23.400	22.0	94	0	50	46-127
Heptachlor	23.400	25.7	110	1	31	35-130
Aldrin	23.400	24.3	104	0	43	34-132
Dieldrin	46.900	47.7	102	1	38	31-134
Endrin	46.900	49.0	104	3	45	42-139
4,4'-DDT	46.900	56.1	120	3	50	23-134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS:

591

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKSL

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

Lab Sample ID: PBLKSL Lab File ID: _____

Matrix:(soil/water) SOIL Extraction:(SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N Date Extracted: 03/25/94

Date Analyzed (1): 04/01/94 Date Analyzed (2): 04/01/94

Time Analyzed (1): 0352 Time Analyzed (2): 0352

Instrument ID (1): HP-02A Instrument ID (2): HP-02B

GC Column (1): DB-17 ID: 0.53 (mm) GC Column (2): DB-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	EQT90	17973-01	04/01/94	04/01/94
02	EQT97	17973-02	04/01/94	04/01/94
03	EQT98	17973-03	04/01/94	04/01/94
04	EQT98DL	17973-03DL	04/01/94	04/01/94
05	EQT99	17973-04	04/01/94	04/01/94
06	ESC23	17973-05	04/01/94	04/01/94
07	ESC31	17973-06	04/01/94	04/01/94
08	ESC46	17973-07	04/01/94	04/01/94
09	EQT99MS	17973-04MS	04/01/94	04/01/94
10	EQT99MSD	17973-04MSD	04/01/94	04/01/94

COMMENTS:

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKSL

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: PBLKSL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/25/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/01/94

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.3	U
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	3.3	U
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT90

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 21 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/25/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/01/94

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.2	U
72-55-9	4,4'-DDE	4.2	U
72-20-8	Endrin	4.2	U
33213-65-9	Endosulfan II	4.2	U
72-54-8	4,4'-DDD	4.2	U
1031-07-8	Endosulfan sulfate	4.2	U
50-29-3	4,4'-DDT	4.2	U
72-43-5	Methoxychlor	22	U
53494-70-5	Endrin ketone	4.2	U
7421-93-4	Endrin aldehyde	14	P
5103-71-9	alpha-Chlordane	2.6	P
5103-74-2	gamma-Chlordane	2.7	P
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	85	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT97

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 33 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/25/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/01/94

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.5	U
319-85-7	beta-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.5	U
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	4.9	U
72-55-9	4,4'-DDE	4.9	U
72-20-8	Endrin	4.9	U
33213-65-9	Endosulfan II	4.9	U
72-54-8	4,4'-DDD	4.9	U
1031-07-8	Endosulfan sulfate	4.9	U
50-29-3	4,4'-DDT	4.9	U
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin ketone	4.9	U
7421-93-4	Endrin aldehyde	16	
5103-71-9	alpha-Chlordane	2.5	U
5103-74-2	gamma-Chlordane	2.5	U
8001-35-2	Toxaphene	250	U
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	49	U
11096-82-5	Aroclor-1260	49	U

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT98

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 31 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/25/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/01/94

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.5	U
319-85-7	beta-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.5	U
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	16	P
72-55-9	4,4'-DDE	4.8	U
72-20-8	Endrin	4.9	P
33213-65-9	Endosulfan II	4.8	U
72-54-8	4,4'-DDD	4.8	U
1031-07-8	Endosulfan sulfate	4.8	U
50-29-3	4,4'-DDT	4.8	U
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin ketone	4.8	U
7421-93-4	Endrin aldehyde	4.8	P
5103-71-9	alpha-Chlordane	~~46~~ 39	~~PE~~ PD
5103-74-2	gamma-Chlordane	37	P
8001-35-2	Toxaphene	250	U
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	97	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U

SM 6/29/94

CL 4-19-94

PD J SM

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT98DL

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973-03DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 31 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/25/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/01/94

