US EPA RECORDS CENTER REGION 5
407260

SPECIAL STUDY REPORT
FOR
U.S. SCRAP
CHICAGO, ILLINOIS
U.S. EPA ID: ILD980679484
SS ID: ILZ8
TDD: F05-8611-193
PAN: FIL0102VA

VOLUME 4 OF 6

OCTOBER 10, 1990

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

recycled paper

TABLE OF CONTENTS

VOLUME 4

Appendix

I ANALYTICAL RESULTS OF FIT-COLLECTED SAMPLES 1987-1988 (Cont.)

APPENDIX I

ANALYTICAL RESULTS OF FIT-COLLECTED SAMPLES
1987-1988 (Cont.)

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

CRL Receipt Date 11/30 FIT Receipt Date 1/25 Review Completed 3/2/88

TO: Carman
FROM: Loretta Guzdziol
SUBJECT: US Scrap
PAN: IL0102 (1 hour charged for review) Case # 8288

Sample Description

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

Project Data Status _____ Completed!!

✓ Incomplete, awaiting Case 8288 is NOT complete, more - 2 org soil more

Scrap data out under other Case #'s as well

FIT Data Review Findings:

Common lab artifact found - methylene chloride 73
& Estimated Toluene Concentration.
Reanalyzed due to a matrix effect

Check Data Sheets for Transcription Errors

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

Book No. 7 Page No. 64 Date Sampled 10/27/87

recycled paper

Rec'd 1/25/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 1-21-88

SUBJECT: Review of Region V CLP Data
Received for Review on 11-30-87

FROM Curtis Ross, Director (5SCRL)
Central Regional Laboratory Kleur B Bolger for

TO. Data User: FIT

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

SITE NAME: US SCRAP SMO Case No. 8288

EPA Data Set No. SF 4510 No. of Samples: 1 D.U./Activity Numbers 8TFA05WUZZ Y905/C72100

CRL No. 88FC03S85

SMO Traffic No. EP989

CLP Laboratory: ERCO Hrs. Required for Review: .5

Following are our findings:

One low level soil, EP989, with a repeat run of EP989RE, was analyzed for volatiles, semivolatiles (BNA), and Pest/PCB. EP989RE was run due to matrix effect.

Low level water method blank was used as volatile 'procedural blank.'

1. Sample Holding Times:
Sample holding time met the required period from receipt to extraction.

( ) 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

DATA QUALIFIERS

Contractor: ERCO

Case 8288

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

2. GC/MS Tuning and GC Instrument Performance:

DFTPP and BFB were within the given % relative ion abundance QC limits.

GC performance was acceptable meeting the given criteria.

3. Calibration:

Initial calibration and continuing calibration showed SPCC and CCC to be within the given QC limits for volatiles and semivolatiles. The HSL compounds of the above are recorded in the "Outlier Forms" and appropriately flagged.

4. Blanks:

In three low level water method blank runs, first and third run were absent of contaminants and the second run showed methylene chloride as contaminant but less than 10 times CRDL. The two low level ABN blanks also showed some common contaminants that were less than 10 times the CRDL. The Pest/PCB blank was free of contaminant.

Samples EP989 and EP989 RE showed detectable levels of methylene chloride in the volatile fraction. The parameter for this compound in the sample have been flagged appropriately.

5. Surrogate Recoveries:

Low level water and soil % Surr Rec, water blank used for volatiles only and soil blank for volatiles, semivolatiles and Pest/PCB to analyze EP989; its MS/MSD, EP989 RE

Reviewed by: T.G.

Phone: (352) 353-2960

Date: 1/12/88

DATA QUALIFIERS

Contractor: ERCO

Case 8288

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

and ERCO blank 1 and 2 were all within the given QC parameter.

6. MS/MSD:

The low level soil MS and MSD of EP 989, MS/MSD % Rec. of volatiles, ABN and Pest/PCB fell within the QC parameter except for lindane which fell below the MSD % Rec. RPD of all the compounds met the QC limits.

7. Detailed Case Specific Problems:

The results are acceptable as reported. There was no major problem which will cause adverse effect on the analysis of the sample.

Additional Qualifiers (K. Belger 1-20-88)

3. ALL compounds (HSL) are examined for outliers and indicated as outlier forms

6. Matrix Spike/MSD: Lindane in unspiked native sample of EP989 is flagged LLI (estimated DL) due to high recovery in MSD.

Kevin B Belger (312)353-4676 1-21-88

Reviewed by: [signature]

Phone: (312) 353-2960

Date: 1/12/88

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

CASE/SAS # 8288 CONTRACTOR/ ENSECO

Instrument # U3	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	10/13/87			10/29/87 21:05			10/28/87 20:21			10/28/87 4:52					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane				1.49	28.6	J	1.49	35.0	J	1.49	31.2	J			
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide				[illegible]	108.0	J	[illegible]	109.7	J	[illegible]	103.5	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				[illegible]	106.2	J									
AFFECTED SAMPLES:				VSTD 5D			VSTD 5D			VSTD 5D					
				H_2O Blk			H_2O Blk			H_2O Blk					
				EP 989			EP 989 MSD			EP 989					
										EP 989 MS					

Reviewer's Initials/Date: [illegible] 1/12/88

* 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 1)

CASE/SAS # 8288 CONTRACTOR ENSECO

Instrument # S3	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	11/13/87			11/13/87 17:35											
	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															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
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	.16	64.0	J	.16	375	J									
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

ERCG BLK
EP 989
EP 989 Spk
E989 Spk Dup

Reviewer Initials/Date: T.G. 1/12/88

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

8/87

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

CASE/SAS # 8288 CONTRACTOR ENSECO

Instrument #S3	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	11/13/87			11/13/87 17:45											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
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					57.6	J									
Benzo(a)Pyrene															
* Indeno(1,2,3-cd)Pyrene	.78	39.7	J												
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: T.G. 1/12/88

8/87

Case: 8288

Contractor: ERCD

TENTATIVELY IDENTIFIED COMPOUNDS
MATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Perry N. Gamacchi

SAMPLE DATE: 10/21/87
LOG IN DATE: 11/4/87
DUE DATE: 12/30/87

CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS

SUPERFUND 4510

THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

CASE NUMBER/SAS No. 8288 SITE NAME US Scrap LABORATORY ERCO CAL/EPS DATE SHIPPED 10/21/87

SUPERFUND DU NUMBER 4905 EPA RPM or OSC (S.M.S.)/(CES) CERCLIS NUMBER ILD986679484 PAGE 1 OF 1

ACTIVITY NUMBER C72100

CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	INORGANIC TRAFFIC REPORT NUMBER	WATER OR LIQUIDS													SEDIMENTS or SOILS										
			ACID-BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17574	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17564	WATER POLYCHLORINATED BIPHENYLS UG/L PES 17144	WATER CHLORINATED PESTICIDES UG/L PES17134	TOTAL METALS IN WATER UG/L MET111	WATER CYANIDE UG/L MIN74919	NITRATE/NITRITE MG/L MIN7284	AMMONIA MG/L MIN7294	RESIDUE, FILTERABLE TDS MG/L MIN7362	RESIDUE, NON-FILT TSS MG/L MIN7372			ACID-BASE NEUTRAL CPDS ORGANIC SCAN MG/KG TOX215722	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN MG/KG TOX215622	SEDIMENTS POLYCHLORINATED BIPHENYLS MG/KG PES211422	SEDIMENT CHLORINATED PESTICIDES MG/KG 211322	TOTAL METALS MG/KG MET413	CYANIDE MG/KG MIN44930	EP TOXICITY METALS MG/KG	AMMONIA MG/KG MIN42925				
88FC03595	EP989	MER571													✓	✓	✓	✓	✓	✓						

Enseco

RECEIVED
NOV 25 1987
U.S. EPA CENTRAL
REGIONAL LAB

November 24, 1987

Case Narrative

U.S. EPA Case 8288
Contractor: Enseco Incorporated
Contract Number: 68-01-7147
Region V

1. The results for Case 8288 will be sent in two separate data packages since the samples arrived at different times. The first package, which is enclosed, contains the results for one soil sample, EP 989. We received the sample on October 22, 1987.

2. The analyses were performed by the Erco Laboratory under California Analytical Laboratory's contract.

3. Due to the low internal standard areas in the volatile fraction of sample EP 989, the sample was reanalyzed. Since these areas were also low in the reanalysis, the sample showed a matrix effect.

Elizabeth J. McCarthy

Elizabeth McCarthy
Data Control Manager

205 Alewife Brook Parkway
Cambridge, Massachusetts 02138
617/661-3111 Facsimile 617/354-5258

WATER SURROGATE PERCENT RECOVERY SUMMARY

Case No. 8288 Contract Laboratory Enseco Inc.- Erco Laboratory Contract No. 108.01.7147

	SMO TRAFFIC NO.	VOLATILE: TOLUENE-D8 (88-110)	VOLATILE: BFB (86-115)	VOLATILE: 1,2 DICHLORO-ETHANE-D4 (76-114)	SEMI-VOLATILE: NITRO-BENZENE-D5 (35-114)	SEMI-VOLATILE: 2-FLUORO-BIPHENYL (43-116)	SEMI-VOLATILE: TERPHENYL-D14 (33-141)	SEMI-VOLATILE:	SEMI-VOLATILE:	SEMI-VOLATILE: PHENOL-D5 (10-94)	SEMI-VOLATILE: 2-FLUORO-PHENOL (21-100)	SEMI-VOLATILE: 2,4,6 TRIBROMO-PHENOL (10-123)	PESTICIDE: ** DIBUTYL-CHLORENDATE (24-154)
Blk 1	L9534B	99	100	94									
Blk 2	L9688B	102	103	91									
Blk 3	L9797B	99	99	95									

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 9 ; outside of QC limits

Semi-Volatiles: — out of — ; outside of QC limits

Pesticides: — out of — ; outside of QC limits

Comments:

7/85

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 3788 Contract Laboratory Enseco Inc.- Erco Laboratory Contract No. 68-01-7147

Low X Medium _____

	VOLATILE			SEMI-VOLATILE								PESTICIDE**
SMO TRAFFIC NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLORO-ETHANE-D4 (70-121)	NITRO-BENZENE-D5 (23-120)	2-FLUORO-BIPHENYL (30-115)	TERPHENYL-D14 (18-137)			PHENOL-D5 (24-113)	2-FLUORO-PHENOL (25-121)	2,4,6 TRIBROMO-PHENOL (19-122)	DIBUTYL-CHLORENDATE (20-150)
EP939	106	100	96	72	78	82			66	69	59	145
EP939MS	107	101	95	77	82	87			80	77	76	60
EP939MSD	104	99	96	74	79	85			76	72	59	99
rerun EP939	114	95	92									
ErcoBlank1				74	76	80			69	74	76	
ErcoBlank2												57

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 12 ; outside of QC limits

Semi-Volatiles: 0 out of 24 ; outside of QC limits

Pesticides: 0 out of 4 ; outside of QC limits

7/85

Comments: _____

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 8288 **Contractor** Enseco - Erco Laboratory **Contract No.** 68-01-7147

Low Level ✓ **Medium Level** _____

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EP989	1,1-Dicholorethene	98 90	0	90	93	71	79	15	22	59-172
	Trichloroethene	98 90	0	81	83	68	76	8.8	24	62-137
	Chlorobenzene	98 90	0	83	84	73	81	3.6	21	60-133
	Toluene	98 90	4.1	94	92	77	81	13	21	59-139
	Benzene	98 90	0	92	93	80	88	5.5	21	66-142
B/N SMO SAMPLE NO. EP989	1,2,4-Trichlorobenzene	4200 / 5700	0	3000	71	3900	68	4.3	23	38-107
	Acenaphthene	4200 / 5700	0	3400	80	4400	77	3.8	19	31-137
	2,4 Dinitrotoluene	4200 / 5700	0	3200	77	3900	67	14	47	28-89
	Pyrene	4200 / 5700	0	3600	84	4600	80	4.9	36	35-142
	N-Nitrosodi-n-Propylamine	4200 / 5700	0	3200	75	4000	70	6.9	38	41-126
	1,4-Dichlorobenzene	4200 / 5700	0	2900	70	3700	65	7.4	27	28-104
ACID SMO SAMPLE NO. EP989	Pentachlorophenol	8500 / 11000	0	3600	42	3100	27	43	47	17-109
	Phenol	8500 / 11000	0	5500	65	7200	63	3.1	35	26-90
	2-Chlorophenol	8500 / 11000	0	7100	84	9000	78	7.4	50	25-102
	4-Chloro-3-Methylphenol	8500 / 11000	0	5900	69	7700	67	2.9	33	26-103
	4-Nitrophenol	8500 / 11000	0	5600	66	6900	60	9.5	50	11-114
PEST SMO SAMPLE NO. EP 989	Lindane	7.3 7.2	0	3.7	51	2.6	36 *	34	50	46-127
	Heptachlor	7.3 7.2	0	3.5	48	4.7	65	29	31	35-130
	Aldrin	7.3 7.2	0	2.9	40	3.7	51	24	43	34-132
	Dieldrin	18.3 18.1	0	8.8	48	10.8	60	20	38	31-134
	Endrin	18.3 18.1	0	8.4	46	10.0	55	17	45	42-139
	4,4'-DDT	18.3 18.1	0	8.4	46	9.9	55	16	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 0 out of 5 ; outside QC limits
B/N 0 out of 6 ; outside QC limits
ACID 0 out of 5 ; outside QC limits
PEST 1 out of 6 ; outside QC limits

RECOVERY: VOAs 0 out of 10 ; outside QC limits
B/N 0 out of 12 ; outside QC limits
ACID 0 out of 10 ; outside QC limits
PEST 0 out of 12 ; outside QC limits

Comments: _____

3

FORM III

7/85

METHOD BLANK SUMMARY

Case No. 8288 Region — Contractor Enseco Inc.- Erco Laboratory Contract No. 68-01-7147

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRQL
L9154 / Method Blank 1	10.27.87	VOA	water	low	V3	—	none detected	—	—	—
L9168 / Method Blank 2	10.28.87	VOA	water	low	V3	75.09.2	methylene chloride	2.2 J	µg/L	5 u
L9179 / Method Blank 3	10.28.87	VOA	water	low	V3	—	none detected	—	—	—
Erco Blank 1	11.13.87	ABN	Soil	low	S3	86.30.6	N-Nitrosodiphenylamine	200	µg/kg	540
						117.81.7	Bis(2-Ethyl hexyl) phthalate	460	µg/kg	540
						—	Unknown	1100	µg/kg	NA
						—	Unknown	1200	µg/kg	NA
						123.42.2	4-Hydroxy-4-Methyl-2-Pentanone*	54000	µg/kg	NA
						—	Unknown	550	µg/kg	NA
Erco Blank 2	11.17.87	PEST	Soil	low	GC#9	—	No pesticides found	—	—	—

Comments: * Possible aldol condensation product
NA = Not Applicable.

Sample Number
EP 989

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Enseco - Erco Laboratory
Case No. 8288
Lab Sample ID No 5681-01
QC Report No: 002-CAL
Sample Matrix. soil
Contract No. 68-01-7147
Data Release Authorized By: [signature]
Date Sample Received. 10.20.87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10.28.87
Date Analyzed: 10.28.87
Conc/Dil Factor: 1.9 pH 9.1
Percent Moisture: (Not Decanted) 16%

See Rerun due to low IS areas.

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	19U
74-83-9	Bromomethane	19U
75-01-4	Vinyl Chloride	19U
75-00-3	Chloroethane	19U
75-09-2	Methylene Chloride	73B J
67-64-1	Acetone	19U
75-15-0	Carbon Disulfide	9.5U
75-35-4	1, 1-Dichloroethene	9.5U
75-34-3	1, 1-Dichloroethane	9.5U
156-60-5	Trans-1, 2-Dichloroethene	9.5U
67-66-3	Chloroform	9.5U
107-06-2	1, 2-Dichloroethane	9.5U
78-93-3	2-Butanone	19U
71-55-6	1, 1, 1-Trichloroethane	9.5U
56-23-5	Carbon Tetrachloride	9.5U
108-05-4	Vinyl Acetate	19U
75-27-4	Bromodichloromethane	9.5U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	9.5U
10061-02-6	Trans-1, 3-Dichloropropene	9.5U
79-01-6	Trichloroethene	9.5U
124-48-1	Dibromochloromethane	9.5U
79-00-5	1, 1, 2-Trichloroethane	9.5U
71-43-2	Benzene	9.5U
10061-01-5	cis-1, 3-Dichloropropene	9.5U
110-75-8	2-Chloroethylvinylether	19U
75-25-2	Bromoform	9.5U
108-10-1	4-Methyl-2-Pentanone	19U
591-78-6	2-Hexanone	19U
127-18-4	Tetrachloroethene	9.5U
79-34-5	1, 1, 2, 2-Tetrachloroethane	9.5U
108-88-3	Toluene	4.1J
108-90-7	Chlorobenzene	9.5U
100-41-4	Ethylbenzene	9.5U
100-42-5	Styrene	9.5U
	Total Xylenes	9.5U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

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

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

1/13/88 } J KBB 1-21-88
[illegible]

Laboratory Name Enseco - Erco Laboratory

Case No: 8288

Sample Number EP 989

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 10/23/87

Date Analyzed: 11/13/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 23

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	670u
111-44-4	bis(-2-Chloroethyl)Ether	670u
95-57-8	2-Chlorophenol	670u
541-73-1	1, 3-Dichlorobenzene	670u
106-46-7	1, 4-Dichlorobenzene	670u
100-51-6	Benzyl Alcohol	670u
95-50-1	1, 2-Dichlorobenzene	670u
95-48-7	2-Methylphenol	670u
39638-32-9	bis(2-chloroisopropyl)Ether	670u
106-44-5	4-Methylphenol	670u
621-64-7	N-Nitroso-Di-n-Propylamine	670u
67-72-1	Hexachloroethane	670u
98-95-3	Nitrobenzene	670u
78-59-1	Isophorone	670u
88-75-5	2-Nitrophenol	670u
105-67-9	2, 4-Dimethylphenol	670u
65-85-0	Benzoic Acid	3300u
111-91-1	bis(-2-Chloroethoxy)Methane	670u
120-83-2	2, 4-Dichlorophenol	670u
120-82-1	1, 2, 4-Trichlorobenzene	670u
91-20-3	Naphthalene	670u
106-47-8	4-Chloroaniline	670u
87-68-3	Hexachlorobutadiene	670u
59-50-7	4-Chloro-3-Methylphenol	670u
91-57-6	2-Methylnaphthalene	670u
77-47-4	Hexachlorocyclopentadiene	670u
88-06-2	2, 4, 6-Trichlorophenol	670u
95-95-4	2, 4, 5-Trichlorophenol	3300u
91-58-7	2-Chloronaphthalene	670u
88-74-4	2-Nitroaniline	3300u
131-11-3	Dimethyl Phthalate	670u
208-96-8	Acenaphthylene	670u
90-09-2	3-Nitroaniline	3300u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	670u
51-28-5	2, 4-Dinitrophenol	3300u
100-02-7	4-Nitrophenol	3300u
132-64-9	Dibenzofuran	670u
121-14-2	2, 4-Dinitrotoluene	670u
606-20-2	2, 6-Dinitrotoluene	670u
84-66-2	Diethylphthalate	670u
7005-72-3	4-Chlorophenyl-phenylether	670u
86-73-7	Fluorene	670u
100-01-6	4-Nitroaniline	3300u
534-52-1	4, 6-Dinitro-2-Methylphenol	3300u
86-30-6	N-Nitrosodiphenylamine (1)	290 jb UJ
101-55-3	4-Bromophenyl-phenylether	670u
118-74-1	Hexachlorobenzene	670u
87-86-5	Pentachlorophenol	3300u
85-01-8	Phenanthrene	670u
120-12-7	Anthracene	670u
84-74-2	Di-n-Butylphthalate	670u
206-44-0	Fluoranthene	670u
129-00-0	Pyrene	670u
85-68-7	Butylbenzylphthalate	670u
91-94-1	3, 3'-Dichlorobenzidine	1300u
56-55-3	Benzo(a)Anthracene	670u
117-81-7	bis(2-Ethylhexyl)Phthalate	320 jb UJ
218-01-9	Chrysene	670u
117-84-0	Di-n-Octyl Phthalate	670u
205-99-2	Benzo(b)Fluoranthene	670u
207-08-9	Benzo(k)Fluoranthene	670u
50-32-8	Benzo(a)Pyrene	670u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	670u
53-70-3	Dibenz(a, h)Anthracene	670u
191-24-2	Benzo(g, h, i)Perylene	670u

(1)-Cannot be separated from diphenylamine

Form I 1/13/88 J KGB 1-21-88 7/85

Tilge

13 NOL

Laboratory Name ERCo/ENSECO

Case No 8288

Sample Number EP989

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 10-26-87

Date Analyzed 11-17-87

Conc/Dil Factor 20

Percent Moisture (decanted) 12 Pd-9.12

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	160U
319-85-7	Beta-BHC	160U
319-86-8	Delta-BHC	160U
58-89-9	Gamma-BHC (Lindane)	160U
76-44-8	Heptachlor	160U
309-00-2	Aldrin	160U
1024-57-3	Heptachlor Epoxide	160U
959-98-8	Endosulfan I	160U
60-57-1	Dieldrin	320U
72-55-9	4,4'-DDE	320U
72-20-8	Endrin	320U
33213-65-9	Endosulfan II	320U
72-54-8	4,4'-DDD	320U
1031-07-8	Endosulfan Sulfate	320U
50-29-3	4,4'-DDT	320U
72-43-5	Methoxychlor	1600U
53494-70-5	Endrin Ketone	320U
57-74-9	Chlordane	1600U
8001-35-2	Toxaphene	3200U
12674-11-2	Aroclor-1016	1600U
11104-28-2	Aroclor-1221	1600U
11141-16-5	Aroclor-1232	1600U
53469-21-9	Aroclor-1242	1600U
12672-29-6	Aroclor-1248	1600U
11097-69-1	Aroclor-1254	1600U
11096-82-5	Aroclor-1260	1600U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s NA or W_s 29.1 V_t 1000 V_i 2.0

EP 989
Rerun

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Enseco - Erco Laboratory
Case No.: 8238
Lab Sample ID No: 5681-01 Rerun
QC Report No: 001-CAL
Sample Matrix: soil
Contract No: 68-01-7147
Data Release Authorized By: [illegible]
Date Sample Received: 10.20.87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10.23.87
Date Analyzed: 10.23.87
Conc/Dil Factor: 1.8 pH 9.1
Percent Moisture: (Not Decanted) 16%

Shows a matrix effect.

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	18U
74-83-9	Bromomethane	18U
75-01-4	Vinyl Chloride	18U
75-00-3	Chloroethane	18U
75-09-2	Methylene Chloride	22 B
67-64-1	Acetone	18U
75-15-0	Carbon Disulfide	9U
75-35-4	1, 1-Dichloroethene	9U
75-34-3	1, 1-Dichloroethane	9U
156-60-5	Trans-1, 2-Dichloroethene	9U
67-66-3	Chloroform	9U
107-06-2	1, 2-Dichloroethane	9U
78-93-3	2-Butanone	18U
71-55-6	1, 1, 1-Tricnloroethane	9U
56-23-5	Carbon Tetrachloride	9U
108-05-4	Vinyl Acetate	18U
75-27-4	Bromodichloromethane	9U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	9U
10061-02-6	Trans-1, 3-Dichloropropene	9U
79-01-6	Trichloroethene	9U
124-48-1	Dibromochloromethane	9U
79-00-5	1, 1, 2-Trichloroethane	9U
71-43-2	Benzene	9U
10061-01-5	cis-1, 3-Dichloropropene	9U
110-75-8	2-Chloroethylvinylether	18U
75-25-2	Bromoform	9U
108-10-1	4-Methyl-2-Pentanone	18U
591-78-6	2-Hexanone	18U
127-18-4	Tetrachloroethene	9U
79-34-5	1, 1, 2, 2-Tetrachloroethane	9U
108-88-3	Toluene	4.6 J
108-90-7	Chlorobenzene	9U
100-41-4	Ethylbenzene	9U
100-42-5	Styrene	9U
	Total Xylenes	9U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS

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

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

1/13/88 { J KBB 1-21-88
9.4.

Laboratory Name Enseco Inc.- Erco Laboratory

Case No. 4288

Sample Number
EP 989
Rerun

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 76131	1,1,2-trichloro-1,2,2-trifluoroethane	VOA	444	16
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.				

Laboratory Name Enseco Inc.- Erco Laboratory

Case No 8288

Sample Number
EP 989

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown	BNA	285	1,500
2.	Unknown	BNA	293	540
3.	Unknown	BNA	302	290
4.	Unknown	BNA	307	390
5. 123-42-2	4-Hydroxy-4-methyl-2-pentanone *	BNA	331	64,000 /LT
6.	Unknown	BNA	428	850
7.	Unknown branched hydrocarbon	BNA	463	290
8. 1120-21-4	Undecane	BNA	647	440
9. 122-40-3	Dodecane	BNA	746	350
10.	$C_{13}H_{28}$ branched hydrocarbon	BNA	759	330
11.	$C_{13}H_{28}$ branched hydrocarbon	BNA	836	380
12.	Unknown	BNA	921	540
13.	C_8-Benzene isomer ($C_{14}H_{22}$)	BNA	972	330
14. 629-62-9	Pentadecane	BNA	1002	460
15.	$C_{19}H_{40}$ branched hydrocarbon	BNA	1154	390
16.				
17. 76131	1,1,2-trichloro-1,2,2-trifluoroethane	VOA	447	19
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

* possible aldol-condensation reaction product.

ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL 312-663-9415

International Specialists in the Environment

CRL Receipt Date _____ FIT Receipt Date _____ Review Completed _____

TO:

FROM: Brenda R. Jones

SUBJECT:

PAN: _____ (1 hour charged for review) Case # _____

Sample Description

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

Project Data Status _____ Completed!!

_____ Incomplete, awaiting _____

_____

FIT Data Review Findings:

Check Data Sheets for Transcription Errors

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

Book No. _____ Page No. _____ Date Sampled _____

recycled paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7

DATE: 1-13 88

SUBJECT: Review of Region 7 CLP Data
Received for Review on [illegible]

FROM: Curtis Fuss, Director (SSCR)
Central Region Laboratory Jay Thakkar

TO: Data Use : [illegible]

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

SITE NAME [illegible] SMO Case No. [illegible]
No. of [illegible] D.U. Activity
EPA Data Set No. [illegible] Samples [illegible] Numbers [illegible]

CRL No. [illegible]

SMO Traffic No. [illegible]

CLP Laboratory [illegible] Hrs. Required for Review 2.0

Following are our findings:

This review covers 1 high concentration soil sample analyzed for metals and cyanide.

Spike recoveries for Cr(31%), Mn(151%) are shown above. All Cr and Mn data are estimated.

All other QC audits are acceptable.

[illegible]

1 13 88

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
[illegible] Contract Laboratory.
[illegible]

[illegible] EPA Support Services
[illegible] EMSL, Las Vegas

P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS:8-557-2490

DATE 12/14/87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

QC REPORT: 6
SAS NO.: 3249I/SET 6
PROJECT NO.:5073.006

LAB NAME: VERSAR, INC.
SOW: HIGH CONC.

SAMPLE NUMBERS

EPA NO.	PHASE NO.	LAB ID NO.	EPA NO.	PHASE NO.	LAB ID NO.
3249I SET6 01	11	41945			

COMMENTS: All ICP parameter samples, standards, rinses, and interferences are diluted by a factor of five with deionized water prior to analysis. Further dilutions beyond this initial dilution will be noted as a total dilution factor for the applicable element on the individual FORM I's.

ICP INTERELEMENT AND BACKGROUND CORRECTION APPLIED? YES.
CORRECTIONS APPLIED BEFORE GENERATION OF RAW DATA.

FOOTNOTES:

NR - NOT REQUIRED BY CONTRACT AT THIS TIME
VALUE - IF THE RESULT IS A VALUE GREATER THAN THE CRDL, REPORT THE VALUE AS DESCRIBED IN SECTION C-3, EXHIBIT B.
F - INDICATES SAMPLE CONCENTRATION GREATER THAN FOUR TIMES THE ANALYTICAL SPIKE VALUE
U - INDICATES ELEMENT WAS ANALYZED FOR BUT NOT DETECTED. REPORT WITH THE DETECTION LIMIT VALUE (E.G., 10U).
E - INDICATES A VALUE ESTIMATED OR NOT REPORTED DUE TO THE PRESENCE OF INTERFERENCE. EXPLANATORY NOTE INCLUDED ON COVER PAGE.
S - INDICATES VALUE DETERMINED BY METHOD OF STANDARD ADDITION
M - INDICATES SPIKE SAMPLE RECOVERY IS NOT WITHIN CONTROL LIMITS.
* - INDICATES DUPLICATE ANALYSIS IS NOT WITHIN CONTROL LIMITS.
+ - INDICATES THE CORRELATION COEFFICIENT FOR METHOD OF STANDARD ADDITION IS LESS THAN 0.995
DF - DILUTION FACTOR

FORM I

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA. 22313
703/557-2490 FTS: 8-557-2490

SAMPLE NO.
3249I SET6 01
PHASE NO.
11

DATE: 12/14/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME: VERSAR INC.

SAS NO.: 3249I/SET 6

SOW NO.: HIGH CONC.

LAB SAMPLE ID. NO.: 41945

QC REPORT NO.: 6

PROJECT-TASK: 5073.006

BATCH: 1

ELEMENTS IDENTIFIED AND MEASURED IN MG/KG

HIGH CONCENTRATION

PHASE: 11(SOLID) X 12(WATER-MISCIBLE) 13(NONWATER-MISCIBLE)

1.	ALUMINUM	18100. F	13.	MAGNESIUM	8390.
2.	ANTIMONY	20. U S	14.	MANGANESE	255. M
3.	ARSENIC	20. U S	15.	MERCURY	0.3 U
4.	BARIUM	209.	16.	MOLYBDENUM	40. U
5.	BERYLLIUM	40. U	17.	NICKEL	40. U
6.	CADMIUM	10. U	18.	SELENIUM	20. U S
7.	CALCIUM	24500. F	19.	SILICON	134000. F
8.	CHROMIUM	49. M	20.	SILVER	40. U
9.	COBALT	200. U	21.	SODIUM	4000. U
10.	COPPER	68.	22.	THALLIUM	400. U
11.	IRON	22300. F	23.	TITANIUM	1150.
12.	LEAD	391.	24.	VANADIUM	200. U
	CYANIDE	15 U	25.	ZINC	511.
	SULFIDE	111.		PHASE PERCENT	100.

OXIDANTS: PH: CONDUCTIVITY:

FOOTNOTES: SEE COVER PAGE.
COMMENTS:

LAB MANAGER

WILLIAM T. NIVENS

CALIBRATION BLANKS

LAB NAME: VERSAR, INC. SAS NO.: 32491/SET 6

DATE: 12/14/87 UNITS: UG/L

MATRIX HOH

COMPOUND	INITIAL CALIBRATION BLANK VALUE	CONTINUING CALIBRATION BLANK VALUE 1	2	3	4
1. ALUMINUM	1000.U	1000.U	1000.U		
2. ANTIMONY					
3. ARSENIC					
4. BARIUM	300.U	300.U	300.U		
5. BERYLLIUM	100.U	100.U	100.U		
6. CADMIUM	25.U	25.U	25.U		
7. CALCIUM	2000.U	2000.U	2000.U		
8. CHROMIUM	70.U	70.U	70.U		
9. COBALT	500.U	500.U	500.U		
10. COPPER	100.U	100.U	100.U		
11. IRON	500.U	500.U	500.U		
12. LEAD	250.U	250.U	250.U		
13. MAGNESIUM	2000.U	2000.U	2000.U		
14. MANGANESE	100.U	100.U	100.U		
15. MERCURY	0.3U	0.3U			
16. MOLYBDENUM	100.U	100.U	100.U		
17. NICKEL	100.U	100.U	100.U		
18. SELENIUM					
19. SILICON	2000.U	2000.U	2000.U		
20. SILVER	100.U	100.U	100.U		
21. SODIUM	10000.U	10000.U	10000.U		
22. THALLIUM	1000.U	1000.U	1000.U		
23. TITANIUM	1000.U	1000.U	1000.U		
24. VANADIUM	500.U	500.U	500.U		
25. ZINC	100.U	100.U	100.U		
26. CYANIDE	30.U	30.U			

CALIBRATION BLANKS

LAB NAME: VERSAR, INC. SAS NO.: 3249I/SET 6

DATE: 12/14/87 UNITS: UG/L

MATRIX HOH

COMPOUND	INITIAL CALIBRATION BLANK VALUE	CONTINUING CALIBRATION BLANK VALUE 1	2	3	4
1. ALUMINUM					
2. ANTIMONY					
3. ARSENIC					
4. BARIUM					
5. BERYLLIUM					
6. CADMIUM					
7. CALCIUM					
8. CHROMIUM					
9. COBALT					
10. COPPER					
11. IRON					
12. LEAD					
13. MAGNESIUM					
14. MANGANESE					
15. MERCURY		0.3U	0.3U		
16. MOLYBDENUM					
17. NICKEL					
18. SELENIUM					
19. SILICON					
20. SILVER					
21. SODIUM					
22. THALLIUM					
23. TITANIUM					
24. VANADIUM					
25. ZINC					
26. CYANIDE					

LAB NAME: VERSAR, INC.
DATE: 12/14/87

SAS NO.: 3249I/SET 6
UNITS: MG/KG

MATRIX HOH

COMPOUND	CRDL	METHOD BLANK VALUES 1	METHOD BLANK VALUES 2	QCCS RESULTS (1) FOUND	QCCS RESULTS (1) TRUE	QCCS RESULTS (1) %R
1. ALUMINUM	400.	400. U				
2. ANTIMONY	20.	20. U				
3. ARSENIC	20.	20. U				
4. BARIUM	120.	120. U				
5. BERYLLIUM	40.	40. U				
6. CADMIUM	10.	10. U				
7. CALCIUM	800.	800. U				
8. CHROMIUM	28.	28. U				
9. COBALT	200.	200. U				
10. COPPER	40.	40. U				
11. IRON	200.	200. U				
12. LEAD	100.	100. U				
13. MAGNESIUM	800.	800. U				
14. MANGANESE	40.	40. U				
15. MERCURY	0.3	0.3U	0.3 U			
16. MOLYBDENUM	40.	40. U				
17. NICKEL	40.	40. U				
18. SELENIUM	20.	20. U				
19. SILICON	800.	800. U				
20. SILVER	40.	40. U				
21. SODIUM	4000.	4000. U				
22. THALLIUM	400.	400. U				
23. TITANIUM	400.	400. U				
24. VANADIUM	200.	200. U				
25. ZINC	40.	40. U				
26. CYANIDE	1.5	1.5 U				
27. SULFIDE	2.5	2.5U				

(1) QCCS results listed on FORM II's.

LAB NAME: VERSAR, INC.
DATE: 12/14/87

MATRIX: 11 (2)

SAS NO.: 3249I/SET 6
EPA SAMPLE NO.:3249I SET6 01
LAB SAMPLE ID NO.:41945
UNITS: MG/KG

COMPOUND	CONTROL LIMIT %R	SPIKED SAMPLE RESULT (SSR)	SAMPLE RESULT (SR)	SPIKED ADDED (SA)	%R (1)	
1. ALUMINUM	75-125	19900.	18100.	1240.	143.	NR
2. ANTIMONY	75-125	979.	20.U	1240.	79.	
3. ARSENIC	75-125	1230.	20.U	1240.	99.	
4. BARIUM	75-125	1520.	209.	1240.	106.	
5. BERYLLIUM	75-125	1290.	40.U	1240.	104.	
6. CADMIUM	75-125	1440.	10.U	1240.	116.	
7. CALCIUM	75-125	40600.	24500.	1240.	1300.	NR
8. CHROMIUM	75-125	434.	49.	1240.	31.	M
9. COBALT	75-125	999.	200.U	1240.	81.	
10. COPPER	75-125	1040.	68.	1240.	78.	
11. IRON	75-125	20300.	22300.	1240.	0.0	
12. LEAD	75-125	1830.	391.	1240.	116.	
13. MAGNESIUM	75-125	10400.	8390.	1240.	162.	NR
14. MANGANESE	75-125	2130.	255.	1240.	151.	M
15. MERCURY	75-125	3.1	0.3U	2.5	124.	
16. MOLYBDENUM	75-125	1300.	40.U	1240.	105.	
17. NICKEL	75-125	161.	40.U	1240.	13.	NR
18. SELENIUM	75-125	1220.	20.U	1240.	98.	
19. SILICON	75-125	150000.	134000.	1240.	1260.	NR
20. SILVER	75-125	40.U	40.U	----	—	NR
21. SODIUM	75-125	4290.	4000.U	1240.	346.	NR
22. THALLIUM	75-125	1250.	400.U	1240.	101.	NR
23. TITANIUM	75-125	2480.	1150.	1240.	107.	NR
24. VANADIUM	75-125	1240.	200.U	1240.	100.	
25. ZINC	75-125	1890.	511.	1240.	111.	
26. CYANIDE	70-130	69.	1.5U	100.	69.	
27. SULFIDE	70-130	199.	111.	71.7	123.	NR

(1) %R = [(SSR-SR)/SA] X 100 "M"- OUT OF CONTROL NR-NO RECOVERY CRITERIA
(2) 11-SOLID 12-WATER MISCIBLE 13-NON WATER-MISCIBLE

FORM V - B Q.C. REPORT: 6

ANALYSIS SPIKE SAMPLE RECOVERY

LAB NAME: VERSAR, INC. SAS NO.: 3249I/SET 6

DATE: 12/14/87 EPA SAMPLE NO.:3249I SET6 01

LAB SAMPLE ID NO.:41945

MATRIX: 11 (2) UNITS: MG/KG

COMPOUND	CONTROL LIMIT %R	SPIKED SAMPLE RESULT (SSR)	SAMPLE RESULT (SR)	SPIKED ADDED (SA)	%R (1)	
1. ALUMINUM	85-115	20400.	18100.	3980.	57.	F
2. ANTIMONY						
3. ARSENIC						
4. BARIUM	85-115	2080.	209.	1990.	94.	
5. BERYLLIUM	85-115	404.	40.U	398.	101.	
6. CADMIUM	85-115	368.	10.U	398.	92.	
7. CALCIUM	85-115	26100.	24500.	3980.	40.	F
8. CHROMIUM	85-115	436.	49.	398.	97.	
9. COBALT	85-115	1850.	200.U	1990.	93.	
10. COPPER	85-115	442.	68.	398.	94.	
11. IRON	85-115	24700.	22300.	3980.	60.	F
12. LEAD	85-115	2270.	391.	1990.	95.	
13. MAGNESIUM	85-115	12200.	8390.	3980.	96.	
14. MANGANESE	85-115	2150.	255.	1990.	95.	
15. MERCURY	85-115	2.7	0.3U	2.5	168.	
16. MOLYBDENUM	85-115	400.	40.U	398.	101.	
17. NICKEL	85-115	2030.	40.U	1990.	102.	
18. SELENIUM						
19. SILICON	85-115	129000.	134000.	3980.	0.0	F
20. SILVER	85-115	1760.	40.U	1990.	88.	
21. SODIUM	85-115	39100.	4000.U	39800.	98.	
22. THALLIUM	85-115	1930.	400.U	1990.	97.	
23. TITANIUM	85-115	4940.	1150.	3980.	95.	
24. VANADIUM	85-125	1890.	200.U	1990.	95.	
25. ZINC	85-125	879.	511.	398.	92.	

(1) %R = [(SSR-SR)/SA] X 100 NR-NO RECOVERY CRITERIA

(2) 11-SOLID 12-WATER MISCIBLE 13-NON WATER-MISCIBLE

F - SAMPLE CONCENTRATION > FOUR TIMES ANALYTICAL SPIKE LEVEL.

METALS DUPLICATES

LAB NAME: VERSAR, INC.
DATE: 12/14/87

SAS NO.: 3249I/SET 6
EPA SAMPLE NO.:3249I SET6 01
LAB SAMPLE ID NO.:41945

MATRIX: 11 (3)
UNITS: MG/KG

COMPOUND	CONTROL LIMITS (1)	SAMPLE(S)	DUPLICATE(D)	RPD(2)
1. ALUMINUM		18100.	21700.	18.
2. ANTIMONY		20.U	20.U	NC
3. ARSENIC		20.U	20.U	NC
4. BARIUM		209.	246.	16.
5. BERYLLIUM		40.U	40.U	NC
6. CADMIUM		10.U	10.U	NC
7. CALCIUM		24500.	28700.	16.
8. CHROMIUM		49.	44.	11.
9. COBALT		200.U	200.U	NC
10. COPPER		68.	63.	7.1
11. IRON		22300.	27100.	20.
12. LEAD		391.	351.	11.
13. MAGNESIUM		8390.	9920.	17.
14. MANGANESE		255.	307.	19.
15. MERCURY		0.3U	0.3U	NC
16. MOLYBDENUM		40.U	40.U	NC
17. NICKEL		40.U	40.U	NC
18. SELENIUM		20.U	20.U	NC
19. SILICON		134000.	147000.	9.7
20. SILVER		40.U	40.U	NC
21. SODIUM		4000.U	4000.U	NC
22. THALLIUM		400.U	400.U	NC
23. TITANIUM		1150.	1330.	15.
24. VANADIUM		200.U	200.U	NC
25. ZINC		511.	468.	8.9
26. CYANIDE		1.5 U	1.5 U	NC
27. SULFIDE		111.	108.	2.7

pH + 0.2 UNITS
NR-NO RECOVERY CRITERIA
(1) TO BE ADDED AT A LATER DATE
* - OUT OF CONTROL
(2) RPD = [(S-D)/((S-D)/2)]X100
(3) 11-SOLID 12-WATER MISCIBLE 13-NON WATER-MISCIBLE
NC - NON CALCULABLE RPD DUE TO VALUE(S) LESS THAN CRDL

LAB NAME: VERSAR, INC.
DATE: 12/14/87

SAS NO.: 3249I/SET 6
EPA SAMPLE NO.:3249I SET6 01
LAB SAMPLE ID NO.:41945

MATRIX: 11 (3)
UNITS: MG/KG

COMPOUND	CONTROL LIMITS	SAMPLE(S)	DUPLICATE(D)	RPD(2)
1. ALUMINUM	10	18100.	18200.	.12
2. ANTIMONY	15	20.U	20.U	NC
3. ARSENIC	15	20.U	20.U	NC
4. BARIUM	10	209.	207.	.86
5. BERYLLIUM	10	40.U	40.U	NC
6. CADMIUM	10	10.U	10.U	NC
7. CALCIUM	10	24500.	24400.	.36
8. CHROMIUM	10	49.	42.	16.
9. COBALT	10	200.U	200.U	NC
10. COPPER	10	68.	70.	3.4
11. IRON	10	22300.	22200.	.29
12. LEAD	10	391.	371.	5.1
13. MAGNESIUM	10	8390.	8400.	.02
14. MANGANESE	10	255.	253.	1.0
15. MERCURY	NA			
16. MOLYBDENUM	10	40.U	40.U	NC
17. NICKEL	10	40.U	40.U	NC
18. SELENIUM	15	20.U	20.U	NC
19. SILICON	10	134000.	134000.	0.0
20. SILVER	10	40.U	40.U	NC
21. SODIUM	10	4000.U	4000.U	NC
22. THALLIUM	10	400.U	400.U	NC
23. TITANIUM	10	1150.	1140.	.35
24. VANADIUM	10	200.U	200.U	NC
25. ZINC	10	511.	510.	.18
26. CYANIDE	10	1.5 U	1.5 U	NC
27. SULFIDE	10	111.	111.	0.0

NR-NO RECOVERY CRITERIA
(1) TO BE ADDED AT A LATER DATE * - OUT OF CONTROL
(2) RPD = [(S-D)/((S+D)/2)]X100
(3) 11-SOLID 12-WATER MISCIBLE 13-NON WATER-MISCIBLE
NC - NON CALCULABLE RPD DUE TO VALUE(S) LESS THAN CRDL

METHOD DETECTION LIMITS AND METHOD REFERENCE SAMPLE

LAB NAME: VERSAR, INC.
DATE: 12/14/87

CASE NO.: 3249I/SET 6
MRS UNITS: MG/KG
LAB SAMPLE ID NO.: MRS

MATRIX: 11 UNITS: MG/KG

COMPOUND	CRDL(MG/KG)	MDL(MG/KG)	TRUE (1)	FOUND	%R
1. ALUMINUM	400.	400.	22600.	24000.	106.
2. ANTIMONY	20.	6.1	--	43.	--
3. ARSENIC	20.	5.1	66.	71.	108.
4. BARIUM	120.	120.	356.	361.	101.
5. BERYLLIUM	40.	40.	1.0	40.U	0.0
6. CADMIUM	10.	10.	10.	10.U	0.0
7. CALCIUM	800.	800.	29000.	29200.	101.
8. CHROMIUM	28.	28.	29600.	25300.	86.
9. COBALT	200.	200.	10.	200.U	0.0
10. COPPER	40.	40.	109.	101.	93.
11. IRON	200.	200.	113000.	98000.	87.
12. LEAD	100.	100.	714.	758.	106.
13. MAGNESIUM	800.	800.	7400.	7430.	100.
14. MANGANESE	40.	40.	785.	696.	89.
15. MERCURY	0.3	0.3	18.8	20.	106.
16. MOLYBDENUM	40.	40.	--	52.	--
17. NICKEL	40.	40.	46.	40.U	0.0
18. SELENIUM	20.	4.1	--	20.U	--
19. SILICON	800.	800.	238000.	250000.	105.
20. SILVER	40.	40.	--	42.	--
21. SODIUM	4000.	4000.	5400.	6130.	113.
22. THALLIUM	400.	400.	--	400.U	--
23. TITANIUM	400.	400.	652.	630.	97.
24. VANADIUM	200.	200.	24.	200.U	0.0
25. ZINC	40.	40.	1720.	1590.	93.
26. CYANIDE (2)	1.5	NA	0.1122	0.114	102
27. SULFIDE (2)	2.5	NA	0.717	0.596	83.

(1) REFERENCE SOURCE: ICP-NBS RIVER SED; HG-3 KID MINE; CN-EPA WP1182; S2 - FISHER
(2) CONCENTRATION OF MRS IN MG/L

6/3/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 5/27/88

SUBJECT: Review of Region V CLP Data Received for Review on 5-18-88

FROM: Curtis Ross, Director (5SCRL) Central Regional Laboratory Patrick J Churella for

TO: Data User: FIT

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

SITE NAME: U. S. Scrap (IL) SMO Case No. SAS 3155I Set8

EPA Data Set No. SF 4630 No. of Samples: 1 D.U./Activity Numbers Y905/C721Z8

CRL No. 88FC07S70

SMO Traffic No. I01

CLP Laboratory: NANCO Hrs. Required for Review: 8

Following are our findings:

This review cover one high concentration sample analyzed for full organics. Qualifiers and calibration data is included on the following pages of the review narrative.

Nilia Feliciano
5/25/88

( ) Data are acceptable for use.
(X) 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

PAGE ___ OF ___

DATA QUALIFIERS

Contractor: Tianco

Case SAS3155I Set 8

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

Sample holding time:
All sample meet sample holding time.

GC/MS Tuning
All ion meet ion abundance criteria. All sample run within 12 hours.

Calibration:
Compounds with a %RSD greater than 30% and %D greater than 25% results should be considered estimated (J). See calibration outliers form. Pest/PCB's were analyzed using GC/MS also, according with the high concentration protocol.

Blank:
Bis(2-ethylhexyl) Phthalate was noted above the CRDL for the BNA fraction, does not affect the data. Acetone and Methylene Chloride were noted below the CRDL and it was noted in sample at higher concentration than blank level.

Surrogate:
Acceptable for BN-. In [illegible] fraction 6 out of 12, outside QC limits. Concentrations were [illegible] out. Any [illegible] result should be considered estimated but usable.

Reviewed by: [illegible]

Phone: 353-0651

PAGE ___ OF ___

DATA QUALIFIERS

Contractor: Nanco

Case SAS3155 I Set 8

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

Matrix Spike/MSD:
For VOA and BNA recoveries were outside the Q.C. limits. It is possible that samples were spiked twice. Recoveries present in some parameters are as higher as hundred percent more.

Reviewed by: [illegible]

Phone: 355-0651

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

CASE SAS # 3155 I CONTRACTOR Nanco

Instrument # A	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	11/19/87 9:53			11/22/87 11:32											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane	1.93			2.85	47.3	J									
Bromomethane		33.0	J												
Vinyl Chloride															
Chloroethane	.790	32.0	J	1.35	71.7	J									
Methylene Chloride	.547			.788	43.9	J									
Acetone	.310	37.9	J	.123	60.1	J									
Carbon Disulfide	2.85			4.14	45.0	J									
1,1-Dichloroethane															
1,1-Dichloroethene	1.78			2.90	62.9	J									
Trans-1,2-Dichloroethene	1.09			1.69	55.4	J									
Chloroform															
2-Butanone	.037		2/J	.028		2/J									
1,2-Dichloroethane	1.73			2.99	71.9	J									
1,1,1-Trichloroethane	.65	39.7	J	1.06	63.6	J									
Carbon Tetrachloride	.745			1.39	87.6	J									
Vinyl Acetate	.46	43.7	J	.25	44.5	J									
Bromodichloromethane	.618			1.05	71.4	J									
1,2-Dichloropropane	2.10			4.01	90.2	J									
Trans-1,3-Dichloropropene	.512			.82	61.4	J									
Trichloroethene	.434			.691	59.1	J									
Dibromochloromethane	.716			1.15	61.0	J									
1,1,2-Trichloroethane	.256			.385	50.5	J									
Benzene	.735			1.01	37.9	J									
cis-1,3-Dichloropropene	.454			.739	62.6	J									
2-Chloroethylvinylether		35.4	J												
Bromoform	.628			.966	53.9	J									
4-Methyl-2-Pentanone	.173			.265	52.9	J									
2-Hexanone	.109	31.3	J	.177	62.4	J									
Tetrachloroethene	.474			.806	69.9	J									
1,1,2,2-Tetrachloroethane	.315			.498	58.0	J									
Toluene															
Chlorobenzene	.931			1.40	51.1	J									
Ethylbenzene															
Styrene	1.49			1.92	22.7	J									
m-Xylene } Total Xylenes	.434			1.23	31.7	J									
o/p-Xylene }															

AFFECTED SAMPLES:

Blank #1
3155I-01-151
3155I-01-[illegible]
[illegible]

Reviewer's Initials/Date: [illegible]

* 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 1)

CASE/SAS # 3155 I Set 8 CONTRACTOR Nanco

Instrument # E	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	12/20/87 22:52			12/10/87 17:00			1/18/88 15:20								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether	1.36							42.4	J						
2-Chlorophenol	1.14							36.8	J						
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol	1.19							36.5	J						
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane	.603				29.9	J		33.4	J						
Nitrobenzene	.668				30.3	J									
Isophorone	.821				37.1	J									
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid	.126				39.6	J		28.8	J						
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline		32.0	J												
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene	.811	31.4	J					28.4	J						
Hexachlorocyclopentadiene	.457				41.7	J		44.1	J						
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene	1.32				30.7	J									
2-Nitroaniline															
Dimethyl Phthalate	1.70				47.4	J									
Acenaphthylene															
3-Nitroaniline	.109	54.7	J		25.9	J									
Acenaphthene															
2,4-Dinitrophenol	.132				37.8	J									
4-Nitrophenol	.218				26.0	J									
Dibenzofuran	.74				48.7	J									

Blank #1 01-154

01-154 [illegible]

[illegible]

AFFECTED SAMPLES:

Reviewer Initials/Date [illegible]

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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
PESTICIDES -BL COMPOUNDS

CASE/SAS # 3155I Set 8 CONTRACTOR Nanco

Instrument # E	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	11/23/87			12/10/87 2011											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Beta-BHC															
Gamma-BHC															
Delta-BHC	.098				38.9	J									
Heptachlor															
Aldrin															
Heptachlor epoxide	.0410		R/J		43.0	J		36.5	J						
Alpha chlordane															
Gamma chlordane															
Endosulfan-I	.109				33.9	J									
Dieldrin	1.13				43.8	J		27.5	J						
4-4'-DDE															
Endrin															
Endosulfan-2	.034	30.1	R/J	.037		R/J	.036		R/J						
4-4'-DDD															
Endosulfan sulfate	.123				27.9	J									
4-4'-DDT	.431							32.2	J						
Endrin ketone	.102				34.4	J		32.1	J						
Methoxychlor															
Monochlorobiphenyl	5.66				43.8	J		56.6	J						
Dichlorobiphenyl	1.60				26.8	J		30.2	J						
Trichlorobiphenyl								26.2	J						
Tetrachlorobiphenyl															
Pentachlorobiphenyl															
Hexachlorobiphenyl															
Heptachlorobiphenyl															
Octachlorobiphenyl															
Decachlorobiphenyl															

AFFECTED SAMPLES:

Reviewer Initials/Date: M.T. 5/24/88

* 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 # 3155I Set 8 CONTRACTOR Mancc

Instrument # E	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	10/20/87			12/10/87 19:00			1/18/88 15:20								
:	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene	.376				37.3	J		33.5	J						
Diethylphthalate	.51				25.7	J									
4-Chlorophenyl-phenylether	.738				27.9	J									
Fluorene															
4-Nitroaniline	.106	51.9	J		28.7	J									
4,6-Dinitro-2-Methylphenol	.106							27.7	J						
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether	.310							29.6	J						
Hexachlorobenzene	.368							30.8	J						
Pentachlorophenol															
Phenanthrene															
Anthracene	.972				34.7	J									
Di-n-Butylphthalate	1.44				33.6	J									
Fluoranthene															
Pyrene	1.71				30.5	J		33.7	J						
Butylbenzylphthalate	.253				47.1	J		29.4	J						
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate	1.12				31.8	J		52.4	J						
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 [illegible]

January 30, 1988

CASE NARRATIVE Prepared for: U.S.E.P.A.

CASE NUMBER: SAS-3155I

CONTRACT NUMBER: 68-01-7472

ORGANIC ANALYSIS

This case was received at Nanco Labs, Inc. on November 17, 1987. It consisted of one (1) soil sample for full analysis. The sample ID in this case was as follows: 01-SET 8

I would just like to note that there were no Traffic Reports received with this group.

Sample 01-SET 8 was chosen for the QC (i.e.matrix spike and matrix spike duplicate.)

Due to occasional problems with integration in our Hewlett Packard GC/MS system you may find some areas and concentrations in our data corrected and handwritten by our analysts.

Some difficulties have been encountered with this case. Both of the standard biphenyl solutions received from EPA were either incorrect concentrations or incorrect biphenyl compounds. This problem was discussed with Leslie Braun per a telephone with Sohail Jahani on December 3, 1987 & January 26, 1988 (see attached logs). A letter to Emile Boulos was dispatched on January 5, 1988 which also demonstrates the problems associated with this case that was beyond laboratory control (see attached letter).

NANCO PROCEDURES

All files beginning with >A were run on GC/MS A, all files beginning with >B were run on GC/MS B and all files beginning with >F were run on GC/MS F. All files beginning with >C were run on GC/MS C, all files beginning with >D were run on GC/MS D, and all files beginning with >E were run on GC/MS E.

Some Tentatively Identified Compounds may show less than three "hits" or possibly zero "hits" for the results of the library search. This is due to the algorithm of the Hewlett Packard system we are using. Only data base entries of a probability of greater than one percent (1%) will be reported.

nanco labs. inc.

January 5, 1988

Emile Boulos
WH 548A
401 M Street South West
Washington, D.C. 20460 WH548A

Re: High Level Hazard Protocol: Case #3155I

Dear Emile:

This letter is to inform you of the status of case # 3155I (high level hazard).

Some difficulties have been encountered with this case. Due to the nature of the samples, a new calibration seems to be required for each set that has gone through GPC cleanup. Many times phthalatephenol calibration solution does not meet the recovery of $\geq$85%.

As per my telephone conversation with Leslie Brown about the problem with three biphenyls which do not go into the solution at high concentration, I have ordered a new biphenyl solution from the EPA which is at 200 PPM.

The average response factors for the pesticide and biphenyl compounds are low. On many occasions several compounds have no response at 20 PPM unless the source is perfectly cleaned and a new column is being used.

Also, due to the solubility problem there should be three different solutions; one for BN/A, one for pesticide and a third for biphenyl compounds. Therefore, there are three different initial calibration curves and three different continuous calibration injections daily.

For better utilization of instruments and efficiency of laboratories, I would like to suggest that the limit of 12 hours DFTPP and BFB time be changed to 24 hours. Also, Since detection at less than 50 nanograms per injection is difficult, all pesticide and biphenyl compounds should require a four-point initial calibration at 50, 80, 120, and 160 total nanograms.

January 30, 1988

Case Narrative Prepared for: U.S.E.P.A.

SURROGATE RECOVERIES

Most surrogate recoveries are within specification, but some were diluted out. These are noted on Form HC-II.

MATRIX SPIKE RECOVERIES

Most spikes and RPD's are within specification, the exceptions are noted on Form HC-III.

"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."

Sohail Jahani
Organic Manager

SAMPLE CONDITION

All samples arrived in good condition.

This case ran without problems.

Sincerely,

Patricia L.Gunsch
Manager
Organic Reporting

enclosures

nanco labs, inc.

Due to the problems we have encountered with this case, I would like to request a 65 day turn around time rather than the original 40 days.

Due to the importance of this case we will assume that the above proposals have been accepted by the EPA, if no contact regarding these matters is made within two weeks.

I would like to keep the communication channels open between Nanco Labs and the EPA for the development of new ideas and suggestions for solving problems.

I hope Nanco Labs can be helpful to the EPA in finalizing the High Level Hazard IFB.

