ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 10/11 FIT Receipt Date 11/17 Review Completed 12/20/89

TO: Mary
FROM: Mary Gzyra
SUBJECT: Wauseon Mfg
PAN: OH0481SB (1 hour charged for review) Case # 12811

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 8	Low Soil	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

✓ Incomplete, awaiting Soil ABN, P/P; Inorg.

FIT Data Review Findings:

Check Data Sheets for Transcription Errors

_____ Compounds were detected in sample(s); see enclosed sheet.

Book No. 9 Page No. _____ Date Sampled 9/29

0759:2

EPA Region 5 Records Ctr.
381231

recycled paper

3 12/20/89

Table 4-__
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED _____ SAMPLES

Physical State*	Waste Characteristics**	Category***	SI Memo	Sample Collection Information and Parameters	Sample Number 1	2	3	4	5	6	7	8	9	10	11	12
				Date												
				Time												
				Well Depth (Feet)												
				CRL Log Number												
				CLP Organic Traffic Report Number	EDB 96	97	EFS 02	03	04	05	06	07				
				CLP Inorganic Traffic Report Number												
				Temperature (°C)												
				Specific Conductivity (µmhos/cm)												
				pH												
				Compound Detected (values in µg/L or µg/kg)												
				Volatile Organics												
Gas	A,D,G,I	OCC	HH	chloromethane												
Gas	A,D,G,I	OCC	HH	bromomethane												
Gas	A,D,G,I	OCC	HH	vinyl chloride												
Gas	A,D,G,I	OCC	HH	chloroethane												
Liquid	A,D,H,I	SOL	HH,CLA	methylene chloride			31 B									
Liquid	E,H,I,A	SOL	K,CLA	acetone												
Liquid	A,H,I	SOL	SH	carbon disulfide												
Liquid	A,D,G,I	SOL	HH	1,1-dichloroethene												
Liquid	A,D,H,G	SOL	HH	1,1-dichloroethane												
Liquid	A,D,G	SOL	HH	1,2-dichloroethene (total)												
Liquid	A,D	SOL	HH	chloroform												
Liquid	A,D,G	SOL	HH	1,2-dichloroethane												
Liquid	A,E,G	SOL	K,CLA	2-butanone (MEK)												
Liquid	A,D	SOL	HH	1,1,1-trichloroethane												
Liquid	A,D	SOL	HH	carbon tetrachloride												
Liquid	A,D,G	SOL	HYD	vinyl acetate												
Liquid	A,D	OCC	HH	bromodichloroethane												
Liquid	A,D,G	SOL	HH	1,2-dichloropropane												
Liquid	A,D,G	SOL	HH	cis-1,3-dichloropropene												
Liquid	A,D,G,B	SOL	HH	trichloroethene												
Liquid	A,D	OCC	HH	dibromochloroethane												
Liquid	A,D	SOL	HH	1,1,2-trichloroethane												
Liquid	A,G	SOL	A	benzene												
Liquid	A,D,G	SOL	HH	trans-1,3-dichloropropene												
Liquid	A,D	SOL	HH,CLA	bromoform												
Liquid	A,E,G	SOL	K,CLA	4-methyl-2-pentanone												
Liquid	A,E,G	SOL	K	2-hexanone												
Liquid	A,D	SOL	HH	tetrachloroethene												
Liquid	A,G,E	SOL	A,CLA	toluene												
Liquid	A,D,E	SOL	HH	1,1,2,2-tetrachloroethane												
Liquid	A,D,G	SOL	HA	chlorobenzene												
Liquid	A,G	SOL	A	ethylbenzene												
Liquid	A,D,G	OCC	A	styrene												
Liquid	A,G	SOL	A	xylenes (total)												

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 11/14/89

SUBJECT: Review of Region V CLP Data Received for Review on 10-11-89 11/17/89

FROM: Curtis Ross, Director (SSCRL) Chuck E Ely
Central Regional Laboratory

TO: Data User: Jet

We have reviewed the data for the following case(s).

SITE NAME: Wausaon Manuf. Co SMD Case No. 12811

EPA Data Set No. _____ No. of Samples: 8 D.U./Activity Numbers _____

CRL No. _____

SMD Traffic No. EDB96-97 . EFS02-07

CLP Laboratory: Aquatec Hrs. Required for Review: 3 + 1 = 4 wks

Following are our findings:

This review covers eight soil samples (EDB96, EDB97 and EFS02 through EFS07) for volatile organic analysis at low levels only.
The reviewer's narrative and data qualifiers follow.

Al Venuto (Weston/ESAT)
9 Nov. 1989

[ ] Data are acceptable for use.
[✓] Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
[ ] Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
[ ] Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

Region V

ORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 12811

LABORATORY Aquatec

SDG # EDB96

SOW#

DPO: ACTION _____ FYI _____

SITE Wauseon Mfg. Co.

NO. OF SAMPLES/ MATRIX 8 soil

REVIEWER (IF NOT ESD) Weston/ESAT

REVIEWER'S NAME Al Vernito

COMPLETION DATE 9 Nov. 1989

DATA ASSESSMENT SUMMARY

		VOA	BNA	PEST	OTHER
1.	HOLDING TIMES	O	–	–	
2.	GC/MS TUNE/INSTR. PERFORM.	O	–	–	
3.	CALIBRATIONS	O	–	–	
4.	BLANKS	O	–	–	
5.	SURROGATES	O	–	–	
6.	MATRIX SPIKE/DUP	O	–	–	
7.	OTHER QC	O	–	–	
8.	INTERNAL STANDARDS	O	–	–	
9.	COMPOUND IDENTIFICATION	–	–	–	
10.	SYSTEM PERFORMANCE	–	–	–	
11.	OVERALL ASSESSMENT	O	–	–	

O = Data had no problems/or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS:

AREAS OF CONCERN:

NOTABLE PERFORMANCE:

DATA QUALIFIERS

Contractor: AQUATEC, INC.

Case 12811

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

(1) Holding Times:
The ten day holding time from date of sampling to date of analysis was met for all samples. (The date of sampling did not appear on the traffic report, but even if the sampling occurred as much as four days before the sample had been shipped, the holding time would still have been met.)

(2) GC/MS Tuning:
The GC tuning and mass calibration were all within the required Q.C. limits.

(3) Calibration:
The volatile calibration outliers are listed on the outliers forms.

(4) Method Blanks:
The volatile method blank VBLKC3 was found to contain the common contaminants methylene chloride and acetone; all of the associated samples also contained these two compounds. VBLKC4 and VBLKC5 contained only methylene chloride; this compound was also found in each of the associated samples. VBLKB8 contained no compounds.

(5) Surrogate Recoveries:
All volatile surrogate recoveries were within the Q.C. limits.

(6) Matrix Spikes and Matrix Spike Duplicates:
All volatile MS and MSD recoveries and RPDs

Reviewed by: Al Venuto
Phone: (312) 353-2959
Date: 9 Nov. 1989

DATA QUALIFIERS

Contractor: AQUATEC, INC.

Case 12811

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

were very well within the Q.C. limits.

(7) Field Duplicates:

No samples in this case were identified as field duplicates and, being soil samples, none were field blanks.

(8) Internal Standards Performance:

All volatile IS areas were within the Q.C. limits.

(9) Compound Quantitation and Reported Detection Limits:

The correct limits were used and the proper adjustments were made with respect to percent moisture and sample size (no dilutions were necessary.

(10) Additional Case-Specific Problems:

None noted.

Reviewed by: Al Venuto

Phone: (312) 353-2959

Date: 9 Nov. 1989

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 12811 CONTRACTOR AQUATEC

Instrument # OWAC	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME: 9-26-89 17:24	9-26-89 17:24			9-28-89 11:48											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane	.429			.656	52.8	J									
Vinyl Chloride															
Chloroethane	.433			.566	30.7	J									
Methylene Chloride	1.19			1.59	34.0	J									
Acetone	.159			.204	28.3	J									
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

VBLK B8
EDB96
EDB97

Reviewer's Initials/Date: AV 11-8-89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 12811 CONTRACTOR AQUATEC

Instrument # OWAC	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME: 9-29-89 7:25	9-29-89 7:25			9-29-89 14:25			10-2-89 2:29								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane	.820			.759			.609	25.8	J						
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	.162			.177			.121	25.1	J						
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

		VBLK C4	VBLK C5		
		EFS06	EFS07		
			EFS07MS		
			EFS07MSD		

Reviewer's Initials/Date: AV 11-8-89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 12811 CONTRACTOR AQUATEC

Instrument # OWAD	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME: 9-28-89 20:51	9-28-89 20:51			9-29-89 16:56											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane	.863			1.34	55.1	J									
Bromomethane	.258	59.6	J	.138	46.6	J									
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide	1.90			2.71	42.6	J									
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

VBLK C3
EFS02
EFS03
EFS04
EFS05

Reviewer's Initials/Date: AV 11-8-89

* These flags should be applied to the analytes on the sample data sheets.

For reporting results to the USEPA, the following contract specific qualifiers are to be used. The seven qualifiers defined below are not subject to modification by the laboratory. Up to five qualifiers may be reported on Form I for each compound.

The seven EPA-defined qualifiers to be used are as follows:

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

$$\frac{(330\ U)}{D} \times df \qquad \text{where } D = \frac{100 - \%\ \text{moisture}}{100}$$

and df = dilution factor

$$\text{at 24\% moisture, } D = \frac{100-24}{100} = 0.76$$

$$\frac{(330\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by 2, to account for the fact that only half of the extract is recovered.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J. The sample quantitation limit must be adjusted for both dilution and percent moisture as discussed for the U flag, so that if a sample with 24% moisture and a 1 to 10 dilution factor has a calculated concentration of 300 ug/L and a sample quantitation limit of 430 ug/kg, report the concentration as 300J on Form I.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides $\geq$10 ng/ul in the final extract shall 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 must be 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 will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the 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 shall be reported on separate Forms I. The Form I for the diluted sample shall 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 should be 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 an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag 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 must be fully described and such description attached to the Sample Data Summary Package and the Case Narrative. Begin by using "X". If more than one flag is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some sample.

The combination of flags "BU" or"UB" is expressly prohibited. Blank contaminants are flagged "B" only when they are also detected in the sample.

If analyses at two different dilution factors are required (see Exhibit D), follow the data reporting instructions given in Exhibit D and with the "D" and "E" flags above.

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

Organic Traffic Report
(For CLP Use Only)

Case Number: 12811
SAS No. (if applicable):

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

2. Region Number: V
Sampling Co.: FIT
Sampler (Name): MATTHEW JOSEPH

3. Ship To: AQUATEC, INC
75 GREEN MOUNTAIN DR.
S. BURLINGTON, VT 05403
ATTN: JANIE BANKS

4. Date Shipped: 9/26/89
Airbill Number: 3142101690
Carrier: F

Triple volume required for matrix spike/duplicate aqueous sample.

Ship medium and high concentration samples in paint cans.

See reverse for additional instructions.

5. Date Received: 9/27/89 @ 1030
Received by: Maureen Henry
Laboratory Contract Number: 68-01-7434
Unit Price: 195.-

6. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

CLP Sample Number (From labels)	(A) Sample Description (From box 1)	(B) Concentration L=low M=med H=high	(C) RAS Analysis VOA	BNA	Pest/PCB	(D) Special Handling	(E) Station Location	(F) Date/Time of Sample Collection	(G) Corresponding CLP Inorganic Sample Number	(H) Sample Condition on Receipt	(I) High Conc. Phases (Check below) Solid	Water—MIS Liq.	Non Water—MIS Liq.
EDB 96	5	L	X						MEEG 89	SDG # EDB 96			
EDB 97	5	L	X						MEEG 90				
EFS 02	5	L	X						MEFM 93	All samples			
EFS 03	5	L	X						MEFM 94	recvd intact			
EFS 04	5	L	X						MEFM 95	inside cooler			
EFS 05	5	L	X						MEAE 28	w/ice. Cooler			
EFS 06	5	L	X						MEAE 29	was intact as			
EFS 07	5	L	X						MEAE 30	were custody			
~~EFS 08~~	~~5~~	~~L~~	~~X~~						MEAE 31	seals on outside			
										of cooler			
										Chain-of-custody			
					SHIPMENT	IS	COMPLETE			present as			
										well as sample			
										tags. All			
										caps were			
										sealed w/tape.			
										Final sample			
										in EFS 07 for			
										SDG # EDB 96			

EPA Form 9110-2 (8-88) Replaces EPA Form 2075-7, which may be used. Blue - SMO Copy Pink - Region Copy White - Lab Copy for Return to SMO Yellow - Lab Copy

000075

SAMPLE DELIVERY GROUP (SDG)
TRAFFIC REPORT (TR) COVER SHEET

Lab Name: Aquatec, Inc. Contract No.: 68-01- 7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____-____

Full Sample Analysis Price in Contract: $_____

SDG No./First Sample in SDG: EDB96 Sample Receipt Date: 09/27/89 (MM/DD/YY)
(Lowest EPA Sample Number in first shipment of samples received under SDG)

Last Sample in SDG: EFS07 Sample Receipt Date: 09/27/89 (MM/DD/YY)
(Highest EPA Sample Number in last shipment of samples received under SDG)

EPA Sample Numbers in the SDG (listed in alphanumeric order):

1	EDB96	11	
2	EDB97	12	
3	EFS02	13	
4	EFS03	14	
5	EFS04	15	
6	EFS05	16	
7	EFS06	17	
8	EFS07	18	
9		19	
10		20	

Note: There is a maximum of 20 field samples in an SDG.

Attach Traffic Report(s) to this form in alphanumeric order (i.e. the order listed on this form).

Janine L. Banks
Sample Custodian

September 29, 1989
Date

89901F17AUG89

aquatec INC. ENVIRONMENTAL SERVICES

75 GREEN MOUNTAIN DRIVE, SOUTH BURLINGTON, VERMONT 05403, TELEPHONE (802) 658-1074

October 9, 1989

U.S. Environmental Protection Agency
Contract Laboratory Program
Sample Management Office
209 Madison Street, Suite 200
Alexandria, VA 22314

Re: Contract No. 68-01-7434
Aquatec Project No. 87108
Case No. 12811, SDG No. EDB96

Gentlemen:

Enclosed are the analytical results for Case No. 12811, SDG No. EDB96.

This case consists of eight (8) soil samples for volatile organic analysis only.

The samples were received intact by Aquatec on September 27, 1989.

Laboratory numbers were assigned and are designated as follows:

EPA	Aquatec	Sample Matrix
EDB96	103943	soil
EDB97	103944	soil
EFS02	103945	soil
EFS03	103946	soil
EFS04	103947	soil
EFS05	103948	soil
EFS06	103949	soil
EFS07	103950	soil
EFS07MS	103951	soil
EFS007MSD	103952	soil

Enhanced total ion peak heights were used for the purpose of evaluating and quantitating "Tentatively Identified Compounds" associated with these samples.