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

SM 6/29/94 use EQT98 results

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	25	U J
319-85-7	beta-BHC	25	U
319-86-8	delta-BHC	25	U
58-89-9	gamma-BHC (Lindane)	25	U
76-44-8	Heptachlor	25	U
309-00-2	Aldrin	25	U
1024-57-3	Heptachlor epoxide	25	U
959-98-8	Endosulfan I	25	U
60-57-1	Dieldrin	12	DJP
72-55-9	4,4'-DDE	48	U
72-20-8	Endrin	48	U
33213-65-9	Endosulfan II	48	U
72-54-8	4,4'-DDD	48	U
1031-07-8	Endosulfan sulfate	48	U
50-29-3	4,4'-DDT	48	U
72-43-5	Methoxychlor	250	U
53494-70-5	Endrin ketone	48	U
7421-93-4	Endrin aldehyde	48	U
5103-71-9	alpha-Chlordane	39	PD
5103-74-2	gamma-Chlordane	31	PD
8001-35-2	Toxaphene	2500	U
12674-11-2	Aroclor-1016	480	U
11104-28-2	Aroclor-1221	970	U
11141-16-5	Aroclor-1232	480	U
53469-21-9	Aroclor-1242	480	U
12672-29-6	Aroclor-1248	480	U
11097-69-1	Aroclor-1254	480	U
11096-82-5	Aroclor-1260	480	U

low bias

CL 4-19-94

613

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQT99

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 29 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/25/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/01/94

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	2.4	U
1024-57-3	Heptachlor epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	4.6	U
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	4.6	U
72-43-5	Methoxychlor	24	U
53494-70-5	Endrin ketone	4.6	U
7421-93-4	Endrin aldehyde	4.6	U
5103-71-9	alpha-Chlordane	2.4	U
5103-74-2	gamma-Chlordane	2.4	U
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

625

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC23

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 37 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/25/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/01/94

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.7	U
319-85-7	beta-BHC	2.7	U
319-86-8	delta-BHC	2.7	U
58-89-9	gamma-BHC (Lindane)	2.7	U
76-44-8	Heptachlor	3.2	P
309-00-2	Aldrin	2.7	U
1024-57-3	Heptachlor epoxide	5.0	P
959-98-8	Endosulfan I	2.7	U
60-57-1	Dieldrin	13	P
72-55-9	4,4'-DDE	5.2	U
72-20-8	Endrin	20	P
33213-65-9	Endosulfan II	11	P
72-54-8	4,4'-DDD	5.2	U
1031-07-8	Endosulfan sulfate	5.2	U
50-29-3	4,4'-DDT	11	P
72-43-5	Methoxychlor	27	U
53494-70-5	Endrin ketone	5.2	U
7421-93-4	Endrin aldehyde	16	P
5103-71-9	alpha-Chlordane	39	P
5103-74-2	gamma-Chlordane	35	P
8001-35-2	Toxaphene	270	U
12674-11-2	Aroclor-1016	52	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	52	U
12672-29-6	Aroclor-1248	52	U
11097-69-1	Aroclor-1254	52	U
11096-82-5	Aroclor-1260	52	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC31

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 46 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/25/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/01/94

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.1	U
319-85-7	beta-BHC	3.1	U
319-86-8	delta-BHC	5.7	
58-89-9	gamma-BHC (Lindane)	3.1	U
76-44-8	Heptachlor	3.1	U
309-00-2	Aldrin	3.1	U
1024-57-3	Heptachlor epoxide	3.1	U
959-98-8	Endosulfan I	3.1	U
60-57-1	Dieldrin	6.2	P
72-55-9	4,4'-DDE	6.1	U
72-20-8	Endrin	11	P
33213-65-9	Endosulfan II	10	P
72-54-8	4,4'-DDD	6.1	U
1031-07-8	Endosulfan sulfate	6.1	U
50-29-3	4,4'-DDT	8.6	P
72-43-5	Methoxychlor	31	U
53494-70-5	Endrin ketone	6.1	U
7421-93-4	Endrin aldehyde	19	P
5103-71-9	alpha-Chlordane	19	P
5103-74-2	gamma-Chlordane	20	P
8001-35-2	Toxaphene	310	U
12674-11-2	Aroclor-1016	61	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	61	U
53469-21-9	Aroclor-1242	61	U
12672-29-6	Aroclor-1248	61	U
11097-69-1	Aroclor-1254	61	U
11096-82-5	Aroclor-1260	61	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESC46

Lab Name: SWL-TULSA Contract: 68-D2-0013

Lab Code: SWOK Case No.: 21795 SAS No.: _____ SDG No.: EQT90

Matrix: (soil/water) SOIL Lab Sample ID: 17973-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 45 decanted: (Y/N) N Date Received: 03/25/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/25/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/01/94

