EA Laboratories

19 Loveton Circle
Sparks, MD 21152
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72-0144 1625

30 April 1996

Mr. Mike Dae
Chambers USA Waste Services Company
2236 Bolton Road, N.W.
Atlanta, GA 30318

Re: Tontitown Landfill Leachate (70110.00)

Dear Mr. Dae:

Enclosed is our report on the analysis of four water samples collected for the Chambers -Tontitown Landfill Leachate project on 28 March 1996. The invoice is included.

Please contact me if you have any questions or require further information and refer to report 960426. Unless other arrangements are made, we reserve the right to dispose of your sample sixty (60) days from the date of this letter. We will retain the raw data for seven years from this date.

Sincerely,

for RTR 4/30/96

R. Thomas Randall
Laboratory Project Manager

enclosure

LABORATORY DATA REPORT

Prepared for:

Chambers
Tontitown Landfill Leachate

Prepared by:

EA Laboratories
19 Loveton Circle
Sparks, Maryland 21152

Report 960426

April 1996

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Chambers - Tontitown Landfill
EA Laboratories Report No. 960426

1. NARRATIVE

EA Laboratories
ANALYTICAL NARRATIVE

Client: **Chambers USA**
Site: **Tontitown Landfill**
Project number: **70110.00**

EA Laboratories Report: **960426**
Laboratory Project Manager: **R. Thomas Randall**
Report Date: **30 April 1996**

This report contains the results of the analysis of four water samples collected on 28 March 1996 in support of the referenced project.

SAMPLE RECEIPT

The samples arrived by Federal Express at EA Laboratories on 29 March 1996. Upon receipt, the samples were inspected and compared with the chain-of-custody record. The samples were then logged into the laboratory computer system with assigned laboratory accession numbers and released for analysis.

Client Sample Designation	EA Lab Number
TRANS STA LEACH	9603775
SITE 3 LEACH	9603776
SITE 4 LEACH	9603777
CLASS 4 LEACH	9603778

Following this narrative section are a description of analytical methods (Table 1), a glossary of qualifiers (Table 2) and the original chain-of-custody. Analytical results and quality control information are summarized in the appended data package which has been formatted to be consistent with the deliverable requirements of this project.

QUALITY CONTROL

The following sections are ordered as the data appears in this report. They contain observations made during sample analysis, summarize the results of quality control measurements, and address the impact on data usability based upon project Data Quality Objectives. For each fractional analysis the narrative includes:

- Sample chronology: This section summarizes the sample history by fraction including the sample preparation method and date, analytical method, and analysis date. Anything unusual about the samples, digestates, or extracts is identified. Holding time compliance is evaluated in this section.

- Laboratory method performance: All quality control criteria for method performance must be met for all target analytes for data to be reported. These criteria generally apply to instrument tune, calibration, method blanks, and Laboratory Control Samples (LCS). In some instances

where method criteria fail, useable data can be obtained and are reported with client approval. The narrative will then include a thorough discussion of the impact on data quality.

- Sample performance: Quality control field samples are analyzed to determine any measurement bias due to the sample matrix based on evaluation of matrix spikes (MS), matrix spike duplicates (MSD), and laboratory duplicates (D). If acceptance criteria are not met, matrix interferences are confirmed either by reanalysis or by inspection of the LCS results to verify that laboratory method performance is in control. Data are reported with appropriate qualifiers or discussion.

TCLP VOLATILES by GC/MS - WATER (EA9603775-EA9603776)

Sample Chronology: Two samples were TCLP extracted by USEPA SW-846, Method 1311 on 3 April 1996. The resultant leachates were analyzed on 5 April 1996 for the hazardous waste characterization analyte list by USEPA SW-846, Methods 5030/8240. All specified holding times were met.

Laboratory Method Performance: All laboratory method performance criteria were met for the reported samples.

Sample Performance: All quality control criteria were met for the reported samples.

TCLP SEMIVOLATILES by GC/MS - WATER (EA9603775 - EA9603778)

Sample Chronology: The samples were TCLP extracted by SW-846 method 1311 on 3 April 1996. The resultant leachates were extracted by SW-846 method 3520 on 4 April 1996. The sample extracts and the associated quality control samples were analyzed by SW-846 method 8270 on 17 April and 18 April 1996 for the hazardous waste characterization analyte list. The samples were extracted and analyzed within method specified holding times.

The matrix spike and matrix spike duplicate associated with this extraction batch were performed on another client's sample. Data and results for the reference field sample, the matrix spike, and the matrix spike duplicate have been kept on file at the laboratory.

Field sample SITE 3 LEACH was reanalyzed at a 4X dilution in order to achieve concentrations of target analytes within the calibration range. Data and results for both the diluted and the undiluted analyses have been included in this report.

Sample SITE 4 LEACH was concentrated to a 3 ml final volume instead of the method specified

1 ml final volume due to the viscosity of the extract (this is equivalent to a 3X dilution).

Laboratory Method Performance: The batch TCLP extraction blank had the 2-fluorobiphenyl surrogate recovery below the lower method quality control limit of 43% at 33%. This low recovery was isolated to this extract; therefore, data usability should not be impacted.

The batch laboratory control sample had the recoveries for acenaphthene (53%), n-nitroso-di-n-propylamine (64%), pyrene (58%), and 1,2,4-trichlorobenzene (40%) below the lower laboratory quality control limits of 57%, 67%, 64%, and 47%, respectively. These low recoveries may indicate a negative bias for these analytes. However, since these analytes were not detected in any of the samples, and since these analytes are not target compounds, data usability should not be impacted.

All other laboratory method performance criteria were met for the reported samples.

Sample Performance: The nitrobenzene-d5 surrogate recovery in TRANS STA LEACH (25%) and the terphenyl-d14 surrogate recovery in SITE 3 LEACH DL (32%) were below the lower method quality control limits of 35% and 33%, respectively. These low recoveries may indicate a negative bias for certain base/neutral extractable analytes in these extracts.

The spike reference sample had the 2-fluorophenol surrogate recovery below the lower quality control limit of 21% at 6%. The matrix spike duplicate performed on this sample had all acid surrogate recoveries less than 10%. There was insufficient sample to perform a re-extraction. These low recoveries may indicate a negative bias for certain acid extractable analytes that may be isolated to these extracts. The matrix spike performed on this sample had all surrogate recoveries within quality control limits. Since the reference sample and these QC samples were performed on another client's sample, and since all acid surrogate recoveries in the reported samples were within quality control limits, data usability should not be impacted.

The acid extractable analytes in the matrix spike duplicate had spike recoveries near or below the lower quality control limits and all RPDs above the quality control limits. These recoveries indicate a negative bias for acid extractable analytes that is isolated to the matrix spike duplicate QC sample. The high RPDs are indicative of a precision deficit.

