L1430655015
Bemis Company Inc.
ILD 006215727
SF/HRS

CERCLA
Site Inspection Prioritization Analytical Results

Illinois Environmental Protection Agency

2200 Churchill Road
P. O. Box 19276
Springfield, IL 62794-9276

EPA Region 5 Records Ctr.
293431

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TARGET COMPOUND LIST

Volatile Target Compounds

Chloromethane	1,2-Dichloropropane
Bromomethane	cis-1,3-Dichloropropene
Vinyl Chlorde	Trichloroethene
Chloroethane	Dibromochloromethane
Methylene Chloride	1,1,2-Trichloroethane
Acetone	Benzene
Carbon Disulfide	trans-1,3-Dichloropropene
1,1-Dichloroethene	Bromoform
1,1-Dichloroethane	4-Methyl-2-pentanone
1,2-Dichloroehtene (total)	2-Hexanone
Chloroform	Tetrachloroethene
1,2-Dichloroethane	1,1,2,2-Tetrachloroethane
2-Butanone	Toluene
1,1,1-Trichloroethane	Chlorobenzene
Carbon Tetrachloride	Ethylbenzene
Vinyl Acetate	Styrene
Bromodichloromethane	Xylenes (total)

Base/Neutral Target Compounds

Hexachloroethane	2,4-Dinitrotoluene
bis(2-Chloroethyl) Ether	Diethylphthalate
Benzyl Alcohol	N-Nitrosodiphenylamine
bis (2-Chloroisopropyl) Ether	Hexachlorobenzene
N-Nitroso-Di-n-Propylamine	Phenanthrene
Nitrobenzene	4-Bromophenyl-phenylether
Hexachlorobutadiene	Anthracene

2-Methylnaphthalene	Di-n-Butylphthalate
1,2,4-Trichlorobenzene	Fluoranthene
Isophorone	Pyrene
Naphthalene	Butylbenzylphthalate
4-Chloroaniline	bis(2-Ethylhexyl)Phthalate
bis(2-chloroethoxy)Methane	Chrysene
Hexachlorocyclopentadiene	Benzo(a)Anthracene
2-Chloronaphthalene	3-3'-Dichlorobenzidene
2-Nitroaniline	Di-n-Octyl Phthalate
Acenaphthylene	Benzo(b)Fluoranthene
3-Nitroaniline	Benzo(k)Fluoranthene
Acenaphthene	Benzo(a)Pyrene
Dibenzofuran	Ideno(1,2,3-cd)Pyrene
Dimethyl Phthalate	Dibenz(a,h)Anthracene
2,6-Dinitrotoluene	Benzo(g,h,i)Perylene
Fluorene	1,2-Dichlorobenzene
4-Nitroaniline	1,3-Dichlorobenzene
4-Chlorophenyl-phenylether	1,4-Dichlorobenzene

Acid Target Compounds

Benzoic Acid	2,4,6-Trichlorophenol
Phenol	2,4,5-Trichlorophenol
2-Chlorophenol	4-Chloro-3-methylphenol
2-Nitrophenol	2,4-Dinitrophenol
2-Methylphenol	2-Methyl-4,6-dinitrophenol
2,4-Dimethylphenol	Pentachlorophenol
4-Methylphenol	4-Nitrophenol
2,4-Dichlorophenol	

Pesticide/PCB Target Compounds

alpha-BHC	Endrin Ketone
beta-BHC	Endosulfan Sulfate
delta-BHC	Methoxychlor
gamma-BHC (Lindane)	alpha-Chlordane
Heptachlor	gamma-Chlordane
Aldrin	Toxaphene
Heptachlor epoxide	Aroclor-1016
Endosulfan I	Aroclor-1221
4,4'-DDE	Aroclor-1232
Dieldrin	Aroclor-1242
Endrin	Aroclor-1248
4,4'-DDD	Aroclor-1254
Endosulfan II	Aroclor-1260
4,4'-DDT	

Inorganic Target Compounds

Aluminum	Manganese
Antimony	Mercury
Arsenic	Nickel
Barium	Potassium
Beryllium	Selenium
Cadmium	Silver
Calcium	Sodium
Chromium	Thallium
Cobolt	Vanadium
Copper	Zinc
Iron	Cyanide
Lead	Sulfide
Magnesium	

DATA QUALIFIERS

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
U	Compound was tested for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by two, to account for the fact that only half of the extract is recovered.	Analyte was analyzed for but not detected.
J	Estimated value. Used when estimating a concentration for tentatively identified compounds (TICS) where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria and the result is less than the sample quantitation limit but greater than zero. Used in data validation when the quality control data indicate that a value may not be accurate.	Estimated value. Used in data validation when the quality control data indicate that a value may not be accurate.
C	This flag applies to pesticide results where the identification is confirmed by GC/MS.	Method qualifier indicates analysis by the Manual Spectrophotometric method.
B	Analyte was 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.	The reported value is less than the CRDL but greater than the instrument detection limit (IDL).
D	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, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values are flagged with the "D" flag.	Not used.
E	Identifies compounds whose concentrations exceed the calibration range for that specific analysis. All extracts containing compounds exceeding the calibration range must be diluted and analyzed again. 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 must be reported on separate Forms I. The Form I for the diluted sample must have the "DL" suffix appended to the sample number.	The reported value is estimated because of the presence of interference.
A	This flag indicates that a TIC is a suspected aldol concentration product formed by the reaction of the solvents used to process the sample in the laboratory.	Method qualifier indicates analysis by Flame Atomic Absorption (AA).
M	Not used.	Duplicate injection (a QC parameter not met).

N	Not used	Spiked sample (a QC parameter not met).
S	Not used.	The reported value was determined by the Method of Standard Additions (MSA).
W	Not used.	Post digestion spike for Furnace AA analysis (a QC parameter) is out of control limits of 85% to 115% recovery, while sample absorbance is less than 50% of spike absorbance.
*	Not used.	Duplicate analysis (a QC parameter not within control limits).
+	Not used.	Correlation coefficient for MSA (a QC parameter) is less than 0.995.
P	Not used.	Method qualifier indicates analysis by ICP (Inductively Coupled Plasma) Spectroscopy.
CV	Not used.	Method qualifier indicates analysis by Cold Vapor AA.
AV	Not used.	Method qualifier indicates analysis by Automated Cold Vapor AA.
AS	Not used.	Method qualifier indicates analysis by Semi-Automated Cold Spectrophotometry.
T	Not used.	Method qualifier indicates Titrimetric analysis.
NR	The analyte was not required to be analyzed.	The analyte was not required to be analyzed.
R	Rejected data. The QC parameters indicate that the data is not usable for any purpose.	Rejected data. The QC parameters indicate that the data is not usable for any purpose.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data
Received for Review on July 28, 1995

FROM: Dennis Wesolowski, Chief (SQC-1J)
Contract Analytical Services Section

TO: Data User: IEPA Patricia J Scott for D Wesolowski 8/14/95

We have reviewed the data for the following case:

SITE NAME: Benis Corp (IL)

CASE NUMBER: 23773 SDG NUMBER: EAPH5

Number and Type of Samples: 12 (soil)

Sample Numbers: EAPH5-9 EAPJ0-6

Laboratory: SWOK Hrs. for Review: ~~17~~ 20 w/ fm

Following are our findings:

The data are acceptable and usable with the qualifications described in the attached narrative.

Patricia J Scott

RECEIVED
AUG 18 1995
IEPA/DLPC

cc: Regional TPO

NARRATIVE

LABORATORY: S W O K **CASE: 23773**

SITE: Bemis Corp.(IL) **SDG: EAPH5**

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

This review covers twelve (12) low level soil samples numbered: EAPH5, EAPH6, EAPH7, EAPH8, EAPH9, EAPJ0, EAPJ1, EAPJ2, EAPJ3, EAPJ4, EAPJ5 and EAPJ6. The samples were collected on 07/12/95. The Southwest Laboratory of Oklahoma (SWOK), OK received the samples on 07/13/95 in good condition for the full list of organic analysis following the CLP SOW OLM03.1 protocol.

All Volatile soil analyses were performed within the technical holding time of fourteen (14) days after sample collection; therefore, the results are acceptable.
All soil Semivolatile and Pesticide/PCB sample extractions were performed within fourteen (14) days and all analyses were performed within forty (40) days after extraction; therefore, the results are acceptable.

The sampling date for sample EAPH5 was missing in the Organic Traffic Report, however the collection date was confirmed by sample tag.

Sample **EAPH5** was used as the low level soil matrix spike/matrix spike duplicates in all three fractions.

Based on the same sample collection times reported in the Organic Traffic Report, sample **EAPJ2** was specified as a field duplicate of **EAPJ1** and sample **EAPJ5** as a duplicate of **EAPJ4** but they were not explicitly identified as such. Results of samples and their duplicates were in agreement.

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

Reviewed by: _____Krystyna Minczuk__Lockheed/ESAT
Date:__August 4th, 1995__

NARRATIVE

LABORATORY: S W O K **CASE: 23773**

SITE: Bemis Corp.(IL) **SDG: EAPH5**

1.HOLDING TIME

Twelve (12) low level soil samples numbered: EAPH5, EAPH6, EAPH7, EAPH8, EAPH9, EAPJ0, EAPJ1, EAPJ2, EAPJ3, EAPJ4, EAPJ5 and EAPJ6 were collected on 07/12/95. The Southwest Laboratory of Oklahoma (SWOK), OK received the samples on 07/13/95 in good condition for the full list of organic analysis following the CLP SOW OLM03.1 protocol.

All Volatile analyses were performed within the technical holding time of fourteen (14) days after sample collection; therefore, the results are acceptable.
All soil Semivolatile and Pesticide/PCB sample extractions were performed within fourteen (14) days all analyses were performed within forty (40) days after extraction; therefore, the results are acceptable.

2.GC/MS TUNING PERFORMANCE

All GC/MS tuning complied with the mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

All GC/MS tuning complied with the mass list and ion abundance criteria for DFTPP, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

The GC Resolution Check Mix met the 60% resolution criteria. DDT and Endrin degradation checks using Performance Evaluation Mix of DB-1701 and DB-17 columns were acceptable (<20%); therefore, the results are acceptable.

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

Pesticide surrogates TCX and DCB were outside the retention time window in samples: EAPJ1DL, EAPJ2DL and surrogate TCX was outside the retention time window in samples EAPH8DL and EAPJ1 on the DB-1701 column. Surrogates TCX and DCB were outside the retention time window in samples: EAPJ1DL, EAPH8DL, EAPJ1, EAPJ2DL and DCB was outside the retention time window in samples: EAPH9DL, EAPJ0DL and EAPH8 on DB-17 column. After reviewing the chromatograms of these samples the reviewer found that surrogates apparently were present but was not found due to dilution or matrix interference of the

Reviewed by: _____Krystyna Minczuk__Lockheed/ESAT
Date:__August 4th, 1995__

NARRATIVE

LABORATORY: S W O K **CASE: 23773**

SITE: Bemis Corp.(IL) **SDG: EAPH5**

samples. Qualification of these samples is presented in the Section 5.

3.CALIBRATION

Initial and continuing calibration standards of Volatile, Semivolatile and Pesticide/PCB were evaluated for the Target Compounds List (TCLs) and outliers were recorded on the outlier forms included as a part of this narrative.

4.METHOD BLANK

Volatile:

VBLK1, VBLK2, VBLK3 and VBLK4 are the low level soil Volatile method blanks. VBLK1 contained Bromomethane (1 µg/Kg), VBLK2 contained Acetone (12 µg/Kg), VBLK3 and VBLK4 contained Methylene Chloride (2 µg/Kg each).
Methylene Chloride and Acetone are the common laboratory contaminants. The presence of the laboratory contaminants in the samples associated with VBLK2, VBLK3 and VBLK4 is flagged as non-detected "U" when the sample results are less than ten (10) times the blank results.
Bromomethane was not detected in any of the samples associated with VBLK1.
The Volatile method blank summary (FORM IV VOA) lists the associated samples.

VHBLK1 is the Volatile storage blank. This blank was contaminated by Methylene Chloride (12 µg/Kg). There were no samples associated with the storage blank.

Semivolatile:

SBLK1 and SBLK2 are the low level soil Semivolatile method blanks. SBLK1 contained Di-n-butylphthalate (19 µg/KG), Butylbenzylphthalate (18 µg/Kg), bis(2-Ethylhexyl)phthalate (52 µg/Kg) and reported twelve (12) Semivolatile tentatively identified compounds.
SBLK2 contained bis(2-Ethylhexyl)phthalate (52 µg/Kg) and reported twenty four (24) Semivolatile identified compounds.
Di-n-butylphthalate, Butylbenzylphthalate and bis(2-Ethylhexyl) phthalate are the common laboratory contaminants.
The presence of the laboratory contaminants in the samples associated with SBLK1 and SBLK2 is flagged as non-detected "U" when the sample results are less than ten (10) times the blank results.

Reviewed by: _____Krystyna Minczuk__Lockheed/ESAT
Date:__August 4th, 1995__

NARRATIVE

LABORATORY: S W O K **CASE: 23773**

SITE: Bemis Corp.(IL) **SDG: EAPH5**

The presence of any of the TICs in the samples associated with SBLK1 and SBLK2 is flagged as non-detected "U" when the sample results are less than five (5) times the blank results.
The Semivolatile method blank summary (FORM IV SV) lists the associated samples.

Pesticide/PCB:

PBLKSH is the soil Pesticide method blank. This method blank had no contaminants; therefore, the results are acceptable.

There were six (6) Pesticide instrument blanks. All of them had no contaminants. There were no samples associated with instrument blanks.

5.SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

Volatile:

The low level soil system monitoring compounds SMC1 (TOL) Toluene-d8 was above the QC limit in samples: EAPJ4, EAPJ5, EAPJ6, EAPH6, EAPH7, EAPJ4RE, EAPJ5RE, EAPH6RE, EAPH7RE; SMC2 (BFB) Bromofluorobenzene was below the QC limit in samples: EAPJ5, EAPH6, EAPJ4RE, EAPJ5RE, EAPH6RE and SMC3 (DCB) 1,2-Dichloroethane-d4 was below the QC limit in sample EAPH7.
Positive Volatile results in the above noted samples (with exceptions of EAPJ4 and EAPJ7RE) should be considered estimated "J" and any non-detected quantitation limits should be considered estimated "UJ".
For samples EAPJ4, EAPJ5RE and EAPJ7RE positive Volatile results should be considered estimated "J".

Semivolatile:

The low level soil surrogates were within the QC limits; therefore, the results are acceptable.

Reviewed by: Krystyna Minczuk Lockheed/ESAT
Date: August 4th, 1995

NARRATIVE

LABORATORY: S W O K **CASE: 23773**

SITE: Bemis Corp.(IL) **SDG: EAPH5**

Pesticide/PCB:
The Pesticide soil samples with surrogates out of control are present in the Table below:

Sample #	TCX1	TCX2	DCB1	DCB2
EAPJ1DL	0D	0D	0D	0D
EAPJ2	-	-	729D	1532D
EAPH8DL	0D	0D	-	0D
EAPH9DL	-	-	289D	376D
EAPJ0DL	-	-	-	387D
EAPJ1	0D	0D	332D	1159D
EAPJ2DL	0D	0D	0D	0D
EAPH8	-	-	297	426
EAPH9	-	-	527	318
EAPJ0	-	-	-	281

	QC LIMITS
TCX=Tetrachloro-m-xylene	30-150
DCB=Decachlorobiphenyl	30-150

High surrogate recoveries for samples EAPJ2, EAPH9DL, EAPJ0DL, EAPJ1 (DCB), EAPH8, EAPH9 and EAPJ0 are due to co-elution with Aroclor 1260 or matrix interference of the sample; therefore, no qualification is necessary. Zero (0%) percent recoveries are affected by co-elution surrogate standards with another peaks or dilution of the samples; therefore, no qualification is needed for samples EAPJ1DL, EAPH8DL, EAPJ1 (TCX) and EAPJ2DL.

6.MATRIX SPIKE/SPIKE DUPLICATES

Sample EAPH5 was used as the MS/MSD in all three fractions.

Volatile:
All spike recoveries and RPDs were within the QC limits; therefore, the results are acceptable.

Semivolatile:
All spike recoveries and RPDs were within the QC limits; therefore, the results are acceptable.

Pesticide/PCB:
All spike recoveries and RPDs were within the QC limits; therefore, the results are acceptable.

Reviewed by: _____Krystyna Minczuk__Lockheed/ESAT
Date:__August 4th, 1995__

NARRATIVE

LABORATORY: S W O K CASE: 23773

SITE: Bemis Corp.(IL) SDG: EAPH5

7.FIELD BLANK AND FIELD DUPLICATE

Sample EAPJ2 was identified as a filed duplicate of EAPJ1 and sample EAPJ5 was identified as a field duplicate of EAPJ4. The compounds detected in the samples and their duplicates are presented in the Table below:

Compound (µg/Kg)	EAPJ2	EAPJ1	EAPJ5	EAPJ4
Volatile:				
Bromomethane	1	1	-	-
Methylene Chloride	21	23	-	-
Benzene	2	2	-	-
Tetrachloroethane	1	1	-	-
Toluene	10	12	-	-
Ethylbenzene	2	2	-	-
Xylene(total)	6	7	-	-
# VOA TICs	3	2	2	2
Semivolatile:				
1,2,4-Trichlorobenzene	160	200	-	-
Naphthalene	130	330	120	180
2-Methylnaphthalene	150	220	260	400
Dimethylphthalate	-	34	-	-
Acenaphthylene	35	38	-	-
Acenaphthene	360	630	53	54
Dibenzofuran	170	340	68	88
Fluorene	230	440	91	78
Hexachlorobenzene	340	330	-	-
Phenanthrene	4000	6000	860	1100
Anthracene	760	1000	160	170
Carbazole	720	1000	81	130
Fluoranthene	6000	7500	1400	1600
Pyrene	5200	8900	970	990
Butylbenzylphthalate	1400	10000	-	-
Benzo(a)anthracene	3800	4100	390	400
Chrysene	5500	6200	440	450
Benzo(b)fluoranthene	5700	6700	230	320
Benzo(k)fluoranthene	2700	3000	240	250
Benzo(a)pyrene	4100	4800	210	240
Indene(1,2,3-cd)pyrene	5000	5500	110	170
Dibenzo(a)anthracene	1600	1700	44	51
Benzo(g,h,i)perylene	5000	5500	93	160
#SVOA TICs	33	31	21	22

Reviewed by: Krystyna Minczuk Lockheed/ESAT
Date: August 4th, 1995

NARRATIVE

LABORATORY: S W O K **CASE: 23773**

SITE: Bemis Corp.(IL) **SDG: EAPH5**

Compound (µg/Kg)	**EAPJ2**	**EAPJ1**	**EAPJ5**	**EAPJ4**
Pesticide/PCB:				
Endosulfan I	-	-	3.2	-
Dieldrin	1300	980	-	-
4,4'-DDE	390	52	-	-
Endrin	1700	1700	-	-
Endosulfan II	1700	1700	-	-
4,4'-DDD	1100	900	-	-
4,4'-DDT	1700	1700	-	-
Methoxychlor	1700	-	-	-
Endrin Aldehyde	1700	1700	-	-
alpha-Chlordane	330	290	6.3	-
gamma-Chlordane	78	52	-	-
Aroclor 1260	340000	280000	53	36

8.INTERNAL STANDARDS

Volatile:

The internal standards area counts were below the QC limits for IS1 (BCM) Bromochloromethane in samples: EAPJ4, EAPJ5, EAPJ6, EAPH7, EAPH8, EAPH9, EAPJ4RE, EAPJ5RE, EAPJ6RE, EAPH7RE, EAPH8RE, EAPH9RE; IS2(DFB) 1,4-Difluorobenzene in samples: EAPH5, EAPJ4, EAPJ5, EAPJ6, EAPH6, EAPH7, EAPH8, EAPH9, EAPJ4RE, EAPJ5RE, EAPJ6RE, EAPH6RE, EAPH7RE, EAPH8RE, EAPH9RE, EAPJ0RE and IS3(CBZ) Chlorobenzene-d5 in samples: EAPH5, EAPH5MS, EAPH5MSD, EAPJ4, EAPJ5, EAPJ6, EAPH6, EAPH7, EAPH8, EAPH9, EAPJ0, EAPJ1, EAPJ2, EAPJ4RE, EAPJ5RE, EAPJ6RE, EAPH6RE, EAPH7RE, EAPH8RE, EAPH9RE, EAPJ0RE, EAPJ1RE and EAPJ2RE.

The positive results for the target compounds which are quantitated using IS1, IS2 and IS3 in the above noted samples are flagged as estimated "J" and non-detected results are flagged with the sample quantitation limit as estimated "UJ".

Please, refer to Table 4 for the list of associated Volatile compounds which are quantitated using IS1, IS2 and IS3.

Semivolatile:

The internal standards retention times and area counts for the SVOA fraction were within the QC limits; therefore, the results are acceptable.

9.COMPOUND IDENTIFICATION

The target compounds and TICs for the Volatile, Semivolatile and

Reviewed by: _____Krystyna Minczuk__Lockheed/ESAT
Date:__August 4th, 1995__

NARRATIVE

LABORATORY: S W O K **CASE: 23773**

SITE: Bemis Corp.(IL) **SDG: EAPH5**

Pesticide/PCB fractions were correctly identified.

10.COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The Volatile, Semivolatile and Pesticide/PCB Target Compounds (TCLs) and Tentative Identified Compounds (TICs) were properly quantitated; therefore, the data are acceptable. The CRQLs were adjusted to reflect all sample dilutions and percent moisture.

11.SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.
GC baselines for the Pesticide analysis was acceptable.

12.ADDITIONAL INFORMATION

Volatile:
A large number of VOA TICs were reported in samples:
EAPH6 - 8
EAPH7 - 16
EAPH7RE - 11

Semivolatile:
Target compound Fluoranthene exceeded the calibration range in sample EAPH8. Several target compounds: Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluorenthane, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene and Benzo(g,h,i)perylene exceeded the calibration range in samples EAPH9, EAPJ1 (Butylbenzylphthalate additional) and EAPJ2.
For any analyte that exceeded the calibration range in the original sample analysis; the results of the diluted analysis should be considered the sample's analyte concentration.

A large number of SVOA TICs were reported in all soil samples and ranged from 9 to 35 per sample.

Pesticide:
Aroclor 1260 exceeded the calibration range in samples EAPH5, EAPJ1, EAPJ2. Target compounds: Endrin, Endosulfan II, 4,4'-DDD, 4,4-DDT, Methoxychlor and Aroclor 1260 exceeded the calibration range in sample EAPH8. Target compounds: Endrin, Endosulfan II, 4,4-DDT, Endrin Aldehyde and Aroclor 1260 exceeded the calibration range in samples EAPH9, EAPJ0.
For any analyte that exceeded the calibration range in the original

Reviewed by: _____Krystyna Minczuk__Lockheed/ESAT
Date:__August 4th, 1995__

NARRATIVE

LABORATORY: S W O K **CASE: 23773**

SITE: Bemis Corp.(IL) **SDG: EAPH5**

sample analysis; the results of the diluted analysis should be considered the sample's analyte concentration.

