Reference 21

9532582

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

Date: July 19, 2000

Subject: Contract Laboratory Program Data Review

From: R. A. Flores for Marvelyn Humphrey, Alternate ESAT RPO, 6MD-HC

To: B. Rhotenberry, 6SF-RA

Site : FALCON REFINING

Case#: 28064

SDG# : F02J0

The EPA Region 6 Houston Branch ESAT data review team has completed a review of the submitted Contract Laboratory Program (CLP) data package for the referenced site. The samples analyzed and reviewed are detailed in the attached Regional data review report.

The data package is acceptable for regional use. Problems, if any, are listed in the report narrative.

If you have any questions regarding the data review report, please call me at (281) 983-2140.

Attachments
cc: R. Flores, Region 6 CLP/TPO
M. El-feky, Region 6 Data Coordinator
Files (2)

LOCKHEED MARTIN SERVICES GROUP
ESAT REGION VI
10101 SOUTHWEST FREEWAY, SUITE 500
HOUSTON, TX 77074

MEMORANDUM

DATE: July 11, 2000

TO: Melvin Ritter/Marvelyn Humphrey, ESAT RPO/Alternate RPO, Region VI

FROM: Tom C.H. Chiang, ESAT Team Manager, Region VI

SUBJECT: CLP Data Review

REF: TDF # 6-0385A ESAT # O-2204
ESAT Contract No. 68-D6-0005

Attached is the data review summary for Case # 28064
SDG # F02J0
Site Falcon Refining

COMMENTS:

I. CONTRACTUAL ASSESSMENT OF THE DATA PACKAGE

Hardcopy review found the following contractually non-compliant item that CCS did not report.

Internal standard (IS) responses exceeded the QC limits for BNA samples F0-2JA and F0-2JB (OLM04.2, D-51/SVOA, 11.3.6), but the laboratory did not reanalyze the same sample extracts (OLM04.2, D-53/SVOA, 11.4.3.2). The diluted analyses for these samples did not repeat the IS problems. It is, therefore, unknown whether matrix effects or instrument problems caused the outlying IS performance for these samples. Because of the outlying IS performance, six analyte results were qualified for these two samples.

II. TECHNICAL USABILITY ASSESSMENT OF THE DATA PACKAGE

The total number of sample results reviewed was 1410 for this data package. Some results were qualified because of technical problems. The significant technical problem is addressed below.

Pesticides γ-BHC and aldrin had low MS/MSD recoveries.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099

ORGANIC REGIONAL DATA ASSESSMENT

CASE NO.	28064	SITE	Falcon Refining
LABORATORY	AATS	NO. OF SAMPLES	10
CONTRACT#	68-W-00-077	MATRIX	Soil
SDG#	F02J0	REVIEWER (IF NOT ESD)	ESAT
SOW#	SOW OLM04.2	REVIEWER'S NAME	Ying-Ping Hsieh
ACCT#	050102DJN73	COMPLETION DATE	July 11, 2000
SF#	50102DZZ		

SAMPLE NO.					
	F0-2JA	F0-2J5	F0-2K2		
	F0-2JB	F0-2J7	F0-2K6		
	F0-2J0	F0-2J8			
	F0-2J1	F0-2KA			

DATA ASSESSMENT SUMMARY

	VOA	BNA	PEST
1. HOLDING TIMES	O	O	O
2. GC/MS TUNE/INSTR. PERFORM.	O	O	O
3. CALIBRATIONS	O	O	O
4. BLANKS	O	O	M
5. SMC/SURROGATES	O	O	O
6. MATRIX SPIKE/DUPLICATE	O	O	M
7. OTHER QC	N/A	N/A	N/A
8. INTERNAL STANDARDS (IS)	O	M	N/A
9. COMPOUND ID/QUANTITATION	O	O	M
10. PERFORMANCE/COMPLETENESS	O	O	O
11. OVERALL ASSESSMENT	O	M	M

O = Data had no problems.
M = Data qualified due to major or minor problems.
Z = Data unacceptable.
NA = Not applicable.

ACTION ITEMS: IS responses exceeded the QC limits for BNA samples F0-2JA and F0-2JB, but the laboratory failed to reanalyze the same sample extracts.

AREA OF CONCERN: Pesticides γ-BHC and aldrin had low MS/MSD recoveries. Laboratory contamination resulted in data qualification for four Pest/PCB samples. Endosulfan sulfate had two-column quantitation results differing by more than 25 percent in two samples.

NOTABLE PERFORMANCE:

COMMENTS/CLARIFICATIONS
REGION VI CLP QA REVIEW

CASE 28064 **SDG** F02J0 **SITE** Falcon Refining **LAB** AATS

The following is a summary of sample qualifiers used by Region 6 in reporting this CLP data:

No.	Acceptable	Provisional	Unacceptable
VOA	10		
BNA	8	2	
PEST	5	5	

COMMENTS: This SDG consisted of 10 soil samples for complete RAS organics analyses by CLP SOW OLM04.2. According to the OTR/COC records, sample F0-2J0 was the QC sample. The CRQL's require %moisture correction for the soil samples and additional dilution correction for the diluted samples. The corrected CRQL's are reported by the laboratory and are referred to as sample quantitation limits (SQL's) in this report. The VOA and BNA soil samples were analyzed following the low level methods. The laboratory used additional silica gel cleanup for Pest/PCB samples with the EPA permission. The data package arrived on time for the contractual 14-day turnaround time but contained the following contractually non-compliant item.

- IS responses exceeded the QC limits for BNA samples F0-2JA and F0-2JB but the laboratory failed to reanalyze the same sample extracts.

VOA Acetone was the only target analyte reported at concentrations above the SQL's in three samples.

BNA Target analytes reported at concentrations above the SQL's were PAH's, dibenzofuran, and/or carbazole in four samples. Samples F0-2JA and F0-2JB were analyzed and then diluted 5X because of high concentrations of PAH's. Sample F0-2J0 was diluted 5X because of high background matrix interferences. IS responses exceeded the QC limits for samples F0-2JA and F0-2JB, but the laboratory failed to reanalyze the same sample extracts to verify the cause of the outlying IS performance. The diluted analyses for these samples did not repeat the problems. Samples F0-2J0 and F0-2J0 MS/MSD had IS3 areas exceeding the QC limit, demonstrating matrix effects.

Pest/PCB Target analytes reported at concentrations above the SQL's included heptachlor in four samples, endosulfan sulfate in samples F0-2J0 and F0-2J1, and γ-chlordane in samples F0-2KA and F0-2K6 although the heptachlor and γ-chlordane concentrations in all these samples were solely due to laboratory contamination.

Some results are provisional for two BNA and five Pest/PCB samples because of problems with IS performance, laboratory contamination, MS/MSD recoveries, and compound quantitation.

ORGANIC QA REVIEW
CONTINUATION PAGE

CASE 28064 **SDG** F02J0 **SITE** Falcon Refining **LAB** AATS

COMMENTS: (continued)
The technical usability of all reported sample results is indicated by ESAT's final data qualifiers in the Data Summary Table. An Evidence Audit was conducted for the Complete Sample Delivery Group File (CSF), and the audit results were reported on the Evidence Inventory Checklist.

NOTE: THE FOLLOWING REVIEW NARRATIVE ADDRESSES BOTH CONTRACTUAL ISSUES (BASED ON THE STATEMENT OF WORK) AND TECHNICAL ISSUES (BASED ON THE NATIONAL FUNCTIONAL GUIDELINES). THE ASSESSMENT MADE FOR EACH QC PARAMETER IS SOLELY BASED ON THE TECHNICAL DATA USABILITY, WHICH MAY NOT NECESSARILY BE AFFECTED BY CONTRACTUAL PROBLEMS. THE ASSESSMENTS ARE DEFINED BELOW.

COMMENTS:

Acceptable = No results were qualified for any problem associated with this QC parameter.
Provisional = Some results were qualified because of problems associated with this QC parameter.
Unusable = All results are unusable because of major problems associated with this QC parameter.

1. **Holding Times:** Acceptable. All samples met contractual holding time criteria. No technical holding time criteria exist for soil samples.

2. **Tuning/Performance:** Acceptable. BFB and DFTPP analyses met GC/MS tuning criteria. Several pesticides had overlapping retention time windows on both columns, but the sample results were not affected by the chromatographic problem.

3. **Calibrations:** Acceptable. All calibrations met contractual criteria. Several VOA and BNA analytes failed technical %D calibration criteria. Since these analyte results in the associated samples were not reported at concentrations above the SQL's or were not recommended for use, data qualification was unnecessary.

4. **Blanks:** Provisional. The method, instrument, and storage blanks met the contractual criteria. No target analytes were detected in the BNA and storage blanks.

VOA Methylene chloride was detected at concentrations below the CRQL in the soil method blanks. All methylene chloride results with laboratory "B" flags (concentrations below the SQL's) should be considered as undetected (U).

CASE 28064 **SDG** F02J0 **SITE** Falcon Refining **LAB** AATS

Pest/PCB Heptachlor and γ-chlordane were detected at concentrations below the CRQL's in the method blank. The effects of the laboratory contamination are summarized below.

- The laboratory "B"-flagged heptachlor results in the samples should be considered as undetected (U), among which the heptachlor concentrations above the SQL's for samples F0-2J0, F0-2KA, F0-2K2, and F0-2K6 should be used as raised quantitation limits (M).

- The laboratory "B"-flagged γ-chlordane results in the samples should be considered as undetected (U), among which the γ-chlordane concentrations above the SQL's for samples F0-2KA and F0-2K6 should be used as the raised quantitation limits (M).

Field blank: According to the OTR/COC records, all samples in this SDG were associated with the field blank sample F0-2H3 (in SDG F0-2H1). The α-chlordane was reported at a concentration below the CRQL in this field blank. Because the associated soil samples have different sample matrix and reporting units than the field blank (water), the reviewer can not accurately access the soil sample results for field contamination.

5. **System Monitoring Compounds (SMC's)/Surrogates**: Acceptable. The SMC and surrogate recoveries were all within the QC limits.

6. **Matrix Spike/Matrix Spike Duplicate (MS/MSD)**: Provisional. The MS/MSD results met the QC criteria for precision and %recovery with the following exceptions. Pesticides γ-BHC and aldrin had low MS/MSD recoveries. The reviewer qualified the quantitation limits as estimated and biased low for these two compounds in the unspiked Pest/PCB sample F0-2J0.

7. **Other QC**: Not applicable.

8. **Internal Standards (IS)**: Provisional. Internal standard performance met the QC criteria for all VOA and BNA samples with the following exceptions. Samples F0-2J0, F0-2J0MS, and F0-2J0MSD had high IS recoveries, which did not appear to affect the MS/MSD results. IS responses exceeded the QC limits for BNA samples F0-2JA and F0-2JB, but the laboratory failed to reanalyze the same sample extracts to demonstrate matrix effect. The diluted analyses for these samples did not repeat the problems, probably because matrix effects were diluted out. For the outlying IS performance, the reviewer qualified the results above the SQL's as estimated for the analytes listed below:

CASE 28064 **SDG** F02J0 **SITE** Falcon Refining **LAB** AATS

8. **Internal Standards (IS):** (continued)
anthracene in sample F0-2JA and

acenaphthene, dibenzofuran, fluorene, anthracene, and carbazole in sample F0-2JB.

9. **Compound Identity/Quantitation:** Provisional. The reported analytes met compound identification criteria.

VOA Acetone was the only target analyte reported at concentrations above the SQL's in three samples.

BNA Target analytes reported at concentrations above the SQL's were PAH's, dibenzofuran, and/or carbazole in four samples. Samples F0-2JA and F0-2JB were analyzed and then diluted 5X because of high concentrations of PAH's. Sample F0-2J0 was diluted 5X because of high background matrix interferences.

Pest/PCB Target analytes reported at concentrations above the SQL's included heptachlor in four samples, endosulfan sulfate in samples F0-2J0 and F0-2J1, and γ-chlordane in samples F0-2KA and F0-2K6. The laboratory reported extremely low concentrations (less than 10 percent of the SQL's) for some pesticides. The reviewer raised these low concentrations to the SQL's and "U"-flagged them following the Region 6 guidelines. The laboratory "P"-flagged endosulfan sulfate results in samples F0-2J0 and F0-2J1 were qualified as estimated because two-column quantitation results differed by more than 25 percent.

10. **Performance/Completeness:** Acceptable. The laboratory mailed revised SDG narrative page 1, BFB raw data pages 234 and 235, and Form 1G (page 709) for BNA sample F0-2KA in response to the CCS report. The resubmission was reviewed and used to replace the original one in the CSF package. The data package was complete but contained some reporting errors. The laboratory was contacted for correction and resubmission (see FAX Record Log).

11. **Overall Assessment:** Data are acceptable for all VOA, eight BNA, and five Pest/PCB samples.

BNA Some results were qualified for samples F0-2JA and F0-2JB because of problems with IS performance.