Very truly yours,

Sohail Jahani

Sohail Jahani
Organics Manager

SJ/kdp

cc.Leslie Brown, Joan Fisk

In Reference to Case No(s): 3155 I.

Contract Laboratory Program
REGIONAL LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: 12/3/87

Laboratory Name: Nancy

Lab Contact: [illegible]

Region: 8 MO

Regional Contact: Leslie Brown

Call Initiated By: ✓ Laboratory ____ Region

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

High level samples set 1, 10, 11

Summary of Questions/issues Discussed:

Hexachlorobiphenyl, Decachlorobiphenyl do not go into the solution. We can't obtain a octachlorobiphenyl

Summary of Resolution:

for these sets do not quantitate for these three biphenyls
Try to obtain solution from EPA for further a

[illegible] 12/3/87
Date

In Reference to Case No(s):
3155 I.

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM

Telephone Record Log

Date of Call: 1/26/88

Laboratory Name: Nancy

Lab Contact: Soln Johani

Region: SMO

Regional Contact: Leslie Braun

Call Initiated By: ___ Laboratory ___ Region / SMO

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

3155 I
response to the letter of 1/5/88

Summary of Questions/Issues Discussed

~~phth~~ a letter will follow from Leslie

Summary of Resolution:

Phthalate/Phenol Calib for 580 of GPC w waved
use 2 soln on for BNA one for PCB
one soln mono-hepta @ 10/20, 30, 50
or
" 5 oct-nono-deca @ 20, 60, 100 PPM
use 12 Hr DFTPP & BFB Time
Extention is 45 days + 7 more days

Signature: Soln Johani

Date: 1/26/88

01-154 115

HIGH CONCENTRATION
VOLATILE CONTROL MATRIX SPIKE RECOVERY

Case No: EPA 3155I Laboratory Name: NANCO LABS, INC Contract No: 108 01-7472

Compound	Concentration Spike Added (mg/Kg)	Concentration Control Matrix	Percent(*) Recovery	QC Limits
1,1-Dichloroethene	25	2.7	11 *	60-150
Trichloroethene	25	1.3	5 *	60-150
Chlorobenzene	25	—	— *	60-150
Toluene	25	2200.0	8800 *	60-150
Benzene	25	50.0	200 *	60-150

* ASTERISKED VALUES ARE OUTSIDE OF ADVISORY QC LIMITS

Volatiles: 5 out of 5; outside of recovery QC limits

COMMENTS:

00007

HIGH CONCENTRATION
VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Case No: EPA 3155I Laboratory Name: NANCO LABS INC Contract No: 68-01-7472

SMO Sample Number	Toluene-D8 (50-160*)	Bromofluorobenzene (50-160*)	1,2-Dichloroethane-D4 (50-160*)
BLANK #1	75	77	78
3155I - 01	DL*	151	DL*
3155I - 01 MS	DL*	DL*	DL*
3155I - 01 MSD	DL*	DL*	DL*

* MANDATORY CONTRACT REQUIRED LIMITS FOR METHOD BLANKS;
ADVISORY for SAMPLES and CONTROL MATRIX SPIKE

Volatiles: 8 out of 12 ; outside of QC limits

COMMENTS: DL - Diluted Out

HIGH CONCENTRATION
VOLATILE CONTROL MATRIX SPIKE RECOVERY

Case No: EPA 3155I Laboratory Name: NANCO LABS Inc. Contract No: 68-01-7472

Compound	Concentration Spike Added (mg/Kg)	Concentration Control Matrix	Percent(*) Recovery	QC Limits
1,1-Dichloroethene	25	2.3	9.2 *	60-150
Trichloroethene	25	1.3	5.2 *	60-150
Chlorobenzene	25	10	40 *	60-150
Toluene	25	220	880 *	60-150
Benzene	25	530	2120 *	60-150

* ASTERISKED VALUES ARE OUTSIDE OF ADVISORY QC LIMITS

Volatiles: 5 out of 5 ; outside of recovery QC limits

COMMENTS:

00008

HIGH CONCENTRATION
EXTRACTABLE SURROGATE PERCENT RECOVERY SUMMARY

Case No: EPA 3155I Laboratory Name: NANCO LABS, INC. Contract No: 68-01-7473

SMO Sample No.	Nitro-benzene-D5 (20-140A)	2-Fluoro-biphenyl (20-140A)	Terphenyl-D14 (20-150A)	Phenol-D5 (20-140A)	2-Fluoro-phenol (20-140A)	2,4,6-tribromo-phenol (10-140A)		
[illegible]	31	34	31	33	20	13		
01-154	34	42	35	45	33	16		
01-154MS	31	39	33	56	40	15		
01-154MSD	34	24	43	76	67	26		

A MANDATORY CONTRACT REQUIRED LIMITS FOR METHOD BLANKS; ADVISORY for SAMPLES and CONTROL MATRIX SPIKE

Extractables: 0 out of 24 ; outside of QC limits

COMMENTS:

Form IIC-II

7/86

00125

HIGH[redacted]TI[redacted]

VOLATILE MET. BLANK SUMMARY

Case No: EPA 3155I Region 5 Laboratory Name: [illegible]

Contract No: 68-01-7472

Lab File ID	Date of Analysis	Inst. ID	CAS Number	Compound Name	CONC. (mg/Kg)	CRDL
[illegible]	11/09/87	GC/MSA	75-09-2	METHYLENE CHLORIDE (HCV)	3.0	5.0
[illegible]	11/09/87	GC/MSA	67-64-1	ACETONE (HCV)	4.1 J	5.0
[illegible]	11/09/87	GC/MSA	—	NONE FOUND (TIC)	—	—

COMMENTS:

FORM HC-IV

7/86

01-154MB

HIGH CONCENTRATION
EXTRACTABLE CONTROL MATRIX SPIKE RECOVERY

Case No: EPA 3155I Laboratory Name: NANCO LABS INC Contract No: 68-01-7472

Compound	Concentration Spike Added (mg/Kg)	Concentration (mg/Kg) Control Matrix	Percent* Recovery	QC Limits
1,2,4-Trichlorobenzene	100	170.0	170 *	30-140
Acenaphthene	100	180.0	180 *	30-140
2,4-Dinitrotoluene	100	230.0	230 *	30-140
Pyrene	100	200.0	200 *	30-140
N-Nitroso-di-n-propylamine	100	220.0	220 *	30-140
1,4-Dichlorobenzene	100	160.0	160 *	30-140
Pentachlorophenol	200	300.0	150 *	10-120
Phenol	200	460.0	230 *	10-120
2-Chlorophenol	200	440.0	220 *	10-120
4-Chloro-3-methylphenol	200	410.0	205 *	10-120
4-Nitrophenol	200	260.0	130 *	10-120
Heptachlor	100	ND	— *	30-140
Dieldrin	200	59.0	30	30-140

00126

* ASTERISKED VALUES ARE OUTSIDE QC LIMITS

Extractables: 12 out of 13 ; outside of recovery QC limits

COMMENTS: ND = NOT DETECTED

HIGH CONCENTRATION
EXTRACTABLE CONTROL MATRIX SPIKE RECOVERY

Case No: EPA 31551 Laboratory Name: NANCO LABS, INC. Contract No: 68-01-7472

Compound	Concentration Spike Added (mg/Kg)	Concentration (mg/Kg) Control Matrix	Percent[A] Recovery	QC Limits
1,2,4-Trichlorobenzene	100	190.0	190 *	30-140
Acenaphthene	100	180.0	180 *	30-140
2,4-Dinitrotoluene	100	290.0	290 *	30-140
Pyrene	100	230.0	230 *	30-140
N-Nitroso-di-n-propylamine	100	310.0	310 *	30-140
1,4-Dichlorobenzene	100	200.0	200 *	30-140
Pentachlorophenol	200	360.0	180 *	10-120
Phenol	200	570.0	285 *	10-120
2-Chlorophenol	200	580.0	290 *	10-120
4-Chloro-3-methylphenol	200	660.0	330 *	10-120
4-Nitrophenol	200	350.0	175 *	10-120
Heptachlor	100	ND	— *	30-140
Dieldrin	200	840	420	30-140

A ASTERISKED VALUES ARE OUTSIDE QC LIMITS

Extractables: 12 out of 12 ; outside of recovery QC limits

COMMENTS: ND = NOT DETECTED

001127

HIGH CONCENTRATION
EXTRACTABLE METHOD BLANK SUMMARY

Case No: EPA 3158T Region 5 Laboratory Name: NARCO LABS, INC

Contract No: 108-001-7472

Lab File ID	Date of Analysis	Inst. ID	CAS Number	Compound Name	CONC. (mg/Kg)	CRDL
SE 1936	12/10/87	GC/MSE		BIS(2-ETHYLHEXYL) PHTHALATE (HSL)	97.0	40.0
SE 1936	12/10/87	GC/MSE	—	UNKNOWN	9.4 J	—
SE 1936	12/10/87	GC/MSE	—	UNKNOWN	13.0 J	—
SE 1936	12/10/87	GC/MSE	—	UNKNOWN	14.0 J	—
SE 1936	12/10/87	GC/MSE	—	UNKNOWN	24.0 J	—
SE 1936	12/10/87	GC/MSE	—	UNKNOWN	3.5 J	—
SE 1936	12/10/87	GC/MSE	—	UNKNOWN	29.0 J	—
SE 1936	12/10/87	GC/MSE	—	UNKNOWN ALKANE	26.0 J	—
SE 1936	12/10/87	GC/MSE	—	UNKNOWN	17.0 J	—
SE 1936	12/10/87	GC/MSE	—	UNKNOWN	15.0 J	—

00128

COMMENTS:

FORM HC-IV

7/86

00028

SAMPLE NUMBER
3155I-C.

HIGH CONCENTRATION
VOLATILE ANALYSIS DATA SHEET
(Page 1)
Target Compounds

Laboratory Name: NANCO LABS, INC.

Case No: EPA 3155I

Lab Sample ID No: 3155I-01-154

QC Report No:

Phase Type: C

Contract No: 68-01-7472

Data Release Authorized By: P.Y. Munoch

Date Received: 11/17/87

Date Phase Separated: 11/17/87

Date Extracted: 11/19/87

Date Analyzed: 11/22/87

Dilu Factor: 2 pH: 9.1

CAS Number		mg/Kg	CAS Number		mg/Kg
74-87-3	Chloromethane	~~10.0~~ 9.0 U	78-87-5	1,2-Dichloropropane	5.0 U
74-83-9	Bromomethane	7.9 J	10061-02-6	trans-1,3-Dichloropropene	5.0 U
[illegible]-01-4	Vinyl chloride	1.3 J	79-01-6	Trichloroethene	5.0 U
[illegible]-00-3	Chloroethane	1.8 J	124-48-1	Dibromochloromethane	5.0 U
75-09-2	Methylene chloride	37	79-00-5	1,1,2-Trichloroethane	5.0 U
[illegible]64-1	Acetone	740	71-43-2	Benzene	149 J
[illegible]15-0	Carbon disulfide	5.0 U	10061-01-5	cis-1,3-Dichloropropene	5.0 U
75-35-4	1,1-Dichloroethene	5.0 U	110-75-8	2-Chloroethylvinylether	10.0 U
[illegible]-34-3	1,1-Dichloroethane	5.0 U	75-25-2	Bromoform	5.0 U
[illegible]6-60-5	trans-1,2-Dichloroethene	5.0 U	~~108-10-1~~	2-Hexanone	591-78-6 ~~10.0~~
67-66-3	Chloroform	5.0 U	~~591-78-6~~	4-Methyl-2-pentanone	108-10-1 10.0
107-06-2	1,2-Dichloroethane	5.0 U	127-18-4	Tetrachloroethene	5.0 U
[illegible]-93-3	2-Butanone	10.0 U	79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
[illegible]-55-6	1,1,1-Trichloroethane	14.5 J	108-88-3	Toluene	33,000
56-23-5	Carbon tetrachloride	5.0 U	108-90-7	Chlorobenzene	5.0 U
[illegible]08-05-4	Vinyl acetate	10.0 U	100-41-4	Ethylbenzene	320
[illegible]-27-4	Bromodichloromethane	5.0 U	100-42-5	Styrene	5.0 U
				Total Xylenes (980)	~~7,000~~ B

Delete CAS #s

Laboratory Name: NANCC LABS

Case No: EPA 3155I

SAMPLE NUMBER
3155I-01

000229

HIGH CONCENTRATION
VOLATILE ANALYSIS DATA SHEET
(Page ~~3~~ 2)

Tentatively Identified Compounds

CAS Number	Compound Name	RT or SCAN Number	Estimated Concentration
1. —	UNKNOWN ALKENE	24.90	100
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.			

EXTRACTABLE ANALYSIS DATA SHEET
(PAGE 1)
Target Compound List

00122

SAMPLE NUMBER
01-154

[illegible]ratory Name: NANOC LABS, INC

Case No: EPA 3155 I

[illegible] Sample ID No: 3155I-01-154

QC Report No: N/A

[illegible]e Type: C

Contract No: 68-01-7472

[illegible] Release
[illegible]orized By: [illegible]

Date Received: 11/17/87

Date Phase Separated: 11/19/87
Date Extracted: 11/19/87
Date Analyzed: 11/18/87
Conc/Dilu Factor: 2 pH: 9.1

CAS Number		mg/Kg
105-95-2	Phenol	40.0U
1[illegible]-44-4	bis(2-Chloroethyl)ether	40.0U
[illegible]37-8	2-Chlorophenol	40.0U
541-73-1	1,3-Dichlorobenzene	40.0U
1[illegible]-46-7	1,4-Dichlorobenzene	40.0U
[illegible]-51-6	Benzyl alcohol	40.0U
95-50-1	1,2-Dichlorobenzene	40.0U
9[illegible]48-7	2-Methylphenol	40.0U
3[illegible]38-32-9	bis-(2-Chloroisopropyl)ether	40.0U
106-44-5	4-Methylphenol	40.0U
621-64-7	N-Nitroso-di-n-propylamine	40.0U
6[illegible]72-1	Hexachloroethane	40.0U
9[illegible]95-3	Nitrobenzene	40.0U
78-59-1	Isophorone	40.0U
8[illegible]75-5	2-Nitrophenol	40.0U
1[illegible]-67-9	2,4-Dimethylphenol	40.0U
65-85-0	Benzoic acid	200.0U
1[illegible]-91-1	bis(2-Chloroethoxy)methane	40.0U
1[illegible]-83-2	2,4-Dichlorophenol	40.0U
[illegible]-82-1	1,2,4-Trichlorobenzene	40.0U
91-20-3	Naphthalene	40.0U
1[illegible]-47-8	4-Chloroaniline	40.0U
5[illegible]-68-3	Hexachlorobutadiene	40.0U
59-50-7	4-Chloro-3-methylphenol	40.0U
9[illegible]-57-6	2-Methylnaphthalene	40.0U
7[illegible]-47-4	Hexachlorocyclopentadiene	40.0U
88-06-2	2,4,6-Trichlorophenol	40.0U
9[illegible]-95-4	2,4,5-Trichlorophenol	200.0U
9[illegible]-58-7	2-Chloronaphthalene	40.0U
88-74-4	2-Nitroaniline	200.0U
131-11-3	Dimethylphthalate	40.0U
2[illegible]-96-8	Acenaphthylene	40.0U
9[illegible]-09-2	3-Nitroaniline	200.0U

CAS Number		mg/Kg
83-32-9	Acenaphthene	40.0U
51-28-5	2,4-Dinitrophenol	200.0U
100-02-7	4-Nitrophenol	200.0U
132-64-9	Dibenzofuran	40.0U
121-14-2	2,4-Dinitrotoluene	40.0U
606-20-2	2,6-dinitrotoluene	40.0U
84-66-2	Diethylphthalate	40.0U
7005-72-3	4-Chlorophenyl-phenylether	40.0U
86-73-7	Fluorene	40.0U
100-01-6	4-Nitroaniline	200.0U
534-52-1	4,6-Dinitro-2-methylphenol	200.0U
86-30-6	N-Nitrosodiphenylamine(1)	40.0U
101-55-3	4-Bromophenyl-phenylether	40.0U
118-74-1	Hexachlorobenzene	40.0U
87-86-5	Pentachlorophenol	200.0U
85-01-8	Phenanthrene	40.0U
120-12-7	Anthracene	40.0U
84-74-2	Di-n-butylphthalate	40.0U
206-44-0	Fluoranthene	40.0U
129-00-0	Pyrene	40.0U
85-68-7	Butylbenzylphthalate	40.0U
91-94-1	3,3'-Dichlorobenzidine	80.0U
56-55-3	Benzo(a)anthracene	40.0U
117-81-7	bis(2-Ethylhexyl)phthalate	40.0U
218-01-9	Chrysene	40.0U
117-84-0	Di-n-octylphthalate	40.0U
205-99-2	Benzo(b)fluoranthene	40.0U
207-08-9	Benzo(k)fluoranthene	40.0U
50-32-8	Benzo(a)pyrene	40.0U
193-39-5	Indeno(1,2,3-cd)pyrene	40.0U
53-70-3	Dibenz(a,h)anthracene	40.0U
191-24-2	Benzo(g,h,i)perylene	40.0U

(1)-cannot be separated from diphenylamine

Delete CAS nos

(Page 2)

SAMPLE NUMBER
01-154

00123

Laboratory Name: [illegible] Case No: [illegible]

CAS Number		mg/kg	
3[illegible]-84-6	alpha-BHC	40.0	U
3[illegible]-85-7	beta-BHC	40.0	U
319-86-8	delta-BHC	40.0	U
5[illegible]-89-9	gamma-BHC (Lindane)	40.0	U
7[illegible]-44-8	Heptachlor	40.0	U
30[illegible]-00-2	Aldrin	40.0	U
1024-57-3	Heptachlor epoxide	40.0	U
	gamma-Chlordane	40.0	U
9[illegible]-98-8	Endosulfan I	40.0	U
	alpha-Chlordane	40.0	U
6[illegible]-57-1	Dieldrin	40.0	U
7[illegible]-55-9	4,4'-DDE	40.0	U
72-20-8	Endrin	40.0	U

CAS Number		mg/kg	
332[illegible]-65-9	Endosulfan II	40.0	U
72-54-8	4,4'-DDD	40.0	U
103[illegible]-07-8	Endosulfan sulfate	40.0	U
50-29-3	4,4'-DDT	40.0	U
72-43-5	Methoxychlor	40.0	U
53494-70-5	Endrin ketone	40.0	U
27323-18-8	Monochlorobiphenyl	200.0	U
25512-42-9	Dichlorobiphenyl	200.0	U
25323-68-6	Trichlorobiphenyl	200.0	U
26914-33-0	Tetrachlorobiphenyl	200.0	U
25429-29-2	Pentachlorobiphenyl	200.0	U
26601-64-9	Hexachlorobiphenyl	200.0	U
28655-71-2	Heptachlorobiphenyl	200.0	U
31[illegible]-83-0	Octachlorobiphenyl	200.0	U
53742-07-7	Nonochlorobiphenyl	200.0	U
2051-24-3	Decachlorobiphenyl	200.0	U

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used. Additional flags or footnotes explaining results are incouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with a U (e.g. 10U) based on necessary dilution(s). (This is not necessarily the instrument detection limit) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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 indicated the presence of a target compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J) If limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, report as 3J.

B This flag is used when a target compound is found in the method blank as well as a single phase unit extract. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags or footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Case No: EPA 3155 I

SAMPLE NUMBER: 01-154

HIGH CONCENTRATION
EXTRACTABLE ANALYSIS DATA SHEET
(Page 3)

001 24

Tentatively Identified Compounds

CAS Number	Compound Name	RT or SCAN Number	Estimated Concentration
1. —	UNKNOWN	31.22	0.9 J
2. —	UNKNOWN	31.69	1.1 J
3. —	UNKNOWN	33.15	1.9 J
4. —	UNKNOWN	34.52	4.8 J
5. —	UNKNOWN	35.80	4.2 J
6. —	UNKNOWN	36.98	3.4 J
7. —	UNKNOWN	38.12	1.9 J
8. —	UNKNOWN	39.18	1.3 J
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 [illegible] FIT Receipt Date [illegible] Review Completed [illegible]

TO: Carman
FROM: Loretta Guzdziol
SUBJECT: [illegible]
PAN: [illegible] (1 hour charged for review) Case # [illegible]

Sample Description

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

Project Data Status _____ Completed!!

✓ Incomplete, awaiting Case #8288 is complete - Hanson, more pkgs are out on this project!

FIT Data Review Findings:

Please see summary sheet. EQ312 has HR's usable data

Check Data Sheets for Transcription Errors

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

Book No. 7 Page No. 74 Date Sampled 10/21/87

recycled paper

CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
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.	Compound was confirmed by mass spectroscopy
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.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
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.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Metals

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
s	s	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not calculated since chemical is not a carcinogen.
( ) Estimated value.

COMPOUND	SAMPLE	OTC	11	PP6									
				SG 3/2	SG 3/3								
chloromethane													
bromomethane													
vinyl chloride													
chloroethane													
methylene chloride													
acetone				200	40								
carbon disulfide													
1,1-dichloroethene													
1,1-dichloroethane													
trans-1,2,-dichloroethene													
chloroform													
1,2-dichloroethane													
2-butanone													
1,1,1-trichloroethane													
carbon tetrachloride													
vinyl acetate													
bromodichloromethane													
1,1,2,2-tetrachloroethane													
1,2-dichloropropane													
trans-1,3-dichloropropene													
trichloroethene													
dibromochloromethane													
1,1,2-trichloroethane													
benzene													
cis-1,3-dichloropropene													
2-chloroethylvinylether													
bromoform													
2-hexanone													
4-methyl-2-pentanone													
tetrachloroethene													
toluene													
chlorobenzene													
ethylbenzene 5				340									
styrene													
total xylenes 5				2000									
N-nitrosodimethylamine													
phenol													
aniline													
bis(2-chloroethyl)ether													
2-chlorophenol													
1,3-dichlorobenzene													
[illegible]													
benzyl alcohol													
1,2-dichlorobenzene													
2-methylphenol													
bis(2-chloroisopropyl)ether													
4-methylphenol													
N-nitroso-di-n-propylamine													
hexachloroethane													
nitrobenzene													
isophrone				170 J									
2-nitrophenol													
2,4-dimethylphenol				140 J									
benzoic acid													
bis(2-chloroethoxy)methane													
2,4-dichlorophenol													
1,2,4-trichlorobenzene													
napthalene				970 J									
4-chloroaniline													
hexachlorobutadiene													
4-chloro-3-methylphenol													
2-methylnapthalene													
hexachlorocyclopentadiene													
2,4,6-trichlorophenol													
2,4,5-trichlorophenol													
2-chloronaphthalene													
2-nitroaniline													
dimethyl phthalate													
acenapthylene				21[illegible] J									
3-nitroaniline													
acenaphthene				4[illegible] J									
2,4-dinitrophenol													
4-nitrophenol													
dibenzofuran				470 J									
2,4-dinitrotoluene													
2,6-dinitrotoluene													
diethylphthalate													
4-chlorophenyl-phenylether													
fluorene				[illegible] J									
4-nitroaniline													
4,6-dinitro-2-methylphenol													
N-nitrosodiphenylamine					[illegible] J								
4-bromophenyl-phenylether													
hexachlorobenzene													

VOA

ABV

COMPOUND		SAMPLE	OIC	PPB									
pentachlorophenol													
phenanthrene	330		6100	76 J									
anthracene			1400										
di-n-butylphthalate													
fluoranthene	330		5400	59 J									
benzidine													
pyrene	330		4700	57 J									
butylbenzylphthalate													
3,3'-dichlorobenzidine													
benzo(a)anthracene	330		2400										
bis(2-ethylhexyl)phthalate				300 J									
chrysene	330		2400										
di-n-octylphthalate													
benzo(b&k)fluoranthene													
benzo(a)pyrene	330		2000										
indeno(1,2,3-cd)pyrene													
dibenzo(a,h)anthracene													
benzo(g,h,i)perylene			930 J										
alpha-BHC													
beta-BHC													
delta-BHC													
gamma-BHC(lindane)													
heptachlor													
aldrin													
heptachlor epoxide													
endosulfan I													
dieldrin													
4,4'-DDE													
endrin													
endosulfan II													
4,4'-DDD													
endrin aldehyde													
endosulfan sulfate													
4,4'-DDT													
methoxychlor													
endrin ketone													
chlordane													
toxaphene													
Aroclor-1016													
Aroclor-1221													
Aroclor-1232													
[illegible]													
[illegible]													
Aroclor-1254													
Aroclor-1260													
ELEMENT													
aluminum													
antimony													
arsenic													
barium													
beryllium													
cadmium													
calcium													
chromium													
cobalt													
copper													
iron													
lead													
magnesium													
manganese													
mercury													
nickel													
potassium													
selenium													
silver													
sodium													
thallium													
tin													
vanadium													
zinc													
cyanide CHECK IF ANALYZED ( )													
TENTATIVELY IDENTIFIED ORGANICS													

PEST.

1/27

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE. 1-26-88

SUBJECT. Review of Region V CLP Data Received for Review on 12-2-87

FROM Curtis Ross, Director (5SCRL) Central Regional Laboratory Patrick J. Quinlan for

TO. Data User: FIT

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

SITE NAME: U.S. SCRAP SMO Case No. 8288

EPA Data Set No. SF 4560 No. of Samples: 2 D.U./Activity Numbers 8TFA05WUZZ Y905 | C72100

CRL No. 88FC04S50, S51

SMO Traffic No. EQ372, 373

CLP Laboratory: ERCO Hrs. Required for Review: 8

Following are our findings:

THIS DATA REVIEW COVERS ORGANIC ANALYSIS OF 2 SOIL SAMPLES FOR VOLATILES, ABN, AND PESTICIDES/PCB'S. THE DATA ARE ACCEPTABLE BUT THERE ARE SEVERAL POINTS WHICH ARE OF IMPORTANCE TO BE DISCUSSED IN THE FOLLOWING SECTION.

(1) HOLDING TIMES WERE MET FOR EACH SAMPLE.

(2) GC/MS TUNING WAS VERY SATISFACTORY AS WAS PCB/PESTICIDE COLUMN DEGRADATION. INSTRUMENT PERFORMANCE WAS GOOD.

( ) 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

DATA QUALIFIERS

Contractor: ENSECO/ERCO

Case 8288

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

(3) CALIBRATION OUTLIERS ARE TABULATED IN THE CALIBRATION OUTLIER FORMS. CCC AND SPCC COMPOUNDS ARE SATISFACTORY.

(4) METHYLENE CHLORIDE, 4-HYDROXY-4-METHYL-2-PENTANONE, A POSSIBLE ALDOL CONDENSATION PRODUCT, AND (3) UNKNOWNS WERE FOUND IN THE SOIL BNA BLANK. NO PESTICIDES WERE FOUND IN THE SOIL PESTICIDE BLANK. A VOLATILE SOIL BLANK WAS NOT RAN AND IN ITS PLACE WAS RAN A WATER VOA BLANK. THIS DOES NOT CONFORM TO CONTRACTUAL OBLIGATIONS.

(5) THE SURROGATE RECOVERY OF DIBUTYL CHLORENDATE IN SAMPLES EQ 372 AND EQ 373 WERE NOT WITHIN ADVISORY LIMITS. A SOIL SURROGATE VOA BLANK WAS NOT RAN. ~~PLEASE SUBMIT~~ SOIL NOT AVAILABLE. THIS IS OK. -RJC 1-25-88

(6) MATRIX SPIKE/MATRIX SPIKE DUPLICATES FOR VOA SOIL EQ 372 HAD LOW % REC IN THE MS AND MSD AS WELL AS HIGH % RPD FOR TOLUENE. THE RPD FOR BENZENE WAS ALSO ELEVATED IN THIS SAMPLE. TOLUENE AND BENZENE ARE NOW FLAGGED (MS) IN THE EQ 372 DATA SHEET. IN THE BNA MATRIX ASSAY USING SOIL EQ 373, 2,4-DINITRO TOLUENE HAD AN ELEVATED % RECOVERY IN THE MSD; PENTACHLOROPHENOL HAD AN ELEVATED RPD; PHENOL AS WELL AS 2-CHLOROPHENOL A HIGH % REC IN THE MSD.

Reviewed by: Robert Hatze

Phone: 312-353-2958

Date: 1/12/88

DATA QUALIFIERS

Contractor: ENSECO/ERCO

Case 8288

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

THE EQ 373 SOIL LINDANE MS AND MSD % RECOVERIES WERE BOTH LOW WHILE THE RPD WAS SATISFACTORY. THE COMPOUNDS ARE NOW FLAGGED PROPERLY ON THE EQ373 DATA SHEET.

(7) COMPOUND IDENTIFICATION AND THE 23 TIC'S FOUND IN EQ 372 AND THE 21 TIC'S IN EQ 373 WERE CARRIED OUT PROPERLY. GC/MS RESULTS SUBSTANTIATE THE COMPOUNDS IDENTIFIED.

* (8) DATA ARE ACCEPTABLE WITH THE MAJOR DIFFICULTY BEING A LACK OF A VOA SOIL BLANK ANALYSIS.

* SOIL IS NOT AVAILABLE FOR VOA BLANK ANALYSIS. WATER BLANKS WERE USED WHICH IS ACCEPTABLE.
-PJC
1-23-88

Reviewed by: Robert Kaiser

Phone: 312-353-2985

Date: 1-29-88

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

CASE/SAS # 8288 CONTRACTOR ENSECO/ERCO

Instrument # V 3	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	10/13/87			11/4/87 0951			11/5/87 2345								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane								30.64	J						
Vinyl Chloride															
Chloroethane															
Methylene Chloride					41.66	J		35.06	J						
Acetone															
Carbon Disulfide					92.16	J		138.8	J						
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone								45.90	J						
1,2-Dichloroethane								32.65	J						
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate								41.21	J						
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether								26.10	J						
Bromoform															
4-Methyl-2-Pentanone								38.11	J						
2-Hexanone								39.36	J						
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

BLK1 m110	BLK2 m150	
EQ 372	EQ 373	
	EQ 372 MS	
	EQ 372 MSD	

Reviewer's Initials/Date: RK 11/12/88

* 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 1)

CASE/SAS # 8288 CONTRACTOR ENSECO/ERCO

Instrument #EGMS 5-3	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	11/13/87			11/16/87 1638			11/18/87 1216			11/20/87 1459					
	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											26.8	J			
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid								31.3	J		28.1	J			
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline					48.9	J		38.4	J						
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene											31.9	J			
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline		63.9	J		130.0	J		119.3	J		94.9	J			
Acenaphthene															
2,4-Dinitrophenol								62.1	J		42.2	J			
4-Nitrophenol								31.1	J		26.2	J			
Dibenzofuran															

AFFECTED SAMPLES:

	ERCO BLK 5254-70	EQ 373	EQ 372
		EQ 373 MS	
		EQ 373 MSD	

Reviewer Initials/Date: RK 1/12/88

* 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 # 8288 CONTRACTOR ENSECO/ERCO

Instrument # GC/MS S-3	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	11/13/87			11/16/87 1638			11/19/87 1216			11/20/87 1459					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether											25.6	J			
Fluorene															
4-Nitroaniline					113.7	J					25.8	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					51.2	J		56.6	J		59.0	J			
Benzo(k)Fluoranthene					51.2	J		56.6	J		59.0	J			
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene		39.69	J		40.3	J		40.6	J		42.0	J			
Dibenz(a,h)Anthracene								28.3	J		32.3	J			
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: RK 1/12/88

Case: 8288

Contractor: ENSECO / ERCO

TENTATIVELY IDENTIFIED COMPOUNDS
MATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Robert Katzen 1/12/88

Enseco

RECEIVED
NOV 30 1987
U.S. EPA CENTRAL
REGIONAL LAB

November 25, 1987

Case Narrative

U.S. EPA Case 8288
Contractor: Enseco Incorporated
Contract Number: 68-01-7147
Region V

1. The second and final data package for Case 8288 consists of the results for two samples. We received the samples on October 28, 1987.

2. The analyses were performed by the Erco Laboratory under California Analytical Laboratory's contract.

3. The matrix spike and matrix spike duplicate were performed on Sample EQ-372 for the volatile fraction and EQ-373 for the BNA and pesticide fractions.

Elizabeth McCarthy

Elizabeth McCarthy
Data Control Manager

205 Alewife Brook Parkway
Cambridge, Massachusetts 02138
617/661-3111 Facsimile 617/354-5258

DELIVERABLES INDEX

EPA NEIC CASE NO: 8288
CONTRACT NO: 68-01-7147
CONTRACTOR: ENSECO INCORPORATED

I. INTRODUCTION
CASE NARRATIVE
SAMPLE ANALYSIS INSTRUMENT KEY
INTERNAL STANDARD & SURROGATE STANDARD KEY

		PAGE
II.	QC SUMMARY	
	A. SURROGATE % RECOVERY SUMMARY (FORM II)	1-2
	B. MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY (FORM III)	3
	C. METHOD BLANK SUMMARY (FORM IV)	4
	D. GC/MS TUNING & MASS CALIBRATION (FORM V)	5-11
III.	SAMPLE DATA	
	A. TRAFFIC REPORT	
	B. ORGANIC ANALYSIS DATA SHEET (FORM I)	
	C. TENTATIVELY IDENTIFIED COMPOUNDS (FORM I, PART B)	
	D. VOA AND BNA STANDARD SPECTRA	
	E. RAW DATA -- IN ORDER: VOA, BNA, PEST.	

EPA ID	LAB ID	
EQ 372	5748-1	12-102
EQ 373	5748-2	103-158

IV.	STANDARDS DATA	
	A. INSTRUMENT DETECTION LIMITS	159-162
	B. INITIAL CALIBRATION DATA (FORM VI)	163-166
	C. CONTINUING CALIBRATION CHECK (FORM VII)	167-176
	D. PESTICIDE FORMS	–
	1. PESTICIDE EVALUATION STANDARDS SUMMARY (FORM VIII)	177-178
	2. PESTICIDE/PCB STANDARDS SUMMARY (FORM IX)	179-180
	3. PESTICIDE/PCB IDENTIFICATION (FORM X)	NA
	E. VOA STANDARD(S) CHROMATOGRAMS & QUANT REPORT	181-194
	F. BNA STANDARD(S) CHROMATOGRAMS & QUANT REPORT	195-268
	G. PESTICIDE EVALUATION STANDARD(S) chrom. & printout	269-276
	H. PESTICIDE INDIVIDUAL STANDARD MIX chrom. & printout	277-284
	I. PESTICIDE QUANTITATION STANDARD(S) chrom. & printout	–

V.	RAW QC DATA			
	A. DFTPP (bar graph spectrum & mass listing)			285-292
	B. BFB (bar graph spectrum & mass listing)			293-298
	C. BLANK DATA	Method blank 1,2	M1108, M1508	299-308
		Erco Blank 1	5754-7B	309-329
		Erco Blank 2	5748-5B	330-332
	D. MATRIX SPIKE DATA	EQ372, EQ373	5748-3,4 MS	333-361
	E. MATRIX SPIKE DUPLICATE DATA	EQ372, EQ373	5748-3,4 MSD	362-389.

INSTRUMENT DETECTION LIMITS

Volatile Compounds

Hewlett-Packard 5996 GC/MS V1, V2, V3, V4

CAS Number	Parameter	ng
74-87-3	Chloromethane	2 µ
74-83-9	Bromomethane	2 µ
75-01-4	Vinyl chloride	2 µ
75-00-3	Chloroethane	2 µ
75-09-2	Methylene chloride	2 µ
67-64-1	Acetone	2 µ
75-15-0	Carbon disulfide	1 µ
75-35-4	1,1-Dichloroethene	1 µ
75-34-3	1,1-Dichloroethane	1 µ
156-60-5	trans-1,2-Dichloroethene	1 µ
67-66-3	Chloroform	1 µ
107-06-2	1,2-Dichloroethane	1 µ
78-93-3	2-'Butanone	1 µ
71-55-6	1,1,1-Trichloroethane	1 µ
56-23-5	Carbon tetrachloride	1 µ
108-05-4	Vinyl acetate	2 µ
75-27-4	Bromodichloromethane	1 µ
79-34-5	1,1,2,2-Tetrachloroethane	1 µ
78-87-5	1,2-Dichloropropane	1 µ
10061-02-6	trans-1,3-Dichloropropene	1 µ
79-01-6	Trichloroethene	1 µ
124-48-1	Dibromochloromethane	1 µ
79-00-5	1,1,2-Trichloroethane	1 µ
71-43-2	Benzene	1 µ
10061-01-5	cis-1,3-Dichloropropene	1 µ
110-75-8	2-Chloroethylvinylether	2 µ
75-25-2	Bromoform	1 µ
591-78-6	2-Hexanone	2 µ
108-10-1	4-Methyl-2-pentanone	2 µ
127-18-4	Tetrachloroethene	1 µ
108-88-3	Toluene	1 µ
108-90-7	Chlorobenzene	1 µ
100-41-4	Ethylbenzene	1 µ
100-42-5	Styrene	1 µ
	Total xylenes	1 µ

INSTRUMENT DETECTION LIMITS

Semivolatile Compounds

Finnigan GC/MS S-1, S-2, and S-3

CAS Number	Parameter	ng
108-95-2	Phenol	5 µ
111-44-4	bis(2-Chloroethyl)ether	5 µ
95-57-8	2-Chlorophenol	5 µ
541-73-1	1,3-Dichlorobenzene	5 µ
106-46-7	1,4-Dichlorobenzene	5 µ
100-51-6	Benzyl alcohol	10 µ
95-50-1	1,2-Dichlorobenzene	5 µ
95-48-7	2-Methylphenol	5 µ
39638-32-9	bis(2-Chloroisopropyl)ether	5 µ
106-44-5	4-Methylphenol	5 µ
621-64-7	N-Nitroso-di-n-propylamine	10 µ
67-72-1	Hexachloroethane	10 µ
98-95-3	Nitrobenzene	5 µ
78-59-1	Isophorone	5 µ
88-75-5	2-Nitrophenol	10 µ
105-67-9	2,4-Dimethylphenol	10 µ
65-85-0	Benzoic acid	25 µ
111-91-1	bis(2-Chloroethoxy)methane	5 µ
120-83-2	2,4-Dichlorophenol	5 µ
120-82-1	1,2,4-Trichlorobenzene	5 µ
91-20-3	Naphthalene	3 µ
106-47-8	4-Chloroaniline	5 µ
87-68-3	Hexachlorobutadiene	5 µ
59-50-7	4-Chloro-3-methylphenol	10 µ
91-57-6	2-Methylnaphthalene	10 µ
77-47-4	Hexachlorocyclopentadiene	10 µ
88-06-2	2,4,6-Trichlorophenol	10 µ
95-95-4	2,4,5-Trichlorophenol	10 µ
91-58-7	2-Chloronaphthalene	4 µ
88-74-4	2-Nitroaniline	10 µ
131-11-3	Dimethyl phthalate	4 µ
208-96-8	Acenaphthylene	3 µ
99-09-2	3-Nitroaniline	10 µ
83-32-9	Acenaphthene	3 µ
51-289-5	2,4-Dinitrophenol	25 µ
100-02-7	4-Nitrophenol	15 µ
132-64-9	Dibenzofuran	4 µ

INSTRUMENT DETECTION LIMITS

Semivolatile Compounds

Finnigan GC/MS S-1, S-2, and S-3

CAS Number	Parameter	ng
121-14-2	2,4-Dinitrotoluene	10 µ
606-20-2	2,6-Dinitrotoluene	10 µ
84-66-2	Diethylphthalate	4 µ
7005-72-3	4-Chlorophenyl-phenylether	5 µ
86-73-7	Fluorene	4 µ
100-01-6	4-Nitroaniline	10 µ
534-52-1	4,6-Dinitro-2-methylphenol	15 µ
86-30-6	N-Nitrosodiphenylamine (1)	5 µ
101-55-3	4-Bromophenyl-phenylether	5 µ
118-74-1	Hexachlorobenzene	5 µ
87-86-5	Pentachlorophenol	10 µ
85-01-8	Phenanthrene	3 µ
120-12-7	Anthracene	3 µ
84-74-2	Di-n-butylphthalate	3 µ
206-44-0	Fluoranthene	3 µ
129-00-0	Pyrene	3 µ
85-68-7	Butylbenzylphthalate	5 µ
91-94-1	3,3-Dichlorobenzidine	5 µ
56-55-3	Benzo(a)anthracene	3 µ
117-81-7	bis(2-ethylhexyl)phthalate	4 µ
218-01-9	Chrysene	3 µ
117-84-0	Di-n-octyl phthalate	3 µ
205-99-2	Benzo(b)fluoranthene	3 µ
207-08-9	Benzo(k)fluoranthene	3 µ
50-32-8	Benzo(a)pyrene	3 µ
193-39-5	Indeno(1,2,3-c,d)pyrene	4 µ
53-70-3	Dibenzo(a,h)anthracene	3 µ
191-24-2	Benzo(g,h,i)perylene	3 µ

INSTRUMENT DETECTION LIMITS

Pesticide/PCB Compounds

Hewlett Packard 5880 No. 7 and No. 9

CAS Number	Parameter	ng
319-84-6	alpha-BHC	0.01 µ
319-85-7	beta-BHC	0.02 µ
319-86-8	delta-BHC	0.01 µ
58-89-9	gamma-BHC (Lindane)	0.01 µ
76-44-8	Heptachlor	0.01 µ
309-00-2	Aldrin	0.01 µ
1024-57-3	Heptachlor epoxide	0.01 µ
959-98-8	Endosulfan I	0.02 µ
60-57-1	Dieldrin	0.02 µ
72-55-9	4,4-DDE	0.02 µ
72-20-8	Endrin	0.05 µ
33213-65-9	Endosulfan II	0.02 µ
72-54-8	4,4-DDD	0.02 µ
1031-07-8	Endosulfan sulfate	0.08 µ
50-29-3	4,4-DDT	0.08 µ
72-43-5	Methoxychlor	0.06 µ
53494-70-5	Endrin ketone	0.08 µ
57-74-9	Chlordane	0.12 µ
8001-35-2	Toxaphene	0.40 µ
12674-11-2	Aroclor-1016	0.38 µ
11104-28-2	Aroclor-1221	0.29 µ
11141-16-5	Aroclor-1232	0.40 µ
53469-21-9	Aroclor-1242	0.45 µ
12672-29-6	Aroclor-1248	0.31 µ
11097-69-1	Aroclor-1254	0.42 µ
11096-82-5	Aroclor-1260	0.25 µ

WATER SURROGATE PERCENT RECOVERY SUMMARY

Case No. 8248 Contract Laboratory Enseco Inc.- Erco Laboratory Contract No. 68-01-7147

	VOLATILE			SEMI-VOLATILE								PESTICIDE
SMO TRAFFIC NO.	TOLUENE-D8 (88-110)	BFB (86-115)	1,2 DICHLORO-ETHANE-D4 (76-114)	NITRO-BENZENE-D5 (35-114)	2-FLUORO-BIPHENYL (43-116)	TERPHENYL-D14 (33-141)			PHENOL-D5 (10-94)	2-FLUORO-PHENOL (21-100)	2,4,6 TRIBROMO PHENOL (10-123)	** DIBUTYL-CHLORENDATE (24-154)
MW10B	100	101	98									
MW50B	101	99	88									

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 6 ; outside of QC limits

Semi-Volatiles: — out of — ; outside of QC limits

Pesticides: — out of — ; outside of QC limits

Comments:

2

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Resubmitted Data

Case No. 8288 Contract Laboratory Enseco Inc.- Erco Laboratory Contract No. 68-01-7147

Low ✓ Medium _____

SMO TRAFFIC NO.	VOLATILE: TOLUENE-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLORO-ETHANE-D4 (70-121)	SEMI-VOLATILE: NITRO-BENZENE-D5 (23-120)	SEMI-VOLATILE: 2-FLUORO-BIPHENYL (30-116)	SEMI-VOLATILE: TERPHENYL-D14 (18-137)	SEMI-VOLATILE:	SEMI-VOLATILE:	SEMI-VOLATILE: PHENOL-D5 (24-113)	SEMI-VOLATILE: 2-FLUORO-PHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMO-PHENOL (19-122)	PESTICIDE: DIBUTYL-CHLORENDATE ** (20-150)
EQ 372	113	88	96	67	67	69			61	69	61	DC *
EQ 373	107	96	90	82	80	102			82	75	69	158 *
EQ 373S	~~112~~	~~90~~	~~87~~ 88	91	95	99			91	90	74	114
EQ 373SD	~~116~~	~~88~~	~~87~~ 88	108	108	120			110	109	106	102
Erco Blank 1				73	80	81			73	~~78~~ 76	76	
Erco Blank 2												137
EQ 372MS	112	90	87									
EQ 372MSD	116	88	87									

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 12 ; outside of QC limits

Semi-Volatiles: 0 out of 30 ; outside of QC limits

Pesticides: 2 out of 5 ; outside of QC limits

7/86

Comments: D.C. = Diluted Out

FORM II

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 8288 **Contractor** Enseco - Erco Laboratory **Contract No.** 68-01-7147

Low Level ✓ **Medium Level** _____

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EQ 372	1,1-Dicholorethene	300 320	0	250	83	290	90	8.1	22	59-172
	Trichloroethene	300 320	0	270	92	300	92	0	24	62-137
	Chlorobenzene	300 320	0	280	95	310	97	2.1	21	60-133
	Toluene	300 320	284	344	20 *	430	46 *	79 *	21	59-139
	Benzene	300 320	152	350	66	480	102	43 *	21	66-142
B/N SMO SAMPLE NO. EQ 373	1,2,4-Trichlorobenzene	4700 / 4700	0	4000	86	4800	103	18	23	38-107
	Acenaphthene	4700 / 4700	0	4300	90	5000	106	16	19	31-137
	2,4 Dinitrotoluene	4700 / 4700	0	3900	82	4700	101*	21	47	28-89
	Pyrene	4700 / 4700	57	5200	110	6500	138	23	36	35-142
	N-Nitrosodi-n-Propylamine	4700 / 4700	0	4100	86	4300	92	6.7	38	41-126
	1,4-Dichlorobenzene	4700 / 4700	0	3900	83	4700	101	20	27	28-104
ACID SMO SAMPLE NO. EQ 373	Pentachlorophenol	9400 / 9300	0	1900	20	3700	40	67 *	47	17-109
	Phenol	9400 / 9300	0	8000	84	9300	100*	17	35	26-90
	2-Chlorophenol	9400 / 9300	0	9100	96	10000	108*	12	50	25-102
	4-Chloro-3-Methylphenol	9400 / 9300	0	8100	85	9500	102	18	33	26-103
	4-Nitrophenol	9400 / 9300	0	7200	76	8800	94	21	50	11-114
PEST SMO SAMPLE NO. EQ 373	Lindane	7.8 7.6	0	3.2	41 *	2.4	32 *	9	50	46-127
	Heptachlor	7.8 7.6	0	6.6	85	8.0	105	20	31	35-130
	Aldrin	7.8 7.6	0	4.0	51	3.4	45	6	43	34-132
	Dieldrin	19.6 18.9	0	12.3	63	10.6	56	7	38	31-134
	Endrin	19.6 18.9	0	11.1	57	9.6	51	6	45	42-139
	4,4'-DDT	19.6 18.9	0	10.7	55	8.9	47	8	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ~~0~~ 2 RK 1/11/88 out of 5 ; outside QC limits
B/N 0 out of 6 ; outside QC limits
ACID 1 out of 5 ; outside QC limits
PEST 0 out of 6 ; outside QC limits

RECOVERY: VOAs 2 out of 10 ; outside QC limits
B/N 1 out of 12 ; outside QC limits
ACID 2 out of 10 ; outside QC limits
PEST 2 out of 12 ; outside QC limits

Comments: _____

3

FORM III

7/85

METHOD BLANK SUMMARY

Case No. 8288 Region V Contractor Enseco Inc.- Erco Laboratory Contract No. 68-01-7147

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
Blank 1 5754-7B	11/16/87	BNA	Soil	L	Gems 5-3	—	Methylene chloride + unknown	3,000	µg/kg	NA
						—	Unknown	1,000	µg/kg	NA
						123-42-2	4-Hydroxy-4-methyl-2-pentanone *	28,000	µg/kg	NA
						—	Unknown	260	µg/kg	NA
Blank 2 5748-5B	11-17-87	Pest	Soil	low	GC#9	—	No Pesticides Found	—	—	—
Blank 1 M110B	11-4-87	VOA	water	low	V3	75-09-2	Methylene Chloride	1.9	µg/l	5
Blank 2 M150B	11-6-87	VOA	water	low	V3	75-09-2	Methylene Chloride	1.3	µg/l	5

Comments: * Possible aldol condensation product
NA = Not Applicable.

4

Laboratory Name Enseco Inc.- Erco Laboratory

Case No 8288

Sample Number EQ-372

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Methylene chloride + unknown	BNA	164	9,700
2.	Unknown	BNA	276	1,300
3. 123-42-2	4-Hydroxy-4-methyl-2-pentanone *	BNA	323	35,000
4. 100-41-4	Benzene, ethyl-	BNA	338	1,400
5.	Benzene, dimethyl- isomer	BNA	350	4,600
6. 873-94-9	Cyclohexanone, 3,3,5-Trimethyl-	BNA	568	6,400
7. 116-02-9	Cyclohexanol, 3,3,5-Trimethyl-	BNA	584	3,100
8.	Unknown branched hydrocarbon	BNA	1144	1,100
9.	Phenanthrene / Anthracene, methyl- isomer	BNA	1274	2,300
10. 203-64-5	4H-Cyclopenta[DEF]phenanthrene	BNA	1285	1,800
11. 10544-50-0	Sulfur, mol. (S8)	BNA	1360	8,600
12.	Unknown	BNA	1366	2,400
13.	Pyrene, methyl- isomer	BNA	1463	1,800
14.	11H-Benzofluorene isomer	BNA	1472	1,400
15.	Unknown	BNA	1541	970
16.	Unknown aromatic compound	BNA	1560	1,000
17.	Unknown aromatic compound	BNA	1608	1,200
18. 192-97-2	Benzo (e) pyrene	BNA	1783	1,900
19.				
20.	~~CH_2~~ C_4H_8O isomer	VOA	385	103
21. 76131	1,1,2-trichloro-1,2,2-trifluoroethane	VOA	448	38
22.	alkyl-substituted benzene	VOA	1311	36
23.	alkyl-substituted benzene	VOA	1465	60
24.	alkyl-Substituted benzene	VOA	1524	48
25.				
26.				
27.				
28.				
29.				
30.				

* Possible aldol condensation product

Form 1, Part B

7/85

NCK

VAL

EQ 372

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Enseco - Erco Laboratory
Case No 3238
Lab Sample ID No 5748-01
QC Report No. 002 - CAL
Sample Matrix. soil
Contract No 68.01.7147
Data Release Authorized By: A
Date Sample Received. 10.28.87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 11.4.87
Date Analyzed: 11.4.87
Conc/Dil Factor: 10.8 pH 8.5
Percent Moisture: (Not Decanted) 26

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	68u
74-83-9	Bromomethane	68u
75-01-4	Vinyl Chloride	68u
75-00-3	Chloroethane	68u
75-09-2	Methylene Chloride	270 ~~B~~ uJ
67-64-1	Acetone	200
75-15-0	Carbon Disulfide	34uJ
75-35-4	1, 1-Dichloroethene	34u
75-34-3	1, 1-Dichloroethane	34u
156-60-5	Trans-1, 2-Dichloroethene	34u
67-66-3	Chloroform	34u
107-06-2	1, 2-Dichloroethane	34u
78-93-3	2-Butanone	68u
71-55-6	1, 1, 1-Trichloroethane	34u
56-23-5	Carbon Tetrachloride	34u
108-05-4	Vinyl Acetate	68u
75-27-4	Bromodichloromethane	34u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	34u
10061-02-6	Trans-1, 3-Dichloropropene	34u
79-01-6	Trichloroethene	34u
124-48-1	Dibromochloromethane	34u
79-00-5	1, 1, 2-Trichloroethane	34u
71-43-2	Benzene	150 uJ
10061-01-5	cis-1, 3-Dichloropropene	34u
110-75-8	2-Chloroethylvinylether	68u
75-25-2	Bromoform	34u
108-10-1	4-Methyl-2-Pentanone	68u
591-78-6	2-Hexanone	68u
127-18-4	Tetrachloroethene	34u
79-34-5	1, 1, 2, 2-Tetrachloroethane	34u
108-88-3	Toluene	280 uJ
108-90-7	Chlorobenzene	34u
100-41-4	Ethylbenzene	340
100-42-5	Styrene	34u
	Total Xylenes	2000

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

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

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

d = co-elution

RK (uJ) 1/12/88

13

Laboratory Name Enseco - Erco Laboratory

Case No: 8288

Sample Number
EQ-372

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10/30/87

Date Analyzed: 11/20/87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 25

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	1000u
111-44-4	bis(-2-Chloroethyl)Ether	1000u
95-57-8	2-Chlorophenol	1000u
541-73-1	1 3-Dichlorobenzene	1000u
106-46-7	1. 4-Dichlorobenzene	1000u
100-51-6	Benzyl Alcohol	1000u
95-50-1	1. 2-Dichlorobenzene	1000u
95-48-7	2-Methylphenol	1000u
39638-32-9	bis(2-chloroisopropyl)Ether	1000u
106-44-5	4-Methylpheno	1000u
621-64-7	N-Nitroso-Di-n-Propylamine	1000u J
67-72-1	Hexachloroethane	1000u
98-95-3	Nitrobenzene	1000u
78-59-1	Isophorone	170j
88-75-5	2-Nitrophenol	1000u
105-67-9	2. 4-Dimethylphenol	140j
65-85-0	Benzoic Acid	5000u J
111-91-1	bis(-2-Chloroethoxy)Methane	1000u
120-83-2	2. 4-Dichlorophenol	1000u
120-82-1	1. 2. 4-Trichlorobenzene	1000u
91-20-3	Naphthalene	970j
106-47-8	4-Chloroaniline	1000u
87-68-3	Hexachlorobutadiene	1000u
59-50-7	4-Chloro-3-Methylphenol	1000u
91-57-6	2-Methylnaphthalene	410j MJ
77-47-4	Hexachlorocyclopentadiene	1000u
88-06-2	2. 4. 6-Trichlorophenol	1000u
95-95-4	2. 4. 5-Trichlorophenol	5000u
91-58-7	2-Chloronaphthalene	1000u
88-74-4	2-Nitroaniline	5000u
131-11-3	Dimethyl Phthalate	1000u
208-96-8	Acenaphthylene	210j
99-09-2	3-Nitroaniline	5000u J

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	450u j
51-28-5	2. 4-Dinitrophenol	5000u J
100-02-7	4-Nitrophenol	5000u J
132-64-9	Dibenzofuran	470j
121-14-2	2 4-Dinitrotoluene	1000u
606-20-2	2. 6-Dinitrotoluene	1000u
84-66-2	Diethylphthalate	1000u
7005-72-3	4-Chlorophenyl-phenylether	1000u J
86-73-7	Fluorene	910j
100-01-6	4-Nitroaniline	5000u J
534-52-1	4. 6-Dinitro-2-Methylphenol	5000u
86-30-6	N-Nitrosodiphenylamine (1)	1000u
101-55-3	4-Bromophenyl-phenylether	1000u
118-74-1	Hexachlorobenzene	1000u
87-86-5	Pentachlorophenol	5000u
85-01-8	Phenanthrene	6100
120-12-7	Anthracene	1400
84-74-2	Di-n-Butylphthalate	1000u
206-44-0	Fluoranthene	5400
129-00-0	Pyrene	4700
85-68-7	Butylbenzylphthalate	1000u
91-94-1	3. 3'-Dichlorobenzidine	2000u
56-55-3	Benzo(a)Anthracene	2400
117-81-7	bis(2-Ethylhexyl)Phthalate	1000u
218-01-9	Chrysene	2400
117-84-0	Di-n-Octyl Phthalate	1000u
205-99-2	Benzo(b)Fluoranthene	2900d MJ
207-08-9	Benzo(k)Fluoranthene	2900d MJ
50-32-8	Benzo(a)Pyrene	2000
193-39-5	Indeno(1. 2. 3-cd)Pyrene	980j MJ
53-70-3	Dibenzia h)Anthracene	300j MJ
191-24-2	Benzo(g. h i)Perylene	930j

(1)-Cannot be separated from diphenylamine

d= Coelution.

