Grundy Co.
0630605012
Green A.P. Refractories
ILD 049136658
SF/HRS

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Site Team Evaluation Prioritization

CERCLA

Analytical Results

EPA Region 5 Records Ctr.
327929

Illinois Environmental Protection Agency

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

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
SEP 12 1995
IEPA/DLPC

Date: SEP 07 1995

Subject: Review of Region 5 Data for Green AP Refractories Code:ZZ

From: Charles T. Elly, Director Chuck Elly
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for Green AP Refractories Code:ZZ
CRL request number 950233
for analyses for ICP
Results are reported for sample designations: 95IE24S01, 95IE24D01, 95IE24S02 and 95IE24R03

Results Status:
(x) Acceptable for Use
( ) Data Qualified, but Acceptable for use
( ) Data Unacceptable for Use

(x) Sewer Disposal Criteria Met; Exceptions: Acid preserved samples must be neutralized prior to disposal.

Comments on Data Quality by Reviewer

The low magnesium channel gave a response 7.0% high for the second mid-range instrument check sample, outside the ±5% CRL criteria. Only the field blank, which was less than the reporting limit of 100 μg/L, was reported from this channel. All other results for magnesium were reported from the high channel, which was in control. All other QC were acceptable.

Comments by Laboratory Director or Quality Control Coordinator

-0345-

Review Record for Green AP Refractories Code:ZZ

John V. Moore 6 Sept 95

Team Leader and Date (X) Reviewed ( ) Unreviewed

Chuck Elly 9/6/95

Section Chief and Date ( ) Reviewed (X) Unreviewed

Chuck Elly 9/6/95

QC Coordinator and Date ( ) Reviewed (X) Unreviewed

Sylvia Griffin SEP 0 7 1995

Data Management Coordinator and Date Received

Date Transmitted SEP 0 7 1995

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date

Comments:

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 23-AUG-95

SAMPLE ORGANIZATION: IEPA
MPLE REQUESTOR: IEPA
ABORATORY: ESAT

SAMPLE BATCH ID: 950233
ACCOUNT NO: TFA301
FACILITY: GREEN AP REFRACTORIE

SAMPLE: 95IE24D01 FIELD: 95IE24D01

COLLECTED: 09-AUG-95 RECEIVED: 10-AUG-95 ANALYZED: 21-AUG-95

COMPOUND	AMOUNT	(Units)	QUALIFIERS	CAS NUMBER
Aluminum	90	(ug/L)		7429-90-5
Barium	21	(ug/L)		7440-39-3
Beryllium	1U	(ug/L)	BDL	7440-41-7
Calcium	146000	(ug/L)		7440-70-2
Chromium	8U	(ug/L)	BDL	7440-47-3
Cobalt	6U	(ug/L)	BDL	7440-48-4
Copper	6U	(ug/L)	BDL	7440-50-8
Iron	1610	(ug/L)		7439-89-6
Magnesium	71000	(ug/L)		7439-95-4
Manganese	44	(ug/L)		7439-96-5
Nickel	20U	(ug/L)	BDL	7440-02-0
Potassium	26000	(ug/L)		7440-09-7
Silver	6U	(ug/L)	BDL	7440-22-4
Sodium	89000	(ug/L)		7440-23-5
Vanadium	5U	(ug/L)	BDL	7440-62-2
Zinc	40U	(ug/L)	BDL	7440-66-6

ANALYZED BY: PD 8-23-95 JLM 6 Sept 95

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 23-AUG-95

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: IEPA
LABORATORY: ESAT

SAMPLE BATCH ID: 950233
ACCOUNT NO: TFA301
FACILITY: GREEN AP REFRACTORIE

SAMPLE: 95IE24R03 FIELD: 95IE24R03

COLLECTED: 09-AUG-95 RECEIVED: 10-AUG-95 ANALYZED: 21-AUG-95

COMPOUND	AMOUNT	(Units)	QUALIFIERS	CAS NUMBER
Aluminum	80U	(ug/L)	BDL	7429-90-5
Barium	6U	(ug/L)	BDL	7440-39-3
Beryllium	1U	(ug/L)	BDL	7440-41-7
Calcium	500U	(ug/L)	BDL	7440-70-2
Chromium	8U	(ug/L)	BDL	7440-47-3
Cobalt	6U	(ug/L)	BDL	7440-48-4
Copper	6U	(ug/L)	BDL	7440-50-8
Iron	80U	(ug/L)	BDL	7439-89-6
Magnesium	100U	(ug/L)	BDL	7439-95-4
Manganese	5U	(ug/L)	BDL	7439-96-5
Nickel	20U	(ug/L)	BDL	7440-02-0
Potassium	5000U	(ug/L)	BDL	7440-09-7
Silver	6U	(ug/L)	BDL	7440-22-4
Sodium	1000U	(ug/L)	BDL	7440-23-5
Vanadium	5U	(ug/L)	BDL	7440-62-2
Zinc	40U	(ug/L)	BDL	7440-66-6

ANALYZED BY: DP 8-23-95 JVM 6 Sept 95

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 23-AUG-95

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: IEPA
LABORATORY: ESAT

SAMPLE BATCH ID: 950233
ACCOUNT NO: TFA301
FACILITY: GREEN AP REFRACTORIE

SAMPLE: 95IE24S01 FIELD: 95IE24S01

COLLECTED: 09-AUG-95 RECEIVED: 10-AUG-95 ANALYZED: 21-AUG-95

COMPOUND	AMOUNT	(Units)	QUALIFIERS	CAS NUMBER
Aluminum	80U	(ug/L)	BDL	7429-90-5
Barium	21	(ug/L)		7440-39-3
Beryllium	1U	(ug/L)	BDL	7440-41-7
Calcium	145000	(ug/L)		7440-70-2
Chromium	8U	(ug/L)	BDL	7440-47-3
Cobalt	6U	(ug/L)	BDL	7440-48-4
Copper	7	(ug/L)		7440-50-8
Iron	1140	(ug/L)		7439-89-6
Magnesium	71000	(ug/L)		7439-95-4
Manganese	37	(ug/L)		7439-96-5
Nickel	20U	(ug/L)	BDL	7440-02-0
Potassium	26000	(ug/L)		7440-09-7
Silver	6U	(ug/L)	BDL	7440-22-4
Sodium	90000	(ug/L)		7440-23-5
Vanadium	5	(ug/L)		7440-62-2
Zinc	40U	(ug/L)	BDL	7440-66-6

ANALYZED BY: [illegible] 8-23-95 JVM 6 Sept 95

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 23-AUG-95

SAMPLE ORGANIZATION: IEPA
MPLE REQUESTOR: IEPA
LABORATORY: ESAT

SAMPLE BATCH ID: 950233
ACCOUNT NO: TFA301
FACILITY: GREEN AP REFRACTORIES

SAMPLE: 95IE24S02 FIELD: 95IE24S02

COLLECTED: 09-AUG-95 RECEIVED: 10-AUG-95 ANALYZED: 21-AUG-95

COMPOUND	AMOUNT	(Units)	QUALIFIERS	CAS NUMBER
Aluminum	80U	(ug/L)	BDL	7429-90-5
Barium	19	(ug/L)		7440-39-3
Beryllium	1U	(ug/L)	BDL	7440-41-7
Calcium	49000	(ug/L)		7440-70-2
Chromium	8U	(ug/L)	BDL	7440-47-3
Cobalt	6U	(ug/L)	BDL	7440-48-4
Copper	6U	(ug/L)	BDL	7440-50-8
Iron	388	(ug/L)		7439-89-6
Magnesium	23000	(ug/L)		7439-95-4
Manganese	5U	(ug/L)	BDL	7439-96-5
Nickel	20U	(ug/L)	BDL	7440-02-0
Potassium	19000	(ug/L)		7440-09-7
Silver	6U	(ug/L)	BDL	7440-22-4
Sodium	143000	(ug/L)		7440-23-5
Vanadium	5U	(ug/L)	BDL	7440-62-2
Zinc	40U	(ug/L)	BDL	7440-66-6

ANALYZED BY: PD 8-23-95 JVM 6 Sept 95

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED

SEP 12 1995

IEPA/DLPC

Date: SEP 07 1995

Subject: Review of Region 5 Data for GREEN AP REFRACTORIES

From: Charles T. Elly, Director Chuck Elly
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for GREEN AP REFRACTORIES
CRL request number 950233
for analyses for Mercury and Cyanide.
Results are reported for sample designations: 95IE24S01, 95IE24D01, 95IE24S02, and 95IE24R03.

Results Status:
(X) Acceptable for Use: Mercury and Cyanide
( ) Data Qualified, but Acceptable for use:
( ) Data Unacceptable for Use:

( ) Sewer Disposal Criteria Met;

The portion of samples 95IE24S01, 95IE24D01, 95IE24S02, and 95IE24R03 which were collected and analyzed for mercury should be disposed of in a drum. The acid/dichromate preservative used is toxic.

The portion of samples 95IE24S01, 95IE24D01, 95IE24S02, and 95IE24R03 which were collected and analyzed for cyanide are preserved with sodium hydroxide. All the samples should be neutralized prior to disposal down the drain. Cyanide concentration in all the samples are less than detection.

Comments on Data Quality by Reviewer:

All the cyanide results are acceptable for use.

Mercury: Mercury samples were received in the laboratory preserved with nitric acid only. Acid dichromate preservative was added to the samples as required by the procedure for mercury analysis. The results are acceptable for use.

Comments by Laboratory Director or Quality Control Coordinator:

Francis A. Awanya 9/6/95

Team Leader and Date (X) Reviewed ( ) Unreviewed

Chuck Elby 9/7/95

Section Chief and Date ( ) Reviewed (✓) Unreviewed

Chuck Elby 9/7/95

QC Coordinator and Date ( ) Reviewed (✓) Unreviewed

Sylvia Griffin SEP 0 7 1995

Data Management Coordinator and Date Received

Date Transmitted SEP 0 7 1995

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date

Comments:

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY
FINAL RESULT REPORT for the team: MINERALS-NUTRIENTS

Report produced on: 18-AUG-95

Sample Organization: **IEPA**
Sample Requestor: **IEPA**
Laboratory: **ESAT**

Sample Batch ID: **950233**
Account NO: **TFA301**
Facility: **GREEN AP REFRACTORIES**

Sample: **95IE24D01**

Field: **95IE24D01**

Collected: **09-AUG-95 /**

Received: **10-AUG-95**

Parameter	Result	(Units)	QUALIFIERS	Anal. Date	Analyst
Cyanide (Total)	8	(ug/L)	U	14-AUG-95	M. Fletcher
Mercury	0.1	(ug/L)	U	16-AUG-95	L. Leonova

Reviewed by : Fiunun A. Alvanga 9/6/95

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY
FINAL RESULT REPORT for the team: MINERALS-NUTRIENTS

Report produced on: 18-AUG-95

Sample Organization: **IEPA**
Sample Requestor: **IEPA**
Laboratory: **ESAT**

Sample Batch ID: **950233**
Account NO: **TFA301**
Facility: **GREEN AP REFRACTORIES**

Sample: **95IE24R03**

Field: **95IE24R03**

Collected: **09-AUG-95 /**

Received: **10-AUG-95**

Parameter	Result	(Units)	QUALIFIERS	Anal. Date	Analyst
Cyanide (Total)	8	(ug/L)	U	14-AUG-95	M. Fletcher
Mercury	0.1	(ug/L)	U	16-AUG-95	L. Leonard

Reviewed by : Francis A Akuanya 9/6/95

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY
FINAL RESULT REPORT for the team: MINERALS-NUTRIENTS

Report produced on: 18-AUG-95

Sample Organization: **IEPA**
Sample Requestor: **IEPA**
Laboratory: **ESAT**

Sample Batch ID: **950233**
Account NO: **TFA301**
Facility: **GREEN AP REFRACTORIES**

Sample: **95IE24S01**

Field: **95IE24S01**

Collected: **09-AUG-95 /**

Received: **10-AUG-95**

Parameter	Result	(Units)	QUALIFIERS	Anal. Date	Analyst
Cyanide (Total)	8	(ug/L)	U	14-AUG-95	M. Fletcher
Mercury	0.1	(ug/L)	U	16-AUG-95	L. Leonard

Reviewed by : Frank A. Mwanza 9/6/95

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY
FINAL RESULT REPORT for the team: MINERALS-NUTRIENTS

Report produced on: 18-AUG-95

Sample Organization: **IEPA**
Sample Requestor: **IEPA**
Laboratory: **ESAT**

Sample Batch ID: **950233**
Account NO: **TFA301**
Facility: **GREEN AP REFRACTORIES**

Sample: **95IE24S02**

Field: **95IE24S02**

Collected: **09-AUG-95 /**

Received: **10-AUG-95**

Parameter	Result	(Units)	QUALIFIERS	Anal. Date	Analyst
Cyanide (Total)	8	(ug/L)	U	14-AUG-95	M. Fletcher
Mercury	0.1	(ug/L)	U	16-AUG-95	L. Leonova

Reviewed by : Francis A Awanya 9/6/95

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
SEP 12 1995
IEPA/DLPC

Date: SEP 0 7 1995

Subject: Review of Region 5 Data for Green AP Refractories Code:ZZ

From: Charles T. Elly, Director Chuck Elly
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for Green AP Refractories Code:ZZ
CRL request number 950233
for analyses for Antimony, Arsenic, Cadmium, Lead, Selenium and Thallium
Results are reported for sample designations: 95IE24S01, 95IE24D01, 95IE24S02 and 95IE24R03

Results Status:
(x) Acceptable for Use
( ) Data Qualified, but Acceptable for use
( ) Data Unacceptable for Use

(x) Sewer Disposal Criteria Met; Exceptions: Acid preserved samples must be neutralized prior to disposal.

Comments on Data Quality by Reviewer

Lead was found in the field blank, sample 95IE24R03, although this was not confirmed by analysis of the undigested field blank. No lead was found in the digestion blanks.

Comments by Laboratory Director or Quality Control Coordinator

Review Record for Green AP Refractories Code:ZZ

John V. Moore 7 Sept 95

Team Leader and Date (✓) Reviewed ( ) Unreviewed

Chuck Eddy 9/7/95

Section Chief and Date ( ) Reviewed (✓) Unreviewed

Chuck Eddy 9/7/95

QC Coordinator and Date ( ) Reviewed (✓) Unreviewed

Sylvia Griffin SEP 07 1995

Data Management Coordinator and Date Received

Date Transmitted SEP 07 1995

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date

Comments:

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY

Single Analyte Result Report, produced on: 29-AUG-95

Sample organization: **IEPA**
Sample Requestor: **IEPA**
Facility: **GREEN AP REFRACTORIES**
Matrix: **WATER**
Date Collected: **09-AUG-95**

Sample Batch ID: **950233**
Account No: **TFA301**
Sample ID: **95IE24D01**
Units: **ug/L**
Date Received: **10-AUG-95**

Parameter	Result	Anal. Date	Analyst	Comments
Antimony	1U	29-AUG-95	P Mikulski	
Arsenic	0.1U	18-AUG-95	McKapp	
Cadmium Concentration	0.2U	22-AUG-95	B. Yu	
Lead Concentration	5	22-AUG-95	B Yu	
Selenium Concentration	2U	21-AUG-95	B Yu	
Thallium Concentration	2U	21-AUG-95	B Yu	

Team Leader: JVM 7Sept95

pmt#0621

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY

Single Analyte Result Report, produced on: 29-AUG-95

Sample organization: **IEPA**
Sample Requestor: **IEPA**
Facility: **GREEN AP REFRACTORIES**
Matrix: **WATER**
Date Collected: **09-AUG-95**

Sample Batch ID: **950233**
Account No: **TFA301**
Sample ID: **95IE24R03**
Units: **ug/L**
Date Received: **10-AUG-95**

Parameter	Result	Anal. Date	Analyst	Comments
Antimony	1U	29-AUG-95	P McClintock	
Arsenic	0.1U	18-AUG-95	M. Kapp	
Cadmium Concentration	0.2U	22-AUG-95	B Lyn	
Lead Concentration	2	22-AUG-95	B Lyn	
Selenium Concentration	2U	21-AUG-95	B Lyn	
Thallium Concentration	2U	21-AUG-95	B Lyn	

Team Leader: JM 7 Sep 95

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY

Single Analyte Result Report, produced on: 29-AUG-95

Sample organization: **IEPA**
Sample Requestor: **IEPA**
Facility: **GREEN AP REFRACTORIES**
Matrix: **WATER**
Date Collected: **09-AUG-95**

Sample Batch ID: **950233**
Account No: **TFA301**
Sample ID: **95IE24S01**
Units: **ug/L**
Date Received: **10-AUG-95**

Parameter	Result	Anal. Date	Analyst	Comments
Antimony	1U	29-AUG-95	P. McCluskey	
Arsenic	0.1	18-AUG-95	M. Kapp	
Cadmium Concentration	0.3	22-AUG-95	B. Yu	
Lead Concentration	7	22-AUG-95	B. Yu	
Selenium Concentration	2U	21-AUG-95	B. Yu	
Thallium Concentration	2U	21-AUG-95	B. Yu	

Team Leader: JVM 7 Sept 95

pmt#0621

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY

Single Analyte Result Report, produced on: 29-AUG-95

Sample organization: **IEPA**
Sample Requestor: **IEPA**
Facility: **GREEN AP REFRACTORIES**
Matrix: **WATER**
Date Collected: **09-AUG-95**

Sample Batch ID: **950233**
Account No: **TFA301**
Sample ID: **95IE24S02**
Units: **ug/L**
Date Received: **10-AUG-95**

Parameter	Result	Anal. Date	Analyst	Comments
Antimony	1U	29-AUG-95	P. McCartney	
Arsenic	0.1U	18-AUG-95	M. Kapp	
Cadmium Concentration	0.2U	22-AUG-95	B. Lynn	
Lead Concentration	4	22-AUG-95	B. Lynn	
Selenium Concentration	2U	21-AUG-95	B. Lynn	
Thallium Concentration	2U	21-AUG-95	B. Lynn	

Team Leader: JVM 7 Sep 95

pmt#0621

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: SEP 0 5 1995

Subject: Review of Region 5 Data for SF 950233 GREEN AP REFRACTORIES

From: Charles T. Elly, Director Chuck Elly
Region 5 Central Regional Laboratory

RECEIVED
SEP 07 1995
IEPA/DLPC

To: IEPA

Attached are the results for SF 950233 GREEN AP REFRACTORIES
CRL request number 950233
for analyses for PCB/PESTICIDES
Results are reported for sample designations: 95IE24S01, 95IE24S02, 95IE24D01, 95IE24R03

Results Status:
(X) Acceptable for Use
(X) Data Qualified, but Acceptable for use *for sample 95IE24S01; both surrogate spikes gave low % recoveries.*
( ) Data Unacceptable for Use

( ) Sewer Disposal Criteria Met; Exceptions: none

Comments on Data Quality by Reviewer

Data are acceptable for use for all samples but with qualification for 95IE24S01 due to low recoveries for both surrogate spikes (TCMX & DCB). Data for this sample were flagged UJ (Undetected, Estimated). Please see attached case narrative for comments.

Comments by Laboratory Director or Quality Control Coordinator

CASE NARRATIVE

DATE: August 23, 1995

PROJECT NAME: GREEN AP REFRACTORIES/CRL Case: SF950233
Analysis of Pesticides/PCBs

ANALYST: Steffanie Tobin, Chemist
Krystina Minczuk, Chemist

REVIEWERS: W. Ira Wilson, Lockheed/ESAT Organic Supervisor
Lewis Kranz, Lockheed/ESAT QA/QC Coordinator
Dennis Miller, Lockheed/ESAT Team Manager
Erlinda Evangelista, EPA CRL Task Monitor

I. CASE DESCRIPTION:

The laboratory received four (4) residential well water samples (95IE24S01, 95IE24D01, 95IE24S02, 95IE24R03) on 08/10/95 for pesticides/PCBs analysis using CRL method 608 Pest/PCB DNS. The samples were extracted on 08/13/95 utilizing one-step continuous liquid/liquid extractors and analyzed utilizing the HP5890 GC/EC#2 on 08/14/95. The samples were extracted within the holding time requirements of seven (7) days after collection and analyzed within forty days after extraction. No problems were encountered in extraction or analysis.

This data set was analyzed with Case SF950232 (7 residential well water samples), Case SF950234 (3 residential well water samples) and Case SF950235 (3 residential well water samples).

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** Initial and continuing Endrin and DDT degradation checks for both the primary and confirmation columns were within CRL QC limits of <10%, ranging from 4.5%-8.4%. No problems were observed. The raw data for the Endrin and DDT were included with Case SF950232.

2. **Initial Calibration Check:** An acceptable initial calibration standard is required before samples can be analyzed. Correlation coefficients generated for Pesticide B and Aroclor 1242 using five points and for Pesticide A using four points were greater than 0.995 and were acceptable. Pesticide A level 5 standard was rejected as an outlier per EPA task monitor. The raw data for the initial standards were included with Case SF950232.

3. **Continuing Calibration Check:** Continuing calibration check standards (Level 3 Pest A, Pest B & Aroclor 1242) were within the acceptable RPDs (continuing vs. initial area) limit of <15% for each compound on primary column. The continuing calibration check standards (Level 3 Pest A, Pest B & Aroclor 1242) were within acceptable RPDs on the confirmatory column with the exception of methoxychlor which was 24.4%. The raw data for the continuing standards were included with Case SF950232.

4. **Retention Time (RT) Summary:** The retention time RPDs for each individual compound in the Pest A, Pest B mixes & Aroclor 1242 were within acceptable limits of <0.25% (continuing vs. initial), ranging from 0.00%-0.08% [limits of <0.25% (continuing vs.initial) ranged from 0.00%-0.14%].

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** Reagent water spiked with surrogates was analyzed with the samples. No target analytes were detected above the method detection limit. The raw data for the hexane blank and the method blank were included with Case SF950232.

2. **Surrogate Spike Compound Results:** The TCMX surrogate spike recoveries for all samples in this case were below the QC limits (50%-150%) on both the primary and confirmatory columns. The TCMX recovery ranged from 16-45%. The DCB spike recovery was within the QC limit (50-150%) on both columns with the exception of 95IE24S01 (REC=30% for primary column and REC=47% for confirmatory column). The DCB recovery for the method blank (REC=151%) on the confirmatory column was above the QC limit.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results:** MS/MSD are not required for residential well water analysis. Instead, the laboratory analyzes a Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCS DUP) with each data set or extraction batch, and a Performance Evaluation Sample (PES) once a month. Please see below for comments on the LCS/LCS dup.

4. **Laboratory Control Sample (LCS):** The laboratory generated acceptable percent recovery results for all the compounds comprising the LCS/LCS DUP (QC limits for percent recovery: 50-150%) with the exception of enhanced recoveries for p,p'-DDT and Endosulfan Sulfate due to coelution of these two pesticides on the primary column. All RPDs were acceptable for the primary column (QC limit: <30%). The raw

data for the LCS/LCS DUP were included with Case SF950232.

~~ESAT-5-007-0~~

On the confirmatory column, recoveries of Aldrin (REC=168% and REC=214.7%) and Endrin Aldehyde (REC=221.1% and REC=365.7%) exceeded the QC limits. All RPDs were acceptable except for Endrin Aldehyde (RPD=49.3%).

5. **Florisil Cartridge Check:** A Florisil Cartridge check was performed using the Pest B mix (Level 3) and recoveries of all compounds were acceptable (QC limit; 80-120%). The raw data for the Florisil Cartrige Check was included with Case SF950232.

IV. **SAMPLE RESULTS:** No target analytes were detected in the sample and field duplicate above the detection limits.

4 samples

95023

TFA301

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: PESTICIDES AND PCB'S

DIVISION/BRANCH SUPERFUND SAMPLE DATE 8/9/95 GREEN AP LAB ARRIVAL DATE 8/10/95 DUE DATE 8/31/95

DU NUMBER TFA DATA SET NUMBER 950233 STUDY REFRACTORIES PRIORITY N CONTRACTOR IEPA

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER TRIHALOMETHANES UG/L PES17414	WATER POLYCHLORINATED BIPHENYLS UG/L PES 17144	WATER CHLORINATED PESTICIDES UG/L PES 17134	WATER HERBICIDES UG/L PES 17424	WATER OIL AND GREASE MG/L PES 17439
95IE24S01	G201 5-009589		X	X		
95IE24D01	G202 5-009594		X	X		
95IE24S02	G203 5-009598 5-009602 + 606		X	X		
95IE24R03	G204(FB) 5-009610		X	X		
				8/22/95		

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter: PEST/PCB

Sample organization: IEPA
Sample Requestor: IEPA
Facility: GREEN AP REFRACTORIES
Matrix: WATER
RLIMS Method: 608_P/P_DNS1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24D01
Units: ug/L

Date Collected: 09-AUG-95
Date Extracted: 13-AUG-95

Date Received: 10-AUG-95
Date Analyzed: 14-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.01	U
58899	Lindane	.01	U
76448	Heptachlor	.01	U
309002	Aldrin	.01	U
1024573	Heptachlor Epoxide	.01	U
959988	Endosulfan I	.01	U
60571	Dieldrin	.02	U
72208	Endrin	.02	U
3312659	Endosulfan II	.02	U
50293	p,p'-DDT	.02	U
72-43-5	Methoxychlor	.1	U
319857	Beta-BHC	.01	U
419868	Delta-BHC	.01	U
5103-74-2	Gamma-Chlordane	.01	U
5103-71-9	Alpha-Chlordane	.01	U
72559	p,p'-DDE	.02	U
72548	p,p'-DDD	.02	U
7421934	Endrin Aldehyde	.02	U
1031078	Endosulfan Sulfate	.02	U
53494-70-5	Endrin Ketone	.02	U
57-74-9	Chlordane, Technical	.2	U
8001352	Toxaphene	1	U
1104-28-2	Aroclor 1221	.2	U
11141165	Aroclor 1232	.2	U
53469219	Aroclor 1242	.2	U
12674-11-2	Aroclor 1016	.2	U
12672296	Aroclor 1248	.2	U
11097691	Aroclor 1254	.2	U
11096825	Aroclor 1260	.2	U

Analyzed by: Stephanie N Tobin (Lockheed/ESAT)

Team Leader: [illegible]

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter: PEST/PCB

Sample organization: IEPA
Sample Requestor: IEPA
Facility: GREEN AP REFRACTORIES
Matrix: WATER
RLIMS Method: 608_P/P_DNS1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24R03
Units: ug/L

Date Collected: 09-AUG-95
Date Extracted: 13-AUG-95

Date Received: 10-AUG-95
Date Analyzed: 14-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.01	U
58899	Lindane	.01	U
76448	Heptachlor	.01	U
309002	Aldrin	.01	U
1024573	Heptachlor Epoxide	.01	U
959988	Endosulfan I	.01	U
60571	Dieldrin	.02	U
72208	Endrin	.02	U
3312659	Endosulfan II	.02	U
50293	p,p'-DDT	.02	U
72-43-5	Methoxychlor	.1	U
319857	Beta-BHC	.01	U
419868	Delta-BHC	.01	U
5103-74-2	Gamma-Chlordane	.01	U
5103-71-9	Alpha-Chlordane	.01	U
72559	p,p'-DDE	.02	U
72548	p,p'-DDD	.02	U
7421934	Endrin Aldehyde	.02	U
1031078	Endosulfan Sulfate	.02	U
53494-70-5	Endrin Ketone	.02	U
57-74-9	Chlordane, Technical	.2	U
8001352	Toxaphene	1	U
1104-28-2	Aroclor 1221	.2	U
11141165	Aroclor 1232	.2	U
53469219	Aroclor 1242	.2	U
12674-11-2	Aroclor 1016	.2	U
12672296	Aroclor 1248	.2	U
11097691	Aroclor 1254	.2	U
11096825	Aroclor 1260	.2	U

Analyzed by: Stephanie N. Tobin (Lockheed/ESAT)
Team Leader: [illegible]

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter: PEST/PCB

Sample organization: IEPA
Sample Requestor: IEPA
Facility: GREEN AP REFRACTORIES
Matrix: WATER
RLIMS Method: 608_P/P_DNS1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24S01
Units: ug/L

Date Collected: 09-AUG-95
Date Extracted: 13-AUG-95

Date Received: 10-AUG-95
Date Analyzed: 14-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.01	UJ
58899	Lindane	.01	UJ
76448	Heptachlor	.01	UJ
309002	Aldrin	.01	UJ
1024573	Heptachlor Epoxide	.01	UJ
959988	Endosulfan I	.01	UJ
60571	Dieldrin	.02	UJ
72208	Endrin	.02	UJ
3312659	Endosulfan II	.02	UJ
50293	p,p'-DDT	.02	UJ
72-43-5	Methoxychlor	.1	UJ
319857	Beta-BHC	.01	UJ
419868	Delta-BHC	.01	UJ
5103-74-2	Gamma-Chlordane	.01	UJ
5103-71-9	Alpha-Chlordane	.01	UJ
72559	p,p'-DDE	.02	UJ
72548	p,p'-DDD	.02	UJ
7421934	Endrin Aldehyde	.02	UJ
1031078	Endosulfan Sulfate	.02	UJ
53494-70-5	Endrin Ketone	.02	UJ
57-74-9	Chlordane, Technical	.2	UJ
8001352	Toxaphene	1	UJ
1104-28-2	Aroclor 1221	.2	UJ
11141165	Aroclor 1232	.2	UJ
53469219	Aroclor 1242	.2	UJ
12674-11-2	Aroclor 1016	.2	UJ
12672296	Aroclor 1248	.2	UJ
11097691	Aroclor 1254	.2	UJ
11096825	Aroclor 1260	.2	UJ

Analyzed by: Stephanie N Tolson (Lockheed/ESAT)

Team Leader: [signature]

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter: PEST/PCB

Sample organization: IEPA
Sample Requestor: IEPA
Facility: GREEN AP REFRACTORIES
Matrix: WATER
RLIMS Method: 608_P/P_DNS1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24S02
Units: ug/L

Date Collected: 09-AUG-95
Date Extracted: 13-AUG-95

Date Received: 10-AUG-95
Date Analyzed: 14-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.01	U
58899	Lindane	.01	U
76448	Heptachlor	.01	U
309002	Aldrin	.01	U
1024573	Heptachlor Epoxide	.01	U
959988	Endosulfan I	.01	U
60571	Dieldrin	.02	U
72208	Endrin	.02	U
3312659	Endosulfan II	.02	U
50293	p,p'-DDT	.02	U
72-43-5	Methoxychlor	.1	U
319857	Beta-BHC	.01	U
419868	Delta-BHC	.01	U
5103-74-2	Gamma-Chlordane	.01	U
5103-71-9	Alpha-Chlordane	.01	U
72559	p,p'-DDE	.02	U
72548	p,p'-DDD	.02	U
7421934	Endrin Aldehyde	.02	U
1031078	Endosulfan Sulfate	.02	U
53494-70-5	Endrin Ketone	.02	U
57-74-9	Chlordane, Technical	.2	U
8001352	Toxaphene	1	U
1104-28-2	Aroclor 1221	.2	U
11141165	Aroclor 1232	.2	U
53469219	Aroclor 1242	.2	U
12674-11-2	Aroclor 1016	.2	U
12672296	Aroclor 1248	.2	U
11097691	Aroclor 1254	.2	U
11096825	Aroclor 1260	.2	U

Analyzed by: Stephanie N Tobin (Lockheed / ESAT)
Team Leader: [illegible]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED

SEP 05 1995

IEPA/DLPC

Date: AUG 30 1995

Subject: Review of Region 5 Data for **GREEN AP REFRACTORIES**

From: Charles T. Elly, Director Chuck Elly
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for: **GREEN AP REFRACTORIES**
CRL request number: **950233**
Analyzed for: **VOA (Organics)**
Results are reported for sample designations: 95IE24S01, D01, S02, R01 and R02 (FIVE SAMPLES)

Results Status:
(X) Acceptable for Use
( ) Data Qualified but acceptable for use
( ) Data Unacceptable for Use

(X) Sewer Disposal Criteria Met; Exceptions: none
Comments on Data Quality by Reviewer:

Please see narrative.

CASE NARRATIVE

DATE: August 24, 1995

PROJECT NAME: Green AP Refractories - CRL Case #: 950233
Analysis of Volatile Organic Analytes (VOA)

ANALYSTS: Ziyad Rajabi, Lockheed ESAT
Anthony Gugliotta, Lockheed/ESAT

REVIEWERS: Lewis Kranz, Lockheed/ESAT QA/QC Coordinator
Dennis Miller, Lockheed/ESAT Team Manager
Nidia Fuentes, EPA CRL Task Monitor

I. CASE DESCRIPTION:

The laboratory received five preserved residential well water samples (95IE24R01, -R03, -S01, -D01, and -S02) on 8/10/95 for volatile organic analyte (VOA) analysis. These samples were analyzed by a modified version of CRL Method 624VOA which uses the surrogate, internal standards, and QC criteria of OLC01. An initial calibration was performed on 8/12/95, and the site samples were analyzed on 8/13/95. Dilutions or reanalyses were not required. All site samples were analyzed within the sample holding time requirements. The QC criterion for sample holding times is 14 days for acid-preserved samples. These samples were received at the laboratory in good condition. No problems were observed.