Pest/PCB Some results were qualified for the following samples because of problems with laboratory contamination, MS/MSD recoveries, and compound quantitation:

F0-2J0, F0-2J1, F0-2KA, F0-2K2, and F0-2K6.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

U	Not detected at reported quantitation limit.
N	Identification is tentative.
J	Estimated value.
L	Reported concentration is below the CRQL.
M	Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
R	Unusable.
^	High biased. Actual concentration may be lower than the concentration reported.
v	Low biased. Actual concentration may be higher than the concentration reported.
F+	A false positive exists.
F-	A false negative exists.
B	This result may be high biased because of laboratory/field contamination. The reported concentration is above 5X or 10X the concentration reported in the method/field blank.
UJ	Estimated quantitation limit.
T	Identification is questionable because of absence of other commonly coexisting pesticides.
*	Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

Rev. 11/99

ORGANIC DATA SUMMARY

Case No.: 28054 SDG: F02J0 Reviewer: Y. Hsieh

Laboratory: AATS Matrix: Soil Units: ug/Kg

VOLATILE EPA SAMPLE NUMBER:	F0-2JA	FLAG	F0-2JB	FLAG	F0-2J0	FLAG	F0-2J1	FLAG	F0-2J5	FLAG	F0-2J7	FLAG	F0-2J8	FLAG
Dichlorodifluoromethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Chloromethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Vinyl Chloride	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Bromomethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Chloroethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Trichlorofluoromethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,1-Dichloroethene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,1,2-Trichloro-1,2,2-trifluoroethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Acetone	14	U	15	U	17		14	U	12	U	150		12	U
Carbon Disulfide	4	LJ	15	U	4	LJ	2	LJ	12	U	13	U	12	U
Methyl Acetate	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Methylene Chloride	14	U	15	U	15	U	14	U	12	U	13	U	12	U
trans-1,2-Dichloroethene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Methyl tert-Butyl Ether	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,1-Dichloroethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
cis-1,2-Dichloroethene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
2-Butanone	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Chloroform	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,1,1-Trichloroethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Cyclohexane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Carbon Tetrachloride	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Benzene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,2-Dichloroethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Trichloroethene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Methylcyclohexane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,2-Dichloropropane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Bromodichloromethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
cis-1,3-Dichloropropene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
4-Methyl-2-pentanone	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Toluene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
trans-1,3-Dichloropropene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,1,2-Trichloroethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Tetrachloroethene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
2-Hexanone	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Dibromochloromethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,2-Dibromoethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Chlorobenzene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Ethylbenzene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Xylenes (total)	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Styrene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Bromoform	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Isopropylbenzene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,1,2,2-Tetrachloroethane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,3-Dichlorobenzene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,4-Dichlorobenzene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,2-Dichlorobenzene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,2-Dibromo-3-chloropropane	14	U	15	U	15	U	14	U	12	U	13	U	12	U
1,2,4-Trichlorobenzene	14	U	15	U	15	U	14	U	12	U	13	U	12	U
Sample wt (g):	5.4		4.1		5		5		5.3		5.3		5.6	
%Moisture:	34		20		32		26		20		29		25	
Dilution Factor:	1		1		1		1		1		1		1	
Level:	Low		Low		Low		Low		Low		Low		Low	
Number of TIC's:	0		3		3		3		3		3		3	

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No.: 28064 SDG: F02J0 Reviewer: Y. Hsieh

Laboratory: AATS Matrix: Soil Units: ug/Kg

VOLATILE EPA SAMPLE NUMBER:	F0-2KA	FLAG	F0-2K2	FLAG	F0-2K5	FLAG		FLAG		FLAG		FLAG		FLAG
Dichlorodifluoromethane	11	U	12	U	11	U								
Chloromethane	11	U	12	U	11	U								
Vinyl Chloride	11	U	12	U	11	U								
Bromomethane	11	U	12	U	11	U								
Chloroethane	11	U	12	U	11	U								
Trichlorofluoromethane	11	U	12	U	11	U								
1,1-Dichloroethene	11	U	12	U	11	U								
1,1,2-Trichloro-1,2,2-trifluoroethane	11	U	12	U	11	U								
Acetone	38		12	U	11	U								
Carbon Disulfide	11	U	12	U	11	U								
Methyl Acetate	11	U	12	U	11	U								
Methylene Chloride	11	U	12	U	11	U								
trans-1,2-Dichloroethene	11	U	12	U	11	U								
Methyl tert-Butyl Ether	11	U	12	U	11	U								
1,1-Dichloroethane	11	U	12	U	11	U								
cis-1,2-Dichloroethene	11	U	12	U	11	U								
2-Butanone	11	U	12	U	11	U								
Chloroform	11	U	12	U	11	U								
1,1,1-Trichloroethane	11	U	12	U	11	U								
Cyclohexane	11	U	12	U	11	U								
Carbon Tetrachloride	11	U	12	U	11	U								
Benzene	11	U	12	U	11	U								
1,2-Dichloroethane	11	U	12	U	11	U								
Trichloroethene	11	U	12	U	11	U								
Methylcyclohexane	11	U	12	U	11	U								
1,2-Dichloropropane	11	U	12	U	11	U								
Bromodichloromethane	11	U	12	U	11	U								
cis-1,3-Dichloropropene	11	U	12	U	11	U								
4-Methyl-2-pentanone	11	U	12	U	11	U								
Toluene	11	U	12	U	11	U								
trans-1,3-Dichloropropene	11	U	12	U	11	U								
1,1,2-Trichloroethane	11	U	12	U	11	U								
Tetrachloroethene	11	U	12	U	11	U								
2-Hexanone	11	U	12	U	11	U								
Dibromochloromethane	11	U	12	U	11	U								
1,2-Dibromoethane	11	U	12	U	11	U								
Chlorobenzene	11	U	12	U	11	U								
Ethylbenzene	11	U	12	U	11	U								
Xylenes (total)	11	U	12	U	11	U								
Styrene	11	U	12	U	11	U								
Bromoform	11	U	12	U	11	U								
Isopropylbenzene	11	U	12	U	11	U								
1,1,2,2-Tetrachloroethane	11	U	12	U	11	U								
1,3-Dichlorobenzene	11	U	12	U	11	U								
1,4-Dichlorobenzene	11	U	12	U	11	U								
1,2-Dichlorobenzene	11	U	12	U	11	U								
1,2-Dibromo-3-chloropropane	11	U	12	U	11	U								
1,2,4-Trichlorobenzene	11	U	12	U	11	U								
Sample wt (g):	5.6		4.6		5.5									
%Moisture:	19		6		19									
Dilution Factor:	1		1		1									
Level:	Low		Low		Low									
Number of TIC's:	2		3		2									

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No.: 28064 SDG: F02J0 Reviewer: Y. Hsieh

Laboratory: AATS Matrix: Soil Units: ug/Kg

SEMIVOLATILE EPA SAMPLE NUMBER:	F0-2JA	FLAG	F0-2JADL	FLAG	F0-2JB	FLAG	F0-2JBDL	FLAG	F0-2J0	FLAG	F0-2J1	FLAG	F0-2J5	FLAG
Benzaldehyde	490	U	2500	U *	27	LJ	2000	U *	150	LJ	440	U	410	U
Phenol	490	U	2500	U *	76	LJ	2000	U *	2400	U	440	U	410	U
bis-(2-Chloroethyl) ether	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2-Chlorophenol	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2-Methylphenol	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2,2'-oxybis(1-Chloropropane)	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Acetophenone	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
4-Methylphenol	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
N-Nitroso-di-n-propylamine	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Hexachloroethane	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Nitrobenzene	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Isophorone	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2-Nitrophenol	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2,4-Dimethylphenol	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
bis(2-Chloroethoxy)methane	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2,4-Dichlorophenol	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Naphthalene	490	U	2500	U *	330	LJ	320	*	2400	U	440	U	410	U
4-Chloroaniline	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Hexachlorobutadiene	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Caprolactam	490	U	2500	U *	23	LJ	2000	U *	2400	U	440	U	410	U
4-Chloro-3-methylphenol	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2-Methylnaphthalene	490	U	2500	U *	120	LJ	2000	U *	2400	U	440	U	410	U
Hexachlorocyclopentadiene	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2,4,6-Trichlorophenol	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2,4,5-Trichlorophenol	1200	U	6200	U *	1000	U	5000	U *	6100	U	1100	U	1000	U
1,1'-Biphenyl	490	U	2500	U *	38	LJ	2000	U *	2400	U	440	U	410	U
2-Chloronaphthalene	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2-Nitroaniline	1200	U	6200	U *	1000	U	5000	U *	6100	U	1100	U	1000	U
Dimethylphthalate	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
2,6-Dinitrotoluene	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Acenaphthylene	200	LJ	360	*	400	U	130	*	2400	U	81	LJ	410	U
3-Nitroaniline	1200	U	6200	U *	1000	U	5000	U *	6100	U	1100	U	1000	U
Acenaphthene	490	U	2500	U *	960	J	940	*	2400	U	440	U	410	U
2,4-Dinitrophenol	1200	U	6200	U *	1000	U	5000	U *	6100	U	1100	U	1000	U
4-Nitrophenol	1200	U	6200	U *	1000	U	5000	U *	6100	U	1100	U	1000	U
Dibenzofuran	490	U	2500	U *	510	J	420	*	2400	U	440	U	410	U
2,4-Dinitrotoluene	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Diethylphthalate	490	U	180	*	400	U	2000	U *	2400	U	49	LJ	410	U
Fluorene	44	LJ	2500	U *	790	J	740	*	2400	U	440	U	410	U
4-Chlorophenyl-phenyl ether	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
4-Nitroaniline	1200	U	6200	U *	1000	U	5000	U *	6100	U	1100	U	1000	U
4,6-Dinitro-2-methylphenol	1200	U	6200	U *	1000	U	5000	U *	6100	U	1100	U	1000	U
N-Nitrosodiphenylamine	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
4-Bromophenyl-phenylether	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Hexachlorobenzene	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Atrazine	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Pentachlorophenol	1200	U	6200	U *	1000	U	5000	U *	6100	U	1100	U	1000	U
Phenanthrene	320	LJ	380	*	5100	*	5400		2400	U	440	U	410	U
Anthracene	700	J	700	*	1500	J	1300	*	2400	U	440	U	410	U
Carbazole	140	LJ	160	*	950	J	1000	*	2400	U	440	U	410	U

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No. : 28064 SDG : F02J0 Reviewer : Y. Hsieh

Laboratory : AATS Matrix : Soil Units : ug/Kg

SEMIVOLATILE EPA SAMPLE NUMBER :	F0-2JA	FLAG	F0-2JADL	FLAG	F0-2JB	FLAG	F0-2JBDL	FLAG	F0-2J0	FLAG	F0-2J1	FLAG	F0-2J5	FLAG
Di-n-butylphthalate	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Fluoranthene	5800	*	8300		5200	*	7100		2400	U	52	LJ	410	U
Pyrene	11000	*	10000		6100	*	5500		640	LJ	42	LJ	410	U
Butylbenzylphthalate	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
3,3'-Dichlorobenzidine	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Benzo(a)anthracene	5800	*	6000		3200		3200	*	2400	U	440	U	410	U
Chrysene	5800	*	6600		3000		3300	*	960	LJ	560		410	U
bis(2-Ethylhexyl)phthalate	79	LJ	2500	U *	95	LJ	130	*	2400	U	48	LJ	410	U
Di-n-octylphthalate	490	U	2500	U *	400	U	2000	U *	2400	U	440	U	410	U
Benzo(b)fluoranthene	4600	*	4000		2500		2300	*	220	LJ	140	LJ	410	U
Benzo(k)fluoranthene	3000		3100	*	2300		2200	*	2400	U	440	U	410	U
Benzo(a)pyrene	3700		3400	*	2800		2800	*	2200	LJ	440	U	410	U
Indeno(1,2,3-cd)pyrene	1500		1500	*	1400		1500	*	280	LJ	180	LJ	410	U
Dibenzo(a,h)anthracene	630		440	*	520		450	*	2400	U	56	LJ	410	U
Benzo(g,h,i)perylene	1500		1400	*	1400		1300	*	3700		1200		410	U
Sample wt (g) :	30.5		30.5		30.9		30.9		30.2		30.3		30.8	
%Moisture :	34		34		20		20		32		26		21	
Dilution Factor :	1		5		1		5		5		1		1	
Level :	Low		Low		Low		Low		Low		Low		Low	
Number of TIC's :	22		23		22		23		22		22		22	

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No.: 28064 SDG: F02J0 Reviewer: Y. Hsieh

Laboratory: AATS Matrix: Soil Units: ug/Kg

SEMIVOLATILE EPA SAMPLE NUMBER:	F0-2J7	FLAG	F0-2J8	FLAG	F0-2KA	FLAG	F0-2K2	FLAG	F0-2K6	FLAG		FLAG		FLAG
Benzaldehyde	45	LJ	27	LJ	400	U	350	U	24	LJ				
Phenol	440	U	50	LJ	400	U	350	U	400	U				
bis-(2-Chloroethyl) ether	440	U	400	U	400	U	350	U	400	U				
2-Chlorophenol	440	U	400	U	400	U	350	U	400	U				
2-Methylphenol	440	U	400	U	400	U	350	U	400	U				
2,2'-oxybis(1-Chloropropane)	440	U	400	U	400	U	350	U	400	U				
Acetophenone	440	U	400	U	400	U	350	U	400	U				
4-Methylphenol	440	U	400	U	400	U	350	U	400	U				
N-Nitroso-di-n-propylamine	440	U	400	U	400	U	350	U	400	U				
Hexachloroethane	440	U	400	U	400	U	350	U	400	U				
Nitrobenzene	440	U	400	U	400	U	350	U	400	U				
Isophorone	440	U	400	U	400	U	350	U	400	U				
2-Nitrophenol	440	U	400	U	400	U	350	U	400	U				
2,4-Dimethylphenol	440	U	400	U	400	U	350	U	400	U				
bis(2-Chloroethoxy)methane	440	U	400	U	400	U	350	U	400	U				
2,4-Dichlorophenol	440	U	400	U	400	U	350	U	400	U				
Naphthalene	440	U	400	U	400	U	350	U	400	U				
4-Chloroaniline	440	U	400	U	400	U	350	U	400	U				
Hexachlorobutadiene	440	U	400	U	400	U	350	U	400	U				
Caprolactam	440	U	400	U	400	U	350	U	400	U				
4-Chloro-3-methylphenol	440	U	400	U	400	U	350	U	400	U				
2-Methylnaphthalene	440	U	400	U	400	U	350	U	400	U				
Hexachlorocyclopentadiene	440	U	400	U	400	U	350	U	400	U				
2,4,6-Trichlorophenol	440	U	400	U	400	U	350	U	400	U				
2,4,5-Trichlorophenol	1100	U	1000	U	1000	U	870	U	1000	U				
1,1'-Biphenyl	440	U	400	U	400	U	350	U	400	U				
2-Chloronaphthalene	440	U	400	U	400	U	350	U	400	U				
2-Nitroaniline	1100	U	1000	U	1000	U	870	U	1000	U				
Dimethylphthalate	440	U	400	U	400	U	350	U	400	U				
2,6-Dinitrotoluene	440	U	400	U	400	U	350	U	400	U				
Acenaphthylene	440	U	400	U	400	U	350	U	400	U				
3-Nitroaniline	1100	U	1000	U	1000	U	870	U	1000	U				
Acenaphthene	440	U	400	U	400	U	350	U	400	U				
2,4-Dinitrophenol	1100	U	1000	U	1000	U	870	U	1000	U				
4-Nitrophenol	1100	U	1000	U	1000	U	870	U	1000	U				
Dibenzofuran	440	U	400	U	400	U	350	U	400	U				
2,4-Dinitrotoluene	440	U	400	U	400	U	350	U	400	U				
Diethylphthalate	440	U	400	U	400	U	350	U	400	U				
Fluorene	440	U	400	U	400	U	350	U	400	U				
4-Chlorophenyl-phenyl ether	440	U	400	U	400	U	350	U	400	U				
4-Nitroaniline	1100	U	1000	U	1000	U	870	U	1000	U				
4,6-Dinitro-2-methylphenol	1100	U	1000	U	1000	U	870	U	1000	U				
N-Nitrosodiphenylamine	440	U	400	U	400	U	350	U	400	U				
4-Bromophenyl-phenylether	440	U	400	U	400	U	350	U	400	U				
Hexachlorobenzene	440	U	400	U	400	U	350	U	400	U				
Atrazine	440	U	400	U	400	U	350	U	400	U				
Pentachlorophenol	1100	U	1000	U	1000	U	870	U	1000	U				
Phenanthrene	440	U	400	U	400	U	350	U	400	U				
Anthracene	440	U	400	U	400	U	350	U	400	U				
Carbazole	440	U	400	U	400	U	350	U	400	U				

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No. : 28064 SDG : F02J0 Reviewer : Y. Hsieh

