L0894695045-Kane
Phillips, Thomas LF
ILD 980902134
SF/HRS

Site Team Evaluation Prioritization

EPA Region 5 Records Ctr.
362194

CERCLA

Analytical Results

Illinois Environmental Protection Agency

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

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VOA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
JUN 05 1996
IEPA/DLPC

Date: JUN 03 1996

Subject: Review of Region 5 Data for **PHILLIPS THOM LANDFILL**

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

To: IEPA

Attached are the results for: **PHILLIPS THOM LANDFILL**

CRL request number: **960085**
Analyzed for: **VOA (Organics)**
Results are reported for sample designations: 96IE16S01 to S04, R01, R05 and D01
(SEVEN 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 for detailed QA/QC information.

0915 Wear C.

CASE NARRATIVE

DATE: May 15, 1996

PROJECT NAME: Phillips Thom Landfill Samples - CRL Case #: 960085
Analysis of Volatile Organic Analytes (VOA)

ANALYSTS: Ziyad Rajabi, Lockheed/ESAT

REVIEWERS: Ira Wilson, Lockheed/ESAT Assistant ETM
Dennis Miller, Lockheed/ESAT Team Manager
Nidia Fuentes, EPA CRL Task Monitor

I. CASE DESCRIPTION:

The laboratory received seven preserved residential well water samples (96IE16S01 to -S04, -R01, -R05, and -D01) on 05/10/96 for volatile organic analyte (VOA) analysis. The samples were analyzed by CRL Method 624VOA (revised 12/15/95) using GC/MS#7. 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 (IPC):** On each day of analysis, GC/MS IPCs 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, no problems were observed.

2. **Initial Calibrations (IC):** An acceptable five-point IC is required for all target compounds before samples can be analyzed. The QC criterion for the IC states that each analyte's %RSD must be ≤30%.

An initial calibration was generated on 05/03/96 on GC/MS#7. All QC criteria were acceptable for all target compounds. No problems were observed.

3. **Continuing Calibrations (CC):** One continuing calibration was required for this case (file >B2165 on 05/13/96).

The QC criterion for the CC states that each analyte's %D must be ≤30%. All QC criteria were acceptable for all target compounds. No problems were observed.

4. **Internal Standard (IS) Area and Retention Time (RT) Summary:** The QC criterion states that the areas of ISs must

be within a factor of two of the IS area of the corresponding CC. The RT of the IS for samples must also be within 30 seconds of the RT of the IS for the corresponding CC.

All internal standard areas and retention times met the QC requirements on all samples analyzed on GC/MS#7. No problems were observed.

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** 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). All QC data for the Lab Blank were acceptable.

In the Lab Blank analyzed on 05/13/96, no analytes and no TICs were detected. No problems were observed.

2. **Surrogate Spike Compound Results:** The surrogate spike compound recovery data were within the QC limits for all water samples on GC/MS#7. No problems were observed. (See Form II VOA-1).

3. **Laboratory Control Sample (LCS):** The laboratory analyzed a Lab Spike sample with this data set. Recovery data were within the QC limits for all spike compounds. No problems were observed. (See Form XI VOA).

4. **Performance Evaluation Sample (PES):** The laboratory analyzed a Performance Evaluation Sample (960010S01) for May 1996. The QC criteria for the PES are the control limits established by EMSL-LV. For the May 1996 PES, all reported target compound values were within acceptable limits.

IV. SAMPLE RESULTS:

Sample 96IE16R01 was identified as the trip blank. Sample 96IE16R05 was identified as the field blank. The trip blank 96IE16R01 contained 1 TIC at 2 µg/L. The field blank 96IE16R05 contained acetone at 7 µg/L, methylene chloride at 0.6 µg/L, chloroform at 0.9 µg/L, toluene at 0.5 µg/L, and no TICs.

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

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: CRL REGION V Contract: ESAT

Lab code: 5SCRL Case No.: 960085 SAS No.: ------ SDG No.: ------

	EPA SAMPLE NO.	S1 (BEN) #	S2 (BFB) #	S3 (TOL) #	S4 ( ) #	TOT OUT
01	LAB BLANK	103	94	102		0
02	96IE16R01	103	91	104		0
03	96IE16S01	103	92	104		0
04	96IE16S02	98	91	102		0
05	96IE16S03	101	88	104		0
06	96IE16S04	102	92	103		0
07	96IE16R05	101	92	104		0
08	96IE16D01	103	92	102		0
09	LAB SPIKE	103	94	104		0
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
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28						
29						
30						

		QC LIMITS
S1 (BEN)	= BENZENE-D6	(70-130)
S2 (BFB)	= p-BROMOFLUOROBENZENE	(70-130)
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

FORM II VOA-1

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: CRL REGION V Contract: ESAT

Lab code: ESCRL Case No.: 960085 SAS No.: ------ SDG No.: ------

Lab File ID: >B2167 Lab Sample ID: LAB BLANK

Date Analyzed: 05/13/96 Time Analyzed: 13:18

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

Instrument ID: GCMS#7

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	96IE16R01	96IE16R01	>B2168	13:56
2	96IE16S01	96IE16S01	>B2169	14:34
3	96IE16S02	96IE16S02	>B2170	15:11
4	96IE16S03	96IE16S03	>B2171	15:49
5	96IE16S04	96IE16S04	>B2172	16:27
6	96IE16R05	96IE16R05	>B2173	17:05
7	96IE16D01	96IE16D01	>B2174	17:43
8	LAB SPIKE	LAB SPIKE	>B2175	18:20
9				
10				
11				
12				
13				
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30				

COMMENTS: _____

FORM IV VOA 1/87 Rev.

11A
VOLATILE ORGANICS LAB CONTROL SPIKE

EPA SAMPLE NO.

LAB SPIKE

Lab Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: SL-10C Case No.: 960085 SAS No.: ------ SDG No.: ------

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

Sample wt/vol: 25 (g/ml) ML Lab File ID: >B2175

Level: (low/med) LOW Date Received: 05/13/96

% Moisture: not dec. ---- Date Analyzed: 05/13/96

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

COMPOUND	Conc	Spike	Recovery
Vinyl chloride	5	5	101
Carbon tetrachloride	7	5	134
Benzene	6	5	113
1,2-Dichloroethane	6	5	130
Trichloroethene	6	5	125
1,2-Dichloropropane	5	5	106
cis-1,3-Dichloropropene	5	5	109
Tetrachloroethene	5	5	104
1,1,2-Trichloroethane	5	5	103
1,2-Dibromoethane	6	5	113
Bromoform	5	5	107
1,4-Dichlorobenzene	5	5	106

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

Site Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: SL-10C Case No.: 960085 SAS No.: ------ SDG No.: ------

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

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2167

Level: (low/med) LOW Date Received: 05/13/96

% Moisture: not dec.---- Date Analyzed: 5/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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
594-20-7	2,2-Dichloropropane	1.	U
156-59-2	cis-1,2-Dichloroethene	1.	U
78-93-3	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2.	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
142-28-9	1,3-Dichloropropane	1.	U
591-78-6	2-Hexanone	2.	U
124-48-1	Dibromochloromethane	1.	U
106-93-4	1,2-Dibromoethane	1.	U
108-90-7	Chlorobenzene	1.	U
630-20-6	1,1,1,2-Tetrachloroethane	1.	U
100-41-4	Ethylbenzene	1.	U

Are there any TICs ? (Please check a box) YES |__| NO |_X_|

FORM I VOA 1/89 Rev.

1A-2

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

S . Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: SL-1CC Case No.: 960085 SAS No.: ------ SDG No.: ------

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

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2167

Level: (low/med) LOW Date Received: 05/13/96

% Moisture: not dec.---- Date Analyzed: 5/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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
98-82-8	Isopropylbenzene	1.	U
108-86-1	Bromobenzene	1.	U
96-18-4	1,2,3-Trichloropropane	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
103-65-1	n-Propylbenzene	1.	U
95-49-8	2-Chlorotoluene	1.	U
106-43-4	4-Chlorotoluene	1.	U
108-67-8	1,3,5-Trimethylbenzene	1.	U
98-06-6	tert-Butylbenzene	1.	U
95-63-6	1,2,4-Trimethylbenzene	1.	U
135-98-8	sec-Butylbenzene	1.	U
541-73-1	1,3-Dichlorobenzene	1.	U
106-46-7	1,4-Dichlorobenzene	1.	U
99-87-6	p-Isopropyltoluene	1.	U
95-50-1	1,2-Dichlorobenzene	1.	U
104-51-8	n-Butylbenzene	1.	U
96-12-8	1,2-Dibromo-3-chloropropane	1.	U
120-82-1	1,2,4-Trichlorobenzene	1.	U
91-20-3	Naphthalene	1.	U
87-68-3	Hexachlorobutadiene	1.	U
87-61-6	1,2,3-Trichlorobenzene	1.	U

FORM I-2 VOA 1/89 Rev.

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER** Method: **B624SAS.0**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16D01**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **13-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **13-MAY-96**

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
594-20-7	2,2-Dichloropropane	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2	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
142-28-9	1,3-Dichloropropane	1	U
591-78-6	2-Hexanone	2	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
630-20-6	1,1,1,2-Tetrachloroethane	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
98-82-8	Isopropylbenzene	1	U
108-86-1	Bromobenzene	1	U
96-18-4	1,2,3-Trichloropropane	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
103-65-1	n-Propylbenzene	1	U
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER** Method: **B624SAS.0**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16D01**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **13-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **13-MAY-96**

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
99-87-6	p-Isopropyltoluene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
104-51-8	n-Butylbenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
91-20-3	Naphthalene	1	U
87-68-3	Hexachlorobutadiene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U

Analyzed by: Zuzana Rajt
Team Leader: Walter Wilson

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

Sample organization: IEPA
Sample Requestor: MARK WAGNER-IEPA
Facility: PHILLIPS THOM LANDFILL
Matrix: WATER
Method: B624SAS.0

Sample Batch ID: 960085
Account No: TFA301
Sample ID: 96IE16R01
Units: ug/L

Date Collected: 08-MAY-96
Date Extracted: 13-MAY-96

Date Received: 10-MAY-96
Date Analyzed: 13-MAY-96

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
594-20-7	2,2-Dichloropropane	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2	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
142-28-9	1,3-Dichloropropane	1	U
591-78-6	2-Hexanone	2	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
630-20-6	1,1,1,2-Tetrachloroethane	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
98-82-8	Isopropylbenzene	1	U
108-86-1	Bromobenzene	1	U
96-18-4	1,2,3-Trichloropropane	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
103-65-1	n-Propylbenzene	1	U
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER** Method: **B624SAS.0**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16R01**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **13-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **13-MAY-96**

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
99-87-6	p-Isopropyltoluene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
104-51-8	n-Butylbenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
91-20-3	Naphthalene	1	U
87-68-3	Hexachlorobutadiene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U

Analyzed by: [signature]
Team Leader: [signature]

EPA RLIMS CRL - REGION V
TENTATIVELY IDENTIFIED COMPOUNDS
REPORT PRODUCED ON: 17-MAY-96

SAMPLE ORGANIZATION: **IEPA**
SAMPLE REQUESTOR: **MARK WAGNER-IEPA**
LABORATORY: **ESAT**

SAMPLE BATCH ID: **960085**
ACCOUNT NO: **TFA301**
FACILITY: **PHILLIPS THOM LANDFILL**

B624BAB.0 (624VOA ANALYSIS OF VOAs IN SF/NPDES WAT

SAMPLE: **96IE16R01** FIELD: **96IE16R01** CONTROL TYPE: **SAM**

COLLECTED: **08-MAY-96** RECEIVED: **10-MAY-96** ANALYZED: **13-MAY-96**

COMPOUND	EST. CONC.	RT	Q	CAS NUMBER
UNKNOWN	2 J	6.14		

ANALYZED BY:

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

Sample organization: IEPA
Sample Requestor: MARK WAGNER-IEPA
Facility: PHILLIPS THOM LANDFILL
Matrix:WATER Method:B624SAS.0

Sample Batch ID: 960085
Account No: TFA301
Sample ID: 96IE16R05
Units: ug/L

Date Collected:08-MAY-96
Date Extracted:13-MAY-96

Date Received:10-MAY-96
Date Analyzed:13-MAY-96

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	7	
75-15-0	Carbon Disulfide	1	U
75-09-2	Methylene Chloride	1	J
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
594-20-7	2,2-Dichloropropane	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	J
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	Cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	J
108-10-1	4-Methyl-2-Pentanone	2	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
142-28-9	1,3-Dichloropropane	1	U
591-78-6	2-Hexanone	2	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
630-20-6	1,1,1,2-Tetrachloroethane	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
98-82-8	Isopropylbenzene	1	U
108-86-1	Bromobenzene	1	U
96-18-4	1,2,3-Trichloropropane	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
103-65-1	n-Propylbenzene	1	U
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER** Method: **B624SAS.0**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16R05**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **13-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **13-MAY-96**

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
99-87-6	p-Isopropyltoluene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
104-51-8	n-Butylbenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
91-20-3	Naphthalene	1	U
87-68-3	Hexachlorobutadiene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U

Analyzed by: Susan Pitt
Team Leader: Ann Wilson

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

Sample organization: IEPA
Sample Requestor: MARK WAGNER-IEPA
Facility: PHILLIPS THOM LANDFILL
Matrix: WATER
Method: B624SAS.0

Sample Batch ID: 960085
Account No: TFA301
Sample ID: 96IE16S01
Units: ug/L

Date Collected: 08-MAY-96
Date Extracted: 13-MAY-96

Date Received: 10-MAY-96
Date Analyzed: 13-MAY-96

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
594-20-7	2,2-Dichloropropane	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2	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
142-28-9	1,3-Dichloropropane	1	U
591-78-6	2-Hexanone	2	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
630-20-6	1,1,1,2-Tetrachloroethane	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
98-82-8	Isopropylbenzene	1	U
108-86-1	Bromobenzene	1	U
96-18-4	1,2,3-Trichloropropane	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
103-65-1	n-Propylbenzene	1	U
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER** Method: **B624SAS.0**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16S01**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **13-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **13-MAY-96**

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
99-87-6	p-Isopropyltoluene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
104-51-8	n-Butylbenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
91-20-3	Naphthalene	1	U
87-68-3	Hexachlorobutadiene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U

Analyzed by:
Team Leader:

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

Sample organization: IEPA
Sample Requestor: MARK WAGNER-IEPA
Facility: PHILLIPS THOM LANDFILL
Matrix: WATER
Method: B624SAS.0

Sample Batch ID: 960085
Account No: TFA301
Sample ID: 96IE16S02
Units: ug/L

Date Collected: 08-MAY-96
Date Extracted: 13-MAY-96

Date Received: 10-MAY-96
Date Analyzed: 13-MAY-96

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
594-20-7	2,2-Dichloropropane	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2	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
142-28-9	1,3-Dichloropropane	1	U
591-78-6	2-Hexanone	2	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
630-20-6	1,1,1,2-Tetrachloroethane	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
98-82-8	Isopropylbenzene	1	U
108-86-1	Bromobenzene	1	U
96-18-4	1,2,3-Trichloropropane	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
103-65-1	n-Propylbenzene	1	U
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER** Method: **B624SAS.0**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16S02**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **13-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **13-MAY-96**

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
99-87-6	p-Isopropyltoluene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
104-51-8	n-Butylbenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
91-20-3	Naphthalene	1	U
87-68-3	Hexachlorobutadiene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U

Analyzed by: [signature]
Team Leader: [signature]

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

Sample organization: IEPA
Sample Requestor: MARK WAGNER-IEPA
Facility: PHILLIPS THOM LANDFILL
Matrix: WATER
Method: B624SAS.0

Sample Batch ID: 960085
Account No: TFA301
Sample ID: 96IE16S03
Units: ug/L

Date Collected: 08-MAY-96
Date Extracted: 13-MAY-96

Date Received: 10-MAY-96
Date Analyzed: 13-MAY-96

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
594-20-7	2,2-Dichloropropane	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2	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
142-28-9	1,3-Dichloropropane	1	U
591-78-6	2-Hexanone	2	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
630-20-6	1,1,1,2-Tetrachloroethane	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
98-82-8	Isopropylbenzene	1	U
108-86-1	Bromobenzene	1	U
96-18-4	1,2,3-Trichloropropane	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
103-65-1	n-Propylbenzene	1	U
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U

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

Sample organization: IEPA
Sample Requestor: MARK WAGNER-IEPA
Facility: PHILLIPS THOM LANDFILL
Matrix: WATER
Method: B624SAS.0

Sample Batch ID: 960085
Account No: TFA301
Sample ID: 96IE16S03
Units: ug/L

Date Collected: 08-MAY-96
Date Extracted: 13-MAY-96

Date Received: 10-MAY-96
Date Analyzed: 13-MAY-96

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
99-87-6	p-Isopropyltoluene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
104-51-8	n-Butylbenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
91-20-3	Naphthalene	1	U
87-68-3	Hexachlorobutadiene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U

Analyzed by: [illegible]
Team Leader: [illegible]

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

Sample organization: IEPA
Sample Requestor: MARK WAGNER-IEPA
Facility: PHILLIPS THOM LANDFILL
Matrix: WATER Method: B624SAS.0

Sample Batch ID: 960085
Account No: TFA301
Sample ID: 96IE16S04
Units: ug/L

Date Collected: 08-MAY-96
Date Extracted: 13-MAY-96

Date Received: 10-MAY-96
Date Analyzed: 13-MAY-96

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
594-20-7	2,2-Dichloropropane	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2	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
142-28-9	1,3-Dichloropropane	1	U
591-78-6	2-Hexanone	2	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
630-20-6	1,1,1,2-Tetrachloroethane	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
98-82-8	Isopropylbenzene	1	U
108-86-1	Bromobenzene	1	U
96-18-4	1,2,3-Trichloropropane	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
103-65-1	n-Propylbenzene	1	U
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER** Method: **B624SAS.0**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16S04**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **13-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **13-MAY-96**

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
99-87-6	p-Isopropyltoluene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
104-51-8	n-Butylbenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
91-20-3	Naphthalene	1	U
87-68-3	Hexachlorobutadiene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U

Analyzed by: [signature]
Team Leader: [signature]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
SEP 26 1996
IEPA/DLPC

Date: MAY 23 1996

Subject: Review of Region 5 Data for **PHILLIPS THOM LANDFILL**

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

To: IEPA

Attached are the results for **Phillips Thom Landfill**
CRL request number: **960085**
Analyzed for: **ABN (Organics)**
Results are reported for sample designations: 96IE16S01-S04, -D01 and -R05 (6 water samples)

Results Status:
(X) Acceptable for Use **except** the compound results qualified **J** and **UJ**. Please see comments below.

(X) Data Qualified but acceptable for Use for the compounds qualified **J** and **UJ**. See the comments below.

( ) Data Unacceptable for Use.

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

- 2,4-Dinitrophenol did not meet the CRL calibration QC requirement. Because this compound was not detected at the site, its MDL data was qualified **UJ** (UJ = estimated MDL). Bis(2-ethylhexyl)phthalate was detected in some of the samples at below the CRL reporting limit. Therefore, its result was qualified J (J = below reporting limit). No other problems were observed.

ILD 980 902 13A 960085 TFA301

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ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUPERFUND SAMPLE DATE 5/8/96 LAB ARRIVAL DATE 5/10/96 DUE DATE 5/31/96

DU NUMBER TFA DATA SET NUMBER 960085 STUDY PHILLIPS THOM LANDFILL PRIORITY N CONTRACTOR IEPA

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 215822	SEDIMENTS SOLIDS ABN ORGANICS SCAN MG/KG (DRY) TOX 215722
96IE16S01	G101 5-189755-768	X			
96IE16D01	G103 5-189790-794	X			
96IE16S02	G102 5-189781-785	X			
96IE16S03	G104 5-189802-806	X			
96IE16S04	G105 5-189812-816	X			
96IE16R01	TRIP BLANK 5-189800-801	X			
96IE16R05	FIELD BLANK 5-189821-24	X			
96IE16S01	G101 5-189769-770-771		X		
96IE16D01	G103 5-189799		X		
96IE16S02	G102 5-189786		X		
96IE16S03	G104 5-189808		X		
96IE16S04	G105 5-189817		X		
96IE16R05	FIELD BLANK 5-189825		X		

CASE NARRATIVE

DATE: May 18, 1996
PROJECT NAME: Phillips Thom Landfill - CRL Case #: 960085
Analysis of Acid\Base\Neutral (ABN)Organic Analytes

ANALYST: Babu Paruchuri, Chemist

REVIEWERS: Chi M. Tang, Team Leader
Organic Laboratory Section

I. CASE DESCRIPTION:

The laboratory received six water samples (96IE16S01 - S04, -D01 and -R05) on May 10 for acid and base-neutral (ABN) organic compound analysis. The samples were extracted on May 14 by one-step continuous extraction technique at a pH of <2. The samples were analyzed for ABNs on May 16 by the CRL test method # 625CLP. All site samples were extracted and analyzed within sample holding time requirements. These samples were received at the laboratory in good condition. No problems were observed. (EPA QC Criteria for sample holding time: Extraction - seven days from date of collection; Analysis - 40 days from the date of preparative extraction).

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** On the day of sample analysis, GC/MS instrument (HP-MS#2) performance checks were made to determine if the EPA tuning criteria for DFTPP were met. (QC Criteria - CRL criteria are the same as EPA CLP 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 data generated on May 15 were acceptable for all target compounds. (QC Criteria for IC - %RSD should be $\leq$ 30%). No problems were observed.

3. **Continuing Calibration Check:** The continuing calibration data generated on May 16 were acceeptable for all target compounds except 2,4-dinitrophenol. (QC Criteria for CCC

standard: %D should be ≤ 25%). Because this compound was not detected at the site, its MDL data was qualified **UJ** (UJ = estimated MDL). No other problems were observed.

4. **Internal Standard (IS) Area and Retention Time Summary:** All 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 + 200%] from the associated daily calibration standard; QC Criteria for RT - RT of the IS compound 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 each day of sample extraction, a method blank (Lab Blank) sample was also extracted with the site samples to check for contamination problems due to sample extraction/concentration procedures. The method blank sample data were acceptable. Bis(2-ethylhexyl)phthalate was detected at 2 ug/L in the Lab Blank sample. The site sample results were qualified **B** (B = found in Lab Blank) when this compound was also detected in the site samples. See Forms I SV-1&2.

2. **Surrogate Spike Compound Results:** The laboratory produced acceptable surrogate spike compound recovery (accuracy) data. No problems were observed. See Form II SV-1.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results:** The laboratory produced acceptable matrix precision and accuracy (P&A) data for the field sample 96IE16S01. None of the target compounds, except the presence of a phthalate, were detected at the site. See Form III SV-1.

4. **Laboratory Control Sample (LCS):** Not applicable.

5. **Performance Evaluation Sample (PES):** Not applicable.

IV. SAMPLE RESULTS:

The laboratory met qualitative and quantitative analysis requirements for all TCLs. No problems were observed.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LAB BLANK

L Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

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

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8793

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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

NO TICs.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LAB BLANK

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

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

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8793

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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	UJ
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	2	J
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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16R05

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16R05

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8794

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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

NO TICs.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16R05

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16R05

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8794

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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	UJ
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	5	U
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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16S01

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16S01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8799

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16S01

1 , Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16S01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8799

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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	UJ
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	2	BJ
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

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE16S01

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16S01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: >B8799

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec.---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/16/96

GPC Cleanup: (Y/N) N pH: NA Dilution Factor: 1.00000

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	10544500	Sulfur, mol. (S8)	20.11	5.	
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16D01

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16D01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8798

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16D01

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16D01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8798

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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	UJ
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	2	BJ
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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE16D01

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16D01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: >B8798

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec.---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/16/96

GPC Cleanup: (Y/N) N pH: NA Dilution Factor: 1.00000

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	10544500	Sulfur, mol. (S8)	20.12	39.	
2.					
3.					
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16S02

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16S02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8795

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16S02

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16S02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8795

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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	UJ
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	2	BJ
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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE16S02

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16S02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: >B8795

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec.---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/16/96

GPC Cleanup: (Y/N) N pH: NA Dilution Factor: 1.00000

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	10544500	Sulfur, mol. (S8)	20.13	44.	
2.					
3.					
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16S03

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16S03

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8796

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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

NO TICs.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16S03

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16S03

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8796

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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	UJ
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	5	U
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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16S04

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16S04

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8797

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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

NO TICs.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE16S04

Lab Name: PHILLIPS THOM LANDFILL IN Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: -------

Matrix: (soil/water) WATER Lab Sample ID: 96IE16S04

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8797

Level: (low/med) LOW Date Received: 05/10/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 05/14/96

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 05/16/96

GPC 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	UJ
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	5	U
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

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: PHILLIPS THOM LANDFILL I Contract: ML-10C

Lab code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: ------

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 ( ) #	TOT OUT
01	LAB BLANK	44	53	100	41	32	58		0
02	96IE16R05	68	75	115	60	56	59		0
03	96IE16S02	80	88	120	13	71	78		0
04	96IE16S03	65	70	102	53	52	71		0
05	96IE16S04	70	69	116	54	57	69		0
06	96IE16D01	64	70	124	51	48	66		0
07	96IE16S01	70	69	115	63	63	68		0
08	96IE16S01M	86	87	85	72	70	99		0
09	96IE16S01S	86	95	92	74	77	96		0
10									
11									
12									
13									
14									
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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

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: PHILLIPS THOM LANDFILL I Contract: ML-10C

Lab Code: USEPA Case No.: 960085 SAS No.: PHILLI SDG No.: ------

Matrix Spike - EPA Sample No.: 96IE16S01

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	75	0	54	71	12- 89
2-Chlorophenol	75	0	54	71	27-123
1,4-Dichlorobenzene	75	0	53	70	36- 97
N-Nitroso-di-n-propylam	75	0	71	94	41-116
1,2,4-Trichlorobenzene	75	0	56	75	39- 98
4-Chloro-3-methylphenol	75	0	69	92	23- 97
Acenaphthene	75	0	58	78	46-118
4-Nitrophenol	75	0	88	117 *	10- 80
2,6-Dinitrotoluene	75	0	70	93	24- 96
Pentachlorophenol	75	0	99	132 *	9-103
Pyrene	75	0	59	78	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	75	58	77	8	42	12- 89
2-Chlorophenol	75	58	77	8	40	27-123
1,4-Dichlorobenzene	75	55	73	3	28	36- 97
N-Nitroso-di-n-propylam	75	68	90	5	38	41-116
1,2,4-Trichlorobenzene	75	57	76	1	28	39- 98
4-Chloro-3-methylphenol	75	73	98 *	6	42	23- 97
Acenaphthene	75	61	82	5	31	46-118
4-Nitrophenol	75	90	120 *	3	50	10- 80
2,6-Dinitrotoluene	75	69	92	1	38	24- 96
Pentachlorophenol	75	110	146 *	10	50	9-103
Pyrene	75	64	85	9	31	26-127

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: 5 out of 22 outside limits

COMMENTS: None of the ~~biased~~ biased high compounds were detected in sample -S01._.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: PHILLIPS THOM LANDFILL I Contract: ML-10C

Lab code: USEPA Case No.: 960085 SAS No.: PHILLIP SDG No.: ------

Lab File ID: >B8793 Lab Sample ID: LAB BLANK

Date Extracted: 05/14/96 Extraction: (Sepf/Cont/Sonc) SEPF

Date Analyzed: 05/16/96 Time Analyzed: 17:40

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	96IE16R05	96IE16R05	>B8794	05/16/96
2	96IE16S02	96IE16S02	>B8795	05/16/96
3	96IE16S03	96IE16S03	>B8796	05/16/96
4	96IE16S04	96IE16S04	>B8797	05/16/96
5	96IE16D01	96IE16D01	>B8798	05/16/96
6	96IE16S01	96IE16S01	>B8799	05/16/96
7	96IE16S01M	96IE16S01M	>B8800	05/16/96
8	96IE16S01S	96IE16S01S	>B8801	05/16/96
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
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30				

COMMENTS: _____.
_____.

PCB/PEST

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
JUN 05 1996
IEPA/DLPC

Date: JUN 03 1996

Subject: Review of Region 5 Data for SF 960085 PHILLIPS THOM LANDFILL

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

To: IEPA

Attached are the results for SF 960085 PHILLIPS THOM LANDFILL
CRL request number 960085
for analyses for PCB/PESTICIDES IN WATER
Results are reported for sample designations: 96IE16S01 - 96IE16S04; 96IE16D01 & -R05

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

( ) Sewer Disposal Criteria Met; Exceptions: none

Comments on Data Quality by Reviewer

Instrument performance audits and QC data were acceptable. See attached narrative for detailed comments.

Data are acceptable for use.

Comments by Laboratory Director or Quality Control Coordinator

960085

TFA301

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

DIVISION/BRANCH SUPERFUND SAMPLE DATE 5/8/96 LAB ARRIVAL DATE 5/10/96 DUE DATE 5/31/96

DU NUMBER TFA DATA SET NUMBER 960085 STUDY PHILLIPS THOM LANDFILL PRIORITY ~ 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
96IE16S01	G101 5-189772-3-4		X	X		
96IE16D01	G103 5-189796		X	X		
96IE16S02	G102 5-189787		X	X		
96IE16S03	G104 5-189809		X	X		
96IE16S04	G105 5-189818		X	X		
96IE16R05	FIELD BLANK 5-189826		X	X		

Kupture Minn 5/20/96

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER**
RLIMS Method: **608_P/P_DNS2**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16D01**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **14-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **15-MAY-96**

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
419858	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: Uniquals / Lockheed

Team Leader: [signature]

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER** RLIMS Method: **608_P/P_DNS2**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16R05**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **14-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **15-MAY-96**

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
11104-28-2	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: Antoinette Lockhart

Team Leader: [illegible]

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER**
RLIMS Method: **608_P/P_DNS2**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16S01**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **14-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **15-MAY-96**

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: [illegible]
Team Leader: [illegible]

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

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER** RLIMS Method: **608_P/P_DNS2**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16S02**
Units: **ug/L**

Date Collected: **08-MAY-96**
Date Extracted: **14-MAY-96**

Date Received: **10-MAY-96**
Date Analyzed: **15-MAY-96**

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: [illegible]

Team Leader: [illegible]

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

Sample organization: **IEPA** | Sample Batch ID: **960085**
Sample Requestor: **MARK WAGNER-IEPA** | Account No: **TFA301**
Facility: **PHILLIPS THOM LANDFILL** | Sample ID: **96IE16S03**
Matrix: **WATER** | RLIMS Method: **608_P/P_DNS2** | Units: **ug/L**

Date Collected: **08-MAY-96** | Date Received: **10-MAY-96**
Date Extracted: **14-MAY-96** | Date Analyzed: **15-MAY-96**

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: Lillian Lockhart

Team Leader: [signature]

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

Sample organization: **IEPA** | Sample Batch ID: **960085**
Sample Requestor: **MARK WAGNER-IEPA** | Account No: **TFA301**
Facility: **PHILLIPS THOM LANDFILL** | Sample ID: **96IE16S04**
Matrix: **WATER** | RLIMS Method: **608_P/P_DNS2** | Units: **ug/L**

Date Collected: **08-MAY-96** | Date Received: **10-MAY-96**
Date Extracted: **14-MAY-96** | Date Analyzed: **15-MAY-96**

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: [illegible]

Team Leader: [illegible]

CASE NARRATIVE

DATE: May 22, 1996

PROJECT NAME: Phillips Thom LF/CRL Case #: SF 960085
Analysis of Pesticides/PCBs

ANALYST: Krystyna Minczuk, ESAT Chemist KM

REVIEWERS: Ziyad Rajabi, Lockheed/ESAT Organic Group Leader
W.Ira Wilson, Lockheed/ESAT Organic Supervisor for D Miller
Dennis Miller, Lockheed/ESAT Team Manager D Miller
Babu Paruchuri, EPA CRL Work Assignment Manager

I. CASE DESCRIPTION:

The laboratory received six (6) residential well water samples (96IE16R05, 96IE16S01, 96IE16D01, 96IE16S02, 96IE16S03, and 96IE16S04) for pesticides/PCBs analysis using CRL method 608 Pest/PCB DNS on 05/10/96. In addition, the monthly performance Evaluation Sample (PE PP885) for the month of May was assigned to ESAT.
The samples were extracted on 05/14/96 utilizing one-step continuous liquid/liquid extractors per OLC01 methodology and analyzed between 05/15/96 utilizing the HP5890 GC/EC-2. The samples were extracted within the holding time requirements of seven (7) days after collection and analyzed within forty (40) days after extraction.