Because of the common occurrence of mass 43 with low molecular weight hydrocarbons, the laboratory has used mass 58 as the quantitation ion for acetone in the volatile organics analysis of the samples.

Hydrographic Studies and Analyses • Water Quality Studies • Analytical Laboratories
Ecological Studies • Computer Simulations • Industrial Waste Surveys

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name:AQUATEC, INC. Contract:68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	VBLKC3	109	110	103		0
02	EFS02	110	105	103		0
03	EFS03	108	97	100		0
04	EFS04	109	100	107		0
05	EFS05	110	103	108		0
06	VBLKB8	99	97	97		0
07	EDB96	113	81	95		0
08	EDB97	110	92	96		0
09	VBLKC4	108	98	109		0
10	EFS06	116	92	113		0
11	VBLKC5	101	101	102		0
12	EFS07	108	88	101		0
13	EFS07MS	105	85	100		0
14	EFS07MSD	109	86	106		0
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

		QC LIMITS
S1 (TOL)	= Toluene-d8	(81-117)
S2 (BFB)	= Bromofluorobenzene	(74-121)
S3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix Spike - EPA Sample No.: EFS07 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	83	0	72	88	59-172
Trichloroethene	83	0	81	98	62-137
Benzene	83	0	80	97	66-142
Toluene	83	0	86	105	59-139
Chlorobenzene	83	0	82	100	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	88	74	84	4	22	59-172
Trichloroethene	88	86	99	1	24	62-137
Benzene	88	88	100	3	21	66-142
Toluene	88	93	106	1	21	59-139
Chlorobenzene	88	88	100	0	21	60-133

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

* Values outside of QC limits

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

COMMENTS: _____

4A
VOLATILE METHOD BLANK SUMMARY

VBLK B8

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Lab File ID: CGMB003CV Lab Sample ID: CGMB003CV

Date Analyzed: 09/28/89 Time Analyzed: 1515

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

Instrument ID: OWAC

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EDB96	103943	C103943V	1629
02	EDB97	103944	C103944V	1724
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____

4A

VOLATILE METHOD BLANK SUMMARY

VBLKC4

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Lab File ID: CGNB003AV Lab Sample ID: CGNB003AV

Date Analyzed: 09/30/89 Time Analyzed: 0002

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

Instrument ID: OWAC

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EFS06	103949	C103949V	0109
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____

The data summary forms submitted in this data package represent a translation of the forms produced by EPA Cincinnati software "Format B." The diskette represents 2/88 SOW, "Format A."

For the benefit of interested parties, documentation of sample handling and preparation is included at the end of the "Sample Data Package." A colored sheet of paper entitled "Sample Preparation Package" has been used to explicitly mark the location of these documents.

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

Sincerely,

Joseph Comeau

Joseph K. Comeau, Ph.D.
Laboratory Director

10/9/89
Date

Enclosure

cc: EMSL
EPA Region V

87108B90CT89

4A
VOLATILE METHOD BLANK SUMMARY

VBLKC3

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Lab File ID: DIUB002BV Lab Sample ID: DIUB002BV

Date Analyzed: 09/29/89 Time Analyzed: 1909

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

Instrument ID: OWAD

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EFS02	103945	D103945V	2311
02	EFS03	103946	D103946V	0013
03	EFS04	103947	D103947V	0106
04	EFS05	103948	D103948V	0157
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____

FORM IV VOA

1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKB8

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: CGMB003CV

Sample wt/vol: 3.3 (g/mL) G Lab File ID: CGMB003CV

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

% Moisture: not dec. 0 Date Analyzed: 09/28/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	8	U
67-64-1	Acetone	15	U
75-15-0	Carbon Disulfide	8	U
75-35-4	1,1-Dichloroethene	8	U
75-34-3	1,1-Dichloroethane	8	U
540-59-0	1,2-Dichloroethene (total)	8	U
67-66-3	Chloroform	8	U
107-06-2	1,2-Dichloroethane	8	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	8	U
56-23-5	Carbon Tetrachloride	8	U
108-05-4	Vinyl Acetate	15	U
75-27-4	Bromodichloromethane	8	U
78-87-5	1,2-Dichloropropane	8	U
10061-01-5	cis-1,3-Dichloropropene	8	U
79-01-6	Trichloroethene	8	U
124-48-1	Dibromochloromethane	8	U
79-00-5	1,1,2-Trichloroethane	8	U
71-43-2	Benzene	8	U
10061-02-6	trans-1,3-Dichloropropene	8	U
75-25-2	Bromoform	8	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	8	U
79-34-5	1,1,2,2-Tetrachloroethane	8	U
108-88-3	Toluene	8	U
108-90-7	Chlorobenzene	8	U
100-41-4	Ethylbenzene	8	U
100-42-5	Styrene	8	U
1330-20-7	Xylene (total)	8	U

4A
VOLATILE METHOD BLANK SUMMARY

VBLK C5

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Lab File ID: CGNB002BV Lab Sample ID: CGNB002BV

Date Analyzed: 10/02/89 Time Analyzed: 0439

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

Instrument ID: OWAC

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EFS07	103950	C103950V	0534
02	EFS07MS	103951	C103951V	0636
03	EFS07MSD	103952	C103952V	0822
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKB8

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: CGMB003CV

Sample wt/vol: 3.3 (g/mL) G Lab File ID: CGMB003CV

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

% Moisture: not dec. 0 Date Analyzed: 09/28/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKC4

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: CGNB003AV

Sample wt/vol: 3.0 (g/mL) G Lab File ID: CGNB003AV

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

% Moisture: not dec. 0 Date Analyzed: 09/30/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	27	
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	8	U
75-35-4	1,1-Dichloroethene	8	U
75-34-3	1,1-Dichloroethane	8	U
540-59-0	1,2-Dichloroethene (total)	8	U
67-66-3	Chloroform	8	U
107-06-2	1,2-Dichloroethane	8	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	8	U
56-23-5	Carbon Tetrachloride	8	U
108-05-4	Vinyl Acetate	17	U
75-27-4	Bromodichloromethane	8	U
78-87-5	1,2-Dichloropropane	8	U
10061-01-5	cis-1,3-Dichloropropene	8	U
79-01-6	Trichloroethene	8	U
124-48-1	Dibromochloromethane	8	U
79-00-5	1,1,2-Trichloroethane	8	U
71-43-2	Benzene	8	U
10061-02-6	trans-1,3-Dichloropropene	8	U
75-25-2	Bromoform	8	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	8	U
79-34-5	1,1,2,2-Tetrachloroethane	8	U
108-88-3	Toluene	8	U
108-90-7	Chlorobenzene	8	U
100-41-4	Ethylbenzene	8	U
100-42-5	Styrene	8	U
1330-20-7	Xylene (total)	8	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKC4

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: CGNB003AV

Sample wt/vol: 3.0 (g/mL) G Lab File ID: CGNB003AV

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

% Moisture: not dec. 0 Date Analyzed: 09/30/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKC5

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: CGNB002BV

Sample wt/vol: 3.4 (g/mL) G Lab File ID: CGNB002BV

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

% Moisture: not dec. 0 Date Analyzed: 10/02/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	13	
67-64-1	Acetone	15	U
75-15-0	Carbon Disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon Tetrachloride	7	U
108-05-4	Vinyl Acetate	15	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Xylene (total)	7	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKC5

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: CGNB002BV

Sample wt/vol: 3.4 (g/mL) G Lab File ID: CGNB002BV

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

% Moisture: not dec. 0 Date Analyzed: 10/02/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDB96

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103943

Sample wt/vol: 3.1 (g/mL) G Lab File ID: C103943V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 29 Date Analyzed: 09/28/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	23	U
74-83-9	Bromomethane	23	U
75-01-4	Vinyl Chloride	23	U
75-00-3	Chloroethane	23	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	23	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	23	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
108-05-4	Vinyl Acetate	23	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	23	U
591-78-6	2-Hexanone	23	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKC3

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: DIUB002BV

Sample wt/vol: 3.1 (g/mL) G Lab File ID: DIUB002BV

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

% Moisture: not dec. 0 Date Analyzed: 09/29/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	16	U
74-83-9	Bromomethane	16	U
75-01-4	Vinyl Chloride	16	U
75-00-3	Chloroethane	16	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	3	J
75-15-0	Carbon Disulfide	8	U
75-35-4	1,1-Dichloroethene	8	U
75-34-3	1,1-Dichloroethane	8	U
540-59-0	1,2-Dichloroethene (total)	8	U
67-66-3	Chloroform	8	U
107-06-2	1,2-Dichloroethane	8	U
78-93-3	2-Butanone	16	U
71-55-6	1,1,1-Trichloroethane	8	U
56-23-5	Carbon Tetrachloride	8	U
108-05-4	Vinyl Acetate	16	U
75-27-4	Bromodichloromethane	8	U
78-87-5	1,2-Dichloropropane	8	U
10061-01-5	cis-1,3-Dichloropropene	8	U
79-01-6	Trichloroethene	8	U
124-48-1	Dibromochloromethane	8	U
79-00-5	1,1,2-Trichloroethane	8	U
71-43-2	Benzene	8	U
10061-02-6	trans-1,3-Dichloropropene	8	U
75-25-2	Bromoform	8	U
108-10-1	4-Methyl-2-Pentanone	16	U
591-78-6	2-Hexanone	16	U
127-18-4	Tetrachloroethene	8	U
79-34-5	1,1,2,2-Tetrachloroethane	8	U
108-88-3	Toluene	8	U
108-90-7	Chlorobenzene	8	U
100-41-4	Ethylbenzene	8	U
100-42-5	Styrene	8	U
1330-20-7	Xylene (total)	8	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKC3

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: DIUB002BV

Sample wt/vol: 3.1 (g/mL) G Lab File ID: DIUB002BV

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

% Moisture: not dec. 0 Date Analyzed: 09/29/89

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDB96

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103943

Sample wt/vol: 3.1 (g/mL) G Lab File ID: C103943V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 29 Date Analyzed: 09/28/89

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDB97

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103944

Sample wt/vol: 3.2 (g/mL) G Lab File ID: C103944V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 11 Date Analyzed: 09/28/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	18	U
74-83-9	Bromomethane	18	U
75-01-4	Vinyl Chloride	18	U
75-00-3	Chloroethane	18	U
75-09-2	Methylene Chloride	9	U
67-64-1	Acetone	18	U
75-15-0	Carbon Disulfide	9	U
75-35-4	1,1-Dichloroethene	9	U
75-34-3	1,1-Dichloroethane	9	U
540-59-0	1,2-Dichloroethene (total)	9	U
67-66-3	Chloroform	9	U
107-06-2	1,2-Dichloroethane	9	U
78-93-3	2-Butanone	18	U
71-55-6	1,1,1-Trichloroethane	9	U
56-23-5	Carbon Tetrachloride	9	U
108-05-4	Vinyl Acetate	18	U
75-27-4	Bromodichloromethane	9	U
78-87-5	1,2-Dichloropropane	9	U
10061-01-5	cis-1,3-Dichloropropene	9	U
79-01-6	Trichloroethene	9	U
124-48-1	Dibromochloromethane	9	U
79-00-5	1,1,2-Trichloroethane	9	U
71-43-2	Benzene	9	U
10061-02-6	trans-1,3-Dichloropropene	9	U
75-25-2	Bromoform	9	U
108-10-1	4-Methyl-2-Pentanone	18	U
591-78-6	2-Hexanone	18	U
127-18-4	Tetrachloroethene	9	U
79-34-5	1,1,2,2-Tetrachloroethane	9	U
108-88-3	Toluene	9	U
108-90-7	Chlorobenzene	9	U
100-41-4	Ethylbenzene	9	U
100-42-5	Styrene	9	U
1330-20-7	Xylene (total)	9	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDB97

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103944

Sample wt/vol: 3.2 (g/mL) G Lab File ID: C103944V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 11 Date Analyzed: 09/28/89

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS02

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103945

Sample wt/vol: 3.1 (g/mL) G Lab File ID: D103945V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 12 Date Analyzed: 09/29/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	18	U
74-83-9	Bromomethane	18	U
75-01-4	Vinyl Chloride	18	U
75-00-3	Chloroethane	18	U
75-09-2	Methylene Chloride	31	~~B~~
67-64-1	Acetone	18 ~~5~~	~~B~~ U
75-15-0	Carbon Disulfide	9	U
75-35-4	1,1-Dichloroethene	9	U
75-34-3	1,1-Dichloroethane	9	U
540-59-0	1,2-Dichloroethene (total)	9	U
67-66-3	Chloroform	9	U
107-06-2	1,2-Dichloroethane	9	U
78-93-3	2-Butanone	18	U
71-55-6	1,1,1-Trichloroethane	9	U
56-23-5	Carbon Tetrachloride	9	U
108-05-4	Vinyl Acetate	18	U
75-27-4	Bromodichloromethane	9	U
78-87-5	1,2-Dichloropropane	9	U
10061-01-5	cis-1,3-Dichloropropene	9	U
79-01-6	Trichloroethene	9	U
124-48-1	Dibromochloromethane	9	U
79-00-5	1,1,2-Trichloroethane	9	U
71-43-2	Benzene	9	U
10061-02-6	trans-1,3-Dichloropropene	9	U
75-25-2	Bromoform	9	U
108-10-1	4-Methyl-2-Pentanone	18	U
591-78-6	2-Hexanone	18	U
127-18-4	Tetrachloroethene	9	U
79-34-5	1,1,2,2-Tetrachloroethane	9	U
108-88-3	Toluene	9	U
108-90-7	Chlorobenzene	9	U
100-41-4	Ethylbenzene	9	U
100-42-5	Styrene	9	U
1330-20-7	Xylene (total)	9	U

AV 11-8-89

000037

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS02

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103945

Sample wt/vol: 3.1 (g/mL) G Lab File ID: D103945V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 12 Date Analyzed: 09/29/89

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS03

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103946

Sample wt/vol: 3.0 (g/mL) G Lab File ID: D103946V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 13 Date Analyzed: 09/30/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	19	U
74-83-9	Bromomethane	19	U
75-01-4	Vinyl Chloride	19	U
75-00-3	Chloroethane	19	U
75-09-2	Methylene Chloride	22	~~B~~ U
67-64-1	Acetone	19 ~~6~~	~~B~~ U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	19	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
108-05-4	Vinyl Acetate	19	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	19	U
591-78-6	2-Hexanone	19	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

AV 11-8-89

000046

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS03

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103946

Sample wt/vol: 3.0 (g/mL) G Lab File ID: D103946V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 13 Date Analyzed: 09/30/89