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Checks:** On 8/12/95 and 8/13/95, GC/MS instrument performance checks using *p*-BFB were made on GC/MS#7 to determine if acceptable EPA tuning criteria were met. The QC criteria are the same as those found in the Statement of Work under the EPA's Contract Laboratory Program. All criteria were met, and no problems were observed.

2. **Initial Calibrations:** An acceptable five-point initial calibration (IC) is required for all target compounds before samples can be analyzed. The QC criterion for the IC is each analyte's %RSD is ≤30%. The initial calibration curve generated on 8/12/95 on GC/MS#7 was acceptable for all required target compounds. No problems were observed.

3. **Continuing Calibrations:** The QC criterion for the continuing calibration is that the %D for each analyte should be ≤30%. On GC/MS#7, a continuing calibration (CC) standard

was analyzed on 8/13/95, and no outliers were found. No problems were observed.

4. **Internal Standard (IS) Area and Retention Time Summary:** According to the QC criteria, the IS areas of the samples should be within 40% of the corresponding IS areas of the daily calibration standard, and the RT of the IS in the samples should be within ± 20 seconds of the internal standard RTs in the daily calibration standard. All internal standard areas and retention times met the QC requirements. No problems were observed.

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** On 8/13/95, a Lab Blank (reagent water spiked with internal standards and surrogates) was analyzed to check the GC/MS, purge and trap systems and reagents for laboratory contamination. [See Form I VOA]. No target compounds above the MDL were detected in the blank.

2. **Surrogate Spike Compound Results:** The surrogate spike compound recovery data were within the QC limits for all samples. No problems were observed. [See Form II VOA-1].

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results:** MS/MSD analyses are not required for residential well water samples. Instead, the laboratory analyzes, on a monthly basis, a Laboratory Control Sample (LCS) and a Performance Evaluation Sample (PES). The site sample data quality in terms of accuracy are evaluated based on the monthly LCS and PES data. Please see below comments on the monthly LCS and PES results.

4. **Laboratory Control Sample (LCS):** The LCS for August, 1995 was analyzed on GC/MS#7. The laboratory generated acceptable results for the LCS. [See Form XI VOA].

5. **Performance Evaluation Sample (PES):** The PES for August, 1995 was analyzed on GC/MS#7. The laboratory generated acceptable results for the PES. The QC criteria for the PES are the control limits established by EMSL-LV.

IV. SAMPLE RESULTS:

No target analytes and one tentatively identified compound (TIC) were detected in the trip blank, 95IE24R01. The TIC contamination in the trip blank was not detected in the site samples and does not affect results.

Acetone at 20 µg/L and methylene chloride at 5 µg/L were detected in field blank 95YM09R03; tentatively identified compounds (TICs) were not found in this sample. The contamination in the field blank was not detected in the site samples and does not affect results.

No other problems were noted. The laboratory met the qualitative and quantitative analysis requirements for TCLs and TICs.

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:VOA

Sample organization: IEPA
Sample Requestor: IEPA
Facility: GREEN AP REFRACTORIES
Matrix:WATER
Method:A624SAS.0

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24R01
Units: ug/L

Date Collected:09-AUG-95
Date Extracted:13-AUG-95

Date Received:10-AUG-95
Date Analyzed:13-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	3	U
75-15-0	Carbon Disulfide	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
74-97-5	2-Butanone	3	U
74-97-5	Bromochloromethane	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	Cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
108-10-1	4-Methyl-2-Pentanone	3	U
10061-02-6	Trans-1,3-Dichloropropene	1	U
127-18-4	Tetrachloroethene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	3	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1083836423	m &/or p-Xylene	1	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

Analyzed by: A. Sighittal Lockheed ESAT

Team Leader: [illegible]

EPA RLIMS CRL - REGION V
TENTATIVELY IDENTIFIED COMPOUNDS
REPORT PRODUCED ON: 24-AUG-95

A E ORGANIZATION: **IEPA**
AMPLE REQUESTOR: **IEPA**
ABORATORY: **ESAT**

SAMPLE BATCH ID: **950233**
ACCOUNT NO: **TFA301**
FACILITY: **GREEN AP REFRACTORIES**

624SAS.0 (624VOC 25-mL WATER CAP COL GC/MS)

AMPLE: **95IE24R01** FIELD: **95IE24R01** CONTROL TYPE: **SAM**

OLLECTED: **09-AUG-95** RECEIVED: **10-AUG-95** ANALYZED: **13-AUG-95**

COMPOUND	EST. CONC.	RT	Q	CAS NUMBER
ACETALDEHYDE	**4 J**	**6.07**		**75070**

ANALYZED BY: Anthony Guglietta / Lockheed ESAT

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:VOA

ample organization: IEPA
ar e Requestor: IEPA
acility: GREEN AP REFRACTORIES
atrix:WATER Method:A624SAS.0

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24R03
Units: ug/L

ate Collected:09-AUG-95
ate Extracted:13-AUG-95

Date Received:10-AUG-95
Date Analyzed:13-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	
75-15-0	Carbon Disulfide	1	U
75-09-2	Methylene Chloride	5	
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
74-97-5	2-Butanone	3	U
74-97-5	Bromochloromethane	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	Cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
108-10-1	4-Methyl-2-Pentanone	3	U
10061-02-6	Trans-1,3-Dichloropropene	1	U
127-18-4	Tetrachloroethene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	3	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1083836423	m &/or p-Xylene	1	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

Analyzed by: A. Guglietta / Lockheed ESAT

Team Leader: [illegible]

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter: VOA

ample organization: IEPA
al e Requestor: IEPA
acility: GREEN AP REFRACTORIES
atrix: WATER
Method: A624SAS.0

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24801
Units: ug/L

ate Collected: 09-AUG-95
ate Extracted: 13-AUG-95

Date Received: 10-AUG-95
Date Analyzed: 13-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	3	U
75-15-0	Carbon Disulfide	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
74-97-5	2-Butanone	3	U
74-97-5	Bromochloromethane	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	Cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
108-10-1	4-Methyl-2-Pentanone	3	U
10061-02-6	Trans-1,3-Dichloropropene	1	U
127-18-4	Tetrachloroethene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	3	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1083836423	m &/or p-Xylene	1	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

Analyzed by: A. Ingletta (Lockheed ESAT
Team Leader: [illegible]

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:VOA

ample organization: IEPA
an e Requestor: IEPA
acility: GREEN AP REFRACTORIES
atrix:WATER Method:A624SAS.0

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24D01
Units: ug/L

ate Collected:09-AUG-95
ate Extracted:13-AUG-95

Date Received:10-AUG-95
Date Analyzed:13-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	3	U
75-15-0	Carbon Disulfide	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
74-97-5	2-Butanone	3	U
74-97-5	Bromochloromethane	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	Cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
108-10-1	4-Methyl-2-Pentanone	3	U
10061-02-6	Trans-1,3-Dichloropropene	1	U
127-18-4	Tetrachloroethene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	3	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1083836423	m &/or p-Xylene	1	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

Analyzed by: A. Juglitta / Lockheed ESAT

Team Leader: [illegible]

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:VOA

ample organization: IEPA
al e Requestor: IEPA
acility: GREEN AP REFRACTORIES
atrix:WATER Method:A624SAS.0

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24S02
Units: ug/L

ate Collected:09-AUG-95
ate Extracted:13-AUG-95

Date Received:10-AUG-95
Date Analyzed:13-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	3	U
75-15-0	Carbon Disulfide	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
74-97-5	2-Butanone	3	U
74-97-5	Bromochloromethane	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	Cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
108-10-1	4-Methyl-2-Pentanone	3	U
10061-02-6	Trans-1,3-Dichloropropene	1	U
127-18-4	Tetrachloroethene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	3	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1083836423	m &/or p-Xylene	1	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

Analyzed by: A. Inglisitta / Lockheed ESAT

Team Leader: [illegible]

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: CRL REGION V Contract: LOCKHEED/ESAT

Lab code: 5SCRL Case No.: 950233 SAS No.: SDG No.: ---

	EPA SAMPLE NO.	S1 (BEN)#	S2 (BFB)#	S3 (TOL)#	S4 ( )#	TOT OUT
01	LAB BLANK	99	103	100		0
02	95IE24R01	99	101	100		0
03	95IE24R03	97	102	100		0
04	95IE24S01	98	103	99		0
05	95IE24D01	99	101	100		0
06	95IE24S02	104	88	106		0
07	STORAGE BK	100	97	101		0
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
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26						
27						
28						
29						
30						

		QC LIMITS
S1 (BEN)	= BENZENE-D6	(70-130)
S2 (BFB)	= p-BROMOFLUOROBENZENE	(80-120)
S3 (TOL)	= TOLUENE-D8	(70-130)

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

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: CRL REGION V Contract: LOCKHEED/ESAT

Lab code: 5SCRL Case No.: 950233 SAS No.: SDG No.: ---

Lab File ID: >B1551 Lab Sample ID: LAB BLANK

Date Analyzed: 08/13/95 Time Analyzed: 11:01

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

Instrument ID: GC/MS#7

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	95IE24R01	95IE24R01	>B1559	16:20
2	95IE24R03	95IE24R03	>B1560	16:57
3	95IE24S01	95IE24S01	>B1561	17:34
4	95IE24D01	95IE24D01	>B1562	18:12
5	95IE24S02	95IE24S02	>B1563	18:49
6	STORAGE BK	STORAGE BK	>B1564	19:27
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____

_____

FORM IV VOA 1/87 Rev.

11A

VOLATILE ORGANICS LAB CONTROL SPIKE

EPA SAMPLE NO.

LAB SPIKE

Na .: CRL REGION V Contract: LOCKHEED/ESA

Code: 5SCRL Case No.: 950224 SAS No.: SDG No.: ---

rix: (soil/water) WATER Lab Sample ID: LAB SPIKE

ple wt/vol: 25 (g/ml) ML Lab File ID: >B1508

el: (low/med) LOW Date Received: 08/07/95

oisture: not dec. Date Analyzed: 08/07/95

umn: (pack/cap) CAP Dilution Factor: 1.0

COMPOUND	Conc	Spike	Recovery
Vinyl chloride	6	5	123
Carbon tetrachloride	6	5	111
Benzene	6	5	118
1,2-Dichloroethane	6	5	114
Trichloroethene	6	5	116
1,2-Dichloropropane	6	5	110
cis-1,3-Dichloropropene	6	5	111
Tetrachloroethene	5	5	109
1,1,2-Trichloroethane	6	5	111
1,2-Dibromoethane	5	5	110
Bromoform	4	5	90
4-Dichlorobenzene	5	5	106

QC LIMITS: 60% - 140%

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
AUG 28 1995
IEPA/DLPC

Date: AUG 2 4 1995

Subject: Review of Region 5 Data for **GREEN AP REFRACTORIES**

From: Charles T. Elly, Director Chuck Elly
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for: **Green AP Refractories**
CRL request number: **950233**
Analyzed for: **ABN (Organics)**
Results are reported for sample designations: 95IE24S01, -S02, -D01, & -R03 (4 samples).

Results Status:
(X) Acceptable for Use. Please see the attached Case Narrative.
(-X) Data Qualified but acceptable for Use. Please see the attached Case Narrative.
( ) Data Unacceptable for Use

(X) Sewer Disposal Criteria Met; Exceptions: none
Comments on Data Quality by Reviewer:

Please see the case narrative.

Comments by Laboratory Director or Quality Control Coordinator

Review Record for **Green AP Refractories 950233 ABN**

Baba Pahnchitz 08/23/95

Team Leader and Task Monitor Date (X) Reviewed ( ) Unreviewed

8/24/95

Section Chief and Date (✓) Reviewed ( ) Unreviewed

8/24/95

QC Coordinator and Date ( ) Reviewed (✓) Unreviewed

Sylvia Griffin AUG 2 4 1995

Data Management Coordinator and Date Received

Date Transmitted AUG 2 4 1995

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date

Comments:

CASE NARRATIVE

DATE: August 23, 1995

PROJECT NAME: Green AP Refractories - CRL Case #: 950233
Analysis of Acid\Base\Neutral Organic Analytes

ANALYST: Babu Paruchuri, Chemist (BP)

REVIEWERS: Chi M. Tang, Chief
Organic Laboratory Section

I. CASE DESCRIPTION:

The laboratory received four (95IE24S01, -S02, -D01, and -R03) residential well water samples on 08/10/95 for acid/base-neutral (ABN) organic compound analysis. These samples were analyzed by the CRL test method # 625CLP. The site samples were extracted on 08/14/95 and analyzed on 08/17/95. All site samples were extracted and analyzed within sample holding time requirements. These samples were received at the laboratory in good condition. (QC Criteria for sample holding time for Extraction and Analysis: Seven Days from date of collection and 40 days from date of extraction, respectively). No problems were observed.

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** On each day of analysis, GC/MS instrument (HP-MS#2) performance checks were made to determine if the EPA tuning criteria for DFTPP were met. (QC Criteria: Same as CLP Statement of Work criteria). No problems were observed.

2. **Initial Calibration Check:** An acceptable five point initial calibration (IC) curve is required for all target compounds before samples can be analyzed. The initial calibration curve generated on 08/16/95 was acceptable for all of the target compounds. (QC Criteria for IC: %RSD should be $\leq$ 30%). No problems were observed.

3. **Continuing Calibration Check:** A continuing calibration check standard (CCC) was analyzed on 08/17/95. The CCC data were acceptable for all of the target compounds. (QC Criteria for CCC standard: %D should be $\leq$ 25%). No problems were observed.

4. **Internal Standard (IS) Area and Retention Time Summary:** The site samples met the internal standard (IS) area and retention time (RT) QC criteria. (QC Criteria for IS Area: internal standard area counts for samples and blanks must not vary by more than a factor of two [- 50% to + 100%] from the

associated daily calibration standard; QC Criteria for RT: RT of the IS compounds in samples and blanks must not vary by more than ± 30 seconds from the daily calibration standard). No problems were observed.

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** On the day of sample extraction, reagent water spiked with surrogates was extracted to check for contamination due to extraction/concentration procedures. The method blank sample data are acceptable. See Form I ABN. A common laboratory contaminant, bis(2-ethylhexyl)phthalate, was detected in the method blank sample. All site samples were flagged "**B**" (B = Found in lab blank) if this contaminant was also detected in the site samples.

2. **Surrogate Spike Compound Results:** The surrogate spike compound recovery data were within the QC limits for all samples. No problems were observed. See Form II ABN-1.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results:** MS/MSD sample analyses are not required for residential well water sample analysis. Instead, the laboratory analyzes, on a daily basis, a Laboratory Control Sample (LCS), and, on a monthly basis, a Performance Evaluation Sample (PES). The site sample data quality, in terms of accuracy, is evaluated based on data from LCS and PES data. Please see below.

4. **Laboratory Control Sample (LCS):** The laboratory generated acceptable accuracy data for most of the compounds, except bis(2-chloroethyl)ether and 2-chlorophenol. Because their recoveries were slightly below acceptance limits and because none of these compounds were detected at the site, the site data for these two compounds were flagged "**UJ**" (UJ = estimated method detection limit). See Form XI ABN.

5. **Performance Evaluation Sample (PES):** The laboratory generated acceptable results for the PES. EPA (EMSL-LV) establishes data acceptance limits for PES. No problems were observed.

IV. SAMPLE RESULTS:

The laboratory met qualitative and quantitative analysis requirements for TCLs and TICs.

Bis(2-ethylhexyl)phthalate, a common laboratory contaminant, was detected in the laboratory method blank, and site samples. The site sample data quality was not affected.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LAB BLANK

ab .ame: GREEN AP REFRACTORIES IL Contract: SLO-10C

ab Code: USEPA Case No.: 950233 SAS No.: GRNAPRF SDG No.: -------

atrix: (soil/water) WATER Lab Sample ID: LAB BLANK

ample wt/vol: 1000 (g/ml) ML Lab File ID: >B8502

evel: (low/med) LOW Date Received: 08/10/95

Moisture: not dec. ---- dec. ---- Date Extracted: 08/14/95

xtraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 08/17/95

PC Cleanup: (Y/N) N pH: NA Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	U
95-57-8	2-Chlorophenol	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
95-50-1	1,2-Dichlorobenzene	5	U
95-48-7	2-Methylphenol	5	U
108-60-1	bis(2-Chloroisopropyl)ether	5	U
106-44-5	4-Methylphenol	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic acid	20	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dinitrotoluene	5	U

BP 8/23/95

NO TICS. BP 8/23/95

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LAB BLANK

ab Name: GREEN AP REFRACTORIES IL Contract: SLO-10C

ab Code: USEPA Case No.: 950233 SAS No.: GRNAPRF SDG No.: -------

atrix: (soil/water) WATER Lab Sample ID: LAB BLANK

ample wt/vol: 1000 (g/ml) ML Lab File ID: >B8502

evel: (low/med) LOW Date Received: 08/10/95

Moisture: not dec. ---- dec. ---- Date Extracted: 08/14/95

xtraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 08/17/95

PC Cleanup: (Y/N) N pH: NA Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	5	U
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
84-66-2	Diethylphthalate	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
86-73-7	Fluorene	5	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
86-74-8	Carbazole	5	U
56-55-3	Benzo(a)anthracene	5	U
218-01-9	Chrysene	5	U
117-81-7	bis(2-Ethylhexyl)phthalate	22	
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)pyrene	5	U
53-70-3	Dibenzo(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	U

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:ABN

Sample organization: IEPA
Sample Requestor: IEPA
Facility: GREEN AP REFRACTORIES
Matrix:WATER
Method:A625SWLCS.1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24R03
Units: ug/L

Date Collected:09-AUG-95
Date Extracted:14-AUG-95

Date Received:10-AUG-95
Date Analyzed:17-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	UJ
95-57-8	2-Chlorophenol	5	UJ
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
95-50-1	1,2-Dichlorobenzene	5	U
95-48-7	2-Methylphenol	5	U
108-60-1	bis(2-Chloroisopropyl)ether	5	U
106-44-5	4-Methylphenol	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic acid	20	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	5	U
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	5	U
606-20-2	2,6-Dinitrotoluene	5	U
121-14-2	2,4-Dinitrotoluene	5	U
84-66-2	Diethylphthalate	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
86-73-7	Fluorene	5	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	5	U

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:ABN

ample organization: IEPA
ar e Requestor: IEPA
ac..ity: GREEN AP REFRACTORIES
atrix:WATER Method:A625SWLCS.1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24R03
Units: ug/L

ate Collected:09-AUG-95
ate Extracted:14-AUG-95

Date Received:10-AUG-95
Date Analyzed:17-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
120-12-7	Anthracene	5	U
86-74-8	Carbazole	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	5	U
218-01-9	Chrysene	5	U
117-81-7	bis(2-Ethylhexyl)phthalate	25	B
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)pyrene	5	U
53-70-3	Dibenzo(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	U

Analyzed by: Barbara Patrachwicz

NO TICs

Team Leader: Barbara Patrachwicz 8/23/95

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:ABN

Sample organization: IEPA
Sample Requestor: IEPA
Facility: GREEN AP REFRACTORIES
Matrix:WATER
Method:A625SWLCS.1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24S01
Units: ug/L

Date Collected:09-AUG-95
Date Extracted:14-AUG-95

Date Received:10-AUG-95
Date Analyzed:17-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	UJ
95-57-8	2-Chlorophenol	5	UJ
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
95-50-1	1,2-Dichlorobenzene	5	U
95-48-7	2-Methylphenol	5	U
108-60-1	bis(2-Chloroisopropyl)ether	5	U
106-44-5	4-Methylphenol	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic acid	20	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	5	U
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	5	U
606-20-2	2,6-Dinitrotoluene	5	U
121-14-2	2,4-Dinitrotoluene	5	U
84-66-2	Diethylphthalate	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
86-73-7	Fluorene	5	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	5	U

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:ABN

ample organization: IEPA
am e Requestor: IEPA
ac..ity: GREEN AP REFRACTORIES
atrix:WATER Method:A625SWLCS.1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24S01
Units: ug/L

ate Collected:09-AUG-95
ate Extracted:14-AUG-95

Date Received:10-AUG-95
Date Analyzed:17-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
120-12-7	Anthracene	5	U
86-74-8	Carbazole	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	5	U
218-01-9	Chrysene	5	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	B
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)pyrene	5	U
53-70-3	Dibenzo(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	U

Analyzed by: Babu Patuchwar

NO TICs. Team Leader: Babu Patuchwar 8/23/95

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:ABN

ample organization: IEPA
a e Requestor: IEPA
acility: GREEN AP REFRACTORIES
atrix:WATER
Method:A625SWLCS.1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24D01
Units: ug/L

ate Collected:09-AUG-95
ate Extracted:14-AUG-95

Date Received:10-AUG-95
Date Analyzed:17-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	UJ
95-57-8	2-Chlorophenol	5	UJ
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
95-50-1	1,2-Dichlorobenzene	5	U
95-48-7	2-Methylphenol	5	U
108-60-1	bis(2-Chloroisopropyl)ether	5	U
106-44-5	4-Methylphenol	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic acid	20	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	2	J
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
99-09-2	3-Nitroaniline	9	J
83-32-9	Acenaphthene	5	U
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	5	U
606-20-2	2,6-Dinitrotoluene	5	U
121-14-2	2,4-Dinitrotoluene	5	U
84-66-2	Diethylphthalate	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
86-73-7	Fluorene	5	U
100-01-6	4-Nitroaniline	4	J
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	5	U

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:ABN

Sample organization: IEPA
Sample Requestor: IEPA
Facility: GREEN AP REFRACTORIES
Matrix:WATER
Method:A625SWLCS.1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24D01
Units: ug/L

Date Collected:09-AUG-95
Date Extracted:14-AUG-95

Date Received:10-AUG-95
Date Analyzed:17-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
120-12-7	Anthracene	5	U
86-74-8	Carbazole	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	5	U
218-01-9	Chrysene	5	U
117-81-7	bis(2-Ethylhexyl)phthalate	5	JB
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)pyrene	5	U
53-70-3	Dibenzo(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	U

Analyzed by: Baba Paruchuri
Team Leader: Baba Paruchuri 8/23/95

NO TICs.

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:ABN

Sample organization: IEPA
Sample Requestor: IEPA
Facility: GREEN AP REFRACTORIES
Matrix:WATER
Method:A625SWLCS.1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24S02
Units: ug/L

Date Collected:09-AUG-95
Date Extracted:14-AUG-95

Date Received:10-AUG-95
Date Analyzed:17-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	UJ
95-57-8	2-Chlorophenol	5	UJ
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
95-50-1	1,2-Dichlorobenzene	5	U
95-48-7	2-Methylphenol	5	U
108-60-1	bis(2-Chloroisopropyl)ether	5	U
106-44-5	4-Methylphenol	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic acid	20	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	5	U
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	5	U
606-20-2	2,6-Dinitrotoluene	5	U
121-14-2	2,4-Dinitrotoluene	5	U
84-66-2	Diethylphthalate	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
86-73-7	Fluorene	5	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	5	U

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
Parameter:ABN

ample organization: IEPA
ar e Requestor: IEPA
ac..ity: GREEN AP REFRACTORIES
atrix:WATER Method:A625SWLCS.1

Sample Batch ID: 950233
Account No: TFA301
Sample ID: 95IE24S02
Units: ug/L

ate Collected:09-AUG-95
ate Extracted:14-AUG-95

Date Received:10-AUG-95
Date Analyzed:17-AUG-95

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
120-12-7	Anthracene	5	U
86-74-8	Carbazole	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	5	U
218-01-9	Chrysene	5	U
117-81-7	bis(2-Ethylhexyl)phthalate	9	B
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)pyrene	5	U
53-70-3	Dibenzo(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	U

Analyzed by: Barb Pabuchutzi

Team Leader: Barb Pabuchutzi 8/22/95

EPA RLIMS CRL - REGION V
TENTATIVELY IDENTIFIED COMPOUNDS
REPORT PRODUCED ON: 23-AUG-95

AM E ORGANIZATION: **IEPA**
AM E REQUESTOR: **IEPA**
ABORATORY: **ESAT**

SAMPLE BATCH ID: **950233**
ACCOUNT NO: **TFA301**
FACILITY: **GREEN AP REFRACTORIES**

625SWLCS.1 (ABNs in all SF Water samples by GC/MS -

AMPLE: **95IE24S02** FIELD: **95IE24S02** CONTROL TYPE: **SAM**

OLLECTED: **09-AUG-95** RECEIVED: **10-AUG-95** ANALYZED: **17-AUG-95**

COMPOUND	EST. CONC.	RT	Q	CAS NUMBER
SULFUR, MOL. (S8)	**21 J**	**19.81**		**10544500**
BENZENE, 1,1'-SULFONYLBIS[4-CHLORO-	**51 J**	**21.96**		**80079**

ANALYZED BY: Baba Pahuchwai, 8/23/95

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: GREEN AP REFRACTORIES IL Contract: SLO-10C

Lab code: USEPA Case No.: 950233 SAS No.: GRNAPRF SDG No.: ------

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 ( )#	TOT OUT
01	LAB BLANK	56	61	84	62	56	78		0
02	LAB SPIKE	63	64	78	54	63	94		0
03	95IE24R03	43	52	93	51	52	67		0
04	95IE24S01	48	60	97	55	60	73		0
05	95IE24D01	40	48	91	52	54	69		0
06	95IE24S02	41	43	102	44	49	72		0
07									
08									
09									
10									
11									
12									
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		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(35-114)
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)
S3 (TPH)	= Terphenyl-d14	(33-141)
S4 (PHL)	= Phenol-d5	(10-100)
S5 (2FP)	= 2-Fluorophenol	(21-110)
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)

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

11B

SEMIVOLATILE ORGANICS LAB CONTROL SPIKE

EPA SAMPLE NO.

LAB SPIKE

ab Name: GREEN AP REFRACTORIES IL Contract: SLO-10C

ab Code: USEPA Case No.: 950233 SAS No.: GRNAPRF SDG No.: -------

atrix: (soil/water) WATER Lab Sample ID: LAB SPIKE

ample wt/vol: 1000 (g/ml) ML Lab File ID: >B8503

evel: (low/med) LOW Date Received: 08/10/95

Moisture: not dec. ---- dec. ---- Date Extracted: 08/14/95

xtraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 08/17/95

PC Cleanup: (Y/N) N pH: NA Dilution Factor: 1.0

COMPOUND	Conc	Spike	Recovery
Phenol	46	75	62
bis(2-Chloroethyl)ether	41	75	55
2-Chlorophenol	40	75	53
N-Nitroso-di-n-propylamine	53	75	71
Hexachloroethane	39	75	52
Isophorone	52	75	69
1,2,4-Trichlorobenzene	44	75	58
Naphthalene	39	75	52
4-Chloroaniline	50	75	67
2,4,6-Trichlorophenol	52	75	69
2,6-Dinitrotoluene	66	75	88
Diethylphthalate	65	75	86
N-Nitrosodiphenylamine	72	75	96
Hexachlorobenzene	61	75	81
Benzo(a)pyrene	64	75	85

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: GREEN AP REFRACTORIES IL Contract: SLO-10C

Lab code: USEPA Case No.: 950233 SAS No.: GRNAPRF SDG No.: ------

Lab File ID: >B8502 Lab Sample ID: LAB BLANK

Date Extracted: 08/14/95 Extraction:(Sepf/Cont/Sonc) CONT

Date Analyzed: 08/17/95 Time Analyzed: 12:28

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

Instrument ID:

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	LAB SPIKE	LAB SPIKE	>B8503	08/17/95
2	95IE24R03	95IE24R03	>B8511	08/17/95
3	95IE24S01	95IE24S01	>B8512	08/17/95
4	95IE24D01	95IE24D01	>B8513	08/17/95
5	95IE24S02	95IE24S02	>B8514	08/17/95
7				
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COMMENTS: _____.

_____.

page __ of __.

950233

TFA 301

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUPERFUND SAMPLE DATE 8/9/95 LAB ARRIVAL DATE 8/10/95 DUE DATE 8/31/95

DU NUMBER TFA DATA SET NUMBER 950233 STUDY GREEN AP REFRACTORIES PRIORITY N CONTRACTOR ~~TE~~PA

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX 17664	WATER ABN ORGANICS SCAN UG/L TOX 17674	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX 216622	SEDIMENTS SOLIDS ABN ORGANICS SCAN MG/KG (DRY) TOX 215722
95IE24S01	G201 5-009586-587	X			
95IE24D01	G202 5-009590-591	X			
95IE24S02	G203 5-009595-596 5-009600-601+603-4	X			
95IE24R01	TRIP BLANK 5-009611-612	X			
95IE24R03	G204 (FB) 5-009607-08	X			
95IE24S01	G201 5-009588		X		
95IE24D01	G202 5-009593		X		
95IE24S02	G203 5-009597+599 5-009605		X		
95IE24R03	G204 (FB) 5-009609		X		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

RECEIVED
SEP 1 1995
IEPA/DLPC

DATE:

SUBJECT: Review of Region V CLP Data
Received for Review on Aug 25, 1995

FROM: Dennis Wesolowski, Chief (SQC-14J)
Contract Analytical Services Section

TO: Data User: IEPA

We have reviewed the data for the following case:

SITE NAME: Green AP Refractories (IL)

CASE NUMBER: 23890 SDG NUMBER: MEAEQ1

Number and Type of Samples: 11 (Soil)

Sample Numbers: MEAEQ1-3, MEAES5-7 MEAET4-6
MEZN39-40

Laboratory: SWDK Hrs. for Review: 4.0
+0.3 T.M.

Following are our findings:

Tl and Hg data are estimated due to blank contamination. Antimony data are estimated due to potential cross-talk. However, the data are acceptable as is with qualification. See attached CAPORE data review narrative for detail.

cc: Regional TPO

NARRATIVE

SITE: GREEN AP REFRACTORIES CASE: 23890
LABORATORY: SWOK SDG: MEAEQ1

The laboratory's portion of case 23890 contains 11 low level soil samples assayed for total metals and total cyanide. This is a CADRE review.

EVIDENTIAL AUDIT: All forms are originals. Most of the raw data sheets are originals, those photocopied are from bound lab notebooks. The originals that are present are sample tags, Federal Express airbill, chain of custody forms and Form DC-1. All forms are present and in the order indicated on the Form DC-2 [inventory sheet].

The temperature of the shipment cooler of samples when received by the lab was 13° C. The lab was advised by CLASS to go ahead with sample analyses (see phone log).

CADRE REVIEW:

Matrix Spike Criteria

Percent Recovery Limits	
Upper	125.0
Lower	75.0
Extreme lower	30.0

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low, indicating that sample results may be biased low.
Hits are qualified "L"and non-detects are qualified "UJ".

Antimony
MEAEQ1, MEAEQ2, MEAEQ3, MEAES5, MEAES6, MEAES7, MEAET4, MEAET5, MEAET6, MEZN39, MEZN40

Reviewed by: J. Redlin James Redlin
Lockheed ESAT
Date: 8/30/95

CLIENT/LABORATORY COMMUNICATION SYSTEM

PROJECT OFFICERS DEPARTMENT

TM

SWL X /AATS ____

TELEPHONE RECORD LOG

➤ In Reference to Case Contract/Proposal: 23890/23889

➤ Date of Call: 8/11/95

➤ Client Name: CLASS

➤ Client Contact: ROGER NOWAKOWSKI

➤ Call Initiated By: ☐ Client ☑ Laboratory

➤ In reference to data for the following sample number(s):

➤ Sumary of Questions/Issues Discussed: SHIPMENT COOLERS ARRIVED; ONE COOLER FOR CASE 23889 WAS 14°C & SHIPMENT COOLER FOR CASE 23890 WAS 13°C

➤ Summary of Resolution: GO AHEAD & ANALYZE SAMPLES AND NOTE INCIDENT IN THE CASE NARRATIVE

Signature: Chuck Jones *Date:* 8/11/95

➤ Distribution: ✔ White/Lab Copy ✔ Yellow/Client Copy ✔ Pink/Project Officer Copy

SOUTHWEST LABORATORY OF OKLAHOMA, INC. • AMERICAN ANALYTICAL & TECHNICAL SERVICES, INC.
1700 W. ALBANY • BROKEN ARROW, OKLAHOMA 74012 • OFFICE (918) 251-2858 • FAX (918) 251-2599 [PJ001-0994-02]

001

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany / Broken Arrow, Oklahoma 74012 / Office (918) 251-2858 / Fax (918) 251-2599

SDG NARRATIVE

CONTRACT:68-D3-0040 **DATE:08/24/95**
CASE:23890 **SOW NO.:ILM03.0**
SDG:MEAEQ1 **EPISODE NO.:23189**

INORGANIC METAL FRACTION:

11 soil samples + 1 MS/DUP/LCS were submitted for ICP, CN and Hg analysis. The samples analyses were completed according to SOW(ILM03.0).