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** Endrin degradation checks for both the primary and confirmatory columns were within CRL QC limits of <10%.
DDT initial degradation checks for tho primary (12.55%) and confirmatory (13.00%) columns and the second continuing check on the primary (13.48%) column exceeded the 10% QC limit.

2. **Initial Calibration Check (IC):** An acceptable initial calibration is required before samples can be analyzed. Correlation coefficients generated for Pest A, Pest B and Aroclor 1242 using five points were 0.995 or greater with the exception of b-BHC (0.994) on the primary column.

3. **Continuing Calibration Check (CC):** For the primary column continuing calibration check standards (Level 3 Pest A, Pest B & Aroclor 1242 were within the acceptable %Ds limit of <15% with the exceptions of Lindane (16.1%), p,p'-DDD (15.6%), g-Chlordane (18.47%) for the first continuing calibration, Heptachlor (17.15%), Methoxychlor (27.04%) for the second continuing calibration and p,p-DDD (15.84%), Methoxychlor (28.07%), and Endrin Aldehyde for the third continuing calibration.

For the confirmatory column continuing calibration check standards (Level 3 Pest A, Pest B & Aroclor 1242 were within the acceptable %Ds limit of <15% with the exceptions of Dieldrin (16.33%), and Endrin Ketone (23.70%) for the third continuing calibration.

4. **Retention Time (RT) Summary:** The retention time %Ds for each individual compound in the Pest A, Pest B mixes & Aroclor 1242 ranged between 0.00% to 0.38% on primary column and between 0.00% to 0.13% on the confirmatory column.

III. **METHOD QUALITY CONTROL:**

1. **Method Blank Results:** A DI water sample used for the method blanks was spiked with surrogates and was extracted and analyzed with the sample batch. No target analytes were detected above the method detection limit.

2. **Surrogate Spike Compound Results:** The TCMX and DCB surrogate spike recoveries were within the QC limits (50-150%) on both the primary and confirmatory columns for all samples.

3. **Laboratory Control/Laboratory Control Duplicate Sample Results:** For,both the primary and confirmatory columns, the Laboratory Control Sample (LCS PEST) and Laboratory Control Sample Duplicate (LCS PEST D) recoveries were acceptable (50-150%) with the exception of high recovery for Endosulfan Sulfate due to co-elution of this pesticide with phthalate on the primary column. All RPDs were acceptable.

4. **Performance Evaluation Samples (PEs):** Sample PP 885 was identified as the PES sample for the month of May. All compounds were within acceptance limits with the exception gamma-BHC (Lindane) which was action high.

5. **Florisil Cartridge Check:** Florisil Cartridge Check gave acceptable percent recoveries (80-120%) on both columns with the exception of Endosulfan Sulfate (145.60%) on the primary column.

IV. **SAMPLE RESULTS:** No target compounds were detected above the method detection limits for any at the samples.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
JUN 26 1996
IEPA/DLPC

Date: JUN 24 1996

Subject: Review of Region 5 Data for Phillips Thom Landfill Code:ZZ

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

To: IEPA

Attached are the results for Phillips Thom Landfill Code:ZZ
CRL request number 960085
for analyses for ICP
Results are reported for sample designations: 96IE16S01, 96IE16D01, 96IE16S02, 96IE16S03, 96IE16S04 and 96IE16R05

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. Samples 96IE16S01, 96IE16D01 and 96IE16S02 exceed the disposal criterion for iron. The samples were noted to have a strong sulfide odor.

Comments on Data Quality by Reviewer

Lead was reported from the ICP for sample 96IE16S02. This lead result is far above the SDWA limit. All other lead results were reported from the graphite furnace atomic absorption analyses. An attempt to confirm the copper result for the field blank, 96IE16R05, found no detectable level in the undigested aliquot of this sample. The amount found (7 μg/L) is just above the detection limit of 6 μg Cu/L. Laboratory digestion blanks showed no evidence of copper contamination, however. The disparity between the zinc results for the field duplicates 96IE16S01 and 96IE16D01 was confirmed by analysis of an undigested portion of 96IE16D01.

Comments by Laboratory Director or Quality Control Coordinator

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 16-MAY-96

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: MARK WAGNER-IEPA
LABORATORY: ESAT

SAMPLE BATCH ID: 960085
ACCOUNT NO: TFA301
FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE16D01 FIELD: 96IE16D01

COLLECTED: 08-MAY-96 RECEIVED: 10-MAY-96 ANALYZED: 15-MAY-96

COMPOUND	AMOUNT	(Units)	QUALIFIERS	CAS NUMBER
Aluminum	80U	(ug/L)	BDL	7429-90-5
Barium	102	(ug/L)		7440-39-3
Beryllium	1U	(ug/L)	BDL	7440-41-7
Calcium	113000	(ug/L)		7440-70-2
Chromium	8U	(ug/L)	BDL	7440-47-3
Cobalt	6U	(ug/L)	BDL	7440-48-4
Copper	13	(ug/L)		7440-50-8
Iron	4180	(ug/L)		7439-89-6
Magnesium	47000	(ug/L)		7439-95-4
Manganese	93	(ug/L)		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	36000	(ug/L)		7440-23-5
Vanadium	5U	(ug/L)	BDL	7440-62-2
Zinc	217	(ug/L)		7440-66-6

ANALYZED BY: 5-16-96 1 Jun 96

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 16-MAY-96

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: MARK WAGNER-IEPA
LABORATORY: ESAT

SAMPLE BATCH ID: 960085
ACCOUNT NO: TFA301
FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE16R05 FIELD: 96IE16R05

COLLECTED: 08-MAY-96 RECEIVED: 10-MAY-96 ANALYZED: 15-MAY-96

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	7	(ug/L)		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: 5-16-96

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 16-MAY-96

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: MARK WAGNER-IEPA
LABORATORY: ESAT

SAMPLE BATCH ID: 960085
ACCOUNT NO: TFA301
FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE16S01 FIELD: 96IE16S01

COLLECTED: 08-MAY-96 RECEIVED: 10-MAY-96 ANALYZED: 15-MAY-96

COMPOUND	AMOUNT	(Units)	QUALIFIERS	CAS NUMBER
Aluminum	80U	(ug/L)	BDL	7429-90-5
Barium	209	(ug/L)		7440-39-3
Beryllium	1U	(ug/L)	BDL	7440-41-7
Calcium	158000	(ug/L)		7440-70-2
Chromium	8U	(ug/L)	BDL	7440-47-3
Cobalt	6U	(ug/L)	BDL	7440-48-4
Copper	8	(ug/L)		7440-50-8
Iron	3560	(ug/L)		7439-89-6
Magnesium	65000	(ug/L)		7439-95-4
Manganese	77	(ug/L)		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	184000	(ug/L)		7440-23-5
Vanadium	5U	(ug/L)	BDL	7440-62-2
Zinc	40U	(ug/L)	BDL	7440-66-6

ANALYZED BY: RA 5-17-96 JVM 11 Jun 96

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 16-MAY-96

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: MARK WAGNER-IEPA
LABORATORY: ESAT

SAMPLE BATCH ID: 960085
ACCOUNT NO: TFA301
FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE16S02 FIELD: 96IE16S02

COLLECTED: 08-MAY-96 RECEIVED: 10-MAY-96 ANALYZED: 15-MAY-96

COMPOUND	AMOUNT	(Units)	QUALIFIERS	CAS NUMBER
Aluminum	80U	(ug/L)	BDL	7429-90-5
Barium	103	(ug/L)		7440-39-3
Beryllium	1U	(ug/L)	BDL	7440-41-7
Calcium	115000	(ug/L)		7440-70-2
Chromium	8U	(ug/L)	BDL	7440-47-3
Cobalt	6U	(ug/L)	BDL	7440-48-4
Copper	30	(ug/L)		7440-50-8
Iron	28000	(ug/L)		7439-89-6
Lead	307	(ug/L)		7439-92-1
Magnesium	48000	(ug/L)		7439-95-4
Manganese	185	(ug/L)		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	36000	(ug/L)		7440-23-5
Vanadium	5U	(ug/L)	BDL	7440-62-2
Zinc	448	(ug/L)		7440-66-6

ANALYZED BY: 5-16-96 21 June 96

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 16-MAY-96

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: MARK WAGNER-IEPA
LABORATORY: ESAT

SAMPLE BATCH ID: 960085
ACCOUNT NO: TFA301
FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE16S03 FIELD: 96IE16S03

COLLECTED: 08-MAY-96 RECEIVED: 10-MAY-96 ANALYZED: 15-MAY-96

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	14000	(ug/L)		7440-70-2
Chromium	8U	(ug/L)	BDL	7440-47-3
Cobalt	6U	(ug/L)	BDL	7440-48-4
Copper	9	(ug/L)		7440-50-8
Iron	80U	(ug/L)	BDL	7439-89-6
Magnesium	8000	(ug/L)		7439-95-4
Manganese	5U	(ug/L)	BDL	7439-96-5
Nickel	20U	(ug/L)	BDL	7440-02-0
Potassium	6000	(ug/L)		7440-09-7
Silver	6U	(ug/L)	BDL	7440-22-4
Sodium	222000	(ug/L)		7440-23-5
Vanadium	5U	(ug/L)	BDL	7440-62-2
Zinc	40U	(ug/L)	BDL	7440-66-6

ANALYZED BY: 5-16-96

EPA RLIMS CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 16-MAY-96

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: MARK WAGNER-IEPA
LABORATORY: ESAT

SAMPLE BATCH ID: 960085
ACCOUNT NO: TFA301
FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE16S04 FIELD: 96IE16S04

COLLECTED: 08-MAY-96 RECEIVED: 10-MAY-96 ANALYZED: 15-MAY-96

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	2000	(ug/L)		7440-70-2
Chromium	8U	(ug/L)	BDL	7440-47-3
Cobalt	6U	(ug/L)	BDL	7440-48-4
Copper	28	(ug/L)		7440-50-8
Iron	80U	(ug/L)	BDL	7439-89-6
Magnesium	1000	(ug/L)		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	415000	(ug/L)		7440-23-5
Vanadium	5U	(ug/L)	BDL	7440-62-2
Zinc	40U	(ug/L)	BDL	7440-66-6

ANALYZED BY: RD 5-16-96 Jun 21 Jun 96

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: JUN 1 0 1996

Subject: Review of Region 5 Data for PHILLIPS THOM LANDFILL

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

RECEIVED
JUN 14 1996
IEPA/DLPC

To: IEPA

Attached are the results for PHILLIPS THOM LANDFILL
CRL request number 960085
for analyses for Cyanide and Mercury.
Results are reported for sample designations: 96IE16S01, 96IE16D01, 96IE16S02, 96IE16S03, 96IE16S04, and 96IE16R05.

Results Status:

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

( ) Sewer Disposal Criteria Met;

Mercury: All portion of the above samples which were collected and submitted for mercury analysis are preserved with acid/dichromate reagents. Those samples should be disposed of in a drum. The preservative utilized is toxic.

Cyanide: Portions of all of the above samples which were collected and submitted for cyanide analyses are preserved with sodium hydroxide reagents. All the samples should be neutralized prior to disposal down the drain provided that the concentrations of other analytes are less than the laboratory detection or other controlling limits. Cyanide concentration in those samples are below the laboratory detection limit.

Comments on Data Quality by Reviewer:

All the water samples submitted for cyanide and mercury analyses were assayed and the results are attached. Required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the limits. All the Cyanide and Mercury results are acceptable for use.

Comments on Sample Results:

All the Cyanide and Mercury results were found to be below the laboratory detection limit. Those limits are 0.008 mg/L (8 μg/L) for Cyanide and 0.0001 mg/L (0.1μg/L) for Mercury. All the samples are considered safe with respect to the two Cyanide and Mercury.

Comments by Laboratory Director or Quality Control Coordinator:

Francis A. Awanya 6/4/96
Reviewer/Task Monitor and Date (X) Reviewed ( ) Unreviewed

10 Jun 96
Team Leader and Date (X) Reviewed ( ) Unreviewed

Chuck Ellis 6/10/96
QC Coordinator and Date ( ) Reviewed (X) Unreviewed

Sylvia Griffin JUN 10 1996
Data Management Coordinator and Date Received

Date Transmitted JUN 10 1996

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

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

Report produced on: 16-MAY-96

Sample Organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Laboratory: **ESAT**

Sample Batch ID: **960085**
Account NO: **TFA301**
Facility: **PHILLIPS THOM LANDFILL**

Sample: **96IE16D01**

Field: **96IE16D01**

Collected: **08-MAY-96 /**

Received: **10-MAY-96**

Parameter	Result	(Units)	QUALIFIERS	Anal. Date	Analyst
Cyanide (Total)	8	(ug/L)	U	15-MAY-96	M. Kupp
Mercury (Total)	0.1	(ug/L)	U	14-MAY-96	L. Leonard

Reviewed by : Francis A. Awanya 6/4/96

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

Report produced on: 16-MAY-96

Sample Organization: IEPA
Sample Requestor: MARK WAGNER-IEPA
Laboratory: ESAT

Sample Batch ID: 960085
Account NO: TFA301
Facility: PHILLIPS THOM LANDFILL

Sample: 96IE16R05

Field: 96IE16R05

Collected: 08-MAY-96 /

Received: 10-MAY-96

Parameter	Result	(Units)	QUALIFIERS	Anal. Date	Analyst
Cyanide (Total)	8	(ug/L)	U	15-MAY-96	[illegible]
Mercury (Total)	0.1	(ug/L)	U	14-MAY-96	L. Fonseca

Reviewed by : Francis A. Awanya 6/4/96

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

Report produced on: 16-MAY-96

Sample Organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Laboratory: **ESAT**

Sample Batch ID: **960085**
Account NO: **TFA301**
Facility: **PHILLIPS THOM LANDFILL**

Sample: **96IE16801**

Field: **96IE16801**

Collected: **08-MAY-96 /**

Received: **10-MAY-96**

Parameter	Result	(Units)	QUALIFIERS	Anal. Date	Analyst
Cyanide (Total)	8	(ug/L)	U	15-MAY-96	M. Kupp
Mercury (Total)	0.1	(ug/L)	U	14-MAY-96	L. Levrous

Reviewed by : Francis A. Awanya 6/4/96

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

Report produced on: 16-MAY-96

Sample Organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Laboratory: **ESAT**

Sample Batch ID: **960085**
Account NO: **TFA301**
Facility: **PHILLIPS THOM LANDFILL**

Sample: **96IE16802**

Field: **96IE16802**

Collected: **08-MAY-96 /**

Received: **10-MAY-96**

Parameter	Result	(Units)	QUALIFIERS	Anal. Date	Analyst
Cyanide (Total)	8	(ug/L)	U	15-MAY-96	MKapp
Mercury (Total)	0.1	(ug/L)	U	14-MAY-96	L. Ferrero

Reviewed by : Francis A. Awanya 6/4/96

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

Report produced on: 16-MAY-96

Sample Organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Laboratory: **ESAT**

Sample Batch ID: **960085**
Account NO: **TFA301**
Facility: **PHILLIPS THOM LANDFILL**

Sample: **96IE16803**

Field: **96IE16803**

Collected: **08-MAY-96 /**

Received: **10-MAY-96**

Parameter	Result	(Units)	QUALIFIERS	Anal. Date	Analyst
Cyanide (Total)	8	(ug/L)	U	15-MAY-96	M.K.
Mercury (Total)	0.1	(ug/L)	U	14-MAY-96	L Ferrara

Reviewed by : Francis A. Awanya 6/4/96

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

Report produced on: 16-MAY-96

Sample Organization: IEPA
Sample Requestor: MARK WAGNER-IEPA
Laboratory: ESAT

Sample Batch ID: 960065
Account NO: TFA301
Facility: PHILLIPS THOM LANDFILL

Sample: 96IE16804

Field: 96IE16804

Collected: 08-MAY-96 /

Received: 10-MAY-96

Parameter	Result	(Units)	QUALIFIERS	Anal. Date	Analyst
Cyanide (Total)	8	(ug/L)	U	15-MAY-96	M. Kupp
Mercury (Total)	0.1	(ug/L)	U	14-MAY-96	I. Leonov

Reviewed by : Francis A. Awanya 6/4/96

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
JUN 26 1996
IEPA/DLPC

Date: JUN 24 1996

Subject: Review of Region 5 Data for Phillips Thom Landfill Code:ZZ

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

To: IEPA

Attached are the results for Phillips Thom Landfill Code:ZZ
CRL request number 960085
for analyses for Antimony, Arsenic, Cadmium, Lead, Selenium and Thallium
Results are reported for sample designations: 96IE16S01, 96IE16D01, 96IE16S02, 96IE16S03, 96IE16S04 and 96IE16R05

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 reported from the ICP for sample 96IE16S02. All other lead results were reported from the graphite furnace atomic absorption analyses. The lead result for the field blank, 96IE16R05, was not confirmed, but is just at the detection limit. No measurable lead was found in the laboratory digestion blank. The matrix spike recovery for arsenic was 126%, but all arsenic results are below detection, so the data are unaffected.

Comments by Laboratory Director or Quality Control Coordinator

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY

Single Analyte Result Report, produced on: 22-MAY-96

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER**
Date Collected: **08-MAY-96**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16D01**
Units: **ug/L**
Date Received: **10-MAY-96**

Parameter	Result	Anal. Date	Analyst	Comments
Antimony	1U	21-MAY-96	MV	
Arsenic Concentration	2U	15-MAY-96	B. Lynn	
Cadmium Concentration	0.2U	14-MAY-96	B. Lynn	
Lead Concentration	3	16-MAY-96	B. Lynn	
Selenium Concentration	2U	16-MAY-96	B. Lynn	
Thallium Concentration	2U	14-MAY-96	B. Lynn	

Team Leader: Jun 21 Jun 96

pmt#06

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY

Single Analyte Result Report, produced on: 22-MAY-96

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER**
Date Collected: **08-MAY-96**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16R05**
Units: **ug/L**
Date Received: **10-MAY-96**

Parameter	Result	Anal. Date	Analyst	Comments
Antimony	1U	21-MAY-96	[illegible]	
Arsenic Concentration	2U	15-MAY-96	B. Lyman	
Cadmium Concentration	0.2U	14-MAY-96	B. Lyman	
Lead Concentration	2	16-MAY-96	B. Lyman	
Selenium Concentration	2U	16-MAY-96	B. Lyman	
Thallium Concentration	2U	14-MAY-96	B. Lyman	

Team Leader: JVM 21 June 96

pmt#06

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY

Single Analyte Result Report, produced on: 22-MAY-96

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER**
Date Collected: **08-MAY-96**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16801**
Units: **ug/L**
Date Received: **10-MAY-96**

Parameter	Result	Anal. Date	Analyst	Comments
Antimony	1U	21-MAY-96	[illegible]	
Arsenic Concentration	2U	15-MAY-96	B. L[illegible]	
Cadmium Concentration	0.2U	14-MAY-96	B. L[illegible]	
Lead Concentration	2U	16-MAY-96	B. L[illegible]	
Selenium Concentration	2U	16-MAY-96	B. L[illegible]	
Thallium Concentration	2U	14-MAY-96	B. L[illegible]	

Team Leader: [illegible] 21 June 96

pmt#06

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY

Single Analyte Result Report, produced on: 22-MAY-96

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER**
Date Collected: **08-MAY-96**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16802**
Units: **ug/L**
Date Received: **10-MAY-96**

Parameter	Result	Anal. Date	Analyst	Comments
Antimony	1U	21-MAY-96	[illegible]	
Arsenic Concentration	2U	15-MAY-96	B. Lyne	
Cadmium Concentration	0.8	14-MAY-96	B. Lyne	
Selenium Concentration	2U	16-MAY-96	B. Lyne	
Thallium Concentration	2U	14-MAY-96	B. Lyne	

Team Leader: [illegible] 21 May 96

pmt#062

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY

Single Analyte Result Report, produced on: 22-MAY-96

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER**
Date Collected: **08-MAY-96**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16803**
Units: **ug/L**
Date Received: **10-MAY-96**

Parameter	Result	Anal. Date	Analyst	Comments
Antimony	1U	21-MAY-96	[illegible]	
Arsenic Concentration	8U	15-MAY-96	B. Lyman	
Cadmium Concentration	0.2U	14-MAY-96	B. Lyman	
Lead Concentration	2U	16-MAY-96	B. Lyman	
Selenium Concentration	2U	16-MAY-96	B. Lyman	
Thallium Concentration	2U	14-MAY-96	B. Lyman	

Team Leader: [illegible] 21 May 96

pmt#06

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY

Single Analyte Result Report, produced on: 22-MAY-96

Sample organization: **IEPA**
Sample Requestor: **MARK WAGNER-IEPA**
Facility: **PHILLIPS THOM LANDFILL**
Matrix: **WATER**
Date Collected: **08-MAY-96**

Sample Batch ID: **960085**
Account No: **TFA301**
Sample ID: **96IE16804**
Units: **ug/L**
Date Received: **10-MAY-96**

Parameter	Result	Anal. Date	Analyst	Comments
Antimony	1U	21-MAY-96	[illegible]	
Arsenic Concentration	2U	15-MAY-96	B. Yun	
Cadmium Concentration	0.2U	14-MAY-96	B. Yun	
Lead Concentration	2U	16-MAY-96	B. Yun	
Selenium Concentration	4U	16-MAY-96	B. Yun	
Thallium Concentration	2U	14-MAY-96	B. Yun	

Team Leader: [illegible] 11 June 96

pmt#06

ON-SITE SAMPLE DATA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
JUL 19 1996
IEPA/DLPC

Date: JUL 17 1996

Subject: Review of Region 5 Data for Phillips Thom Landfill Code:ZZ

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

To: IEPA

Attached are the results for Phillips Thom Landfill Code:ZZ
CRL request number 960098
for analyses for ICP
Results are reported for sample designations:

Water: 96IE19S01, 96IE19S02, 96IE19D02, 96IE19S03 and 96IE19R02

Soil: 96IE19S06, 96IE19S07, 96IE19S08, 96IE19S09, 96IE19S10 and 96IE19D10

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. Samples 96IE19S01 and 96IE19S03 exceed the disposal criterion for iron. Soils may not be disposed of except in a drum.

Comments on Data Quality by Reviewer

For the water samples, the sample 96IE19S03 was designated in the field as the sample for the matrix spike and duplicate. The three bottles for this sample all were quite different in appearance from the other samples in this batch. All three bottles were at neutral pH upon arrival at the CRL. When additional nitric acid was added to these bottles, the different portions behaved differently from each other. One portion, tag number 5-025659, required only 1.5 mL of concentrated nitric acid to adjust the pH to < 2. Some foaming occurred while this acid was added. The next bottle, after the addition of more than 5 mL of concentrated nitric acid, remained neutral, and the foaming was more severe. The third bottle was left unaltered, in case further investigations were necessary. Because there were apparent differences among the different portions, only the first portion was used for all sample, matrix spike, and duplicate analyses. In addition, the analyst elected to perform another matrix spike and duplicate on sample 96IE19S01, because the matrix of 96IE19S03 was so different from the other samples. A sulfide odor was noted from some of the samples.

The copper result matrix spike for sample 96IE19S03 was low (83%), but the duplicate was also low compared to the sample (duplicate difference -14 μg Cu/L). The duplicate supports the spike, because use of the duplicate result for the matrix spike recovery calculation yields a recovery of 110%.

Cadmium and lead analyses were reported from the ICP analysis for the soil samples 96IE19S08, 96IE19S09, 96IE19S10 and 96IE19D10. The cadmium and lead results for the other two samples is reported from the GFAA analyses. For the soil run, the second instrument blank for cadmium was outside the criterion of $\pm$the detection limit ($\pm$10 μg Cd/L; -10.5 μg/L was determined). Both the initial instrument blank and the digestion blank were acceptable. The worst effect of any baseline drift this represents would be a bias of less than 2 mg Cd/kg low for those four samples reported from the ICP run. This would be less than 20% deviation for most of the samples. The initial instrument check standard for cadmium was high by 6.7%, and zinc was high by 5.5%, both outside the CRL's $\pm$5% criteria (CLP allows $\pm$10%). Both analytes were in control for the second instrument check standard, and all matrix QC audits were in control for these metals, so the data are minimally affected. The duplicate difference for cobalt was 1.3 mg Co/kg, whereas $\pm$ the detection limit would be $\pm$1.1 mg Co/kg.

Comments by Laboratory Director or Quality Control Coordinator

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 24-JUNE-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE REQUESTOR: MARK WAGNER
LABORATORY: ESAT
SAMPLE FACILITY:
SAMPLE BATCH ID: 960098
ACCOUNT NO: TFA301
PHILLIPS THOM LANDFILL

SAMPLE: 96IE19R02
FIELD: 96IE19R02

COLLECTED: 29,30-MAY-96
RECEIVED: 31-MAY-96
ANALYZED: 10-JUNE-96

COMPOUND	AMOUNT	(Units)
Aluminum	80 U	(ug/L)
Barium	6 U	(ug/L)
Beryllium	1 U	(ug/L)
Calcium	500 U	(ug/L)
Chromium	8 U	(ug/L)
Cobalt	6 U	(ug/L)
Copper	6 U	(ug/L)
Iron	80 U	(ug/L)
Magnesium	10000 U	(ug/L)
Manganese	5 U	(ug/L)
Nickel	20 U	(ug/L)
Potassium	5000 U	(ug/L)
Silver	6 U	(ug/L)
Sodium	1000 U	(ug/L)
Vanadium	5 U	(ug/L)
Zinc	40 U	(ug/L)

ANALYZED BY: L.K 6-24-96 JW 16 July 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 24-JUNE-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE REQUESTOR: MARK WAGNER
LABORATORY: ESAT
SAMPLE BATCH ID: 960098
ACCOUNT NO: TFA301
SAMPLE FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE19S01 FIELD: 96IE19S01

COLLECTED: 29,30-MAY-96 RECEIVED: 31-MAY-96 ANALYZED: 10-JUNE-96

COMPOUND	AMOUNT	(Units)
Aluminum	114	(ug/L)
Barium	158	(ug/L)
Beryllium	1 U	(ug/L)
Calcium	122000	(ug/L)
Chromium	13.4	(ug/L)
Cobalt	6 U	(ug/L)
Copper	6 U	(ug/L)
Iron	5590	(ug/L)
Magnesium	83000	(ug/L)
Manganese	158	(ug/L)
Nickel	20 U	(ug/L)
Potassium	35800	(ug/L)
Silver	6 U	(ug/L)
Sodium	59000	(ug/L)
Vanadium	5 U	(ug/L)
Zinc	40 U	(ug/L)

ANALYZED BY: DK 6-24-96 JVM 16 July 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 24-JUNE-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE REQUESTOR: MARK WAGNER
LABORATORY: ESAT

SAMPLE BATCH ID: 960098
ACCOUNT NO: TFA301
SAMPLE FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE19S02 FIELD: 96IE19S02

COLLECTED: 29,30-MAY-96 RECEIVED: 31-MAY-96 ANALYZED: 10-JUNE-96

COMPOUND	AMOUNT	(Units)
Aluminum	80 U	(ug/L)
Barium	60.4	(ug/L)
Beryllium	1 U	(ug/L)
Calcium	99800	(ug/L)
Chromium	8 U	(ug/L)
Cobalt	6 U	(ug/L)
Copper	6 U	(ug/L)
Iron	107	(ug/L)
Magnesium	48000	(ug/L)
Manganese	5 U	(ug/L)
Nickel	20 U	(ug/L)
Potassium	5000 U	(ug/L)
Silver	6 U	(ug/L)
Sodium	16000	(ug/L)
Vanadium	5 U	(ug/L)
Zinc	40 U	(ug/L)

ANALYZED BY: 6-24-96 16 July 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 24-JUNE-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE REQUESTOR: MARK WAGNER
LABORATORY: ESAT

SAMPLE BATCH ID: 960098
ACCOUNT NO: TFA301
SAMPLE FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE19D02 FIELD: 96IE19D02

COLLECTED: 29,30-MAY-96 RECEIVED: 31-MAY-96 ANALYZED: 10-JUNE-96

COMPOUND	AMOUNT	(Units)
Aluminum	113	(ug/L)
Barium	61.8	(ug/L)
Beryllium	1 U	(ug/L)
Calcium	99200	(ug/L)
Chromium	8 U	(ug/L)
Cobalt	6 U	(ug/L)
Copper	10	(ug/L)
Iron	331	(ug/L)
Magnesium	50500	(ug/L)
Manganese	5 U	(ug/L)
Nickel	20 U	(ug/L)
Potassium	5180	(ug/L)
Silver	6 U	(ug/L)
Sodium	23600	(ug/L)
Vanadium	5 U	(ug/L)
Zinc	40 U	(ug/L)

ANALYZED BY: 6-24-96 JVM 16 July 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 24-JUNE-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE BATCH ID: 960098
SAMPLE REQUESTOR: MARK WAGNER
ACCOUNT NO: TFA301
LABORATORY: ESAT
SAMPLE FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE19S03
FIELD: 96IE19S03