Reviewed by: _____Krystyna Minczuk__Lockheed/ESAT
Date:__August 4th, 1995__

CALIBRATION OUTLIERS
VOLATILE TCL COMPOUNDS
(Page 1 of 1)

CASE\SAS#: 23773 LABORATORY: SWOK

COLUMN: DB624 SITE NAME: Bemis Corp (IL)

HEATED PURGE (Y/N): Y

Instrument# L		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		6/14/95 12:07			7/18/95 13:42			7/19/95 14:04			7/20/95 10:25			7/21/95 11:13		
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Chloromethane	0.01	1.310			1.939	28.3	J	1.019			1.150			1.070		
Bromomethane	0.10															
Vinyl chloride	0.10															
Chloroethane	0.01															
Methylene chloride	0.01	1.800	47.9	J	1.249	30.6	J	1.423			2.257	25.4	J	1.698		
Acetone	0.01	.321			.112	65.1	J	.143	55.5	J	.141	56.1	J	.163	49.2	J
Carbon disulfide	0.01															
1,1-Dichloroethene	0.10															
1,1-Dichloroethane	0.20	2.880			2.058	28.5	J	1.987	31.0	J	2.349			2.266		
1,2-Dichloroethene (total)																
Chloroform	0.20															
1,2-Dichloroethane	0.10	1.223			.825	32.5	J	.858	29.8	J	.902			.972		
2-Butanone	0.01	.609			.238	60.9	J	.280	54.0	J	.267	56.2	J	.307	49.6	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															
tran-1,3-Dichloropropene	0.10															
Bromoform	0.10	.189			.172			.222			.212			.241	28.2	J
4-Methyl-2-pentanone	0.01	.361			.173	52.4	J	.197	45.4	J	.185	48.8	J	.206	42.9	J
2-Hexanone	0.01	.239			.104	56.5	J	.132	44.8	J	.118	50.6	J	.132	44.8	J
Tetrachloroethene	0.20	.357			.422			.407			.497	39.2	J	.458	28.3	J
1,1,2,2-Tetrachloroethane	0.50	.431			.323	25.1	J	.439			.418			.480		
Toluene	0.40															
Chlorobenzene	0.50															
Ethylbenzene	0.10															
Styrene	0.30															
Xylene (total)	0.30															
Toluene-d8																
Bromofluorobenzene	0.20															
1,2-Dichloroethane-d4		1.130			.827	26.8	J	.804	28.8	J	.811	28.2	J	.902		

Samples affected:

VBLK1	VBLK2	VBLK3	VBLK4
EAPH5	EAPH6 —	EAPH6RE	VHBLK1
EAPH5MS	EAPH9	EAPH7RE	
EAPH5MSD	EAPJ0 —	EAPH8RE	
EAPJ3	EAPJ2	EAPH9RE	
EAPJ4	EAPJ4RE	EAPJ0RE	
EAPJ5	EAPJ5RE	EAPJ1RE	
EAPJ6	EAPJ6RE	EAPJ2RE	

Reviewer's Init/Date: KM 8/05/95

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

* = 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#: 23773
COLUMN:

LABORATORY: SWOK
SITE NAME: Bemis Corp (IL)

Instrument# T		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		7/10/95 21:41			7/18/95 7:22											
	#	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-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	.299			.198	33.7	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															
4-Nitrophenol	0.01															
Dibenzofuran	0.80															
2,4-Dinitrotoluene	0.20															

Affected samples:

SBLK1
EAPH5-
EAPH9
EAPH5MS
EAPH5MSD
EAPJ0-
EAPJ6

Reviewer's Init/Date: KM 8-03-95

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

* = 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#: 23973 LABORATORY: SWOIC

COLUMN:

SITE NAME: Bemis Corp (IL)

Instrument# T		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		7/10/95 21:41			7/19/95 7:22											
	#	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															
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	1.563			1.959	25.3	J									
Butylbenzylphthalate	0.01															
3,3'-Dichlorobenzidine	0.01	1.310			1.182	41.4	J									
Benzo(a)anthracene	0.80															
Chrysene	0.70															
bis(2-Ethylhexyl)phthalate	0.01															
Di-n-octyl phthalate	0.01	1.587			2.154	35.9	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															
Nitrobenzene-d5	0.01															
2-Fluorobiphenyl	0.70															
Terphenyl-d14	0.50	1.071			1.377	28.6	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: KM 8/3/95

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

* = 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#: 23773
COLUMN:

LABORATORY: SWOK
SITE NAME: Bemis Corp (IL)

Instrument# V		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		7/14/95 7:16			7/20/95 8:09			7/21/95 13:50								
	#	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	2.488			2.141			1.838	26.1	J						
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															
2,4,6-Trichlorophenol	0.20	.319			1.404	26.4	J	.398								
2,4,5-Trichlorophenol	0.20															
2-Chloronaphthalene	0.80	1.108			1.388	25.3	J	1.349								
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															
4-Nitrophenol	0.01	.155			.095	38.6	J	.124								
Dibenzofuran	0.80															
2,4-Dinitrotoluene	0.20															

Affected samples:

EAPH8DL	EAPH9DL
EAPJ2DL	
SBLK2	
EAPJ1DL	

Reviewer's Init/Date: KM 8/3/95

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# = Minimum Relative Response Factor

CALIBRATION OUTLIER
SEMIVOLATILE TCL COMPOUNDS
(Page 2 of 2)

CASE\SAS#: 23773

COLUMN:

LABORATORY: SWOIC

SITE NAME: Benu's Corp (IL)

Instrument# √		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		7/14/95 7:16			7/20/95 8:09			7/21/95 13:30								
	#	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	.341			.215	37.1	J	.265								
4,6-Dinitro-2-methylphenol	0.01															
N-nitrosodiphenylamine	0.01	.373			.708			.731	27.6	J						
4-Bromophenyl-phenylether	0.10	.240			.310	29.2	J	.281								
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															
Benzo(a)anthracene	0.80															
Chrysene	0.70															
bis(2-Ethylhexyl)phthalate	0.01															
Di-n-octyl phthalate	0.01	.975			2.025	28.6	J	2.042								
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															
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	.137			.175	27.8	J	.166								
2-Chlorophenol-d4																
1,2-Dichlorobenzene-d4																

Reviewer's Init/Date: KM 8/3/95

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

* = 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#: 23773 LABORATORY: SWOK

COLUMN: DB-17C1 SITE NAME: Bemis Corp (IL)

Instrument# HP-06A		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		7/23-23/95			7/23/95 16:29											
	#	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:

PBLKSH	EAPH8DL			
EAPH6	EAPH9DL			
EAPH7	EAPJ1			
EAPJ3	EAPJ2DL			
EAPJ6	EAPH8			
EAPH5DL	EAPH9			
EAPH5	EAPJ0			
EAPH5MS				
EAPH5MSD				
EAPJ1DL				
EAPJ2				

Reviewer's Init/Date: KM 8/4/95

* 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#: 23773 LABORATORY: SWOK

COLUMN: DB-17 SITE NAME: Bemis Loop (IL)

Instrument# MP-CC15		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time:		7/23-29/95			7/23/95 16:22											
	#	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:

PBLKSM	EAPH8DL			
EAPH6	EAPH9DL			
EAPH7	EAPJ1			
EAPJ3	EAPJ2D			
EAPJ6	EAPH8			
EAPH5DL	EAPH9			
EAPH5	EAPJ0			
EAPH5MS				
EAPH5MSD				
EAPJ1DL				
EAPJ2				

Reviewer's Init/Date: KM 8/4/95

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

ORGANIC DATA QUALIFIER DEFINITIONS

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

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

U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.

J Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound but the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.

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

N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.

P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.

C Indicates pesticide results that have been confirmed by GC/MS.

B Indicates the analyte is detected in the associated blank as well as the sample.

E Indicates compounds whose concentrations exceed the calibration range of the instrument.

D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.

A Indicates tentatively identified compounds that are suspected to be aldol condensation products.

G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.

L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.

T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.

X, Y, Z are reserved for laboratory defined flags.

SOUTHWEST LABORATORY OF OKLAHOMA
1700 West Albany, Suite A / Broken Arrow, OK 74012
918-251-2858

SDG NARRATIVE
July 26, 1995

RECEIVED
JUL 28 1995
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

CONTRACT NO.: 68-D5-0026

CASE NO.: 23773

SAMPLE NOS.: EAPH5, EAPH5MS, EAPH5MSD, EAPH6, EAPH6RE, EAPH7, EAPH7RE, EAPH8, EAPH8DL, EAPH8RE, EAPH9, EAPH9DL, EAPH9RE, EAPJ0, EAPJ0RE, EAPJ1, EAPJ1DL, EAPJ1RE, EAPJ2, EAPJ2DL, EAPJ2RE, EAPJ3, EAPJ4, EAPJ4RE, EAPJ5, EAPJ5RE, EAPJ6, EAPJ6RE

SDG NO.: EAPH5

VOLATILE FRACTION

Twelve soil samples were submitted for Volatile Organic Analysis. The samples were analyzed by GC/MS following the OLM03.1 CLP Statement of Work.

Alternate columns used by Southwest Laboratory of Oklahoma for the analysis of volatile compounds by Method OLM03.1 are the Restek XTI-5 (bonded 5% phenyl-95% dimethyl polysiloxane), 30m, 0.25mm ID, 1um film thickness (Restek #12253) and the DB624, 75m, 0.53mmID Megabore, 3um film thickness (J&W 125-1374).

An alternate trap used for the analysis of volatile compounds by method OLM03.1 is the Vocarb 3000 (Carbopack B/Carboxen 1000 & 1001; Tekmar #2-1066).

The following samples in this SDG (labeled with an "RE") are considered billable due to surrogate recovery verification: EAPH6, EAPH7, EAPJ4

The following samples in this SDG (labeled with an "RE") are considered billable since reanalysis was performed to verify internal standard area recoveries. EAPH6, EAPH7, EAPH8, EAPH9, EAJP0, EAPJ1, EAPJ2, EAPJ4, EAPJ5 AND EAPJ6.

No major problems occurred during the analyses of these samples.

Blanks: VBLK3, VBLK4 and the holding blank, VHBLK1 all had low level methylene chloride contamination less than CRQL. VBLK1 contained bromomethane less than CRQL and VBLK2 contained acetone less than 5X CRQL.

Surrogates: The following sample analyses had surrogate spike recoveries which did not fall within QC limits: EAPH6, EAPH7, EAPJ4, EAPJ5 and EAPJ6. Upon reanalysis, sample EAPJ6's surrogate recoveries fell within recommended limits, while all other samples duplicated the original results, verifying a matrix effect. All original runs and subsequent reanalyses have been submitted.

Matrix Spikes: No problems.

EPA United States Environmental Protection Agency Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):
Case No.: 23773

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

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

2. Region No.: 5
Sampling Co.: IEPA
4. Date Shipped:
Carrier: Federal Express
6. Date Received -- Received by: 7-13-95 [illegible]

Sampler (Name): Brad Taylor
Airbill Number: 4413934000
Laboratory Contract Number:
Unit Price:

Sampler Signature: [illegible]
5. Ship To: Southwest Labs of Oklahoma, 1700 W. Albany Suite C, Broken Arrow, OK 74012
ATTN: Harry Berg 918-251-2858
7. Transfer to:
Date Received:

3. Purpose*
Lead: SF, PRP, ST, FED
Early Action: CLEM, PA, REM, RI, SI (X), ESI
Long-Term Action: FS, RD, RA, O&M, NPLD

Received by:
Contract Number:
Price:

CLP Sample Numbers (from labels)	A Matrix (from Box 1) / Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) / Other:	E RAS Analysis: VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
EAPJ0	5	L	G	5		X	X		5009173	X106	7/12/95/1445	MEADWS	B.T			
EAPJ0	5	L	G	5	X				5009174-5	X106	7/12/95/1445	MEADWS	B.T.			

Shipment for Case Complete? (Y/N):
Page: 2 of 4
Sample(s) to be Used for Laboratory QC: EAPH5
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 45138 & 45139

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[illegible]	7/12/95 1540				
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	
		[illegible] EAPH5	7/13/95 1015		

A21-012-4 REV. 3/93

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

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

358930

EPA United States Environmental Protection Agency Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):
Case No.: 23773

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

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

2. Region No.: 5
Sampling Co.: IEPA
4. Date Shipped:
Carrier: Federal Express
6. Date Received -- Received by: 7-13-95 [signature]
Sampler (Name): Brad Taylor
Airbill Number: 4413934000
Laboratory Contract Number:
Unit Price:
Sampler Signature: [signature]
5. Ship To: Southwest Labs of Oklahoma, 1700 West Albany, Suite C, Broken Arrow, OK 74012, ATTN: Harry Berg 918-251-2858
7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

3. Purpose*
Lead: SF, PRP, ST, FED
Early Action: CLEM, PA, REM, RI, SI (X), ESI
Long-Term Action: FS, RD, RA, O&M, NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) / Other:	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) / Other:	E RAS Analysis: VOA	BNA	Pest/PCB	High only / ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection		I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
EAPH5	5	L	G	5	X				5009161-2	X101	7/ /95	1500	MEADW0	B.T.			
EAPH5	5	L	G	5		X	X		5009163	X101	7/ /95	1500	MEADW0	B.T.			
EAPH6	5	L	G	5		X	X		5009164	X102	7/12/95	11:30	MEADW1	B.T.			
EAPH6	5	L	G	5	X				5009194-5	X102	7/12/95	11:30	MEADW1	B.T.			
EAPH7	5	L	G	5		X	X		5009196	X103	7/12/95	12:00	MEADW2	B.T.			
EAPH7	5	L	G	5	X				5009165-6	X103	7/12/95	12:00	MEADW2	B.T.			
EAPH8	5	L	G	5		X	X		5009167	X104	7/12/95	13:45	MEADW3	B.T.			
EAPH8	5	L	G	5	X				5009168-9	X104	7/12/95	13:45	MEADW3	B.T.			
EAPH9	5	L	G	5		X	X		5009170	X105	7/12/95	14:00	MEADW4	B.T.			
EAPH9	5	L	G	5	X				5009171-2	X105	7/12/95	14:00	MEADW4	B.T.			

Shipment for Case Complete? (Y/N):
Page 1 of 4
Sample(s) to be Used for Laboratory QC: EAPH5
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 45138 2 4 1 9

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	7/12/95 1540				
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
		[signature]	7/13/95 1015		

EAPH5

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

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-0124 REV. 3/93

EPA United States Environmental Protection Agency Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):
Case No.: 23773

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. DS (High only)
7. Waste (High only)
8. Other (Specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

2. Region No.: 5
Sampling Co.: IEPA
4. Date Shipped:
Carrier: Federal Express
6. Date Received -- Received by: 7-13-95 [illegible]
Laboratory Contract Number:
Unit Price:
Sampler (Name): Brad Taylor
Airbill Number: 4413934000
Sampler Signature: [illegible]
5. Ship To: Southwest Labs of Oklahoma, 1700 ~~East~~ W. Albany, Suite C, Broken Arrow, OK 74012
ATTN: Holly Bass (918)-251-2858
7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

3. Purpose*
Lead: SF, PRP, ST, FED
Early Action: CLEM, PA, REM, RI, [X] SI, ESI
Long-Term Action: FS, RD, RA, O&M, NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases Solids	Water-Miscible Liq.	Water-Immis. Liq.
EAPJ4	5	L	G	5		X	X		5009185	X202	7/12/95/1045	MEADW9	B.T.			
EAPJ4	5	L	G	5	X				5009186-7	X202	7/12/95/10:45	MEADW9	B.T.			
EAPJ5	5	L	G	5		X	X		5009188	X203	7/12/95/10:45	MEADX0	B.T.			
EAPJ5	5	L	G	5	X				5009189-90	X203	7/12/95/10:45	MEADX0	B.T.			
EAPJ6	5	L	G	5		X	X		5009191	X204	7/12/95/10:10	MEADX1	B.T.			
EAPJ6	5	L	G	5	X				5009192-3	X204	7/12/95/10:10	MEADX1	B.T.			

Shipment for Case Complete? (Y/N):
Page: 4 of 4
Sample(s) to be Used for Laboratory QC: EAPH5
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 45140 + 45141

*SDG Final Sample

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	7/12/95/1340				
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) [illegible]	Date / Time 7/13/95/1015	Remarks: Is custody seal intact? Y/N/none	

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

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-4 REV. 3/93

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252022

EPA United States Environmental Protection Agency Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):
Case No.: 23773

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

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

2. Region No.: 5
Sampling Co.: IEPA
4. Date Shipped:
Carrier: Federal Express
6. Date Received -- Received by: 7-13-95 L Hallis
Laboratory Contract Number:
Unit Price:
Sampler (Name): Brad Taylor
Airbill Number: 4413934000
Sampler Signature: Brad Taylor
5. Ship To: Southwest Labs of Oklahoma, 1700 W. Albany Suite C, Broken Arrow, Ok 74012
ATTN: Harry Bass (918-251-2858)
7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

3. Purpose*
Lead: SF, PRP, ST, FED
Early Action: CLEM, PA, REM, RI, SI (X), ESI
Long-Term Action: FS, RD, RA, O&M, NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases Solids	Water-Miscible Liq.	Water-Immis. Liq.
EAPJ1	5	L	G	5		X	X		5009176	X107	7/12/95 1300	MEADW6	BT			
EAPJ1	5	L	G	5	X				5009177-8	X107	7/12/95 1300	MEADW6	BT			
											~~7/ /95~~					
EAPJ2	5	L	G	5		X	X		5009179	X108	7/12/95 1300	MEADW7	BT			
EAPJ2	5	L	G	5	X				5009180-1	X108	7/12/95 1300	MEADW7	BT			
											~~7/ /95~~					
EAPJ3	5	L	G	5		X	X		5009182	X201	7/12/95 1640	MEADW8	BT			
EAPJ3	5	L	G	5	X				5009183-4	X201	7/12/95 1640	MEADW8	BT			

Shipment for Case Complete? (Y/N):
Page: 3 of 4
Sample(s) to be Used for Laboratory QC: EAPH5
Additional Sampler Signatures: Brad Taylor
Chain of Custody Seal Number(s): 45140 + 45141

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Edward J. Prosecutt	7/12/95 1340				
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) L Hallis	Date / Time 7/13/95 1015	Remarks: Is custody seal intact? Y/N/none (Y)	

EAPH5

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

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-4 REV. 3/93

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TABLE 4

(For Multi-Media, Multi-Concentration Analysis)

VOLATILE INTERNAL STANDARDS WITH CORRESPONDING TCL ANALYTES ASSIGNED FOR QUANTITATION

Bromochloromethane

Chloromethane
Bromomethane
Vinyl chloride
Chloroethane
Methylene chloride
Acetone
Carbon disulfide
1,1-Dichloroethene
1,1-Dichloroethane
1,2-Dichloroethene(total)
Chloroform
1,2-Dichloroethane
1,2-Dichloroethane-d_4(surr,smc)
2-Butanone

1,4-Difluorobenzene

Bromoform
1,1,1-Trichloroethane
Carbon tetrachloride
Bromodichloromethane
1,2-Dichloropropane
trans-1,3-Dichloropropene
Trichloroethene
Dibromochloromethane
1,1,2-Trichloroethane
Benzene
cis-1,3-Dichloropropene

Chlorobenzene-d_5

2-Hexanone
4-Methyl-2-pentanone
Tetrachloroethene
1,1,2,2-Tetrachloroethane
Toluene
Chlorobenzene
Ethylbenzene
Styrene
Xylene(total)
Bromofluorobenzene(surr,smc)
Toluene-d_8(surr,smc)

SEMIVOLATILE INTERNAL STANDARDS WITH CORRESPONDING TCL ANALYTES ASSIGNED FOR QUANTITATION

1,4-Dichlorobenzene-d_4

Phenol
bis(2-chloroethyl)ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2,2'-Oxybis-(1-chloropropane)
1,2-Dichlorobenzene
2-Methylphenol
bis(2-Chloroisopropyl)ether
4-Methylphenol
N-nitroso-di-n-propylamine
Hexachloroethane
2-Fluorophenol(surr)
Phenol-d_5(surr)
2-Chlorobenzene-d_4(surr)
1,2-Dichlorobenzene-d_4(surr)

Naphthalene-d_8

Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Naphthalene
bis(2-Chloroethoxy)methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
4-Chloroaniline
Hexachlorobutadiene
4-Chloro-3-methylphenol
2-Methylnaphthalene
Nitrobenzene-d_5(surr)

Acenaphthene-d_{10}

Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2-Chloronaphthalene
2-Nitroaniline
Dimethylphthalate
Acenaphthylene
3-Nitroaniline
Acenaphthene
2,4-Dinitrophenol
4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Diethyl phthalate
4-Chlorophenyl phenyl ether
Fluorene
4-Nitroaniline
2-Fluorobiphenyl(surr)
2,4,6-Tribromophenol(surr)

Phenanthrene-d_{10}

4,6-Dinitro-2-methylphenol
N-nitroso-di-phenylamine
Carbazole
4-Bromophenyl phenyl ether
Hexachlorobenzene
Pentachlorophenol
Phenanthrene
Anthracene
Di-n-butyl phthalate
Fluoranthene

Chrysene-d_{12}

Pyrene
butylbenzyl phthalate
3,3'-Dichlorobenzidine
Benzo(a)anthracene
bis(2-Ethylhexyl)phthalate
Chrysene
Terphenyl-d_{14}(surr)

Perylene-d_{12}

Di-n-octyl phthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

(surr) - surrogate
(smc) - system monitoring compound

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH5

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16821.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 9 Date Analyzed: 07/18/95

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	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	U
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	2	J
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH5

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16821.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 9 Date Analyzed: 07/18/95

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
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC OLM03

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16842.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 46 Date Analyzed: 07/19/95

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	67	
74-83-9	Bromomethane	11	J
75-01-4	Vinyl Chloride	18	U
75-00-3	Chloroethane	18	U
75-09-2	Methylene Chloride	63	
67-64-1	Acetone	78	B
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	U
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	9	J
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	23	
79-34-5	1,1,2,2-Tetrachloroethane	18	U
108-88-3	Toluene	57	
108-90-7	Chlorobenzene	18	U
100-41-4	Ethylbenzene	8	J
100-42-5	Styrene	18	U
1330-20-7	Xylene (Total)	18	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16842.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 46 Date Analyzed: 07/19/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 8

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	5.624	14	NJ
2. 108-87-2	Cyclohexane, methyl-	8.493	13	NJ
3.	UNKNOWN HYDROCARBON	9.827	20	J
4.	UNKNOWN	10.134	10	J
5.	UNKNOWN CYCLOALKANE	10.662	16	J
6.	Cyclotetrasiloxane	12.668	16	J
7.	UNKNOWN	12.783	15	J
8.	SILANE	14.760	70	J
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
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30.				

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH6RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.02RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16863.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 46 Date Analyzed: 07/20/95

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	9	J
74-83-9	Bromomethane	18	U
75-01-4	Vinyl Chloride	18	U
75-00-3	Chloroethane	18	U
75-09-2	Methylene Chloride	33	B
67-64-1	Acetone	69	
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	U
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	8	J
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	13	J
79-34-5	1,1,2,2-Tetrachloroethane	18	U
108-88-3	Toluene	78	
108-90-7	Chlorobenzene	18	U
100-41-4	Ethylbenzene	14	J
100-42-5	Styrene	18	U
1330-20-7	Xylene (Total)	34	

u KM 8/3

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH6RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.02RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16863.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 46 Date Analyzed: 07/20/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-87-2	Cyclohexane, methyl-	8.664	10	NJ
2.	UNKNOWN HYDROCARBON	9.978	16	J
3.	Cyclotetrasiloxane	12.836	22	J
4.	UNKNOWN	12.942	10	J
5.	SILANE	14.947	79	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH7

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16843.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 52 Date Analyzed: 07/19/95

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	270	
74-83-9	Bromomethane	34	
75-01-4	Vinyl Chloride	21	U
75-00-3	Chloroethane	21	U
75-09-2	Methylene Chloride	150	
67-64-1	Acetone	230	B
75-15-0	Carbon Disulfide	21	U
75-35-4	1,1-Dichloroethene	21	U
75-34-3	1,1-Dichloroethane	21	U
540-59-0	1,2-Dichloroethene (total)	21	U
67-66-3	Chloroform	21	U
107-06-2	1,2-Dichloroethane	21	U
78-93-3	2-Butanone	21	U
71-55-6	1,1,1-Trichloroethane	21	U
56-23-5	Carbon Tetrachloride	21	U
75-27-4	Bromodichloromethane	21	U
78-87-5	1,2-Dichloropropane	21	U
10061-01-5	cis-1,3-Dichloropropene	21	U
79-01-6	Trichloroethene	21	U
124-48-1	Dibromochloromethane	21	U
79-00-5	1,1,2-Trichloroethane	21	U
71-43-2	Benzene	21	U
10061-02-6	trans-1,3-Dichloropropene	21	U
75-25-2	Bromoform	21	U
108-10-1	4-Methyl-2-Pentanone	21	U
591-78-6	2-Hexanone	21	U
127-18-4	Tetrachloroethene	21	U
79-34-5	1,1,2,2-Tetrachloroethane	21	U
108-88-3	Toluene	21	U
108-90-7	Chlorobenzene	21	U
100-41-4	Ethylbenzene	21	U
100-42-5	Styrene	21	U
1330-20-7	Xylene (Total)	21	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH7

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16843.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 52 Date Analyzed: 07/19/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 16

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	75-69-4	Trichloromonofluoromethane	3.553	60	NJ
2.	110-54-3	Hexane	5.606	40	NJ
3.		UNKNOWN CYCLOALKANE	6.354	20	J
4.	110-82-7	Cyclohexane	7.150	33	NJ
5.		UNKNOWN HYDROCARBON	7.284	20	J
6.		UNKNOWN CYCLOALKANE	7.688	1400	J
7.		UNKNOWN HYDROCARBON	7.784	1400	J
8.	108-87-2	Cyclohexane, methyl-	8.465	4500	J
9.		UNKNOWN CYCLOALKANE	8.916	520	J
10.		UNKNOWN HYDROCARBON	9.156	970	J
11.		UNKNOWN HYDROCARBON	9.319	590	J
12.		UNKNOWN CYCLOALKANE	9.588	1500	J
13.		UNKNOWN HYDROCARBON	9.809	1400	J
14.		UNKNOWN CYCLOALKANE	9.991	520	J
15.		UNKNOWN CYCLOALKANE	10.692	1200	J
16.		SILANE	14.741	1700	J
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FORM I VOA-TIC OLM03.