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.1	U
319-85-7	beta-BHC	3.1	U
319-86-8	delta-BHC	3.4	
58-89-9	gamma-BHC (Lindane)	3.1	U
76-44-8	Heptachlor	3.8	P
309-00-2	Aldrin	3.1	U
1024-57-3	Heptachlor epoxide	3.1	U
959-98-8	Endosulfan I	3.1	U
60-57-1	Dieldrin	6.0	U
72-55-9	4,4'-DDE	6.0	U
72-20-8	Endrin	13	P
33213-65-9	Endosulfan II	6.0	U
72-54-8	4,4'-DDD	6.0	U
1031-07-8	Endosulfan sulfate	6.0	U
50-29-3	4,4'-DDT	15	P
72-43-5	Methoxychlor	31	U
53494-70-5	Endrin ketone	6.0	U
7421-93-4	Endrin aldehyde	8.3	P
5103-71-9	alpha-Chlordane	4.7	P
5103-74-2	gamma-Chlordane	5.0	P
8001-35-2	Toxaphene	310	U
12674-11-2	Aroclor-1016	60	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	60	U
53469-21-9	Aroclor-1242	60	U
12672-29-6	Aroclor-1248	60	U
11097-69-1	Aroclor-1254	60	U
11096-82-5	Aroclor-1260	60	U

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4-19-94

651

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE 000002

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795 SAS No.: _____ SDG No.:MEWY46

SOW No.: ILM02.1

EPA Sample No.	Lab Sample ID
MEWY46	MEWY46
MEWY47	MEWY47
MEWY48	MEWY48
MEWY49	MEWY49
MEWY49D	MEWY49D
MEWY49S	MEWY49S
MEWY74	MEWY74
MEWY75	MEWY75
MEWY76	MEWY76

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536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David A Dunlap Name: David A Dunlap

Date: 4/25/94 Title: Project Manager

REVIEWED BY: Aac
DATE: 4/18/94

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1

INORGANIC ANALYSES DATA SHEET

Y00003

EPA SAMPLE NO.

MEWY46

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Matrix (soil/water): SOIL_ Lab Sample ID: MEWY46

Level (low/med): LOW__ Date Received: 03/25/94

% Solids: _77.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2350		*	P
7440-36-0	Antimony	4.5	U	N	P
7440-38-2	Arsenic	163		*	P
7440-39-3	Barium	47.5	B		P
7440-41-7	Beryllium	0.20	B		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	93200			P
7440-47-3	Chromium	114			P
7440-48-4	Cobalt	3.5	B		P
7440-50-8	Copper	95.9			P
7439-89-6	Iron	7260		*	P
7439-92-1	Lead	8.6		*	P
7439-95-4	Magnesium	8180			P
7439-96-5	Manganese	286			P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	7.2	B		P
7440-09-7	Potassium	491	B		P
7782-49-2	Selenium	0.44	U		P
7440-22-4	Silver	0.46	U		P
7440-23-5	Sodium	132	B		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	7.5	B		P
7440-66-6	Zinc	84.8			P
	Cyanide	3.2	U		AS

C Sm

UJ dma 6/27

JJ 6/27/94 dma

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: STONES

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1

INORGANIC ANALYSES DATA SHEET

000004

EPA SAMPLE NO.

MEWY47

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Matrix (soil/water): SOIL_ Lab Sample ID: MEWY47

Level (low/med): LOW__ Date Received: 03/25/94

% Solids: _64.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7570		*	P	
7440-36-0	Antimony	6.6	B	N	P	J ↓ 6/27 dwa
7440-38-2	Arsenic	179		*	P	
7440-39-3	Barium	101			P	
7440-41-7	Beryllium	0.50	B		P	
7440-43-9	Cadmium	1.2	U		P	
7440-70-2	Calcium	68800			P	
7440-47-3	Chromium	130			P	
7440-48-4	Cobalt	7.4	B		P	
7440-50-8	Copper	114			P	
7439-89-6	Iron	14100		*	P	J ↓ 6/27 dwa
7439-92-1	Lead	24.6		*	P	
7439-95-4	Magnesium	6150			P	
7439-96-5	Manganese	525			P	
7439-97-6	Mercury	0.15	U		CV	
7440-02-0	Nickel	14.6			P	
7440-09-7	Potassium	1070	B		P	
7782-49-2	Selenium	0.52	U		P	
7440-22-4	Silver	0.55	U		P	
7440-23-5	Sodium	225	B		P	
7440-28-0	Thallium	1.4	U		P	
7440-62-2	Vanadium	19.4			P	
7440-66-6	Zinc	78.5			P	
	Cyanide	3.9	U		AS	