Form I RK 1/17/88 (MJ)

7/85

NCR

Laboratory Name ERCO/ENDECO

Case No 8288

Sample Number EQ372

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 10-29-87

Date Analyzed 11-17-87

Conc/Dil Factor 200

Percent Moisture (decanted) 29 PH = 8.47

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	1600u
319-85-7	Beta-BHC	1600u
319-86-8	Delta-BHC	1600u
58-89-9	Gamma-BHC (Lindane)	1600u
76-44-8	Heptachlor	1600u
309-00-2	Aldrin	1600u
1024-57-3	Heptachlor Epoxide	1600u
959-98-8	Endosulfan I	1600u
60-57-1	Dieldrin	3200u
72-55-9	4,4-DDE	3200u
72-20-8	Endrin	3200u
33213-65-9	Endosulfan II	3200u
72-54-8	4,4-DDD	3200u
1031-07-8	Endosulfan Sulfate	3200u
50-29-3	4,4-DDT	3200u
72-43-5	Methoxychlor	16000u
53494-70-5	Endrin Ketone	3200u
57-74-9	Chlordane	16000u
8001-35-2	Toxaphene	32000u
12674-11-2	Aroclor-1016	16000u
11104-28-2	Aroclor-1221	16000u
11141-16-5	Aroclor-1232	16000u
53469-21-9	Aroclor-1242	16000u
12672-29-6	Aroclor-1248	16000u
11097-69-1	Aroclor-1254	16000u
11096-82-5	Aroclor-1260	16000u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s NA or W_s 21.9 V_t 1000 V_i 2.0

15

EP 373

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Enseco - Erco Laboratory
Case No: 3288
Lab Sample ID No: 5748-02
QC Report No.: 002-CAL
Sample Matrix: soil
Contract No: 68-01-7147
Data Release Authorized By: Av
Date Sample Received: 10.28.87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 11.4.87
Date Analyzed: 11.4.87
Conc/Dil Factor: 1.8 pH 8.9
Percent Moisture: (Not Decanted) 19

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	18U
74-83-9	Bromomethane	18U
75-01-4	Vinyl Chloride	18U
75-00-3	Chloroethane	18U
75-09-2	Methylene Chloride	50B U
67-64-1	Acetone	40
75-15-0	Carbon Disulfide	9U
75-35-4	1, 1-Dichloroethene	9U
75-34-3	1, 1-Dichloroethane	9U
156-60-5	Trans-1, 2-Dichloroethene	9U
67-66-3	Chloroform	9U
107-06-2	1, 2-Dichloroethane	9U
78-93-3	2-Butanone	18U
71-55-6	1, 1, 1-Trichloroethane	9U
56-23-5	Carbon Tetrachloride	9U
108-05-4	Vinyl Acetate	18U
75-27-4	Bromodichloromethane	9U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	9U
10061-02-6	Trans-1, 3-Dichloropropene	9U
79-01-6	Trichloroethene	9U
124-48-1	Dibromochloromethane	9U
79-00-5	1, 1, 2-Trichloroethane	9U
71-43-2	Benzene	9U
10061-01-5	cis-1, 3-Dichloropropene	9U
110-75-8	2-Chloroethylvinylether	18U
75-25-2	Bromoform	9U
108-10-1	4-Methyl-2-Pentanone	18U
591-78-6	2-Hexanone	18U
127-18-4	Tetrachloroethene	9U
79-34-5	1, 1, 2, 2-Tetrachloroethane	9U
108-88-3	Toluene	9U
108-90-7	Chlorobenzene	9U
100-41-4	Ethylbenzene	9U
100-42-5	Styrene	9U
	Total Xylenes	9U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

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

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

RK
1.12.88
(MJ)

103

Laboratory Name Enseco - Erco Laboratory

Case No: 8288

Sample Number
EQ-373

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10/30/87

Date Analyzed: 11/18/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 17

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
108-95-2	Phenol	480u J
111-44-4	bis(-2-Chloroethyl)Ether	480u
95-57-8	2-Chlorophenol	480u J
541-73-1	1 3-Dichlorobenzene	480u
106-46-7	1. 4-Dichlorobenzene	480u
100-51-6	Benzyl Alcohol	480u
95-50-1	1 2-Dichlorobenzene	480u
95-48-7	2-Methylphenol	480u
39638-32-9	bis(2-chloroisopropyl)Ether	480u
106-44-5	4-Methylpheno	480u
621-64-7	N-Nitroso-Di-n-Propylamine	480u
67-72-1	Hexachloroethane	480u
98-95-3	Nitrobenzene	480u
78-59-1	Isophorone	480u
88-75-5	2-Nitrophenol	480u
105-67-9	2. 4-Dimethylphenol	480u
65-85-0	Benzoic Acid	2400u J
111-91-1	bis(-2-Chloroethoxy)Methane	480u
120-83-2	2. 4-Dichlorophenol	480u
120-82-1	1. 2. 4-Trichlorobenzene	480u
91-20-3	Naphthalene	480u
106-47-8	4-Chloroaniline	480u J
87-68-3	Hexachlorobutadiene	480u
59-50-7	4-Chloro-3-Methylphenol	480u
91-57-6	2-Methylnaphthalene	480u
77-47-4	Hexachlorocyclopentadiene	480u
88-06-2	2. 4. 6-Trichlorophenol	480u
95-95-4	2. 4. 5-Trichlorophenol	2400u
91-58-7	2-Chloronaphthalene	480u
88-74-4	2-Nitroaniline	2400u
131-11-3	Dimethyl Phthalate	480u
208-96-8	Acenaphthylene	480u
99-09-2	3-Nitroaniline	2400u J

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	480u
51-28-5	2. 4-Dinitrophenol	2400u J
100-02-7	4-Nitrophenol	2400u J
132-64-9	Dibenzofuran	480u
121-14-2	2 4-Dinitrotoluene	480u J
606-20-2	2 6-Dinitrotoluene	480u
84-66-2	Diethylphthalate	480u
7005-72-3	4-Chlorophenyl-phenylether	480u
86-73-7	Fluorene	480u
100-01-6	4-Nitroaniline	2400u
534-52-1	4. 6-Dinitro-2-Methylphenol	2400u
86-30-6	N-Nitrosodiphenylamine (1)	110j
101-55-3	4-Bromophenyl-phenylether	480u
118-74-1	Hexachlorobenzene	480u
87-86-5	Pentachlorophenol	2400u J
85-01-8	Phenanthrene	86j
120-12-7	Anthracene	480u
84-74-2	Di-n-Butylphthalate	480u
206-44-0	Fluoranthene	59j
129-00-0	Pyrene	57j
85-68-7	Butylbenzylphthalate	480u
91-94-1	3. 3'-Dichlorobenzidine	950u
56-55-3	Benzo(a)Anthracene	480u
117-81-7	bis(2-Ethylhexyl)Phthalate	200j
218-01-9	Chrysene	480u
117-84-0	Di-n-Octyl Phthalate	480u
205-99-2	Benzo(b)Fluoranthene	480u J
207-08-9	Benzo(k)Fluoranthene	480u J
50-32-8	Benzo(a)Pyrene	480u
193-39-5	Indeno(1. 2. 3-cd)Pyrene	480u J
53-70-3	Dibenz(a h)Anthracene	480u J
191-24-2	Benzo(g h. i)Perylene	480u

(1)-Cannot be separated from diphenylamine

R.K. 11/12/88 (MJ)

Laboratory Name ERCo / ENSECO

Case No 8288

Sample Number EQ 373

Organics Analysis Data Sheet
(Page 3)

Pesticide / PCBs

Concentration (Low) Medium (Circle One)

Date Extracted / Prepared 10-29-87

Date Analyzed 11-17-87

Conc / Dil Factor 20

Percent Moisture (decanted) 16 PH = 8.92

GPC Cleanup ☐ Yes ☒ No

Separatory Funnel Extraction ☐ Yes

Continuous Liquid - Liquid Extraction ☐ Yes

CAS Number		ug / l or (ug / Kg) (Circle One)
319-84-6	Alpha-BHC	160U
319-85-7	Beta-BHC	160U
319-86-8	Delta-BHC	160U
58 89-9	Gamma-BHC (Lindane)	160U J
76-44-8	Heptachlor	160U
309-00-2	Aldrin	160U
1024-57-3	Heptachlor Epoxide	160U
959-98-8	Endosulfan I	160U
60-57-1	Dieldrin	320U
72-55-9	4 4 -DDE	320U
72-20-8	Endrin	320U
33213-65-9	Endosulfan II	320U
72-54-8	4, 4 -DDD	320U
1031-07-8	Endosulfan Sulfate	320U
50-29-3	4 4 -DDT	320U
72-43-5	Methoxychlor	1600U
53494-70-5	Endrin Ketone	320U
57-74-9	Chlordane	1600U
8001-35-2	Toxaphene	3200U
12674-11-2	Aroclor-1016	1600U
11104-28-2	Aroclor-1221	1600U
11141-16-5	Aroclor-1232	1600U
53469-21-9	Aroclor-1242	1600U
12672-29-6	Aroclor-1248	1600U
11097-69-1	Aroclor-1254	1600U
11096-82-5	Aroclor-1260	1600U

RLK (MJ) 11/12/88

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s NA or W_s 26.0 V_t 1000 V_i 2.0

Case No 8288

EQ-373

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Methylene chloride + unknown	BNA	164	3,400
2.	Unknown	BNA	283	1,500
3. 123-42-2	4-Hydroxy-4-methyl-2-pentanone *	BNA	331	34,000
4.	Unknown	BNA	423	430
5. 459-60-9	Benzene, 1-Fluoro-4-methoxy	BNA	458	200
6. 873-94-9	Cyclohexanone, 3,3,5-Trimethyl-	BNA	570	200
7. 1120-21-4	Undecane	BNA	640	280
8.	Unknown branched hydrocarbon	BNA	739	240
9.	$C_{13}H_{28}$ branched hydrocarbon	BNA	752	210
10.	$C_{13}H_{28}$ isomer	BNA	829	290
11. 629-59-4	Tetradecane + unknown	BNA	914	430
12.	Unknown	BNA	965	300
13. 629-62-9	Pentadecane	BNA	994	380
14. 544-76-3	Hexadecane	BNA	1070	340
15.	Unknown branched hydrocarbon	BNA	1106	210
16. 629-78-7	Heptadecane	BNA	1142	200
17.	$C_{19}H_{40}$ isomer	BNA	1146	490
18.	Unknown branched hydrocarbon	BNA	1217	200
19. 629-92-5	Nonadecane	BNA	1275	250
20. 10544-50-0	Sulfur, mol. (S8)	BNA	1360	420
21.	Unknown	BNA	1542	210
22.				
23.	Not detected	VOA	-	-
24.				
25.				
26.				
27.				
28.				
29.				
30.				

* Possible aldol condensation product

ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

International Specialists in the Environment

CRL Receipt Date _____ FIT Receipt Date _____ Review Completed _____

TO: [illegible]

FROM: Brenda R. Jones

SUBJECT: [illegible]

PAN: IL0102 CASE # [illegible]

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# _____	Low Soil	# 3	Low Soil
_____	Low Water	_____	Low Water
_____	Drinking Water	_____	Drinking Water
_____	Other	_____	Other

Project Data Status _____ Completed!!

✓ Incomplete, awaiting: _____

FIT Data Review Findings:

Check Data Sheets for Transcription Errors

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

Book No. 7 Page No. 75 Date Sampled 10/21/87

26U:001

I have charged to above PAN week ending 12/19/87

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: [illegible] PAN# _____ DATE: [illegible]

CASE # [illegible] UNITS- [illegible] REVIEWER: [illegible]

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	MEQ 305	MEQ 571	MEQ 117				
	ALUMINUM									
	ANTIMONY									
	ARSENIC	2		11	13	14				
	BARIUM									
	BERYLLIUM	1		.6		.7				
	CADMIUM	1		4.7	4.4	5.9				
	CHROMIUM	2		25	19	22				
	COBALT	10		12	15	8				
	COPPER	5		29	34	73				
	LEAD	1		5	18	7570				
	MERCURY									
	NICKEL	8		34	36	22				
	SELENIUM									
	SILVER									
	THALLIUM									
	TIN									
	VANADIUM	10		[illegible]	21	[illegible]				
	ZINC									
	CYANIDE									

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 12-8-87

SUBJECT: Review of Region V CLP Data
Received for Review on 12-2-87

15 pages

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

TO: Data User: FIT

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

SITE NAME: U.S. SCRAP SMO case No. 8288

EPA Data Set No. SF 4560/ SF 4510 No. of Samples: 3 D.U./Activity Numbers Y905/C72100

CRL No. 88FC03S85 ; 88FC04S50, S51

SMO Traffic No. MER571 ; MEQ007, 008

CLP Laboratory: ENVIRONMENTAL PROTECTION SYSTEMS Hrs. Required for Review: 4

This is a review of three soil samples for case 8288.

Antimony and lead are unusable. Iron and zinc are estimated. Arsenic is biased 40% low. Selenium detectionlimit should be elevated by 50%. Cadmium is acceptable without qualification.

Antimony is unusable because of a spike failure of 21% recovery out of 500ug/l. The possibility of false negatives exists and detection limits are higher than reported. (p40 SOP)

Lead is unusable and not in contract compliance. MSA not done at 50. 100 and 150% of sample absorbance as stated in E 10 of SOW. Sample values outside of range of standards. Slope of curve nearly flat although correlation coefficient requirements met in some cases. MSA not marked on sample MEQ 008 data. MSA attempted on sample MER 571 with only two supplemental points (raw data PB6 and PB7). This is expressly forbidden in the SOW. Required MSA not marked on MER 571 data, not properly done and not recorded on the MSA report form.

Iron and zinc estimated because the serial dilution for ICP disagrees by more than 10%.

Arsenic is biased low because of poor spike recovery.

Selenium sample values are all less than detection limit. The spike is biased low and the detection limit should be raised by 50%.

Cadmium data is acceptable. Duplicate error is within 5 times the CRDL and should not have been flagged.

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

MS 12/8/87

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)

SUPERFUND 4510

CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS

LOG IN DATE: 11/4/87
DUE DATE: 12/30/87

THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

CASE NUMBER/SAS No. 8288 SITE NAME US Scrap IN LABORATORY CRL/EPS DATE SHIPPED 10/21/87

SUPERFUND DU NUMBER 4905 EPA RPM or OSC (S M S)/(CES) CERCLIS NUMBER ILD984679484 PAGE 1 OF 1

ACTIVITY NUMBER C72100

CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No	INORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No	WATER OR LIQUIDS: ACID BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17574	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17564	WATER POLYCHLORINATED BIPHENYLS UG/L PES17144	WATER CHLORINATED PESTICIDES UG/L PES17134	TOTAL METALS IN WATER UG/L MET111	WATER CYANIDE UG/L MIN74919	NITRATE NITRITE MG/L MIN7284	AMMONIA MG/L MIN7294	RESIDUE FILTERABLE TDS MG/L MIN7362	RESIDUE NON FILT TSS MG/L MIN7272			SEDIMENTS or SOILS: ACID BASE NEUTRAL CPDS ORGANIC SCAN MG/KG TOX16988	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN MG/KG TOX15622	SEDIMENTS POLYCHLORINATED BIPHENYLS MG/KG PES211422	SEDIMENT CHLORINATED PESTICIDES MG/KG 211322	TOTAL METALS MG/KG MET413	CYANIDE MG/KG MIN74930	EP TOXICITY METALS MG/KG	AMMONIA MG/KG MIN31928				
88F003595	EP989	MER571													✓	✓	✓	✓	✓	✓					

NOV 05 REC'D

UPER FUND 4560

CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS

LOG IN DATE: [illegible]
DUE DATE: 1/5/88

THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

E NUMBER/SAS No 8288 SITE NAME U S Scrap LABORATORY CAL (ERCD)/EPS DATE SHIPPED 10/27/87

ERFUND DU NUMBER U905 EPA RPM or OSC (S M S)/(CES) CERCLIS NUMBER ILD980679484 PAGE 1 OF 1

TIVITY NUMBER C92100

CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	INORGANIC TRAFFIC REPORT NUMBER	WATER OR LIQUIDS: ACID BASE NEUTRAL CPDS ORGANIC SCAN UG L TOX17574	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG L TOX17564	WATER POLYCHLORINATED BIPHENYLS UG L PES 17144	WATER CHLORINATED PESTICIDES UG L PES17134	TOTAL METALS IN WATER UG L MET111	WATER CYANIDE UG L MIN74919	NITRATE NITRITE MG L MIN7284	AMMONIA MG L MIN7294	RESIDUE FILTERABLE TDS MG L MIN7362	RESIDUE NON FILT TSS MG L MIN7372			SEDIMENTS or SOILS: ACID BASE NEUTRAL CPDS ORGANIC SCAN MG KG TOX215722	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN MG KG TOX215622	SEDIMENTS POLYCHLORINATED BIPHENYLS MG KG PES211422	SEDIMENT CHLORINATED PESTICIDES MG KG 211322	TOTAL METALS MG/KG MET413	CYANIDE MG KG MIN44930	EP TOXICITY METALS MG/KG	AMMONIA MG/KG MIN42925				
8FC04550	EQ372	MEQ007	✓												✓	✓	✓	✓	✓	✓						
88FC04551	EQ373	MEQ008	✓												✓	✓	✓	✓	✓	✓						

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P. O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEQ008

Date 11-25-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
SOW NO. 785
LAB SAMPLE ID NO. MEQ008

CASE NO. 8288
Lab Receipt Date 10-28-87
QC REPORT NO. 42

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Other ____

( )ug/L or (X)mg/kg dry weight

1.	Aluminum	15700		P	13.	Magnesium	30400		P
2.	Antimony	12	U N	P	14.	Manganese	408		P
3.	Arsenic	11	N	F	15.	Mercury	0.1	U	CV
4.	Barium	127		P	16.	Nickel	34		P
5.	Beryllium	[0.61]		P	17.	Potassium	4390		P
6.	Cadmium	4.7	*	P	18.	Selenium	1.2	U N	F
7.	Calcium	64200		P	19.	Silver	1.2	U	P
8.	Chromium	25		P	20.	Sodium	[236]		P
9.	Cobalt	12		P	21.	Thallium	2.4	U	F
10.	Copper	29		P	22.	Vanadium	29		P
11.	Iron	27100	E	P	23.	Zinc	73	E	P
12.	Lead	15	S N	F	Percent Solids (%)		80.47		
Cyanide		0.5	U						

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Gray, claylike soil.

Lab Manager D. Albert for J. O'Neal

IFB Amend. One

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P. O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MER571

Date 11-25-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
SOW NO. 785
LAB SAMPLE ID NO. MER571

CASE NO. 8288
Lab Receipt Date 10-22-87
QC REPORT NO. 42

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Other ____

( )ug/L or (X)mg/kg dry weight

1.	Aluminum	11100		P	13.	Magnesium	33700	P
2.	Antimony	12	U N	P	14.	Manganese	425	P
3.	Arsenic	13	N	F	15.	Mercury	0.1 U	CV
4.	Barium	[30]		P	16.	Nickel	36	P
5.	Beryllium	~~0.4 U~~		P	17.	Potassium	3830	P
6.	Cadmium	4.4 *		P	18.	Selenium	1.2 U N	F
7.	Calcium	59700		P	19.	Silver	1.2 U	P
8.	Chromium	19		P	20.	Sodium	[198]	P
9.	Cobalt	15		P	21.	Thallium	2.3 U	F
10.	Copper	34		P	22.	Vanadium	21	P
11.	Iron	27000	E	P	23.	Zinc	72 E	P
12.	Lead	18	N	F	Percent Solids (%)		85.65	
Cyanide		0.5 U						

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Gray claylike soil.

Lab Manager D. Abbott for L O'Neal

IFB Amend. One

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P. O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEQ007

Date 11-25-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
SOW NO. 785
LAB SAMPLE ID NO. MEQ007

CASE NO. 8288
Lab Receipt Date 10-28-87
QC REPORT NO. 42

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Other ____

( )ug/L or (X)mg/kg dry weight

1. Aluminum	12100		P	13. Magnesium	14900		P
2. Antimony	13	U N	P	14. Manganese	395		P
3. Arsenic	14 S	N	F	15. Mercury	0.1	U	CV
4. Barium	99		P	16. Nickel	22		P
5. Beryllium	[0.7]		P	17. Potassium	2840		P
6. Cadmium	5.9 *		P	18. Selenium	1.1	U N	F
7. Calcium	38600		P	19. Silver	1.3	U	P
8. Chromium	22		P	20. Sodium	[449]		P
9. Cobalt	[8]		P	21. Thallium	2.2	U	F
10. Copper	73		P	22. Vanadium	27		P
11. Iron	28400 E		P	23. Zinc	203 E		P
12. Lead	7570 S+	N	F	Percent Solids (%)	74.7		
Cyanide	0.5 U						

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Black, claylike soil.

Lab Manager D. Willett for J. O'Neal

IFB Amend. One

Form III

Q.C. Report No. 42

BLANKS

LAB NAME EPS
DATE 11-25-87

CASE NO. 8288
UNITS ug/L
mg/kg for Soil Prep Blank

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: Water 1	Matrix: Soil* 2
Metals:							
1. Aluminum-c	167 U	137U	167U				33.4U
2. Antimony	54 U	54U	54U				10.8U
3. Arsenic	1 U	1U	1U				0.2U
4. Barium-c	74 U	74U	74U				14.8U
5. Beryllium	2 U	2U	2U				0.4U
6. Cadmium	4 U	4U	4U				0.8U
7. Calcium-c	773 U	773U	773U				155 U
8. Chromium	6.8 U	6.8U	6.8U				1.4U
9. Cobalt	7.5 U	7.5U	7.5U				1.5U
10. Copper	9.4 U	9.4U	9.4U				1.9U
11. Iron-c	19 U	19U	19U				3.8U
12. Lead	1.5 U	1.5U	1.5U				0.3U
13. Magnesium-c	1120 U	1120U	1120U				224 U
14. Manganese-c	9.3 U	9.3U	9.3U				1.9U
15. Mercury	0.2 U	0.2U					0.1U
16. Nickel	15 U	15U	15U				3 U
17. Potassium	493	493U	493U				98.6U
18. Selenium	1 U	1U	1U				0.2U
19. Silver	5.6 U	5.6U	[6]				1.1U
20. Sodium	342	342U	342U				68.4U
21. Thallium	0.6 U	0.6U					0.1U
22. Vanadium	17 U	17U	17U				3.4U
23. Zinc	[4]	[5]	3.4U				[0.8]
Other:							
Cyanide	0.1 U	0.1U	0.1U				0.5U

1Reporting Units: aqueous, ug/L; solid, mg/kg.
*All values are the result of multiplying the raw data by the final volume (200ml) except Mercury and Cyanide.

Form III

Q.C. Report No. 42

BLANKS

LAB NAME EPS
DATE 11-25-87

CASE NO. 8288
UNITS ug/L
mg/kg for Soil Prep Blank

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: Water 1	Matrix: Soil* 2
Metals:							
1. Aluminum-C	167 U	167U	167U				33.4U
2. Antimony							
3. Arsenic	1 U	1U	1U				
4. Barium-C	74 U	74U	74U				14.8U
5. Beryllium							
6. Cadmium							
7. Calcium-C	773 U	773U	773U				155 U
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron-C	19 U	19U	(30)				3.8U
12. Lead	1.5 U	1.5U	1.5U				
13. Magnesium-C	1120 U	1120U	1120U	1120U			224 U
14. Manganese-C	9.3 U	9.3U	9.3U				1.9U
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium	1 U	1U					
19. Silver							
20. Sodium							
21. Thallium	0.6 U	0.6U	0.6U				
22. Vanadium							
23. Zinc							
Other:							
Cyanide							

1Reporting Units: aqueous, ug/L; solid, mg/kg.
*All values are the result of multiplying the raw data by the final volume (200ml) except Mercury and Cyanide.

Form III

Q.C. Report No. 42

BLANKS

LAB NAME EPS
DATE 11-25-87

CASE NO. 8288
UNITS ug/L
mg/kg for Soil Prep Blank

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: Water 1	Matrix: Soil* 2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic	1 U	1U					
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	1.5 U	1.5U					
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium	1 U	1U					
19. Silver							
20. Sodium							
21. Thallium	0.6 U	0.6U					
22. Vanadium							
23. Zinc							
Other:							
Cyanide							

1Reporting Units: aqueous, ug/L; solid, mg/kg.
*All values are the result of multiplying the raw data by the final volume (200ml) except Mercury and Cyanide.

Form III

Q.C. Report No. 42

BLANKS

LAB NAME EPS
DATE 11-25-87

CASE NO. 8288
UNITS ug/L
mg/kg for Soil Prep Blank

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: Water 1	Matrix: Soil* 2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	1.5 U	1.5U					
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Vanadium							
23. Zinc							
Other:							
Cyanide							

1Reporting Units: aqueous, ug/L; solid, mg/kg.
*All values are the result of multiplying the raw data by the final volume (200ml) except Mercury and Cyanide.

Form III

Q.C. Report No. 42

BLANKS

LAB NAME EPS
DATE 11-25-87

CASE NO. 8288
UNITS ug/L
mg/kg for Soil Prep Blank

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: Water 1	Matrix: Soil* 2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	1.5 U	1.5U					
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Vanadium							
23. Zinc							
Other:							
Cyanide							

1Reporting Units: aqueous, ug/L; solid, mg/kg.
*All values are the result of multiplying the raw data by the final volume (200ml) except Mercury and Cyanide.

Form III

Q.C. Report No. 42

BLANKS

LAB NAME EPS **CASE NO.** 8288
DATE 11-25-87 **UNITS** ug/L
mg/kg for Soil Prep Blank

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: Water 1	Matrix: Soil* 2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	1.5 U	1.5U					
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Vanadium							
23. Zinc							
Other:							
Cyanide							

1Reporting Units: aqueous, ug/L; solid, mg/kg.
*All values are the result of multiplying the raw data by the final volume (200ml) except Mercury and Cyanide.

Form III

Q.C. Report No. 42

BLANKS

LAB NAME EPS CASE NO. 8288
DATE 11-25-87 UNITS ug/L
mg/kg for Soil Prep Blank

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: Water 1	Matrix: Soil* 2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	1.5 U	1.5U					
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Vanadium							
23. Zinc							
Other:							
Cyanide							

1Reporting Units: aqueous, ug/L; solid, mg/kg.
*All values are the result of multiplying the raw data by the final volume (200ml) except Mercury and Cyanide.

Form V

Q.C. Report No. 42

SPIKE SAMPLE RECOVERY

LAB NAME EPS

DATE 11-25-87

CASE NO. 8288
EPA Sample No. MER571
Lab Sample ID No. MER571
Units ug/l

Matrix SOIL

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R1
Metals:					
1. Aluminum	75-125	NR	NR	NR	NR
2. Antimony	75-125	103	54 U	500	21 N
3. Arsenic	75-125	85	61.6	40	58 N
4. Barium	75-125	2150	[130]	2000	101
5. Beryllium	75-125	53	2 U	50	106
6. Cadmium	75-125	63	17.3	50	91
7. Calcium	75-125	NR	NR	NR	NR
8. Chromium	75-125	278	79.5	200	99
9. Cobalt	75-125	516	57.2	500	92
10. Copper	75-125	396	147.6	250	99
11. Iron	75-125	NR	NR	NR	NR
12. Lead	75-125	103.5	83.7	50	40 N
13. Magnesium	75-125	NR	NR	NR	NR
14. Manganese	75-125	2230	1830	500	80
15. Mercury	75-125	0.95	0.2 U	1.0	95
16. Nickel	75-125	597	141	500	91
17. Potassium	75-125	NR	NR	NR	NR
18. Selenium	75-125	4.2	5 U	10	42 N
19. Silver	75-125	44	5.6 U	50	88
20. Sodium	75-125	NR	NR	NR	NR
21. Thallium	75-125	59.2	10 U	50	118
22. Vanadium	75-125	572	88	500	97
23. Zinc	75-125	881	309	500	114
Other:					
Cyanide		104	10 U	100	104

1 %R = [(SSR - SR)/SA] X 100

"N" - out of control
"NR" - Not required
"NA" - Sample concentration greater than 4 times the spike added
Comments: ++Sample multiplied by the following weight correction factors:
Furnace = 1.0088/1.0966 ICP = 1.0621/1.005

Form VI

Q.C. Report No. 42

DUPLICATES

LAB NAME EPS

DATE 11-25-87

CASE NO. 8288

EPA Sample No. MEQ008

Lab Sample ID No. MEQ008

Units mg/kg

Matrix SOIL

Compound	Control Limit1	Sample(S)	Duplicate	RPD2
Metals:	+/-			
1. Aluminum		15672	17394	10.4
2. Antimony	13	11.6 U	12.6 U	NC
3. Arsenic	2	10.9	10	8.5
4. Barium	43	127	137	7.5
5. Beryllium	1	(0.6)	(0.9)	NC
6. Cadmium	1	4.7	3.3	35.9 *
7. Calcium		64151	66724	3.9
8. Chromium		25.3	23.2	8.7
9. Cobalt	11	11.6	13.3	14.3
10. Copper		28.7	31.1	8.1
11. Iron		27141	28298	4.2
12. Lead		14.6 S	17.1 S+	15.9
13. Magnesium		30413	32252	5.9
14. Manganese		408	389	4.9
15. Mercury		0.1 U	0.1 U	NC
16. Nickel	9	34.1	37.7	10.1
17. Potassium	1071	4393.1	4239	3.6
18. Selenium	1	1.2 U	1.1 U	NC
19. Silver	2	1.2 U	1.3 U	NC
20. Sodium	1071	(235.7)	(210.8)	NC
21. Thallium	2	2 U	2 U	NC
22. Vanadium	11	29.4	27.4	6.9
23. Zinc		72.9	63	14.5
Other:				
Cyanide		0.5 U	0.5 U	NC

* Out of Control

1 To be added at a later date.

2 RPD = [|S - D|/((S + D)/2)] X 100

NC - Non-calculable RPD due to value(s) less than CRDL

1 For soil samples, the Control Limit is based on the sample weight.

Form VII

Q.C. Report No. 42

INSTRUMENT DETECTION LIMITS AND

LCS(s)

LABORATORY CONTROL SAMPLE

LAB NAME EPS CASE NO. 8288 DATE 11-25-87

LCS NO. UNLV ICV-1 & 3

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA ID# PE6500	Instrument Detection Limits (IDL)-ug/l Furnace ID# PE5000Z	Lab Control Sample ug/L (X) True	Lab Control Sample ug/L (X) Found	Lab Control Sample mg/kg ( ) %R
Metals:						
1. Aluminum	200	167		1980	1960	99
2. Antimony	60	54		1090	1089	108
3.*Arsenic	10		1.0	49.4	53.9 S	109
4. Barium	200	74		1980	2022	102
5. Beryllium	5	2.0		481	479	100
6. Cadmium	5	4.0		489	444	91
7. Calcium	5000	773		49800	48930	98
8. Chromium	10	6.8		506	475	94
9. Cobalt	50	7.5		474	459	97
10. Copper	25	9.4		542	508	94
11. Iron	100	19		1990	1940	97
12.*Lead	5		1.2	49	48.2	98
13. Magnesium	5000	1120		25000	24580	98
14. Manganese	15	9.3		513	490	96
15. Mercury	0.2	0.1		NR	NR	NR
16. Nickel	40	15		496	437	88
17. Potassium	5000	493		50200	49600	99
18.*Selenium	5		1.0	98.2	98.0	100
19. Silver	10	5.6		509	438	86
20. Sodium	5000	342		50700	49800	98
21.*Thallium	10		0.6	48.7	49.7	102
22. Vanadium	50	17		511	494	97
23. Zinc	20	3.4		3100	2808	91
Other:						
Cyanide	10	NR	NR	100	98	98

NR - Not Required

* - UNLV, ICV-2, and ICV-4 1:20

Form VII

Q.C. Report No. 42

INSTRUMENT DETECTION LIMITS AND

TKM

LABORATORY CONTROL SAMPLE

LAB NAME EPS CASE NO. 8288 DATE 11-25-87

LCS NO. UNLV ICV-1 & 3

Compound	CRDL ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA ID# PE6500	Furnace ID# PE5000Z	Lab Control Sample ug/L ( ) Low	mg/kg (X) Found	High
Metals:						
1. Aluminum	200	167		7500	17558	22900
2. Antimony	60	54		0	0	44
3.*Arsenic	10		1.0	380	702.2S	980
4. Barium	200	74		360	448	980
5. Beryllium	5	2.0		0	0.6	1.6
6. Cadmium	5	4.0		0	1.3	7.8
7. Calcium	5000	773		7850	11276	13200
8. Chromium	10	6.8		0	8.3	46
9. Cobalt	50	7.5		0	5.7	18.6
10. Copper	25	9.4		220	264	310
11. Iron	100	19		5910	13253	16500
12.*Lead	5		1.2	4310	5951	7340
13. Magnesium	5000	1120		10910	16083	18560
14. Manganese	15	9.3		68600	104734	114900
15. Mercury	0.2	0.1		1.3	16.19	36.2
16. Nickel	40	15		5	20.6	39.8
17. Potassium	5000	493		4540	8984	11770
18.*Selenium	5		1.0	0	0	11
19. Silver	10	5.6		0	9.6	26
20. Sodium	5000	342		2790	3829	4690
21.*Thallium	10		0.6	0	5.4 S	9.1
22. Vanadium	50	17		0	0	45.8
23. Zinc	20	3.4		317	425	535
Other:						
Cyanide	10	NR	NR			

NR - Not Required

* - UNLV, ICV-2, and ICV-4 1:20

ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

International Specialists in the Environment

CRL Receipt Date _____ FIT Receipt Date _____ Review Completed _____

TO: Jeff Jarrard

FROM: Brenda R. Jones

SUBJECT: U S Scrap

PAN: IL 0102 - CASE # [illegible]

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#_____	Low Soil	#3	Low Soil
_____	Low Water	_____	Low Water
_____	Drinking Water	_____	Drinking Water
_____	Other	_____	Other

Project Data Status _____ Completed!!

✓ Incomplete, awaiting: _____

_____

FIT Data Review Findings:

Check Data Sheets for Transcription Errors

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

Book No. 7 Page No. 55 Date Sampled 10/14/87

26U:001

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: [illegible] PAN#: DATE: [illegible]

CASE #: [illegible] UNITS: mg/kg REVIEWER: [illegible]

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	[illegible] 4.5		4.6		4.7		
	ALUMINUM									
	ANTIMONY									
	ARSENIC			7.6		9.7		6.3		
	BARIUM									
	BERYLLIUM									
	CADMIUM									
	CHROMIUM			16		11		13		
	COBALT			9.4		13		[illegible]		
	COPPER			22		34		35		
	LEAD			11		14		24		
	MERCURY									
	NICKEL			31		35		33		
	SELENIUM									
	SILVER									
	THALLIUM									
	TIN									
	VANADIUM			17		13				
	ZINC									
	CYANIDE									

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 11/23/87

SUBJECT: Review of Region V CLP Data
Received for Review on 11-17-87 NOV 30 1987

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

TO: Data User: FIT

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

SITE NAME: U. S. SCRAP SMO case No. 8254

EPA Data Set No. SF 4528 No. of Samples: 3 D.U./Activity Numbers Y905/C72100

CRL No. 88FC03S28 - S30

SMO Traffic No. MER415 - 417

CLP Laboratory: RMAL Hrs. Required for Review: 3

Following are our findings:

This review covers covers three soil samples analyzed for metals and cyanide.
Duplicate analysis showed high RPD for Fe (70%). Limits of 35% apply for soil duplicates. All Fe data are estimated (J). Spike recovery for se (0%) is out of control limits and the data is unuseable (R). Spike recovery for As (66%) is low and duplicate MSA's were performed to quantify As. Both correlation coefficients are less than 0.995 and the data is estimated (J). Spike recoveries for Sb (34%), Tl (72%), and CN^- (64%) are low and the detection limits could be biased low. Thus results for Sb, Tl and cyanide are estimated (UJ). The spike recovery for Pb (127%) indicate high bias and the result should be estimated (J). All QC data for mercury are acceptable.

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

Winston Vijayswaran 11/23/87

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)

U.S. EPA Contract boratory Program
Sample Management fice
209 Madison St. exandria, VA 22314
703/557-2490 FT -557-2490

Date 11-11-87

COVER PAGE
NORGANIC ANALYSIS DATA PACKAGE

Lab Name ROCKY MO AIN ANALYTICAL
SOW No. 4

Case No. 8254
QC Report No. 87332

Sample Numbers

EPA No.	ab ID No.	EPA No.	Lab ID No.
MER415D			
MER415			
MER415S			
MER416			
MER417			
[MER999]			

RECEIVED
NOV 13 1987
U.S. EPA CENTRAL REGIONAL LAB

Comments: 3 LOW S FOR TOTAL METALS AND CYANIDE ANALYSIS
SERIAL DILUTION SAMPLE MER417 IS IDENTIFIED AS [MER999]

ICP Interelement l background corrections applied? Yes X No ___.
If yes, correcti applied before X or after ___ generation of raw data.

Footnotes:

NR - not requi by contract at this time
Form I:
Value - If the r t is a value greater than or equal to the instrument detection mit but less than the contract required detection limit, t the value in brackets (i.e., [10]). Indicate the method with P (for ICP/Flame AA) or F (for furnace).
U - Indicate ement was analyzed for but not detected. Report with the dete n limit value (e.g., 10U).
B - Indicate value estimated or not reported due to the presence of interfer . Explanatory note included on cover page.
S - Indicate lue determined by Method of Standard Addition.
R - Indicat ike sample recovery is not within control limits.
X - Indicat plicate analysis is not within control limits.
+ - Indicat e correlation coefficient for method of standard additi Less than 0.995
CV - Indicat old Vapor
AS - Indicat tomated Spectrophotometric

Form I

U.S. EPA Contract boratory Program
Sample Management fice
209 Madison St. exandria, VA 22314
703/557-2490 F -557-2490

EPA Sample No.
MER415

Date 11-11-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY AIN ANALYTICAL CASE NO. 8254
SOW NO. 4
LAB SAMPLE ID. - QC REPORT NO. 87332

Elements Identified and Measured

Concentration: ow X Medium
Matrix: Water Soil X Sludge Other

mg/kg dry weight

1.	ALUMINUM	8270	P	13.	MAGNESIUM	26800	P
2.	ANTIMONY	14U	P R UJ	14.	MANGANESE	368	P
3.	ARSENIC	7.6 S+	F R J	15.	MERCURY	0.11U	CV
4.	BARIUM	[44]	P	16.	NICKEL	31	P
5.	BERYLLIUM	0.57U	P	17.	POTASSIUM	[1600]	P
6.	CADMIUM	2.3U	P	18.	SELENIUM	2.8U	F R
7.	CALCIUM	63100	P	19.	SILVER	2.3U	P
8.	CHROMIUM	16	P	20.	SODIUM	619U	P
9.	COBALT	[9.4]	P	21.	THALLIUM	5.7U	F R UJ
10.	COPPER	22	P	22.	TIN	13U	P
11.	IRON	19300	P X J	23.	VANADIUM	[17]	P
12.	LEAD	11	F R J	24.	ZINC	55	P
	Cyanide	0.57U	AS R UJ		Percent Solids (%) 88		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Arsenic value is determined by MSA

Lab Manager

Form I

U.S. EPA Contrac boratory Program
Sample Managemen fice
209 Madison St. exandria, VA 22314
703/557-2490 FT -557-2490

EPA Sample No.
MER416

Date 11-11-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY M AIN ANALYTICAL CASE NO. 8254
SOW NO. 4
LAB SAMPLE ID. N - QC REPORT NO. 87332

Elements Identified and Measured

Concentration: ow X Medium
Matrix: Water Soil X Sludge Other

mg/kg dry weight

1.	ALUMINUM	5790	P		13.	MAGNESIUM	29000	P
2.	ANTIMONY	14U	P	R UJ	14.	MANGANESE	473	P
3.	ARSENIC	9.7	F	R J	15.	MERCURY	0.11U	CV
4.	BARIUM	[21]	P		16.	NICKEL	38	P
5.	BERYLLIUM	0.56U	P		17.	POTASSIUM	[1290]	P
6.	CADMIUM	2.2U	P		18.	SELENIUM	2.8U	F R
7.	CALCIUM	52300	P		19.	SILVER	2.2U	P
8.	CHROMIUM	11	P		20.	SODIUM	612U	P
9.	COBALT	[13]	P		21.	THALLIUM	5.6U	F R UJ
10.	COPPER	34	P		22.	TIN	12U	P
11.	IRON	26700	P	X J	23.	VANADIUM	[13]	P
12.	LEAD	14	F	R J	24.	ZINC	60	P

Cyanide 0.56U AS R UJ Percent Solids (%) 89

Footnotes: For orting results to EPA, standard result qualifiers are used defined on Cover Page. Additional flags or footnotes expl ing results are encouraged. Definition of such flags must explicit and contained on Cover Page, however.

Comments:

Lab Manager

Form I

U.S. EPA Contra aboratory Program
Sample Managem ffice
209 Madison St. lexandria, VA 22314
703/557-2490 F: 3-557-2490

EPA Sample No.
MER417

Date 11-11-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY TAIN ANALYTICAL
SOW NO. 34
LAB SAMPLE ID. -

CASE NO. 8254
QC REPORT NO. 87332

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	7810	P	13.	MAGNESIUM	22600	P
2.	ANTIMONY	16U	P R UJ	14.	MANGANESE	397	P
3.	ARSENIC	[6.3]	F R J	15.	MERCURY	0.13U	CV
4.	BARIUM	[69]	P	16.	NICKEL	32	P
5.	BERYLLIUM	0.63U	P	17.	POTASSIUM	[1540]	P
6.	CADMIUM	2.5U	P	18.	SELENIUM	3.2U	F R
7.	CALCIUM	52300	P	19.	SILVER	2.5U	P
8.	CHROMIUM	18	P	20.	SODIUM	690U	P
9.	COBALT	[10]	P	21.	THALLIUM	6.3U	F R J
10.	COPPER	35	P	22.	TIN	14U	P
11.	IRON	20300	P X J	23.	VANADIUM	[17]	P
12.	LEAD	24	F R J	24.	ZINC	109	P

Cyanide 0.63U AS R UJ Percent Solids (%) 79

Footnotes: Fo rting results to EPA, standard result qualifiers are u defined on Cover Page. Additional flags or footnotes ex ing results are encouraged. Definition of such flags mu explicit and contained on Cover Page, however.

Comments:

Lab Manager

Form III

Q.C. Report No. 89332

BLANKS

LAB NAME ROCKY M[illegible]AIN ANALYTICAL CASE NO. 8254
DATE 11-11-[illegible] UNITS ug/L
Matrix SOIL

Preparation Compound	C[illegible] B[illegible]	[illegible]ial [illegible]ation Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:								
1. ALUMINUM			15u					
2. ANTIMONY			25u					
3. ARSENIC								
4. BARIUM			3u					
5. BERYLLIUM			1u					
6. CADMIUM			4u					
7. CALCIUM			179u					
8. CHROMIUM			4u					
9. COBALT			9u					
10. COPPER			6u					
11. IRON			24u					
12. LEAD								
13. MAGNESIUM			153u					
14. MANGANESE			4u					
15. MERCURY								
16. NICKEL			8u					
17. POTASSIUM			175u					
18. SELENIUM								
19. SILVER			4u					
20. SODIUM			1090u					
21. THALLIUM								
22. TIN			22u					
23. VANADIUM			7u					
24. ZINC			[3.4]					
Other:								
Cyanide								

Form III

Q.C. Report No. 87332

BLANKS

LAB NAME ROCKY MOUNTAIN ANALYTICAL
DATE 11-11-87
CASE NO. 8254
UNITS ug/L
Matrix SOIL

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. ALUMINUM	15U	15U				15U	
2. ANTIMONY	25U	25U				25U	
3. ARSENIC	10U	10U	10U			10U	
4. BARIUM	3U	3U				3U	
5. BERYLLIUM	1U	1U				1U	
6. CADMIUM	4U	4U				4U	
7. CALCIUM	179U	179U				179U	
8. CHROMIUM	4U	4U				4U	
9. COBALT	9U	9U				9U	
10. COPPER	6U	6U				6U	
11. IRON	24U	24U				24U	
12. LEAD	5U	5U	5U			5U	
13. MAGNESIUM	153U	153U				153U	
14. MANGANESE	4U	4U				4U	
15. MERCURY	0.2U	0.2U				0.2U	
16. NICKEL	8U	8U				8U	
17. POTASSIUM	175U	175U				175U	
18. SELENIUM	5U	5U	5U	5U		5U	
19. SILVER	4U	4U				4U	
20. SODIUM	1090U	1090U				1090U	
21. THALLIUM	10	10U	10U			10U	
22. TIN	22U	22U				22U	
23. VANADIUM	7U	7U				7U	
24. ZINC	3U	3U				[5]	
Other:							
Cyanide	10U	10U	10U			10U	

Form V

Q.C. Report No. 87332

SPIKE SAMPLE RECOVERY

LAB NAME ROCKY MOUNTAIN ANALYTICAL

DATE 11-11-87

CASE NO. 8254
EPA Sample No. MER415
Lab Sample ID No. -
Units mg/kg

MATRIX - SOIL

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R[1]	
Metals:						
1. ALUMINUM	75-125	8100	7280	NR		
2. ANTIMONY	75-125	86	12U	250	34	R
3. ARSENIC	75-125	20	6.7 S +	20	66	R
4. BARIUM	75-125	982	[39]	1000	94	
5. BERYLLIUM	75-125	24	0.5U	25	96	
6. CADMIUM	75-125	26	2U	25	104	
7. CALCIUM	75-125	51700	55500	NR		
8. CHROMIUM	75-125	115	14	100	101	
9. COBALT	75-125	249	[8.3]	250	96	
10. COPPER	75-125	143	19	125	99	
11. IRON	75-125	18800	17000	NR		
12. LEAD	75-125	22	9.3	10	127	R
13. MAGNESIUM	75-125	22400	23600	NR		
14. MANGANESE	75-125	568	324	250	98	
15. MERCURY	75-125	0.56	0.1U	0.5	112	
16. NICKEL	75-125	264	27	250	95	
17. POTASSIUM	75-125	[1460]	[1410]	NR		
18. SELENIUM	75-125	25U	2.5U	5	0	R
19. SILVER	75-125	24	2U	25	96	
20. SODIUM	75-125	545U	545U	NR		
21. THALLIUM	75-125	18	5U	25	72	R
22. TIN	75-125	242	11U	250	97	
23. VANADIUM	75-125	248	[15]	250	93	
24. ZINC	75-125	288	48	250	96	
Other:						
Cyanide	75-125	3.2	0.5U	5	64	R

[1] %R = [(SSR - SR)/SA] x 100
"R"- out of control

Comments: Arsenic sample Result is determined by MSA
Selenium matrix spike Result is reported at an additional 10X

Form VI

Q.C. Report No. 87332

DUPLICATES

LAB NAME ROCKY MOUNTAIN ANALYTICAL

DATE 11-11-87

CASE NO. 8254
EPA Sample No. MER415
Lab Sample ID No. -
Units - mg/kg

Matrix SOIL

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]	
Metals:					
1. ALUMINUM		7280	6550	11	
2. ANTIMONY		12U	12U	NC	
3. ARSENIC		6.7 S +	5.5 S	20	
4. BARIUM		[39]	[32]	NC	
5. BERYLLIUM		0.5U	0.5U	NC	
6. CADMIUM		2U	2U	NC	
7. CALCIUM		55500	51300	7.9	
8. CHROMIUM		14	11	24	
9. COBALT		[8.3]	[8.8]	NC	
10. COPPER		19	20	5.1	
11. IRON		17000	35200	70	X
12. LEAD		9.3	11	17	
13. MAGNESIUM		23600	23700	0.42	
14. MANGANESE		324	350	7.7	
15. MERCURY		0.1U	0.1U	NC	
16. NICKEL		27	29	7.1	
17. POTASSIUM		[1410]	[1300]	NC	
18. SELENIUM		2.5U	2.5U	NC	
19. SILVER		2U	2U	NC	
20. SODIUM		545U	545U	NC	
21. THALLIUM		5U	5U	NC	
22. TIN		11U	11U	NC	
23. VANADIUM		[15]	[14]	NC	
24. ZINC		48	46	4.3	
Other:					
% Solids		88	87	1.1	
Cyanide		0.5U	0.5U	NC	

X Out of Control

[1] To be added at a later date. [2] RPD = [|S-D|/((S+D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

The following elements reported unflagged due to sample and/or duplicate concentration less than 5 times the CRDL and +/- CRDL:

Form VII

Q.C. Report No. 87332
INSTRUMENT DETECTION LIMITS AND
LABORATORY CONTROL SAMPLE

LAB NAME ROCKY MOUNTAIN ANALYTICAL CASE NO 8254
DATE 11-11-87 UNITS ug/L

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
Metals:						
1. ALUMINUM	200	15		1980	2060	104
2. ANTIMONY	60	25		1010	955	95
3. ARSENIC	10	31	2	49	47	96
4. BARIUM	200	3		1980	1870	94
5. BERYLLIUM	5	1		481	463	96
6. CADMIUM	5	4		489	452	92
7. CALCIUM	5000	179		49800	49200	99
8. CHROMIUM	10	4		506	489	97
9. COBALT	50	9		474	484	102
10. COPPER	25	6		542	539	100
11. IRON	100	24		1990	1920	96
12. LEAD	5	20	1	98	102	104
13. MAGNESIUM	5000	153		25000	24200	97
14. MANGANESE	15	4		513	507	99
15. MERCURY	0.2		0.2CV	5.2	5.4	104
16. NICKEL	40	8		496	471	95
17. POTASSIUM	5000	175		50200	48700	97
18. SELENIUM	5		1	98	88 S	90
19. SILVER	10	4		509	439	86
20. SODIUM	5000	1090		50700	49900	98
21. THALLIUM	10		1	97	87	90
22. TIN	40	22		2000	1970	98
23. VANADIUM	50	7		511	486	95
24. ZINC	20	3		3100	2760	89
Other:						
Cyanide	10		10AS	~~58~~ 129	122	95

CV - Cold Vapor
AS - Automated Spectrophotometric
Selenium value is determined by MSA
Cyanide LCS source is ERA 9908

ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

International Specialists in the Environment

CRL Receipt Date 1/15/88 FIT Receipt Date 2/26/89 Review Completed 2/24/89

TO: Jeff Carman

FROM: Brenda R. Jones

SUBJECT: U.S. Scrap

PAN: _____ (1 hour charged for review) Case # 8635

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 5	~~Low~~ Med Soil	# _____	Low Soil
13	Low Water	_____	Low Water
_____	Drinking Water	_____	Drinking Water
_____	Other	_____	Other

Project Data Status ✓ Completed!! for this case

_____ Incomplete, awaiting _____

FIT Data Review Findings:

Check Data Sheets for Transcription Errors

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

Book No. 7 Page No. 153 Date Sampled 11/30

recycled paper

8635 U.S. Scrap COMPOUND	SAMPLE	DET. LIMIT	Ng/L EQ757 ~~ET982RE~~	EQ758	Ng/L EQ759	EQ760	Ng/L EQ761	EQ762	5 of Ng/L EQ763	EQ7
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride			4 JB					2 JB		
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
trans-1,2,-dichloroethene										
chloroform			3 JB	1 JB						
1,2-dichloroethane										
2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
vinyl acetate										
bromodichloromethane										
1,1,2,2-tetrachloroethane										
1,2-dichloropropane										
trans-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
cis-1,3-dichloropropene										
2-chloroethylvinylether										
bromoform										
2-hexanone										
4-methyl-2-pentanone										
tetrachloroethene										
toluene			4J			1J				
chlorobenzene										
ethylbenzene										
styrene										
total xylenes										
N-nitrosodimethylamine										
phenol										
aniline										
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										
isophrone										
2-nitrophenol										
2,4-dimethylphenol										
benzoic acid										
bis(2-chloroethoxy)methane										
2,4-dichlorophenol										
1,2,4-trichlorobenzene										
napthalene										
4-chloroaniline										
hexachlorobutadiene										
4-chloro-3-methylphenol										
2-methylnapthalene										
hexachlorocyclopentadiene										
2,4,6-trichlorophenol										

VOA

[illegible] #8635

SITE U.S Scrap

COMPOUND	SAMPLE	DET. LIMIT	EQ757	EQ758	EQ759	EQ760	EQ761	EQ762	EQ763	EQ764
			Ng/L		Ng/L		Ng/L		Ng/L	
			UNITS	[illegible]						
dimethyl phthalate										
acenapthylene										
3-nitroaniline										
acenaphthene										
2,4-dinitrophenol										
4-nitrophenol										
dibenzofuran										
2,4-dinitrotoluene										
2,6-dinitrotoluene										
diethylphthalate										
4-chlorophenyl-phenylether										
fluorene										
4-nitroaniline										
4,6-dinitro-2-methylphenol										
N-nitrosodiphenylamine										
4-bromophenyl-phenylether										
hexachlorobenzene										
pentachlorophenol										
phenanthrene										
anthracene										
di-n-butylphthalate										
fluoranthene										
benzidine										
pyrene										
butylbenzylphthalate										
3,3'-dichlorobenzidine										
benzo(a)anthracene										
bis(2-ethylhexyl)phthalate							4 J			
chrysene										
di-n-octylphthalate										
benzo(b&k)fluoranthene										
benzo(a)pyrene										
indeno(1,2,3-cd)pyrene										
dibenzo(a,h)anthracene										
benzo(g,h,i)perylene										
alpha-BHC										
beta-BHC										
delta-BHC										
gamma-BHC(lindane)										
heptachlor										
aldrin										
heptachlor epoxide										
endosulfan I										
dieldrin										
4,4'-DDE										
endrin										
endosulfan II										
4,4'-DDD										
endrin aldehyde										
endosulfan sulfate										
4,4'-DDT										
methoxychlor										
endrin ketone										
chlordane										
toxaphene										
Aroclor-1016										
Aroclor-1221										
Aroclor-1232										
Aroclor-1242										
Aroclor-1248										
Aroclor-1254										

8635 U.S. Scrap COMPOUND	SAMPLE	DET. LIMIT	ug/L EQ764 ET983RE	EQ765	ug/L EQ766	EQ767	EQ769	EQ770
chloromethane								
bromomethane								
vinyl chloride								
chloroethane								
methylene chloride					4 JB			2 JB
acetone					740			
carbon disulfide								
1,1-dichloroethene								
1,1-dichloroethane								
trans-1,2,-dichloroethene								
chloroform						600 JB	690 JB	
1,2-dichloroethane					3 J			
2-butanone					540	30,000	30,000	
1,1,1-trichloroethane				-		5300	5800	
carbon tetrachloride								
vinyl acetate								
bromodichloromethane								
1,1,2,2-tetrachloroethane								
1,2-dichloropropane								
trans-1,3-dichloropropene								
trichloroethene						28,000	31000	
dibromochloromethane								
1,1,2-trichloroethane								
benzene					11			
cis-1,3-dichloropropene								
2-chloroethylvinylether								
bromoform								
2-hexanone								
4-methyl-2-pentanone					230	20,000	22,000	
tetrachloroethene								
toluene					100	12,000	13000	18
chlorobenzene								
ethylbenzene					14			
styrene								
total xylenes					120			
N-nitrosodimethylamine								
phenol								
aniline								
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								
isophrone								
2-nitrophenol								
2,4-dimethylphenol								
benzoic acid								
bis(2-chloroethoxy)methane								
2,4-dichlorophenol								
1,2,4-trichlorobenzene								
nepthalene								
4-chloroaniline								
hexachlorobutadiene								
4-chloro-3-methylphenol								
2-methylnepthalene								
hexachlorocyclopentadiene					-			
2,4,6-trichlorophenol								

VOA

Case #8635

Site US SCRAP

COMPOUND	SAMPLE	DET. LIMIT	UNITS UG/KG							
			EQ764	EQ765	EQ766	EQ767	EQ769	EQ770		
dimethyl phthalate										
acenapthylene										
3-nitroaniline										
acenaphthene										
2,4-dinitrophenol										
4-nitrophenol										
dibenzofuran										
2,4-dinitrotoluene										
2,6-dinitrotoluene										
diethylphthalate										
4-chlorophenyl-phenylether										
fluorene										
4-nitroaniline										
4,6-dinitro-2-methylphenol										
N-nitrosodiphenylamine										
4-bromophenyl-phenylether										
hexachlorobenzene										
pentachlorophenol										
phenanthrene										
anthracene										
di-n-butylphthalate										
fluoranthene										
benzidine										
pyrene										
butylbenzylphthalate										
3,3'-dichlorobenzidine										
benzo(a)anthracene										
bis(2-ethylhexyl)phthalate					8 J					
chrysene										
di-n-octylphthalate										
benzo(b&k)fluoranthene										
benzo(a)pyrene										
indeno(1,2,3-cd)pyrene										
dibenzo(a,h)anthracene										
benzo(g,h,i)perylene										
alpha-BHC				0.06		0.9	2			
beta-BHC										
delta-BHC										
gamma-BHC(lindane)										
heptachlor						1.0	0.9			
aldrin										
heptachlor epoxide						0.1				
endosulfan I										
dieldrin										
4,4'-DDE										
endrin										
endosulfan II										
4,4'-DDD										
endrin aldehyde										
endosulfan sulfate										
4,4'-DDT							0.2			
methoxychlor										
endrin ketone										
chlordane										
toxephene										
Aroclor-1016										
Aroclor-1221										
Aroclor-1232										
Aroclor-1242										
Aroclor-1248										
Aroclor-1254										

8635
.. U.S. Scrap

COMPOUND	SAMPLE	DET. LIMIT	EQ771 ~~ES003RE~~	ES001	ES002	ES003RE	ES004			
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride				10 B	10 B	14	11			
acetone			130	14	160	270	220			
carbon disulfide							20			
1,1-dichloroethene										
1,1-dichloroethane					8					
trans-1,2,-dichloroethene					6 J					
chloroform			0.7 JB		0.8 JB					
1,2-dichloroethane										
2-butanone			26		43	30	30			
1,1,1-trichloroethane					24	27				
carbon tetrachloride										
vinyl acetate										
bromodichloromethane										
1,1,2,2-tetrachloroethane										
1,2-dichloropropane										
trans-1,3-dichloropropene										
trichloroethene					8	18	5 J			
dibromochloromethane										
1,1,2-trichloroethane										
benzene							18			
cis-1,3-dichloropropene										
2-chloroethylvinylether										
bromoform										
2-hexanone										
4-methyl-2-pentanone					32					
tetrachloroethene					31	230	32			
toluene			13 B	21 B	190 B	150	250			
chlorobenzene										
ethylbenzene					85	34	470			
styrene										
total xylenes					170		19			
N-nitrosodiethylamine										
phenol										
aniline										
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										
isophrone										
2-nitrophenol										
2,4-dimethylphenol										
benzoic acid										
bis(2-chloroethoxy)methane										
2,4-dichlorophenol										
1,2,4-trichlorobenzene										
nepthalene				2400 J	4900	8200	1900 J			
4-chloroaniline										
hexachlorobutadiene										
4-chloro-3-methylphenol										
2-methylnepthalene				1500 J	2600 J	6200	5100 J			
hexachlorocyclopentadiene										
2,4,6-trichlorophenol										

VOA

Form #8635

Site: U.S. Scrap	SAMPLE	DET. LIMIT	UNITS ug/kg						
COMPOUND			FQ771	ES001	ES002	ES003	ES004		
dimethyl phthalate									
acenapthylene				380 J		6100			
3-nitroaniline									
acenaphthene						12,000	2100 J		
2,4-dinitrophenol									
4-nitrophenol									
dibenzofuran						9800	1600 J		
2,4-dinitrotoluene									
2,6-dinitrotoluene									
diethylphthalate									
4-chlorophenyl-phenylether									
fluorene						17,000	3100 J		
4-nitroaniline									
4,6-dinitro-2-methylphenol									
N-nitrosodiphenylamine									
4-bromophenyl-phenylether									
hexachlorobenzene									
pentachlorophenol									
phenanthrene				1200 J	7300	92000 E	21000		
anthracene				570 J	2100 J	40,000	5900		
di-n-butylphthalate				1600 J					
fluoranthene			570 J	1500 J	6500	86,000 E	25,000		
benzidine									
pyrene			1300 J	2200 J	8100 J	100,000 E	26000		
butylbenzylphthalate									
3,3'-dichlorobenzidine									
benzo(a)anthracene				1400 J	4000 J	87,000 E	15000		
bis(2-ethylhexyl)phthalate			9700	10,000	12,000	3000 J	41000		
chrysene				2000 J	5100	85,000	18000		
di-n-octylphthalate									
benzo(b&k)fluoranthene			2800 J	5900 J	12,200	195,000 E	39000		
benzo(a)pyrene			1200 J	2700 J	5200	99,000 E	18000		
indeno(1,2,3-cd)pyrene			2200 J	2500 J	3700 J	55000	6200		
dibenzo(a,h)anthracene						11,000	2100 J		
benzo(g,h,i)perylene			3300 J	3900 J	3900 J	30,000	5700		
alpha-BHC			2400						
beta-BHC									
delta-BHC									
gamma-BHC(lindane)									
heptachlor									
aldrin			5500	1800					
heptachlor epoxide									
endosulfan I									
dieldrin									
4,4'-DDE			7600	2600					
endrin									
endosulfan II			6100	2200					
4,4'-DDD									
endrin aldehyde									
endosulfan sulfate						2500			
4,4'-DDT			13000	4400	1300				
methoxychlor									
endrin ketone									
chlordane			32000	17200	8400				
toxephene									
Aroclor-1016									
Aroclor-1221									
Aroclor-1232									
Aroclor-1242									
Aroclor-1248									
Aroclor-1254									

2/26
REC 156 pages

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 2 22 '88

SUBJECT: Review of Region V CLP Data
Received for Review on -1-15-88

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory Patrick J. Chuville for

TO: Data User: FIT

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

SITE NAME: U.S. Scrap SMO Case No. 8635

EPA Data Set No. SF4707 No. of Samples: 18 D.U./Activity Numbers Y905/C721Z8

CRL No. 88FC09S11-S25

SMO Traffic No. EQ757-767, 769-771; ES001-004

CLP Laboratory: AATS Hrs. Required for Review: 24 hrs

PAN # FIL0102VAA

Following are our findings: See attached review.
LC attached

( ) Data are acceptable for use.
(x) 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 (Ref. 5/87)

U.S. Scrap AATS February 11, 1988
PAN # FIL0102VAA Case # 8635

770

This review regards 13 low water samples. Five (EQ757,762,763,764, and 765) were analyzed for volatiles only, and the remaining eight were analyzed for full organics. AATS received the samples on December 1 and 2, 1987. After screening the samples the lab completed the extractions and analyses.