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS04

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103947

Sample wt/vol: 3.1 (g/mL) G Lab File ID: D103947V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 15 Date Analyzed: 09/30/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	19	U
74-83-9	Bromomethane	19	U
75-01-4	Vinyl Chloride	19	U
75-00-3	Chloroethane	19	U
75-09-2	Methylene Chloride	21	~~B~~ U
67-64-1	Acetone	19 ~~8~~	~~BJ~~ U
75-15-0	Carbon Disulfide	9	U
75-35-4	1,1-Dichloroethene	9	U
75-34-3	1,1-Dichloroethane	9	U
540-59-0	1,2-Dichloroethene (total)	9	U
67-66-3	Chloroform	9	U
107-06-2	1,2-Dichloroethane	9	U
78-93-3	2-Butanone	19	U
71-55-6	1,1,1-Trichloroethane	9	U
56-23-5	Carbon Tetrachloride	9	U
108-05-4	Vinyl Acetate	19	U
75-27-4	Bromodichloromethane	9	U
78-87-5	1,2-Dichloropropane	9	U
10061-01-5	cis-1,3-Dichloropropene	9	U
79-01-6	Trichloroethene	9	U
124-48-1	Dibromochloromethane	9	U
79-00-5	1,1,2-Trichloroethane	9	U
71-43-2	Benzene	9	U
10061-02-6	trans-1,3-Dichloropropene	9	U
75-25-2	Bromoform	9	U
108-10-1	4-Methyl-2-Pentanone	19	U
591-78-6	2-Hexanone	19	U
127-18-4	Tetrachloroethene	9	U
79-34-5	1,1,2,2-Tetrachloroethane	9	U
108-88-3	Toluene	9	U
108-90-7	Chlorobenzene	9	U
100-41-4	Ethylbenzene	9	U
100-42-5	Styrene	9	U
1330-20-7	Xylene (total)	9	U

AV
11-9-89

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS04

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103947

Sample wt/vol: 3.1 (g/mL) G Lab File ID: D103947V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 15 Date Analyzed: 09/30/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS05

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103948

Sample wt/vol: 3.0 (g/mL) G Lab File ID: D103948V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 12 Date Analyzed: 09/30/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	19	U
74-83-9	Bromomethane	19	U
75-01-4	Vinyl Chloride	19	U
75-00-3	Chloroethane	19	U
75-09-2	Methylene Chloride	16	~~B~~ U
67-64-1	Acetone	19 ~~8~~	~~B~~ U
75-15-0	Carbon Disulfide	9	U
75-35-4	1,1-Dichloroethene	9	U
75-34-3	1,1-Dichloroethane	9	U
540-59-0	1,2-Dichloroethene (total)	9	U
67-66-3	Chloroform	9	U
107-06-2	1,2-Dichloroethane	9	U
78-93-3	2-Butanone	19	U
71-55-6	1,1,1-Trichloroethane	9	U
56-23-5	Carbon Tetrachloride	9	U
108-05-4	Vinyl Acetate	19	U
75-27-4	Bromodichloromethane	9	U
78-87-5	1,2-Dichloropropane	9	U
10061-01-5	cis-1,3-Dichloropropene	9	U
79-01-6	Trichloroethene	9	U
124-48-1	Dibromochloromethane	9	U
79-00-5	1,1,2-Trichloroethane	9	U
71-43-2	Benzene	9	U
10061-02-6	trans-1,3-Dichloropropene	9	U
75-25-2	Bromoform	9	U
108-10-1	4-Methyl-2-Pentanone	19	U
591-78-6	2-Hexanone	19	U
127-18-4	Tetrachloroethene	9	U
79-34-5	1,1,2,2-Tetrachloroethane	9	U
108-88-3	Toluene	9	U
108-90-7	Chlorobenzene	9	U
100-41-4	Ethylbenzene	9	U
100-42-5	Styrene	9	U
1330-20-7	Xylene (total)	9	U

AV 11-8-89

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS05

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103948

Sample wt/vol: 3.0 (g/mL) G Lab File ID: D103948V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 12 Date Analyzed: 09/30/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS06

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103949

Sample wt/vol: 3.0 (g/mL) G Lab File ID: C103949V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 Date Analyzed: 09/30/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	18	U
74-83-9	Bromomethane	18	U
75-01-4	Vinyl Chloride	18	U
75-00-3	Chloroethane	18	U
75-09-2	Methylene Chloride	19	~~B~~ U
67-64-1	Acetone	18	U
75-15-0	Carbon Disulfide	9	U
75-35-4	1,1-Dichloroethene	9	U
75-34-3	1,1-Dichloroethane	9	U
540-59-0	1,2-Dichloroethene (total)	9	U
67-66-3	Chloroform	9	U
107-06-2	1,2-Dichloroethane	9	U
78-93-3	2-Butanone	18	U
71-55-6	1,1,1-Trichloroethane	9	U
56-23-5	Carbon Tetrachloride	9	U
108-05-4	Vinyl Acetate	18	U
75-27-4	Bromodichloromethane	9	U
78-87-5	1,2-Dichloropropane	9	U
10061-01-5	cis-1,3-Dichloropropene	9	U
79-01-6	Trichloroethene	9	U
124-48-1	Dibromochloromethane	9	U
79-00-5	1,1,2-Trichloroethane	9	U
71-43-2	Benzene	9	U
10061-02-6	trans-1,3-Dichloropropene	9	U
75-25-2	Bromoform	9	U
108-10-1	4-Methyl-2-Pentanone	18	U
591-78-6	2-Hexanone	18	U
127-18-4	Tetrachloroethene	9	U
79-34-5	1,1,2,2-Tetrachloroethane	9	U
108-88-3	Toluene	9	U
108-90-7	Chlorobenzene	9	U
100-41-4	Ethylbenzene	9	U
100-42-5	Styrene	9	U
1330-20-7	Xylene (total)	9	U

AV 11-8-89

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS06

Lab Name: AQUATEC, INC. Contract: 68-01-7434

Lab Code: AQUAI Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 103949

Sample wt/vol: 3.0 (g/mL) G Lab File ID: C103949V

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 Date Analyzed: 09/30/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 12/6/89 FIT Receipt Date 12/8/89 Review Completed 12/19/89

TO: Mayes

FROM: John ERVE

SUBJECT: Wausaun Mfg. Limited

PAN: OH0481SB (1 hour charged for review) Case # 12811

Sample Description

Organics (~~VOA~~, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 8	Low Soil	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

X Incomplete, awaiting Soil Metals

FIT Data Review Findings:

No PCB's or pesticides

Check Data Sheets for Transcription Errors

_____ Compounds were detected in sample(s); see enclosed sheet.

Book No. 9 Page No. _____ Date Sampled 9/26/89

0759:2

recycled paper

Table 4-> Cont.

JE 12/19/89

2070-13 Physical State*	Waste Characteristics	Category**	Cf. Memo	Sample Collection Information and Parameters	Sample Number ≥1 ED896	≥2 ED897	≥3 EFS02	≥4 EFS03	≥5 EFS04	≥6 EFS05	≥7 EFS06	≥8 EFS07	≥9 EFS08	≥10	≥11	≥12
				Semivolatile Organics												
S, thick liquid	A,B,E	OCC	P	phenol												
Liquid	A,D,B	OCC	HH	bis(2-chloroethyl)ether												
Liquid	A,D,B	OCC	P	2-chlorophenol												
Liquid	A,D,H	SOL	HA	1,3-dichlorobenzene												
Solid	A,D,H	OCC	HA	1,4-dichlorobenzene												
Liquid	A,D,H	SOL	A	benzyl alcohol												
Liquid	A,D,H	OCC	HA	1,2-dichlorobenzene												
Liquid	A,B	OCC	P	2-methylphenol												
	A,D	OCC	HH	bis(2-chloroisopropyl)ether												
Liquid	A,B	OCC	P	4-methylphenol												
	A	OCC	N-Amine	n-nitroso-di-n-dipropylamine												
Solid	A,D	OCC	HH	hexachloroethane												
Liquid	A,D	OCC	HA	nitrobenzene												
Liquid	A,D	OCC	H	isophorone												
Solid	A,D	OCC	P	2-nitrophenol												
Solid	A,B	OCC	P	2,4-dimethylphenol												
Solid	A	OCC	A	benzoic acid												
	A,D	OCC	HH	bis(2-chloroethoxy)methane												
Liquid	A,D	OCC	P	2,4-dichlorophenol												
Liquid	A,D	OCC	HA	1,2,4-trichlorobenzene												
Solid	A	OCC	PAH	naphthalene												
Solid	A,D	OCC	HH	4-chloroaniline												
Liquid	A,D,B	OCC	HH	hexachlorobutadiene												
Solid	A,D	OCC	P	4-chloro-3-methylphenol												
Liquid	A,D	OCC	PAH	2-methylnaphthalene												
Liquid	A,D,B	OCC	HH	hexachlorocyclopentadiene												
Solid	A,D	OCC	P	2,4,6-trichlorophenol												
Solid	A,D	OCC	P	2,4,5-trichlorophenol												
Liquid	A,D	OCC	PAH	2-chloronaphthalene												
Solid	A,D	OCC	HH	2-nitroaniline												
Liquid	A,D	OCC	PH,CLA	dimethylphthalate												
Solid	A,D	OCC	PAH	acenaphthylene												
Solid	A,D	OCC	HA	2,6-dinitrotoluene												
Solid	A,D	OCC	HH	3-nitroaniline												
Solid	A,D	OCC	PAH	acenaphthene												
Solid	A,D,G	OCC	P	2,4-dinitrophenol												
Solid	A,D	OCC	P	4-nitrophenol												
Solid	A,D	OCC	A	dibenzofuran												
Solid	A,D	OCC	HA	2,4-dinitrotoluene												
Liquid	A,D	OCC	PH	diethylphthalate												
	A,D	OCC	HH	4-chlorophenyl-phenylether												
Solid	A,D	OCC	PAH	fluorene												
Solid	A,D,E	OCC	HH	4-nitroaniline												
Solid	A,D	OCC	P	4,6-dinitro-2-methylphenol												
Solid	A,D	OCC	HH	n-nitrosodiphenylamine												
Liquid	A,D	OCC	HH	4-bromophenyl-phenylether												
Solid	A,D	OCC	HA	hexachlorobenzene												
Solid	A,D	OCC	P	pentachlorophenol												
Solid	A,D	OCC	PAH	phenanthrene							44 J	47 J				

Table 4-> Cont.

Physical State*	Waste Characteristics**	Category***	SI Memo	Sample Collection Information and Parameters	Sample Number ≥ 1	≥ 2	≥ 3	≥ 4	≥ 5	≥ 6	≥ 7	≥ 8	≥ 9	≥ 10	≥ 11	≥ 12
				Semivolatile Organics, Cont.												
Solid	A,D	OCC	PAH	anthracene												
Liquid	A,D	OCC	PH,CLA	di-n-butylphthalate												
Solid	A,D	OCC	PAH	fluoranthene							120 J					
Solid	A,D	OCC	PAH	pyrene							100 J					
Liquid	A,D	OCC	PH,CLA	butylbenzylphthalate												
	A,D	OCC	BA	3,3'-dichlorobenzidine												
Solid	A,D	OCC	PAH	benzo[a]anthracene							57 J					
Solid	A,D	OCC	PAH	chrysene							92 J					
Liquid	A,D	OCC	PH,CLA	bis(2-ethylhexyl)phthalate		380	52 J			42 J	100 J					
Liquid	A,D	OCC	PH,CLA	di-n-octylphthalate												
Solid	A,D	OCC	PAH	benzo[b]fluoranthene												
Solid	A,D	OCC	PAH	benzo[k]fluoranthene							120 J					
Solid	A,D,K,L	OCC	PAH	benzo[a]pyrene							45 J					
Solid	A,D	OCC	PAH	indeno[1,2,3-cd]pyrene												
Solid	A,D	OCC	PAH	dibenzo[a,h]anthracene												
Solid	A,D	OCC	PAH	benzo[g,h,i]perylene												
				Pesticides/PCBs												
Solid	A,D	PSD	PEST	alpha BHC												
Solid	A,D	PSD	PEST	beta BHC												
Solid	A,D	PSD	PEST	delta BHC												
Solid	A,D	PSD	PEST	gamma BHC (Lindane)												
Solid	A,D	PSD	PEST	Heptachlor												
Solid	A,D	PSD	PEST	Aldrin												
Solid	A,D	PSD	PEST	Heptachlor epoxide												
Solid	A,D	PSD	PEST	Endosulfan I												
Solid	A,D,E	PSD	PEST	Dieldrin												
Solid	A,D	PSD	PEST	4,4'-DDE												
Solid	A,D	PSD	PEST	Endrin												
Solid	A,D	PSD	PEST	Endosulfan II												
Solid	A,D	PSD	PEST	4,4'-DDD												
Solid	A,D	PSD	PEST	Endosulfan sulfate												
Solid	A,D	PSD	PEST	4,4'-DDT												
Solid	A,D	PSD	PEST	Methoxychlor (Mariate)												
Solid	A,D	PSD	PEST	Endrin ketone												
Solid	A,D	PSD	PEST	alpha Chlordane												
Solid	A,D	PSD	PEST	gamma Chlordane												
Solid	A,D	PSD	PEST	Toxaphene												
Liquid	A,D	OCC	PCB	Aroclor 1016												
Liquid	A,D	OCC	PCB	Aroclor 1221												
Liquid	A,D	OCC	PCB	Aroclor 1232												
Liquid	A,D	OCC	PCB	Aroclor 1242												
Liquid	A,D	OCC	PCB	Aroclor 1248												
Liquid	A,D	OCC	PCB	Aroclor 1254												
Liquid	A,D	OCC	PCB	Aroclor 1260												

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

12/8/89

DATE: 12/6/89

SUBJECT: Review of Region V CLP Data
Received for Review on 10-31-89

FROM: Curtis Ross, Director (5SCRL) 12/6/89
Central Regional Laboratory

TO: Data User: F.T

We have reviewed the data for the following case(s).

SITE NAME: WAUSEON MTG LTD SMO Case No. 12811

EPA Data Set No. _____ No. of Samples: 8 D.U./Activity Numbers 1

CRL No. _____

SMO Traffic No. EDB96-97, EFS02-07

CLP Laboratory: ETC/TOXICON Hrs. Required for Review: 5+1=6

Following are our findings.

This review covers eight soil samples (EDB96, EDB97, and EFS02 through EFS07) for semi-volatile organic and pesticide analysis at low levels only.

The reviewer's narrative and data qualifiers follow.

Al Venuto (Weston/ESAT)
1 Dec. 1989

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

Region V

ORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 12811

LABORATORY ETC/Tequion

SDG # EDB 96

SOW#

DPO: ACTION _____ FYI _____

SITE Wauseon Mfg. Ltd.