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: __ROOTS

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001005

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEWY48

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Matrix (soil/water): SOIL_ Lab Sample ID: MEWY48

Level (low/med): LOW__ Date Received: 03/25/94

% Solids: _68.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9690		*	P
7440-36-0	Antimony	5.1	U	N	P
7440-38-2	Arsenic	23.0		*	P
7440-39-3	Barium	111			P
7440-41-7	Beryllium	0.73	B		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	5570			P
7440-47-3	Chromium	20.7			P
7440-48-4	Cobalt	8.2	B		P
7440-50-8	Copper	12.9			P
7439-89-6	Iron	22400		*	P
7439-92-1	Lead	35.2		*	P
7439-95-4	Magnesium	1520			P
7439-96-5	Manganese	495			P
7439-97-6	Mercury	0.15	U		CV
7440-02-0	Nickel	10.7	B		P
7440-09-7	Potassium	601	B		P
7782-49-2	Selenium	0.99	B		P
7440-22-4	Silver	0.52	U		P
7440-23-5	Sodium	160	B		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	40.2			P
7440-66-6	Zinc	67.4			P
	Cyanide	3.6	U		AS

UJ 6/27 SMA

J 6/27 SMA

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: STONES AND ROOTS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEWY49

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Matrix (soil/water): SOIL_ Lab Sample ID: MEWY49

Level (low/med): LOW__ Date Received: 03/25/94

% Solids: _71.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4950		*	P
7440-36-0	Antimony	4.9	U	N	P
7440-38-2	Arsenic	5.3		*	P
7440-39-3	Barium	91.5			P
7440-41-7	Beryllium	0.37	B		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	1100	B		P
7440-47-3	Chromium	8.8			P
7440-48-4	Cobalt	4.6	B		P
7440-50-8	Copper	8.1			P
7439-89-6	Iron	8910		*	P
7439-92-1	Lead	35.9		*	P
7439-95-4	Magnesium	625	B		P
7439-96-5	Manganese	1260			P
7439-97-6	Mercury	0.14	U		CV
7440-02-0	Nickel	4.2	B		P
7440-09-7	Potassium	436	B		P
7782-49-2	Selenium	0.59	B		P
7440-22-4	Silver	0.57	B		P
7440-23-5	Sodium	63.0	B		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	18.5			P
7440-66-6	Zinc	42.4			P
	Cyanide	3.5	U		AS

UJ 6/27 sm

JU 6/27 sm

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: ROOTS

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEWY74

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 21795 SAS No.: SDG No.: MEWY46

Matrix (soil/water): SOIL Lab Sample ID: MEWY74

Level (low/med): LOW Date Received: 03/25/94

% Solids: 52.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	12800		*	P	
7440-36-0	Antimony	6.6	U	N	P	UJ ↓ SM
7440-38-2	Arsenic	9.9		*	P	
7440-39-3	Barium	148			P	
7440-41-7	Beryllium	0.79	B		P	
7440-43-9	Cadmium	1.7	B		P	
7440-70-2	Calcium	13800			P	
7440-47-3	Chromium	19.0			P	
7440-48-4	Cobalt	11.5	B		P	
7440-50-8	Copper	57.1			P	
7439-89-6	Iron	16700		*	P	J ↓ 6/26 JMA
7439-92-1	Lead	174		*	P	
7439-95-4	Magnesium	2630			P	
7439-96-5	Manganese	1360			P	
7439-97-6	Mercury	0.19	U		CV	
7440-02-0	Nickel	26.8			P	
7440-09-7	Potassium	680	B		P	
7782-49-2	Selenium	0.64	U		P	
7440-22-4	Silver	0.67	U		P	
7440-23-5	Sodium	295	B		P	
7440-28-0	Thallium	1.7	U		P	
7440-62-2	Vanadium	22.0			P	
7440-66-6	Zinc	225			P	
	Cyanide	4.7	U		AS	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