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH7RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.03RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16864.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 52 Date Analyzed: 07/20/95

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	8	J
74-83-9	Bromomethane	4	J
75-01-4	Vinyl Chloride	21	U
75-00-3	Chloroethane	21	U
75-09-2	Methylene Chloride	98	B
67-64-1	Acetone	170	
75-15-0	Carbon Disulfide	21	U
75-35-4	1,1-Dichloroethene	21	U
75-34-3	1,1-Dichloroethane	21	U
540-59-0	1,2-Dichloroethene (total)	21	U
67-66-3	Chloroform	21	U
107-06-2	1,2-Dichloroethane	21	U
78-93-3	2-Butanone	21	U
71-55-6	1,1,1-Trichloroethane	21	U
56-23-5	Carbon Tetrachloride	21	U
75-27-4	Bromodichloromethane	21	U
78-87-5	1,2-Dichloropropane	21	U
10061-01-5	cis-1,3-Dichloropropene	21	U
79-01-6	Trichloroethene	21	U
124-48-1	Dibromochloromethane	21	U
79-00-5	1,1,2-Trichloroethane	21	U
71-43-2	Benzene	21	U
10061-02-6	trans-1,3-Dichloropropene	21	U
75-25-2	Bromoform	21	U
108-10-1	4-Methyl-2-Pentanone	21	U
591-78-6	2-Hexanone	21	U
127-18-4	Tetrachloroethene	21	U
79-34-5	1,1,2,2-Tetrachloroethane	21	U
108-88-3	Toluene	21	U
108-90-7	Chlorobenzene	21	U
100-41-4	Ethylbenzene	21	U
100-42-5	Styrene	21	U
1330-20-7	Xylene (Total)	21	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH7RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.03RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16864.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 52 Date Analyzed: 07/20/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 11

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	75-69-4	Trichloromonofluoromethane	3.725	47	NJ
2.		UNKNOWN	4.924	11	J
3.		UNKNOWN	7.340	12	J
4.		UNKNOWN HYDROCARBON	7.974	12	J
5.	108-87-2	Cyclohexane, methyl-	8.655	63	NJ
6.		UNKNOWN HYDROCARBON	9.326	510	J
7.		Cyclohexane, dimethyl	9.768	500	J
8.		UNKNOWN HYDROCARBON	9.979	730	J
9.	1678-91-7	Cyclohexane, ethyl-	10.823	400	NJ
10.		Cyclotetrasiloxane	12.809	410	J
11.		SILANE	14.930	1000	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH8

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16844.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 12 Date Analyzed: 07/19/95

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	
74-83-9	Bromomethane	5	J
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	43	
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	5	J
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	2	J
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	20	
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	2	J
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	8	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH8

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16844.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 12 Date Analyzed: 07/19/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.266	11	J
2.	UNKNOWN HYDROCARBON	3.649	9	J
3. 110-54-3	Hexane	5.587	11	NJ
4. 108-87-2	Cyclohexane, methyl-	8.447	12	NJ
5.	SILANE	14.735	9	J
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FORM I VOA-TIC OLM01

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH8RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16865.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 12 Date Analyzed: 07/20/95

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	3	J
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	23	B
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	2	J
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	13	
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	1	J
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	7	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH8RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16865.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 12 Date Analyzed: 07/20/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-87-2	Cyclohexane, methyl-	8.608	9	NJ
2.	Silane	14.874	8	J
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FORM I VOA-TIC OLM03.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH9

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16845.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 20 Date Analyzed: 07/19/95

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	12	U
74-83-9	Bromomethane	3	J
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	39	
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	3	J
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	2	J
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	13	
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	4	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH9

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16845.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 20 Date Analyzed: 07/19/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	75-69-4	Trichloromonofluoromethane	3.534	9	NJ
2.	110-54-3	Hexane	5.586	15	NJ
3.		SILANE	14.710	15	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH9RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16866.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 20 Date Analyzed: 07/20/95

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	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	36	B
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	2	J
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	10	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	8	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH9RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16866.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 20 Date Analyzed: 07/20/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 75-69-4	Trichloromonofluoromethane	3.658	8	NJ
2.	Silane	14.861	13	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ0

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16846.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 13 Date Analyzed: 07/19/95

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	11	U
74-83-9	Bromomethane	1	J
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	22	
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	1	J
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	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	2	J
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	7	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ0

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16846.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 13 Date Analyzed: 07/19/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	5.585	8	NJ
2. 110-82-7	Cyclohexane	7.149	6	NJ
3. 108-87-2	Cyclohexane, methyl-	8.446	15	NJ
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ0RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.06RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16867.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 13 Date Analyzed: 07/20/95

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	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	14	B
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	1	J
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	8	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	1	J
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	5	J

U KM 8/3/9

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ0RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.06RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16867.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 13 Date Analyzed: 07/20/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-87-2	Cyclohexane, methyl-	8.609	14	NJ
2.	UNKNOWN HYDROCARBON	9.944	7	J
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x107

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ1

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16848.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 6 Date Analyzed: 07/19/95

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	11	U
74-83-9	Bromomethane	1	J
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	23	
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	2	J
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	1	J
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	12	
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	2	J
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	7	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ1

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16848.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 6 Date Analyzed: 07/19/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	110-54-3	Hexane	5.605	8	NJ
2.	108-87-2	Cyclohexane, methyl-	8.474	10	NJ
3.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ1RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16868.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 6 Date Analyzed: 07/20/95

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	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	14	B u KM 8/31/0
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	1	J
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	0.8	J
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	10	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	2	J
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	7	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ1RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16868.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 6 Date Analyzed: 07/20/95

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. 108-87-2	Cyclohexane, methyl-	8.674	8	NJ
2.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16849.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 5 Date Analyzed: 07/19/95

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	1	J
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	21	
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	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	Bromodichloromethan	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	2	J
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	1	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	2	J
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	6	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16849.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 5 Date Analyzed: 07/19/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	5.672	7	NJ
2. 108-87-2	Cyclohexane, methyl-	8.522	8	NJ
3.	UNKNOWN HYDROCARBON	9.866	5	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ2RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16869.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 5 Date Analyzed: 07/20/95

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	11	B
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	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	0.7	J
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	0.3	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	6	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	1	J
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	4	J

u KM 8/3/9

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ2RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16869.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 5 Date Analyzed: 07/20/95

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.

EAPJ3

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16831.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 23 Date Analyzed: 07/18/95

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
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	38	
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.

EAPJ3

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16831.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 23 Date Analyzed: 07/18/95

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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FORM I VOA-TIC OLM03.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ4

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16832.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 42 Date Analyzed: 07/18/95

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	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	17	U
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (Total)	17	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ4

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16832.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 42 Date Analyzed: 07/18/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	12.979	14	J
2.	SILANE	15.166	47	J
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4.				
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FORM I VOA-TIC OLM03.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ4RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.10RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16850.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 42 Date Analyzed: 07/19/95

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	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	20	
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (Total)	17	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ4RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.10RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16850.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 42 Date Analyzed: 07/19/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	5.729	15	NJ
2.	SILANE	14.908	16	J
3.				
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FORM I VOA-TIC OLM03

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ5

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16833.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 40 Date Analyzed: 07/18/95

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	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	17	U
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (Total)	17	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ5

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16833.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 40 Date Analyzed: 07/18/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	12.996	22	J
2.	UNKNOWN	15.154	10	J
3.				
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FORM I VOA-TIC OLM03.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ5RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.11RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16851.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 40 Date Analyzed: 07/19/95

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	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	29	
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (Total)	17	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ5RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.11RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16851.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 40 Date Analyzed: 07/19/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	5.786	24	NJ
2.	SILANE	14.955	35	J
3.				
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FORM I VOA-TIC OLM03

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.12

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16834.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 22 Date Analyzed: 07/18/95

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
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	8	J
67-64-1	Acetone	56	
75-15-0	Carbon Disulfide	10	J
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	2	J
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	5	J
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	11	J
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (Total)	4	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.12

Sample wt/vol: 5.0 mL) G Lab File ID: L16834.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 22 Date Analyzed: 07/18/95

GC Column:DB-624 ID: 0. (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
1.					
2.					
3.					
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FORM I VOA-TIC OLM03.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ6RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.12RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16852.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 22 Date Analyzed: 07/19/95

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
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	26	
67-64-1	Acetone	74	B
75-15-0	Carbon Disulfide	10	J
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	9	J
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (Total)	4	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ6RE

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.12RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16852.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: not dec. 22 Date Analyzed: 07/19/95

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	110-54-3	Hexane	5.816	10	NJ
2.		UNKNOWN HYDROCARBON	13.559	8	J
3.		UNKNOWN HYDROCARBON	13.837	7	J
4.		UNKNOWN HYDROCARBON	14.116	10	J
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2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

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	63	71	82	74	62	90	62	58	0
02	EAPH5	70	85	76	75	70	75	71	68	0
03	EAPH5MS	75	92	81	69	73	83	68	72	0
04	EAPH5MSD	73	89	81	69	72	80	68	73	0
05	EAPH6	53	64	55	37	40	29	43	57	0
06	EAPH7	50	65	31	38	50	35	47	55	0
07	EAPH8	72	92	68	79	74	80	74	68	0
08	EAPH9	64	88	96	82	65	98	73	65	0
09	EAPJ0	71	92	75	73	65	81	72	70	0
10	EAPJ1	72	97	103	88	76	98	84	79	0
11	EAPJ2	67	95	103	82	69	88	83	78	0
12	EAPJ3	69	89	74	74	71	87	80	78	0
13	EAPJ4	71	93	65	80	74	88	83	80	0
14	EAPJ5	68	90	57	78	75	84	78	75	0
15	EAPJ6	65	92	83	76	68	87	73	67	0
16	EAPH8DL	77	83	77	70	67	73	68	65	0
17	EAPJ2DL	96	91	77	92	91	69	88	83	0
18	SBLK2	58	61	100	59	54	73	52	54	0
19	EAPJ1DL	82	80	71	76	81	63	74	72	0
20	EAPH9DL	67	71	76	64	58	73	58	54	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

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix Spike - EPA Sample No.: EAPH5 Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMIT REC.
Phenol	2700	0	2100	78	26- 9
2-Chlorophenol	2700	0	1600	59	25-1(
1,4-Dichlorobenzene	1800	0	1300	72	28-1(
N-Nitroso-di-n-prop.(1)	1800	0	1300	72	41-1:
1,2,4-Trichlorobenzene	1800	0	1300	72	38-1(
4-Chloro-3-Methylphenol	2700	0	1900	70	26-1(
Acenaphthene	1800	0	1700	94	31-1:
4-Nitrophenol	2700	0	2200	81	11-1:
2,4-Dinitrotoluene	1800	0	1500	83	28- 8
Pentachlorophenol	2700	0	1800	67	17-1(
Pyrene	1800	65	1600	85	35-14

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	2700	2200	81	4	35	2 9
2-Chlorophenol	2700	1600	59	0	50	25-1(
1,4-Dichlorobenzene	1800	1300	72	0	27	28-1(
N-Nitroso-di-n-prop.(1)	1800	1400	78	8	38	41-1:
1,2,4-Trichlorobenzene	1800	1300	72	0	23	38-1(
4-Chloro-3-Methylphenol	2700	1800	67	4	33	26-1(
Acenaphthene	1800	1600	89	5	19	31-1:
4-Nitrophenol	2700	1500	56	36	50	11-1:
2,4-Dinitrotoluene	1800	1400	78	6	47	28- 8
Pentachlorophenol	2700	1700	63	6	47	17-1(
Pyrene	1800	1700	91	7	36	35-14

(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-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Lab File ID: T10689.D Lab Sample ID: BL0714SC

Instrument ID: T Date Extracted: 07/14/95

Matrix: (soil/water) SOIL Date Analyzed: 07/18/95

Level:(low/med) LOW Time Analyzed: 0823

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EAPH5	22896.01	T10692.D	07/18/95
02	EAPH5MS	22896.01MS	T10693.D	07/18/95
03	EAPH5MSD	22896.01MSD	T10694.D	07/18/95
04	EAPH6	22896.02	T10695.D	07/18/95
05	EAPH7	22896.03	T10696.D	07/18/95
06	EAPH8	22896.04	T10697.D	07/18/95
07	EAPH9	22896.05	T10698.D	07/18/95
08	EAPJ0	22896.06	T10699.D	07/18/95
09	EAPJ1	22896.07	T10700.D	07/18/95
10	EAPJ2	22896.08	T10701.D	07/18/95
11	EAPJ3	22896.09	T10702.D	07/18/95
12	EAPJ4	22896.10	T10703.D	07/18/95
13	EAPJ5	22896.11	T10704.D	07/18/95
14	EAPJ6	22896.12	T10705.D	07/18/95
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COMMENTS:

page 01 of 01

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Lab File ID: V9337.D Lab Sample ID: BL0714SC

Instrument ID: V Date Extracted: 07/14/95

Matrix: (soil/water) SOIL Date Analyzed: 07/20/95

Level:(low/med) LOW Time Analyzed: 1200

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EAPH8DL	22896.04DL	V9333.D	07/20/95
02	EAPJ2DL	22896.08DL	V9336.D	07/20/95
03	EAPJ1DL	22896.07DL	V9338.D	07/20/95
04	EAPH9DL	22896.05DL	V9343.D	07/21/95
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COMMENTS:

page 01 of 01

FORM IV SV OLM0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: BL0714SC

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10689.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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
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	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	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	830	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: BL0714SC

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10689.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	830	U
100-02-7	4-Nitrophenol	830	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	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	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	830	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	19	J
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	18	J
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	52	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.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: BL0714SC

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10689.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

Number TICs found: 12

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-met	2.687	8300	NJA
2.	111-46-6	Ethanol, 2,2'-oxybis-	3.728	420	NJ
3.		UNKNOWN ORGANIC ACID	7.860	130	J
4.		UNKNOWN AMIDE	10.887	160	J
5.		UNKNOWN AMIDE	12.304	260	J
6.		UNKNOWN AMIDE	12.443	450	J
7.		UNKNOWN AMIDE	13.763	5700	J
8.		UNKNOWN AMIDE	13.892	250	J
9.	78-51-3	Ethanol, 2-butoxy-, phosphat	14.075	640	NJ
10.		UNKNOWN AMIDE	15.084	140	J
11.		UNKNOWN AMIDE	16.350	3300	J
12.		UNKNOWN	16.597	130	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: BL0714SC

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9337.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

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
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	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	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	830	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: BL0714SC

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9337.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

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	830	U
100-02-7	4-Nitrophenol	830	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	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	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	830	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	52	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.

SBLK2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: BL0714SC

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9337.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

Number TICs found: 24

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-met	3.640	5900	NJA
2.	111-46-6	Ethanol, 2,2'-oxybis-	4.544	160	NJ
3.		Benzenamine, -ethyl-	5.663	71	J
4.		UNKNOWN ORGANIC ACID	9.430	130	J
5.		UNKNOWN AMIDE	12.583	200	J
6.		UNKNOWN AMIDE	14.047	340	J
7.		UNKNOWN AMIDE	14.176	560	J
8.		UNKNOWN AMIDE	14.789	71	J
9.		UNKNOWN AMIDE	15.511	6600	J
10.		UNKNOWN AMIDE	15.650	320	J
11.	78-51-3	Ethanol, 2-butoxy-, phosphat	15.801	650	NJ
12.		UNKNOWN AMIDE	16.867	300	J
13.		UNKNOWN	17.179	84	J
14.	191-07-1	Coronene	17.771	220	NJ
15.		Dibenzpyrene	18.040	120	J
16.		UNKNOWN AMIDE	18.137	4800	J
17.		UNKNOWN	18.384	130	J
18.		UNKNOWN	18.492	70	J
19.		UNKNOWN	18.965	70	J
20.		UNKNOWN	19.600	92	J
21.		UNKNOWN	19.880	150	J
22.		Unknown	19.934	68	J
23.		UNKNOWN	21.484	72	J
24.		UNKNOWN	23.475	83	J
25.					
26.					
27.					
28.					
29.					
30.					

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH5

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10692.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 9 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-Methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	910	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	910	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	910	U
83-32-9	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH5

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10692.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 9 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	910	U
100-02-7	4-Nitrophenol	910	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	910	U
534-52-1	4,6-Dinitro-2-methylphenol	910	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	910	U
85-01-8	Phenanthrene	34	J
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	75	J
129-00-0	Pyrene	65	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	37	J
218-01-9	Chrysene	54	J
117-81-7	bis(2-Ethylhexyl)phthalate	300 ~~44~~	JB
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	39	J
207-08-9	Benzo(k)fluoranthene	46	J
50-32-8	Benzo(a)pyrene	46	J
193-39-5	Indeno(1,2,3-cd)pyrene	43	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	43	J

u KH 8/13

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 OLM03.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH5

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10692.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 9 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

Number TICs found: 23

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	123-42-2	2-Pentanone, 4-hydroxy-4-met	2.677	9500	NJAB	u
2.		UNKNOWN ORGANIC ACID	7.861	76	JB	u
3.		UNKNOWN ORGANIC ACID	10.791	100	J	
4.		UNKNOWN AMIDE	12.305	120	JB	u
5.		UNKNOWN	12.358	110	J	
6.		UNKNOWN AMIDE	12.444	240	JB	u
7.		1,1'-Biphenyl, -hexachloro	13.024	82	J	
8.		1,1'-Biphenyl, -hexachloro-	13.389	84	J	
9.		UNKNOWN AMIDE	13.732	3600	JB	u
10.		UNKNOWN AMIDE	13.904	240	JB	u
11.		1,1'-Biphenyl, -heptachl	14.054	140	J	
12.		1,1'-Biphenyl,-heptachlo	14.795	83	J	
13.		UNKNOWN AMIDE	16.340	1100	JB	u
14.		UNKNOWN	16.598	270	JB	u
15.		UNKNOWN	19.270	160	J	
16.		UNKNOWN	19.431	150	J	
17.	83-47-6	.gamma.-Sitosterol	19.550	690	NJ	
18.		UNKNOWN	19.625	450	J	
19.		UNKNOWN	19.732	240	J	
20.		UNKNOWN	19.796	210	J	
21.		UNKNOWN	19.861	130	J	
22.		UNKNOWN	20.408	660	J	
23.		Urs-en-oic acid, oxo-, methy	20.773	450	J	
24.						
25.						
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10695.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 46 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	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	610	U
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
111-91-1	bis(2-Chloroethoxy)methane	610	U
120-83-2	2,4-Dichlorophenol	610	U
120-82-1	1,2,4-Trichlorobenzene	610	U
91-20-3	Naphthalene	34	J
106-47-8	4-Chloroaniline	610	U
87-68-3	Hexachlorobutadiene	610	U
59-50-7	4-Chloro-3-Methylphenol	610	U
91-57-6	2-Methylnaphthalene	49	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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10695.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 46 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	1500	U
100-02-7	4-Nitrophenol	1500	U
132-64-9	Dibenzofuran	610	U
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
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	38	J
120-12-7	Anthracene	610	U
86-74-8	Carbazole	610	U
84-74-2	Di-n-butylphthalate	610	U
206-44-0	Fluoranthene	610	U
129-00-0	Pyrene	610	U
85-68-7	Butylbenzylphthalate	610 ~~35~~	JB
91-94-1	3,3'-Dichlorobenzidine	610	U
56-55-3	Benzo(a)anthracene	610	U
218-01-9	Chrysene	610	U
117-81-7	bis(2-Ethylhexyl)phthalate	610 ~~110~~	JB
117-84-0	Di-n-octylphthalate	610	U
205-99-2	Benzo(b)fluoranthene	610	U
207-08-9	Benzo(k)fluoranthene	610	U
50-32-8	Benzo(a)pyrene	610	U
193-39-5	Indeno(1,2,3-cd)pyrene	610	U
53-70-3	Dibenz(a,h)anthracene	610	U
191-24-2	Benzo(g,h,i)perylene	610	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10695.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 46 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 12

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	1.262	150	J
2. 141-79-7	3-Penten-2-one, 4-methyl-	2.228	220	NJA
3. 123-42-2	2-Pentanone, 4-hydroxy-4-met	2.690	11000	NJAB
4.	UNKNOWN ORGANIC ACID	7.853	140	JB
5.	UNKNOWN AMIDE	10.912	140	JB
6.	UNKNOWN AMIDE	12.318	390	JB
7.	UNKNOWN AMIDE	12.457	410	JB
8.	UNKNOWN AMIDE	13.734	5900	JB
9.	UNKNOWN AMIDE	16.364	2000	JB
10.	UNKNOWN	16.589	1000	JB
11.	UNKNOWN	18.167	150	J
12.	UNKNOWN	18.435	220	J
13.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH7

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10696.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 52 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	690	U
111-44-4	bis(2-Chloroethyl)Ether	690	U
95-57-8	2-Chlorophenol	690	U
541-73-1	1,3-Dichlorobenzene	690	U
106-46-7	1,4-Dichlorobenzene	690	U
95-50-1	1,2-Dichlorobenzene	690	U
95-48-7	2-Methylphenol	690	U
108-60-1	2,2'-oxybis(1-Chloropropane)	690	U
106-44-5	4-Methylphenol	690	U
621-64-7	N-Nitroso-di-n-propylamine	690	U
67-72-1	Hexachloroethane	690	U
98-95-3	Nitrobenzene	690	U
78-59-1	Isophorone	690	U
88-75-5	2-Nitrophenol	690	U
105-67-9	2,4-Dimethylphenol	690	U
111-91-1	bis(2-Chloroethoxy)methane	690	U
120-83-2	2,4-Dichlorophenol	690	U
120-82-1	1,2,4-Trichlorobenzene	690	U
91-20-3	Naphthalene	690	U
106-47-8	4-Chloroaniline	690	U
87-68-3	Hexachlorobutadiene	690	U
59-50-7	4-Chloro-3-Methylphenol	690	U
91-57-6	2-Methylnaphthalene	690	U
77-47-4	Hexachlorocyclopentadiene	690	U
88-06-2	2,4,6-Trichlorophenol	690	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	690	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	690	U
208-96-8	Acenaphthylene	690	U
606-20-2	2,6-Dinitrotoluene	690	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	690	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH7

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10696.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 52 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	690	U
121-14-2	2,4-Dinitrotoluene	690	U
84-66-2	Diethylphthalate	690	U
7005-72-3	4-Chlorophenyl-phenylether	690	U
86-73-7	Fluorene	690	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	690	U
101-55-3	4-Bromophenyl-phenylether	690	U
118-74-1	Hexachlorobenzene	690	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	690	U
120-12-7	Anthracene	690	U
86-74-8	Carbazole	690	U
84-74-2	Di-n-butylphthalate	690	U
206-44-0	Fluoranthene	690	U
129-00-0	Pyrene	690	U
85-68-7	Butylbenzylphthalate	690	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	690	U
218-01-9	Chrysene	690	U
117-81-7	bis(2-Ethylhexyl)phthalate	690 ~~150~~	JB
117-84-0	Di-n-octylphthalate	690	U
205-99-2	Benzo(b)fluoranthene	690	U
207-08-9	Benzo(k)fluoranthene	690	U
50-32-8	Benzo(a)pyrene	690	U
193-39-5	Indeno(1,2,3-cd)pyrene	690	U
53-70-3	Dibenz(a,h)anthracene	690	U
191-24-2	Benzo(g,h,i)perylene	690	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH7

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10696.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 52 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.5

Number TICs found: 9

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.		UNKNOWN	1.252	150	J	
2.		UNKNOWN	1.349	140	J	
3.	141-79-7	3-Penten-2-one, 4-methyl-	2.218	250	NJA	
4.	123-42-2	2-Pentanone, 4-hydroxy-4-met	2.691	12000	NJAB	u
5.	100-52-7	Benzaldehyde	3.624	160	NJ	
6.		UNKNOWN AMIDE	13.746	1100	JB	u
7.		UNKNOWN AMIDE	16.375	890	JB	u
8.		UNKNOWN	16.590	690	JB	u
9.		UNKNOWN	18.436	150	J	
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH8

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10697.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 12 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

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	62	J
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	83	J
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	940	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	940	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	940	U
83-32-9	Acenaphthene	130	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH8

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10697.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 12 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	940	U
100-02-7	4-Nitrophenol	940	U
132-64-9	Dibenzofuran	61	J
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	69	J
100-01-6	4-Nitroaniline	940	U
534-52-1	4,6-Dinitro-2-methylphenol	940	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	940	U
85-01-8	Phenanthrene	1400	
120-12-7	Anthracene	260	J
86-74-8	Carbazole	240	J
84-74-2	Di-n-butylphthalate	38 ~~251~~	JB u UM 8/3/
206-44-0	Fluoranthene	3700	E
129-00-0	Pyrene	2600	
85-68-7	Butylbenzylphthalate	38 ~~031~~	JB u UM 8/3/
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	1700	
218-01-9	Chrysene	2300	
117-81-7	bis(2-Ethylhexyl)phthalate	38 ~~120~~	JB u UM 8/3/
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo(b)fluoranthene	2700	
207-08-9	Benzo(k)fluoranthene	1900	
50-32-8	Benzo(a)pyrene	2200	
193-39-5	Indeno(1,2,3-cd)pyrene	2700	
53-70-3	Dibenz(a,h)anthracene	800	
191-24-2	Benzo(g,h,i)perylene	2700	