Internal standard areas in the following were below the lower laboratory quality control limit of -50% of the daily calibration standard: SITE 4 LEACH (1,4-dichlorobenzene-d4, chrysene-d12, perylene-d12), CLASS 4 LEACH (perylene-d12), and CLASS 4 LEACH SPK (chrysene-d12, perylene-d12). These internal standard areas were not so low as to impact the laboratory's ability to detect target analytes at the required reporting limits, and no target analytes which may have

been quantitated using these internal standard were detected in these samples; therefore, data usability should not be impacted.

All other quality control criteria were met for the reported samples.

TCLP CHLORINATED PESTICIDES by GC - WATER (EA9603775 - EA9603778)

Sample Chronology: The sample was TCLP extracted by SW-846 method 1311 on 3 April 1996. The resultant leachate was extracted by SW-846 method 3520 on 4 April 1996 and sulfur cleaned by SW-846 method 3660 on 9 April 1996. The sample extract and the associated quality control samples were analyzed by SW-846 method 8080 on 24 April 1996 for the hazardous waste characterization analyte list. The samples were extracted and analyzed within method specified holding times, however the extraction blank yielded low recoveries for the surrogate, tetrachloro-m-xylene (TCX), and the laboratory control sample yielded low recoveries for aldrin and heptachlor. As corrective action, the samples were re-extracted on 26 April 1996 and analyzed on 27 and 28 April 1996. The re-extraction was performed eight days outside of the 14 day holding time, thus both sets of data are included.

Laboratory Method Performance: In the initial extract analysis, the laboratory blank yielded unacceptable recoveries for TCX on both columns at 19 and 18% for the Rtx5 and Rtx35, respectively (lower QC limit 30%). Recoveries for the decachlorobiphenyl (DCB) surrogate were within QC limits on both columns. Analysis of the associated laboratory control sample yielded low recoveries for aldrin at 24% (limit 25%), and heptachlor at 10% (limit also 25%). The samples were requested for reextraction following these observations.

The re-extracted analyses yielded all control analyte recoveries within QC limits in the laboratory blank and control sample.

All other laboratory method performance criteria were met for the reported sample.

Sample Performance: In the initial extraction analysis, the TCX surrogate recoveries for the TCLP blank (XBLK3775) were below the lower QC limit of 30% on both columns at 13 and 14%. In addition, DCB recoveries were belwo the lower QC limits on at least one column in each of the sample extracts. The matrix spike and matrix spike duplicate recoveries for gamma-BHC (49% and 53%), heptachlor (16% and 20%), aldrin (18% and 24%), and 4,4'DDT (11% and 26%) were below the lower method quality control limits of 56, 40, 40, and 38%, respectively. These recoveries may indicate a negative bias for these analytes, however they may also be due to matrix interference. Due to the prevailing poor blank and control sample results, the samples were reextracted and reanalyzed.

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The initial extraction was performed with a 1 litre sample size, and targets lower reporting limits than necessary for hazardous waste characterization, hence in the re-extraction and reanalysis of the samples, a 200 ml sample size was used to target the regulatory.

The re-extracted data indicated no recovery problems in the laboratory QC, or the matrix spike and matrix spike duplicate samples. The relative percent difference (RPD) between the matrix spike and matrix spike duplicate recoveries for heptachlor (26%) was above the method quality control limit of 20%. This high RPD may be indicative of a precision deficit, but since the individual MS/MSD recoveries were within quality control limits, data usability should not be impacted.

All other quality control criteria were met for the reported sample.

HERBICIDES - WATER (EA9603775 - EA9603778)

Sample Chronology: Four samples were TCLP extracted on 3 April 1996 by USEPA SW-846, Method 1311. The resultant leachates were extracted on 4 April 1996 by USEPA SW-846, Method 8150 and were analyzed for the hazardous waste analyte list by the same method on 19 April 1996. All method specified holding times were met.

Laboratory Method Performance: All laboratory method performance criteria were met for the reported samples.

Sample Performance: The recovery of the surrogate dichlorophenylacetic acid (DCAA) in sample TRANS STA LEACHMSD (48%) was slightly below the lower QC limit of 50%. Also, the surrogate recovery in sample SITE 4 LEACH (26%) was below QC limits. These low recoveries may indicate a negative bias. However, because no target analytes were detected in any of the samples there should be no impact on data usability.

The relative percent differences (RPDs) between the MS and the MSD for 2,4-D (42%) and 2,4,5-TP (33%) were above the QC limit of 25%. These high RPDs may be indicative of a precision deficit. However, because all individual recoveries were within QC limits and no target analytes were detected in the samples, data usability should not be impacted.

All other quality control criteria were met for the reported samples.

METALS - WATER (EA9603775-EA9603778)

Sample Chronology: Four samples were prepared on 14-15 April 1996 and analyzed for total cadmium, chromium, copper, nickel, zinc, and lead (USEPA methods 200.7/239.2) on 18-23 April 1996.

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Laboratory Method Performance: All laboratory method performance criteria were met for the reported samples.

Sample Performance: The lead matrix spike recovery (0.0%) is outside control limits (75-125%). This low recovery may indicate a potential low bias to the sample data for lead. Also, the lead duplicate relative percent difference (78.8%) exceeds the control limit(20%). All remaining quality control criteria were met for the reported samples.

GENERAL CHEMISTRY - WATER (EA9603775-EA9603778)

Sample Chronology: Four samples were analyzed for the following USEPA methods. All holding times were met for the reported samples.

Parameter	Method#	PrepDate	AnalysisDate
Chloride	325.2	N/A	17 April 1996
pH	150.1	N/A	29 March 1996
BOD	405.1	29 March 1996	3 April 1996
COD	410.4	N/A	17 April 1996
TDS	160.1	N/A	3 April 1996
Flashpoint	1010	N/A	18 April 1996
Sulfide, total	376.1	N/A	4 April 1996
Cyanide, total	335.2	9 April 1996	9 April 1996

Since these were water samples, they were analyzed for flashpoint instead of ignitability and for total sulfide/cyanide instead of releasable sulfide/cyanide. Reactivity was determined from the total sulfide/cyanide results.

Laboratory Method Performance: All laboratory method performance criteria were met for the reported samples.

Sample Performance: All quality control criteria were met for the reported samples.

CERTIFICATION OF RESULTS

The Laboratory certifies that this report meets the project requirements for analytical data as stated in the Analytical Task Order (ATO) and the chain-of-custody. In addition, the Laboratory certifies that the data as reported meet the Data Quality Objectives for precision, accuracy, and completeness specified for this

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project or as stated in EA Laboratories Quality Assurance program for other than the conditions detailed above. Release of the data contained in this report has been authorized by the appropriate Laboratory Manager as verified by the following signature.