ARTIFACTS: FREE_WATER_AND_ROOTS

U.S. EPA - CLP

000008

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEWY75

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Matrix (soil/water): SOIL_ Lab Sample ID: MEWY75

Level (low/med): LOW__ Date Received: 03/25/94

% Solids: _45.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15800		*	P
7440-36-0	Antimony	7.7	U	N	P
7440-38-2	Arsenic	10.7		*	P
7440-39-3	Barium	141			P
7440-41-7	Beryllium	0.64	B		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	12100			P
7440-47-3	Chromium	16.1			P
7440-48-4	Cobalt	8.6	B		P
7440-50-8	Copper	85.9			P
7439-89-6	Iron	15600		*	P
7439-92-1	Lead	81.4		*	P
7439-95-4	Magnesium	2520			P
7439-96-5	Manganese	3390			P
7439-97-6	Mercury	0.22	U		CV
7440-02-0	Nickel	15.3	B		P
7440-09-7	Potassium	700	B		P
7782-49-2	Selenium	0.74	U		P
7440-22-4	Silver	0.79	U		P
7440-23-5	Sodium	254	B		P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	19.9	B		P
7440-66-6	Zinc	177			P
	Cyanide	5.5	U		AS

UJ ↓ SM

J ↓ JMA 6/27

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: FREE WATER, STONES, AND ROOTS

U.S. EPA - CLP

V0u009

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEWY76

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Matrix (soil/water): SOIL_ Lab Sample ID: MEWY76

Level (low/med): LOW__ Date Received: 03/25/94

% Solids: _56.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9350		*	P
7440-36-0	Antimony	6.2	U	N	P
7440-38-2	Arsenic	7.3		*	P
7440-39-3	Barium	113			P
7440-41-7	Beryllium	0.62	B		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	3130			P
7440-47-3	Chromium	11.7			P
7440-48-4	Cobalt	9.6	B		P
7440-50-8	Copper	29.0			P
7439-89-6	Iron	16900		*	P
7439-92-1	Lead	39.3		*	P
7439-95-4	Magnesium	1650	B		P
7439-96-5	Manganese	1220			P
7439-97-6	Mercury	0.18	U		CV
7440-02-0	Nickel	12.1	B		P
7440-09-7	Potassium	680	B		P
7782-49-2	Selenium	0.60	U		P
7440-22-4	Silver	1.1	B		P
7440-23-5	Sodium	176	B		P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	16.4	B		P
7440-66-6	Zinc	98.1			P
	Cyanide	4.4	U		AS

UJ ↓ sm

J↓ JMA 6/27

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: FREE_WATER_AND_ROOTS

3
BLANKS

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	13.0	U	13.0	U	13.0	U	13.0	U	2.600	U	P
Antimony	17.5	U	17.5	U	17.5	U	17.5	U	3.500	U	P
Arsenic	-3.2	B	-3.3	B	-3.9	B	1.7	U	-0.500	B	P
Barium	0.6	U	0.6	U	0.6	U	0.6	U	0.120	U	P
Beryllium	0.3	U	0.3	U	0.3	U	0.3	U	0.060	U	P
Cadmium	3.9	U	3.9	U	3.9	U	3.9	U	0.780	U	P
Calcium	5.7	U	5.7	U	5.7	U	5.7	U	1.140	U	P
Chromium	2.5	U	2.5	U	2.5	U	2.5	U	0.500	U	P
Cobalt	3.5	U	3.5	U	3.5	U	3.5	U	0.700	U	P
Copper	1.6	U	1.6	U	1.6	U	1.6	U	0.320	U	P
Iron	7.7	U	7.7	U	7.7	U	7.7	U	3.164	B	P
Lead	1.6	U	-2.6	B	-2.5	B	-1.9	B	0.320	U	P
Magnesium	16.7	U	16.7	U	19.1	B	16.7	U	3.340	U	P
Manganese	0.8	U	0.8	U	0.8	U	0.8	U	0.160	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	CV
Nickel	8.0	U	8.0	U	8.0	U	8.0	U	1.600	U	P
Potassium	298.0	U	298.0	U	373.8	B	298.0	U	59.600	U	P
Selenium	1.7	U	1.7	U	1.7	U	1.7	U	0.340	U	P
Silver	1.8	U	1.8	U	1.8	U	1.8	U	0.360	U	P
Sodium	10.0	B	9.3	U	9.3	U	14.7	B	1.860	U	P
Thallium	4.6	U	4.6	U	4.6	U	4.6	U	0.920	U	P
Vanadium	2.3	U	2.3	U	2.3	U	2.3	U	0.460	U	P
Zinc	8.3	U	8.3	U	8.3	U	8.3	U	1.660	U	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	2.500	U	AS