A. Holding Times- Acceptable

Sample EQ766 was re-extracted and re-analyzed outside the required holding time for the semi-volatile fraction.

B. Surrogates- Acceptable

% Recoveries:	VOAs	0 out of 51 Outside QC limits
	SV	6 out of 60 Outside QC limits
	Pest.	9 out of 16 Outside QC limits

C. MS/MSD- Acceptable

% Recoveries:	VOAs	1 out of 10 Outside QC limits
	SV	5 out of 22 Outside QC limits
	Pest.	3 out of 12 Outside QC limits
RPDs:	VOAs	1 out of 5 Outside QC limits
	SV	0 out of 11 Outside QC limits
	Pest.	5 out of 6 Outside QC limits

D. Method Blank- Acceptable

Common lab artifacts include methylene chloride, chloroform and toluene.

E. Calibration- Acceptable

Compounds that are outside specifications are listed on the calibrations outlier form.

F. Tuning-Acceptable

G. Pesticides-Acceptable
Linearity- Acceptable
Breakdown- Acceptable
DBC Shift- Acceptable
DDT retention time > 12 minutes

U.S. Scrap AATS February 11,1988
PAN # FIL 0102 VAA Case # 8635

This review regards 5 low soil samples for which full organic analysis was requested. AATS received the samples on December 1 and 2, 1987. Initial screening by the lab confirmed the classification of the samples as low concentration.

A. Holding Times- Acceptable

B. Surrogates- Acceptable

% Recoveries:	VOAs	4 out of 36	Outside QC limits
	SV	1 out of 48	Outside QC limits
	Pest.	2 out of 8	Outside QC limits

C. MS/MSD- Acceptable

% Recoveries:	VOAs	0 out of 10	Outside QC limits
	SV	2 out of 22	Outside QC limits
	Pest.	0 out of 12	Outside QC limits
RPDs:	VOAs	0 Out of 5	Outside QC limits
	SV	0 out of 11	Outside QC limits
	Pest.	0 out of 6	Outside QC limits

D. Method Blank- Acceptable

Common lab artifacts include metyhylene chloride, chloroform and toluene.

E. Calibration- Acceptable

Compounds that are outside specifications are listed on the calibrations outlier form.

F. Tuning-Acceptable

G. Pesticides-Acceptable

Linearity- Acceptable
Breakdown- Acceptable
DBC Shift- Acceptable
DDT retention time > 12 minutes

User Information Sheet

U.S. Scrap
Case# 8635
Pan# FIL 0102 VAA

AATS

February 11, 1988
Reviewed by Loyd Collins

Methylene chloride, chloroform, and toluene were detected in the lab blank for the volatile fraction. Samples EQ766 and ES004 were re-analyzed outside the required holding time; however, this did not affect the quality of the data for these samples. Surrogate recoveries for the pesticide fraction showed several samples outside QC limits. This was due to the oily matrix of the samples and did not affect the quality of the pesticide data.

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

CASE/SAS # 8635 CONTRACTOR AATS

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Ca	
DATE/TIME:	1/7/88			1/8/88 13:02			1/10/88			1/11/88			1/12/88	
	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														
bis(2-Chloroethoxy)Methane														
2,4-Dichlorophenol														
1,2,4-Trichlorobenzene														
Naphthalene														
4-Chloroaniline														
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														
4-Nitrophenol														
Dibenzofuran														

AFFECTED SAMPLES:

All	EQ758	EQ761	EQ767	E[illegible]
	EQ759		EQ769	
	EQ760		ES001	
	EQ765		ES002	
			ES003	
			ES004	

Reviewer Initials/Date: L.C. 2/11/88

* 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 # 8635 CONTRACTOR AATS

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. C	
DATE/TIME:	1/7/88			1/8/88			1/10/88			1/11/88			1/12/88	
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D
2,4-Dinitrotoluene														
2,6-Dinitrotoluene														
Diethylphthalate														
4-Chlorophenyl-phenylether														
Fluorene														
4-Nitroaniline														
4,6-Dinitro-2-Methylphenol														
N-Nitrosodiphenylamine														
4-Bromophenyl-phenylether														
Hexachlorobenzene														
Pentachlorophenol											27	J		
Phenanthrene														
Anthracene														
Di-n-Butylphthalate														
Fluoranthene														
Pyrene														
Butylbenzylphthalate														
Benzo(a)Anthracene														
bis(2-Ethylhexyl)Phthalate														
Chrysene														
Di-n-Octyl Phthalate														[illegible]
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: L. C. 2/11/88

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

CASE/SAS # 8635 SOIL SOIL CONTRACTOR AATS

	WATER			Soil Init. Cal			Soil Init. Cal			WATER			WATER		
Instrument # 7002D	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	12/1/87			11/30/87			12/16/87			12/1/87 21:36			12/2/87 09:11		
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	.182		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:

EQ758 (all water)	EQ771	ES003RE	EQ758	EQ757
EQ759	ES001		EQ759	EQ760
EQ765	ES002			EQ761
EQ767	ES004			EQ762
EQ769				EQ763
EQ766				EQ767
EQ760				EQ765
EQ761				EQ766
EQ763				EQ767
EQ764				EQ769
EQ757				EQ770
EQ762				
EQ770				

Reviewer's Initials/Date: L.C 2/11/88

* 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 # 8635 CONTRACTOR AATS

Instrument # 7002D	Init. Cal.			Cont. Cal. Soil			Cont. Cal. Soil			Cont. Cal. Soil			Cont. Cal.		
DATE/TIME:				12/2/87 16:03			12/4/87 18:17			12/19/87 21:42					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone					30.2	J									
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone					30.3	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					42.7	J		25.3	J						
2-Hexanone					43.5	J									
Tetrachloroethene															
1,1,2,2-Tetrachloroethane					68.7	J		48	J						
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

	EQ771	ES004	ES003RE
	ES001		
	ES002		

Reviewer's Initials/Date: LC 2/11/88

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

Case: 8635

Contractor: WADSWORTH

TENTATIVELY IDENTIFIED COMPOUNDS
WATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Reviewer's Initials/Date: R.C. 2/11/85

SITE NAME: U.S. SCRAP
CASE NUMBER 8635 PAGE 1 OF 2
CONCENTRATIONS IN PARTS PER BILLION

ORGANIC TRAFFIC NUMBERS
AND SAMPLE STATION LOCATION DESCRIPTIONS

			E0757	E0758	E0759	E0760	E0761	E0762	E0763	E0764	E0765	E0766	E0767	E0769
		MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
COMPOUND	CAS#/SCAN	CLASS												
BENZENE	71-43-2	VOA/1										1		
1,2-DICHLOROETHANE	107-06-2	VOA/1										3J		
1,1,1-TRICHLOROETHANE	71-55-6	VOA/1											5300	5800
CHLOROFORM	67-66-3	VOA/1	2JB	1JB									600JB	690JB
ETHYLBENZENE	100-41-4	VOA/1										14		
METHYLENE CHLORIDE	75-09-2	VOA/1	4JB					2JB				4JB		
TOLUENE	108-88-3	VOA/1	4J			1J							12000	13000
TRICHLOROETHENE	79-01-6	VOA/1											[illegible]	31000
ACETONE	67-64-1	VOA/2										740		
2-BUTANONE	78-93-3	VOA/2										54	30000	30000
4-METHYL-2-PENTANONE	108-10-1	VOA/2										230	20000	22000
TOTAL XYLENES	1330-20-7	VOA/2										100		
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	PBN/1					4J					8J		
4,4'-DDT	50-29-3	PES/1												0.2[illegible]
HEPTACHLOR	76-44-8	PES/1		[illegible]									1	0.3[illegible]
HEPTACHLOR EPOXIDE	1024-57-3	PES/1											0.10	
ALPHA-BHC	319-84-6	PES/1									0.06		0.90	2

1. PRIORITY POLLUTANT
2. SPECIFIED HAZARDOUS SUBSTANCE
3. TENTATIVELY IDENTIFIED

VOA - VOLATILE
ABN ACID/BASE/NEUTRAL
PES PESTICIDE

B - THE ANALYTE IS FOUND [illegible]
J - INDICATES AN ESTIMATED VALUE [illegible]
IDENTIFIED COMPOUNDS OR COMPOUNDS FOUND
BY CONTRACT DETECTION LIMIT
[illegible]

C - [illegible]

SITE NAME: U.S. SCRAP
CASE NUMBER 8635 PAGE 2 OF 2
CONCENTRATIONS IN PARTS PER BILLION

ORGANIC TRAFFIC NUMBERS
AND SAMPLE STATION LOCATION DESCRIPTIONS

			50770											
		MATRIX	WATER											
COMPOUND	CAS#/SCAN	CLASS												
BENZENE	71-43-2	VOA/1												
1,2-DICHLOROETHANE	107-05-2	VOA/1												
1,1,1-TRICHLOROETHANE	71-55-6	VOA/1												
CHLOROFORM	67-66-3	VOA/1												
ETHYLBENZENE	100-41-4	VOA/1												
METHYLENE CHLORIDE	75-09-2	VOA/1	2B											
TOLUENE	108-88-3	VOA/1	1B											
TRICHLOROETHENE	79-01-6	VOA/1												
ACETONE	67-64-1	VOA/2												
2 BUTANONE	78-93-3	VOA/2												
4-METHYL-2-PENTANONE	108-10-1	VOA/2												
TOTAL XYLENES	1330-20-7	VOA/2												
BIS(2-ETHYLHEXYL)PHTHALAT	117-81-7	ABN/1												
4,4'-DDT	50-29-3	PES/1												
HEPTACHLOR	76-44-8	PES/1												
HEPTACHLOR EPOXIDE	1024-57-3	PES/1												
ALPHA-BHC	319-84-6	PES/1												

1. PRIORITY POLLUTANT
2. SPECIFIED HAZARDOUS SUBSTANCE
3. TENTATIVELY IDENTIFIED

VOA - VOLATILE
ABN - ACID/BASE/NEUTRAL
PES - PEST CIDE

B - THE ANALYTE IS FOUND [illegible] THE LAB BLANK
INDICATED [illegible]
IDENTIFIED COMPOUND OR COMPOUND [illegible]
B [illegible] CONTRACT DETECTION LIMIT
[illegible]

C - CONFIRMED BY MASS SPECTRUM DATA

SITE NAME: U.S. SCRAP
CASE NUMBER 8635 PAGE 1 OF 2
CONCENTRATIONS IN PARTS PER BILLION

ORGANIC TRAFFIC NUMBERS
AVAILABLE STATION LOCATION DESCRIPTIONS

COMPOUND	CAS#/SCAN CLASS						
BENZENE	71-43-2	VOA/1					
1,1,1-TRICHLOROETHANE	71-55-6	VOA/1			14	27	
1,1-DICHLOROETHANE	75-34-3	VOA/1			8		
CHLOROFORM	67-66-3	VOA/1	0.70JB		0.6JB		
TRANS-1,2-DICHLOROETHENE	156-60-5	VOA/1			6		
ETHYLBENZENE	100-41-4	VOA/1			95	24	470
METHYLENE CHLORIDE	75-09-2	VOA/1		1.9	105	145	1.2
TETRACHLOROETHENE	127-18-4	VOA/1			31	330	21
TOLUENE	108-88-3	VOA/1	12B	2.9	109	500	1500
TRICHLOROETHENE	79-01-6	VOA/1			8	16	5
ACETONE	67-64-1	VOA/2	130	14	160	270	330
2-BUTANONE	78-93-3	VOA/2	26		42	30	30
CARBONDISULFIDE	75-15-0	VOA/2					8
4-METHYL-2-PENTANONE	108-10-1	VOA/2			32		
TOTAL XYLENES	1330-20-7	VOA/2			150		13
ACENAPHTHENE	83-32-9	BEN/1					3200
FLUORANTHENE	206-44-0	BEN/1	570J	160J	65J	2600J	2500J
NAPHTHALENE	91-20-3	BEN/1		240J	49J	370J	1900J
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	BEN/1	370J	1000J	1J	170J	1J
DI-N-BUTYL PHTHALATE	84-74-2	BEN/1		1600J			
BENZO(A)ANTHRACENE	56-55-3	BEN/1		1400J	4J	37J	500J
BENZO(A)PYRENE	50-32-8	BEN/1	1200J	870J	5J	95J	1800J
BENZO(B)FLUORANTHENE	205-99-2	BEN/1	1600J	310J	6J	1J	500J
BENZO(K)FLUORANTHENE	207-08-9	BEN/1	300J	290J	63J	75J	1600J
CHRYSENE	218-01-9	BEN/1		300J	1J	45J	1J
ACENAPHTHYLENE	208-96-8	BEN/1		390J		6J	
ANTHRACENE	120-12-7	BEN/1		570J	1J	400J	530J
BENZO(GHI)PERYLENE	191-24-2	BEN/1	2300J	350J	3J	300J	570J
FLUORENE	86-73-7	BEN/1		130J		1200J	320J
PHENANTHRENE	85-01-8	BEN/1		1300J	25J	3400J	1J
DIBENZO(A,H)ANTHRACENE	53-70-3	BEN/1				100J	300J
INDENO(1,2,3-CD)PYRENE	193-39-5	BEN/1	2300J	350J	2J	330J	630J
PYRENE	129-00-0	BEN/1	1700J	1300J	6	1400J	5600J
DIBENZOFURAN	132-64-9	BEN/2				560J	1500J
2-METHYLNAPHTHALENE	91-57-6	BEN/2		1500J		620J	2300J
ALDRIN	309-00-2	PES/1	550J	870J			
CHLORDANE	57-74-9	PES/1	3300J	17300J	840J		
4,4'-DDT	50-29-3	PES/1	1300J	4400J			
4,4'-DDE	72-55-9	PES/1	760J	2600J			
ENDOSULFAN SULFATE	1031-07-8	PES/1				270J	

1. PRIORITY POLLUTANT
2. SPECIFIED HAZARDOUS SUBSTANCE
3. TENTATIVE IDENTIFIED

VOA - VOLATILE
BEN - ACID/BASE/NEUTRAL
PES - PESTICIDE

B - THE ANALYTE IS FOUND IN THE BLANK
J - ESTIMATED VALUE
IDENTIFIED FROM [illegible]
[illegible]
[illegible]

SITE NAME: .S. SCRAP
CASE NUMBER 8635 PAGE 2 OF ?
CONCENTRATIONS IN PARTS PER B[illegible]ION

ORGANIC [illegible] NUMBERS
(AND SAMPLE STATION LOCATION DESCRIPTIONS)

			[illegible]	ESN01	ESN02	[illegible]	[illegible]
		MATRIX [illegible]					
COMPOUND	CAS#/SCAN	CLASS					
ALPHA B-C	319-84-6	PES/1	2400				
ENDOSULFAN II	33213-65-9	PES/1	61		33		

1. PRIORITY POLLUTANT
S. SPECIFIED HAZARDOUS SUBSTANCE
? TENTATIVELY IDENTIFIED

VOA - VOLATILE
BEN - ACID/BASE/NEUTRAL
PES - PESTICIDE

B - THE ANALYTE IS FOUND IN THE LAB BLANK
J - INDICATES AN ESTIMATED VALUE [illegible]
IDENTIFIED COMPOUNDS [illegible]
SHOWN [illegible] DETECTION LIMIT
P - PRESENT IN SAMPLE BUT NOT REPORTED BY [illegible]
[illegible] CONFIRMED BY [illegible] SPECTRAL DATA

AMERICAN ANALYTICAL TECHNICAL SERVICES
10926 EAST 55TH PLACE / TULSA, OKLAHOMA 74146 / 918-251-2858

CASE NARRATIVE

RECEIVED
JAN 14 1988
U.S. EPA CENTRAL
REGIONAL LAB

January 12, 1988

CONTRACT NO.: 68-01-7392

CASE NO.: 8635

SAMPLE NO.: EQ757 thru EQ761, EQ763 thru EQ767, EQ769, EQ770, and ES001 thru ES004

SDG NO.: EQ758

---

1. Traffic Report for sample EQ768 indicated that it was from the same station as the sample EQ766. Hence, sample EQ768 was treated as an extra aliquot of sample EQ766 allowing for matrix spike and matrix spike duplicate, after consultation with Sample Management Office.

2. Samples EQ763, EQ764, EQ757, EQ762 and EQ770 were analysed for the volatile fraction only.

3. Sample ES003 was reanalysed for the volatile fraction because the surrogates were outside QC limits. The reanalysed sample also did not meet surrogate recovery criteria. This reanalysis is billable.

4. Sample EQ766 was reextracted and reanalysed for the semi-volatile fraction because the surrogates were outside QC limits. The reanalysed sample met surrogates recovery criteria. Due to the reextraction, the holding time for the extraction could not be met.

5. Sample EQ767 and sample EQ769 could not be concentrated to less than 40 mls. for the semi-volatile fraction. The extracts of these samples were further diluted 10 times before analysis. Due to the excessive dilution, the surrogate recoveries could not be determined.

6. The surrogate spiking solution used for spiking the samples was analysed by GC/MS and the responses generated were used to calculate the surrogate recoveries for the semi-volatile fraction.

7. One of the surrogates and the internal standard area was outside the QC limits for the sample ES004 for the volatile fraction. This sample was reanalysed at a later date in order to meet the QC requirements. As a result, the analysis holding time could not be met for the volatile fraction.

8. One of the 'CCC' compounds was outside the QC limits because of the saturation of the peak for the continuing calibration analysed on 01-11-88 and 01-12-88. This will not affect the quality of the data.

"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."

J. D. Shringarpure, Ph.D.
Program Manager

1-12-88
Date

2A

WATER VOLATILE SURROGATE RECOVERY

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK1	100	101	97		0
2	EQ758	101	98	95		0
3	EQ759	101	102	100		0
4	EQ763	102	101	99		0
5	EQ767	101	99	101		0
6	EQ769	101	100	98		0
7	EQ766	98	102	97		0
8	EQ766MS	99	102	97		0
9	EQ766MSD	99	102	99		0
10	EQ760	97	99	100		0
11	EQ761	99	99	99		0
12	EQ763	97	100	101		0
13	EQ764	96	100	101		0
14	VBLK2	102	101	101		0
15	EQ757	104	105	105		0
16	EQ762	104	102	108		0
17	EQ770	106	105	107		0
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

		QC LIMITS
S1 (TOL)	= TOLUENE-D8	(88-110)
S2 (BFB)	= BROMOFLUOROBENZENE	(86-115)
S3 (DCE)	= 1,2-DICHLOROETHANE-D4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: E0758

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK1	101	97	95		0
2	ES001	117	84	93		0
3	ES001MS	110	92	91		0
4	ES001MSD	115	85	95		0
5	ES002	117	85	92		0
6	E0771	112	85	91		0
7	VBLK2	102	99	99		0
8	ES003	132 *	79	109		1
9	ES003 RE	132 *	80	96		1
10	ES004	124 *	0 *	100		2
11						
12						
13						
14						
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

FORM II VOA-2 1/87 Rev.

SOIL VOLATILE SURROGATE RECOVERY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: E0758

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK3	101	96	92		0
2	ES004 RE	116	87	91		0
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						

	QC LIMITS
S1 (TOL) = TOLUENE-D8	(81-117)
S2 (BFB) = 4-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 Surrogate diluted out

FORM II VOA-2 1/87 Rev.

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Name: AATS Contract: 68-01-7392

Code: AATS Case No.: 8435 SAS No.: SDG No.: E0758

Matrix Spike - EPA Sample No.: E0766

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC #	QC LIMITS REC.
1,1-DICHLOROETHENE	50.	0.	48.	97.	61-145
TRICHLOROETHENE	50.	0.	50.	99.	71-120
BENZENE	50.	11.	67.	111.	76-127
TOLUENE	50.	104.	171.	134. *	76-125
CHLOROBENZENE	50.	0.	53.	105.	75-130

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-DICHLOROETHENE	50.	48.	97.	0.	14	61-145
TRICHLOROETHENE	50.	48.	97.	2.	14	71-120
BENZENE	50.	65.	107.	3.	11	76-127
TOLUENE	50.	159.	111.	19. *	13	76-125
CHLOROBENZENE	50.	51.	102.	3.	13	75-130

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

Values outside of QC limits

RPD: 1 out of 5 outside limits
Spike Recovery: 1 out of 10 outside limits

COMMENTS:

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

ab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: E0758

Matrix Spike - EPA Sample No.: ES001 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	60.	0.	56.	93.	59-172
TRICHLOROETHENE	60.	0.	49.	82.	62-137
BENZENE	60.	0.	69.	115.	66-142
TOLUENE	60.	21.	83.	102.	59-139
CHLOROBENZENE	60.	0.	66.	110.	60-133

COMPOUND	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-DICHLOROETHENE	60.	51.	85.	9.	22	59-172
TRICHLOROETHENE	60.	44.	73.	12.	24	62-137
BENZENE	60.	66.	110.	5.	21	66-142
TOLUENE	60.	91.	116.	12.	21	59-139
CHLOROBENZENE	60.	64.	106.	4.	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

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Lab File ID: 5499 Lab Sample ID:_____

Date Analyzed: 12/ 1/87 Time Analyzed: 22:16

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

Instrument ID: 7002D

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	EQ758		5500	22:55
2	EQ759		5501	23:35
3	EQ765		5502	0:14
4	EQ767		5503	0:53
5	EQ769		5504	1:59
6	EQ766		5505	3:05
7	EQ766MS		5506	3:44
8	EQ766MSD		5507	4:23
9	EQ760		5508	5:02
10	EQ761		5509	5:42
11	EQ763		5510	6:21
12	EQ764		5511	7:00
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Lab File ID: 5514 Lab Sample ID:_____

Date Analyzed: 12/ 2/87 Time Analyzed: 9:51

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

Instrument ID: 7002D

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	EQ757		5520	14:04
2	EQ762		5521	14:44
3	EQ770		5522	15:23
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				

COMMENTS:

FORM IV VOA 1/87 Rev.

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8633 SAS No.: SDG No.: EQ758

Lab File ID: 5525 Lab Sample ID:_____

Date Analyzed: 12/ 2/87 Time Analyzed: 16:42

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

Instrument ID: 7002D

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	ES001		5526	18:06
2	ES001MS		5527	18:47
3	ES001MSD		5528	19:26
4	ES002		5533	22:43
5	E0771		5534	23:23
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				

COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Lab File ID: 5555 Lab Sample ID: _____

Date Analyzed: 12/ 4/87 Time Analyzed: 18:57

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

Instrument ID: 7002D

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	ES003		5556	19:36
2	ES003		5558	23:07
3	ES004		5559	23:58
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				

COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Lab File ID: 5829 Lab Sample ID: _____

Date Analyzed: 12/19/87 Time Analyzed: 22:26

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

Instrument ID: 7002D

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	ES004 PE		5833	1:01
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				

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5499

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 12/ 1/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	U
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	1.	J
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK1

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5499

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 12/ 1/87

Column: (packed/cap) PACK Dilution Factor: 1.00

Number TICs found: ~~1~~ 0 Fr

CONCENTRATION UNITS:
(ug/L or ug/kg) UG/L

	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.

VBLK1

ab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5525

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 12/ 2/87

Column: (packed/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	2.	J
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	1.	J
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	.4	J
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK1

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5525

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: 0 K

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.

VBLK2

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5514

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	2.	J
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	1.	J
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK2

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5514

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	76-13-1	Ethane, 1,1,2-trichloro-1,2,	11.92	7.	J
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.

VBLK2

ab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5555

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 12/ 4/87

Column: (packed/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	U
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	1.	J
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK2

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 6635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5555

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 12/ 4/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-91-1	1,4-Dioxane (9CI)	13.69	8.	J
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.

VBLK3

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8633 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/ml) G Lab File ID: 5829

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 12/19/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	U
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK3

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5829

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 12/19/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-91-1	1,4-Dioxane (SCI)	13.51	9.	J
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.					

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 9635 SAS No.: SDG No.: EQ758

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
1	SBLKB1	73	90	101	72	93	92		0
2	EQ765	62	85	105	67	75	91		0
3	EQ758	82	88	74	93	111 *	89		1
4	EQ759	84	98	55	64	51	60		0
5	EQ760	82	87	46	74	74	61		0
6	EQ761	100	73	53	98 *	63	64		1
7	EQ766MS	130 *	82	35	180 *	87	78		2
8	EQ766MSD	133 *	87	35	185 *	90	82		2
# 9	EQ769	0 *	0 *	0 *	0 *	0 *	0 *		6
#10	EQ767	0 *	0 *	0 *	0 *	0 *	0 *		6
11	SBLKB2	104	97	134	34	66	60		0
12	EQ766 RE	99	94	103	39	70	67		0
13									
14									
15									
16	F See	Case	Narrative						
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

			QC LIMITS
S1 (NBZ)	= CS20	NITROBENZENE-D5	(35-114)
S2 (FBP)	= CS25	2-FLUOROBIPHENYL	(43-116)
S3 (TPH)	= CS30	TERPHENYL-D14	(33-141)
S4 (PHL)	= CS45	PHENOL-D5	(10- 94)
S5 (2FP)	= CS50	2-FLUOROPHENOL	(21-100)
S6 (TBP)	= CS55	2,4,6-TRIBROMOPH	(10-123)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
1	SBLKB1	66	79	91	65	72	75		0
2	ES001	69	101	109	70	73	117		0
3	ES001MS	81	107	96	65	70	116		0
4	ES001MSD	76	97	94	86	83	118		0
5	ES002	75	101	123	66	74	111		0
6	ES003	109	107	126	85	82	123 *		1
7	ES004	64	107	103	78	69	121		0
8	EQ771	55	65	73	56	44	83		0
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

			QC LIMITS
S1 (NBZ)	= CS20	NITROBENZENE-D5	(23-120)
S2 (FBP)	= CS23	2-FLUOROBIPHENYL	(30-115)
S3 (TPH)	= CS30	TERPHENYL-D14	(18-137)
S4 (PHL)	= CS40	PHENOL-D5	(24-113)
S5 (2FP)	= CS50	2-FLUOROPHENOL	(25-121)
S6 (TBP)	= CS55	2,4,6-TRIBROMOPH	(19-122)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: E0758

Matrix Spike - EPA Sample No.: E0766

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC	#	QC LIMITS REC.
C315 PHENOL*	200.	0.	238.	119.	*	12- 89
C330 2-CHLOROPHENOL	200.	0.	198.	99.		27-123
C340 1,4-DICHLOROBENZE	100.	0.	73.	73.		36- 97
C370 N-NITROSO-DI-N-PR	100.	0.	87.	87.		41-116
C445 1,2,4-TRICHLOROBE	100.	0.	75.	75.		39- 98
C465 4-CHLORO-3-METHYL	200.	0.	210.	105.	*	23- 97
C550 ACENAPTHENE*	100.	0.	87.	87.		46-118
C560 4-NITROPHENOL**	200.	0.	133.	66.		10- 80
C570 2,4-DINITROTOLUEN	100.	0.	76.	76.		24- 96
C635 PENTACHLOROPHENOL	200.	0.	191.	95.		9-103
C715 PYRENE	100.	0.	77.	77.		26-127

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC	#	% RPD	#	QC LIMITS RPD	QC LIMITS REC.
C315 PHENOL*	200.	256.	128.	*	7.		42	12- 89
C330 2-CHLOROPHENOL	200.	209.	105.		6.		40	27-123
C340 1,4-DICHLOROBENZE	100.	77.	77.		5.		28	36- 97
C370 N-NITROSO-DI-N-PR	100.	93.	93.		7.		38	41-116
C445 1,2,4-TRICHLOROBE	100.	78.	78.		4.		28	39- 98
C465 4-CHLORO-3-METHYL	200.	222.	111.	*	6.		42	23- 97
C550 ACENAPTHENE*	100.	95.	95.		9.		31	46-118
C560 4-NITROPHENOL**	200.	167.	84.	*	23.		50	10- 80
C570 2,4-DINITROTOLUEN	100.	85.	85.		12.		38	24- 96
C635 PENTACHLOROPHENOL	200.	204.	102.		7.		50	9-103
C715 PYRENE	100.	80.	80.		5.		31	26-127

(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: 5 out of 22 outside limits

COMMENTS:

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Matrix Spike - EPA Sample No.: ES001 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (UG/KG)	SAMPLE CONCENTRATION (UG/KG)	MS CONCENTRATION (UG/KG)	MS % REC #	QC LIMITS REC.
C315 PHENOL*	4016.	0.	2777.	69.	26- 90
C330 2-CHLOROPHENOL	4016.	0.	3552.	88.	25-102
C340 1,4-DICHLOROBENZE	2008.	0.	1659.	83.	28-104
C370 N-NITROSO-DI-N-PR	2008.	0.	1598.	80.	41-126
C445 1,2,4-TRICHLOROBE	2008.	0.	1908.	95.	38-107
C465 4-CHLORO-3-METHYL	4016.	0.	4442.	111. *	26-103
C550 ACENAPTHENE*	2008.	0.	2499.	124.	31-137
C560 4-NITROPHENOL**	4016.	0.	2978.	74.	11-114
C570 2,4-DINITROTOLUEN	2008.	0.	1564.	78.	28- 89
C635 PENTACHLOROPHENOL	4016.	0.	2742.	68.	17-109
C715 PYRENE	2008.	2167.	4156.	99.	35-142

COMPOUND	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
C315 PHENOL*	4016.	2337.	58.	17.	35	26- 90
C330 2-CHLOROPHENOL	4016.	3265.	81.	8.	50	25-102
C340 1,4-DICHLOROBENZE	2008.	1738.	87.	5.	27	28-104
C370 N-NITROSO-DI-N-PR	2008.	1598.	80.	0.	38	41-126
C445 1,2,4-TRICHLOROBE	2008.	1879.	94.	2.	23	38-107
C465 4-CHLORO-3-METHYL	4016.	4357.	108. *	2.	33	26-103
C550 ACENAPTHENE*	2008.	2307.	115.	8.	19	31-137
C560 4-NITROPHENOL**	4016.	2197.	55.	30.	50	11-114
C570 2,4-DINITROTOLUEN	2008.	1504.	75.	4.	47	28- 89
C635 PENTACHLOROPHENOL	4016.	2187.	54.	22.	47	17-109
C715 PYRENE	2008.	3637.	73.	13.	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: 2 out of 22 outside limits

COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: E0758

Lab File ID: BLK8635A Lab Sample ID:_____

Date Extracted: 12/ 4/87 Extraction:(SepF/Cont/Sonc) CONT

Date Analyzed: 1/ 8/88 Time Analyzed: 18:34

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

Instrument ID: B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	E0765		16226	1/ 8/88
2	E0758		16224	1/ 8/88
3	E0759		16225	1/ 8/88
4	E0760		16231	1/ 8/88
5	E0761		16232	1/10/88
6	E0766MS		16229MS	1/10/88
7	E0766MSD		16229MSD	1/10/88
8	E0769		16228T	1/11/88
9	E0767		16227	1/11/88
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Lab File ID: BLK8635C Lab Sample ID:_____

Date Extracted: 12/11/87 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 1/11/88 Time Analyzed: 14:03

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

Instrument ID: B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	ES001		16264	1/11/88
2	ES001MS		16264MS	1/11/88
3	ES001MSD		16264MSD	1/11/88
4	ES002		16265	1/11/88
5	ES003		16280	1/11/88
6	ES004		16281	1/11/88
7	EQ771		16263R	1/12/88
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM IV SV 1/87 Rev.

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: E0758

Lab File ID: BLK8635D Lab Sample ID: _____

Date Extracted: 1/11/87 Extraction:(SepF/Cont/Sonc) SEPF

Date Analyzed: 1/11/88 Time Analyzed: 22:50

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

Instrument ID: B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	E0766 RE		16229R	1/12/88
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				

COMMENTS:

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKB1

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: BLK8635A

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. - Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2-------C315	PHENOL*	10.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	10.	U
95-57-8-------C330	2-CHLOROPHENOL	10.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	10.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	10.	U
100-51-6-------C345	BENZYL ALCOHOL	10.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	10.	U
95-48-7-------C355	2-METHYLPHENOL	10.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	10.	U
106-44-5-------C365	4-METHYLPHENOL	10.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	10.	U
67-72-1-------C375	HEXACHLOROETHANE	10.	U
98-95-3-------C410	NITROBENZENE	10.	U
78-59-1-------C415	ISOPHORONE	10.	U
88-75-5-------C420	2-NITROPHENOL*	10.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	10.	U
65-85-0-------C430	BENZOIC ACID	50.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	10.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	10.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	10.	U
91-20-3-------C450	NAPHTHALENE	10.	U
106-47-8-------C455	4-CHLOROANILINE	10.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	10.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	10.	U
91-57-6-------C470	2-METHYLNAPTHALENE	10.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	10.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	10.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	50.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	10.	U
88-74-4-------C530	2-NITROANILINE	50.	U
131-11-3-------C535	DIMETHYL PHTHALATE	10.	U
208-96-8-------C540	ACENAPHTHYLENE	10.	U
606-20-2-------C545	2,6-DINITROTOLUENE	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKB1

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: BLK8635A

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2-------C545	3-NITROANILINE	50.	U
83-32-9-------C550	ACENAPTHENE*	10.	U
51-28-5-------C555	2,4-DINITROPHENOL**	50.	U
100-02-7-------C560	4-NITROPHENOL**	50.	U
132-64-9-------C565	DIBENZOFURAN	10.	U
121-14-2-------C570	2,4-DINITROTOLUENE	10.	U
84-66-2-------C580	DIETHYL PHTHALATE	10.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	10.	U
86-73-7-------C590	FLUORENE	10.	U
100-01-6-------C595	4-NITROANILINE	50.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	10.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	50.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	10.	U
118-74-1-------C630	HEXACHLOROBENZENE	10.	U
87-86-5-------C635	PENTACHLOROPHENOL*	50.	U
85-01-8-------C640	PHENANTHRENE	10.	U
120-12-7-------C645	ANTHRACENE	10.	U
84-74-2-------C650	DI-N-BUTYL PHTHALATE	10.	U
206-44-0-------C655	FLUORANTHENE*	10.	U
129-00-0-------C715	PYRENE	50.	U
85-68-7-------C720	BUTYL BENZYL PHTHALATE	10.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	20.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	10.	U
218-01-9-------C740	CHRYSENE	10.	U
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	10.	U
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	10.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	10.	U
207-08-9-------C770	BENZO(K)FLUORANTHENE	10.	U
50-32-8-------C775	BENZO(A)PYRENE*	10.	U
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	10.	U
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	10.	U
191-24-2-------C790	BENZO(G,H,I)PERYLENE	10.	U

(1) - Cannot be separated from diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKB1

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: BLK8635A

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

Number TICs found: 0

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

	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.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKB2

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: BLK8635D

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 1/11/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2-------C315	PHENOL*	10.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	10.	U
95-57-8-------C330	2-CHLOROPHENOL	10.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	10.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	10.	U
100-51-6-------C345	BENZYL ALCOHOL	10.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	10.	U
95-48-7-------C355	2-METHYLPHENOL	10.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	10.	U
106-44-5-------C365	4-METHYLPHENOL	10.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	10.	U
67-72-1-------C375	HEXACHLOROETHANE	10.	U
98-95-3-------C410	NITROBENZENE	10.	U
78-59-1-------C415	ISOPHORONE	10.	U
88-75-5-------C420	2-NITROPHENOL*	10.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	10.	U
65-85-0-------C430	BENZOIC ACID	50.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	10.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	10.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	10.	U
91-20-3-------C450	NAPHTHALENE	10.	U
106-47-8-------C455	4-CHLOROANILINE	10.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	10.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	10.	U
91-57-6-------C470	2-METHYLNAPTHALENE	10.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	10.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	10.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	50.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	10.	U
88-74-4-------C530	2-NITROANILINE	50.	U
131-11-3-------C535	DIMETHYL PHTHALATE	10.	U
208-96-8-------C540	ACENAPHTHYLENE	10.	U
606-20-2-------C543	2,6-DINITROTOLUENE	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKB2

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: BLK8635D

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. - Date Extracted: 1/11/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2-------C545	3-NITROANILINE	50.	U
83-32-9-------C550	ACENAPTHENE*	10.	U
51-28-5-------C555	2,4-DINITROPHENOL**	50.	U
100-02-7-------C560	4-NITROPHENOL**	50.	U
132-64-9-------C565	DIBENZOFURAN	10.	U
121-14-2-------C570	2,4-DINITROTOLUENE	10.	U
84-66-2-------C580	DIETHYL PHTHALATE	10.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	10.	U
86-73-7-------C590	FLUORENE	10.	U
100-01-6-------C595	4-NITROANILINE	50.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	10.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	50.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	10.	U
118-74-1-------C630	HEXACHLOROBENZENE	10.	U
87-86-5-------C635	PENTACHLOROPHENOL*	50.	U
85-01-8-------C640	PHENANTHRENE	10.	U
120-12-7-------C645	ANTHRACENE	10.	U
84-74-2-------C650	DI-N-BUTYL PHTHALATE	10.	U
206-44-0-------C655	FLUORANTHENE*	10.	U
129-00-0-------C715	PYRENE	50.	U
85-68-7-------C720	BUTYL BENZYL PHTHALATE	10.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	20.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	10.	U
218-01-9-------C740	CHRYSENE	10.	U
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	10.	U
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	10.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	10.	U
207-08-9-------C770	BENZO(K)FLUORANTHENE	10.	U
50-32-8-------C775	BENZO(A)PYRENE*	10.	U
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	10.	U
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	10.	U
191-24-2-------C790	BENZO(G,H,I)PERYLENE	10.	U

(1) - Cannot be separated from diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKB2

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: BLK8635D

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. - Date Extracted: 1/11/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

Number TICs found: 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN ALCOHOL	6.05	20.	J
2.	- -	UNKNOWN ALCOHOL	6.87	60.	J
3.	- -	UNKNOWN HYDROCARBON	7.12	20.	J
4.	- -	UNKNOWN HYDROCARBON	7.50	50.	J
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.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKB1

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 30. (g/mL) G Lab File ID: BLK8635C

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-------C315	PHENOL*	330.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	330.	U
95-57-8-------C330	2-CHLOROPHENOL	330.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	330.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	330.	U
100-51-6-------C345	BENZYL ALCOHOL	330.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	330.	U
95-48-7-------C355	2-METHYLPHENOL	330.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	330.	U
106-44-5-------C365	4-METHYLPHENOL	330.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	330.	U
67-72-1-------C375	HEXACHLOROETHANE	330.	U
98-95-3-------C410	NITROBENZENE	330.	U
78-59-1-------C415	ISOPHORONE	330.	U
88-75-5-------C420	2-NITROPHENOL*	330.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	330.	U
65-85-0-------C430	BENZOIC ACID	1700.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	330.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	330.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	330.	U
91-20-3-------C450	NAPHTHALENE	330.	U
106-47-8-------C455	4-CHLOROANILINE	330.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	330.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	330.	U
91-57-6-------C470	2-METHYLNAPTHALENE	330.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	330.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	330.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	1700.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	330.	U
88-74-4-------C530	2-NITROANILINE	1700.	U
131-11-3-------C535	DIMETHYL PHTHALATE	330.	U
208-96-8-------C540	ACENAPHTHYLENE	330.	U
606-20-2-------C543	2,6-DINITROTOLUENE	330.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKB1

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 30. (g/mL) G Lab File ID: BLK8635C

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2-------C545	3-NITROANILINE	1700.	U
83-32-9-------C550	ACENAPTHENE*	330.	U
51-28-5-------C555	2,4-DINITROPHENOL**	1700.	U
100-02-7-------C560	4-NITROPHENOL**	1700.	U
132-64-9-------C565	DIBENZOFURAN	330.	U
121-14-2-------C570	2,4-DINITROTOLUENE	330.	U
84-66-2-------C580	DIETHYL PHTHALATE	330.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	330.	U
86-73-7-------C590	FLUORENE	330.	U
100-01-6-------C595	4-NITROANILINE	1700.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	330.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	1700.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	330.	U
118-74-1-------C630	HEXACHLOROBENZENE	330.	U
87-86-5-------C635	PENTACHLOROPHENOL*	1700.	U
85-01-8-------C640	PHENANTHRENE	330.	U
120-12-7-------C645	ANTHRACENE	330.	U
84-74-2-------C650	DI-N-BUTYL PHTHALATE	330.	U
206-44-0-------C655	FLUORANTHENE*	330.	U
129-00-0-------C715	PYRENE	1700.	U
85-68-7-------C720	BUTYL BENZYL PHTHALATE	330.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	670.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	330.	U
218-01-9-------C740	CHRYSENE	330.	U
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	330.	U
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	330.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	330.	U
207-08-9-------C770	BENZO(K)FLUORANTHENE	330.	U
50-32-8-------C775	BENZO(A)PYRENE*	330.	U
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	330.	U
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	330.	U
191-24-2-------C790	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.

SBLKB1

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 30. (g/mL) G Lab File ID: BLK8635C

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. - -	UNKNOWN KETONE	6.60	200.	J
2. - -	UNKNOWN ALCOHOL	7.92	700.	J
3. - -	UNKNOWN COMPOUND	8.10	400.	J
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.				

2E
WATER PESTICIDE SURROGATE RECOVERY

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

	EPA SAMPLE NO.	S1 (DBC)	#	OTHER
1	ZZZZZ	52		
2	ZZZZZ	61		
3	ZZZZZ	53		
4	ZZZZZ	58		
5	ZZZZZ	98		
6	PBLK	151	*	
7	EQ758	44	*	
8	EQ759	15	*	
9	EQ765	90		
10	EQ767	31	*	
11	EQ769	61		
12	EQ766	33	*	
13	EQ766MS	20	*	
14	EQ766MSD	31	*	
15	EQ760	44	*	
16	EQ761	35	*	
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

ADVISORY QC LIMITS

S1 (DBC) = DIBUTYL CHLORENDATE (48-136)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II PEST-1 1/87 Rev.

2F

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Level: (low/med) MED

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
1	PBLK	202 *	
2	EQ771	197 *	
3	ES001	87	
4	ES002	74	
5	ES003	115	
6	ES003MS	104	
7	ES003MSD	125	
8	ES004	44	
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

S1 (DBC) = DIBUTYL CHLORENDATE — ADVISORY QC LIMITS (20-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Matrix Spike - EPA Sample No.: EQ766

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC	#	QC LIMITS REC.
GAMMA-BHC	.20	.00	.17	83.		56-123
HEPTACHLOR	.20	.00	.13	66.		40-131
ALDRIN	.20	.00	.06	32.	*	40-120
DIELDRIN	.50	.00	.26	52.	*	52-126
ENDRIN	.50	.00	.30	59.		56-121
4,4'-DDT	.50	.00	.19	38.		38-127

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC	#	% RPD	#	QC LIMITS RPD	QC LIMITS REC.
GAMMA-BHC	.20	.26	129.	*	43.	*	15	56-123
HEPTACHLOR	.20	.18	90.		31.	*	20	40-131
ALDRIN	.20	.11	53.		49.	*	22	40-120
DIELDRIN	.50	.40	80.		42.	*	18	52-126
ENDRIN	.50	.47	93.		44.	*	21	56-121
4,4'-DDT	.50	.25	49.		25.		27	38-127

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

* Values outside of QC limits

RPD: 5 out of 6 outside limits
Spike Recovery: 3 out of 12 outside limits

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AATS Contract: 68-01-7392

Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Matrix Spike - EPA Sample No.: ES003 Level:(low/med) MED

COMPOUND	SPIKE ADDED (UG/KG)	SAMPLE CONCENTRATION (UG/KG)	MS CONCENTRATION (UG/KG)	MS % REC #	QC LIMITS REC.
GAMMA-BHC	2567.39	.00	2294.86	89.	46-127
HEPTACHLOR	2567.39	.00	2328.42	91.	35-130
ALDRIN	2567.39	.00	2573.30	100.	34-132
DIELDRIN	6418.48	.00	6233.89	97.	31-134
ENDRIN	6418.48	.00	7708.03	120.	42-139
4,4'-DDT	6418.48	.00	6651.92	104.	23-134

COMPOUND	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
GAMMA-BHC	2567.39	2685.39	105.	16.	50	46-127
HEPTACHLOR	2567.39	2781.66	108.	18.	31	35-130
ALDRIN	2567.39	3135.88	122.	20.	43	34-132
DIELDRIN	6418.48	7198.68	112.	14.	38	31-134
ENDRIN	6418.48	8622.26	134.	11.	45	42-139
4,4'-DDT	6418.48	7910.95	123.	17.	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: 0 out of 12 outside limits

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Lab Sample ID: _____ Lab File ID: 1204PWB

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

Date Extracted: 12/ 4/87 Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed (1): 1/ 6/88 Date Analyzed (2): 1/ 6/88

Time Analyzed (1): 5:57 Time Analyzed (2): 17:34

Instrument ID (1): 5890A Instrument ID (2): 3700A

GC Column ID (1): MULTIPHA - QUANTITATION GC Column ID (2): DB-5 - CONFIRMAT

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
1	EQ758		1/ 6/88	
2	EQ759		1/ 6/88	
3	EQ765		1/ 6/88	
4	EQ767		1/ 6/88	1/ 6/88
5	EQ769		1/ 6/88	1/ 6/88
6	EQ766		1/ 6/88	
7	EQ766MS		1/ 6/88	
8	EQ766MSD		1/ 6/88	
9	EQ760		1/ 6/88	
10	EQ761		1/ 6/88	
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

Comments:

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

Lab Sample ID: _____ Lab File ID: 0106PSB

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

Date Extracted: 1/ 6/88 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed (1): 1/ 6/88 Date Analyzed (2): 1/ 6/88

Time Analyzed (1): 15:00 Time Analyzed (2): 19:39

Instrument ID (1): 5890A Instrument ID (2): 3700A

GC Column ID (1): MULTIPHA - QUANTITATION GC Column ID (2): DB-5 - CONFIRMAT

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
1	EQ771		1/ 6/88	1/ 7/88
2	ES001		1/ 6/88	1/ 6/88
3	ES002		1/ 6/88	1/ 6/88
4	ES003		1/ 6/88	1/ 6/88
5	ES003MS		1/ 6/88	1/ 6/88
6	ES003MSD		1/ 6/88	1/ 6/88
7	ES004		1/ 6/88	
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

Comments:

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 1204PWB

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. - Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	ALPHA-BHC	.05	U
319-85-7	BETA-BHC	.05	U
319-86-8	DELTA-BHC	.05	U
58-89-9	GAMMA-BHC	.05	U
76-44-8	HEPTACHLOR	.05	U
309-00-2	ALDRIN	.05	U
1024-57-3	HEPTACHLOR EPOXIDE	.05	U
959-98-8	ENDOSULFAN I	.05	U
60-57-1	DIELDRIN	.1	U
72-55-9	4,4'-DDE	.1	U
72-20-8	ENDRIN	.1	U
33213-65-9	ENDOSULFAN II	.1	U
72-54-8	4,4'-DDD	.1	U
1031-07-8	ENDOSULFAN SULFATE	.1	U
50-29-3	4,4'-DDT	.1	U
72-43-5	METHOXYCHLOR	.5	U
53494-70-5	ENDRIN KETONE	1.	U
5103-71-9	ALPHA CHLORDANE	.5	U
5103-74-2	GAMMA CHLORDANE	.5	U
8001-35-2	TOXAPHENE	1.	U
12674-11-2	AROCLOR-1016	.5	U
11104-28-2	AROCLOR-1221	.5	U
11141-16-5	AROCLOR-1232	.5	U
53469-21-9	AROCLOR-1242	.5	U
12672-29-6	AROCLOR-1248	.5	U
11097-69-1	AROCLOR-1254	1.	U
11096-82-5	AROCLOR-1260	1.	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1. (g/mL) G Lab File ID: 0106PSB

Level: (low/med) MED Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 1/ 6/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: .0500

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	ALPHA-BHC	120.	U
319-85-7	BETA-BHC	120.	U
319-86-8	DELTA-BHC	120.	U
58-89-9	GAMMA-BHC	120.	U
76-44-8	HEPTACHLOR	120.	U
309-00-2	ALDRIN	120.	U
1024-57-3	HEPTACHLOR EPOXIDE	120.	U
959-98-8	ENDOSULFAN I	120.	U
60-57-1	DIELDRIN	240.	U
72-55-9	4,4'-DDE	240.	U
72-20-8	ENDRIN	240.	U
33213-65-9	ENDOSULFAN II	240.	U
72-54-8	4,4'-DDD	240.	U
1031-07-8	ENDOSULFAN SULFATE	240.	U
50-29-3	4,4'-DDT	240.	U
72-43-5	METHOXYCHLOR	1200.	U
53494-70-5	ENDRIN KETONE	240.	U
5103-71-9	ALPHA CHLORDANE	1200.	U
5103-74-2	GAMMA CHLORDANE	1200.	U
8001-35-2	TOXAPHENE	2400.	U
12674-11-2	AROCLOR-1016	1200.	U
11104-28-2	AROCLOR-1221	1200.	U
11141-16-5	AROCLOR-1232	1200.	U
53469-21-9	AROCLOR-1242	1200.	U
12672-29-6	AROCLOR-1248	1200.	U
11097-69-1	AROCLOR-1254	2400.	U
11096-82-5	AROCLOR-1260	2400.	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ757

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5520

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	4	BJ
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	3.	BJ
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	4	J
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1C

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ757

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5520

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (packed/cap) PACK Dilution Factor: 1.00

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. - -	FREON	11.91	6.	J
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.