No major problems occurred during the digestion or analyses of these samples.
As noted in the client/Laboratory communication. The shipment cooler for this case was 13 C. We were instructed to go ahead with the sample analysis.

Initial and Continuing Calibration Checks: No problems.

Initial and Continuing Calibration Blanks: The following elements showed low level concentrations below the Contract Required Detection Limit in the Calibration Blanks: Al, As. Ca, Cr, Co, Mn, Ni, Ag, Na, Tl, V. No action required.

Linearity near the CRDL (CRA & CRI): No problems.

Preparation Blanks: The following elements showed low level concentrations below the Contract Required Detection Limit in the Preparation Blank: Cr, Fe, Mg,Ni, Na, Tl. No action required.

Lab Control Spikes: No problems.

Matrix Spike(s) (and MSD): The following element was outside the control limits of 75-125% recovery: Sb. All associated samples were flagged with a "N" on Form I's. No action required

Duplicate(s) (and MSD): No problems

Serial Dilution (ICP): No problems

Sincerely,

Jason D. Ruckman
Inorganic Program Manager

Laboratory Blanks Criteria

DC-284: The following inorganic samples are associated with a blank concentration which is greater than the instrument detection limit (IDL). The sample concentration is also greater than the IDL and less than five times the blank concentration.
Hits are qualified "H".

Silver
MEAEQ3

Sodium
MEAEQ1, MEAEQ2

Thallium
MEAEQ1, MEAEQ2, MEAEQ3

After a visual inspection of the laboratory blanks by the reviewer, it was noted that the PBS for Na and the PBS and a CCB for Tl qualified more Na and Tl data according to DC-284.
Hits are qualified "H".

Sodium
MEAES5, MEAES6, MEAES7, MEAET4, MEAET5, MEAET6, MEZN39, MEZN40

Thallium
MEAES5, MEAES6, MEAES7, MEAET5, MEAET6, MEZN39, MEZN40

Reviewed by: J. Redlin
James Redlin
Lockheed ESAT

Date: 8/30/95

INORGANIC CADRE DATA QUALIFIER DEFINITIONS

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

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

J Indicates the associated value is an estimated quantity.

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

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

L Low bias

H High bias

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEAEQ2S

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract:68-D3-0040

Lab Code: SWOK__ Case No.: 23890 SAS No.: _____ SDG No.: MEAEQ1

Matrix: __SOIL_____ Level (low/med): _LOW____

% Solids for Sample: _65.3

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	66.2018		0.9188	U	153.14	43.2	N	P
Arsenic	75-125	625.1112		6.4343		612.56	101.0		P
Barium	75-125	633.8254		15.6104	B	612.56	100.9		P
Beryllium	75-125	17.2907		0.8980	B	15.31	107.1		P
Cadmium	75-125	25.5593		12.4260		15.31	85.8		P
Calcium									NR
Chromium	75-125	70.7093		7.4475		61.26	103.3		P
Cobalt	75-125	180.5593		22.6172		153.14	103.1		P
Copper	75-125	109.9259		30.1397		76.57	104.2		P
Iron									NR
Lead	75-125	174.1253		22.0009		153.14	99.3		P
Magnesium									NR
Manganese	75-125	323.6551		184.3198		153.14	91.0		P
Mercury	75-125	0.6845		0.1531	U	0.77	88.9		AV
Nickel	75-125	202.5994		48.7798		153.14	100.4		P
Potassium									NR
Selenium	75-125	613.5436		2.9342		612.56	99.7		P
Silver	75-125	15.3130		0.3063	U	15.31	100.0		P
Sodium									NR
Thallium	75-125	601.8628		1.6380	B	612.56	98.0		P
Vanadium	75-125	162.6021		8.4199	B	153.14	100.7		P
Zinc	75-125	331.4842		213.5590		153.14	77.0		P
Cyanide	75-125	6.1529		0.2297	U	7.66	80.3		AS

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO. 027

MEAEQ2D

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: 68-D3-0040

Lab Code: SWOK__ Case No.: 23890 SAS No.: _____ SDG No.: MEAEQ1

Matrix (soil/water): SOIL_ Level (low/med): _LOW__

% Solids for Sample: _65.3 % Solids for Duplicate: __65.5

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		3336.9755		3395.5528		1.7		P
Antimony		0.9188	U	0.9188	U			P
Arsenic	3.1	6.4343		5.8147		10.1		P
Barium		15.6104	B	14.9464	B	4.3		P
Beryllium		0.8980	B	0.8263	B	8.3		P
Cadmium		12.4260		12.3565		0.6		P
Calcium	1531.4	1584.0123		1536.5075		3.0		P
Chromium	3.1	7.4475		7.2245		3.0		P
Cobalt	15.3	22.6172		18.9574		17.6		P
Copper	7.7	30.1397		29.4003		2.5		P
Iron		18099.6744		16151.9130		11.4		P
Lead		22.0009		20.9213		5.0		P
Magnesium		423.5945	B	405.3933	B	4.4		P
Manganese		184.3198		190.2478		3.2		P
Mercury		0.1531	U	0.1531	U			AV
Nickel	12.3	48.7798		40.2708		19.1		P
Potassium		916.4502	B	547.7011	B	50.4		P
Selenium	1.5	2.9342		3.1314		6.5		P
Silver		0.3063	U	0.3063	U			P
Sodium		118.0796	B	81.5335	B	36.6		P
Thallium		1.6380	B	1.7617	B	7.3		P
Vanadium		8.4199	B	8.9476	B	6.1		P
Zinc		213.5590		215.3069		0.8		P
Cyanide		0.2297	U	0.2297	U			AS

FORM VI - IN

ILM02.1

EPA United States Environmental Protection Agency Contract Laboratory Program

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

SAS No. (if applicable):
Case No: 23890

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

2. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not preserved

2. Region No.: V
Sampling Co.: IEPA
Sampler (Name): Ted Prescott
Sampler Signature: [signature]

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

4. Date Shipped: 8-10-95
Carrier: Federal Express
Airbill Number: 4413934836
5. Ship To: Southwest Labs of Oklahoma, 1700 West Albany, Suite C, Broken Arrow, OK 74012
ATTN: Robert Harris

6. Date Received -- Received by: [signature] 8-11-95
Laboratory Contract Number: 68-D3-0040
Unit Price: $175.00
7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) Other:	E – FAS Analysis: Diss. Metals	Total Metals	Cyanide	Low only: NO_2/NO_3	Fluoride	High only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
MEZN40	5	L	G	6	X		X					5-009551	X211	[illegible]	EAQ62	RP			

field sample received in SDG 08-15-95

Shipment for Case Complete? (Y/N)	Page	Sample(s) to be Used for Laboratory QC	Additional Sampler Signatures	Chain of Custody Seal Number(s)
	2 of 2	MEAEQ2		45233-45234

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	8-10-95 / 1915				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	
		[signature] MEAEQ1	8/11/95 0930	intact	

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

EPA Form 9110-1

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

A21-012-6 REV. 3/93

250

262200

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

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (if applicable):

Case No.: 23890

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

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

3. Region No.: V

Sampling Co.: IEPA

Sampler (Name): Ted Prescott

Sampler Signature: [signature]

4. Type of Activity

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

5. Date Shipped: 8-10-95

Carrier: Federal Express

Airbill Number: 4413934836

6. Ship To: Southwest Labs of Oklahoma, 1700 West Albany, Suite C, Broken Arrow, OK 74012

ATTN: Robert Harris

7. Date Received -- Received by: [signature] 8-11-95

Laboratory Contract Number: 68-D3-0040

Unit Price: $175.00

8. Transfer to

Date Received

Received by

Contract Number

Price

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. only: Nitrate/Nitrite	Fluoride	High only: pH	Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - MIS Liq.	Non Water - Ms Liq.
MEAEQ1	5	L	G	6	X		X					5-009541	X201	8/10/95 1130	[illegible]	AQC2	intact			
MEAEQ2	5	L	G	6	X		X					5-009542	X202	8/10/95 830	[illegible]	AQC3				
MEAEQ3	5	L	G	6	X		X					5-009543	X203	8/10/95 [illegible]	[illegible]	AQC4				
MEAET4	5	L	G	6	X		X					5-009544	X204	8/10/95 945	[illegible]	AQG4				
MEAET5	5	L	G	6	X		X					5-009545	X205	8/10/95 [illegible]	[illegible]	AQG5				
MEAET6	5	L	G	6	X		X					5-009546	X206	8/10/95 [illegible]	[illegible]	AQG6				
MEAES6	5	L	G	6	X		X					5-009547	X207	8/10/95 [illegible]	[illegible]	AQG7				
MEAES6	5	L	G	6	X		X					5-009548	X208	8/10/95 [illegible]	[illegible]	AQG8				
MEAES7	5	L	G	6	X		X					5-009549	X209	8/10/95 [illegible]	[illegible]	AQG9				
MEZN39	5	L	G	6	X		X					5-009550	X210	8/10/95 [illegible]	[illegible]	AQG1				

Shipment for Case complete? (Y/N): Y

Page 1 of 2

Sample used for a spike and/or duplicate: MEAEQ2

Additional Sampler Signatures:

Chain of Custody Seal Number: 45233-45234

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	8-10-95 1415				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	
		[signature]	8/11/95 0930		

MEAEQ2

If Samples: ☐ Accepted (Signature) ☐ Declined

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

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

249

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: _____ CERCLIS No: ILD049136658

Case No: 23890 Site Name Location: Green AP Refractories

Contractor or EPA Lab: SWOK Data User: IEPA

No. of Samples: 11 Date Sampled or Data Received: 8-25-95

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

Are basic data forms in? Yes ✓ No ____
No of samples claimed: 11 No. of samples received: 11

Received by: Lynette Burnett Date: 8/25/95

Received by LSSS: Allison C Harvey Date: 8-28-95

Review started: 8/29/95 Reviewer Signature: J. Rodlin

Total time spent on review: ~~8/30/95~~ 4.0 JR 8/30/95 +0.3 hr. Date review completed: 8/30/95

Copied by: LB for LJ Date: 9-7-95

Mailed to user by: _____ Date: 9-7-95

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if

PROBLEMS: Please indicate reasons why data are not suitable for yo uses.

Received by Data Mgmt. Coordinator for Files. Data: _____

CADRE REVIEW 2.2P

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

The samples (EAQC2-EAQC4, EAQG1, EAQG2, EAQG4-EAQG9) were collected on 08/10/95. The laboratory received eleven (11) low level soil samples on 08/11/95 in good condition for the full list of organic analysis following the SOW OLM03.1.

Sample EAQC3 was used as the low level matrix spike/spike duplicates for the VOA, SVOA and Pest/PCB.

Sample EAQG7 was identified as the field duplicate of sample EAQG6. None of the samples in this case were identified as the field blanks.

The VOA samples were analyzed within the holding time of fourteen (14) days for the soil samples. The SVOA and Pest/PCB samples were extracted within the holding time of fourteen (14) days for the soil samples. The extracts were analyzed within forty (40) days following the extraction.

For the SVOA fraction, the result of bis(2-ethylhexyl)phthalate in the samples associated with a method blank contains bis(2-ethylhexyl)phthalate was not elevated to the CRQL eventhough the sample result was less than 10X the CRQL.

No flag for the method blanks of the VOA, SVOA and Pest/PCB fractions were reported for the CADRE report.

The reviewer's comments and data qualifiers from CADRE 2.2P are noted in the following pages.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

RECEIVED

NOV 03 1995

IEPA/DLPC

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

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

FROM: Dennis Wesolowski, Chief (SQC-14J)
Contract Analytical Services Section

TO: Data User: IEPA Patricia J Scott for D. Wesolowski 09/18/95

We have reviewed the data for the following case:

SITE NAME: Green AP Refractories (IL)

CASE NUMBER: 23890 SDG NUMBER: EAQC2

Number and Type of Samples: 11 (soil)

Sample Numbers: EAQC2-4, EAQG1-2,4-9

Laboratory: SWOK Hrs. for Review: 14 hrs W.K.

Following are our findings:

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

Patricia J Scott

cc: Regional TPO

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

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

1.HOLDING TIME

No problems found for this qualification.

2.GC/MS TUNING PERFORMANCE

No problems found for this qualification.

3.CALIBRATION

DC-22: The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "VS". The "VS" flag for the non-detected of the following samples was changed to "UJ" by the reviewer.

2-Hexanone
EAQC2, EAQC3, EAQC3MS, EAQC3MSD, EAQC4, EAQG1, EAQG2, EAQG4, EAQG5, EAQG6, VBLK1, VBLK2, VHBLK1

DC-23: The following volatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Chloromethane
EAQC2, EAQC3, EAQC3MS, EAQC3MSD, EAQC4, EAQG1, EAQG2, EAQG4, EAQG5, EAQG6, VBLK1, VBLK2, VHBLK1

Acetone
EAQC3, EAQC3MS, EAQC3MSD, VBLK1

DC-100: The following semivolatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Hexachlorocyclopentadiene
EAQC2, EAQC3, EAQC3MS, EAQC3MSD, EAQC4, EAQG1, EAQG2, EAQG4, EAQG5, EAQG6, EAQG7, EAQG8, EAQG9, SBLK1

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

2,4-Dinitrophenol
EAQC2, EAQC3, EAQC3MS, EAQC3MSD, EAQC4, EAQG1, EAQG5, SBLK1

Pentachlorophenol
EAQC2, EAQC3, EAQC3MS, EAQC3MSD, EAQC4, EAQG1, EAQG5, SBLK1

4.METHOD BLANK

DC-31: The following volatile samples have analyte concentrations reported above the CRQL and less than or equal to ten times (10X) the associated method blank concentration. Hits are qualified "U" and non-detects are not flagged.

Methylene Chloride
EAQC3, EAQC3MS, EAQC3MSD, EAQG2, EAQG4, EAQG5, EAQG7, EAQG9

DC-124: The following semivolatile samples have no associated method blank. Hits are flagged "M" and non-detects are not flagged.

EAQC2

DC-204: The following semivolatie samples have analyte concentrations reported below the CRQL and less than or equal to ten times (10X) the associated method blank concentration. Reported sample concentrations have not been elevated to the CRQL. Hits are qualified "U" and non-detects are not flagged.

EAQC3
bis(2-Ethylhexyl)phthalate

EAQC3MS
bis(2-Ethylhexyl)phthalate

EAQC3MSD
bis(2-Ethylhexyl)phthalate

EAQC4
bis(2-Ethylhexyl)phthalate

EAQG1
bis(2-Ethylhexyl)phthalate

EAQG2
bis(2-Ethylhexyl)phthalate

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

EAQG4
bis(2-Ethylhexyl)phthalate

EAQG5
bis(2-Ethylhexyl)phthalate

EAQG6
bis(2-Ethylhexyl)phthalate

EAQG7
bis(2-Ethylhexyl)phthalate

EAQG8
bis(2-Ethylhexyl)phthalate

EAQG9
bis(2-Ethylhexyl)phthalate

5.SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

DC-173: The following pesticide samples have surrogate RT's outside the RT window established during the initial calibration. Professional judgement is recommended. Hits and non-detects are flagged "VS". The "VS" flag for the following samples were changed to "J" and "UJ" by the reviewer.

EAQC4, EAQG1, EAQG2, EAQG9

DC-174: The following pesticide samples have surrogate percent recoveries which exceed the upper limit of the criteria window. Hits are qualified "J" and non-detects are not flagged.

EAQC4, EAQG1, EAQG2, EAQG7, EAQG9

6.MATRIX SPIKE/SPIKE DUPLICATES

No problems found for this qualification.

7.FIELD BLANK AND FIELD DUPLICATE

NA

8.INTERNAL STANDARDS

DC-44: The following volatile samples have internal standard area counts outside expanded criteria. Hits are qualified "J" and non-detects are qualified "R".

EAQC3
4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane, Toluene, Chlorobenzene, Ethylbenzene, Styrene, Xylene (total)

EAQC3MS
4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane, Toluene, Chlorobenzene, Ethylbenzene, Styrene Xylene (total)

EAQC3MSD
4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane, Toluene, Chlorobenzene, Ethylbenzene, Styrene Xylene (total)

EAQG6
4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane, Toluene, Chlorobenzene, Ethylbenzene, Styrene Xylene (total)

EAQG6RE
Chloromethane, Bromomethane, Vinyl Chloride, Chloroethane Methylene Chloride, Acetone, Carbon Disulfide, 1,1-Dichloroethene, 1,1-Dichloroethane, 1,2-Dichloroethene (total), Chloroform, 1,2-Dichloroethane, 2-Butanone, 1,1,1-Trichloroethane, Carbon Tetrachloride, Bromodichloromethane, 1,2-Dichloropropane, cis-1,3-Dichloropropene, Trichloroethene, Dibromochloromethane, 1,1,2-Trichloroethane, Benzene, trans-1,3-Dichloropropene, Bromoform, 4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane, Toluene, Chlorobenzene, Ethylbenzene, Styrene, Xylene (total)

9.COMPOUND IDENTIFICATION

NA

10.COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

For the VOA, SVOA and Pest/PCB results of this section, if the compounds were the laboratory contaminants which were also detected in the associated blanks and the sample results are less than the associated blank results by 10X (for common laboratory contaminants) or 5X (for none common laboratory contaminants). The flag for these results will remain as non-detected "U" as mention in section 4 (method blank).

DC-45: The following volatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

EAQC3
Carbon Disulfide, Toluene

EAQC3MS
Carbon Disulfide

EAQG2
Toluene

EAQG7
Acetone

VBLK2
Methylene Chloride

VBLK3
Methylene Chloride

DC-66: The quantitation limits of the following volatile samples could not be calculated, due to missing information. Hits are flagged "M" and non-detects are not flagged.

VHBLK1

DC-110: The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

EAQC3
bis(2-Ethylhexyl)phthalate

EAQC3MS
Di-n-butylphthalate, bis(2-Ethylhexyl)phthalate

EAQC3MSD
Fluoranthene, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)-phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

EAQC4
Naphthalene, 2-Methylnaphthalene, Phenanthrene, Di-n-butylphthalate, bis(2-Ethylhexyl)phthalate

EAQG1
Naphthalene, 2-Methylnaphthalene, Dibenzofuran, Phenanthrene Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene Chrysene, bis(2-Ethylhexyl)phthalate

EAQG2
Di-n-butylphthalate, bis(2-Ethylhexyl)phthalate

EAQG4
Di-n-butylphthalate, bis(2-Ethylhexyl)phthalate

EAQG5
Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

EAQG6
Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EAQG7
Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

EAQG8
Pyrene, Chrysene, bis(2-Ethylhexyl)phthalate,

Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene

EAQG9
Di-n-butylphthalate, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

SBLK1
bis(2-Ethylhexyl)phthalate

DC-111: The quantitation limits of the following semivolatile samples could not be calculated due to missing information. Hits are flagged "M" and non-detects are not flagged.

EAQC2

11. SYSTEM PERFORMANCE

DC-215: The following pesticide samples are associated with a continuing PEM in which the RPD between the nominal and calculated amounts for a PEM compound is outside criteria. Hits are qualified "J" and non-detects are qualified "UJ".

EAQC2
alpha-BHC, beta-BHC

EAQC3
alpha-BHC, beta-BHC

EAQC3MS
alpha-BHC, beta-BHC

EAQC3MSD
alpha-BHC, beta-BHC

EAQC4
alpha-BHC, beta-BHC

EAQG1
alpha-BHC, beta-BHC

EAQG2
alpha-BHC, beta-BHC

EAQG4
alpha-BHC, beta-BHC

EAQG5
alpha-BHC, beta-BHC

EAQG6
alpha-BHC, beta-BHC

EAQG7
alpha-BHC, beta-BHC

EAQG9
alpha-BHC, beta-BHC

PBLKSW
alpha-BHC

12. ADDITIONAL INFORMATION

None

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

13.CADRE SUMMARY OF THE RESULTS

Below is the final flag for the sample results of this data package:

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59			
CRITERIA FILE: REG5095			
DATA			
	Original	X	Qualified
QUALIFICATIONS PERFORMED			
X	Quantitation Limit		CRDL Standards
	Percent Moisture		ICS
X	Holding Time		LCS
X	Calibrations		Duplicates
X	Matrix Spikes		Furnace AA QC
X	IPC		ICP Serial Dilutions
X	Internal Standards		Sample Results Verification
X	SMC/Surrogates	X	Laboratory Blanks
X	System Performance		Field QC
	Sample Cleanup		
PRINT NON-DETECTS			
X	Yes		No
PRINT REJECTED RESULTS			
X	Yes		No

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890 Site:
SDG No: EAQC2 Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQC2		EAQC3		EAQC3MS		EAQC3MSD		EAQC4	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Matrix Spike		Matrix Spike Dup		Routine Sample	
MATRIX/ANALYSIS:	Soil/Low		Soil/Low		Soil/Low		Soil/Low		Soil/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	32		34		34		34		42	
VOA										
Chloromethane	15	UJ	15	UJ	15	UJ	15	UJ	17	UJ
Bromomethane	15	U	15	U	15	U	15	U	17	U
Vinyl Chloride	15	U	15	U	15	U	15	U	17	U
Chloroethane	15	U	15	U	15	U	15	U	17	U
Methylene Chloride	34		23	U	24	U	18	U	37	
Acetone	25		220	J	220	J	120	J	27	
Carbon Disulfide	15	U	2	J	3	J	15	U	17	U
1,1-Dichloroethene	15	U	15	U	68		69		17	U
1,1-Dichloroethane	15	U	15	U	15	U	15	U	17	U
1,2-Dichloroethene (total)	15	U	15	U	15	U	15	U	17	U
Chloroform	15	U	15	U	15	U	15	U	17	U
1,2-Dichloroethane	15	U	15	U	15	U	15	U	17	U
2-Butanone	15	U	86		85		51		17	U
1,1,1-Trichloroethane	15	U	15	U	15	U	15	U	17	U
Carbon Tetrachloride	15	U	15	U	15	U	15	U	17	U
Bromodichloromethane	15	U	15	U	15	U	15	U	17	U
1,2-Dichloropropane	15	U	15	U	15	U	15	U	17	U
cis-1,3-Dichloropropene	15	U	15	U	15	U	15	U	17	U
Trichloroethene	15	U	15	U	58		67		17	U
Dibromochloromethane	15	U	15	U	15	U	15	U	17	U
1,1,2-Trichloroethane	15	U	15	U	15	U	15	U	17	U
Benzene	15	U	15	U	74		78		17	U
trans-1,3-Dichloropropene	15	U	15	U	15	U	15	U	17	U
Bromoform	15	U	15	U	15	U	15	U	17	U
4-Methyl-2-Pentanone	15	U	15	R	15	R	15	R	17	U
2-Hexanone	15	UJ	15	R	15	R	15	R	17	UJ
Tetrachloroethene	15	U	15	R	15	R	15	R	17	U
1,1,2,2-Tetrachloroethane	15	U	15	R	15	R	15	R	17	U
Toluene	15	U	3	J	87	J	85	J	17	U
Chlorobenzene	15	U	15	R	67	J	73	J	17	U
Ethylbenzene	15	U	15	R	15	R	15	R	17	U
Styrene	15	U	15	R	15	R	15	R	17	U
Xylene (total)	15	U	15	R	15	R	15	R	17	U

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890
SDG No: EAQC2
Site:
Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQG1		EAQG2		EAQG4		EAQG5		EAQG6	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Soil/Low		Soil/Low		Soil/Low		Soil/Low		Soil/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	50		35		42		44		65	
VOA										
Chloromethane	20	UJ	15	UJ	17	UJ	18	UJ	28	UJ
Bromomethane	20	U	15	U	17	U	18	U	28	U
Vinyl Chloride	20	U	15	U	17	U	18	U	28	U
Chloroethane	20	U	15	U	17	U	18	U	28	U
Methylene Chloride	51		20	U	25	U	31	U	79	
Acetone	310		88		17	U	18	U	52	
Carbon Disulfide	20	U	15	U	17	U	18	U	28	U
1,1-Dichloroethene	20	U	15	U	17	U	18	U	28	U
1,1-Dichloroethane	20	U	15	U	17	U	18	U	28	U
1,2-Dichloroethene (total)	20	U	15	U	17	U	18	U	28	U
Chloroform	20	U	15	U	17	U	18	U	28	U
2-Dichloroethane	20	U	15	U	17	U	18	U	28	U
2-Butanone	83		29		17	U	18	U	28	U
1,1,1-Trichloroethane	20	U	15	U	17	U	18	U	28	U
Carbon Tetrachloride	20	U	15	U	17	U	18	U	28	U
Bromodichloromethane	20	U	15	U	17	U	18	U	28	U
1,2-Dichloropropane	20	U	15	U	17	U	18	U	28	U
cis-1,3-Dichloropropene	20	U	15	U	17	U	18	U	28	U
Trichloroethene	20	U	15	U	17	U	18	U	28	U
Dibromochloromethane	20	U	15	U	17	U	18	U	28	U
1,1,2-Trichloroethane	20	U	15	U	17	U	18	U	28	U
Benzene	20	U	15	U	17	U	18	U	28	U
trans-1,3-Dichloropropene	20	U	15	U	17	U	18	U	28	U
Bromoform	20	U	15	U	17	U	18	U	28	U
4-Methyl-2-Pentanone	20	U	15	U	17	U	18	U	28	R
2-Hexanone	20	UJ	15	UJ	17	UJ	18	UJ	28	R
Tetrachloroethene	20	U	15	U	17	U	18	U	28	R
1,1,2,2-Tetrachloroethane	20	U	15	U	17	U	18	U	28	R
Toluene	20	U	5	J	17	U	18	U	28	R
Chlorobenzene	20	U	15	U	17	U	18	U	28	R
Ethylbenzene	20	U	15	U	17	U	18	U	28	R
Styrene	20	U	15	U	17	U	18	U	28	R
Xylene (total)	20	U	15	U	17	U	18	U	28	R

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin Lockheed/ESAT
Date: September 14th, 1995

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890 Site:
SDG No: EAQC2 Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQG6RE		EAQG7		EAQG8		EAQG9		VBLK1	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Method Blank	
MATRIX/ANALYSIS:	Soil/Low		Soil/Low		Soil/Low		Soil/Low		Soil/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	65		66		26		53		0	
VOA										
Chloromethane	28	R	29	U	14	U	21	U	10	UJ
Bromomethane	28	R	29	U	14	U	21	U	10	U
Vinyl Chloride	28	R	29	U	14	U	21	U	10	U
Chloroethane	28	R	29	U	14	U	21	U	10	U
Methylene Chloride	74	J	58	U	40		32	U	17	U
Acetone	200	J	27	J	110		100		10	UJ
Carbon Disulfide	28	R	29	U	14	U	21	U	10	U
1,1-Dichloroethene	28	R	29	U	14	U	21	U	10	U
1,1-Dichloroethane	28	R	29	U	14	U	21	U	10	U
1,2-Dichloroethene (total)	28	R	29	U	14	U	21	U	10	U
Chloroform	28	R	29	U	14	U	21	U	10	U
1,2-Dichloroethane	28	R	29	U	14	U	21	U	10	U
2-Butanone	28	R	29	U	14	U	21	U	10	U
1,1,1-Trichloroethane	28	R	29	U	14	U	21	U	10	U
Carbon Tetrachloride	28	R	29	U	14	U	21	U	10	U
Bromodichloromethane	28	R	29	U	14	U	21	U	10	U
1,2-Dichloropropane	28	R	29	U	14	U	21	U	10	U
cis-1,3-Dichloropropene	28	R	29	U	14	U	21	U	10	U
Trichloroethene	28	R	29	U	14	U	21	U	10	U
Dibromochloromethane	28	R	29	U	14	U	21	U	10	U
1,1,2-Trichloroethane	28	R	29	U	14	U	21	U	10	U
Benzene	28	R	29	U	14	U	21	U	10	U
trans-1,3-Dichloropropene	28	R	29	U	14	U	21	U	10	U
Bromoform	28	R	29	U	14	U	21	U	10	U
4-Methyl-2-Pentanone	28	R	29	U	14	U	21	U	10	U
2-Hexanone	28	R	29	U	14	U	21	U	10	UJ
Tetrachloroethene	28	R	29	U	14	U	21	U	10	U
1,1,2,2-Tetrachloroethane	28	R	29	U	14	U	21	U	10	U
Toluene	28	R	29	U	14	U	21	U	10	U
Chlorobenzene	28	R	29	U	14	U	21	U	10	U
Ethylbenzene	28	R	29	U	14	U	21	U	10	U
Styrene	28	R	29	U	14	U	21	U	10	U
Xylene (total)	28	R	29	U	14	U	21	U	10	U

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890
SDG No: EAQC2

Site:
Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	VBLK2		VBLK3		VHBLK1			
REGIONAL SAMPLE NUMBER:								
SAMPLE LOCATION:								
SAMPLE TYPE:	Method Blank		Method Blank		Storage Blank			
MATRIX/ANALYSIS:	Soil/Low		Soil/Low		Soil/Low			
DILUTION FACTOR:	1.0		1.0		1.0			
PERCENT MOISTURE:	0		0					
VOA								
Chloromethane	10	UJ	10	U	10	U		
Bromomethane	10	U	10	U	10	U		
Vinyl Chloride	10	U	10	U	10	U		
Chloroethane	10	U	10	U	10	U		
Methylene Chloride	2	J	2	J	8	J		
Acetone	10	U	10	U	10	U		
Carbon Disulfide	10	U	10	U	10	U		
1,1-Dichloroethene	10	U	10	U	10	U		
1,1-Dichloroethane	10	U	10	U	10	U		
1,2-Dichloroethene (total)	10	U	10	U	10	U		
Chloroform	10	U	10	U	10	U		
1,2-Dichloroethane	10	U	10	U	10	U		
2-Butanone	10	U	10	U	10	U		
1,1,1-Trichloroethane	10	U	10	U	10	U		
Carbon Tetrachloride	10	U	10	U	10	U		
Bromodichloromethane	10	U	10	U	10	U		
1,2-Dichloropropane	10	U	10	U	10	U		
cis-1,3-Dichloropropene	10	U	10	U	10	U		
Trichloroethene	10	U	10	U	10	U		
Dibromochloromethane	10	U	10	U	10	U		
1,1,2-Trichloroethane	10	U	10	U	10	U		
Benzene	10	U	10	U	10	U		
trans-1,3-Dichloropropene	10	U	10	U	10	U		
Bromoform	10	U	10	U	10	U		
4-Methyl-2-Pentanone	10	U	10	U	10	U		
2-Hexanone	10	UJ	10	UJ	10	UJ		
Tetrachloroethene	10	U	10	U	10	U		
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U		
Toluene	10	U	10	U	10	U		
Chlorobenzene	10	U	10	U	10	U		
Ethylbenzene	10	U	10	U	10	U		
Styrene	10	U	10	U	10	U		
Xylene (total)	10	U	10	U	10	U		

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin Lockheed/ESAT
Date: September 14th, 1995

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890 Site:
SDG No: EAQC2 Laboratory: SOUTHW LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQC2		EAQC3		EAQC3MS		EAQC SD		EAQC4	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Matrix Spike		Matrix Spike Dup		Routine Sample	
MATRIX/ANALYSIS:	Soil/		Soil/Low		Soil/Low		Soil/Low		Soil/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	32		34		34		34		42	
BNA										
Phenol	480	U	500	U	2000		2200		570	U
bis(2-Chloroethyl) ether	480	U	500	U	500	U	500	U	570	U
2-Chlorophenol	480	U	500	U	2100		2200		570	U
1,3-Dichlorobenzene	480	U	500	U	500	U	500	U	570	U
1,4-Dichlorobenzene	480	U	500	U	1200		1200		570	U
1,2-Dichlorobenzene	480	U	500	U	500	U	500	U	570	U
2-Methylphenol	480	U	500	U	500	U	500	U	570	U
2,2'-oxybis(1-Chloropropane	480	U	500	U	500	U	500	U	570	U
4-Methylphenol	480	U	500	U	500	U	500	U	570	U
N-Nitroso-di-n-propylamine	480	U	500	U	1400		1400		570	U
Hexachloroethane	480	U	500	U	500	U	500	U	570	U
Nitrobenzene	480	U	500	U	500	U	500	U	570	U
Isophorone	480	U	500	U	500	U	500	U	570	U
2-Nitrophenol	480	U	500	U	500	U	500	U	570	U
2,4-Dimethylphenol	480	U	500	U	500	U	500	U	570	U
bis(2-Chloroethoxy) methane	480	U	500	U	500	U	500	U	570	U
2,4-Dichlorophenol	480	U	500	U	500	U	500	U	570	U
1,2,4-Trichlorobenzene	480	U	500	U	1500		1500		570	U
Naphthalene	480	U	500	U	500	U	500	U	32	J
4-Chloroaniline	480	U	500	U	500	U	500	U	570	U
Hexachlorobutadiene	480	U	500	U	500	U	500	U	570	U
4-Chloro-3-methylphenol	480	U	500	U	2900		3000		570	U
2-Methylnaphthalene	480	U	500	U	500	U	500	U	31	J
Hexachlorocyclopentadiene	480	UJ	500	UJ	500	UJ	500	UJ	570	UJ
2,4,6-Trichlorophenol	480	U	500	U	500	U	500	U	570	U
2,4,5-Trichlorophenol	1200	U	1200	U	1200	U	1200	U	1400	U
2-Chloronaphthalene	480	U	500	U	500	U	500	U	570	U
2-Nitroaniline	1200	U	1200	U	1200	U	1200	U	1400	U
Dimethylphthalate	480	U	500	U	500	U	500	U	570	U
Acenaphthylene	480	U	500	U	500	U	500	U	570	U
2,6-Dinitrotoluene	480	U	500	U	500	U	500	U	570	U
3-Nitroaniline	1200	U	1200	U	1200	U	1200	U	1400	U
Acenaphthene	480	U	500	U	1800		1900		570	U
2,4-Dinitrophenol	1200	UJ	1200	UJ	1200	UJ	1200	UJ	1400	UJ
4-Nitrophenol	1200	U	1200	U	3400		4000		1400	U
Dibenzofuran	480	U	500	U	500	U	500	U	570	U
2,4-Dinitrotoluene	480	U	500	U	1900		2100		570	U