COLLECTED: 29,30-MAY-96
RECEIVED: 31-MAY-96
ANALYZED: 10-JUNE-96

COMPOUND	AMOUNT	(Units)
Aluminum	443	(ug/L)
Barium	431	(ug/L)
Beryllium	1 U	(ug/L)
Calcium	315000	(ug/L)
Chromium	49.7	(ug/L)
Cobalt	7.3	(ug/L)
Copper	15.4	(ug/L)
Iron	65800	(ug/L)
Magnesium	197000	(ug/L)
Manganese	368	(ug/L)
Nickel	113	(ug/L)
Potassium	160000	(ug/L)
Silver	6 U	(ug/L)
Sodium	496000	(ug/L)
Vanadium	6	(ug/L)
Zinc	59	(ug/L)

ANALYZED BY: 6-24-96

16 July 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 2-JULY-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE REQUESTOR: MARK WAGNER
LABORATORY: ESAT
SAMPLE FACILITY: PHILLIPS THOM LANDFILL
SAMPLE BATCH ID: 960098
ACCOUNT NO: TFA301

SAMPLE: 96IE19S06 FIELD: 96IE19S06

COLLECTED: 29,30-MAY-96 RECEIVED: 31-MAY-96 ANALYZED: 25-JUNE-96

COMPOUND	AMOUNT	(Units)
Silver	1.1 U	(mg/kg)
Aluminum	12000	(mg/kg)
Barium	180	(mg/kg)
Beryllium	0.5	(mg/kg)
Calcium	1900	(mg/kg)
Cobalt	11	(mg/kg)
Chromium	18	(mg/kg)
Copper	13	(mg/kg)
Magnesium	2200	(mg/kg)
Iron	16000	(mg/kg)
Potassium	1700	(mg/kg)
Manganese	1300	(mg/kg)
Sodium	200 U	(mg/kg)
Nickel	11	(mg/kg)
Vanadium	30	(mg/kg)
Zinc	62	(mg/kg)

ANALYZED BY: 7-2-96

16 July 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 2-JULY-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE BATCH ID: 960098
SAMPLE REQUESTOR: MARK WAGNER
ACCOUNT NO: TFA301
LABORATORY: ESAT
SAMPLE FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE19S07
FIELD: 96IE19S07

COLLECTED: 29,30-MAY-96
RECEIVED: 31-MAY-96
ANALYZED: 25-JUNE-96

COMPOUND	AMOUNT	(Units)
Silver	1.1 U	(mg/kg)
Aluminum	11000	(mg/kg)
Barium	750	(mg/kg)
Beryllium	11	(mg/kg)
Calcium	4400	(mg/kg)
Cobalt	36	(mg/kg)
Chromium	19	(mg/kg)
Copper	150	(mg/kg)
Magnesium	790	(mg/kg)
Iron	14000	(mg/kg)
Potassium	1000	(mg/kg)
Manganese	120	(mg/kg)
Sodium	460	(mg/kg)
Nickel	57	(mg/kg)
Vanadium	81	(mg/kg)
Zinc	82	(mg/kg)

ANALYZED BY: FK 7-2-96 Jvm 16 July 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 2-JULY-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE REQUESTOR: MARK WAGNER
LABORATORY: ESAT

SAMPLE BATCH ID: 960098
ACCOUNT NO: TFA301
SAMPLE FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE19S08 FIELD: 96IE19S08

COLLECTED: 29,30-MAY-96 RECEIVED: 31-MAY-96 ANALYZED: 25-JUNE-96

COMPOUND	AMOUNT	(Units)
Silver	4.7	(mg/kg)
Aluminum	3700	(mg/kg)
Barium	59	(mg/kg)
Beryllium	3.2	(mg/kg)
Calcium	5300	(mg/kg)
Cadmium	13	(mg/kg)
Cobalt	9.3	(mg/kg)
Chromium	510	(mg/kg)
Copper	270	(mg/kg)
Magnesium	490	(mg/kg)
Iron	44000	(mg/kg)
Potassium	1100	(mg/kg)
Manganese	190	(mg/kg)
Sodium	200 U	(mg/kg)
Nickel	82	(mg/kg)
Lead	350	(mg/kg)
Vanadium	48	(mg/kg)
Zinc	1500	(mg/kg)

ANALYZED BY: RK 7-2-96 JVM 16 July 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 2-JULY-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE REQUESTOR: MARK WAGNER
LABORATORY: ESAT
SAMPLE FACILITY:

SAMPLE BATCH ID: 960098
ACCOUNT NO: TFA301
PHILLIPS THOM LANDFILL

SAMPLE: 96IE19S09 FIELD: 96IE19S09

COLLECTED: 29,30-MAY-96 RECEIVED: 31-MAY-96 ANALYZED: 25-JUNE-96

COMPOUND	AMOUNT	(Units)
Silver	12	(mg/kg)
Aluminum	5700	(mg/kg)
Barium	180	(mg/kg)
Beryllium	1.9	(mg/kg)
Calcium	63000	(mg/kg)
Cadmium	19	(mg/kg)
Cobalt	3.6	(mg/kg)
Chromium	330	(mg/kg)
Copper	150	(mg/kg)
Magnesium	20000	(mg/kg)
Iron	21000	(mg/kg)
Potassium	1000 U	(mg/kg)
Manganese	310	(mg/kg)
Sodium	200	(mg/kg)
Nickel	120	(mg/kg)
Lead	150	(mg/kg)
Vanadium	18	(mg/kg)
Zinc	850	(mg/kg)

ANALYZED BY: RD 7-2-96

16 July 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 2-JULY-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE REQUESTOR: MARK WAGNER
LABORATORY: ESAT

SAMPLE BATCH ID: 960098
ACCOUNT NO: TFA301
SAMPLE FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE19S10 FIELD: 96IE19S10

COLLECTED: 29,30-MAY-96 RECEIVED: 31-MAY-96 ANALYZED: 25-JUNE-96

COMPOUND	AMOUNT	(Units)
Silver	1.1 U	(mg/kg)
Aluminum	6300	(mg/kg)
Barium	37	(mg/kg)
Beryllium	6.8	(mg/kg)
Calcium	7600	(mg/kg)
Cadmium	13	(mg/kg)
Cobalt	7.9	(mg/kg)
Chromium	23	(mg/kg)
Copper	71	(mg/kg)
Magnesium	890	(mg/kg)
Iron	37000	(mg/kg)
Potassium	1000	(mg/kg)
Manganese	150	(mg/kg)
Sodium	200 U	(mg/kg)
Nickel	60	(mg/kg)
Lead	180	(mg/kg)
Vanadium	46	(mg/kg)
Zinc	1300	(mg/kg)

ANALYZED BY: RD 7-2-96

JVM
16 July 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 2-JULY-96

SAMPLE OGANIZATION: ILL EPA
SAMPLE REQUESTOR: MARK WAGNER
LABORATORY: ESAT

SAMPLE BATCH ID: 960098
ACCOUNT NO: TFA301
SAMPLE FACILITY: PHILLIPS THOM LANDFILL

SAMPLE: 96IE19D10 FIELD: 96IE19D10

COLLECTED: 29,30-MAY-96 RECEIVED: 31-MAY-96 ANALYZED: 25-JUNE-96

COMPOUND	AMOUNT	(Units)
Silver	1.2 U	(mg/kg)
Aluminum	5500	(mg/kg)
Barium	36	(mg/kg)
Beryllium	6.3	(mg/kg)
Calcium	6200	(mg/kg)
Cadmium	8.4	(mg/kg)
Cobalt	7.9	(mg/kg)
Chromium	18	(mg/kg)
Copper	68	(mg/kg)
Magnesium	760	(mg/kg)
Iron	34000	(mg/kg)
Potassium	1000	(mg/kg)
Manganese	130	(mg/kg)
Sodium	200 U	(mg/kg)
Nickel	51	(mg/kg)
Lead	170	(mg/kg)
Vanadium	42	(mg/kg)
Zinc	1000	(mg/kg)

ANALYZED BY: RD 7-2-96 JVM 16 July 96

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
AUG 02 1996
IEPA/DLPC

Date: JUL 31 1996

Subject: Review of Region 5 Data for **PHILLIPS THOM LANDFILL**

From: Charles T. Elly, Director Chi Vang for
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for **PHILLIPS THOM LANDFILL**
CRL request number **960098**
for analyses for **Cyanide** and **Mercury**.
Results are reported for sample designations:

Water samples; 96IE19S01, 96IE19S02, 96IE19D02, 96IE19S03, 96IE19R02.

Soils samples; 96IE19S06, 96IE19S07, 96IE19S08, 96IE19S09, 96IE19S10, 96IE19D10.

Results Status:

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

( ) Sewer Disposal Criteria Met;

Mercury: All the water samples which were collected and submitted for mercury analysis are preserved with acid/dichromate reagents. Those samples should be disposed of in a drum. The preservative utilized is toxic. All the soil samples should be disposed of in a drum.

Cyanide: *Portion of the water samples which were collected and submitted for cyanide analyses*

are preserved with sodium hydroxide reagents. Sample 96IE19S03 should be disposed of in a drum. Cyanide concentration in the sample is above the laboratory detection limit. The remaining samples should be neutralized prior to disposal down the drain provided that the concentrations of other analytes are less than the laboratory detection or other controlling limits. Cyanide concentration in those samples are below the laboratory detection limit. All the soil samples should be disposed of in a drum.

Comments on Data Quality by Reviewer:

All the water samples submitted for cyanide and mercury analyses were assayed and the results are attached. Required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the limits. All the Cyanide and Mercury results are acceptable for use. The matrix spike recovery for cyanide initially indicated interference. The samples were re-distilled at five fold dilutions and analyzed. The matrix spike results were found to be within the limits. No cyanide was detected at all dilutions.

Comments on Sample Results:

Water Samples: Cyanide results for samples 96IE19S01, 96IE19S02, 96IE19D02, 96IE19R02 and Mercury results for all the water samples were found to be below the laboratory detection limit. Those limits are 0.008 mg/L (8 μg/L) for Cyanide and 0.0001 mg/L (0.1μg/L) for Mercury. Those samples are considered to be safe with respect to Cyanide and Mercury.

Soil Samples: Mercury results for samples 96IE19S07, 96IE19S09, 96IE19S10, and 96IE19D10 were found to be above the laboratory detection limits. Those samples could pose some risk with respect to mercury.

Comments by Laboratory Director or Quality Control Coordinator:

Francis A Avanga 7/26/96
Reviewer/Task Monitor and Date (X) Reviewed ( ) Unreviewed

Robert V. Morr 30 July 96
Team Leader and Date (X) Reviewed ( ) Unreviewed

QC Coordinator and Date ( ) Reviewed ( ) Unreviewed

FINAL SAMPLE REPORT FOR CN AND Hg
DATA SET 960098 (WATER)
PHILLIPS THOM LANDFILL
(μg/L)

SAMPLE	CN RESULT REPORTED	Hg RESULT REPORTED
96IE19S01	40 U	0.1 U
96IE19S02	40 U	0.1 U
96IE19D02	40 U	0.1 U
96IE19S03	29	0.1 U
96IE19R02	40 U	0.1 U

FINAL SAMPLE REPORT FOR CN AND Hg
DATA SET 960098 (SOIL)
PHILLIPS THOM LANDFILL
(Mg/Kg)

SAMPLE	CN RESULT REPORTED	Hg RESULT REPORTED
96IE19S06	0.5 U	0.1 U
96IE19S07	0.6 U	0.3
96IE19S08	37.4	0.1 U
96IE19S09	10.7	0.6
96IE19S10	0.7	0.3
96IE19D10	0.6	0.3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: JUL 17 1996

Subject: Review of Region 5 Data for Phillips Thom Landfill Code:ZZ

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

To: IEPA

Attached are the results for Phillips Thom Landfill Code:ZZ
CRL request number 960098
for analyses for Antimony, Arsenic, Cadmium, Lead, Selenium and Thallium
Results are reported for sample designations:

Water: 96IE19S01, 96IE19S02, 96IE19D02, 96IE19S03 and 96IE19R02

Soil: 96IE19S06, 96IE19S07, 96IE19S08, 96IE19S09, 96IE19S10 and 96IE19D10

Results Status:
(x) Acceptable for Use
( ) Data Qualified, but Acceptable for use
(x) Data Unacceptable for Use for antimony in the soil samples.

(x) Sewer Disposal Criteria Met; Exceptions: Acid preserved samples must be neutralized prior to disposal. Sample 96IE19S03 exceeds the disposal criterion for lead. Soils may not be disposed of except in a drum.

RECEIVED
JUL 19 1996
IEPA/DLPC

Comments on Data Quality by Reviewer

For the water samples, the sample 96IE19S03 was designated in the field as the sample for the matrix spike and duplicate. The three bottles for this sample all were quite different in appearance from the other samples in this batch. All three bottles were at neutral pH upon arrival at the CRL. When additional nitric acid was added to these bottles, the different portions behaved differently from each other. One portion, tag number 5-025659, required only 1.5 mL of concentrated nitric acid to adjust the pH to < 2. Some foaming occurred while this acid was added. The next bottle, after the addition of more than 5 mL of concentrated nitric acid, remained neutral, and the foaming was more severe. The third bottle was left unaltered, in case further investigations were necessary. Because there were apparent differences among the different portions, only the first portion was used for all sample, matrix spike, and duplicate analyses. A sulfide odor was noted from some of the samples.

For the water samples, the selenium analyses required dilution to obtain an acceptable analytical spike recovery (90-110%), except for samples 96IE19S02 and 96IE19D02. The analytical spike recoveries for the undiluted samples were 75-82%, and no selenium above the detection limit of 2 μg Se/L was found.

Cadmium and lead analyses were reported from the ICP analysis for the soil samples 96IE19S08, 96IE19S09, 96IE19S10 and 96IE19D10. The cadmium and lead results for the other two samples is reported from the GFAA analyses. Antimony is qualified because the matrix spike recovery for the soil digestion is very small (4.7%). Poor recovery is characteristic of the CLP-type digestion for antimony.

Most metals were found in these samples. It is unusual to find selenium and thallium in all soil samples in a survey. Arsenic is also quite high in these soils.

Comments by Laboratory Director or Quality Control Coordinator

FINAL SAMPLE REPORT FOR GFAA/FIAS (WATER)
DATA SET 960098
PHILLIPS THOM LANDFILL
(µg/L)

SAMPLE 96IE19	As RESULT	Cd RESULT	Pb RESULT	Sb RESULT	Se RESULT	Tl RESULT
S01	27	0.2 U	2 U	8 U	4 U	2 U
S02	2 U	0.2 U	2 U	2 U	4	2 U
D02	2 U	0.2 U	2 U	2 U	3	2 U
S03	8	0.2 U	35	8 U	12 U	2 U
R02	2 U	0.2 U	2 U	2 U	6 U	2 U

Jun
16 July 96

B. Green
6-25-96

FINAL SAMPLE REPORT FOR GFAA/FIAS (SOIL)
DATA SET 960098
PHILLIPS THOM LANDFILL
(mg/Kg)

SAMPLE 96IE19	As RESULT	Cd RESULT	Pb RESULT	Sb RESULT	Se RESULT	Tl RESULT
S06	5.9	0.40	31	1.1 U	0.6	0.4 U
S07	47	0.53	62	1.2 U	28	2.6
S08	25	ICP	ICP	1.2 U	0.8	0.7
S09	36	ICP	ICP	1.2 U	1.4	0.5
S10	81	ICP	ICP	1.2 U	2.8	1.9
D10	87	ICP	ICP	1.2 U	2.4	1.7

JLM
16 July 96

B. Jones
6-25-96

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED

JUL 24 1996

IEPA/DLPC

Date: JUL 22 1996

Subject: Review of Region 5 Data for **PHILLIPS THOM LANDFILL**

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

To: IEPA

Attached are the results for: **PHILLIPS THOM LANDFILL**
CRL request number: **960098**
Analyzed for: **VOA (Organics)**
Results are reported for sample designations: 96IE19S06 to S10 and -D10
(6 samples)

Results Status:
(**X**) Acceptable for Use .
(**X**) Data Qualified but acceptable for use for the compounds qualified **UJ** or **J**. See the attached case narrative.
( ) Data Unacceptable for Use.

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

- Do to low internal standard area, all site samples has been flagged "J" for estimated. Samples were reanalyzed but same results were obtained. See attached case narrative.

CASE NARRATIVE

DATE: July 16, 1996

PROJECT NAME: Phillips Thom Landfill Samples - CRL Case #: 960098
Analysis of Volatile Organic Compounds (VOC)

ANALYSTS: Anthony Gugliotta and Ziyad A. Rajabi, Lockheed/ESAT

REVIEWERS: Ira Wilson, ESAT Organic Supervisor for D. Miller
Dennis Miller, Lockheed/ESAT Team Manager D. Miller
Nidia Fuentes, EPA CRL Task Monitor

I. CASE DESCRIPTION:

The laboratory received six soil samples (96IE19S06 to -S10, and -D10) on 5/31/96 for Volatile Organic Compounds (VOC) analysis. The samples were collected on May 30, 1996 and analyzed by CRL Method 624VOC (revised 12/15/95) using GC/MS#4. Severe matrix effects were noted during the initial analysis on June 7, 1996. The samples were reanalyzed on June 10, 1996, June 11, 1996, and June 13, 1996. The same matrix effects were noted during the reanalysis processes. For reporting purposes, the June 13, 1996 data were used. Analysis data from the remaining three analysis days are included in the (not used) section of the package. Matrix spike and matrix spike duplicate analyses were performed on 5g aliquots of sample 96IE19S06. All site samples were analyzed within the sample holding time requirements. The QC criterion for sample holding times is 14 days for soil samples. These samples were received at the laboratory in good condition. No problems were observed.

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Checks (IPC):** On each day of analysis, GC/MS IPCs using *p*-BFB were made on GC/MS#4 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, no problems were observed.

2. **Initial Calibrations (IC):** An acceptable five-point IC is required for all target compounds before samples can be analyzed. The QC criterion for the IC states that each analyte's %RSD must be ≤30%.

An initial calibration was generated on 6/13/96 on GC/MS#4. All QC criteria were acceptable for all target compounds.

3. **Continuing Calibrations (CC):** One continuing calibration check (initial calibration middle point) is included with this

data set. All QC criteria were acceptable for all target compounds. No problems were observed with this continuing calibration.

4. **Internal Standard (IS) Area and Retention Time (RT) Summary:** The QC criterion states that the areas of ISs must be within a factor of two of the IS area of the corresponding CC. The RT of the IS for samples must also be within 30 seconds of the RT of the IS for the corresponding CC.

All internal standard areas and retention times met the QC requirements except for low chlorobenzene-d5 and 1,2-dichlorobenzene-d4 recoveries for samples 95IE19S06, -S06M, and -S06S. All three internal standards recoveries were low for samples 96IE19S07, -S08, -S09, -S10, -D10, and the initial check standards 061196ICHK. Results of all compounds quantitaited based on the above internal standards will be qualified estimated (J) for detected compounds while all non-detects will be flagged as estimated (UJ). No other problems were observed.

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** Lab Blank (blank soil spiked with internal standards and surrogates) was analyzed to check the GC/MS, purge and trap systems and reagents for laboratory contaminations (see Form I VOA). All QC data for the Lab Blank were acceptable.

The LAB BLANK contained acetone (9 µg/Kg), 2-butanone (9 µg/Kg), 2-hexanone (5 µg/Kg), and five TICs. These compounds were flagged (B) when detected in the associated samples. No other problems were observed.

2. **Surrogate Spike Compound Results:** The surrogate spike compound recovery data were within the QC limits for all soil samples except for low toluene-d8 and bromofluorobenzene recoveries in sample 96IE19S07. High benzene-d6 and low bromofluorobenzene recoveries were noted for sample 96IE19S10. High benzene-d6, low toluene-d8 and bromofluorobenzene recoveries were noted for samples 96IE19S08 and -D10. Results of samples 96IE19S07, -S08, -S10, and -D10 will be qualified estimated (J) for detected compounds while all non-detects will be flagged as estimated (UJ). No other problems were observed. (See Form II VOA-1).

3. **Matrix Spike and Matrix Spike Duplicate:** Matrix spike and matrix spike duplicate analyses were performed on 5g aliquots of sample 96IE19S06. All recoveries and all relative percent deviations (RPD) were within their acceptable limits.

IV. SAMPLE RESULTS:

Samples 96IE19D10 was identified as the field duplicate of sample 96IE19S10.

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

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SI-100 Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: LAB BLANK

Sample wt/vol: 5 (g/mL) G Lab File ID: >A1997

Level: (low/med) LOW Date Received: 06/13/96

% Moisture: not dec.---- Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	25.	U
75-01-4	Vinyl chloride	10.	U
74-83-9	Bromomethane	4.	J
75-00-3	Chloroethane	25.	U
75-35-4	1,1-Dichloroethene	5.	U
67-64-1	Acetone	9.	J
75-15-0	Carbon disulfide	5.	U
75-09-2	Methylene chloride	5.	U
156-60-5	trans-1,2-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
594-20-7	2,2-Dichloropropane	5.	U
156-59-2	cis-1,2-Dichloroethene	5.	U
78-93-3	2-Butanone	9.	J
74-97-5	Bromochloromethane	5.	U
67-66-3	Chloroform	5.	U
71-55-6	1,1,1-trichloroethane	5.	U
56-23-5	Carbon tetrachloride	5.	U
563-58-6	1,1-Dichloropropene	5.	U
71-43-2	Benzene	5.	U
107-06-2	1,2-Dichloroethane	5.	U
79-01-6	Trichloroethene	5.	U
78-87-5	1,2-Dichloropropane	5.	U
74-95-3	Dibromomethane	5.	U
75-27-4	Bromodichloromethane	5.	U
10061-01-5	cis-1,3-dichloropropene	5.	U
108-88-3	Toluene	5.	U
108-10-1	4-Methyl-2-pentanone	10.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
127-18-4	Tetrachloroethene	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
142-28-9	1,3-Dichloropropane	5.	U
591-78-6	2-Hexanone	5.	J
124-48-1	Dibromochloromethane	5.	U
106-93-4	1,2-Dibromoethane	5.	U
108-90-7	Chlorobenzene	5.	U
630-20-6	1,1,1,2-Tetrachloroethane	5.	U
100-41-4	Ethylbenzene	5.	U

Are there any TICs ? (Please check a box) YES |_X_| NO |__|

FORM I VOA

1/89 Rev.

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: LAB BLANK

Sample wt/vol: 5 (g/mL) G Lab File ID: >A1997

Level: (low/med) LOW Date Received: 06/13/96

% Moisture: not dec.---- Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
1083836423	m &/or p-Xylene	5.	U
95-47-6	o-Xylene	5.	U
100-42-5	Styrene	5.	U
75-25-2	Bromoform	5.	U
98-82-8	Isopropylbenzene	5.	U
108-86-1	Bromobenzene	5.	U
96-18-4	1,2,3-Trichloropropane	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
103-65-1	n-Propylbenzene	5.	U
95-49-8	2-Chlorotoluene	5.	U
106-43-4	4-Chlorotoluene	5.	U
108-67-8	1,3,5-Trimethylbenzene	5.	U
98-06-6	tert-Butylbenzene	5.	U
95-63-6	1,2,4-Trimethylbenzene	5.	U
135-98-8	sec-Butylbenzene	5.	U
541-73-1	1,3-Dichlorobenzene	5.	U
106-46-7	1,4-Dichlorobenzene	5.	U
99-87-6	p-Isopropyltoluene	5.	U
95-50-1	1,2-Dichlorobenzene	5.	U
104-51-8	n-Butylbenzene	5.	U
96-12-8	1,2-Dibromo-3-chloropropane	5.	U
120-82-1	1,2,4-Trichlorobenzene	5.	U
91-20-3	Naphthalene	5.	U
87-68-3	Hexachlorobutadiene	5.	U
87-61-6	1,2,3-Trichlorobenzene	5.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LAB BLANK

Lab Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: LAB BLANK

Sample wt/vol: 5 (g/mL) G Lab File ID: >A1997

Level: (low/med) LOW Date Received: 06/13/96

% Moisture: not dec.---- Date Analyzed: 6/13/96

Column: CAP Dilution Factor: 1.00000

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	Unknown	19.14	2.	J
2	Unknown	21.26	2.	J
3	Unknown	23.41	2.	J
4	Unknown	24.55	4.	J
5	Unknown	29.85	2.	J
6				
7				
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S06

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S06

Sample wt/vol: 5.02 (g/mL) G Lab File ID: >A1998

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 1.23 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	25.	U
75-01-4	Vinyl chloride	10.	U
74-83-9	Bromomethane	25.	U
75-00-3	Chloroethane	25.	U
75-35-4	1,1-Dichloroethene	5.	U
67-64-1	Acetone	3.	BJ
75-15-0	Carbon disulfide	5.	U
75-09-2	Methylene chloride	5.	U
156-60-5	trans-1,2-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
594-20-7	2,2-Dichloropropane	5.	U
156-59-2	cis-1,2-Dichloroethene	5.	U
78-93-3	2-Butanone	3.	BJ
74-97-5	Bromochloromethane	5.	U
67-66-3	Chloroform	5.	U
71-55-6	1,1,1-trichloroethane	5.	U
56-23-5	Carbon tetrachloride	5.	U
563-58-6	1,1-Dichloropropene	5.	U
71-43-2	Benzene	5.	U
107-06-2	1,2-Dichloroethane	5.	U
79-01-6	Trichloroethene	5.	U
78-87-5	1,2-Dichloropropane	5.	U
74-95-3	Dibromomethane	5.	U
75-27-4	Bromodichloromethane	5.	U
10061-01-5	cis-1,3-dichloropropene	5.	U
108-88-3	Toluene	5.	U
108-10-1	4-Methyl-2-pentanone	10.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
127-18-4	Tetrachloroethene	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
142-28-9	1,3-Dichloropropane	5.	U
591-78-6	2-Hexanone	10.	U
124-48-1	Dibromochloromethane	5.	U
106-93-4	1,2-Dibromoethane	5.	U
108-90-7	Chlorobenzene	5.	UJ
630-20-6	1,1,1,2-Tetrachloroethane	5.	UJ
100-41-4	Ethylbenzene	5.	UJ

Are there any TICs ? (Please check a box) YES |_X_| NO |__|

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S06

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S06

Sample wt/vol: 5.02 (g/mL) G Lab File ID: >A1998

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 1.23 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
1083836423	m &/or p-Xylene	3.	J
95-47-6	o-Xylene	5.	UJ
100-42-5	Styrene	5.	UJ
75-25-2	Bromoform	5.	UJ
98-82-8	Isopropylbenzene	5.	UJ
108-86-1	Bromobenzene	5.	UJ
96-18-4	1,2,3-Trichloropropane	5.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5.	UJ
103-65-1	n-Propylbenzene	5.	UJ
95-49-8	2-Chlorotoluene	5.	UJ
106-43-4	4-Chlorotoluene	5.	UJ
108-67-8	1,3,5-Trimethylbenzene	5.	UJ
98-06-6	tert-Butylbenzene	5.	UJ
95-63-6	1,2,4-Trimethylbenzene	5.	UJ
135-98-8	sec-Butylbenzene	5.	UJ
541-73-1	1,3-Dichlorobenzene	5.	UJ
106-46-7	1,4-Dichlorobenzene	5.	UJ
99-87-6	p-Isopropyltoluene	5.	UJ
95-50-1	1,2-Dichlorobenzene	5.	UJ
104-51-8	n-Butylbenzene	5.	UJ
96-12-8	1,2-Dibromo-3-chloropropane	5.	UJ
120-82-1	1,2,4-Trichlorobenzene	5.	UJ
91-20-3	Naphthalene	5.	UJ
87-68-3	Hexachlorobutadiene	5.	UJ
87-61-6	1,2,3-Trichlorobenzene	5.	UJ

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S06

Lab Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S06

Sample wt/vol: 5.02 (g/mL) G Lab File ID: >A1998

Level: (low/med) LOW Date Received: 06/13/96

% Moisture: not dec. 1.23 Date Analyzed: 6/13/96

Column: CAP Dilution Factor: 1.00000

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	Unknown	20.85	5.	J
2	Unknown	24.53	4.	BJ
3	Unknown	29.84	3.	BJ
4				
5				
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S07

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S07

Sample wt/vol: 4.92 (g/mL) G Lab File ID: >A2002

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 32.16 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	37.	UJ
75-01-4	Vinyl chloride	15.	UJ
74-83-9	Bromomethane	37.	UJ
75-00-3	Chloroethane	37.	UJ
75-35-4	1,1-Dichloroethene	7.	UJ
67-64-1	Acetone	190.	UJ
75-15-0	Carbon disulfide	7.	UJ
75-09-2	Methylene chloride	22.	J
156-60-5	trans-1,2-Dichloroethene	7.	UJ
75-34-3	1,1-Dichloroethane	7.	UJ
594-20-7	2,2-Dichloropropane	7.	UJ
156-59-2	cis-1,2-Dichloroethene	7.	UJ
78-93-3	2-Butanone	30.	UJ
74-97-5	Bromochloromethane	7.	UJ
67-66-3	Chloroform	7.	UJ
71-55-6	1,1,1-trichloroethane	7.	UJ
56-23-5	Carbon tetrachloride	7.	UJ
563-58-6	1,1-Dichloropropene	7.	UJ
71-43-2	Benzene	7.	UJ
107-06-2	1,2-Dichloroethane	7.	UJ
79-01-6	Trichloroethene	7.	UJ
78-87-5	1,2-Dichloropropane	7.	UJ
74-95-3	Dibromomethane	7.	UJ
75-27-4	Bromodichloromethane	7.	UJ
10061-01-5	cis-1,3-dichloropropene	7.	UJ
108-88-3	Toluene	7.	UJ
108-10-1	4-Methyl-2-pentanone	15.	UJ
10061-02-6	trans-1,3-Dichloropropene	7.	UJ
127-18-4	Tetrachloroethene	7.	UJ
79-00-5	1,1,2-Trichloroethane	7.	UJ
142-28-9	1,3-Dichloropropane	7.	UJ
591-78-6	2-Hexanone	15.	UJ
124-48-1	Dibromochloromethane	7.	UJ
106-93-4	1,2-Dibromoethane	7.	UJ
108-90-7	Chlorobenzene	7.	UJ
630-20-6	1,1,1,2-Tetrachloroethane	7.	UJ
100-41-4	Ethylbenzene	7.	UJ

Are there any TICs ? (Please check a box) YES |_X_| NO |__|

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S07

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S07

Sample wt/vol: 4.92 (g/mL) G Lab File ID: >A2002

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.32.16 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
1083836423	m &/or p-Xylene	7.	UJ
95-47-6	o-Xylene	7.	UJ
100-42-5	Styrene	7.	UJ
75-25-2	Bromoform	7.	UJ
98-82-8	Isopropylbenzene	7.	UJ
108-86-1	Bromobenzene	7.	UJ
96-18-4	1,2,3-Trichloropropane	7.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	7.	UJ
103-65-1	n-Propylbenzene	7.	UJ
95-49-8	2-Chlorotoluene	7.	UJ
106-43-4	4-Chlorotoluene	7.	UJ
108-67-8	1,3,5-Trimethylbenzene	7.	UJ
98-06-6	tert-Butylbenzene	7.	UJ
95-63-6	1,2,4-Trimethylbenzene	7.	UJ
135-98-8	sec-Butylbenzene	7.	UJ
541-73-1	1,3-Dichlorobenzene	7.	UJ
106-46-7	1,4-Dichlorobenzene	7.	UJ
99-87-6	p-Isopropyltoluene	7.	UJ
95-50-1	1,2-Dichlorobenzene	7.	UJ
104-51-8	n-Butylbenzene	7.	UJ
96-12-8	1,2-Dibromo-3-chloropropane	7.	UJ
120-82-1	1,2,4-Trichlorobenzene	7.	UJ
91-20-3	Naphthalene	7.	UJ
87-68-3	Hexachlorobutadiene	7.	UJ
87-61-6	1,2,3-Trichlorobenzene	7.	UJ