NO. OF SAMPLES/ MATRIX 8 soil

REVIEWER (IF NOT ESD) Weston/ESAT

REVIEWER'S NAME Al Vernito

COMPLETION DATE 1 Dec. 1989

DATA ASSESSMENT SUMMARY

		VOA	BNA	PEST	OTHER
1.	HOLDING TIMES		O	O	
2.	GC/MS TUNE/INSTR. PERFORM.		O	O	
3.	CALIBRATIONS		O	O	
4.	BLANKS		O	O	
5.	SURROGATES		O	O	
6.	MATRIX SPIKE/DUP		O	O	
7.	OTHER QC		O	O	
8.	INTERNAL STANDARDS		O	—	
9.	COMPOUND IDENTIFICATION		—	—	
10.	SYSTEM PERFORMANCE		—	—	
11.	OVERALL ASSESSMENT		O	O	

O = Data had no problems/or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS:

AREAS OF CONCERN:

NOTABLE PERFORMANCE:

DATA QUALIFIERS

Contractor: ETC/TOXICON

Case 12811

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

(1) Holding Times:
The date of sample collection was not entered on the Organic Traffic Report, but since both fractions of all samples were extracted on the date of receipt, they undoubtedly met the ten day holding time from date of sampling to date of extraction for soil samples. All samples were subsequently analyzed within a reasonable time.

(2) GC/MS Tuning and GC Instrument Performance:
The GC tuning and mass calibration were all within the required Q.C. limits. The pesticide breakdown in the column for PCB/pesticides was zero, which is ideal.

(3) Calibration:
The few semi-volatile calibration outliers are listed on the outliers forms. All checks for linearity in the pesticide column were within the Q.C. limits.

(4) Method Blanks:
The semi-volatile blank contained no TCL compounds, but did contain 2 TICs. The associated sample EDB96 also contained both TICs, but EDB96 contained only the early-eluting TIC and samples EFS05 and EFS06 only the late-eluting TIC; neither TIC was found in any of the other samples.
The pesticide blank contained no TICs.

(5) Surrogate Recoveries:

Reviewed by: Al Venuto
Phone: (312) 353-2959
Date: 1 Dec. 1989

DATA QUALIFIERS

Contractor: ETC/TOXICON

Case 12811

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

All surrogate recoveries for both semi-volatile and pesticide fractions were within the Q.C. limits.

(6) Matrix Spikes and Matrix Spike Duplicates:
All semi-volatile MS and MSD recoveries and RPDs were well within the Q.C. limits.
All pesticide MS and MSD recoveries and RPDs were within the Q.C. limits except for the recovery of DDT in EFS03MS, which was slightly above the limit. Since no DDT was found in the unspiked sample, no action is recommended.

(7) Field Duplicates:
No samples in this case were identified as field duplicates.

(8) Internal Standards Performance:
All semi-volatile IS areas were well within the Q.C. limits.

(9) Compound Quantitation and Reported Detection Limits:
The correct limits were used and the proper adjustments were made to reflect percent moisture and dilutions. (Uniform sample sizes were used throughout.)

(10) Additional Case-Specific Problems:
None noted.

Reviewed by: Al Venuto
Phone: (312) 353-2959
Date: 1 Dec. 1981

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 12811 CONTRACTOR ETC - TOXICON

Instrument # A	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME: 10-6-89 17:20	10-6-89 17:20			10-18-89 18:05											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid	.335			.145	56.7	J									
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline	.300			.181	39.7	J									
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol	.180			.131	27.2	J									
4-Nitrophenol	.142			.087	38.7	J									
Dibenzofuran															

AFFECTED SAMPLES:

SBLK01
EDB96
EDB97
EFS02
through
EFS07
EFS03MS
EFS03MSD

Reviewer Initials/Date: AV 11-30-89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 12811 CONTRACTOR ETC-TOXICON

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME: 10-6-89 17:20	10-6-89 17:20			10-18-89 18:05											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline	.200			.135	32.5	J									
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: AV 11-30-89

For reporting results to the USEPA, the following contract specific qualifiers are to be used. The seven qualifiers defined below are not subject to modification by the laboratory. Up to five qualifiers may be reported on Form I for each compound.

The seven EPA-defined qualifiers to be used are as follows:

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

$$\frac{(330\ U)}{D} \times df \qquad \text{where } D = \frac{100 - \%\ moisture}{100}$$

and df = dilution factor

$$\text{at 24\% moisture, } D = \frac{100-24}{100} = 0.76$$

$$\frac{(330\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by 2, to account for the fact that only half of the extract is recovered.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J. The sample quantitation limit must be adjusted for both dilution and percent moisture as discussed for the U flag, so that if a sample with 24% moisture and a 1 to 10 dilution factor has a calculated concentration of 300 ug/L and a sample quantitation limit of 430 ug/kg, report the concentration as 300J on Form I.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract shall 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 must be 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 will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the 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 shall be reported on separate Forms I. The Form I for the diluted sample shall 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 should be 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 an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag 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 must be fully described and such description attached to the Sample Data Summary Package and the Case Narrative. Begin by using "X". If more than one flag is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some sample.

The combination of flags "BU" or "UB" is expressly prohibited. Blank contaminants are flagged "B" only when they are also detected in the sample.

If analyses at two different dilution factors are required (see Exhibit D), follow the data reporting instructions given in Exhibit D and with the "D" and "E" flags above.

TOXICON, A Division of
Environmental Testing and Certification Corp.
3213 Monterrey Boulevard
Baton Rouge, Louisiana 70814
504-925-5012

US EPA CENTRAL REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605
OCT 31 1989

ETC - TOXICON

CASE NARRATIVE

October 30, 1989

USEPA
Contract Laboratory Program
SMO
300 N. Lee Street
Alexandria, VA 22314

USEPA
EMSL-LV
944 E. Harmon Executive Center
Las Vegas, NV 89109
ATTN: Data Audit Staff

USEPA Region V
536 S. Clark Street
Tenth Floor, CRL
Chicago, IL 60605
ATTN: Curtis Ross

RE: Contract No. 68D90036; Case No. 12811; SDG No. EDB96

Enclosed are the analytical data and quality assurance for Case No.12811 received from USEPA Region V on September 27, 1989. The sample identifications and analyses requested are as follows:

ETC/Toxicon Identification	USEPA Identification		Parameters Requested
456801	EDB96	Low Soil	BNA/Pest/PCBTCL
456802	EDB97	Low Soil	BNA/Pest/PCBTCL
456803	EFS02	Low Soil	BNA/Pest/PCBTCL
456804	EFS03	Low Soil	BNA/Pest/PCBTCL
456804MS	EFS03MS	Low Soil	BNA/Pest/PCBTCL
456804MSD	EFS03MSD	Low Soil	BNA/Pest/PCBTCL
456805	EFS04	Low Soil	BNA/Pest/PCBTCL
456806	EFS05	Low Soil	BNA/Pest/PCBTCL
456807	EFS06	Low Soil	BNA/Pest/PCBTCL
456808	EFS07	Low Soil	BNA/Pest/PCBTCL

In the Pesticide/PCB analysis, matrix spike compound 4,4-DDT for sample EFS03MS (TL 456804MS) was outside advisory Q.C. Limits for no apparent reason.

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

Richard P. Albert
Operations Manager
October 30, 1989

1281151001

RPA/ks

SDG COVER SHEET

Lab Name: ETC/TOXICON | Lab Code: ETCTOX | Contract No. 68D90036

Case No. 12811 | SDG No. EDB96 | SAS No. _____

EPA Sample Identifications	Laboratory Identifications	Sample Analysis Price
EDB96	456801	$ 609.02
EDB97	456802	609.02
EFS02	456803	609.02
EFS03	456804	609.02
EFS03MS	456804 MS	609.02
EFS03 MSD	456804 MSD	609.02
EFS04	456805	609.02
EFS05	456806	609.02
EFS06	456807	609.02
EFS07	456808	609.02

FIRST SAMPLE EDB96 RECEIVED: 09/27/89

FINAL SAMPLE EFS07 RECEIVED: 09/27/89

Signature: Peggy P. Ebbert

Title: Document Control Officer

Date: 9/27/89

1281152001

SEMIVOLATILE NARRATIVE

Lab Name ETC/TOXICON Lab Code ETCTOX Contract No. 68D90036

Case No. 12811 SDG No. EDB96 SAS No. _____

EPA Identifications	Laboratory Identifications	Level Matrix	Nonbillable Reanalysis Required	Billable Reanalysis Required	Reason for Reanalysis
EDB96	456801	Low Soil			
EDB97	456802	Low Soil			
EFS02	456803	Low Soil			
EFS03	456804	Low Soil			
EFS03MS	456804MS	Low Soil			
EFS03MSD	456804MSD	Low Soil			
EFS04	456805	Low Soil			
EFS05	456806	Low Soil			
EFS06	456807	Low Soil			
EFS07	456808	Low Soil			

Rev. 09/19/88

1281154001

SEMIVOLATILE NARRATIVE

Documentation of shipment, sample, analytical, and/or quality control problems:

NO ANALYTICAL PROBLEMS OCCURRED.

Documentation of internal quality control, corrective actions, and resolutions.

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

Signature: Greg Murain

Title: BNA - Group Leader

Date: 10/23/89

1281154002

PESTICIDE/PCB NARRATIVE

Lab Name ETC/TOXICON Lab Code ETCTOX Contract No. _____

Case No. 12811 SDG No. ED896 SAS No. _____

EPA Identifications	Laboratory Identifications	Level Matrix	Nonbillable Reanalysis Required	Billable Reanalysis Required	Reason for Reanalysis
EDB96	456801				
EDB97	456802				
EFS02	456803				
EFS03	456804				
EFS03MS	456804MS				
EFS03MSD	456804MSD				
EFS04	456805				
EFS05	456806				
EFS06	456807				
EFS07	456802				

Rev. 09/19/88

1281155001

PESTICIDE/PCB NARRATIVE

Documentation of shipment, sample, analytical, and/or quality control problems:

matrix spike compound 4,4-DDT for sample 456804MS (EFS03MS) was outside advisory Q.C. Limits due to no apparent reason.

Documentation of internal quality control, corrective actions, and resolutions.

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

Signature: Scott Bailey

Title: G.C. Manager

Date: 10/24/89

1281155002

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
01	EDB96	69	83	109	71	74	81		0
02	EDB97	67	84	100	69	71	74		0
03	EFS02	68	82	112	70	72	71		0
04	EFS03	35	52	64	38	41	39		0
05	EFS04	70	88	105	69	72	70		0
06	EFS05	69	83	107	68	73	23		0
07	EFS06	56	84	97	64	64	57		0
08	EFS07	33	42	55	34	38	32		0
09	EFS03MS	54	74	76	60	59	55		0
10	EFS03MSD	54	72	77	57	56	39		0
11	SBLK01	71	77	101	74	77	60		0

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl	(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

2F

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (DBC)#	OTHER
01	EDB96	81	0
02	EDB97	71	0
03	EFS02	99	0
04	EFS03	100	0
05	EFS03MS	98	0
06	EFS03MSD	94	0
07	EFS04	99	0
08	EFS05	105	0
09	EFS06	67	0
10	EFS07	101	0
11	PBLK01	110	0

ADVISORY QC LIMITS

S1 (DBC) = Dibutlychlorendate (20-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II PEST-2 1/87 Rev.

1281155003

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix Spike - EPA Sample No.: EFS03 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	3900	0	1900	49	26- 90
2-Chlorophenol	3900	0	2190	56	25-102
1,4-Dichlorobenzene	1950	0	1080	55	28 104
N-Nitroso-di-n-prop.(1)	1950	0	1030	53	41 126
1,2,4-Trichlorobenzene	1950	0	1040	53	38 107
4-Chloro-3-methylphenol	3900	0	1910	49	26 103
Acenaphthene	1950	0	1260	65	31-137
4-Nitrophenol	3900	0	2210	57	11-114
2,4-Dinitrotoluene	1950	0	991	51	28- 89
Pentachlorophenol	3900	0	1480	38	17-109
Pyrene	1950	0	1570	81	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	3900	1810	46	6	35	26- 90
2-Chlorophenol	3900	2200	56	0	50	25-102
1,4-Dichlorobenzene	1950	1080	55	0	27	28 104
N-Nitroso-di-n-prop.(1)	1950	1010	52	2	38	41 126
1,2,4-Trichlorobenzene	1950	1020	52	2	23	38 107
4-Chloro-3-methylphenol	3900	1660	43	13	33	26 103
Acenaphthene	1950	1230	63	3	19	31-137
4-Nitrophenol	3900	2380	61	-7	50	11-114
2,4-Dinitrotoluene	1950	901	46	10	47	28- 89
Pentachlorophenol	3900	1970	51	-29	47	17-109
Pyrene	1950	1610	83	-2	36	35-142

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

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

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

COMMENTS: CLP,12811,EDB96,EFS03,L,S,456804,B,EPA,1,35.09,10
A IFB/BNA ETC/TOXICON

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix Spike - EPA Sample No.: EFS03 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	29.8	0	28.8	97	46-127
Heptachlor	29.8	0	31.3	105	35-130
Aldrin	29.8	0	37.6	126	34-132
Dieldrin	74.5	0	72.6	97	31-134
Endrin	74.5	0	96.9	130	42-139
4,4'-DDT	74.5	0	104	140 *	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	29.8	27.8	93	4	50	46-127
Heptachlor	29.8	30.7	103	2	31	35-130
Aldrin	29.8	29.4	99	24	43	34-132
Dieldrin	74.5	65.2	88	11	38	31-134
Endrin	74.5	89.4	120	8	45	42-139
4,4'-DDT	74.5	83.4	112	22	50	23-134

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

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 1 out of 12 outside limits

COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Lab File ID: SB456801R Lab Sample ID: 4568SBLK01

Date Extracted: 09/27/89 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 10/18/89 Time Analyzed: 1902

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

Instrument ID: A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EDB96	456801	SV456801R	10/18/89
02	EDB97	456802	SV456802R	10/18/89
03	EFS02	456803	SV456803R	10/18/89
04	EFS03	456804	SV456804R	10/18/89
05	EFS04	456805	SV456805R	10/19/89
06	EFS05	456806	SV456806R	10/19/89
07	EFS06	456807	SV456807R	10/19/89
08	EFS07	456808	SV456808R	10/19/89
09	EFS03MS	456804MS	456804MSR	10/18/89
10	EFS03MSD	456804MSD	456804MSDR	10/19/89

COMMENTS: CLP,12811,EDB96,SBLK01,L,S,4568SBLK01,B,BLANK,1,35.09,0
A IFB/BNA ETC/TOXICON

FORM IV SV 1/87 Rev.