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH8

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10697.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 12 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

Number TICs found: 34

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	2.679	10000	NJAB
2. 90-12-0	Naphthalene, 1-methyl-	5.792	150	NJ
3. 84-65-1	9,10-Anthracenedione	11.019	340	NJ
4.	1,1'-Biphenyl, -pentachloro-	11.760	180	J
5.	1,1'-Biphenyl,-hexachloro	12.629	180	J
6.	11H-Benzo[]fluorene	12.822	230	J
7.	1,1'-Biphenyl, -hexachloro	12.865	380	J
8.	1,1'-Biphenyl, -hexachloro-	12.930	230	J
9.	1,1'-Biphenyl, -hexachloro-	13.048	1100	J
10.	1,1'-Biphenyl, -hexachloro	13.413	2900	J
11.	1,1'-Biphenyl, -hexachloro-	13.456	720	J
12.	1,1'-Biphenyl, -hexachloro-	13.606	1600	J
13.	UNKNOWN AMIDE	13.745	1900	JB
14.	1,1'-Biphenyl,-hexachloro	13.831	3200	J
15.	1,1'-Biphenyl, -heptachl	14.078	2900	J
16.	1,1'-Biphenyl, -heptachl	14.142	880	J
17. 82-05-3	7H-Benz[de]anthracen-7-one	14.239	480	NJ
18.	1,1'-Biphenyl,-heptachl	14.421	1700	J
19.	Benzo[]phenanthrene	14.701	520	J
20.	1,1'-Biphenyl, -heptachl	14.829	3000	J
21.	1,1'-Biphenyl, -Heptachl	15.248	1500	J
22.	1,1'-Biphenyl, -octac	15.366	610	J
23.	1,1'-Biphenyl,-octac	15.441	680	J
24.	1,1'-Biphenyl, -octach	16.150	800	J
25.	UNKNOWN AMIDE	16.364	1000	JB
26.	UNKNOWN PAH	16.643	880	J
27.	UNKNOWN	16.847	500	J
28. 192-97-2	Benzo[e]pyrene	16.933	2100	NJ
29. 198-55-0	Perylene	17.148	800	NJ
30.	UNKNOWN	18.457	780	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH8

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10697.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 12 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

Number TICs found: 34

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN PAH	18.607	690	J
2.	UNKNOWN PAH	18.994	590	J
3.	-Dibenzpyrene	21.258	1100	J
4.	Dibenzpyrene	21.409	730	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH8DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9333.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 12 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	750	U
111-44-4	bis(2-Chloroethyl)Ether	750	U
95-57-8	2-Chlorophenol	750	U
541-73-1	1,3-Dichlorobenzene	750	U
106-46-7	1,4-Dichlorobenzene	750	U
95-50-1	1,2-Dichlorobenzene	750	U
95-48-7	2-Methylphenol	750	U
108-60-1	2,2'-oxybis(1-Chloropropane)	750	U
106-44-5	4-Methylphenol	750	U
621-64-7	N-Nitroso-di-n-propylamine	750	U
67-72-1	Hexachloroethane	750	U
98-95-3	Nitrobenzene	750	U
78-59-1	Isophorone	750	U
88-75-5	2-Nitrophenol	750	U
105-67-9	2,4-Dimethylphenol	750	U
111-91-1	bis(2-Chloroethoxy)methane	750	U
120-83-2	2,4-Dichlorophenol	750	U
120-82-1	1,2,4-Trichlorobenzene	750	U
91-20-3	Naphthalene	46	JD
106-47-8	4-Chloroaniline	750	U
87-68-3	Hexachlorobutadiene	750	U
59-50-7	4-Chloro-3-Methylphenol	750	U
91-57-6	2-Methylnaphthalene	58	JD
77-47-4	Hexachlorocyclopentadiene	750	U
88-06-2	2,4,6-Trichlorophenol	750	U
95-95-4	2,4,5-Trichlorophenol	1900	U
91-58-7	2-Chloronaphthalene	750	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethylphthalate	750	U
208-96-8	Acenaphthylene	750	U
606-20-2	2,6-Dinitrotoluene	750	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	89	JD

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH8DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9333.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 12 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	47	JD
121-14-2	2,4-Dinitrotoluene	750	U
84-66-2	Diethylphthalate	750	U
7005-72-3	4-Chlorophenyl-phenylether	750	U
86-73-7	Fluorene	53	JD
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine (1)	750	U
101-55-3	4-Bromophenyl-phenylether	750	U
118-74-1	Hexachlorobenzene	750	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	1200	D
120-12-7	Anthracene	130	JD
86-74-8	Carbazole	160	JD
84-74-2	Di-n-butylphthalate	750	U
206-44-0	Fluoranthene	3200	D
129-00-0	Pyrene	2800	D
85-68-7	Butylbenzylphthalate	750	U
91-94-1	3,3'-Dichlorobenzidine	750	U
56-55-3	Benzo(a)anthracene	1400	D
218-01-9	Chrysene	2100	D
117-81-7	bis(2-Ethylhexyl)phthalate	750 ~~120~~	JBD
117-84-0	Di-n-octylphthalate	750	U
205-99-2	Benzo(b)fluoranthene	2900	D
207-08-9	Benzo(k)fluoranthene	1700	D
50-32-8	Benzo(a)pyrene	1900	D
193-39-5	Indeno(1,2,3-cd)pyrene	2200	D
53-70-3	Dibenz(a,h)anthracene	410	JD
191-24-2	Benzo(g,h,i)perylene	2200	D

KM 8/4/

(1) - Cannot be separated from Diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH8DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9333.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 12 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.7

Number TICs found: 33

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.628	9400	NJABD
2. 111-46-6	Ethanol, 2,2'-oxybis-	4.532	480	NJBD
3. 95-16-9	Benzothiazole	6.426	170	NJD
4.	UNKNOWN ORGANIC ACID	9.418	180	JBD
5. 1210-12-4	9-Anthracenecarbonitrile	14.337	350	NJD
6.	1,1'-Biphenyl, -hexachloro	14.476	430	J
7.	1,1'-Biphenyl, -hexachloro-	14.692	1200	JD
8.	1,1'-Biphenyl, -hexachloro	14.767	400	JD
9.	1,1'-Biphenyl, -hexachloro	14.885	2100	JD
10.	1,1'-Biphenyl, hexachloro-	15.154	360	JD
11.	1,1'-Biphenyl, -hexachloro	15.251	2200	JD
12.	1,1'-Biphenyl, -hexachloro	15.316	500	JD
13.	1,1'-Biphenyl, -hexachloro	15.445	700	JD
14.	UNKNOWN	15.488	1500	JD
15.	1,1'-Biphenyl, -heptachl	15.596	380	JD
16.	1,1'-Biphenyl, -hexachloro-	15.682	1900	JD
17. 82-05-3	7H-Benz[de]anthracen-7-one	15.725	400	NJD
18.	1,1'-Biphenyl, -heptachl	15.800	590	JD
19.	1,1'-Biphenyl, -heptachl	15.929	1600	JD
20.	1,1'-Biphenyl, -heptachlo	16.005	860	JD
21.	1,1'-Biphenyl, -heptachl	16.285	1200	JD
22.	1,1'-Biphenyl, -heptachl	16.683	2400	JD
23.	1,1'-Biphenyl, -heptachl	17.135	1100	JD
24.	1,1'-Biphenyl, -octac	17.242	620	JD
25.	1,1'-Biphenyl, -octac	17.328	660	JD
26.	1,1'-Biphenyl, -octac	18.039	710	JD
27.	UNKNOWN AMIDE	18.125	1200	JBD
28.	UNKNOWN PAH	18.609	650	JD
29. 192-97-2	Benzo[e]pyrene	18.911	2300	NJD
30. 198-55-0	Perylene	19.147	740	NJD

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH8DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9333.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 12 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.7

Number TICs found: 33

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	20.934	830	JD
2.	UNKNOWN PAH	21.192	1000	JD
3. 215-58-7	Benzo[b]triphenylene	21.849	620	NJD
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH9

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10698.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 20 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	410	U
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	55	J
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	350	J
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U
91-57-6	2-Methylnaphthalene	890	
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	410	U
208-96-8	Acenaphthylene	53	J
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	290	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH9

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10698.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 20 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	350	J	
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	240	J	
100-01-6	4-Nitroaniline	1000	U	
534-52-1	4,6-Dinitro-2-methylphenol	1000	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	1000	U	
85-01-8	Phenanthrene	4000	E	
120-12-7	Anthracene	630		
86-74-8	Carbazole	560		
84-74-2	Di-n-butylphthalate	120	JB	
206-44-0	Fluoranthene	5400	E	
129-00-0	Pyrene	8300	E	
85-68-7	Butylbenzylphthalate	410 ~~160~~	JB	U K 81
91-94-1	3,3'-Dichlorobenzidine	410	U	
56-55-3	Benzo(a)anthracene	4000	E	
218-01-9	Chrysene	5200	E	
117-81-7	bis(2-Ethylhexyl)phthalate	410 ~~360~~	JB	U K 81
117-84-0	Di-n-octylphthalate	410	U	
205-99-2	Benzo(b)fluoranthene	8200	E	
207-08-9	Benzo(k)fluoranthene	410	U	
50-32-8	Benzo(a)pyrene	4700	E	
193-39-5	Indeno(1,2,3-cd)pyrene	5000	E	
53-70-3	Dibenz(a,h)anthracene	1900		
191-24-2	Benzo(g,h,i)perylene	4900	E	

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH9

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10698.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 20 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

Number TICs found: 22

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	2.659	9700	NJAB
2. 90-12-0	Naphthalene, 1-methyl-	5.803	610	NJ
3.	Naphthalene, -ethyl-	6.372	270	J
4.	Naphthalene, -dimethyl-	6.458	360	J
5.	Naphthalene, -dimethyl-	6.576	920	J
6.	Naphthalene, dimethyl-	6.844	210	J
7.	UNKNOWN	7.274	420	J
8.	Naphthalene, -trimethyl-	7.564	560	J
9.	Naphthalene, -trimethyl-	7.703	420	J
10.	Naphthalene, -trimethyl-	7.907	260	J
11.	Dibenzofuran, -methyl-	8.175	290	J
12.	UNKNOWN	8.293	570	J
13.	UNKNOWN	8.390	580	J
14.	UNKNOWN	9.109	720	J
15.	UNKNOWN	9.871	520	J
16.	Phenanthrene,-methyl-	10.429	380	J
17.	Phenanthrene, -methyl-	10.644	330	J
18.	Phenanthrene,-dimethyl-	11.535	310	J
19. 10544-50-0	Sulfur, mol. (S8)	11.621	1800	NJ
20.	Pyrene, -methyl-	12.855	360	J
21.	UNKNOWN	16.644	300	JB
22.	UNKNOWN	19.552	300	J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH9DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9343.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 20 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/21/95

Injection Volume: 2.0(uL) Dilution Factor: 5.0

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	2100	U
111-44-4	bis(2-Chloroethyl)Ether	2100	U
95-57-8	2-Chlorophenol	2100	U
541-73-1	1,3-Dichlorobenzene	2100	U
106-46-7	1,4-Dichlorobenzene	2100	U
95-50-1	1,2-Dichlorobenzene	2100	U
95-48-7	2-Methylphenol	2100	U
108-60-1	2,2'-oxybis(1-Chloropropane)	2100	U
106-44-5	4-Methylphenol	2100	U
621-64-7	N-Nitroso-di-n-propylamine	2100	U
67-72-1	Hexachloroethane	2100	U
98-95-3	Nitrobenzene	2100	U
78-59-1	Isophorone	2100	U
88-75-5	2-Nitrophenol	2100	U
105-67-9	2,4-Dimethylphenol	2100	U
111-91-1	bis(2-Chloroethoxy)methane	2100	U
120-83-2	2,4-Dichlorophenol	2100	U
120-82-1	1,2,4-Trichlorobenzene	2100	U
91-20-3	Naphthalene	270	JD
106-47-8	4-Chloroaniline	2100	U
87-68-3	Hexachlorobutadiene	2100	U
59-50-7	4-Chloro-3-Methylphenol	2100	U
91-57-6	2-Methylnaphthalene	640	JD
77-47-4	Hexachlorocyclopentadiene	2100	U
88-06-2	2,4,6-Trichlorophenol	2100	U
95-95-4	2,4,5-Trichlorophenol	5200	U
91-58-7	2-Chloronaphthalene	2100	U
88-74-4	2-Nitroaniline	5200	U
131-11-3	Dimethylphthalate	2100	U
208-96-8	Acenaphthylene	2100	U
606-20-2	2,6-Dinitrotoluene	2100	U
99-09-2	3-Nitroaniline	5200	U
83-32-9	Acenaphthene	220	JD

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH9DL

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9343.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 20 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/21/95

Injection Volume: 2.0(uL) Dilution Factor: 5.0

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	5200	U
100-02-7	4-Nitrophenol	5200	U
132-64-9	Dibenzofuran	260	JD
121-14-2	2,4-Dinitrotoluene	2100	U
84-66-2	Diethylphthalate	2100	U
7005-72-3	4-Chlorophenyl-phenylether	2100	U
86-73-7	Fluorene	190	JD
100-01-6	4-Nitroaniline	5200	U
534-52-1	4,6-Dinitro-2-methylphenol	5200	U
86-30-6	N-Nitrosodiphenylamine (1)	2100	U
101-55-3	4-Bromophenyl-phenylether	2100	U
118-74-1	Hexachlorobenzene	2100	U
87-86-5	Pentachlorophenol	5200	U
85-01-8	Phenanthrene	3300	D
120-12-7	Anthracene	410	JD
86-74-8	Carbazole	420	JD
84-74-2	Di-n-butylphthalate	130	JD
206-44-0	Fluoranthene	8500	D
129-00-0	Pyrene	6300	D
85-68-7	Butylbenzylphthalate	140	JD
91-94-1	3,3'-Dichlorobenzidine	2100	U
56-55-3	Benzo(a)anthracene	3200	D
218-01-9	Chrysene	4500	D
117-81-7	bis(2-Ethylhexyl)phthalate	2100 ~~270~~	JBD U KM 8/4
117-84-0	Di-n-octylphthalate	2100	U
205-99-2	Benzo(b)fluoranthene	5000	D
207-08-9	Benzo(k)fluoranthene	4800	D
50-32-8	Benzo(a)pyrene	4200	D
193-39-5	Indeno(1,2,3-cd)pyrene	3900	D
53-70-3	Dibenz(a,h)anthracene	820	JD
191-24-2	Benzo(g,h,i)perylene	3800	D

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPH9DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9343.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 20 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/21/95

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.6

Number TICs found: 23

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-met	3.520	11000	NJAD
2.		Naphthalene, -methyl-	6.996	810	JD
3.		Naphthalene, -dimethyl-	7.750	620	JD
4.		Naphthalene, -dimethyl-	7.890	1000	JD
5.		Naphthalene, dimethyl-	7.922	720	JD
6.		Naphthalene, -trimethyl-	8.998	770	JD
7.		Naphthalene, -trimethyl-	9.149	620	JD
8.		9H-Fluoren-ol	9.795	710	JD
9.		Azulene, -ethyl-dimethyl-	10.656	1200	JD
10.		Phenanthrene, -methyl-	12.270	1000	JD
11.		Phenanthrene, -dimethyl-	13.163	1100	JD
12.		Pyrene, -methyl-	14.541	2000	JD
13.	82-05-3	7H-Benz[de]anthracen-7-one	15.983	910	NJD
14.		Chrysene, -methyl-	17.145	1100	JD
15.	192-97-2	Benzo[e]pyrene	18.738	5700	NJD
16.	198-55-0	Perylene	18.986	1600	NJD
17.		UNKNOWN	19.556	4700	JBD
18.		UNKNOWN	20.708	6600	JD
19.		UNKNOWN	21.601	4000	JD
20.		UNKNOWN	21.720	2300	JD
21.		UNKNOWN	22.398	2200	JD
22.		UNKNOWN	22.591	2300	JD
23.		UNKNOWN	23.506	2000	JBD
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ0

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10699.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 13 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

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	36	J
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	62	J
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	950	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	950	U
83-32-9	Acenaphthene	35	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ0

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10699.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 13 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	950	U
100-02-7	4-Nitrophenol	950	U
132-64-9	Dibenzofuran	25	J
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	30	J
100-01-6	4-Nitroaniline	950	U
534-52-1	4,6-Dinitro-2-methylphenol	950	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	950	U
85-01-8	Phenanthrene	470	
120-12-7	Anthracene	98	J
86-74-8	Carbazole	57	J
84-74-2	Di-n-butylphthalate	380 ~~34~~	JB u K
206-44-0	Fluoranthene	930	
129-00-0	Pyrene	640	
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	370	J
218-01-9	Chrysene	500	
117-81-7	bis(2-Ethylhexyl)phthalate	380 ~~56~~	JB u K
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo(b)fluoranthene	400	
207-08-9	Benzo(k)fluoranthene	470	
50-32-8	Benzo(a)pyrene	470	
193-39-5	Indeno(1,2,3-cd)pyrene	460	
53-70-3	Dibenz(a,h)anthracene	160	J
191-24-2	Benzo(g,h,i)perylene	430	

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ0

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10699.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 13 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

Number TICs found: 26

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	2.656	9500	NJAB
2.	UNKNOWN AMIDE	12.337	180	JB
3.	1,1'-Biphenyl,-hexachloro-	13.067	450	J
4.	1,1'-Biphenyl,-hexachloro-	13.432	200	J
5.	UNKNOWN AMIDE	13.776	1500	JB
6.	1,1'-Biphenyl, -hexachloro-	13.851	450	J
7.	1,1'-Biphenyl, -heptachl	14.087	260	J
8.	1,1'-Biphenyl, '-heptachl	14.173	160	J
9.	1,1'-Biphenyl, -Heptachl	14.441	190	J
10.	1,1'-Biphenyl,-heptachl	14.849	360	J
11.	UNKNOWN	15.579	170	J
12.	UNKNOWN AMIDE	16.395	660	JB
13.	UNKNOWN	16.652	730	JB
14.	UNKNOWN	17.307	580	J
15.	UNKNOWN	17.382	380	J
16.	UNKNOWN	17.511	400	J
17.	UNKNOWN	17.725	630	J
18.	UNKNOWN	17.962	390	J
19.	UNKNOWN	18.412	580	J
20.	UNKNOWN	18.874	500	J
21.	UNKNOWN	19.131	450	J
22.	UNKNOWN PAH	19.400	350	J
23.	Unknown	19.496	390	J
24.	UNKNOWN	19.668	850	J
25.	UNKNOWN	19.722	320	J
26.	-Dibenzpyrene	21.332	330	J
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ1

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10700.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 6 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	200	J
91-20-3	Naphthalene	330	J
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	220	J
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	880	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	880	U
131-11-3	Dimethylphthalate	34	J
208-96-8	Acenaphthylene	38	J
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	880	U
83-32-9	Acenaphthene	630	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ1

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10700.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 6 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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
51-28-5	2,4-Dinitrophenol	880	U
100-02-7	4-Nitrophenol	880	U
132-64-9	Dibenzofuran	340	J
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	440	
100-01-6	4-Nitroaniline	880	U
534-52-1	4,6-Dinitro-2-methylphenol	880	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	330	J
87-86-5	Pentachlorophenol	880	U
85-01-8	Phenanthrene	6000	E
120-12-7	Anthracene	1000	
86-74-8	Carbazole	1000	
84-74-2	Di-n-butylphthalate	350 ~~150~~	JB
206-44-0	Fluoranthene	7500	E
129-00-0	Pyrene	8900	E
85-68-7	Butylbenzylphthalate	10000	EB
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	4100	E
218-01-9	Chrysene	6200	E
117-81-7	bis(2-Ethylhexyl)phthalate	510	B
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	6700	E
207-08-9	Benzo(k)fluoranthene	3000	E
50-32-8	Benzo(a)pyrene	4800	E
193-39-5	Indeno(1,2,3-cd)pyrene	5500	E
53-70-3	Dibenz(a,h)anthracene	1700	
191-24-2	Benzo(g,h,i)perylene	5500	E

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ1

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10700.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 6 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 32

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	2.679	10000	NJAB
2.	Benzene, -tetrachloro-	6.285	620	J
3. 608-93-5	Benzene, pentachloro-	7.402	460	NJ
4. 84-65-1	9,10-Anthracenedione	11.105	530	NJ
5.	1,1'-Biphenyl, -pentachloro-	12.221	1200	J
6.	1,1'-Biphenyl, -hexachloro-	12.714	910	J
7.	1,1'-Biphenyl, -Pentachloro-	12.768	680	J
8.	1,1'-Biphenyl, -hexachloro	12.972	1400	J
9.	1,1'-Biphenyl, -hexachloro	13.026	790	J
10.	1,1'-Biphenyl, -hexachloro	13.133	1500	J
11.	1,1'-Biphenyl, -Pentachloro-	13.208	1000	J
12.	1,1'-Biphenyl, -hexachloro	13.423	510	J
13.	1,1'-Biphenyl, -hexachloro	13.519	1000	J
14.	1,1'-Biphenyl, -hexachloro-	13.584	1100	J
15.	1,1'-Biphenyl, -heptachl	13.723	670	J
16.	1,1'-Biphenyl, -hexachloro	13.745	600	J
17.	1,1'-Biphenyl, -hexachloro	13.938	1400	J
18.	1,1'-Biphenyl, -hexachloro-	13.992	1000	J
19.	1,1'-Biphenyl, -heptachl	14.056	470	J
20.	1,1'-Biphenyl, -heptachl	14.174	1100	J
21.	1,1'-Biphenyl, -heptachl	14.217	350	J
22.	1,1'-Biphenyl, -Heptachlo	14.260	830	J
23.	1,1'-Biphenyl, -hexachloro	14.346	370	J
24.	1,1'-Biphenyl, -Heptachl	14.400	340	J
25.	1,1'-Biphenyl, -heptachl	14.518	1200	J
26.	UNKNOWN PAH	14.700	1300	J
27.	1,1'-Biphenyl, -heptachl	14.925	1100	J
28.	1,1'-Biphenyl,-heptachl	14.979	700	J
29.	1,1'-Biphenyl, -Heptachl	15.355	1100	J
30.	1,1'-Biphenyl,-Octach	15.462	580	J

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ1

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10700.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 6 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 32

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	1,1'-Biphenyl, -octac	15.537	620	J
2.	1,1'-Biphenyl, -Octach	16.224	640	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ1DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9338.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 6 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 10.0

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	3500	U
111-44-4	bis(2-Chloroethyl)Ether	3500	U
95-57-8	2-Chlorophenol	3500	U
541-73-1	1,3-Dichlorobenzene	3500	U
106-46-7	1,4-Dichlorobenzene	3500	U
95-50-1	1,2-Dichlorobenzene	3500	U
95-48-7	2-Methylphenol	3500	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3500	U
106-44-5	4-Methylphenol	3500	U
621-64-7	N-Nitroso-di-n-propylamine	3500	U
67-72-1	Hexachloroethane	3500	U
98-95-3	Nitrobenzene	3500	U
78-59-1	Isophorone	3500	U
88-75-5	2-Nitrophenol	3500	U
105-67-9	2,4-Dimethylphenol	3500	U
111-91-1	bis(2-Chloroethoxy)methane	3500	U
120-83-2	2,4-Dichlorophenol	3500	U
120-82-1	1,2,4-Trichlorobenzene	3500	U
91-20-3	Naphthalene	270	JD
106-47-8	4-Chloroaniline	3500	U
87-68-3	Hexachlorobutadiene	3500	U
59-50-7	4-Chloro-3-Methylphenol	3500	U
91-57-6	2-Methylnaphthalene	3500	U
77-47-4	Hexachlorocyclopentadiene	3500	U
88-06-2	2,4,6-Trichlorophenol	3500	U
95-95-4	2,4,5-Trichlorophenol	8800	U
91-58-7	2-Chloronaphthalene	3500	U
88-74-4	2-Nitroaniline	8800	U
131-11-3	Dimethylphthalate	3500	U
208-96-8	Acenaphthylene	3500	U
606-20-2	2,6-Dinitrotoluene	3500	U
99-09-2	3-Nitroaniline	8800	U
83-32-9	Acenaphthene	510	JD