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S07

Lab Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S07

Sample wt/vol: 4.92 (g/mL) G Lab File ID: >A2002

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 32.16 Date Analyzed: 6/13/96

Column: CAP Dilution Factor: 1.00000

Number TICs found: 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		Unknown	20.83	75.	J
2		Unknown	24.56	93.	BJ
3		Unknown	29.83	65.	BJ
4					
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S08

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S08

Sample wt/vol: 5.06 (g/mL) G Lab File ID: >A2003

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 6.48 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	26.	UJ
75-01-4	Vinyl chloride	11.	UJ
74-83-9	Bromomethane	26.	UJ
75-00-3	Chloroethane	26.	UJ
75-35-4	1,1-Dichloroethene	5.	UJ
67-64-1	Acetone	130.	UJ
75-15-0	Carbon disulfide	5.	UJ
75-09-2	Methylene chloride	17.	J
156-60-5	trans-1,2-Dichloroethene	5.	UJ
75-34-3	1,1-Dichloroethane	5.	UJ
594-20-7	2,2-Dichloropropane	5.	UJ
156-59-2	cis-1,2-Dichloroethene	7.	J
78-93-3	2-Butanone	21.	UJ
74-97-5	Bromochloromethane	5.	UJ
67-66-3	Chloroform	5.	UJ
71-55-6	1,1,1-trichloroethane	5.	UJ
56-23-5	Carbon tetrachloride	5.	UJ
563-58-6	1,1-Dichloropropene	5.	UJ
71-43-2	Benzene	5.	UJ
107-06-2	1,2-Dichloroethane	5.	UJ
79-01-6	Trichloroethene	150.	J
78-87-5	1,2-Dichloropropane	5.	UJ
74-95-3	Dibromomethane	5.	UJ
75-27-4	Bromodichloromethane	5.	UJ
10061-01-5	cis-1,3-dichloropropene	5.	UJ
108-88-3	Toluene	5.	UJ
108-10-1	4-Methyl-2-pentanone	11.	UJ
10061-02-6	trans-1,3-Dichloropropene	5.	UJ
127-18-4	Tetrachloroethene	5.	J
79-00-5	1,1,2-Trichloroethane	5.	UJ
142-28-9	1,3-Dichloropropane	5.	UJ
591-78-6	2-Hexanone	11.	UJ
124-48-1	Dibromochloromethane	5.	UJ
106-93-4	1,2-Dibromoethane	5.	UJ
108-90-7	Chlorobenzene	5.	UJ
630-20-6	1,1,1,2-Tetrachloroethane	5.	UJ
100-41-4	Ethylbenzene	5.	UJ

Are there any TICs ? (Please check a box) YES |_X_| NO |__|

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S08

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S08

Sample wt/vol: 5.06 (g/mL) G Lab File ID: >A2003

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 6.48 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
1083836423	m &/or p-Xylene	5.	UJ
95-47-6	o-Xylene	5.	UJ
100-42-5	Styrene	5.	UJ
75-25-2	Bromoform	5.	UJ
98-82-8	Isopropylbenzene	5.	UJ
108-86-1	Bromobenzene	5.	UJ
96-18-4	1,2,3-Trichloropropane	5.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5.	UJ
103-65-1	n-Propylbenzene	5.	UJ
95-49-8	2-Chlorotoluene	5.	UJ
106-43-4	4-Chlorotoluene	5.	UJ
108-67-8	1,3,5-Trimethylbenzene	5.	UJ
98-06-6	tert-Butylbenzene	5.	UJ
95-63-6	1,2,4-Trimethylbenzene	5.	UJ
135-98-8	sec-Butylbenzene	5.	UJ
541-73-1	1,3-Dichlorobenzene	5.	UJ
106-46-7	1,4-Dichlorobenzene	5.	UJ
99-87-6	p-Isopropyltoluene	5.	UJ
95-50-1	1,2-Dichlorobenzene	5.	UJ
104-51-8	n-Butylbenzene	5.	UJ
96-12-8	1,2-Dibromo-3-chloropropane	5.	UJ
120-82-1	1,2,4-Trichlorobenzene	5.	UJ
91-20-3	Naphthalene	5.	UJ
87-68-3	Hexachlorobutadiene	5.	UJ
87-61-6	1,2,3-Trichlorobenzene	5.	UJ

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S08

Lab Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S08

Sample wt/vol: 5.06 (g/mL) G Lab File ID: >A2003

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 6.48 Date Analyzed: 6/13/96

Column: CAP Dilution Factor: 1.00000

Number TICs found: 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		Unknown	20.82	22.	J
2		Unknown	24.55	28.	BJ
3		Unknown	29.85	14.	BJ
4					
5					
6					
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S09

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S09

Sample wt/vol: 4.85 (g/mL) G Lab File ID: >A2004

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 17.71 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	31.	UJ
75-01-4	Vinyl chloride	13.	UJ
74-83-9	Bromomethane	31.	UJ
75-00-3	Chloroethane	31.	UJ
75-35-4	1,1-Dichloroethene	6.	UJ
67-64-1	Acetone	28.	BJ
75-15-0	Carbon disulfide	6.	UJ
75-09-2	Methylene chloride	7.	J
156-60-5	trans-1,2-Dichloroethene	6.	UJ
75-34-3	1,1-Dichloroethane	12.	J
594-20-7	2,2-Dichloropropane	6.	UJ
156-59-2	cis-1,2-Dichloroethene	6.	UJ
78-93-3	2-Butanone	5.	BJ
74-97-5	Bromochloromethane	6.	UJ
67-66-3	Chloroform	6.	UJ
71-55-6	1,1,1-trichloroethane	6.	UJ
56-23-5	Carbon tetrachloride	6.	UJ
563-58-6	1,1-Dichloropropene	6.	UJ
71-43-2	Benzene	6.	UJ
107-06-2	1,2-Dichloroethane	6.	UJ
79-01-6	Trichloroethene	6.	J
78-87-5	1,2-Dichloropropane	6.	UJ
74-95-3	Dibromomethane	6.	UJ
75-27-4	Bromodichloromethane	6.	UJ
10061-01-5	cis-1,3-dichloropropene	6.	UJ
108-88-3	Toluene	6.	UJ
108-10-1	4-Methyl-2-pentanone	13.	UJ
10061-02-6	trans-1,3-Dichloropropene	6.	UJ
127-18-4	Tetrachloroethene	7.	J
79-00-5	1,1,2-Trichloroethane	6.	UJ
142-28-9	1,3-Dichloropropane	6.	UJ
591-78-6	2-Hexanone	13.	UJ
124-48-1	Dibromochloromethane	6.	UJ
106-93-4	1,2-Dibromoethane	6.	UJ
108-90-7	Chlorobenzene	6.	UJ
630-20-6	1,1,1,2-Tetrachloroethane	6.	UJ
100-41-4	Ethylbenzene	6.	UJ

Are there any TICs ? (Please check a box) YES |_X_| NO |__|

FORM I VOA

1/89 Rev.

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S09

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S09

Sample wt/vol: 4.85 (g/mL) G Lab File ID: >A2004

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 17.71 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
1083836423	m &/or p-Xylene	6.	UJ
95-47-6	o-Xylene	6.	UJ
100-42-5	Styrene	6.	UJ
75-25-2	Bromoform	6.	UJ
98-82-8	Isopropylbenzene	6.	UJ
108-86-1	Bromobenzene	6.	UJ
96-18-4	1,2,3-Trichloropropane	6.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6.	UJ
103-65-1	n-Propylbenzene	6.	UJ
95-49-8	2-Chlorotoluene	6.	UJ
106-43-4	4-Chlorotoluene	6.	UJ
108-67-8	1,3,5-Trimethylbenzene	6.	UJ
98-06-6	tert-Butylbenzene	6.	UJ
95-63-6	1,2,4-Trimethylbenzene	6.	UJ
135-98-8	sec-Butylbenzene	6.	UJ
541-73-1	1,3-Dichlorobenzene	6.	UJ
106-46-7	1,4-Dichlorobenzene	6.	UJ
99-87-6	p-Isopropyltoluene	6.	UJ
95-50-1	1,2-Dichlorobenzene	6.	UJ
104-51-8	n-Butylbenzene	6.	UJ
96-12-8	1,2-Dibromo-3-chloropropane	6.	UJ
120-82-1	1,2,4-Trichlorobenzene	6.	UJ
91-20-3	Naphthalene	3.	J
87-68-3	Hexachlorobutadiene	6.	UJ
87-61-6	1,2,3-Trichlorobenzene	6.	UJ

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S09

Lab Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S09

Sample wt/vol: 4.85 (g/mL) G Lab File ID: >A2004

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.17.71 Date Analyzed: 6/13/96

Column: CAP Dilution Factor: 1.00000

Number TICs found: 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	20.80	6.	J
2.		Unknown	24.55	11.	BJ
3.		Unknown	30.17	11.	J
4.					
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S10

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S10

Sample wt/vol: 4.84 (g/mL) G Lab File ID: >A2005

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 19.05 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	32.	UJ
75-01-4	Vinyl chloride	13.	UJ
74-83-9	Bromomethane	32.	UJ
75-00-3	Chloroethane	32.	UJ
75-35-4	1,1-Dichloroethene	6.	UJ
67-64-1	Acetone	160.	UJ
75-15-0	Carbon disulfide	6.	UJ
75-09-2	Methylene chloride	6.	UJ
156-60-5	trans-1,2-Dichloroethene	6.	UJ
75-34-3	1,1-Dichloroethane	6.	UJ
594-20-7	2,2-Dichloropropane	6.	UJ
156-59-2	cis-1,2-Dichloroethene	6.	UJ
78-93-3	2-Butanone	26.	UJ
74-97-5	Bromochloromethane	6.	UJ
67-66-3	Chloroform	6.	UJ
71-55-6	1,1,1-trichloroethane	6.	UJ
56-23-5	Carbon tetrachloride	6.	UJ
563-58-6	1,1-Dichloropropene	6.	UJ
71-43-2	Benzene	6.	UJ
107-06-2	1,2-Dichloroethane	6.	UJ
79-01-6	Trichloroethene	4.	J
78-87-5	1,2-Dichloropropane	6.	UJ
74-95-3	Dibromomethane	6.	UJ
75-27-4	Bromodichloromethane	6.	UJ
10061-01-5	cis-1,3-dichloropropene	6.	UJ
108-88-3	Toluene	9.	J
108-10-1	4-Methyl-2-pentanone	13.	UJ
10061-02-6	trans-1,3-Dichloropropene	6.	UJ
127-18-4	Tetrachloroethene	14.	J
79-00-5	1,1,2-Trichloroethane	6.	UJ
142-28-9	1,3-Dichloropropane	6.	UJ
591-78-6	2-Hexanone	13.	UJ
124-48-1	Dibromochloromethane	6.	UJ
106-93-4	1,2-Dibromoethane	6.	UJ
108-90-7	Chlorobenzene	6.	UJ
630-20-6	1,1,1,2-Tetrachloroethane	6.	UJ
100-41-4	Ethylbenzene	6.	UJ

Are there any TICs ? (Please check a box) YES |_X_| NO |__|

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S10

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S10

Sample wt/vol: 4.84 (g/mL) G Lab File ID: >A2005

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 19.05 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
1083836423	m &/or p-Xylene	6.	UJ
95-47-6	o-Xylene	6.	UJ
100-42-5	Styrene	6.	UJ
75-25-2	Bromoform	6.	UJ
98-82-8	Isopropylbenzene	6.	UJ
108-86-1	Bromobenzene	6.	UJ
96-18-4	1,2,3-Trichloropropane	6.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6.	UJ
103-65-1	n-Propylbenzene	6.	UJ
95-49-8	2-Chlorotoluene	6.	UJ
106-43-4	4-Chlorotoluene	6.	UJ
108-67-8	1,3,5-Trimethylbenzene	6.	UJ
98-06-6	tert-Butylbenzene	6.	UJ
95-63-6	1,2,4-Trimethylbenzene	6.	UJ
135-98-8	sec-Butylbenzene	6.	UJ
541-73-1	1,3-Dichlorobenzene	6.	UJ
106-46-7	1,4-Dichlorobenzene	6.	UJ
99-87-6	p-Isopropyltoluene	6.	UJ
95-50-1	1,2-Dichlorobenzene	6.	UJ
104-51-8	n-Butylbenzene	6.	UJ
96-12-8	1,2-Dibromo-3-chloropropane	6.	UJ
120-82-1	1,2,4-Trichlorobenzene	6.	UJ
91-20-3	Naphthalene	6.	UJ
87-68-3	Hexachlorobutadiene	6.	UJ
87-61-6	1,2,3-Trichlorobenzene	6.	UJ

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S10

Lab Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S10

Sample wt/vol: 4.84 (g/mL) G Lab File ID: >A2005

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 19.05 Date Analyzed: 6/13/96

Column: CAP Dilution Factor: 1.00000

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	Unknown	20.82	45.	J
2	Unknown	24.54	40.	BJ
3				
4				
5				
6				
7				
8				
9				
10				
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1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19D10

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19D10

Sample wt/vol: 4.96 (g/mL) G Lab File ID: >A2006

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 22.03 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	32.	UJ
75-01-4	Vinyl chloride	13.	UJ
74-83-9	Bromomethane	32.	UJ
75-00-3	Chloroethane	32.	UJ
75-35-4	1,1-Dichloroethene	6.	UJ
67-64-1	Acetone	13.	BJ
75-15-0	Carbon disulfide	6.	UJ
75-09-2	Methylene chloride	6.	UJ
156-60-5	trans-1,2-Dichloroethene	6.	UJ
75-34-3	1,1-Dichloroethane	6.	UJ
594-20-7	2,2-Dichloropropane	6.	UJ
156-59-2	cis-1,2-Dichloroethene	6.	UJ
78-93-3	2-Butanone	26.	UJ
74-97-5	Bromochloromethane	6.	UJ
67-66-3	Chloroform	6.	UJ
71-55-6	1,1,1-trichloroethane	6.	UJ
56-23-5	Carbon tetrachloride	6.	UJ
563-58-6	1,1-Dichloropropene	6.	UJ
71-43-2	Benzene	6.	UJ
107-06-2	1,2-Dichloroethane	6.	UJ
79-01-6	Trichloroethene	15.	J
78-87-5	1,2-Dichloropropane	6.	UJ
74-95-3	Dibromomethane	6.	UJ
75-27-4	Bromodichloromethane	6.	UJ
10061-01-5	cis-1,3-dichloropropene	6.	UJ
108-88-3	Toluene	14.	J
108-10-1	4-Methyl-2-pentanone	13.	UJ
10061-02-6	trans-1,3-Dichloropropene	6.	UJ
127-18-4	Tetrachloroethene	81.	J
79-00-5	1,1,2-Trichloroethane	6.	UJ
142-28-9	1,3-Dichloropropane	6.	UJ
591-78-6	2-Hexanone	13.	UJ
124-48-1	Dibromochloromethane	6.	UJ
106-93-4	1,2-Dibromoethane	6.	UJ
108-90-7	Chlorobenzene	6.	UJ
630-20-6	1,1,1,2-Tetrachloroethane	6.	UJ
100-41-4	Ethylbenzene	6.	UJ

Are there any TICs ? (Please check a box) YES |_X_| NO |__|

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19D10

Site Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19D10

Sample wt/vol: 4.96 (g/mL) G Lab File ID: >A2006

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 22.03 Date Analyzed: 6/13/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/Kg	Q
1083836423	m &/or p-Xylene	6.	UJ
95-47-6	o-Xylene	6.	UJ
100-42-5	Styrene	6.	UJ
75-25-2	Bromoform	6.	UJ
98-82-8	Isopropylbenzene	6.	UJ
108-86-1	Bromobenzene	6.	UJ
96-18-4	1,2,3-Trichloropropane	6.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6.	UJ
103-65-1	n-Propylbenzene	6.	UJ
95-49-8	2-Chlorotoluene	6.	UJ
106-43-4	4-Chlorotoluene	6.	UJ
108-67-8	1,3,5-Trimethylbenzene	6.	UJ
98-06-6	tert-Butylbenzene	6.	UJ
95-63-6	1,2,4-Trimethylbenzene	6.	UJ
135-98-8	sec-Butylbenzene	6.	UJ
541-73-1	1,3-Dichlorobenzene	6.	UJ
106-46-7	1,4-Dichlorobenzene	6.	UJ
99-87-6	p-Isopropyltoluene	6.	UJ
95-50-1	1,2-Dichlorobenzene	6.	UJ
104-51-8	n-Butylbenzene	6.	UJ
96-12-8	1,2-Dibromo-3-chloropropane	6.	UJ
120-82-1	1,2,4-Trichlorobenzene	6.	UJ
91-20-3	Naphthalene	6.	UJ
87-68-3	Hexachlorobutadiene	6.	UJ
87-61-6	1,2,3-Trichlorobenzene	6.	UJ

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19D10

Lab Name: PHILLIPS THOM LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19D10

Sample wt/vol: 4.96 (g/mL) G Lab File ID: >A2006

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.22.03 Date Analyzed: 6/13/96

Column: CAP Dilution Factor: 1.00000

Number TICs found: 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		Unknown	20.82	35.	J
2		Unknown	24.51	38.	BJ
3		Unknown	29.87	49.	BJ
4					
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8					
9					
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LOCKHEED ESAT CONTRACT
DATA SET CUSTODY TRANSFER FORM

DATA SET NUMBER 960098 CHARGE NUMBER 255-51-086

SITE NAME: Phillips Therm. LF TID NUMBER 51-02-014

PARAMETER: VOC MATRIX: Soil

SF DU/ACT NO: TFA 301 Y ____ /C ____

SAMPLE NUMBERS: 96IE19S06, -S07, -S08, -S09, S10 and -D10

NUMBER OF SAMPLES: 6

ESAT APPROVALS:

Analyst 7-16-96 Date | Task Group Leader 7-17-96 Date

QA/QC Coordinator 7-16-96 Date | ESAT Team Manager 7-17-96 Date

COMMENTS:

The above identified data set was transferred from ESAT custody to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the indicated date relinquished.

Relinquished by 7-17-96 Date | Received by Barbara Rodriguez 7/17/96 Date

EPA APPROVALS:

EPA Task Monitor 7/18/96 Date

[✓] Reviewed
[ ] Unreviewed
[ ] Accepted
[ ] Rejected
[ ] Returned: ____ Date

COMMENTS: Rlims reports not present

Section Chief 7/19/96 Date

[ ] Reviewed [✓] Unreviewed

ESAT DPO Date | DATA COORDINATOR/RECD/TRANSMTD

A COPY OF THIS CUSTODY TRANSFER FORM WITH A RECEIVED BY EPA SIGNATURE IS TO BE FILED WITH THE AOC IN THE TID FILE. THE ORIGINAL CUSTODY TRANSFER ACCOMPANIES THE DATA SET TO BE APPROVED BY THE EPA AND A COMPLETED COPY RETURNED TO ESAT.

To: Babu Paruchuri, EPA Work Assignment Manager

Thru: Dennis Miller, ESAT Team Manager Dennis Miller

From: Ziyad Rajabi, ESAT Organic Group Leader

Copies: Ira Wilson, ESAT Organic Supervisor

Date: July 16, 1996

SUBJECT: Data Set SF960098: Volatile Organic Compounds Analyses of the Phillips Thom Landfill Samples Using CRL Method 624VOC

LOCKHEED ENVIRONMENTAL SYSTEMS AND TECHNOLOGIES & SCIENCES COMPANY

VOLATILE ORGANIC DELIVERABLES CHECK-OFF LIST

DATA SET NUMBER: 960098 CHARGE NUMBER: 255-51-086

PRESENT	NOT REQD	ITEM
		REPORTING INFORMATION
[✓]	[ ]	SAMPLE REPORT LOG
[✓]	[ ]	DATA SET CUSTODY TRANSFER FORM
[✓]	[ ]	NARRATIVE
[✓]	[ ]	RUN SEQUENCE
[✓] 7-16-96	[✓]	ABN BENCH SHEET
		AQC
[✓]	[ ]	SURROGATE RECOVERY (FORM II)
[✓]	[ ]	MATRIX SPIKE/DUP (FORM III)
[✓]	[ ]	MS/MSD RAW DATA
[✓]	[ ]	METHOD BLANK (FORM VI)
[✓]	[ ]	MASS CAL/TUNING (FORM V)
[✓]	[ ]	MASS CAL RAW DATA
[✓]	[✓]	MDL RESULTS

PRESENT	NOT REQD	ITEM
		CALIBRATION DATA
[✓]	[ ]	INITIAL CAL RRF (FORM VI)
[✓]	[ ]	ICV RAW DATA
[✓]	[ ]	CONT CAL VERIFI (FORM VII)
[✓]	[ ]	CCV RAW DATA
[✓]	[ ]	INT STD AREA & RT (FORM VIII)
		SAMPLE DATA
[✓]	[ ]	ID FILE (SHORT) (HP ONLY)
[✓]	[ ]	TCL RESULTS (FORM I)
[✓]	[ ]	TIC RESULTS (FORM I-TIC)
[✓]	[ ]	SAMPLE RAW DATA
[✓]	[ ]	SAMPLE TAGS
[✓]	[ ]	ARCHIVE REFERENCE
[ ]	[✓]	QC SUMMARY PACKAGE (FORMS 2-8)

ESAT-5-018.1

LOCKHEED
ANALYTICAL LABORATORY
TIME TRACKING RECORD
(Organic)

Task Number: 255-51-086 Date Assigned: 6-4-96
TID Number: 51-02-014 Date Due: 6-18-96
SF Number: 960098 Estimated Hours: 36
Site Name: Phillips Thom L.F.
Assigned To: A. Gugliotta, Z. Rajabi

VOA ✓ BNA _____ Pest/PCBs _____ Other _____

****

Extraction Record

Person:		Date:		Hours:	
Person:		Date:		Hours:	
Person:		Date:		Hours:	
Person:		Date:		Hours:	

NA

****

Analysis Record

Person:	AG	Date:	wk 6-14	Hours:	~~4.0~~ 2.0
Person:	~~AH~~	Date:	—	Hours:	~~1.5~~
Person:	ZR	Date:	wk 7-14	Hours:	8.0+0.5
Person:		Date:		Hours:	
Person:		Date:		Hours:	
Person:		Date:		Hours:	

****

QA/QC Record

Person:	DM	Date:	wk 6-4 → 7-21	Hours:	0.5+0.5+0.5
Person:	[illegible]	Date:	7-16-96	Hours:	1.0
Person:		Date:		Hours:	

****

LIMS Data Entry

Person:		Date:		Hours:	
Person:		Date:		Hours:	

****

Comments: _____

****

Total Hours: _____ EMT: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: JUL 1 0 1996

Subject: Review of Region 5 Data for **PHILLIPS THOM LANDFILL**

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

To: IEPA

Attached are the results for **Phillips Thom Landfill**
CRL request number: **960098**
Analyzed for: **ABN (Organics)**
Results are reported for sample designations: 96IE19S06 to -S10, and -D10 (Six soil samples)
(Data package **1** of **2**)
Results Status:
(**X**) Acceptable for Use **except** the compound results qualified **J** and **UJ**. Please see attached case narrative.

(**X**) Data Qualified but acceptable for Use for the compounds qualified **J** and **UJ**. 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 attached case narrative.

RECEIVED
JUL 15 1996
IEPA/DLPC

9606 -18

TFA301

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUPERFUND SAMPLE DATE 5/29-30/96 LAB ARRIVAL DATE 5/31/96 DUE DATE 6/21/96

DU NUMBER TFA DATA SET NUMBER 960618 STUDY PHILLIPS THOM LANDFILL PRIORITY N CONTRACTOR ICF

CHL 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
96IE19S01	G201 5-025631		X		
96IE19S02	G202 5-025635		X		
96IE19D02	G203 DUPLICATE 5-025639		X		
96IE19S03	G204 MS/MSD 5-025643/5-025647/5-025651		X		
96IE19R02	G205 FIELD BLANK 5-025669		X		
96IE19S06	X101 5-025578				X
96IE19S07	X102 5-025581				X
96IE19S08	X103 5-025584				X
96IE19S09	X104 5-025587				X
96IE19S10	X105 5-025590				X
96IE19D10	X106 5-025593				X

CASE NARRATIVE

DATE: July 5, 1996

PROJECT NAME: Phillips Thom. Landfill
CRL Case #: 960098 Analysis of Semivolatile Organic Analyte (SVOA)

ANALYST: Ziyad Rajabi, Lockheed/ESAT Organic Group Leader ZR

REVIEWERS: Ira Wilson, ESAT Organic Supervisor for R Miller
Dennis Miller, Lockheed/ESAT Team Manager D Miller
Babu Paruchuri, EPA Work Assignment Manager BP

I. CASE DESCRIPTION:

The laboratory received, in good condition, six soil samples (96IE19S06 to -S10 and -D10) on May 31, 1996 for Semivolatile organic analyte (SVOA) analysis. The samples were collected May 30, 1996 and were extracted on June 6, 1996 which is within the holding time requirements for soil samples. [QC Criteria for holding time: Fourteen days from the date of collection]. The sample extracts were analyzed within the holding time requirements. [QC Criteria for sample holding time: Forty days from the date of the extraction]. No problems were observed.

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** Performance checks using decafluorotriphenylphosphine (DFTPP) were made to determine if acceptable EPA tuning criteria were met. The QC criteria are the same as the CLP IFB's criteria. No problems were observed.

2. **Initial Calibrations (IC):** An acceptable five-point initial calibration (IC) is required for all target compounds before samples can be analyzed. (QC criteria for IC: %RSD must be ≤ 30%).

Two initial calibrations were associated with this data set. The first calibration was generated on June 18, 1996 on the HP5987. The second initial calibration was generated on June 21, 1996 on the HP5987. All of the target compounds %RSDs were acceptable for both calibrations. No problems were observed.

3. **Continuing Calibrations (CC):** The QC criteria for the continuing calibration are (CC: %D must be ≤ 25%).

Four continuing calibrations were associated with this data set. For the continuing calibrations generated on June 18, 19 (at 9:39), and June 20, 1996, all of the target compounds %Ds were acceptable, therefore, results are acceptable. No problems were observed.

For the continuing calibrations generated on June 23, 1996 (11:46), all of the target compounds %Ds were acceptable except 4-nitrophenol (%D=43.0), therefore, 4-nitrophenol will be flagged as estimated (J) for detected compounds while all non-detects will be flagged as estimated (UJ). No other problems were observed.

4. **Internal Standard (IS) Area and Retention Time (RT) Summary:** The QC criterion states that the IS area of samples must be within 50% of the IS area of the corresponding CC. The RT of the IS for samples must also be within 30 seconds of the RT of the IS for the corresponding CC.

All internal standard areas met the QC requirements for the undiluted sample extracts analyses; therefore, the undiluted sample results will not be qualified.

For the diluted sample extracts analyses, low perylene-d12 recovery was observed in sample 96IE19S07D2. Low chrysene-d12 recovery was observed in sample 96IE19S10D2. Low chrysene-d12 and perylene-d12 recoveries were observed in the Lab blank D2 and samples 96IE19S06D2, -S06MD2, -S06SD2, S08D2, and -D10D2. Results of the compounds quantitated based on the above internal standards will be flagged as estimated (J) for detected compounds while all non-detects will be flagged as estimated (UJ). Phthalates results for which the dilutions were made were not affected by the internal standards recoveries; therefore, results on the summary forms were not qualified. No other problems were observed. See Form VIII

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** One Lab Blank (de-ionized Soil spiked with surrogates) was extracted with this data set to check for contamination.

The blank reported di-n-butylphthalate, bis(2-ethylhexyl)phthalate, and four TICs. Phthalates are common laboratory contaminants. All positive results for di-n-butylphthalate, bis(2-ethylhexyl)phthalate, or any of the blank TICs are qualified (B) in all of the associated samples. [See Form I SVOA].

2. **Surrogate Spike Compound Results:** The surrogate spike

compound recovery data are within the QC limits except for high 2-fluorobiphenyl, terphenyl-d1, and 2,4,6-tribromophenol recoveries observed for sample 96IE19S06, therefore, positive results for base-neutral fractions of sample 96IE19S06 will be flagged as estimated (J) for detected compounds while all non-detects will not be flagged. One surrogate outlier is allowed per fraction, therefore, no acid-fraction data qualification will be necessary. No other problems were observed. See Form II

3. **Matrix Spike and Matrix Spike Duplicate:**

Matrix spike and matrix spike duplicate analyses were performed on two 10 grams aliquots of soil sample 96IE19S05. Each aliquot was spiked with 750 µL of the ABN spike standard that contained all of the target analytes except 2,4-dinitrotoluene. The final concentration in the soil sample extract was expected to be 75 µg/L for all target analytes.

Recoveries and %RPDs were within the QC limits, therefore, results are acceptable.

A high level of bis(2-ethylhexyl)phthalate was present in the original unspiked sample (96IE19S06), therefore, bis(2-ethylhexyl)phthalate recovery data is not useful.

IV. SAMPLE RESULTS

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

The soil sample extracts were concentrated to a final volume 0.5 mL to alleviate the GPC dilution effect.

Di-n-butylphthalate and bis(2-ethylhexyl)phthalate were reported outside the upper calibration range for several samples. These samples were diluted at two dilution levels and reanalyzed (D1 and D2). The reanalysis results were within the calibration range, therefore, results for Di-n-butylphthalate and bis(2-ethylhexyl)phthalate will be obtained from the diluted sample. Summary forms reflecting reportable values were prepared and submitted in this data package.