1281154005

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Lab Sample ID: 4568PBLK01 Lab File ID: _____

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

Date Extracted: 09/27/89 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed (1): 10/08/89 Date Analyzed (2): _____

Time Analyzed (1): 0033 Time Analyzed (2): _____

Instrument ID (1): C Instrument ID (2): _____

GC Column ID (1): DB5 GC Column ID (2): _____

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	EDB96	456801	10/08/89	
02	EDB97	456802	10/08/89	
03	EFS02	456803	10/08/89	
04	EFS03	456804	10/08/89	
05	EFS03MS	456804MS	10/08/89	
06	EFS03MSD	456804MSD	10/08/89	
07	EFS04	456805	10/08/89	
08	EFS05	456806	10/08/89	
09	EFS06	456807	10/08/89	
10	EFS07	456808	10/08/89	

COMMENTS:

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 4568SBLK01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SB456801R

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)Ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-Propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)Methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U

1281154245

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 4568SBLK01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SB456801R

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-Methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)Anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)Phthalate	330	U
117-84-0	Di-n-Octyl Phthalate	330	U
205-99-2	Benzo(b)Fluoranthene	330	U
207-08-9	Benzo(k)Fluoranthene	330	U
50-32-8	Benzo(a)Pyrene	330	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3	Dibenz(a,h)Anthracene	330	U
191-24-2	Benzo(g,h,i)Perylene	330	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK01

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 4568SBLK01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SB456801R

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 3744-02-3	4-METHYL-4-PENTEN-2-ONE	8.65	230	J
2.	UNKNOWN	38.12	250	J

1281154247

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK01

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 4568PBLK01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/08/89

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.0	U
319-85-7	beta-BHC	8.0	U
319-86-8	delta-BHC	8.0	U
58-89-9	gamma-BHC (Lindane)	8.0	U
76-44-8	Heptachlor	8.0	U
309-00-2	Aldrin	8.0	U
1024-57-3	Heptachlor epoxide	8.0	U
959-98-8	Endosulfan I	8.0	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

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

EPA

Organic Traffic Report

(For CLP Use Only)

Case Number: 12811

SAS No. (if applicable):

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

2. Region Number: V
Sampling Co.: FIT
Sampler (Name): MATHIEU JOSEPH

3. Ship To: ETC / TOXICON, INC
3213 MONTERREY BLVD.
BATON ROUGE, LA 70814
ATTN: JEFFREY McDUFFEY

4. Date Shipped: 9/26/89
Airbill Number: 3142101642
Carrier: F

Triple volume required for matrix spike/duplicate aqueous sample.

Ship medium and high concentration samples in paint cans.

See reverse for additional instructions.

5. Date Received: 09/27/89 0840
Received by: Faith Singh
Laboratory Contract Number: 68D90036
Unit Price: 609.02

6. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

CLP Sample Number (From labels)	(A) Sample Description (From box 1)	(B) Concentration L=low M=med H=high	(C) RAS Analysis VOA	BNA	Pest/PCB	(D) Special Handling	(E) Station Location	(F) Date/Time of Sample Collection	(G) Corresponding CLP Inorganic Sample Number	(H) Sample Condition on Receipt	(I) High Conc. Phases (Check below) Soil	Water—MIS Liq.	Non Water—MIS Liq.
EDB 91	5	L		X	X				MEEG 89				
EDB 97	5	L		X	X				MEEG 90				
EFS 02	5	L		X	X				MEFM 93				
EFS 03	5	L		X	X				MEFM 94				
EFS 04	5	L		X	X				MEFM 95				
EFS 05	5	L		X	X				MEAE 28				
EFS 06	5	L		X	X				MEAE 29				
EFS 07	5	L		X	X				MEAE 30				
~~EFS 08~~	~~5~~	~~L~~		~~X~~	~~X~~				~~MEAE 31~~	FINAL SAMPLE	SDG EDB96		

SHIPMENT IS COMPLETE

Custody Seal Intact	yes / no
Chain of Custody Accurate	yes / no
SMO Forms Accurate	yes / no
Sample Tags Present	yes / no
Samples in Good Conditions	yes / no — temp @ receipt = 3.7°C

12811152002

EPA Form 9110-2 (8-88) Replaces EPA Form 2075-7 which may be used

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDB96

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456801

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456801R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 24 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	430	U
111-44-4	bis(2-Chloroethyl)Ether	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
100-51-6	Benzyl Alcohol	430	U
95-50-1	1,2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	bis(2-Chloroisopropyl)Ether	430	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-Di-n-Propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
65-85-0	Benzoic Acid	2100	U
111-91-1	bis(2-Chloroethoxy)Methane	430	U
120-83-2	2,4-Dichlorophenol	430	U
120-82-1	1,2,4-Trichlorobenzene	430	U
91-20-3	Naphthalene	430	U
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-Methylphenol	430	U
91-57-6	2-Methylnaphthalene	430	U
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	2100	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	2100	U
131-11-3	Dimethyl Phthalate	430	U
208-96-8	Acenaphthylene	430	U
606-20-2	2,6-Dinitrotoluene	430	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDB96

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456801

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456801R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 24 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2100	U
83-32-9	Acenaphthene	430	U
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	U
132-64-9	Dibenzofuran	430	U
121-14-2	2,4-Dinitrotoluene	430	U
84-66-2	Diethylphthalate	430	U
7005-72-3	4-Chlorophenyl-phenylether	430	U
86-73-7	Fluorene	430	U
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-Methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine (1)	430	U
101-55-3	4-Bromophenyl-phenylether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	430	U
120-12-7	Anthracene	430	U
84-74-2	Di-n-Butylphthalate	430	U
206-44-0	Fluoranthene	430	U
129-00-0	Pyrene	430	U
85-68-7	Butylbenzylphthalate	430	U
91-94-1	3,3'-Dichlorobenzidine	870	U
56-55-3	Benzo(a)Anthracene	430	U
218-01-9	Chrysene	430	U
117-81-7	bis(2-Ethylhexyl)Phthalate	430	U
117-84-0	Di-n-Octyl Phthalate	430	U
205-99-2	Benzo(b)Fluoranthene	430	U
207-08-9	Benzo(k)Fluoranthene	430	U
50-32-8	Benzo(a)Pyrene	430	U
193-39-5	Indeno(1,2,3-cd)Pyrene	430	U
53-70-3	Dibenz(a,h)Anthracene	430	U
191-24-2	Benzo(g,h,i)Perylene	430	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDB96

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456801

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456801R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 24 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.00

Number TICs found: 12

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 3744-02-3	4-METHYL-4-PENTEN-2-ONE	8.65	330	~~BNL~~ V
2.	UNKNOWN	9.07	200	J
3.	C6H8O2 ISOMER	9.55	770	J
4.	UNKNOWN	10.74	640	J
5. 57-10-3	HEXADECANOIC ACID	27.74	210	J
6.	UNKNOWN	36.27	330	J
7.	UNKNOWN	38.11	740	~~BNL~~ V
8.	UNKNOWN	38.96	1700	J
9.	UNKNOWN	42.81	1700	J
10.	UNKNOWN	43.51	380	J
11.	UNKNOWN	48.43	350	J
12.	UNKNOWN	49.18	310	J

AV
11-30-89

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDB97

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456802

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456802R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
100-51-6	Benzyl Alcohol	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)Ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-Di-n-Propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-Methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

1281154028

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDB97

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456802

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456802R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
84-74-2	Di-n-Butylphthalate	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)Phthalate	3800	
117-84-0	Di-n-Octyl Phthalate	360	U
205-99-2	Benzo(b)Fluoranthene	360	U
207-08-9	Benzo(k)Fluoranthene	360	U
50-32-8	Benzo(a)Pyrene	360	U
193-39-5	Indeno(1,2,3-cd)Pyrene	360	U
53-70-3	Dibenz(a,h)Anthracene	360	U
191-24-2	Benzo(g,h,i)Perylene	360	U

(1) - Cannot be separated from Diphenylamine

1281154029

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDB97

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456802

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456802R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.7 Dilution Factor: 1.00

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 3744-02-3	4-METHYL-4-PENTEN-2-ONE	8.65	220	~~BJ~~ U
2.	UNKNOWN	9.07	170	J
3.	C6H8O2 ISOMER	9.55	460	J
4.	UNKNOWN	10.72	710	J
5.	UNKNOWN	24.12	240	J
6.	UNKNOWN	26.11	250	J
7. 57-10-3	HEXADECANOIC ACID	27.74	350	J
8.	UNKNOWN	29.54	250	J
9.	UNKNOWN	36.27	260	J
10.	UNKNOWN	40.01	590	J
11.	UNKNOWN	40.29	420	J
12.	UNKNOWN	42.83	640	J
13.	UNKNOWN	43.39	470	J
14.	UNKNOWN	43.49	540	J
15.	UNKNOWN	44.03	440	J
16.	UNKNOWN	44.14	370	J
17.	UNKNOWN	44.28	420	J
18.	UNKNOWN	44.41	420	J
19.	UNKNOWN	44.66	400	J
20.	UNKNOWN	45.51	670	J

AV
11-30-89

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS02

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456803

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456803R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 13 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
100-51-6	Benzyl Alcohol	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	bis(2-Chloroisopropyl)Ether	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-Di-n-Propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS02

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456803

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456803R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 13 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-Butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	760	U
56-55-3	Benzo(a)Anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)Phthalate	52	J
117-84-0	Di-n-Octyl Phthalate	380	U
205-99-2	Benzo(b)Fluoranthene	380	U
207-08-9	Benzo(k)Fluoranthene	380	U
50-32-8	Benzo(a)Pyrene	380	U
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U
53-70-3	Dibenz(a,h)Anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	380	U

(1) - Cannot be separated from Diphenylamine

1281154058

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS02

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456803

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456803R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 13 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 1.00

Number TICs found: 11

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	C6H8O2 ISOMER	9.55	620	J
2.	UNKNOWN	24.04	240	J
3. 16747-30-1	3-METHYLTETRADECANE	24.12	270	J
4.	UNKNOWN	25.49	170	J
5.	UNKNOWN	26.91	160	J
6.	UNKNOWN	37.41	260	J
7.	UNKNOWN	38.54	270	J
8.	UNKNOWN	38.94	440	J
9.	UNKNOWN	42.73	280	J
10.	UNKNOWN	43.39	260	J
11.	UNKNOWN	45.48	280	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS03

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456804

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456804R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 10 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
100-51-6	Benzyl Alcohol	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	bis(2-Chloroisopropyl)Ether	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-Di-n-Propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-Methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS03

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456804

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456804R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 10 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
86-73-7	Fluorene	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
84-74-2	Di-n-Butylphthalate	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	bis(2-Ethylhexyl)Phthalate	370	U
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U
53-70-3	Dibenz(a,h)Anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	370	U

(1) - Cannot be separated from Diphenylamine

12811154077

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS03

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456804

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456804R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 10 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/18/89

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

Number TICs found: 16

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	9.12	160	J
2.	C6H8O2 ISOMER	9.59	330	J
3.	UNKNOWN	10.75	390	J
4.	UNKNOWN	39.41	280	J
5.	UNKNOWN	39.94	250	J
6.	UNKNOWN	40.36	260	J
7.	UNKNOWN	42.74	240	J
8.	UNKNOWN	43.41	290	J
9.	UNKNOWN	44.36	310	J
10.	UNKNOWN	44.48	300	J
11.	UNKNOWN	44.61	380	J
12.	UNKNOWN	44.74	240	J
13.	UNKNOWN	45.26	260	J
14.	UNKNOWN	45.39	280	J
15.	UNKNOWN	45.53	730	J
16.	UNKNOWN	45.66	330	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS04

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456805

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456805R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 11 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
100-51-6	Benzyl Alcohol	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	bis(2-Chloroisopropyl)Ether	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-Di-n-Propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-Methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS04

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456805

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456805R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 11 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
86-73-7	Fluorene	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
84-74-2	Di-n-Butylphthalate	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	740	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	bis(2-Ethylhexyl)Phthalate	370	U
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U
53-70-3	Dibenz(a,h)Anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	370	U

(1) - Cannot be separated from Diphenylamine

1281154100

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS04

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456805

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456805R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 11 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 1.00

Number TICs found: 13

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	9.09	210	J
2.	C6H8O2 ISOMER	9.57	540	J
3.	UNKNOWN	10.74	580	J
4. 544-76-3	HEXADECANE	22.52	190	J
5.	UNKNOWN	24.05	370	J
6.	UNKNOWN	24.15	370	J
7.	UNKNOWN	25.52	290	J
8.	UNKNOWN	26.92	310	J
9.	UNKNOWN	28.27	260	J
10.	UNKNOWN	29.56	230	J
11.	UNKNOWN	30.77	180	J
12.	UNKNOWN	35.24	160	J
13.	UNKNOWN	43.43	320	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS05

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456806

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456806R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
100-51-6	Benzyl Alcohol	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)Ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-Di-n-Propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-Methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

1281154118

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS05

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456806

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456806R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
84-74-2	Di-n-Butylphthalate	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)Phthalate	48	J
117-84-0	Di-n-Octyl Phthalate	360	U
205-99-2	Benzo(b)Fluoranthene	360	U
207-08-9	Benzo(k)Fluoranthene	360	U
50-32-8	Benzo(a)Pyrene	360	U
193-39-5	Indeno(1,2,3-cd)Pyrene	360	U
53-70-3	Dibenz(a,h)Anthracene	360	U
191-24-2	Benzo(g,h,i)Perylene	360	U

(1) - Cannot be separated from Diphenylamine

1281154119

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS05

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: ED896

Matrix: (soil/water) SOIL Lab Sample ID: 456806

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456806R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	9.10	280	J
2.	C6H8O2 ISOMER	9.59	430	J
3.	UNKNOWN	10.75	580	J
4.	UNKNOWN	38.12	200	~~BJ~~ V
5.	UNKNOWN	38.96	360	J
6.	UNKNOWN	42.83	310	J

AV
11-30-89

1281154120

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS06

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456807

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456807R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 5.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
100-51-6	Benzyl Alcohol	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)Ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-Di-n-Propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-Methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS06

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456807

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456807R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ___ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 5.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	44	J
120-12-7	Anthracene	360	U
84-74-2	Di-n-Butylphthalate	360	U
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	100	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	57	J
218-01-9	Chrysene	92	J
117-81-7	bis(2-Ethylhexyl)Phthalate	100	J
117-84-0	Di-n-Octyl Phthalate	360	U
205-99-2	Benzo(b)Fluoranthene	360	U
207-08-9	Benzo(k)Fluoranthene	120	J
50-32-8	Benzo(a)Pyrene	45	J
193-39-5	Indeno(1,2,3-cd)Pyrene	360	U
53-70-3	Dibenz(a,h)Anthracene	360	U
191-24-2	Benzo(g,h,i)Perylene	360	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS06

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456807

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456807R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 5.2 Dilution Factor: 1.00

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	9.04	340	J
2.	C6H8O2 ISOMER	9.55	680	J
3.	UNKNOWN	10.74	510	J
4.	UNKNOWN	26.11	590	J
5.	UNKNOWN	26.72	200	J
6. 57-10-3	HEXADECANOIC ACID	27.76	230	J
7.	C10H6CL8 ISOMER	30.19	240	J
8.	C10H6CL8 ISOMER	30.57	220	J
9.	UNKNOWN	34.17	160	J
10.	UNKNOWN	36.27	200	J
11.	UNKNOWN	38.12	6100	~~BJ~~ U
12.	UNKNOWN	38.97	570	J
13.	UNKNOWN	41.64	530	J
14.	UNKNOWN	42.83	820	J
15.	UNKNOWN	43.56	220	J
16.	UNKNOWN	48.51	330	J
17.	UNKNOWN	49.24	200	J