PAC 4/30/96 30 April 1996
Phyllis A. Christopher, Production Manager

TABLE 1. ANALYTICAL METHODS

Parameter	Method	Method Number	Matrix	Reference
SAMPLE PREPARATION				
Releasable Cyanide	Acidification, Nitrogen Purge	§7.3.3.2	W	(1)
Releasable Sulfide	Acidification, Nitrogen Purge	§7.3.4.2	W	(1)
Organics Extraction	Continuous Extraction	3520	W	(1)
Total Metals Digestion	Nitric Acid - Hydrochloric Acid	3010	W	(1)
Toxicity Characteristic Leaching Procedure (TCLP)	Liquid Extraction	1311	W	(2)
ORGANICS				
Acid Extractable Organic Compounds	Gas Chromatography/Mass Spectrometry	8270	W	(1)
Base-Neutral Extractable Organic Compounds	Gas Chromatography/Mass Spectrometry	8270	W	(1)
Biochemical Oxygen Demand	BOD (5 day, 20C)	405.1	W	(3)
Chemical Oxygen Demand	Colorimetric - Manual	410.4	W	(3)
Halogenated Hydrocarbon Pesticides	Gas Chromatography - ECD	8080	W	(1)
Phenoxy Acid Herbicides	Gas Chromatography - ECD	8150	W	(1)

TABLE 1. ANALYTICAL METHODS

Parameter	Method	Method Number	Matrix	Reference
Volatile Organic Compounds	Gas Chromatography/Mass Spectrometry	8240	W	(1)
METALS				
Arsenic	Atomic Emission - ICP	6010	W	(1)
Barium	Atomic Emission - ICP	6010	W	(1)
Cadmium	Atomic Emission - ICP	6010	W	(1)
Chromium, Total	Atomic Emission - ICP	6010	W	(1)
Lead	Atomic Emission - ICP	6010	W	(1)
Mercury	Atomic Absorption - Cold Vapor	7470	W	(1)
Selenium	Atomic Emission - ICP	6010	W	(1)
Silver	Atomic Emission - ICP	6010	W	(1)
INORGANIC NONMETALS				
Chloride	Colorimetric - Ferricyanide	325.2	W	(3)
PHYSICAL DETERMINATIONS				
Ignitability (Liquid)	Flash Point, Pensky-Martens Closed Cup Method	1010	W	(1)
Corrosivity (Liquid)	pH Measurement	9040	W	(1)

TABLE 1. ANALYTICAL METHODS

Parameter	Method	Method Number	Matrix	Reference
pH	Potentiometric	150.1	W	(3)
Reactivity (Liquid)	Reaction Over pH Range 2-12	§7.3	W	(1)
Residue. Total Nonfilterable	Gravimetric - 103-105C	160.2	W	(3)

Matrix codes:

W - Estuarine water, ground water, leachates, ocean water, surface water, and wastewater

References:

1. United States Environmental Protection Agency. August 1993. Test Methods for Evaluating Solid Waste. Physical/Chemical Methods. EPA SW-846, 3rd edition, including Final Update I. U.S. EPA, Washington, D.C.
2. United States Environmental Protection Agency. 1990. Toxicity characteristic leaching procedure. Federal Register 55(126):26986-26998.
3. United States Environmental Protection Agency. 1979. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-020. U.S. EPA, Cincinnati, Ohio.

TABLE 2. ORGANIC ANALYSIS DATA QUALIFIERS

ND or U Indicates a compound on the target compound list (TCL) was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and, if a soil sample, for percent moisture. For example, 10 U is used for phenol in water if the sample final volume is the protocol-specified final volume. If a 1-to-10 dilution of the extract was necessary, the reported limit is (10 x 10 U) or 100 U. For a soil sample, the value is also adjusted for percent moisture. For example, if the sample had 24% moisture and a 1-to-10 dilution factor, the soil sample quantitation limit for phenol (330 U) would be corrected as follows:

Reported limit = (330 U) x df / D

where: df = dilution factor = 10

D = (100 - % moisture) / 100 (At 24% moisture, D = (100-24) / 100 = 0.76)

Reported limit = (330 U) x 10 / 0.76 = 4300 U (rounded to two significant figures)

For soil samples subjected to gel permeation chromatography (GPC) cleanup procedures, the contract required quantitation limit (CRQL) is also multiplied by 2 to account for the fact that only half of the extract is recovered. Note: If GPC procedures are employed, the factor of 2 is not included in the dilution factor reported; a "Y" is entered for GPC (Y/N).

TR or J Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, 2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the CRQL but greater than zero, 3) when the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria and the result is less than the CRQL but greater than zero. Note: the "J" code is not used and the compound is not reported as being identified for pesticide/Aroclor results less than the CRQL, if the technical judgement of the pesticide residue analysis expert determines that the peaks used for compound identification resulted from instrument noise or other interferences (column bleed, solvent contamination, etc.). For example, if the sample quantitation limit is 10 ug/L but a concentration of 3 ug/L is calculated, report it as 3 J. The sample quantitation limit must be adjusted for dilution as discussed for the U flag

C This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides with concentration equal to or greater than 10 ng/uL in the final extract must be confirmed by GC/MS.

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

E This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag does not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater that full scale, the sample or extract must be diluted and reanalyzed according to the specifications listed in the SOW. All such compounds with a response greater than full scale should have a concentration flagged with an "E" on Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses are reported on separate Forms I. The Form I for the diluted sample will have the "DL" suffix appended to the sample number. NOTE: For total xylenes, where three isomers are quantified as two peaks, the calibration range of each peak is considered separately; e.g., a diluted analysis is not required for total xylenes unless the concentration of either peak separately exceeds 200 ug/L.

D This flag identifies all compounds identified in the analysis at a secondary dilution factor. If a sample or extract is reanalyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag.

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

X Other specific flags may be required to properly define the results. If used, they are fully described and such description attached to the Sample Data Summary Package and the Case Narrative. The flags begin by using "X". If more that one flag is required, "Y" and "Z" are used, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some sample.

N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

P This flag is used for GC analyses when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

2. CHAIN OF CUSTODY

Mike Dae

Chain of Custody Record

EA Laboratories
19 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771-4920
Fax: (410) 771-4407

Company Name: Chambers USA

Project Manager or Contact: Kevin Hodges

Phone:

Project No. ~~700~~ 70110.01

Dept.: Task:

Project Name: Tontitown Landfill Leachate

Sample Storage Location: B10 - B11

ATO Number: April

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Report #: 960426

Report Deliverables: 1 (2) 3 4 D (E)

EDD: Yes (No)