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ1DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9338.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 6 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	8800	U
100-02-7	4-Nitrophenol	8800	U
132-64-9	Dibenzofuran	280	JD
121-14-2	2,4-Dinitrotoluene	3500	U
84-66-2	Diethylphthalate	3500	U
7005-72-3	4-Chlorophenyl-phenylether	3500	U
86-73-7	Fluorene	410	JD
100-01-6	4-Nitroaniline	8800	U
534-52-1	4,6-Dinitro-2-methylphenol	8800	U
86-30-6	N-Nitrosodiphenylamine (1)	3500	U
101-55-3	4-Bromophenyl-phenylether	3500	U
118-74-1	Hexachlorobenzene	210	JD
87-86-5	Pentachlorophenol	8800	U
85-01-8	Phenanthrene	5900	D
120-12-7	Anthracene	880	JD
86-74-8	Carbazole	810	JD
84-74-2	Di-n-butylphthalate	3500	U
206-44-0	Fluoranthene	14000	D
129-00-0	Pyrene	7700	D
85-68-7	Butylbenzylphthalate	8100	D
91-94-1	3,3'-Dichlorobenzidine	3500	U
56-55-3	Benzo(a)anthracene	4100	D
218-01-9	Chrysene	5600	D
117-81-7	bis(2-Ethylhexyl)phthalate	3500	U
117-84-0	Di-n-octylphthalate	3500	U
205-99-2	Benzo(b)fluoranthene	5100	D
207-08-9	Benzo(k)fluoranthene	4800	D
50-32-8	Benzo(a)pyrene	4700	D
193-39-5	Indeno(1,2,3-cd)pyrene	5100	D
53-70-3	Dibenz(a,h)anthracene	800	JD
191-24-2	Benzo(g,h,i)perylene	4800	D

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ1DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9338.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 6 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 10.0

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

Number TICs found: 35

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.605	13000	NJABD
2.	1,1'-Biphenyl,-pentachloro-	13.947	7300	JD
3.	1,1'-Biphenyl, -Pentachloro-	14.378	850	JD
4.	1,1'-Biphenyl, -hexachloro-	14.496	4200	JD
5.	1,1'-Biphenyl, -pentachloro-	14.529	3400	JD
6.	1,1'-Biphenyl, -hexachloro	14.722	9200	JD
7.	1,1'-Biphenyl, -hexachloro	14.787	4400	JD
8.	1,1'-Biphenyl, -hexachloro	14.916	23000	JD
9.	1,1'-Biphenyl, -hexachloro-	15.077	1000	JD
10.	1,1'-Biphenyl, -hexachloro	15.174	3000	JD
11.	1,1'-Biphenyl,-hexachloro	15.282	24000	JD
12.	UNKNOWN	15.336	6100	JD
13.	1,1'-Biphenyl,-Hexachloro	15.476	6900	JD
14.	1,1'-Biphenyl, -heptachl	15.616	2100	JD
15.	1,1'-Biphenyl, -hexachloro	15.712	21000	JD
16. 82-05-3	7H-Benz[de]anthracen-7-one	15.745	2100	NJD
17.	1,1'-Biphenyl, -heptachl	15.820	2500	JD
18.	1,1'-Biphenyl, -heptachl	15.949	16000	JD
19.	1,1'-Biphenyl, -heptachl	16.025	6900	JD
20.	1,1'-Biphenyl, -hexachloro	16.121	1800	JD
21.	1,1'-Biphenyl,-heptachl	16.186	1800	JD
22.	1,1'-Biphenyl, -Heptachl	16.315	13000	JD
23.	1,1'-Biphenyl, -octac	16.552	1100	JD
24.	1,1'-Biphenyl, -heptachl	16.606	1700	JD
25.	1,1'-Biphenyl,-heptachl	16.724	26000	JD
26.	1,1'-Biphenyl,-octac	16.896	860	JD
27.	1,1'-Biphenyl, -heptachl	17.155	12000	JD
28.	1,1'-Biphenyl, -octac	17.273	5300	JD
29.	1,1'-Biphenyl, -octach	17.348	6000	JD
30.	1,1'-Biphenyl, -Octach	17.790	4600	JD

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ1DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9338.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 6 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 10.0

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

Number TICs found: 35

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		1,1'-Biphenyl,-octac	18.059	11000	JD
2.		UNKNOWN	18.145	2000	JD
3.	192-97-2	Benzo[e]pyrene	18.941	5100	NJD
4.	198-55-0	Perylene	19.189	2200	NJD
5.	191-26-4	Dibenzo[def,mno]chrysene	21.244	2600	NJD
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ2

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10701.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 5 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	160	J
91-20-3	Naphthalene	130	J
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	150	J
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	870	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	870	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	35	J
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	870	U
83-32-9	Acenaphthene	360	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10701.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 5 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	870	U
100-02-7	4-Nitrophenol	870	U
132-64-9	Dibenzofuran	170	J
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	230	J
100-01-6	4-Nitroaniline	870	U
534-52-1	4,6-Dinitro-2-methylphenol	870	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	340	J
87-86-5	Pentachlorophenol	870	U
85-01-8	Phenanthrene	4000	E
120-12-7	Anthracene	760	
86-74-8	Carbazole	720	
84-74-2	Di-n-butylphthalate	~~35078~~	JB
206-44-0	Fluoranthene	6000	E
129-00-0	Pyrene	5200	E
85-68-7	Butylbenzylphthalate	1400	B
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	3800	E
218-01-9	Chrysene	5500	E
117-81-7	bis(2-Ethylhexyl)phthalate	350	U
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	5700	E
207-08-9	Benzo(k)fluoranthene	2700	
50-32-8	Benzo(a)pyrene	4100	E
193-39-5	Indeno(1,2,3-cd)pyrene	5000	E
53-70-3	Dibenz(a,h)anthracene	1600	
191-24-2	Benzo(g,h,i)perylene	5000	E

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(1) - Cannot be separated from Diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10701.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 5 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 34

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	2.676	11000	NJAB
2.	Benzene, -tetrachloro-	6.282	660	J
3. 84-65-1	9,10-Anthracenedione	11.102	500	NJ
4.	1,1'-Biphenyl, -hexachloro-	12.722	1200	J
5.	1,1'-Biphenyl, -pentachloro-	12.776	890	J
6.	1,1'-Biphenyl, -hexachloro-	12.980	1600	J
7.	1,1'-Biphenyl, -hexachloro	13.034	880	J
8.	1,1'-Biphenyl, -Hexachloro-	13.141	1600	J
9.	1,1'-Biphenyl, -hexachloro	13.205	1200	J
10.	1,1'-Biphenyl, -hexachloro	13.302	380	J
11.	1,1'-Biphenyl, -hexachloro	13.420	930	J
12.	1,1'-Biphenyl,-hexachloro	13.527	1200	J
13.	1,1'-Biphenyl, -hexachloro-	13.592	1500	J
14.	1,1'-Biphenyl, -heptachl	13.721	830	J
15.	1,1'-Biphenyl, -hexachloro	13.753	890	J
16.	1,1'-Biphenyl,-heptachlo	13.839	910	J
17.	1,1'-Biphenyl, -hexachloro	13.946	1900	J
18.	1,1'-Biphenyl, -hexachloro-	13.989	1200	J
19.	1,1'-Biphenyl, -heptachl	14.064	650	J
20.	1,1'-Biphenyl, -Heptachl	14.182	1300	J
21.	1,1'-Biphenyl, -heptachl	14.214	580	J
22.	1,1'-Biphenyl, -heptachl	14.279	1000	J
23.	1,1'-Biphenyl, -hexachloro	14.343	490	J
24.	1,1'-Biphenyl, -Heptachl	14.407	430	J
25.	1,1'-Biphenyl, -Heptachl	14.515	1100	J
26.	1,1'-Biphenyl, -heptachlo	14.547	510	J
27.	1,1'-Biphenyl, -Heptachl	14.622	1700	J
28.	1,1'-Biphenyl, -heptachl	14.815	390	J
29.	1,1'-Biphenyl, -heptachl	14.933	1300	J
30.	1,1'-Biphenyl, -heptachl	14.987	830	J

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10701.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 5 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 34

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		1,1'-Biphenyl, -heptachl	15.363	1400	J
2.		1,1'-Biphenyl, -octac	15.470	840	J
3.		1,1'-Biphenyl, -octac	15.545	850	J
4.		1,1'-Biphenyl, -Octach	16.232	750	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ2DL

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9336.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 5 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1400	U
111-44-4	bis(2-Chloroethyl)Ether	1400	U
95-57-8	2-Chlorophenol	1400	U
541-73-1	1,3-Dichlorobenzene	1400	U
106-46-7	1,4-Dichlorobenzene	1400	U
95-50-1	1,2-Dichlorobenzene	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1400	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-n-propylamine	1400	U
67-72-1	Hexachloroethane	1400	U
98-95-3	Nitrobenzene	1400	U
78-59-1	Isophorone	1400	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	bis(2-Chloroethoxy)methane	1400	U
120-83-2	2,4-Dichlorophenol	1400	U
120-82-1	1,2,4-Trichlorobenzene	140	JD
91-20-3	Naphthalene	130	JD
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	1400	U
59-50-7	4-Chloro-3-Methylphenol	1400	U
91-57-6	2-Methylnaphthalene	140	JD
77-47-4	Hexachlorocyclopentadiene	1400	U
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	3500	U
91-58-7	2-Chloronaphthalene	1400	U
88-74-4	2-Nitroaniline	3500	U
131-11-3	Dimethylphthalate	1400	U
208-96-8	Acenaphthylene	1400	U
606-20-2	2,6-Dinitrotoluene	1400	U
99-09-2	3-Nitroaniline	3500	U
83-32-9	Acenaphthene	320	JD

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ2DL

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9336.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 5 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	3500	U
100-02-7	4-Nitrophenol	3500	U
132-64-9	Dibenzofuran	180	JD
121-14-2	2,4-Dinitrotoluene	1400	U
84-66-2	Diethylphthalate	1400	U
7005-72-3	4-Chlorophenyl-phenylether	1400	U
86-73-7	Fluorene	240	JD
100-01-6	4-Nitroaniline	3500	U
534-52-1	4,6-Dinitro-2-methylphenol	3500	U
86-30-6	N-Nitrosodiphenylamine (1)	1400	U
101-55-3	4-Bromophenyl-phenylether	1400	U
118-74-1	Hexachlorobenzene	230	JD
87-86-5	Pentachlorophenol	3500	U
85-01-8	Phenanthrene	3700	D
120-12-7	Anthracene	590	JD
86-74-8	Carbazole	650	JD
84-74-2	Di-n-butylphthalate	1400	U
206-44-0	Fluoranthene	11000	D
129-00-0	Pyrene	6600	D
85-68-7	Butylbenzylphthalate	1000	JD
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)anthracene	4200	D
218-01-9	Chrysene	5000	D
117-81-7	bis(2-Ethylhexyl)phthalate	1400	U
117-84-0	Di-n-octylphthalate	1400	U
205-99-2	Benzo(b)fluoranthene	6700	D
207-08-9	Benzo(k)fluoranthene	4000	D
50-32-8	Benzo(a)pyrene	4600	D
193-39-5	Indeno(1,2,3-cd)pyrene	4500	D
53-70-3	Dibenz(a,h)anthracene	1300	JD
191-24-2	Benzo(g,h,i)perylene	4400	D

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ2DL

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9336.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 5 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 33

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.616	13000	NJABD
2.	1,1'-Biphenyl, -pentachloro-	13.969	2400	JD
3.	1,1'-Biphenyl, -pentachloro-	14.389	420	JD
4.	1,1'-Biphenyl, -hexachloro-	14.507	1400	JD
5.	1,1'-Biphenyl,-pentachloro-	14.550	1100	JD
6.	1,1'-Biphenyl, -hexachloro-	14.733	3000	JD
7.	1,1'-Biphenyl,-hexachloro	14.798	1600	JD
8.	1,1'-Biphenyl, -hexachloro-	14.927	4000	JD
9.	1,1'-Biphenyl, -hexachloro	14.948	2600	JD
10.	1,1'-Biphenyl, -hexachloro-	15.088	410	JD
11.	1,1'-Biphenyl, -hexachloro	15.185	1200	JD
12.	1,1'-Biphenyl, -hexachloro-	15.304	4400	JD
13.	1,1'-Biphenyl, -hexachloro	15.325	2000	JD
14.	1,1'-Biphenyl,-Hexachloro-	15.357	2100	JD
15.	1,1'-Biphenyl,-hexachloro	15.497	3200	JD
16.	1,1'-Biphenyl, -Heptachlo	15.626	880	JD
17.	1,1'-Biphenyl, -hexachloro-	15.723	5900	JD
18.	1,1'-Biphenyl, -Heptachl	15.842	1100	JD
19.	1,1'-Biphenyl, -heptachl	15.971	4100	JD
20.	1,1'-Biphenyl, -heptachl	16.046	2300	JD
21.	1,1'-Biphenyl, -hexachloro-	16.143	670	JD
22.	1,1'-Biphenyl,-Heptachl	16.208	650	JD
23.	1,1'-Biphenyl, 2-heptachl	16.326	3600	JD
24.	1,1'-Biphenyl, -heptachl	16.423	2500	JD
25.	1,1'-Biphenyl,-heptachl	16.627	630	JD
26.	1,1'-Biphenyl, -heptachl	16.735	4400	JD
27.	1,1'-Biphenyl,-heptachl	16.767	2000	JD
28.	1,1'-Biphenyl, -Octach	16.918	340	JD
29.	1,1'-Biphenyl, -heptachl	17.187	3900	JD
30.	1,1'-Biphenyl,-octac	17.295	1800	JD

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ2DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9336.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 5 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/95

Injection Volume: 2.0(uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 33

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		1,1'-Biphenyl, -octac	17.370	2000	JD
2.		1,1'-Biphenyl, -octac	17.811	740	JD
3.		1,1'-Biphenyl, -octach	18.080	10000	JD
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ3

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10702.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 23 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	430	U
111-44-4	bis(2-Chloroethyl)Ether	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
95-50-1	1,2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-di-n-propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	bis(2-Chloroethoxy)methane	430	U
120-83-2	2,4-Dichlorophenol	430	U
120-82-1	1,2,4-Trichlorobenzene	430	U
91-20-3	Naphthalene	430	U
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-Methylphenol	430	U
91-57-6	2-Methylnaphthalene	34	J
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	430	U
208-96-8	Acenaphthylene	430	U
606-20-2	2,6-Dinitrotoluene	430	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	430	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ3

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10702.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 23 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

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	430	U
121-14-2	2,4-Dinitrotoluene	430	U
84-66-2	Diethylphthalate	430	U
7005-72-3	4-Chlorophenyl-phenylether	430	U
86-73-7	Fluorene	430	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	430	U
101-55-3	4-Bromophenyl-phenylether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	180	J
120-12-7	Anthracene	38	J
86-74-8	Carbazole	430	U
84-74-2	Di-n-butylphthalate	430	U
206-44-0	Fluoranthene	360	J
129-00-0	Pyrene	260	J
85-68-7	Butylbenzylphthalate	430 ~~30~~	JB u K
91-94-1	3,3'-Dichlorobenzidine	430	U
56-55-3	Benzo(a)anthracene	160	J
218-01-9	Chrysene	180	J
117-81-7	bis(2-Ethylhexyl)phthalate	430 ~~84~~	JB u K
117-84-0	Di-n-octylphthalate	430	U
205-99-2	Benzo(b)fluoranthene	140	J
207-08-9	Benzo(k)fluoranthene	170	J
50-32-8	Benzo(a)pyrene	170	J
193-39-5	Indeno(1,2,3-cd)pyrene	120	J
53-70-3	Dibenz(a,h)anthracene	37	J
191-24-2	Benzo(g,h,i)perylene	130	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ3

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10702.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 23 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

Number TICs found: 23

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	141-79-7	3-Penten-2-one, 4-methyl-	2.208	280	NJA
2.	123-42-2	2-Pentanone, 4-hydroxy-4-met	2.701	13000	NJAB
3.		UKNKNOWN	7.284	95	J
4.		UNKNOWN ORGANIC ACID	10.826	100	J
5.		UNKNOWN AMIDE	10.923	100	JB
6.	10544-50-0	Sulfur, mol. (S8)	11.610	1000	NJ
7.		UNKNOWN AMIDE	12.340	280	JB
8.		UNKNOWN AMIDE	12.479	300	JB
9.		Pyrene, -methyl-	12.855	110	J
10.		1,1'-Biphenyl, -hexachloro	13.059	210	J
11.		1,1'-Biphenyl,-hexachloro	13.424	110	J
12.		UNKNOWN AMIDE	13.778	3600	JB
13.		UNKNOWN AMIDE	13.928	180	JB
14.	78-51-3	Ethanol, 2-butoxy-, phosphat	14.100	270	NJB
15.		1,1'-Biphenyl, -heptachl	14.841	150	J
16.		UNKNOWN AMIDE	15.109	130	JB
17.		UNKNOWN AMIDE	16.375	1600	JB
18.		UNKNOWN	16.622	550	JB
19.		UNKNOWN	18.200	340	J
20.		UNKNOWN	19.499	250	J
21.		UNKNOWN	19.917	270	J
22.	1058-61-3	Stigmast-4-en-3-one	20.475	220	NJ
23.		UNKNOWN	21.205	480	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ4

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10703.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 42 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	570	U
111-44-4	bis(2-Chloroethyl)Ether	570	U
95-57-8	2-Chlorophenol	570	U
541-73-1	1,3-Dichlorobenzene	570	U
106-46-7	1,4-Dichlorobenzene	570	U
95-50-1	1,2-Dichlorobenzene	570	U
95-48-7	2-Methylphenol	570	U
108-60-1	2,2'-oxybis(1-Chloropropane)	570	U
106-44-5	4-Methylphenol	570	U
621-64-7	N-Nitroso-di-n-propylamine	570	U
67-72-1	Hexachloroethane	570	U
98-95-3	Nitrobenzene	570	U
78-59-1	Isophorone	570	U
88-75-5	2-Nitrophenol	570	U
105-67-9	2,4-Dimethylphenol	570	U
111-91-1	bis(2-Chloroethoxy)methane	570	U
120-83-2	2,4-Dichlorophenol	570	U
120-82-1	1,2,4-Trichlorobenzene	570	U
91-20-3	Naphthalene	180	J
106-47-8	4-Chloroaniline	570	U
87-68-3	Hexachlorobutadiene	570	U
59-50-7	4-Chloro-3-Methylphenol	570	U
91-57-6	2-Methylnaphthalene	400	J
77-47-4	Hexachlorocyclopentadiene	570	U
88-06-2	2,4,6-Trichlorophenol	570	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	570	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	570	U
208-96-8	Acenaphthylene	570	U
606-20-2	2,6-Dinitrotoluene	570	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	54	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ4

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10703.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 42 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	88	J
121-14-2	2,4-Dinitrotoluene	570	U
84-66-2	Diethylphthalate	570	U
7005-72-3	4-Chlorophenyl-phenylether	570	U
86-73-7	Fluorene	78	J
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	570	U
101-55-3	4-Bromophenyl-phenylether	570	U
118-74-1	Hexachlorobenzene	570	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	1100	
120-12-7	Anthracene	170	J
86-74-8	Carbazole	130	J
84-74-2	Di-n-butylphthalate	570 ~~38~~	JB u KM 8/4/95
206-44-0	Fluoranthene	1600	
129-00-0	Pyrene	990	
85-68-7	Butylbenzylphthalate	570 ~~34~~	JB u KM 8/4/95
91-94-1	3,3'-Dichlorobenzidine	570	U
56-55-3	Benzo(a)anthracene	400	J
218-01-9	Chrysene	450	J
117-81-7	bis(2-Ethylhexyl)phthalate	570 ~~120~~	JB u KM 8/4/95
117-84-0	Di-n-octylphthalate	570	U
205-99-2	Benzo(b)fluoranthene	320	J
207-08-9	Benzo(k)fluoranthene	250	J
50-32-8	Benzo(a)pyrene	240	J
193-39-5	Indeno(1,2,3-cd)pyrene	170	J
53-70-3	Dibenz(a,h)anthracene	51	J
191-24-2	Benzo(g,h,i)perylene	160	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ4

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10703.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 42 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 28

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 141-79-7	3-Penten-2-one, 4-methyl-	2.197	270	NJA
2. 123-42-2	2-Pentanone, 4-hydroxy-4-met	2.680	15000	NJAB
3.	-Trimethylbenzene	4.022	230	J
4. 90-12-0	Naphthalene, 1-methyl-	5.804	360	NJ
5.	Naphthalene, -ethyl-	6.372	160	J
6.	Naphthalene, -dimethyl-	6.458	330	J
7.	Naphthalene, -dimethyl-	6.576	460	J
8.	Naphthalene, -(-methylethyl)	7.210	160	J
9.	UNKNOWN	7.274	250	J
10.	Naphthalene, -trimethyl-	7.703	230	J
11.	Azulene, -ethyl-dimethyl-	9.109	370	J
12.	UNKNOWN	9.710	410	J
13.	UNKNOWN KETONE	9.871	240	J
14.	Phenanthrene, -methyl-	10.430	250	J
15.	UNKNOWN ORGNAIC ACID	10.687	330	J
16.	Phenanthrene, -dimethyl-	11.524	240	J
17. 10544-50-0	Sulfur, mol. (S8)	11.621	2400	NJ
18. 243-42-5	Benzo[b]naphtho[2,3-d]furan	12.190	420	NJ
19.	UNKNOWN AMIDE	12.351	580	JB
20.	UNKNOWN AMIDE	12.501	490	JB
21.	UNKNOWN	13.403	300	J
22.	UNKNOWN AMIDE	13.800	5700	JB
23.	UNKNOWN	14.111	330	J
24.	UNKNOWN	16.215	430	J
25.	UNKNOWN AMIDE	16.386	1400	JB
26.	UNKNOWN	16.633	640	JB
27.	UNKNOWN	16.880	380	J
28.	UNKNOWN	18.490	410	J
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ5

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10704.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 40 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	550	U
111-44-4	bis(2-Chloroethyl)Ether	550	U
95-57-8	2-Chlorophenol	550	U
541-73-1	1,3-Dichlorobenzene	550	U
106-46-7	1,4-Dichlorobenzene	550	U
95-50-1	1,2-Dichlorobenzene	550	U
95-48-7	2-Methylphenol	550	U
108-60-1	2,2'-oxybis(1-Chloropropane)	550	U
106-44-5	4-Methylphenol	550	U
621-64-7	N-Nitroso-di-n-propylamine	550	U
67-72-1	Hexachloroethane	550	U
98-95-3	Nitrobenzene	550	U
78-59-1	Isophorone	550	U
88-75-5	2-Nitrophenol	550	U
105-67-9	2,4-Dimethylphenol	550	U
111-91-1	bis(2-Chloroethoxy)methane	550	U
120-83-2	2,4-Dichlorophenol	550	U
120-82-1	1,2,4-Trichlorobenzene	550	U
91-20-3	Naphthalene	120	J
106-47-8	4-Chloroaniline	550	U
87-68-3	Hexachlorobutadiene	550	U
59-50-7	4-Chloro-3-Methylphenol	550	U
91-57-6	2-Methylnaphthalene	260	J
77-47-4	Hexachlorocyclopentadiene	550	U
88-06-2	2,4,6-Trichlorophenol	550	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	550	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	550	U
208-96-8	Acenaphthylene	550	U
606-20-2	2,6-Dinitrotoluene	550	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	53	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ5

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10704.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 40 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	68	J
121-14-2	2,4-Dinitrotoluene	550	U
84-66-2	Diethylphthalate	550	U
7005-72-3	4-Chlorophenyl-phenylether	550	U
86-73-7	Fluorene	91	J
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	550	U
101-55-3	4-Bromophenyl-phenylether	550	U
118-74-1	Hexachlorobenzene	550	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	860	
120-12-7	Anthracene	160	J
86-74-8	Carbazole	81	J
84-74-2	Di-n-butylphthalate	550 ~~36~~	JB U KJ 8/1
206-44-0	Fluoranthene	1400	
129-00-0	Pyrene	970	
85-68-7	Butylbenzylphthalate	550	U
91-94-1	3,3'-Dichlorobenzidine	550	U
56-55-3	Benzo(a)anthracene	390	J
218-01-9	Chrysene	440	J
117-81-7	bis(2-Ethylhexyl)phthalate	550 ~~120~~	JB U KJ 8/1
117-84-0	Di-n-octylphthalate	550	U
205-99-2	Benzo(b)fluoranthene	230	J
207-08-9	Benzo(k)fluoranthene	240	J
50-32-8	Benzo(a)pyrene	210	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	J
53-70-3	Dibenz(a,h)anthracene	44	J
191-24-2	Benzo(g,h,i)perylene	93	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ5

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10704.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 40 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 28

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	10574-37-5	2-Pentene, 2,3-dimethyl-	2.205	220	NJA	
2.	123-42-2	2-Pentanone, 4-hydroxy-4-met	2.688	14000	NJAB	u
3.	90-12-0	Naphthalene, 1-methyl-	5.801	270	NJ	
4.		Naphthalene, -dimethyl-	6.456	270	J	
5.		Naphthalene, -dimethyl-	6.574	330	J	
6.		UNKNOWN	7.282	190	J	
7.		Naphthalene, -trimethyl-	7.561	220	J	
8.		Naphthalene, -trimethyl-	7.701	150	J	
9.		Azulene, -ethyl-dimethyl-	9.107	290	J	
10.		UNKNOWN	9.708	260	J	
11.		UNKNOWN	9.794	180	J	
12.		UNKNOWN KETONE	9.869	190	J	
13.		UNKNOWN ORGANIC ACID	10.695	320	J	
14.		UNKNOWN ORANIC ACID	10.846	540	J	
15.		UNKNOWN AMIDE	10.953	200	JB	u
16.		Phenanthrene, -dimethyl-	11.532	230	J	
17.	10544-50-0	Sulfur, mol. (S8)	11.618	1900	NJ	
18.		UNKNOWN AMIDE	12.359	610	JB	u
19.		UNKNOWN AMIDE	12.498	600	JB	u
20.		Pyrene, -methyl-	12.863	360	J	
21.		UNKNOWN	13.400	280	J	
22.		UNKNOWN AMIDE	13.808	6200	JB	u
23.		UNKNOWN PAH	14.119	360	J	
24.		UNKNOWN AMIDE	16.395	2600	JB	u
25.		UNKNOWN	16.631	1100	JB	u
26.		UNKNOWN	16.888	400	J	
27.		UNKNOWN	17.715	490	J	
28.		UNKNOWN	18.488	670	J	
29.						
30.						