AV
11-30-89

1281154134

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS07

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456808

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456808R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 10 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
100-51-6	Benzyl Alcohol	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	bis(2-Chloroisopropyl)Ether	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-Di-n-Propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-Methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U

1281154173

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS07

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456808

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456808R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 10 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
86-73-7	Fluorene	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	47	J
120-12-7	Anthracene	370	U
84-74-2	Di-n-Butylphthalate	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	bis(2-Ethylhexyl)Phthalate	370	U
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U
53-70-3	Dibenz(a,h)Anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	370	U

(1) - Cannot be separated from Diphenylamine

1281154174

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFS07

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456808

Sample wt/vol: 30.0 (g/mL) G Lab File ID: SV456808R

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 10 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/19/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	C10H16 ISOMER	9.20	730	J
2.	C6H8O2 ISOMER	9.57	210	J
3.	UNKNOWN	10.74	310	J
4.	UNKNOWN	30.72	230	J
5.	UNKNOWN	31.31	580	J
6.	C20H30O ISOMER	32.56	240	J
7.	C20H30O ISOMER	32.82	320	J
8.	UNKNOWN	32.97	320	J
9.	UNKNOWN	35.62	150	J
10.	UNKNOWN	36.26	280	J
11.	UNKNOWN	37.49	330	J
12.	UNKNOWN	38.09	1200	J
13.	UNKNOWN	38.94	1500	J
14.	UNKNOWN	41.62	310	J
15.	UNKNOWN	42.79	1100	J
16.	UNKNOWN	46.78	210	J
17.	C22H22O7 TERPENE ISOMER	48.34	870	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDB96

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456801

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. [illegible] dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/08/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	11	U
319-85-7	beta-BHC	11	U
319-86-8	delta-BHC	11	U
58-89-9	gamma-BHC (Lindane)	11	U
76-44-8	Heptachlor	11	U
309-00-2	Aldrin	11	U
1024-57-3	Heptachlor epoxide	11	U
959-98-8	Endosulfan I	11	U
60-57-1	Dieldrin	21	U
72-55-9	4,4'-DDE	21	U
72-20-8	Endrin	21	U
33213-65-9	Endosulfan II	21	U
72-54-8	4,4'-DDD	21	U
1031-07-8	Endosulfan sulfate	21	U
50-29-3	4,4'-DDT	21	U
72-43-5	Methoxychlor	110	U
53494-70-5	Endrin ketone	21	U
5103-71-9	alpha-Chlordane	110	U
5103-74-2	gamma-Chlordane	110	U
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	110	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	110	U
53469-21-9	Aroclor-1242	110	U
12672-29-6	Aroclor-1248	110	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U

1281155006

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDB97

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456802

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/08/89

GPC Cleanup: (Y/N) N pH: 7.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.8	U
319-85-7	beta-BHC	8.8	U
319-86-8	delta-BHC	8.8	U
58-89-9	gamma-BHC (Lindane)	8.8	U
76-44-8	Heptachlor	8.8	U
309-00-2	Aldrin	8.8	U
1024-57-3	Heptachlor epoxide	8.8	U
959-98-8	Endosulfan I	8.8	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	Methoxychlor	88	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	88	U
5103-74-2	gamma-Chlordane	88	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	88	U
11104-28-2	Aroclor-1221	88	U
11141-16-5	Aroclor-1232	88	U
53469-21-9	Aroclor-1242	88	U
12672-29-6	Aroclor-1248	88	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS02

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456803

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 13 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/08/89

GPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.2	U
319-85-7	beta-BHC	9.2	U
319-86-8	delta-BHC	9.2	U
58-89-9	gamma-BHC (Lindane)	9.2	U
76-44-8	Heptachlor	9.2	U
309-00-2	Aldrin	9.2	U
1024-57-3	Heptachlor epoxide	9.2	U
959-98-8	Endosulfan I	9.2	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	Methoxychlor	92	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	92	U
5103-74-2	gamma-Chlordane	92	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	92	U
11104-28-2	Aroclor-1221	92	U
11141-16-5	Aroclor-1232	92	U
53469-21-9	Aroclor-1242	92	U
12672-29-6	Aroclor-1248	92	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS03

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456804

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 10 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/08/89

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.9	U
319-85-7	beta-BHC	8.9	U
319-86-8	delta-BHC	8.9	U
58-89-9	gamma-BHC (Lindane)	8.9	U
76-44-8	Heptachlor	8.9	U
309-00-2	Aldrin	8.9	U
1024-57-3	Heptachlor epoxide	8.9	U
959-98-8	Endosulfan I	8.9	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	Methoxychlor	89	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	89	U
5103-74-2	gamma-Chlordane	89	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	89	U
11104-28-2	Aroclor-1221	89	U
11141-16-5	Aroclor-1232	89	U
53469-21-9	Aroclor-1242	89	U
12672-29-6	Aroclor-1248	89	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS04

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456805

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 11 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/08/89

GPC Cleanup: (Y/N) N pH: 7.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.0	U
319-85-7	beta-BHC	9.0	U
319-86-8	delta-BHC	9.0	U
58-89-9	gamma-BHC (Lindane)	9.0	U
76-44-8	Heptachlor	9.0	U
309-00-2	Aldrin	9.0	U
1024-57-3	Heptachlor epoxide	9.0	U
959-98-8	Endosulfan I	9.0	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	Methoxychlor	90	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	90	U
5103-74-2	gamma-Chlordane	90	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	90	U
11104-28-2	Aroclor-1221	90	U
11141-16-5	Aroclor-1232	90	U
53469-21-9	Aroclor-1242	90	U
12672-29-6	Aroclor-1248	90	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS05

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456806

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/08/89

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.8	U
319-85-7	beta-BHC	8.8	U
319-86-8	delta-BHC	8.8	U
58-89-9	gamma-BHC (Lindane)	8.8	U
76-44-8	Heptachlor	8.8	U
309-00-2	Aldrin	8.8	U
1024-57-3	Heptachlor epoxide	8.8	U
959-98-8	Endosulfan I	8.8	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	Methoxychlor	88	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	88	U
5103-74-2	gamma-Chlordane	88	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	88	U
11104-28-2	Aroclor-1221	88	U
11141-16-5	Aroclor-1232	88	U
53469-21-9	Aroclor-1242	88	U
12672-29-6	Aroclor-1248	88	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS06

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456807

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 9 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/08/89

GPC Cleanup: (Y/N) N pH: 5.2 Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	44	U
319-85-7	beta-BHC	44	U
319-86-8	delta-BHC	44	U
58-89-9	gamma-BHC (Lindane)	44	U
76-44-8	Heptachlor	44	U
309-00-2	Aldrin	44	U
1024-57-3	Heptachlor epoxide	44	U
959-98-8	Endosulfan I	44	U
60-57-1	Dieldrin	88	U
72-55-9	4,4'-DDE	88	U
72-20-8	Endrin	88	U
33213-65-9	Endosulfan II	88	U
72-54-8	4,4'-DDD	88	U
[illegible]07-8	Endosulfan sulfate	88	U
50-29-3	4,4'-DDT	88	U
72-43-5	Methoxychlor	440	U
53494-70-5	Endrin ketone	88	U
5103-71-9	alpha-Chlordane	440	U
5103-74-2	gamma-Chlordane	440	U
8001-35-2	Toxaphene	880	U
12674-11-2	Aroclor-1016	440	U
11104-28-2	Aroclor-1221	440	U
11141-16-5	Aroclor-1232	440	U
53469-21-9	Aroclor-1242	440	U
12672-29-6	Aroclor-1248	440	U
11097-69-1	Aroclor-1254	880	U
11096-82-5	Aroclor-1260	880	U

1281155024

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFS07

Lab Name: ETC/TOXICON Contract: 68D90036

Lab Code: ETCTOX Case No.: 12811 SAS No.: _____ SDG No.: EDB96

Matrix: (soil/water) SOIL Lab Sample ID: 456808

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 09/27/89

% Moisture: not dec. 10 dec. ____ Date Extracted: 09/27/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/08/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.9	U
319-85-7	beta-BHC	8.9	U
319-86-8	delta-BHC	8.9	U
58-89-9	gamma-BHC (Lindane)	8.9	U
76-44-8	Heptachlor	8.9	U
309-00-2	Aldrin	8.9	U
1024-57-3	Heptachlor epoxide	8.9	U
959-98-8	Endosulfan I	8.9	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	Methoxychlor	89	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	89	U
5103-74-2	gamma-Chlordane	89	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	89	U
11104-28-2	Aroclor-1221	89	U
11141-16-5	Aroclor-1232	89	U
53469-21-9	Aroclor-1242	89	U
12672-29-6	Aroclor-1248	89	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 11/17 FIT Receipt Date 12/27 Review Completed 1/2/90

TO: Thayer
FROM: Mary Czyra
SUBJECT: Wauseon Mfg. Co.
PAN: OH0 481SB (1 hour charged for review) Case # 12811

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 8	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status X Completed!!

Incomplete, awaiting

FIT Data Review Findings:

Check Data Sheets for Transcription Errors

Compounds were detected in sample(s); see enclosed sheet.

Book No. 9 Page No. Date Sampled 9/26

0759:2

recycle paper

3/1/290

Table 4- (Cont.)

Physical State*	Waste Characteristics**	Category***	SI Memo	Sample Collection Information and Parameters	Sample Number 1 (~~WEEG~~ 89)	2 (90)	3 (~~WEFA~~ 93)	4 (94)	5 (95)	6 (~~WEGE~~ 28)	7 (29)	8 (30)	9	10	11	12
				Analyte Detected (values in mg/kg or µg/L)												
Solid	A,D	MES	CSC/CWC	aluminum	17300	7130	14600	11400	11400	10900	3320	6970				
Solid	A,D	MES	HM	antimony												
Solid	A,D	MES	HM	arsenic	2.6 JWB	3.6	3.8 B	9.0	5.1	4.4	1.3 B	2.4				
Solid	A,D	MES	CSC/CWC	barium	76.8	45.6	80.9	68.1	78.6	64.5	21.8 B	33.6 B				
Solid	A,D	MES	M	beryllium	0.89 B	0.40 B	0.74 B	0.60 B	0.64 B	0.69 B		0.31 B				
Solid	A,D	MES	HM	cadmium		47.7	68	26.4	25.1							
Solid	D	MES	CSC/CWC	calcium	6040	40400	22800	46800	74300	43200	964 B	2410				
Solid	A,D	MES	HM	chromium	19.9	100	37.7	445	624	38.3	11.6	8.9				
Solid	A,D	MES	HM	cobalt	5.7 B	6.4 B	11.2 B	5.9 B	9.7 B	4.4 B	1.2 B	2.3 B				
Solid	A,D	MES	HM	copper	33.9	1010	76.2	283	331	67.7	17	10.3				
Solid	A,D	MES	HM,CSC,CWC	iron	21400	14900	26100	21800	23200	18800	5970	10900				
Solid	A,D	MES	HM	lead	19.4	17.7	19.1	31.6	19.7	15.3	146	17.9				
Solid	A,D	MES	CSC/CWC	magnesium	4030	9260	7070	17400	14600	10000	782 B	1740				
Solid	A,D	MES	HM	manganese	180	320	390	488	577	290	66.8	119				
Liquid	A,D	MES	HM	mercury						0.06 B						
Solid	A,D	MES	HM	nickel	13.9	44.4	50.1	325	223	25.7		4.3 JB				
Solid	D	MES	CSC,CWC	potassium	2990	1310	1760	1760	2290	1790	370 B	866 B				
Solid	A,D	MES	M	selenium												
Solid	A,D	MES	HM	silver												
Solid	D	MES	CSC,CWC	sodium	111 B	173 B	141 B	190 B	218 B	171 B	74.9 B	77.6 B				
Solid	A,D	MES	HM	thallium	0.59 B	0.24 JWB	0.42 B	0.34 JWB	0.39 JWB	0.24 B						
Solid	A,D	MES	HM	vanadium	30.6	17	29.7	24.2	25.1	23.8	9.4 B	15				
Solid	A,D	MES	CWL,CSC,HM	zinc	74.9	2870	332	1350	1488	120	76.1	36.5				
Solid	A	IOC	IOC	cyanide		19.9	0.80	32.5	14.7	2.8						

-- Not detected.

12/5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 12·19·89

12/27/89

SUBJECT: Review of Region V CLP Data
Received for Review on Nov 17, 1989

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory Jay Thepkar

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: Wauseon Mfg Corp SMO case No. 12811

EPA Data Set No. SF6729 No. of Samples: 8 D.U./Activity Numbers TFA/TFA 102

CRL No. 89FM35507-14

SMO Traffic No. MEAE 28-30, MEEG 89-90, MEEM 93-95

CLP Laboratory: Betz Hrs. Required for Review: 7.0 +½ PH.

Following are our findings:

The laboratory's portion of case 12811 contains 8 low level soil samples analyzed for total metals and cyanide. (See next page)

Therese Lombard
12/14/89

( ) Data are acceptable for use.
(✗) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Duane Geuder, Quality Assurance Officer, EPA Support Services
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

EPA FORM 1320-6 (Rev. 5/87)

DATA QUALIFIERS

Contract Lab: Betz - The Woodlands Case No.: 12811

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

ICAP ANALYSIS:

The laboratory incorrectly entered the Fe value for MEFM93 on Form 1. The correct value is 26100 mg/kg. This was corrected by the reviewer.

A CCB was found to contain Ni (17.5 ug/l). Therefore, sample MEAE30 is estimated (J) due to contamination.

Matrix spike analysis for Sb (52.8%) is out of control, and the laboratory flagged all Sb data with a N. Therefore, all Sb data are estimated (UJ) due to a possible elevation of the detection limit.

GFAA ANALYSIS:

Analytical spike analysis is out of control for the following data: As and Se in sample MEEG89; and Tl in samples MEEG90, MEFM94 and 95. This data was flagged W by the laboratory. Therefore, Se in sample MEEG89 is estimated (UJ), and the remainder of the W flagged data are estimated (J) due to interferences.

OTHER QUALIFIERS:

All Hg data are acceptable.

The laboratory incorrectly entered the spike added value and % recovery for CN on Form 5. The correct values are 5.9313 mg/kg spike added and 93.7% recovery. Based on the corrected values, CN data does not need to be flagged N on Forms 1 and 5. These were removed by the reviewer.

All CN data are acceptable.

No field blanks or field duplicates were included in this case.