DUE TO CLIENT: 4/20/96

Parameters/Method Numbers for Analysis

* Date	* Time	Water	Soil	* Sample Identification 19 Characters	No. of Containers	Chloride 325.2	TDS 160.2	COD 410.4	BOD 405.1	pH 150.1	Full TCLP **	Total Metals ***						EA Labs Accession Number	Remarks
3/28/96	1410	✓		TRANSISTA LEACH	15	✓	✓	✓	✓	✓	✓	✓						9603775	LPM: RANDALL
3/28/96	1445	✓		SITE 3 LEACH	15	✓	✓	✓	✓	✓	✓	✓						① 9603776	
3/28/96	1245	✓		SITE 4 LEACH	15	✓	✓	✓	✓	✓	✓	✓						9603777	** Full TCLP
3/28/96	1325	✓		CLASS 4 LEACH	15	✓	✓	✓	✓	✓	✓	✓						9603778	TCLP VOA 1311/8240
~~#~~																			TCLP BNA 1311/8270
		~~X~~		~~Trip Blank~~	~~2~~													~~9603779~~ 3/29/96 SOD	TCLP Pest 1311/8080
				SOD 3/29/96															TCLP Herb 1311/8150
																			TCLP Metals 1311/6010/7470
																			React 7.3.3.2/7.3.4.2
																			Ignit 7.1
																			Corrosivity 9045
																			*** Total Metals
																			Zn, Cu, Ni, Pb, Cr, Cd
																			200 series
												L904							① 2 broken Amber liters
																			4 Amber liters remaining.
																			all VOAs broken upon
																			Rec'd of Cooler for Sample Site 4 Class 4

Samples by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
* [signature]	3/28/1736				
Relinquished by: (Signature)	**Date/Time**	**Received by Laboratory: (Signature)**	**Date/Time**	**Airbill Number:**	
*		D Archer 3/29/96	945		

Cooler Temp 2.1-2.3 °C pH: ☒ Yes ☐ No Comments: B,C <2 S,R I7 Custody Seals Intact ☒ Yes ☐ No

Sample Shipped by: (Circle) Fed Ex. Puro. UPS Hand Carried Other:

NOTE: Please indicate method number for analyses requested. This will help clarify any questions with laboratory techniques.

WHITE—EA Laboratories YELLOW—EA Laboratories PINK—Project Manager

3. VOLATILES DATA

A. QC Summary

LCS RECOVERY REPORT

LAB NAME: EA LABORATORIES

DATA FILE: VE5A7874

INSTRUMENT:

DATE: 04/05/96

SAMPLE ID: V3699

MATRIX: WATER

ANALYST: JJP

SPIKE COMPOUND	SPIKE ADDED	SAMPLE CONC.	%REC.
1,1-Dichloroethene	50.00	50.79	102
Benzene	50.00	49.08	98
Trichloroethene	50.00	55.52	111
Toluene	50.00	51.26	103
Chlorobenzene	50.00	50.04	100

CURRENT VOLATILE LCS LIMITS

	WATER	SOIL
1,1-Dichloroethene	75 - 123	74 - 124
Benzene	75 - 122	81 - 118
Trichloroethene	72 - 126	76 - 117
Toluene	77 - 127	75 - 127
Chlorobenzene	76 - 128	73 - 128

If LCS is outside limits, a non-conformance form is required.

The LCS has been checked and is (within)/outside current limits.

JJP 4/9/96

ANALYST DATE

N/A

Non-conformance form #

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO: VBLK01

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: VE5A7873

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE5A7873

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

% Moisture: not dec. _____ Date Analyzed: 04/05/96

GC Column: RTX502.2 ID: .53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
56-23-5	Carbon Tetrachloride	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
127-18-4	Tetrachloroethene	5	U
108-90-7	Chlorobenzene	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO: TCLPBLANK

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: LBLK3775

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE5A7876

Level: (low/med) LOW Date Received: 03/29/96

% Moisture: not dec. _____ Date Analyzed: 04/05/96

GC Column: RTX502.2 ID: .53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
56-23-5	Carbon Tetrachloride	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
127-18-4	Tetrachloroethene	5	U
108-90-7	Chlorobenzene	5	U

B. Sample Data

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

TRANSSTALEAC

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603775

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE5A7880

Level: (low/med) LOW Date Received: 03/29/96

% Moisture: not dec. _____ Date Analyzed: 04/05/96

GC Column: RTX502.2 ID: .53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	120	
56-23-5	Carbon Tetrachloride	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
127-18-4	Tetrachloroethene	5	U
108-90-7	Chlorobenzene	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO: SITE3LEACH

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603776

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VE5A7881

Level: (low/med) LOW Date Received: 03/29/96

% Moisture: not dec. _____ Date Analyzed: 04/05/96

GC Column: RTX502.2 ID: .53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	340	
56-23-5	Carbon Tetrachloride	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
127-18-4	Tetrachloroethene	5	U
108-90-7	Chlorobenzene	5	U

4. SEMIVOLATILES DATA

A. QC Summary

LCS RECOVERY REPORT

LAB NAME: EA LABORATORIES

DATA FILE: SA1A9072

INSTRUMENT:

DATE: 04/17/96

SAMPLE ID: SLCS3768

MATRIX: WATER

ANALYST: BBP

SPIKE COMPOUND	SPIKE ADDED	SAMPLE CONC.	%REC.
4-Chloro-3-methylphenol	100.00	65.42	65
2-Chlorophenol	100.00	50.77	51
4-Nitrophenol	100.00	72.82	73
Pentachlorophenol	100.00	76.13	76
Phenol	100.00	54.32	54
Acenaphthene	100.00	52.77	53 *
1,4-Dichlorobenzene	100.00	39.39	39
2,4-Dinitrotoluene	100.00	68.41	68
N-Nitroso-di-n-propylamine	100.00	63.56	64 *
Pyrene	100.00	58.29	58 *
1,2,4-Trichlorobenzene	100.00	40.47	40 *

CURRENT SEMIVOLATILE LCS LIMITS

	WATER	SOIL
4-Chloro-3-methylphenol	52 - 98	45 - 95
2-Chlorophenol	51 - 84	50 - 81
4-Nitrophenol	69 - 85	59 - 105
Pentachlorophenol	61 - 91	39 - 103
Phenol	37 - 92	49 - 81
Acenaphthene	57 - 101	64 - 85
1,4-Dichlorobenzene	29 - 73	55 - 80
2,4-Dinitrotoluene	67 - 99	66 - 105
N-Nitroso-di-n-propylamine	67 - 102	66 - 97
Pyrene	64 - 97	55 - 89
1,2,4-Trichlorobenzene	47 - 89	52 - 100

If LCS is outside limits, a non-conformance form is required.

The LCS has been checked and is within (outside) current limits.