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Name: REGION V CRL Contract: ESAT

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 ( ) #	TOT OUT
01	LAB BLANK	84	79	93	84	74	93		0
02	96IE19S06	115	116 *	139 *	112	71	131 *		3
03	96IE19S06M	62	69	79	59	37	81		0
04	96IE19S06S	56	62	66	53	33	72		0
05	96IE19S08	60	61	57	57	37	61		0
06	96IE19S09	58	62	53	55	38	62		0
07	96IE19D10	55	59	67	53	30	68		0
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		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(23-120)
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4 (PHL)	= Phenol-d5	(24-113)
S5 (2FP)	= 2-Fluorophenol	(25-121)
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)

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

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: REGION V CRL Contract: ESAT

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 ( ) #	TOT OUT
01	96IE19S07	56	62	57	51	36	63		0
02	96IE19S10	57	65	60	57	38	65		0
03	LAB BLANK D1	61	55	71	63	58	D		0
04	96IE19S06D1	103	101	132	107	D	D		0
05	96IE19S06MD1	D	53	73	D	D	D		0
06	96IE19S06SD1	D	D	75	D	D	D		0
07	96IE19S07D1	D	D	D	D	D	D		0
08	96IE19S08D1	D	D	66	D	D	D		0
09	96IE19S09D1	47	49	70	45	D	D		0
10	96IE19S10D1	D	D	D	D	D	D		0
11	96IE19D10D1	D	D	D	D	D	D		0
12									
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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)

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

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

: Name: REGION V CRL Contract: ESAT

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 ( ) #	TOT OUT
01	LAB BLANK D2	D	D	D	D	D	D		0
02	96IE19S06D2	D	D	D	D	D	D		0
03	96IE19S06MD2	D	D	D	D	D	D		0
04	96IE19S06SD2	D	D	D	D	D	D		0
05	96IE19S07D2	D	D	D	D	D	D		0
06	96IE19S08D2	D	D	D	D	D	D		0
07	96IE19S09D2	D	D	D	D	D	D		0
08	96IE19S10D2	D	D	D	D	D	D		0
09	96IE19D10D2	D	D	D	D	D	D		0
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		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(23-120)
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4 (PHL)	= Phenol-d5	(24-113)
S5 (2FP)	= 2-Fluorophenol	(25-121)
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)

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

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: REGION V CRL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: 96IE19S06 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	7100	0	4200	56	26- 90
2-Chlorophenol	7100	0	3900	52	25-102
1,4-Dichlorobenzene	7100	0	3600	48	28-104
N-Nitroso-di-n-propylam	7100	0	5200	70	41-126
1,2,4-Trichlorobenzene	7100	0	4200	56	38-107
4-Chloro-3-methylphenol	7100	0	5900	79	26-103
Acenaphthene	7100	0	5000	67	31-137
4-Nitrophenol	7100	0	6500	87	11-114
2,6-Dinitrotoluene	7100	0	6400	86	28- 89
Pentachlorophenol	7100	0	7400	99	17-109
Pyrene	7100	0	5800	78	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	7100	3600	50	11	35	26- 90
2-Chlorophenol	7100	3400	47	10	50	25-102
1,4-Dichlorobenzene	7100	3100	43	10	27	28-104
N-Nitroso-di-n-propylam	7100	4600	63	9	38	41-126
1,2,4-Trichlorobenzene	7100	3600	50	10	23	38-107
4-Chloro-3-methylphenol	7100	5100	71	11	33	26-103
Acenaphthene	7100	4500	62	8	19	31-137
4-Nitrophenol	7100	5000	70	22	50	11-114
2,6-Dinitrotoluene	7100	5500	76	12	47	28- 89
Pentachlorophenol	7100	6500	90	10	47	17-109
Pyrene	7100	4700	65	18	36	35-142

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

* Values outside of QC limits

RPD 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

COMMENTS: _____

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: REGION V CRL Contract: ESAT

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Lab File ID: >F0573 Lab Sample ID: LAB BLANK

Date Extracted: 06/06/96 Extraction:(Sepf/Cont/Sonc) SOXH

Date Analyzed: 06/19/96 Time Analyzed: 10:23

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

Instrument ID: HP5987

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	96IE19S06	96IE19S06	>F0575	06/19/96
2	96IE19S06M	96IE19S06M	>F0576	06/19/96
3	96IE19S06S	96IE19S06S	>F0577	06/19/96
4	96IE19S08	96IE19S08	>F0579	06/19/96
5	96IE19S09	96IE19S09	>F0580	06/19/96
6	96IE19D10	96IE19D10	>F0582	06/19/96
7	96IE19S07	96IE19S07	>F0611	06/20/96
8	96IE19S10	96IE19S10	>F0612	06/20/96
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COMMENTS: _____

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
LAB BLANK

Lab Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: LAB BLANK

Sample wt/vol: 10.0 (g/ml) G Lab File ID: >F0573

Level: (low/med) LOW Date Received: 06/06/96

% Moisture: not dec. ---- dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	1000	U
111-44-4	bis(2-Chloroethyl)ether	1000	U
95-57-8	2-Chlorophenol	1000	U
541-73-1	1,3-Dichlorobenzene	1000	U
106-46-7	1,4-Dichlorobenzene	1000	U
100-51-6	Benzyl alcohol	1000	U
95-50-1	1,2-Dichlorobenzene	1000	U
95-48-7	2-Methylphenol	1000	U
39638-32-9	bis(2-Chloroisopropyl)ether	1000	U
106-44-5	4-Methylphenol	1000	U
621-64-7	N-Nitroso-di-n-propylamine	1000	U
67-72-1	Hexachloroethane	1000	U
98-95-3	Nitrobenzene	1000	U
78-59-1	Isophorone	1000	U
88-75-5	2-Nitrophenol	1000	U
105-67-9	2,4-Dimethylphenol	1000	U
65-85-0	Benzoic acid	5000	U
111-91-1	bis(2-Chloroethoxy)methane	1000	U
120-83-2	2,4-Dichlorophenol	1000	U
120-82-1	1,2,4-Trichlorobenzene	1000	U
91-20-3	Naphthalene	1000	U
106-47-8	4-Chloroaniline	1000	U
87-68-3	Hexachlorobutadiene	1000	U
59-50-7	4-Chloro-3-methylphenol	1000	U
91-57-6	2-Methylnaphthalene	1000	U
77-47-4	Hexachlorocyclopentadiene	1000	U
88-06-2	2,4,6-Trichlorophenol	1000	U
95-95-4	2,4,5-Trichlorophenol	5000	U
91-58-7	2-Chloronaphthalene	1000	U
88-74-4	2-Nitroaniline	5000	U
131-11-3	Dimethylphthalate	1000	U
208-96-8	Acenaphthylene	1000	U
606-20-2	2,6-Dinitrotoluene	1000	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [X] NO [ ]

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
LAB BLANK

L. Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: LAB BLANK

Sample wt/vol: 10.0 (g/ml) G Lab File ID: >F0573

Level: (low/med) LOW Date Received: 06/06/96

% Moisture: not dec. ---- dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
99-09-2	3-Nitroaniline	5000	U
83-32-9	Acenaphthene	1000	U
51-28-5	2,4-Dinitrophenol	5000	U
100-02-7	4-Nitrophenol	5000	U
132-64-9	Dibenzofuran	1000	U
121-14-2	2,4-Dinitrotoluene	1000	U
84-66-2	Diethylphthalate	1000	U
7005-72-3	4-Chlorophenyl-phenylether	1000	U
86-73-7	Fluorene	1000	U
100-01-6	4-Nitroaniline	5000	U
534-52-1	4,6-Dinitro-2-methylphenol	5000	U
86-30-6	N-Nitrosodiphenylamine	1000	U
101-55-3	4-Bromophenyl-phenylether	1000	U
118-74-1	Hexachlorobenzene	1000	U
87-86-5	Pentachlorophenol	5000	U
85-01-8	Phenanthrene	1000	U
120-12-7	Anthracene	1000	U
84-74-2	Di-n-butylphthalate	3700	
206-44-0	Fluoranthene	1000	U
129-00-0	Pyrene	1000	U
85-68-7	Butylbenzylphthalate	1000	U
56-55-3	Benzo(a)anthracene	1000	U
218-01-9	Chrysene	1000	U
117-81-7	bis(2-Ethylhexyl)phthalate	290000	D
117-84-0	Di-n-octylphthalate	1000	U
205-99-2	Benzo(b)fluoranthene	1000	U
207-08-9	Benzo(k)fluoranthene	1000	U
50-32-8	Benzo(a)pyrene	1000	U
193-39-5	Indeno(1,2,3-cd)pyrene	1000	U
53-70-3	Dibenzo(a,h)anthracene	1000	U
191-24-2	Benzo(g,h,i)perylene	1000	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LAB BLANK

Lab Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: LAB BLANK

Sample wt/vol: 10.00 (g/mL) G Lab File ID: >F0573

Level: (low/med) LOW Date Received: 06/06/96

% Moisture: not dec. --- dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 6/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.00000

Number TICs found: 4

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

1.	Unknown	13.72	7100.	J
2.	Unknown Phthalate	17.59	560.	J
3.	Unknown dioic acid ester	24.00	40000.	J
4.	Unknown Phthalate	26.42	610.	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GPC BLANK

Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix (soil/water) ---- Lab Sample ID: GPC BLANK

Sample wt/vol: ---- (g/ml) G Lab File ID: >F0574

Level: (low/med) LOW Date Received: 06/06/96

% Moisture: not dec. ---- dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) ---- Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic acid	50	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [ ] NO [X]

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GPC BLANK

Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) ---- Lab Sample ID: GPC BLANK

Sample wt/vol: ---- (g/ml) G Lab File ID: >F0574

Level: (Low/med) LOW Date Received: 06/06/96

% Moisture: not dec. ---- dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) ---- Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	1	BJ
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	16	B
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19S06

I Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S06

Sample wt/vol: 10.68 (g/ml) G Lab File ID: >F0575

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 1.23 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	950	U
111-44-4	bis(2-Chloroethyl)ether	950	U
95-57-8	2-Chlorophenol	950	U
541-73-1	1,3-Dichlorobenzene	950	U
106-46-7	1,4-Dichlorobenzene	950	U
100-51-6	Benzyl alcohol	950	U
95-50-1	1,2-Dichlorobenzene	950	U
95-48-7	2-Methylphenol	950	U
39638-32-9	bis(2-Chloroisopropyl)ether	950	U
106-44-5	4-Methylphenol	950	U
621-64-7	N-Nitroso-di-n-propylamine	950	U
67-72-1	Hexachloroethane	950	U
98-95-3	Nitrobenzene	950	U
78-59-1	Isophorone	950	U
88-75-5	2-Nitrophenol	950	U
105-67-9	2,4-Dimethylphenol	950	U
65-85-0	Benzoic acid	4700	U
111-91-1	bis(2-Chloroethoxy)methane	950	U
120-83-2	2,4-Dichlorophenol	950	U
120-82-1	1,2,4-Trichlorobenzene	950	U
91-20-3	Naphthalene	950	U
106-47-8	4-Chloroaniline	950	U
87-68-3	Hexachlorobutadiene	950	U
59-50-7	4-Chloro-3-methylphenol	950	U
91-57-6	2-Methylnaphthalene	950	U
77-47-4	Hexachlorocyclopentadiene	950	U
88-06-2	2,4,6-Trichlorophenol	950	U
95-95-4	2,4,5-Trichlorophenol	4700	U
91-58-7	2-Chloronaphthalene	950	U
88-74-4	2-Nitroaniline	4700	U
131-11-3	Dimethylphthalate	950	U
208-96-8	Acenaphthylene	950	U
606-20-2	2,6-Dinitrotoluene	950	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [X] NO [ ]

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19S06

L Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: SSCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix (soil/water) SOIL Lab Sample ID: 96IE19S06

Sample wt/vol: 10.68 (g/ml) G Lab File ID: >F0575

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 1.23 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
99-09-2	3-Nitroaniline	4700	U
83-32-9	Acenaphthene	950	U
51-28-5	2,4-Dinitrophenol	4700	U
100-02-7	4-Nitrophenol	4700	U
132-64-9	Dibenzofuran	950	U
121-14-2	2,4-Dinitrotoluene	950	U
84-66-2	Diethylphthalate	950	U
7005-72-3	4-Chlorophenyl-phenylether	950	U
86-73-7	Fluorene	950	U
100-01-6	4-Nitroaniline	4700	U
534-52-1	4,6-Dinitro-2-methylphenol	4700	U
86-30-6	N-Nitrosodiphenylamine	950	U
101-55-3	4-Bromophenyl-phenylether	950	U
118-74-1	Hexachlorobenzene	950	U
87-86-5	Pentachlorophenol	4700	U
85-01-8	Phenanthrene	950	U
120-12-7	Anthracene	950	U
84-74-2	Di-n-butylphthalate	4100	BJ
206-44-0	Fluoranthene	950	U
129-00-0	Pyrene	950	U
85-68-7	Butylbenzylphthalate	950	U
56-55-3	Benzo(a)anthracene	950	U
218-01-9	Chrysene	950	U
117-81-7	bis(2-Ethylhexyl)phthalate	910000	BJD
117-84-0	Di-n-octylphthalate	220	J
205-99-2	Benzo(b)fluoranthene	950	U
207-08-9	Benzo(k)fluoranthene	950	U
50-32-8	Benzo(a)pyrene	950	U
193-39-5	Indeno(1,2,3-cd)pyrene	950	U
53-70-3	Dibenzo(a,h)anthracene	950	U
191-24-2	Benzo(g,h,i)perylene	950	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S06

Lab Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S06

Sample wt/vol: 10.68 (g/mL) G Lab File ID: >F0575

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 1.23 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 6/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.00000

Number TICs found: 10

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

1.	Unknown	13.73	13000.	BJ
2.	Unknown Phthalate	17.59	620.	BJ
3.	Unknown	17.93	940.	J
4.	Unknown	18.95	1200.	J
5.	Unknown	20.53	780.	J
6.	Unknown	21.40	610.	J
7.	Unknown dioic acid ester	24.02	54000.	BJ
8.	Unknown	24.97	810.	J
9.	Unknown Phthalate	25.30	750.	J
10.	Unknown Phthalate	26.46	1500.	BJ
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19S07

L Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S07

Sample wt/vol: 10.27 (g/ml) G Lab File ID: >F0611

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 32.16 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/20/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	1400	U
111-44-4	bis(2-Chloroethyl)ether	1400	U
95-57-8	2-Chlorophenol	1400	U
541-73-1	1,3-Dichlorobenzene	1400	U
106-46-7	1,4-Dichlorobenzene	1400	U
100-51-6	Benzyl alcohol	1400	U
95-50-1	1,2-Dichlorobenzene	1400	U
95-48-7	2-Methylphenol	1400	U
39638-32-9	bis(2-Chloroisopropyl)ether	1400	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-n-propylamine	1400	U
67-72-1	Hexachloroethane	1400	U
98-95-3	Nitrobenzene	1400	U
78-59-1	Isophorone	1400	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
65-85-0	Benzoic acid	7200	U
111-91-1	bis(2-Chloroethoxy)methane	1400	U
120-83-2	2,4-Dichlorophenol	1400	U
120-82-1	1,2,4-Trichlorobenzene	1400	U
91-20-3	Naphthalene	350	J
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	1400	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	490	J
77-47-4	Hexachlorocyclopentadiene	1400	U
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	7200	U
91-58-7	2-Chloronaphthalene	1400	U
88-74-4	2-Nitroaniline	7200	U
131-11-3	Dimethylphthalate	1400	U
208-96-8	Acenaphthylene	1400	U
606-20-2	2,6-Dinitrotoluene	1400	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [X] NO [ ]

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19S07

L Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S07

Sample wt/vol: 10.27 (g/ml) G Lab File ID: >F0611

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 32.16 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/20/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
99-09-2	3-Nitroaniline	7200	U
83-32-9	Acenaphthene	1400	U
51-28-5	2,4-Dinitrophenol	7200	U
100-02-7	4-Nitrophenol	7200	U
132-64-9	Dibenzofuran	1400	U
121-14-2	2,4-Dinitrotoluene	1400	U
84-66-2	Diethylphthalate	1400	U
7005-72-3	4-Chlorophenyl-phenylether	1400	U
86-73-7	Fluorene	1400	U
100-01-6	4-Nitroaniline	7200	U
534-52-1	4,6-Dinitro-2-methylphenol	7200	U
86-30-6	N-Nitrosodiphenylamine	1400	U
101-55-3	4-Bromophenyl-phenylether	1400	U
118-74-1	Hexachlorobenzene	1400	U
87-86-5	Pentachlorophenol	7200	U
85-01-8	Phenanthrene	340	J
120-12-7	Anthracene	1400	U
84-74-2	Di-n-butylphthalate	8400	B
206-44-0	Fluoranthene	1400	U
129-00-0	Pyrene	1400	U
85-68-7	Butylbenzylphthalate	1400	U
56-55-3	Benzo(a)anthracene	1400	U
218-01-9	Chrysene	1400	U
117-81-7	bis(2-Ethylhexyl)phthalate	5000000	B D
117-84-0	Di-n-octylphthalate	1090	J
205-99-2	Benzo(b)fluoranthene	1400	U
207-08-9	Benzo(k)fluoranthene	1400	U
50-32-8	Benzo(a)pyrene	1400	U
193-39-5	Indeno(1,2,3-cd)pyrene	1400	U
53-70-3	Dibenzo(a,h)anthracene	1400	U
191-24-2	Benzo(g,h,i)perylene	1400	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S07

Lab Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S07

Sample wt/vol: 10.27 (g/mL) G Lab File ID: >F0611

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 32.16 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 6/20/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.00000

Number TICs found: 17

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

1.	Unknown	13.76	58000.	BJ
2.	Unknown	15.06	3000.	J
3.	Unknown hydrocarbon	15.42	1400.	J
4.	Unknown	15.49	1100.	J
5.	Unknown phthalate	17.59	1300.	BJ
6.	Unknown	17.91	4200.	J
7.	Unknown	18.95	2000.	J
8.	Unknown	19.27	1100.	J
9.	Unknown	20.50	3900.	J
10.	Unknown phthalate	20.65	1000.	J
11.	Unknown ester	23.44	1600.	J
12.	Unknown phthalate	23.59	1500.	J
13.	Unknown phthalate	23.71	2600.	J
14.	Unknown ester	23.83	4900.	J
15.	Unknown dioic acid ester	24.02	130000.	BJ
16.	Unknown phthalate	26.51	3300.	BJ
17.	Unknown phthalate	26.95	900.	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19S08

Lab Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: SSCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S08

Sample wt/vol: 10.10 (g/ml) G Lab File ID: >F0579

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 6.48 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	1060	U
111-44-4	bis(2-Chloroethyl)ether	1060	U
95-57-8	2-Chlorophenol	1060	U
541-73-1	1,3-Dichlorobenzene	1060	U
106-46-7	1,4-Dichlorobenzene	1060	U
100-51-6	Benzyl alcohol	1060	U
95-50-1	1,2-Dichlorobenzene	1060	U
95-48-7	2-Methylphenol	1060	U
39638-32-9	bis(2-Chloroisopropyl)ether	1060	U
106-44-5	4-Methylphenol	260	J
621-64-7	N-Nitroso-di-n-propylamine	1060	U
67-72-1	Hexachloroethane	1060	U
98-95-3	Nitrobenzene	1060	U
78-59-1	Isophorone	1060	U
88-75-5	2-Nitrophenol	1060	U
105-67-9	2,4-Dimethylphenol	1060	U
65-85-0	Benzoic acid	5300	U
111-91-1	bis(2-Chloroethoxy)methane	1060	U
120-83-2	2,4-Dichlorophenol	1060	U
120-82-1	1,2,4-Trichlorobenzene	1060	U
91-20-3	Naphthalene	730	J
106-47-8	4-Chloroaniline	1060	U
87-68-3	Hexachlorobutadiene	1060	U
59-50-7	4-Chloro-3-methylphenol	1060	U
91-57-6	2-Methylnaphthalene	380	J
77-47-4	Hexachlorocyclopentadiene	1060	U
88-06-2	2,4,6-Trichlorophenol	1060	U
95-95-4	2,4,5-Trichlorophenol	5300	U
91-58-7	2-Chloronaphthalene	1060	U
88-74-4	2-Nitroaniline	5300	U
131-11-3	Dimethylphthalate	1060	U
208-96-8	Acenaphthylene	1060	U
606-20-2	2,6-Dinitrotoluene	1060	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [X] NO [ ]

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19S08

L Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S08

Sample wt/vol: 10.10 (g/ml) G Lab File ID: >F0579

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 6.48 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
99-09-2	3-Nitroaniline	5300	U
83-32-9	Acenaphthene	1060	U
51-28-5	2,4-Dinitrophenol	5300	U
100-02-7	4-Nitrophenol	5300	U
132-64-9	Dibenzofuran	1060	U
121-14-2	2,4-Dinitrotoluene	1060	U
84-66-2	Diethylphthalate	1060	U
7005-72-3	4-Chlorophenyl-phenylether	1060	U
86-73-7	Fluorene	1060	U
100-01-6	4-Nitroaniline	5300	U
534-52-1	4,6-Dinitro-2-methylphenol	5300	U
86-30-6	N-Nitrosodiphenylamine	1060	U
101-55-3	4-Bromophenyl-phenylether	1060	U
118-74-1	Hexachlorobenzene	1060	U
87-86-5	Pentachlorophenol	5300	U
85-01-8	Phenanthrene	330	J
120-12-7	Anthracene	1060	U
84-74-2	Di-n-butylphthalate	27000	BJD
206-44-0	Fluoranthene	1060	U
129-00-0	Pyrene	1060	U
85-68-7	Butylbenzylphthalate	550	J
56-55-3	Benzo(a)anthracene	1060	U
218-01-9	Chrysene	1060	U
117-81-7	bis(2-Ethylhexyl)phthalate	190000	BD
117-84-0	Di-n-octylphthalate	470	J
205-99-2	Benzo(b)fluoranthene	1060	U
207-08-9	Benzo(k)fluoranthene	1060	U
50-32-8	Benzo(a)pyrene	1060	U
193-39-5	Indeno(1,2,3-cd)pyrene	1060	U
53-70-3	Dibenzo(a,h)anthracene	1060	U
191-24-2	Benzo(g,h,i)perylene	1060	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S08

Lab Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S08

Sample wt/vol: 10.10 (g/mL) G Lab File ID: >F0579

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 6.48 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 6/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.00000

Number TICs found: 18

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

1.	Diethyl benzene	4.72	1800.	J
2.	Methylethyl benzene	5.79	820.	J
3.	Unknown	6.35	920.	J
4.	Unknown	6.46	750.	J
5.	Unknown	6.57	700.	J
6.	Unknown	13.76	25000.	BJ
7.	Unknown	15.07	1100.	J
8.	Unknown hydrocarbon	15.44	1300.	J
[illegible]	Unknown	17.69	780.	J
[illegible]	Unknown	17.94	1700.	J
11.	Unknown phthalate	18.73	710.	J
12.	Unknown	18.98	1200.	J
13.	Unknown	19.24	850.	J
14.	Unknown	20.53	1700.	J
15.	Unknown hydrocarbon	20.70	950.	J
16.	Unknown	21.42	1300.	J
17.	Unknown ester	23.83	2300.	J
18.	Unknown dioic acid ester	24.03	71000.	BJ
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19S09

L Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 53CRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S09

Sample wt/vol: 10.34 (g/ml) G Lab File ID: >F0580

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 17.71 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	1200	U
111-44-4	bis(2-Chloroethyl)ether	1200	U
95-57-8	2-Chlorophenol	1200	U
541-73-1	1,3-Dichlorobenzene	1200	U
106-46-7	1,4-Dichlorobenzene	1200	U
100-51-6	Benzyl alcohol	1200	U
95-50-1	1,2-Dichlorobenzene	1200	U
95-48-7	2-Methylphenol	1200	U
39638-32-9	bis(2-Chloroisopropyl)ether	1200	U
106-44-5	4-Methylphenol	300	J
621-64-7	N-Nitroso-di-n-propylamine	1200	U
67-72-1	Hexachloroethane	1200	U
98-95-3	Nitrobenzene	1200	U
78-59-1	Isophorone	1200	U
88-75-5	2-Nitrophenol	1200	U
105-67-9	2,4-Dimethylphenol	1200	U
65-85-0	Benzoic acid	5900	U
111-91-1	bis(2-Chloroethoxy)methane	1200	U
120-83-2	2,4-Dichlorophenol	1200	U
120-82-1	1,2,4-Trichlorobenzene	1200	U
91-20-3	Naphthalene	1200	U
106-47-8	4-Chloroaniline	350	J
87-68-3	Hexachlorobutadiene	1200	U
59-50-7	4-Chloro-3-methylphenol	1200	U
91-57-6	2-Methylnaphthalene	1200	U
77-47-4	Hexachlorocyclopentadiene	1200	U
88-06-2	2,4,6-Trichlorophenol	1200	U
95-95-4	2,4,5-Trichlorophenol	5900	U
91-58-7	2-Chloronaphthalene	1200	U
88-74-4	2-Nitroaniline	5900	U
131-11-3	Dimethylphthalate	1200	U
208-96-8	Acenaphthylene	1200	U
606-20-2	2,6-Dinitrotoluene	1200	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [X] NO [ ]

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19S09

I Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: SSCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S09

Sample wt/vol: 10.34 (g/ml) G Lab File ID: >F0580

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 17.71 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
99-09-2	3-Nitroaniline	5900	U
83-32-9	Acenaphthene	1200	U
51-28-5	2,4-Dinitrophenol	5900	U
100-02-7	4-Nitrophenol	5900	U
132-64-9	Dibenzofuran	1200	U
121-14-2	2,4-Dinitrotoluene	1200	U
84-66-2	Diethylphthalate	1200	U
7005-72-3	4-Chlorophenyl-phenylether	1200	U
86-73-7	Fluorene	1200	U
100-01-6	4-Nitroaniline	5900	U
534-52-1	4,6-Dinitro-2-methylphenol	5900	U
86-30-6	N-Nitrosodiphenylamine	1200	U
101-55-3	4-Bromophenyl-phenylether	1200	U
118-74-1	Hexachlorobenzene	1200	U
87-86-5	Pentachlorophenol	5900	U
85-01-8	Phenanthrene	320	J
120-12-7	Anthracene	1200	U
84-74-2	Di-n-butylphthalate	4000	B
206-44-0	Fluoranthene	190	J
129-00-0	Pyrene	170	J
85-68-7	Butylbenzylphthalate	1200	U
56-55-3	Benzo(a)anthracene	1200	U
218-01-9	Chrysene	1200	U
117-81-7	bis(2-Ethylhexyl)phthalate	620000	B D
117-84-0	Di-n-octylphthalate	140	J
205-99-2	Benzo(b)fluoranthene	1200	U
207-08-9	Benzo(k)fluoranthene	1200	U
50-32-8	Benzo(a)pyrene	1200	U
193-39-5	Indeno(1,2,3-cd)pyrene	1200	U
53-70-3	Dibenzo(a,h)anthracene	1200	U
191-24-2	Benzo(g,h,i)perylene	1200	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S09

Lab Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: ESCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S09

Sample wt/vol: 10.34 (g/mL) G Lab File ID: >F0580

Level: (low/med) LOW Date Received: 06/06/96

% Moisture: not dec. 17.71 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 6/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.00000

Number TICs found: 5

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

1.	Unknown	13.72	11000.	BJ
2.	Unknown ester	17.70	1300.	J
3.	Unknown	18.99	1400.	J
4.	Unknown dioic acid ester	24.03	62000.	BJ
5.	Unknown	31.09	2200.	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19S10

Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: SSCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S10

Sample wt/vol: 10.07 (g/ml) G Lab File ID: >F0612

Level: (Low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 19.05 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/20/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	1200	U
111-44-4	bis(2-Chloroethyl)ether	1200	U
95-57-8	2-Chlorophenol	1200	U
541-73-1	1,3-Dichlorobenzene	1200	U
106-46-7	1,4-Dichlorobenzene	1200	U
100-51-6	Benzyl alcohol	1200	U
95-50-1	1,2-Dichlorobenzene	1200	U
95-48-7	2-Methylphenol	1200	U
39638-32-9	bis(2-Chloroisopropyl)ether	1200	U
106-44-5	4-Methylphenol	1200	U
621-64-7	N-Nitroso-di-n-propylamine	1200	U
67-72-1	Hexachloroethane	1200	U
98-95-3	Nitrobenzene	1200	U
78-59-1	Isophorone	1200	U
88-75-5	2-Nitrophenol	1200	U
105-67-9	2,4-Dimethylphenol	1200	U
65-85-0	Benzoic acid	6100	U
111-91-1	bis(2-Chloroethoxy)methane	1200	U
120-83-2	2,4-Dichlorophenol	1200	U
120-82-1	1,2,4-Trichlorobenzene	1200	U
91-20-3	Naphthalene	1200	U
106-47-8	4-Chloroaniline	1200	U
87-68-3	Hexachlorobutadiene	1200	U
59-50-7	4-Chloro-3-methylphenol	1200	U
91-57-6	2-Methylnaphthalene	1200	U
77-47-4	Hexachlorocyclopentadiene	1200	U
88-06-2	2,4,6-Trichlorophenol	1200	U
95-95-4	2,4,5-Trichlorophenol	6100	U
91-58-7	2-Chloronaphthalene	1200	U
88-74-4	2-Nitroaniline	6100	U
131-11-3	Dimethylphthalate	1200	U
208-96-8	Acenaphthylene	1200	U
606-20-2	2,6-Dinitrotoluene	1200	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [X] NO [ ]

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19S10

L Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S10

Sample wt/vol: 10.07 (g/ml) G Lab File ID: >F0612

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 19.05 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/20/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
99-09-2	3-Nitroaniline	6100	U
83-32-9	Acenaphthene	1200	U
51-28-5	2,4-Dinitrophenol	6100	U
100-02-7	4-Nitrophenol	6100	U
132-64-9	Dibenzofuran	1200	U
121-14-2	2,4-Dinitrotoluene	1200	U
84-66-2	Diethylphthalate	1200	U
7005-72-3	4-Chlorophenyl-phenylether	1200	U
86-73-7	Fluorene	1200	U
100-01-6	4-Nitroaniline	6100	U
534-52-1	4,6-Dinitro-2-methylphenol	6100	U
86-30-6	N-Nitrosodiphenylamine	1200	U
101-55-3	4-Bromophenyl-phenylether	1200	U
118-74-1	Hexachlorobenzene	1200	U
87-86-5	Pentachlorophenol	6100	U
85-01-8	Phenanthrene	200	J
120-12-7	Anthracene	1200	U
84-74-2	Di-n-butylphthalate	7900	B
206-44-0	Fluoranthene	1200	U
129-00-0	Pyrene	1200	U
85-68-7	Butylbenzylphthalate	260	J
56-55-3	Benzo(a)anthracene	1200	U
218-01-9	Chrysene	1200	U
117-81-7	bis(2-Ethylhexyl)phthalate	3700000	B D
117-84-0	Di-n-octylphthalate	880	J
205-99-2	Benzo(b)fluoranthene	1200	U
207-08-9	Benzo(k)fluoranthene	1200	U
50-32-8	Benzo(a)pyrene	1200	U
193-39-5	Indeno(1,2,3-cd)pyrene	1200	U
53-70-3	Dibenzo(a,h)anthracene	1200	U
191-24-2	Benzo(g,h,i)perylene	1200	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S10

Lab Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19S10

Sample wt/vol: 10.07 (g/mL) G Lab File ID: >F0612

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 19.05 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 6/20/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.00000