Reviewed by: Theresa Lombard 12/14/89

DPO [ ] ACTION [X] FYI Region V

INORGANIC REGIONAL DATA ASSESSMENT SUMMARY

CASE NO. 12811 LABORATORY Betz-The Woodlands

SDG NO. MEAE28 DATA USER FIT

SOW 7/88 REVIEW COMPLETION DATE 12/14/89

NO. OF SAMPLES _____ WATER 8 SOIL _____ OTHER -

REVIEWER [ ] ESD [X] ESAT [ ] OTHER, CONTRACT/CONTRACTOR _____

	ICP	AA	Hg	CYANIDE
1. HOLDING TIMES	O	O	O	O
2. INITIAL CALIBRATIONS	O	O	O	O
3. CONTINUING CALIBRATIONS	O	O	O	O
4. FIELD BLANKS ("F" = not applicable)	F	F	F	F
5. LABORATORY BLANKS	X	O	O	O
6. ICS	O			
7. LCS	O	O		
8. DUPLICATE ANALYSIS	O	O	O	O
9. MATRIX SPIKE	O	O	O	O
10. MSA		O		
11. SERIAL DILUTION	O			
12. SAMPLE VERIFICATION	O	O	O	O
13. REGIONAL QC ("F" = not applicable)	F	F	F	F
14. OVERALL ASSESSMENT	X	M	O	O

O = No problems or minor problems that do not affect data usability.
X = No more than *about* 5% of the data points are qualified as either estimated or unusable.
M = More than *about* 5% of the data points are qualified as estimated.
Z = More than *about* 5% of the data points are qualified as unusable.

DPO ACTION ITEMS: _____

AREAS OF CONCERN: _____

QC EXCEPTION SUMMARY REPORT

CASE # 12811
DATA SET #
LAB Q.C.#
DATE:

SITE Wauseon Mfg. Corp
LAB Betz-Woodlands
REVIEWED BY

MATRIX: SOIL
CONC. : LOW
MATRIX:
CONC. :

WATER SAMPLE SPK.
WATER SAMPLE DUP.
SOIL SAMPLE SPK.
SOIL SAMPLE DUP.

	OVERALL CASE QC									MATRIX SPECIFIC QC						SAMPLE SPECIFIC QC		FIELD QC			REGIONAL QC			OTHER/ COMMENTS
	OK		OK	OK			OK		OK						OK									
	Holding Time	Cal Blanks	Ind Calver	Contin Calver	Prep Blk AQ	Prep Blk SOL	ICS %R	ICS % AQ	ICS % SOL	Sol Dup RPD	Sol Spk %R	AQ Dup RPD	AQ Spk %R	Sol Dup AQ	Sol Dup SOL	GFAA Dup	GFAA Spike	Blank	Dup RPD	Spike %R	Stand Blank	Stand Spike %R	Spike Sample RPD	
Aluminum																								
Antimony											52.8													
Arsenic																								
Barium																								
Beryllium																								
Cadmium																								
Calcium																								
Chromium																								
Cobalt																								
Copper																								
Iron						2.096																		
Lead																								
Magnesium																								
Manganese		3.9				.720																		
Mercury		0.1																						
Nickel		17.5																						
Potassium																								
Selenium																								
Silver																								
Sodium																								
Thallium																								
Tin																								
Vanadium		4.7																						
Zinc		13.4																						
Cyanide											~~46.8~~													OK

No field blanks or field duplicates.
Lab miscalculated "spike added" value for CN.
% TS incorrect for MEFM 94

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

00002

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

SDG No.: 7/88_

EPA Sample No.	Lab Sample ID
MEAE28	MEAE28
MEAE28D	MEAE28D
MEAE29	MEAE29
MEAE29S	MEAE29S
MEAE30	MEAE30
MEEG89	MEEG89
MEEG90	MEEG90
MEFM93	MEFM93
MEFM94	MEFM94
MEFM95	MEFM95

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No NO_

If yes - were raw data generated before application of background corrections ? Yes/No

Comments:

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

Signature: William W Walton Name: William W. Walton

Date: November 16, 1989 Title: Laboratory Manager

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO. 00003

MEAE28

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Matrix (soil/water): SOIL_ Lab Sample ID: MEAE28____

Level (low/med): LOW__ Date Received: 10/05/89

% Solids: _89.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	10900			P_
7440-36-0	Antimony_	7.8	U	N	P_
7440-38-2	Arsenic__	4.4			F_
7440-39-3	Barium___	64.5			P_
7440-41-7	Beryllium	0.59	B		P_
7440-43-9	Cadmium__	0.67	U		P_
7440-70-2	Calcium__	43200			P_
7440-47-3	Chromium_	38.3			P_
7440-48-4	Cobalt___	4.4	B		P_
7440-50-8	Copper___	67.7			P_
7439-89-6	Iron_____	18800			P_
7439-92-1	Lead_____	15.3			F_
7439-95-4	Magnesium	10000			P_
7439-96-5	Manganese	790			P_
7439-97-6	Mercury__	0.06	B		CV
7440-02-0	Nickel___	25.7			P_
7440-09-7	Potassium	1790			P_
7782-49-2	Selenium_	0.44	U		F_
7440-22-4	Silver___	0.89	U		P_
7440-23-5	Sodium___	171	B		P_
7440-28-0	Thallium_	0.24	B		F_
7440-62-2	Vanadium_	23.8			P_
7440-66-6	Zinc_____	120			P_
	Cyanide__	2.8		~~N~~	C_

TML 12/13/89

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS:_ROOTS_AND_CLUMPS_OF_CLAY.

FORM I - IN

7/88

U.S. EPA - CLP

00904

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEAE29

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Matrix (soil/water): SOIL_ Lab Sample ID: MEAE29____

Level (low/med): LOW__ Date Received: 10/05/89

% Solids: _90.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	3320			P_
7440-36-0	Antimony_	7.8	U	N	P_
7440-38-2	Arsenic__	1.3	B		F_
7440-39-3	Barium___	21.8	B		P_
7440-41-7	Beryllium	0.22	U		P_
7440-43-9	Cadmium__	0.67	U		P_
7440-70-2	Calcium__	964	B		P_
7440-47-3	Chromium_	11.6			P_
7440-48-4	Cobalt___	1.2	B		P_
7440-50-8	Copper___	17.0			P_
7439-89-6	Iron____	5970			P_
7439-92-1	Lead____	146			F_
7439-95-4	Magnesium	782	B		P_
7439-96-5	Manganese	66.8			P_
7439-97-6	Mercury__	0.06	U		CV
7440-02-0	Nickel___	3.3	U		P_
7440-09-7	Potassium	370	B		P_
7782-49-2	Selenium_	0.44	U		F_
7440-22-4	Silver___	0.89	U		P_
7440-23-5	Sodium___	74.9	B		P_
7440-28-0	Thallium_	0.22	U		F_
7440-62-2	Vanadium_	9.4	B		P_
7440-66-6	Zinc____	76.1			P_
_____	Cyanide__	0.57	U	~~N~~	C_

mc 12/13/89

Color Before: BROWN____ Clarity Before: _____ Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: ROOTS AND HUMUS.

U.S. EPA - CLP

00005

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEAE30

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Matrix (soil/water): SOIL_ Lab Sample ID: MEAE30____

Level (low/med): LOW__ Date Received: 10/05/89

% Solids: _89.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	6970			P_
7440-36-0	Antimony_	7.8	U	N	P_
7440-38-2	Arsenic__	2.4			F_
7440-39-3	Barium___	33.6	B		P_
7440-41-7	Beryllium	0.31	B		P_
7440-43-9	Cadmium__	0.67	U		P_
7440-70-2	Calcium__	2410			P_
7440-47-3	Chromium_	8.9			P_
7440-48-4	Cobalt___	2.8	B		P_
7440-50-8	Copper___	10.3			P_
7439-89-6	Iron_____	10900			P_
7439-92-1	Lead_____	17.9			F_
7439-95-4	Magnesium	1700			P_
7439-96-5	Manganese	119			P_
7439-97-6	Mercury__	0.06	U		CV
7440-02-0	Nickel___	4.3	B		P_
7440-09-7	Potassium	866	B		P_
7782-49-2	Selenium_	0.45	U		F_
7440-22-4	Silver___	0.89	U		P_
7440-23-5	Sodium___	77.6	B		P_
7440-28-0	Thallium_	0.22	U		F_
7440-62-2	Vanadium_	15.0			P_
7440-66-6	Zinc_____	36.5			P_
_____	Cyanide__	0.56	U	~~N~~	C_

TML 12/13/89

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: _CLUMPS_OF_CLAY_AND_PLANT_MATTER.

FORM I - IN

7/88

U.S. EPA - CLP

00006

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEEG89

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Matrix (soil/water): SOIL_ Lab Sample ID: MEEG89____

Level (low/med): LOW__ Date Received: 10/05/89

% Solids: _73.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	17300			P_
7440-36-0	Antimony_	9.5	U	N	P_
7440-38-2	Arsenic__	2.6	B	W	F_
7440-39-3	Barium___	96.8			P_
7440-41-7	Beryllium	0.89	B		P_
7440-43-9	Cadmium__	0.82	U		P_
7440-70-2	Calcium__	6040			P_
7440-47-3	Chromium_	19.9			P_
7440-48-4	Cobalt___	5.7	B		P_
7440-50-8	Copper___	33.9			P_
7439-89-6	Iron_____	21400			P_
7439-92-1	Lead_____	19.4			F_
7439-95-4	Magnesium	4030			P_
7439-96-5	Manganese	180			P_
7439-97-6	Mercury__	0.06	U		CV
7440-02-0	Nickel___	13.9			P_
7440-09-7	Potassium	2990			P_
7782-49-2	Selenium_	0.54	U	W	F_
7440-22-4	Silver___	1.1	U		P_
7440-23-5	Sodium___	111	B		P_
7440-28-0	Thallium_	0.59	B		F_
7440-62-2	Vanadium_	30.6			P_
7440-66-6	Zinc_____	74.9			P_
_____	Cyanide__	0.68	U	~~N~~	C_

tmL 12/13/89

Color Before: BLACK____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: _PLANT_MATTER.

FORM I - IN

7/86

U.S. EPA - CLP

00007

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEEG90

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Matrix (soil/water): SOIL_ Lab Sample ID: MEEG90____

Level (low/med): LOW__ Date Received: 10/05/89

% Solids: _89.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7130			P
7440-36-0	Antimony	7.8	U	N	P
7440-38-2	Arsenic	3.6			F
7440-39-3	Barium	45.6			P
7440-41-7	Beryllium	0.40	B		P
7440-43-9	Cadmium	47.7			P
7440-70-2	Calcium	40400			P
7440-47-3	Chromium	1100			P
7440-48-4	Cobalt	6.4	B		P
7440-50-8	Copper	1010			P
7439-89-6	Iron	14900			P
7439-92-1	Lead	17.7			F
7439-95-4	Magnesium	9860			P
7439-96-5	Manganese	320			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	464			P
7440-09-7	Potassium	1310			P
7782-49-2	Selenium	0.44	U		F
7440-22-4	Silver	0.89	U		P
7440-23-5	Sodium	173	B		P
7440-28-0	Thallium	0.24	B	W	F
7440-62-2	Vanadium	17.0			P
7440-66-6	Zinc	2870			P
	Cyanide	19.9		N	C

TMK 12/13/89

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: COLORLESS Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS:_CLUMPS_OF_CLAY_AND_ROOTS.

FORM I - IN

7/88

U.S. EPA - CLP

00008

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEFM93

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Matrix (soil/water): SOIL_ Lab Sample ID: MEFM93____

Level (low/med): LOW__ Date Received: 10/05/89

% Solids: _85.8

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum_	14600			P_	
7440-36-0	Antimony_	8.2	U	N	P_	
7440-38-2	Arsenic__	8.8	B	S	F_	
7440-39-3	Barium___	80.9			P_	
7440-41-7	Beryllium	0.74	B		P_	
7440-43-9	Cadmium__	6.5			P_	
7440-70-2	Calcium__	22800			P_	
7440-47-3	Chromium_	87.7			P_	
7440-48-4	Cobalt___	11.2	B		P_	
7440-50-8	Copper___	76.2			P_	
7439-89-6	Iron_____	26100 ~~2740~~			P_	TML 12/13/89
7439-92-1	Lead_____	15.1			F_	
7439-95-4	Magnesium	7070			P_	
7439-96-5	Manganese	390			P_	
7439-97-6	Mercury__	0.06	U		CV	
7440-02-0	Nickel___	50.1			P_	
7440-09-7	Potassium	1760			P_	
7782-49-2	Selenium_	0.47	U		F_	
7440-22-4	Silver___	0.93	U		P_	
7440-23-5	Sodium___	141	B		P_	
7440-28-0	Thallium_	0.42	B		F_	
7440-62-2	Vanadium_	29.7			P_	
7440-66-6	Zinc_____	332			P_	
_____	Cyanide__	0.80		~~N~~	C_	TML 12/13/89

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: COLORLESS Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: ROOTS

FORM I - IN

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEFM94

Lab Code: BETZ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Matrix (soil/water): SOIL Lab Sample ID: MEFM94

Level (low/med): LOW Date Received: 09/27/89

% Solids: 89.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11400			P
7440-36-0	Antimony	7.9	U	N	P
7440-38-2	Arsenic	9.0			F
7440-39-3	Barium	68.1			P
7440-41-7	Beryllium	0.60	B		P
7440-43-9	Cadmium	26.4			P
7440-70-2	Calcium	46800			P
7440-47-3	Chromium	445			P
7440-48-4	Cobalt	5.9	B		P
7440-50-8	Copper	283			P
7439-89-6	Iron	21800			P
7439-92-1	Lead	31.6			F
7439-95-4	Magnesium	17400			P
7439-96-5	Manganese	488			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	325			P
7440-09-7	Potassium	1760			P
7782-49-2	Selenium	0.45	U		F
7440-22-4	Silver	0.90	U		P
7440-23-5	Sodium	190	B		P
7440-28-0	Thallium	0.34	B	W	F
7440-62-2	Vanadium	24.2			P
7440-66-6	Zinc	1350			P
	Cyanide	32.5			C

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: YELLOW Clarity After: _____ Artifacts: YES

Comments:
ARTIFACTS: ROOTS

U.S. EPA - CLP

00010

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MEFM95

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Matrix (soil/water): SOIL_ Lab Sample ID: MEFM95____

Level (low/med): LOW__ Date Received: 10/05/89

% Solids: _88.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	11400			P_
7440-36-0	Antimony_	7.9	U	N	P_
7440-38-2	Arsenic__	5.1			F_
7440-39-3	Barium___	78.6			P_
7440-41-7	Beryllium	0.64	B		P_
7440-43-9	Cadmium__	25.1			P_
7440-70-2	Calcium__	74300			P_
7440-47-3	Chromium_	624			P_
7440-48-4	Cobalt___	9.7	B		P_
7440-50-8	Copper___	331			P_
7439-89-6	Iron_____	23200			P_
7439-92-1	Lead_____	14.7			F_
7439-95-4	Magnesium	14600			P_
7439-96-5	Manganese	573			P_
7439-97-6	Mercury__	0.05	U		CV
7440-02-0	Nickel___	223			P_
7440-09-7	Potassium	2290			P_
7782-49-2	Selenium_	0.45	U		F_
7440-22-4	Silver___	0.90	U		P_
7440-23-5	Sodium___	218	B		P_
7440-28-0	Thallium_	0.39	B	W	F_
7440-62-2	Vanadium_	25.1			P_
7440-66-6	Zinc_____	1480			P_
	Cyanide__	14.7		N	C_

TMC 12/13/89

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: ROOTS.