E0758

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: E0758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5500

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 1/87

Column: (packl/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	U
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	1.	BJ
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENE (TOTAL)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ758

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1010. (g/mL) ML Lab File ID: 16224

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2-------C315	PHENOL*	10.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	10.	U
95-57-8-------C330	2-CHLOROPHENOL	10.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	10.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	10.	U
100-51-6-------C345	BENZYL ALCOHOL	10.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	10.	U
95-48-7-------C355	2-METHYLPHENOL	10.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	10.	U
106-44-5-------C365	4-METHYLPHENOL	10.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	10.	U
67-72-1-------C375	HEXACHLOROETHANE	10.	U
98-95-3-------C410	NITROBENZENE	10.	U
78-59-1-------C415	ISOPHORONE	10.	U
88-75-5-------C420	2-NITROPHENOL*	10.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	10.	U
65-85-0-------C430	BENZOIC ACID	50.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	10.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	10.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	10.	U
91-20-3-------C450	NAPHTHALENE	10.	U
106-47-8-------C455	4-CHLOROANILINE	10.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	10.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	10.	U
91-57-6-------C470	2-METHYLNAPTHALENE	10.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	10.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	10.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	50.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	10.	U
88-74-4-------C530	2-NITROANILINE	50.	U
131-11-3-------C535	DIMETHYL PHTHALATE	10.	U
208-96-8-------C540	ACENAPHTHYLENE	10.	U
606-20-2-------C543	2,6-DINITROTOLUENE	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ758

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1010. (g/mL) ML Lab File ID: 16224

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2-------C545	3-NITROANILINE	50.	U
83-32-9-------C550	ACENAPTHENE*	10.	U
51-28-5-------C555	2,4-DINITROPHENOL**	50.	U
100-02-7-------C560	4-NITROPHENOL**	50.	U
132-64-9-------C565	DIBENZOFURAN	10.	U
121-14-2-------C570	2,4-DINITROTOLUENE	10.	U
84-66-2-------C580	DIETHYL PHTHALATE	10.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	10.	U
86-73-7-------C590	FLUORENE	10.	U
100-01-6-------C595	4-NITROANILINE	50.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	10.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	50.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	10.	U
118-74-1-------C630	HEXACHLOROBENZENE	10.	U
87-86-5-------C635	PENTACHLOROPHENOL*	50.	U
85-01-8-------C640	PHENANTHRENE	10.	U
120-12-7-------C645	ANTHRACENE	10.	U
84-74-2-------C650	DI-N-BUTYL PHTHALATE	10.	U
206-44-0-------C655	FLUORANTHENE*	10.	U
129-00-0-------C715	PYRENE	50.	U
85-68-7-------C720	BUTYL BENZYL PHTHALATE	10.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	20.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	10.	U
218-01-9-------C740	CHRYSENE	10.	U
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	10.	U
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	10.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	10.	U
207-08-9-------C770	BENZO(K)FLUORANTHENE	10.	U
50-32-8-------C775	BENZO(A)PYRENE*	10.	U
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	10.	U
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	10.	U
191-24-2-------C790	BENZO(G,H,I)PERYLENE	10.	U

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ758

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL)ML Lab File ID: 16224

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. - Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	ALPHA-BHC	.05	U
319-85-7	BETA-BHC	.05	U
319-86-8	DELTA-BHC	.05	U
58-89-9	GAMMA-BHC	.05	U
76-44-8	HEPTACHLOR	.05	U
309-00-2	ALDRIN	.05	U
1024-57-3	HEPTACHLOR EPOXIDE	.05	U
959-98-8	ENDOSULFAN I	.05	U
60-57-1	DIELDRIN	.1	U
72-55-9	4,4'-DDE	.1	U
72-20-8	ENDRIN	.1	U
33213-65-9	ENDOSULFAN II	.1	U
72-54-8	4,4'-DDD	.1	U
1031-07-8	ENDOSULFAN SULFATE	.1	U
50-29-3	4,4'-DDT	.1	U
72-43-5	METHOXYCHLOR	.5	U
53494-70-5	ENDRIN KETONE	1.	U
5103-71-9	ALPHA CHLORDANE	.5	U
5103-74-2	GAMMA CHLORDANE	.5	U
8001-35-2	TOXAPHENE	1.	U
12674-11-2	AROCLOR-1016	.5	U
11104-28-2	AROCLOR-1221	.5	U
11141-16-5	AROCLOR-1232	.5	U
53469-21-9	AROCLOR-1242	.5	U
12672-29-6	AROCLOR-1248	.5	U
11097-69-1	AROCLOR-1254	1.	U
11096-82-5	AROCLOR-1260	1.	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ758

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1010. (g/mL) ML Lab File ID: 16224

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.0000

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	124-07-2	OCTANOIC ACID	11.18	20.	J
2.	- -	UNKNOWN COMPOUND	12.88	7.	J
3.	334-48-5	DECANOIC ACID	13.68	10.	J
4.	143-07-7	DODECANOIC ACID	16.00	100.	J
5.	- -	UNKNOWN COMPOUND	17.12	30.	J
6.	- -	UNKNOWN COMPOUND	17.72	10.	J
7.	544-63-8	TETRADECANOIC ACID	17.98	30.	J
8.	- -	UNKNOWN ACID	19.70	40.	J
9.	57-10-3	HEXADECANOIC ACID	19.87	50.	J
10.	- -	UNKNOWN COMPOUND	20.95	8.	J
11.	- -	UNKNOWN HYDROCARBON	21.08	30.	J
12.	- -	UNKNOWN ALDEHYDE	21.38	30.	J
13.	- -	UNKNOWN ACID	21.55	6.	J
14.	- -	UNKNOWN COMPOUND	22.65	300.	J
15.	- -	UNKNOWN COMPOUND	22.85	80.	J
16.	- -	UNKNOWN HYDROCARBON	24.87	40.	J
17.	- -	UNKNOWN COMPOUND	28.37	6.	J
18.	- -	UNKNOWN HYDROCARBON	29.38	20.	J
19.	- -	UNKNOWN ESTER	31.27	40.	J
20.	- -	UNKNOWN COMPOUND	34.43	10.	J
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ759

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5501

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 1/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	U
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ759

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1020. (g/mL) ML Lab File ID: 16225

Level: (low/med) LOW Date Received: 12/ 1/87

Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2-------C315	PHENOL*	10.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	10.	U
95-57-8-------C330	2-CHLOROPHENOL	10.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	10.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	10.	U
100-51-6-------C345	BENZYL ALCOHOL	10.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	10.	U
95-48-7-------C355	2-METHYLPHENOL	10.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	10.	U
106-44-5-------C365	4-METHYLPHENOL	10.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	10.	U
67-72-1-------C375	HEXACHLOROETHANE	10.	U
98-95-3-------C410	NITROBENZENE	10.	U
78-59-1-------C415	ISOPHORONE	10.	U
88-75-5-------C420	2-NITROPHENOL*	10.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	10.	U
65-85-0-------C430	BENZOIC ACID	49.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	10.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	10.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	10.	U
91-20-3-------C450	NAPHTHALENE	10.	U
106-47-8-------C455	4-CHLOROANILINE	10.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	10.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	10.	U
91-57-6-------C470	2-METHYLNAPTHALENE	10.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	10.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	10.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	49.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	10.	U
88-74-4-------C530	2-NITROANILINE	49.	U
131-11-3-------C535	DIMETHYL PHTHALATE	10.	U
208-96-8-------C540	ACENAPHTHYLENE	10.	U
606-20-2-------C543	2,6-DINITROTOLUENE	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ759

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1020. (g/mL) ML Lab File ID: 16225

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	C545 3-NITROANILINE	49.	U
83-32-9	C550 ACENAPTHENE*	10.	U
51-28-5	C555 2,4-DINITROPHENOL**	49.	U
100-02-7	C560 4-NITROPHENOL**	49.	U
132-64-9	C565 DIBENZOFURAN	10.	U
121-14-2	C570 2,4-DINITROTOLUENE	10.	U
84-66-2	C580 DIETHYL PHTHALATE	10.	U
7005-72-3	C585 4-CHLOROPHENYL PHENYL	10.	U
86-73-7	C590 FLUORENE	10.	U
100-01-6	C595 4-NITROANILINE	49.	U
534-52-1	C610 4,6-DINITRO-2-METHYLPH	10.	U
86-30-6	C615 N-NITROSODIPHENYLAMINE	49.	U
101-55-3	C625 4-BROMOPHENYL PHENYL E	10.	U
118-74-1	C630 HEXACHLOROBENZENE	10.	U
87-86-5	C635 PENTACHLOROPHENOL*	49.	U
85-01-8	C640 PHENANTHRENE	10.	U
120-12-7	C645 ANTHRACENE	10.	U
84-74-2	C650 DI-N-BUTYL PHTHALATE	10.	U
206-44-0	C655 FLUORANTHENE*	10.	U
129-00-0	C715 PYRENE	49.	U
85-68-7	C720 BUTYL BENZYL PHTHALATE	10.	U
91-94-1	C725 3,3'-DICHLOROBENZIDINE	20.	U
56-55-3	C730 BENZO(A)ANTHRACENE	10.	U
218-01-9	C740 CHRYSENE	10.	U
117-81-7	C745 BIS(2-ETHYLHEXYL)PHTHA	10.	U
117-84-0	C760 DI-N-OCTYLPHTHALATE*	10.	U
205-99-2	C765 BENZO(B)FLUORANTHENE	10.	U
207-08-9	C770 BENZO(K)FLUORANTHENE	10.	U
50-32-8	C775 BENZO(A)PYRENE*	10.	U
193-39-5	C780 INDENO(1,2,3-CD)PYRENE	10.	U
53-70-3	C785 DIBENZ(A,H)ANTHRACENE	10.	U
191-24-2	C790 BENZO(G,H,I)PERYLENE	10.	U

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ759

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL)ML Lab File ID: 16225

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	ALPHA-BHC	.05	U
319-85-7	BETA-BHC	.05	U
319-86-8	DELTA-BHC	.05	U
58-89-9	GAMMA-BHC	.05	U
76-44-8	HEPTACHLOR	.05	U
309-00-2	ALDRIN	.05	U
1024-57-3	HEPTACHLOR EPOXIDE	.05	U
959-98-8	ENDOSULFAN I	.05	U
60-57-1	DIELDRIN	.1	U
72-55-9	4,4'-DDE	.1	U
72-20-8	ENDRIN	.1	U
33213-65-9	ENDOSULFAN II	.1	U
72-54-8	4,4'-DDD	.1	U
1031-07-8	ENDOSULFAN SULFATE	.1	U
50-29-3	4,4'-DDT	.1	U
72-43-5	METHOXYCHLOR	.5	U
53494-70-5	ENDRIN KETONE	1.	U
5103-71-9	ALPHA CHLORDANE	.5	U
5103-74-2	GAMMA CHLORDANE	.5	U
8001-35-2	TOXAPHENE	1.	U
12674-11-2	AROCLOR-1016	.5	U
11104-28-2	AROCLOR-1221	.5	U
11141-16-5	AROCLOR-1232	.5	U
53469-21-9	AROCLOR-1242	.5	U
12672-29-6	AROCLOR-1248	.5	U
11097-69-1	AROCLOR-1254	1.	U
11096-82-5	AROCLOR-1260	1.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ759

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5501

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 1/87

Column: (packed/cap) PACK Dilution Factor: 1.00

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-91-1	1,4-Dioxane (9CI)	13.61	10.	J
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.					

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ759

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1020. (g/mL) ML Lab File ID: 16225

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0000

Number TICs found: 12

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN COMPOUND	7.00	10.	J
2.	- -	UNKNOWN COMPOUND	7.10	30.	J
3.	- -	UNKNOWN COMPOUND	8.78	10.	J
4.	- -	UNKNOWN ALCOHOL	9.15	10.	J
5.	- -	UNKNOWN COMPOUND	15.92	10.	J
6.	- -	UNKNOWN COMPOUND	17.72	6.	J
7.	57-10-3	HEXADECANOIC ACID	19.83	10.	J
8.	- -	UNKNOWN COMPOUND	22.62	100.	J
9.	- -	UNKNOWN COMPOUND	24.22	10.	J
10.	- -	UNKNOWN COMPOUND	26.47	5.	J
11.	- -	UNKNOWN COMPOUND	27.47	6.	J
12.	- -	UNKNOWN COMPOUND	27.60	6.	J
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.

EQ760

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/ml) ML Lab File ID: 5508

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (packed/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	U
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	1.	J
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ760

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 16231

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2-------C315	PHENOL*	10.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	10.	U
95-57-8-------C330	2-CHLOROPHENOL	10.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	10.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	10.	U
100-51-6-------C345	BENZYL ALCOHOL	10.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	10.	U
95-48-7-------C355	2-METHYLPHENOL	10.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	10.	U
106-44-5-------C365	4-METHYLPHENOL	10.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	10.	U
67-72-1-------C375	HEXACHLOROETHANE	10.	U
98-95-3-------C410	NITROBENZENE	10.	U
78-59-1-------C415	ISOPHORONE	10.	U
88-75-5-------C420	2-NITROPHENOL*	10.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	10.	U
65-85-0-------C430	BENZOIC ACID	50.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	10.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	10.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	10.	U
91-20-3-------C450	NAPHTHALENE	10.	U
106-47-8-------C455	4-CHLOROANILINE	10.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	10.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	10.	U
91-57-6-------C470	2-METHYLNAPTHALENE	10.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	10.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	10.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	50.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	10.	U
88-74-4-------C530	2-NITROANILINE	50.	U
131-11-3-------C535	DIMETHYL PHTHALATE	10.	U
208-96-8-------C540	ACENAPHTHYLENE	10.	U
606-20-2-------C543	2,6-DINITROTOLUENE	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ760

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 16231

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
99-09-2-------C545	3-NITROANILINE	50.	U
83-32-9-------C550	ACENAPTHENE*	10.	U
51-28-5-------C555	2,4-DINITROPHENOL**	50.	U
100-02-7-------C560	4-NITROPHENOL**	50.	U
132-64-9-------C565	DIBENZOFURAN	10.	U
121-14-2-------C570	2,4-DINITROTOLUENE	10.	U
84-66-2-------C580	DIETHYL PHTHALATE	10.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	10.	U
86-73-7-------C590	FLUORENE	10.	U
100-01-6-------C595	4-NITROANILINE	50.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	10.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	50.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	10.	U
118-74-1-------C630	HEXACHLOROBENZENE	10.	U
87-86-5-------C635	PENTACHLOROPHENOL*	50.	U
85-01-8-------C640	PHENANTHRENE	10.	U
120-12-7-------C645	ANTHRACENE	10.	U
84-74-2-------C650	DI-N-BUTYL PHTHALATE	10.	U
206-44-0-------C655	FLUORANTHENE*	10.	U
129-00-0-------C715	PYRENE	50.	U
85-68-7-------C720	BUTYL BENZYL PHTHALATE	10.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	20.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	10.	U
218-01-9-------C740	CHRYSENE	10.	U
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	10.	U
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	10.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	10.	U
207-08-9-------C770	BENZO(K)FLUORANTHENE	10.	U
50-32-8-------C775	BENZO(A)PYRENE*	10.	U
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	10.	U
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	10.	U
191-24-2-------C790	BENZO(G,H,I)PERYLENE	10.	U

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ760

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 980. (g/mL)ML Lab File ID: 16231

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: .5000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	ALPHA-BHC	.1	U
319-85-7	BETA-BHC	.1	U
319-86-8	DELTA-BHC	.1	U
58-89-9	GAMMA-BHC	.1	U
76-44-8	HEPTACHLOR	.1	U
309-00-2	ALDRIN	.1	U
1024-57-3	HEPTACHLOR EPOXIDE	.1	U
959-98-8	ENDOSULFAN I	.1	U
60-57-1	DIELDRIN	.2	U
72-55-9	4,4'-DDE	.2	U
72-20-8	ENDRIN	.2	U
33213-65-9	ENDOSULFAN II	.2	U
72-54-8	4,4'-DDD	.2	U
1031-07-8	ENDOSULFAN SULFATE	.2	U
50-29-3	4,4'-DDT	.2	U
72-43-5	METHOXYCHLOR	1.	U
53494-70-5	ENDRIN KETONE	2.	U
5103-71-9	ALPHA CHLORDANE	1.	U
5103-74-2	GAMMA CHLORDANE	1.	U
8001-35-2	TOXAPHENE	2.	U
12674-11-2	AROCLOR-1016	1.	U
11104-28-2	AROCLOR-1221	1.	U
11141-16-5	AROCLOR-1232	1.	U
53469-21-9	AROCLOR-1242	1.	U
12672-29-6	AROCLOR-1248	1.	U
11097-69-1	AROCLOR-1254	2.	U
11096-82-5	AROCLOR-1260	2.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ760

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8625 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5508

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: ~~1~~ 0 ok

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

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.				

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ760

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 16231

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 1.0000

Number TICs found: 19

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN COMPOUND	7.00	7.	J
2.	- -	UNKNOWN COMPOUND	7.12	10.	J
3.	- -	UNKNOWN COMPOUND	7.20	8.	J
4.	- -	UNKNOWN COMPOUND	8.78	20.	J
5.	- -	UNKNOWN ALCOHOL	9.15	30.	J
6.	- -	UNKNOWN HYDROCARBON	11.55	6.	J
7.	- -	UNKNOWN COMPOUND	12.88	5.	J
8.	- -	UNKNOWN COMPOUND	13.17	4.	J
9.	143-07-7	DODECANOIC ACID	15.92	10.	J
10.	- -	UNKNOWN HYDROCARBON	16.37	6.	J
11.	- -	UNKNOWN HYDROCARBON	17.40	7.	J
12.	- -	UNKNOWN HYDROCARBON	17.47	5.	J
13.	- -	UNKNOWN HYDROCARBON	18.37	7.	J
14.	- -	UNKNOWN HYDROCARBON	19.30	7.	J
15.	57-10-3	HEXADECANOIC ACID	19.83	10.	J
16.	- -	UNKNOWN HYDROCARBON	20.18	4.	J
17.	- -	UNKNOWN COMPOUND	22.58	60.	J
18.	- -	UNKNOWN COMPOUND	25.48	10.	J
19.	- -	UNKNOWN COMPOUND	25.70	10.	J
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ761

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5509

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	U
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ761

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 16232

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/10/88

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2-------C315	PHENOL*	10.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	10.	U
95-57-8-------C330	2-CHLOROPHENOL	10.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	10.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	10.	U
100-51-6-------C345	BENZYL ALCOHOL	10.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	10.	U
95-48-7-------C355	2-METHYLPHENOL	10.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	10.	U
106-44-5-------C365	4-METHYLPHENOL	10.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	10.	U
67-72-1-------C375	HEXACHLOROETHANE	10.	U
98-95-3-------C410	NITROBENZENE	10.	U
78-59-1-------C415	ISOPHORONE	10.	U
88-75-5-------C420	2-NITROPHENOL*	10.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	10.	U
65-85-0-------C430	BENZOIC ACID	50.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	10.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	10.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	10.	U
91-20-3-------C450	NAPHTHALENE	10.	U
106-47-8-------C455	4-CHLOROANILINE	10.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	10.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	10.	U
91-57-6-------C470	2-METHYLNAPTHALENE	10.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	10.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	10.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	50.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	10.	U
88-74-4-------C530	2-NITROANILINE	50.	U
131-11-3-------C535	DIMETHYL PHTHALATE	10.	U
208-96-8-------C540	ACENAPHTHYLENE	10.	U
606-20-2-------C543	2,6-DINITROTOLUENE	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ761

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 16232

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/10/88

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2-------C545	3-NITROANILINE	50.	U
83-32-9-------C550	ACENAPTHENE*	10.	U
51-28-5-------C555	2,4-DINITROPHENOL**	50.	U
100-02-7-------C560	4-NITROPHENOL**	50.	U
132-64-9-------C565	DIBENZOFURAN	10.	U
121-14-2-------C570	2,4-DINITROTOLUENE	10.	U
84-66-2-------C580	DIETHYL PHTHALATE	10.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	10.	U
86-73-7-------C590	FLUORENE	10.	U
100-01-6-------C595	4-NITROANILINE	50.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	10.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	50.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	10.	U
118-74-1-------C630	HEXACHLOROBENZENE	10.	U
87-86-5-------C635	PENTACHLOROPHENOL*	50.	U
85-01-8-------C640	PHENANTHRENE	10.	U
120-12-7-------C645	ANTHRACENE	10.	U
84-74-2-------C650	DI-N-BUTYL PHTHALATE	10.	U
206-44-0-------C655	FLUORANTHENE*	10.	U
129-00-0-------C715	PYRENE	50.	U
85-68-7-------C720	BUTYL BENZYL PHTHALATE	10.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	20.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	10.	U
218-01-9-------C740	CHRYSENE	10.	U
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	4.	J
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	10.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	10.	U
207-08-9-------C770	BENZO(K)FLUORANTHENE	10.	U
50-32-8-------C775	BENZO(A)PYRENE*	10.	U
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	10.	U
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	10.	U
191-24-2-------C790	BENZO(G,H,I)PERYLENE	10.	U

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ761

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1010. (g/mL) ML Lab File ID: 162320

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. - Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	ALPHA-BHC	.05	U
319-85-7	BETA-BHC	.05	U
319-86-8	DELTA-BHC	.05	U
58-89-9	GAMMA-BHC	.05	U
76-44-8	HEPTACHLOR	.05	U
309-00-2	ALDRIN	.05	U
1024-57-3	HEPTACHLOR EPOXIDE	.05	U
959-98-8	ENDOSULFAN I	.05	U
60-57-1	DIELDRIN	.1	U
72-55-9	4,4'-DDE	.1	U
72-20-8	ENDRIN	.1	U
33213-65-9	ENDOSULFAN II	.1	U
72-54-8	4,4'-DDD	.1	U
1031-07-8	ENDOSULFAN SULFATE	.1	U
50-29-3	4,4'-DDT	.1	U
72-43-5	METHOXYCHLOR	.5	U
53494-70-5	ENDRIN KETONE	1.	U
5103-71-9	ALPHA CHLORDANE	.5	U
5103-74-2	GAMMA CHLORDANE	.5	U
8001-35-2	TOXAPHENE	1.	U
12674-11-2	AROCLOR-1016	.5	U
11104-28-2	AROCLOR-1221	.5	U
11141-16-5	AROCLOR-1232	.5	U
53469-21-9	AROCLOR-1242	.5	U
12672-29-6	AROCLOR-1248	.5	U
11097-69-1	AROCLOR-1254	1.	U
11096-82-5	AROCLOR-1260	1.	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ761

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 16232

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/10/88

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.0000

Number TICs found: 8

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN HYDROCARBON	7.05	6	J
2.	- -	UNKNOWN COMPOUND	7.25	5	J
3.	- -	UNKNOWN COMPOUND	7.35	7	J
4.	- -	UNKNOWN ESTER	7.43	7	J
5.	- -	UNKNOWN HYDROCARBON	10.15	4	J
6.	- -	UNKNOWN COMPOUND	15.93	10	J
7.	57-10-3	HEXADECANOIC ACID	19.85	5	J
8.	- -	UNKNOWN COMPOUND	22.62	50	J
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.

EQ761

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5509

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: ~~1~~ 0 CONCENTRATION UNITS: (ug/L or ug/kg) UG/L

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.

EQ762

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5521

Level: (low/med) LOW Date Received: 12/ 2/87

Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	2.	BJ
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL 2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ762

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8633 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5521

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	FREON	11.92	5.	J
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.

EQ763

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ75R

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5510

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (packed/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	U
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ763

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5510

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (packl/cap) PACI Dilution Factor: 1.00

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/kg) UG/L

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.

EQ764

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/ml) ML Lab File ID: 5511

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (packl/cap) PACK. Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	U
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ764

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5511

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: ~~1~~ 0 KW

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

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.

E0765

b Name: AATS Contract: 68-01-7392

ab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

ample wt/vol: 5. (g/mL) ML Lab File ID: 5502

Level: (low/med) LOW Date Received: 12/ 1/87

Moisture: not dec.100. Date Analyzed: 12/ 2/87

olumn: (pack/cap) PACK Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	U
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ765

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1110. (g/mL) ML Lab File ID: 16226

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 6.1 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2-------C315	PHENOL*	9.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	9.	U
95-57-8-------C330	2-CHLOROPHENOL	9.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	9.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	9.	U
100-51-6-------C345	BENZYL ALCOHOL	9.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	9.	U
95-48-7-------C355	2-METHYLPHENOL	9.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	9.	U
106-44-5-------C365	4-METHYLPHENOL	9.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	9.	U
67-72-1-------C375	HEXACHLOROETHANE	9.	U
98-95-3-------C410	NITROBENZENE	9.	U
78-59-1-------C415	ISOPHORONE	9.	U
88-75-5-------C420	2-NITROPHENOL*	9.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	9.	U
65-85-0-------C430	BENZOIC ACID	45.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	9.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	9.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	9.	U
91-20-3-------C450	NAPHTHALENE	9.	U
106-47-8-------C455	4-CHLOROANILINE	9.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	9.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	9.	U
91-57-6-------C470	2-METHYLNAPTHALENE	9.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	9.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	9.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	45.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	9.	U
88-74-4-------C530	2-NITROANILINE	45.	U
131-11-3-------C535	DIMETHYL PHTHALATE	9.	U
208-96-8-------C540	ACENAPHTHYLENE	9.	U
606-20-2-------C543	2,6-DINITROTOLUENE	9.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ765

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1110. (g/mL) ML Lab File ID: 16226

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 6.1 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2-------C545	3-NITROANILINE	45.	U
83-32-9-------C550	ACENAPTHENE*	9.	U
51-28-5-------C555	2,4-DINITROPHENOL**	45.	U
100-02-7-------C560	4-NITROPHENOL**	45.	U
132-64-9-------C565	DIBENZOFURAN	9.	U
121-14-2-------C570	2,4-DINITROTOLUENE	9.	U
84-66-2-------C580	DIETHYL PHTHALATE	9.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	9.	U
86-73-7-------C590	FLUORENE	9.	U
100-01-6-------C595	4-NITROANILINE	45.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	9.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	45.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	9.	U
118-74-1-------C630	HEXACHLOROBENZENE	9.	U
87-86-5-------C635	PENTACHLOROPHENOL*	45.	U
85-01-8-------C640	PHENANTHRENE	9.	U
120-12-7-------C645	ANTHRACENE	9.	U
84-74-2-------C650	DI-N-BUTYL PHTHALATE	9.	U
206-44-0-------C655	FLUORANTHENE*	9.	U
129-00-0-------C715	PYRENE	45.	U
85-68-7-------C720	BUTYL BENZYL PHTHALATE	9.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	18.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	9.	U
218-01-9-------C740	CHRYSENE	9.	U
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	9.	U
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	9.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	9.	U
207-08-9-------C770	BENZO(K)FLUORANTHENE	9.	U
50-32-8-------C775	BENZO(A)PYRENE*	9.	U
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	9.	U
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	9.	U
191-24-2-------C790	BENZO(G,H,I)PERYLENE	9.	U

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ765

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 16226

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 6.1 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	ALPHA-BHC	.06	
319-85-7	BETA-BHC	.05	U
319-86-8	DELTA-BHC	.05	U
58-89-9	GAMMA-BHC	.05	U
76-44-8	HEPTACHLOR	.05	U
309-00-2	ALDRIN	.05	U
1024-57-3	HEPTACHLOR EPOXIDE	.05	U
959-98-8	ENDOSULFAN I	.05	U
60-57-1	DIELDRIN	.1	U
72-55-9	4,4'-DDE	.1	U
72-20-8	ENDRIN	.1	U
33213-65-9	ENDOSULFAN II	.1	U
72-54-8	4,4'-DDD	.1	U
1031-07-8	ENDOSULFAN SULFATE	.1	U
50-29-3	4,4'-DDT	.1	U
72-43-5	METHOXYCHLOR	.5	U
53494-70-5	ENDRIN KETONE	1.	U
5103-71-9	ALPHA CHLORDANE	.5	U
5103-74-2	GAMMA CHLORDANE	.5	U
8001-35-2	TOXAPHENE	1.	U
12674-11-2	AROCLOR-1016	.5	U
11104-28-2	AROCLOR-1221	.5	U
11141-16-5	AROCLOR-1232	.5	U
53469-21-9	AROCLOR-1242	.5	U
12672-29-6	AROCLOR-1248	.5	U
11097-69-1	AROCLOR-1254	1.	U
11096-82-5	AROCLOR-1260	1.	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ765

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1110. (g/mL) ML Lab File ID: 16226

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 8/88

GPC Cleanup: (Y/N) N pH: 6.1 Dilution Factor: 1.0000

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	119-61-9	BENZOPHENONE	16.87	8.	J
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.

EQ766

b Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5505

Level: (low/med) LOW Date Received: 12/ 1/87

Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	4.	J
67-64-1	ACETONE	740.	
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	13.	J
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	540.	
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	11.	
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	230.	
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	100.	
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	14.	
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	120.	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ766 RE

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: B635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 16229R

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 1/11/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 1/12/88

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2-------C315	PHENOL*	10.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	10.	U
95-57-8-------C330	2-CHLOROPHENOL	10.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	10.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	10.	U
100-51-6-------C345	BENZYL ALCOHOL	10.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	10.	U
95-48-7-------C355	2-METHYLPHENOL	10.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	10.	U
106-44-5-------C365	4-METHYLPHENOL	10.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	10.	U
67-72-1-------C375	HEXACHLOROETHANE	10.	U
98-95-3-------C410	NITROBENZENE	10.	U
78-59-1-------C415	ISOPHORONE	10.	U
88-75-5-------C420	2-NITROPHENOL*	10.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	10.	U
65-85-0-------C430	BENZOIC ACID	50.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	10.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	10.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	10.	U
91-20-3-------C450	NAPHTHALENE	10.	U
106-47-8-------C455	4-CHLOROANILINE	10.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	10.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	10.	U
91-57-6-------C470	2-METHYLNAPTHALENE	10.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	10.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	10.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	50.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	10.	U
88-74-4-------C530	2-NITROANILINE	50.	U
131-11-3-------C535	DIMETHYL PHTHALATE	10.	U
208-96-8-------C540	ACENAPHTHYLENE	10.	U
606-20-2-------C543	2,6-DINITROTOLUENE	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ766 RE

-b Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 16229R

Level: (low/med) LOW Date Received: 12/ 1/87

Moisture: not dec. 0. dec. 0. Date Extracted: 1/11/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 1/12/88

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2-------C545	3-NITROANILINE	50.	U
83-32-9-------C550	ACENAPTHENE*	10.	U
51-28-5-------C555	2,4-DINITROPHENOL**	50.	U
100-02-7-------C560	4-NITROPHENOL**	50.	U
132-64-9-------C565	DIBENZOFURAN	10.	U
121-14-2-------C570	2,4-DINITROTOLUENE	10.	U
84-66-2-------C580	DIETHYL PHTHALATE	10.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	10.	U
86-73-7-------C590	FLUORENE	10.	U
100-01-6-------C595	4-NITROANILINE	50.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	10.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	50.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	10.	U
118-74-1-------C630	HEXACHLOROBENZENE	10.	U
87-86-5-------C635	PENTACHLOROPHENOL*	50.	U
85-01-8-------C640	PHENANTHRENE	10.	U
120-12-7-------C645	ANTHRACENE	10.	U
84-74-2-------C650	DI-N-BUTYL PHTHALATE	10.	U
206-44-0-------C655	FLUORANTHENE*	10.	U
129-00-0-------C715	PYRENE	50.	U
85-68-7-------C720	BUTYL BENZYL PHTHALATE	10.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	20.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	10.	U
218-01-9-------C740	CHRYSENE	10.	U
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	8.	J
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	10.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	10.	U
207-08-9-------C770	BENZO(K)FLUORANTHENE	10.	U
50-32-8-------C775	BENZO(A)PYRENE*	10.	U
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	10.	U
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	10.	U
191-24-2-------C790	BENZO(G,H,I)PERYLENE	10.	U

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ766

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL)ML Lab File ID: 16229

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: .5000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	ALPHA-BHC	.1	U
319-85-7	BETA-BHC	.1	U
319-86-8	DELTA-BHC	.1	U
58-89-9	GAMMA-BHC	.1	U
76-44-8	HEPTACHLOR	.1	U
309-00-2	ALDRIN	.1	U
1024-57-3	HEPTACHLOR EPOXIDE	.1	U
959-98-8	ENDOSULFAN I	.1	U
60-57-1	DIELDRIN	.2	U
72-55-9	4,4'-DDE	.2	U
72-20-8	ENDRIN	.2	U
33213-65-9	ENDOSULFAN II	.2	U
72-54-8	4,4'-DDD	.2	U
1031-07-8	ENDOSULFAN SULFATE	.2	U
50-29-3	4,4'-DDT	.2	U
72-43-5	METHOXYCHLOR	1.	U
53494-70-5	ENDRIN KETONE	2.	U
5103-71-9	ALPHA CHLORDANE	1.	U
5103-74-2	GAMMA CHLORDANE	1.	U
8001-35-2	TOXAPHENE	2.	U
12674-11-2	AROCLOR-1016	1.	U
11104-28-2	AROCLOR-1221	1.	U
11141-16-5	AROCLOR-1232	1.	U
53469-21-9	AROCLOR-1242	1.	U
12672-29-6	AROCLOR-1248	1.	U
11097-69-1	AROCLOR-1254	2.	U
11096-82-5	AROCLOR-1260	2.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ766

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5505

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (packl/cap) PACI Dilution Factor: 1.00

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	21.71	9.	J
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.

EQ770

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8435 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/ml) ML Lab File ID: 5522

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (packed/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	2.	BJ
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	18.	
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ770

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 6625 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/ml) ML Lab File ID: 5522

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pacl/cap) PACK Dilution Factor: 1.00

Number TICs found: ~~1~~ OK

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

	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.

EQ771

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5534

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 23. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	13.	U
74-83-9	BROMOMETHANE	13.	U
75-01-4	VINYL CHLORIDE	13.	U
75-00-3	CHLOROETHANE	13.	U
75-09-2	METHYLENE CHLORIDE	6.	U
67-64-1	ACETONE	130.	
75-15-0	CARBON DISULFIDE	6.	U
75-35-4	1,1-DICHLOROETHENE	6.	U
75-34-3	1,1-DICHLOROETHANE	6.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	6.	U
67-66-3	CHLOROFORM	.7	BJ
107-06-2	1,2-DICHLOROETHANE	6.	U
78-93-3	2-BUTANONE	26.	
71-55-6	1,1,1-TRICHLOROETHANE	6.	U
56-23-5	CARBON TETRACHLORIDE	6.	U
108-05-4	VINYL ACETATE	13.	U
75-27-4	BROMODICHLOROMETHANE	6.	U
78-87-5	1,2-DICHLOROPROPANE	6.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	6.	U
79-01-6	TRICHLOROETHENE	6.	U
124-48-1	DIBROMOCHLOROMETHANE	6.	U
79-00-5	1,1,2-TRICHLOROETHANE	6.	U
71-43-2	BENZENE	6.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	6.	U
75-25-2	BROMOFORM	6.	U
108-10-1	4-METHYL-2-PENTANONE	13.	U
591-78-6	2-HEXANONE	13.	U
127-18-4	TETRACHLOROETHENE	6.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	6.	U
108-88-3	TOLUENE	13.	B
108-90-7	CHLOROBENZENE	6.	U
100-41-4	ETHYLBENZENE	6.	U
100-42-5	STYRENE	6.	U
1330-20-7	XYLENES (TOTAL)	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ771

) Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 29. (g/mL) G Lab File ID: 16263R

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 23. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/12/88

GPC Cleanup: (Y/N) N pH: 8.8 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-------C315	PHENOL*	4400.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	4400.	U
95-57-8-------C330	2-CHLOROPHENOL	4400.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	4400.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	4400.	U
100-51-6-------C345	BENZYL ALCOHOL	4400.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	4400.	U
95-48-7-------C355	2-METHYLPHENOL	4400.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	4400.	U
106-44-5-------C365	4-METHYLPHENOL	4400.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	4400.	U
67-72-1-------C375	HEXACHLOROETHANE	4400.	U
98-95-3-------C410	NITROBENZENE	4400.	U
78-59-1-------C415	ISOPHORONE	4400.	U
88-75-5-------C420	2-NITROPHENOL*	4400.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	4400.	U
65-85-0-------C430	BENZOIC ACID	22000.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	4400.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	4400.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	4400.	U
91-20-3-------C450	NAPHTHALENE	4400.	U
106-47-8-------C455	4-CHLOROANILINE	4400.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	4400.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	4400.	U
91-57-6-------C470	2-METHYLNAPTHALENE	4400.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	4400.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	4400.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	22000.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	4400.	U
88-74-4-------C530	2-NITROANILINE	22000.	U
131-11-3-------C535	DIMETHYL PHTHALATE	4400.	U
208-96-8-------C540	ACENAPHTHYLENE	4400.	U
606-20-2-------C543	2,6-DINITROTOLUENE	4400.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ771

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 29. (g/mL) G Lab File ID: 16263R

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 23. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/12/88

GPC Cleanup: (Y/N) N pH: 8.8 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2--------C545	3-NITROANILINE	22000.	U
83-32-9--------C550	ACENAPTHENE*	4400.	U
51-28-5--------C555	2,4-DINITROPHENOL**	22000.	U
100-02-7--------C560	4-NITROPHENOL**	22000.	U
132-64-9--------C565	DIBENZOFURAN	4400.	U
121-14-2--------C570	2,4-DINITROTOLUENE	4400.	U
84-66-2--------C580	DIETHYL PHTHALATE	4400.	U
7005-72-3--------C585	4-CHLOROPHENYL PHENYL	4400.	U
86-73-7--------C590	FLUORENE	4400.	U
100-01-6--------C595	4-NITROANILINE	22000.	U
534-52-1--------C610	4,6-DINITRO-2-METHYLPH	4400.	U
86-30-6--------C615	N-NITROSODIPHENYLAMINE	22000.	U
101-55-3--------C625	4-BROMOPHENYL PHENYL E	4400.	U
118-74-1--------C630	HEXACHLOROBENZENE	4400.	U
87-86-5--------C635	PENTACHLOROPHENOL*	22000.	U
85-01-8--------C640	PHENANTHRENE	4400.	U
120-12-7--------C645	ANTHRACENE	4400.	U
84-74-2--------C650	DI-N-BUTYL PHTHALATE	~~4400.~~	U
206-44-0--------C655	FLUORANTHENE*	570.	J
129-00-0--------C715	PYRENE	1300.	J
85-68-7--------C720	BUTYL BENZYL PHTHALATE	4400.	U
91-94-1--------C725	3,3'-DICHLOROBENZIDINE	8800.	U
56-55-3--------C730	BENZO(A)ANTHRACENE	4400.	U
218-01-9--------C740	CHRYSENE	4400.	U
117-81-7--------C745	BIS(2-ETHYLHEXYL)PHTHA	9700.	
117-84-0--------C760	DI-N-OCTYLPHTHALATE*	4400.	U
205-99-2--------C765	BENZO(B)FLUORANTHENE	1600.	J
207-08-9--------C770	BENZO(K)FLUORANTHENE	1200.	J
50-32-8--------C775	BENZO(A)PYRENE*	1200.	J
193-39-5--------C780	INDENO(1,2,3-CD)PYRENE	2200.	J
53-70-3--------C785	DIBENZ(A,H)ANTHRACENE	4400.	U
191-24-2--------C790	BENZO(G,H,I)PERYLENE	3300.	J

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ771

b Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

atrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 1. (g/mL) G Lab File ID: 16263

Level: (low/med) MED Date Received: 12/ 2/87

Moisture: not dec. 23. dec. 23. - Date Extracted: 1/ 6/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/ 6/88

PC Cleanup: (Y/N) N pH: 8.8 Dilution Factor: .0050

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	ALPHA-BHC	2400.	
319-85-7	BETA-BHC	1600.	U
319-86-8	DELTA-BHC	1600.	U
58-89-9	GAMMA-BHC	1600.	U
76-44-8	HEPTACHLOR	1600.	U
309-00-2	ALDRIN	5500.	
1024-57-3	HEPTACHLOR EPOXIDE	1600.	U
959-98-8	ENDOSULFAN I	1600.	U
60-57-1	DIELDRIN	3100.	U
72-55-9	4,4'-DDE	7600.	
72-20-8	ENDRIN	3100.	U
33213-65-9	ENDOSULFAN II	6100.	
72-54-8	4,4'-DDD	3100.	U
1031-07-8	ENDOSULFAN SULFATE	3100.	U
50-29-3	4,4'-DDT	13000.	
72-43-5	METHOXYCHLOR	16000.	U
53494-70-5	ENDRIN KETONE	3100.	U
5103-71-9	ALPHA CHLORDANE	32000.	
5103-74-2	GAMMA CHLORDANE	16000.	U
8001-35-2	TOXAPHENE	31000.	U
12674-11-2	AROCLOR-1016	16000.	U
11104-28-2	AROCLOR-1221	16000.	U
11141-16-5	AROCLOR-1232	16000.	U
53469-21-9	AROCLOR-1242	16000.	U
12672-29-6	AROCLOR-1248	16000.	U
11097-69-1	AROCLOR-1254	31000.	U
11096-82-5	AROCLOR-1260	31000.	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ766 RE

b Name: AATS Contract: 68-01-7392

ab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

atrix: (soil/water) WATER Lab Sample ID: _____

Sample wt/vol: 1000. (g/mL) ML Lab File ID: 16229R

evel: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 1/11/87

xtraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 1/12/88

PC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.0000

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN HYDROCARBON	6.38	20.	J
2.	- -	UNKNOWN ALDEHYDE	7.10	60.	J
3.	- -	UNKNOWN HYDROCARBON	7.33	20.	J
4.	- -	UNKNOWN HYDROCARBON	7.70	40.	J
5.	- -	UNKNOWN HYDROCARBON	8.50	20.	J
6.	- -	UNKNOWN COMPOUND	9.37	30.	J
7.	- -	UNKNOWN ALCOHOL	9.50	20.	J
8.	- -	UNKNOWN COMPOUND	9.63	100.	J
9.	- -	UNKNOWN ACID	10.85	9.	J
10.	- -	UNKNOWN ACID	11.22	40.	J
11.	- -	UNKNOWN COMPOUND	12.48	10.	J
12.	- -	UNKNOWN HYDROCARBON	12.82	20.	J
13.	- -	UNKNOWN ALCOHOL	13.12	10.	J
14.	- -	UNKNOWN COMPOUND	16.00	6.	J
15.	- -	UNKNOWN COMPOUND	24.20	4.	J
16.	- -	UNKNOWN PNA	24.65	4.	J
17.	- -	UNKNOWN KETONE	25.00	10.	J
18.	- -	UNKNOWN KETONE	25.37	30.	J
19.	- -	UNKNOWN HYDROCARBON	25.58	4.	J
20.	- -	UNKNOWN COMPOUND	26.10	10.	J
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ767

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 0. (g/mL) ML Lab File ID: 5503

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1000.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	CHLOROMETHANE	10000.	U
74-83-9	BROMOMETHANE	10000.	U
75-01-4	VINYL CHLORIDE	10000.	U
75-00-3	CHLOROETHANE	10000.	U
75-09-2	METHYLENE CHLORIDE	5000.	U
67-64-1	ACETONE	10000.	U
75-15-0	CARBON DISULFIDE	5000.	U
75-35-4	1,1-DICHLOROETHENE	5000.	U
75-34-3	1,1-DICHLOROETHANE	5000.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5000.	U
67-66-3	CHLOROFORM	600.	BJ
107-06-2	1,2-DICHLOROETHANE	5000.	U
78-93-3	2-BUTANONE	30000.	
71-55-6	1,1,1-TRICHLOROETHANE	5300.	
56-23-5	CARBON TETRACHLORIDE	5000.	U
108-05-4	VINYL ACETATE	10000.	U
75-27-4	BROMODICHLOROMETHANE	5000.	U
78-87-5	1,2-DICHLOROPROPANE	5000.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5000.	U
79-01-6	TRICHLOROETHENE	28000.	
124-48-1	DIBROMOCHLOROMETHANE	5000.	U
79-00-5	1,1,2-TRICHLOROETHANE	5000.	U
71-43-2	BENZENE	5000.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5000.	U
75-25-2	BROMOFORM	5000.	U
108-10-1	4-METHYL-2-PENTANONE	20000.	
591-78-6	2-HEXANONE	10000.	U
127-18-4	TETRACHLOROETHENE	5000.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5000.	U
108-88-3	TOLUENE	12000.	
108-90-7	CHLOROBENZENE	5000.	U
100-41-4	ETHYLBENZENE	5000.	U
100-42-5	STYRENE	5000.	U
1330-20-7	XYLENES (TOTAL)	5000.	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ767

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1010. (g/mL) ML Lab File ID: 16227

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: .0003

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2-------C315	PHENOL*	39000.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	39000.	U
95-57-8-------C330	2-CHLOROPHENOL	39000.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	39000.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	39000.	U
100-51-6-------C345	BENZYL ALCOHOL	39000.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	39000.	U
95-48-7-------C355	2-METHYLPHENOL	39000.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	39000.	U
106-44-5-------C365	4-METHYLPHENOL	39000.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	39000.	U
67-72-1-------C375	HEXACHLOROETHANE	39000.	U
98-95-3-------C410	NITROBENZENE	39000.	U
78-59-1-------C415	ISOPHORONE	39000.	U
88-75-5-------C420	2-NITROPHENOL*	39000.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	39000.	U
65-85-0-------C430	BENZOIC ACID	200000.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	39000.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	39000.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	39000.	U
91-20-3-------C450	NAPHTHALENE	39000.	U
106-47-8-------C455	4-CHLOROANILINE	39000.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	39000.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	39000.	U
91-57-6-------C470	2-METHYLNAPTHALENE	39000.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	39000.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	39000.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	200000.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	39000.	U
88-74-4-------C530	2-NITROANILINE	200000.	U
131-11-3-------C535	DIMETHYL PHTHALATE	39000.	U
208-96-8-------C540	ACENAPHTHYLENE	39000.	U
606-20-2-------C543	2,6-DINITROTOLUENE	39000.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ767

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1010. (g/mL) ML Lab File ID: 16227

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: .0003

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2-------C545	3-NITROANILINE	200000.	U
83-32-9-------C550	ACENAPTHENE*	39000.	U
51-28-5-------C555	2,4-DINITROPHENOL**	200000.	U
100-02-7-------C560	4-NITROPHENOL**	200000.	U
132-64-9-------C565	DIBENZOFURAN	39000.	U
121-14-2-------C570	2,4-DINITROTOLUENE	39000.	U
84-66-2-------C580	DIETHYL PHTHALATE	39000.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	39000.	U
86-73-7-------C590	FLUORENE	39000.	U
100-01-6-------C595	4-NITROANILINE	200000.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	39000.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	200000.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	39000.	U
118-74-1-------C630	HEXACHLOROBENZENE	39000.	U
87-86-5-------C635	PENTACHLOROPHENOL*	200000.	U
85-01-8-------C640	PHENANTHRENE	39000.	U
120-12-7-------C645	ANTHRACENE	39000.	U
84-74-2-------C650	DI-N-BUTYL PHTHALATE	39000.	U
206-44-0-------C655	FLUORANTHENE*	39000.	U
129-00-0-------C715	PYRENE	200000.	U
85-68-7-------C720	BUTYL BENZYL PHTHALATE	39000.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	78000.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	39000.	U
218-01-9-------C740	CHRYSENE	39000.	U
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	39000.	U
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	39000.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	39000.	U
207-08-9-------C770	BENZO(K)FLUORANTHENE	39000.	U
50-32-8-------C775	BENZO(A)PYRENE*	39000.	U
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	39000.	U
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	39000.	U
191-24-2-------C790	BENZO(G,H,I)PERYLENE	39000.	U

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ767

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1000. (g/mL)ML Lab File ID: 16227

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: .5000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	ALPHA-BHC	.9	
319-85-7	BETA-BHC	.1	U
319-86-8	DELTA-BHC	.1	U
58-89-9	GAMMA-BHC	.1	U
76-44-8	HEPTACHLOR	1.	
309-00-2	ALDRIN	.1	U
1024-57-3	HEPTACHLOR EPOXIDE	.1	
959-98-8	ENDOSULFAN I	.1	U
60-57-1	DIELDRIN	.2	U
72-55-9	4,4'-DDE	.2	U
72-20-8	ENDRIN	.2	U
33213-65-9	ENDOSULFAN II	.2	U
72-54-8	4,4'-DDD	.2	U
1031-07-8	ENDOSULFAN SULFATE	.2	U
50-29-3	4,4'-DDT	.2	U
72-43-5	METHOXYCHLOR	1.	U
53494-70-5	ENDRIN KETONE	2.	U
5103-71-9	ALPHA CHLORDANE	1.	U
5103-74-2	GAMMA CHLORDANE	1.	U
8001-35-2	TOXAPHENE	2.	U
12674-11-2	AROCLOR-1016	1.	U
11104-28-2	AROCLOR-1221	1.	U
11141-16-5	AROCLOR-1232	1.	U
53469-21-9	AROCLOR-1242	1.	U
12672-29-6	AROCLOR-1248	1.	U
11097-69-1	AROCLOR-1254	2.	U
11096-82-5	AROCLOR-1260	2.	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ769

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1010. (g/mL) ML Lab File ID: 16228T

Level: (low/med) LOW Date Received: 12/ 1/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 12/ 4/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: .0003

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN ESTER	5.87	2000000.	J
2.	126-30-7	1,3-PROPANEDIOL, 2,2-DIMETHY	7.25	70000.	J
3.	- -	UNKNOWN ALCOHOL	7.60	90000.	J
4.	- -	UNKNOWN ESTER	7.90	100000.	J
5.	- -	UNKNOWN COMPOUND	8.97	40000.	J
6.	- -	UNKNOWN ALCOHOL	9.75	3000000.	J
7.	- -	UNKNOWN COMPOUND	9.85	90000.	J
8.	- -	UNKNOWN ALDEHYDE	11.05	20000.	J
9.	- -	UNKNOWN COMPOUND	11.23	70000.	J
10.	- -	UNKNOWN ALDEHYDE	11.67	40000.	J
11.	- -	UNKNOWN COMPOUND	12.37	40000.	J
12.	- -	UNKNOWN COMPOUND	13.15	30000.	J
13.	- -	UNKNOWN COMPOUND	13.63	40000.	J
14.	- -	UNKNOWN HYDROCARBON	15.97	20000.	J
15.	- -	UNKNOWN HYDROCARBON	16.67	30000.	J
16.	- -	UNKNOWN COMPOUND	17.73	40000.	J
17.	- -	UNKNOWN COMPOUND	20.78	20000.	J
18.	- -	UNKNOWN HYDROCARBON	21.53	20000.	J
19.	- -	UNKNOWN COMPOUND	21.62	30000.	J
20.	- -	UNKNOWN COMPOUND	24.42	100000.	J
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ770

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/ml) ML Lab File ID: 5522

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	12.	BJ
67-64-1	ACETONE	10.	U
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	18.	
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENES (TOTAL)	5.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ770

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 6625 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: 5510

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec.100. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: ~~1~~ 0 K

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

	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.

EQ771

ab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5534

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 23. Date Analyzed: 12/ 2/87

Column: (packed/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	13.	U
74-83-9	BROMOMETHANE	13.	U
75-01-4	VINYL CHLORIDE	13.	U
75-00-3	CHLOROETHANE	13.	U
75-09-2	METHYLENE CHLORIDE	6.	U
67-64-1	ACETONE	130.	
75-15-0	CARBON DISULFIDE	6.	U
75-35-4	1,1-DICHLOROETHENE	6.	U
75-34-3	1,1-DICHLOROETHANE	6.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	6.	U
67-66-3	CHLOROFORM	1.7	BJ
107-06-2	1,2-DICHLOROETHANE	6.	U
78-93-3	2-BUTANONE	26.	
71-55-6	1,1,1-TRICHLOROETHANE	6.	U
56-23-5	CARBON TETRACHLORIDE	6.	U
108-05-4	VINYL ACETATE	13.	U
75-27-4	BROMODICHLOROMETHANE	6.	U
78-87-5	1,2-DICHLOROPROPANE	6.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	6.	U
79-01-6	TRICHLOROETHENE	6.	U
124-48-1	DIBROMOCHLOROMETHANE	6.	U
79-00-5	1,1,2-TRICHLOROETHANE	6.	U
71-43-2	BENZENE	6.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	6.	U
75-25-2	BROMOFORM	6.	U
108-10-1	4-METHYL-2-PENTANONE	13.	U
591-78-6	2-HEXANONE	13.	U
127-18-4	TETRACHLOROETHENE	6.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	6.	U
108-88-3	TOLUENE	13.	B
108-90-7	CHLOROBENZENE	6.	U
100-41-4	ETHYLBENZENE	6.	U
100-42-5	STYRENE	6.	U
1330-20-7	XYLENES (TOTAL)	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ771

) Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 29. (g/mL) G Lab File ID: 16263R

Level: (low/med) LOW Date Received: 12/ 2/87

Moisture: not dec. 23. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/12/88

GPC Cleanup: (Y/N) N pH: 8.8 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
108-95-2-------C315	PHENOL*	4400.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	4400.	U
95-57-8-------C330	2-CHLOROPHENOL	4400.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	4400.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	4400.	U
100-51-6-------C345	BENZYL ALCOHOL	4400.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	4400.	U
95-48-7-------C355	2-METHYLPHENOL	4400.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	4400.	U
106-44-5-------C365	4-METHYLPHENOL	4400.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	4400.	U
67-72-1-------C375	HEXACHLOROETHANE	4400.	U
98-95-3-------C410	NITROBENZENE	4400.	U
78-59-1-------C415	ISOPHORONE	4400.	U
88-75-5-------C420	2-NITROPHENOL*	4400.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	4400.	U
65-85-0-------C430	BENZOIC ACID	22000.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	4400.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	4400.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	4400.	U
91-20-3-------C450	NAPHTHALENE	4400.	U
106-47-8-------C455	4-CHLOROANILINE	4400.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	4400.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	4400.	U
91-57-6-------C470	2-METHYLNAPTHALENE	4400.	U
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	4400.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	4400.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	22000.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	4400.	U
88-74-4-------C530	2-NITROANILINE	22000.	U
131-11-3-------C535	DIMETHYL PHTHALATE	4400.	U
208-96-8-------C540	ACENAPHTHYLENE	4400.	U
606-20-2-------C543	2,6-DINITROTOLUENE	4400.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ771

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 29. (g/mL) G Lab File ID: 16263R

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 23. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/12/88

GPC Cleanup: (Y/N) N pH: 8.8 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2 C545	3-NITROANILINE	22000.	U
83-32-9 C550	ACENAPTHENE*	4400.	U
51-28-5 C555	2,4-DINITROPHENOL**	22000.	U
100-02-7 C560	4-NITROPHENOL**	22000.	U
132-64-9 C565	DIBENZOFURAN	4400.	U
121-14-2 C570	2,4-DINITROTOLUENE	4400.	U
84-66-2 C580	DIETHYL PHTHALATE	4400.	U
7005-72-3 C585	4-CHLOROPHENYL PHENYL	4400.	U
86-73-7 C590	FLUORENE	4400.	U
100-01-6 C595	4-NITROANILINE	22000.	U
534-52-1 C610	4,6-DINITRO-2-METHYLPH	4400.	U
86-30-6 C615	N-NITROSODIPHENYLAMINE	22000.	U
101-55-3 C625	4-BROMOPHENYL PHENYL E	4400.	U
118-74-1 C630	HEXACHLOROBENZENE	4400.	U
87-86-5 C635	PENTACHLOROPHENOL*	22000.	U
85-01-8 C640	PHENANTHRENE	4400.	U
120-12-7 C645	ANTHRACENE	4400.	U
84-74-2 C650	DI-N-BUTYL PHTHALATE	~~4400.~~	U
206-44-0 C655	FLUORANTHENE*	570.	J
129-00-0 C715	PYRENE	1300.	J
85-68-7 C720	BUTYL BENZYL PHTHALATE	4400.	U
91-94-1 C725	3,3'-DICHLOROBENZIDINE	8800.	U
56-55-3 C730	BENZO(A)ANTHRACENE	4400.	U
218-01-9 C740	CHRYSENE	4400.	U
117-81-7 C745	BIS(2-ETHYLHEXYL)PHTHA	9700.	
117-84-0 C760	DI-N-OCTYLPHTHALATE*	4400.	U
205-99-2 C765	BENZO(B)FLUORANTHENE	1600.	J
207-08-9 C770	BENZO(K)FLUORANTHENE	1200.	J
50-32-8 C775	BENZO(A)PYRENE*	1200.	J
193-39-5 C780	INDENO(1,2,3-CD)PYRENE	2200.	J
53-70-3 C785	DIBENZ(A,H)ANTHRACENE	4400.	U
191-24-2 C790	BENZO(G,H,I)PERYLENE	3300.	J

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQ771

b Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

atrix: (soil/water) SOIL Lab Sample ID: _____

ample wt/vol: 1. (g/mL) G Lab File ID: 16263

evel: (low/med) MED Date Received: 12/ 2/87

Moisture: not dec. 23. dec. 23. - Date Extracted: 1/ 6/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/ 6/88

PC Cleanup: (Y/N) N pH: 8.8 Dilution Factor: .0050

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	ALPHA-BHC	2400.	
319-85-7	BETA-BHC	1600.	U
319-86-8	DELTA-BHC	1600.	U
58-89-9	GAMMA-BHC	1600.	U
76-44-8	HEPTACHLOR	1600.	U
309-00-2	ALDRIN	5500.	
1024-57-3	HEPTACHLOR EPOXIDE	1600.	U
959-98-8	ENDOSULFAN I	1600.	U
60-57-1	DIELDRIN	3100.	U
72-55-9	4,4'-DDE	7600.	
72-20-8	ENDRIN	3100.	U
33213-65-9	ENDOSULFAN II	6100.	
72-54-8	4,4'-DDD	3100.	U
1031-07-8	ENDOSULFAN SULFATE	3100.	U
50-29-3	4,4'-DDT	13000.	
72-43-5	METHOXYCHLOR	16000.	U
53494-70-5	ENDRIN KETONE	3100.	U
5103-71-9	ALPHA CHLORDANE	32000.	
5103-74-2	GAMMA CHLORDANE	16000.	U
8001-35-2	TOXAPHENE	31000.	U
12674-11-2	AROCLOR-1016	16000.	U
11104-28-2	AROCLOR-1221	16000.	U
11141-16-5	AROCLOR-1232	16000.	U
53469-21-9	AROCLOR-1242	16000.	U
12672-29-6	AROCLOR-1248	16000.	U
11097-69-1	AROCLOR-1254	31000.	U
11096-82-5	AROCLOR-1260	31000.	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQ771

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 29. (g/mL) G Lab File ID: 16263R

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 23. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/12/88

GPC Cleanup: (Y/N) N pH: 8.8 Dilution Factor: .1000

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. - -	UNKNOWN PHTHALATE	13.25	3000.	J
2. - -	UNKNOWN HYDROCARBON	17.85	2000.	J
3. - -	UNKNOWN HYDROCARBON	18.40	4000.	J
4. - -	UNKNOWN COMPOUND	20.70	4000.	J
5. - -	UNKNOWN PHTHALATE	21.00	4000.	J
6. - -	UNKNOWN PHTHALATE	25.20	3000.	J
7. - -	UNKNOWN HYDROCARBON	25.35	10000.	J
8. - -	UNKNOWN HYDROCARBON	25.73	8000.	J
9. - -	UNKNOWN COMPOUND	26.63	4000.	J
10. - -	UNKNOWN COMPOUND	26.77	3000.	J
11. - -	UNKNOWN COMPOUND	27.53	8000.	J
12. - -	UNKNOWN COMPOUND	27.97	7000.	J
13. - -	UNKNOWN PNA	28.22	3000.	J
14. - -	UNKNOWN COMPOUND	29.63	2000.	J
15. - -	UNKNOWN COMPOUND	29.90	9000.	J
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.

EQ771

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5534

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 23. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	17.28	6.	J
2.	- -	UNKNOWN	20.84	6.	J
3.	- -	UNKNOWN	22.16	10.	J
4.	- -	UNKNOWN	22.67	6.	J
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.