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890
SDG No: EAQC2

Site:
Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQC2		EAQC3		EAQC3MS		EAQC3MSD		EAQC4	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Matrix Spike		Matrix Spike Dup		Routine Sample	
MATRIX/ANALYSIS:	Soil/		Soil/Low		Soil/Low		Soil/Low		Soil/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	32		34		34		34		42	
BNA										
Diethylphthalate	480	U	500	U	500	U	500	U	570	U
4-Chlorophenyl-phenyl ether	480	U	500	U	500	U	500	U	570	U
Fluorene	480	U	500	U	500	U	500	U	570	U
4-Nitroaniline	1200	U	1200	U	1200	U	1200	U	1400	U
4,6-Dinitro-2-methylphenol	1200	U	1200	U	1200	U	1200	U	1400	U
N-nitrosodiphenylamine	480	U	500	U	500	U	500	U	570	U
4-Bromophenyl-phenylether	480	U	500	U	500	U	500	U	570	U
Hexachlorobenzene	480	U	500	U	500	U	500	U	570	U
Pentachlorophenol	1200	UJ	1200	UJ	3100	J	3500	J	1400	UJ
Phenanthrene	480	U	500	U	500	U	500	U	30	J
Anthracene	480	U	500	U	500	U	500	U	570	U
rbazole	480	U	500	U	500	U	500	U	570	U
-n-butylphthalate	480	U	500	U	28	J	500	U	59	J
Fluoranthene	480	U	500	U	500	U	44	J	570	U
Pyrene	480	U	500	U	1700		2100		570	U
Butylbenzylphthalate	480	U	500	U	500	U	500	U	570	U
3,3'-Dichlorobenzidine	480	U	500	U	500	U	500	U	570	U
Benzo(a)anthracene	480	U	500	U	500	U	30	J	570	U
Chrysene	480	U	500	U	500	U	34	J	570	U
bis(2-Ethylhexyl)phthalate	210	U	360	U	180	U	210	U	310	U
Di-n-octylphthalate	480	U	500	U	500	U	500	U	570	U
Benzo(b)fluoranthene	480	U	500	U	500	U	45	J	570	U
Benzo(k)fluoranthene	480	U	500	U	500	U	36	J	570	U
Benzo(a)pyrene	480	U	500	U	500	U	53	J	570	U
Indeno(1,2,3-cd)pyrene	480	U	500	U	500	U	44	J	570	U
Dibenz(a,h)anthracene	480	U	500	U	500	U	500	U	570	U
Benzo(g,h,i)perylene	480	U	500	U	500	U	46	J	570	U

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890 Site:
SDG No: EAQC2 Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQG1		EAQG2		EAQG4		EAQG5		EAQG6	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Soil/Low		Soil/Low		Soil/Low		Soil/Low		Soil/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	50		35		42		44		65	
BNA										
Phenol	660	U	510	U	570	U	590	U	940	U
bis(2-Chloroethyl) ether	660	U	510	U	570	U	590	U	940	U
2-Chlorophenol	660	U	510	U	570	U	590	U	940	U
1,3-Dichlorobenzene	660	U	510	U	570	U	590	U	940	U
1,4-Dichlorobenzene	660	U	510	U	570	U	590	U	940	U
1,2-Dichlorobenzene	660	U	510	U	570	U	590	U	940	U
2-Methylphenol	660	U	510	U	570	U	590	U	940	U
2,2'-oxybis(1-Chloropropane	660	U	510	U	570	U	590	U	940	U
4-Methylphenol	660	U	510	U	570	U	590	U	940	U
N-Nitroso-di-n-propylamine	660	U	510	U	570	U	590	U	940	U
Hexachloroethane	660	U	510	U	570	U	590	U	940	U
Nitrobenzene	660	U	510	U	570	U	590	U	940	U
Isophorone	660	U	510	U	570	U	590	U	940	U
2-Nitrophenol	660	U	510	U	570	U	590	U	940	U
2,4-Dimethylphenol	660	U	510	U	570	U	590	U	940	U
bis(2-Chloroethoxy) methane	660	U	510	U	570	U	590	U	940	U
2,4-Dichlorophenol	660	U	510	U	570	U	590	U	940	U
1,2,4-Trichlorobenzene	660	U	510	U	570	U	590	U	940	U
Naphthalene	52	J	510	U	570	U	590	U	940	U
4-Chloroaniline	660	U	510	U	570	U	590	U	940	U
Hexachlorobutadiene	660	U	510	U	570	U	590	U	940	U
4-Chloro-3-methylphenol	660	U	510	U	570	U	590	U	940	U
2-Methylnaphthalene	140	J	510	U	570	U	590	U	940	U
Hexachlorocyclopentadiene	660	UJ	510	UJ	570	UJ	590	UJ	940	UJ
2,4,6-Trichlorophenol	660	U	510	U	570	U	590	U	940	U
2,4,5-Trichlorophenol	1600	U	1200	U	1400	U	1400	U	2300	U
2-Chloronaphthalene	660	U	510	U	570	U	590	U	940	U
2-Nitroaniline	1600	U	1200	U	1400	U	1400	U	2300	U
Dimethylphthalate	660	U	510	U	570	U	590	U	940	U
Acenaphthylene	660	U	510	U	570	U	590	U	940	U
2,6-Dinitrotoluene	660	U	510	U	570	U	590	U	940	U
3-Nitroaniline	1600	U	1200	U	1400	U	1400	U	2300	U
Acenaphthene	660	U	510	U	570	U	590	U	940	U
2,4-Dinitrophenol	1600	UJ	1200	U	1400	U	1400	UJ	2300	U
4-Nitrophenol	1600	U	1200	U	1400	U	1400	U	2300	U
Dibenzofuran	72	J	510	U	570	U	590	U	940	U
2,4-Dinitrotoluene	660	U	510	U	570	U	590	U	940	U

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin Lockheed/ESAT
Date: September 14th, 1995

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890
SDG No: EAQC2

Site:
Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQG1		EAQG2		EAQG4		EAQG5		EAQG6	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Soil/Low		Soil/Low		Soil/Low		Soil/Low		Soil/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	50		35		42		44		65	
BNA										
Diethylphthalate	660	U	510	U	570	U	590	U	940	U
4-Chlorophenyl-phenyl ether	660	U	510	U	570	U	590	U	940	U
Fluorene	660	U	510	U	570	U	590	U	940	U
4-Nitroaniline	1600	U	1200	U	1400	U	1400	U	2300	U
4,6-Dinitro-2-methylphenol	1600	U	1200	U	1400	U	1400	U	2300	U
N-nitrosodiphenylamine	660	U	510	U	570	U	590	U	940	U
4-Bromophenyl-phenylether	660	U	510	U	570	U	590	U	940	U
Hexachlorobenzene	660	U	510	U	570	U	590	U	940	U
Pentachlorophenol	1600	UJ	1200	U	1400	U	1400	UJ	2300	U
Phenanthrene	320	J	510	U	570	U	590	U	81	J
Anthracene	660	U	510	U	570	U	590	U	940	U
rbazole	660	U	510	U	570	U	590	U	940	U
-n-butylphthalate	40	J	27	J	44	J	590	U	940	U
Fluoranthene	80	J	510	U	570	U	43	J	180	J
Pyrene	84	J	510	U	570	U	44	J	230	J
Butylbenzylphthalate	660	U	510	U	570	U	590	U	940	U
3,3'-Dichlorobenzidine	660	U	510	U	570	U	590	U	940	U
Benzo(a)anthracene	45	J	510	U	570	U	41	J	280	J
Chrysene	50	J	510	U	570	U	45	J	320	J
bis(2-Ethylhexyl)phthalate	350	U	240	U	260	U	330	U	460	U
Di-n-octylphthalate	660	U	510	U	570	U	590	U	940	U
Benzo(b)fluoranthene	660	U	510	U	570	U	56	J	490	J
Benzo(k)fluoranthene	660	U	510	U	570	U	49	J	390	J
Benzo(a)pyrene	660	U	510	U	570	U	64	J	510	J
Indeno(1,2,3-cd)pyrene	660	U	510	U	570	U	67	J	490	J
Dibenz(a,h)anthracene	660	U	510	U	570	U	590	U	120	J
Benzo(g,h,i)perylene	660	U	510	U	570	U	63	J	540	J

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890
SDG No: EAQC2

Site:
Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQG7		EAQG8		EAQG9		SBLK1	
REGIONAL SAMPLE NUMBER:								
SAMPLE LOCATION:								
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Method Blank	
MATRIX/ANALYSIS:	Soil/Low		Soil/Low		Soil/Low		Soil/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	66		26		53		0	
BNA								
Phenol	970	U	440	U	700	U	330	U
bis(2-Chloroethyl) ether	970	U	440	U	700	U	330	U
2-Chlorophenol	970	U	440	U	700	U	330	U
1,3-Dichlorobenzene	970	U	440	U	700	U	330	U
1,4-Dichlorobenzene	970	U	440	U	700	U	330	U
1,2-Dichlorobenzene	970	U	440	U	700	U	330	U
2-Methylphenol	970	U	440	U	700	U	330	U
2,2'-oxybis(1-Chloropropane	970	U	440	U	700	U	330	U
4-Methylphenol	970	U	440	U	700	U	330	U
N-Nitroso-di-n-propylamine	970	U	440	U	700	U	330	U
Hexachloroethane	970	U	440	U	700	U	330	U
Nitrobenzene	970	U	440	U	700	U	330	U
Isophorone	970	U	440	U	700	U	330	U
2-Nitrophenol	970	U	440	U	700	U	330	U
2,4-Dimethylphenol	970	U	440	U	700	U	330	U
bis(2-Chloroethoxy) methane	970	U	440	U	700	U	330	U
2,4-Dichlorophenol	970	U	440	U	700	U	330	U
1,2,4-Trichlorobenzene	970	U	440	U	700	U	330	U
Naphthalene	970	U	440	U	700	U	330	U
4-Chloroaniline	970	U	440	U	700	U	330	U
Hexachlorobutadiene	970	U	440	U	700	U	330	U
4-Chloro-3-methylphenol	970	U	440	U	700	U	330	U
2-Methylnaphthalene	970	U	440	U	700	U	330	U
Hexachlorocyclopentadiene	970	UJ	440	UJ	700	UJ	330	UJ
2,4,6-Trichlorophenol	970	U	440	U	700	U	330	U
2,4,5-Trichlorophenol	2400	U	1100	U	1700	U	800	U
2-Chloronaphthalene	970	U	440	U	700	U	330	U
2-Nitroaniline	2400	U	1100	U	1700	U	800	U
Dimethylphthalate	970	U	440	U	700	U	330	U
Acenaphthylene	970	U	440	U	700	U	330	U
2,6-Dinitrotoluene	970	U	440	U	700	U	330	U
3-Nitroaniline	2400	U	1100	U	1700	U	800	U
Acenaphthene	970	U	440	U	700	U	330	U
2,4-Dinitrophenol	2400	U	1100	U	1700	U	800	UJ
4-Nitrophenol	2400	U	1100	U	1700	U	800	U
Dibenzofuran	970	U	440	U	700	U	330	U
2,4-Dinitrotoluene	970	U	440	U	700	U	330	U

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890
SDG No: EAQC2

Site:
Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQG7		EAQG8		EAQG9		SBLK1	
REGIONAL SAMPLE NUMBER:								
SAMPLE LOCATION:								
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Method Blank	
MATRIX/ANALYSIS:	Soil/Low		Soil/Low		Soil/Low		Soil/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	66		26		53		0	
BNA								
Diethylphthalate	970	U	440	U	700	U	330	U
4-Chlorophenyl-phenyl ether	970	U	440	U	700	U	330	U
Fluorene	970	U	440	U	700	U	330	U
4-Nitroaniline	2400	U	1100	U	1700	U	800	U
4,6-Dinitro-2-methylphenol	2400	U	1100	U	1700	U	800	U
N-nitrosodiphenylamine	970	U	440	U	700	U	330	U
4-Bromophenyl-phenylether	970	U	440	U	700	U	330	U
Hexachlorobenzene	970	U	440	U	700	U	330	U
Pentachlorophenol	2400	U	1100	U	1700	U	800	UJ
Phenanthrene	970	U	440	U	700	U	330	U
Anthracene	970	U	440	U	700	U	330	U
Carbazole	970	U	440	U	700	U	330	U
Di-n-butylphthalate	970	U	440	U	44	J	330	U
Fluoranthene	120	J	440	U	700	U	330	U
Pyrene	110	J	23	J	700	U	330	U
Butylbenzylphthalate	970	U	440	U	700	U	330	U
3,3'-Dichlorobenzidine	970	U	440	U	700	U	330	U
Benzo(a)anthracene	86	J	440	U	700	U	330	U
Chrysene	110	J	23	J	36	J	330	U
bis(2-Ethylhexyl)phthalate	410	U	390	U	410	U	60	J
Di-n-octylphthalate	970	U	440	U	700	U	330	U
Benzo(b)fluoranthene	110	J	440	U	44	J	330	U
Benzo(k)fluoranthene	110	J	23	J	36	J	330	U
Benzo(a)pyrene	140	J	26	J	44	J	330	U
Indeno(1,2,3-cd)pyrene	110	J	440	U	40	J	330	U
Dibenz(a,h)anthracene	970	U	440	U	700	U	330	U
Benzo(g,h,i)perylene	120	J	24	J	47	J	330	U

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin Lockheed/ESAT
Date: September 14th, 1995

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890
SDG No: EAQC2

Site:
Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQC2		EAQC3		EAQC3MS		EAQC3MSD		EAQC4	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Matrix Spike		Matrix Spike Dup		Routine Sample	
MATRIX/ANALYSIS:	Soil/		Soil/		Soil/		Soil/		Soil/	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	32		34		34		34		42	
PES										
alpha-BHC	2.5	UJ	2.6	UJ	2.6	UJ	2.6	UJ	2.9	UJ
beta-BHC	2.5	UJ	2.6	UJ	2.6	UJ	2.6	UJ	2.9	UJ
delta-BHC	2.5	U	2.6	U	2.6	U	2.6	U	2.9	UJ
gamma-BHC (Lindane)	2.5	U	2.6	U	19		21		2.9	UJ
Heptachlor	2.5	U	2.6	U	23		25		2.9	UJ
Aldrin	2.5	U	2.6	U	20		21		2.9	UJ
Heptachlor epoxide	2.5	U	2.6	U	2.6	U	2.6	U	2.9	UJ
Endosulfan I	2.5	U	2.6	U	2.6	U	2.6	U	2.9	UJ
Dieldrin	4.8	U	5.0	U	42		47		5.7	UJ
4,4'-DDE	4.8	U	5.0	U	5.0	U	5.0	U	5.7	UJ
Endrin	4.8	U	5.0	U	42		47		8.5	UJ
Endosulfan II	4.8	U	5.0	U	5.0	U	5.0	U	5.7	UJ
4,4'-DDD	4.8	U	5.0	U	5.0	U	5.0	U	5.7	UJ
Endosulfan sulfate	4.8	U	5.0	U	5.0	U	5.0	U	5.7	UJ
4,4'-DDT	4.8	U	5.0	U	44		50		5.7	UJ
Methoxychlor	25	U	26	U	26	U	26	U	29	UJ
Endrin ketone	4.8	U	5.0	U	5.0	U	5.0	U	5.7	UJ
Endrin aldehyde	4.8	U	5.0	U	5.0	U	5.0	U	8.6	UJ
alpha-Chlordane	2.5	U	2.6	U	2.6	U	2.6	U	2.9	UJ
gamma-Chlordane	2.5	U	2.6	U	2.6	U	2.6	U	2.9	UJ
Toxaphene	250	U	260	U	260	U	260	U	290	UJ
Aroclor-1016	48	U	50	U	50	U	50	U	57	UJ
Aroclor-1221	98	U	100	U	100	U	100	U	120	UJ
Aroclor-1232	48	U	50	U	50	U	50	U	57	UJ
Aroclor-1242	48	U	50	U	50	U	50	U	57	UJ
Aroclor-1248	48	U	50	U	50	U	50	U	57	UJ
Aroclor-1254	48	U	50	U	50	U	50	U	57	UJ
Aroclor-1260	48	U	50	U	50	U	50	U	57	UJ

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890
SDG No: EAQC2

Site:
Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQG1		EAQG2		EAQG4		EAQG5		EAQG6	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Soil/		Soil/		Soil/		Soil/		Soil/	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	50		35		42		44		65	
PES										
alpha-BHC	3.4	UJ	2.6	UJ	2.9	UJ	3.0	UJ	4.9	UJ
beta-BHC	3.4	UJ	2.6	UJ	2.9	UJ	3.0	UJ	4.9	UJ
delta-BHC	3.4	UJ	2.6	UJ	2.9	U	3.0	U	4.9	U
gamma-BHC (Lindane)	3.4	UJ	2.6	UJ	2.9	U	3.0	U	4.9	U
Heptachlor	3.4	UJ	2.6	UJ	2.9	U	3.4		4.9	U
Aldrin	3.4	UJ	2.6	UJ	2.9	U	3.0	U	4.9	U
Heptachlor epoxide	3.4	UJ	2.6	UJ	2.9	U	3.0	U	4.9	U
Endosulfan I	3.4	UJ	2.6	UJ	2.9	U	3.0	U	4.9	U
Dieldrin	6.6	UJ	5.1	UJ	5.7	U	5.9	U	9.4	U
4,4'-DDE	6.6	UJ	5.1	UJ	5.7	U	5.9	U	9.4	U
Endrin	6.6	UJ	5.1	UJ	5.7	U	5.9	U	9.4	U
Endosulfan II	6.6	UJ	5.1	UJ	5.7	U	5.9	U	9.4	U
4,4'-DDD	6.6	UJ	5.1	UJ	5.7	U	5.9	U	9.4	U
Endosulfan sulfate	6.6	UJ	5.1	UJ	5.7	U	5.9	U	9.4	U
4,4'-DDT	6.6	UJ	5.1	UJ	5.7	U	5.9	U	9.4	U
Methoxychlor	34	UJ	26	UJ	29	U	30	U	48	U
Endrin ketone	6.6	UJ	5.1	UJ	5.7	U	5.9	U	9.4	U
Endrin aldehyde	13	UJ	6.7	UJ	5.7	U	12		9.4	U
alpha-Chlordane	3.4	UJ	2.6	UJ	2.9	U	3.0	U	4.9	U
gamma-Chlordane	3.4	UJ	2.6	UJ	2.9	U	3.0	U	4.9	U
Toxaphene	340	UJ	260	UJ	290	U	300	U	480	U
Aroclor-1016	66	UJ	51	UJ	57	U	59	U	94	U
Aroclor-1221	130	UJ	100	UJ	120	U	120	U	190	U
Aroclor-1232	66	UJ	51	UJ	57	U	59	U	94	U
Aroclor-1242	66	UJ	51	UJ	57	U	59	U	94	U
Aroclor-1248	66	UJ	51	UJ	57	U	59	U	94	U
Aroclor-1254	66	UJ	51	UJ	57	U	59	U	94	U
Aroclor-1260	66	UJ	51	UJ	57	U	59	U	94	U

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Reviewed by: Steffanie N. Tobin Lockheed/ESAT
Date: September 14th, 1995

LABORATORY: SWL-TULSA
CASE: 23890
SDG: EAQC2
SITE: Green AP Refractories (IL)

TCL QUALIFIED SPREADSHEET

Case No: 23890
SDG No: EAQC2

Site:
Laboratory: SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER:	EAQG7		EAQG8		EAQG9		PBLKSW		PBLKSY	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Method Blank		Method Blank	
MATRIX/ANALYSIS:	Soil/		Soil/		Soil/		Soil/		Soil/	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	66		26		53		0		0	
PES										
alpha-BHC	5.0	UJ	2.3	U	3.6	UJ	1.7	UJ	1.7	U
beta-BHC	5.0	UJ	2.3	U	3.6	UJ	1.7	U	1.7	U
delta-BHC	5.0	U	2.3	U	3.6	UJ	1.7	U	1.7	U
gamma-BHC (Lindane)	5.0	U	2.3	U	3.6	UJ	1.7	U	1.7	U
Heptachlor	5.0	U	2.3	U	3.6	UJ	1.7	U	1.7	U
Aldrin	5.0	U	2.3	U	3.6	UJ	1.7	U	1.7	U
Heptachlor epoxide	5.0	U	2.3	U	3.6	UJ	1.7	U	1.7	U
Endosulfan I	5.0	U	2.3	U	3.6	UJ	1.7	U	1.7	U
Dieldrin	9.7	U	4.5	U	7.0	UJ	3.3	U	3.3	U
4,4'-DDE	9.7	U	4.5	U	7.0	UJ	3.3	U	3.3	U
Endrin	9.7	U	4.5	U	7.0	UJ	3.3	U	3.3	U
Endosulfan II	9.7	U	4.5	U	7.0	UJ	3.3	U	3.3	U
4,4'-DDD	9.7	U	4.5	U	7.0	UJ	3.3	U	3.3	U
Endosulfan sulfate	9.7	U	4.5	U	7.0	UJ	3.3	U	3.3	U
4,4'-DDT	9.7	U	4.5	U	7.0	UJ	3.3	U	3.3	U
Methoxychlor	50	U	23	U	36	UJ	17	U	17	U
Endrin ketone	9.7	U	4.5	U	7.0	UJ	3.3	U	3.3	U
Endrin aldehyde	9.7	U	4.5	U	12	UJ	3.3	U	3.3	U
alpha-Chlordane	5.0	U	2.3	U	3.6	UJ	1.7	U	1.7	U
gamma-Chlordane	5.0	U	2.3	U	3.6	UJ	1.7	U	1.7	U
Toxaphene	500	U	230	U	360	UJ	170	U	170	U
Aroclor-1016	97	U	44	U	70	UJ	33	U	33	U
Aroclor-1221	200	U	90	U	140	UJ	67	U	67	U
Aroclor-1232	97	U	44	U	70	UJ	33	U	33	U
Aroclor-1242	97	U	44	U	70	UJ	33	U	33	U
Aroclor-1248	97	U	44	U	70	UJ	33	U	33	U
Aroclor-1254	97	U	44	U	70	UJ	33	U	33	U
Aroclor-1260	97	U	44	U	70	UJ	33	U	33	U

FILE NAME: EAQC2 DATE: 09/13/95 TIME: 15:59 CADRE 2.2P

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__September 14th, 1995__

ORGANIC DATA QUALIFIER DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SDG NARRATIVE
August 24, 1995

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

CONTRACT NO.: 68-D5-0026

CASE NO.: 23890

SAMPLE NOS.: EAQC2, EAQC3, EAQC3MS, EAQC3MS, EAQC3MSD
EAQC4, EAQG1, EAQG2, EAQG4, EAQG5, EAQG6,EAQG7
EAQG8, EAQG9

SDG NO.: EAQC2

VOLATILE FRACTION

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

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

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

The following samples in this SDG (labeled with an "RE") are considered billable since reanalysis was performed to verify internal standard area recoveries: EAQG6

No major problems occurred during the analyses of these samples..

Blanks: VBLK1,VBLK2,VBLK3 and the holding blank VHBLK1 all had low-level methylene chloride contamination. VBLK1 VBLK2, and VBLK3 less tha CRQL, and VBLK1 less than 2.5x CRQL..

Surrogates: No problems.

Matrix Spikes:

Internal Standards: The following sample analyses had internal standard spike recoveries which did not fall within QC limits: EAQC3 and EAQG6. The matrix spike and the matrix spike

duplicate of EAQC3 and a reanalysis of EAQG6 duplicated each sample's original results, verfying a matrix effect. All runs have been submitted.

SEMIVOLATILE FRACTION

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

The following column is used for the semivolatile analysis: Restek XTI-5 (bonded 5% phenyl-95% dimethyl polysiloxane), 30m, 0.25mm ID, 0.25um film thickness (Restek #12223).

No major problems occurred during the analyses of these samples. Coolers arrived at 13 and 9 degrees celcius.

The following samples had alkanes reported and the reports are included at the end of this SDG narrative:EAQC2, EAQC3, EAQC4, EAQG1, EAQG2, EAQG4, EAQG5, EAQG6, EAQG7, EAQG8, EAQG9 and SBLK1..

Blanks: SBLK1, had low level phthalate contamination below CRQL.

Surrogates: No problems.

Matrix Spikes: No problems.

Internal Standards:No problems.

NOTE: All manual integrations in this data package for GC/MS Volatiles/Semivolatiles have been performed for one of the following reasons:

a. Data system missed peak during acquisition.
b. Data system improperly integrated peak.

If water samples are contained in this case, their pH data is included on the page accompanying this SDG narrative.

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

Harry M. Borg

Harry M. Borg
Organic Program Manager

August 24, 1995

SDG Narrative
August 21, 1995

Case: 23890
SDG: EAQC2
Contract: 68-D5-0026
Samples: EAQC2, EAQC3, EAQC4, EAQG1, EAQG2, EAQG3, EAQG4, EAQG5, EAQG6, EAQG7, EAQG8, EAQG9.
Fraction: Pesticide/PCB

SDG EAQC2 consisted of 11 water samples which were analyzed for pesticide/PCBs. All samples, blanks and spikes were extracted and analyzed according to EPA SOW OLM03.1. The samples were analyzed on J&W Scientific dual analytical columns (30m x 0.32mm ID, 0.25µm film thickness, DB-17 and DB-1701). The DB-17 phase consists of (50%-Phenyl) Methylpolysiloxane and the DB-1701 phase consists of (14%-Cyanopropylphenyl) Methylpolysiloxane. These columns were specifically designed for pesticide/PCB separation as required by the EPA's SOW. All applicable manufacturer's instructions were followed for the analysis of pesticides/PCBs. Manufacturer provided information concerning the performance characteristics of the column are kept on site.

Surrogate recoveries of all method blanks were within limits. All matrix spike recoveries were within advisory limits. Surrogate retention times reported on the Form 8Ds for samples EAQG1, EAQG2, EAQG4, EAQG8 and EAQG9 were outside of the established retention windows. This phenomenon was caused by an interfering peak that only interfered with TCX on the DB-1701 column. The interference was such that the TCX peak could not reliably be separated from the interference peak. Expanded chromatograms for TCX are included in the data package.

All samples in this SDG were sulfur cleaned using the copper technique as outlined in D-56/PEST, 10.1.8.3.3.2, in addition to GPC and Florisil cleanups.

The following tables list the total nanograms injected on column for each calibration standard based upon amount injected on column, 1µL or 2µL:

RESOLUTION CHECK

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
gamma-Chlordane	0.01	0.02
Endosulfan I	0.01	0.02
4,4'-DDE	0.02	0.04
Dieldrin	0.02	0.04
Endosulfan Sulfate	0.02	0.04
Endrin Ketone	0.02	0.04
Methoxychlor	0.1	0.2
Tetrachloro-m-xylene	0.02	0.04
Decachlorobiphenyl	0.02	0.04

PERFORMANCE EVALUATION

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
gamma-BHC	0.01	0.02
alpha-BHC	0.01	0.02
4,4'-DDT	0.1	.02
beta-BHC	0.01	0.02
Endrin	0.05	0.1
Methoxychlor	0.25	0.5
Tetrachloro-m-xylene	0.02	0.04
Decachlorobiphenyl	0.02	0.04

INDIVIDUAL STANDARD MIXTURE A -- LOW

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
alpha-BHC	0.005	0.01
Heptachlor	0.005	0.01
gamma-BHC	0.005	0.01
Endosulfan I	0.005	0.01
Dieldrin	0.01	0.02
Endrin	0.01	0.02
4,4'-DDD	0.01	0.02
4,4'-DDT	0.01	0.02
Methoxychlor	0.05	0.1
Tetrachloro-m-xylene	0.005	0.01
Decachlorobiphenyl	0.01	0.02

INDIVIDUAL STANDARD MIXTURE B -- LOW

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
beta-BHC	0.005	0.01
delta-BHC	0.005	0.01
Aldrin	0.005	0.01
Heptachlor epoxide	0.005	0.01
alpha-Chlordane	0.005	0.01
gamma-Chlordane	0.005	0.01
4,4'-DDE	0.01	0.02
Endosulfan sulfate	0.01	0.02
Endrin aldehyde	0.01	0.02
Endrin ketone	0.01	0.02
Endosulfan II	0.01	0.02
Tetrachloro-m-xylene	0.005	0.01
Decachlorobiphenyl	0.01	0.02

INDIVIDUAL STANDARD MIXTURE A -- MEDIUM

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
alpha-BHC	0.02	0.04
Heptachlor	0.02	0.04
gamma-BHC	0.02	0.04
Endosulfan I	0.02	0.04
Dieldrin	0.04	0.08
Endrin	0.04	0.08
4,4'-DDD	0.04	0.08
4,4'-DDT	0.04	0.08
Methoxychlor	0.2	0.4
Tetrachloro-m-xylene	0.02	0.04
Decachlorobiphenyl	0.04	0.08

INDIVIDUAL STANDARD MIXTURE B -- MEDIUM

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
beta-BHC	0.02	0.04
delta-BHC	0.02	0.04
Aldrin	0.02	0.04
Heptachlor epoxide	0.02	0.04
alpha-Chlordane	0.02	0.04
gamma-Chlordane	0.02	0.04
4,4'-DDE	0.04	0.08
Endosulfan sulfate	0.04	0.08
Endrin aldehyde	0.04	0.08
Endrin ketone	0.04	0.08
Endosulfan II	0.04	0.08
Tetrachloro-m-xylene	0.02	0.04
Decachlorobiphenyl	0.04	0.08

INDIVIDUAL STANDARD MIXTURE A -- HIGH

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
alpha-BHC	0.08	0.16
Heptachlor	0.08	0.16
gamma-BHC	0.08	0.16
Endosulfan I	0.08	0.16
Dieldrin	0.16	0.32
Endrin	0.16	0.32
4,4'-DDD	0.16	0.32
4,4'-DDT	0.16	0.32
Methoxychlor	0.8	1.6
Tetrachloro-m-xylene	0.08	0.16
Decachlorobiphenyl	0.16	0.32

INDIVIDUAL STANDARD MIXTURE B -- HIGH

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
beta-BHC	0.08	0.16
delta-BHC	0.08	0.16
Aldrin	0.08	0.16
Heptachlor epoxide	0.08	0.16
alpha-Chlordane	0.08	0.16
gamma-Chlordane	0.08	0.16
4,4'-DDE	0.16	0.32
Endosulfan sulfate	0.16	0.32
Endrin aldehyde	0.16	0.32
Endrin ketone	0.16	0.32
Endosulfan II	0.16	0.32
Tetrachloro-m-xylene	0.08	0.16
Decachlorobiphenyl	0.16	0.32

MULTI-RESPONSE STANDARD MIXTURES

Compounds	Total nanograms (1µL)	Total nanograms (2µL)
Aroclor-1016	0.1	0.2
Aroclor-1221	0.2	0.4
Aroclor-1232	0.1	0.2
Aroclor-1242	0.1	0.2
Aroclor-1248	0.1	0.2
Aroclor-1254	0.1	0.2
Aroclor-1260	0.1	0.2
Toxaphene	0.5	1.0

All manual integrations in this data package for GC/EC have been performed for one of the following reasons:

a. Data system missed a peak during processing.
b. Data system improperly integrated a peak.