Bhadresh Patel 4/19/96

ANALYST DATE

3-1651

Non-conformance form #

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO: SBLK3768

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: SBLK3768

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SA1A9071

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

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/17/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
106-44-5	3+4-Methylphenol	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
121-14-2	2,4-Dinitrotoluene	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO: XBLK3768

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: XBLK3768

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SA1A9093

Level: (low/med) LOW Date Received: 03/29/96

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/18/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
106-44-5	3+4-Methylphenol	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
121-14-2	2,4-Dinitrotoluene	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U

B. Sample Data

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

TRANS STA

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603775

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SA1A9096

Level: (low/med) LOW Date Received: 03/29/96

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/18/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
106-44-5	3+4-Methylphenol	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
121-14-2	2,4-Dinitrotoluene	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

SITE 3 LEACH

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603776

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SA1A9097

Level: (low/med) LOW Date Received: 03/29/96

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/18/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)ug/L	Q
110-86-1	Pyridine	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
106-44-5	3+4-Methylphenol	350	E
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
121-14-2	2,4-Dinitrotoluene	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

SITE 3 DL

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603776

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SA1A9101

Level: (low/med) LOW Date Received: 03/29/96

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/18/96

Injection Volume: 1.0 (uL) Dilution Factor: 4.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)ug/L	Q
110-86-1	Pyridine	40	U
106-46-7	1,4-Dichlorobenzene	40	U
95-48-7	2-Methylphenol	40	U
106-44-5	3+4-Methylphenol	360	D
67-72-1	Hexachloroethane	40	U
98-95-3	Nitrobenzene	40	U
87-68-3	Hexachlorobutadiene	40	U
88-06-2	2,4,6-Trichlorophenol	40	U
95-95-4	2,4,5-Trichlorophenol	200	U
121-14-2	2,4-Dinitrotoluene	40	U
118-74-1	Hexachlorobenzene	40	U
87-86-5	Pentachlorophenol	200	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

SITE 4 LEACH

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603777

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SA1A9098

Level: (low/med) LOW Date Received: 03/29/96

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/96

Concentrated Extract Volume: 3000 (uL) Date Analyzed: 04/18/96

Injection Volume: 1.0 (uL) Dilution Factor: 3.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	30	U
106-46-7	1,4-Dichlorobenzene	30	U
95-48-7	2-Methylphenol	30	U
106-44-5	3+4-Methylphenol	30	U
67-72-1	Hexachloroethane	30	U
98-95-3	Nitrobenzene	30	U
87-68-3	Hexachlorobutadiene	30	U
88-06-2	2,4,6-Trichlorophenol	30	U
95-95-4	2,4,5-Trichlorophenol	150	U
121-14-2	2,4-Dinitrotoluene	30	U
118-74-1	Hexachlorobenzene	30	U
87-86-5	Pentachlorophenol	150	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

CLASS4 LEACH

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603778

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SA1A9099

Level: (low/med) LOW Date Received: 03/29/96

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/18/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
106-44-5	3+4-Methylphenol	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
121-14-2	2,4-Dinitrotoluene	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U

5. PESTICIDES DATA

A. QC Summary

LCS RECOVERY REPORT

LAB NAME: EA LABORATORIES

DATA FILE: 438FAHSN

INSTRUMENT: SN4

DATE: 04/24/96

SAMPLE ID: PLCS3768

MATRIX: WATER

ANALYST:

SPIKE I.D.: S-6222

SPIKE COMPOUND	SPIKE ADDED	SAMPLE CONC.	%REC.
Aldrin	0.500	0.12	24*
gamma-BHC	0.500	0.46	92
Dieldrin	1.000	0.96	96
4,4'-DDT	1.000	0.86	86
Endrin	1.000	0.95	95
Heptachlor	0.500	0.05	10*

CURRENT PESTICIDE LIMITS

	WATER	SOIL
Aldrin	25 - 136	68 - 129
gamma-BHC	56 - 125	59 - 103
Dieldrin	63 - 113	67 - 111
4,4'-DDT	56 - 139	66 - 127
Endrin	69 - 125	71 - 129
Heptachlor	25 - 128	69 - 118

If LCS is outside limits, a non-conformance form is required.

The LCS has been checked and is within/outside current limits.

ANALYST 04/29/96 DATE

Non-conformance form #

LCS RECOVERY REPORT

LAB NAME: EA LABORATORIES

DATA FILE: 208FAFSL

INSTRUMENT: SL2

DATE: 04/27/96

SAMPLE ID: PLCS3775

MATRIX: WATER

ANALYST: NSB

SPIKE I.D.: S-6222

SPIKE COMPOUND	SPIKE ADDED	SAMPLE CONC.	%REC.
Aldrin	2.500	2.3	92
gamma-BHC	2.500	2.6	104
Dieldrin	5.000	5.4	108
4,4'-DDT	5.000	5.3	106
Endrin	5.000	4.9	98
Heptachlor	2.500	2.4	96

CURRENT PESTICIDE LIMITS

	WATER	SOIL
Aldrin	25 - 136	68 - 129
gamma-BHC	56 - 125	59 - 103
Dieldrin	63 - 113	67 - 111
4,4'-DDT	56 - 139	66 - 127
Endrin	69 - 125	71 - 129
Heptachlor	25 - 128	69 - 118

If LCS is outside limits, a non-conformance form is required.

The LCS has been checked and is within/outside current limits.

Norman S. Brook 042996

ANALYST DATE

Non-conformance form #

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK3768

Lab Name: EA LABS Contract: _____

Lab Code: EAENG Case No:_____ SAS No: _____ SDG No:

Lab Sample ID: PBLK3768 Lab File ID: 437FAHSN

Matrix: (soil/water) WATER Extraction:(SepF/Cont/Sonc) CONT

Sulfur Cleanup: (Y/N) Y Date Extracted: 04/04/96

Date Analyzed (1): 04/24/96 Date Analyzed (2): 04/24/96

Time Analyzed (1): 02:00 Time Analyzed (2): 02:24

Instrument ID (1): SN4 Instrument ID (2): SN4

GC Column (1): RTX-5 ID:0.53(mm) GC Column (2):RTX-35 ID:0.53 (mm)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
1	PLCS3768	PLCS3768	04/24/96	04/24/96
2	XBLK3775	XBLK3775	04/24/96	04/24/96
3	TRANS STA LE	9603775	04/24/96	04/24/96
4	SITE 3 LEACH	9603776	04/24/96	04/24/96
5	SITE 4 LEACH	9603777	04/24/96	04/24/96
6	SITE 4 LEACH	9603777MS	04/24/96	04/24/96
7	SITE 4 LEACH	9603777MSD	04/24/96	04/24/96
8	CLASS 4LEACH	9603778	04/24/96	04/24/96

COMMENTS: _____

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK3775RE

Lab Name: EA LABS Contract: _____

Lab Code: EAENG Case No:_____ SAS No: _____ SDG No:

Lab Sample ID: PBLK3775RE Lab File ID: 207FAFSL

Matrix: (soil/water) WATER Extraction:(SepF/Cont/Sonc) CONT

Sulfur Cleanup: (Y/N) Y Date Extracted: 04/26/96

Date Analyzed (1): 04/27/96 Date Analyzed (2): 04/27/96

Time Analyzed (1): 22:30 Time Analyzed (2): 22:59

Instrument ID (1): SL2 Instrument ID (2): SL2

GC Column (1): RTX-5 ID:0.53(mm) GC Column (2):RTX-35 ID:0.53 (mm)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
1	PLCS3775RE	PLCS3775RE	04/27/96	04/27/96
2	TRANS STA LEACH	9603775RE	04/27/96	04/27/96
3	SITE 3 LEACH	9603776RE	04/27/96	04/28/96
4	SITE 4 LEACH	9603777RE	04/28/96	04/28/96
5	CLASS 4 LEACH	9603778RE	04/28/96	04/28/96
6	CLASS 4 LEACHMS	9603778MSRE	04/28/96	04/28/96
7	CLASS 4 LEACHMSD	9603778MSDR	04/28/96	04/28/96
8	XBLK3775RE	XBLK4912	04/28/96	04/28/96

COMMENTS: _____

B. Sample Data

1D

EPA SAMPLE NO.