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ6

ab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10705.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 22 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	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	55	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	90	J
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	170	J
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	1100	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	1100	U
83-32-9	Acenaphthene	170	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10705.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 22 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

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	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	120	J
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	29	J
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	240	J
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	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	1100	U
85-01-8	Phenanthrene	2200	
120-12-7	Anthracene	520	
86-74-8	Carbazole	360	J
84-74-2	Di-n-butylphthalate	420 ~~53~~	JB u KM 8/4/
206-44-0	Fluoranthene	3100	
129-00-0	Pyrene	2600	
85-68-7	Butylbenzylphthalate	420 ~~42~~	JB u KM 8/4/
91-94-1	3,3'-Dichlorobenzidine	420	U
56-55-3	Benzo(a)anthracene	1400	
218-01-9	Chrysene	1600	
117-81-7	bis(2-Ethylhexyl)phthalate	420 ~~170~~	JB u KM 8/4/
117-84-0	Di-n-octylphthalate	420	U
205-99-2	Benzo(b)fluoranthene	1400	
207-08-9	Benzo(k)fluoranthene	1000	
50-32-8	Benzo(a)pyrene	1300	
193-39-5	Indeno(1,2,3-cd)pyrene	880	
53-70-3	Dibenz(a,h)anthracene	220	J
191-24-2	Benzo(g,h,i)perylene	790	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10705.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 22 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

Number TICs found: 32

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	2.687	10000	NJAB
2. 90-12-0	Naphthalene, 1-methyl-	5.810	150	NJ
3.	Naphthalene, -dimethyl-	6.572	250	J
4.	Naphthalene, -dimethyl-	6.733	340	J
5.	Naphthalene, -trimethyl-	7.560	170	J
6.	Naphthalene, -trimethyl-	7.699	200	J
7.	Phenol, -(-tetramethylbutyl)	8.075	240	J
8.	UNKNOWN	8.300	160	J
9.	UNKNOWN	8.955	180	J
10.	Azulene, -ethyl-dimethyl-	9.105	170	J
11. 132-65-0	Dibenzothiophene	9.288	160	NJ
12.	UNKNOWN KETONE	9.867	160	J
13.	Anthracene, -methyl-	10.490	150	J
14. 120-32-1	Clorophene	10.587	150	NJ
15.	4H-Cyclopenta[]phenanthrene	10.640	300	J
16.	UNKNOWN ORGANIC ACID	10.844	430	J
17.	UNKNOWN AMIDE	10.952	290	JB
18.	-Phenylnaphthalene	11.037	580	J
19. 84-65-1	9,10-Anthracenedione	11.080	880	NJ
20.	UNKNOWN	11.145	890	J
21.	UNKNOWN	11.231	1000	J
22.	UNKNOWN	11.338	1400	J
23. 10544-50-0	Sulfur, mol. (S8)	11.789	22000	NJ
24.	UNKNOWN AMIDE	12.358	240	JB
25.	UNKNOWN AMIDE	12.497	170	JB
26.	Pyrene, -methyl-	12.883	360	J
27.	11H-Benzo[]fluorene	13.002	220	J
28.	UNKNOWN AMIDE	13.785	9400	JB
29. 82-05-3	7H-Benz[de]anthracen-7-one	13.882	920	NJ
30. 78-51-3	Ethanol, 2-butoxy-, phosphat	14.118	2800	NJB

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAPJ6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T10705.D

Level: (low/med) LOW Date Received: 07/13/95

% Moisture: 22 decanted: (Y/N) N Date Extracted: 07/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

Number TICs found: 32

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	15.567	650	J
2.		UNKNOWN AMIDE	16.382	1700	JB u
3.					
4.					
5.					
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2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

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

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKSH	77	74	106	108			0
02	EAPH6	68	64	113	111			0
03	EAPH7	72	63	109	114			0
04	EAPJ3	72	68	121	124			0
05	EAPJ4	70	66	116	113			0
06	EAPJ5	57	57	107	105			0
07	EAPJ6	44	43	71	69			0
08	EAPH5DL	64	65	111	99			0
09	EAPH5	76	74	132	134			0
10	EAPH5MS	64	64	125	126			0
11	EAPH5MSD	72	70	128	124			0
12	EAPJ1DL	0D	0D	0D	0D			0
13	EAPJ2	46	83	729D	1532D			0
14	EAPH8DL	0D	0D	119	0D			0
15	EAPH9DL	57	78	289D	376D			0
16	EAPJ0DL	57	56	144	387D			0
17	EAPJ1	0D	0D	332D	1159D			0
18	EAPJ2DL	0D	0D	0D	0D			0
19	EAPH8	70	64	297*	426*			2
20	EAPH9	81	74	527*	318*			2
21	EAPJ0	80	66	91	281*			1
22								
23								
24								
25								
26								
27								
28								
29								
30								

QC LIMITS

TCX = Tetrachloro-m-xylene (30-150)
DCB = Decachlorobiphenyl (30-150)

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

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix Spike - EPA Sample NO.: EAPH5

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMIT REC.
gamma-BHC(Lindane)	18.3	0	12.0	66	46-12
Heptachlor	18.3	0	14.6	80	35-13
Aldrin	18.3	0	10.9	60	34-13
Dieldrin	36.6	0	33.2	91	31-13
Endrin	36.6	0	44.1	120	42-13
4,4'-DDT	36.6	39.2	69.4	82	23-13

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC(Lindane)	18.3	13.7	75	13	50	46-12
Heptachlor	18.3	16.5	90	12	31	35-13
Aldrin	18.3	12.9	70	15	43	34-13
Dieldrin	36.6	36.0	98	7	38	31-13
Endrin	36.6	48.9	134	11	45	42-13
4,4'-DDT	36.6	74.6	96	16	50	23-13

Column to be used to flag recovery values

* 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.

PBLKSH

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Lab Sample ID: PBLKSH Lab File ID: 6_001502

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

Sulfur Cleanup: (Y/N) Y Date Extracted: 07/14/95

Date Analyzed (1): 07/23/95 Date Analyzed (2): 07/23/95

Time Analyzed (1): 0605 Time Analyzed (2): 0605

Instrument ID (1): HP_06A Instrument ID (2): HP_06B

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	EAPH6	22896.02	07/23/95	07/23/95
02	EAPH7	22896.03	07/23/95	07/23/95
03	EAPJ3	22896.09	07/23/95	07/23/95
04	EAPJ4	22896.10	07/23/95	07/23/95
05	EAPJ5	22896.11	07/23/95	07/23/95
06	EAPJ6	22896.12	07/23/95	07/23/95
07	EAPH5DL	22896.01DL	07/23/95	07/23/95
08	EAPH5	22896.01	07/23/95	07/23/95
09	EAPH5MS	22896.01MS	07/23/95	07/23/95
10	EAPH5MSD	22896.01MSD	07/23/95	07/23/95
11	EAPJ1DL	22896.07DL	07/23/95	07/23/95
12	EAPJ2	22896.08	07/23/95	07/23/95
13	EAPH8DL	22896.04DL	07/23/95	07/23/95
14	EAPH9DL	22896.05DL	07/23/95	07/23/95
15	EAPJ0DL	22896.06DL	07/23/95	07/23/95
16	EAPJ1	22896.07	07/23/95	07/23/95
17	EAPJ2DL	22896.08DL	07/23/95	07/23/95
18	EAPH8	22896.04	07/23/95	07/23/95
19	EAPH9	22896.05	07/23/95	07/23/95
20	EAPJ0	22896.06	07/23/95	07/23/95
21				
22				
23				
24				
25				
26				

Comments:

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKSH

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

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

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

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

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 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

EAPH5

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4966.D

% Moisture: 9 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4 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	
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.6	U
72-55-9	4,4'-DDE	3.6	U
72-20-8	Endrin	3.6	U
33213-65-9	Endosulfan II	22	P
72-54-8	4,4'-DDD	3.6	U
1031-07-8	Endosulfan sulfate	10	
50-29-3	4,4'-DDT	39	P
72-43-5	Methoxychlor	50	P
53494-70-5	Endrin ketone	3.6	U
7421-93-4	Endrin aldehyde	33	P
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	36	U
11104-28-2	Aroclor-1221	74	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	770	PC

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH5DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.01DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4966.D

% Moisture: 9 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.4 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.3	U
319-85-7	beta-BHC	9.3	U
319-86-8	delta-BHC	9.3	U
58-89-9	gamma-BHC (Lindane)	9.3	U
76-44-8	Heptachlor	9.3	U
309-00-2	Aldrin	9.3	U
1024-57-3	Heptachlor epoxide	9.3	U
959-98-8	Endosulfan I	9.3	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	15	DPJ
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	7.8	DPJ
50-29-3	4,4'-DDT	38	DP
72-43-5	Methoxychlor	39	DPJ
53494-70-5	Endrin ketone	18	U
7421-93-4	Endrin aldehyde	24	DP
5103-71-9	alpha-Chlordane	9.3	U
5103-74-2	gamma-Chlordane	9.3	U
8001-35-2	Toxaphene	930	U
12674-11-2	Aroclor-1016	180	U
11104-28-2	Aroclor-1221	370	U
11141-16-5	Aroclor-1232	180	U
53469-21-9	Aroclor-1242	180	U
12672-29-6	Aroclor-1248	180	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	880	DC

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.02

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

% Moisture: 46 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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	3.1	U
319-85-7	beta-BHC	3.1	U
319-86-8	delta-BHC	3.1	U
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	6.1	U
72-55-9	4,4'-DDE	6.1	U
72-20-8	Endrin	6.1	U
33213-65-9	Endosulfan II	6.1	U
72-54-8	4,4'-DDD	6.1	U
1031-07-8	Endosulfan sulfate	6.1	U
50-29-3	4,4'-DDT	6.1	U
72-43-5	Methoxychlor	31	U
53494-70-5	Endrin ketone	6.1	U
7421-93-4	Endrin aldehyde	6.1	U
5103-71-9	alpha-Chlordane	3.1	U
5103-74-2	gamma-Chlordane	3.1	U
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.

EAPH7

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.03

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

% Moisture: 52 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.5	U
319-85-7	beta-BHC	3.5	U
319-86-8	delta-BHC	3.5	U
58-89-9	gamma-BHC (Lindane)	3.5	U
76-44-8	Heptachlor	3.5	U
309-00-2	Aldrin	3.5	U
1024-57-3	Heptachlor epoxide	3.5	U
959-98-8	Endosulfan I	3.5	U
60-57-1	Dieldrin	6.9	U
72-55-9	4,4'-DDE	6.9	U
72-20-8	Endrin	6.9	U
33213-65-9	Endosulfan II	6.9	U
72-54-8	4,4'-DDD	6.9	U
1031-07-8	Endosulfan sulfate	6.9	U
50-29-3	4,4'-DDT	6.9	U
72-43-5	Methoxychlor	35	U
53494-70-5	Endrin ketone	6.9	U
7421-93-4	Endrin aldehyde	6.9	U
5103-71-9	alpha-Chlordane	3.5	U
5103-74-2	gamma-Chlordane	3.5	U
8001-35-2	Toxaphene	350	U
12674-11-2	Aroclor-1016	69	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	69	U
53469-21-9	Aroclor-1242	69	U
12672-29-6	Aroclor-1248	69	U
11097-69-1	Aroclor-1254	69	U
11096-82-5	Aroclor-1260	69	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH8

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4967.D

% Moisture: 12 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7 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	6.4	P
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	
959-98-8	Endosulfan I	2.0	P
60-57-1	Dieldrin	48	P
72-55-9	4,4'-DDE	28	P
72-20-8	Endrin	600	PEX
33213-65-9	Endosulfan II	1200	PEX
72-54-8	4,4'-DDD	84	E
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	1600	PEX
72-43-5	Methoxychlor	880	PEX
53494-70-5	Endrin ketone	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	12	P
5103-74-2	gamma-Chlordane	4.7	P
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	76	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	16000	PC

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH8DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.04DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4967.D

% Moisture: 12 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	96	U
319-85-7	beta-BHC	96	U
319-86-8	delta-BHC	96	U
58-89-9	gamma-BHC (Lindane)	96	U
76-44-8	Heptachlor	96	U
309-00-2	Aldrin	96	U
1024-57-3	Heptachlor epoxide	96	U
959-98-8	Endosulfan I	96	U
60-57-1	Dieldrin	45	DPJ
72-55-9	4,4'-DDE	23	DPJ
72-20-8	Endrin	190	U
33213-65-9	Endosulfan II	950	DPX
72-54-8	4,4'-DDD	90	DJ
1031-07-8	Endosulfan sulfate	190	U
50-29-3	4,4'-DDT	1700	UX
72-43-5	Methoxychlor	960	U
53494-70-5	Endrin ketone	190	U
7421-93-4	Endrin aldehyde	1300	DX
5103-71-9	alpha-Chlordane	14	DPJ
5103-74-2	gamma-Chlordane	96	U
8001-35-2	Toxaphene	9600	U
12674-11-2	Aroclor-1016	1900	U
11104-28-2	Aroclor-1221	3800	U
11141-16-5	Aroclor-1232	1900	U
53469-21-9	Aroclor-1242	1900	U
12672-29-6	Aroclor-1248	1900	U
11097-69-1	Aroclor-1254	1900	U
11096-82-5	Aroclor-1260	17000	DPC

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH9

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4968.D

% Moisture: 20 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	6.6	P
319-86-8	delta-BHC	12	P
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	5.2	P
1024-57-3	Heptachlor epoxide	8.6	
959-98-8	Endosulfan I	22	P
60-57-1	Dieldrin	22	P
72-55-9	4,4'-DDE	15	P
72-20-8	Endrin	170	PE
33213-65-9	Endosulfan II	110	PE
72-54-8	4,4'-DDD	4.1	U
1031-07-8	Endosulfan sulfate	52	P
50-29-3	4,4'-DDT	180	PE
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	40	P
7421-93-4	Endrin aldehyde	180	PE
5103-71-9	alpha-Chlordane	21	
5103-74-2	gamma-Chlordane	13	P
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	84	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	3600	PC

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPH9DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.05DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4968.D

% Moisture: 20 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	21	U
319-85-7	beta-BHC	7.3	DPJ
319-86-8	delta-BHC	21	U
58-89-9	gamma-BHC (Lindane)	21	U
76-44-8	Heptachlor	21	U
309-00-2	Aldrin	4.5	DJ
1024-57-3	Heptachlor epoxide	21	U
959-98-8	Endosulfan I	2.7	DPJ
60-57-1	Dieldrin	6.0	DPJ
72-55-9	4,4'-DDE	41	U
72-20-8	Endrin	41	U
33213-65-9	Endosulfan II	73	DP
72-54-8	4,4'-DDD	20	DPJ
1031-07-8	Endosulfan sulfate	30	DJ
50-29-3	4,4'-DDT	140	D
72-43-5	Methoxychlor	210	U
53494-70-5	Endrin ketone	33	DPJ
7421-93-4	Endrin aldehyde	110	D
5103-71-9	alpha-Chlordane	2.5	DPJ
5103-74-2	gamma-Chlordane	7.3	DPJ
8001-35-2	Toxaphene	2100	U
12674-11-2	Aroclor-1016	410	U
11104-28-2	Aroclor-1221	840	U
11141-16-5	Aroclor-1232	410	U
53469-21-9	Aroclor-1242	410	U
12672-29-6	Aroclor-1248	410	U
11097-69-1	Aroclor-1254	410	U
11096-82-5	Aroclor-1260	3100	DC

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EAPJ0

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4969.D

% Moisture: 13 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 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	14	P
319-86-8	delta-BHC	14	
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	4.3	
1024-57-3	Heptachlor epoxide	2.0	
959-98-8	Endosulfan I	16	
60-57-1	Dieldrin	16	P
72-55-9	4,4'-DDE	14	P
72-20-8	Endrin	140	PE
33213-65-9	Endosulfan II	270	PE
72-54-8	4,4'-DDD	39	P
1031-07-8	Endosulfan sulfate	48	P
50-29-3	4,4'-DDT	430	EX
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	18	P
7421-93-4	Endrin aldehyde	390	EX
5103-71-9	alpha-Chlordane	9.3	P
5103-74-2	gamma-Chlordane	9.7	P
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	77	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	4900	PC

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ0DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.06DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4969.D

% Moisture: 13 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 8.4 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	20	U
319-85-7	beta-BHC	20	U
319-86-8	delta-BHC	20	U
58-89-9	gamma-BHC (Lindane)	20	U
76-44-8	Heptachlor	20	U
309-00-2	Aldrin	20	U
1024-57-3	Heptachlor epoxide	20	U
959-98-8	Endosulfan I	2.3	DPJ
60-57-1	Dieldrin	5.6	DPJ
72-55-9	4,4'-DDE	7.0	DPJ
72-20-8	Endrin	99	DP
33213-65-9	Endosulfan II	160	DP
72-54-8	4,4'-DDD	18	DPJ
1031-07-8	Endosulfan sulfate	32	DPJ
50-29-3	4,4'-DDT	310	D
72-43-5	Methoxychlor	200	U
53494-70-5	Endrin ketone	38	U
7421-93-4	Endrin aldehyde	220	DP
5103-71-9	alpha-Chlordane	2.1	DPJ
5103-74-2	gamma-Chlordane	5.5	DPJ
8001-35-2	Toxaphene	2000	U
12674-11-2	Aroclor-1016	380	U
11104-28-2	Aroclor-1221	770	U
11141-16-5	Aroclor-1232	380	U
53469-21-9	Aroclor-1242	380	U
12672-29-6	Aroclor-1248	380	U
11097-69-1	Aroclor-1254	380	U
11096-82-5	Aroclor-1260	3200	DPC

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ1

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4970.D

% Moisture: 6 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 50.0

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	90	U
319-85-7	beta-BHC	90	U
319-86-8	delta-BHC	90	U
58-89-9	gamma-BHC (Lindane)	90	U
76-44-8	Heptachlor	90	U
309-00-2	Aldrin	90	U
1024-57-3	Heptachlor epoxide	90	U
959-98-8	Endosulfan I	90	U
60-57-1	Dieldrin	980	PX
72-55-9	4,4'-DDE	52	PJ
72-20-8	Endrin	1700	UX
33213-65-9	Endosulfan II	1700	UX
72-54-8	4,4'-DDD	900	PX
1031-07-8	Endosulfan sulfate	180	U
50-29-3	4,4'-DDT	1700	UX
72-43-5	Methoxychlor	900	U
53494-70-5	Endrin ketone	180	U
7421-93-4	Endrin aldehyde	1700	UX
5103-71-9	alpha-Chlordane	280	
5103-74-2	gamma-Chlordane	52	PJ
8001-35-2	Toxaphene	9000	U
12674-11-2	Aroclor-1016	1800	U
11104-28-2	Aroclor-1221	3600	U
11141-16-5	Aroclor-1232	1800	U
53469-21-9	Aroclor-1242	1800	U
12672-29-6	Aroclor-1248	1800	U
11097-69-1	Aroclor-1254	1800	U
11096-82-5	Aroclor-1260	280000	PC

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ1DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.07DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4970.D

% Moisture: 6 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1000.0

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	1800	U
319-85-7	beta-BHC	1800	U
319-86-8	delta-BHC	1800	U
58-89-9	gamma-BHC (Lindane)	1800	U
76-44-8	Heptachlor	1800	U
309-00-2	Aldrin	1800	U
1024-57-3	Heptachlor epoxide	1800	U
959-98-8	Endosulfan I	1800	U
60-57-1	Dieldrin	1000	DPJX
72-55-9	4,4'-DDE	320	DPJ
72-20-8	Endrin	3500	U
33213-65-9	Endosulfan II	1700	UX
72-54-8	4,4'-DDD	1100	DJX
1031-07-8	Endosulfan sulfate	3500	U
50-29-3	4,4'-DDT	1700	UX
72-43-5	Methoxychlor	18000	U
53494-70-5	Endrin ketone	3500	U
7421-93-4	Endrin aldehyde	1700	UX
5103-71-9	alpha-Chlordane	350	DJX
5103-74-2	gamma-Chlordane	1800	U
8001-35-2	Toxaphene	180000	U
12674-11-2	Aroclor-1016	35000	U
11104-28-2	Aroclor-1221	71000	U
11141-16-5	Aroclor-1232	35000	U
53469-21-9	Aroclor-1242	35000	U
12672-29-6	Aroclor-1248	35000	U
11097-69-1	Aroclor-1254	35000	U
11096-82-5	Aroclor-1260	310000	DPC

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4971.D

% Moisture: 5 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	89	U
319-85-7	beta-BHC	89	U
319-86-8	delta-BHC	89	U
58-89-9	gamma-BHC (Lindane)	89	U
76-44-8	Heptachlor	89	U
309-00-2	Aldrin	89	U
1024-57-3	Heptachlor epoxide	89	U
959-98-8	Endosulfan I	89	U
60-57-1	Dieldrin	1300	PX
72-55-9	4,4'-DDE	390	PX
72-20-8	Endrin	1700	UX
33213-65-9	Endosulfan II	1700	UX
72-54-8	4,4'-DDD	1100	PX
1031-07-8	Endosulfan sulfate	170	U
50-29-3	4,4'-DDT	1700	UX
72-43-5	Methoxychlor	1700	UX
53494-70-5	Endrin ketone	170	U
7421-93-4	Endrin aldehyde	1700	UX
5103-71-9	alpha-Chlordane	330	P
5103-74-2	gamma-Chlordane	78	PJ
8001-35-2	Toxaphene	8900	U
12674-11-2	Aroclor-1016	1700	U
11104-28-2	Aroclor-1221	3500	U
11141-16-5	Aroclor-1232	1700	U
53469-21-9	Aroclor-1242	1700	U
12672-29-6	Aroclor-1248	1700	U
11097-69-1	Aroclor-1254	1700	U
11096-82-5	Aroclor-1260	340000	PC

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ2DL

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.08DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: M4971.D

% Moisture: 5 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1000.0

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1800	U
319-85-7	beta-BHC	1800	U
319-86-8	delta-BHC	1800	U
58-89-9	gamma-BHC (Lindane)	1800	U
76-44-8	Heptachlor	1800	U
309-00-2	Aldrin	1800	U
1024-57-3	Heptachlor epoxide	1800	U
959-98-8	Endosulfan I	1800	U
60-57-1	Dieldrin	1000	DPJX
72-55-9	4,4'-DDE	3500	U
72-20-8	Endrin	1700	UX
33213-65-9	Endosulfan II	1700	UX
72-54-8	4,4'-DDD	1500	DPJX
1031-07-8	Endosulfan sulfate	3500	U
50-29-3	4,4'-DDT	1700	UX
72-43-5	Methoxychlor	18000	U
53494-70-5	Endrin ketone	3500	U
7421-93-4	Endrin aldehyde	1700	UX
5103-71-9	alpha-Chlordane	1800	U
5103-74-2	gamma-Chlordane	1800	U
8001-35-2	Toxaphene	180000	U
12674-11-2	Aroclor-1016	35000	U
11104-28-2	Aroclor-1221	70000	U
11141-16-5	Aroclor-1232	35000	U
53469-21-9	Aroclor-1242	35000	U
12672-29-6	Aroclor-1248	35000	U
11097-69-1	Aroclor-1254	35000	U
11096-82-5	Aroclor-1260	110000	DPC

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ3

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.09

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

% Moisture: 23 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7 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	4.3	U
72-55-9	4,4'-DDE	4.3	U
72-20-8	Endrin	4.3	U
33213-65-9	Endosulfan II	4.3	U
72-54-8	4,4'-DDD	4.3	U
1031-07-8	Endosulfan sulfate	4.3	U
50-29-3	4,4'-DDT	4.4	P
72-43-5	Methoxychlor	22	U
53494-70-5	Endrin ketone	4.3	U
7421-93-4	Endrin aldehyde	4.3	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	43	U
11104-28-2	Aroclor-1221	87	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	43	U
11096-82-5	Aroclor-1260	48	P

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ4

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.10

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

% Moisture: 42 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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	2.9	U
319-85-7	beta-BHC	2.9	U
319-86-8	delta-BHC	2.9	U
58-89-9	gamma-BHC (Lindane)	2.9	U
76-44-8	Heptachlor	2.9	U
309-00-2	Aldrin	2.9	U
1024-57-3	Heptachlor epoxide	2.9	U
959-98-8	Endosulfan I	2.9	U
60-57-1	Dieldrin	5.7	U
72-55-9	4,4'-DDE	5.7	U
72-20-8	Endrin	5.7	U
33213-65-9	Endosulfan II	5.7	U
72-54-8	4,4'-DDD	5.7	U
1031-07-8	Endosulfan sulfate	5.7	U
50-29-3	4,4'-DDT	5.7	U
72-43-5	Methoxychlor	29	U
53494-70-5	Endrin ketone	5.7	U
7421-93-4	Endrin aldehyde	5.7	U
5103-71-9	alpha-Chlordane	2.9	U
5103-74-2	gamma-Chlordane	2.9	U
8001-35-2	Toxaphene	290	U
12674-11-2	Aroclor-1016	57	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	57	U
11097-69-1	Aroclor-1254	57	U
11096-82-5	Aroclor-1260	36	JP

2.3

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ5

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.11

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

% Moisture: 40 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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	2.8	U
319-85-7	beta-BHC	2.8	U
319-86-8	delta-BHC	2.8	U
58-89-9	gamma-BHC (Lindane)	2.8	U
76-44-8	Heptachlor	2.8	U
309-00-2	Aldrin	2.8	U
1024-57-3	Heptachlor epoxide	2.8	U
959-98-8	Endosulfan I	3.2	P
60-57-1	Dieldrin	5.5	U
72-55-9	4,4'-DDE	5.5	U
72-20-8	Endrin	5.5	U
33213-65-9	Endosulfan II	5.5	U
72-54-8	4,4'-DDD	5.5	U
1031-07-8	Endosulfan sulfate	5.5	U
50-29-3	4,4'-DDT	5.5	U
72-43-5	Methoxychlor	28	U
53494-70-5	Endrin ketone	5.5	U
7421-93-4	Endrin aldehyde	5.5	U
5103-71-9	alpha-Chlordane	6.3	P
5103-74-2	gamma-Chlordane	2.8	U
8001-35-2	Toxaphene	280	U
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	U
11096-82-5	Aroclor-1260	53	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAPJ6

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: 22896.12

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

% Moisture: 22 decanted: (Y/N) N Date Received: 07/13/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/23/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 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	2.5	?
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	86	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	22	JP

Internal Standards: The following sample analyses had internal standard spike recoveries which did not fall within QC limits: EAPH5, EAPH6, EAPH7, EAPH8, EAPH9, EAPJ0, EAPJ1, EAPJ2, EAPJ4, EAPJ5 and EAPJ6. Upon reanalysis (or, for EAPH5, upon analysis of a matrix spike and matrix spike duplicate), the original results were duplicated for all of these samples, verifying a matrix effect. All original runs and subsequent reanalyses have been submitted.