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

Brett R Dees
GC Group Leader

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Level:(low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	VBLK1	98	100	93		0
02	EAQC3	112	71	95		0
03	EAQC3MS	120	71	97		0
04	EAQC3MSD	109	82	98		0
05	VBLK2	100	97	94		0
06	EAQC2	95	83	90		0
07	EAQC4	93	82	88		0
08	EAQG1	104	77	91		0
09	VBLK3	101	102	96		0
10	EAQG2	90	80	85		0
11	EAQG9	103	95	95		0
12	EAQG4	97	79	88		0
13	EAQG8	112	86	93		0
14	EAQG5	94	77	83		0
15	EAQG7	108	88	96		0
16	EAQG6	94	64	79		0
17	EAQG6RE	121	71	104		0
18	VHBLK1	98	91	92		0
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

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

Column to be used to flag recovery values

* Values outside of contract required QC limits

3B
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix Spike - EPA Sample No.: EAQC3 Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	76	0	68	89	59-172
Trichloroethene	76	0	58	76	62-137
Benzene	76	0	74	97	66-142
Toluene	76	3	87	110	59-139
Chlorobenzene	76	0	67	88	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	76	69	91	2	22	59-172
Trichloroethene	76	67	88	15	24	62-137
Benzene	76	78	103	6	21	66-142
Toluene	76	85	108	2	21	59-139
Chlorobenzene	76	73	96	9	21	60-133

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

* Values outside of QC limits

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

COMMENTS: _____

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: L950817A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17449.D

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

% Moisture: not dec. 0 Date Analyzed: 08/17/95

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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FORM I VOA-TIC OLM03.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: L950818A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17472.D

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

% Moisture: not dec. 0 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK3

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: C950818B

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C18050.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 0 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQC2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17473.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 32 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQC3

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17465.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 34 Date Analyzed: 08/17/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		SILANE	14.537	9	J
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQC4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17474.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 42 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17475.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 50 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17483.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 35 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17484.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 42 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG5

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17485.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 44 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG6

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17486.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 65 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG6RE

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.08RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C18058.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 65 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

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

EPA SAMPLE NO.

EAQG7

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C18057.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 66 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG8

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C18056.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 26 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

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

EPA SAMPLE NO.

EAQG9

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C18055.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 53 Date Analyzed: 08/18/95

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
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SOIL SEMIVOLATILE SURROGATE RECOVERY

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT OUT
01	SBLK1	62	66	76	63	68	74	62	64	0
02	EAQC2	59	66	72	63	66	76	65	62	0
03	EAQC3	62	66	89	60	72	86	65	64	0
04	EAQC3MS	57	64	72	58	60	84	62	58	0
05	EAQC3MSD	57	64	84	61	61	83	64	56	0
06	EAQC4	52	57	68	54	58	76	56	51	0
07	EAQG1	54	60	71	54	61	77	55	49	0
08	EAQG5	56	65	65	51	58	66	54	51	0
09	EAQG2	54	60	66	58	54	74	54	55	0
10	EAQG4	50	56	67	53	55	69	52	52	0
11	EAQG6	52	58	65	58	54	70	57	54	0
12	EAQG7	52	58	67	60	58	69	59	50	0
13	EAQG8	51	47	60	47	44	51	48	47	0
14	EAQG9	52	58	64	60	53	66	57	56	0
15										
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		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S3 (TPH)	= Terphenyl-d14	(18-137)	
S4 (PHL)	= Phenol-d5	(24-113)	
S5 (2FP)	= 2-Fluorophenol	(25-121)	
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)	
S7 (2CP)	= 2-Chlorophenol-d4	(20-130)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(20-130)	(advisory)

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

3D
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix Spike - EPA Sample No.: EAQC3 Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Phenol	3800	0	2000	53	26- 90
2-Chlorophenol	3800	0	2100	55	25-102
1,4-Dichlorobenzene	2500	0	1200	48	28-104
N-Nitroso-di-n-prop.(1)	2500	0	1400	56	41-126
1,2,4-Trichlorobenzene	2500	0	1500	60	38-107
4-Chloro-3-Methylphenol	3800	0	2900	76	26-103
Acenaphthene	2500	0	1800	72	31-137
4-Nitrophenol	3800	0	3400	89	11-114
2,4-Dinitrotoluene	2500	0	1900	76	28- 89
Pentachlorophenol	3800	0	3100	82	17-109
Pyrene	2500	0	1700	68	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	3800	2200	58	9	35	26- 90
2-Chlorophenol	3800	2200	58	5	50	25-102
1,4-Dichlorobenzene	2500	1200	48	0	27	28-104
N-Nitroso-di-n-prop.(1)	2500	1400	56	0	38	41-126
1,2,4-Trichlorobenzene	2500	1500	60	0	23	38-107
4-Chloro-3-Methylphenol	3800	3000	79	4	33	26-103
Acenaphthene	2500	1900	76	5	19	31-137
4-Nitrophenol	3800	4000	105	16	50	11-114
2,4-Dinitrotoluene	2500	2100	84	10	47	28- 89
Pentachlorophenol	3800	3500	92	11	47	17-109
Pyrene	2500	2100	84	21	36	35-142

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

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

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

COMMENTS:

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQC2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9745.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 32 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

Number TICs found: 24

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALCOHOL	2.131	210	J
2.	123-42-2	2-Pentanone, 4-hydroxy-4-met	3.444	7400	NJAB
3.		UNKNOWN ORGANIC ACID	9.073	350	J
4.		UNKNOWN	10.999	330	J
5.		UNKNOWN	11.430	240	J
6.		UNKNOWN ORGANIC ACID	12.097	480	
7.	7704-34-9	Sulfur	12.796	670	NJ
8.	10544-50-0	Sulfur, mol. (S8)	12.936	530	NJ
9.	10544-50-0	Sulfur, mol. (S8)	13.044	1300	NJ
10.	10544-50-0	Sulfur, mol. (S8)	13.119	2600	NJ
11.		UNKNOWN AMIDE	13.657	280	J
12.		UNKNOWN AMIDE	13.797	350	JB
13.		UNKNOWN AMIDE	15.110	4600	JB
14.		UNKNOWN	15.412	700	J
15.		Benzene, -(-dimethyl--hexeny	16.800	300	J
16.		UNKNOWN AMIDE	17.747	2000	JB
17.		UNKNOWN	17.995	570	JB
18.		UNKNOWN HYDROCARBON	18.178	470	J
19.		UNKNOWN HYDROCARBON	18.522	240	J
20.		UNKNOWN HYDROCARBON	18.737	700	J
21.		UNKNOWN	21.363	550	J
22.	83-48-7	Stigmasterol	21.406	580	NJ
23.		Ergost--en--ol, (3.beta.)-	21.945	1200	J
24.	1058-61-3	Stigmast-4-en-3-one	23.322	510	NJ
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26.					
27.					
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29.					
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQC3

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9746.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 34 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6

Number TICs found: 30

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALCOHOL	2.074	240	J
2.		UNKNOWN ALCOHOL	2.138	240	J
3.		UNKNOWN	2.655	120	JB
4.	141-79-7	3-Penten-2-one, 4-methyl-	3.064	120	NJAB
5.	123-42-2	2-Pentanone, 4-hydroxy-4-met	3.441	8900	NJAB
6.	10544-50-0	Sulfur, mol. (S8)	8.714	250	NJ
7.		UNKNOWN ORGANIC ACID	9.069	490	J
8.	10544-50-0	Sulfur, mol. (S8)	11.017	370	NJ
9.		UNKNOWN ORGANIC ACID	12.072	140	J
10.		UNKNOWN AMIDE	12.212	110	J
11.	10544-50-0	Sulfur, mol. (S8)	13.138	4200	NJ
12.	7704-34-9	Sulfur	13.159	1600	NJ
13.		UNKNOWN AMIDE	13.665	210	J
14.		UNKNOWN AMIDE	13.794	330	JB
15.		UNKNOWN	14.849	160	J
16.		UNKNOWN AMIDE	15.118	4900	JB
17.		UNKNOWN	15.581	130	J
18.		UNKNOWN	16.808	210	J
19.		UNKNOWN	17.001	190	J
20.		UNKNOWN AMIDE	17.744	1800	JB
21.		UNKNOWN	21.360	180	J
22.	83-47-6	.gamma.-Sitosterol	21.941	1400	NJ
23.		UNKNOWN	22.081	700	J
24.		UNKNOWN	22.221	280	J
25.		UNKNOWN	22.361	350	J
26.		UNKNOWN	22.512	170	J
27.		UNKNOWN	22.856	170	J
28.		UNKNOWN	22.942	270	J
29.		UNKNOWN	23.340	480	J
30.		UNKNOWN	23.717	170	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQC4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9749.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 42 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.7

Number TICs found: 22

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALCOHOL	2.118	160	J
2. 141-79-7	3-Penten-2-one, 4-methyl-	3.054	140	NJAB
3. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.441	9200	NJAB
4.	UNKNOWN ORGANIC ACID	9.070	610	J
5.	UNKNOWN AMIDE	12.213	130	J
6. 10544-50-0	Sulfur, mol. (S8)	13.095	900	
7.	UNKNOWN AMIDE	13.666	190	J
8.	UNKNOWN AMIDE	13.795	280	JB
9.	UNKNOWN	14.850	200	J
10.	UNKNOWN AMIDE	15.119	4000	JB
11.	UNKNOWN AMIDE	16.475	140	JB
12.	UNKNOWN	16.808	270	J
13.	UNKNOWN HYDROCARBON	17.325	190	J
14.	UNKNOWN AMIDE	17.745	2800	JB
15.	UNKNOWN HYDROCARBON	18.746	180	J
16.	UNKNOWN	19.381	320	J
17.	UNKNOWN	19.725	320	J
18.	UNKNOWN	20.532	560	J
19. 83-48-7	Stigmasterol	21.372	760	NJ
20.	UNKNOWN	22.373	210	J
21.	UNKNOWN	22.857	170	J
22.	UNKNOWN	23.341	320	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9750.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 50 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

Number TICs found: 33

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.107	330	J
2. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.431	12000	NJAB
3.	Naphthalene, -dimethyl-	7.682	340	J
4.	-Dodecatriene, -dimethyl--me	7.833	240	J
5.	UNKNOWN	8.522	380	J
6.	UNKNOWN ORGANIC ACID	9.081	690	J
7.	UNKNOWN ALCOHOL	9.706	570	J
8.	UNKNOWN	9.932	350	J
9.	UNKNOWN ORGANIC ACID	10.416	290	J
10.	UNKNOWN ALKENE	11.019	270	J
11. 10544-50-0	Sulfur, mol. (S8)	11.804	320	NJ
12.	UNKNOWN ORGANIC ACID	12.095	400	J
13.	UNKNOWN AMIDE	12.235	240	J
14. 10544-50-0	Sulfur, mol. (S8)	12.708	3700	NJ
15. 7704-34-9	Sulfur	12.977	2400	NJ
16.	UNKNOWN AMIDE	13.806	340	JB
17.	UNKNOWN AMIDE	15.130	4300	JB
18.	UNKNOWN	17.013	500	J
19.	UNKNOWN AMIDE	17.756	2000	JB
20.	UNKNOWN HYDROCARBON	18.477	920	J
21. 59-02-9	Vitamin E	20.038	950	NJ
22. 57-88-5	Cholesterol	20.134	740	NJ
23.	UNKNOWN	20.522	1100	J
24.	UNKNOWN	21.038	3100	J
25.	UNKNOWN	21.318	4800	J
26.	UNKNOWN	21.469	1600	J
27.	UNKNOWN	21.781	710	J
28. 83-47-6	.gamma.-Sitosterol	21.910	10000	NJ
29.	UNKNOWN	22.039	2500	J
30.	UNKNOWN	22.330	680	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9750.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 50 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

Number TICs found: 33

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	22.395	1300	J
2. 1058-61-3	Stigmast-4-en-3-one	23.374	1800	NJ
3.	UNKNOWN	23.751	1100	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9756.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 35 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

Number TICs found: 16

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALCOHOL	2.077	180	J
2.	141-79-7	3-Penten-2-one, 4-methyl-	3.003	130	NJAB
3.	123-42-2	2-Pentanone, 4-hydroxy-4-met	3.390	6400	NJAB
4.		UNKNOWN ORGANIC ACID	8.987	400	J
5.	10544-50-0	Sulfur, mol. (S8)	10.892	100	NJ
6.		UNKNOWN AMIDE	12.119	110	J
7.	10544-50-0	Sulfur, mol. (S8)	13.001	1100	NJ
8.		UNKNOWN AMIDE	13.561	230	J
9.		UNKNOWN AMIDE	13.701	480	JB
10.		UNKNOWN AMIDE	15.025	4700	JB
11.		UNKNOWN ORGANIC ACID	15.111	260	J
12.		UNKNOWN AMIDE	15.164	210	JB
13.		UNKNOWN AMIDE	16.370	120	J
14.		UNKNOWN AMIDE	17.651	1800	JB
15.		UNKNOWN ALKENE	21.622	230	J
16.		UNKNOWN	22.160	110	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9757.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 42 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALCOHOL	2.067	180	J
2.	UNKNOWN	2.594	140	JB
3. 141-79-7	3-Penten-2-one, 4-methyl-	3.003	150	NJAB
4. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.391	8300	NJAB
5.	UNKNOWN ORGANIC ACID	8.987	280	J
6.	UNKNOWN AMIDE	12.108	140	
7.	UNKNOWN AMIDE	13.561	230	
8.	UNKNOWN AMIDE	13.701	330	JB
9.	UNKNOWN AMIDE	15.025	4600	JB
10.	UNKNOWN AMIDE	15.165	230	JB
11.	UNKNOWN AMIDE	16.370	140	J
12.	UNKNOWN AMIDE	17.651	1900	JB
13.	UNKNOWN	21.752	360	J
14.	UNKNOWN	21.806	230	J
15.	UNKNOWN	22.161	160	J
16.	UNKNOWN	23.129	680	J
17.	UNKNOWN	24.292	1200	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG5

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9753.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 44 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

Number TICs found: 28

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.109	540	J
2.		UNKNOWN	2.174	260	J
3.		UNKNOWN	2.679	150	JB
4.	141-79-7	3-Penten-2-one, 4-methyl-	3.078	140	NJAB
5.	123-42-2	2-Pentanone, 4-hydroxy-4-met	3.454	7000	NJAB
6.		UNKNOWN	3.584	140	J
7.		UNKNOWN ORGANIC ACID	9.072	490	J
8.		UNKNOWN AMIDE	12.215	130	J
9.		UNKNOWN AMIDE	13.517	120	J
10.		UNKNOWN AMIDE	13.668	270	J
11.		UNKNOWN AMIDE	13.797	360	JB
12.		UNKNOWN AMIDE	15.121	5300	JB
13.		UNKNOWN AMIDE	15.261	330	J
14.		UNKNOWN AMIDE	16.477	200	JB
15.		UNKNOWN	17.295	180	J
16.		UNKNOWN AMIDE	17.747	2500	JB
17.		UNKNOWN ALKENE	17.876	200	J
18.		UNKNOWN ALCOHOL	18.468	640	J
19.		UNKNOWN KETONE	19.727	280	J
20.		UNKNOWN	20.169	190	J
21.		UNKNOWN	21.374	470	J
22.		Ergost--en--ol, (3.beta.)-	21.901	1600	J
23.		UNKNOWN	22.020	690	J
24.		Cholestan--one, -dimethyl-,	22.375	670	J
25.		UNKNOWN	22.526	130	J
26.		UNKNOWN	23.161	130	J
27.		UNKNOWN	23.257	670	J
28.		UNKNOWN	23.387	3900	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG6

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9759.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 65 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 27

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALCOHOL	2.055	400	J
2.		UNKNOWN	2.583	200	JB
3.	141-79-7	3-Penten-2-one, 4-methyl-	2.992	300	NJAB
4.	123-42-2	2-Pentanone, 4-hydroxy-4-met	3.390	9900	NJAB
5.		UNKNOWN ORGANIC ACID	8.997	840	J
6.		UNKNOWN	9.309	300	
7.		UNKNOWN HYDROCARBON	9.665	280	
8.		UNKNOWN	9.729	210	J
9.		UNKNOWN HYDROCARBON	10.192	340	J
10.		UNKNOWN	11.365	210	J
11.		UNKNOWN ORGANIC ACID	12.011	340	J
12.		UNKNOWN AMIDE	12.151	240	J
13.		UNKNOWN	12.915	600	J
14.	10544-50-0	Sulfur, mol. (S8)	13.033	2000	NJ
15.		UNKNOWN AMIDE	13.722	330	JB
16.		UNKNOWN AMIDE	15.035	3600	JB
17.		UNKNOWN AMIDE	17.672	4800	JB
18.	198-55-0	Perylene	18.382	1400	NJ
19.		UNKNOWN KETONE	19.620	1100	J
20.		UNKNOWN	20.825	690	J
21.		UNKNOWN	21.708	6800	J
22.		UNKNOWN	21.848	2400	J
23.		UNKNOWN	22.214	2200	J
24.		UNKNOWN	22.354	540	J
25.		UNKNOWN	22.709	450	J
26.	1058-61-3	Stigmast-4-en-3-one	23.161	1300	NJ
27.		UNKNOWN	24.097	3100	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG7

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9760.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 66 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 31

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	3.390	14000	NJAB
2.	UNKNOWN ORGANIC ACID	8.997	660	J
3.	UNKNOWN ORGANIC ACID	11.871	680	J
4.	UNKNOWN ORGANIC ACID	12.021	710	J
5.	UNKNOWN AMIDE	12.161	380	J
6. 10544-50-0	Sulfur, mol. (S8)	12.624	5100	NJ
7. 10544-50-0	Sulfur, mol. (S8)	12.721	3000	NJ
8.	UNKNOWN AMIDE	12.764	2100	J
9. 10544-50-0	Sulfur, mol. (S8)	12.829	2900	NJ
10.	UNKNOWN	12.936	7800	J
11. 10544-50-0	Sulfur, mol. (S8)	13.022	5400	NJ
12. 10544-50-0	Sulfur, mol. (S8)	13.065	5100	NJ
13.	UNKNOWN	13.550	520	J
14.	UNKNOWN AMIDE	13.593	510	J
15.	UNKNOWN AMIDE	13.722	1000	JB
16.	UNKNOWN AMIDE	15.046	7600	JB
17.	UNKNOWN	15.498	1400	J
18.	UNKNOWN AMIDE	17.672	4000	JB
19.	UNKNOWN	19.620	960	J
20. 80-97-7	Cholestanol	20.072	1300	NJ
21.	Ergost--en--ol, (3.beta.)-	20.868	1900	J
22. 83-48-7	Stigmasterol	21.148	3700	NJ
23.	UNKNOWN	21.277	2600	J
24.	Ergost--en--ol, (3.beta.)-	21.708	8800	J
25.	UNKNOWN	21.869	5300	J
26.	-Amyrin	22.213	7500	J
27.	UNKNOWN	22.364	1500	J
28.	UNKNOWN	22.902	3100	J
29.	UNKNOWN	23.128	15000	J
30. 471-68-1	Olean-12-ene	23.214	7800	NJ

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG7

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9760.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 66 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 31

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	24.377	7100	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG8

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9761.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 26 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

Number TICs found: 15

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALCOHOL	2.076	140	J
2.	141-79-7	3-Penten-2-one, 4-methyl-	3.002	90	NJAB
3.	123-42-2	2-Pentanone, 4-hydroxy-4-met	3.389	6300	NJAB
4.		UNKNOWN	3.443	110	J
5.		UNKNOWN ALCOHOL	3.519	98	J
6.		UNKNOWN ORGANIC ACID	8.997	340	J
7.		UNKNOWN AMIDE	12.129	110	J
8.	10544-50-0	Sulfur, mol. (S8)	13.000	530	NJ
9.		UNKNOWN AMIDE	13.581	120	J
10.		UNKNOWN AMIDE	13.721	170	JB
11.		UNKNOWN AMIDE	15.045	5300	JB
12.		UNKNOWN	15.185	360	J
13.		UNKNOWN AMIDE	16.390	210	JB
14.		Benzene, -(-dimethyl--hexeny	16.724	150	J
15.		UNKNOWN AMIDE	17.660	2300	JB
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EAQG9

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9762.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 53 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 29

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALCOHOL	2.067	220	J
2. 123-42-2	2-Pentanone, 4-hydroxy-4-met	3.401	9400	NJAB
3.	UNKNOWN	4.564	180	J
4.	UNKNOWN ORGANIC ACID	8.998	660	J
5. 10544-50-0	Sulfur, mol. (S8)	11.871	270	NJ
6.	UNKNOWN ORGANIC ACID	12.022	450	
7. 7704-34-9	Sulfur	12.722	1100	NJ
8.	UNKNOWN HYDROCARBON	12.818	1400	J
9.	UNKNOWN HYDROCARBON	12.926	3600	J
10. 10544-50-0	Sulfur, mol. (S8)	13.001	3300	NJ
11. 10544-50-0	Sulfur, mol. (S8)	13.055	3200	NJ
12.	UNKNOWN AMIDE	13.723	230	JB
13.	UNKNOWN AMIDE	15.046	7000	JB
14.	UNKNOWN ALKENE	17.166	730	J
15.	UNKNOWN AMIDE	17.683	4100	JB
16.	UNKNOWN HYDROCARBON	18.350	630	J
17.	UNKNOWN KETONE	19.631	1100	J
18. 80-97-7	Cholestanol	20.083	500	NJ
19. 0-00-0	Coprostan-3-one	20.363	480	NJ
20.	UNKNOWN	20.890	820	J
21. 83-48-7	Stigmasterol	21.170	1900	NJ
22.	UNKNOWN HYDROCARBON	21.278	1600	J
23. 83-47-6	.gamma.-Sitosterol	21.730	6500	NJ
24. 6538-02-9	Ergostanol	21.859	3200	NJ
25.	UNKNOWN	22.236	1900	J
26.	UNKNOWN	22.376	1200	J
27. 545-47-1	Lupeol	22.698	1000	NJ
28. 1058-61-3	Stigmast-4-en-3-one	23.193	2500	NJ
29.	UNKNOWN	24.367	1900	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: BL0814SJ

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9743.D

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

% Moisture: 0 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 11

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		-Propanol, -methoxy-	2.098	96	J
2.	1569-50-2	3-Penten-2-ol	2.162	110	NJ
3.		UNKNOWN	2.668	88	J
4.	141-79-7	3-Penten-2-one, 4-methyl-	3.066	72	NJA
5.	123-42-2	2-Pentanone, 4-hydroxy-4-met	3.454	4500	NJA
6.		UNKNOWN	9.072	120	J
7.		UNKNOWN AMIDE	13.786	100	J
8.		UNKNOWN AMIDE	15.109	1600	J
9.		UNKNOWN AMIDE	16.476	69	J
10.		UNKNOWN AMIDE	17.746	1400	J
11.		UNKNOWN	17.994	80	J
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
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29.					
30.					

2F
SOIL PESTICIDE SURROGATE RECOVERY

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

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

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKSW	98	61	76	83			0
02	PBLKSY	71	63	93	94			0
03	EAQC2	69	61	89	84			0
04	EAQC3	74	63	88	88			0
05	EAQC3MS	68	60	77	81			0
06	EAQC3MSD	75	62	82	84			0
07	EAQC4	209*	51	66	71			1
08	EAQG1	289*	67	105	88			1
09	EAQG2	233*	60	90	94			1
10	EAQG4	72	61	89	87			0
11	EAQG5	92	73	92	119			0
12	EAQG6	60	52	64	100			0
13	EAQG7	71	59	101	207*			1
14	EAQG9	220*	67	78	96			1
15	EAQG8	76	63	86	92			0
16								
17								
18								
19								
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30								

QC LIMITS

TCX = Tetrachloro-m-xylene (30-150)
DCB = Decachlorobiphenyl (30-150)

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

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix Spike - EPA Sample NO.: EAQC3

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMI REC
gamma-BHC(Lindane)	25.2	0	18.6	74	46-1
Heptachlor	25.2	0	22.7	90	35-1
Aldrin	25.2	0	19.5	77	34-1
Dieldrin	50.5	0	41.8	83	31-1
Endrin	50.5	0	41.9	83	42-1
4,4'-DDT	50.5	0	43.9	87	23-1

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC
gamma-BHC(Lindane)	25.2	21.1	84	13	50	46-1
Heptachlor	25.2	25.1	99	10	31	35-1
Aldrin	25.2	21.4	85	10	43	34-1
Dieldrin	50.5	46.9	93	11	38	31-1
Endrin	50.5	46.7	92	10	45	42-1
4,4'-DDT	50.5	49.5	98	12	50	23-1

Column to be used to flag recovery values

* Values outside of QC limits

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

Comments:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: _____ CERCLIS No: ILD049136658

Case No: 23890 Site Name Location: Green AP Refracto

Contractor or EPA Lab: SWOK Data User: IEPA

No. of Samples: 11 Date Sampled or Data Received: 8-28-95

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

_____ _____ _____ _____

_____ _____ _____ _____

Are basic data forms in? Yes ✓ No ___
No of samples claimed: 11 No. of samples received: 11

Received by: Lynette Burnett Date: 8-28-95

Received by LSSS: Allison C Harvey Date: 8-31-95

Review started: 9/1/95 Reviewer Signature: Stephanie N Tobin

Total time spent on review: 12 hrs Date review completed: 9/5/95

Copied by: _____ Date: _____

Mailed to user by: _____ Date: _____

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if

PROBLEMS: Please indicate reasons why data are not suitable f you uses.

_____

_____

Received by Data Mgmt. Coordinator for Files. Data: _____

Missing Contents Error Report

SDG NO: EAQC2
CASE NO: 23890

LABORATORY: SOUTHWEST LAB
AGENCY INPUT FILE: EAQC2.CRO

FIELD DESCRIPTION	CADRE KEY		
Date Received	Record Type 21	Line 1433	Format YY/MM/DD
Analysis Time	Record Type 20	Line 4335	Format HH:MM
Results	Record Type 30	Line 4382	Format REAL NUMERIC
Results	Record Type 30	Line 4384	Format REAL NUMERIC
PEAK	Record Type 32	Line 4408	Format REAL NUMERIC
PEAK	Record Type 32	Line 4410	Format REAL NUMERIC
PEAK	Record Type 32	Line 4419	Format REAL NUMERIC
PEAK	Record Type 32	Line 4421	Format REAL NUMERIC
PEAK	Record Type 32	Line 4432	Format REAL NUMERIC
PEAK	Record Type 32	Line 4434	Format REAL NUMERIC
PEAK	Record Type 32	Line 4447	Format REAL NUMERIC
PEAK	Record Type 32	Line 4449	Format REAL NUMERIC
PEAK	Record Type 32	Line 4462	Format REAL NUMERIC
PEAK	Record Type 32	Line 4464	Format REAL NUMERIC
PEAK	Record Type 32	Line 4477	Format REAL NUMERIC
PEAK	Record Type 32	Line 4479	Format REAL NUMERIC
PEAK	Record Type 32	Line 4490	Format REAL NUMERIC
PEAK	Record Type 32	Line 4492	Format REAL NUMERIC
Results	Record Type 30	Line 4685	Format REAL NUMERIC
Results	Record Type 30	Line 4687	Format REAL NUMERIC
Analysis Time	Record Type 20	Line 4689	Format HH:MM
Results	Record Type 30	Line 4745	Format REAL NUMERIC
Results	Record Type 30	Line 4747	Format REAL NUMERIC
Sulfur Cleanup	Record Type 27	Line 4753	Format RANGE
Results	Record Type 30	Line 5393	Format REAL NUMERIC
Results	Record Type 30	Line 5395	Format REAL NUMERIC
Results	Record Type 30	Line 5445	Format REAL NUMERIC
Results	Record Type 30	Line 5447	Format REAL NUMERIC
Sulfur Cleanup	Record Type 27	Line 5453	Format RANGE
Analysis Time	Record Type 20	Line 5729	Format HH:MM
Results	Record Type 30	Line 5776	Format REAL NUMERIC
Results	Record Type 30	Line 5778	Format REAL NUMERIC
PEAK	Record Type 32	Line 5802	Format REAL NUMERIC
PEAK	Record Type 32	Line 5804	Format REAL NUMERIC
PEAK	Record Type 32	Line 5813	Format REAL NUMERIC
PEAK	Record Type 32	Line 5815	Format REAL NUMERIC
PEAK	Record Type 32	Line 5826	Format REAL NUMERIC
PEAK	Record Type 32	Line 5828	Format REAL NUMERIC
PEAK	Record Type 32	Line 5841	Format REAL NUMERIC
PEAK	Record Type 32	Line 5843	Format REAL NUMERIC
PEAK	Record Type 32	Line 5856	Format REAL NUMERIC
PEAK	Record Type 32	Line 5858	Format REAL NUMERIC
PEAK	Record Type 32	Line 5871	Format REAL NUMERIC
PEAK	Record Type 32	Line 5873	Format REAL NUMERIC
PEAK	Record Type 32	Line 5884	Format REAL NUMERIC
PEAK	Record Type 32	Line 5886	Format REAL NUMERIC
Results	Record Type 30	Line 6079	Format REAL NUMERIC

Missing Contents Error Report

SDG NO: EAQC2
CASE NO: 23890

LABORATORY: SOUTHWEST LAB
AGENCY INPUT FILE: EAQC2.CRO

FIELD DESCRIPTION	CADRE KEY		
Results	Record Type 30	Line 6081	Format REAL NUMERIC
Analysis Time	Record Type 20	Line 6083	Format HH:MM
Results	Record Type 30	Line 6139	Format REAL NUMERIC
Results	Record Type 30	Line 6141	Format REAL NUMERIC
Sulfur Cleanup	Record Type 27	Line 6147	Format RANGE
Results	Record Type 30	Line 6787	Format REAL NUMERIC
Results	Record Type 30	Line 6789	Format REAL NUMERIC
Results	Record Type 30	Line 6839	Format REAL NUMERIC
Results	Record Type 30	Line 6841	Format REAL NUMERIC
Sulfur Cleanup	Record Type 27	Line 6847	Format RANGE

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Lab File ID: L17449.D Lab Sample ID: L950817A

Date Analyzed: 08/17/95 Time Analyzed: 1030

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: L

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EAQC3	23206.02	L17465.D	1950
02	EAQC3MS	23206.02MS	L17466.D	2019
03	EAQC3MSD	23206.02MSD	L17467.D	2046
04				
05				
06				
07				
08				
09				
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COMMENTS:

page 01 of 01

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Lab File ID: L17472.D Lab Sample ID: L950818A

Date Analyzed: 08/18/95 Time Analyzed: 1048

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: L

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EAQC2	23206.01	L17473.D	1119
02	EAQC4	23206.03	L17474.D	1146
03	EAQG1	23206.04	L17475.D	1213
04	EAQG2	23206.05	L17483.D	1606
05	EAQG4	23206.06	L17484.D	1633
06	EAQG5	23206.07	L17485.D	1659
07	EAQG6	23206.08	L17486.D	1725
08	VHBLK1	VHBLK23890	L17487.D	1811
09				
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COMMENTS:

page 01 of 01

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK3

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Lab File ID: C18050.D Lab Sample ID: C950818B

Date Analyzed: 08/18/95 Time Analyzed: 1342

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: C

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EAQG9	23206.11	C18055.D	1622
02	EAQG8	23206.10	C18056.D	1649
03	EAQG7	23206.09	C18057.D	1716
04	EAQG6RE	23206.08RA	C18058.D	1744
05				
06				
07				
08				
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COMMENTS:

page 01 of 01

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: L950817A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17449.D

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

% Moisture: not dec. 0 Date Analyzed: 08/17/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	17	
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: L950818A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17472.D

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

% Moisture: not dec. 0 Date Analyzed: 08/18/95

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

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

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK3

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: C950818B

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C18050.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 0 Date Analyzed: 08/18/95

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

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

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17473.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 32 Date Analyzed: 08/18/95

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

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

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC3

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17465.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 34 Date Analyzed: 08/17/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	23	B
67-64-1	Acetone	220	
75-15-0	Carbon Disulfide	2	J
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene (total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	86	
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Xylene (Total)	15	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17474.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 42 Date Analyzed: 08/18/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	37	B
67-64-1	Acetone	27	
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (Total)	17	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17475.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 50 Date Analyzed: 08/18/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	20	U
74-83-9	Bromomethane	20	U
75-01-4	Vinyl Chloride	20	U
75-00-3	Chloroethane	20	U
75-09-2	Methylene Chloride	51	B
67-64-1	Acetone	310	
75-15-0	Carbon Disulfide	20	U
75-35-4	1,1-Dichloroethene	20	U
75-34-3	1,1-Dichloroethane	20	U
540-59-0	1,2-Dichloroethene (total)	20	U
67-66-3	Chloroform	20	U
107-06-2	1,2-Dichloroethane	20	U
78-93-3	2-Butanone	83	
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon Tetrachloride	20	U
75-27-4	Bromodichloromethane	20	U
78-87-5	1,2-Dichloropropane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
79-01-6	Trichloroethene	20	U
124-48-1	Dibromochloromethane	20	U
79-00-5	1,1,2-Trichloroethane	20	U
71-43-2	Benzene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
75-25-2	Bromoform	20	U
108-10-1	4-Methyl-2-Pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
108-88-3	Toluene	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
100-42-5	Styrene	20	U
1330-20-7	Xylene (Total)	20	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17483.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 35 Date Analyzed: 08/18/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	20	B
67-64-1	Acetone	88	
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene (total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	29	
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-88-3	Toluene	5	J
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Xylene (Total)	15	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17484.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 42 Date Analyzed: 08/18/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	25	B
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (Total)	17	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG5