Number TICs found: 20

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

1.	Unknown	13.75	50000.	BJ
2.	Unknown	15.06	2500.	J
3.	Unknown	15.51	1100.	J
4.	Unknown phthalate	17.59	1200.	BJ
5.	Unknown	17.91	4100.	J
6.	Unknown	18.95	1500.	J
7.	Unknown	19.27	1100.	J
8.	Unknown	20.50	3900.	J
9.	Unknown phthalate	20.66	820.	J
10.	Unknown phthalate	21.40	630.	J
11.	Unknown ester	23.46	1100.	J
12.	Unknown phthalate	23.71	2700.	J
13.	Unknown ester	23.83	6500.	J
14.	Unknown dioic acid ester	24.02	78000.	BJ
15.	Unknown phthalate	26.53	2000.	BJ
16.	Unknown phthalate	26.95	800.	J
17.	Unknown phthalate	27.12	840.	J
18.	Unknown phthalate	28.16	740.	J
19.	Unknown phthalate	28.29	660.	J
20.	Unknown	35.76	620.	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19D10

L Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19D10

Sample wt/vol: 10.65 (g/ml) G Lab File ID: >F0582

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 22.03 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	1200	U
111-44-4	bis(2-Chloroethyl)ether	1200	U
95-57-8	2-Chlorophenol	1200	U
541-73-1	1,3-Dichlorobenzene	1200	U
106-46-7	1,4-Dichlorobenzene	1200	U
100-51-6	Benzyl alcohol	1200	U
95-50-1	1,2-Dichlorobenzene	1200	U
95-48-7	2-Methylphenol	1200	U
39638-32-9	bis(2-Chloroisopropyl)ether	1200	U
106-44-5	4-Methylphenol	1200	U
621-64-7	N-Nitroso-di-n-propylamine	1200	U
67-72-1	Hexachloroethane	1200	U
98-95-3	Nitrobenzene	1200	U
78-59-1	Isophorone	1200	U
88-75-5	2-Nitrophenol	1200	U
105-67-9	2,4-Dimethylphenol	1200	U
65-85-0	Benzoic acid	6000	U
111-91-1	bis(2-Chloroethoxy)methane	1200	U
120-83-2	2,4-Dichlorophenol	1200	U
120-82-1	1,2,4-Trichlorobenzene	1200	U
91-20-3	Naphthalene	1200	U
106-47-8	4-Chloroaniline	1200	U
87-68-3	Hexachlorobutadiene	1200	U
59-50-7	4-Chloro-3-methylphenol	1200	U
91-57-6	2-Methylnaphthalene	1200	U
77-47-4	Hexachlorocyclopentadiene	1200	U
88-06-2	2,4,6-Trichlorophenol	1200	U
95-95-4	2,4,5-Trichlorophenol	6000	U
91-58-7	2-Chloronaphthalene	1200	U
88-74-4	2-Nitroaniline	6000	U
131-11-3	Dimethylphthalate	1200	U
208-96-8	Acenaphthylene	1200	U
606-20-2	2,6-Dinitrotoluene	1200	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [X] NO [ ]

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMMARY
96IE19D10

L Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: SSCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix (soil/water) SOIL Lab Sample ID: 96IE19D10

Sample wt/vol: 10.65 (g/ml) G Lab File ID: >F0582

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. 22.03 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 06/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
99-09-2	3-Nitroaniline	6000	U
83-32-9	Acenaphthene	1200	U
51-28-5	2,4-Dinitrophenol	6000	U
100-02-7	4-Nitrophenol	6000	U
132-64-9	Dibenzofuran	1200	U
121-14-2	2,4-Dinitrotoluene	1200	U
84-66-2	Diethylphthalate	1200	U
7005-72-3	4-Chlorophenyl-phenylether	1200	U
86-73-7	Fluorene	1200	U
100-01-6	4-Nitroaniline	6000	U
534-52-1	4,6-Dinitro-2-methylphenol	6000	U
86-30-6	N-Nitrosodiphenylamine	1200	U
101-55-3	4-Bromophenyl-phenylether	1200	U
118-74-1	Hexachlorobenzene	1200	U
87-86-5	Pentachlorophenol	6000	U
85-01-8	Phenanthrene	250	J
120-12-7	Anthracene	1200	U
84-74-2	Di-n-butylphthalate	19000	BJD
206-44-0	Fluoranthene	1200	U
129-00-0	Pyrene	1200	U
85-68-7	Butylbenzylphthalate	1200	U
56-55-3	Benzo(a)anthracene	1200	U
218-01-9	Chrysene	1200	U
117-81-7	bis(2-Ethylhexyl)phthalate	2200000	B D
117-84-0	Di-n-octylphthalate	490	J
205-99-2	Benzo(b)fluoranthene	1200	U
207-08-9	Benzo(k)fluoranthene	1200	U
50-32-8	Benzo(a)pyrene	1200	U
193-39-5	Indeno(1,2,3-cd)pyrene	1200	U
53-70-3	Dibenzo(a,h)anthracene	1200	U
191-24-2	Benzo(g,h,i)perylene	1200	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19D10

Lab Name: PHILLIPS THOM LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) SOIL Lab Sample ID: 96IE19D10

Sample wt/vol: 10.65 (g/mL) G Lab File ID: >F0582

Level: (low/med) LOW Date Received: 06/06/96

% Moisture: not dec. 22.03 dec. --- Date Extracted: 06/06/96

Extraction: (Sepf/Cont/Sonc) SOXH Date Analyzed: 6/19/96

GPC Cleanup: (Y/N) Y pH: --- Dilution Factor: 1.00000

Number TICs found: 16

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

1.	Unknown	13.76	31000.	BJ
2.	Unknown	15.07	1300.	J
3.	Unknown	15.50	720.	J
4.	Unknown phthalate	17.60	1900.	BJ
5.	Unknown	17.92	2200.	J
6.	Unknown phthalate	18.72	1200.	J
7.	Unknown	18.95	1100.	J
8.	Unknown	19.28	730.	J
9.	Unknown	20.52	2200.	J
10.	Unknown	21.03	5700.	J
11.	Unknown ester	23.46	680.	J
12.	Unknown phthalate	23.62	610.	J
13.	Unknown phthalate	23.73	630.	J
14.	Unknown ester	23.83	1200.	J
15.	Unknown dioic acid ester	24.02	55000.	BJ
16.	Unknown phthalate	26.48	1500.	BJ
17.				
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED

JUL 24 1996

IEPA/DLPC

Date: JUL 22 1996

Subject: Review of Region 5 Data for SF 960098 PHILLIPS THOM LF

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

To: IEPA

Attached are the results for SF 960098 PHILLIPS THOM LF
CRL request number 960098
for analyses for PCB/PESTICIDES IN SOILS
Results are reported for sample designations: 96IE19S06 - S10; 96IE19D10

Results Status:
( ) Acceptable for Use
(X) Data Qualified, but Acceptable for use (due to dilutions & QC outliers)
( ) Data Unacceptable for Use

( ) Sewer Disposal Criteria Met; Exceptions: none

Comments on Data Quality by Reviewer

PCBs were detected in sample S09 and quantitated after acid-treatment. The pesticides analytes identified (prior to acid-treatment) in the same PCB containing sample had to be qualified because of coelution problems. See attached narrative for detailed comments.

Data are qualified but acceptable for use.

Comments by Laboratory Director or Quality Control Coordinator

960098

TFA301

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

DIVISION/BRANCH SUPERFUND SAMPLING DATE 5/29-30/96 LAB ARRIVAL DATE 5/31/96 DUE DATE 6/21/96

DU NUMBER TFA DATASET NUMBER 960098 STUDY PHILLIPS IRON LANDFILL PRIORITY N CONTRACTOR IEPA

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS POLYCHLORINATED BIPHENYLS MG/KG (DRY) PES211422	SEDIMENTS SOLIDS CHLORINATED PESTICIDES MG/KG (DRY) PES211322	SEDIMENTS SOLIDS OIL AND GREASE MG/KG (DRY) PES214322
96IE19				
S06	X101502557 8	X	X	
S07	X102 5025581	X	X	
S08	X103 502584	X	X	
S09	X104 5025587	X	X	
S10	X105 5025590	X	X	
D10	X106 5025593	X	X	

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: IEPA
Sample requestor: Ted Prescott
Facility: Phyllips Thom LF
Matrix: Soil
Date Collected: 29-May-96
Date Extracted: 05-Jun-96

Sample Batch ID: 960098
Account Number: TFA
Sample ID: 96IE19S06
Units: µg/gm
Date Received: 31-May-96
Date Analyzed: 11-Jun-96

8081 SOT P/P S

Method: ~~608_P/P_DNS~~2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.006	DU
58899	Lindane	.006	DU
76443	Heptachlor	.006	DU
309002	Aldrin	.006	DU
1024573	Heptachlor Epoxide	.006	DU
959988	Endosulfan I	.006	DU
60571	Dieldrin	.010	DU
72208	Endrin	.010	DU
3312659	Endosulfan II	.010	DU
50293	p,p'-DDT	.010	DU
72-43-5	Methoxychlor	.060	DU
319857	Beta-BHC	.006	DU
419868	Delta-BHC	.006	DU
103-74-2	Gamma-Chlordane	.006	DU
5103-71-9	Alpha-Chlordane	.006	DU
72559	p,p'-DDE	.010	DU
72548	p,p'-DDD	.010	DU
7421934	Endrin Aldehyde	.010	DU
1031278	Endosulfan Sulfate	.010	DU
53494-70-5	Endrin Ketone	.010	DU
57-74-9	Chlordane, Technical	.04	DU
8001352	Toxaphene	.20	DU
1104-28-2	Aroclor 1221	.04	DU
11141165	Aroclor 1232	.04	DU
53469219	Aroclor 1242	.04	DU
12674-11-2	Aroclor 1016	.04	DU
12672296	Aroclor 1248	.04	DU
11097691	Aroclor 1254	.04	DU
11096825	Aroclor 1260	.04	DU

Analyzed by: [illegible] N Tom/Lockheed/ESAT

Team Leader: [illegible]

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: IEPA
Sample requestor: Ted Prescott
Facility: Phyllips Thom LF
Matrix: Soil
Date Collected: 29-May-96
Date Extracted: 05-Jun-96

Sample Batch ID: 960098
Account Number: TFA
Sample ID: 96IE19S07
Units: µg/gm
Date Received: 31-May-96
Date Analyzed: 11-Jun-96

8081 soil P/P ST
Method: ~~608_P/P_DN32~~

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.006	DU
58899	Lindane	.006	DU
76443	Heptachlor	.006	DU
309002	Aldrin	.006	DU
1024573	Heptachlor Epoxide	.006	DU
959988	Endosulfan I	.006	DU
60571	Dieldrin	.010	DU
72208	Endrin	.010	DU
3312659	Endosulfan II	.010	DU
50293	p,p'-DDT	.010	DU
72-43-5	Methoxychlor	.060	DU
319857	Beta-BHC	.006	DU
419868	Delta-BHC	.006	DU
103-74-2	Gamma-Chlordane	.006	DU
5103-71-9	Alpha-Chlordane	.006	DU
72559	p,p'-DDE	.010	DU
72548	p,p'-DDD	.010	DU
7421934	Endrin Aldehyde	.010	DU
1031278	Endosulfan Sulfate	.010	DU
53494-70-5	Endrin Ketone	.010	DU
57-74-9	Chlordane, Technical	.04	DU
8001352	Toxaphene	.20	DU
1104-28-2	Aroclor 1221	.04	DU
11141165	Aroclor 1232	.04	DU
53469219	Aroclor 1242	.04	DU
12674-11-2	Aroclor 1016	.04	DU
12672296	Aroclor 1248	.04	DU
11097691	Aroclor 1254	.04	DU
11096825	Aroclor 1260	.04	DU

Analyzed by: Stephanie N Tohn/Lockheed/ESAT

Team Leader: W Sue Wilson

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: IEPA
Sample requestor: Ted Prescott
Facility: Phyllips Thom LF
Matrix: Soil
Date Collected: 29-May-96
Date Extracted: 05-Jun-96

Sample Batch ID: 960098
Account Number: TFA
Sample ID: 96IE19S08
Units: µg/gm
Date Received: 31-May-96
Date Analyzed: 11-Jun-96

8081 SOIL P/P ST
Method: ~~608_P/P_DNS~~2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.006	DU
58899	Lindane	.006	DU
76443	Heptachlor	.006	DU
309002	Aldrin	.006	DU
1024573	Heptachlor Epoxide	.006	DU
959988	Endosulfan I	.006	DU
60571	Dieldrin	.010	DU
72208	Endrin	.010	DU
3312659	Endosulfan II	.010	DU
50293	p,p'-DDT	.010	DU
72-43-5	Methoxychlor	.060	DU
319857	Beta-BHC	.035	D
419868	Delta-BHC	.006	DU
103-74-2	Gamma-Chlordane	.006	DU
5103-71-9	Alpha-Chlordane	.006	DU
72559	p,p'-DDE	.010	DU
72548	p,p'-DDD	.010	DU
7421934	Endrin Aldehyde	.010	DU
1031278	Endosulfan Sulfate	.010	DU
53494-70-5	Endrin Ketone	.010	DU
57-74-9	Chlordane, Technical	.04	DU
8001352	Toxaphene	.20	DU
1104-28-2	Aroclor 1221	.04	DU
11141165	Aroclor 1232	.04	DU
53469219	Aroclor 1242	.04	DU
12674-11-2	Aroclor 1016	.04	DU
12672296	Aroclor 1248	.04	DU
11097691	Aroclor 1254	.04	DU
11096825	Aroclor 1260	.04	DU

Analyzed by: [illegible]/Lockheed/ESAT

Team Leader: Mike Wilson

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: IEPA
Sample requestor: Ted Prescott
Facility: Phyllips Thom LF
Matrix: Soil
Date Collected: 29-May-96
Date Extracted: 05-Jun-96

Sample Batch ID: 960098
Account Number: TFA
Sample ID: 96IE19S09
Units: µg/gm
Date Received: 31-May-96
Date Analyzed: 11-Jun-96

8081 Soil P/P

Method: 608 ~~P/P DNS2~~

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.006	DU
58899	Lindane	.006	DU
76443	Heptachlor	.006	DU
309002	Aldrin	.006	DJ
1024573	Heptachlor Epoxide	.008	DJ
959988	Endosulfan I	.006	DU
60571	Dieldrin	.017	DJ
72208	Endrin	.016	DJ
3312659	Endosulfan II	.010	DU
50293	p,p'-DDT	.010	DU
72-43-5	Methoxychlor	.060	DU
319857	Beta-BHC	.006	DU
419868	Delta-BHC	.011	DJ
103-74-2	Gamma-Chlordane	.034	DJ
5103-71-9	Alpha-Chlordane	.019	DJ
72559	p,p'-DDE	.010	DU
72548	p,p'-DDD	.010	DU
7421934	Endrin Aldehyde	.010	DU
1031278	Endosulfan Sulfate	.010	DU
53494-70-5	Endrin Ketone	.010	DU
57-74-9	Chlordane, Technical	.04	DU
8001352	Toxaphene	.20	DU
1104-28-2	Aroclor 1221	.04	DU
11141165	Aroclor 1232	.04	DU
53469219	Aroclor 1242	.04	DU
12674-11-2	Aroclor 1016	.04	DU
12672296	Aroclor 1248	.04	DU
11097691	Aroclor 1254	.24	D
11096825	Aroclor 1260	.04	DU

7/18/96

Analyzed by: Stephanie Tobin/Lockheed/ESAT

Team Leader: Nina Wilson

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: IEPA
Sample requestor: Ted Prescott
Facility: Phyllips Thom LF
Matrix: Soil
Date Collected: 29-May-96
Date Extracted: 05-Jun-96

Sample Batch ID: 960098
Account Number: TFA
Sample ID: 96IE19S10
Units: µg/gm
Date Received: 31-May-96
Date Analyzed: 11-Jun-96

8081 Soil P/P 8T
Method: ~~608_P/P_DNS2~~

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.006	DU
58899	Lindane	.006	DU
76443	Heptachlor	.006	DU
309002	Aldrin	.006	DU
1024573	Heptachlor Epoxide	.006	DU
959988	Endosulfan I	.006	DU
60571	Dieldrin	.010	DU
72208	Endrin	.010	DU
3312659	Endosulfan II	.010	DU
50293	p,p'-DDT	.010	DU
72-43-5	Methoxychlor	.060	DU
319857	Beta-BHC	.006	DU
419868	Delta-BHC	.006	DU
103-74-2	Gamma-Chlordane	.006	DU
5103-71-9	Alpha-Chlordane	.006	DU
72559	p,p'-DDE	.010	DU
72548	p,p'-DDD	.010	DU
7421934	Endrin Aldehyde	.010	DU
1031278	Endosulfan Sulfate	.010	DU
53494-70-5	Endrin Ketone	.010	DU
57-74-9	Chlordane, Technical	.04	DU
8001352	Toxaphene	.20	DU
1104-28-2	Aroclor 1221	.04	DU
11141165	Aroclor 1232	.04	DU
53469219	Aroclor 1242	.04	DU
12674-11-2	Aroclor 1016	.04	DU
12672296	Aroclor 1248	.04	DU
11097691	Aroclor 1254	.04	DU
11096825	Aroclor 1260	.04	DU

Analyzed by: [illegible] Tony/Lockheed/ESAT

Team Leader: [illegible]

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: IEPA
Sample requestor: Ted Prescott
Facility: Phyllips Thom LF
Matrix: Soil
Date Collected: 29-May-96
Date Extracted: 05-Jun-96

Sample Batch ID: 960098
Account Number: TFA
Sample ID: 96IE19D10
Units: µg/gm
Date Received: 31-May-96
Date Analyzed: 11-Jun-96

Method: ~~608_P/P_DNS2~~ 8081 Soil P/P ST

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.006	DU
58899	Lindane	.006	DU
76443	Heptachlor	.006	DU
309002	Aldrin	.006	DU
1024573	Heptachlor Epoxide	.006	DU
959988	Endosulfan I	.006	DU
60571	Dieldrin	.010	DU
72208	Endrin	.010	DU
3312659	Endosulfan II	.010	DU
50293	p,p'-DDT	.010	DU
72-43-5	Methoxychlor	.060	DU
319857	Beta-BHC	.006	DU
419868	Delta-BHC	.006	DU
103-74-2	Gamma-Chlordane	.006	DU
5103-71-9	Alpha-Chlordane	.006	DU
72559	p,p'-DDE	.010	DU
72548	p,p'-DDD	.010	DU
7421934	Endrin Aldehyde	.010	DU
1031278	Endosulfan Sulfate	.010	DU
53494-70-5	Endrin Ketone	.010	DU
57-74-9	Chlordane, Technical	.04	DU
8001352	Toxaphene	.20	DU
1104-28-2	Aroclor 1221	.04	DU
11141165	Aroclor 1232	.04	DU
53469219	Aroclor 1242	.04	DU
12674-11-2	Aroclor 1016	.04	DU
12672296	Aroclor 1248	.04	DU
11097691	Aroclor 1254	.04	DU
11096825	Aroclor 1260	.04	DU

Analyzed by: Stephanie N. Tobin/Lockheed/ESAT

Team Leader: W Ann Wilson

To: Babu Paruchuri, Work Assignment Manager

For: Linda Evangelista, Pesticide/PCB Group Leader

Thru: Dennis Miller, ESAT Team Manager Dennis Miller

From: Steffanie N. Tobin, ESAT Chemist

Date: 06/19/96

Subject: Pesticide/PCB Analysis for Phillips Thom Landfill (Data Set SF 960098) by soxhlet extraction (Work Assignment 05-96-0-03)

CASE NARRATIVE

DATE: June 19, 1996

PROJECT NAME: Phillips Thom Landfill/CRL Case #: SF 960098
Analysis of Pesticides/PCBs

ANALYST: Steffanie N. Tobin, ESAT Chemist

REVIEWERS: Ziyad Rajabi, Lockheed/ESAT Organic Group Leader
W.Ira Wilson, Lockheed/ESAT Organic Supervisor
Dennis Miller, Lockheed/ESAT Team Manager
Babu Paruchuri, EPA CRL Work Assignment Manager

I. CASE DESCRIPTION:

The laboratory received six (6) soil samples (96IE19S06-96IE19S10 and 96IE19D10) for pesticide/PCB analysis using CRL method 608 Pest/PCB DNS on 05/31/96.

The soil samples were extracted on 06/03/96 utilizing soxhlet extraction per 3540A methodology. The samples were analyzed between 06/11/96 and 06/19/96 utilizing the HP5890 GC/EC#4. The samples were extracted within the holding time requirements of fourteen (14) days for soil samples. The GPC and florisil clean up were performed for all samples. The sulfur clean up was performed for sample 96IE19S09. The acid clean up was performed for all soil samples after the extracts were analyzed for pesticides. The extracts were analyzed within forty (40) days of sample extraction.

Aroclor 1242 and 1254 standards were analyzed seperate from the pesticide standards for the initial and continuing calibrations. The samples were analyzed for pesticides on 06/11/96 - 06/13/96. The samples were analyzed for Aroclor 1242 and Aroclor 1254 on 06/14/96 - 06/19/96. Aroclor 1254 was detected in samples 96IE19S09. The raw data for all standards are with dataset SF960096.

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** The last Endrin degradation check for the primary column was above the CRL QC limit of <10% (12.91%). The p,p'-DDT degradation check for the primary column was within the QC limit.

The last two Endrin degradation checks for the confirmatory column exceeded the 10% limit with 12.05% and 10.97% degradation values. The initial p,p'-DDT degradation check for the confirmatory column was at the QC limit of 10.0%.

2. **Initial Calibration Check (IC):** An acceptable initial calibration is required before samples can be analyzed. For the primary column, correlation coefficients generated for Pest A, Pest B, Aroclor 1242 and Aroclor 1254 standards using

five points were 0.995 or greater. For the confirmatory column, correlation coefficients generated for Pest A, Pest B, Aroclor 1242 and Aroclor 1254 standards using five points were 0.995 or greater with the exception of DCB which has a correlation coefficient of 0.994.

3. **Continuing Calibration Check (CC):** Continuing calibration check standards (Level 3 Pest A, Pest B, Aroclor 1242 & Aroclor 1254) were within the acceptable limit of <15% on the primary column with the exception of methoxychlor (18.98%, 21.30% and 17.15%), d-BHC (18.30%), Endrin aldehyde (17.77%) and AR1242-A (20.09%).

For the confirmatory column, a-BHC (17.66%, 19.72%), Lindane (16.14%, 17.86%), Heptachlor (15.99%), TCMX (16.33%, 20.12%, 17.89%), b-BHC (16.47%, 15.76%), d-BHC (21.22%, 21.71%), p,p'-DDE (19.4%, 24.98%, 25.29%) and Endosulfan sulfate (17.18%) were above the QC limit of 15%.

4. **Retention Time (RT) Summary:** The retention time %Ds for the standards of the Pest A, Pest B, Aroclor 1254 and Aroclor 1242 were within the QC limits of less than 0.25% for the primary column with the exception of TCMX (0.29%) and DCB (0.27%) and the last Aroclor 1242 (0.58%, 0.56%, 0.55%, 0.51% and 0.56%) and Aroclor 1254 (0.27%, 0.27%).

For the confirmatory column, the retention time %Ds for the standards of Pest A, Pest B, Aroclor 1242 and Aroclor 1254 were within the QC limits of less than 0.25%.

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** Sodium sulfate and glass wool were used as the method blank for the soil samples and was spiked with surrogates. No surrogates were spiked for the GPC method blank. The above method blanks were analyzed with the sample batch. No target analytes were detected above the method detection limit.

2. **Surrogate Spike Compound Results:** For the primary column, the TCMX recovery of BLK060596 was above the QC limit. The DCB recovery of BLK060596, 96IE19S09 and S06MSD was above the QC limits.

For the confirmatory column, the TCMX recovery of BLK060596 and 96IE19S06MSD was above the QC limit. The DCB recovery of BLK060596, 96IE19S09 and S06MSD was above the QC limit.

3. **Matrix Spike/Matrix Spike Duplicate Results:** Sample 96IE19S06 was used as Pesticide spike/spike duplicate for this data set. The recoveries of endrin aldehyde for 96IE19S06MS of primary column was above the QC limit. The recoveries of all spiked compounds for 96IE19S06MSD of the primary column were above the QC limits except for lindane, aldrin and endo. sulfate. The recoveries of all compounds for 96IE19S06MSD of the confirmation column were above the QC limits except for

aldrin and endrin aldehyde. All RPDs were above the QC limits. High Endrin aldehyde recovery for the spike was caused by phthalate interference.

4. **Performance Evaluation Samples (PEs):** No PE was assigned to ESAT for the month of June.

5. **Florisil Cartridge Check:** Florisil Cartridge Check gave acceptable percent recoveries (80-120%) on the primary column with the exception of d-BHC, Endo sulfate and Endrin ketone which were above the QC limits. For confirmatory column, the recoveries of TCMX, d-BHC and p,p'-DDE was also above the QC limit.

IV. **SAMPLE RESULTS:** The summary of the results in µg/g for the soil samples are as follow:

Analytes	**S09**	**S08**
b-BHC		0.0350
d-BHC	0.011	
Aldrin	0.006	
Hept. Ep.	0.008	
g-chlordane	0.034	
a-chlordane	0.019	
Dieldrin	0.017	
Endrin	0.016	
AR1254	0.238	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: JUL 2 4 1996

Subject: Review of Region 5 Data for **PHILLIPS THOMAS LANDFILL**

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

To: IEPA

Attached are the results for: **PHILLIPS THOMAS LANDFILL**
CRL request number: **960098**
Analyzed for: **VOA (Organics)**
Results are reported for sample designations: 96IE19R01, R02, R03, S01 S02, S03 and D02 (seven samples)

Results Status:
(X) Acceptable for Use .
(X) Data Qualified but acceptable for use for the compounds qualified UJ or J. See the attached case narrative.
( ) Data Unacceptable for Use.

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

- All QC criteria were acceptable for all target compounds except 1,1,2-trichloroethane. 1,1,2-trichloroethane was flagged as estimated "J" in each of the associated samples.

- Sample 96IE19S03 was highly contaminated. Sample needed a 1000x dilution for ethylbenzene, m/p-xylene, o-xylene and 1,2,4-trimethylbenzene. Sample with high concentration of analytes mentioned above are not save to human health. See attached case narrative.

RECEIVED
JUL 2 6 1996
IEPA/DLPC

CASE NARRATIVE

DATE: July 18, 1996

PROJECT NAME: Phillips Thomas Landfill Samples - CRL Case # 960098
Analysis of Volatile Organic Analytes (VOA)

ANALYST: Anthony Gugliotta, Lockheed/ESAT ag

REVIEWERS: Ziyad Rajabi, Lockheed/ESAT Organic Group Leader
Dennis Miller, Lockheed/ESAT Team Manager
Nidia Fuentes, EPA CRL Task Monitor

I. CASE DESCRIPTION:

The laboratory received seven preserved samples from the Phillips Thomas Landfill site (96IE19R01, -R02, -R03, -S01, -S02, -S03 and -D02) on 5/31/96 for volatile organic analyte (VOA) analysis. All samples were analyzed by CRL Method 624VOA (revised 12/15/95) using GC/MS#7 on 6/5/96 and 6/6/96. 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 (IPC):** On 6/4/96, 6/5/96 and 6/6/96, a GC/MS IPC using *p*-BFB was 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, no problems were observed.

2. **Initial Calibrations (IC):** An acceptable five-point IC is required for all target compounds before samples can be analyzed. The QC criterion for the IC states that each analyte's %RSD must be ≤30%.

An initial calibration was generated on 6/4/96 on GC/MS#7. All QC criteria were acceptable for all target compounds except 1,1,2-trichloroethane (48.5% RSD). 1,1,2-Trichloroethane was flagged as estimated (J) or with estimated detection limits (UJ) in each of the associated samples.

3. **Continuing Calibrations (CC):** Two continuing calibrations were required for this case (file >B2208 on 6/5/96, and file >B2229 on 6/6/96).

On 6/5/96, the CC had no outliers. No problems were observed with this continuing calibration.

On 6/6/96, the CC had one outlier, 1,1,2-trichloroethane (43.6 %D), which was flagged as estimated (J) or with an estimated detection limit (UJ) in each of the associated samples. No other problems were observed with this continuing calibration.

4. **Internal Standard (IS) Area and Retention Time (RT) Summary:** The QC criterion states that the areas of ISs must be within a factor of two of the IS area of the corresponding CC. The RT of the IS for samples must also be within 30 seconds of the RT of the IS for the corresponding CC.

All internal standard areas and retention times met the QC requirements on all samples analyzed on GC/MS#7. No problems were observed.

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** Lab Blanks (reagent water spiked with internal standards and surrogates) were analyzed to check the GC/MS, purge and trap systems and reagents for laboratory contamination (see Form I VOA). All QC data for the Lab Blanks were acceptable.

In the Lab Blanks analyzed on 6/5/96 and 6/6/96, no analytes and no TICs were detected. No problems were observed.

2. **Surrogate Spike Compound Results:** The surrogate spike compound recovery data were within the QC limits for all water samples on GC/MS#7. No problems were observed. (See Form II VOA-1).

3. **Matrix Spike and Matrix Spike Duplicate Samples (MS and MSD):** The sample designated for matrix spike and matrix spike duplicate analyses was 96IE19S03. Due to high levels of contamination, this sample required a 1000X dilution. Thus, MS and MSD samples were prepared from 1000X dilutions (25 µL/25 mL) of sample 96IE19S03.

In 96IE19S03MSD, 1,1,2-trichloroethane had a low recovery (22%) and the relative percent deviation of this compound (111%) was above the QC limit. The recovery of 1,1,2-trichloroethane was acceptable in sample 96IE19S03MS (78 % recovery). 1,1,2-Trichloroethane was not detected in the original, unspiked analysis of 96IE19S03; therefore, qualification of the data based on these MS/MSD results is not needed.

Due to the high dilution needed for the MS and MSD analyses of

sample 96IE19S03, an additional set of MS and MSD analyses was performed for this data set. Additional MS and MSD samples were prepared from 25-mL aliquots of sample 96IE10S01. The recoveries of all the required compounds in samples S01MS and S01MSD were within the acceptable QC limits, but two compounds, 1,2,4-trichlorobenzene and 1,2,3-trichlorobenzene, had high relative percent deviations (33% and 25%, respectively). These two compounds were not detected in the original, unspiked analysis of 96IE19S01; therefore, qualification of the data based on these MS/MSD results is not needed.

IV. SAMPLE RESULTS:

The concentration of carbon disulfide exceeded the upper calibration limit in sample 96IE19D02. An additional aliquot (12.5 mL) was taken from a second vial of this sample and diluted to 25 mL. The 2X dilution (96IE19D02D1) was analyzed on 6/6/96. The concentration of carbon disulfide from the 2X dilution was used in the final report of this sample and is shown on a Form 1 Summary.