SEMIVOLATILE FRACTION

Twelve soil samples were submitted for Semivolatile Organic Analysis. The samples were analyzed by GC/MS following the OLM03.1 CLP Organic Statement of Work.

The following column is used for the semivolatile analysis: Restek XTI-5 (bonded 5% phenyl-95% dimethyl polysiloxane), 30m, 0.25mm ID, 0.25um film thickness (Restek #12223).

The following samples in this SDG (labeled with a "DL") are considered billable since these samples were diluted to bring target analytes within linear range. EAPH8DL, EAPH9DL, EAPJ1DL and EAPJ2DL.

No major problems occurred during the analyses of these samples. Note: Sample (EAPH5) for BNA's/PEST/PCB contained the metals sample number MEADW0 on bottle sample tag and Tag # 5-009148, instead of what was listed on C of C, these all had the same station location of X101.

The following samples had alkanes reported and the reports are included at the end of this SDG narrative: EAPH5, EAPH6, EAPH7, EAPH8, EAPH8DL, EAPH9, EAPH9DL, EAPJ0, EAPJ1DL, EAPJ2, EAPJ2DL, EAPJ3, EAPJ4, EAPJ5, EAPJ6, SBLK1 and SBLK2.

Blanks: SBLK1 and SBLK2 had low 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.

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

July 26, 1995

SDG Narrative
July 26, 1995

Case: 23773
SDG: EAPH5
Contract: 68-D5-0026
Samples: EAPH5, EAPH6, EAPH7, EAPH8, EA EAPJ0, EAPJ1, EAPJ2, EAPJ3, EAPJ4, EAPJ5, EAPJ6, EAPH5DL, EAPJ1DL, EAPH8DL, EAPH9DL, EAPJ0DL, EAPJ2DL.
Fraction: Pesticide/PCB

SDG EAPH5 consisted of 12 soil samples plus dilutions which were analyzed for pesticide/PCBs. All samples, blanks and spikes were extracted and analyzed according to EPA SOW OLM03.1. The samples were analyzed on J&W Scientific dual analytical columns (30m x 0.32mm ID, 0.25µm film thickness, DB-17 and DB-1701). The DB-17 phase consists of (50%-Phenyl) Methylpolysiloxane and the DB-1701 phase consists of (14%-Cyanopropylphenyl) Methylpolysiloxane. These columns were specifically designed for pesticide/PCB separation as required by the EPA's SOW. All applicable manufacturer's instructions were followed for the analysis of pesticides/PCBs. Manufacturer provided information concerning the performance characteristics of the column are kept on site.

Surrogate recoveries of all method blanks were within limits. MS/MSD recoveries were also within advisory control limits.

Form 1Ds for some samples may exhibit a special flag denoted "X". When used alone, the "X" qualifier denotes that GC/MS identification was attempted but could not be confirmed *and* the concentration calculated from GC/EC is less than the GC/MS reference standard. In these cases, the GC/EC value is reported. When used in combination with the "U" qualifier (i.e. "UX"), the flag indicates that GC/MS identification was attempted but did not confirm *and* the calculated GC/EC concentration is greater than or equal to the GC/MS reference standard. In these cases, the GC/MS reference standard concentration is reported on the form 1D.

Samples EAPH5, EAPJ1, EAPJ2, EAPH8, EAPH9 and EAPJ0 required dilution to bring target analytes within calibration range. A table of primary and secondary dilutions follows:

Sample	Primary Dilution	Secondary Dilution
EAPH5	1:1	1:5
EAPJ1	1:50	1:1000
EAPJ2	1:50	1:1000
EAPH8	1:1	1:50
EAPH9	1:1	1:10
EAPJ0	1:1	1:10

The dilutions are billable because OLM03.1, page D-60/PEST, paragraph 10.2.3.4 states, "If dilution is employed solely to bring a peak within the calibration range or to get a

multicomponent pattern on scale, the results for both the more and the less concentrated extracts must be reported."

The undiluted extracts of samples EAPH8, EAPH9, EAPJ0, EAPJ1 and EAPJ2 caused severe problems on the DB-17 column phase; retention time instability being the most prevalent. Hence, DCB in the final PIBLK run following the undiluted samples (PIBLK4, 7/24/95, 0203 on the DB-17) was outside of the retention time window. The column had to be replaced after analyzing these samples.

All samples in this SDG were sulfur cleaned using the copper technique as outlined in D-56/PEST, 10.1.8.3.3.2, in addition to GPC and Florisil cleanups.

The following tables list the total nanograms injected on column for each calibration standard based upon amount injected on column, 1μL or 2μL:

RESOLUTION CHECK

Compounds	Total nanograms (1μL)	Total nanograms (2μL)
gamma-Chlordane	0.01	0.02
Endosulfan I	0.01	0.02
4,4'-DDE	0.02	0.04
Dieldrin	0.02	0.04
Endosulfan Sulfate	0.02	0.04
Endrin Ketone	0.02	0.04
Methoxychlor	0.1	0.2
Tetrachloro-m-xylene	0.02	0.04
Decachlorobiphenyl	0.02	0.04

PERFORMANCE EVALUATION

Compounds	Total nanograms (1μL)	Total nanograms (2μL)
gamma-BHC	0.01	0.02
alpha-BHC	0.01	0.02
4,4'-DDT	0.1	.02
beta-BHC	0.01	0.02
Endrin	0.05	0.1
Methoxychlor	0.25	0.5
Tetrachloro-m-xylene	0.02	0.04
Decachlorobiphenyl	0.02	0.04

INDIVIDUAL STANDARD MIXTURE A -- LOW

Compounds	Total nanograms (1μL)	Total nanograms (2μL)
alpha-BHC	0.005	0.01
Heptachlor	0.005	0.01
gamma-BHC	0.005	0.01
Endosulfan I	0.005	0.01
Dieldrin	0.01	0.02

Endrin	0.01	0.02
4,4'-DDD	0.01	0.02
4,4'-DDT	0.01	0.02
Methoxychlor	0.05	0.1
Tetrachloro-m-xylene	0.005	0.01
Decachlorobiphenyl	0.01	0.02

INDIVIDUAL STANDARD MIXTURE B -- LOW

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
beta-BHC	0.005	0.01
delta-BHC	0.005	0.01
Aldrin	0.005	0.01
Heptachlor epoxide	0.005	0.01
alpha-Chlordane	0.005	0.01
gamma-Chlordane	0.005	0.01
4,4'-DDE	0.01	0.02
Endosulfan sulfate	0.01	0.02
Endrin aldehyde	0.01	0.02
Endrin ketone	0.01	0.02
Endosulfan II	0.01	0.02
Tetrachloro-m-xylene	0.005	0.01
Decachlorobiphenyl	0.01	0.02

INDIVIDUAL STANDARD MIXTURE A -- MEDIUM

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
alpha-BHC	0.02	0.04
Heptachlor	0.02	0.04
gamma-BHC	0.02	0.04
Endosulfan I	0.02	0.04
Dieldrin	0.04	0.08
Endrin	0.04	0.08
4,4'-DDD	0.04	0.08
4,4'-DDT	0.04	0.08
Methoxychlor	0.2	0.4
Tetrachloro-m-xylene	0.02	0.04
Decachlorobiphenyl	0.04	0.08

INDIVIDUAL STANDARD MIXTURE B -- MEDIUM

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
beta-BHC	0.02	0.04
delta-BHC	0.02	0.04
Aldrin	0.02	0.04
Heptachlor epoxide	0.02	0.04

alpha-Chlordane	0.02	0.04
gamma-Chlordane	0.02	0.04
4,4'-DDE	0.04	0.08
Endosulfan sulfate	0.04	0.08
Endrin aldehyde	0.04	0.08
Endrin ketone	0.04	0.08
Endosulfan II	0.04	0.08
Tetrachloro-m-xylene	0.02	0.04
Decachlorobiphenyl	0.04	0.08

INDIVIDUAL STANDARD MIXTURE A -- HIGH

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
alpha-BHC	0.08	0.16
Heptachlor	0.08	0.16
gamma-BHC	0.08	0.16
Endosulfan I	0.08	0.16
Dieldrin	0.16	0.32
Endrin	0.16	0.32
4,4'-DDD	0.16	0.32
4,4'-DDT	0.16	0.32
Methoxychlor	0.8	1.6
Tetrachloro-m-xylene	0.08	0.16
Decachlorobiphenyl	0.16	0.32

INDIVIDUAL STANDARD MIXTURE B -- HIGH

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
beta-BHC	0.08	0.16
delta-BHC	0.08	0.16
Aldrin	0.08	0.16
Heptachlor epoxide	0.08	0.16
alpha-Chlordane	0.08	0.16
gamma-Chlordane	0.08	0.16
4,4'-DDE	0.16	0.32
Endosulfan sulfate	0.16	0.32
Endrin aldehyde	0.16	0.32
Endrin ketone	0.16	0.32
Endosulfan II	0.16	0.32
Tetrachloro-m-xylene	0.08	0.16
Decachlorobiphenyl	0.16	0.32

MULTI-RESPONSE STANDARD MIXTURES

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
Aroclor-1016	0.1	0.2
Aroclor-1221	0.2	0.4
Aroclor-1232	0.1	0.2

Aroclor-1242	0.1	0.2
Aroclor-1248	0.1	0.2
Aroclor-1254	0.1	0.2
Aroclor-1260	0.1	0.2
Toxaphene	0.5	1.0

All manual integrations in this data package for GC/EC have been performed for one of the following reasons:

a. Data system missed a peak during processing.
b. Data system improperly integrated a peak.

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 his designee, as verified by the following signature.

Brett R Dees
GC Group Leader

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Level:(low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	VBLK1	100	104	99		0
02	EAPH5	120	105	111		0
03	EAPH5MS	103	87	98		0
04	EAPH5MSD	116	79	96		0
05	EAPJ3	115	85	100		0
06	EAPJ4	238*	61	104		1
07	EAPJ5	268*	46*	107		2
08	EAPJ6	162*	63	105		1
09	VBLK2	102	96	97		0
10	EAPH6	246*	41*	85		2
11	EAPH7	324*	83	63*		2
12	EAPH8	123	76	97		0
13	EAPH9	134	79	96		0
14	EAPJ0	106	71	90		0
15	EAPJ1	121	83	99		0
16	EAPJ2	112	76	94		0
17	EAPJ4RE	192*	56*	100		2
18	EAPJ5RE	232*	56*	100		2
19	EAPJ6RE	128	67	94		0
20	VBLK3	105	97	97		0
21	EAPH6RE	248*	43*	97		2
22	EAPH7RE	236*	64	70		1
23	EAPH8RE	118	80	99		0
24	EAPH9RE	138	84	108		0
25	EAPJ0RE	120	84	110		0
26	EAPJ1RE	119	79	102		0
27	EAPJ2RE	114	80	98		0
28	VBLK4	102	96	93		0
29	VHBLK1	102	99	98		0
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

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix Spike - EPA Sample No.: EAPH5 Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMIT REC.
1,1-Dichloroethene	55	0	48	87	59-17
Trichloroethene	55	0	47	85	62-13
Benzene	55	0	50	91	66-14
Toluene	55	2	52	91	59-13
Chlorobenzene	55	0	48	87	60-13

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	55	42	76	13	22	59-17
Trichloroethene	55	46	84	1	24	62-13
Benzene	55	51	93	2	21	66-14
Toluene	55	55	96	5	21	59-13
Chlorobenzene	55	43	78	11	21	60-13

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-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Lab File ID: L16814.D Lab Sample ID: L950718A

Date Analyzed: 07/18/95 Time Analyzed: 1429

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: L

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EAPH5	22896.01	L16821.D	1744
02	EAPH5MS	22896.01MS	L16822.D	1812
03	EAPH5MSD	22896.01MSD	L16823.D	1838
04	EAPJ3	22896.09	L16831.D	2159
05	EAPJ4	22896.10	L16832.D	2223
06	EAPJ5	22896.11	L16833.D	2247
07	EAPJ6	22896.12	L16834.D	2312
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COMMENTS:

page 01 of 01

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Lab File ID: L16839.D Lab Sample ID: L950719A

Date Analyzed: 07/19/95 Time Analyzed: 1610

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: L

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EAPH6	22896.02	L16842.D	1738
02	EAPH7	22896.03	L16843.D	1806
03	EAPH8	22896.04	L16844.D	1834
04	EAPH9	22896.05	L16845.D	1903
05	EAPJ0	22896.06	L16846.D	1931
06	EAPJ1	22896.07	L16848.D	1958
07	EAPJ2	22896.08	L16849.D	2025
08	EAPJ4RE	22896.10RA	L16850.D	2052
09	EAPJ5RE	22896.11RA	L16851.D	2117
10	EAPJ6RE	22896.12RA	L16852.D	2143
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COMMENTS:

page 01 of 01

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK3

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Lab File ID: L16855.D Lab Sample ID: L950720A

Date Analyzed: 07/20/95 Time Analyzed: 1236

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: L

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EAPH6RE	22896.02RA	L16863.D	1736
02	EAPH7RE	22896.03RA	L16864.D	1802
03	EAPH8RE	22896.04RA	L16865.D	1829
04	EAPH9RE	22896.05RA	L16866.D	1856
05	EAPJ0RE	22896.06RA	L16867.D	1922
06	EAPJ1RE	22896.07RA	L16868.D	1948
07	EAPJ2RE	22896.08RA	L16869.D	2013
08				
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COMMENTS:

page 01 of 01

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK4

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Lab File ID: L16875.D Lab Sample ID: L950721A

Date Analyzed: 07/21/95 Time Analyzed: 1206

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: L

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHBLK1	VHBLK23773	L16876.D	1243
02				
03				
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COMMENTS:

page 01 of 01

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: L950718A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16814.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/18/95

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	1	J
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	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.

VBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: L950718A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16814.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/18/95

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-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: L950719A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16839.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/19/95

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	12	
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.

VBLK2

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: L950719A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16839.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/19/95

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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FORM I VOA-TIC OLM03

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK3

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: L950720A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16855.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/20/95

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	2	J
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	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.

VBLK3

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: L950720A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16855.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/20/95

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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FORM I VOA-TIC OLM03

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK4

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: L950721A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16875.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/21/95

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	2	J
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	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.

VBLK4

Lab Name: SWL-TULSA Contract: 68-D5-0026

Lab Code: SWOK Case No.: 23773 SAS No.: SDG No.: EAPH5

Matrix: (soil/water) SOIL Lab Sample ID: L950721A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L16875.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/21/95

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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FORM I VOA-TIC OLM03

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

trument ID Number: P0 Method: P

rt date: 07/22/95 End date: 07/22/95

EPA ample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZ	1.00	1116		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1119		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	5.00	1124		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1130		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1133		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	5.00	1138		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1144		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1147		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.00	1150		X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	-
B	1.00	1153		X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	-
ZZZZ	1.00	1201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1205		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1210		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	5.00	1214		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1218		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1221		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1224		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1231		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1240		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZ	1.00	1245		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V	1.00	1248		X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	-
B	1.00	1251		X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	-
ZZZZ	1.00	1256		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I	1.00	1313		-	X	X	-	X	X	-	X	X	X	-	X	-	X	-	X	-	X	X	-	X	X	X	-
SA	1.00	1322		X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	-
SAB	1.00	1327		X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	-
V	1.00	1330		X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	-
B	1.00	1333		X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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14

ANALYSIS RUN LOG

b Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

b Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

strument ID Number: P0 Method: P

art date: 07/22/95 End date: 07/22/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
EADW3	1.00	0920		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
EADW4	1.00	0923		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
EADW5	1.00	0927		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
EADW6	1.00	0930		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
EADW7	1.00	0933		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CV	1.00	0936		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CB	1.00	0939		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
EADW8	1.00	0942		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	
EADW9	1.00	0945		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
EADX0	1.00	0948		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
EADX1	1.00	0951		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ZZZZZ	1.00	0954																									
ZZZZZ	1.00	0957		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1000		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1003		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1006		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1013																									
CV	1.00	1016		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CB	1.00	1019		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ZZZZZ	1.00	1026		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1029		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1032		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	5.00	1035																									
EADW0	1.00	1042		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
EADW0D	1.00	1046		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
EADW0S	1.00	1049			X	X	X	X	X		X	X	X		X		X	_	X		X	X		X	X	X	_
EADW0L	5.00	1052		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ZZZZZ	1.00	1100		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1103																									
CV	1.00	1106		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CB	1.00	1109		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ZZZZZ	1.00	1113		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

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14

ANALYSIS RUN LOG

Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

trument ID Number: P0 Method: P

rt date: 07/22/95 End date: 07/22/95

EPA ample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
	1.00	0708		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
	1.00	0712			X	X	X	X	X		X	X	X		X		X		X						X	X	
	1.00	0714																			X			X			
	1.00	0716		X						X				X		X				X			X				
	1.00	0718																				X					
V	1.00	0719		X			X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
V	1.00	0722				X															X						
V	1.00	0726			X																						
V	1.00	0729																						X			
3	1.00	0734		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
I	1.00	0738			X	X		X	X		X	X	X		X		X		X		X	X		X	X	X	
SA	1.00	0743		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
SAB	1.00	0747		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
V	1.00	0750		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
B	1.00	0753		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZ	1.00	0756																									
ZZZZ	1.00	0759																									
S	1.00	0802		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZ	1.00	0805																									
SS	1.00	0813		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZ	1.00	0823																									
ZZZZ	1.00	0828																									
ZZZZ	1.00	0833																									
ZZZZ	1.00	0837																									
ZZZZ	1.00	0851																									
V	1.00	0854		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
B	1.00	0857		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZ	1.00	0901																									
ZZZZ	1.00	0906																									
ZZZZ	1.00	0909																									
ADW1	1.00	0913		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ADW2	1.00	0916		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	

U.S. EPA - CLP

14
ANALYSIS RUN LOG

b Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

b Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

strument ID Number: CV Method: CV

art date: 07/18/95 End date: 07/18/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CB	1.00	1614																X									
EADW4	1.00	1616																X									
EADW5	1.00	1618																X									
EADW6	1.00	1620																X									
EADW7	1.00	1622																X									
EADW8	1.00	1624																X									
EADW9	1.00	1626																X									
EADX0	1.00	1628																X									
EADX1	1.00	1630																X									
ZZZZZ	1.00	1632																									
CV	1.00	1634																X									
CB	1.00	1636																X									

FORM XIV - IN ILM03.0

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

trument ID Number: CV Method: CV

rt date: 07/18/95 End date: 07/18/95

EPA ample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
	1.00	1510																X									
.5	1.00	1512																X									
.0	1.00	1514																X									
.0	1.00	1516																X									
0.0	1.00	1518																X									
V	1.00	1520																X									
B	1.00	1522																X									
V	1.00	1524																X									
B	1.00	1526																X									
	1.00	1528																X									
ZZZZ	1.00	1530																									
ZZZZ	1.00	1532																									
ZZZZ	1.00	1534																									
ZZZZ	1.00	1536																									
ZZZZ	1.00	1538																									
ZZZZ	1.00	1540																									
ZZZZ	1.00	1542																									
ZZZZ	1.00	1544																									
ZZZZ	1.00	1546																									
V	1.00	1548																X									
B	1.00	1550																X									
ZZZZ	1.00	1552																									
ZZZZ	1.00	1554																									
S	1.00	1556																X									
SS	10.00	1558																X									
ADW0	1.00	1600																X									
ADW0D	1.00	1602																X									
ADW0S	1.00	1604																X									
ADW1	1.00	1606																X									
ADW2	1.00	1608																X									
ADW3	1.00	1610																X									
V	1.00	1612																X									

U.S. EPA - CLP

14
ANALYSIS RUN LOG

ɔ Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

ɔ Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

strument ID Number: CN Method: C

art date: 07/17/95 End date: 07/17/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ɔ	1.00	1230																									X
10.0	1.00	1232																									X
100.0	1.00	1234																									X
500.0	1.00	1236																									X
1000.0	1.00	1238																									X
CV	1.00	1240																									X
CB	1.00	1242																									X
CV	1.00	1244																									X
CB	1.00	1246																									
ZZZZZ	1.00	1248																									
BS	1.00	1250																									X
CSS	1.00	1252																									X
EADW0	1.00	1254																									X
EADW0D	1.00	1256																									X
EADW0S	1.00	1300																									X
EADW1	1.00	1302																									X
EADW2	1.00	1304																									X
EADW3	1.00	1306																									X
EADW4	1.00	1308																									X
CV	1.00	1310																									X
CB	1.00	1312																									X
EADW5	1.00	1314																									X
EADW6	1.00	1316																									X
EADW7	1.00	1318																									X
EADW8	1.00	1320																									X
EADW9	1.00	1322																									X
EADX0	1.00	1324																									X
EADX1	1.00	1326																									X
CV	1.00	1328																									X
CB	1.00	1330																									X

FORM XIV - IN ILM03.0

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 08-11-95

SUBJECT: **Review of Region V CLP Data Received for Review on** July 28, 1995

FROM: **Dennis Wesolowski, Chief (SQC-14J) Contract Analytical Services Section** L. Finkelberg for D. Wesolowski

TO: **Data User:** IEPA

We have reviewed the data for the following case:

SITE NAME: Bemis Corp (IL)

CASE NUMBER: 23773 **SDG NUMBER:** MEADW0

Number and Type of Samples: 12 (soil)

Sample Numbers: MEADW0-9 MEADX0-1

Laboratory: Chemtech **Hrs. for Review:** 9.9 +0.5

Following are our findings:

The ICP serial dilution of Na is out of control. The CCB was found to contain contamination. All data are usable with the qualifications described in the attached narrative.