ES001

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5526

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 17. Date Analyzed: 12/ 2/87

Column: (packed/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	12.	U
74-83-9	BROMOMETHANE	12.	U
75-01-4	VINYL CHLORIDE	12.	U
75-00-3	CHLOROETHANE	12.	U
75-09-2	METHYLENE CHLORIDE	10.	B
67-64-1	ACETONE	14.	
75-15-0	CARBON DISULFIDE	6.	U
75-35-4	1,1-DICHLOROETHENE	6.	U
75-34-3	1,1-DICHLOROETHANE	6.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	6.	U
67-66-3	CHLOROFORM	6.	U
107-06-2	1,2-DICHLOROETHANE	6.	U
78-93-3	2-BUTANONE	12.	U
71-55-6	1,1,1-TRICHLOROETHANE	6.	U
56-23-5	CARBON TETRACHLORIDE	6.	U
108-05-4	VINYL ACETATE	12.	U
75-27-4	BROMODICHLOROMETHANE	6.	U
78-87-5	1,2-DICHLOROPROPANE	6.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	6.	U
79-01-6	TRICHLOROETHENE	6.	U
124-48-1	DIBROMOCHLOROMETHANE	6.	U
79-00-5	1,1,2-TRICHLOROETHANE	6.	U
71-43-2	BENZENE	6.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	6.	U
75-25-2	BROMOFORM	6.	U
108-10-1	4-METHYL-2-PENTANONE	12.	U
591-78-6	2-HEXANONE	12.	U
127-18-4	TETRACHLOROETHENE	6.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	6.	U
108-88-3	TOLUENE	21.	B
108-90-7	CHLOROBENZENE	6.	U
100-41-4	ETHYLBENZENE	6.	U
100-42-5	STYRENE	6.	U
1330-20-7	XYLENES (TOTAL)	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES001

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 16264

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 17. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.7 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-------C315	PHENOL*	4000.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	4000.	U
95-57-8-------C330	2-CHLOROPHENOL	4000.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	4000.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	4000.	U
100-51-6-------C345	BENZYL ALCOHOL	4000.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	4000.	U
95-48-7-------C355	2-METHYLPHENOL	4000.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	4000.	U
106-44-5-------C365	4-METHYLPHENOL	4000.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	4000.	U
67-72-1-------C375	HEXACHLOROETHANE	4000.	U
98-95-3-------C410	NITROBENZENE	4000.	U
78-59-1-------C415	ISOPHORONE	4000.	U
88-75-5-------C420	2-NITROPHENOL*	4000.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	4000.	U
65-85-0-------C430	BENZOIC ACID	20000.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	4000.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	4000.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	4000.	U
91-20-3-------C450	NAPHTHALENE	2400.	J
106-47-8-------C455	4-CHLOROANILINE	4000.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	4000.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	4000.	U
91-57-6-------C470	2-METHYLNAPTHALENE	1500.	J
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	4000.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	4000.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	20000.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	4000.	U
88-74-4-------C530	2-NITROANILINE	20000.	U
131-11-3-------C535	DIMETHYL PHTHALATE	4000.	U
208-96-8-------C540	ACENAPHTHYLENE	380.	J
606-20-2-------C543	2,6-DINITROTOLUENE	4000.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES001

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 16264

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 17. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.7 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2-------C545	3-NITROANILINE	20000.	U
83-32-9-------C550	ACENAPTHENE*	4000.	U
51-28-5-------C555	2,4-DINITROPHENOL**	20000.	U
100-02-7-------C560	4-NITROPHENOL**	20000.	U
132-64-9-------C565	DIBENZOFURAN	4000.	U
121-14-2-------C570	2,4-DINITROTOLUENE	4000.	U
84-66-2-------C580	DIETHYL PHTHALATE	4000.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	4000.	U
86-73-7-------C590	FLUORENE	4000.	U
100-01-6-------C595	4-NITROANILINE	20000.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	4000.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	20000.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	4000.	U
118-74-1-------C630	HEXACHLOROBENZENE	4000.	U
87-86-5-------C635	PENTACHLOROPHENOL*	20000.	U
85-01-8-------C640	PHENANTHRENE	1200.	J
120-12-7-------C645	ANTHRACENE	570.	J
84-74-2-------C650	DI-N-BUTYL PHTHALATE	1600.	J
206-44-0-------C655	FLUORANTHENE*	1500.	J
129-00-0-------C715	PYRENE	2200.	J
85-68-7-------C720	BUTYL BENZYL PHTHALATE	4000.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	8000.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	1400.	J
218-01-9-------C740	CHRYSENE	2000.	J
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	10000.	
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	4000.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	3100.	J
207-08-9-------C770	BENZO(K)FLUORANTHENE	2800.	J
50-32-8-------C775	BENZO(A)PYRENE*	2700.	J
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	2500.	J
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	4000.	U
191-24-2-------C790	BENZO(G,H,I)PERYLENE	3900.	J

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES001

b Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

atrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 1. (g/mL) G Lab File ID: 16264

evel: (low/med) MED Date Received: 12/ 2/87

Moisture: not dec. 17. dec. 17. Date Extracted: 1/ 6/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/ 6/88

PC Cleanup: (Y/N) N pH: 7.7 Dilution Factor: .0200

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	ALPHA-BHC	360.	U
319-85-7	BETA-BHC	360.	U
319-86-8	DELTA-BHC	360.	U
58-89-9	GAMMA-BHC	360.	U
76-44-8	HEPTACHLOR	360.	U
309-00-2	ALDRIN	1800.	
1024-57-3	HEPTACHLOR EPOXIDE	360.	U
959-98-8	ENDOSULFAN I	360.	U
60-57-1	DIELDRIN	720.	U
72-55-9	4,4'-DDE	2600.	
72-20-8	ENDRIN	720.	U
33213-65-9	ENDOSULFAN II	2200.	
72-54-8	4,4'-DDD	720.	U
1031-07-8	ENDOSULFAN SULFATE	720.	U
50-29-3	4,4'-DDT	4400.	
72-43-5	METHOXYCHLOR	3600.	U
53494-70-5	ENDRIN KETONE	720.	U
5103-71-9	ALPHA CHLORDANE	13000.	
5103-74-2	GAMMA CHLORDANE	4200.	
8001-35-2	TOXAPHENE	7200.	U
12674-11-2	AROCLOR-1016	3600.	U
11104-28-2	AROCLOR-1221	3600.	U
11141-16-5	AROCLOR-1232	3600.	U
53469-21-9	AROCLOR-1242	3600.	U
12672-29-6	AROCLOR-1248	3600.	U
11097-69-1	AROCLOR-1254	7200.	U
11096-82-5	AROCLOR-1260	7200.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ES001

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5526

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 17. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: 8

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	18.85	2.	J
2.	- -	UNKNOWN	19.66	6.	J
3.	- -	UNKNOWN	19.78	2.	J
4.	- -	UNKNOWN	20.59	5.	J
5.	- -	UNKNOWN	20.82	10.	J
6.	617-78-7	Pentane, 3-ethyl- (8CI,9CI)	21.21	5.	J
7.	589-34-4	Hexane, 3-methyl- (8CI,9CI)	22.14	30.	J
8.	591-76-4	Hexane, 2-methyl- (8CI,9CI)	22.68	50.	J
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ES001

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 16264

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 17. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.7 Dilution Factor: .1000

Number TICs found: 16

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	873-94-9	CYCLOHEXANONE, 3,3,5-TRIMETH	9.30	8000.	J
2.	- -	UNKNOWN ALCOHOL	9.50	3000.	J
3.	- -	UNKNOWN HYDROCARBON	9.62	6000.	J
4.	25155-15-1	BENZENE, METHYL(1-METHYLETHY	9.93	3000.	J
5.	- -	UNKNOWN HYDROCARBON	10.05	2000.	J
6.	- -	UNKNOWN HYDROCARBON	10.58	5000.	J
7.	- -	UNKNOWN HYDROCARBON	11.07	2000.	J
8.	- -	UNKNOWN PHTHALATE	13.28	4000.	J
9.	- -	UNKNOWN ACID	15.27	3000.	J
10.	- -	UNKNOWN	18.75	2000.	J
11.	- -	UNKNOWN ACID	19.53	2000.	J
12.	91-76-9	1,3,5-TRIAZINE-2,4-DIAMINE,	20.70	4000.	J
13.	- -	UNKNOWN	25.20	2000.	J
14.	- -	UNKNOWN HYDROCARBON	25.35	10000.	J
15.	- -	UNKNOWN HYDROCARBON	25.75	5000.	J
16.	- -	UNKNOWN	26.47	2000.	J
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES002

ab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5537

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 29. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	14.	U
74-83-9	BROMOMETHANE	14.	U
75-01-4	VINYL CHLORIDE	14.	U
75-00-3	CHLOROETHANE	14.	U
75-09-2	METHYLENE CHLORIDE	10.	B
67-64-1	ACETONE	160.	
75-15-0	CARBON DISULFIDE	7.	U
75-35-4	1,1-DICHLOROETHENE	7.	U
75-34-3	1,1-DICHLOROETHANE	8.	
540-59-0	1,2-DICHLOROETHENE (TOTAL)	6.	J
67-66-3	CHLOROFORM	.9	BJ
107-06-2	1,2-DICHLOROETHANE	7.	U
78-93-3	2-BUTANONE	43.	
71-55-6	1,1,1-TRICHLOROETHANE	24.	
56-23-5	CARBON TETRACHLORIDE	7.	U
108-05-4	VINYL ACETATE	14.	U
75-27-4	BROMODICHLOROMETHANE	7.	U
78-87-5	1,2-DICHLOROPROPANE	7.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	7.	U
79-01-6	TRICHLOROETHENE	8.	
124-48-1	DIBROMOCHLOROMETHANE	7.	U
79-00-5	1,1,2-TRICHLOROETHANE	7.	U
71-43-2	BENZENE	7.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	7.	U
75-25-2	BROMOFORM	7.	U
108-10-1	4-METHYL-2-PENTANONE	32.	
591-78-6	2-HEXANONE	14.	U
127-18-4	TETRACHLOROETHENE	31.	
79-34-5	1,1,2,2-TETRACHLOROETHANE	7.	U
108-88-3	TOLUENE	190.	B
108-90-7	CHLOROBENZENE	7.	U
100-41-4	ETHYLBENZENE	85.	
100-42-5	STYRENE	7.	U
1330-20-7	XYLENES (TOTAL)	170.	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES002

AATS Contract: 68-01-7392

AATS Case No.: 8635 SAS No.: SDG No.: EQ758

soil/water) SOIL Lab Sample ID: _____

wt/vol: 29. (g/mL) G Lab File ID: 16265

(low/med) LOW Date Received: 12/ 2/87

ure: not dec. 29. dec. 0. Date Extracted: 12/11/87

tion: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

anup: (Y/N) N pH: 7.2 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-------C315	PHENOL*	4800.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	4800.	U
95-57-8-------C330	2-CHLOROPHENOL	4800.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	4800.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	4800.	U
100-51-6-------C345	BENZYL ALCOHOL	4800.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	4800.	U
95-48-7-------C355	2-METHYLPHENOL	4800.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	4800.	U
106-44-5-------C365	4-METHYLPHENOL	4800.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	4800.	U
67-72-1-------C375	HEXACHLOROETHANE	4800.	U
98-95-3-------C410	NITROBENZENE	4800.	U
78-59-1-------C415	ISOPHORONE	4800.	U
88-75-5-------C420	2-NITROPHENOL*	4800.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	4800.	U
65-85-0-------C430	BENZOIC ACID	24000.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	4800.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	4800.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	4800.	U
91-20-3-------C450	NAPHTHALENE	4900.	
106-47-8-------C455	4-CHLOROANILINE	4800.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	4800.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	4800.	U
91-57-6-------C470	2-METHYLNAPTHALENE	2200.	J
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	4800.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	4800.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	24000.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	4800.	U
88-74-4-------C530	2-NITROANILINE	24000.	U
131-11-3-------C535	DIMETHYL PHTHALATE	4800.	U
208-96-8-------C540	ACENAPHTHYLENE	4800.	U
606-20-2-------C543	2,6-DINITROTOLUENE	4800.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES002

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 29. (g/mL) G Lab File ID: 16265

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 29. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2-------C545	3-NITROANILINE	24000.	U
83-32-9-------C550	ACENAPTHENE*	4800.	U
51-28-5-------C555	2,4-DINITROPHENOL**	24000.	U
100-02-7-------C560	4-NITROPHENOL**	24000.	U
132-64-9-------C565	DIBENZOFURAN	4800.	U
121-14-2-------C570	2,4-DINITROTOLUENE	4800.	U
84-66-2-------C580	DIETHYL PHTHALATE	4800.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	4800.	U
86-73-7-------C590	FLUORENE	4800.	U
100-01-6-------C595	4-NITROANILINE	24000.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	4800.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	24000.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	4800.	U
118-74-1-------C630	HEXACHLOROBENZENE	4800.	U
87-86-5-------C635	PENTACHLOROPHENOL*	24000.	U
85-01-8-------C640	PHENANTHRENE	7300.	
120-12-7-------C645	ANTHRACENE	2100.	J
84-74-2-------C650	DI-N-BUTYL PHTHALATE	4800.	U
206-44-0-------C655	FLUORANTHENE*	6500.	
129-00-0-------C715	PYRENE	8100.	J
85-68-7-------C720	BUTYL BENZYL PHTHALATE	4800.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	9600.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	4000.	J
218-01-9-------C740	CHRYSENE	5100.	
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	12000.	
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	4800.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	6000.	
207-08-9-------C770	BENZO(K)FLUORANTHENE	6200.	
50-32-8-------C775	BENZO(A)PYRENE*	5200.	
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	3700.	J
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	4800.	U
191-24-2-------C790	BENZO(G,H,I)PERYLENE	3900.	J

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES002

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1. (g/mL) G Lab File ID: 16265

Level: (low/med) MED Date Received: 12/ 2/87

Moisture: not dec. 29. dec. 29. Date Extracted: 1/ 6/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: .0200

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	ALPHA-BHC	380.	U
319-85-7	BETA-BHC	380.	U
319-86-8	DELTA-BHC	380.	U
58-89-9	GAMMA-BHC	380.	U
76-44-8	HEPTACHLOR	380.	U
309-00-2	ALDRIN	380.	U
1024-57-3	HEPTACHLOR EPOXIDE	380.	U
959-98-8	ENDOSULFAN I	380.	U
60-57-1	DIELDRIN	770.	U
72-55-9	4,4'-DDE	770.	U
72-20-8	ENDRIN	770.	U
33213-65-9	ENDOSULFAN II	770.	U
72-54-8	4,4'-DDD	770.	U
1031-07-8	ENDOSULFAN SULFATE	770.	U
50-29-3	4,4'-DDT	1300.	
72-43-5	METHOXYCHLOR	3800.	U
53494-70-5	ENDRIN KETONE	770.	U
5103-71-9	ALPHA CHLORDANE	4400.	
5103-74-2	GAMMA CHLORDANE	4000.	
8001-35-2	TOXAPHENE	7700.	U
12674-11-2	AROCLOR-1016	3800.	U
11104-28-2	AROCLOR-1221	3800.	U
11141-16-5	AROCLOR-1232	3800.	U
53469-21-9	AROCLOR-1242	3800.	U
12672-29-6	AROCLOR-1248	3800.	U
11097-69-1	AROCLOR-1254	7700.	U
11096-82-5	AROCLOR-1260	7700.	U

1L

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ES002

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/ml) G Lab File ID: 5533

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 29. Date Analyzed: 12/ 2/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: 10 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	2.36	10.	J
2.	110-54-3	HEXANE	15.15	3.	J
3.	- -	UNKNOWN	16.05	4.	J
4.	- -	UNKNOWN	17.29	3.	J
5.	- -	UNKNOWN	17.52	4.	J
6.	- -	UNKNOWN	18.88	6.	J
7.	- -	UNKNOWN	19.65	4.	J
8.	617-78-7	Pentane, 3-ethyl- (8CI9CI)	21.16	4.	J
9.	- -	UNKNOWN	21.71	4.	J
10.	589-34-4	Hexane, 3-methyl- (8CI9CI)	22.17	20.	J
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ES002

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 29. (g/mL) G Lab File ID: 16265

Level: (low/med) LOW Date Received: 12/ 2/87

% Moisture: not dec. 29. dec. 0. - Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: .1000

Number TICs found: 14

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	108-67-8	BENZENE, 1,3,5-TRIMETHYL-	8.38	4000.	J
2.	- -	UNKNOWN HYDROCARBON	8.92	4000.	J
3.	873-94-9	CYCLOHEXANONE, 3,3,5-TRIMETH	9.20	8000.	J
4.	116-02-9	CYCLOHEXANOL, 3,3,5-TRIMETHY	9.40	5000.	J
5.	- -	UNKNOWN HYDROCARBON	9.52	3000.	J
6.	- -	UNKNOWN HYDROCARBON	9.97	5000.	J
7.	- -	UNKNOWN HYDROCARBON	10.17	2000.	J
8.	- -	UNKNOWN HYDROCARBON	10.53	5000.	J
9.	- -	UNKNOWN HYDROCARBON	13.28	3000.	J
10.	00-00-0	NAPHTHALENE, DIMETHYL-	14.62	2000.	J
11.	- -	UNKNOWN COMPOUND	16.95	3000.	J
12.	- -	UNKNOWN COMPOUND	20.73	2000.	J
13.	- -	UNKNOWN COMPOUND	24.38	2000.	J
14.	- -	UNKNOWN COMPOUND	27.65	5000.	J
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.

ES003 RE

ab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: AA79 SAS No.: SDG No.: E0758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5558

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 22. Date Analyzed: 12/ 4/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
74-87-3	CHLOROMETHANE	13.	U
74-83-9	BROMOMETHANE	13.	U
75-01-4	VINYL CHLORIDE	13.	U
75-00-3	CHLOROETHANE	13.	U
75-09-2	METHYLENE CHLORIDE	14.	
67-64-1	ACETONE	270.	
75-15-0	CARBON DISULFIDE	6.	U
75-35-4	1,1-DICHLOROETHENE	6.	U
75-34-3	1,1-DICHLOROETHANE	6.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	6.	U
67-66-3	CHLOROFORM	6.	U
107-06-2	1,2-DICHLOROETHANE	6.	U
78-93-3	2-BUTANONE	30.	
71-55-6	1,1,1-TRICHLOROETHANE	27.	
56-23-5	CARBON TETRACHLORIDE	6.	U
108-05-4	VINYL ACETATE	13.	U
75-27-4	BROMODICHLOROMETHANE	6.	U
78-87-5	1,2-DICHLOROPROPANE	6.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	6.	U
79-01-6	TRICHLOROETHENE	15.	
124-48-1	DIBROMOCHLOROMETHANE	6.	U
79-00-5	1,1,2-TRICHLOROETHANE	6.	U
71-43-2	BENZENE	6.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	6.	U
75-25-2	BROMOFORM	6.	U
108-10-1	4-METHYL-2-PENTANONE	13.	U
591-78-6	2-HEXANONE	13.	U
127-18-4	TETRACHLOROETHENE	230.	
79-34-5	1,1,2,2-TETRACHLOROETHANE	6.	U
108-88-3	TOLUENE	150.	
108-90-7	CHLOROBENZENE	6.	U
100-41-4	ETHYLBENZENE	34.	
100-42-5	STYRENE	6.	U
1330-20-7	XYLENES (TOTAL)	6.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E5003

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8639 SAS No.: SDG No.: E0758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5556

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 22. Date Analyzed: 12/ 4/87

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
74-87-3	CHLOROMETHANE	13.	U
74-83-9	BROMOMETHANE	13.	U
75-01-4	VINYL CHLORIDE	13.	U
75-00-3	CHLOROETHANE	13.	U
75-09-2	METHYLENE CHLORIDE	5.	J
67-64-1	ACETONE	24.	
75-15-0	CARBON DISULFIDE	6.	U
75-35-4	1,1-DICHLOROETHENE	6.	U
75-34-3	1,1-DICHLOROETHANE	6.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	6.	U
67-66-3	CHLOROFORM	.8	BJ
107-06-2	1,2-DICHLOROETHANE	6.	U
78-93-3	2-BUTANONE	13.	U
71-55-6	1,1,1-TRICHLOROETHANE	6.	U
56-23-5	CARBON TETRACHLORIDE	6.	U
108-05-4	VINYL ACETATE	13.	U
75-27-4	BROMODICHLOROMETHANE	6.	U
78-87-5	1,2-DICHLOROPROPANE	6.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	6.	U
79-01-6	TRICHLOROETHENE	5.	J
124-48-1	DIBROMOCHLOROMETHANE	6.	U
79-00-5	1,1,2-TRICHLOROETHANE	6.	U
71-43-2	BENZENE	6.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	6.	U
75-25-2	BROMOFORM	6.	U
108-10-1	4-METHYL-2 PENTANONE	13.	U
591-78-6	2-HEXANONE	13.	U
127-18-4	TETRACHLOROETHENE	67.	
79-34-5	1,1,2,2-TETRACHLOROETHANE	6.	U
108-88-3	TOLUENE	2.	
108-90-7	CHLOROBENZENE	6.	U
100-41-4	ETHYLBENZENE	6.	U
100-42-5	STYRENE	6.	U
1330-20-7	XYLENES (TOTAL)	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES003

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 29. (g/mL) G Lab File ID: 16280

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 22. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
108-95-2-------C315	PHENOL*	4400.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	4400.	U
95-57-8-------C330	2-CHLOROPHENOL	4400.	U
541-73-1-------C335	1.3-DICHLOROBENZENE	4400.	U
106-46-7-------C340	1.4-DICHLOROBENZENE*	4400.	U
100-51-6-------C345	BENZYL ALCOHOL	4400.	U
95-50-1-------C350	1.2-DICHLOROBENZENE	4400.	U
95-48-7-------C355	2-METHYLPHENOL	4400.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	4400.	U
106-44-5-------C365	4-METHYLPHENOL	4400.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	4400.	U
67-72-1-------C375	HEXACHLOROETHANE	4400.	U
98-95-3-------C410	NITROBENZENE	4400.	U
78-59-1-------C415	ISOPHORONE	4400.	U
88-75-5-------C420	2-NITROPHENOL*	4400.	U
105-67-9-------C425	2.4-DIMETHYLPHENOL	4400.	U
65-85-0-------C430	BENZOIC ACID	22000.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	4400.	U
120-83-2-------C440	2.4-DICHLOROPHENOL*	4400.	U
120-82-1-------C445	1.2.4-TRICHLOROBENZENE	4400.	U
91-20-3-------C450	NAPHTHALENE	8200.	
106-47-8-------C455	4-CHLOROANILINE	4400.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	4400.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	4400.	U
91-57-6-------C470	2-METHYLNAPTHALENE	6200.	
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	4400.	U
88-06-2-------C515	2.4.6-TRICHLOROPHENOL*	4400.	U
95-95-4-------C520	2.4.5-TRICHLOROPHENOL	22000.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	4400.	U
88-74-4-------C530	2-NITROANILINE	22000.	U
131-11-3-------C535	DIMETHYL PHTHALATE	4400.	U
208-96-8-------C540	ACENAPHTHYLENE	6100.	
606-20-2-------C543	2.6-DINITROTOLUENE	4400.	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES003

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 29. (g/mL) G Lab File ID: 16280

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 22. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2-------C545	3-NITROANILINE	22000.	U
83-32-9-------C550	ACENAPTHENE*	12000.	
51-28-5-------C555	2,4-DINITROPHENOL**	22000.	U
100-02-7-------C560	4-NITROPHENOL**	22000.	U
132-64-9-------C565	DIBENZOFURAN	9800.	
121-14-2-------C570	2,4-DINITROTOLUENE	4400.	U
84-66-2-------C580	DIETHYL PHTHALATE	4400.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	4400.	U
86-73-7-------C590	FLUORENE	17000.	
100-01-6-------C595	4-NITROANILINE	22000.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	4400.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	22000.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	4400.	U
118-74-1-------C630	HEXACHLOROBENZENE	4400.	U
87-86-5-------C635	PENTACHLOROPHENOL*	22000.	U
85-01-8-------C640	PHENANTHRENE	92000.	E
120-12-7-------C645	ANTHRACENE	40000.	
84-74-2-------C650	DI-N-BUTYL PHTHALATE	4400.	U
206-44-0-------C655	FLUORANTHENE*	86000.	E
129-00-0-------C715	PYRENE	100000.	E
85-68-7-------C720	BUTYL BENZYL PHTHALATE	4400.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	8800.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	87000.	E
218-01-9-------C740	CHRYSENE	85000.	E
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	3000.	J
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	4400.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	120000.	E
207-08-9-------C770	BENZO(K)FLUORANTHENE	75000.	E
50-32-8-------C775	BENZO(A)PYRENE*	99000.	E
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	33000.	
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	11000.	
191-24-2-------C790	BENZO(G,H,I)PERYLENE	30000.	

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES003

b Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

atrix: (soil/water) SOIL Lab Sample ID: _____

ample wt/vol: 1. (g/mL) G Lab File ID: 16280

evel: (low/med) MED Date Received: 12/ 2/87

Moisture: not dec. 22. dec. 22. Date Extracted: 1/ 6/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/ 6/88

PC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: .0200

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	ALPHA-BHC	390.	U
319-85-7	BETA-BHC	390.	U
319-86-8	DELTA-BHC	390.	U
58-89-9	GAMMA-BHC	390.	U
76-44-8	HEPTACHLOR	390.	U
309-00-2	ALDRIN	390.	U
1024-57-3	HEPTACHLOR EPOXIDE	390.	U
959-98-8	ENDOSULFAN I	390.	U
60-57-1	DIELDRIN	770.	U
72-55-9	4,4'-DDE	770.	U
72-20-8	ENDRIN	770.	U
33213-65-9	ENDOSULFAN II	770.	U
72-54-8	4,4'-DDD	770.	U
1031-07-8	ENDOSULFAN SULFATE	2500.	
50-29-3	4,4'-DDT	770.	U
72-43-5	METHOXYCHLOR	3900.	U
53494-70-5	ENDRIN KETONE	770.	U
5103-71-9	ALPHA CHLORDANE	3900.	U
5103-74-2	GAMMA CHLORDANE	3900.	U
8001-35-2	TOXAPHENE	7700.	U
12674-11-2	AROCLOR-1016	3900.	U
11104-28-2	AROCLOR-1221	3900.	U
11141-16-5	AROCLOR-1232	3900.	U
53469-21-9	AROCLOR-1242	3900.	U
12672-29-6	AROCLOR-1248	3900.	U
11097-69-1	AROCLOR-1254	7700.	U
11096-82-5	AROCLOR-1260	7700.	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ES003 RE

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5558

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 22. Date Analyzed: 12/ 4/87

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: 9

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	9.19	9.	J
2.	- -	UNKNOWN	16.01	4.	J
3.	- -	UNKNOWN	18.84	4.	J
4.	- -	UNKNOWN	19.62	9.	J
5.	565-59-3	Pentane, 2,4-dimethyl- (8CI9	20.82	10.	J
6.	617-78-7	Pentane, 3-ethyl- (8CI9CI)	21.17	8.	J
7.	589-34-4	Hexane, 3-methyl- (8CI9CI)	22.14	40.	J
8.	- -	UNKNOWN	26.44	20.	J
9.	98-82-8	Benzene, (1-methylethyl)- (9	29.89	90.	J
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

COMPOUND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ES369	ES370	[illegible]	[illegible]
chloromethane									
bromomethane									
vinyl chloride									
chloroethane									
methylene chloride						13,000	450,000	[illegible]	
acetone		[illegible]	[illegible]	17,000	470,000	5,700	710,000	[illegible]	
carbon disulfide				[illegible] J					
1,1-dichloroethene		[illegible]					[illegible] J	[illegible] J	
1,1-dichloroethane				[illegible]		[illegible] J			
trans-1,2-dichloroethene									
chloroform						70 JB	30,000 J	[illegible] J	
1,2-dichloroethane									
2-butanone						2,700	1,200,000	[illegible]	
1,1,1-trichloroethane						1700	71,000	[illegible] J	
carbon tetrachloride						[illegible] J		[illegible] J	
vinyl acetate									
bromodichloromethane									
1,1,2,2-tetrachloroethane							72,000 J	[illegible] J	
1,2-dichloropropane									
trans-1,3-dichloropropene									
trichloroethene						[illegible]	[illegible]	[illegible]	
dibromochloromethane									
1,1,2-trichloroethane									
benzene									
cis-1,3-dichloropropene									
2-chloroethylvinylether									
bromoform									
2-hexanone									
4-methyl-2-pentanone									
tetrachloroethene		1300 J				[illegible] J	67000 J	[illegible] J	
toluene		70,000	1,200,000	23,000	180,[illegible]	[illegible]	2,600,000	[illegible]	
chlorobenzene									
ethylbenzene		83,000	350,000	44,000	97,000	[illegible]	720,000	[illegible]	
styrene									
total xylenes		2,100,000	7,300,000	920,000	2,300,[illegible]	[illegible]	3,000,000	11,[illegible]	
N-nitrosodiethylamine									
phenol		3700 J			7700 J			[illegible]	
aniline									
bis(2-chloroethyl)ether									
2-chlorophenol									
1,3-dichlorobenzene									
1,4-dichlorobenzene									
benzyl alcohol									
1,2-dichlorobenzene								7400 J	
2-methylphenol		3400 J					76,000		
bis(2-chloroisopropyl)ether									
4-methylphenol		10,000 J	[illegible] J		3400 J				
N-nitroso-di-n-propylamine									
hexachloroethane									
nitrobenzene								[illegible]	
isophrone					4900 J		[illegible]	[illegible]	
2-nitrophenol									
2,4-dimethylphenol									
benzoic acid									
bis(2-chloroethoxy)methane									
2,4-dichlorophenol									
1,2,4-trichlorobenzene									
napthalene		33,000	[illegible]	[illegible] J	13,000 J		380,000	[illegible]	
4-chloroaniline									
hexachlorobutadiene									
4-chloro-3-methylphenol									
2-methylnapthalene		[illegible]	[illegible]	[illegible] J	[illegible]		[illegible]	[illegible]	
hexachlorocyclopentadiene									
2,4,6-trichlorophenol									
2,4,5-trichlorophenol									
2-chloronapthalene									

COMPOUND	DET. LIMIT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
dimethyl phthalate							[illegible]	[illegible] J
acenapthylene								
3-nitroaniline								
acenaphthene		[illegible] J	[illegible] J	[illegible] J	[illegible] J		[illegible] J	[illegible] J
2,4-dinitrophenol								
4-nitrophenol								
dibenzofuran		[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible] J
2,4-dinitrotoluene								
2,6-dinitrotoluene								
diethylphthalate							[illegible] J	[illegible] J
4-chlorophenyl-phenylether								
fluorene		[illegible] J	30,000	[illegible] J	[illegible] J		[illegible] J	[illegible] J
4-nitroaniline								
4,6-dinitro-2-methylphenol								
N-nitrosodiphenylamine								
4-bromophenyl-phenylether								
hexachlorobenzene								
pentachlorophenol								
phenanthrene		[illegible] J	[illegible]	[illegible] J		[illegible] J	[illegible]	[illegible]
anthracene			3700 J	[illegible] J			[illegible]	[illegible] J
di-n-butylphthalate		[illegible] J		[illegible] J	[illegible] J	[illegible] J	110,000	[illegible]
fluoranthene		[illegible] J	53,000	[illegible] J	[illegible] J	[illegible] J	[illegible]	48,000
benzidine								
pyrene		[illegible] J	58,000	[illegible] J	[illegible]	[illegible] J	66,000	[illegible]
butylbenzylphthalate		[illegible] J	5200 J				46,000	[illegible] J
3,3'-dichlorobenzidine								
benzo(a)anthracene		[illegible] J	20,000 J	3300 J	[illegible]		32,000	19,000 J
bis(2-ethylhexyl)phthalate		[illegible]	310,000	56,000	53,000	41,000 J	660,000	180,000
chrysene		[illegible] J	21,000 J	[illegible] J	[illegible] J	[illegible] J	[illegible]	[illegible] J
di-n-octylphthalate		7200 J	3500 J	1300 J				6700 J
benzo(b&k)fluoranthene		4000 J	36,000	6000 J	4100 J	4800 J	46,000	21,000 J
benzo(a)pyrene		1100 J	17,000 J	3000 J	2300 J	3000 J	23,000 J	15,000 J
indeno(1,2,3-cd)pyrene			8400 J			[illegible] J	[illegible] J	8900 J
dibenzo(a,h)anthracene								
benzo(g,h,i)perylene			[illegible] J			[illegible] J	[illegible] J	[illegible] J
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC(lindane)								
heptachlor								
aldrin								
heptachlor epoxide								
endosulfan I								
dieldrin								
4,4'-DDE								
endrin								
endosulfan II								
4,4'-DDD								
endrin aldehyde								
endosulfan sulfate								
4,4'-DDT								
methoxychlor								
endrin ketone								
chlordane		[illegible]		[illegible]	[illegible]			
toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								

VOLATILE HSL COMPOUNDS

CASE/SAS # [illegible] CONTRACTOR [illegible]

Instrument # [illegible]	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	[illegible]			[illegible]			12/17/87 07:51			12/2/87 [illegible]			12/[illegible]		
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone					65.7	J		61.4	J		61.4	J		53.6	J
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	[illegible]			[illegible]			[illegible]			[illegible]			[illegible]		
1,2-Dichloroethane					[illegible]			[illegible]			[illegible]			[illegible]	
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:

[illegible]	ES[illegible]7	ES012	ES00[illegible]
	ES[illegible]		ES[illegible]
	ES014		ES011
	ES368		ES013
			ES015
			ES367
			ES369
			ES370

Reviewer's Initials/Date: [illegible]

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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 7
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # [illegible] CONTRACTOR [illegible]

Instrument # [illegible]	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Ca	
DATE/TIME:	[illegible]			[illegible]			[illegible]			[illegible]			[illegible]	
	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								[illegible]			[illegible]			[illegible]
Isophorone														
2-Nitrophenol														
2,4-Dimethylphenol														
Benzoic Acid														
bis(2-Chloroethoxy)Methane														
2,4-Dichlorophenol														
1,2,4-Trichlorobenzene														
Naphthalene														
4-Chloroaniline														
Hexachlorobutadiene														
4-Chloro-3-Methylphenol														
2-Methylnaphthalene														
Hexachlorocyclopentadiene														
2,4,6-Trichlorophenol														
2,4,5-Trichlorophenol														
2-Chloronaphthalene														
2-Nitroaniline														
Dimethyl Phthalate														
Acenaphtnylene														
3-Nitroaniline														
Acenaphthene														
2,4-Dinitrophenol														
4-Nitrophenol														
Dibenzofuran														

AFFECTED SAMPLES:

[illegible]

Reviewer Initials/Date: _____

* 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 # _____ CONTRACTOR _____

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:				[illegible]			[illegible]			[illegible]			[illegible]		
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
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														88.7	
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: L L 2/15/88

8/87

Case: [illegible]

Contractor: [illegible]

TENTATIVELY IDENTIFIED COMPOUNDS
WATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) **If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.**

Reviewer's Initials/Date: [illegible] 2/25/88

86880002

ACUREX Corporation

Environmental Systems Division

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

January 15, 1988

Attention: Linda Boynton

Subject: Data packages for
Case 8688
Contract # : 68-1-7142
Protocol: July 1985

Enclosed please find the sample data package and standards package for 15 samples identified as ES006 through E015 and ES367 through E371. Both VOA and BNA fractions contained high level soil samples.

Due to the extremely high levels of compounds found in the VOA fractions, medium level extracts (4 grams in 10 mL methanol) were diluted in methanol before injecting. These dilutions were necessary to prevent saturation of compounds in the GC/MS system.

Please note that pages of this report are numbered at the top of the page. The first four digits are the case number and the remaining digits are the sequential page numbers.

Quantitation reports for GC/MS data in this package represent final values for those compounds found in each sample. The quantitation lists from which these were generated have been edited to remove false positives based on an inspection of the dual display of the sample spectra and the library spectra. A correction factor has been applied to the calculation so that amounts reported represent the true values relative to the original sample. The equation at the bottom of each quantitation report details how this correction factor was obtained.

If you have any questions regarding this package, please call.

Sincerely,

Paulette Vashio

Paulette Vashio
Project Chemist

CC: USEPA/EMSL/LV
944 East Harman Avenue, Room 226
Las Vegas, NV 89109
Attention: Data Audit Staff
Region V

485 Clyde Avenue, PO Box 7044 Mountain View CA 94039 (415) 961-5700 Telex 325961 FAX (415) 964-5145

User Information Sheet

U.S. Scrap
Case= 8688
Pan# FIL 0102 SA

Acurex

February 12, 1988
Reviewed by Loyd Collins

In the volatile fraction lab blanks acetone, toluene, ethylbenzene, and styrene wre detected. These compounds were also detected in several samples. The concentrations of these compounds were greater than 10 times the concentration in the blanks therefore the "B" qualifier was not used when this happened. ?

Some of the matrix spike recoveries and their RPD's were outside QC limits. This was due to the high concentrations of "oily" compounds in the sample and did not affect the quality of the data.

All samples had broad, oily peaks characteristic of an oily matrix. Some samples had PCB-1248 detected in them, as well as numerous polynuclear aromatic hydrocarbons and volatile compounds.

calibrations outlier form.

F. Tuning-Acceptable

G. Pesticides-Acceptable

Linearity- Acceptable
Breakdown- Acceptable
DBC Shift- Acceptable
DDT retention time > 12 minutes

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 8688 Contract Laboratory Acurex Contract No. 86880116 68-01-7142

Low _____ Medium *

	VOLATILE			SEMI-VOLATILE								PESTICIDE
EMC TRAFFIC NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLORO-ETHANE-D4 (70-121)	NITRO-BENZENE-D5 (23-120)	2-FLUORO-BIPHENYL (30-115)	TERPHENYL-D14 (18-137)			PHENOL-D6 (24-116)	2-FLUORO-PHENOL (25-121)	2,4,6 TRIBROMO-PHENOL (19-122)	DIBUTYL-CHLORENDATE (20-150) **
ES006	100	101	106	70	77	83			64	60	54	60
ES007	100	111	87									
ES008	99	101	97									
ES009	100	105	105									
ES010	101	102	99	48	55	53			39	42	23	70
ES011	101	102	99	60	65	61			45	48	42	104
ES012	99	103	92	58	63	58			51	52	37	96
ES013	100	101	106									—
ES014	104	111	106	63	64	63			50	52	36	82
ES015	101	103	105	60	68	70			43	52	42	76
ES367	103	100	107	49	69	74			46.9	38	47	22
ES368	100	101	103	56	62	55			47	48	35	68
ES369	100	107	111	72	77	88			65	62	66	37*
ES370	97	107	99	88	94	90			73	73	55	7*
ES371	98	108	101	57	62	66			53	57	55	0*
ES370MS	—	—	—	73	81	71			56	62	51	~~30~~ 20
ES370MSD	—	—	—	73	79	74			57	63	55	30
ES015MS	—	—	—	71	79	80			57	68	54	74
ES015MSD	—	—	—	53	58	60			40	48	38	112
ES013MS	103	108	106									—
ES013MSD	101	105	104									—
METHOD BLANK3												45
METH BLANK4												38

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: Ø out of 51 ~~63~~ ; outside of QC limits

Semi-Volatiles: Ø out of 90 ; outside of QC limits

Pesticides: _____ out of _____ ; outside of QC limits

7/85

Comments:

FORM II

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 8688 Contract Laboratory Acurex Contract No. 86880115 68-01-7142

Low * Medium

EPA SAMPLE NO.	VOLATILE: TOLUENE-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLORO-ETHANE-D4 (70-121)	SEMI-VOLATILE: NITRO-BENZENE-D5 (23-120)	SEMI-VOLATILE: 2-FLUORO-BIPHENYL (30-115)	SEMI-VOLATILE: TERPHENYL-D14 (18-137)	SEMI-VOLATILE:	SEMI-VOLATILE:	SEMI-VOLATILE: PHENOL-D5 (24-113)	SEMI-VOLATILE: 2-FLUORO-PHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMO-PHENOL (19-122)	PESTICIDE: DIBUTYL-CHLORENDATE** (20-150)
ES002	—	—	—	88	92	~~84~~ 87			76	73	44	18
ES008	—	—	—	53	51	54			37	35	39	24
ES009	—	—	—	74	84	82			59	57	42	34
ES013	—	—	—	44	46	50			36	35	40	20
ES013MS	—	—	—	74	74	76			68	56	53	~~26~~ 34
ES013MSD	—	—	—	72	65	79			68	56	60	26
METHOD BLANK1												31
METHOD BLANK2												30
5												

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: Ø out of Ø ; outside of QC limits

Semi-Volatiles: Ø out of 36 ; outside of QC limits

Pesticides: _____ out of _____ ; outside of QC limits

7/85

Comments:

FORM II

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 8688 Contractor ACUREX Contract No. 68-01-7142

Low Level * Medium Level _____

FRACTION	COMPOUND	CONC. SPIKE ADDED (µg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO.	1,1-Dicholorethene								22	59-172
	Trichloroethene								24	62-137
	Chlorobenzene								21	60-133
	Toluene								21	59-139
_____	Benzene								21	66-142
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene	100		3300	71	3000			23	38-107
	Acenaphthene	100		3200	75	3200	75	0	19	31-137
	2,4 Dinitrotoluene	100		2800	67	3200	75	12	47	28-89
	Di-n-Butylphthalate	100	135	3200	77	3700	84	9	47	29-135
	Pyrene	100		3600	85	3800	91	7	36	35-142
	N-Nitrosodi-n-Propylamine	100		2900	69	3000	70	1	38	41-126
ES013	1,4-Dichlorobenzene	100		2700	63	2600	61	3	27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol	200		5200	62	5800	69	11	47	17-109
	Phenol	200	430	6300	70	6500	72	3	35	26-90
	2-Chlorophenol	200		5900	70	6000	71	1	50	25-102
	4-Chloro-3-Methylphenol	200		5100	60	5800	68	13	33	26-103
_____	4-Nitrophenol	200		4700	55	5600	66	20	50	11-114
PEST SMO SAMPLE NO.	Lindane								50	46-127
	Heptachlor								31	35-130
	Aldrin								43	34-132
	Dieldrin								38	31-134
	Endrin								45	42-139
_____	4,4'-DDT								50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____; outside QC limits
B/N 0 out of 12; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

RECOVERY: VOAs ____ out of ____; outside QC limits
B/N 0 out of 12; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

Comments: _____

86880118

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 8688 Contractor ACUREX Contract No. 68-01-7142

Low Level _____ Medium Level X

FRACTION	COMPOUND	CONC. SPIKE ADDED (µg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO.	1,1-Dicholorethene								22	59-172
	Trichloroethene								24	62-137
	Chlorobenzene								21	60-133
	Toluene								21	59-139
	Benzene								21	66-142
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene	100		98298	39	100888	40	1	23	38-107
	Acenaphthene	100	14732	118364	41	117602	41	Ø	19	31-137
	2,4 Dinitrotoluene	100		79502	31	71374	28	11	47	28-89
	Di-n-Butylphthalate	100	114554	204724	36	213106	39	8	47	29-135
	Pyrene	100	65786	168148	40	166370	40	Ø	36	35-142
ES370	N-Nitrosodi-n-Propylamine	100		103632	41	114046	45	10	38	41-126
	1,4-Dichlorobenzene	100		87630	35	90170	35	Ø	27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol	200		137414	54	161798	64	18	47	17-109
	Phenol	200		300990	119	317246	125	5	35	26-90
	2-Chlorophenol	200		186182	73	192024	75	3	50	25-102
	4-Chloro-3-Methylphenol	200		157988	62	174244	69	11	33	26-103
	4-Nitrophenol	200		62738	25	86106	34	36	50	11-114
PEST SMO SAMPLE NO.	Lindane								50	46-127
	Heptachlor								31	35-130
	Aldrin								43	34-132
	Dieldrin								38	31-134
	Endrin								45	42-139
	4,4'-DDT								50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____; outside QC limits
B/N Ø out of 12; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

RECOVERY: VOAs ____ out of ____; outside QC limits
B/N 2 out of 12; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

Comments: _____

FORM III

4/84

86880119

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 8688 Contractor ACUREX Contract No. 68-01-7147

Low Level X Medium Level _____

86880120

FRACTION	COMPOUND	CONC. SPIKE ADDED (µg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO.	1,1-Dicholorethene								22	59-172
	Trichloroethene								24	62-137
	Chlorobenzene								21	60-133
	Toluene								21	59-139
	Benzene								21	66-142
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene								23	38-107
	Acenaphthene								19	31-137
	2,4 Dinitrotoluene								47	28-89
	Di-n-Butylphthalate								47	29-135
	Pyrene								36	35-142
	N-Nitrosodi-n-Propylamine								38	41-126
	1,4-Dichlorobenzene								27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol								47	17-109
	Phenol								35	26-90
	2-Chlorophenol								50	25-102
	4-Chloro-3-Methylphenol								33	26-103
	4-Nitrophenol								50	11-114
PEST SMO SAMPLE NO. ES013	Lindane	27	ND	32	118	27	100	17	50	46-127
	Heptachlor	27	↓	0	0 *	24	89	- *	31	35-130
	Aldrin	27		0	0 *	38	140 *	- *	43	34-132
	Dieldrin	67		92	137 *	65	101	30	38	31-134
	Endrin	67		160	239 *	120	179 *	29	45	42-139
	4,4'-DDT	67	↓	80	119	57	85	33	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST 2 out of 6; outside QC limits

RECOVERY: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST 6 out of 12; outside QC limits

Comments: _____

FORM III

4/84

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 8648 Contractor ACUREX Contract No. 68-01-7142

Low Level _____ Medium Level X

86880121

FRACTION	COMPOUND	CONC. SPIKE ADDED (µg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO.	1,1-Dicholorethene								22	59-172
	Trichloroethene								24	62-137
	Chlorobenzene								21	60-133
	Toluene								21	59-139
	Benzene								21	66-142
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene								23	38-107
	Acenaphthene								19	31-137
	2,4 Dinitrotoluene								47	28-89
	Di-n-Butylphthalate								47	29-135
	Pyrene								36	35-142
	N-Nitrosodi-n-Propylamine								38	41-126
	1,4-Dichlorobenzene								27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol								47	17-109
	Phenol								35	26-90
	2-Chlorophenol								50	25-102
	4-Chloro-3-Methylphenol								33	26-103
	4-Nitrophenol								50	11-114
PEST SMO SAMPLE NO.	Lindane	2000	ND	860	43*	1100	55	25	50	46-127
	Heptachlor	2000	↓	720	36	960	48	27	31	35-130
	Aldrin	2000		780	39	1000	50	25	43	34-132
	Dieldrin	5000		2100	42	2800	56	24	38	31-134
	Endrin	5000		4000	80	5300	106	28	45	42-139
E5370	4,4'-DDT	5000	↓	2100	42	3000	60	35	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST 0 out of 6; outside QC limits

RECOVERY: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST 1 out of 12; outside QC limits

Comments: _____

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 8688 Contractor ALURECK Contract No. 68-01-7142

Low Level _____ Medium Level X

86880122

FRACTION	COMPOUND	CONC. SPIKE ADDED (µg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO.	1,1-Dicholorethene								22	59-172
	Trichloroethene								24	62-137
	Chlorobenzene								21	60-133
	Toluene								21	59-139
_____	Benzene								21	66-142
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene								23	38-107
	Acenaphthene								19	31-137
	2,4 Dinitrotoluene								47	28-89
	Di-n-Butylphthalate								47	29-135
	Pyrene								36	35-142
	N-Nitrosodi-n-Propylamine								38	41-126
_____	1,4-Dichlorobenzene								27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol								47	17-109
	Phenol								35	26-90
	2-Chlorophenol								50	25-102
	4-Chloro-3-Methylphenol								33	26-103
_____	4-Nitrophenol								50	11-114
PEST SMO SAMPLE NO.	Lindane	2000	ND	1300	65	1800	90	32	50	46-127
	Heptachlor	2000	↓	1700	85	2200	110	36*	31	35-130
	Aldrin	2000		2400	120	3600	180*	40	43	34-132
	Dieldrin	5000		4800	96	6600	132	32	38	31-134
	Endrin	5000		9800	196*	14000	280*	33	45	42-139
ES015	4,4'-DDT	5000	↓	4000	80	6600	132	44	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST 1 out of 5; outside QC limits

RECOVERY: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST 4 out of 12; outside QC limits

Comments: _____

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 8688 Contractor ACUREX Contract No. 68-01-7142

Low Level _____ Medium Level X

86880123

FRACTION	COMPOUND	CONC. SPIKE ADDED (µg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO.	1,1-Dicholorethene								22	59-172
	Trichloroethene								24	62-137
	Chlorobenzene								21	60-133
	Toluene								21	59-139
_____	Benzene								21	66-142
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene	100		54769	76	79504	28.56	36	23	38-107
	Acenaphthene	100		69498	97	106964	37.74	31	19	31-137
	2,4 Dinitrotoluene	100		46189	64	67210	47	36	47	28-89
	Di-n-Butylphthalate	100		60203	84	93522	66	27	47	29-135
	Pyrene	100	58058	88088	21	138996	57	71	36	35-142
	N-Nitrosodi-n-Propylamine	100		53482	74	78936	55	34	38	41-126
ES015	1,4-Dichlorobenzene	100		49192	68	68926	48	42	27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol	200		70224	49	48048	67	37	47	17-109
	Phenol	200		100000	70	72215	51	37	35	26-90
	2-Chlorophenol	200		105000	73	76076	53	38	50	25-102
	4-Chloro-3-Methylphenol	200		89757	63	65065	46	37	33	26-103
_____	4-Nitrophenol	200		76648	54	54626	38	42	50	11-114
PEST SMO SAMPLE NO.	Lindane								50	46-127
	Heptachlor								31	35-130
	Aldrin								43	34-132
	Dieldrin								38	31-134
	Endrin								45	42-139
_____	4,4'-DDT								50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____; outside QC limits
B/N 5 out of 12; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

RECOVERY: VOAs ____ out of ____; outside QC limits
B/N 0 out of 12; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

Comments: _____

METHOD BLANK SUMMARY

Case No. 8688 Region 5 Contractor ACUREX Contract No. 68-01-7142

86880124

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
E1222IM01	12/22/87	VOA	S	M	FINN	100-42-5	STYRENE	32	ug/kg	2
E1222IM01	12/22/87	VOA	S	M	FINN	67-66-3	Chloroform	24		2
E1229IM01	12/29/87	VOA	S	M	FINN	67-64-1	Acetone	370		4
E1229IM01	12/29/87	VOA	S	M	FINN	100-42-5	Styrene	32		2
E1216IM1	12/16/87	VOA	S	M	FINN	67-64-1	Acetone	650		4
E1216IM1	12/16/87	VOA	S	M	FINN	108-88-3	Toluene	61		2
E1216IM1	12/16/87	VOA	S	M	FINN	100-41-4	Ethylbenzene	100		2
E1216IM1	12/16/87	VOA	S	M	FINN	—	TOTAL XYLENES	2400		2
E1217CL1	12/17/87	BNA	S	L	4500	86-30-6	N-Nitrosodiphenylamine	550		330
E1217CL1	12/17/87	BNA	S	L	4500	—	UNKNOWN	800		—
E1217CL1	12/17/87	BNA	S	L	4500	—	UNKNOWN	18000		—
E1217CL1	12/17/87	BNA	S	L	4500	—	UNKNOWN	1000		—
E1217CL1	12/17/87	BNA	S	L	4500	—	UNKNOWN	1100		—
E1217CM1	1/6/88	BNA	S	M	4500	86-30-6	N-Nitrosodiphenylamine	11000		330
E1217CM2	1/6/88	BNA	S	M	4500	86-30-6	N-Nitrosodiphenylamine	8400		330
E1217IM1	12/17/87	VOA	S	M	FINN	108-88-3	Toluene	19		2
E1217IM1	12/17/87	VOA	S	M	FINN	100-42-5	Styrene	37		2
E1217IM1	12/17/87	VOA	S	M	FINN	67-64-1	Acetone	360		4

Comments:

METHOD BLANK SUMMARY

Case No. 8688 Region 5 Contractor ACUREX Contract No. 68-01-7142

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRQL
E122IM01	12/21/87	VOA	S	M	FINN	67-64-1	Acetone	420	ug/kg	4
E122IM01	12/21/87	VOA	S	M	FINN	108-88-3	Toluene	18		2
E122IM01	12/21/87	VOA	S	M	FINN	100-42-5	Styrene	45		2
E122IM01	12/21/87	VOA	S	M	FINN	—	TOTAL xylenes	34		2
E1228CM2	1/11/88	BNA	S	M	4520	—	—	—	—	—

Comments:

868880125

86880003

Sample Number
ES006

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP. Case No: 8688
Lab Sample ID No: 8712176 QC Report No:
Sample Matrix: SOIL Contract No: 68-01-7142
Data Release Authorized By: [illegible] Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/21/87
Dil Factor: 1000 pH 8.37
Percent Moisture: (Not Decanted) 24.9

CAS Number		ug/Kg	CAS Number		ug/Kg
[illegible]-87-3	Chloromethane	1.3E6 U	78-87-5	1,2-Dichloropropane	670000U
[illegible]-83-9	Bromomethane	1.3E6 U	10061-02-6	Trans-1,3-Dichloropropene	670000U
75-01-4	Vinyl Chloride	1.3E6 U	79-01-6	Trichloroethene	670000U
75-00-3	Chloroethane	1.3E6 U	124-48-1	Dibromochloromethane	670000U
[illegible]-09-2	Methylene Chloride	670000U	79-00-5	1,1,2-Trichloroethane	670000U
[illegible]7-64-1	Acetone	1.9E6 B	71-43-2	Benzene	670000U
75-15-0	Carbon Disulfide	670000U	10061-01-5	cis-1,3-Dichloropropene	670000U
[illegible]5-35-4	1,1-Dichloroethene	670000U	110-75-8	2-Chloroethylvinylether	1.3E6 U
[illegible]5-35-3	1,1-Dichloroethane	670000U	75-25-2	Bromoform	670000U
156-60-5	Trans-1,2-Dichloroethene	670000U	108-10-1	4-Methyl-2-Pentanone	1.3E6 U
[illegible]7-66-3	Chloroform	670000U	591-78-6	2-Hexanone	1.3E6 U
[illegible]07-06-2	1,2-Dichloroethane	670000U	127-18-4	Tetrachloroethene	670000U
78-93-3	2-Butanone	1.3E6 U	79-34-5	1,1,2,2-Tetrachloroethane	1.3E6 U
[illegible]1-55-6	1,1,1-Trichloroethane	670000U	108-88-3	Toluene	2.0E6 B
[illegible]6-23-5	Carbon Tetrachloride	670000U	108-90-7	Chlorobenzene	670000U
108-05-4	Vinyl Acetate	1.3E6 U	100-41-4	Ethylbenzene	3.7E6
75-27-4	Bromodichloromethane	670000U	100-42-5	Styrene	670000U
				Total Xylenes	8.0E7 B

B - Compound was detected in the QC blank.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Form 1

86880004

Laboratory Name: ACUREX CORP.
Case No: 8688

Sample Number
ES006

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared: 12/15/87
Date Analyzed: 01/06/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) 24.9

GPC Cleanup ___ Yes X No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/KG	CAS Number		UG/KG
108-95-2	Phenol	26000 U	83-32-9	Acenaphthene	3700 J
111-44-4	bis(2-Chloroethyl)Ether	26000 U	51-28-5	2,4-Dinitrophenol	130000U
95-57-8	2-Chlorophenol	26000 U	100-02-7	4-Nitrophenol	130000U
541-73-1	1,3-Dichlorobenzene	26000 U	132-64-9	Dibenzofuran	2800 J
106-46-7	1,4-Dichlorobenzene	26000 U	121-14-2	2,4-Dinitrotoluene	26000 U
100-51-6	Benzyl Alcohol	26000 U	606-20-2	2,6-Dinitrotoluene	26000 U
95-50-1	1,2-Dichlorobenzene	26000 U	84-66-2	Diethylphthalate	26000 U
95-48-7	2-Methylphenol	26000 U	7005-72-3	4-Chlorophenyl-phenylether	26000 U
108638-32-9	bis(2-Chloroisopropyl)Ether	26000 U	86-73-7	Fluorene	4800 J
106-44-5	4-Methylphenol	26000 U	100-10-6	4-Nitroaniline	130000U
621-64-7	N-Nitroso-Di-n-Propylamine	26000 U	534-52-1	4,6-Dinitro-2-Methylphenol	130000U
67-72-1	Hexachloroethane	26000 U	86-30-6	N-Nitrosodiphenylamine (1)	13000 BJ
98-95-3	Nitrobenzene	26000 U	101-55-3	4-Bromophenyl-phenylether	26000 U
78-59-1	Isophorone	26000 U	118-74-1	Hexachlorobenzene	26000 U
88-75-5	2-Nitrophenol	26000 U	87-86-5	Pentachlorophenol	130000U
105-67-9	2,4-Dimethylphenol	26000 U	85-01-8	Phenanthrene	37000
65-85-0	Benzoic Acid	130000U	120-12-7	Anthracene	7900 J
111-91-1	bis(2-Chloroethoxy)Methane	26000 U	84-74-2	Di-n-Butylphthalate	26000 U
120-83-2	2,4-Dichlorophenol	26000 U	206-44-0	Fluoranthene	33000
120-82-1	1,2,4-Trichlorobenzene	26000 U	129-00-0	Pyrene	33000
91-20-3	Naphthalene	170000	85-68-7	Butylbenzylphthalate	26000 U
106-47-8	4-Chloroaniline	26000 U	91-94-1	3,3'-Dichlorobenzidine	53000 U
87-68-3	Hexachlorobutadiene	26000 U	56-55-3	Benzo(a)Anthracene	15000 J
59-50-7	4-Chloro-3-Methylphenol	26000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	50000
91-57-6	2-Methylnaphthalene	47000	218-01-9	Chrysene	15000 J
77-47-4	Hexachlorocyclopentadiene	26000 U	117-84-0	Di-n-Octyl Phthalate	26000 U
88-06-2	2,4,6-Trichlorophenol	26000 U	205-99-2	Benzo(b)Fluoranthene	13000 J
95-95-4	2,4,5-Trichlorophenol	130000U	207-08-9	Benzo(k)Fluoranthene	14000 J
91-58-7	2-Chloronaphthalene	26000 U	50-32-8	Benzo(a)Pyrene	14000 J
88-74-4	2-Nitroaniline	130000U	193-39-5	Indeno(1,2,3-cd)Pyrene	4400 J
131-11-3	Dimethyl Phthalate	26000 U	53-70-3	Dibenz(a,h)Anthracene	26000 U
208-96-8	Acenaphthylene	26000 U	191-24-2	Benzo(g,h,i)Perylene	4400 J
99-09-2	3-Nitroaniline	130000U			

(1) - Cannot be separated from diphenylamine

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES006

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 25%

GPC Cleanup NO
Sep Funnel Extraction NO
Continuous Liquid-Liquid Extraction NO

Cas Number		ug/kg
319-84-8	Alpha BHC	320 U
319-85-7	Beta BHC	320 U
319-86-8	Delta BHC	320 U
58-89-9	Gamma BHC	320 U
76-44-8	Heptachlor	320 U
309-00-2	Aldrin	320 U
1024-57-3	Heptachlor Epoxide	320 U
959-98-8	Endosulfan I	320 U
60-57-1	Dieldrin	639 U
72-55-9	4,4'-DDE	639 U
72-20-8	Endrin	639 U
33213-65-9	Endosulfan II	639 U
72-54-8	4,4'DDD	639 U
1031-07-8	Endosulfan Sulfate	639 U
50-29-3	4,4'-DDT	639 U
72-43-5	Methoxychlor	3196 U
53494-70-5	Endrin Ketone	639 U
57-74-9	Chlordane	3196 U
8001-35-2	Toxaphene	6391 U
12674-11-2	Aroclor 1016	3196 U
11104-28-2	Aroclor 1221	3196 U
11141-16-5	Aroclor 1232	3196 U
53469-21-9	Aroclor 1242	3196 U
12672-29-6	Aroclor 1248	52000
11097-69-1	Aroclor 1254	6391 U
11096-82-5	Aroclor 1260	6391 U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