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3
BLANKS

W0W014

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury			0.2	U							CV
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide			10.0	U							AS

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5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO. 000017

MEWY49S

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Matrix (soil/water): SOIL__ Level (low/med): LOW___

% Solids for Sample: _71.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	61.2689		4.9020	U	140.06	43.7	N	P
Arsenic	75-125	503.9860		5.3361		560.22	89.0		P
Barium	75-125	618.2213		91.4874		560.22	94.0		P
Beryllium	75-125	12.7927		0.3669	B	14.01	88.7		P
Cadmium	75-125	13.1653		1.0924	U	14.01	94.0		P
Calcium									NR
Chromium	75-125	58.3165		8.7927		56.02	88.4		P
Cobalt	75-125	139.1625		4.5630	B	140.06	96.1		P
Copper	75-125	74.1849		8.0644		70.03	94.4		P
Iron									NR
Lead	75-125	166.9804		35.9356		140.06	93.6		P
Magnesium									NR
Manganese		1647.7843		1257.9020		140.06	278.4		P
Mercury	75-125	0.7640		0.1401	U	0.70	109.1		CV
Nickel	75-125	134.4818		4.1905	B	140.06	93.0		P
Potassium									NR
Selenium	75-125	523.4174		0.5882	B	560.22	93.3		P
Silver	75-125	11.6807		0.5742	B	14.01	79.3		P
Sodium									NR
Thallium	75-125	526.6275		1.2885	U	560.22	94.0		P
Vanadium	75-125	146.0644		18.4818		140.06	91.1		P
Zinc	75-125	176.7675		42.3810		140.06	95.9		P
Cyanide	75-125	36.3060		3.5014	U	35.01	103.7		AS

Comments:

U.S. EPA - CLP

000018

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEWY49A

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Matrix (soil/water) : SOIL__ Level (low/med): LOW___

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									NR
Antimony		134.17		17.50	U	120.0	111.8		P
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

U.S. EPA - CLP

000019

6
DUPLICATES

EPA SAMPLE NO.

MEWY49D

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

Matrix (soil/water): SOIL_ Level (low/med): _LOW__

% Solids for Sample: _71.4 % Solids for Duplicate: __71.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		4949.3810		6497.0644		27.0	*	P
Antimony		4.9020	U	4.9020	U			P
Arsenic	2.8	5.3361		9.8992		59.9	*	P
Barium	56.0	91.4874		100.6919		9.6		P
Beryllium		0.3669	B	0.5322	B	36.8		P
Cadmium		1.0924	U	1.0924	U			P
Calcium		1099.9944	B	1102.5686	B	0.2		P
Chromium	2.8	8.7927		11.4510		26.3		P
Cobalt		4.5630	B	5.6415	B	21.1		P
Copper	7.0	8.0644		9.0588		11.6		P
Iron		8907.0560		14036.2353		44.7	*	P
Lead		35.9356		45.2185		22.9	*	P
Magnesium		624.7647	B	723.2465	B	14.6		P
Manganese		1257.9020		1493.1989		17.1		P
Mercury		0.1401	U	0.1401	U			CV
Nickel		4.1905	B	5.6218	B	29.2		P
Potassium		435.7899	B	474.3978	B	8.5		P
Selenium		0.5882	B	0.4762	U	200.0		P
Silver		0.5742	B	0.5042	U	200.0		P
Sodium		62.9748	B	75.4622	B	18.0		P
Thallium		1.2885	U	1.2885	U			P
Vanadium	14.0	18.4818		28.6947		43.3		P
Zinc		42.3810		51.7031		19.8		P
Cyanide		3.5014	U	3.5014	U			AS

000022

10

Instrument Detection Limits (Quarterly)