Laboratory : AATS Matrix : Soil Units : ug/Kg

SEMIVOLATILE EPA SAMPLE NUMBER :	F0-2J7	FLAG	F0-2J8	FLAG	F0-2KA	FLAG	F0-2K2	FLAG	F0-2K8	FLAG		FLAG		FLAG
Di-n-butylphthalate	440	U	400	U	400	U	350	U	400	U				
Fluoranthene	440	U	400	U	400	U	350	U	400	U				
Pyrene	440	U	400	U	400	U	350	U	400	U				
Butylbenzylphthalate	440	U	400	U	400	U	350	U	400	U				
3,3'-Dichlorobenzidine	440	U	400	U	400	U	350	U	400	U				
Benzo(a)anthracene	440	U	400	U	400	U	350	U	400	U				
Chrysene	440	U	400	U	400	U	350	U	400	U				
bis(2-Ethylhexyl)phthalate	440	U	400	U	26	LJ	350	U	400	U				
Di-n-octylphthalate	440	U	400	U	400	U	350	U	400	U				
Benzo(b)fluoranthene	440	U	400	U	400	U	350	U	400	U				
Benzo(k)fluoranthene	440	U	400	U	400	U	350	U	400	U				
Benzo(a)pyrene	440	U	400	U	400	U	350	U	400	U				
Indeno(1,2,3-cd)pyrene	440	U	400	U	400	U	350	U	400	U				
Dibenzo(a,h)anthracene	440	U	400	U	400	U	350	U	400	U				
Benzo(g,h,i)perylene	440	U	400	U	400	U	350	U	400	U				
Sample wt (g) :	32		32.7		30.8		30.3		30.8					
%Moisture :	29		25		19		6		19					
Dilution Factor :	1		1		1		1		1					
Level :	Low		Low		Low		Low		Low					
Number of TIC's :	23		22		22		22		22					

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No. : 28064 SDG : F02J0 Reviewer : Y. Hsieh

Laboratory : AATS Matrix : Soil Units : ug/Kg

PESTICIDES/PCBs EPA SAMPLE NUMBER :	F0-2JA	FLAG	F0-2J8	FLAG	F0-2J0	FLAG	F0-2J1	FLAG	F0-2J5	FLAG	F0-2J7	FLAG	F0-2J8	FLAG
alpha-BHC	2.5	U	2.0	U	2.5	U	2.3	U	2.1	U	2.3	U	2.3	U
beta-BHC	2.5	U	2.0	U	2.5	U	2.3	U	2.1	U	2.3	U	2.3	U
delta-BHC	2.5	U	2.0	U	2.5	U	2.3	U	2.1	U	2.3	U	2.3	U
gamma-BHC (Lindane)	2.5	U	2.0	U	2.5	UJv	2.3	U	2.1	U	0.99	LJ	1.4	LJ
Heptachlor	2.5	U	2.0	U	2.6	UM	2.3	U	2.1	U	2.3	U	2.3	U
Aldrin	2.5	U	2.0	U	2.5	UJv	2.3	U	2.1	U	2.3	U	2.3	U
Heptachlor epoxide	2.5	U	0.81	LJ	2.5	U	2.3	U	2.1	U	2.3	U	2.3	U
Endosulfan I	2.5	U	0.29	LJ	2.5	U	0.32	LJ	0.83	LJ	2.3	U	0.72	LJ
Dieldrin	4.9	U	3.9	U	4.8	U	4.4	U	4.0	U	4.6	U	4.4	U
4,4'-DDE	4.9	U	0.95	LJ	4.8	U	4.4	U	4.0	U	4.6	U	4.4	U
Endrin	4.9	U	3.9	U	4.8	U	1.6	LJ	4.0	U	4.6	U	4.4	U
Endosulfan II	4.9	U	0.62	LJ	4.8	U	1.1	LJ	4.0	U	4.6	U	4.4	U
4,4'-DDD	1.2	LJ	3.9	U	4.8	U	4.4	U	4.0	U	4.6	U	4.4	U
Endosulfan sulfate	4.9	U	3.9	U	7.5	J	6.3	J	4.0	U	4.6	U	4.4	U
4,4'-DDT	4.9	U	0.78	LJ	4.8	U	1.7	LJ	4.0	U	4.6	U	4.4	U
Methoxychlor	25	U	20	U	25	U	23	U	21	U	23	U	23	U
Endrin ketone	4.9	U	3.9	U	4.8	U	3.0	LJ	4.0	U	4.6	U	4.4	U
Endrin aldehyde	3.7	LJ	2.1	LJ	4.8	U	0.98	LJ	4.0	U	1.7	LJ	4.4	U
alpha-Chlordane	2.5	U	0.26	LJ	2.5	U	0.29	LJ	2.1	U	2.3	U	2.3	U
gamma-Chlordane	2.5	U	2.0	U	2.5	U	2.3	U	2.1	U	2.3	U	2.3	U
Toxaphene	250	U	200	U	250	U	230	U	210	U	230	U	230	U
Aroclor-1016	49	U	39	U	48	U	44	U	40	U	46	U	44	U
Aroclor-1221	100	U	80	U	97	U	90	U	82	U	93	U	89	U
Aroclor-1232	49	U	39	U	48	U	44	U	40	U	46	U	44	U
Aroclor-1242	49	U	39	U	48	U	44	U	40	U	46	U	44	U
Aroclor-1248	49	U	39	U	48	U	44	U	40	U	46	U	44	U
Aroclor-1254	49	U	39	U	48	U	44	U	40	U	46	U	44	U
Aroclor-1260	49	U	39	U	48	U	44	U	40	U	46	U	44	U
Sample wt (g) :	30.5		31.5		30.4		30.2		30.8		30.6		30.2	
%Moisture :	34		20		32		26		20		29		25	
Dilution Factor :	1		1		1		1		1		1		1	

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No.: 28064 SDG: F02J0 Reviewer: Y. Hsieh

Laboratory: AATS Matrix: Soil Units: ug/Kg

PESTICIDES/PCBs EPA SAMPLE NUMBER:	F0-2KA	FLAG	F0-2K2	FLAG	F0-2K6	FLAG		FLAG		FLAG		FLAG		FLAG
alpha-BHC	2.0	U	1.8	U	2.1	U								
beta-BHC	2.0	U	1.8	U	2.1	U								
delta-BHC	2.0	U	1.8	U	2.1	U								
gamma-BHC (Lindane)	1.6	LJ	1.8	U	0.50	LJ								
Heptachlor	7.0	UM	2.1	UM	3.9	UM								
Aldrin	2.0	U	1.8	U	2.1	U								
Heptachlor epoxide	2.0	U	1.8	U	2.1	U								
Endosulfan I	0.38	LJ	1.8	U	2.1	U								
Dieldrin	3.8	U	3.5	U	4.0	U								
4,4'-DDE	3.8	U	3.5	U	4.0	U								
Endrin	3.8	U	3.5	U	4.0	U								
Endosulfan II	3.8	U	3.5	U	4.0	U								
4,4'-DDD	3.8	U	3.5	U	4.0	U								
Endosulfan sulfate	3.8	U	3.5	U	4.0	U								
4,4'-DDT	3.8	U	3.5	U	4.0	U								
Methoxychlor	20	U	18	U	21	U								
Endrin ketone	3.8	U	3.5	U	4.0	U								
Endrin aldehyde	3.0	LJ	3.5	U	2.2	LJ								
alpha-Chlordane	0.34	LJ	1.8	U	0.96	LJ								
gamma-Chlordane	3.3	UM	1.8	U	2.2	UM								
Toxaphene	200	U	180	U	210	U								
Aroclor-1016	38	U	35	U	40	U								
Aroclor-1221	77	U	71	U	81	U								
Aroclor-1232	38	U	35	U	40	U								
Aroclor-1242	38	U	35	U	40	U								
Aroclor-1248	38	U	35	U	40	U								
Aroclor-1254	38	U	35	U	40	U								
Aroclor-1260	38	U	35	U	40	U								
Sample wt (g):	32.1		30.3		30.6									
%Moisture:	19		6		19									
Dilution Factor:	1		1		1									

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No. 28064 SDG No. F02J0 SDG Nos. To Follow SAS No. Date Rec 06/01/00

EPA Lab ID: AATS

Lab Location: 1700 W. Albany, Suite A, Broken Arrow, OK74012

Region: 6 Audit No.: 28064/F02J0

Re_Submitted CSF? Yes _____ No X

Box No(s): 1

COMMENTS:

Over for additional comments.

ORIGINALS	YES	NO	N/A
CUSTODY SEALS			
1. Present on package?	X		
2. Intact upon receipt?	X		
FORM DC-2			
3. Numbering scheme accurate?	X		
4. Are enclosed documents listed?	X		
5. Are listed documents enclosed?	X		
FORM DC-1			
6. Present?	X		
7. Complete?	X		
8. Accurate?	X		
CHAIN-OF-CUSTODY RECORD(s)			
9. Signed?	X		
10. Dated?	X		
TRAFFIC REPORT(s) PACKING LIST(s)			
11. Signed?	X		
12. Dated?	X		
AIRBILLS/AIRBILL STICKER			
13. Present?	X		
14. Signed?	X		
15. Dated?	X		
SAMPLE TAGS			
16. Does DC-1 list tags as being included?	X		
17. Present?	X		
OTHER DOCUMENTS			
18. Complete?	X		
19. Legible?	X		
20. Original?		X	
20a.If "NO", does the copy indicate where original documents are located?	X		

Audited by: Mingli Yu — Mingli Yu / ESAT Data Reviewer — Date 06/28/00

Audited by: _____ — _____ — Date _____

Audited by: _____ — _____ — Date _____

Signature — Printed Name/Title

TO BE COMPLETED BY CEAT

Date Recvd by CEAT: _____ Date Entered: _____ Date Reviewed: _____

Entered by: _____ _____

Reviewed by: _____ _____

Signature — Printed Name/Title

DC-2___

21017

In Reference to Case No(s):
28064 SDG: F02J0 (O-2204)

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
FAX Record Log

Laboratory Name: AATS
Lab Contact: Harry Borg

Region: 6
Regional Contact: Mahmoud El-Feky - EPA
ESAT Reviewer: Ying-Ping Hsieh - LMSG

FAX initiated by: ____Laboratory __X__Region

In reference to data for the following fractions:

BNA Pest/PCB

Summary of Questions/Issues:

A. BNA

Samples F02JA, F02JADL, and F02JB (Form 1G, pages 466, 510, and 554): Benzo(k)fluoranthene and dibenzo(a,h)anthracene are BNA target analytes and should be deleted from the TIC list (OLM04.2, p. D-45/SVOA, sec. 11.1.2.2). "Unknown PAH" can be entered instead. Please revise and resubmit these pages.

B. Pest/PCB

1. The manual integration chromatograms with integration time ranges for the TCX, heptachlor, and endosulfan sulfate peaks on column DB-1701 for sample F02J0 (page 832) were omitted (OLM04.2, p. B-21, sec. 2.6.5.2.4). Please submit at this time.

2. The manual integration chromatogram with the integration time range for the heptachlor peak on column DB-17 for the method blank PBLKSD (page 1057) was omitted (OLM04.2, p. B-21, sec. 2.6.5.2.4). Please submit at this time.

FAX COMMUNICATION LOG

Continuation Page 2
Laboratory/Contact AATS/Harry Borg
In Reference To Case No. 28064 SDG: F02J0

NOTE: Any laboratory resubmission should be submitted either as an addendum to the original CSF with a revised Form DC-2 or submitted as a new CSF with a new Form DC-2 (OLM04.2, p. B-26, 2.7.3), except those containing only replacement pages. Custody seals are required for all CSF resubmission shipments.

Please respond to the above items <u>within 7 days</u> to:

Mr. Mahmoud El-Feky
U.S. EPA Region 6 Laboratory
10625 Fallstone Road
Houston, TX 77099

If you have any questions, please contact me at (281) 983-2128.

M. El-Feky
Signature

7-11-00
Date

Distribution: (1) Lab Copy, (2) Region Copy, and (3) ESAT Copy

EPA United States Environmental Protection Agency
Contract Laboratory Program

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

Case No. 28064

1. Project Code:
2. Region No. 4 | Sampling Co. TTNRCC
4. Date Shipped 5/17/00 | Carrier Airborne Express
Account Code
Sampler (Name) Wes Newberry
Airbill Number 2952378730
Site Name: Falcon Refining
Sampler Signature:
5. Ship To: AATS, 1700 West Albany, Suite C, Broken Arrow, OK 74012 ATTN: Deborah Inman
City, State: Ingleside, TX | Site Spill ID | Op Unit
3. Purpose**: Lead [ ] SF [ ] PRP [ ] ST [X] FED [ ] BZ; Early Action [ ] UA [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp/Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 (14) 21 VOA	TA (circle one) PR* 7 (14) 21 BNA	TA (circle one) PR* 7 (14) 21 Pest/PCB	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 Field QC Qualifier (B = Blank, S = Field Spike, D = Field Duplicate, R = Rinsate, PE = Perform Eval.)
F02K2	5	L	G	5	X	X	X	6-189009-014	SO-21	5/16/00/1635	MF00PK	MC	—
F02HD	5	L	C	5	X	X	X	6-188501-506, 6-189301-302	SE-1	5/16/00/1640	MF00MY	WN	—
F02HF	5	L	C	5	X	X	X	6-188613-618	SE-3	5/16/00/1608	MF00NO	WN	—
F02HG	5	L	C	5	X	X	X	6-188669-674	SE-4	5/16/00/1612	MF00N1	WN	D (F02HF)
F02HH	5	L	C	5	X	X	X	6-188751-756	SE-5	5/16/00/1628	MF00N2	WN	—
F02J0	5	L	C	5	X	X	X	6-188693-694, 6-188697-698	SE-20	5/17/00/1000	MF00NH	MC	—
F02J1	5	L	C	5	X	X	X	6-188519-522	SE-21	5/17/00/1036	MF00NJ	MC	—
F02J5	5	L	C	5	X	X	X	6-188783-788	SE-25	5/16/00/1520	MF00NN	MC	—
F02J7	5	L	G	5	X	X	X	6-188549-554	SE-27	5/16/00/1545	MF00NQ	MC	—
F02J8	5	L	C	5	X	X	X	6-188589-594	SE-28	5/16/00/1606	MF00NR	MC	—

Shipment for Case Complete? (Y/N) | Page 1 of 1
VOA MS/MSD Required? (Y)N Sample #: F02HD; F02J0
BNA MS/MSD Required? (Y)N Sample #: F02HD; F02J0
Pest/PCB MS/MSD Required? (Y)N Sample #: F02HD; F02J0
Additional Sampler Signatures: Marshall Cohen
Chain of Custody Seal Number(s)

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	5-17-00 1830				
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	

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

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

020

389000

EPA United States Environmental Protection Agency
Contract Laboratory Program

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

Case No. 28064

1. Project Code	2. Region No. 6	Sampling Co. TNRCC	4. Date Shipped 5/17/00
Carrier Airborne Express			
Account Code	Sampler (Name) Wes Newberry	Airbill Number 2952378936	
Site Name Falcon Refining	Sampler Signature [signature]	5. Ship To: AATS 1700 West Albany, Suite C Broken Arrow, OK 74012 ATTN: Deborah Inman	
City, State Ingleside, TX	Site Spill ID	Op Unit	