PESTICIDE COMPOUNDS ORGANICS ANALYSIS SHEET

TRANS STA LEAC

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No: SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603775

Sample wt/vol: 1000.0(g/mL) ML Lab File ID: 448FAHSN

% Moisture: decanted: (Y/N): N Date Received: 03/29/96

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/04/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/24/96

Injection Volume: 1.0 (uL) Dilution Factor: 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC	0.067	P
76-44-8	Heptachlor	0.10	P
1024-57-3	Heptachlor Epoxide	0.082	P
72-20-8	Endrin	0.10	U
57-74-9	Chlordane	1.0	U
8001-35-2	Toxaphene	5.0	U
72-43-5	Methoxychlor	0.50	U

10A

EPA SAMPLE NO.

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

TRANS STA LE

Lab Name: EA LABS Contract: _____

Lab Code: EAENG Case No: _____ SAS No: _____ SDG No:

Lab Sample ID: 9603775 Date(s) Analyzed: 04/24/96

Instrument ID (1): SN4 Instrument ID (2): SN4\

GC Column (1): RTX-5 ID:0.53(mm) GC Column (2):RTX-35 ID:0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Aldrin	1	7.70	7.64	7.74	0.33	
	2	7.81	7.80	7.90	0.070	370
Heptachlor	1	7.05	7.00	7.10	0.10	
	2	7.20	7.14	7.24	0.37	270
Hept. epoxide	1	8.49	8.37	8.51	0.15	
	2	8.90	8.88	9.02	0.082	83
gamma-BHC	1	5.87	5.82	5.92	0.067	
	2	6.45	6.40	6.50	0.12	79

PESTICIDE COMPOUNDS ORGANICS ANALYSIS SHEET

TRANS STA LE

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No: SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603775RE

Sample wt/vol: 200.0 (g/mL) ML Lab File ID: 209FAFSL

% Moisture: decanted: (Y/N): N Date Received: 03/29/96

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/26/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/27/96

Injection Volume: 1.0 (uL) Dilution Factor: 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC	0.25	U
76-44-8	Heptachlor	0.25	U
1024-57-3	Heptachlor Epoxide	0.25	U
72-20-8	Endrin	0.50	U
72-43-5	Methoxychlor	2.5	U
57-74-9	Chlordane	5.0	U
8001-35-2	Toxaphene	25	U

PESTICIDE COMPOUNDS ORGANICS ANALYSIS SHEET

SITE 3 LEACH

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No: SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603776

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: 449FAHSN

% Moisture: decanted: (Y/N): N Date Received: 03/29/96

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/04/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/24/96

Injection Volume: 1.0 (uL) Dilution Factor: 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-20-8	Endrin	0.10	U
57-74-9	Chlordane	1.0	U
8001-35-2	Toxaphene	5.0	U
72-43-5	Methoxychlor	0.50	U

PESTICIDE COMPOUNDS ORGANICS ANALYSIS SHEET

SITE 3 LEACH

Lab Name: EA LABS Contract:_____

Lab Code: EAENG Case No:_____ SAS No: _____ SDG No:

Matrix: (soil/water)WATER Lab Sample ID: 9603776RE

Sample wt/vol: 200.0(g/mL) ML Lab File ID: 210FAFSL

% Moisture: _____ decanted: (Y/N): N Date Received: 03/29/96

Extraction: (SepF/Cont/Sonc) CONT Date Extracted:04/26/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/27/96

Injection Volume: 1.0 (uL) Dilution Factor: 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC	0.25	U
76-44-8	Heptachlor	0.25	U
1024-57-3	Heptachlor Epoxide	0.25	U
72-20-8	Endrin	0.50	U
72-43-5	Methoxychlor	2.5	U
57-74-9	Chlordane	5.0	U
8001-35-2	Toxaphene	25	U

PESTICIDE COMPOUNDS ORGANICS ANALYSIS SHEET

SITE 4 LEACH

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No: SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603777

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: 450FAHSN

% Moisture: decanted: (Y/N): N Date Received: 03/29/96

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/04/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/24/96

Injection Volume: 1.0 (uL) Dilution Factor: 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC	0.075	P
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-20-8	Endrin	0.10	U
57-74-9	Chlordane	1.0	U
8001-35-2	Toxaphene	5.0	U
72-43-5	Methoxychlor	0.50	U

10A

EPA SAMPLE NO

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SITE 4 LEACH

Lab Name: EA LABS Contract: _____

Lab Code: EAENG Case No: _____ SAS No: _____ SDG No:

Lab Sample ID: 9603777 Date(s) Analyzed: 04/24/96

Instrument ID (1): SN4 Instrument ID (2): SN4\

GC Column (1): RTX-5 ID:0.53(mm) GC Column (2):RTX-35 ID:0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-BHC	1	5.36	5.32	5.42	0.093	
	2	5.78	5.73	5.83	0.40	330
gamma-BHC	1	5.89	5.82	5.92	0.22	
	2	6.49	6.40	6.50	0.075	190

PESTICIDE COMPOUNDS ORGANICS ANALYSIS SHEET

SITE 4 LEACH

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No: SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603777RE

Sample wt/vol: 200.0 (g/mL) ML Lab File ID: 211FAFSL

% Moisture: decanted: (Y/N): N Date Received: 03/29/96

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/26/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/28/96

Injection Volume: 1.0 (uL) Dilution Factor: 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC	0.25	U
76-44-8	Heptachlor	0.30	P
1024-57-3	Heptachlor Epoxide	0.25	U
72-20-8	Endrin	0.50	U
72-43-5	Methoxychlor	2.5	U
57-74-9	Chlordane	5.0	U
8001-35-2	Toxaphene	25	U

10A

EPA SAMPLE NO.