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17485.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 44 Date Analyzed: 08/18/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	18	U
74-83-9	Bromomethane	18	U
75-01-4	Vinyl Chloride	18	U
75-00-3	Chloroethane	18	U
75-09-2	Methylene Chloride	31	B
67-64-1	Acetone	18	U
75-15-0	Carbon Disulfide	18	U
75-35-4	1,1-Dichloroethene	18	U
75-34-3	1,1-Dichloroethane	18	U
540-59-0	1,2-Dichloroethene (total)	18	U
67-66-3	Chloroform	18	U
107-06-2	1,2-Dichloroethane	18	U
78-93-3	2-Butanone	18	U
71-55-6	1,1,1-Trichloroethane	18	U
56-23-5	Carbon Tetrachloride	18	U
75-27-4	Bromodichloromethane	18	U
78-87-5	1,2-Dichloropropane	18	U
10061-01-5	cis-1,3-Dichloropropene	18	U
79-01-6	Trichloroethene	18	U
124-48-1	Dibromochloromethane	18	U
79-00-5	1,1,2-Trichloroethane	18	U
71-43-2	Benzene	18	U
10061-02-6	trans-1,3-Dichloropropene	18	U
75-25-2	Bromoform	18	U
108-10-1	4-Methyl-2-Pentanone	18	U
591-78-6	2-Hexanone	18	U
127-18-4	Tetrachloroethene	18	U
79-34-5	1,1,2,2-Tetrachloroethane	18	U
108-88-3	Toluene	18	U
108-90-7	Chlorobenzene	18	U
100-41-4	Ethylbenzene	18	U
100-42-5	Styrene	18	U
1330-20-7	Xylene (Total)	18	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG6

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: L17486.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 65 Date Analyzed: 08/18/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	28	U
74-83-9	Bromomethane	28	U
75-01-4	Vinyl Chloride	28	U
75-00-3	Chloroethane	28	U
75-09-2	Methylene Chloride	79	B
67-64-1	Acetone	52	
75-15-0	Carbon Disulfide	28	U
75-35-4	1,1-Dichloroethene	28	U
75-34-3	1,1-Dichloroethane	28	U
540-59-0	1,2-Dichloroethene (total)	28	U
67-66-3	Chloroform	28	U
107-06-2	1,2-Dichloroethane	28	U
78-93-3	2-Butanone	28	U
71-55-6	1,1,1-Trichloroethane	28	U
56-23-5	Carbon Tetrachloride	28	U
75-27-4	Bromodichloromethane	28	U
78-87-5	1,2-Dichloropropane	28	U
10061-01-5	cis-1,3-Dichloropropene	28	U
79-01-6	Trichloroethene	28	U
124-48-1	Dibromochloromethane	28	U
79-00-5	1,1,2-Trichloroethane	28	U
71-43-2	Benzene	28	U
10061-02-6	trans-1,3-Dichloropropene	28	U
75-25-2	Bromoform	28	U
108-10-1	4-Methyl-2-Pentanone	28	U
591-78-6	2-Hexanone	28	U
127-18-4	Tetrachloroethene	28	U
79-34-5	1,1,2,2-Tetrachloroethane	28	U
108-88-3	Toluene	28	U
108-90-7	Chlorobenzene	28	U
100-41-4	Ethylbenzene	28	U
100-42-5	Styrene	28	U
1330-20-7	Xylene (Total)	28	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG6RE

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.08RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C18058.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 65 Date Analyzed: 08/18/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	28	U
74-83-9	Bromomethane	28	U
75-01-4	Vinyl Chloride	28	U
75-00-3	Chloroethane	28	U
75-09-2	Methylene Chloride	74	B
67-64-1	Acetone	200	
75-15-0	Carbon Disulfide	28	U
75-35-4	1,1-Dichloroethene	28	U
75-34-3	1,1-Dichloroethane	28	U
540-59-0	1,2-Dichloroethene (total)	28	U
67-66-3	Chloroform	28	U
107-06-2	1,2-Dichloroethane	28	U
78-93-3	2-Butanone	28	U
71-55-6	1,1,1-Trichloroethane	28	U
56-23-5	Carbon Tetrachloride	28	U
75-27-4	Bromodichloromethane	28	U
78-87-5	1,2-Dichloropropane	28	U
10061-01-5	cis-1,3-Dichloropropene	28	U
79-01-6	Trichloroethene	28	U
124-48-1	Dibromochloromethane	28	U
79-00-5	1,1,2-Trichloroethane	28	U
71-43-2	Benzene	28	U
10061-02-6	trans-1,3-Dichloropropene	28	U
75-25-2	Bromoform	28	U
108-10-1	4-Methyl-2-Pentanone	28	U
591-78-6	2-Hexanone	28	U
127-18-4	Tetrachloroethene	28	U
79-34-5	1,1,2,2-Tetrachloroethane	28	U
108-88-3	Toluene	28	U
108-90-7	Chlorobenzene	28	U
100-41-4	Ethylbenzene	28	U
100-42-5	Styrene	28	U
1330-20-7	Xylene (Total)	28	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG7

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C18057.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 66 Date Analyzed: 08/18/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	29	U
74-83-9	Bromomethane	29	U
75-01-4	Vinyl Chloride	29	U
75-00-3	Chloroethane	29	U
75-09-2	Methylene Chloride	58	B
67-64-1	Acetone	27	J
75-15-0	Carbon Disulfide	29	U
75-35-4	1,1-Dichloroethene	29	U
75-34-3	1,1-Dichloroethane	29	U
540-59-0	1,2-Dichloroethene (total)	29	U
67-66-3	Chloroform	29	U
107-06-2	1,2-Dichloroethane	29	U
78-93-3	2-Butanone	29	U
71-55-6	1,1,1-Trichloroethane	29	U
56-23-5	Carbon Tetrachloride	29	U
75-27-4	Bromodichloromethane	29	U
78-87-5	1,2-Dichloropropane	29	U
10061-01-5	cis-1,3-Dichloropropene	29	U
79-01-6	Trichloroethene	29	U
124-48-1	Dibromochloromethane	29	U
79-00-5	1,1,2-Trichloroethane	29	U
71-43-2	Benzene	29	U
10061-02-6	trans-1,3-Dichloropropene	29	U
75-25-2	Bromoform	29	U
108-10-1	4-Methyl-2-Pentanone	29	U
591-78-6	2-Hexanone	29	U
127-18-4	Tetrachloroethene	29	U
79-34-5	1,1,2,2-Tetrachloroethane	29	U
108-88-3	Toluene	29	U
108-90-7	Chlorobenzene	29	U
100-41-4	Ethylbenzene	29	U
100-42-5	Styrene	29	U
1330-20-7	Xylene (Total)	29	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG8

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C18056.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 26 Date Analyzed: 08/18/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	40	B
67-64-1	Acetone	110	
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	14	U
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene (total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	14	U
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	14	U
10061-02-6	trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-88-3	Toluene	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Xylene (Total)	14	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG9

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C18055.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: not dec. 53 Date Analyzed: 08/18/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	21	U
74-83-9	Bromomethane	21	U
75-01-4	Vinyl Chloride	21	U
75-00-3	Chloroethane	21	U
75-09-2	Methylene Chloride	32	B
67-64-1	Acetone	100	
75-15-0	Carbon Disulfide	21	U
75-35-4	1,1-Dichloroethene	21	U
75-34-3	1,1-Dichloroethane	21	U
540-59-0	1,2-Dichloroethene (total)	21	U
67-66-3	Chloroform	21	U
107-06-2	1,2-Dichloroethane	21	U
78-93-3	2-Butanone	21	U
71-55-6	1,1,1-Trichloroethane	21	U
56-23-5	Carbon Tetrachloride	21	U
75-27-4	Bromodichloromethane	21	U
78-87-5	1,2-Dichloropropane	21	U
10061-01-5	cis-1,3-Dichloropropene	21	U
79-01-6	Trichloroethene	21	U
124-48-1	Dibromochloromethane	21	U
79-00-5	1,1,2-Trichloroethane	21	U
71-43-2	Benzene	21	U
10061-02-6	trans-1,3-Dichloropropene	21	U
75-25-2	Bromoform	21	U
108-10-1	4-Methyl-2-Pentanone	21	U
591-78-6	2-Hexanone	21	U
127-18-4	Tetrachloroethene	21	U
79-34-5	1,1,2,2-Tetrachloroethane	21	U
108-88-3	Toluene	21	U
108-90-7	Chlorobenzene	21	U
100-41-4	Ethylbenzene	21	U
100-42-5	Styrene	21	U
1330-20-7	Xylene (Total)	21	U

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Lab File ID: V9743.D Lab Sample ID: BL0814SJ

Instrument ID: V Date Extracted: 08/14/95

Matrix: (soil/water) SOIL Date Analyzed: 08/17/95

Level:(low/med) LOW Time Analyzed: 1529

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EAQC2	23206.01	V9745.D	08/17/95
02	EAQC3	23206.02	V9746.D	08/17/95
03	EAQC3MS	23206.02MS	V9747.D	08/17/95
04	EAQC3MSD	23206.02MSD	V9748.D	08/17/95
05	EAQC4	23206.03	V9749.D	08/17/95
06	EAQG1	23206.04	V9750.D	08/17/95
07	EAQG5	23206.07	V9753.D	08/17/95
08	EAQG2	23206.05	V9756.D	08/18/95
09	EAQG4	23206.06	V9757.D	08/18/95
10	EAQG6	23206.08	V9759.D	08/18/95
11	EAQG7	23206.09	V9760.D	08/18/95
12	EAQG8	23206.10	V9761.D	08/18/95
13	EAQG9	23206.11	V9762.D	08/18/95
14				
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COMMENTS:

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9745.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 32 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	480	U
111-44-4	bis(2-Chloroethyl)Ether	480	U
95-57-8	2-Chlorophenol	480	U
541-73-1	1,3-Dichlorobenzene	480	U
106-46-7	1,4-Dichlorobenzene	480	U
95-50-1	1,2-Dichlorobenzene	480	U
95-48-7	2-Methylphenol	480	U
108-60-1	2,2'-oxybis(1-Chloropropane)	480	U
106-44-5	4-Methylphenol	480	U
621-64-7	N-Nitroso-di-n-propylamine	480	U
67-72-1	Hexachloroethane	480	U
98-95-3	Nitrobenzene	480	U
78-59-1	Isophorone	480	U
88-75-5	2-Nitrophenol	480	U
105-67-9	2,4-Dimethylphenol	480	U
111-91-1	bis(2-Chloroethoxy)methane	480	U
120-83-2	2,4-Dichlorophenol	480	U
120-82-1	1,2,4-Trichlorobenzene	480	U
91-20-3	Naphthalene	480	U
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	480	U
59-50-7	4-Chloro-3-Methylphenol	480	U
91-57-6	2-Methylnaphthalene	480	U
77-47-4	Hexachlorocyclopentadiene	480	U
88-06-2	2,4,6-Trichlorophenol	480	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	480	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	480	U
208-96-8	Acenaphthylene	480	U
606-20-2	2,6-Dinitrotoluene	480	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	480	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9745.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 32 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	480	U
121-14-2	2,4-Dinitrotoluene	480	U
84-66-2	Diethylphthalate	480	U
7005-72-3	4-Chlorophenyl-phenylether	480	U
86-73-7	Fluorene	480	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	480	U
101-55-3	4-Bromophenyl-phenylether	480	U
118-74-1	Hexachlorobenzene	480	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	480	U
120-12-7	Anthracene	480	U
86-74-8	Carbazole	480	U
84-74-2	Di-n-butylphthalate	480	U
206-44-0	Fluoranthene	480	U
129-00-0	Pyrene	480	U
85-68-7	Butylbenzylphthalate	480	U
91-94-1	3,3'-Dichlorobenzidine	480	U
56-55-3	Benzo(a)anthracene	480	U
218-01-9	Chrysene	480	U
117-81-7	bis(2-Ethylhexyl)phthalate	210	JB
117-84-0	Di-n-octylphthalate	480	U
205-99-2	Benzo(b)fluoranthene	480	U
207-08-9	Benzo(k)fluoranthene	480	U
50-32-8	Benzo(a)pyrene	480	U
193-39-5	Indeno(1,2,3-cd)pyrene	480	U
53-70-3	Dibenz(a,h)anthracene	480	U
191-24-2	Benzo(g,h,i)perylene	480	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC3

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9746.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 34 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	500	U
111-44-4	bis(2-Chloroethyl)Ether	500	U
95-57-8	2-Chlorophenol	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
95-50-1	1,2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	2,2'-oxybis(1-Chloropropane)	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-di-n-propylamine	500	U
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
111-91-1	bis(2-Chloroethoxy)methane	500	U
120-83-2	2,4-Dichlorophenol	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
91-20-3	Naphthalene	500	U
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-Methylphenol	500	U
91-57-6	2-Methylnaphthalene	500	U
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	500	U
208-96-8	Acenaphthylene	500	U
606-20-2	2,6-Dinitrotoluene	500	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	500	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC3

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9746.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 34 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	500	U
121-14-2	2,4-Dinitrotoluene	500	U
84-66-2	Diethylphthalate	500	U
7005-72-3	4-Chlorophenyl-phenylether	500	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	500	U
101-55-3	4-Bromophenyl-phenylether	500	U
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
86-74-8	Carbazole	500	U
84-74-2	Di-n-butylphthalate	500	U
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	500	U
85-68-7	Butylbenzylphthalate	500	U
91-94-1	3,3'-Dichlorobenzidine	500	U
56-55-3	Benzo(a)anthracene	500	U
218-01-9	Chrysene	500	U
117-81-7	bis(2-Ethylhexyl)phthalate	360	JB
117-84-0	Di-n-octylphthalate	500	U
205-99-2	Benzo(b)fluoranthene	500	U
207-08-9	Benzo(k)fluoranthene	500	U
50-32-8	Benzo(a)pyrene	500	U
193-39-5	Indeno(1,2,3-cd)pyrene	500	U
53-70-3	Dibenz(a,h)anthracene	500	U
191-24-2	Benzo(g,h,i)perylene	500	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9749.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 42 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	570	U
111-44-4	bis(2-Chloroethyl)Ether	570	U
95-57-8	2-Chlorophenol	570	U
541-73-1	1,3-Dichlorobenzene	570	U
106-46-7	1,4-Dichlorobenzene	570	U
95-50-1	1,2-Dichlorobenzene	570	U
95-48-7	2-Methylphenol	570	U
108-60-1	2,2'-oxybis(1-Chloropropane)	570	U
106-44-5	4-Methylphenol	570	U
621-64-7	N-Nitroso-di-n-propylamine	570	U
67-72-1	Hexachloroethane	570	U
98-95-3	Nitrobenzene	570	U
78-59-1	Isophorone	570	U
88-75-5	2-Nitrophenol	570	U
105-67-9	2,4-Dimethylphenol	570	U
111-91-1	bis(2-Chloroethoxy)methane	570	U
120-83-2	2,4-Dichlorophenol	570	U
120-82-1	1,2,4-Trichlorobenzene	570	U
91-20-3	Naphthalene	32	J
106-47-8	4-Chloroaniline	570	U
87-68-3	Hexachlorobutadiene	570	U
59-50-7	4-Chloro-3-Methylphenol	570	U
91-57-6	2-Methylnaphthalene	31	J
77-47-4	Hexachlorocyclopentadiene	570	U
88-06-2	2,4,6-Trichlorophenol	570	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	570	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	570	U
208-96-8	Acenaphthylene	570	U
606-20-2	2,6-Dinitrotoluene	570	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	570	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9749.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 42 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	570	U
121-14-2	2,4-Dinitrotoluene	570	U
84-66-2	Diethylphthalate	570	U
7005-72-3	4-Chlorophenyl-phenylether	570	U
86-73-7	Fluorene	570	U
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	570	U
101-55-3	4-Bromophenyl-phenylether	570	U
118-74-1	Hexachlorobenzene	570	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	30	J
120-12-7	Anthracene	570	U
86-74-8	Carbazole	570	U
84-74-2	Di-n-butylphthalate	59	J
206-44-0	Fluoranthene	570	U
129-00-0	Pyrene	570	U
85-68-7	Butylbenzylphthalate	570	U
91-94-1	3,3'-Dichlorobenzidine	570	U
56-55-3	Benzo(a)anthracene	570	U
218-01-9	Chrysene	570	U
117-81-7	bis(2-Ethylhexyl)phthalate	310	JB
117-84-0	Di-n-octylphthalate	570	U
205-99-2	Benzo(b)fluoranthene	570	U
207-08-9	Benzo(k)fluoranthene	570	U
50-32-8	Benzo(a)pyrene	570	U
193-39-5	Indeno(1,2,3-cd)pyrene	570	U
53-70-3	Dibenz(a,h)anthracene	570	U
191-24-2	Benzo(g,h,i)perylene	570	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9750.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 50 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	660	U
111-44-4	bis(2-Chloroethyl)Ether	660	U
95-57-8	2-Chlorophenol	660	U
541-73-1	1,3-Dichlorobenzene	660	U
106-46-7	1,4-Dichlorobenzene	660	U
95-50-1	1,2-Dichlorobenzene	660	U
95-48-7	2-Methylphenol	660	U
108-60-1	2,2'-oxybis(1-Chloropropane)	660	U
106-44-5	4-Methylphenol	660	U
621-64-7	N-Nitroso-di-n-propylamine	660	U
67-72-1	Hexachloroethane	660	U
98-95-3	Nitrobenzene	660	U
78-59-1	Isophorone	660	U
88-75-5	2-Nitrophenol	660	U
105-67-9	2,4-Dimethylphenol	660	U
111-91-1	bis(2-Chloroethoxy)methane	660	U
120-83-2	2,4-Dichlorophenol	660	U
120-82-1	1,2,4-Trichlorobenzene	660	U
91-20-3	Naphthalene	52	J
106-47-8	4-Chloroaniline	660	U
87-68-3	Hexachlorobutadiene	660	U
59-50-7	4-Chloro-3-Methylphenol	660	U
91-57-6	2-Methylnaphthalene	140	J
77-47-4	Hexachlorocyclopentadiene	660	U
88-06-2	2,4,6-Trichlorophenol	660	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	660	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	660	U
208-96-8	Acenaphthylene	660	U
606-20-2	2,6-Dinitrotoluene	660	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	660	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9750.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 50 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	72	J
121-14-2	2,4-Dinitrotoluene	660	U
84-66-2	Diethylphthalate	660	U
7005-72-3	4-Chlorophenyl-phenylether	660	U
86-73-7	Fluorene	660	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	660	U
101-55-3	4-Bromophenyl-phenylether	660	U
118-74-1	Hexachlorobenzene	660	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	320	J
120-12-7	Anthracene	660	U
86-74-8	Carbazole	660	U
84-74-2	Di-n-butylphthalate	40	J
206-44-0	Fluoranthene	80	J
129-00-0	Pyrene	84	J
85-68-7	Butylbenzylphthalate	660	U
91-94-1	3,3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)anthracene	45	J
218-01-9	Chrysene	50	J
117-81-7	bis(2-Ethylhexyl)phthalate	350	JB
117-84-0	Di-n-octylphthalate	660	U
205-99-2	Benzo(b)fluoranthene	660	U
207-08-9	Benzo(k)fluoranthene	660	U
50-32-8	Benzo(a)pyrene	660	U
193-39-5	Indeno(1,2,3-cd)pyrene	660	U
53-70-3	Dibenz(a,h)anthracene	660	U
191-24-2	Benzo(g,h,i)perylene	660	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9756.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 35 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	510	U
111-44-4	bis(2-Chloroethyl)Ether	510	U
95-57-8	2-Chlorophenol	510	U
541-73-1	1,3-Dichlorobenzene	510	U
106-46-7	1,4-Dichlorobenzene	510	U
95-50-1	1,2-Dichlorobenzene	510	U
95-48-7	2-Methylphenol	510	U
108-60-1	2,2'-oxybis(1-Chloropropane)	510	U
106-44-5	4-Methylphenol	510	U
621-64-7	N-Nitroso-di-n-propylamine	510	U
67-72-1	Hexachloroethane	510	U
98-95-3	Nitrobenzene	510	U
78-59-1	Isophorone	510	U
88-75-5	2-Nitrophenol	510	U
105-67-9	2,4-Dimethylphenol	510	U
111-91-1	bis(2-Chloroethoxy)methane	510	U
120-83-2	2,4-Dichlorophenol	510	U
120-82-1	1,2,4-Trichlorobenzene	510	U
91-20-3	Naphthalene	510	U
106-47-8	4-Chloroaniline	510	U
87-68-3	Hexachlorobutadiene	510	U
59-50-7	4-Chloro-3-Methylphenol	510	U
91-57-6	2-Methylnaphthalene	510	U
77-47-4	Hexachlorocyclopentadiene	510	U
88-06-2	2,4,6-Trichlorophenol	510	U
95-95-4	2,4,5-Trichlorophenol	1300	U
91-58-7	2-Chloronaphthalene	510	U
88-74-4	2-Nitroaniline	1300	U
131-11-3	Dimethylphthalate	510	U
208-96-8	Acenaphthylene	510	U
606-20-2	2,6-Dinitrotoluene	510	U
99-09-2	3-Nitroaniline	1300	U
83-32-9	Acenaphthene	510	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9756.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 35 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1300	U
100-02-7	4-Nitrophenol	1300	U
132-64-9	Dibenzofuran	510	U
121-14-2	2,4-Dinitrotoluene	510	U
84-66-2	Diethylphthalate	510	U
7005-72-3	4-Chlorophenyl-phenylether	510	U
86-73-7	Fluorene	510	U
100-01-6	4-Nitroaniline	1300	U
534-52-1	4,6-Dinitro-2-methylphenol	1300	U
86-30-6	N-Nitrosodiphenylamine (1)	510	U
101-55-3	4-Bromophenyl-phenylether	510	U
118-74-1	Hexachlorobenzene	510	U
87-86-5	Pentachlorophenol	1300	U
85-01-8	Phenanthrene	510	U
120-12-7	Anthracene	510	U
86-74-8	Carbazole	510	U
84-74-2	Di-n-butylphthalate	27	J
206-44-0	Fluoranthene	510	U
129-00-0	Pyrene	510	U
85-68-7	Butylbenzylphthalate	510	U
91-94-1	3,3'-Dichlorobenzidine	510	U
56-55-3	Benzo(a)anthracene	510	U
218-01-9	Chrysene	510	U
117-81-7	bis(2-Ethylhexyl)phthalate	240	JB
117-84-0	Di-n-octylphthalate	510	U
205-99-2	Benzo(b)fluoranthene	510	U
207-08-9	Benzo(k)fluoranthene	510	U
50-32-8	Benzo(a)pyrene	510	U
193-39-5	Indeno(1,2,3-cd)pyrene	510	U
53-70-3	Dibenz(a,h)anthracene	510	U
191-24-2	Benzo(g,h,i)perylene	510	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9757.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 42 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	570	U
111-44-4	bis(2-Chloroethyl)Ether	570	U
95-57-8	2-Chlorophenol	570	U
541-73-1	1,3-Dichlorobenzene	570	U
106-46-7	1,4-Dichlorobenzene	570	U
95-50-1	1,2-Dichlorobenzene	570	U
95-48-7	2-Methylphenol	570	U
108-60-1	2,2'-oxybis(1-Chloropropane)	570	U
106-44-5	4-Methylphenol	570	U
621-64-7	N-Nitroso-di-n-propylamine	570	U
67-72-1	Hexachloroethane	570	U
98-95-3	Nitrobenzene	570	U
78-59-1	Isophorone	570	U
88-75-5	2-Nitrophenol	570	U
105-67-9	2,4-Dimethylphenol	570	U
111-91-1	bis(2-Chloroethoxy)methane	570	U
120-83-2	2,4-Dichlorophenol	570	U
120-82-1	1,2,4-Trichlorobenzene	570	U
91-20-3	Naphthalene	570	U
106-47-8	4-Chloroaniline	570	U
87-68-3	Hexachlorobutadiene	570	U
59-50-7	4-Chloro-3-Methylphenol	570	U
91-57-6	2-Methylnaphthalene	570	U
77-47-4	Hexachlorocyclopentadiene	570	U
88-06-2	2,4,6-Trichlorophenol	570	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	570	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	570	U
208-96-8	Acenaphthylene	570	U
606-20-2	2,6-Dinitrotoluene	570	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	570	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9757.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 42 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	570	U
121-14-2	2,4-Dinitrotoluene	570	U
84-66-2	Diethylphthalate	570	U
7005-72-3	4-Chlorophenyl-phenylether	570	U
86-73-7	Fluorene	570	U
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	570	U
101-55-3	4-Bromophenyl-phenylether	570	U
118-74-1	Hexachlorobenzene	570	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	570	U
120-12-7	Anthracene	570	U
86-74-8	Carbazole	570	U
84-74-2	Di-n-butylphthalate	44	J
206-44-0	Fluoranthene	570	U
129-00-0	Pyrene	570	U
85-68-7	Butylbenzylphthalate	570	U
91-94-1	3,3'-Dichlorobenzidine	570	U
56-55-3	Benzo(a)anthracene	570	U
218-01-9	Chrysene	570	U
117-81-7	bis(2-Ethylhexyl)phthalate	260	JB
117-84-0	Di-n-octylphthalate	570	U
205-99-2	Benzo(b)fluoranthene	570	U
207-08-9	Benzo(k)fluoranthene	570	U
50-32-8	Benzo(a)pyrene	570	U
193-39-5	Indeno(1,2,3-cd)pyrene	570	U
53-70-3	Dibenz(a,h)anthracene	570	U
191-24-2	Benzo(g,h,i)perylene	570	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG5

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9753.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 44 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	590	U
111-44-4	bis(2-Chloroethyl)Ether	590	U
95-57-8	2-Chlorophenol	590	U
541-73-1	1,3-Dichlorobenzene	590	U
106-46-7	1,4-Dichlorobenzene	590	U
95-50-1	1,2-Dichlorobenzene	590	U
95-48-7	2-Methylphenol	590	U
108-60-1	2,2'-oxybis(1-Chloropropane)	590	U
106-44-5	4-Methylphenol	590	U
621-64-7	N-Nitroso-di-n-propylamine	590	U
67-72-1	Hexachloroethane	590	U
98-95-3	Nitrobenzene	590	U
78-59-1	Isophorone	590	U
88-75-5	2-Nitrophenol	590	U
105-67-9	2,4-Dimethylphenol	590	U
111-91-1	bis(2-Chloroethoxy)methane	590	U
120-83-2	2,4-Dichlorophenol	590	U
120-82-1	1,2,4-Trichlorobenzene	590	U
91-20-3	Naphthalene	590	U
106-47-8	4-Chloroaniline	590	U
87-68-3	Hexachlorobutadiene	590	U
59-50-7	4-Chloro-3-Methylphenol	590	U
91-57-6	2-Methylnaphthalene	590	U
77-47-4	Hexachlorocyclopentadiene	590	U
88-06-2	2,4,6-Trichlorophenol	590	U
95-95-4	2,4,5-Trichlorophenol	1500	U
91-58-7	2-Chloronaphthalene	590	U
88-74-4	2-Nitroaniline	1500	U
131-11-3	Dimethylphthalate	590	U
208-96-8	Acenaphthylene	590	U
606-20-2	2,6-Dinitrotoluene	590	U
99-09-2	3-Nitroaniline	1500	U
83-32-9	Acenaphthene	590	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG5

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9753.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 44 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1500	U
100-02-7	4-Nitrophenol	1500	U
132-64-9	Dibenzofuran	590	U
121-14-2	2,4-Dinitrotoluene	590	U
84-66-2	Diethylphthalate	590	U
7005-72-3	4-Chlorophenyl-phenylether	590	U
86-73-7	Fluorene	590	U
100-01-6	4-Nitroaniline	1500	U
534-52-1	4,6-Dinitro-2-methylphenol	1500	U
86-30-6	N-Nitrosodiphenylamine (1)	590	U
101-55-3	4-Bromophenyl-phenylether	590	U
118-74-1	Hexachlorobenzene	590	U
87-86-5	Pentachlorophenol	1500	U
85-01-8	Phenanthrene	590	U
120-12-7	Anthracene	590	U
86-74-8	Carbazole	590	U
84-74-2	Di-n-butylphthalate	590	U
206-44-0	Fluoranthene	43	J
129-00-0	Pyrene	44	J
85-68-7	Butylbenzylphthalate	590	U
91-94-1	3,3'-Dichlorobenzidine	590	U
56-55-3	Benzo(a)anthracene	41	J
218-01-9	Chrysene	45	J
117-81-7	bis(2-Ethylhexyl)phthalate	330	JB
117-84-0	Di-n-octylphthalate	590	U
205-99-2	Benzo(b)fluoranthene	56	J
207-08-9	Benzo(k)fluoranthene	49	J
50-32-8	Benzo(a)pyrene	64	J
193-39-5	Indeno(1,2,3-cd)pyrene	67	J
53-70-3	Dibenz(a,h)anthracene	590	U
191-24-2	Benzo(g,h,i)perylene	63	J

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG6

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9759.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 65 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	940	U
111-44-4	bis(2-Chloroethyl)Ether	940	U
95-57-8	2-Chlorophenol	940	U
541-73-1	1,3-Dichlorobenzene	940	U
106-46-7	1,4-Dichlorobenzene	940	U
95-50-1	1,2-Dichlorobenzene	940	U
95-48-7	2-Methylphenol	940	U
108-60-1	2,2'-oxybis(1-Chloropropane)	940	U
106-44-5	4-Methylphenol	940	U
621-64-7	N-Nitroso-di-n-propylamine	940	U
67-72-1	Hexachloroethane	940	U
98-95-3	Nitrobenzene	940	U
78-59-1	Isophorone	940	U
88-75-5	2-Nitrophenol	940	U
105-67-9	2,4-Dimethylphenol	940	U
111-91-1	bis(2-Chloroethoxy)methane	940	U
120-83-2	2,4-Dichlorophenol	940	U
120-82-1	1,2,4-Trichlorobenzene	940	U
91-20-3	Naphthalene	940	U
106-47-8	4-Chloroaniline	940	U
87-68-3	Hexachlorobutadiene	940	U
59-50-7	4-Chloro-3-Methylphenol	940	U
91-57-6	2-Methylnaphthalene	940	U
77-47-4	Hexachlorocyclopentadiene	940	U
88-06-2	2,4,6-Trichlorophenol	940	U
95-95-4	2,4,5-Trichlorophenol	2400	U
91-58-7	2-Chloronaphthalene	940	U
88-74-4	2-Nitroaniline	2400	U
131-11-3	Dimethylphthalate	940	U
208-96-8	Acenaphthylene	940	U
606-20-2	2,6-Dinitrotoluene	940	U
99-09-2	3-Nitroaniline	2400	U
83-32-9	Acenaphthene	940	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG6

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9759.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 65 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2400	U
100-02-7	4-Nitrophenol	2400	U
132-64-9	Dibenzofuran	940	U
121-14-2	2,4-Dinitrotoluene	940	U
84-66-2	Diethylphthalate	940	U
7005-72-3	4-Chlorophenyl-phenylether	940	U
86-73-7	Fluorene	940	U
100-01-6	4-Nitroaniline	2400	U
534-52-1	4,6-Dinitro-2-methylphenol	2400	U
86-30-6	N-Nitrosodiphenylamine (1)	940	U
101-55-3	4-Bromophenyl-phenylether	940	U
118-74-1	Hexachlorobenzene	940	U
87-86-5	Pentachlorophenol	2400	U
85-01-8	Phenanthrene	81	J
120-12-7	Anthracene	940	U
86-74-8	Carbazole	940	U
84-74-2	Di-n-butylphthalate	940	U
206-44-0	Fluoranthene	180	J
129-00-0	Pyrene	230	J
85-68-7	Butylbenzylphthalate	940	U
91-94-1	3,3'-Dichlorobenzidine	940	U
56-55-3	Benzo(a)anthracene	280	J
218-01-9	Chrysene	320	J
117-81-7	bis(2-Ethylhexyl)phthalate	460	JB
117-84-0	Di-n-octylphthalate	940	U
205-99-2	Benzo(b)fluoranthene	490	J
207-08-9	Benzo(k)fluoranthene	390	J
50-32-8	Benzo(a)pyrene	510	J
193-39-5	Indeno(1,2,3-cd)pyrene	490	J
53-70-3	Dibenz(a,h)anthracene	120	J
191-24-2	Benzo(g,h,i)perylene	540	J