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

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. PE-water
7. PE-soil
8. Other (specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. CH3OH
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 (14) 21 VOA	TA (circle one) PR* 7 (14) 21 BNA	TA (circle one) PR* 7 (14) 21 Pest/PCB	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 Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
F02HJ	5	L	C	5	X	X	X	6-188709-714	SE-06	5/16/00/1621	MF00N3	WN	—
F02JA	5	L	C	5	X	X	X	6-188653-658	SE-30	5/16/00/1555	MF00NT	WN	—
F02JB	5	L	C	5	X	X	X	6-188533-538	SE-31	5/16/00/1515	MF00NW	WN	—
F02K6	5	L	G	5	X	X	X	6-188900-905	SO-25	5/16/00/1435	MF00PP	MC	—
F02KA	5	L	G	5	X	X	X	6-189001-006	SO-29	5/16/00/1440	MF00PT	MC	—
F02H3	4	L	G	5	X	X	X	6-188746-748	FB-03	5/17/00/1550	MF00ML	MC	B

Shipment for Case Complete? (Y/N)	Page 1 of 1	VOA MS/MSD Required? Y/(N) Sample #:	Additional Sampler Signatures: [signature]
		BNA MS/MSD Required? Y/(N) Sample #:	Chain of Custody Seal Number(s)
		Pest/PCB MS/MSD Required? Y/(N) Sample #:	

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5-17/00 1830				
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	

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

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

Page 30 of 30

210021

389002

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J0

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: N39500.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 32 Date Analyzed: 05/23/00

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
75-71-8	Dichlorodifluoromethane	15	U
74-87-3	Chloromethane	15	U
75-01-4	Vinyl Chloride	15	U
74-83-9	Bromomethane	15	U
75-00-3	Chloroethane	15	U
75-69-4	Trichlorofluoromethane	15	U
75-35-4	1,1-Dichloroethene	15	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	15	U
67-64-1	Acetone	17	
75-15-0	Carbon Disulfide	4	J
79-20-9	Methyl Acetate	15	U
75-09-2	Methylene Chloride	10	BJ
156-60-5	trans-1,2-Dichloroethene	15	U
1634-04-4	Methyl-tert-Butyl Ether	15	U
75-34-3	1,1-Dichloroethane	15	U
156-59-2	cis-1,2-Dichloroethene	15	U
78-93-3	2-Butanone	15	U
67-66-3	Chloroform	15	U
71-55-6	1,1,1-Trichloroethane	15	U
110-82-7	Cyclohexane	15	U
56-23-5	Carbon Tetrachloride	15	U
71-43-2	Benzene	15	U
107-06-2	1,2-Dichloroethane	15	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J0

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: N39500.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 32 Date Analyzed: 05/23/00

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
79-01-6	Trichloroethene	15	U
108-87-2	Methylcyclohexane	15	U
78-87-5	1,2-Dichloropropane	15	U
75-27-4	Bromodichloromethane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
108-88-3	Toluene	15	U
10061-02-6	trans-1,3-Dichloropropene	15	U
79-00-5	1,1,2-Trichloroethane	15	U
127-18-4	Tetrachloroethene	15	U
591-78-6	2-Hexanone	15	U
124-48-1	Dibromochloromethane	15	U
106-93-4	1,2-Dibromoethane	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
1330-20-7	Xylene (total)	15	U
100-42-5	Styrene	15	U
75-25-2	Bromoform	15	U
98-82-8	Isopropylbenzene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
541-73-1	1,3-Dichlorobenzene	15	U
106-46-7	1,4-Dichlorobenzene	15	U
95-50-1	1,2-Dichlorobenzene	15	U
96-12-8	1,2-Dibromo-3-chloropropane	15	U
120-82-1	1,2,4-Trichlorobenzene	15	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02J0

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: N39500.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 32 Date Analyzed: 05/23/00

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. 1066-40-6	SILANOL, TRIMETHYL-	7.94	13	BJN
2.	CYCLOTRISILOXANE	11.44	24	BJ
3.	CYCLOTETRASILOXANE	14.20	11	BJ
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J1

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: N39505.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 26 Date Analyzed: 05/23/00

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
75-71-8	Dichlorodifluoromethane	14	U
74-87-3	Chloromethane	14	U
75-01-4	Vinyl Chloride	14	U
74-83-9	Bromomethane	14	U
75-00-3	Chloroethane	14	U
75-69-4	Trichlorofluoromethane	14	U
75-35-4	1,1-Dichloroethene	14	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	14	U
67-64-1	Acetone	14	U
75-15-0	Carbon Disulfide	2	J
79-20-9	Methyl Acetate	14	U
75-09-2	Methylene Chloride	8	BJ
156-60-5	trans-1,2-Dichloroethene	14	U
1634-04-4	Methyl-tert-Butyl Ether	14	U
75-34-3	1,1-Dichloroethane	14	U
156-59-2	cis-1,2-Dichloroethene	14	U
78-93-3	2-Butanone	14	U
67-66-3	Chloroform	14	U
71-55-6	1,1,1-Trichloroethane	14	U
110-82-7	Cyclohexane	14	U
56-23-5	Carbon Tetrachloride	14	U
71-43-2	Benzene	14	U
107-06-2	1,2-Dichloroethane	14	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J1

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: N39505.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 26 Date Analyzed: 05/23/00

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
79-01-6	Trichloroethene	14	U
108-87-2	Methylcyclohexane	14	U
78-87-5	1,2-Dichloropropane	14	U
75-27-4	Bromodichloromethane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
108-88-3	Toluene	14	U
10061-02-6	trans-1,3-Dichloropropene	14	U
79-00-5	1,1,2-Trichloroethane	14	U
127-18-4	Tetrachloroethene	14	U
591-78-6	2-Hexanone	14	U
124-48-1	Dibromochloromethane	14	U
106-93-4	1,2-Dibromoethane	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
1330-20-7	Xylene (total)	14	U
100-42-5	Styrene	14	U
75-25-2	Bromoform	14	U
98-82-8	Isopropylbenzene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
541-73-1	1,3-Dichlorobenzene	14	U
106-46-7	1,4-Dichlorobenzene	14	U
95-50-1	1,2-Dichlorobenzene	14	U
96-12-8	1,2-Dibromo-3-chloropropane	14	U
120-82-1	1,2,4-Trichlorobenzene	14	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02J1

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: N39505.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 26 Date Analyzed: 05/23/00

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.	UNKNOWN	7.93	15	J
2. 541-05-9	CYCLOTRISILOXANE, HEXAMETHYL	11.42	22	JN
3.	CYCLOTETRASILOXANE	14.19	11	BJ
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J5

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.09

Sample wt/vol: 5.3 (g/mL) G Lab File ID: N39506.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 20 Date Analyzed: 05/23/00

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
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
75-35-4	1,1-Dichloroethene	12	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	12	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
79-20-9	Methyl Acetate	12	U
75-09-2	Methylene Chloride	3	BJ
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-tert-Butyl Ether	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
78-93-3	2-Butanone	12	U
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
110-82-7	Cyclohexane	12	U
56-23-5	Carbon Tetrachloride	12	U
71-43-2	Benzene	12	U
107-06-2	1,2-Dichloroethane	12	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J5

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.09

Sample wt/vol: 5.3 (g/mL) G Lab File ID: N39506.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 20 Date Analyzed: 05/23/00

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
79-01-6	Trichloroethene	12	U
108-87-2	Methylcyclohexane	12	U
78-87-5	1,2-Dichloropropane	12	U
75-27-4	Bromodichloromethane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
108-88-3	Toluene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	12	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
96-12-8	1,2-Dibromo-3-chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02J5

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.09

Sample wt/vol: 5.3 (g/mL) G Lab File ID: N39506.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 20 Date Analyzed: 05/23/00

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.		UNKNOWN	7.22	8	J
2.		UNKNOWN	8.73	7	J
3.		CYCLOTRISILOXANE	11.43	7	BJ
4.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J7

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.10

Sample wt/vol: 5.3 (g/mL) G Lab File ID: N39523.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 29 Date Analyzed: 05/24/00

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
75-71-8	Dichlorodifluoromethane	13	U
74-87-3	Chloromethane	13	U
75-01-4	Vinyl Chloride	13	U
74-83-9	Bromomethane	13	U
75-00-3	Chloroethane	13	U
75-69-4	Trichlorofluoromethane	13	U
75-35-4	1,1-Dichloroethene	13	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	13	U
67-64-1	Acetone	150	
75-15-0	Carbon Disulfide	13	U
79-20-9	Methyl Acetate	13	U
75-09-2	Methylene Chloride	12	BJ
156-60-5	trans-1,2-Dichloroethene	13	U
1634-04-4	Methyl-tert-Butyl Ether	13	U
75-34-3	1,1-Dichloroethane	13	U
156-59-2	cis-1,2-Dichloroethene	13	U
78-93-3	2-Butanone	13	U
67-66-3	Chloroform	13	U
71-55-6	1,1,1-Trichloroethane	13	U
110-82-7	Cyclohexane	13	U
56-23-5	Carbon Tetrachloride	13	U
71-43-2	Benzene	13	U
107-06-2	1,2-Dichloroethane	13	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J7

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.10

Sample wt/vol: 5.3 (g/mL) G Lab File ID: N39523.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 29 Date Analyzed: 05/24/00

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
79-01-6	Trichloroethene	13	U
108-87-2	Methylcyclohexane	13	U
78-87-5	1,2-Dichloropropane	13	U
75-27-4	Bromodichloromethane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
108-88-3	Toluene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
79-00-5	1,1,2-Trichloroethane	13	U
127-18-4	Tetrachloroethene	13	U
591-78-6	2-Hexanone	13	U
124-48-1	Dibromochloromethane	13	U
106-93-4	1,2-Dibromoethane	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
1330-20-7	Xylene (total)	13	U
100-42-5	Styrene	13	U
75-25-2	Bromoform	13	U
98-82-8	Isopropylbenzene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
541-73-1	1,3-Dichlorobenzene	13	U
106-46-7	1,4-Dichlorobenzene	13	U
95-50-1	1,2-Dichlorobenzene	13	U
96-12-8	1,2-Dibromo-3-chloropropane	13	U
120-82-1	1,2,4-Trichlorobenzene	13	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02J7

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.10

Sample wt/vol: 5.3 (g/mL) G Lab File ID: N39523.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 29 Date Analyzed: 05/24/00

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. 1066-40-6	SILANOL, TRIMETHYL-	7.91	10	JN
2.	CYCLOTRISILOXANE	11.39	12	BJ
3.	CYCLOTETRASILOXANE	14.15	13	BJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J8

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.11

Sample wt/vol: 5.6 (g/mL) G Lab File ID: N39508.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 25 Date Analyzed: 05/23/00

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
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
75-35-4	1,1-Dichloroethene	12	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	12	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
79-20-9	Methyl Acetate	12	U
75-09-2	Methylene Chloride	1	BJ
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-tert-Butyl Ether	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
78-93-3	2-Butanone	12	U
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
110-82-7	Cyclohexane	12	U
56-23-5	Carbon Tetrachloride	12	U
71-43-2	Benzene	12	U
107-06-2	1,2-Dichloroethane	12	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J8

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.11

Sample wt/vol: 5.6 (g/mL) G Lab File ID: N39508.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 25 Date Analyzed: 05/23/00

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
79-01-6	Trichloroethene	12	U
108-87-2	Methylcyclohexane	12	U
78-87-5	1,2-Dichloropropane	12	U
75-27-4	Bromodichloromethane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
108-88-3	Toluene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	12	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
96-12-8	1,2-Dibromo-3-chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02J8

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.11

Sample wt/vol: 5.6 (g/mL) G Lab File ID: N39508.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 25 Date Analyzed: 05/23/00

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.	UNKNOWN	7.21	6	J
2. 1066-40-6	SILANOL, TRIMETHYL-	7.94	11	BJN
3.	CYCLOTRISILOXANE	11.42	8	BJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.12

Sample wt/vol: 5.4 (g/mL) G Lab File ID: N39509.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 34 Date Analyzed: 05/23/00

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
75-71-8	Dichlorodifluoromethane	14	U
74-87-3	Chloromethane	14	U
75-01-4	Vinyl Chloride	14	U
74-83-9	Bromomethane	14	U
75-00-3	Chloroethane	14	U
75-69-4	Trichlorofluoromethane	14	U
75-35-4	1,1-Dichloroethene	14	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	14	U
67-64-1	Acetone	14	U
75-15-0	Carbon Disulfide	4	J
79-20-9	Methyl Acetate	14	U
75-09-2	Methylene Chloride	3	BJ
156-60-5	trans-1,2-Dichloroethene	14	U
1634-04-4	Methyl-tert-Butyl Ether	14	U
75-34-3	1,1-Dichloroethane	14	U
156-59-2	cis-1,2-Dichloroethene	14	U
78-93-3	2-Butanone	14	U
67-66-3	Chloroform	14	U
71-55-6	1,1,1-Trichloroethane	14	U
110-82-7	Cyclohexane	14	U
56-23-5	Carbon Tetrachloride	14	U
71-43-2	Benzene	14	U
107-06-2	1,2-Dichloroethane	14	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.12

Sample wt/vol: 5.4 (g/mL) G Lab File ID: N39509.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 34 Date Analyzed: 05/23/00

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
79-01-6	Trichloroethene	14	U
108-87-2	Methylcyclohexane	14	U
78-87-5	1,2-Dichloropropane	14	U
75-27-4	Bromodichloromethane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
108-88-3	Toluene	14	U
10061-02-6	trans-1,3-Dichloropropene	14	U
79-00-5	1,1,2-Trichloroethane	14	U
127-18-4	Tetrachloroethene	14	U
591-78-6	2-Hexanone	14	U
124-48-1	Dibromochloromethane	14	U
106-93-4	1,2-Dibromoethane	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
1330-20-7	Xylene (total)	14	U
100-42-5	Styrene	14	U
75-25-2	Bromoform	14	U
98-82-8	Isopropylbenzene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
541-73-1	1,3-Dichlorobenzene	14	U
106-46-7	1,4-Dichlorobenzene	14	U
95-50-1	1,2-Dichlorobenzene	14	U
96-12-8	1,2-Dibromo-3-chloropropane	14	U
120-82-1	1,2,4-Trichlorobenzene	14	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02JA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.12

Sample wt/vol: 5.4 (g/mL) G Lab File ID: N39509.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 34 Date Analyzed: 05/23/00

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

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JB

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.13

Sample wt/vol: 4.1 (g/mL) G Lab File ID: N39510.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 20 Date Analyzed: 05/23/00