Sample 96IE19S03 was highly contaminated. In an analysis of a 25X dilution of this sample (96IE19S03D2), four analytes (ethylbenzene, m/p-xylene, o-xylene and 1,2,4-trimethylbenzene) had concentrations that exceeded the upper calibration limit. This sample was reanalyzed at a 1000X dilution, and the concentrations of the four analytes were within the calibration range. A Form 1 Summary was created based on the results of the 25X dilution and the concentrations of the four analytes mentioned above from the 1000X dilution.

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

960048 TFA301

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUPERFUND SAMPLE DATE 5/29-30/96 LAB ARRIVAL DATE 5/31/96 DUE DATE 6/21/96

DU NUMBER TFA DATA SET NUMBER 960048 STUDY PHILLIPSTOWN LANDFILL PRIORITY N CONTRACTOR IEPA

CHL 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 216722
96IE19S01	G201 5-025629-630	X			
96IE19S02	G202 5-025633-634	X			
96IE19D02	G203 5-025637-638 DUPLICATE	X			
96IE19S03	G204 5-025641-42/5-025645-46 MS/MSD	X			
96IE19R01	TRIP BLANK #1 5-025671-672	X			
96IE19R02	G205 5-025667-668 FIELD BLANK	X			
96IE19R03	TRIP BLANK #2 5-025673-674	X			
96IE19S06	X101 5-025576-577			X	
96IE19S07	X102 5-025579-580			X	
96IE19S08	X103 5-025582-583			X	
96IE19S09	X104 5-025585-586			X	
96IE19S10	X105 5-025588-589			X	
96IE19D10	X106 5-025591-592			X	

Anthony Ingrotta 7/17/96

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

S. Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

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

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2210

Level: (low/med) LOW Date Received: 06/05/96

% Moisture: not dec.----- Date Analyzed: 6/05/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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
594-20-7	2,2-Dichloropropane	1.	U
156-59-2	cis-1,2-Dichloroethene	1.	U
78-93-3	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
127-18-4	Tetrachloroethene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	UJ
142-28-9	1,3-Dichloropropane	1.	U
591-78-6	2-Hexanone	2.	U
124-48-1	Dibromochloromethane	1.	U
106-93-4	1,2-Dibromoethane	1.	U
108-90-7	Chlorobenzene	1.	U
630-20-6	1,1,1,2-Tetrachloroethane	1.	U
100-41-4	Ethylbenzene	1.	U

Are there any TICs ? (Please check a box) YES |__| NO |_X_|

FORM I VOA

1/89 Rev.

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

Si Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: SSCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

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

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2210

Level: (low/med) LOW Date Received: 06/05/96

% Moisture: not dec.----- Date Analyzed: 6/05/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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
98-82-8	Isopropylbenzene	1.	U
108-86-1	Bromobenzene	1.	U
96-18-4	1,2,3-Trichloropropane	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
103-65-1	n-Propylbenzene	1.	U
95-49-8	2-Chlorotoluene	1.	U
106-43-4	4-Chlorotoluene	1.	U
108-67-8	1,3,5-Trimethylbenzene	1.	U
98-06-6	tert-Butylbenzene	1.	U
95-63-6	1,2,4-Trimethylbenzene	1.	U
135-98-8	sec-Butylbenzene	1.	U
541-73-1	1,3-Dichlorobenzene	1.	U
106-46-7	1,4-Dichlorobenzene	1.	U
99-87-6	p-Isopropyltoluene	1.	U
95-50-1	1,2-Dichlorobenzene	1.	U
104-51-8	n-Butylbenzene	1.	U
96-12-8	1,2-Dibromo-3-chloropropane	1.	U
120-82-1	1,2,4-Trichlorobenzene	1.	U
91-20-3	Naphthalene	1.	U
87-68-3	Hexachlorobutadiene	1.	U
87-61-6	1,2,3-Trichlorobenzene	1.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

Si Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

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

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2231

Level: (low/med) LOW Date Received: 06/06/96

% Moisture: not dec.----- Date Analyzed: 6/06/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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
594-20-7	2,2-Dichloropropane	1.	U
156-59-2	cis-1,2-Dichloroethene	1.	U
78-93-3	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
127-18-4	Tetrachloroethene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	UJ
142-28-9	1,3-Dichloropropane	1.	U
591-78-6	2-Hexanone	2.	U
124-48-1	Dibromochloromethane	1.	U
106-93-4	1,2-Dibromoethane	1.	U
108-90-7	Chlorobenzene	1.	U
630-20-6	1,1,1,2-Tetrachloroethane	1.	U
100-41-4	Ethylbenzene	1.	U

Are there any TICs ? (Please check a box) YES |__| NO |_X_|

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

Si Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: SSCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

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

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2231

Level: (low/med) LOW Date Received: 06/06/96

% Moisture: not dec.----- Date Analyzed: 6/06/96

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
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
98-82-8	Isopropylbenzene	1.	U
108-86-1	Bromobenzene	1.	U
96-18-4	1,2,3-Trichloropropane	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
103-65-1	n-Propylbenzene	1.	U
95-49-8	2-Chlorotoluene	1.	U
106-43-4	4-Chlorotoluene	1.	U
108-67-8	1,3,5-Trimethylbenzene	1.	U
98-06-6	tert-Butylbenzene	1.	U
95-63-6	1,2,4-Trimethylbenzene	1.	U
135-98-8	sec-Butylbenzene	1.	U
541-73-1	1,3-Dichlorobenzene	1.	U
106-46-7	1,4-Dichlorobenzene	1.	U
99-87-6	p-Isopropyltoluene	1.	U
95-50-1	1,2-Dichlorobenzene	1.	U
104-51-8	n-Butylbenzene	1.	U
96-12-8	1,2-Dibromo-3-chloropropane	1.	U
120-82-1	1,2,4-Trichlorobenzene	1.	U
91-20-3	Naphthalene	1.	U
87-68-3	Hexachlorobutadiene	1.	U
87-61-6	1,2,3-Trichlorobenzene	1.	U

FORM I-2 VOA 1/89 Rev.

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19R01

Site Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19R01

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2221

Level (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.----- Date Analyzed: 6/05/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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	8.	
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
594-20-7	2,2-Dichloropropane	1.	U
156-59-2	cis-1,2-Dichloroethene	1.	U
78-93-3	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
127-18-4	Tetrachloroethene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	UJ
142-28-9	1,3-Dichloropropane	1.	U
591-78-6	2-Hexanone	2.	U
124-48-1	Dibromochloromethane	1.	U
106-93-4	1,2-Dibromoethane	1.	U
108-90-7	Chlorobenzene	1.	U
630-20-6	1,1,1,2-Tetrachloroethane	1.	U
100-41-4	Ethylbenzene	1.	U

Are there any TICs ? (Please check a box) YES |__| NO |_X_|

FORM I VOA

1/89 Rev.

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19R01

Si Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19R01

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2221

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.----- Date Analyzed: 6/05/96

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
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
98-82-8	Isopropylbenzene	1.	U
108-86-1	Bromobenzene	1.	U
96-18-4	1,2,3-Trichloropropane	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
103-65-1	n-Propylbenzene	1.	U
95-49-8	2-Chlorotoluene	1.	U
106-43-4	4-Chlorotoluene	1.	U
108-67-8	1,3,5-Trimethylbenzene	1.	U
98-06-6	tert-Butylbenzene	1.	U
95-63-6	1,2,4-Trimethylbenzene	1.	U
135-98-8	sec-Butylbenzene	1.	U
541-73-1	1,3-Dichlorobenzene	1.	U
106-46-7	1,4-Dichlorobenzene	1.	U
99-87-6	p-Isopropyltoluene	1.	U
95-50-1	1,2-Dichlorobenzene	1.	U
104-51-8	n-Butylbenzene	1.	U
96-12-8	1,2-Dibromo-3-chloropropane	1.	U
120-82-1	1,2,4-Trichlorobenzene	1.	U
91-20-3	Naphthalene	1.	U
87-68-3	Hexachlorobutadiene	1.	U
87-61-6	1,2,3-Trichlorobenzene	1.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19R02

Si Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19R02

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2222

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.----- Date Analyzed: 6/05/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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	.6	J
156-60-5	trans-1,2-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
594-20-7	2,2-Dichloropropane	1.	U
156-59-2	cis-1,2-Dichloroethene	1.	U
78-93-3	2-Butanone	3.	U
74-97-5	Bromochloromethane	1.	U
67-66-3	Chloroform	.6	J
71-55-6	1,1,1-trichloroethane	1.	U
56-23-5	Carbon tetrachloride	1.	U
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
127-18-4	Tetrachloroethene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	UJ
142-28-9	1,3-Dichloropropane	1.	U
591-78-6	2-Hexanone	2.	U
124-48-1	Dibromochloromethane	1.	U
106-93-4	1,2-Dibromoethane	1.	U
108-90-7	Chlorobenzene	1.	U
630-20-6	1,1,1,2-Tetrachloroethane	1.	U
100-41-4	Ethylbenzene	1.	U

Are there any TICs ? (Please check a box) YES |__| NO |_X_|

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19R02

Si Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19R02

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2222

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.----- Date Analyzed: 6/05/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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
98-82-8	Isopropylbenzene	1.	U
108-86-1	Bromobenzene	1.	U
96-18-4	1,2,3-Trichloropropane	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
103-65-1	n-Propylbenzene	1.	U
95-49-8	2-Chlorotoluene	1.	U
106-43-4	4-Chlorotoluene	1.	U
108-67-8	1,3,5-Trimethylbenzene	1.	U
98-06-6	tert-Butylbenzene	1.	U
95-63-6	1,2,4-Trimethylbenzene	1.	U
135-98-8	sec-Butylbenzene	1.	U
541-73-1	1,3-Dichlorobenzene	1.	U
106-46-7	1,4-Dichlorobenzene	1.	U
99-87-6	p-Isopropyltoluene	1.	U
95-50-1	1,2-Dichlorobenzene	1.	U
104-51-8	n-Butylbenzene	1.	U
96-12-8	1,2-Dibromo-3-chloropropane	1.	U
120-82-1	1,2,4-Trichlorobenzene	1.	U
91-20-3	Naphthalene	1.	U
87-68-3	Hexachlorobutadiene	1.	U
87-61-6	1,2,3-Trichlorobenzene	1.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19R03

Si Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19R03

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2223

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.----- Date Analyzed: 6/05/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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
594-20-7	2,2-Dichloropropane	1.	U
156-59-2	cis-1,2-Dichloroethene	1.	U
78-93-3	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
127-18-4	Tetrachloroethene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	UJ
142-28-9	1,3-Dichloropropane	1.	U
591-78-6	2-Hexanone	2.	U
124-48-1	Dibromochloromethane	1.	U
106-93-4	1,2-Dibromoethane	1.	U
108-90-7	Chlorobenzene	1.	U
630-20-6	1,1,1,2-Tetrachloroethane	1.	U
100-41-4	Ethylbenzene	1.	U

Are there any TICs ? (Please check a box) YES |__| NO |_X_|

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19R03

Si Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19R03

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2223

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.----- Date Analyzed: 6/05/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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
98-82-8	Isopropylbenzene	1.	U
108-86-1	Bromobenzene	1.	U
96-18-4	1,2,3-Trichloropropane	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
103-65-1	n-Propylbenzene	1.	U
95-49-8	2-Chlorotoluene	1.	U
106-43-4	4-Chlorotoluene	1.	U
108-67-8	1,3,5-Trimethylbenzene	1.	U
98-06-6	tert-Butylbenzene	1.	U
95-63-6	1,2,4-Trimethylbenzene	1.	U
135-98-8	sec-Butylbenzene	1.	U
541-73-1	1,3-Dichlorobenzene	1.	U
106-46-7	1,4-Dichlorobenzene	1.	U
99-87-6	p-Isopropyltoluene	1.	U
95-50-1	1,2-Dichlorobenzene	1.	U
104-51-8	n-Butylbenzene	1.	U
96-12-8	1,2-Dibromo-3-chloropropane	1.	U
120-82-1	1,2,4-Trichlorobenzene	1.	U
91-20-3	Naphthalene	1.	U
87-68-3	Hexachlorobutadiene	1.	U
87-61-6	1,2,3-Trichlorobenzene	1.	U

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Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S01

Site Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S01

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2224

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.----- Date Analyzed: 6/05/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	1.	U
75-01-4	Vinyl chloride	1.	U
74-83-9	Bromomethane	1.	U
75-00-3	Chloroethane	4.	
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
594-20-7	2,2-Dichloropropane	1.	U
156-59-2	cis-1,2-Dichloroethene	1.	U
78-93-3	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
127-18-4	Tetrachloroethene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	UJ
142-28-9	1,3-Dichloropropane	1.	U
591-78-6	2-Hexanone	2.	U
124-48-1	Dibromochloromethane	1.	U
106-93-4	1,2-Dibromoethane	1.	U
108-90-7	Chlorobenzene	1.	U
630-20-6	1,1,1,2-Tetrachloroethane	1.	U
100-41-4	Ethylbenzene	1.	U

Are there any TICs ? (Please check a box) YES |__| NO |_X_|

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S01

Si Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S01

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2224

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.----- Date Analyzed: 6/05/96

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
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
98-82-8	Isopropylbenzene	1.	U
108-86-1	Bromobenzene	1.	U
96-18-4	1,2,3-Trichloropropane	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
103-65-1	n-Propylbenzene	1.	U
95-49-8	2-Chlorotoluene	1.	U
106-43-4	4-Chlorotoluene	1.	U
108-67-8	1,3,5-Trimethylbenzene	1.	U
98-06-6	tert-Butylbenzene	1.	U
95-63-6	1,2,4-Trimethylbenzene	1.	U
135-98-8	sec-Butylbenzene	1.	U
541-73-1	1,3-Dichlorobenzene	1.	U
106-46-7	1,4-Dichlorobenzene	1.	U
99-87-6	p-Isopropyltoluene	1.	U
95-50-1	1,2-Dichlorobenzene	1.	U
104-51-8	n-Butylbenzene	1.	U
96-12-8	1,2-Dibromo-3-chloropropane	1.	U
120-82-1	1,2,4-Trichlorobenzene	1.	U
91-20-3	Naphthalene	1.	U
87-68-3	Hexachlorobutadiene	1.	U
87-61-6	1,2,3-Trichlorobenzene	1.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S02

SI Name: PHILLIPS THOMAS LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S02

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2234

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.---- Date Analyzed: 6/06/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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	2.	
75-09-2	Methylene chloride	1.	U
156-60-5	trans-1,2-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
594-20-7	2,2-Dichloropropane	1.	U
156-59-2	cis-1,2-Dichloroethene	1.	U
78-93-3	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
127-18-4	Tetrachloroethene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	UJ
142-28-9	1,3-Dichloropropane	1.	U
591-78-6	2-Hexanone	2.	U
124-48-1	Dibromochloromethane	1.	U
106-93-4	1,2-Dibromoethane	1.	U
108-90-7	Chlorobenzene	1.	U
630-20-6	1,1,1,2-Tetrachloroethane	1.	U
100-41-4	Ethylbenzene	1.	U

Are there any TICs ? (Please check a box) YES |__| NO |_X_|

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE19S02

Si Name: PHILLIPS THOMAS LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S02

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2234

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.---- Date Analyzed: 6/06/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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
98-82-8	Isopropylbenzene	1.	U
108-86-1	Bromobenzene	1.	U
96-18-4	1,2,3-Trichloropropane	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
103-65-1	n-Propylbenzene	1.	U
95-49-8	2-Chlorotoluene	1.	U
106-43-4	4-Chlorotoluene	1.	U
108-67-8	1,3,5-Trimethylbenzene	1.	U
98-06-6	tert-Butylbenzene	1.	U
95-63-6	1,2,4-Trimethylbenzene	1.	U
135-98-8	sec-Butylbenzene	1.	U
541-73-1	1,3-Dichlorobenzene	1.	U
106-46-7	1,4-Dichlorobenzene	1.	U
99-87-6	p-Isopropyltoluene	1.	U
95-50-1	1,2-Dichlorobenzene	1.	U
104-51-8	n-Butylbenzene	1.	U
96-12-8	1,2-Dibromo-3-chloropropane	1.	U
120-82-1	1,2,4-Trichlorobenzene	1.	U
91-20-3	Naphthalene	1.	U
87-68-3	Hexachlorobutadiene	1.	U
87-61-6	1,2,3-Trichlorobenzene	1.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SUMMARY
96IE19D02

Site Name: PHILLIPS THOMAS LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19D02

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2236

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.---- Date Analyzed: 6/06/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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	3.	D
75-09-2	Methylene chloride	1.	U
156-60-5	trans-1,2-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
594-20-7	2,2-Dichloropropane	1.	U
156-59-2	cis-1,2-Dichloroethene	1.	U
78-93-3	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
563-58-6	1,1-Dichloropropene	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
74-95-3	Dibromomethane	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	2.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
127-18-4	Tetrachloroethene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	UJ
142-28-9	1,3-Dichloropropane	1.	U
591-78-6	2-Hexanone	2.	U
124-48-1	Dibromochloromethane	1.	U
106-93-4	1,2-Dibromoethane	1.	U
108-90-7	Chlorobenzene	1.	U
630-20-6	1,1,1,2-Tetrachloroethane	1.	U
100-41-4	Ethylbenzene	1.	U

Are there any TICs ? (Please check a box) YES |__| NO |_X_|

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SUMMARY
96IE19D02

Si Name: PHILLIPS THOMAS LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19D02

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2236

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.---- Date Analyzed: 6/06/96

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
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
98-82-8	Isopropylbenzene	1.	U
108-86-1	Bromobenzene	1.	U
96-18-4	1,2,3-Trichloropropane	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
103-65-1	n-Propylbenzene	1.	U
95-49-8	2-Chlorotoluene	1.	U
106-43-4	4-Chlorotoluene	1.	U
108-67-8	1,3,5-Trimethylbenzene	1.	U
98-06-6	tert-Butylbenzene	1.	U
95-63-6	1,2,4-Trimethylbenzene	1.	U
135-98-8	sec-Butylbenzene	1.	U
541-73-1	1,3-Dichlorobenzene	1.	U
106-46-7	1,4-Dichlorobenzene	1.	U
99-87-6	p-Isopropyltoluene	1.	U
95-50-1	1,2-Dichlorobenzene	1.	U
104-51-8	n-Butylbenzene	1.	U
96-12-8	1,2-Dibromo-3-chloropropane	1.	U
120-82-1	1,2,4-Trichlorobenzene	1.	U
91-20-3	Naphthalene	1.	U
87-68-3	Hexachlorobutadiene	1.	U
87-61-6	1,2,3-Trichlorobenzene	1.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SUMMARY
96IE19S03

Si Name: PHILLIPS THOMAS LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S03

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2245

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.---- Date Analyzed: 6/06/96

Column: (pack/cap) CAP Dilution Factor: 25

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	25.	U D
75-01-4	Vinyl chloride	25.	U D
74-83-9	Bromomethane	25.	U D
75-00-3	Chloroethane	37.	D
75-35-4	1,1-Dichloroethene	25.	U D
67-64-1	Acetone	460.	D
75-15-0	Carbon disulfide	25.	U D
75-09-2	Methylene chloride	25.	U D
156-60-5	trans-1,2-Dichloroethene	25.	U D
75-34-3	1,1-Dichloroethane	25.	U D
594-20-7	2,2-Dichloropropane	25.	U D
156-59-2	cis-1,2-Dichloroethene	25.	U D
78-93-3	2-Butanone	550.	D
74-97-5	Bromochloromethane	25.	U D
67-66-3	Chloroform	25.	U D
71-55-6	1,1,1-trichloroethane	25.	U D
56-23-5	Carbon tetrachloride	25.	U D
563-58-6	1,1-Dichloropropene	25.	U D
71-43-2	Benzene	51.	D
107-06-2	1,2-Dichloroethane	25.	U D
79-01-6	Trichloroethene	25.	U D
78-87-5	1,2-Dichloropropane	25.	U D
74-95-3	Dibromomethane	25.	U D
75-27-4	Bromodichloromethane	25.	U D
10061-01-5	cis-1,3-dichloropropene	25.	U D
108-88-3	Toluene	500.	D
108-10-1	4-Methyl-2-pentanone	280.	D
10061-02-6	trans-1,3-Dichloropropene	25.	U D
127-18-4	Tetrachloroethene	25.	U D
79-00-5	1,1,2-Trichloroethane	25.	UJD
142-28-9	1,3-Dichloropropane	25.	U D
591-78-6	2-Hexanone	50.	U D
124-48-1	Dibromochloromethane	25.	U D
106-93-4	1,2-Dibromoethane	25.	U D
108-90-7	Chlorobenzene	25.	U D
630-20-6	1,1,1,2-Tetrachloroethane	25.	U D
100-41-4	Ethylbenzene	4300.	D

Are there any TICs ? (Please check a box) YES |_X| NO |___|

FORM I VOA

1/89 Rev.

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SUMMARY
96IE19S03

Si Name: PHILLIPS THOMAS LANDFILL Contract: CRL

Lab Code: SL-10C Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S03

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2245

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.---- Date Analyzed: 6/06/96

Column: (pack/cap) CAP Dilution Factor: 25

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
1083836423	m &/or p-Xylene	17000.	D
95-47-6	o-Xylene	1600.	D
100-42-5	Styrene	25.	U D
75-25-2	Bromoform	25.	U D
98-82-8	Isopropylbenzene	92.	D
108-86-1	Bromobenzene	25.	U D
96-18-4	1,2,3-Trichloropropane	25.	U D
79-34-5	1,1,2,2-Tetrachloroethane	25.	U D
103-65-1	n-Propylbenzene	220.	D
95-49-8	2-Chlorotoluene	25.	U D
106-43-4	4-Chlorotoluene	25.	U D
108-67-8	1,3,5-Trimethylbenzene	450.	D
98-06-6	tert-Butylbenzene	25.	U D
95-63-6	1,2,4-Trimethylbenzene	1900.	D
135-98-8	sec-Butylbenzene	17.	J D
541-73-1	1,3-Dichlorobenzene	25.	U D
106-46-7	1,4-Dichlorobenzene	25.	U D
99-87-6	p-Isopropyltoluene	34.	D
95-50-1	1,2-Dichlorobenzene	25.	U D
104-51-8	n-Butylbenzene	25.	U D
96-12-8	1,2-Dibromo-3-chloropropane	25.	U D
120-82-1	1,2,4-Trichlorobenzene	25.	U D
91-20-3	Naphthalene	490.	D
87-68-3	Hexachlorobutadiene	25.	U D
87-61-6	1,2,3-Trichlorobenzene	25.	U D

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S03D2

Lab Name: PHILLIPS THOMAS LANDFILL Contract: ESAT

Lab Code: 5SCRL Case No.: 960098 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S03D2

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2245

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.----- Date Analyzed: 6/06/96

Column: CAP Dilution Factor: 25

Number TICs found: 9

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		Ethylmethylbenzene	18.09	2400.	JD
2		Ethylmethylbenzene	18.63	400.	JD
3		Ethylmethylbenzene	19.69	1400.	JD
4		Unknown aromatic (M=118)	20.09	1400.	JD
5		C4-benzene	20.66	220.	JD
6		C4-benzene	20.84	360.	JD
7		C4-benzene	21.58	280.	JD
8		C4-benzene	21.68	360.	JD
9		C4-benzene	22.53	360.	JD
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2A
WATER VOLATILE SURROGATE RECOVERY

I Name: CRL REGION V Contract:

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

	EPA SAMPLE NO.	S1 (BEN)#	S2 (BFB)#	S3 (TOL)#	S4 ( )#	TOT OUT
01	LAB BLANK	99	95	100		0
02	96IE19R01	101	92	102		0
03	96IE19R02	100	95	101		0
04	96IE19R03	99	91	100		0
05	96IE19S01	99	89	101		0
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		QC LIMITS
S1 (BEN)	= BENZENE-D6	(70-130)
S2 (BFB)	= p-BROMOFLUOROBENZENE	(70-130)
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

2A
WATER VOLATILE SURROGATE RECOVERY

Name: CRL REGION V Contract:

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

	EPA SAMPLE NO.	S1 (BEN)#	S2 (BFB)#	S3 (TOL)#	S4 ( )#	TOT OUT
01	LAB BLANK	100	90	101		0
02	96IE19S03D1	98	86	100		0
03	96IE19S02	100	90	99		0
04	96IE19D02	101	90	99		0
05	96IE19S03M	104	89	99		0
06	96IE19S03S	103	90	100		0
07	96IE19S01M	100	88	97		0
08	96IE19S01S	103	87	96		0
09	96IE19D02D1	103	84	97		0
10	96IE19S03D2	105	107	101		0
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		QC LIMITS
S1 (BEN)	= BENZENE-D6	(70-130)
S2 (BFB)	= p-BROMOFLUOROBENZENE	(70-130)
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

FORM II VOA-1

1/87 Rev

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CRL REGION V Contract:

Lab Code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: 96IE19S03D1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	5	0	6	112	70-130
Methylene chloride	5	0	7	139	60-140
trans-1,2-Dichloroethen	5	0	6	121	60-140
1,1-Dichloroethane	5	0	7	132	60-140
2,2-Dichloropropane	5	0	5	108	60-140
cis-1,2-Dichloroethene	5	0	5	107	60-140
Bromochloromethane	5	0	5	90	60-140
Chloroform	5	0	5	109	60-140
1,1,1-Trichloroethane	5	0	5	110	60-140
Carbon tetrachloride	5	0	5	108	60-140
1,1-Dichloropropene	5	0	5	109	60-140

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	5	5	109	2	25	70-130
Methylene chloride	5	6	120	14	25	60-140
trans-1,2-Dichloroethen	5	6	120	1	25	60-140
1,1-Dichloroethane	5	6	114	14	25	60-140
2,2-Dichloropropane	5	5	94	14	25	60-140
cis-1,2-Dichloroethene	5	5	99	8	25	60-140
Bromochloromethane	5	5	94	4	25	60-140
Chloroform	5	5	103	6	25	60-140
1,1,1-Trichloroethane	5	5	102	7	25	60-140
Carbon tetrachloride	5	5	102	5	25	60-140
1,1-Dichloropropene	5	5	103	6	25	60-140

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

* Values outside of QC limits

RPD: 1 out of 53 outside limits

Spike Recovery: 1 out of 106 outside limits

COMMENTS: Sample: >B2233; MS: >B2238; MSD: >B2239. Sample, MS and MSD were analyzed at 1000X dilutions (25 uL/25 mL).

3A-2
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CRL REGION V Contract:

Lab Code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: 96IE19S03D1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Benzene	5	0	5	103	70-130
1,2-Dichloroethane	5	0	6	116	60-140
Trichloroethene	5	0	5	104	70-130
1,2-Dichloropropane	5	0	5	105	60-140
Dibromomethane	5	0	5	91	60-140
Bromodichloromethane	5	0	6	115	60-140
cis-1,3-Dichloropropene	5	0	6	113	60-140
Toluene	5	0.5	6	105	70-130
trans-1,3-Dichloroprope	5	0	6	114	60-140
Tetrachloroethene	5	0	5	91	60-140
1,1,2-Trichloroethane	5	0	4	78	60-140

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	5	5	99	4	25	70-130
1,2-Dichloroethane	5	6	114	1	25	60-140
Trichloroethene	5	5	98	6	25	70-130
1,2-Dichloropropane	5	5	105	0	25	60-140
Dibromomethane	5	5	90	1	25	60-140
Bromodichloromethane	5	5	109	6	25	60-140
cis-1,3-Dichloropropene	5	6	110	3	25	60-140
Toluene	5	5	99	6	25	70-130
trans-1,3-Dichloroprope	5	6	116	2	25	60-140
Tetrachloroethene	5	4	86	6	25	60-140
1,1,2-Trichloroethane	5	1	22 *	111 *	25	60-140

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

* Values outside of QC limits

RPD: 1 out of 53 outside limits

Spike Recovery: 1 out of 106 outside limits

COMMENTS: _____

3A-3
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CRL REGION V Contract:

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: 96IE19S03D1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,3-Dichloropropane	5	0	5	106	60-140
Dibromochloromethane	5	0	5	108	60-140
1,2-Dibromoethane	5	0	5	100	60-140
Chlorobenzene	5	0	5	105	70-130
1,1,1,2-Tetrachloroetha	5	0	5	110	60-140
Ethylbenzene	5	4	10	107	60-140
m &/or p-Xylene	10	17	28	107	60-140
o-Xylene	5	2	7	103	60-140
Styrene	5	0	6	112	60-140
Bromoform	5	0	5	102	60-140
Isopropylbenzene	5	0	5	108	60-140

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,3-Dichloropropane	5	5	104	2	25	60-140
Dibromochloromethane	5	5	99	9	25	60-140
1,2-Dibromoethane	5	5	102	2	25	60-140
Chlorobenzene	5	5	100	5	25	70-130
1,1,1,2-Tetrachloroetha	5	5	99	10	25	60-140
Ethylbenzene	5	9	98	8	25	60-140
m &/or p-Xylene	10	27	96	11	25	60-140
o-Xylene	5	7	100	3	25	60-140
Styrene	5	5	108	4	25	60-140
Bromoform	5	5	96	7	25	60-140
Isopropylbenzene	5	5	105	3	25	60-140

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

* Values outside of QC limits

RPD: 1 out of 53 outside limits

Spike Recovery: 1 out of 106 outside limits

COMMENTS: _____.
_____.

3A-4

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

L Name: CRL REGION V Contract:

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: 96IE19S03D1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Bromobenzene	5	0	5	102	60-140
1,2,3-Trichloropropane	5	0	6	111	60-140
1,1,2,2-Tetrachloroetha	5	0	6	116	60-140
n-Propylbenzene	5	0	5	106	60-140
2-Chlorotoluene	5	0	5	101	60-140
4-Chlorotoluene	5	0	5	103	60-140
1,3,5-Trimethylbenzene	5	0	6	117	60-140
tert-Butylbenzene	5	0	5	101	60-140
1,2,4-Trimethylbenzene	5	2	7	104	60-140
sec-Butylbenzene	5	0	6	111	60-140
1,3-Dichlorobenzene	5	0	5	98	60-140

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Bromobenzene	5	4	89	14	25	60-140
1,2,3-Trichloropropane	5	6	114	3	25	60-140
1,1,2,2-Tetrachloroetha	5	6	112	3	25	60-140
n-Propylbenzene	5	5	98	8	25	60-140
2-Chlorotoluene	5	5	95	6	25	60-140
4-Chlorotoluene	5	5	97	6	25	60-140
1,3,5-Trimethylbenzene	5	5	109	8	25	60-140
tert-Butylbenzene	5	5	97	4	25	60-140
1,2,4-Trimethylbenzene	5	7	97	6	25	60-140
sec-Butylbenzene	5	5	104	6	25	60-140
1,3-Dichlorobenzene	5	5	95	3	25	60-140

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

* Values outside of QC limits

RPD: 1 out of 53 outside limits

Spike Recovery: 1 out of 106 outside limits

COMMENTS: _____

3A-5
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CRL REGION V Contract:

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: 96IE19S03D1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,4-Dichlorobenzene	5	0	5	98	60-140
p-Isopropyltoluene	5	0	5	105	60-140
1,2-Dichlorobenzene	5	0	5	103	60-140
n-Butylbenzene	5	0	6	119	60-140
1,2-Dibromo-3-chloropro	5	0	6	115	60-140
1,2,4-Trichlorobenzene	5	0	5	105	60-140
Naphthalene	5	0	6	129	60-140
Hexachlorobutadiene	5	0	5	90	60-140
1,2,3-Trichlorobenzene	5	0	5	104	60-140

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	5	5	93	5	25	60-140
p-Isopropyltoluene	5	5	98	7	25	60-140
1,2-Dichlorobenzene	5	5	96	7	25	60-140
n-Butylbenzene	5	5	101	16	25	60-140
1,2-Dibromo-3-chloropro	5	5	96	18	25	60-140
1,2,4-Trichlorobenzene	5	4	87	18	25	60-140
Naphthalene	5	6	121	7	25	60-140
Hexachlorobutadiene	5	4	76	17	25	60-140
1,2,3-Trichlorobenzene	5	5	90	14	25	60-140

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

* Values outside of QC limits

RPD: 1 out of 53 outside limits

Spike Recovery: 1 out of 106 outside limits

COMMENTS: _____.
_____.