FORM 1 - IN

7/88

U.S. EPA - CLP

3
BLANKS

00025

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	30.0	U	30.0	U	30.0	U	30.0	U	6.000	U	P
Antimony	35.0	U	35.0	U	35.0	U	35.0	U	7.000	U	P
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	F
Barium	17.0	U	17.0	U	17.0	U	17.0	U	3.400	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Cadmium	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
Calcium	157.0	U	157.0	U	157.0	U	157.0	U	31.400	U	P
Chromium	6.0	U	6.0	U	6.0	U	6.0	U	1.200	U	P
Cobalt	5.0	U	5.0	U	5.0	U	5.0	U	1.000	U	P
Copper	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
Iron	11.0	U	11.0	U	11.0	U	11.0	U	8.096	B	P
Lead	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	F
Magnesium	163.0	U	163.0	U	163.0	U	163.0	U	32.600	U	P
Manganese	3.5	B	3.8	B	3.9	B	3.4	B	0.720	B	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	B	0.050	U	CV
Nickel	15.0	U	17.5	B	15.0	U	15.0	U	3.000	U	P
Potassium	900.0	U	900.0	U	900.0	U	900.0	U	180.000	U	P
Selenium	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	F
Silver	4.0	U	4.0	U	4.0	U	4.0	U	0.800	U	P
Sodium	235.0	U	235.0	U	235.0	U	235.0	U	47.000	U	P
Thallium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	F
Vanadium	4.7	B	4.0	U	4.0	U	4.0	U	0.800	U	P
Zinc	2.0	U	2.0	U	2.0	U	-2.6	B	-0.606	B	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	0.250	U	C

U.S. EPA - CLP

00026

3
BLANKS

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony	-38.4	B	-44.1	B	35.0	U	35.0	U			P
Arsenic			2.0	U							F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead			1.0	U	1.0	U					F
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium			2.0	U							F
Silver											NR
Sodium											NR
Thallium			1.0	U							F
Vanadium											NR
Zinc	8.1	B	9.9	B	13.4	B	6.2	B			P
Cyanide									0.250	U	C

00027

3
BLANKS

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U			F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide									0.250	U	C

3
BLANKS

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic			2.0	U							F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

U.S. EPA - CLP

00031

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEAE29S

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract:68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Matrix: __SOIL_____ Level (low/med): _LOW____

% Solids for Sample: _90.2

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	58.5876		7.7605	U	110.86	52.8	N	P
Arsenic	75-125	9.7960		1.2667	B	8.87	96.2		F
Barium	75-125	475.2927		21.8182	B	443.46	102.3		P
Beryllium	75-125	10.8780		0.2217	U	11.09	98.1		P
Cadmium	75-125	10.2306		0.6652	U	11.09	92.3		P
Calcium									NR
Chromium	75-125	51.2816		11.5721		44.35	89.5		P
Cobalt	75-125	109.4612		1.2084	B	110.86	97.6		P
Copper	75-125	76.6519		17.0488		55.43	107.5		P
Iron									NR
Lead		160.9756		145.9463		4.43	339.3		F
Magnesium									NR
Manganese	75-125	170.1774		66.8027		110.86	93.2		P
Mercury	75-125	0.6297		0.0554	U	0.55	114.5		CV
Nickel	75-125	108.1818		3.3259	U	110.86	97.6		P
Potassium									NR
Selenium	75-125	2.1286		0.4391	U	2.22	95.9		F
Silver	75-125	8.8581		0.8869	U	11.09	79.9		P
Sodium									NR
Thallium	75-125	9.8537		0.2195	U	11.09	88.9		F
Vanadium	75-125	112.1375		9.4479	B	110.86	92.6		P
Zinc	75-125	178.8448		76.1486		110.86	92.6		P
Cyanide	75-125	5.5584		0.5656	U	5.9313 ~~11.87~~	93.7 ~~46.8~~		C

DMC 12/13/9

Comments:

FORM V (Part 1) - IN 7/88

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

00032

EPA SAMPLE NO.

MEAE29A

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

Matrix: ____SOIL_____ Level (low/med): LOW_____

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									NR
Antimony		71.94		35.00	U	120.0	60.0		P
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:
ARTIFACTS:_CLUMPS_OF_CLAY_AND_PLANT_MATTER.

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

MEAE28D

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

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

% Solids for Sample: _89.9 % Solids for Duplicate: __90.4

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		10924.5184		10926.9700		0.0		P
Antimony		7.7864	U	7.7864	U			P
Arsenic	2.2	4.4119		4.4163		0.1		F
Barium	44.5	64.4627		64.6541		0.3		P
Beryllium		0.5895	B	0.5962	B	1.1		P
Cadmium		0.6674	U	0.6674	U			P
Calcium		43173.9310		43564.8721		0.9		P
Chromium		38.3226		37.5907		1.9		P
Cobalt		4.3626	B	5.0033	B	13.7		P
Copper		67.7041		68.1424		0.6		P
Iron		18779.6418		18922.4627		0.8		P
Lead		15.3306		17.6874		14.3		F
Magnesium		10047.9978		10106.9210		0.6		P
Manganese		290.3560		292.3582		0.7		P
Mercury		0.0567	B	0.0556	U	200.0		CV
Nickel	8.9	25.6574		25.1257		2.1		P
Potassium	1112.3	1789.7330		1711.0189		4.5		P
Selenium		0.4405	U	0.4405	U			F
Silver		0.8899	U	0.8899	U			P
Sodium		170.9010	B	168.2825	B	1.5		P
Thallium		0.2423	B	0.2247	B	7.5		F
Vanadium	11.1	23.8287		23.9867		0.7		P
Zinc		119.9889		117.3749		2.2		P
Cyanide	0.6	2.7898		2.7281		2.2		C

10

Instrument Detection Limits (Quarterly)

Lab Name: BETZ_LABS_THE_WOODLANDS__ Contract: 68-D9-0083

Lab Code: BETZ__ Case No.: 12811 SAS No.: _____ SDG No.: MEAE28

ICP ID Number: ICP523_____ Date: 10/15/89

Flame AA ID Number : MAS50B_____

Furnace AA ID Number : AAS6488_____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	237.34		200	30.0	P
Antimony	217.59		60	35.0	P
Arsenic	197.20	BZ	10	2.0	F
Barium	493.41		200	17.0	P
Beryllium	313.11		5	1.0	P
Cadmium	214.44		5	3.0	P
Calcium	317.93		5000	157.0	P
Chromium	267.72		10	6.0	P
Cobalt	228.62		50	5.0	P
Copper	324.75		25	3.0	P
Iron	259.94		100	11.0	P
Lead	283.30	BZ	3	1.0	F
Magnesium	383.83		5000	163.0	P
Manganese	257.61		15	2.0	P
Mercury	253.70		0.2	0.1	CV
Nickel	231.60		40	15.0	P
Potassium	766.47		5000	900.0	P
Selenium	196.00	BZ	5	2.0	F
Silver	328.07		10	4.0	P
Sodium	589.59		5000	235.0	P
Thallium	276.80	BZ	10	1.0	F
Vanadium	292.40		50	4.0	P
Zinc	213.86		20	2.0	P

Comments:

To: Jequkie Griffin

Post Site Inspection

Site Name: Wauseon Manufacturing Co. (Fulton Ind.) I.D. Number OHD980610885

Date of Inspection: Sept. 26, 1989

Was Work Plan Followed Y (N)
If no, explain briefly:

The site had a 3-acre soy bean crop on site. FIT did not sample in that location; therefore, one sample was deleted
Eight of Nine soil samples were collected.

Were Samples Collected? (Y) N
Residential Wells Sampled? Y (N)

Anticipated Analysis Report From:

CRL Jan. 2, 1990

CLP Jan. 2, 1990

Anticipated SI Completion: March 26, 1990

Removal Investigation Recommended Y (N)
If yes, explain briefly:

Unanticipated Problems Encountered Y (N)
If yes, explain briefly:

Follow-up site work necessary Y (N)
If yes, explain briefly:

SAMPLE DESCRIPTION

SITE NAME/TDD# WAUSEON MANUFACTURING CO. WAUSEON OHIO / F05-8711-095

CASE NUMBER 12811

SAMPLE #/STATION LOCATION S5

SAMPLING DATE - 09/26/89 SAMPLING TIME 1125

ORGANIC TRAFFIC NUMBER EFS 04

INORGANIC TRAFFIC NUMBER MEF M195

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
120ml	VOA	5-184 392	G8200074
120ml	VOA	5-184 393	— Do —
8 oz	Extractables	5-184 394	F91 581 544
8 oz	Metals / CN	5-184 395	— Do —

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Silty, Sand & Clay

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS - N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# WAUSEON MANUFACTURING CO. WAUSEON, OHIO / F05-8711-095

CASE NUMBER 12811

SAMPLE #/STATION LOCATION S6

SAMPLING DATE - 09/26/89 SAMPLING TIME 1135

ORGANIC TRAFFIC NUMBER EFS.05

INORGANIC TRAFFIC NUMBER MEAE 28

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
120ml	VOA	5-184396	D 82 52094
120ml	VOA	5-184397	— Do —
8 oz	Extractables	5-184398	F 9158 544
8 oz	Metals / CN	5-184399	— Do —

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dry, Silty, Sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS - N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# WAUSEON MANUFACTURING CO. WAUSEON, OHIO / F05-8711-095

CASE NUMBER 12811

SAMPLE #/STATION LOCATION S7

SAMPLING DATE - 09/26/89 SAMPLING TIME 1225

ORGANIC TRAFFIC NUMBER EFS 06

INORGANIC TRAFFIC NUMBER MEAE 29

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
120ml	VOA	5-072 386	D8202174
120ml	VOA	5-072 387	D 8287194
8 oz	Extractables	5-072 388	F91 58544
8 oz	Metals / CN	5-072389	- Do -

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dry, Brown, Soil

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS - N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# WAUSEON MANUFACTURING CO. WAUSEON OHIO / F05-8711-095

CASE NUMBER 12811

SAMPLE #/STATION LOCATION S1

SAMPLING DATE - 09/26/89 SAMPLING TIME 1035

ORGANIC TRAFFIC NUMBER EDB 96.

INORGANIC TRAFFIC NUMBER MEEG 89

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
120ml	VOA	5-184 376	D82 31054
120ml	VOA	5-184 377	—Do—
8 oz	Extractables	5-184 378	F9090 094
8 oz	Metals / CN	5-184 379	—Do—

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Moist, Dark, Clay

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS - N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# WAUSEON MANUFACTURING CO. WAUSEON, OHIO / F05-8711-095

CASE NUMBER 12811

SAMPLE #/STATION LOCATION S2

SAMPLING DATE - 09/26/89 SAMPLING TIME 1050

ORGANIC TRAFFIC NUMBER EDB 97

INORGANIC TRAFFIC NUMBER MEEG 90

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
120ml	VOA	5-184380	D82 31054
120ml	VOA	5-184381	— Do —
8 oz	Extractables	5-184382	F 9090094
8 oz	Metals / CN	5-184383	— Do —

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Sandy, Silty, Brown

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS - N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# WAUSEON MANUFACTURING CO. WAUSEON OHIO / F05-8711-095

CASE NUMBER 12811

SAMPLE #/STATION LOCATION S3

SAMPLING DATE - 09/26/89 SAMPLING TIME 1100

ORGANIC TRAFFIC NUMBER EFS.02

INORGANIC TRAFFIC NUMBER MEFM 93

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
12 cml	VOA	5-184384	082 31054
12 cml	VOA	5-184385	— Do —
8 oz	Extractables	5-184386	F 9090094
8 oz	Metals / CN	5-184387	— Do —

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Silty sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS - N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# WAUSEON MANUFACTURING CO. WAUSEON, OHIO / F05-8711-095

CASE NUMBER 12811

SAMPLE #/STATION LOCATION S4

SAMPLING DATE - 09/26/89 SAMPLING TIME 1115

ORGANIC TRAFFIC NUMBER EFS.03

INORGANIC TRAFFIC NUMBER ME FM 94

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
120ml	VOA	5-184388	D82 31044
120ml	VOA	5-184389	— Do —
8 oz	Extractables	5-184390	F 9090094
8 oz	Metals / CN	5-184391	— Do —

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dry, Silty Sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS - N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# WAUSEON MANUFACTURING CO. WAUSEON, OHIO / FOS-8711-095

CASE NUMBER 12811

SAMPLE #/STATION LOCATION S8

SAMPLING DATE - 09/26/89 SAMPLING TIME 1235

ORGANIC TRAFFIC NUMBER EFS07

INORGANIC TRAFFIC NUMBER MEAE 30

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
120ml	VOA	5-072 390	D82 0218
120ml	VOA	5-072391	D 82 31044
8 oz	Extractables	5-072 392	F90 81064
8 oz	Metals / CN	5-072393	— Do —

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dry, brown soil

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS - N/A

pH

CONDUCTIVITY

TEMPERATURE

Confined X
Cancel

SAMPLE PROPOSAL
FIT REGION V

1. Date Form Completed 7/14/89

2. Account # FOH0481 TDD #

EPA I.D. # OHD980610885

3. Site Name, City, State Wauseon Mfg Ltd
Wauseon, Ohio

4. Team Leader Evelyn Mayes Sampler Mathew Joseph

5. Number and Type of Samples:

Soil/Sediment 9 Surface Water Ground Water

Residential/Municipal Wells Other

Number of Blanks Number of Duplicates

6. RAS Parameters Requested:

A/B/N ✓ Pest/PCB ✓ Volatiles ✓ Metals ✓ Cyanide ✓

SAS Parameters Requested:

7. Expected Sampling Date(s): Week of 9-25-89

Expected Shipping Date(s):

8. Lab Used For Analysis: Organic VOA AQUATECH BNA P/P - ETC TOX

Inorganic BETZ (TX)

SAS

9. Case Number 12811 SAS Number

10. Airbill Numbers:

Organic Lab AQUATEC 3142101640 ETC TOX 3142101642 # Coolers 1 # Samples 8 8

Inorganic Lab BETZ 3142101701 # Coolers 1 # Samples 8

CRL/SAS Lab # Coolers # Samples

9-26-89

Complete cooler