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
75-71-8	Dichlorodifluoromethane	15	U
74-87-3	Chloromethane	15	U
75-01-4	Vinyl Chloride	15	U
74-83-9	Bromomethane	15	U
75-00-3	Chloroethane	15	U
75-69-4	Trichlorofluoromethane	15	U
75-35-4	1,1-Dichloroethene	15	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	15	U
67-64-1	Acetone	15	U
75-15-0	Carbon Disulfide	15	U
79-20-9	Methyl Acetate	15	U
75-09-2	Methylene Chloride	6	BJ
156-60-5	trans-1,2-Dichloroethene	15	U
1634-04-4	Methyl-tert-Butyl Ether	15	U
75-34-3	1,1-Dichloroethane	15	U
156-59-2	cis-1,2-Dichloroethene	15	U
78-93-3	2-Butanone	15	U
67-66-3	Chloroform	15	U
71-55-6	1,1,1-Trichloroethane	15	U
110-82-7	Cyclohexane	15	U
56-23-5	Carbon Tetrachloride	15	U
71-43-2	Benzene	15	U
107-06-2	1,2-Dichloroethane	15	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JB

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.13

Sample wt/vol: 4.1 (g/mL) G Lab File ID: N39510.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 20 Date Analyzed: 05/23/00

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
79-01-6	Trichloroethene	15	U
108-87-2	Methylcyclohexane	15	U
78-87-5	1,2-Dichloropropane	15	U
75-27-4	Bromodichloromethane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
108-88-3	Toluene	15	U
10061-02-6	trans-1,3-Dichloropropene	15	U
79-00-5	1,1,2-Trichloroethane	15	U
127-18-4	Tetrachloroethene	15	U
591-78-6	2-Hexanone	15	U
124-48-1	Dibromochloromethane	15	U
106-93-4	1,2-Dibromoethane	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
1330-20-7	Xylene (total)	15	U
100-42-5	Styrene	15	U
75-25-2	Bromoform	15	U
98-82-8	Isopropylbenzene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
541-73-1	1,3-Dichlorobenzene	15	U
106-46-7	1,4-Dichlorobenzene	15	U
95-50-1	1,2-Dichlorobenzene	15	U
96-12-8	1,2-Dibromo-3-chloropropane	15	U
120-82-1	1,2,4-Trichlorobenzene	15	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02JB

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.13

Sample wt/vol: 4.1 (g/mL) G Lab File ID: N39510.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 20 Date Analyzed: 05/23/00

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.	UNKNOWN	7.92	16	J
2.	CYCLOTRISILOXANE	11.42	13	BJ
3.	CYCLOTETRASILOXANE	14.19	8	BJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02K2

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.14

Sample wt/vol: 4.6 (g/mL) G Lab File ID: N39511.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 6 Date Analyzed: 05/23/00

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
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
75-35-4	1,1-Dichloroethene	12	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	12	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
79-20-9	Methyl Acetate	12	U
75-09-2	Methylene Chloride	2	BJ
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-tert-Butyl Ether	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
78-93-3	2-Butanone	12	U
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
110-82-7	Cyclohexane	12	U
56-23-5	Carbon Tetrachloride	12	U
71-43-2	Benzene	12	U
107-06-2	1,2-Dichloroethane	12	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02K2

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.14

Sample wt/vol: 4.6 (g/mL) G Lab File ID: N39511.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 6 Date Analyzed: 05/23/00

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
79-01-6	Trichloroethene	12	U
108-87-2	Methylcyclohexane	12	U
78-87-5	1,2-Dichloropropane	12	U
75-27-4	Bromodichloromethane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
108-88-3	Toluene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	12	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
96-12-8	1,2-Dibromo-3-chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02K2

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.14

Sample wt/vol: 4.6 (g/mL) G Lab File ID: N39511.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 6 Date Analyzed: 05/23/00

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.	UNKNOWN	8.72	6	J
2.	CYCLOTRISILOXANE	11.42	8	BJ
3.	CYCLOTETRASILOXANE	14.19	6	BJ
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02K6

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.15

Sample wt/vol: 5.5 (g/mL) G Lab File ID: N39518.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 19 Date Analyzed: 05/24/00

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
75-71-8	Dichlorodifluoromethane	11	U
74-87-3	Chloromethane	11	U
75-01-4	Vinyl Chloride	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
75-69-4	Trichlorofluoromethane	11	U
75-35-4	1,1-Dichloroethene	11	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	11	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
79-20-9	Methyl Acetate	11	U
75-09-2	Methylene Chloride	1	BJ
156-60-5	trans-1,2-Dichloroethene	11	U
1634-04-4	Methyl-tert-Butyl Ether	11	U
75-34-3	1,1-Dichloroethane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
78-93-3	2-Butanone	11	U
67-66-3	Chloroform	11	U
71-55-6	1,1,1-Trichloroethane	11	U
110-82-7	Cyclohexane	11	U
56-23-5	Carbon Tetrachloride	11	U
71-43-2	Benzene	11	U
107-06-2	1,2-Dichloroethane	11	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02K6

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.15

Sample wt/vol: 5.5 (g/mL) G Lab File ID: N39518.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 19 Date Analyzed: 05/24/00

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
79-01-6	Trichloroethene	11	U
108-87-2	Methylcyclohexane	11	U
78-87-5	1,2-Dichloropropane	11	U
75-27-4	Bromodichloromethane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
108-88-3	Toluene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
79-00-5	1,1,2-Trichloroethane	11	U
127-18-4	Tetrachloroethene	11	U
591-78-6	2-Hexanone	11	U
124-48-1	Dibromochloromethane	11	U
106-93-4	1,2-Dibromoethane	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
1330-20-7	Xylene (total)	11	U
100-42-5	Styrene	11	U
75-25-2	Bromoform	11	U
98-82-8	Isopropylbenzene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
96-12-8	1,2-Dibromo-3-chloropropane	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02K6

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.15

Sample wt/vol: 5.5 (g/mL) G Lab File ID: N39518.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 19 Date Analyzed: 05/24/00

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	7.93	10	J
2.	UNKNOWN	8.73	7	J
3.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02KA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.16

Sample wt/vol: 5.6 (g/mL) G Lab File ID: N39519.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 19 Date Analyzed: 05/24/00

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
75-71-8	Dichlorodifluoromethane	11	U
74-87-3	Chloromethane	11	U
75-01-4	Vinyl Chloride	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
75-69-4	Trichlorofluoromethane	11	U
75-35-4	1,1-Dichloroethene	11	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	11	U
67-64-1	Acetone	38	
75-15-0	Carbon Disulfide	11	U
79-20-9	Methyl Acetate	11	U
75-09-2	Methylene Chloride	1	BJ
156-60-5	trans-1,2-Dichloroethene	11	U
1634-04-4	Methyl-tert-Butyl Ether	11	U
75-34-3	1,1-Dichloroethane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
78-93-3	2-Butanone	11	U
67-66-3	Chloroform	11	U
71-55-6	1,1,1-Trichloroethane	11	U
110-82-7	Cyclohexane	11	U
56-23-5	Carbon Tetrachloride	11	U
71-43-2	Benzene	11	U
107-06-2	1,2-Dichloroethane	11	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02KA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.16

Sample wt/vol: 5.6 (g/mL) G Lab File ID: N39519.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 19 Date Analyzed: 05/24/00

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
79-01-6	Trichloroethene	11	U
108-87-2	Methylcyclohexane	11	U
78-87-5	1,2-Dichloropropane	11	U
75-27-4	Bromodichloromethane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
108-88-3	Toluene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
79-00-5	1,1,2-Trichloroethane	11	U
127-18-4	Tetrachloroethene	11	U
591-78-6	2-Hexanone	11	U
124-48-1	Dibromochloromethane	11	U
106-93-4	1,2-Dibromoethane	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
1330-20-7	Xylene (total)	11	U
100-42-5	Styrene	11	U
75-25-2	Bromoform	11	U
98-82-8	Isopropylbenzene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
96-12-8	1,2-Dibromo-3-chloropropane	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02KA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.16

Sample wt/vol: 5.6 (g/mL) G Lab File ID: N39519.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: not dec. 19 Date Analyzed: 05/24/00

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. 1066-40-6	SILANOL, TRIMETHYL-	7.92	10	JN
2.	CYCLOTRISILOXANE	11.39	10	BJ
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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J0

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.07

Sample wt/vol: 30.2 (g/mL) G Lab File ID: H0052911.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 32 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.2 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	150	J
108-95-2	Phenol	2400	U
111-44-4	bis(2-Chloroethyl)ether	2400	U
95-57-8	2-Chlorophenol	2400	U
95-48-7	2-Methylphenol	2400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	2400	U
98-86-2	Acetophenone	2400	U
106-44-5	4-Methylphenol	2400	U
621-64-7	N-Nitroso-di-n-propylamine	2400	U
67-72-1	Hexachloroethane	2400	U
98-95-3	Nitrobenzene	2400	U
78-59-1	Isophorone	2400	U
88-75-5	2-Nitrophenol	2400	U
105-67-9	2,4-Dimethylphenol	2400	U
111-91-1	bis(2-Chloroethoxy)methane	2400	U
120-83-2	2,4-Dichlorophenol	2400	U
91-20-3	Naphthalene	2400	U
106-47-8	4-Chloroaniline	2400	U
87-68-3	Hexachlorobutadiene	2400	U
105-60-2	Caprolactam	2400	U
59-50-7	4-Chloro-3-methylphenol	2400	U
91-57-6	2-Methylnaphthalene	2400	U
77-47-4	Hexachlorocyclopentadiene	2400	U
88-06-2	2,4,6-Trichlorophenol	2400	U
95-95-4	2,4,5-Trichlorophenol	6100	U
92-52-4	1,1'-Biphenyl	2400	U
91-58-7	2-Chloronaphthalene	2400	U
88-74-4	2-Nitroaniline	6100	U
131-11-3	Dimethylphthalate	2400	U
606-20-2	2,6-Dinitrotoluene	2400	U
208-96-8	Acenaphthylene	2400	U
99-09-2	3-Nitroaniline	6100	U
83-32-9	Acenaphthene	2400	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J0

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.07

Sample wt/vol: 30.2 (g/mL) G Lab File ID: H0052911.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 32 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.2 Extraction: (Type) SONC

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

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	6100	U
100-02-7	4-Nitrophenol	6100	U
132-64-9	Dibenzofuran	2400	U
121-14-2	2,4-Dinitrotoluene	2400	U
84-66-2	Diethylphthalate	2400	U
86-73-7	Fluorene	2400	U
7005-72-3	4-Chlorophenyl-phenylether	2400	U
100-01-6	4-Nitroaniline	6100	U
534-52-1	4,6-Dinitro-2-methylphenol	6100	U
86-30-6	N-Nitrosodiphenylamine (1)	2400	U
101-55-3	4-Bromophenyl-phenylether	2400	U
118-74-1	Hexachlorobenzene	2400	U
1912-24-9	Atrazine	2400	U
87-86-5	Pentachlorophenol	6100	U
85-01-8	Phenanthrene	2400	U
120-12-7	Anthracene	2400	U
86-74-8	Carbazole	2400	U
84-74-2	Di-n-butylphthalate	2400	U
206-44-0	Fluoranthene	2400	U
129-00-0	Pyrene	640	J
85-68-7	Butylbenzylphthalate	2400	U
91-94-1	3,3'-Dichlorobenzidine	2400	U
56-55-3	Benzo(a)anthracene	2400	U
218-01-9	Chrysene	960	J
117-81-7	bis(2-Ethylhexyl)phthalate	2400	U
117-84-0	Di-n-octylphthalate	2400	U
205-99-2	Benzo(b)fluoranthene	220	J
207-08-9	Benzo(k)fluoranthene	2400	U
50-32-8	Benzo(a)pyrene	2200	J
193-39-5	Indeno(1,2,3-cd)pyrene	280	J
53-70-3	Dibenzo(a,h)anthracene	2400	U
191-24-2	Benzo(g,h,i)perylene	3700	

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02J0

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.07

Sample wt/vol: 30.2 (g/mL) G Lab File ID: H0052911.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 32 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.2 Extraction: (Type) SONC

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	3.67	12000	ABJN
2.	UNKNOWN	16.80	3600	J
3.	BENZALDEHYDE, 5-BENZYLOXY-2-	17.11	3400	JN
4.	UNKNOWN	17.22	2300	J
5.	UNKNOWN	17.64	2200	J
6. 3697-24-3	CHRYSENE, 5-METHYL-	17.96	2100	JN
7. 109292-58-2	4,5,11,12-TETRAHYDROBENZO[A]	18.53	2300	JN
8.	UNKNOWN	19.19	1800	J
9.	UNKNOWN	19.38	3500	J
10.	UNKNOWN	19.53	2200	J
11.	UNKNOWN PAH	19.82	3000	J
12.	UNKNOWN	19.85	2300	J
13.	UNKNOWN	20.00	3800	J
14.	UNKNOWN	20.06	1700	J
15.	UNKNOWN	20.15	4400	J
16.	UNKNOWN	20.17	2400	J
17.	UNKNOWN	20.24	2100	J
18.	UNKNOWN PAH	20.36	3300	J
19.	UNKNOWN PAH	20.46	2200	J
20.	UNKNOWN	20.51	2800	J
21.	UNKNOWN	20.59	1800	J
22.	UNKNOWN	20.98	3200	J
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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J1

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.08

Sample wt/vol: 30.3 (g/mL) G Lab File ID: H0053009.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 26 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/30/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	440	U
108-95-2	Phenol	440	U
111-44-4	bis(2-Chloroethyl)ether	440	U
95-57-8	2-Chlorophenol	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	2,2'-oxybis(1-Chloropropane)	440	U
98-86-2	Acetophenone	440	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-di-n-propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
111-91-1	bis(2-Chloroethoxy)methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
91-20-3	Naphthalene	440	U
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
105-60-2	Caprolactam	440	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	440	U
77-47-4	Hexachlorocyclopentadiene	440	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	1100	U
92-52-4	1,1'-Biphenyl	440	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	440	U
606-20-2	2,6-Dinitrotoluene	440	U
208-96-8	Acenaphthylene	81	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	440	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J1

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.08

Sample wt/vol: 30.3 (g/mL) G Lab File ID: H0053009.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 26 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/30/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

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	440	U
121-14-2	2,4-Dinitrotoluene	440	U
84-66-2	Diethylphthalate	49	J
86-73-7	Fluorene	440	U
7005-72-3	4-Chlorophenyl-phenylether	440	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	440	U
101-55-3	4-Bromophenyl-phenylether	440	U
118-74-1	Hexachlorobenzene	440	U
1912-24-9	Atrazine	440	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	440	U
120-12-7	Anthracene	440	U
86-74-8	Carbazole	440	U
84-74-2	Di-n-butylphthalate	440	U
206-44-0	Fluoranthene	52	J
129-00-0	Pyrene	42	J
85-68-7	Butylbenzylphthalate	440	U
91-94-1	3,3'-Dichlorobenzidine	440	U
56-55-3	Benzo(a)anthracene	440	U
218-01-9	Chrysene	560	
117-81-7	bis(2-Ethylhexyl)phthalate	48	J
117-84-0	Di-n-octylphthalate	440	U
205-99-2	Benzo(b)fluoranthene	140	J
207-08-9	Benzo(k)fluoranthene	440	U
50-32-8	Benzo(a)pyrene	440	U
193-39-5	Indeno(1,2,3-cd)pyrene	180	J
53-70-3	Dibenzo(a,h)anthracene	56	J
191-24-2	Benzo(g,h,i)perylene	1200	