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CRL REGION V Contract:

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: 96IE19S03D1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	5	0	6	112	70-130
Trichloroethene	5	0	5	104	70-130
Benzene	5	0	5	103	70-130
Toluene	5	0.5	6	105	70-130
Chlorobenzene	5	0	5	105	70-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	5	5	109	2	25	70-130
Trichloroethene	5	5	98	6	25	70-130
Benzene	5	5	99	4	25	70-130
Toluene	5	5	99	6	25	70-130
Chlorobenzene	5	5	100	5	25	70-130

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: Sample: >B2233; MS: >B2238; MSD: >B2239. Sample, MS and MSD were analyzed at 1000X dilutions (25 uL/ 25 mL).

4A
VOLATILE METHOD BLANK SUMMARY

I Name: CRL REGION V Contract:

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Lab File ID: >B2210 Lab Sample ID: LAB BLANK

Date Analyzed: 06/05/96 Time Analyzed: 11:27

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

Instrument ID: GCMS#7

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	96IE19R01	96IE19R01	>B2221	18:37
02	96IE19R02	96IE19R02	>B2222	19:14
03	96IE19R03	96IE19R03	>B2223	19:52
04	96IE19S01	96IE19S01	>B2224	20:29
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COMMENTS: _____

FORM IV VOA 1/87 Rev.

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: CRL REGION V Contract:

Lab code: 5SCRL Case No.: 960098 SAS No.: SDG No.:

Lab File ID: >B2231 Lab Sample ID: LAB BLANK

Date Analyzed: 06/06/96 Time Analyzed: 11:20

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

Instrument ID: GCMS#7

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	96IE19S03D1	96IE19S03D1	>B2233	12:37
2	96IE19S02	96IE19S02	>B2234	13:15
3	96IE19D02	96ZC10D02	>B2236	14:36
4	96IE19S03M	96IE19S03MS	>B2238	15:52
5	96IE19S03S	96IE19S03MSD	>B2239	16:30
6	96IE19S01M	96IE19S01MS	>B2240	17:08
07	96IE19S01S	96IE19S01MSD	>B2241	17:46
08	96IE19D02D1	96IE19D02D1	>B2242	18:25
09	96IE19S03D2	96IE19S03D2	>B2245	20:18
10				
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COMMENTS: _____.
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FORM IV VOA 1/87 Rev.

Comments by Laboratory Director or Quality Control Coordinator

Review Record for **Phillips Thom Landfill** **960098** **ABN (Organics)**

Peter Pasuchuk 07/18/96

Peer Reviewer Date (X) Reviewed ( ) Unreviewed

Obi Pang 7/19/96

Team Leader Date (✓) Reviewed ( ) Unreviewed

Chuck Elly 7/22/96

QC Coordinator (**VACANT**) Date ( ) Reviewed (✓) Unreviewed

Sylvia Griffin JUL 2 2 1996

Data Management Coordinator and Date Received

Date Transmitted JUL 2 2 1996

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:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED
JUL 24 1996
IEPA/DLPC

Date: JUL 22 1996

Subject: Review of Region 5 Data for **PHILLIPS THOM LANDFILL**

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

To: IEPA

Attached are the results for **Phillips Thom Landfill**
CRL request number: **960098**
Analyzed for: **ABN (Organics)**
Results are reported for sample designations: **96IE19S01 to -S03, -D02, and -R02 (Five water samples)**
(Data package **2** of **2**)
Results Status:
(X) Acceptable for Use except the compound results qualified **J** and **UJ**. Please see attached case narrative.

(X) Data Qualified but acceptable for Use for the compounds qualified **J** and **UJ**. 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 attached case narrative.

ILD 980 902 134

960098

TFA301

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUPERFUND SAMPLE DATE 5/29-30/96 LAB ARRIVAL DATE 5/31/96 DUE DATE 6/21/96

DU NUMBER TFA DATA SET NUMBER 960098 STUDY PHILLIPS THOM LANDFILL PRIORITY N CONTRACTOR IEPA

CHL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX 17684	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
96IE19S01	G201 5-025631		X		
96IE19S02	G202 5-025635		X		
96IE19D02	G203 DUPLICATE 5-025639		X		
96IE19S03	G204 MS/MSD 5-025643/5-025647/5-025651		X		
96IE19R02	G205 FIELD BLANK 5-025669		X		
96IE19S06	X101 5-025578				X
96IE19S07	X102 5-025581				X
96IE19S08	X103 5-025584				X
96IE19S09	X104 5-025587				X
96IE19S10	X105 5-025590				X
96IE19D10	X106 5-025593				X

CASE NARRATIVE

DATE: July 17, 1996
PROJECT NAME: Phillips Thom Landfill - CRL Case #: 960098
Analysis of Acid\Base\Neutral (ABN)Organic Analytes

ANALYST: Babu Paruchuri, Chemist BP

REVIEWERS: Chi M. Tang, Team Leader CMT
Organic Laboratory Section

I. CASE DESCRIPTION:

The laboratory received five water samples (96IE19S01 - S03, -D02 and -R02) on May 31 for acid and base-neutral (ABN) organic compound analysis. The samples were extracted on June 4 by one-step continuous extraction technique at a pH of <2. The samples were analyzed for ABNs on June 7 by the CRL test method # 625CLP. All site samples were extracted and analyzed within sample holding time requirements. These samples were received at the laboratory in good condition. No problems were observed. (EPA QC Criteria for sample holding time: Extraction - seven days from date of collection; Analysis - 40 days from the date of preparative extraction).

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** On the day of sample analysis, GC/MS instrument (HP-MS#2) met the EPA tuning criteria for DFTPP. (QC Criteria - CRL criteria are the same as EPA CLP criteria).

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 data generated on June 6 were acceptable for all target compounds except benzoic acid.. (QC Criteria for IC - %RSD should be ≤ 30%).

3. **Continuing Calibration Check:** The continuing calibration data generated on June 7 were acceeptable for all target compounds except 4-nitrophenol, benzo(k)fluoranthene and dibenzo(a,h)anthracene. (QC Criteria for CCC standard: %D

should be ≤ 25%). Because these compounds were not detected at the site, their MDL data were qualified **UJ** (UJ = estimated reporting limit).

4. **Internal Standard (IS) Area and Retention Time Summary:** All site samples, except 96IE19S03, met 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 + 200%] from the associated daily calibration standard; QC Criteria for RT - RT of the IS compound in samples and blanks must not vary by more than ± 30 seconds from the daily calibration standard.

The sample -S03 was diluted (1:10) and renalyzed because none of the internal standards met the CRL QC requirement for IS area response and also because some of the target compounds, 2-methylphenol, 4-methylphenol, 2,4-dimethylphenol, naphthalene, 2-methylnaphthalene and diethylphthalate, were detected at higher concentrations (that is, exceeded CRL upper calibration limit). The diluted sample also did not meet the internal standard area response QC requirement for d10-phenanthrene and d12-chrysene. However, the target compound data quality was not affected. 96IE19S03 data from the undiluted sample were qualified UJ for non-detects and J for detects while the diluted sample results for the above six compounds were qaulified D (D = results were from the diluted sample).

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** On the day of sample extraction, a method blank (Lab Blank) sample was also extracted with the site samples to check for contamination problems due to sample extraction/concentration procedures. The method blank sample data were acceptable except for the presence of bis(2-ethylhexyl)phthalate. The site sample results were qualified B (B = found in Lab Blank) when this compound was also detected in the site samples. See Forms I SV-1&2.

2. **Surrogate Spike Compound Results:** The laboratory produced acceptable surrogate spike compound recovery (accuracy) data except for the sample -S03 (undiluted). 96IE19S03 data were

already qualified as specified above (see item II.4). See Form II SV-1.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results:** The laboratory spiked 96IE19S03 with MS/MSD spike solution and produced acceptable matrix precision and accuracy (P&A) data for most of the CLP MS/MSD compounds., except for 4-chloro-3-methylphenol. The accuracy data for this compound were biased very high because of the matrix interferences. 96IE19S03 data were already qualified as specified in item II.4. See Form III SV-1.

4. **Laboratory Control Sample (LCS):** Not applicable.

5. **Performance Evaluation Sample (PES):** Not applicable.

IV. **SAMPLE RESULTS:** The laboratory met qualitative and quantitative analysis requirements for all TCLs. Exceept for -S03, no problems were observed. TICs for -S03 were reported from the diluted sample since the undiluted sample had QC problems.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LAB BLANK

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

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

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8912

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
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

NO T10.8.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LAB BLANK

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

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

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8912

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
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	3	J
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	UJ
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	UJ
191-24-2	Benzo(g,h,i)perylene	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE19R02

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19R02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8914

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
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

NO TICS.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE19R02

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19R02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8914

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
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	6	B
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	UJ
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	UJ
191-24-2	Benzo(g,h,i)perylene	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE19S01

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8915

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE19S01

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8915

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
84-66-2	Diethylphthalate	9	
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	3	BJ
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	UJ
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	UJ
191-24-2	Benzo(g,h,i)perylene	5	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S01

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S01

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >B8915

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.------ dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) Cont Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) N pH: NA Dilution Factor: 1.00000

Number TICs found: 2

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	10544500	Sulfur, mol. (S8)	19.98	13.	
2.		Unknown	23.92	6.	
3.					
4.					
5.					
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7.					
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9.					
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE19S02

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8916

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE19S02

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8916

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
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	5	BJ
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	UJ
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	UJ
191-24-2	Benzo(g,h,i)perylene	5	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S02

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

I Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S02

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >B8916

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.------ dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) Cont Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) N pH: NA Dilution Factor: 1.00000

Number TICs found: 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	105602	2H-Azepin-2-one, hexahydro-	9.35	600.	
2.		Unknown	22.32	6.	
3.		Unknown	23.91	5.	
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE19D02

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19D02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8917

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE19D02

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19D02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8917

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
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	15	J
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	UJ
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	UJ
191-24-2	Benzo(g,h,i)perylene	5	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19D02

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19D02

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >B8917

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.------ dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) Cont Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) N pH: NA Dilution Factor: 1.00000

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.77	5.	
2. 105602	2H-Azepin-2-one, hexahydro-	9.01	220.	
3.	Unknown	20.00	7.	
4.	Unknown	22.36	12.	
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE19S03

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S03

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8913

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	5	UJ
111-44-4	bis(2-Chloroethyl)ether	5	UJ
95-57-8	2-Chlorophenol	5	UJ
541-73-1	1,3-Dichlorobenzene	5	UJ
106-46-7	1,4-Dichlorobenzene	5	UJ
100-51-6	Benzyl alcohol	5	UJ
95-50-1	1,2-Dichlorobenzene	5	UJ
95-48-7	2-Methylphenol	68	D
108-60-1	bis(2-Chloroisopropyl)ether	5	UJ
106-44-5	4-Methylphenol	470	D
621-64-7	N-Nitroso-di-n-propylamine	5	UJ
67-72-1	Hexachloroethane	5	UJ
98-95-3	Nitrobenzene	5	UJ
78-59-1	Isophorone	5	UJ
88-75-5	2-Nitrophenol	5	UJ
105-67-9	2,4-Dimethylphenol	48	D
65-85-0	Benzoic acid	20	UJ
111-91-1	bis(2-Chloroethoxy)methane	5	UJ
120-83-2	2,4-Dichlorophenol	5	UJ
120-82-1	1,2,4-Trichlorobenzene	5	UJ
91-20-3	Naphthalene	410	D
106-47-8	4-Chloroaniline	5	UJ
87-68-3	Hexachlorobutadiene	5	UJ
59-50-7	4-Chloro-3-methylphenol	5	UJ
91-57-6	2-Methylnaphthalene	47	D
77-47-4	Hexachlorocyclopentadiene	5	UJ
88-06-2	2,4,6-Trichlorophenol	5	UJ
95-95-4	2,4,5-Trichlorophenol	20	UJ
91-58-7	2-Chloronaphthalene	5	UJ
88-74-4	2-Nitroaniline	20	UJ
131-11-3	Dimethylphthalate	5	UJ
208-96-8	Acenaphthylene	5	UJ
606-20-2	2,6-Dinitrotoluene	5	UJ

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE19S03

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S03

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >B8913

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec. ---- dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) Y 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	UJ
83-32-9	Acenaphthene	7	J
51-28-5	2,4-Dinitrophenol	20	UJ
100-02-7	4-Nitrophenol	20	UJ
132-64-9	Dibenzofuran	5	J
121-14-2	2,4-Dinitrotoluene	5	UJ
84-66-2	Diethylphthalate	380	D
7005-72-3	4-Chlorophenyl-phenylether	5	UJ
86-73-7	Fluorene	6	J
100-01-6	4-Nitroaniline	20	UJ
534-52-1	4,6-Dinitro-2-methylphenol	20	UJ
86-30-6	N-Nitrosodiphenylamine	5	UJ
101-55-3	4-Bromophenyl-phenylether	5	UJ
118-74-1	Hexachlorobenzene	5	UJ
87-86-5	Pentachlorophenol	20	UJ
85-01-8	Phenanthrene	9	J
120-12-7	Anthracene	5	UJ
84-74-2	Di-n-butylphthalate	5	UJ
206-44-0	Fluoranthene	5	UJ
129-00-0	Pyrene	5	UJ
85-68-7	Butylbenzylphthalate	5	UJ
91-94-1	3,3'-Dichlorobenzidine	5	UJ
86-74-8	Carbazole	5	UJ
56-55-3	Benzo(a)anthracene	5	UJ
218-01-9	Chrysene	5	UJ
117-81-7	bis(2-Ethylhexyl)phthalate	30	BJ
117-84-0	Di-n-octylphthalate	5	UJ
205-99-2	Benzo(b)fluoranthene	5	UJ
207-08-9	Benzo(k)fluoranthene	5	UJ
50-32-8	Benzo(a)pyrene	5	UJ
193-39-5	Indeno(1,2,3-cd)pyrene	5	UJ
53-70-3	Dibenzo(a,h)anthracene	5	UJ
191-24-2	Benzo(g,h,i)perylene	5	UJ

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE19S03

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

I Code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 96IE19S03

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >B8924

Level: (low/med) LOW Date Received: 05/31/96

% Moisture: not dec.------ dec. ---- Date Extracted: 06/04/96

Extraction: (Sepf/Cont/Sonc) Cont Date Analyzed: 06/07/96

GPC Cleanup: (Y/N) N pH: NA Dilution Factor: 10.00000

Number TICs found: 19 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Xylenes	2.30	1300.	
2.	103651	Benzene, propyl-	3.13	260.	
3.	611143	Benzene, 1-ethyl-2-methyl-	3.25	300.	
4.	108678	Benzene, 1,3,5-trimethyl-	3.39	200.	
5.	95636	Benzene, 1,2,4-trimethyl-	3.81	660.	
6.	106627	1-Propanol, 2-(2-hydroxyprop	4.01	300.	
7.	541355	Butanamide	4.39	220.	
8.	496117	1H-Indene, 2,3-dihydro-	4.47	220.	
9.		Unknown	4.86	190.	
10.		Unknown	6.37	630.	
11	21368683	Bicyclo[2.2.1]heptan-2-one,	6.59	300.	
12	526750	Phenol, 2,3-dimethyl-	6.67	1000.	
13		Unknown	7.59	250.	
14	16022085	Bicyclo[3.1.1]heptan-2-one,	7.73	140.	
15	768592	Benzenemethanol, 4-ethyl-	8.66	290.	
16		Unknown	8.88	440.	
17	75112797	Benzenepropanoic acid, Ag sa	10.51	140.	
18	632462	Benzoic acid, 2,6-dimethyl-	10.67	190.	
19	599699	Benzenesulfonamide, NN4-trim	14.95	130.	
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2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab code: USEPA Case No.: 960098 SAS No.: SDG No.:

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 ( )#	TOT OUT
01	LAB BLANK	70	66	99	68	80	63		0
02	96IE19S03	110	220 *	262 *	54	96	130 *		3
03	96IE19R02	72	89	97	77	86	93		0
04	96IE19S01	60	75	85	71	72	79		0
05	96IE19S02	67	91	94	45	83	89		0
06	96IE19D02	68	91	81	65	84	79		0
07	96IE19S03M	102	119 *	121	50	57	108		1
08	96IE19S03S	83	107	99	38	65	87		0
09	96IE19S03D	105	122 *	100	62	98	88		1
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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

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab code: USEPA Case No.: 960098 SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: 96IE19S03D

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	75	0	68	90 *	12- 89
2-Chlorophenol	75	0	62	83	27-123
1,4-Dichlorobenzene	75	0	57	76	36- 97
N-Nitroso-di-n-propylam	75	0	96	128 *	41-116
1,2,4-Trichlorobenzene	75	0	84	112 *	39- 98
4-Chloro-3-methylphenol	75	0	290	393#*	23- 97
Acenaphthene	75	0	87	116	46-118
4-Nitrophenol	75	0	82	109 *	10- 80
2,6-Dinitrotoluene	75	0	82	109 *	24- 96
Pentachlorophenol	75	0	90	121 *	9-103
Pyrene	75	0	81	108	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	75	54	72	22	42	12- 89
2-Chlorophenol	75	57	76	8	40	27-123
1,4-Dichlorobenzene	75	49	65	15	28	36- 97
N-Nitroso-di-n-propylam	75	88	117 *	9	38	41-116
1,2,4-Trichlorobenzene	75	64	86	26	28	39- 98
4-Chloro-3-methylphenol	75	260	352#*	11	42	23- 97
Acenaphthene	75	67	89	27	31	46-118
4-Nitrophenol	75	110	152 *	33	50	10- 80
2,6-Dinitrotoluene	75	65	87	23	38	24- 96
Pentachlorophenol	75	60	80	41	50	9-103
Pyrene	75	59	79	31	31	26-127

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

* Values outside of QC limits

RPD: 1 out of 11 outside limits

Spike Recovery: 10 out of 22 outside limits

COMMENTS: A TIC coeluted with 4-chloro-3-methylphenol. Because the undiluted and unspiked sample -S03 had other QC problems, the sample target compound data were qualified as UJ/J. Babu 7/17/96.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: PHILLIPS THOM LANDFILL IL Contract: ML-10C

Lab code: USEPA Case No.: 960098 SAS No.: SDG No.:

Lab File ID: >B8912 Lab Sample ID: LAB BLANK

Date Extracted: 06/04/96 Extraction:(Sepf/Cont/Sonc) CONT

Date Analyzed: 06/07/96 Time Analyzed: 10:16

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	96IE19S03	96IE19S03	>B8913	06/07/96
2	96IE19R02	96IE19R02	>B8914	06/07/96
3	96IE19S01	96IE19S01	>B8915	06/07/96
4	96IE19S02	96IE19S02	>B8916	06/07/96
5	96IE19D02	96IE19D02	>B8917	06/07/96
6	96IE19S03M	96IE19S03MD	>B8922	06/07/96
7	96IE19S03S	96IE19S03SD	>B8923	06/07/96
8	96IE19S03D	96IE19S03D	>B8924	06/07/96
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COMMENTS: _____.

_____.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED

JUL 24 1996

IEPA/DLPC

Date: JUL 22 1996

Subject: Review of Region 5 Data for SF 960098 PHILLIPS THOM LF

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

To: IEPA

Attached are the results for SF 960098 PHILLIPS THOM LF
CRL request number 960098
for analyses for PCB/PESTICIDES IN WATER
Results are reported for sample designations: 96IE19S01 - S03; 96IE19D02; 96IE19R02

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

( ) Sewer Disposal Criteria Met; Exceptions: none

Comments on Data Quality by Reviewer

Instrument performance audits and QC data (method blank, PCB MS/MSD, Pest MS/MSD, LCS, surrogates, and Florisil cartridge check) are generally acceptable. See attached narrative for more details. There were no target analytes detected in the samples.

Data are acceptable for use.

Comments by Laboratory Director or Quality Control Coordinator

960098

TFA301

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

DIVISION/BRANCH SUPERFUND SAMPLE DATE 5/29-30/96 LAB ARRIVAL DATE 5/31/96 DUE DATE 6/21/96

DU NUMBER TFA DATA SET NUMBER 960098 STUDY PHILLIPS TAHOM LANDFILL 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 17438
96IE19S01	G201 5-025632		X	X		
96IE19S02	G202 5-025636		X	X		
96IE19D02	G203 DUPLICATE 5-025670		X	X		
96IE19S03	G204 MS/MSD 5-025644/5-025648/5-025652		X	X		
96IE19R02	G205 FIELD BLANK 5-025670		X	X		

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: Illinois EPA
Sample requestor: Ted Prescott
Facility: Phillips Thom Landfill
Matrix: Water
Date Collected: 29-MAY-96
Date Extracted: 04-JUN-96

Sample batch ID: 960098
Account Number: TFA 301
Sample ID: 96IE19S01
Units: µg/L
Date Received: 31-MAY-96
Date Analyzed: 17-JUN-96

Method:608_P/P_DNS2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpa-BHC	.02	U
58899	Lindane	.02	U
76443	Heptachlor	.02	U
309002	Aldrin	.02	U
1024573	Heptachlor Epoxide	.02	U
959988	Endosulfan I	.02	U
60571	Dieldrin	.05	U
72208	Endrin	.05	U
3312659	Endosulfan II	.05	U
50293	p,p'-DDT	.05	U
72-43-5	Methoxychlor	.2	U
319857	Beta-BHC	.02	U
419868	Delta-BHC	.02	U
5103-74-2	Gamma-Chlordane	.02	U
5103-71-9	Alpha-Chlordane	.02	U
72559	p,p'-DDE	.05	U
72548	p,p'-DDD	.05	U
7421934	Endrin Aldehyde	.05	U
1031278	Endosulfan Sulfate	.05	U
53494-70-5	Endrin Ketone	.05	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: [signature]

Team Leader: [signature]

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: Illinois EPA
Sample requestor: Ted Prescott
Facility: Phillips Thom Landfill
Matrix: Water
Date Collected: 29-MAY-96
Date Extracted: 04-JUN-96

Sample batch ID: 960098
Account Number: TFA 301
Sample ID: 96IE19S02
Units: µg/L
Date Received: 31-MAY-96
Date Analyzed: 17-JUN-96

Method:608_P/P_DNS2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.02	U
58899	Lindane	.02	U
76443	Heptachlor	.02	U
309002	Aldrin	.02	U
1024573	Heptachlor Epoxide	.02	U
959988	Endosulfan I	.02	U
60571	Dieldrin	.05	U
72208	Endrin	.05	U
3312659	Endosulfan II	.05	U
50293	p,p'-DDT	.05	U
72-43-5	Methoxychlor	.2	U
319857	Beta-BHC	.02	U
419868	Delta-BHC	.02	U
5103-74-2	Gamma-Chlordane	.02	U
5103-71-9	Alpha-Chlordane	.02	U
72559	p,p'-DDE	.05	U
72548	p,p'-DDD	.05	U
7421934	Endrin Aldehyde	.05	U
1031278	Endosulfan Sulfate	.05	U
53494-70-5	Endrin Ketone	.05	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: [illegible]

Team Leader: [illegible]

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: Illinois EPA
Sample requestor: Ted Prescott
Facility: Phillips Thom Landfill
Matrix: Water
Date Collected: 29-MAY-96
Date Extracted: 04-JUN-96

Sample batch ID: 960098
Account Number: TFA 301
Sample ID: 96IE19D02
Units: µg/L
Date Received: 31-MAY-96
Date Analyzed: 17-JUN-96

Method:608_P/P_DNS2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpa-BHC	.02	U
58899	Lindane	.02	U
76443	Heptachlor	.02	U
309002	Aldrin	.02	U
1024573	Heptachlor Epoxide	.02	U
959988	Endosulfan I	.02	U
60571	Dieldrin	.05	U
72208	Endrin	.05	U
3312659	Endosulfan II	.05	U
50293	p,p'-DDT	.05	U
72-43-5	Methoxychlor	.2	U
319857	Beta-BHC	.02	U
419868	Delta-BHC	.02	U
5103-74-2	Gamma-Chlordane	.02	U
5103-71-9	Alpha-Chlordane	.02	U
72559	p,p'-DDE	.05	U
72548	p,p'-DDD	.05	U
7421934	Endrin Aldehyde	.05	U
1031278	Endosulfan Sulfate	.05	U
53494-70-5	Endrin Ketone	.05	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: [illegible]

Team Leader: [illegible]

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: Illinois EPA
Sample requestor: Ted Prescott
Facility: Phillips Thom Landfill
Matrix: Water
Date Collected: 29-MAY-96
Date Extracted: 04-JUN-96

Sample batch ID: 960098
Account Number: TFA 301
Sample ID: 96IE19S03
Units: µg/L
Date Received: 31-MAY-96
Date Analyzed: 17-JUN-96

Method:608_P/P_DNS2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpa-BHC	.02	U
58899	Lindane	.02	U
76443	Heptachlor	.02	U
309002	Aldrin	.02	U
1024573	Heptachlor Epoxide	.02	U
959988	Endosulfan I	.02	U
60571	Dieldrin	.05	U
72208	Endrin	.05	U
3312659	Endosulfan II	.05	U
50293	p,p'-DDT	.05	U
72-43-5	Methoxychlor	.2	U
319857	Beta-BHC	.02	U
419868	Delta-BHC	.02	U
5103-74-2	Gamma-Chlordane	.02	U
5103-71-9	Alpha-Chlordane	.02	U
72559	p,p'-DDE	.05	U
72548	p,p'-DDD	.05	U
7421934	Endrin Aldehyde	.05	U
1031278	Endosulfan Sulfate	.05	U
53494-70-5	Endrin Ketone	.05	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: [illegible]

Team Leader: [illegible]

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: Illinois EPA
Sample requestor: Ted Prescott
Facility: Phillips Thom Landfill
Matrix: Water
Date Collected: 29-MAY-96
Date Extracted: 04-JUN-96

Sample batch ID: 960098
Account Number: TFA 301
Sample ID: 96IE19R02
Units: µg/L
Date Received: 31-MAY-96
Date Analyzed: 17-JUN-96

Method:608_P/P_DNS2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpa-BHC	.02	U
58899	Lindane	.02	U
76443	Heptachlor	.02	U
309002	Aldrin	.02	U
1024573	Heptachlor Epoxide	.02	U
959988	Endosulfan I	.02	U
60571	Dieldrin	.05	U
72208	Endrin	.05	U
3312659	Endosulfan II	.05	U
50293	p,p'-DDT	.05	U
72-43-5	Methoxychlor	.2	U
319857	Beta-BHC	.02	U
419868	Delta-BHC	.02	U
5103-74-2	Gamma-Chlordane	.02	U
5103-71-9	Alpha-Chlordane	.02	U
72559	p,p'-DDE	.05	U
72548	p,p'-DDD	.05	U
7421934	Endrin Aldehyde	.05	U
1031278	Endosulfan Sulfate	.05	U
53494-70-5	Endrin Ketone	.05	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: [illegible]

Team Leader: [illegible]

CASE NARRATIVE

DATE: July 1, 1996

PROJECT NAME: Phillips Thom landfill SF # 960098
Analysis of Pesticides/PCBs

ANALYST: Amberina Khan, Chemist

REVIEWERS: Erlinda Evangelista, Team Leader
Chi Tang, Organic Section Chief CWT 7/31/96

I. CASE DESCRIPTION:

The laboratory received five water samples (96IE19S01, 96IE19S02, 96IE19D02, 96IE19S03, 96IE19R02) on 05/31/96 for pesticides/PCBs analysis. The date of collection was 5/29-30/96. The samples were extracted on 06/04/96 utilizing the One-step continuous liquid/liquid extractors as per OLC01 requirement and analyzed on 06/17/96. The samples met the holding time requirements of seven days after collection for sample extraction and forty days after extraction for analysis.

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** Initial and continuing Endrin and DDT degradation checks for both columns, bracketing the samples & standards in the analytical sequence, ranged from 3%-12% (CRL QC limits <10%).
GC/EC#2 was used for the analysis. No problems were observed.

2. **Initial Calibration Check:** Five-point calibration curves for both pesticides A & B mixes were generated at the start of the analysis. Pesticide A and Pesticide B mixes consist of 9 and 13 compounds, respectively. The acceptance limit for an acceptable calibration curve is correlation coefficient of 0.995 or higher.

Primary column (DB-608): The calibration curves were acceptable, with correlation coefficients greater than 0.995.

Confirmatory column (DB-5): The calibration curves were acceptable, with correlation coefficients greater than 0.995,

3. **Continuing Calibration Check:**

Primary column (DB-608): All the compounds comprising Pest A & Pest B standards met the continuing calibration criteria of <15 % RPD except for endrin aldehyde 29.23%), Endosulfan

Sulfate (19.08%).

Confirmatory column (DB-5): Four compounds exceeded the criteria: Aldrin (18%), Heptachlor epoxide(17.89%), G-chlor (19.36%) Alpha chlor (17.76%).

4. **Retention Time (RT) Summary:** The RT % RPDs for each individual compound in the Pest A & B mixes were acceptable on both columns, ranging from 0.0 % - 0.05 %.

III. **METHOD QUALITY CONTROL:**

1. **Method Blank Results:** Reagent water spiked with surrogates was processed with the samples. There were no target analytes detected above the method detection limit.

2. **Surrogate Spike Compound Results:** The surrogate spike compound recovery data were within the QC limits for all samples (QC limits: 50 - 150%) ranging from 66 - 141 %

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results:** MS/MSD was extracted for both Pesticides and PCB's. The recoveries were acceptable (QC limits: 50 - 150%) ranging from 80-150%.

4. **Laboratory Control Sample (LCS):** The LCS recoveries were acceptable.

5. **Performance Evaluation Sample (PES):** The PE sample (done on a monthly basis) was lost during extraction.

IV. **SAMPLE RESULTS:** There were no target analytes detected in the samples above the detection limits.