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SITE 4 LEACH

Lab Name: EA LABS Contract: _____

Lab Code: EAENG Case No: _____ SAS No: _____ SDG No:

Lab Sample ID: 9603777RE Date(s) Analyzed: 04/27/96 04/28/96

Instrument ID (1): SL2 Instrument ID (2):

GC Column (1): RTX-5 ID:0.53(mm) GC Column (2):RTX-35 ID:0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Heptachlor	1	6.82	6.76	6.86	0.30	
	2	9.07	8.99	9.09	0.86	190

PESTICIDE COMPOUNDS ORGANICS ANALYSIS SHEET

CLASS 4 LEACH

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No: SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603778

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: 453FAHSN

% Moisture: decanted: (Y/N): N Date Received: 03/29/96

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/04/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/24/96

Injection Volume: 1.0 (uL) Dilution Factor: 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-20-8	Endrin	0.10	U
57-74-9	Chlordane	1.0	U
8001-35-2	Toxaphene	5.0	U
72-43-5	Methoxychlor	0.50	U

PESTICIDE COMPOUNDS ORGANICS ANALYSIS SHEET

CLASS 4 LEAC

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No: SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9603778RE

Sample wt/vol: 200.0 (g/mL) ML Lab File ID: 212FAFSL

% Moisture: decanted: (Y/N): N Date Received: 03/29/96

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/26/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/28/96

Injection Volume: 1.0 (uL) Dilution Factor: 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC	0.25	U
76-44-8	Heptachlor	0.25	U
1024-57-3	Heptachlor Epoxide	0.25	U
72-20-8	Endrin	0.50	U
72-43-5	Methoxychlor	2.5	U
57-74-9	Chlordane	5.0	U
8001-35-2	Toxaphene	25	U

6. HERBICIDES DATA

A. QC Summary

LCS
HERBICIDES LCS RECOVERIES

Lab Name:	EA LABORATORIES	Contract:	
Lab Code:	EAENG	Date Extracted:	04/04/96
EA Sample ID:	HLCS3768	Date Analyzed:	04/19/96
Client:		Instrument ID:	SU1
Analyst:	GMG	Spike Sol. #:	S-6219

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS RECOVERY %	#	QC LIMITS REC.
2,4-D	20	14	68%		19-113
2,4,5-TP	4.0	2.9	73%		38-129

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

1

HERBICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

HBLK3768

Lab Name: EA Laboratories

Lab Code: EAENG

Matrix: (soil/water)	WATER	Lab Sample ID:	HBLK3768
Sample wt/vol:	1000 mL	Lab File ID:	
% Moisture:		Date Received:	NA
Extraction:	CONT	Date Extracted:	04/04/96
Extract Volume:	10 (ml)	Date Analyzed:	04/19/96
Injection Volume:	1.0 (ul)	Dilution Factor:	1
GPC Cleanup: (Y/N)	N	Sulfur Cleanup:	N

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	(ug/L ug/Kg)	Q
19719-28-9	2,4-D	12	U
93-72-1	2,4,5-TP	1.7	U

1

HERBICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

XBLK3775

Lab Name: EA Laboratories

Lab Code: EAENG

Matrix: (soil/water)	TCLP	Lab Sample ID:	XBLK3775
Sample wt/vol:	100 ml	Lab File ID:	
% Moisture:		Date Received:	NA
Extraction:	CONT	Date Extracted:	04/04/96
Extract Volume:	10 (ml)	Date Analyzed:	04/19/96
Injection Volume:	1.0 (ul)	Dilution Factor:	1
GPC Cleanup: (Y/N)	N	Sulfur Cleanup:	N

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

CAS NO.	COMPOUND		Q
19719-28-9	2,4-D	120	U
93-72-1	2,4,5-TP	17	U

B. Sample Data

1

HERBICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

TRANSSTALEACH

Lab Name: EA Laboratories

Lab Code: EAENG

Matrix: (soil/water)	TCLP	Lab Sample ID:	9603775
Sample wt/vol:	100 ml	Lab File ID:	
% Moisture:		Date Received:	03/29/95
Extraction:	CONT	Date Extracted:	04/04/96
Extract Volume:	10 (ml)	Date Analyzed:	04/19/96
Injection Volume:	1.0 (ul)	Dilution Factor:	1
GPC Cleanup: (Y/N)	N	Sulfur Cleanup:	N

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

CAS NO.	COMPOUND		Q
19719-28-9	2,4-D	120	U
93-72-1	2,4,5-TP	17	U

HERBICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

SITE3LEACH

Lab Name: EA Laboratories

Lab Code: EAENG

Matrix: (soil/water)	TCLP	Lab Sample ID:	9603776
Sample wt/vol:	100 ml	Lab File ID:	
% Moisture:		Date Received:	03/29/95
Extraction:	CONT	Date Extracted:	04/04/96
Extract Volume:	10 (ml)	Date Analyzed:	04/19/96
Injection Volume:	1.0 (ul)	Dilution Factor:	1
GPC Cleanup: (Y/N)	N	Sulfur Cleanup:	N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L ug/Kg) ug/L	Q
19719-28-9	2,4-D	120	U
93-72-1	2,4,5-TP	17	U

1

HERBICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

SITE4LEACH

Lab Name: EA Laboratories

Lab Code: EAENG

Matrix: (soil/water)	TCLP	Lab Sample ID:	9603777
Sample wt/vol:	100 ml	Lab File ID:	
% Moisture:		Date Received:	03/29/95
Extraction:	CONT	Date Extracted:	04/04/96
Extract Volume:	10 (ml)	Date Analyzed:	04/19/96
Injection Volume:	1.0 (ul)	Dilution Factor:	1
GPC Cleanup: (Y/N)	N	Sulfur Cleanup:	N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L ug/Kg) ug/L	Q
19719-28-9	2,4-D	120	U
93-72-1	2,4,5-TP	17	U

1

HERBICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

CLASS4LEACH

Lab Name: EA Laboratories

Lab Code: EAENG

Matrix: (soil/water)	TCLP	Lab Sample ID:	9603778
Sample wt/vol:	100 ml	Lab File ID:	
% Moisture:		Date Received:	03/29/95
Extraction:	CONT	Date Extracted:	04/04/96
Extract Volume:	10 (ml)	Date Analyzed:	04/19/96
Injection Volume:	1.0 (ul)	Dilution Factor:	1
GPC Cleanup: (Y/N)	N	Sulfur Cleanup:	N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L ug/Kg) ug/L	Q
19719-28-9	2,4-D	120	U
93-72-1	2,4,5-TP	17	U

7. METALS DATA

A. Analytical Results

METALS TCLP RESULTS, CHAMBERS REPORT #960426

EA SAMPLE ID: 9603775 **CLIENT ID:** TRANS STA LEACH

ELEMENT	CONC, UG/L
Arsenic	<100
Barium	620
Cadmium	<5.0
Chromium	60.3
Lead	<100
Mercury	<0.20
Silver	<10.0
Selenium	<100

METALS TCLP RESULTS, CHAMBERS REPORT #960426

EA SAMPLE ID: 9603776 **CLIENT ID:** SITE 3 LEACH

ELEMENT	CONC, UG/L
Arsenic	<100
Barium	1110
Cadmium	<5.0
Chromium	<10.0
Lead	<100
Mercury	<0.20
Silver	<10.0
Selenium	<100