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02J1

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.08

Sample wt/vol: 30.3 (g/mL) G Lab File ID: H0053009.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 26 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/30/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

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	3.65	10000	ABJN
2. 301-02-0	9-OCTADECENAMIDE, (Z)-	16.49	780	JN
3. 64401-21-4	PYRENE, 1,3-DIMETHYL-	17.03	540	JN
4.	UNKNOWN	17.62	720	J
5. 54986-63-9	BENZO[C]PHENANTHRENE, 5,8-DI	18.50	2100	JN
6.	UNKNOWN PAH	18.74	570	J
7.	UNKNOWN PAH	19.01	650	J
8.	UNKNOWN PAH	19.14	670	J
9. 192-97-2	BENZO[E]PYRENE	19.27	2500	JN
10.	UNKNOWN PAH	19.65	560	J
11.	UNKNOWN PAH	19.79	1300	J
12.	UNKNOWN PAH	19.83	1200	J
13.	UNKNOWN PAH	20.00	1300	J
14.	UNKNOWN PAH	20.11	660	J
15.	UNKNOWN PAH	20.30	920	J
16.	UNKNOWN	20.32	700	J
17.	UNKNOWN PAH	20.44	850	J
18.	UNKNOWN	20.52	820	J
19.	UNKNOWN	20.56	1100	J
20.	UNKNOWN	20.66	820	J
21.	UNKNOWN PAH	21.70	730	J
22.	UNKNOWN PAH	21.98	1500	J
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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J5

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.09

Sample wt/vol: 30.8 (g/mL) G Lab File ID: H0052620.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 21 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2 Extraction: (Type) SONC

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

CAS NO.	COMPOUND		Q
100-52-7	Benzaldehyde	410	U
108-95-2	Phenol	410	U
111-44-4	bis(2-Chloroethyl)ether	410	U
95-57-8	2-Chlorophenol	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
98-86-2	Acetophenone	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
105-60-2	Caprolactam	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	1000	U
92-52-4	1,1'-Biphenyl	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U
208-96-8	Acenaphthylene	410	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	410	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J5

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.09

Sample wt/vol: 30.8 (g/mL) G Lab File ID: H0052620.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 21 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2 Extraction: (Type) SONC

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	410	U
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
86-73-7	Fluorene	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
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
1912-24-9	Atrazine	410	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
86-74-8	Carbazole	410	U
84-74-2	Di-n-butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butylbenzylphthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)phthalate	410	U
117-84-0	Di-n-octylphthalate	410	U
205-99-2	Benzo(b)fluoranthene	410	U
207-08-9	Benzo(k)fluoranthene	410	U
50-32-8	Benzo(a)pyrene	410	U
193-39-5	Indeno(1,2,3-cd)pyrene	410	U
53-70-3	Dibenzo(a,h)anthracene	410	U
191-24-2	Benzo(g,h,i)perylene	410	U

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02J5

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.09

Sample wt/vol: 30.8 (g/mL) G Lab File ID: H0052620.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 21 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2 Extraction: (Type) SONC

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	3.71	7300	ABJN
2.	UNKNOWN	4.60	160	J
3.	UNKNOWN	4.80	290	BJ
4.	UNKNOWN	6.07	200	J
5.	UNKNOWN	10.50	110	J
6. 57-10-3	HEXADECANOIC ACID	14.09	130	JN
7.	UNKNOWN	15.40	110	J
8.	UNKNOWN AMIDE	15.50	210	J
9. 301-02-0	9-OCTADECENAMIDE, (Z)-	16.56	2500	BJN
10.	UNKNOWN	16.66	190	BJ
11.	UNKNOWN	19.41	120	J
12.	2,5-DIMETHOXY-4-PROPOXY-.BET	19.90	140	J
13.	UNKNOWN	20.29	150	J
14.	UNKNOWN	20.39	130	J
15.	UNKNOWN	21.04	160	J
16.	UNKNOWN	21.36	280	J
17.	UNKNOWN	21.71	910	J
18.	UNKNOWN	21.77	330	J
19.	UNKNOWN	22.57	120	J
20.	UNKNOWN	22.65	440	BJ
21.	UNKNOWN	22.80	120	J
22.	UNKNOWN	22.94	1500	J
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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J7

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.10

Sample wt/vol: 32.0 (g/mL) G Lab File ID: H0052621.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 29 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	45	J
108-95-2	Phenol	440	U
111-44-4	bis(2-Chloroethyl)ether	440	U
95-57-8	2-Chlorophenol	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	2,2'-oxybis(1-Chloropropane)	440	U
98-86-2	Acetophenone	440	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-di-n-propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
111-91-1	bis(2-Chloroethoxy)methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
91-20-3	Naphthalene	440	U
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
105-60-2	Caprolactam	440	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	440	U
77-47-4	Hexachlorocyclopentadiene	440	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	1100	U
92-52-4	1,1'-Biphenyl	440	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	440	U
606-20-2	2,6-Dinitrotoluene	440	U
208-96-8	Acenaphthylene	440	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	440	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J7

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.10

Sample wt/vol: 32.0 (g/mL) G Lab File ID: H0052621.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 29 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

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	440	U
121-14-2	2,4-Dinitrotoluene	440	U
84-66-2	Diethylphthalate	440	U
86-73-7	Fluorene	440	U
7005-72-3	4-Chlorophenyl-phenylether	440	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	440	U
101-55-3	4-Bromophenyl-phenylether	440	U
118-74-1	Hexachlorobenzene	440	U
1912-24-9	Atrazine	440	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	440	U
120-12-7	Anthracene	440	U
86-74-8	Carbazole	440	U
84-74-2	Di-n-butylphthalate	440	U
206-44-0	Fluoranthene	440	U
129-00-0	Pyrene	440	U
85-68-7	Butylbenzylphthalate	440	U
91-94-1	3,3'-Dichlorobenzidine	440	U
56-55-3	Benzo(a)anthracene	440	U
218-01-9	Chrysene	440	U
117-81-7	bis(2-Ethylhexyl)phthalate	440	U
117-84-0	Di-n-octylphthalate	440	U
205-99-2	Benzo(b)fluoranthene	440	U
207-08-9	Benzo(k)fluoranthene	440	U
50-32-8	Benzo(a)pyrene	440	U
193-39-5	Indeno(1,2,3-cd)pyrene	440	U
53-70-3	Dibenzo(a,h)anthracene	440	U
191-24-2	Benzo(g,h,i)perylene	440	U

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02J7

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.10

Sample wt/vol: 32.0 (g/mL) G Lab File ID: H0052621.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 29 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

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	3.72	8000	ABJN
2.	UNKNOWN	4.45	150	BJ
3.	UNKNOWN	4.81	350	BJ
4.	UNKNOWN	6.08	180	J
5. 112-53-8	1-DODECANOL	10.50	140	JN
6.	UNKNOWN AMIDE	14.22	170	J
7.	UNKNOWN AMIDE	15.41	210	BJ
8. 629-54-9	HEXADECANAMIDE	15.51	380	JN
9.	UNKNOWN AMIDE	16.56	3600	J
10.	UNKNOWN	16.68	160	BJ
11.	UNKNOWN	16.85	250	J
12.	UNKNOWN	19.40	170	J
13.	UNKNOWN	20.28	180	J
14.	UNKNOWN	21.05	560	J
15.	UNKNOWN	21.34	270	J
16.	UNKNOWN	21.41	290	J
17.	UNKNOWN	21.47	150	J
18.	UNKNOWN	21.72	470	J
19.	UNKNOWN	21.76	330	J
20. 39920-37-1	BENZENE, 1,3-DICHLORO-2-ISOC	21.87	160	JN
21.	UNKNOWN	22.15	240	J
22.	UNKNOWN	22.65	730	BJ
23.	UNKNOWN	23.47	230	J
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J8

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.11

Sample wt/vol: 32.7 (g/mL) G Lab File ID: H0052622.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 25 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	27	J
108-95-2	Phenol	50	J
111-44-4	bis(2-Chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
98-86-2	Acetophenone	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
105-60-2	Caprolactam	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	1000	U
92-52-4	1,1'-Biphenyl	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U
208-96-8	Acenaphthylene	400	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	400	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J8

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.11

Sample wt/vol: 32.7 (g/mL) G Lab File ID: H0052622.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 25 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.5 Extraction: (Type) SONC

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	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
86-73-7	Fluorene	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
1912-24-9	Atrazine	400	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	400	U
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)fluoranthene	400	U
50-32-8	Benzo(a)pyrene	400	U
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02J8

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.11

Sample wt/vol: 32.7 (g/mL) G Lab File ID: H0052622.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 25 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.5 Extraction: (Type) SONC

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	3.71	7600	ABJN
2.	UNKNOWN	4.60	120	J
3.	UNKNOWN	4.80	300	BJ
4.	UNKNOWN AMIDE	15.51	150	J
5.	UNKNOWN AMIDE	16.56	1500	J
6.	UNKNOWN	16.86	240	J
7.	UNKNOWN	19.89	150	J
8.	UNKNOWN	20.21	250	J
9.	UNKNOWN	20.29	250	J
10.	UNKNOWN	20.42	890	J
11.	UNKNOWN	20.66	200	J
12.	UNKNOWN	20.73	190	J
13.	UNKNOWN	20.93	380	J
14.	UNKNOWN PAH	21.02	580	J
15.	UNKNOWN	21.05	670	J
16.	UNKNOWN	21.12	150	J
17. 56534-03-3	.BETA.-CHLORDENE	21.36	220	JN
18.	UNKNOWN	21.44	450	J
19.	UNKNOWN	21.76	310	J
20.	UNKNOWN	21.89	220	J
21.	UNKNOWN	22.66	450	BJ
22.	UNKNOWN	22.79	200	J
23.				
24.				
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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.12

Sample wt/vol: 30.5 (g/mL) G Lab File ID: H0052915.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 34 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	490	U
108-95-2	Phenol	490	U
111-44-4	bis(2-Chloroethyl)ether	490	U
95-57-8	2-Chlorophenol	490	U
95-48-7	2-Methylphenol	490	U
108-60-1	2,2'-oxybis(1-Chloropropane)	490	U
98-86-2	Acetophenone	490	U
106-44-5	4-Methylphenol	490	U
621-64-7	N-Nitroso-di-n-propylamine	490	U
67-72-1	Hexachloroethane	490	U
98-95-3	Nitrobenzene	490	U
78-59-1	Isophorone	490	U
88-75-5	2-Nitrophenol	490	U
105-67-9	2,4-Dimethylphenol	490	U
111-91-1	bis(2-Chloroethoxy)methane	490	U
120-83-2	2,4-Dichlorophenol	490	U
91-20-3	Naphthalene	490	U
106-47-8	4-Chloroaniline	490	U
87-68-3	Hexachlorobutadiene	490	U
105-60-2	Caprolactam	490	U
59-50-7	4-Chloro-3-methylphenol	490	U
91-57-6	2-Methylnaphthalene	490	U
77-47-4	Hexachlorocyclopentadiene	490	U
88-06-2	2,4,6-Trichlorophenol	490	U
95-95-4	2,4,5-Trichlorophenol	1200	U
92-52-4	1,1'-Biphenyl	490	U
91-58-7	2-Chloronaphthalene	490	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	490	U
606-20-2	2,6-Dinitrotoluene	490	U
208-96-8	Acenaphthylene	200	J
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	490	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.12

Sample wt/vol: 30.5 (g/mL) G Lab File ID: H0052915.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 34 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

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

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	490	U
121-14-2	2,4-Dinitrotoluene	490	U
84-66-2	Diethylphthalate	490	U
86-73-7	Fluorene	44	J
7005-72-3	4-Chlorophenyl-phenylether	490	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	490	U
101-55-3	4-Bromophenyl-phenylether	490	U
118-74-1	Hexachlorobenzene	490	U
1912-24-9	Atrazine	490	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	320	J
120-12-7	Anthracene	700	
86-74-8	Carbazole	140	J
84-74-2	Di-n-butylphthalate	490	U
206-44-0	Fluoranthene	5800	E
129-00-0	Pyrene	11000	E
85-68-7	Butylbenzylphthalate	490	U
91-94-1	3,3'-Dichlorobenzidine	490	U
56-55-3	Benzo(a)anthracene	5800	E
218-01-9	Chrysene	5800	E
117-81-7	bis(2-Ethylhexyl)phthalate	79	J
117-84-0	Di-n-octylphthalate	490	U
205-99-2	Benzo(b)fluoranthene	4600	E
207-08-9	Benzo(k)fluoranthene	3000	
50-32-8	Benzo(a)pyrene	3700	
193-39-5	Indeno(1,2,3-cd)pyrene	1500	
53-70-3	Dibenzo(a,h)anthracene	630	
191-24-2	Benzo(g,h,i)perylene	1500	

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02JA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.12

Sample wt/vol: 30.5 (g/mL) G Lab File ID: H0052915.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 34 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

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	3.68	12000	ABJN
2.	UNKNOWN	4.75	550	BJ
3.	UNKNOWN	6.01	580	J
4. 57-10-3	HEXADECANOIC ACID	14.05	310	JN
5. 203-64-5	4H-CYCLOPENTA[DEF]PHENANTHRE	14.08	480	JN
6. 238-84-6	11H-BENZO[A]FLUORENE	15.94	690	JN
7. 243-17-4	11H-BENZO[B]FLUORENE	16.04	650	JN
8.	UNKNOWN AMIDE	16.52	670	J
9.	UNKNOWN PAH	18.48	320	J
10. 207-08-9	BENZO[K]FLUORANTHENE	19.07	650	JN
11.	UNKNOWN PAH	19.20	260	J
12. 198-55-0	PERYLENE	19.31	1600	JN
13.	UNKNOWN PAH	19.67	410	J
14.	UNKNOWN PAH	19.73	300	J
15.	UNKNOWN	19.85	380	J
16.	UNKNOWN PAH	20.69	340	J
17.	UNKNOWN PAH	20.95	460	J
18. 53-70-3	DIBENZ[A,H]ANTHRACENE	21.00	460	JN
19.	UNKNOWN	21.28	280	J
20.	UNKNOWN PAH	21.33	580	J
21.	UNKNOWN	22.04	320	J
22.	UNKNOWN	22.56	430	J
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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JADL

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.12DL

Sample wt/vol: 30.5 (g/mL) G Lab File ID: H0053008.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 34 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/30/00