86880005

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES006

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1217I01
CORR. FACTOR: 166000.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
1-84-2	NONANE	782	900000
1078-65-9	1-DECANOL, 2-ETHYL-	898	1200000
620-14-4	BENZENE, 1-ETHYL-3-METHYL-	934	1400000
124-18-5	DECANE	961	2300000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	995	1800000
98-06-6	BENZENE, (1,1-DIMETHYLETHYL)-	1100	1100000
1120-21-4	UNDECANE	1132	1400000

86880006

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: E8006

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1217C01ML
CORR. FACTOR: 1330.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
	Benzene, C_2-substituted	362	UG/KG
	BENZENE, ~~1,3~~-DIMETHYL-	383	1200000
	BENZENE, ~~1,3~~-DIMETHYL-	416	500000
	BENZENE, ~~1~~-ETHYL-~~2~~-METHYL-	523	300000
	BENZENE, ~~1,3,5~~-TRIMETHYL-	534	64000
	~~UNDECANE, 5-METHYL-~~ unknown hydrocarbon	539	87000
	BENZENE, ~~1,3,5~~-TRIMETHYL-	573	280000
124-18-5	DECANE	586	230000
	BENZENE, ~~1,3,5~~-TRIMETHYL-	613	160000
	UNKNOWN	633	200000
	UNKNOWN	639	140000
	~~CYCLOHEXANOL, 3,3,5-TRIMETHYL-~~ unknown	659	170000
	BENZENE, ~~1~~-ETHYL-~~2,4~~-DIMETHYL-	666	81000
	UNKNOWN	675	100000
	BENZENE, ~~2~~-ETHYL-~~1,4~~-DIMETHYL-	692	170000
	BENZENE, ~~2~~-ETHYL-~~1,4~~-DIMETHYL-	703	190000
	~~NONANE, 4,5-DIMETHYL-~~ unknown hydrocarbon	725	220000
	BENZENE, ~~1,2,3,5~~-TETRAMETHYL-	743	160000
	BENZENE, ~~1,2,3,5~~-TETRAMETHYL-	749	140000
	BENZENE, ~~1-ETHYL-3,5-DIMETHYL-~~ C_3 Substituted	787	130000

ONLY 5 INTERNAL STANDARDS USED TO QUANTITATE

86880007

Sample Number
ES007

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP. Case No: 8688
Lab Sample ID No: 8712172 QC Report No:
Sample Matrix: SOIL Contract No: 68-01-7142
Data Release Authorized By: Flach Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/16/87
Dil Factor: 10.0 pH 8.49
Percent Moisture: (Not Decanted) 40.2

CAS Number		ug/Kg		CAS Number		ug/Kg	
74-87-3	Chloromethane	17000	U	78-87-5	1,2-Dichloropropane	8400	U
[illegible]-83-9	Bromomethane	17000	U	10061-02-6	Trans-1,3-Dichloropropene	8400	U
[illegible]-01-4	Vinyl Chloride	17000	U	79-01-6	Trichloroethene	8400	U
75-00-3	Chloroethane	17000	U	124-48-1	Dibromochloromethane	8400	U
[illegible]-09-2	Methylene Chloride	~~8400~~ 13000	U	79-00-5	1,1,2-Trichloroethane	8400	U
[illegible]-64-1	Acetone	~~17000~~ 32000	BU	71-43-2	Benzene	8400	U
75-15-0	Carbon Disulfide	8400	U	10061-01-5	cis-1,3-Dichloropropene	8400	U
[illegible]-35-4	1,1-Dichloroethene	8400	U	110-75-8	2-Chloroethylvinylether	17000	U
[illegible]-35-3	1,1-Dichloroethane	8400	U	75-25-2	Bromoform	8400	U
156-60-5	Trans-1,2-Dichloroethene	8400	U	108-10-1	4-Methyl-2-Pentanone	17000	U
67-66-3	Chloroform	8400	U	591-78-6	2-Hexanone	17000	U
[illegible]7-06-2	1,2-Dichloroethane	8400	U	127-18-4	Tetrachloroethene	8400	U
[illegible]-93-3	2-Butanone	17000	U	79-34-5	1,1,2,2-Tetrachloroethane	17000	U
71-55-6	1,1,1-Trichloroethane	8400	U	108-88-3	Toluene	~~8400~~ 58000	BU
[illegible]-23-5	Carbon Tetrachloride	8400	U	108-90-7	Chlorobenzene	8400	U
[illegible]8-05-4	Vinyl Acetate	17000	U	100-41-4	Ethylbenzene	~~8400~~ 12000	BU
75-27-4	Bromodichloromethane	8400	U	100-42-5	Styrene	8400	U
					Total Xylenes	~~8400~~ 25000	BU

B - Compound was detected in the QC blank.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Form I

86880008

Laboratory Name: ACUREX CORP.
Case No: 8688

Sample Number
ES007

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: LOW
Date Extracted/Prepared: 12/15/87
Date Analyzed: 01/06/88
Dil Factor: 5.00
Percent Moisture: (Decanted) 40.2

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/KG		CAS Number		UG/KG	
108-95-2	Phenol	1000	J	83-32-9	Acenaphthene	2800	U
111-44-4	bis(2-Chloroethyl)Ether	2800	U	51-28-5	2,4-Dinitrophenol	13000	U
95-57-8	2-Chlorophenol	2800	U	100-02-7	4-Nitrophenol	13000	U
541-73-1	1,3-Dichlorobenzene	2800	U	132-64-9	Dibenzofuran	2800	U
106-46-7	1,4-Dichlorobenzene	2800	U	121-14-2	2,4-Dinitrotoluene	2800	U
100-51-6	Benzyl Alcohol	2800	U	606-20-2	2,6-Dinitrotoluene	2800	U
95-50-1	1,2-Dichlorobenzene	2800	U	84-66-2	Diethylphthalate	2800	U
95-48-7	2-Methylphenol	2800	U	7005-72-3	4-Chlorophenyl-phenylether	2800	U
39638-32-9	bis(2-Chloroisopropyl)Ether	2800	U	86-73-7	Fluorene	2800	U
106-44-5	4-Methylphenol	590	J	100-10-6	4-Nitroaniline	13000	U
621-64-7	N-Nitroso-Di-n-Propylamine	2800	U	534-52-1	4,6-Dinitro-2-Methylphenol	13000	U
67-72-1	Hexachloroethane	2800	U	86-30-6	N-Nitrosodiphenylamine (1)	2200	BJ
98-95-3	Nitrobenzene	2800	U	101-55-3	4-Bromophenyl-phenylether	2800	U
78-59-1	Isophorone	2800	U	118-74-1	Hexachlorobenzene	2800	U
88-75-5	2-Nitrophenol	2800	U	87-86-5	Pentachlorophenol	13000	U
105-67-9	2,4-Dimethylphenol	1800	J	85-01-8	Phenanthrene	920	J
65-85-0	Benzoic Acid	13000	U	120-12-7	Anthracene	2800	U
111-91-1	bis(2-Chloroethoxy)Methane	2800	U	84-74-2	Di-n-Butylphthalate	2800	U
120-83-2	2,4-Dichlorophenol	2800	U	206-44-0	Fluoranthene	820	J
120-82-1	1,2,4-Trichlorobenzene	2800	U	129-00-0	Pyrene	870	J
91-20-3	Naphthalene	9100		85-68-7	Butylbenzylphthalate	2800	U
106-47-8	4-Chloroaniline	2800	U	91-94-1	3,3'-Dichlorobenzidine	5500	U
87-68-3	Hexachlorobutadiene	2800	U	56-55-3	Benzo(a)Anthracene	430	J
59-50-7	4-Chloro-3-Methylphenol	2800	U	117-81-7	bis(2-Ethylhexyl)Phthalate	880	J
91-57-6	2-Methylnaphthalene	4300		218-01-9	Chrysene	420	J
77-47-4	Hexachlorocyclopentadiene	2800	U	117-84-0	Di-n-Octyl Phthalate	2800	U
88-06-2	2,4,6-Trichlorophenol	2800	U	205-99-2	Benzo(b)Fluoranthene	310	J
95-95-4	2,4,5-Trichlorophenol	13000	U	207-08-9	Benzo(k)Fluoranthene	370	J
91-58-7	2-Chloronaphthalene	2800	U	50-32-8	Benzo(a)Pyrene	380	J
88-74-4	2-Nitroaniline	13000	U	193-39-5	Indeno(1,2,3-cd)Pyrene	2800	U
131-11-3	Dimethyl Phthalate	2800	U	53-70-3	Dibenz(a,h)Anthracene	2800	U
208-96-8	Acenaphthylene	2800	U	191-24-2	Benzo(g,h,i)Perylene	2800	U
99-09-2	3-Nitroaniline	13000	U				

(1) - Cannot be separated from diphenylamine

Form I

86880391

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES007

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 40%

GPC Cleanup NO
Sep Funnel Extraction NO
Continuous Liquid-Liquid Extraction NO

Cas Number		ug/kg
319-84-8	Alpha BHC	400 U
319-85-7	Beta BHC	400 U
319-86-8	Delta BHC	400 U
58-89-9	Gamma BHC	400 U
76-44-8	Heptachlor	400 U
309-00-2	Aldrin	400 U
1024-57-3	Heptachlor Epoxide	400 U
959-98-8	Endosulfan I	400 U
60-57-1	Dieldrin	800 U
72-55-9	4,4'-DDE	800 U
72-20-8	Endrin	800 U
33213-65-9	Endosulfan II	800 U
72-54-8	4,4'DDD	800 U
1031-07-8	Endosulfan Sulfate	800 U
50-29-3	4,4'-DDT	800 U
72-43-5	Methoxychlor	4000 U
53494-70-5	Endrin Ketone	800 U
57-74-9	Chlordane	11000
8001-35-2	Toxaphene	8000 U
12674-11-2	Aroclor 1016	4000 U
11104-28-2	Aroclor 1221	4000 U
11141-16-5	Aroclor 1232	4000 U
53469-21-9	Aroclor 1242	4000 U
12672-29-6	Aroclor 1248	4200
11097-69-1	Aroclor 1254	8000 U
11096-82-5	Aroclor 1260	8000 U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

86880009

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: E5007

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1217I02
CORR. FACTOR: 2100.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC. PPB
	~~UNKNOWN~~ NH	~~787~~	~~24000~~ NH
5911-04-6	NONANE -	787	21000
99-82-8	BENZENE, (1-METHYLETHYL)-	869	55000
622-96-8	BENZENE, 1-ETHYL-4-METHYL-	938	20000
124-18-5	DECANE	966	35000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	999	25000
91-20-3	NAPHTHALENE (ACN)(DOT)	1037	78000
17851-27-3	BENZENE, 1-ETHYL-2,4,5-TRIMETHYL-	1068	15000
64723-36-0	CYCLOPROPANE, 1-(2-METHYLBUTYL)-1-(1-METHYLP	1137	35000

86880010

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES007

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1217C02
CORR. FACTOR: 278.0(

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
100-41-4	BENZENE, ETHYL-	373	33000
108-38-3	BENZENE, 1,3-DIMETHYL-	389	110000
↓	BENZENE, 1,3-DIMETHYL-	421	24000
98-82-8	BENZENE, (1-METHYLETHYL)-	470	29000
103-65-1	BENZENE, PROPYL-	512	3200
620-14-4	BENZENE, 1-ETHYL-3-METHYL-	524	10000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	534	3500
815-24-7	3-PENTANONE, 2,2,4,4-TETRAMETHYL-	539	4100
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	570	10000
↓	BENZENE, 1,3,5-TRIMETHYL-	610	4700
611-15-4	BENZENE, 1-ETHENYL-2-METHYL-	628	3300
873-94-9	CYCLOHEXANONE, 3,3,5-TRIMETHYL-	635	18000
116-02-9	CYCLOHEXANOL, 3,3,5-TRIMETHYL-	653	9500
488-23-3	BENZENE, 1,2,3,4-TETRAMETHYL-	661	3400
874-41-9	BENZENE, 1-ETHYL-2,4-DIMETHYL-	688	5200
527-53-7	BENZENE, 1,2,3,5-TETRAMETHYL-	737	1600
3290-53-7	BENZENE, (2-METHYL-2-PROPENYL)-	780	1600
90-12-0	NAPHTHALENE, 1-METHYL-	969	1400
	UNKNOWN	2408	19000

86880011

Sample Number
ES008

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP. Case No: 8688
Lab Sample ID No: 8712293 QC Report No:
Sample Matrix: SOIL Contract No: 68-01-7142
Data Release Authorized By: [signature] Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/29/87
Dil Factor: 10.0 pH 8.71
Percent Moisture: (Not Decanted) 28.1

CAS Number		ug/Kg		CAS Number		ug/Kg	
74-87-3	Chloromethane	14000	U	78-87-5	1,2-Dichloropropane	7000	U
74-83-9	Bromomethane	14000	U	10061-02-6	Trans-1,3-Dichloropropene	7000	U
75-01-4	Vinyl Chloride	14000	U	79-01-6	Trichloroethene	7000	U
75-00-3	Chloroethane	14000	U	124-48-1	Dibromochloromethane	7000	U
75-09-2	Methylene Chloride	7000	U	79-00-5	1,1,2-Trichloroethane	7000	U
67-64-1	Acetone	13000	J	71-43-2	Benzene	7000	U
75-15-0	Carbon Disulfide	920	J	10061-01-5	cis-1,3-Dichloropropene	7000	U
75-35-4	1,1-Dichloroethene	7000	U	110-75-8	2-Chloroethylvinylether	14000	U
75-35-3	1,1-Dichloroethane	7000	U	75-25-2	Bromoform	7000	U
156-60-5	Trans-1,2-Dichloroethene	7000	U	108-10-1	4-Methyl-2-Pentanone	14000	U
67-66-3	Chloroform	7000	U	591-78-6	2-Hexanone	14000	U
107-06-2	1,2-Dichloroethane	7000	U	127-18-4	Tetrachloroethene	7000	U
78-93-3	2-Butanone	14000	U	79-34-5	1,1,2,2-Tetrachloroethane	14000	U
71-55-6	1,1,1-Trichloroethane	7000	U	108-88-3	Toluene	15000	
56-23-5	Carbon Tetrachloride	7000	U	108-90-7	Chlorobenzene	7000	U
108-05-4	Vinyl Acetate	14000	U	100-41-4	Ethylbenzene	47000	
75-27-4	Bromodichloromethane	7000	U	100-42-5	Styrene	7000	U
					Total Xylenes	1.0E6	

J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Form I

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES008

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Low
Date Extracted/prep. 12/16/87
Date Analyzed 01/14/88
Conc./Dil Factor 1.00
% Moisture (decanted) 28%

GPC Cleanup NO
Sep Funnel Extraction NO
Continuous Liquid-Liquid Extraction NO

Cas Number		ug/Kg
319-84-8	Alpha BHC	11 U
319-85-7	Beta BHC	11 U
319-86-8	Delta BHC	11 U
58-89-9	Gamma BHC	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	22 U
72-55-9	4,4'-DDE	22 U
72-20-8	Endrin	22 U
33213-65-9	Endosulfan II	22 U
72-54-8	4,4'DDD	22 U
1031-07-8	Endosulfan Sulfate	22 U
50-29-3	4,4'-DDT	22 U
72-43-5	Methoxychlor	111 U
53494-70-5	Endrin Ketone	22 U
57-74-9	Chlordane	111 U
8001-35-2	Toxaphene	222 U
12674-11-2	Aroclor 1016	111 U
11104-28-2	Aroclor 1221	111 U
11141-16-5	Aroclor 1232	111 U
53469-21-9	Aroclor 1242	111 U
12672-29-6	Aroclor 1248	222 U
11097-69-1	Aroclor 1254	222 U
11096-82-5	Aroclor 1260	222 U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.03 Vt 1000 Vi 2

FORM 1

8C880012

oratory Name: ACUREX CORP.
se No: 8686

Sample Number
ES008

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: LOW
te Extracted/Prepared: 12/15/87
te Analyzed: 12/17/87
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) 28.1

GPC Cleanup ___ Yes X No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/KG		CAS Number		UG/KG	
108-95-2	Phenol	190	J	83-32-9	Acenaphthene	460	U
1-44-4	bis(2-Chloroethyl)Ether	460	U	51-28-5	2,4-Dinitrophenol	2200	U
-57-8	2-Chlorophenol	460	U	100-02-7	4-Nitrophenol	2200	U
541-73-1	1,3-Dichlorobenzene	460	U	132-64-9	Dibenzofuran	460	U
6-46-7	1,4-Dichlorobenzene	460	U	121-14-2	2,4-Dinitrotoluene	460	U
0-51-6	Benzyl Alcohol	460	U	606-20-2	2,6-Dinitrotoluene	460	U
5-50-1	1,2-Dichlorobenzene	460	U	84-66-2	Diethylphthalate	460	U
95-48-7	2-Methylphenol	180	J	7005-72-3	4-Chlorophenyl-phenylether	460	U
638-32-9	bis(2-Chloroisopropyl)Ether	460	U	86-73-7	Fluorene	460	U
06-44-5	4-Methylphenol	160	J	100-10-6	4-Nitroaniline	2200	U
621-64-7	N-Nitroso-Di-n-Propylamine	460	U	534-52-1	4,6-Dinitro-2-Methylphenol	2200	U
7-72-1	Hexachloroethane	460	U	86-30-6	N-Nitrosodiphenylamine (1)	460	BU
8-95-3	Nitrobenzene	460	U	101-55-3	4-Bromophenyl-phenylether	460	U
78-59-1	Isophorone	210	J	118-74-1	Hexachlorobenzene	460	U
8-75-5	2-Nitrophenol	460	U	87-86-5	Pentachlorophenol	2200	U
05-67-9	2,4-Dimethylphenol	2000		85-01-8	Phenanthrene	96	J
65-85-0	Benzoic Acid	2200	U	120-12-7	Anthracene	460	U
111-91-1	bis(2-Chloroethoxy)Methane	460	U	84-74-2	Di-n-Butylphthalate	460	U
20-83-2	2,4-Dichlorophenol	460	U	206-44-0	Fluoranthene	74	J
20-82-1	1,2,4-Trichlorobenzene	460	U	129-00-0	Pyrene	110	J
91-20-3	Naphthalene	810		85-68-7	Butylbenzylphthalate	460	U
06-47-8	4-Chloroaniline	460	U	91-94-1	3,3'-Dichlorobenzidine	920	U
7-68-3	Hexachlorobutadiene	460	U	56-55-3	Benzo(a)Anthracene	460	U
59-50-7	4-Chloro-3-Methylphenol	460	U	117-81-7	bis(2-Ethylhexyl)Phthalate	130	J
1-57-6	2-Methylnaphthalene	240	J	218-01-9	Chrysene	460	U
7-47-4	Hexachlorocyclopentadiene	460	U	117-84-0	Di-n-Octyl Phthalate	460	U
88-06-2	2,4,6-Trichlorophenol	460	U	205-99-2	Benzo(b)Fluoranthene	460	U
95-95-4	2,4,5-Trichlorophenol	2200	U	207-08-9	Benzo(k)Fluoranthene	460	U
1-58-7	2-Chloronaphthalene	460	U	50-32-8	Benzo(a)Pyrene	460	U
88-74-4	2-Nitroaniline	2200	U	193-39-5	Indeno(1,2,3-cd)Pyrene	460	U
131-11-3	Dimethyl Phthalate	460	U	53-70-3	Dibenz(a,h)Anthracene	460	U
208-96-8	Acenaphthylene	460	U	191-24-2	Benzo(g,h,i)Perylene	460	U
99-09-2	3-Nitroaniline	2200	U				

(1) - Cannot be separated from diphenylamine

Form I

86880013

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES008

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1217I03R
CORR. FACTOR: 1700.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
8-82-8	BENZENE, (1-METHYLETHYL)-	867	58000

86880015

Sample Number
ES007

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP. Case No: 8688
Lab Sample ID No: 8712174 QC Report No:
Sample Matrix: SOIL Contract No: 68-01-7142
Data Release Authorized By: [illegible] Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/16/87
Conc/Dil Factor: 1. pH 7.52
Percent Moisture: (Not Decanted) 21.9

CAS Number		ug/Kg		CAS Number		ug/Kg	
74-87-3	Chloromethane	1300	U	78-87-5	1,2-Dichloropropane	640	U
74-83-9	Bromomethane	1300	U	10061-02-6	Trans-1,3-Dichloropropene	640	U
75-01-4	Vinyl Chloride	1300	U	79-01-6	Trichloroethene	1100	
75-00-3	Chloroethane	1300	U	124-48-1	Dibromochloromethane	640	U
75-09-2	Methylene Chloride	5500		79-00-5	1,1,2-Trichloroethane	640	U
67-64-1	Acetone	3900	B	71-43-2	Benzene	640	U
75-15-0	Carbon Disulfide	640	U	10061-01-5	cis-1,3-Dichloropropene	640	U
75-35-4	1,1-Dichloroethene	640	U	110-75-8	2-Chloroethylvinylether	1300	U
75-35-3	1,1-Dichloroethane	120	J	75-25-2	Bromoform	640	U
156-60-5	Trans-1,2-Dichloroethene	640	U	108-10-1	4-Methyl-2-Pentanone	1300	U
67-66-3	Chloroform	640	U	591-78-6	2-Hexanone	1300	U
107-06-2	1,2-Dichloroethane	640	U	127-18-4	Tetrachloroethene	170	J
78-93-3	2-Butanone	11000		79-34-5	1,1,2,2-Tetrachloroethane	1300	U
71-55-6	1,1,1-Trichloroethane	3000		108-88-3	Toluene	14000	B
56-23-5	Carbon Tetrachloride	470	J	108-90-7	Chlorobenzene	640	U
108-05-4	Vinyl Acetate	1300	U	100-41-4	Ethylbenzene	1300	B
75-27-4	Bromodichloromethane	640	U	100-42-5	Styrene	640	U
					Total Xylenes	100000	B

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Form I

86880016

ratory Name: ACUREX CORP.

No: 8688

Sample Number
ES009

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

centration: LOW

Date Extracted/Prepared: 12/15/87

Analyzed: 12/17/87

Dil Factor: 1.

ercent Moisture: (Decanted) 21.9

GPC Cleanup __ Yes _X_ No

Separatory Funnel Extraction __ Yes

Continuous Liquid-Liquid Extraction __ Yes

Number		UG/KG		CAS Number		UG/KG	
8-95-2	Phenol	410	J	83-32-9	Acenaphthene	420	U
44-4	bis(2-Chloroethyl)Ether	420	U	51-28-5	2,4-Dinitrophenol	2000	U
7-8	2-Chlorophenol	420	U	100-02-7	4-Nitrophenol	2000	U
41-73-1	1,3-Dichlorobenzene	420	U	132-64-9	Dibenzofuran	59	J
46-7	1,4-Dichlorobenzene	420	U	121-14-2	2,4-Dinitrotoluene	420	U
51-6	Benzyl Alcohol	420	U	606-20-2	2,6-Dinitrotoluene	420	U
50-1	1,2-Dichlorobenzene	420	U	84-66-2	Diethylphthalate	420	U
5-48-7	2-Methylphenol	420	U	7005-72-3	4-Chlorophenyl-phenylether	420	U
8-32-9	bis(2-Chloroisopropyl)Ether	420	U	86-73-7	Fluorene	78	J
44-5	4-Methylphenol	420	U	100-10-6	4-Nitroaniline	2000	U
21-64-7	N-Nitroso-Di-n-Propylamine	420	U	534-52-1	4,6-Dinitro-2-Methylphenol	2000	U
72-1	Hexachloroethane	420	U	86-30-6	N-Nitrosodiphenylamine (1)	590	B
95-3	Nitrobenzene	420	U	101-55-3	4-Bromophenyl-phenylether	420	U
9-59-1	Isophorone	420	U	118-74-1	Hexachlorobenzene	420	U
5-75-5	2-Nitrophenol	420	U	87-86-5	Pentachlorophenol	2000	U
67-9	2,4-Dimethylphenol	450		85-01-8	Phenanthrene	740	
85-0	Benzoic Acid	2000	U	120-12-7	Anthracene	200	J
11-91-1	bis(2-Chloroethoxyl)Methane	420	U	84-74-2	Di-n-Butylphthalate	420	U
83-2	2,4-Dichlorophenol	420	U	206-44-0	Fluoranthene	650	
82-1	1,2,4-Trichlorobenzene	420	U	129-00-0	Pyrene	690	
1-20-3	Naphthalene	2300		85-68-7	Butylbenzylphthalate	420	U
47-8	4-Chloroaniline	420	U	91-94-1	3,3'-Dichlorobenzidine	850	U
68-3	Hexachlorobutadiene	420	U	56-55-3	Benzo(a)Anthracene	330	J
9-50-7	4-Chloro-3-Methylphenol	420	U	117-81-7	bis(2-Ethylhexyl)Phthalate	640	
1-57-6	2-Methylnaphthalene	1200		218-01-9	Chrysene	290	J
47-4	Hexachlorocyclopentadiene	420	U	117-84-0	Di-n-Octyl Phthalate	420	U
06-2	2,4,6-Trichlorophenol	420	U	205-99-2	Benzo(b)Fluoranthene	420	U
5-95-4	2,4,5-Trichlorophenol	2000	U	207-08-9	Benzo(k)Fluoranthene	420	U
68-7	2-Chloronaphthalene	420	U	50-32-8	Benzo(a)Pyrene	420	U
74-4	2-Nitroaniline	2000	U	193-39-5	Indeno(1,2,3-cd)Pyrene	420	U
31-11-3	Dimethyl Phthalate	420	U	53-70-3	Dibenz(a,h)Anthracene	420	U
96-8	Acenaphthylene	420	U	191-24-2	Benzo(g,h,i)Perylene	420	U
09-2	3-Nitroaniline	2000	U				

1) - Cannot be separated from diphenylamine

Form 1

86880014

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES008

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1217C03
CORR. FACTOR: 46.30

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
	BENZENE, ~~ETHYL-~~ C_2-Substituted- SOR	309	9300
	BENZENE, ~~1,3~~ SOR-DIMETHYL-	327	31000
	BENZENE, ~~1,3~~ SOR-DIMETHYL-	366	3600
	BENZENE, (~~1-METHYLETHYL~~)- C_3 Substituted- SOR	428	21000
	BENZENE, ~~1~~ SOR-ETHYL-~~2~~ SOR-METHYL-	488	1600
	~~3-PENTANONE, 2,2,4,4-TETRAMETHYL-~~ Substituted Ketone SOR	505	1000
	BENZENE, ~~1,2,4~~ SOR-TRIMETHYL-	541	1600
	~~CYCLOHEXANONE, 3,3,5-TRIMETHYL-~~ Unknown Ketone SOR	615	5800
	UNKNOWN	638	1200
	BENZENE, ~~2~~ SOR-ETHYL-~~1,4~~ SOR-DIMETHYL-	643	420
	BENZENE, ~~2~~ SOR-ETHYL-~~1,4~~ SOR-DIMETHYL-	682	840
	PHENOL, ~~2,3-DIMETHYL-~~ C_2-Substituted- SOR	796	310
	UNKNOWN	1628	3200
	UNKNOWN	1638	4600
	~~HEXANEDIOIC ACID, MONO(2-ETHYLHEXYL)ESTER~~ Unknown SOR	1863	4000
	UNKNOWN	2413	7600
	UNKNOWN	2433	1600

86880093

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES009

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Low
Date Extracted/prep. 12/16/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 22%

GPC Cleanup ND
Sep Funnel Extraction ND
Continuous Liquid-Liquid Extraction ND

Cas Number		ug/Kg	
319-84-8	Alpha BHC	20	U
319-85-7	Beta BHC	20	U
319-86-8	Delta BHC	20	U
58-89-9	Gamma BHC	20	U
76-44-8	Heptachlor	20	U
309-00-2	Aldrin	20	U
1024-57-3	Heptachlor Epoxide	20	U
959-98-8	Endosulfan I	20	U
60-57-1	Dieldrin	41	U
72-55-9	4,4'-DDE	41	U
72-20-8	Endrin	41	U
33213-65-9	Endosulfan II	41	U
72-54-8	4,4'DDD	41	U
1031-07-8	Endosulfan Sulfate	41	U
50-29-3	4,4'-DDT	41	U
72-43-5	Methoxychlor	205	U
53494-70-5	Endrin Ketone	41	U
57-74-9	Chlordane	205	U
8001-35-2	Toxaphene	410	U
12674-11-2	Aroclor 1016	205	U
11104-28-2	Aroclor 1221	205	U
11141-16-5	Aroclor 1232	205	U
53469-21-9	Aroclor 1242	205	U
12672-29-6	Aroclor 1248	410	U
11097-69-1	Aroclor 1254	410	U
11096-82-5	Aroclor 1260	410	U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.03 Vt 1000 Vi 2

FORM 1

86880017

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES009

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1217I04R
CORR. FACTOR: 160.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
7447-25-4	HEXANE, 2,2,3-TRIMETHYL-	262	5400
110-54-3	HEXANE (DOT)	282	16000
3722-39-3	OXIRANE, (1-METHYLBUTYL)-	322	5200
589-34-4	HEXANE, 3-METHYL-	389	1500
142-82-5	HEPTANE (DOT)	427	1800
108-87-2	CYCLOHEXANE, METHYL-	469	1400
592-27-8	HEPTANE, 2-METHYL-	540	940
111-65-9	OCTANE (DOT)	602	950
124-18-5	DECANE	966	1100
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	999	1100
1078-65-9	1-DECANOL, 2-ETHYL-	1137	1600

86880018

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES009

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1217C04
CORR. FACTOR: 42.70

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
100-41-4	BENZENE, ~~ETHYL-~~ ~~C_2~~ Ethyl-	307	9100
	~~CYCLOPENTENE, 1-ETHENYL-3-METHYLENE-~~ C_2-Substituted Benzene	328	42000
	BENZENE, ~~1,3-~~DIMETHYL-	368	15000
	BENZENE, (~~1-METHYLETHYL~~)- C_2-Substituted	422	1300
	BENZENE, ~~1-~~ETHYL-~~2-~~METHYL-	488	3400
	~~3-PENTANONE, 2,2,4,4-TETRAMETHYL-~~ Unknown ketone	505	1800
	BENZENE, ~~1,2,4-~~TRIMETHYL-	542	3900
124-18-5	DECANE	556	1500
	BENZENE, ~~1,2,4-~~TRIMETHYL-	587	1600
	~~CYCLOHEXANONE, 3,3,5-TRIMETHYL-~~ Unknown ketone	616	6800
	BENZENE, ~~1-~~METHYL-~~2-~~PROPYL-	633	1300
	UNKNOWN	639	3100
	BENZENE, ~~2-~~ETHYL-~~1,4-~~DIMETHYL-	644	1900
	BENZENE, ~~2-~~ETHYL-~~1,4-~~DIMETHYL-	671	2800
	BENZENE, ~~2-~~ETHYL-~~1,4-~~DIMETHYL-	683	2900
	~~UNDECANE~~ aliphatic hydrocarbon	706	2100
	BENZENE, ~~2-ETHYL-1,4-DIMETHYL-~~ C_4 Substituted-	725	1900
	BENZENE, ~~1,2,3,5-~~TETRAMETHYL-	732	2600
	BENZENE, ~~1,4-~~DIETHYL-	774	1100

ONLY 5 INTERNAL STANDARDS USED TO QUANTITATE

86880219

Sample Number
ES010

ORGANICS ANALYSIS DATA SHEET
(Page 1)

aboratory Name: ACUREX CORP. Case No: 8688
a Sample ID No: 8712175 QC Report No:
a le Matrix: SOIL Contract No: 68-01-7142
ata Release Authorized By: Kissler Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/21/87
Dil Factor: 500 pH 8.23
Percent Moisture: (Not Decanted) 21.0

AS Number		ug/Kg	CAS Number		ug/Kg
4-87-3	Chloromethane	630000U	78-87-5	1,2-Dichloropropane	320000U
4 3-9	Bromomethane	630000U	10061-02-6	Trans-1,3-Dichloropropene	320000U
5 01-4	Vinyl Chloride	630000U	79-01-6	Trichloroethene	260000J
5-00-3	Chloroethane	630000U	124-48-1	Dibromochloromethane	320000U
5 9-2	Methylene Chloride	320000U	79-00-5	1,1,2-Trichloroethane	320000U
7 4-1	Acetone	1.3E6 B	71-43-2	Benzene	320000U
5-15-0	Carbon Disulfide	320000U	10061-01-5	cis-1,3-Dichloropropene	320000U
5 5-4	1,1-Dichloroethene	320000U	110-75-8	2-Chloroethylvinylether	630000U
5 5-3	1,1-Dichloroethane	320000U	75-25-2	Bromoform	320000U
56-60-5	Trans-1,2-Dichloroethene	320000U	108-10-1	4-Methyl-2-Pentanone	630000U
7-66-3	Chloroform	320000U	591-78-6	2-Hexanone	630000U
0 06-2	1,2-Dichloroethane	320000U	127-18-4	Tetrachloroethene	88000 J
8 3-3	2-Butanone	2.5E6	79-34-5	1,1,2,2-Tetrachloroethane	630000U
1-55-6	1,1,1-Trichloroethane	370000	108-88-3	Toluene	5.1E6 B
3-5	Carbon Tetrachloride	64000 J	108-90-7	Chlorobenzene	320000U
0 05-4	Vinyl Acetate	630000U	100-41-4	Ethylbenzene	810000B
5-27-4	Bromodichloromethane	320000U	100-42-5	Styrene	320000U
				Total Xylenes	2.3E7 B

B - Compound was detected in the QC blank.
- Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data porting qualifiers.

Form I

86880020

oratory Name: ACURE) CORP.
e No: 8688

Sample Number
ES010

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared: 12/15/87
e Analyzed: 01/06/88
nc/Dil Factor: 1.
Percent Moisture: (Decanted) 21.0

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

S Number		UG/KG	CAS Number		UG/KG
108-95-2	Phenol	25000 U	83-32-9	Acenaphthene	13000 J
1-44-4	bis(2-Chloroethyl)Ether	25000 U	51-28-5	2,4-Dinitrophenol	120000U
-57-8	2-Chloronenol	25000 U	100-02-7	4-Nitrophenol	120000U
541-73-1	1,3-Dichlorobenzene	25000 U	132-64-9	Dibenzofuran	9200 J
106-46-7	1,4-Dichlorobenzene	25000 U	121-14-2	2,4-Dinitrotoluene	25000 U
0-51-6	Benzyl Alcohol	25000 U	606-20-2	2,6-Dinitrotoluene	25000 U
-50-1	1,2-Dichlorobenzene	25000 U	84-66-2	Diethylphthalate	25000 U
95-48-7	2-Methylphenol	25000 U	7005-72-3	4-Chlorophenyl-phenylether	25000 U
638-32-9	bis(2-Chloroisopropyl)Ether	25000 U	86-73-7	Fluorene	14000 J
6-44-5	4-Methylphenol	11000 J	100-10-6	4-Nitroaniline	120000U
621-64-7	N-Nitroso-Di-n-Propylamine	25000 U	534-52-1	4,6-Dinitro-2-Methylphenol	120000U
7-72-1	Hexachloroethane	25000 U	86-30-6	N-Nitrosodiphenylamine (1)	14000 BJ
-95-3	Nitrobenzene	25000 U	101-55-3	4-Bromophenyl-phenylether	25000 U
78-59-1	Isophorone	21000 J	118-74-1	Hexachlorobenzene	25000 U
88-75-5	2-Nitrophenol	25000 U	87-86-5	Pentachlorophenol	120000U
5-67-9	2,4-Dimethylphenol	25000 U	85-01-8	Phenanthrene	84000
-85-0	Benzoic Acid	120000U	120-12-7	Anthracene	17000 J
111-91-1	bis(2-Chloroethoxy)Methane	25000 U	84-74-2	Di-n-Butylphthalate	37000
0-83-2	2,4-Dichlorophenol	25000 U	206-44-0	Fluoranthene	63000
0-82-1	1,2,4-Trichlorobenzene	25000 U	129-00-0	Pyrene	58000
91-20-3	Naphthalene	42000	85-68-7	Butylbenzylphthalate	6100 J
6-47-8	4-Chloroaniline	25000 U	91-94-1	3,3'-Dichlorobenzidine	50000 U
-68-3	Hexachlorobutadiene	25000 U	56-55-3	Benzo(a)Anthracene	29000
59-50-7	4-Chloro-3-Methylphenol	25000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	240000
91-57-6	2-Methylnaphthalene	23000 J	218-01-9	Chrysene	26000
-47-4	Hexachlorocyclopentadiene	25000 U	117-84-0	Di-n-Octyl Phthalate	88000
-06-2	2,4,6-Trichlorophenol	25000 U	205-99-2	Benzo(b)Fluoranthene	34000
95-95-4	2,4,5-Trichlorophenol	120000U	207-08-9	Benzo(k)Fluoranthene	25000 U
-58-7	2-Chloronaphthalene	25000 U	50-32-8	Benzo(a)Pyrene	20000 J
-74-4	2-Nitroaniline	120000U	193-39-5	Indeno(1,2,3-cd)Pyrene	12000 J
131-11-3	Dimethyl Phthalate	25000 U	53-70-3	Dibenz(a,h)Anthracene	25000 U
8-96-8	Acenaphthylene	25000 U	191-24-2	Benzo(g,h,i)Perylene	12000 J
-09-2	3-Nitroaniline	120000U			

(1) - Cannot be separated from diphenylamine

Form I

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES010

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 21%

GPC Cleanup ND
Sep Funnel Extraction ND
Continuous Liquid-Liquid Extraction ND

Cas Number		ug/kg	
319-84-8	Alpha BHC	304	U
319-85-7	Beta BHC	304	U
319-86-8	Delta BHC	304	U
58-89-9	Gamma BHC	304	U
76-44-8	Heptachlor	304	U
309-00-2	Aldrin	304	U
1024-57-3	Heptachlor Epoxide	304	U
959-98-8	Endosulfan I	304	U
60-57-1	Dieldrin	608	U
72-55-9	4,4'-DDE	608	U
72-20-8	Endrin	608	U
33213-65-9	Endosulfan II	608	U
72-54-8	4,4'DDD	608	U
1031-07-8	Endosulfan Sulfate	608	U
50-29-3	4,4'-DDT	608	U
72-43-5	Methoxychlor	3038	U
53494-70-5	Endrin Ketone	608	U
57-74-9	Chlordane	18000	
8001-35-2	Toxaphene	6076	U
12674-11-2	Aroclor 1016	3038	U
11104-28-2	Aroclor 1221	3038	U
11141-16-5	Aroclor 1232	3038	U
53469-21-9	Aroclor 1242	3038	U
12672-29-6	Aroclor 1248	63000	
11097-69-1	Aroclor 1254	6076	U
11096-82-5	Aroclor 1260	6076	U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

86880021

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES010

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1217I05
CORR. FACTOR: 79400.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
96-14-0	PENTANE, 3-METHYL-	280	1000000
96-37-7	CYCLOPENTANE, METHYL-	319	460000
124-18-5	DECANE	962	510000
1120-21-4	UNDECANE	1133	430000

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES010

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1217C05
CORR. FACTOR: 1270.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
95-47-6 ~~108-38-3~~	BENZENE, 1,2-DIMETHYL-	362	53000
1758-88-9	BENZENE, 2-ETHYL-1,4-DIMETHYL-	682	27000
17302-23-7	NONANE, 4,5-DIMETHYL- ← hydrocarbons	706	31000
61141-72-8	DODECANE, 4,6-DIMETHYL- ←	1061	77000
569-41-5	NAPHTHALENE, 1,8-DIMETHYL-	1083	22000
544-76-3	HEXADECANE ← hydrocarbons	1123	22000
17301-32-5	UNDECANE, 4,7-DIMETHYL- ←	1161	80000
~~629-78-7~~ N	UNKNOWN	1254	74000
629-78-7	HEPTADECANE	1343	33000
	UNKNOWN	1427	30000
	UNKNOWN	1507	33000
	UNKNOWN	1836	19000
	UNKNOWN	1910	23000
3648-21-3	1,2-BENZENEDICARBOXYLIC ACID, DIHEPTYL ESTER	1951	20000
	1,2-BENZENEDICARBOXYLIC ACID, DIHEPTYL ESTER	2021	19000
	1,2-BENZENEDICARBOXYLIC ACID, DIHEPTYL ESTER	2132	29000
	1,2-BENZENEDICARBOXYLIC ACID, DIHEPTYL ESTER	2178	40000
	UNKNOWN	2190	26000
28553-12-0	1,2-BENZENEDICARBOXYLIC ACID, DIISONONYL EST	2297	46000

86880023

Sample Number
ES011

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP. Case No: 8688
U[redacted] Sample ID No: 8712176 QC Report No:
S[redacted]ple Matrix: SOIL Contract No: 68-01-7142
Data Release Authorized By: [signature] Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/21/87
Dil Factor: 1000 pH 7.68
Percent Moisture: (Not Decanted) 19.8

CAS Number		ug/Kg	CAS Number		ug/Kg
[redacted]-87-3	Chloromethane	1.2E6 U	78-87-5	1,2-Dichloropropane	620000U
[redacted]-83-9	Bromomethane	1.2E6 U	10061-02-6	Trans-1,3-Dichloropropene	620000U
75-01-4	Vinyl Chloride	1.2E6 U	79-01-6	Trichloroethene	160000J
75-00-3	Chloroethane	1.2E6 U	124-48-1	Dibromochloromethane	620000U
[redacted]-09-2	Methylene Chloride	~~620000U~~ 278000	79-00-5	1,1,2-Trichloroethane	620000U
67-64-1	Acetone	1.8E6 B	71-43-2	Benzene	620000U
75-15-0	Carbon Bisulfide	620000U	10061-01-5	cis-1,3-Dichloropropene	620000U
[redacted]-35-4	1,1-Dichloroethene	620000U	110-75-8	2-Chloroethylvinylether	1.2E6 U
[redacted]-35-3	1,1-Dichloroethane	620000U	75-25-2	Bromoform	620000U
156-60-5	Trans-1,2-Dichloroethene	620000U	108-10-1	4-Methyl-2-Pentanone	1.2E6 U
[redacted]-66-3	Chloroform	620000U	591-78-6	2-Hexanone	1.2E6 U
[redacted]7-06-2	1,2-Dichloroethane	620000U	127-18-4	Tetrachloroethene	620000U
78-93-3	2-Butanone	2.3E6	79-34-5	1,1,2,2-Tetrachloroethane	1.2E6 U
71-55-6	1,1,1-Trichloroethane	250000J	108-88-3	Toluene	3.4E6 B
[redacted]-23-5	Carbon Tetrachloride	620000U	108-90-7	Chlorobenzene	620000U
108-05-4	Vinyl Acetate	1.2E6 U	100-41-4	Ethylbenzene	730000
75-27-4	Bromodichloromethane	620000U	100-42-5	Styrene	620000BU
				Total Xylenes	1.9E7 B

[redacted]B - Compound was detected in the QC blank.
[redacted]J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Form I

86880024

ratory Name: ACUREX CORP.

Mc: 8688

Sample Number
ES011

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

ontentration: MED

ate Extracted/Prepared: 12/15/87

Analyzed: 01/06/88

/Dil Factor: 1.

ercent Moisture: (Decanted) 19.8

GPC Cleanup ___ Yes X No

Separatory Funnel Extraction ___ Yes

Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/KG	CAS Number		UG/KG
08-95-2	Phenol	28000	83-32-9	Acenaphthene	2000 J
11-44-4	bis(2-Chloroethyl)Ether	25000 U	51-28-5	2,4-Dinitrophenol	120000U
7-8	2-Chlorophenol	25000 U	100-02-7	4-Nitrophenol	120000U
73-1	1,3-Dichlorobenzene	25000 U	132-64-9	Dibenzofuran	11000 J
106-46-7	1,4-Dichlorobenzene	25000 U	121-14-2	2,4-Dinitrotoluene	25000 U
51-6	Benzyl Alcohol	25000 U	606-20-2	2,6-Dinitrotoluene	25000 U
0-1	1,2-Dichlorobenzene	25000 U	84-66-2	Diethylphthalate	25000 U
95-48-7	2-Methylphenol	25000 U	7005-72-3	4-Chlorophenyl-phenylether	25000 U
8-32-9	bis(2-Chloroisopropyl)Ether	25000 U	86-73-7	Fluorene	13000 J
44-5	4-Methylphenol	25000 U	100-10-6	4-Nitroaniline	120000U
21-64-7	N-Nitroso-Di-n-Propylamine	25000 U	534-52-1	4,6-Dinitro-2-Methylphenol	120000U
67-72-1	Hexachloroethane	25000 U	86-30-6	~~N-Nitrosodiphenylamine (1)~~	~~25000 BU~~
5-3	Nitrobenzene	25000 U	101-55-3	4-Bromophenyl-phenylether	25000 U
9-1	Isophorone	30000	118-74-1	Hexachlorobenzene	25000 U
8-75-5	2-Nitrophenol	25000 U	87-86-5	Pentachlorophenol	120000U
67-9	2,4-Dimethylphenol	25000 U	85-01-8	Phenanthrene	51000
5-0	Benzoic Acid	120000U	120-12-7	Anthracene	9000 J
111-91-1	bis(2-Chloroethoxy)Methane	25000 U	84-74-2	Di-n-Butylphthalate	33000
83-2	2,4-Dichlorophenol	25000 U	206-44-0	Fluoranthene	27000
82-1	1,2,4-Trichlorobenzene	25000 U	129-00-0	Pyrene	20000 J
91-20-3	Naphthalene	170000	85-68-7	Butylbenzylphthalate	7400 J
106-47-8	4-Chloroaniline	25000 U	91-94-1	3,3'-Dichlorobenzidine	49000 U
8-3	Hexachlorobutadiene	25000 U	56-55-3	Benzo(a)Anthracene	9000 J
59-50-7	4-Chloro-3-Methylphenol	25000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	250000
91-57-6	2-Methylnaphthalene	46000	218-01-9	Chrysene	9200 J
77-7-4	Hexachlorocyclopentadiene	25000 U	117-84-0	Di-n-Octyl Phthalate	88000
6-2	2,4,6-Trichlorophenol	25000 U	205-99-2	Benzo(b)Fluoranthene	6800 J
95-95-4	2,4,5-Trichlorophenol	120000U	207-08-9	Benzo(k)Fluoranthene	7200 J
58-7	2-Chloronaphthalene	25000 U	50-32-8	Benzo(a)Pyrene	7000 J
4-4	2-Nitroaniline	120000U	193-39-5	Indeno(1,2,3-cd)Pyrene	3400 J
131-11-3	Dimethyl Phthalate	25000 U	53-70-3	Dibenz(a,h)Anthracene	25000 U
208-96-8	Acenaphthylene	2100 J	191-24-2	Benzo(g,h,i)Perylene	3100 J
9-2	3-Nitroaniline	120000			

) - Cannot be separated from diphenylamine

Form I

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES011

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 20%

GPC Cleanup ND
Sep Funnel Extraction ND
Continuous Liquid-Liquid Extraction ND

Cas Number		ug/kg	
319-84-8	Alpha BHC	299	U
319-85-7	Beta BHC	299	U
319-86-8	Delta BHC	299	U
58-89-9	Gamma BHC	299	U
76-44-8	Heptachlor	299	U
309-00-2	Aldrin	299	U
1024-57-3	Heptachlor Epoxide	299	U
959-98-8	Endosulfan I	299	U
60-57-1	Dieldrin	599	U
72-55-9	4,4'-DDE	599	U
72-20-8	Endrin	599	U
33213-65-9	Endosulfan II	599	U
72-54-8	4,4'DDD	599	U
1031-07-8	Endosulfan Sulfate	599	U
50-29-3	4,4'-DDT	599	U
72-43-5	Methoxychlor	2993	U
53494-70-5	Endrin Ketone	599	U
57-74-9	Chlordane	3600	
8001-35-2	Toxaphene	5985	U
12674-11-2	Aroclor 1016	2993	U
11104-28-2	Aroclor 1221	2993	U
11141-16-5	Aroclor 1232	2993	U
53469-21-9	Aroclor 1242	2993	U
12672-29-6	Aroclor 1248	2993	U
11097-69-1	Aroclor 1254	5985	U
11096-82-5	Aroclor 1260	5985	U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

86880025

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: E5011

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1217I06
CORR. FACTOR: 156000.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ES003

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: E0758

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 5556

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 22. Date Analyzed: 12/ 4/87

Column: (pack/cap) PACK 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 HYDRC	18.87	7.	J
2. - -	UNKNOWN	19.49	4.	J
3. - -	UNKNOWN	20.62	4.	J
4. 565-59-3	Pentane, 2,3-dimethyl- (8C19	20.81	20.	J
5. 617-78-7	Pentane, 3-ethyl- (8C19CI)	21.16	8.	J
6. 589-34-4	Hexane, 3-methyl- (8C19CI)	22.13	40.	J
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ES003

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 29. (g/mL) G Lab File ID: 16280

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 22. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: .1000

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN COMPOUND	17.07	7000.	J
2.	- -	UNKNOWN PNA	19.30	7000.	J
3.	00-00-0	PHENANTHRENE, METHYL-	19.77	20000.	J
4.	00-00-0	ANTHRACENE, METHYL-	19.85	6000.	J
5.	00-00-0	PHENANTHRENE, METHYL-	19.95	20000.	J
6.	00-00-0	NAPHTHALENE, PHENYL-	20.35	10000.	J
7.	00-00-0	PHENANTHRENE, DIMETHYL-	20.95	6000.	J
8.	- -	UNKNOWN COMPOUND	21.12	10000.	J
9.	- -	UNKNOWN PNA	22.27	8000.	J
10.	- -	UNKNOWN PNA	22.50	10000.	J
11.	- -	UNKNOWN PNA	22.73	10000.	J
12.	- -	UNKNOWN PNA	23.00	10000.	J
13.	82-05-3	7H-BENZ[DE]ANTHRACEN-7-ONE	23.65	7000.	J
14.	- -	UNKNOWN COMPOUND	23.90	7000.	J
15.	- -	UNKNOWN PNA	23.97	10000.	J
16.	- -	UNKNOWN PNA	25.45	7000.	J
17.	- -	UNKNOWN PNA	25.77	8000.	J
18.	205-82-3	BENZO[J]FLUORANTHENE	27.48	20000.	J
19.	- -	UNKNOWN PNA	28.03	60000.	J
20.	- -	UNKNOWN PNA	28.47	20000.	J
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES004

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/ml) G Lab File ID: 5559

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 27. Date Analyzed: 12/ 4/87

Column: (packed/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	14.	U
74-83-9	BROMOMETHANE	14.	U
75-01-4	VINYL CHLORIDE	14.	U
75-00-3	CHLOROETHANE	14.	U
75-09-2	METHYLENE CHLORIDE	11.	
67-64-1	ACETONE	250.	
75-15-0	CARBON DISULFIDE	20.	
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	30.	
71-55-6	1,1,1-TRICHLOROETHANE	7.	U
56-23-5	CARBON TETRACHLORIDE	7.	U
108-05-4	VINYL ACETATE	14.	U
75-27-4	BROMODICHLOROMETHANE	7.	U
78-87-5	1,2-DICHLOROPROPANE	7.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	7.	U
79-01-6	TRICHLOROETHENE	5.	J
124-48-1	DIBROMOCHLOROMETHANE	7.	U
79-00-5	1,1,2-TRICHLOROETHANE	7.	U
71-43-2	BENZENE	18.	
10061-01-5	CIS-1,3-DICHLOROPROPENE	7.	U
75-25-2	BROMOFORM	7.	U
108-10-1	4-METHYL-2-PENTANONE	14.	U
591-78-6	2-HEXANONE	14.	U
127-18-4	TETRACHLOROETHENE	55.	
79-34-5	1,1,2,2-TETRACHLOROETHANE	7.	U
108-88-3	TOLUENE	250.	
108-90-7	CHLOROBENZENE	7.	U
100-41-4	ETHYLBENZENE	470.	
100-42-5	STYRENE	7.	U
1330-20-7	XYLENES (TOTAL)	195.	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES004 RE

ab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1. (g/mL) G Lab File ID: 5833

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 27. Date Analyzed: 12/20/87

Column: (pack/cap) PACK Dilution Factor: 5.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	68.	U
74-83-9	BROMOMETHANE	68.	U
75-01-4	VINYL CHLORIDE	68.	U
75-00-3	CHLOROETHANE	68.	U
75-09-2	METHYLENE CHLORIDE	200.	
67-64-1	ACETONE	66.	J
75-15-0	CARBON DISULFIDE	34.	U
75-35-4	1,1-DICHLOROETHENE	34.	U
75-34-3	1,1-DICHLOROETHANE	34.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	34.	U
67-66-3	CHLOROFORM	34.	U
107-06-2	1,2-DICHLOROETHANE	34.	U
78-93-3	2-BUTANONE	68.	U
71-55-6	1,1,1-TRICHLOROETHANE	34.	U
56-23-5	CARBON TETRACHLORIDE	34.	U
108-05-4	VINYL ACETATE	68.	U
75-27-4	BROMODICHLOROMETHANE	34.	U
78-87-5	1,2-DICHLOROPROPANE	34.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	34.	U
79-01-6	TRICHLOROETHENE	34.	U
124-48-1	DIBROMOCHLOROMETHANE	34.	U
79-00-5	1,1,2-TRICHLOROETHANE	34.	U
71-43-2	BENZENE	34.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	34.	U
75-25-2	BROMOFORM	34.	U
108-10-1	4-METHYL-2-PENTANONE	68.	U
591-78-6	2-HEXANONE	68.	U
127-18-4	TETRACHLOROETHENE	16.	J
79-34-5	1,1,2,2-TETRACHLOROETHANE	34.	U
108-88-3	TOLUENE	92.	
108-90-7	CHLOROBENZENE	34.	U
100-41-4	ETHYLBENZENE	69.	
100-42-5	STYRENE	34.	U
1330-20-7	XYLENES (TOTAL)	34.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES004

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 16281

Level: (low/med) LOW Date Received: 12/ 4/87

Moisture: not dec. 27. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-------C315	PHENOL*	4500.	U
111-44-4-------C325	BIS(2 CHLOROETHYL)ETHE	4500.	U
95-57-8-------C330	2-CHLOROPHENOL	4500.	U
541-73-1-------C335	1,3-DICHLOROBENZENE	4500.	U
106-46-7-------C340	1,4-DICHLOROBENZENE*	4500.	U
100-51-6-------C345	BENZYL ALCOHOL	4500.	U
95-50-1-------C350	1,2-DICHLOROBENZENE	4500.	U
95-48-7-------C355	2-METHYLPHENOL	4500.	U
108-60-1-------C360	BIS(2-CHLOROISOPROPYL)	4500.	U
106-44-5-------C365	4-METHYLPHENOL	4500.	U
621-64-7-------C370	N-NITROSO-DI-N-PROPYLA	4500.	U
67-72-1-------C375	HEXACHLOROETHANE	4500.	U
98-95-3-------C410	NITROBENZENE	4500.	U
78-59-1-------C415	ISOPHORONE	4500.	U
88-75-5-------C420	2-NITROPHENOL*	4500.	U
105-67-9-------C425	2,4-DIMETHYLPHENOL	4500.	U
65-85-0-------C430	BENZOIC ACID	23000.	U
111-91-1-------C435	BIS(2-CHLOROETHOXY)MET	4500.	U
120-83-2-------C440	2,4-DICHLOROPHENOL*	4500.	U
120-82-1-------C445	1,2,4-TRICHLOROBENZENE	4500.	U
91-20-3-------C450	NAPHTHALENE	1900.	J
106-47-8-------C455	4-CHLOROANILINE	4500.	U
87-68-3-------C460	HEXACHLOROBUTADIENE*	4500.	U
59-50-7-------C465	4-CHLORO-3-METHYLPHENO	4500.	U
91-57-6-------C470	2-METHYLNAPTHALENE	2100.	J
77-47-4-------C510	HEXACHLOROCYCLOPENTADI	4500.	U
88-06-2-------C515	2,4,6-TRICHLOROPHENOL*	4500.	U
95-95-4-------C520	2,4,5-TRICHLOROPHENOL	23000.	U
91-58-7-------C525	2-CHLORONAPHTHALENE	4500.	U
88-74-4-------C530	2-NITROANILINE	23000.	U
131-11-3-------C535	DIMETHYL PHTHALATE	4500.	U
208-96-8-------C540	ACENAPHTHYLENE	4500.	U
606-20-2-------C545	2,6-DINITROTOLUENE	4500.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES004

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 16281

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 27. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: .1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2-------C545	3-NITROANILINE	23000.	U
83-32-9-------C550	ACENAPTHENE*	2100.	J
51-28-5-------C555	2,4-DINITROPHENOL**	23000.	U
100-02-7-------C560	4-NITROPHENOL**	23000.	U
132-64-9-------C565	DIBENZOFURAN	1600.	J
121-14-2-------C570	2,4-DINITROTOLUENE	4500.	U
84-66-2-------C580	DIETHYL PHTHALATE	4500.	U
7005-72-3-------C585	4-CHLOROPHENYL PHENYL	4500.	U
86-73-7-------C590	FLUORENE	3100.	J
100-01-6-------C595	4-NITROANILINE	23000.	U
534-52-1-------C610	4,6-DINITRO-2-METHYLPH	4500.	U
86-30-6-------C615	N-NITROSODIPHENYLAMINE	23000.	U
101-55-3-------C625	4-BROMOPHENYL PHENYL E	4500.	U
118-74-1-------C630	HEXACHLOROBENZENE	4500.	U
87-86-5-------C635	PENTACHLOROPHENOL*	23000.	U
85-01-8-------C640	PHENANTHRENE	21000.	
120-12-7-------C645	ANTHRACENE	5900.	
84-74-2-------C650	DI-N-BUTYL PHTHALATE	4500.	U
206-44-0-------C655	FLUORANTHENE*	25000.	
129-00-0-------C715	PYRENE	26000.	
85-68-7-------C720	BUTYL BENZYL PHTHALATE	4500.	U
91-94-1-------C725	3,3'-DICHLOROBENZIDINE	9100.	U
56-55-3-------C730	BENZO(A)ANTHRACENE	15000.	
218-01-9-------C740	CHRYSENE	18000.	
117-81-7-------C745	BIS(2-ETHYLHEXYL)PHTHA	41000.	
117-84-0-------C760	DI-N-OCTYLPHTHALATE*	4500.	U
205-99-2-------C765	BENZO(B)FLUORANTHENE	23000.	
207-08-9-------C770	BENZO(K)FLUORANTHENE	16000.	
50-32-8-------C775	BENZO(A)PYRENE*	18000.	
193-39-5-------C780	INDENO(1,2,3-CD)PYRENE	6200.	
53-70-3-------C785	DIBENZ(A,H)ANTHRACENE	2100.	J
191-24-2-------C790	BENZO(G,H,I)PERYLENE	5700.	