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

ICP ID Number: TRACE_____ Date: 01/15/94

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	189.04		10	1.7	P
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead	220.35		3	1.6	P
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium	196.03		5	1.7	P
Silver			10		NR
Sodium			5000		NR
Thallium	190.86		10	4.6	P
Vanadium			50		NR
Zinc			20		NR

Comments:

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000023

10

Instrument Detection Limits (Quarterly)

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 21795 SAS No.: SDG No.: MEWY46

ICP ID Number: JA61E Date: 01/15/94

Flame AA ID Number :

Furnace AA ID Number :

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		200	13.0	P
Antimony	206.84		60	17.5	P
Arsenic			10		NR
Barium	493.41		200	0.6	P
Beryllium	313.04		5	0.3	P
Cadmium	228.80		5	3.9	P
Calcium	317.93		5000	5.7	P
Chromium	267.72		10	2.5	P
Cobalt	228.62		50	3.5	P
Copper	324.75		25	1.6	P
Iron	259.94		100	7.7	P
Lead			3		NR
Magnesium	279.08		5000	16.7	P
Manganese	257.61		15	0.8	P
Mercury			0.2		NR
Nickel	231.60		40	8.0	P
Potassium	766.49		5000	298.0	P
Selenium			5		NR
Silver	328.07		10	1.8	P
Sodium	588.99		5000	9.3	P
Thallium			10		NR
Vanadium	292.40		50	2.3	P
Zinc	213.86		20	8.3	P

Comments:

10

Instrument Detection Limits (Quarterly)

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

ICP ID Number: _____ Date: 01/15/94

Flame AA ID Number : LEEMAN_PS200

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.2	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

000025

10

Instrument Detection Limits (Quarterly)

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

ICP ID Number: _____ Date: 01/15/94

Flame AA ID Number : LACHAT_____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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12

ICP LINEAR RANGES (QUARTERLY)

000033

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 21795_ SAS No.: _____ SDG No.: MEWY46

ICP ID Number: JA61E_____ Date: 01/15/94

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Aluminum	5.00	600000.0	P
Antimony	5.00	100000.0	P
Arsenic	5.00	100000.0	P
Barium	5.00	100000.0	P
Beryllium	5.00	100000.0	P
Cadmium	5.00	200000.0	P
Calcium	5.00	600000.0	P
Chromium	5.00	100000.0	P
Cobalt	5.00	100000.0	P
Copper	5.00	100000.0	P
Iron	5.00	250000.0	P
Lead	5.00	200000.0	P
Magnesium	5.00	600000.0	P
Manganese	5.00	150000.0	P
Mercury			NR
Nickel	5.00	100000.0	P
Potassium	5.00	1000000.0	P
Selenium	5.00	100000.0	P
Silver	5.00	100000.0	P
Sodium	5.00	500000.0	P
Thallium			P
Vanadium	5.00	100000.0	P
Zinc	5.00	100000.0	P

Comments:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No. _____ CERCLIS No. vll

Case No. 21795 Site Name Location: Perma-Treat of ll.

Contractor or EPA Lab: ITPA Data User: BTV

No. of Samples: 7 Date Samples or Data Received: 4-26-94

Have Chain-of-Custody records been received? YES ✓ NO ___
Have traffic reports or packing lists been received? YES ✓ NO ___
If no, are traffic report or packing list numbers written on the chain-of-custody record? YES ✓ NO ___
If no, which traffic report or packing list numbers are missing?

Are basic data forms in? YES ✓ NO ___
No. of samples claimed: 7 No. of samples received: 7

Received by: Lynette Burnett Date: 4-26-94

Received by LSSS: Adams D Nacus Date: 4-28-94

Review started: 4-29-94 Reviewer Signature: B. Yuen

Total time spent on review: 6 +0.6 T.M. Date review completed: 4-29-94

Copied by: Marvin Date: 05-09-94

Mailed to user by: Lynette Burnett Date: 5-9-94

DATA USERS:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ESCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____
Inorganic Data Complete( ] Suitable for Intended Purpose( ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose( ] list
Dioxin Data Complete [ ] Suitable for Intended Purpose( ] prblms
SAS Data Complete [ ] Suitable for Intended Purpose( ] below.
PROBLEMS: Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files Date: _____