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

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

CAS NO.	COMPOUND	CONCENTRATION	Q
100-52-7	Benzaldehyde	2500	U
108-95-2	Phenol	2500	U
111-44-4	bis(2-Chloroethyl)ether	2500	U
95-57-8	2-Chlorophenol	2500	U
95-48-7	2-Methylphenol	2500	U
108-60-1	2,2'-oxybis(1-Chloropropane)	2500	U
98-86-2	Acetophenone	2500	U
106-44-5	4-Methylphenol	2500	U
621-64-7	N-Nitroso-di-n-propylamine	2500	U
67-72-1	Hexachloroethane	2500	U
98-95-3	Nitrobenzene	2500	U
78-59-1	Isophorone	2500	U
88-75-5	2-Nitrophenol	2500	U
105-67-9	2,4-Dimethylphenol	2500	U
111-91-1	bis(2-Chloroethoxy)methane	2500	U
120-83-2	2,4-Dichlorophenol	2500	U
91-20-3	Naphthalene	2500	U
106-47-8	4-Chloroaniline	2500	U
87-68-3	Hexachlorobutadiene	2500	U
105-60-2	Caprolactam	2500	U
59-50-7	4-Chloro-3-methylphenol	2500	U
91-57-6	2-Methylnaphthalene	2500	U
77-47-4	Hexachlorocyclopentadiene	2500	U
88-06-2	2,4,6-Trichlorophenol	2500	U
95-95-4	2,4,5-Trichlorophenol	6200	U
92-52-4	1,1'-Biphenyl	2500	U
91-58-7	2-Chloronaphthalene	2500	U
88-74-4	2-Nitroaniline	6200	U
131-11-3	Dimethylphthalate	2500	U
606-20-2	2,6-Dinitrotoluene	2500	U
208-96-8	Acenaphthylene	360	DJ
99-09-2	3-Nitroaniline	6200	U
83-32-9	Acenaphthene	2500	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JADL

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.12DL

Sample wt/vol: 30.5 (g/mL) G Lab File ID: H0053008.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 34 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/30/00

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

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

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	6200	U
100-02-7	4-Nitrophenol	6200	U
132-64-9	Dibenzofuran	2500	U
121-14-2	2,4-Dinitrotoluene	2500	U
84-66-2	Diethylphthalate	180	DJ
86-73-7	Fluorene	2500	U
7005-72-3	4-Chlorophenyl-phenylether	2500	U
100-01-6	4-Nitroaniline	6200	U
534-52-1	4,6-Dinitro-2-methylphenol	6200	U
86-30-6	N-Nitrosodiphenylamine (1)	2500	U
101-55-3	4-Bromophenyl-phenylether	2500	U
118-74-1	Hexachlorobenzene	2500	U
1912-24-9	Atrazine	2500	U
87-86-5	Pentachlorophenol	6200	U
85-01-8	Phenanthrene	380	DJ
120-12-7	Anthracene	700	DJ
86-74-8	Carbazole	160	DJ
84-74-2	Di-n-butylphthalate	2500	U
206-44-0	Fluoranthene	8300	D
129-00-0	Pyrene	10000	D
85-68-7	Butylbenzylphthalate	2500	U
91-94-1	3,3'-Dichlorobenzidine	2500	U
56-55-3	Benzo(a)anthracene	6000	D
218-01-9	Chrysene	6600	D
117-81-7	bis(2-Ethylhexyl)phthalate	2500	U
117-84-0	Di-n-octylphthalate	2500	U
205-99-2	Benzo(b)fluoranthene	4000	D
207-08-9	Benzo(k)fluoranthene	3100	D
50-32-8	Benzo(a)pyrene	3400	D
193-39-5	Indeno(1,2,3-cd)pyrene	1500	DJ
53-70-3	Dibenzo(a,h)anthracene	440	DJ
191-24-2	Benzo(g,h,i)perylene	1400	DJ

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02JADL

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.12DL

Sample wt/vol: 30.5 (g/mL) G Lab File ID: H0053008.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 34 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/30/00

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

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	3.64	16000	ADJN
2.	UNKNOWN	15.24	750	DJ
3.	UNKNOWN PAH	15.42	1100	DJ
4. 243-42-5	BENZO[B]NAPHTHO[2,3-D]FURAN	15.55	1900	DJN
5. 243-17-4	11H-BENZO[B]FLUORENE	15.72	1100	DJN
6. 243-17-4	11H-BENZO[B]FLUORENE	15.90	5600	DJN
7. 243-17-4	11H-BENZO[B]FLUORENE	16.01	5300	DJN
8.	UNKNOWN PAH	16.06	1900	DJ
9. 2381-21-7	PYRENE, 1-METHYL-	16.25	660	DJN
10.	UNKNOWN AMIDE	16.48	3300	DJ
11.	UNKNOWN PAH	16.59	1400	DJ
12. 239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPH	16.89	1800	DJN
13.	UNKNOWN PAH	16.95	2300	DJ
14.	UNKNOWN	17.08	1400	DJ
15.	UNKNOWN PAH	17.46	2000	DJ
16. 5717-37-3	(CARBETHOXYETHYLIDINE)TRIPHE	17.56	3300	DJN
17.	UNKNOWN PAH	17.91	1100	DJ
18.	UNKNOWN PAH	17.98	790	DJ
19.	UNKNOWN	18.07	1200	DJ
20.	UNKNOWN	18.13	1000	DJ
21.	UNKNOWN	18.15	860	DJ
22.	UNKNOWN PAH	19.03	780	DJ
23. 207-08-9	BENZO[K]FLUORANTHENE	19.27	2000	DJN
24.				
25.				
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27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JB

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.13

Sample wt/vol: 30.9 (g/mL) G Lab File ID: H0052914.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 20 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1 Extraction: (Type) SONC

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

CAS NO.	COMPOUND	~	Q
100-52-7	Benzaldehyde	27	J
108-95-2	Phenol	76	J
111-44-4	bis(2-Chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
98-86-2	Acetophenone	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
91-20-3	Naphthalene	330	J
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
105-60-2	Caprolactam	23	J
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	120	J
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	1000	U
92-52-4	1,1'-Biphenyl	38	J
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U
208-96-8	Acenaphthylene	400	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	960	

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JB

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.13

Sample wt/vol: 30.9 (g/mL) G Lab File ID: H0052914.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 20 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1 Extraction: (Type) SONC

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	510	
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
86-73-7	Fluorene	790	
7005-72-3	4-Chlorophenyl-phenylether	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
1912-24-9	Atrazine	400	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	5100	E
120-12-7	Anthracene	1500	
86-74-8	Carbazole	950	
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	5200	E
129-00-0	Pyrene	6100	E
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)anthracene	3200	
218-01-9	Chrysene	3000	
117-81-7	bis(2-Ethylhexyl)phthalate	95	J
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	2500	
207-08-9	Benzo(k)fluoranthene	2300	
50-32-8	Benzo(a)pyrene	2800	
193-39-5	Indeno(1,2,3-cd)pyrene	1400	
53-70-3	Dibenzo(a,h)anthracene	520	
191-24-2	Benzo(g,h,i)perylene	1400	

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02JB

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.13

Sample wt/vol: 30.9 (g/mL) G Lab File ID: H0052914.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 20 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1 Extraction: (Type) SONC

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	3.67	7600	ABJN
2.	UNKNOWN	4.75	300	BJ
3. 132-65-0	DIBENZOTHIOPHENE	12.91	360	JN
4. 2531-84-2	PHENANTHRENE, 2-METHYL-	13.90	340	JN
5. 832-69-9	PHENANTHRENE, 1-METHYL-	13.94	630	JN
6.	UNKNOWN PAH	14.09	720	J
7. 243-17-4	11H-BENZO[B]FLUORENE	15.94	360	JN
8.	UNKNOWN AMIDE	16.51	430	J
9. 1090-13-7	5,12-NAPHTHACENEDIONE	18.45	560	JN
10.	UNKNOWN PAH	18.72	350	J
11. 207-08-9	BENZO[K]FLUORANTHENE	19.07	650	JN
12.	UNKNOWN PAH	19.21	430	J
13. 192-97-2	BENZO[E]PYRENE	19.31	1900	JN
14.	UNKNOWN PAH	19.67	360	J
15. 53-70-3	DIBENZ[A,H]ANTHRACENE	20.65	300	JN
16. 53-70-3	DIBENZ[A,H]ANTHRACENE	20.95	480	JN
17.	UNKNOWN PAH	20.99	530	J
18.	UNKNOWN	21.29	320	J
19.	UNKNOWN PAH	21.32	540	J
20. 192-65-4	NAPHTHO[1,2,3,4-DEF]CHRYSENE	22.78	600	JN
21.	1,2:3,4-DIBENZPYRENE	22.91	400	JN
22. 192-65-4	NAPHTHO[1,2,3,4-DEF]CHRYSENE	23.62	690	JN
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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JBDL

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.13DL

Sample wt/vol: 30.9 (g/mL) G Lab File ID: H0053010.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 20 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/30/00

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.1 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	2000	U
108-95-2	Phenol	2000	U
111-44-4	bis(2-Chloroethyl)ether	2000	U
95-57-8	2-Chlorophenol	2000	U
95-48-7	2-Methylphenol	2000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	2000	U
98-86-2	Acetophenone	2000	U
106-44-5	4-Methylphenol	2000	U
621-64-7	N-Nitroso-di-n-propylamine	2000	U
67-72-1	Hexachloroethane	2000	U
98-95-3	Nitrobenzene	2000	U
78-59-1	Isophorone	2000	U
88-75-5	2-Nitrophenol	2000	U
105-67-9	2,4-Dimethylphenol	2000	U
111-91-1	bis(2-Chloroethoxy)methane	2000	U
120-83-2	2,4-Dichlorophenol	2000	U
91-20-3	Naphthalene	320	DJ
106-47-8	4-Chloroaniline	2000	U
87-68-3	Hexachlorobutadiene	2000	U
105-60-2	Caprolactam	2000	U
59-50-7	4-Chloro-3-methylphenol	2000	U
91-57-6	2-Methylnaphthalene	2000	U
77-47-4	Hexachlorocyclopentadiene	2000	U
88-06-2	2,4,6-Trichlorophenol	2000	U
95-95-4	2,4,5-Trichlorophenol	5000	U
92-52-4	1,1'-Biphenyl	2000	U
91-58-7	2-Chloronaphthalene	2000	U
88-74-4	2-Nitroaniline	5000	U
131-11-3	Dimethylphthalate	2000	U
606-20-2	2,6-Dinitrotoluene	2000	U
208-96-8	Acenaphthylene	130	DJ
99-09-2	3-Nitroaniline	5000	U
83-32-9	Acenaphthene	940	DJ

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JBDL

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.13DL

Sample wt/vol: 30.9 (g/mL) G Lab File ID: H0053010.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 20 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/30/00

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.1 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	5000	U
100-02-7	4-Nitrophenol	5000	U
132-64-9	Dibenzofuran	420	DJ
121-14-2	2,4-Dinitrotoluene	2000	U
84-66-2	Diethylphthalate	2000	U
86-73-7	Fluorene	740	DJ
7005-72-3	4-Chlorophenyl-phenylether	2000	U
100-01-6	4-Nitroaniline	5000	U
534-52-1	4,6-Dinitro-2-methylphenol	5000	U
86-30-6	N-Nitrosodiphenylamine (1)	2000	U
101-55-3	4-Bromophenyl-phenylether	2000	U
118-74-1	Hexachlorobenzene	2000	U
1912-24-9	Atrazine	2000	U
87-86-5	Pentachlorophenol	5000	U
85-01-8	Phenanthrene	5400	D
120-12-7	Anthracene	1300	DJ
86-74-8	Carbazole	1000	DJ
84-74-2	Di-n-butylphthalate	2000	U
206-44-0	Fluoranthene	7100	D
129-00-0	Pyrene	5500	D
85-68-7	Butylbenzylphthalate	2000	U
91-94-1	3,3'-Dichlorobenzidine	2000	U
56-55-3	Benzo(a)anthracene	3200	D
218-01-9	Chrysene	3300	D
117-81-7	bis(2-Ethylhexyl)phthalate	130	DJ
117-84-0	Di-n-octylphthalate	2000	U
205-99-2	Benzo(b)fluoranthene	2300	D
207-08-9	Benzo(k)fluoranthene	2200	D
50-32-8	Benzo(a)pyrene	2800	D
193-39-5	Indeno(1,2,3-cd)pyrene	1500	DJ
53-70-3	Dibenzo(a,h)anthracene	450	DJ
191-24-2	Benzo(g,h,i)perylene	1300	DJ

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02JBDL

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.13DL

Sample wt/vol: 30.9 (g/mL) G Lab File ID: H0053010.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 20 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/30/00

Injection Volume: 2.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.1 Extraction: (Type) SONC

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	3.65	9300	ABDJN
2.	UNKNOWN PAH	15.72	1600	DJ
3. 2381-21-7	PYRENE, 1-METHYL-	15.90	5100	DJN
4. 2381-21-7	PYRENE, 1-METHYL-	16.00	3300	DJN
5.	UNKNOWN PAH	16.06	1600	DJ
6.	UNKNOWN PAH	16.25	1700	DJ
7.	UNKNOWN AMIDE	16.48	4800	DJ
8.	UNKNOWN	16.59	1600	DJ
9. 239-35-0	BENZO[B]NAPHTHO[2,1-D]THIOPH	16.88	2500	DJN
10.	UNKNOWN PAH	16.95	2800	DJ
11.	UNKNOWN PAH	17.00	1500	DJ
12.	UNKNOWN PAH	17.05	1500	DJ
13.	UNKNOWN	17.08	2100	DJ
14. 5717-37-3	(CARBETHOXYETHYLIDINE)TRIPHE	17.57	4800	DJN
15.	UNKNOWN PAH	17.59	2600	DJ
16.	UNKNOWN PAH	17.68	1800	DJ
17.	UNKNOWN PAH	17.92	2500	DJ
18.	UNKNOWN	18.07	1500	DJ
19.	UNKNOWN	18.15	2700	DJ
20. 192-97-2	BENZO[E]PYRENE	19.26	1600	DJN
21.	UNKNOWN	20.63	1700	DJ
22.	UNKNOWN PAH	20.90	1700	DJ
23.	UNKNOWN PAH	20.96	2200	DJ
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25.				
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28.				
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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02K2

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.14

Sample wt/vol: 30.3 (g/mL) G Lab File ID: H0052623.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 6 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.0 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	350	U
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
98-86-2	Acetophenone	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
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
105-60-2	Caprolactam	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	870	U
92-52-4	1,1'-Biphenyl	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	870	U
131-11-3	Dimethylphthalate	350	U
606-20-2	2,6-Dinitrotoluene	350	U
208-96-8	Acenaphthylene	350	U
99-09-2	3-Nitroaniline	870	U
83-32-9	Acenaphthene	350	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02K2

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.14

Sample wt/vol: 30.3 (g/mL) G Lab File ID: H0052623.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 6 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.0 Extraction: (Type) SONC