METALS TCLP RESULTS, CHAMBERS REPORT #960426

EA SAMPLE ID: 9603777 **CLIENT ID:** SITE 4 LEACH

ELEMENT	CONC, UG/L
Arsenic	<100
Barium	926
Cadmium	<5.0
Chromium	11.1
Lead	<100
Mercury	<0.20
Silver	<10.0
Selenium	<100

METALS TCLP RESULTS, CHAMBERS REPORT #960426

EA SAMPLE ID: 9603778 **CLIENT ID:** CLASS 4 LEACH

ELEMENT	CONC, UG/L
Arsenic	<100
Barium	847
Cadmium	<5.0
Chromium	<10.0
Lead	<100
Mercury	<0.20
Silver	<10.0
Selenium	<100

METALS RESULTS FOR CHAMBERS REPORT #960426

EA SAMPLE ID: 9603775 **CLIENT ID:** TRANS STA LEACH

ELEMENT	CONC, UG/L
Cadmium	5.3
Chromium	77.7
Copper	29.9
Lead	43.5
Nickel	146
Zinc	3110

METALS RESULTS FOR CHAMBERS REPORT #960426

EA SAMPLE ID: 9603776 **CLIENT ID:** SITE 3 LEACH

ELEMENT	CONC, UG/L
Cadmium	<5.0
Chromium	21.4
Copper	30.5
Lead	34.8
Nickel	156
Zinc	708

METALS RESULTS FOR CHAMBERS REPORT #960426

EA SAMPLE ID: 9603777 **CLIENT ID:** SITE 4 LEACH

ELEMENT	CONC, UG/L
Cadmium	5.4
Chromium	27.5
Copper	<10.0
Lead	<3.0
Nickel	147
Zinc	1460

METALS RESULTS FOR CHAMBERS REPORT #960426

EA SAMPLE ID: 9603778 **CLIENT ID:** CLASS 4 LEACH

ELEMENT	CONC, UG/L
Cadmium	<5.0
Chromium	16.7
Copper	<10.0
Lead	<3.0
Nickel	<40.0
Zinc	91.2

B. Quality Control Data

EA LABORATORIES
LCS Recovery Report

Client: Chambers USA
Project: Tontitown Landfill Leachate
Date Analyzed: 16-19 April 1996

Matrix: water
Method: SW846
Units: µg/L

Liquid LCS

Parameter	True Conc.	Found conc	% rec
Arsenic	2000	1930	96.5
Barium	2000	1990	99.5
Cadmium	50.0	46.7	93.4
Chromium	200	202	101.0
Lead	500	475	95.0
Mercury	4.0	4.51	112.8
Selenium	2000	1740	87.0
Silver	1050	887	84.5

EA LABORATORIES
Method Blank Report

Client: Chambers USA
Project: Tontitown Landfill Leachate
Date Analyzed: 16-19 April 1996

Method: SW846
Matrix: water
Units: ug/L

Parameter	Detection Limit	Blank result
Arsenic	100	<100
Barium	200	<200
Cadmium	5.0	<5.0
Chromium	10.0	<10.0
Lead	100	<100
Mercury	0.2	<0.20
Selenium	100	<100
Silver	10.0	<10.0

EA LABORATORIES
LCS Recovery Report

Client: Chambers USA
Project: Tontitown Landfill Leachate
Date Analyzed: 18-23 April 1996

Matrix: water
Method: 200 Series
Units: µg/L

Liquid LCS

Parameter	True Conc.	Found conc	% rec
Cadmium	1000	846	84.6
Chromium	400	387	96.8
Copper	500	501	100.2
Lead	25.0	21.8	87.2
Nickel	1000	995	99.5
Zinc	1000	946	94.6

EA LABORATORIES
Method Blank Report

Client: Chambers USA
Project: Tontitown Landfill Leachate
Date Analyzed: 18-23 April 1996

Method: 200 Series
Matrix: water
Units: ug/L

Parameter	Detection Limit	Blank result
Cadmium	5.0	<5.0
Chromium	10.0	<10.0
Copper	10.0	<10.0
Lead	3.0	<3.0
Nickel	40.0	<40.0
Zinc	20.0	<20.0

8. GENERAL CHEMISTRY DATA

A. Analytical Results

GENERAL CHEMISTRY RESULTS FOR CHAMBERS RPT. 960426

Parameter	Units	TRANS STA LEACH	SITE 3 LEACH
BOD	mg/L	2470	468
Chemical Oxy. Demand	mg/L	1550	475
Chloride	mg/L	543	753
Corrosivity	Mg/L	4.6	7.0
Cyanide, Total	mg/L	0.022	<0.010
Flash Point	C	>60	>60
Reactive	None	No	No
Residue, Tot. Filt.	mg/L	5460	2760
Sulfide, Total	mg/L	2.0	1.6
pH	pH Units	4.6	7.0
Accession Number		3775	3776

GENERAL CHEMISTRY RESULTS FOR CHAMBERS RPT. 960426

Parameter	Units	SITE 4 LEACH	CLASS 4 LEACH
BOD	mg/L	>2510	<30.0
Chemical Oxy. Demand	mg/L	569	359
Chloride	mg/L	1050	129
Corrosivity		6.3	7.1
Cyanide, Total	mg/L	<0.010	<0.010
Flash Point	C	>60	>60
Reactive	None	No	No
Residue, Tot. Filt.	mg/L	5990	1850
Sulfide, Total	mg/L	2.0	<1.0
pH	pH Units	6.3	7.1
Accession Number		3777	3778

B. Quality Control Data

EA Laboratories
Method Blank Report

Client: Chambers USA
Project: Tontitown Landfill Leachate
Date Analyzed: April 1996

Method: EPA
Matrix: Water

Parameter	Detection Limit	Blank Result	Units
Chloride	1.0	<1.0	mg/L
Flashpoint	N/A	>60	C
BOD	1.0	<1.0	mg/L
TDS	10.0	<10.0	mg/L
COD	10.0	<10.0	mg/L
Sulfide, total	1.0	<1.0	mg/L
Cyanide, total	0.010	<0.010	mg/L

EA Laboratories
LCS Recovery Report

Client: Chambers USA
Project: Tontitown Landfill Leachate
Date Analyzed: April 1996

Method: EPA
Matrix: Water

Parameter	True Conc	Found Conc	Units	%Rec	Limits(%)
pH	6.00	6.05	pH units	+0.05	+/-0.10
Chloride	10.0	9.67	mg/L	97	95-106
Flashpoint	27	26	C	96	None
BOD	200	208	mg/L	104	68-120
TDS	667	621	mg/L	93	88-106
COD	250	259	mg/L	104	86-116
Sulfide,total	18.9	19.6	mg/L	104	81-112
Cyanide,total	0.0970	0.0917	mg/L	95	49-136