L. Finkelberg
08-11-95

cc: Regional TPO

NARRATIVE

SITE : BEMIS CORP. CASE: 23773
LABORATORY: CHEMTECH SDG: MEADW0

The laboratory's portion of this case contains 12 low level soil samples analyzed for total metals and total cyanide. All metals were analyzed by ICP except Hg. The following narrative lists the out of control audits and their possible effects on the results.

EVIDENTIAL AUDIT:

The original ICP raw data pages for 45-137 and the original Hg raw data for pages 139-143 are with case 23778, SDG: METZ44. The remaining raw data, airbill, DC-1 form, DC-2 forms, all forms, and sample tags are originals. An organic sample tag was included with the data case. The sample tag(#EAPH5) was placed in the organic data case(#23773, SDG: EAPH5).

All forms are present and in the order indicated on the DC-2 forms[Inventory sheet].

ICP ANALYSES:

The ICP serial dilution of Na(22.1%) is out of control. All Na data are estimated(J) due to interference.

The duplicate audit of Ag(200 RPD) was not flagged(*) by the laboratory because the technical criterion for soils(+/- 2X CRDL) was not exceeded. Ag data are not qualified on this basis. All Ag data are acceptable.

The matrix spike recovery of Mn(70.6%) was not flagged by the laboratory since the sample result was four times greater than the spike concentration. Mn data are not qualified based on this audit and are acceptable.

The CCB was found to contain Tl(7.5 ug/L). Tl data for samples MEADW2 and MEADW3 are estimated(J) due to contamination.

OTHER QUALIFIERS:

All CN and Hg data are acceptable.

Reviewed by: _____ **Lockheed/ESAT**
Date: 8/2/95

DATA QUALIFIER DEFINITIONS

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

U Indicates the material was analyzed, 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 Indicates the associated value is an estimated quantity.

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

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

E Indicates 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 Indicates duplicate injection precision is not met.

N Indictaes the spike sample recovery is not within control limits.

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

W Indicates the 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.

+ Indicates the correlation coefficient for the MSA is less than 0.995.

* Indicates the duplicate analysis is 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.

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Lab Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

SOW No.: ILM03.0

EPA SAMPLE NO.	Lab Sample ID.
MEADW0	43984S
MEADW0D	43985S2
MEADW0S	43986DS
MEADW1	43987S
MEADW2	43988S
MEADW3	43989S
MEADW4	43990S
MEADW5	43991S
MEADW6	43992S
MEADW7	43993S
MEADW8	43994S
MEADW9	43995S
MEADX0	43996S
MEADX1	43997S

RECEIVED
JUL 28 1995
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:
The "E" qualifier on form I and Form IX for the Sodium indicates the chemical and physical interference were suspected during the Sodium analysis only.

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: Name: PARVEEN HASAN

Date: 07/26/95 Title: QA/QC OFFICER

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEADW0

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Lab Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

Matrix (soil/water): SOIL Lab Sample ID: 43984S

Level (low/med): LOW Date Received: 07/13/95

% Solids: 92.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7320			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	10.1			P
7440-39-3	Barium	53.2			P
7440-41-7	Beryllium	0.22	U		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	53600			P
7440-47-3	Chromium	15.7			P
7440-48-4	Cobalt	6.3	B		P
7440-50-8	Copper	16.2			P
7439-89-6	Iron	17900			P
7439-92-1	Lead	23.2			P
7439-95-4	Magnesium	28900			P
7439-96-5	Manganese	612			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	17.0			P
7440-09-7	Potassium	1340			P
7782-49-2	Selenium	1.1	U		P
7440-22-4	Silver	0.23	B		P
7440-23-5	Sodium	202	B	E	P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	21.4			P
7440-66-6	Zinc	155			P
7440-66-6	Cyanide	0.54	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEADW1

I ⁾ Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Lab Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

Matrix (soil/water): SOIL Lab Sample ID: 43987S

Level (low/med): LOW Date Received: 07/13/95

% Solids: 53.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17800			P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	21.9			P
7440-39-3	Barium	283			P
7440-41-7	Beryllium	3.9			P
7440-43-9	Cadmium	8.8			P
7440-70-2	Calcium	59600			P
7440-47-3	Chromium	37.7			P
7440-48-4	Cobalt	8.1	B		P
7440-50-8	Copper	59.5			P
7439-89-6	Iron	22400			P
7439-92-1	Lead	101			P
7439-95-4	Magnesium	4130			P
7439-96-5	Manganese	570			P
7439-97-6	Mercury	0.19	U		CV
7440-02-0	Nickel	27.7			P
7440-09-7	Potassium	3640			P
7782-49-2	Selenium	1.8	U		P
7440-22-4	Silver	0.50	B		P
7440-23-5	Sodium	1590	B	E	P
7440-28-0	Thallium	2.6	U		P
7440-62-2	Vanadium	57.6			P
7440-66-6	Zinc	757			P
7440-66-6	Cyanide	0.94	U		C

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

EPA SAMPLE NO.

MEADW2

INORGANIC ANALYSIS DATA SHEET

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Lab Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

Matrix (soil/water): SOIL Lab Sample ID: 43988S

Level (low/med): LOW Date Received: 07/13/95

% Solids: 48.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18300			P
7440-36-0	Antimony	2.4	U		P
7440-38-2	Arsenic	24.9			P
7440-39-3	Barium	141			P
7440-41-7	Beryllium	4.5			P
7440-43-9	Cadmium	15.2			P
7440-70-2	Calcium	68700			P
7440-47-3	Chromium	38.8			P
7440-48-4	Cobalt	6.6	B		P
7440-50-8	Copper	24.2			P
7439-89-6	Iron	29600			P
7439-92-1	Lead	137			P
7439-95-4	Magnesium	4580			P
7439-96-5	Manganese	781			P
7439-97-6	Mercury	0.21	U		CV
7440-02-0	Nickel	28.0			P
7440-09-7	Potassium	4200			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	0.55	B		P
7440-23-5	Sodium	1420	B	E	P
7440-28-0	Thallium	2.9	B		P
7440-62-2	Vanadium	51.1			P
7440-66-6	Zinc	1160			P
7440-66-6	Cyanide	1.0	U		C

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEADW3

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Lab Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

Matrix (soil/water): SOIL Lab Sample ID: 43989S

Level (low/med): LOW Date Received: 07/13/95

% Solids: 92.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12000			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	27.8			P
7440-39-3	Barium	76.1			P
7440-41-7	Beryllium	0.59	B		P
7440-43-9	Cadmium	0.21	U		P
7440-70-2	Calcium	10100			P
7440-47-3	Chromium	26.0			P
7440-48-4	Cobalt	9.0	B		P
7440-50-8	Copper	37.2			P
7439-89-6	Iron	24400			P
7439-92-1	Lead	88.3			P
7439-95-4	Magnesium	7870			P
7439-96-5	Manganese	560			P
7439-97-6	Mercury	0.22			CV
7440-02-0	Nickel	28.3			P
7440-09-7	Potassium	1850			P
7782-49-2	Selenium	1.0	U		P
7440-22-4	Silver	0.22	B		P
7440-23-5	Sodium	178	B	E	P
7440-28-0	Thallium	1.5	B		P
7440-62-2	Vanadium	19.5			P
7440-66-6	Zinc	230			P
7440-66-6	Cyanide	0.54	U		C

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

EPA SAMPLE NO.

MEADW4

INORGANIC ANALYSIS DATA SHEET

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Lab Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

Matrix (soil/water): SOIL Lab Sample ID: 43990S

Level (low/med): LOW Date Received: 07/13/95

% Solids: 83.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7060			P
7440-36-0	Antimony	2.2	B		P
7440-38-2	Arsenic	20.2			P
7440-39-3	Barium	84.8			P
7440-41-7	Beryllium	0.51	B		P
7440-43-9	Cadmium	0.25	B		P
7440-70-2	Calcium	43900			P
7440-47-3	Chromium	25.0			P
7440-48-4	Cobalt	7.4	B		P
7440-50-8	Copper	40.4			P
7439-89-6	Iron	22800			P
7439-92-1	Lead	85.7			P
7439-95-4	Magnesium	19600			P
7439-96-5	Manganese	622			P
7439-97-6	Mercury	0.24			CV
7440-02-0	Nickel	48.7			P
7440-09-7	Potassium	1430			P
7782-49-2	Selenium	1.2	U		P
7440-22-4	Silver	0.36	B		P
7440-23-5	Sodium	359	B	E	P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	22.8			P
7440-66-6	Zinc	5220			P
7440-66-6	Cyanide	0.60	U		C

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEADW5

I Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Lab Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

Matrix (soil/water): SOIL Lab Sample ID: 43991S

Level (low/med): LOW Date Received: 07/13/95

% Solids: 91.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8940			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	13.6			P
7440-39-3	Barium	87.7			P
7440-41-7	Beryllium	0.23	B		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	36200			P
7440-47-3	Chromium	22.7			P
7440-48-4	Cobalt	4.8	B		P
7440-50-8	Copper	60.5			P
7439-89-6	Iron	21100			P
7439-92-1	Lead	390			P
7439-95-4	Magnesium	10500			P
7439-96-5	Manganese	320			P
7439-97-6	Mercury	0.22			CV
7440-02-0	Nickel	16.9			P
7440-09-7	Potassium	888	B		P
7782-49-2	Selenium	1.1	U		P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	339	B	E	P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	13.4			P
7440-66-6	Zinc	525			P
7440-66-6	Cyanide	0.55	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEADW6

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Lab Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

Matrix (soil/water): SOIL Lab Sample ID: 43992S

Level (low/med): LOW Date Received: 07/13/95

% Solids: 94.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5030			P
7440-36-0	Antimony	2.9	B		P
7440-38-2	Arsenic	21.0			P
7440-39-3	Barium	82.0			P
7440-41-7	Beryllium	0.21	U		P
7440-43-9	Cadmium	0.89	B		P
7440-70-2	Calcium	71500			P
7440-47-3	Chromium	23.5			P
7440-48-4	Cobalt	4.1	B		P
7440-50-8	Copper	49.7			P
7439-89-6	Iron	19500			P
7439-92-1	Lead	176			P
7439-95-4	Magnesium	26000			P
7439-96-5	Manganese	420			P
7439-97-6	Mercury	0.36			CV
7440-02-0	Nickel	16.5			P
7440-09-7	Potassium	1130			P
7782-49-2	Selenium	1.0	U		P
7440-22-4	Silver	0.21	U		P
7440-23-5	Sodium	935	B	E	P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	13.0			P
7440-66-6	Zinc	381			P
7440-66-6	Cyanide	0.53	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEADW7

Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

rix (soil/water): SOIL Lab Sample ID: 43993S

el (low/med): LOW Date Received: 07/13/95

olids: 94.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5040			P
7440-36-0	Antimony	1.8	B		P
7440-38-2	Arsenic	17.0			P
7440-39-3	Barium	73.6			P
7440-41-7	Beryllium	0.21	U		P
7440-43-9	Cadmium	0.77	B		P
7440-70-2	Calcium	60800			P
7440-47-3	Chromium	22.5			P
7440-48-4	Cobalt	5.6	B		P
7440-50-8	Copper	42.9			P
7439-89-6	Iron	15900			P
7439-92-1	Lead	162			P
7439-95-4	Magnesium	21100			P
7439-96-5	Manganese	416			P
7439-97-6	Mercury	0.28			CV
7440-02-0	Nickel	20.3			P
7440-09-7	Potassium	961	B		P
7782-49-2	Selenium	1.0	U		P
7440-22-4	Silver	0.27	B		P
7440-23-5	Sodium	951	B	E	P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	12.1			P
7440-66-6	Zinc	489			P
7440-66-6	Cyanide	0.53	U		C

lor Before: BROWN Clarity Before: Texture: MEDIUM

lor After: YELLOW Clarity After: Artifacts:

ents:

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEADW8

) Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

) Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

:rix (soil/water): SOIL Lab Sample ID: 43994S

/el (low/med): LOW Date Received: 07/13/95

Solids: 78.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5660			P
7440-36-0	Antimony	1.5	U		P
7440-38-2	Arsenic	5.2			P
7440-39-3	Barium	41.0	B		P
7440-41-7	Beryllium	0.25	U		P
7440-43-9	Cadmium	0.25	U		P
7440-70-2	Calcium	12800			P
7440-47-3	Chromium	65.4			P
7440-48-4	Cobalt	4.0	B		P
7440-50-8	Copper	15.8			P
7439-89-6	Iron	10900			P
7439-92-1	Lead	22.3			P
7439-95-4	Magnesium	8150			P
7439-96-5	Manganese	160			P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	41.6			P
7440-09-7	Potassium	853	B		P
7782-49-2	Selenium	1.2	U		P
7440-22-4	Silver	0.38	B		P
7440-23-5	Sodium	512	B	E	P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	15.1			P
7440-66-6	Zinc	68.7			P
7440-66-6	Cyanide	0.64	U		C

:lor Before: BROWN Clarity Before: Texture: MEDIUM

lor After: YELLOW Clarity After: Artifacts:

mments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEADW9

) Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

) Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

:rix (soil/water): SOIL Lab Sample ID: 43995S

/el (low/med): LOW Date Received: 07/13/95

Solids: 45.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13500			P
7440-36-0	Antimony	2.6	U		P
7440-38-2	Arsenic	7.3			P
7440-39-3	Barium	584			P
7440-41-7	Beryllium	1.3	B		P
7440-43-9	Cadmium	0.48	B		P
7440-70-2	Calcium	87300			P
7440-47-3	Chromium	56.6			P
7440-48-4	Cobalt	5.0	B		P
7440-50-8	Copper	42.5			P
7439-89-6	Iron	30100			P
7439-92-1	Lead	81.7			P
7439-95-4	Magnesium	7140			P
7439-96-5	Manganese	883			P
7439-97-6	Mercury	0.22	U		CV
7440-02-0	Nickel	28.2			P
7440-09-7	Potassium	726	B		P
7782-49-2	Selenium	2.2	U		P
7440-22-4	Silver	1.6	B		P
7440-23-5	Sodium	815	B	E	P
7440-28-0	Thallium	3.0	U		P
7440-62-2	Vanadium	25.7			P
7440-66-6	Zinc	476			P
7440-66-6	Cyanide	1.1	U		C

lor Before: BLACK Clarity Before: Texture: MEDIUM

lor After: YELLOW Clarity After: Artifacts:

ments:

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEADX0

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Lab Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

Matrix (soil/water): SOIL Lab Sample ID: 43996S

Level (low/med): LOW Date Received: 07/13/95

% Solids: 45.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13600			P
7440-36-0	Antimony	2.6	U		P
7440-38-2	Arsenic	4.1	B		P
7440-39-3	Barium	504			P
7440-41-7	Beryllium	1.3	B		P
7440-43-9	Cadmium	0.44	U		P
7440-70-2	Calcium	78200			P
7440-47-3	Chromium	41.0			P
7440-48-4	Cobalt	4.2	B		P
7440-50-8	Copper	34.4			P
7439-89-6	Iron	25900			P
7439-92-1	Lead	62.1			P
7439-95-4	Magnesium	7080			P
7439-96-5	Manganese	833			P
7439-97-6	Mercury	0.22	U		CV
7440-02-0	Nickel	26.6			P
7440-09-7	Potassium	721	B		P
7782-49-2	Selenium	2.2	U		P
7440-22-4	Silver	0.56	B		P
7440-23-5	Sodium	560	B	E	P
7440-28-0	Thallium	3.0	U		P
7440-62-2	Vanadium	26.5			P
7440-66-6	Zinc	3150			P
7440-66-6	Cyanide	1.1	U		C

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEADX1

b Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

b Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

trix (soil/water): SOIL Lab Sample ID: 43997S

vel (low/med): LOW Date Received: 07/13/95

Solids: 63.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13700			P
7440-36-0	Antimony	2.0	B		P
7440-38-2	Arsenic	14.8			P
7440-39-3	Barium	127			P
7440-41-7	Beryllium	1.8			P
7440-43-9	Cadmium	0.31	U		P
7440-70-2	Calcium	31100			P
7440-47-3	Chromium	28.7			P
7440-48-4	Cobalt	6.4	B		P
7440-50-8	Copper	40.6			P
7439-89-6	Iron	55800			P
7439-92-1	Lead	40.1			P
7439-95-4	Magnesium	1730			P
7439-96-5	Manganese	594			P
7439-97-6	Mercury	0.16	U		CV
7440-02-0	Nickel	27.0			P
7440-09-7	Potassium	2120			P
7782-49-2	Selenium	1.5	U		P
7440-22-4	Silver	0.31	U		P
7440-23-5	Sodium	1020	B	E	P
7440-28-0	Thallium	2.2	U		P
7440-62-2	Vanadium	27.2			P
7440-66-6	Zinc	665			P
7440-66-6	Cyanide	0.78	U		C

lor Before: BLACK Clarity Before: Texture: MEDIUM

lor After: YELLOW Clarity After: Artifacts:

ments:

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3

BLANKS

Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

paration Blank Matrix (soil/water): SOIL

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

alyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
uminum	6.0	U	-8.7	B	6.0	U	6.0	U	-2.134	B	P
timony	6.0	U	6.0	U	6.0	U	6.0	U	1.200	U	P
senic	9.0	U	9.0	U	9.0	U	9.0	U	1.800	U	P
rium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
ryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
dmium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
lcium	3.0	U	3.0	U	3.0	U	13.9	B	0.600	U	P
romium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
balt	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	P
pper	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
on	20.0	U	20.0	U	20.0	U	20.0	U	4.000	U	P
ad	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	P
gnesium	5.0	U	5.0	U	5.0	U	8.6	B	1.000	U	P
nganese	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
rcury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	CV
ckel	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	P
tassium	18.0	U	18.0	U	18.0	U	18.0	U	3.600	U	P
lenium	5.0	U	5.0	U	5.0	U	5.0	U	1.000	U	P
lver	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
dium	9.0	U	9.0	U	9.0	U	9.0	U	1.800	U	P
allium	7.0	U	7.0	U	7.0	U	7.5	B	1.400	U	P
nadium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
nc	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
anide	10.0	U	10.0	U	10.0	U	10.0	U	0.500	U	C

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3

BLANKS

ɔ Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

ɔ Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

eparation Blank Matrix (soil/water):

eparation Blank Concentration Units (ug/L or mg/kg):

ıalyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
ıuminum			8.5	B	13.6	B	6.1	B			P
ıtimony			6.0	U	6.0	U	6.0	U			P
rsenic			9.0	U	9.0	U	9.0	U			P
arium			1.0	U	1.0	U	1.0	U			P
eryllium			1.0	U	1.0	U	1.0	U			P
admium			1.0	U	1.0	U	1.0	U			P
cium			3.0	U	3.0	U	-5.5	B			P
ıromium			1.0	U	1.0	U	1.0	U			P
obalt			2.0	U	2.0	U	2.0	U			P
opper			1.0	U	1.0	U	1.0	U			P
ron			20.0	U	20.0	U	20.0	U			P
ead			2.0	U	2.0	U	2.0	U			P
agnesium			5.0	U	8.0	B	5.0	U			P
anganese			1.0	U	1.0	U	1.0	U			P
ercury			0.2	U							CV
ickel			2.0	U	2.0	U	2.0	U			P
otassium			18.0	U	18.0	U	18.0	U			P
elenium			5.0	U	5.0	U	5.0	U			P
ilver			1.0	U	1.0	U	1.0	U			P
odium			9.0	U	9.0	U	9.0	U			P
hallium			7.0	U	7.0	U	7.0	U			P
anadium			1.0	U	1.0	U	1.0	U			P
inc			3.0	U	3.0	U	3.0	U			P
yanide											NR

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3

BLANKS

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Lab Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

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			6.0	U	6.0	U					P
Antimony			6.0	U	6.0	U					P
Arsenic			9.0	U	9.0	U					P
Barium			1.0	U	1.0	U					P
Beryllium			1.0	U	1.0	U					P
Cadmium			1.0	U	1.0	U					P
Calcium			-3.0	B	-8.1	B					P
Chromium			1.0	U	1.0	U					P
Cobalt			2.0	U	2.0	U					P
Copper			1.0	U	1.0	U					P
Iron			20.0	U	20.0	U					P
Lead			2.0	U	2.0	U					P
Magnesium			8.6	B	5.0	U					P
Manganese			1.0	U	1.0	U					P
Mercury											NR
Nickel			2.0	U	2.0	U					P
Potassium			18.0	U	18.0	U					P
Selenium			5.0	U	5.0	U					P
Silver			1.0	U	1.0	U					P
Sodium			-11.4	B	-13.1	B					P
Thallium			7.0	U	7.0	U					P
Vanadium			1.0	U	-1.2	B					P
Zinc			3.0	U	3.0	U					P
Cyanide											NR

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5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEADW0S

b Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

b Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

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

Solids for Sample: 92.9

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
luminum									NR
ntimony	75-125	100.6609		1.2917	U	107.64	93.5		P
rsenic	75-125	400.0646		10.1055		430.57	90.6		P
arium	75-125	450.4198		53.2121		430.57	92.3		P
yllium	75-125	9.7309		0.2153	U	10.76	90.4		P
admium	75-125	8.7083		0.2153	U	10.76	80.9		P
alcium									NR
hromium	75-125	53.7330		15.6964		43.06	88.3		P
obalt	75-125	99.9311		6.2777	B	107.64	87.0		P
opper	75-125	66.8482		16.2282		53.82	94.1		P
ron									NR
ead	75-125	119.5565		23.2271		107.64	89.5		P
agnesium									NR
anganese		687.9225		611.9268		107.64	70.6		P
ercury	75-125	0.5759		0.1076	U	0.54	106.6		CV
ickel	75-125	110.8676		16.9602		107.64	87.2		P
otassium									NR
elenium	75-125	406.6738		1.0764	U	430.57	94.5		P
ilver	75-125	10.9279		0.2282	B	10.76	99.4		P
odium									NR
hallium	75-125	371.0441		1.5070	U	430.57	86.2		P
anadium	75-125	118.8741		21.3972		107.64	90.6		P
inc	75-125	242.8848		155.2443		107.64	81.4		P
yanide	75-125	5.8665		0.5382	U	5.38	109.0		C

mments:

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6

DUPLICATES

EPA SAMPLE NO.

MEADW0D

Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

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

olids for Sample: 92.9 % Solids for Duplicate: 92.9

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		7320.5597		7322.4973		0.0		P
Antimony		1.2917	U	1.2917	U			P
Arsenic	2.2	10.1055		9.6469		4.6		P
Barium	43.1	53.2121		53.2723		0.1		P
Beryllium		0.2153	U	0.2153	U			P
Cadmium		0.2153	U	0.2153	U			P
Calcium		53590.9580		53694.2949		0.2		P
Chromium		15.6964		15.6749		0.1		P
Cobalt		6.2777	B	6.4801	B	3.2		P
Copper	5.4	16.2282		16.2390		0.1		P
Iron		17926.5877		17979.3326		0.3		P
Lead		23.2271		22.7987		1.9		P
Magnesium		28899.8924		28930.0323		0.1		P
Manganese		611.9268		612.9602		0.2		P
Mercury		0.1076	U	0.1076	U			CV
Nickel	8.6	16.9602		17.1324		1.0		P
Potassium	1076.4	1342.8848		1344.8870		0.1		P
Selenium		1.0764	U	1.0764	U			P
Silver		0.2282	B	0.2153	U	200.0		P
Sodium		202.0710	B	201.8988	B	0.1		P
Thallium		1.5070	U	1.5070	U			P
Vanadium	10.8	21.3972		21.4080		0.1		P
Zinc		155.2443		155.1905		0.0		P
Cyanide		0.5382	U	0.5382	U			C

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10
INSTRUMENT DETECTION LIMITS (QUARTERLY)

ɔ Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

ɔ Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

? ID Number: Date: 04/15/95

ame AA ID Number: CV

rnace 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

mments:
CV: SPECTRO-PRODUCTS MERCURY ANALYZER

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10
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Name: CHEMTECH CONSULTING GROUP Contract: 68D30037

Code: CHEM Case No.: 23773 SAS No.: SDG No.: MEADW0

ID Number: P0 Date: 07/15/95

ne AA ID Number:

nace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.20		200	6.0	P
Antimony	206.80		60	6.0	P
Arsenic	189.00		10	9.0	P
Barium	493.40		200	1.0	P
Beryllium	313.00		5	1.0	P
Cadmium	226.50		5	1.0	P
Calcium	317.90		5000	3.0	P
Chromium	267.70		10	1.0	P
Cobalt	228.60		50	2.0	P
Copper	324.70		25	1.0	P
Iron	271.40		100	20.0	P
Lead	220.40		3	2.0	P
Magnesium	279.00		5000	5.0	P
Manganese	257.60		15	1.0	P
Mercury			0.2		NR
Nickel	231.60		40	2.0	P
Potassium	766.50		5000	18.0	P
Selenium	196.00		5	5.0	P
Silver	328.00		10	1.0	P
Sodium	588.90		5000	9.0	P
Thallium	190.90		10	7.0	P
Vanadium	292.40		50	1.0	P
Zinc	213.80		20	3.0	P

ments:
P0: ICP 61E TRACE ANALYZER