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	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
86-73-7	Fluorene	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
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	350	U
1912-24-9	Atrazine	350	U
87-86-5	Pentachlorophenol	870	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	350	U
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenzo(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02K2

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.14

Sample wt/vol: 30.3 (g/mL) G Lab File ID: H0052623.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 6 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.0 Extraction: (Type) SONC

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	3.72	6000	ABJN
2.	UNKNOWN	4.45	120	BJ
3.	UNKNOWN	4.81	200	BJ
4.	UNKNOWN	6.08	130	J
5.	UNKNOWN AMIDE	14.24	92	J
6.	UNKNOWN AMIDE	15.41	120	BJ
7. 629-54-9	HEXADECANAMIDE	15.51	250	JN
8. 301-02-0	9-OCTADECENAMIDE, (Z)-	16.57	2700	BJN
9.	UNKNOWN AMIDE	16.69	200	J
10.	UNKNOWN	16.86	110	J
11.	UNKNOWN	19.42	86	J
12.	UNKNOWN	20.05	100	J
13.	UNKNOWN	20.30	160	J
14. 14021-23-9	D-FRIEDOOLEAN-14-ENE, 3-METH	21.02	1500	JN
15.	UNKNOWN	21.11	170	J
16.	UNKNOWN	21.24	210	J
17. 6160-65-2	1H-IMIDAZOLE, 1,1'-CARBONOTH	21.43	87	JN
18.	UNKNOWN	21.62	150	J
19.	UNKNOWN	21.77	110	J
20.	UNKNOWN	21.89	93	J
21.	UNKNOWN	22.67	510	BJ
22.	UNKNOWN	22.80	190	J
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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02K6

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.15

Sample wt/vol: 30.8 (g/mL) G Lab File ID: H0052624.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 19 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	24	J
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
98-86-2	Acetophenone	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
105-60-2	Caprolactam	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	1000	U
92-52-4	1,1'-Biphenyl	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U
208-96-8	Acenaphthylene	400	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	400	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02K6

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.15

Sample wt/vol: 30.8 (g/mL) G Lab File ID: H0052624.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 19 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

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	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
86-73-7	Fluorene	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
1912-24-9	Atrazine	400	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	400	U
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)fluoranthene	400	U
50-32-8	Benzo(a)pyrene	400	U
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02K6

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.15

Sample wt/vol: 30.8 (g/mL) G Lab File ID: H0052624.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 19 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/26/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

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	3.72	5800	ABJN
2.	UNKNOWN	4.81	230	BJ
3.	UNKNOWN	6.09	140	J
4. 112-53-8	1-DODECANOL	12.25	270	JN
5.	UNKNOWN AMIDE	15.42	110	BJ
6.	UNKNOWN AMIDE	15.52	170	J
7.	UNKNOWN AMIDE	16.57	1700	J
8.	UNKNOWN	16.69	160	BJ
9.	UNKNOWN	19.91	110	J
10.	UNKNOWN	20.30	180	J
11.	UNKNOWN	21.06	170	J
12.	UNKNOWN	21.09	140	J
13.	UNKNOWN	21.22	130	J
14.	UNKNOWN	21.37	220	J
15.	UNKNOWN	21.44	130	J
16.	UNKNOWN	21.52	130	J
17.	UNKNOWN	21.65	120	J
18.	UNKNOWN	21.78	170	J
19.	UNKNOWN	22.13	170	J
20.	UNKNOWN	22.58	110	J
21.	UNKNOWN	22.67	670	BJ
22.	UNKNOWN	22.81	690	J
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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02KA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.16

Sample wt/vol: 30.8 (g/mL) G Lab File ID: H0052910.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 19 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	400	U
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
98-86-2	Acetophenone	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
105-60-2	Caprolactam	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	1000	U
92-52-4	1,1'-Biphenyl	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U
208-96-8	Acenaphthylene	400	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	400	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02KA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.16

Sample wt/vol: 30.8 (g/mL) G Lab File ID: H0052910.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 19 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

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	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
86-73-7	Fluorene	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
1912-24-9	Atrazine	400	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	26	J
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)fluoranthene	400	U
50-32-8	Benzo(a)pyrene	400	U
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) Cannot be seperated from Diphenylamine

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F02KA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.16

Sample wt/vol: 30.8 (g/mL) G Lab File ID: H0052910.D

Level: (low/med) LOW Date Received: 05/18/00

% Moisture: 19 decanted: (Y/N) N Date Extracted: 05/18/00

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/29/00

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

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-METHY	3.67	6500	ABJN
2.	UNKNOWN	4.76	290	BJ
3. 629-54-9	HEXADECANAMIDE	15.46	280	JN
4. 301-02-0	9-OCTADECENAMIDE, (Z)-	16.51	1200	BJN
5.	UNKNOWN	16.80	750	J
6.	UNKNOWN	17.11	530	J
7.	UNKNOWN	17.23	580	J
8.	UNKNOWN	19.23	250	J
9.	UNKNOWN	19.53	410	J
10.	UNKNOWN	19.84	260	J
11.	UNKNOWN	20.15	500	J
12.	UNKNOWN	20.23	270	J
13.	UNKNOWN	20.49	390	J
14.	UNKNOWN	20.59	430	J
15. 1898-13-1	1,3,6,10-CYCLOTETRADECATETRAEN	20.98	960	JN
16.	UNKNOWN	21.36	350	J
17.	UNKNOWN	21.39	620	J
18.	UNKNOWN	21.68	510	J
19.	UNKNOWN	21.81	540	J
20.	UNKNOWN	22.25	440	J
21.	UNKNOWN	22.55	280	J
22.	UNKNOWN	22.70	260	BJ
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1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J0

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.07

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 32 Decanted: (Y/N) N Date Received: 05/18/00

Extraction: (Type) SONC Date Extracted: 05/18/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/29/00

Injection Volume: 0.5(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.5	U
319-85-7	beta-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.6	PB
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	4.8	U
72-55-9	4,4'-DDE	4.8	U
72-20-8	Endrin	4.8	U
33213-65-9	Endosulfan II	4.8	U
72-54-8	4,4'-DDD	4.8	U
1031-07-8	Endosulfan sulfate	7.5	P
50-29-3	4,4'-DDT	4.8	U
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin ketone	4.8	U
7421-93-4	Endrin aldehyde	4.8	U
5103-71-9	alpha-Chlordane	2.5	U
5103-74-2	gamma-Chlordane	2.5	U
8001-35-2	Toxaphene	250	U
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	97	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U

1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J1

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.08

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

% Moisture: 26 Decanted: (Y/N) N Date Received: 05/18/00

Extraction: (Type) SONC Date Extracted: 05/18/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/26/00

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.3	U
319-85-7	beta-BHC	2.3	U
319-86-8	delta-BHC	2.3	U
58-89-9	gamma-BHC (Lindane)	2.3	U
76-44-8	Heptachlor	1.6	JB
309-00-2	Aldrin	2.3	U
1024-57-3	Heptachlor epoxide	0.056	PJ
959-98-8	Endosulfan I	0.32	PJ
60-57-1	Dieldrin	4.4	U
72-55-9	4,4'-DDE	4.4	U
72-20-8	Endrin	1.6	J
33213-65-9	Endosulfan II	1.1	J
72-54-8	4,4'-DDD	4.4	U
1031-07-8	Endosulfan sulfate	6.3	P
50-29-3	4,4'-DDT	1.7	PJ
72-43-5	Methoxychlor	23	U
53494-70-5	Endrin ketone	3.0	PJ
7421-93-4	Endrin aldehyde	0.98	PJ
5103-71-9	alpha-Chlordane	0.29	PJ
5103-74-2	gamma-Chlordane	1.1	JB
8001-35-2	Toxaphene	230	U
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	90	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	44	U
11096-82-5	Aroclor-1260	44	U

1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J5

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.09

Sample wt/vol: 30.8 (g/mL) G Lab File ID:

% Moisture: 20 Decanted: (Y/N) N Date Received: 05/18/00

Extraction: (Type) SONC Date Extracted: 05/18/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/26/00

Injection Volume: 0.5(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	1.7	PJB
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	0.83	J
60-57-1	Dieldrin	4.0	U
72-55-9	4,4'-DDE	4.0	U
72-20-8	Endrin	4.0	U
33213-65-9	Endosulfan II	4.0	U
72-54-8	4,4'-DDD	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
50-29-3	4,4'-DDT	4.0	U
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	4.0	U
7421-93-4	Endrin aldehyde	4.0	U
5103-71-9	alpha-Chlordane	2.1	U
5103-74-2	gamma-Chlordane	0.89	JB
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U

1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J7

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.10

Sample wt/vol: 30.6 (g/mL) G Lab File ID:

% Moisture: 29 Decanted: (Y/N) N Date Received: 05/18/00

Extraction: (Type) SONC Date Extracted: 05/18/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/26/00

Injection Volume: 0.5(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.3	U
319-85-7	beta-BHC	2.3	U
319-86-8	delta-BHC	2.3	U
58-89-9	gamma-BHC (Lindane)	0.99	PJ
76-44-8	Heptachlor	1.7	JB
309-00-2	Aldrin	2.3	U
1024-57-3	Heptachlor epoxide	2.3	U
959-98-8	Endosulfan I	2.3	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	4.6	U
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	4.6	U
72-43-5	Methoxychlor	23	U
53494-70-5	Endrin ketone	4.6	U
7421-93-4	Endrin aldehyde	1.7	PJ
5103-71-9	alpha-Chlordane	2.3	U
5103-74-2	gamma-Chlordane	0.66	PJB
8001-35-2	Toxaphene	230	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	93	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02J8

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.11

Sample wt/vol: 30.2 (g/mL) G Lab File ID:

% Moisture: 25 Decanted: (Y/N) N Date Received: 05/18/00

Extraction: (Type) SONC Date Extracted: 05/18/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/26/00

Injection Volume: 0.5(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.3	U
319-85-7	beta-BHC	2.3	U
319-86-8	delta-BHC	2.3	U
58-89-9	gamma-BHC (Lindane)	1.4	PJ
76-44-8	Heptachlor	1.8	PJB
309-00-2	Aldrin	2.3	U
1024-57-3	Heptachlor epoxide	2.3	U
959-98-8	Endosulfan I	0.72	J
60-57-1	Dieldrin	4.4	U
72-55-9	4,4'-DDE	4.4	U
72-20-8	Endrin	4.4	U
33213-65-9	Endosulfan II	4.4	U
72-54-8	4,4'-DDD	4.4	U
1031-07-8	Endosulfan sulfate	4.4	U
50-29-3	4,4'-DDT	4.4	U
72-43-5	Methoxychlor	23	U
53494-70-5	Endrin ketone	4.4	U
7421-93-4	Endrin aldehyde	4.4	U
5103-71-9	alpha-Chlordane	2.3	U
5103-74-2	gamma-Chlordane	0.68	PJB
8001-35-2	Toxaphene	230	U
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	89	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	44	U
11096-82-5	Aroclor-1260	44	U

1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.12

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 34 Decanted: (Y/N) N Date Received: 05/18/00

Extraction: (Type) SONC Date Extracted: 05/18/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/29/00

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.5	U
319-85-7	beta-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.0	PJB
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	4.9	U
72-55-9	4,4'-DDE	4.9	U
72-20-8	Endrin	4.9	U
33213-65-9	Endosulfan II	4.9	U
72-54-8	4,4'-DDD	1.2	PJ
1031-07-8	Endosulfan sulfate	4.9	U
50-29-3	4,4'-DDT	4.9	U
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin ketone	4.9	U
7421-93-4	Endrin aldehyde	3.7	PJ
5103-71-9	alpha-Chlordane	2.5	U
5103-74-2	gamma-Chlordane	0.38	PJB
8001-35-2	Toxaphene	250	U
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	49	U
11096-82-5	Aroclor-1260	49	U

1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02JB

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.13

Sample wt/vol: 31.5 (g/mL) G Lab File ID: _____

% Moisture: 20 Decanted: (Y/N) N Date Received: 05/18/00

Extraction: (Type) SONC Date Extracted: 05/18/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/29/00

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	1.5	PJB
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	0.81	PJ
959-98-8	Endosulfan I	0.29	PJ
60-57-1	Dieldrin	0.15	PJ
72-55-9	4,4'-DDE	0.95	PJ
72-20-8	Endrin	3.9	U
33213-65-9	Endosulfan II	0.62	PJ
72-54-8	4,4'-DDD	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	0.78	PJ
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.9	U
7421-93-4	Endrin aldehyde	2.1	PJ
5103-71-9	alpha-Chlordane	0.26	PJ
5103-74-2	gamma-Chlordane	0.75	PJB
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02K2

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.14

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 6 Decanted: (Y/N) N Date Received: 05/18/00

Extraction: (Type) SONC Date Extracted: 05/18/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/29/00

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	2.1	B
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	3.5	U
72-55-9	4,4'-DDE	3.5	U
72-20-8	Endrin	3.5	U
33213-65-9	Endosulfan II	3.5	U
72-54-8	4,4'-DDD	3.5	U
1031-07-8	Endosulfan sulfate	3.5	U
50-29-3	4,4'-DDT	3.5	U
72-43-5	Methoxychlor	18	U
53494-70-5	Endrin ketone	3.5	U
7421-93-4	Endrin aldehyde	3.5	U
5103-71-9	alpha-Chlordane	1.8	U
5103-74-2	gamma-Chlordane	0.71	JB
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02K6

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.15

Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____

% Moisture: 19 Decanted: (Y/N) N Date Received: 05/18/00

Extraction: (Type) SONC Date Extracted: 05/18/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/29/00

Injection Volume: 0.5(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	0.50	PJ
76-44-8	Heptachlor	3.9	PB
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	4.0	U
72-55-9	4,4'-DDE	4.0	U
72-20-8	Endrin	4.0	U
33213-65-9	Endosulfan II	4.0	U
72-54-8	4,4'-DDD	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
50-29-3	4,4'-DDT	4.0	U
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	4.0	U
7421-93-4	Endrin aldehyde	2.2	PJ
5103-71-9	alpha-Chlordane	0.96	J
5103-74-2	gamma-Chlordane	2.2	B
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	81	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U

1E
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02KA

Lab Name: SWL-TULSA Contract: 68W00077

Lab Code: AATS Case No.: 28064 SAS No.: SDG No.: F02J0

Matrix: (soil/water) SOIL Lab Sample ID: 43008.16

Sample wt/vol: 32.1 (g/mL) G Lab File ID: _____

% Moisture: 19 Decanted: (Y/N) N Date Received: 05/18/00

Extraction: (Type) SONC Date Extracted: 05/18/00

Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/29/00

Injection Volume: 0.5(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	1.6	PJ
76-44-8	Heptachlor	7.0	B
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	0.38	PJ
60-57-1	Dieldrin	3.8	U
72-55-9	4,4'-DDE	3.8	U
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.8	U
7421-93-4	Endrin aldehyde	3.0	J
5103-71-9	alpha-Chlordane	0.34	PJ
5103-74-2	gamma-Chlordane	3.3	B
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	38	U