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG7

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9760.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 66 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	970	U
111-44-4	bis(2-Chloroethyl)Ether	970	U
95-57-8	2-Chlorophenol	970	U
541-73-1	1,3-Dichlorobenzene	970	U
106-46-7	1,4-Dichlorobenzene	970	U
95-50-1	1,2-Dichlorobenzene	970	U
95-48-7	2-Methylphenol	970	U
108-60-1	2,2'-oxybis(1-Chloropropane)	970	U
106-44-5	4-Methylphenol	970	U
621-64-7	N-Nitroso-di-n-propylamine	970	U
67-72-1	Hexachloroethane	970	U
98-95-3	Nitrobenzene	970	U
78-59-1	Isophorone	970	U
88-75-5	2-Nitrophenol	970	U
105-67-9	2,4-Dimethylphenol	970	U
111-91-1	bis(2-Chloroethoxy)methane	970	U
120-83-2	2,4-Dichlorophenol	970	U
120-82-1	1,2,4-Trichlorobenzene	970	U
91-20-3	Naphthalene	970	U
106-47-8	4-Chloroaniline	970	U
87-68-3	Hexachlorobutadiene	970	U
59-50-7	4-Chloro-3-Methylphenol	970	U
91-57-6	2-Methylnaphthalene	970	U
77-47-4	Hexachlorocyclopentadiene	970	U
88-06-2	2,4,6-Trichlorophenol	970	U
95-95-4	2,4,5-Trichlorophenol	2400	U
91-58-7	2-Chloronaphthalene	970	U
88-74-4	2-Nitroaniline	2400	U
131-11-3	Dimethylphthalate	970	U
208-96-8	Acenaphthylene	970	U
606-20-2	2,6-Dinitrotoluene	970	U
99-09-2	3-Nitroaniline	2400	U
83-32-9	Acenaphthene	970	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG7

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9760.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 66 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2400	U
100-02-7	4-Nitrophenol	2400	U
132-64-9	Dibenzofuran	970	U
121-14-2	2,4-Dinitrotoluene	970	U
84-66-2	Diethylphthalate	970	U
7005-72-3	4-Chlorophenyl-phenylether	970	U
86-73-7	Fluorene	970	U
100-01-6	4-Nitroaniline	2400	U
534-52-1	4,6-Dinitro-2-methylphenol	2400	U
86-30-6	N-Nitrosodiphenylamine (1)	970	U
101-55-3	4-Bromophenyl-phenylether	970	U
118-74-1	Hexachlorobenzene	970	U
87-86-5	Pentachlorophenol	2400	U
85-01-8	Phenanthrene	970	U
120-12-7	Anthracene	970	U
86-74-8	Carbazole	970	U
84-74-2	Di-n-butylphthalate	970	U
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	970	U
91-94-1	3,3'-Dichlorobenzidine	970	U
56-55-3	Benzo(a)anthracene	86	J
218-01-9	Chrysene	110	J
117-81-7	bis(2-Ethylhexyl)phthalate	410	JB
117-84-0	Di-n-octylphthalate	970	U
205-99-2	Benzo(b)fluoranthene	110	J
207-08-9	Benzo(k)fluoranthene	110	J
50-32-8	Benzo(a)pyrene	140	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	J
53-70-3	Dibenz(a,h)anthracene	970	U
191-24-2	Benzo(g,h,i)perylene	120	J

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG8

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9761.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 26 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	440	U
111-44-4	bis(2-Chloroethyl)Ether	440	U
95-57-8	2-Chlorophenol	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	2,2'-oxybis(1-Chloropropane)	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
120-82-1	1,2,4-Trichlorobenzene	440	U
91-20-3	Naphthalene	440	U
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	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
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	440	U
208-96-8	Acenaphthylene	440	U
606-20-2	2,6-Dinitrotoluene	440	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	440	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG8

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9761.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 26 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	440	U
121-14-2	2,4-Dinitrotoluene	440	U
84-66-2	Diethylphthalate	440	U
7005-72-3	4-Chlorophenyl-phenylether	440	U
86-73-7	Fluorene	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
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	23	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	23	J
117-81-7	bis(2-Ethylhexyl)phthalate	390	JB
117-84-0	Di-n-octylphthalate	440	U
205-99-2	Benzo(b)fluoranthene	440	U
207-08-9	Benzo(k)fluoranthene	23	J
50-32-8	Benzo(a)pyrene	26	J
193-39-5	Indeno(1,2,3-cd)pyrene	440	U
53-70-3	Dibenz(a,h)anthracene	440	U
191-24-2	Benzo(g,h,i)perylene	24	J

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG9

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9762.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 53 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	700	U
111-44-4	bis(2-Chloroethyl)Ether	700	U
95-57-8	2-Chlorophenol	700	U
541-73-1	1,3-Dichlorobenzene	700	U
106-46-7	1,4-Dichlorobenzene	700	U
95-50-1	1,2-Dichlorobenzene	700	U
95-48-7	2-Methylphenol	700	U
108-60-1	2,2'-oxybis(1-Chloropropane)	700	U
106-44-5	4-Methylphenol	700	U
621-64-7	N-Nitroso-di-n-propylamine	700	U
67-72-1	Hexachloroethane	700	U
98-95-3	Nitrobenzene	700	U
78-59-1	Isophorone	700	U
88-75-5	2-Nitrophenol	700	U
105-67-9	2,4-Dimethylphenol	700	U
111-91-1	bis(2-Chloroethoxy)methane	700	U
120-83-2	2,4-Dichlorophenol	700	U
120-82-1	1,2,4-Trichlorobenzene	700	U
91-20-3	Naphthalene	700	U
106-47-8	4-Chloroaniline	700	U
87-68-3	Hexachlorobutadiene	700	U
59-50-7	4-Chloro-3-Methylphenol	700	U
91-57-6	2-Methylnaphthalene	700	U
77-47-4	Hexachlorocyclopentadiene	700	U
88-06-2	2,4,6-Trichlorophenol	700	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	700	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	700	U
208-96-8	Acenaphthylene	700	U
606-20-2	2,6-Dinitrotoluene	700	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	700	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG9

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9762.D

Level: (low/med) LOW Date Received: 08/11/95

% Moisture: 53 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/18/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	700	U
121-14-2	2,4-Dinitrotoluene	700	U
84-66-2	Diethylphthalate	700	U
7005-72-3	4-Chlorophenyl-phenylether	700	U
86-73-7	Fluorene	700	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	700	U
101-55-3	4-Bromophenyl-phenylether	700	U
118-74-1	Hexachlorobenzene	700	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	700	U
120-12-7	Anthracene	700	U
86-74-8	Carbazole	700	U
84-74-2	Di-n-butylphthalate	44	J
206-44-0	Fluoranthene	700	U
129-00-0	Pyrene	700	U
85-68-7	Butylbenzylphthalate	700	U
91-94-1	3,3'-Dichlorobenzidine	700	U
56-55-3	Benzo(a)anthracene	700	U
218-01-9	Chrysene	36	J
117-81-7	bis(2-Ethylhexyl)phthalate	410	JB
117-84-0	Di-n-octylphthalate	700	U
205-99-2	Benzo(b)fluoranthene	44	J
207-08-9	Benzo(k)fluoranthene	36	J
50-32-8	Benzo(a)pyrene	44	J
193-39-5	Indeno(1,2,3-cd)pyrene	40	J
53-70-3	Dibenz(a,h)anthracene	700	U
191-24-2	Benzo(g,h,i)perylene	47	J

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: BL0814SJ

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9743.D

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

% Moisture: 0 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: BL0814SJ

Sample wt/vol: 30.0 (g/mL) G Lab File ID: V9743.D

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

% Moisture: 0 decanted: (Y/N) N Date Extracted: 08/14/95

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	830	U
100-02-7	4-Nitrophenol	830	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	830	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	60	J
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKSY

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Lab Sample ID: PBLKSY Lab File ID: 8_001867

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

Sulfur Cleanup: (Y/N) Y Date Extracted: 08/15/95

Date Analyzed (1): 08/21/95 Date Analyzed (2): 08/21/95

Time Analyzed (1): 2214 Time Analyzed (2): 2214

Instrument ID (1): HP_08A Instrument ID (2): HP_08B

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	EAQG8	23206.10	08/21/95	08/21/95
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

Comments:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKSW

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Lab Sample ID: PBLKSW Lab File ID: 8_001800

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

Sulfur Cleanup: (Y/N) Y Date Extracted: 08/14/95

Date Analyzed (1): 08/18/95 Date Analyzed (2): 08/18/95

Time Analyzed (1): 0311 Time Analyzed (2): 0311

Instrument ID (1): HP_08A Instrument ID (2): HP_08B

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	EAQC2	23206.01	08/18/95	08/18/95
02	EAQC3	23206.02	08/18/95	08/18/95
03	EAQC3MS	23206.02MS	08/18/95	08/18/95
04	EAQC3MSD	23206.02MSD	08/18/95	08/18/95
05	EAQC4	23206.03	08/18/95	08/18/95
06	EAQG1	23206.04	08/18/95	08/18/95
07	EAQG2	23206.05	08/18/95	08/18/95
08	EAQG4	23206.06	08/18/95	08/18/95
09	EAQG5	23206.07	08/18/95	08/18/95
10	EAQG6	23206.08	08/18/95	08/18/95
11	EAQG7	23206.09	08/18/95	08/18/95
12	EAQG9	23206.11	08/18/95	08/18/95
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

Comments:

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.01

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

% Moisture: 32 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.5	U
319-85-7	beta-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.5	U
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	4.8	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	4.8	U
50-29-3	4,4'-DDT	4.8	U
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin ketone	4.8	U
7421-93-4	Endrin aldehyde	4.8	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	98	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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC3

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.02

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

% Moisture: 34 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.6	U
319-85-7	beta-BHC	2.6	U
319-86-8	delta-BHC	2.6	U
58-89-9	gamma-BHC (Lindane)	2.6	U
76-44-8	Heptachlor	2.6	U
309-00-2	Aldrin	2.6	U
1024-57-3	Heptachlor epoxide	2.6	U
959-98-8	Endosulfan I	2.6	U
60-57-1	Dieldrin	5.0	U
72-55-9	4,4'-DDE	5.0	U
72-20-8	Endrin	5.0	U
33213-65-9	Endosulfan II	5.0	U
72-54-8	4,4'-DDD	5.0	U
1031-07-8	Endosulfan sulfate	5.0	U
50-29-3	4,4'-DDT	5.0	U
72-43-5	Methoxychlor	26	U
53494-70-5	Endrin ketone	5.0	U
7421-93-4	Endrin aldehyde	5.0	U
5103-71-9	alpha-Chlordane	2.6	U
5103-74-2	gamma-Chlordane	2.6	U
8001-35-2	Toxaphene	260	U
12674-11-2	Aroclor-1016	50	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	50	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQC4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.03

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

% Moisture: 42 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.7 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.9	U
319-85-7	beta-BHC	2.9	U
319-86-8	delta-BHC	2.9	U
58-89-9	gamma-BHC (Lindane)	2.9	U
76-44-8	Heptachlor	2.9	U
309-00-2	Aldrin	2.9	U
1024-57-3	Heptachlor epoxide	2.9	U
959-98-8	Endosulfan I	2.9	U
60-57-1	Dieldrin	5.7	U
72-55-9	4,4'-DDE	5.7	U
72-20-8	Endrin	8.5	
33213-65-9	Endosulfan II	5.7	U
72-54-8	4,4'-DDD	5.7	U
1031-07-8	Endosulfan sulfate	5.7	U
50-29-3	4,4'-DDT	5.7	U
72-43-5	Methoxychlor	29	U
53494-70-5	Endrin ketone	5.7	U
7421-93-4	Endrin aldehyde	8.6	P
5103-71-9	alpha-Chlordane	2.9	U
5103-74-2	gamma-Chlordane	2.9	U
8001-35-2	Toxaphene	290	U
12674-11-2	Aroclor-1016	57	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	57	U
11097-69-1	Aroclor-1254	57	U
11096-82-5	Aroclor-1260	57	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG1

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.04

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

% Moisture: 50 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.4	U
319-85-7	beta-BHC	3.4	U
319-86-8	delta-BHC	3.4	U
58-89-9	gamma-BHC (Lindane)	3.4	U
76-44-8	Heptachlor	3.4	U
309-00-2	Aldrin	3.4	U
1024-57-3	Heptachlor epoxide	3.4	U
959-98-8	Endosulfan I	3.4	U
60-57-1	Dieldrin	6.6	U
72-55-9	4,4'-DDE	6.6	U
72-20-8	Endrin	6.6	U
33213-65-9	Endosulfan II	6.6	U
72-54-8	4,4'-DDD	6.6	U
1031-07-8	Endosulfan sulfate	6.6	U
50-29-3	4,4'-DDT	6.6	U
72-43-5	Methoxychlor	34	U
53494-70-5	Endrin ketone	6.6	U
7421-93-4	Endrin aldehyde	13	P
5103-71-9	alpha-Chlordane	3.4	U
5103-74-2	gamma-Chlordane	3.4	U
8001-35-2	Toxaphene	340	U
12674-11-2	Aroclor-1016	66	U
11104-28-2	Aroclor-1221	130	U
11141-16-5	Aroclor-1232	66	U
53469-21-9	Aroclor-1242	66	U
12672-29-6	Aroclor-1248	66	U
11097-69-1	Aroclor-1254	66	U
11096-82-5	Aroclor-1260	66	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG2

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.05

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

% Moisture: 35 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.6	U
319-85-7	beta-BHC	2.6	U
319-86-8	delta-BHC	2.6	U
58-89-9	gamma-BHC (Lindane)	2.6	U
76-44-8	Heptachlor	2.6	U
309-00-2	Aldrin	2.6	U
1024-57-3	Heptachlor epoxide	2.6	U
959-98-8	Endosulfan I	2.6	U
60-57-1	Dieldrin	5.1	U
72-55-9	4,4'-DDE	5.1	U
72-20-8	Endrin	5.1	U
33213-65-9	Endosulfan II	5.1	U
72-54-8	4,4'-DDD	5.1	U
1031-07-8	Endosulfan sulfate	5.1	U
50-29-3	4,4'-DDT	5.1	U
72-43-5	Methoxychlor	26	U
53494-70-5	Endrin ketone	5.1	U
7421-93-4	Endrin aldehyde	6.7	P
5103-71-9	alpha-Chlordane	2.6	U
5103-74-2	gamma-Chlordane	2.6	U
8001-35-2	Toxaphene	260	U
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	51	U
12672-29-6	Aroclor-1248	51	U
11097-69-1	Aroclor-1254	51	U
11096-82-5	Aroclor-1260	51	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG4

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.06

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

% Moisture: 42 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.7 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.9	U
319-85-7	beta-BHC	2.9	U
319-86-8	delta-BHC	2.9	U
58-89-9	gamma-BHC (Lindane)	2.9	U
76-44-8	Heptachlor	2.9	U
309-00-2	Aldrin	2.9	U
1024-57-3	Heptachlor epoxide	2.9	U
959-98-8	Endosulfan I	2.9	U
60-57-1	Dieldrin	5.7	U
72-55-9	4,4'-DDE	5.7	U
72-20-8	Endrin	5.7	U
33213-65-9	Endosulfan II	5.7	U
72-54-8	4,4'-DDD	5.7	U
1031-07-8	Endosulfan sulfate	5.7	U
50-29-3	4,4'-DDT	5.7	U
72-43-5	Methoxychlor	29	U
53494-70-5	Endrin ketone	5.7	U
7421-93-4	Endrin aldehyde	5.7	U
5103-71-9	alpha-Chlordane	2.9	U
5103-74-2	gamma-Chlordane	2.9	U
8001-35-2	Toxaphene	290	U
12674-11-2	Aroclor-1016	57	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	57	U
11097-69-1	Aroclor-1254	57	U
11096-82-5	Aroclor-1260	57	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG5

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.07

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

% Moisture: 44 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.0	U
319-85-7	beta-BHC	3.0	U
319-86-8	delta-BHC	3.0	U
58-89-9	gamma-BHC (Lindane)	3.0	U
76-44-8	Heptachlor	3.4	P
309-00-2	Aldrin	3.0	U
1024-57-3	Heptachlor epoxide	3.0	U
959-98-8	Endosulfan I	3.0	U
60-57-1	Dieldrin	5.9	U
72-55-9	4,4'-DDE	5.9	U
72-20-8	Endrin	5.9	U
33213-65-9	Endosulfan II	5.9	U
72-54-8	4,4'-DDD	5.9	U
1031-07-8	Endosulfan sulfate	5.9	U
50-29-3	4,4'-DDT	5.9	U
72-43-5	Methoxychlor	30	U
53494-70-5	Endrin ketone	5.9	U
7421-93-4	Endrin aldehyde	12	P
5103-71-9	alpha-Chlordane	3.0	U
5103-74-2	gamma-Chlordane	3.0	U
8001-35-2	Toxaphene	300	U
12674-11-2	Aroclor-1016	59	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	59	U
53469-21-9	Aroclor-1242	59	U
12672-29-6	Aroclor-1248	59	U
11097-69-1	Aroclor-1254	59	U
11096-82-5	Aroclor-1260	59	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG6

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.08

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

% Moisture: 65 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	4.8	U
319-85-7	beta-BHC	4.8	U
319-86-8	delta-BHC	4.8	U
58-89-9	gamma-BHC (Lindane)	4.8	U
76-44-8	Heptachlor	4.8	U
309-00-2	Aldrin	4.8	U
1024-57-3	Heptachlor epoxide	4.8	U
959-98-8	Endosulfan I	4.8	U
60-57-1	Dieldrin	9.4	U
72-55-9	4,4'-DDE	9.4	U
72-20-8	Endrin	9.4	U
33213-65-9	Endosulfan II	9.4	U
72-54-8	4,4'-DDD	9.4	U
1031-07-8	Endosulfan sulfate	9.4	U
50-29-3	4,4'-DDT	9.4	U
72-43-5	Methoxychlor	48	U
53494-70-5	Endrin ketone	9.4	U
7421-93-4	Endrin aldehyde	9.4	U
5103-71-9	alpha-Chlordane	4.8	U
5103-74-2	gamma-Chlordane	4.8	U
8001-35-2	Toxaphene	480	U
12674-11-2	Aroclor-1016	94	U
11104-28-2	Aroclor-1221	190	U
11141-16-5	Aroclor-1232	94	U
53469-21-9	Aroclor-1242	94	U
12672-29-6	Aroclor-1248	94	U
11097-69-1	Aroclor-1254	94	U
11096-82-5	Aroclor-1260	94	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG7

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.09

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

% Moisture: 66 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	5.0	U
319-85-7	beta-BHC	5.0	U
319-86-8	delta-BHC	5.0	U
58-89-9	gamma-BHC (Lindane)	5.0	U
76-44-8	Heptachlor	5.0	U
309-00-2	Aldrin	5.0	U
1024-57-3	Heptachlor epoxide	5.0	U
959-98-8	Endosulfan I	5.0	U
60-57-1	Dieldrin	9.7	U
72-55-9	4,4'-DDE	9.7	U
72-20-8	Endrin	9.7	U
33213-65-9	Endosulfan II	9.7	U
72-54-8	4,4'-DDD	9.7	U
1031-07-8	Endosulfan sulfate	9.7	U
50-29-3	4,4'-DDT	9.7	U
72-43-5	Methoxychlor	50	U
53494-70-5	Endrin ketone	9.7	U
7421-93-4	Endrin aldehyde	9.7	U
5103-71-9	alpha-Chlordane	5.0	U
5103-74-2	gamma-Chlordane	5.0	U
8001-35-2	Toxaphene	500	U
12674-11-2	Aroclor-1016	97	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	97	U
53469-21-9	Aroclor-1242	97	U
12672-29-6	Aroclor-1248	97	U
11097-69-1	Aroclor-1254	97	U
11096-82-5	Aroclor-1260	97	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG8

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.10

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

% Moisture: 26 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/15/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/21/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.3	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	2.3	U
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	4.4	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	2.3	U
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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAQG9

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

Matrix: (soil/water) SOIL Lab Sample ID: 23206.11

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

% Moisture: 53 decanted: (Y/N) N Date Received: 08/11/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.6	U
319-85-7	beta-BHC	3.6	U
319-86-8	delta-BHC	3.6	U
58-89-9	gamma-BHC (Lindane)	3.6	U
76-44-8	Heptachlor	3.6	U
309-00-2	Aldrin	3.6	U
1024-57-3	Heptachlor epoxide	3.6	U
959-98-8	Endosulfan I	3.6	U
60-57-1	Dieldrin	7.0	U
72-55-9	4,4'-DDE	7.0	U
72-20-8	Endrin	7.0	U
33213-65-9	Endosulfan II	7.0	U
72-54-8	4,4'-DDD	7.0	U
1031-07-8	Endosulfan sulfate	7.0	U
50-29-3	4,4'-DDT	7.0	U
72-43-5	Methoxychlor	36	U
53494-70-5	Endrin ketone	7.0	U
7421-93-4	Endrin aldehyde	12	P
5103-71-9	alpha-Chlordane	3.6	U
5103-74-2	gamma-Chlordane	3.6	U
8001-35-2	Toxaphene	360	U
12674-11-2	Aroclor-1016	70	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	70	U
53469-21-9	Aroclor-1242	70	U
12672-29-6	Aroclor-1248	70	U
11097-69-1	Aroclor-1254	70	U
11096-82-5	Aroclor-1260	70	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKSY

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

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

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

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

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:08/15/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/21/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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

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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKSW

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

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: EAQC2

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

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

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

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/14/95

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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

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

EPA United States Environmental Protection Agency Contract Laboratory Program

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

SAS No. (if applicable):
Case No.: 23890

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

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

2. Region No.: V
Sampling Co.: IEPA
Sampler (Name): Ted Prescott
Sampler Signature: [signature]

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

4. Date Shipped: 8-10-95
Carrier: Federal Express
Airbill Number: 4413933915

5. Ship To
Southwest Labs of Oklahoma
1120 West Albany, Suite C
Broken Arrow, OK 74012
ATTN: Mark Smith

6. Date Received -- Received by: [signature] 8-11-95
Laboratory Contract Number:
Unit Price:
7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

CLP Sample Numbers (from labels)	A Matrix (from Box 1) / Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) / Other:	E RAS Analysis: VOA	BNA	Pest/ PCB	High only ARO/ TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
EAQC2	5	L	G	6	X				5009552-3	X201	[illegible]	MEAEQ1	[illegible]			
EAGC2	5	L	G	6		X	X		5-009554	X201	[illegible]	MEAEQ1	[illegible]			
EAGC3	5	L	G	6	X				5-009565-6	X202	[illegible]	MEAEQ2	[illegible]			
EAQC3	5	L	G	6		X	X		5-009557	X202	[illegible]	MEAEQ2	[illegible]			
EAGC4	5	L	G	6	X				5-009558-9	X203	[illegible]	MEAEQ3	[illegible]			
EAGC4	5	L	G	6		X	X		5-009560	X203	[illegible]	MEAEQ4	[illegible]			
EAGC4 EAGG5	5	L	G	6	X				5-009561-2	X204	[illegible]	MEAET4	[illegible]			
EAGG4	5	L	G	6		X	X		5-009563	X204	[illegible]	MEAET4	[illegible]			
EAGG5	5	L	G	6	X				5-009564-5	X205	[illegible]	MEAET5	[illegible]			
EAGG5	5	L	G	6		X	X		5-009566	X205	[illegible]	MEAET5	[illegible]			

Shipment for Case Complete? (Y/N): Y
Page: 1 of 3
Sample(s) to be Used for Laboratory QC: EAGC3
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]					
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? (Y/N/none)	
		[signature]	8/11/95 0930	All samples intact	

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

EAGC2

EPA Form 9110-2

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

A21-012-4 REV. 3/93

20

3589 1

EPA United States Environmental Protection Agency
Contract Laboratory Program

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

SAS No. (if applicable):
Case No.: 33890

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

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

2. Region No.: V
Sampling Co.: IEPA
Sampler (Name): Ted Pierott
Sampler Signature: [signature]

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

4. Date Shipped: 8-10-95
Carrier: Federal Express
Airbill Number: 4413933015

5. Ship To
Southwest Laboratory of Oklahoma
1700 West Albany, Suite C
Broken Arrow, OK 74012
ATTN: Mark Smith

6. Date Received -- Received by: [signature] 8-11-95
Laboratory Contract Number
Unit Price
7. Transfer to:
Date Received
Received by
Contract Number
Price

CLP Sample Numbers (from labels)	A Matrix (from Box 1) / Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) / Other:	E RAS Analysis: VOA	BNA	Pest/PCB	High only / ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
EAQG2	5	L	G	6	X				5-009583-4	X211	[illegible]	MEZN40	TP			
EAQG2	5	L	G	6		X	X		5-009585	X211	[illegible]	MEZN40	TP			

Shipment for Case Complete? (Y/N)
Page 3 of 3
Sample(s) to be Used for Laboratory QC: EAQC3
Additional Sampler Signatures
Chain of Custody Seal Number(s): [illegible]

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	[illegible] / 1115				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? (Y)/N/none	
		[signature]	8/11/95 0930	All samples intact	

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

EAQC2

EPA Form 9110-2

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

A21-012-4 REV. 3/93

3580.0

21 01

EPA United States Environmental Protection Agency
Contract Laboratory Program

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

SAS No. (if applicable):
Case No.: 33590

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

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

2. Region No.: V
Sampling Co.: EPA
Sampler (Name): Tom Rogers
Sampler Signature: [signature]
3. Purpose*: Lead: SF, PRP, ST, FED; Early Action: CLEM, PA, REM, RI, SI, ESI; Long-Term Action: FS, RD, RA, O&M, NPLD

4. Date Shipped: 8-11-95
Carrier: Federal Express
Airbill Number: 4413933915
5. Ship To: [illegible] Laboratories [illegible] 1A West Albany, St. C Bison Arrow OK 74012
ATTN: Mark Smith

6. Date Received -- Received by: [signature] 8-11-95
Laboratory Contract Number
Unit Price
7. Transfer to:
Date Received
Received by
Contract Number
Price

CLP Sample Numbers (from labels)	A Matrix (from Box 1) / Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) / Other:	E RAS Analysis: VOA	BNA	Pest/PCB	High only / ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
EAGG6	5	L	G	6	X				5-009561-8	X206		MEAET6	[illegible]			
EAGG6	5	L	G	6		X	X		5-009569	X206		MEAET6	[illegible]			
EAGG7	5	L	G	6	X				5-009570-1	X207		MEAES5	[illegible]			
EAGG7	5	L	G	6		X	X		5-009572	X207		MEAES5	[illegible]			
EAGG8	5	L	G	6	X				5-009573-4	X208		MEAES6	[illegible]			
EAGG8	5	L	G	6		X	X		5-009575	X208		MEAES6	[illegible]			
* EAGG9	5	L	G	6	X				5-009576-7	X209		MEAES7	[illegible]			
EAGG9	5	L	G	6		X	X		5-009578 5-009579	X209		MEAES7	[illegible]			
EAGG1	5	L	G	6	X				5-009581-1	X210		MEZN39	[illegible]			
EAGG1	5	L	G	6		X	X		5-009582	X210		MEZN39	[illegible]			

Shipment for Case Complete? (Y/N): [illegible]
Page: 2 of 3
Sample(s) to be Used for Laboratory QC: EAGC2
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*SD6 Final Sample

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	8-11-95 1110				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	
		[signature]	8/11/95 0930	All samples intact	

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - SMO Copy; Yellow - Lab Copy for Return to SMO; EAGC2

EPA Form 9110-2

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

A21-012-4 REV. 3/93

22

358967

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data Received for Review on Aug 25, 1995

FROM: Dennis Wesolowski, Chief (SQC-14J) BM for DJW
Contract Analytical Services Section 9/6/95

TO: Data User: IEPA

We have reviewed the data for the following case:

SITE NAME: Green AP Refractories (IL)

CASE NUMBER: 23890 SDG NUMBER: MEAEQ1

Number and Type of Samples: 11 (Soil)

Sample Numbers: MEAEQ1-3, MEAES5-7 MEAET4-6 MEZN39-40

Laboratory: SWDK Hrs. for Review: 4.0 +0.3 T.M.

Following are our findings:

Tl and Ag data are estimated due to blank contamination. Antimony data are estimated due to potential low bias. However, the data are acceptable for use with qualification. See attached CADRE data review narrative for detail.

BM Freeman
9/6/95

RECEIVED
JAN 12 1996
IEPA/DLPC

cc: Regional TPO

NARRATIVE

SITE: GREEN AP REFRACTORIES CASE: 23890
LABORATORY: SWOK SDG: MEAEQ1

The laboratory's portion of case 23890 contains 11 low level soil samples assayed for total metals and total cyanide. This is a CADRE review.

EVIDENTIAL AUDIT: All forms are originals. Most of the raw data sheets are originals, those photocopied are from bound lab notebooks. The originals that are present are sample tags, Federal Express airbill, chain of custody forms and Form DC-1. All forms are present and in the order indicated on the Form DC-2 [inventory sheet].

The temperature of the shipment cooler of samples when received by the lab was 13° C. The lab was advised by CLASS to go ahead with sample analyses (see phone log).

CADRE REVIEW:

Matrix Spike Criteria

Percent Recovery Limits	
Upper	125.0
Lower	75.0
Extreme lower	30.0

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low, indicating that sample results may be biased low.
Hits are qualified "L"and non-detects are qualified "UJ".

Antimony
MEAEQ1, MEAEQ2, MEAEQ3, MEAES5, MEAES6, MEAES7, MEAET4, MEAET5, MEAET6, MEZN39, MEZN40

Reviewed by: J. Redlin James Redlin
Lockheed ESAT
Date: 8/30/95

CLIENT/LABORATORY COMMUNICATION SYSTEM

PROJECT OFFICERS DEPARTMENT

TM

SWL X /AATS ____

TELEPHONE RECORD LOG

➤ In Reference to Case Contract/Proposal: 23890/23889

➤ Date of Call: 8/11/95

➤ Client Name: CLASS

➤ Client Contact: ROGER NOWAKOWSKI

➤ Call Initiated By: ☐ Client ☑ Laboratory

➤ In reference to data for the following sample number(s):

➤ Sumary of Questions/Issues Discussed: SHIPMENT COOLERS ARRIVED; ONE COOLER FOR CASE 23889 WAS 14°C & SHIPMENT COOLER FOR CASE 23890 WAS 13°C

➤ Summary of Resolution: GO AHEAD & ANALYZE SAMPLES AND NOTE INCIDENT IN THE CASE NARRATIVE

Signature: Charles Jones *Date:* 8/11/95

➤ Distribution: ✔ White/Lab Copy ✔ Yellow/Client Copy ✔ Pink/Project Officer Copy

SOUTHWEST LABORATORY OF OKLAHOMA, INC. • AMERICAN ANALYTICAL & TECHNICAL SERVICES, INC.
1700 W. ALBANY • BROKEN ARROW, OKLAHOMA 74012 • OFFICE (918) 251-2858 • FAX (918) 251-2599 [PJ001-0994-02]

001

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany / Broken Arrow, Oklahoma 74012 / Office (918) 251-2858 / Fax (918) 251-2599

SDG NARRATIVE

CONTRACT:68-D3-0040 **DATE:08/24/95**
CASE:23890 **SOW NO.:ILM03.0**
SDG:MEAEQ1 **EPISODE NO.:23189**

INORGANIC METAL FRACTION:

11 soil samples + 1 MS/DUP/LCS were submitted for ICP, CN and Hg analysis. The samples analyses were completed according to SOW(ILM03.0).

No major problems occurred during the digestion or analyses of these samples.
As noted in the client/Laboratory communication. The shipment cooler for this case was 13 C. We were instructed to go ahead with the sample analysis.

Initial and Continuing Calibration Checks: No problems.

Initial and Continuing Calibration Blanks: The following elements showed low level concentrations below the Contract Required Detection Limit in the Calibration Blanks: Al, As. Ca, Cr, Co, Mn, Ni, Ag, Na, Tl, V. No action required.

Linearity near the CRDL (CRA & CRI): No problems.

Preparation Blanks: The following elements showed low level concentrations below the Contract Required Detection Limit in the Preparation Blank: Cr, Fe, Mg,Ni, Na, Tl. No action required.

Lab Control Spikes: No problems.

Matrix Spike(s) (and MSD): The following element was outside the control limits of 75-125% recovery: Sb. All associated samples were flagged with a "N" on Form I's. No action required

Duplicate(s) (and MSD): No problems

Serial Dilution (ICP): No problems

Sincerely,

Jason D. Ruckman
Inorganic Program Manager

Laboratory Blanks Criteria

DC-284: The following inorganic samples are associated with a blank concentration which is greater than the instrument detection limit (IDL). The sample concentration is also greater than the IDL and less than five times the blank concentration.
Hits are qualified "H".

Silver
MEAEQ3

Sodium
MEAEQ1, MEAEQ2

Thallium
MEAEQ1, MEAEQ2, MEAEQ3

After a visual inspection of the laboratory blanks by the reviewer, it was noted that the PBS for Na and the PBS and a CCB for Tl qualified more Na and Tl data according to DC-284.
Hits are qualified "H".

Sodium
MEAES5, MEAES6, MEAES7, MEAET4, MEAET5, MEAET6, MEZN39, MEZN40

Thallium
MEAES5, MEAES6, MEAES7, MEAET5, MEAET6, MEZN39, MEZN40

Reviewed by: J. Redlin
James Redlin
Lockheed ESAT

Date: 8/30/95

INORGANIC CADRE DATA QUALIFIER DEFINITIONS

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

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

J Indicates the associated value is an estimated quantity.

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

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

L Low bias

H High bias

U.S. EPA - CLP

002

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Name: SOUTHWEST_LAB_OF_OK_____ Contract: 68-D3-0040

Lab Code: SWOK__ Case No.: 23890 SAS No.: _____ SDG No.:MEAEQ1

SOW No.: ILM03

EPA Sample No.	Lab Sample ID
MEAEQ1	2318901
MEAEQ2	2318902
MEAEQ2D	2318902D
MEAEQ2S	2318902S
MEAEQ3	2318903
MEAES5	2318904
MEAES6	2318905
MEAES7	2318906
MEAET4	2318907
MEAET5	2318908
MEAET6	2318909
MEZN39	2318910
MEZN40	2318911

RECEIVED
AUG 2 5 1995
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

Were ICP interelement corrections applied ? Yes/No YES

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

Comments:

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

Signature: _____ Name: Jason D. Ruckman

Date: August 24, 1995 Title: Inorganic Program Manager

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEAEQ1

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040
Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1
Matrix (soil/water): SOIL Lab Sample ID: 2318901
Level (low/med): LOW Date Received: 08/11/95
% Solids: 75.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3530			P
7440-36-0	Antimony	0.80	U	N	P
7440-38-2	Arsenic	3.9			P
7440-39-3	Barium	29.9	B		P
7440-41-7	Beryllium	0.49	B		P
7440-43-9	Cadmium	0.27	U		P
7440-70-2	Calcium	2040			P
7440-47-3	Chromium	4.7			P
7440-48-4	Cobalt	4.9	B		P
7440-50-8	Copper	14.0			P
7439-89-6	Iron	9110			P
7439-92-1	Lead	45.2			P
7439-95-4	Magnesium	229	B		P
7439-96-5	Manganese	48.6			P
7439-97-6	Mercury	0.13	U		AV
7440-02-0	Nickel	7.2	B		P
7440-09-7	Potassium	755	B		P
7782-49-2	Selenium	0.65	B		P
7440-22-4	Silver	0.27	U		P
7440-23-5	Sodium	50.9	B		P
7440-28-0	Thallium	1.00	B		P
7440-62-2	Vanadium	9.8	B		P
7440-66-6	Zinc	8.5			P
	Cyanide	0.20	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: COLORLESS Clarity After: Artifacts:

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEAEQ2

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040
Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1
Matrix (soil/water): SOIL Lab Sample ID: 2318902
Level (low/med): LOW Date Received: 08/11/95
% Solids: 65.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3340			P
7440-36-0	Antimony	0.92	U	N	P
7440-38-2	Arsenic	6.4			P
7440-39-3	Barium	15.6	B		P
7440-41-7	Beryllium	0.90	B		P
7440-43-9	Cadmium	12.4			P
7440-70-2	Calcium	1580			P
7440-47-3	Chromium	7.4			P
7440-48-4	Cobalt	22.6			P
7440-50-8	Copper	30.1			P
7439-89-6	Iron	18100			P
7439-92-1	Lead	22.0			P
7439-95-4	Magnesium	424	B		P
7439-96-5	Manganese	184			P
7439-97-6	Mercury	0.15	U		AV
7440-02-0	Nickel	48.8			P
7440-09-7	Potassium	916	B		P
7782-49-2	Selenium	2.9			P
7440-22-4	Silver	0.31	U		P
7440-23-5	Sodium	118	B		P
7440-28-0	Thallium	1.6	B		P
7440-62-2	Vanadium	8.4	B		P
7440-66-6	Zinc	214			P
	Cyanide	0.23	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: COLORLESS Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEAEQ3

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040
Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1
Matrix (soil/water): SOIL Lab Sample ID: 2318903
Level (low/med): LOW Date Received: 08/11/95
% Solids: 65.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3350			P
7440-36-0	Antimony	1.4	B	N	P
7440-38-2	Arsenic	15.0			P
7440-39-3	Barium	46.9	B		P
7440-41-7	Beryllium	0.59	B		P
7440-43-9	Cadmium	2.4			P
7440-70-2	Calcium	640	B		P
7440-47-3	Chromium	8.9			P
7440-48-4	Cobalt	4.6	B		P
7440-50-8	Copper	47.6			P
7439-89-6	Iron	26300			P
7439-92-1	Lead	31.9			P
7439-95-4	Magnesium	363	B		P
7439-96-5	Manganese	41.0			P
7439-97-6	Mercury	0.15	U		AV
7440-02-0	Nickel	9.4	B		P
7440-09-7	Potassium	2760			P
7782-49-2	Selenium	12.9			P
7440-22-4	Silver	0.42	B		P
7440-23-5	Sodium	344	B		P
7440-28-0	Thallium	3.7			P
7440-62-2	Vanadium	24.7			P
7440-66-6	Zinc	44.5			P
	Cyanide	0.23	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: COLORLESS Clarity After: Artifacts:

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO. 006

MEAES5

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1

Matrix (soil/water): SOIL Lab Sample ID: 2318904

Level (low/med): LOW Date Received: 08/11/95

% Solids: 61.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7320			P
7440-36-0	Antimony	0.98	U	N	P
7440-38-2	Arsenic	5.6			P
7440-39-3	Barium	85.2			P
7440-41-7	Beryllium	1.5	B		P
7440-43-9	Cadmium	9.1			P
7440-70-2	Calcium	8840			P
7440-47-3	Chromium	10			P
7440-48-4	Cobalt	19.6			P
7440-50-8	Copper	26.0			P
7439-89-6	Iron	19900			P
7439-92-1	Lead	21.1			P
7439-95-4	Magnesium	2570			P
7439-96-5	Manganese	105			P
7439-97-6	Mercury	0.16	U		AV
7440-02-0	Nickel	42.3			P
7440-09-7	Potassium	2340			P
7782-49-2	Selenium	2.8			P
7440-22-4	Silver	0.33	U		P
7440-23-5	Sodium	77.8	B		P
7440-28-0	Thallium	1.3	B		P
7440-62-2	Vanadium	13.9	B		P
7440-66-6	Zinc	249			P
	Cyanide	0.25	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO. 007

MEAES6

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040
Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1
Matrix (soil/water): SOIL Lab Sample ID: 2318905
Level (low/med): LOW Date Received: 08/11/95
% Solids: 37.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17900			P
7440-36-0	Antimony	1.6	U	N	P
7440-38-2	Arsenic	10.9			P
7440-39-3	Barium	103	B		P
7440-41-7	Beryllium	4.1			P
7440-43-9	Cadmium	38.1			P
7440-70-2	Calcium	9400			P
7440-47-3	Chromium	31.2			P
7440-48-4	Cobalt	49.0			P
7440-50-8	Copper	111			P
7439-89-6	Iron	19300			P
7439-92-1	Lead	39.7			P
7439-95-4	Magnesium	1720	B		P
7439-96-5	Manganese	142			P
7439-97-6	Mercury	0.27	U		AV
7440-02-0	Nickel	232			P
7440-09-7	Potassium	1760	B		P
7782-49-2	Selenium	42.9			P
7440-22-4	Silver	0.53	U		P
7440-23-5	Sodium	96.3	B		P
7440-28-0	Thallium	1.1	B		P
7440-62-2	Vanadium	24.7	B		P
7440-66-6	Zinc	825			P
	Cyanide	0.40	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: COLORLESS Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEAES7

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1

Matrix (soil/water): SOIL Lab Sample ID: 2318906

Level (low/med): LOW Date Received: 08/11/95

% Solids: 57.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3120			P
7440-36-0	Antimony	1.1	U	N	P
7440-38-2	Arsenic	7.4			P
7440-39-3	Barium	40.1	B		P
7440-41-7	Beryllium	0.71	B		P
7440-43-9	Cadmium	8.2			P
7440-70-2	Calcium	8140			P
7440-47-3	Chromium	5.9			P
7440-48-4	Cobalt	18.7			P
7440-50-8	Copper	31.1			P
7439-89-6	Iron	18600			P
7439-92-1	Lead	19.4			P
7439-95-4	Magnesium	3020			P
7439-96-5	Manganese	195			P
7439-97-6	Mercury	0.18	U		AV
7440-02-0	Nickel	46.0			P
7440-09-7	Potassium	1380	B		P
7782-49-2	Selenium	7.5			P
7440-22-4	Silver	0.35	U		P
7440-23-5	Sodium	66.8	B		P
7440-28-0	Thallium	1.7	B		P
7440-62-2	Vanadium	11.1	B		P
7440-66-6	Zinc	461			P
	Cyanide	0.26	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO. 009

MEAET4

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1

Matrix (soil/water): SOIL Lab Sample ID: 2318907

Level (low/med): LOW Date Received: 08/11/95

% Solids: 56.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8040			P
7440-36-0	Antimony	1.3	B	N	P
7440-38-2	Arsenic	21.7			P
7440-39-3	Barium	84.3			P
7440-41-7	Beryllium	2.0			P
7440-43-9	Cadmium	5.6			P
7440-70-2	Calcium	1220	B		P
7440-47-3	Chromium	9.5			P
7440-48-4	Cobalt	8.0	B		P
7440-50-8	Copper	39.7			P
7439-89-6	Iron	33600			P
7439-92-1	Lead	40.3			P
7439-95-4	Magnesium	448	B		P
7439-96-5	Manganese	75.5			P
7439-97-6	Mercury	0.18	U		AV
7440-02-0	Nickel	28.9			P
7440-09-7	Potassium	1840			P
7782-49-2	Selenium	2.5			P
7440-22-4	Silver	0.36	U		P
7440-23-5	Sodium	76.8	B		P
7440-28-0	Thallium	4.2			P
7440-62-2	Vanadium	10.1	B		P
7440-66-6	Zinc	150			P
	Cyanide	0.27	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO. 01

MEAET5

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1

Matrix (soil/water): SOIL Lab Sample ID: 2318908

Level (low/med): LOW Date Received: 08/11/95

% Solids: 64.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6440			P
7440-36-0	Antimony	0.93	U	N	P
7440-38-2	Arsenic	11.8			P
7440-39-3	Barium	62.2	B		P
7440-41-7	Beryllium	1.5	B		P
7440-43-9	Cadmium	13.8			P
7440-70-2	Calcium	3750			P
7440-47-3	Chromium	9.8			P
7440-48-4	Cobalt	8.5	B		P
7440-50-8	Copper	33.8			P
7439-89-6	Iron	18900			P
7439-92-1	Lead	26.0			P
7439-95-4	Magnesium	676	B		P
7439-96-5	Manganese	80.0			P
7439-97-6	Mercury	0.16	U		AV
7440-02-0	Nickel	36.5			P
7440-09-7	Potassium	1520	B		P
7782-49-2	Selenium	2.1			P
7440-22-4	Silver	0.31	U		P
7440-23-5	Sodium	141	B		P
7440-28-0	Thallium	1.1	B		P
7440-62-2	Vanadium	17.5			P
7440-66-6	Zinc	182			P
	Cyanide	0.23	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO. 01

MEAET6

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1

Matrix (soil/water): SOIL Lab Sample ID: 2318909

Level (low/med): LOW Date Received: 08/11/95

% Solids: 59.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9810			P
7440-36-0	Antimony	1.0	U	N	P
7440-38-2	Arsenic	5.6			P
7440-39-3	Barium	95.3			P
7440-41-7	Beryllium	2.1			P
7440-43-9	Cadmium	12.7			P
7440-70-2	Calcium	9750			P
7440-47-3	Chromium	12.2			P
7440-48-4	Cobalt	20.7			P
7440-50-8	Copper	31.5			P
7439-89-6	Iron	21400			P
7439-92-1	Lead	25.5			P
7439-95-4	Magnesium	3090			P
7439-96-5	Manganese	96.8			P
7439-97-6	Mercury	0.17	U		AV
7440-02-0	Nickel	54.2			P
7440-09-7	Potassium	2470			P
7782-49-2	Selenium	3.0			P
7440-22-4	Silver	0.33	U		P
7440-23-5	Sodium	51.7	B		P
7440-28-0	Thallium	1.6	B		P
7440-62-2	Vanadium	15.9	B		P
7440-66-6	Zinc	306			P
	Cyanide	0.30	B		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO. 01

MEZN39

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040
Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1
Matrix (soil/water): SOIL Lab Sample ID: 2318910
Level (low/med): LOW Date Received: 08/11/95
% Solids: 74.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2080			P
7440-36-0	Antimony	1.7	B	N	P
7440-38-2	Arsenic	5.6			P
7440-39-3	Barium	78.0			P
7440-41-7	Beryllium	0.70	B		P
7440-43-9	Cadmium	0.27	U		P
7440-70-2	Calcium	23700			P
7440-47-3	Chromium	4.8			P
7440-48-4	Cobalt	3.6	B		P
7440-50-8	Copper	44.8			P
7439-89-6	Iron	7500			P
7439-92-1	Lead	17.9			P
7439-95-4	Magnesium	13400			P
7439-96-5	Manganese	105			P
7439-97-6	Mercury	0.13	U		AV
7440-02-0	Nickel	19.4			P
7440-09-7	Potassium	3420			P
7782-49-2	Selenium	21.1			P
7440-22-4	Silver	0.45	B		P
7440-23-5	Sodium	203	B		P
7440-28-0	Thallium	1.3	B		P
7440-62-2	Vanadium	57.0			P
7440-66-6	Zinc	7.8			P
	Cyanide	0.20	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: COLORLESS Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEZN40

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1

Matrix (soil/water): SOIL Lab Sample ID: 2318911

Level (low/med): LOW Date Received: 08/11/95

% Solids: 63.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13500			P
7440-36-0	Antimony	0.95	U	N	P
7440-38-2	Arsenic	9.1			P
7440-39-3	Barium	35.1	B		P
7440-41-7	Beryllium	4.8			P
7440-43-9	Cadmium	28.4			P
7440-70-2	Calcium	5980			P
7440-47-3	Chromium	13.1			P
7440-48-4	Cobalt	56.1			P
7440-50-8	Copper	69.9			P
7439-89-6	Iron	22700			P
7439-92-1	Lead	20.4			P
7439-95-4	Magnesium	2670			P
7439-96-5	Manganese	249			P
7439-97-6	Mercury	0.16	U		AV
7440-02-0	Nickel	172			P
7440-09-7	Potassium	1700			P
7782-49-2	Selenium	7.1			P
7440-22-4	Silver	0.32	U		P
7440-23-5	Sodium	99.8	B		P
7440-28-0	Thallium	1.3	B		P
7440-62-2	Vanadium	14.4	B		P
7440-66-6	Zinc	719			P
	Cyanide	0.24	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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3
BLANKS

020

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: 68-D3-0040

Lab Code: SWOK__ Case No.: 23890 SAS No.: _____ SDG No.: MEAEQ1

Preparation Blank Matrix (soil/water): SOIL_

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	9.4	B	8.0	U	12.7	B	13.9	B	1.600	U	P
Antimony	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
Arsenic	2.0	U	2.4	B	2.0	U	2.0	U	0.400	U	P
Barium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Calcium	12.3	B	44.5	B	10.6	B	11.0	B	1.000	U	P
Chromium	1.0	U	1.4	B	1.0	U	1.0	U	0.659	B	P
Cobalt	1.0	U	1.2	B	1.0	U	1.0	U	0.200	U	P
pper	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
ron	10.0	U	10.0	U	10.0	U	10.0	U	3.918	B	P
Lead	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Magnesium	35.0	U	35.0	U	35.0	U	35.0	U	-7.563	B	P
Manganese	1.0	U	1.1	B	1.0	U	1.0	U	0.200	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	AV
Nickel	1.0	U	1.7	B	1.2	B	1.0	U	0.502	B	P
Potassium	-938.4	B	834.0	U	834.0	U	834.0	U	166.800	U	P
Selenium	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	P
Silver	1.0	U	1.5	B	1.0	U	1.0	U	0.200	U	P
Sodium	-261.6	B	174.2	B	142.0	U	142.0	U	35.128	B	P
Thallium	2.0	U	4.3	B	2.0	B	2.0	U	0.657	B	P
Vanadium	1.0	U	1.1	B	1.0	U	1.0	U	0.200	U	P
Zinc	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Cyanide	3.0	U	3.0	U	3.0	U	3.0	U	0.150	U	AS

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3
BLANKS

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: 68-D3-0040

Lab Code: SWOK__ Case No.: 23890 SAS No.: _____ SDG No.: MEAEQ1

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			8.1	B							P
Antimony			3.0	U							P
Arsenic			2.0	U							P
Barium			1.0	U							P
Beryllium			1.0	U							P
Cadmium			1.0	U							P
Calcium			9.3	B							P
Chromium			1.0	U							P
Cobalt			1.0	U							P
Copper			1.0	U							P
Iron			10.0	U							P
Lead			1.0	U							P
Magnesium	35.0	U	35.0	U	35.0	U	35.0	U			P
Manganese			1.0	U							P
Mercury											NR
Nickel			1.0	U							P
Potassium			834.0	U							P
Selenium			2.0	U							P
Silver			1.0	U							P
Sodium			142.0	U							P
Thallium			2.1	B							P
Vanadium			1.0	U							P
Zinc			1.0	U							P
Cyanide											NR

U.S. EPA - CLP

3
BLANKS

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: 68-D3-0040

Lab Code: SWOK__ Case No.: 23890 SAS No.: _____ SDG No.: MEAEQ1

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony	3.0	U	3.0	U	3.0	U	3.0	U			P
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
pper											NR
ron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEAEQ2S

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract:68-D3-0040

Lab Code: SWOK__ Case No.: 23890 SAS No.: _____ SDG No.: MEAEQ1

Matrix: __SOIL_____ Level (low/med): _LOW____

% Solids for Sample: _65.3

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	66.2018		0.9188	U	153.14	43.2	N	P
Arsenic	75-125	625.1112		6.4343		612.56	101.0		P
Barium	75-125	633.8254		15.6104	B	612.56	100.9		P
Beryllium	75-125	17.2907		0.8980	B	15.31	107.1		P
Cadmium	75-125	25.5593		12.4260		15.31	85.8		P
Calcium									NR
Chromium	75-125	70.7093		7.4475		61.26	103.3		P
Cobalt	75-125	180.5593		22.6172		153.14	103.1		P
Copper	75-125	109.9259		30.1397		76.57	104.2		P
									NR
Lead	75-125	174.1253		22.0009		153.14	99.3		P
Magnesium									NR
Manganese	75-125	323.6551		184.3198		153.14	91.0		P
Mercury	75-125	0.6845		0.1531	U	0.77	88.9		AV
Nickel	75-125	202.5994		48.7798		153.14	100.4		P
Potassium									NR
Selenium	75-125	613.5436		2.9342		612.56	99.7		P
Silver	75-125	15.3130		0.3063	U	15.31	100.0		P
Sodium									NR
Thallium	75-125	601.8628		1.6380	B	612.56	98.0		P
Vanadium	75-125	162.6021		8.4199	B	153.14	100.7		P
Zinc	75-125	331.4842		213.5590		153.14	77.0		P
Cyanide	75-125	6.1529		0.2297	U	7.66	80.3		AS

Comments:

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEAEQ2A

Lab Name: SOUTHWEST_LAB_OF_OK Contract: 68-D3-0040

Lab Code: SWOK Case No.: 23890 SAS No.: SDG No.: MEAEQ1

Matrix: SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									NR
Antimony		122.95		3.00	U	120.0	102.5		P
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
on									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO. 027

MEAEQ2D

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: 68-D3-0040

Lab Code: SWOK__ Case No.: 23890 SAS No.: _____ SDG No.: MEAEQ1

Matrix (soil/water): SOIL_ Level (low/med): _LOW__

Solids for Sample: _65.3 % Solids for Duplicate: __65.5

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		3336.9755		3395.5528		1.7		P
Antimony		0.9188	U	0.9188	U			P
Arsenic	3.1	6.4343		5.8147		10.1		P
Barium		15.6104	B	14.9464	B	4.3		P
Beryllium		0.8980	B	0.8263	B	8.3		P
Cadmium		12.4260		12.3565		0.6		P
Calcium	1531.4	1584.0123		1536.5075		3.0		P
Chromium	3.1	7.4475		7.2245		3.0		P
Cobalt	15.3	22.6172		18.9574		17.6		P
Copper	7.7	30.1397		29.4003		2.5		P
Iron		18099.6744		16151.9130		11.4		P
Lead		22.0009		20.9213		5.0		P
Magnesium		423.5945	B	405.3933	B	4.4		P
Manganese		184.3198		190.2478		3.2		P
Mercury		0.1531	U	0.1531	U			AV
Nickel	12.3	48.7798		40.2708		19.1		P
Potassium		916.4502	B	547.7011	B	50.4		P
Selenium	1.5	2.9342		3.1314		6.5		P
Silver		0.3063	U	0.3063	U			P
Sodium		118.0796	B	81.5335	B	36.6		P
Thallium		1.6380	B	1.7617	B	7.3		P
Vanadium		8.4199	B	8.9476	B	6.1		P
Zinc		213.5590		215.3069		0.8		P
Cyanide		0.2297	U	0.2297	U			AS

FORM VI - IN

ILM02.1

10
Instrument Detection Limits (Quarterly)

Name: SOUTHWEST_LAB_OF_OK
Lab Code: SWOK Case No.: 23890
ICP ID Number: TJA#1
Flame AA ID Number :
Furnace AA ID Number :

Contract: 68-D3-0040
SAS No.:
Date: 07/05/95
SDG No.: MEAEQ1

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		200	8.0	P
Antimony	206.84		60	3.0	P
Arsenic	189.04		10	2.0	P
Barium	493.41		200	1.0	P
Beryllium	313.04		5	1.0	P
Cadmium	226.50		5	1.0	P
Calcium	317.93		5000	5.0	P
Chromium	267.72		10	1.0	P
Cobalt	228.62		50	1.0	P
Copper	324.75		25	1.0	P
Iron	271.44		100	10.0	P
Lead	220.35		3	1.0	P
Magnesium	279.08		5000	35.0	P
Manganese	257.61		15	1.0	P
Mercury			0.2		NR
Nickel	231.60		40	1.0	P
Potassium	404.72		5000	834.0	P
Selenium	196.03		5	2.0	P
Silver	328.07		10	1.0	P
Sodium	330.23		5000	142.0	P
Thallium	190.87		10	2.0	P
Vanadium	292.40		50	1.0	P
Zinc	213.86		20	1.0	P
Cyanide			10		NR

Comments:

10

032

Instrument Detection Limits (Quarterly)

Name: SOUTHWEST_LAB_OF_OK
Lab Code: SWOK Case No.: 23890
ICP ID Number:
Flame AA ID Number : PS200A
Furnace AA ID Number :

Contract: 68-D3-0040
SAS No.:
Date: 07/10/95
SDG No.: MEAEQ1

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.30		0.2	0.2	AV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Cyanide			10		NR

Comments:

10

Instrument Detection Limits (Quarterly)

Name: SOUTHWEST_LAB_OF_OK
Lab Code: SWOK Case No.: 23890
ICP ID Number:
Flame AA ID Number : LACHAT
Furnace AA ID Number :

Contract: 68-D3-0040
SAS No.:
Date: 07/28/95
SDG No.: MEAEQ1

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Cyanide	578.00		10	3.0	AS

Comments:

EPA United States Environmental Protection Agency Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analyis)

SAS No. (if applicable):

Case No.: 23210

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

2. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not preserved

2. Region No.: V

Sampling Co.: IEPA

4. Date Shipped: 8-10-95

Carrier: Federal Express

6. Date Received -- Received by: [signature] 8-11-95

Sampler (Name): Ted Prescott

Airbill Number: 4411393483 6

Laboratory Contract Number: 68-D3-0040

Unit Price: $175.00

Sampler Signature: [signature]

5. Ship To: Southwest Labs of Oklahoma, 1700 West Albany, Suite C, Broken Arrow, OK 74012, ATTN: Robert Harris

7. Transfer to:

Date Received:

Received by:

Contract Number:

Price:

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

CLP Sample Numbers (from labels)	A Matrix (from Box 1) / Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) / Other:	E – FAS Analysis: Diss. Metals	Total Metals	Cyanide	Low only: NO_2/NO_3	Fluoride	High only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
MEZN40	5	L	G	6	X		X					5-009551	X211	11/10/95 1330	EAQ62	RP			

Final sample rec'd in SOG 08-15-95

Shipment for Case Complete? (Y/N): Y

Page: 2 of 2

Sample(s) to be Used for Laboratory QC: MEAEQ2

Additional Sampler Signatures:

Chain of Custody Seal Number(s): 45233-45234

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	8-10-95 1915				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	
		[signature]	8/11/95 0930	intact	

MEAEQ1

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

EPA Form 9110-1

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-6 REV. 3/93

250

362299

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

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (if applicable):

Case No.: 23890

1. Sample Description (Enter in Column A)	1. Surface Water; 2. Ground Water; 3. Leachate; 4. Rinsate; 5. Soil/Sediment; 6. Oil (High only); 7. Waste (High only); 8. Other (Specify)
2. Preservative (Enter in Column D)	1. HCl; 2. HNO_3; 3. NaOH; 4. H_2SO_4; 5. $K_2CR_2O_7$; 6. Ice only; 7. Other (Specify); N. Not preserved
3. Region No.	V
Sampling Co.	IEPA
Sampler (Name)	Ted Prescott
Sampler Signature	Ted Prescott
4. Type of Activity	Lead: SF, PRP, ST, FED; Pre-Remedial: PA, SSI, LSI; Remedial: RIFS, RD, RA, O&M (X), NPLD; Removal: CLEM, REMA, REM, OIL, UST
5. Date Shipped	8-10-95
Carrier	Federal Express
Airbill Number	4413934836
6. Ship To	Southwest Labs of Oklahoma, 1700 West Albany, Suite C, Broken Arrow, OK 74012 ATTN: Robert Harris
7. Date Received -- Received by	8-11-95
Laboratory Contract Number	68-D3-0040
Unit Price	$175.00
8. Transfer to	
Date Received	
Received by	
Contract Number	
Price	

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. only: Nitrate/Nitrite	Fluoride	High only: pH	Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - MIS Liq.	Non Water - Mis Liq.
MEAEQ1	5	L	G	6	X		X					5-009541	X201	8/10/95 1130	TP	EAQC2	intact			
MEAEQ2	5	L	G	6	X		X					5-009542	X202	8/10/95 830	TP	EAQC3				
MEAEQ3	5	L	G	6	X		X					5-009543	X203	8/10/95 [illegible]	TP	EAQC4				
MEAET4	5	L	G	6	X		X					5-009544	X204	8/10/95 945	TP	EAQG4				
MEAET5	5	L	G	6	X		X					5-009545	X205	8/10/95 [illegible]	TP	EAQG5				
MEAET6	5	L	G	6	X		X					5-009546	X206	8/10/95 [illegible]	TP	EAQG6				
MEAES6	5	L	G	6	X		X					5-009547	X207	8/10/95 1115	TP	EAQG7				
MEAES6	5	L	G	6	X		X					5-009548	X208	[illegible]	TP	EAQG8				
MEAES7	5	L	G	6	X		X					5-009549	X209	8/10/95 [illegible]	TP	EAQG9				
MEZN39	5	L	G	6	X		X					5-009550	X210	8/10/95 1115	TP	EAQG1				

Shipment for Case complete? (Y/N): Y

Page 1 of 2

Sample used for a spike and/or duplicate: MEAEQ2

Additional Sampler Signatures:

Chain of Custody Seal Number: 45233-45234

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Ted Prescott	8-10-95 1415				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	
		[illegible]	8/11/95 0930		

Split Samples: ☐ Accepted (Signature) ☐ Declined

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

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

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

249

Inorg-2

353405

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: _____ CERCLIS No: ILD049136658

Case No: 23890 Site Name Location: Green AP Refractories

Contractor or EPA Lab: SWOK Data User: IEPA

No. of Samples: 11 Date Sampled or Data Received: 8-25-95

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

Are basic data forms in? Yes ✓ No ____
No of samples claimed: 11 No. of samples received: 11

Received by: Lynette Burnett Date: 8/25/95

Received by LSSS: Allison C Harvey Date: 8-28-95

Review started: 8/29/95 Reviewer Signature: J. Redlin

Total time spent on review: ~~8/30/95~~ 4.0 JR 8/30/95 +0.3 hr. Date review completed: 8/30/95

Copied by: LB for LJ Date: 9-7-95

Mailed to user by: Sylvia Griffin Date: ~~9-7-95~~ 1-10-9

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Data: _____

FULL INORGANICS
COMPLETE SDG FILE (CSF)
INVENTORY SHEET

RECEIVED
AUG 25 1995
US EPA CENTRAL REGIONAL LAB.
77 S. CLARK ST.
CHICAGO, ILLINOIS 60605

Lab Name: Southwest Laboratory of Oklahoma **City/State:** Broken Arrow, OK

Case No. 23890 **SDG No.** MEAE01 **SDG Nos. to Follow:** _____ _____ _____

SAS No. _____ **Contract No.** 68-D3-0040 **SOW No.** ILM03.0

All documents delivered in the Complete SDG File must be original documents where possible. (Reference Exhibit B, Section II F and Section III U)

		Page Nos. From	Page Nos. To	(Please Check:) Lab	(Please Check:) Region
1.	Inventory Sheet (DC-2) (Do not number)			✓	✓
2.	Cover Page	002	002	✓	✓
3.	Inorganic Analysis Data Sheet (Form I-IN)	003	013	✓	✓
4.	Initial & Continuing Calibration Verification (Form IIA-IN)	014	017	✓	✓
5.	CRDL Standards For AA and ICP (Form IIB-IN)	018	019	✓	✓
6.	Blanks (Form III-IN)	020	022	✓	✓
7.	ICP Interference Check Sample (Form IV-IN)	023	024	✓	✓
8.	Spike Sample Recovery (Form VA-IN)	025	025	✓	✓
9.	Post Digest Spike Sample Recovery (Form VB-IN)	026	026	✓	✓
10.	Duplicates (Form VI-IN)	027	027	✓	✓
11.	Laboratory Control Sample (Form VII-IN)	028	028	✓	✓
12.	Standard Addition Results (Form VIII-IN)	029	029	✓	✓
13.	ICP Serial Dilutions (Form IX-IN)	030	030	✓	✓
14.	Instrument Detection Limits (Form X-IN)	031	033	✓	✓
15.	ICP Interelement Correction Factors (Form XIA-IN)	034	034	✓	✓
16.	ICP Interelement Correction Factors (Form XIB-IN)	035	037	✓	✓
17.	ICP Linear Ranges (Form XII-IN)	038	038	✓	✓
18.	Preparation Log (Form XIII-IN)	039	041	✓	✓
19.	Analysis Run Log (Form XIV-IN)	042	048	✓	✓
20.	ICP Raw Data	049	225	✓	✓
21.	Furnace AA Raw Data			NA	—
22.	Mercury Raw Data	226	232	✓	✓

	Page Nos. From	Page Nos. To	(Please Check:) Lab	(Please Check:) Region
23. Cyanide Raw Data	233	238	✓	✓
24. Preparation Logs Raw Data	240	244	✓	✓
25. Percent Solids Determination Log	239	236	✓	✓
26. Traffic Report	249	250	✓	
27. EPA Shipping/Receiving Documents				
Airbill (No. of Shipments 1)	247	247	✓	✓
Chain-of-Custody Records	249	250	✓	✓
Sample Tags	252	263	✓	✓
Sample Log-In Sheet (Lab & DC1)	251	251	✓	✓
SDG Cover Sheet	246	246	✓	✓
28. Misc. Shipping/Receiving Records (list all individual records)				
Telephone Logs			NA	
Worksheets			✓	
SAS Client Request			✓	
29. Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)			NA	
			✓	
30. Internal Original Sample Prep & Analysis Records (describe or list)				
Prep Records			NA	
Analysis Records			✓	
Description			✓	
31. Other Records (describe or list)				
Telephone Communication Log	248	248	✓	✓
Stock & Standard Solutions	245	245	✓	✓
SDG NARRATIVE	001	001	✓	✓

32. Comments:

Completed by (CLP Lab): Darla D. Blan (Signature) — DARLA D. BLAN, Data Reductionist (Print Name & Title) — 8-24-95 (Date)

Audited by (EPA): James Redlin (Signature) — James Redlin/Chemist (Print Name & Title) — 8/30/95 (Date)

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No. 23890 SDG No. MEAEQ1 SDG Nos. To Follow _____ _____ _____ SAS No. _____ Date Recvd 8 25 95

EPA Lab ID: SWOK

Lab Location: Broken Arrow OK

Region: ____ Audit No.: _____

Re-Submitted CSF? Yes ___ No ___

Box No(s): _____

COMMENTS:
1 & 2 Custody seals were present

Over for additional comments.

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

RECEIVED by: Lynette Burnett — Lynette Burnett / DATA COORD — Date 8 25

Audited by: James Redlin — James Redlin / Chemist — Date 8 30

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