(1) - Cannot be separated from diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ES004

Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1. (g/mL) G Lab File ID: 16281

Level: (low/med) MED Date Received: 12/ 2/87

% Moisture: not dec. 27. dec. 27. Date Extracted: 1/ 6/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/ 6/88

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: .0100

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	ALPHA-BHC	750.	U
319-85-7	BETA-BHC	750.	U
319-86-8	DELTA-BHC	750.	U
58-89-9	GAMMA-BHC	750.	U
76-44-8	HEPTACHLOR	750.	U
309-00-2	ALDRIN	750.	U
1024-57-3	HEPTACHLOR EPOXIDE	750.	U
959-98-8	ENDOSULFAN I	750.	U
60-57-1	DIELDRIN	1500.	U
72-55-9	4,4'-DDE	1500.	U
72-20-8	ENDRIN	1500.	U
33213-65-9	ENDOSULFAN II	1500.	U
72-54-8	4,4'-DDD	1500.	U
1031-07-8	ENDOSULFAN SULFATE	1500.	U
50-29-3	4,4'-DDT	1500.	U
72-43-5	METHOXYCHLOR	7500.	U
53494-70-5	ENDRIN KETONE	1500.	U
5103-71-9	ALPHA CHLORDANE	7500.	U
5103-74-2	GAMMA CHLORDANE	7500.	U
8001-35-2	TOXAPHENE	15000.	U
12674-11-2	AROCLOR-1016	7500.	U
11104-28-2	AROCLOR-1221	7500.	U
11141-16-5	AROCLOR-1232	7500.	U
53469-21-9	AROCLOR-1242	7500.	U
12672-29-6	AROCLOR-1248	7500.	U
11097-69-1	AROCLOR-1254	15000.	U
11096-82-5	AROCLOR-1260	15000.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ES004 RE

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 1. (g/mL) G Lab File ID: 5833

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 27. Date Analyzed: 12/20/87

Column: (pack/cap) PACK Dilution Factor: 5.00

Number TICs found: 2

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	1.98	70.	J
2.	98-82-8	Benzene, (1-methylethyl)- (9	29.58	2000.	J
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.

ES004

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8655 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 5. (g/ml) G Lab File ID: 5559

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 27. Date Analyzed: 12/ 4/87

Column: (packed/cap) PACK Dilution Factor: 1.00

Number TICs found: 10 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	18.86	5.	J
2.	- -	UNKNOWN	19.64	8.	J
3.	- -	UNKNOWN HYDROCARBON	20.57	5.	J
4.	565-59-3	Pentane, 2,3-dimethyl- (8CI)	20.80	10.	J
5.	617-78-7	Pentane, 3-ethyl- (8CI,9CI)	21.15	7.	J
6.	589-34-4	Hexane, 3-methyl- (8CI,9CI)	22.16	40.	J
7.	- -	UNKNOWN HYDROCARBON	23.36	40.	J
8.	- -	UNKNOWN	26.30	30.	J
9.	98-82-8	Benzene, (1-methylethyl)- (9	29.99	7000.	J
10.	- -	UNKNOWN	32.08	60.	J
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ES004

Lab Name: AATS Contract: 68-01-7392

Lab Code: AATS Case No.: 8635 SAS No.: SDG No.: EQ758

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 16281

Level: (low/med) LOW Date Received: 12/ 4/87

% Moisture: not dec. 27. dec. 0. Date Extracted: 12/11/87

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 1/11/88

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: .1000

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	98-82-8	BENZENE, (1-METHYLETHYL)-	7.02	20000.	J
2.	629-59-4	TETRADECANE	14.18	4000.	J
3.	00-00-0	NAPHTHALENE, DIMETHYL-	14.63	5000.	J
4.	- -	UNKNOWN HYDROCARBON	14.93	5000.	J
5.	00-00-0	NAPHTHALENE, TRIMETHYL-	15.92	4000.	J
6.	- -	UNKNOWN PNA	16.08	4000.	J
7.	- -	UNKNOWN HYDROCARBON	16.43	9000.	J
8.	- -	UNKNOWN HYDROCARBON	16.95	7000.	J
9.	- -	UNKNOWN HYDROCARBON	17.47	8000.	J
10.	- -	UNKNOWN HYDROCARBON	17.53	9000.	J
11.	- -	UNKNOWN COMPOUND	18.10	3000.	J
12.	- -	UNKNOWN HYDROCARBON	18.45	6000.	J
13.	- -	UNKNOWN HYDROCARBON	19.38	7000.	J
14.	- -	UNKNOWN PNA	19.77	4000.	J
15.	- -	UNKNOWN PNA	19.95	4000.	J
16.	- -	UNKNOWN COMPOUND	20.27	4000.	J
17.	- -	UNKNOWN COMPOUND	20.77	3000.	J
18.	- -	UNKNOWN PNA	20.95	3000.	J
19.	- -	UNKNOWN HYDROCARBON	21.12	3000.	J
20.	- -	UNKNOWN PNA	22.50	3000.	J
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 1-21-88 FIT Receipt Date 2-26-88 Review Completed 2-29-88

TO: JEFF CARMAN
FROM: James Mertes
SUBJECT: U.S. SCRAP
PAN: IL0102VA (1 hour charged for review) Case # 8688

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 15	~~Low~~ MED Soil (3 were low soils) ES007, 008, 013	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status X Completed!!

Incomplete, awaiting

FIT Data Review Findings:

- Note the laboratory's & the reviewer's summary.
- Read Detection limits of individual OAD'S forms. due to dilutions, moisture content

Check Data Sheets for Transcription Errors

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

Book No. 7 Page No. 158 Date Sampled 12-3/4/7/8-87

See reissued data
several changes.

recycled paper

2/26
99 pages

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 5/22/88

SUBJECT: Review of Region V CLP Data
Received for Review on 1-21-88

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

TO: Data User: FIT

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

SITE NAME: U.S. Scrap SMO Case No. 8688

EPA Data Se SF 4721 No Sa: : 15 D.U./Activity Numbers Y905/C721Z8

CRL No. 88FC09S48-S

SMO Traffic ES006-015, 3. -371

CLP Laboratory: Acurex Hrs. Required for Review: [illegible]

PAN # FIL 0102 VA

Following are our findings: See attached review.

[illegible]

( ) Data are acceptable for use.
(x) 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)

U.S. Scrap | Acurex | February 12, 1988
PAN # FIL 0102 VA | | Case # 8688

This review regards 15 soil samples for which full organic analysis was requested. Acurex received the samples on December 8 and 9, 1987. All samples were run as medium concentration sasmples except for the ABN and pesticide fractions of samples ES007, 008, and 013 which were run as low concentration samples.

A. Holding Times- Acceptable

Some of the samples in the volatile and semi-volatile fractions were outside the required holding times; however, the quality of the data was not affected.

B. Surrogates- Acceptable

% Recoveries:	VOAs	0 out of 51	Outside QC limits
	SV	0 out of 126	Outside QC limits
	Pest.	3 out of 25	Outside QC limits

C. MS/MSD- Acceptable

% Recoveries:

medium	VOAs	0 out of 24	Outside QC limits
low	SV	0 out of 24	Outside QC limits
medium	SV	4 out of 48	Outside QC limits
low	Pest.	6 out of 12	Outside QC limits
medium	Pest.	5 out of 24	Outside QC limits

RPDs:

medium	VOAs	0 out of 12	Outside QC limits
low	SV	0 out of 12	Outside QC limits
medium	SV	5 out of 24	Outside QC limits
low	Pest.	2 out of 26	Outside QC limits
medium	Pest.	1 out of 12	Outside QC limits

D. Method Blank- Acceptable

Common lab artifacts included acetone, styrene, chloroform, toluene, ethylbenzene, xylene, and N-nitrosodiphenylamine.

E. Calibration- Acceptable

Compounds that are outside specifications are listed on the

COMPOUND									
dimethyl phthalate									
acenaphthylene							[illegible] J		
3-nitroaniline									
acenaphthene		[illegible] J				[illegible] J	[illegible] J		
2,4-dinitrophenol									
4-nitrophenol									
dibenzofuran					[illegible]	[illegible] J			
2,4-dinitrotoluene									
2,6-dinitrotoluene									
diethylphthalate									
4-chlorophenyl-phenylether									
fluorene		[illegible] J			[illegible]	[illegible] J	[illegible] J	[illegible] J	
4-nitroaniline									
4,6-dinitro-2-methylphenol									
N-nitrosodiphenylamine		[illegible]	[illegible]		[illegible]	[illegible]		[illegible]	
4-bromophenyl-phenylether									
hexachlorobenzene									
pentachlorophenol									
phenanthrene		[illegible]		[illegible] J	[illegible]	[illegible]	[illegible]	[illegible] J	[illegible] J
anthracene					[illegible] J	[illegible] J	[illegible] J		
di-n-butylphthalate						[illegible]	[illegible]	[illegible] J	[illegible] J
fluoranthene		[illegible]	[illegible] J	[illegible] J	[illegible]	[illegible]	[illegible]	[illegible] J	
benzidine									
pyrene		[illegible]	[illegible] J	[illegible] J	[illegible]	[illegible]	[illegible] J	700 J	
butylbenzylphthalate						[illegible] J	[illegible] J	4100 J	
3,3'-dichlorobenzidine									
b[illegible]anthracene		[illegible] J	[illegible] J		[illegible] J	[illegible]	[illegible] J		
b[illegible]thylhexyl)phthalate			230 J	130 J	[illegible]	[illegible]	[illegible]	58,000	1700
c[illegible]e			[illegible] J		[illegible]	[illegible]	[illegible] J		
d[illegible]tylphthalate						[illegible]	[illegible]	1500 J	
be[illegible]&k)fluoranthene		27000 J	[illegible] J			[illegible]	[illegible] J		
be[illegible]pyrene		14000 J	280 J			[illegible] J	[illegible] J		
i[illegible]1,2,3-cd)pyrene		[illegible] J				[illegible]	[illegible] J		
di[illegible]zo(a,h)anthracene									
benzo(g,h,i)perylene		[illegible] J				[illegible]	[illegible]		
alpha-BHC									
beta-BHC									
delta-BHC									
gamma-BHC(lindane)									
heptachlor									
aldrin									
heptachlor epoxide									
endosulfan I									
dieldrin									
4,4'-DDE									
endrin									
endosulfan II									
4,4'-DDD									
endrin aldehyde									
endosulfan sulfate									
4,4'-DDT									
methoxychlor									
endrin ketone									
chlordane						[illegible]	[illegible]	[illegible]	
toxaphene									
Aroclor-1016									
Aroclor-1221									
Aroclor-1232									
Aroclor-1242									
Aroclor-1248									
Aroclor-1254									
Aroclor-1260									

COMPOUND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
chloromethane									
bromomethane									
vinyl chloride									
chloroethane									
methylene chloride					5500		[illegible]	[illegible]	[illegible]
acetone		[illegible]		[illegible] J	[illegible] B	[illegible]	[illegible]	[illegible]	[illegible]
carbon disulfide				[illegible] J					
1,1-dichloroethene									
1,1-dichloroethane					[illegible] J				
trans-1,2-dichloroethene									
chloroform									
1,2-dichloroethane									
2-butanone					11000	2500 000	[illegible]	330 000	[illegible]
1,1,1-trichloroethane					3000	[illegible] J	[illegible] J		260 J
carbon tetrachloride					470 J	[illegible]			
vinyl acetate									
bromodichloromethane									
1,1,2,2-tetrachloroethane									
1,2-dichloropropane									
trans-1,3-dichloropropene									
trichloroethene					400	[illegible]	[illegible] J	[illegible] J	[illegible] J
dibromochloromethane									
1,1,2-trichloroethane									
benzene									
cis-1,3-dichloropropene									
2-chloroethylvinylether									
bromoform									
2-hexanone									
4-methyl-2-pentanone									
tetrachloroethene					170 J	88000		28000 J	130 J
toluene		[illegible]		15000	14000	[illegible]	[illegible]	[illegible]	[illegible]
chlorobenzene									
ethylbenzene		[illegible]		47000	4300	810 00	[illegible]	1 500 000	[illegible]
styrene									
total xylenes		[illegible]		1000000	100,000	[illegible]	[illegible]	[illegible]	[illegible]
N-nitrosodiethylamine									
phenol			[illegible] J	[illegible] J	10 J		[illegible]	[illegible] J	[illegible]
aniline									
bis(2-chloroethyl)ether									
2-chlorophenol									
1,3-dichlorobenzene									
1,4-dichlorobenzene									
benzyl alcohol									
1,2-dichlorobenzene									
2-methylphenol				80 J				[illegible] J	
bis(2-chloroisopropyl)ether									
4-methylphenol			[illegible] J	[illegible] J		11000 J		[illegible] J	[illegible] J
N-nitroso-di-n-propylamine									
hexachloroethane									
nitrobenzene									
isophorone				[illegible] J		[illegible] J	[illegible]		110 J
2-nitrophenol									
2,4-dimethylphenol			[illegible]	[illegible]	[illegible]				[illegible] J
benzoic acid									
bis(2-chloroethoxy)methane									
2,4-dichlorophenol									
1,2,4-trichlorobenzene									
napthalene		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] J
4-chloroaniline									
hexachlorobutadiene									
4-chloro-3-methylphenol									
2-methylnapthalene		[illegible]	[illegible]	[illegible] J	[illegible]	[illegible]	[illegible]	[illegible] J	[illegible] J
hexachlorocyclopentadiene									
2,4,6-trichlorophenol									
2,4,5-trichlorophenol									
2-chloronapthalene									

86880026

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES011

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1217C06
CORR. FACTOR: 1250.0(

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC
			PPB
108-38-3	BENZENE, 1,3-DIMETHYL-	410	150000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	569	150000
↓	BENZENE, 1,3,5-TRIMETHYL-	610	94000
	UNKNOWN	657	100000
535-77-3	BENZENE, 1-METHYL-3-(1-METHYLETHYL)-	690	130000
1730-23-7	NONANE, 4,5-DIMETHYL-	720	140000
527-53-7	BENZENE, 1,2,3,5-TETRAMETHYL-	739	97000
934-74-7	BENZENE, 1-ETHYL-3,5-DIMETHYL-	785	150000
88-99-3	1,2-BENZENEDICARBOXYLIC ACID	979	69000
85-44-9	PHTHALIC ANHYDRIDE	985	78000
629-59-4	TETRADECANE	1063	70000
544-76-3	HEXADECANE hydrocarbons	1162	63000
↓	HEXADECANE	1255	51000
	UNKNOWN	1332	110000
	UNKNOWN	1671	150000
	UNKNOWN	1682	83000
	UNKNOWN	1839	110000
3648-21-3	1,2-BENZENEDICARBOXYLIC ACID, DIHEPTYL ESTER	2179	30000
1330-96-7	1,2-BENZENEDICARBOXYLIC ACID, ISODECYL OCTYL	2298	52000

86880027

Sample Number
ES012

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP. Case No: 8688
Lab Sample ID No: 8712177 QC Report No:
Sample Matrix: SOIL Contract No: 68-01-7142
Data Release Authorized By: Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/17/87
Dil Factor: 200 pH 6.38
Percent Moisture: (Not Decanted) 27.5

CAS Number		ug/Kg	CAS Number		ug/Kg
74-87-3	Chloromethane	280000U	78-87-5	1,2-Dichloropropane	140000U
[illegible]-83-9	Bromomethane	280000U	10061-02-6	Trans-1,3-Dichloropropene	140000U
[illegible]-01-4	Vinyl Chloride	280000U	79-01-6	Trichloroethene	55000 J
75-00-3	Chloroethane	280000U	124-48-1	Dibromochloromethane	140000U
[illegible]-09-2	Methylene Chloride	~~140000U~~ 110000	79-00-5	1,1,2-Trichloroethane	140000U
[illegible]-64-1	Acetone	440000B	71-43-2	Benzene	140000U
75-15-0	Carbon Disulfide	140000U	10061-01-5	cis-1,3-Dichloropropene	140000U
75-35-4	1,1-Dichloroethene	140000U	110-75-8	2-Chloroethylvinylether	280000U
[illegible]-35-3	1,1-Dichloroethane	140000U	75-25-2	Bromoform	140000U
156-60-5	Trans-1,2-Dichloroethene	140000U	108-10-1	4-Methyl-2-Pentanone	280000U
67-66-3	Chloroform	140000U	591-78-6	2-Hexanone	280000U
[illegible]-06-2	1,2-Dichloroethane	140000U	127-18-4	Tetrachloroethene	28000 J
[illegible]-93-3	2-Butanone	330000	79-34-5	1,1,2,2-Tetrachloroethane	280000U
71-55-6	1,1,1-Trichloroethane	140000U	108-88-3	Toluene	2.1E6 B
[illegible]-23-5	Carbon Tetrachloride	140000U	108-90-7	Chlorobenzene	140000U
[illegible]-05-4	Vinyl Acetate	280000U	100-41-4	Ethylbenzene	1.5E6 B
75-27-4	Bromodichloromethane	140000U	100-42-5	Styrene	140000U
				Total Xylenes	3.4E7 B

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Form 1

86880028

ratory Name: ACURE1 CORP.
se No: 8688

Sample Number
ES012

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

oncentration: MED
ate Extracted/Prepared: 12/15/87
Analyzed: 01/06/88
onc/Dil Factor: 1.
ercent Moisture: (Decanted) 27.5

GPC Cleanup ___ Yes X No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

A Number		UG/KG	CAS Number		UG/KG
08-95-2	Phenol	7700 J	83-32-9	Acenaphthene	27000 U
44-4	bis(2-Chloroethyl)Ether	27000 U	51-28-5	2,4-Dinitrophenol	130000U
7-8	2-Chlorophenol	27000 U	100-02-7	4-Nitrophenol	130000U
41-73-1	1,3-Dichlorobenzene	27000 U	132-64-9	Dibenzofuran	27000 U
46-7	1,4-Dichlorobenzene	27000 U	121-14-2	2,4-Dinitrotoluene	27000 U
51-6	Benzyl Alcohol	27000 U	606-20-2	2,6-Dinitrotoluene	27000 U
50-1	1,2-Dichlorobenzene	27000 U	84-66-2	Diethylphthalate	27000 U
5-48-7	2-Methylphenol	2500 J	7005-72-3	4-Chlorophenyl-phenylether	27000 U
8-32-9	bis(2-Chloroisopropyl)Ether	27000 U	86-73-7	Fluorene	1000 J
44-5	4-Methylphenol	4400 J	100-10-6	4-Nitroaniline	130000U
21-64-7	N-Nitroso-Di-n-Propylamine	27000 U	534-52-1	4,6-Dinitro-2-Methylphenol	130000U
2-1	Hexachloroethane	27000 U	86-30-6	N-Nitrosodiphenylamine (1)	14000 BJ
5-3	Nitrobenzene	27000 U	101-55-3	4-Bromophenyl-phenylether	27000 U
8-59-1	Isophorone	27000 U	118-74-1	Hexachlorobenzene	27000 U
75-5	2-Nitrophenol	27000 U	87-86-5	Pentachlorophenol	130000U
67-9	2,4-Dimethylphenol	27000 U	85-01-8	Phenanthrene	3900 J
5-85-0	Benzoic Acid	130000U	120-12-7	Anthracene	27000 U
11-91-1	bis(2-Chloroethoxy)Methane	27000 U	84-74-2	Di-n-Butylphthalate	14000 J
83-2	2,4-Dichlorophenol	27000 U	206-44-0	Fluoranthene	1800 J
82-1	1,2,4-Trichlorobenzene	27000 U	129-00-0	Pyrene	1700 J
1-20-3	Naphthalene	33000	85-68-7	Butylbenzylphthalate	4100 J
47-8	4-Chloroaniline	27000 U	91-94-1	3,3'-Dichlorobenzidine	55000 U
7-8-3	Hexachlorobutadiene	27000 U	56-55-3	Benzo(a)Anthracene	27000 U
9-50-7	4-Chloro-3-Methylphenol	27000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	58000
1-57-6	2-Methylnaphthalene	16000 J	218-01-9	Chrysene	27000 U
7-4	Hexachlorocyclopentadiene	27000 U	117-84-0	Di-n-Octyl Phthalate	1500 J
3-06-2	2,4,6-Trichlorophenol	27000 U	205-99-2	Benzo(b)Fluoranthene	27000 U
5-95-4	2,4,5-Trichlorophenol	130000U	207-08-9	Benzo(k)Fluoranthene	27000 U
8-7	2-Chloronaphthalene	27000 U	50-32-8	Benzo(a)Pyrene	27000 U
4	2-Nitroaniline	130000U	193-39-5	Indeno(1,2,3-cd)Pyrene	27000 U
31-11-3	Dimethyl Phthalate	27000 U	53-70-3	Dibenz(a,h)Anthracene	27000 U
96-8	Acenaphthylene	27000 U	191-24-2	Benzo(g,h,i)Perylene	27000 U
9-2	3-Nitroaniline	130000U			

- Cannot be separated from diphenylamine

Form I

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
E9012

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 28%

GPC Cleanup NO
Sep Funnel Extraction NO
Continuous Liquid-Liquid Extraction NO

Cas Number		ug/Kg	
319-84-8	Alpha BHC	331	U
319-85-7	Beta BHC	331	U
319-86-8	Delta BHC	331	U
58-89-9	Gamma BHC	331	U
76-44-8	Heptachlor	331	U
309-00-2	Aldrin	331	U
1024-57-3	Heptachlor Epoxide	331	U
959-98-8	Endosulfan I	331	U
60-57-1	Dieldrin	662	U
72-55-9	4,4'-DDE	662	U
72-20-8	Endrin	662	U
33213-65-9	Endosulfan II	662	U
72-54-8	4,4'DDD	662	U
1031-07-8	Endosulfan Sulfate	662	U
50-29-3	4,4'-DDT	662	U
72-43-5	Methoxychlor	3310	U
53494-70-5	Endrin Ketone	662	U
57-74-9	Chlordane	8700	
8001-35-2	Toxaphene	6621	U
12674-11-2	Aroclor 1016	3310	U
11104-28-2	Aroclor 1221	3310	U
11141-16-5	Aroclor 1232	3310	U
53469-21-9	Aroclor 1242	3310	U
12672-29-6	Aroclor 1248	45000	
11097-69-1	Aroclor 1254	6621	U
11096-82-5	Aroclor 1260	6621	U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

86880029

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES012

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1217I07
CORR. FACTOR: 34500.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
22-96-8	BENZENE, 1-ETHYL-4-METHYL-	938	710000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	950	270000
124-18-5	DECANE	965	560000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	999	1100000
62016-19-7	OCTANE, 6-ETHYL-2-METHYL-	1034	180000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	1054	300000
1074-17-5	BENZENE, 1-METHYL-2-PROPYL-	1093	400000
17302-27-1	NONANE, 2,5-DIMETHYL-	1136	640000
1758-88-9	BENZENE, 2-ETHYL-1,4-DIMETHYL-	1156	390000

86880030

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES012

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1217C07
CORR. FACTOR: 1380.0(

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
527-53-7	BENZENE, 1,2,3,5-TETRAMETHYL-	737	12000
	BENZENE, 1,2,3,5-TETRAMETHYL-	742	15000
934-74-7	BENZENE, 1-ETHYL-3,5-DIMETHYL-	783	16000
	UNKNOWN	799	13000
17301-32-5	UNDECANE, 4,7-DIMETHYL-	841	19000
	UNDECANE, 4,7-DIMETHYL-	955	8200
	UNKNOWN	971	55000
629-59-4	TETRADECANE	1061	27000
76-72-2	PROPANEDIOIC ACID, ETHYL(1-METHYLBUTYL)-, DI	1152	14000
544-76-3	HEXADECANE	1160	24000
	HEXADECANE	1254	22000
1175-41-5	1H-ISOINDOLE-1,3(2H)-DIONE, 2-AMINO-	1322	19000
629-78-7	HEPTADECANE	1343	21000
	HEPTADECANE	1428	16000
629-92-5	NONADECANE	1508	12000
	UNKNOWN	1690	16000
	UNKNOWN	1707	24000
	UNKNOWN	1838	56000
	UNKNOWN	2018	14000

86880031

Sample Number
ES013

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP. Case No: 8688
Lab Sample ID No: 8712178 QC Report No:
Sample Matrix: SOIL Contract No: 68-01-7142
Data Release Authorized By: Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/21/87
Conc/Dil Factor: 1. pH 8.12
Percent Moisture: (Not Decanted) 21.4

CAS Number		ug/Kg		CAS Number		ug/Kg	
74-87-3	Chloromethane	1300	U	78-87-5	1,2-Dichloropropane	640	U
74-83-9	Bromomethane	1300	U	10061-02-6	Trans-1,3-Dichloropropene	640	U
75-01-4	Vinyl Chloride	1300	U	79-01-6	Trichloroethene	400	J
75-00-3	Chloroethane	1300	U	124-48-1	Dibromochloromethane	640	U
75-09-2	Methylene Chloride	2700		79-00-5	1,1,2-Trichloroethane	640	U
67-64-1	Acetone	15000	B	71-43-2	Benzene	640	U
75-15-0	Carbon Disulfide	640	U	10061-01-5	cis-1,3-Dichloropropene	640	U
75-35-4	1,1-Dichloroethene	640	U	110-75-8	2-Chloroethylvinylether	1300	U
75-35-3	1,1-Dichloroethane	640	U	75-25-2	Bromoform	640	U
156-60-5	Trans-1,2-Dichloroethene	640	U	108-10-1	4-Methyl-2-Pentanone	1300	U
67-66-3	Chloroform	640	U	591-78-6	2-Hexanone	1300	U
107-06-2	1,2-Dichloroethane	640	U	127-18-4	Tetrachloroethene	120	J
78-93-3	2-Butanone	20000		79-34-5	1,1,2,2-Tetrachloroethane	1300	U
71-55-6	1,1,1-Trichloroethane	360	J	108-88-3	Toluene	11000	B
56-23-5	Carbon Tetrachloride	640	U	108-90-7	Chlorobenzene	640	U
108-05-4	Vinyl Acetate	1300	U	100-41-4	Ethylbenzene	5200	
75-27-4	Bromodichloromethane	640	U	100-42-5	Styrene	640	BU
					Total Xylenes	130000	B

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

86880032

Laboratory Name: ACUREX CORP.
Case No: 8688

Sample Number
ES013

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: LOW
Date Extracted/Prepared: 12/15/87
Date Analyzed: 12/17/87
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) 21.4

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/KG		CAS Number		UG/KG	
108-95-2	Phenol	430		83-32-9	Acenapnthene	420	U
[illegible]-44-4	bis(2-Chloroethyl)Ether	420	U	51-28-5	2,4-Dinitrophenol	2000	U
[illegible]-57-8	2-Chlorophenol	420	U	100-02-7	4-Nitrophenol	2000	U
541-73-1	1,3-Dichlorobenzene	420	U	132-64-9	Dibenzofuran	420	U
[illegible]-46-7	1,4-Dichlorobenzene	420	U	121-14-2	2,4-Dinitrotoluene	420	U
[illegible]-51-6	Benzyl Alcohol	420	U	606-20-2	2,6-Dinitrotoluene	420	U
95-50-1	1,2-Dichlorobenzene	420	U	84-66-2	Diethylphthalate	420	U
95-48-7	2-Methylphenol	420	U	7005-72-3	4-Chlorophenyl-phenylether	420	U
[illegible]38-32-9	bis(2-Chloroisopropyl)Ether	420	U	86-73-7	Fluorene	420	U
[illegible]-44-5	4-Methylphenol	160	J	100-10-6	4-Nitroaniline	2000	U
621-64-7	N-Nitroso-Di-n-Propylamine	420	U	534-52-1	4,6-Dinitro-2-Methylphenol	2000	U
[illegible]-72-1	Hexachloroethane	420	U	86-30-6	~~N-Nitrosodiphenylamine (1)~~	~~420~~	~~BU~~
[illegible]-95-3	Nitrobenzene	420	U	101-55-3	4-Bromophenyl-phenylether	420	U
78-59-1	Isophorone	110	J	118-74-1	Hexachlorobenzene	420	U
[illegible]-75-5	2-Nitrophenol	420	U	87-86-5	Pentachlorophenol	2000	U
[illegible]5-67-9	2,4-Dimethylphenol	140	J	85-01-8	Phenanthrene	110	J
[illegible]-85-0	Benzoic Acid	2000	U	120-12-7	Anthracene	420	U
111-91-1	bis(2-Chloroethoxy)Methane	420	U	84-74-2	Di-n-Butylphthalate	130	J
[illegible]-83-2	2,4-Dichlorophenol	420	U	206-44-0	Fluoranthene	420	U
[illegible]-82-1	1,2,4-Trichlorobenzene	420	U	129-00-0	Pyrene	420	U
91-20-3	Naphthalene	260	J	85-68-7	Butylbenzylphthalate	420	U
[illegible]-47-8	4-Chloroaniline	420	U	91-94-1	3,3'-Dichlorobenzidine	840	U
[illegible]-68-3	Hexachlorobutadiene	420	U	56-55-3	Benzo(a)Anthracene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U	117-81-7	bis(2-Ethylhexyl)Phthalate	1700	
[illegible]-57-6	2-Methylnaphthalene	120	J	218-01-9	Chrysene	420	U
[illegible]-47-4	Hexachlorocyclopentadiene	420	U	117-84-0	Di-n-Octyl Phthalate	420	U
[illegible]-06-2	2,4,6-Trichlorophenol	420	U	205-99-2	Benzo(b)Fluoranthene	420	U
95-95-4	2,4,5-Trichlorophenol	2000	U	207-08-9	Benzo(k)Fluoranthene	420	U
[illegible]-58-7	2-Chloronaphthalene	420	U	50-32-8	Benzo(a)Pyrene	420	U
[illegible]-74-4	2-Nitroaniline	2000	U	193-39-5	Indeno(1,2,3-cd)Pyrene	420	U
131-11-3	Dimethyl Phthalate	420	U	53-70-3	Dibenz(a,h)Anthracene	420	U
[illegible]3-96-8	Acenaphthylene	420	U	191-24-2	Benzo(g,h,i)Perylene	420	U
[illegible]-09-2	3-Nitroaniline	2000	U				

(1) - Cannot be separated from diphenylamine

Form I

86880097

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES013

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Low
Date Extracted/prep. 12/16/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 21%

GPC Cleanup ND
Sep Funnel Extraction ND
Continuous Liquid-Liquid Extraction ND

Cas Number		ug/kg
319-84-8	Alpha BHC	20 U
319-85-7	Beta BHC	20 U
319-86-8	Delta BHC	20 U
58-89-9	Gamma BHC	20 U
76-44-8	Heptachlor	20 U
309-00-2	Aldrin	20 U
1024-57-3	Heptachlor Epoxide	20 U
959-98-8	Endosulfan I	20 U
60-57-1	Dieldrin	41 U
72-55-9	4,4'-DDE	41 U
72-20-8	Endrin	41 U
33213-65-9	Endosulfan II	41 U
72-54-8	4,4'DDD	41 U
1031-07-8	Endosulfan Sulfate	41 U
50-29-3	4,4'-DDT	41 U
72-43-5	Methoxychlor	204 U
53494-70-5	Endrin Ketone	41 U
57-74-9	Chlordane	204 U
8001-35-2	Toxaphene	407 U
12674-11-2	Aroclor 1016	204 U
11104-28-2	Aroclor 1221	204 U
11141-16-5	Aroclor 1232	204 U
53469-21-9	Aroclor 1242	204 U
12672-29-6	Aroclor 1248	407 U
11097-69-1	Aroclor 1254	407 U
11096-82-5	Aroclor 1260	407 U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.03 Vt 1000 Vi 2

FORM 1

86880033

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES013

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1217I08
CORR. FACTOR: 160.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
878-19-3	2-PROPANONE, 1-METHOXY-	260	2200
78-92-2	2-BUTANOL (ACN)	369	3400
111-84-2	NONANE	782	870
98-82-8	BENZENE, (1-METHYLETHYL)-	864	920
620-14-4	BENZENE, 1-ETHYL-3-METHYL-	934	1800
124-18-5	DECANE	961	2800
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	995	2900
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	1050	920
21078-65-9	1-DECANOL, 2-ETHYL-	1132	5900
758-88-9	BENZENE, 2-ETHYL-1,4-DIMETHYL-	1152	1200

86880034

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES013

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1217C08
CORR. FACTOR: 42.30

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			UG/L
	UNKNOWN	291	20000
100-41-4	BENZENE, ETHYL-	303	270
	BENZENE, ~~1,3~~-DIMETHYL- Sore	317	700
	UNKNOWN	410	420
	UNKNOWN	580	220
	UNKNOWN	613	1600
	~~CYCLOHEXANOL, 3,3,5-TRIMETHYL~~- Unknown Sore	636	1000
	~~DECANE, 2,5,6-TRIMETHYL~~- Unknown hydrocarbon Sore	704	170
	~~BENZENE, 2-ETHYL-1,4-DIMETHYL~~- Unknown Sore	772	210
	PHENOL, ~~2,3~~-DIMETHYL- Sore	797	220
	UNKNOWN	825	200
	UNKNOWN	901	250
	UNKNOWN	965	270
	~~NONANE, 4,5-DIMETHYL~~- Unknown hydrocarbon Sore	1059	290
	~~NONANE, 4,5-DIMETHYL~~- Unknown hydrocarbon Sore	1159	270
	~~NONANE, 4,5-DIMETHYL~~- Unknown hydrocarbon Sore	1253	240
	UNKNOWN	1632	1100
	UNKNOWN	2029	740
	UNKNOWN	2091	520
	UNKNOWN	2408	390

union copy

Sample Number
ES014

86880826

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP. Case No: 8688
Lab Sample ID No: 8712179 QC Report No:
Sample Matrix: SOIL Contract No: 68-01-7142
Data Release Authorized By: [signature] Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/16/87
Dil Factor: 10.0 pH 7.52
Percent Moisture: (Not Decanted) 20.5

CAS Number		ug/Kg	CAS Number		ug/Kg
74-87-3	Chloromethane	13000 U	78-87-5	1,2-Dichloropropane	6300 U
74-83-9	Bromomethane	13000 U	10061-02-6	Trans-1,3-Dichloroprene	6300 U
75-01-4	Vinyl Chloride	13000 U	79-01-6	Trichloroethene	6300 U
75-00-3	Chloroethane	13000 U	124-48-1	Dibromochloromethane	6300 U
75-09-2	Methylene Chloride	6300 U	79-00-5	1,1,2-Trichloroethane	6300 U
67-64-1	Acetone	22000 B	71-43-2	Benzene	6300 U
75-15-0	Carbon Disulfide	6300 U	10061-01-5	cis-1,3-Dichloropropene	6300 U
75-35-4	1,1-Dichloroethene	6300 U	110-75-8	2-Chloroethylvinylether	13000 U
75-35-3	1,1-Dichloroethane	~~630 J~~ 290 J PV	75-25-2	Bromoform	6300 U
156-60-5	Trans-1,2-Dichloroethene	6300 U	108-10-1	4-Methyl-2-Pentanone	13000 U
67-66-3	Chloroform	6300 U	591-78-6	2-Hexanone	13000 U
107-06-2	1,2-Dichloroethane	6300 U	127-18-4	Tetrachloroethene	~~1300 J~~ 13000 U PV.
78-93-3	2-Butanone	13000 U	79-34-5	1,1,2,2-Tetrachloroethane	13000 U
71-55-6	1,1,1-Trichloroethane	6300 U	108-88-3	Toluene	170000B
56-23-5	Carbon Tetrachloride	6300 U	108-90-7	Chlorobenzene	6300 U
108-05-4	Vinyl Acetate	13000 U	100-41-4	Ethylbenzene	83000 B
75-27-4	Bromodichloromethane	6300 U	100-42-5	Styrene	6300 U
				Total Xylenes	2.1E6 B

(14)

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Sample Number
ES014

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP.
Case No: 8688
Lab Sample ID No: 8712179
QC Report No:
Sample Matrix: SOIL
Contract No: 68-01-7142
Data Release Authorized By: [illegible]
Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/16/87
Dil Factor: 10.0 pH 7.52
Percent Moisture: (Not Decanted) 20.5

CAS Number		ug/Kg	CAS Number		ug/Kg
74-87-3	Chloromethane	13000 U	78-87-5	1,2-Dichloropropane	6300 U
74-83-9	Bromomethane	13000 U	10061-02-6	Trans-1,3-Dichloropropene	6300 U
75-01-4	Vinyl Chloride	13000 U	79-01-6	Trichloroethene	6300 U
75-00-3	Chloroethane	13000 U	124-48-1	Dibromochloromethane	6300 U
75-09-2	Methylene Chloride	6300 U	79-00-5	1,1,2-Trichloroethane	6300 U
67-64-1	Acetone	22000 B	71-43-2	Benzene	6300 U
75-15-0	Carbon Disulfide	6300 U	10061-01-5	cis-1,3-Dichloropropene	6300 U
75-35-4	1,1-Dichloroethene	6300 U	110-75-8	2-Chloroethylvinylether	13000 U
75-35-3	1,1-Dichloroethane	630 J	75-25-2	Bromoform	6300 U
156-60-5	Trans-1,2-Dichloroethene	6300 U	108-10-1	4-Methyl-2-Pentanone	13000 U
67-66-3	Chloroform	6300 U	591-78-6	2-Hexanone	13000 U
107-06-2	1,2-Dichloroethane	6300 U	127-18-4	Tetrachloroethene	1300 J
78-93-3	2-Butanone	13000 U	79-34-5	1,1,2,2-Tetrachloroethane	13000 U
71-55-6	1,1,1-Trichloroethane	6300 U	108-88-3	Toluene	170000 B
56-23-5	Carbon Tetrachloride	6300 U	108-90-7	Chlorobenzene	6300 U
108-05-4	Vinyl Acetate	13000 U	100-41-4	Ethylbenzene	83000 B
75-27-4	Bromodichloromethane	6300 U	100-42-5	Styrene	6300 U
				Total Xylenes	2.1E6 B

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Laboratory Name: ACUREX CORP.
Case No: 8688

Sample Number
ES014

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared: 12/15/87
Date Analyzed: 01/06/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) 20.5

GPC Cleanup __ Yes X No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

CAS Number		UG/KG	CAS Number		UG/KG
108-95-2	Phenol	8700 J	83-32-9	Acenaphtnene	4400 J
111-44-4	bis(2-Chloroethyl)Ether	25000 U	51-28-5	2,4-Dinitrophenol	120000U
95-57-8	2-Chlorophenol	25000 U	100-02-7	4-Nitrophenol	120000U
541-73-1	1,3-Dichlorobenzene	25000 U	132-64-9	Dibenzofuran	4100 J
106-46-7	1,4-Dichlorobenzene	25000 U	121-14-2	2,4-Dinitrotoluene	25000 U
100-51-6	Benzyl Alcohol	25000 U	606-20-2	2,6-Dinitrotoluene	25000 U
95-50-1	1,2-Dichlorobenzene	25000 U	84-66-2	Diethylphthalate	25000 U
95-48-7	2-Methylphenol	3400 J	7005-72-3	4-Chlorophenyl-phenylether	25000 U
39638-32-9	bis(2-Chloroisopropyl)Ether	25000 U	86-73-7	Fluorene	6800 J
106-44-5	4-Methylphenol	10000 J	100-10-6	4-Nitroaniline	120000U
621-64-7	N-Nitroso-Di-n-Propylamine	25000 U	534-52-1	4,6-Dinitro-2-Methylphenol	120000U
67-72-1	Hexachloroethane	25000 U	86-30-6	N-Nitrosodiphenylamine (1)	25000 BU
98-95-3	Nitrobenzene	25000 U	101-55-3	4-Bromophenyl-phenylether	25000 U
78-59-1	Isophorone	25000 U	118-74-1	Hexachlorobenzene	25000 U
88-75-5	2-Nitrophenol	25000 U	87-86-5	Pentachlorophenol	120000U
105-67-9	2,4-Dimethylphenol	25000 U	85-01-8	Phenanthrene	19000 J
65-85-0	Benzoic Acid	120000U	120-12-7	Anthracene	25000 U
111-91-1	bis(2-Chloroethoxy)Methane	25000 U	84-74-2	Di-n-Butylphthalate	3100 J
120-83-2	2,4-Dichlorophenol	25000 U	206-44-0	Fluoranthene	7500 J
120-82-1	1,2,4-Trichlorobenzene	25000 U	129-00-0	Pyrene	6700 J
91-20-3	Naphthalene	33000	85-68-7	Butylbenzylphthalate	1700 J
106-47-8	4-Chloroaniline	25000 U	91-94-1	3,3'-Dichlorobenzidine	50000 U
87-68-3	Hexachlorobutadiene	25000 U	56-55-3	Benzo(a)Anthracene	2600 J
59-50-7	4-Chloro-3-Methylphenol	25000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	110000
91-57-6	2-Methylnaphthalene	60000	218-01-9	Chrysene	2900 J
77-47-4	Hexachlorocyclopentadiene	25000 U	117-84-0	Di-n-Octyl Phthalate	7400 J
88-06-2	2,4,6-Trichlorophenol	25000 U	205-99-2	Benzo(b)Fluoranthene	2100 J
95-95-4	2,4,5-Trichlorophenol	120000U	207-08-9	Benzo(k)Fluoranthene	1900 J
91-58-7	2-Chloronaphthalene	25000 U	50-32-8	Benzo(a)Pyrene	25000 U
88-74-4	2-Nitroaniline	120000U	193-39-5	Indeno(1,2,3-cd)Pyrene	1100 J
131-11-3	Dimethyl Phthalate	25000 U	53-70-3	Dibenz(a,h)Anthracene	25000 U
208-96-8	Acenaphthylene	25000 U	191-24-2	Benzo(g,h,i)Perylene	25000 U
99-09-2	3-Nitroaniline	120000U			

(1) - Cannot be separated from diphenylamine

86880098

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES014

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 21%

GPC Cleanup ND
Sep Funnel Extraction ND
Continuous Liquid-Liquid Extraction ND

Cas Number		ug/Kg	
319-84-8	Alpha BHC	302	U
319-85-7	Beta BHC	302	U
319-86-8	Delta BHC	302	U
58-89-9	Gamma BHC	302	U
76-44-8	Heptachlor	302	U
309-00-2	Aldrin	302	U
1024-57-3	Heptachlor Epoxide	302	U
959-98-8	Endosulfan I	302	U
60-57-1	Dieldrin	604	U
72-55-9	4,4'-DDE	604	U
72-20-8	Endrin	604	U
33213-65-9	Endosulfan II	604	U
72-54-8	4,4'DDD	604	U
1031-07-8	Endosulfan Sulfate	604	U
50-29-3	4,4'-DDT	604	U
72-43-5	Methoxychlor	3019	U
53494-70-5	Endrin Ketone	604	U
57-74-9	Chlordane	11000	
8001-35-2	Toxaphene	6038	U
12674-11-2	Aroclor 1016	3019	U
11104-28-2	Aroclor 1221	3019	U
11141-16-5	Aroclor 1232	3019	U
53469-21-9	Aroclor 1242	3019	U
12672-29-6	Aroclor 1248	27000	
11097-69-1	Aroclor 1254	6038	U
11096-82-5	Aroclor 1260	6038	U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

86880041

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES014

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1217I09
CORR. FACTOR: 1575.0(

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
1073-06-9	BENZENE, 1-BROMO-3-FLUORO-	886	64000
620-14-4	BENZENE, 1-ETHYL-3-METHYL-	938	89000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	951	51000
124-18-5	DECANE	966	75000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	1000	140000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	1055	58000
1074-43-7	BENZENE, 1-METHYL-3-PROPYL-	1094	49000
98-06-6	BENZENE, (1,1-DIMETHYLETHYL)-	1105	68000
17302-27-1	NONANE, 2,5-DIMETHYL-	1137	52000
1758-88-9	BENZENE, 2-ETHYL-1,4-DIMETHYL-	1157	48000

86880042

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES014

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1217C09
CORR. FACTOR: 1260

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
90-12-0	NAPHTHALENE, 1-METHYL-	971	43000
	UNKNOWN	1039	29000
629-59-4	TETRADECANE	1064	56000
582-16-1	NAPHTHALENE, 2,7-DIMETHYL-	1072	69000
569-41-5	NAPHTHALENE, 1,8-DIMETHYL-	1088	110000
74645-98-0	DODECANE, 2,7,10-TRIMETHYL-	1126	55000
544-76-3	HEXADECANE	1164	100000
2131-41-1	NAPHTHALENE, 1,4,5-TRIMETHYL-	1172	35000
2245-38-7	NAPHTHALENE, 1,6,7-TRIMETHYL-	1193	24000
	UNKNOWN	1213	89000
829-26-5	NAPHTHALENE, 2,3,6-TRIMETHYL-	1229	41000
	UNKNOWN	1258	160000
17301-22-33	UNDECANE, 2,5-DIMETHYL-	1300	23000
629-78-7	HEPTADECANE	1347	80000
1921-70-6	PENTADECANE, 2,6,10,14-TETRAMETHYL-	1351	40000
	UNKNOWN	1398	18000
638-36-8	HEXADECANE, 2,6,10,14-TETRAMETHYL-	1438	24000
629-92-5	NONADECANE	1510	33000
~~71764-11-7~~	~~IRON, TRICARBONYLIN-(PHENYL-2-PYRIDINYLMETHY~~	1586	18000

N methylated naphthalenes

N hydrocarbons

N hydrocarbons

86880 43

Sample Number
ES015

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP.
Lab Sample ID No: 87121710
Sample Matrix: SOIL
Data Release Authorized By: [signature]

Case No: 8688
QC Report No:
Contract No: 68-01-7142
Date Sample Received: 12/08/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/21/87
Dil Factor: 200 pH 7.34
Percent Moisture: (Not Decanted) 30.3

CAS Number		ug/Kg	CAS Number		ug/Kg
74-87-3	Chloromethane	290000U	78-87-5	1,2-Dichloropropane	140000U
74-83-9	Bromomethane	290000U	10061-02-6	Trans-1,3-Dichloropropene	140000U
75-01-4	Vinyl Chloride	290000U	79-01-6	Trichloroethene	140000U
75-00-3	Chloroethane	290000U	124-48-1	Dibromochloromethane	140000U
75-09-2	Methylene Chloride	140000U	79-00-5	1,1,2-Trichloroethane	140000U
67-64-1	Acetone	430000B	71-43-2	Benzene	140000U
75-15-0	Carbon Disulfide	140000U	10061-01-5	cis-1,3-Dichloropropene	140000U
75-35-4	1,1-Dichloroethene	140000U	110-75-8	2-Chloroethylvinylether	290000U
75-35-3	1,1-Dichloroethane	140000U	75-25-2	Bromoform	140000U
156-60-5	Trans-1,2-Dichloroethene	140000U	108-10-1	4-Methyl-2-Pentanone	290000U
67-66-3	Chloroform	140000U	591-78-6	2-Hexanone	290000U
107-06-2	1,2-Dichloroethane	140000U	127-18-4	Tetrachloroethene	140000U
78-93-3	2-Butanone	290000U	79-34-5	1,1,2,2-Tetrachloroethane	290000U
71-55-6	1,1,1-Trichloroethane	140000U	108-88-3	Toluene	1.2E6 B
56-23-5	Carbon Tetrachloride	140000U	108-90-7	Chlorobenzene	140000U
108-05-4	Vinyl Acetate	290000U	100-41-4	Ethylbenzene	350000
75-27-4	Bromodichloromethane	140000U	100-42-5	Styrene	140000U
				Total Xylenes	7.3E6 B

B - Compound was detected in the QC blank.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Form I

86880099

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES015

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 30%

GPC Cleanup ND
Sep Funnel Extraction ND
Continuous Liquid-Liquid Extraction ND

Cas Number		ug/Kg
319-84-8	Alpha BHC	344 U
319-85-7	Beta BHC	344 U
319-86-8	Delta BHC	344 U
58-89-9	Gamma BHC	344 U
76-44-8	Heptachlor	344 U
309-00-2	Aldrin	344 U
1024-57-3	Heptachlor Epoxide	344 U
959-98-8	Endosulfan I	344 U
60-57-1	Dieldrin	344 U
72-55-9	4,4'-DDE	689 U
72-20-8	Endrin	689 U
33213-65-9	Endosulfan II	689 U
72-54-8	4,4'DDD	689 U
1031-07-8	Endosulfan Sulfate	689 U
50-29-3	4,4'-DDT	689 U
72-43-5	Methoxychlor	3443 U
53494-70-5	Endrin Ketone	689 U
57-74-9	Chlordane	3443 U
8001-35-2	Toxaphene	6887 U
12674-11-2	Aroclor 1016	3443 U
11104-28-2	Aroclor 1221	3443 U
11141-16-5	Aroclor 1232	3443 U
53469-21-9	Aroclor 1242	3443 U
12672-29-6	Aroclor 1248	67000
11097-69-1	Aroclor 1254	6887 U
11096-82-5	Aroclor 1260	6887 U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES015

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1217I10
CORR. FACTOR: 35800.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
124-18-5	DECANE	963	190000
1120-21-4	UNDECANE -	1133	250000

86880048

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES015

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1217C10
CORR. FACTOR: 2860.0

TENTATIVELY IDENTIFIED COMPOUNDS

methylated naphthalenes

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC. PPB
90-12-0	NAPHTHALENE, 1-METHYL-	974	140000
	UNKNOWN	1042	120000
17301-32-5	UNDECANE, 4,7-DIMETHYL-	1068	460000
582-16-1	NAPHTHALENE, 2,7-DIMETHYL-	1075	280000
569-41-5	NAPHTHALENE, 1,8-DIMETHYL-	1091	320000
	NAPHTHALENE, 1,8-DIMETHYL-	1110	110000
55045-11-9	TRIDECANE, 5-PROPYL-	1129	250000
544-76-3	HEXADECANE ← hydrocarbons	1167	440000
2131-41-1	NAPHTHALENE, 1,4,5-TRIMETHYL-	1175	140000
2245-38-7	NAPHTHALENE, 1,6,7-TRIMETHYL-	1196	110000
	UNKNOWN	1216	360000
829-26-5	NAPHTHALENE, 2,3,6-TRIMETHYL-	1231	180000
544-76-3	HEXADECANE	1260	470000
	HEXADECANE	1303	99000
629-78-7	HEPTADECANE	1350	360000
	UNKNOWN	1355	240000
	UNKNOWN	1385	87000
638-36-8	HEXADECANE, 2,6,10,14-TETRAMETHYL-	1441	110000
629-92-5	NONADECANE	1513	130000

hydrocarbons

hydrocarbons

Laboratory Name: ACUREX CORP.
Case No: 8688

Sample Number
ES015

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared: 12/15/87
Date Analyzed: 01/06/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) 30.3

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/KG	CAS Number		UG/KG
108-95-2	Phenol	28000 U	83-32-9	Acenaphthene	22000 J
111-44-4	bis(2-Chloroethyl)Ether	28000 U	51-28-5	2,4-Dinitrophenol	140000U
95-57-8	2-Chlorophenol	28000 U	100-02-7	4-Nitrophenol	140000U
541-73-1	1,3-Dichlorobenzene	28000 U	132-64-9	Dibenzofuran	18000 J
106-46-7	1,4-Dichlorobenzene	28000 U	121-14-2	2,4-Dinitrotoluene	28000 U
100-51-6	Benzyl Alcohol	28000 U	606-20-2	2,6-Dinitrotoluene	28000 U
95-50-1	1,2-Dichlorobenzene	28000 U	84-66-2	Diethylphthalate	28000 U
95-48-7	2-Methylphenol	28000 U	7005-72-3	4-Chlorophenyl-phenylether	28000 U
39638-32-9	bis(2-Chloroisopropyl)Ether	28000 U	86-73-7	Fluorene	30000
106-44-5	4-Methylphenol	9200 J	100-10-6	4-Nitroaniline	140000U
621-64-7	N-Nitroso-Di-n-Propylamine	28000 U	534-52-1	4,6-Dinitro-2-Methylphenol	140000U
67-72-1	Hexachloroethane	28000 U	86-30-6	N-Nitrosodiphenylamine (1)	28000 BU
98-95-3	Nitrobenzene	28000 U	101-55-3	4-Bromophenyl-phenylether	28000 U
78-59-1	Isophorone	28000 U	118-74-1	Hexachlorobenzene	28000 U
88-75-5	2-Nitrophenol	28000 U	87-86-5	Pentachlorophenol	140000U
105-67-9	2,4-Dimethylphenol	28000 U	85-01-8	Phenanthrene	88000
65-85-0	Benzoic Acid	140000U	120-12-7	Anthracene	9700 J
111-91-1	bis(2-Chloroethoxy)Methane	28000 U	84-74-2	Di-n-Butylphthalate	28000 U
120-83-2	2,4-Dichlorophenol	28000 U	206-44-0	Fluoranthene	53000
120-82-1	1,2,4-Trichlorobenzene	28000 U	129-00-0	Pyrene	58000
91-20-3	Naphthalene	57000	85-68-7	Butylbenzylphthalate	5200 J
106-47-8	4-Chloroaniline	28000 U	91-94-1	3,3'-Dichlorobenzidine	57000 U
87-68-3	Hexachlorobutadiene	28000 U	56-55-3	Benzo(a)Anthracene	20000 J
59-50-7	4-Chloro-3-Methylphenol	28000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	310000
91-57-6	2-Methylnaphthalene	190000	218-01-9	Chrysene	21000 J
77-47-4	Hexachlorocyclopentadiene	28000 U	117-84-0	Di-n-Octyl Phthalate	3500 J
88-06-2	2,4,6-Trichlorophenol	28000 U	205-99-2	Benzo(b)Fluoranthene	36000
95-95-4	2,4,5-Trichlorophenol	140000U	207-08-9	Benzo(k)Fluoranthene	28000 U
91-58-7	2-Chloronaphthalene	28000 U	50-32-8	Benzo(a)Pyrene	17000 J
88-74-4	2-Nitroaniline	140000U	193-39-5	Indeno(1,2,3-cd)Pyrene	8400 J
131-11-3	Dimethyl Phthalate	28000 U	53-70-3	Dibenz(a,h)Anthracene	28000 U
208-96-8	Acenaphthylene	28000 U	191-24-2	Benzo(g,h,i)Perylene	7200 J
99-09-2	3-Nitroaniline	140000U			

(1) - Cannot be separated from diphenylamine

86880050

Sample Number
ES367

ORGANICS ANALYSIS DATA SHEET

(Page 1)

Laboratory Name: ACUREX CORP. Case No: 8688

Lab Sample ID No: 8712281 QC Report No:

Sample Matrix: SOIL Contract No: 68-01-7142

Data Release Authorized By: Martin Date Sample Received: 12/09/87

VOLATILE COMPOUNDS

Concentration: MED

Date Extracted/Prepared:

Date Analyzed: 12/22/87

Dil Factor: 10.0 pH 7.35

Percent Moisture: (Not Decanted) 25.6

CAS Number		UG/KG		CAS Number		UG/KG	
74-87-3	Chloromethane	13000	U	78-87-5	1,2-Dichloropropane	6700	U
74-83-9	Bromomethane	13000	U	10061-02-6	Trans-1,3-Dichloropropene	6700	U
75-01-4	Vinyl Chloride	13000	U	79-01-6	Trichloroethene	6700	U
75-00-3	Chloroethane	13000	U	124-48-1	Dibromochloromethane	6700	U
75-09-2	Methylene Chloride	6700	U	79-00-5	1,1,2-Trichloroethane	6700	U
67-64-1	Acetone	17000		71-43-2	Benzene	6700	U
75-15-0	Carbon Disulfide	450	J	10061-01-5	cis-1,3-Dichloropropene	6700	U
75-35-4	1,1-Dichloroethene	6700	U	110-75-8	2-Chloroethylvinylether	13000	U
75-35-3	1,1-Dichloroethane	650	J	75-25-2	Bromoform	6700	U
156-60-5	Trans-1,2-Dichloroethene	6700	U	108-10-1	4-Methyl-2-Pentanone	13000	U
67-66-3	Chloroform	6700	BU	591-78-6	2-Hexanone	13000	U
107-06-2	1,2-Dichloroethane	6700	U	127-18-4	Tetrachloroethene	6700	U
78-93-3	2-Butanone	13000	U	79-34-5	1,1,2,2-Tetrachloroethane	13000	U
71-55-6	1,1,1-Trichloroethane	6700	U	108-88-3	Toluene	23000	
56-23-5	Carbon Tetrachloride	6700	U	108-90-7	Chlorobenzene	6700	U
108-05-4	Vinyl Acetate	13000	U	100-41-4	Ethylbenzene	44000	
75-27-4	Bromodichloromethane	6700	U	100-42-5	Styrene	6700	BU
					Total Xylenes	930000	

B - Compound was detected in the QC blank.

J - Reported value is less than the detection limit.

U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Laboratory Name: ACUREX CORP.
Case No: 8688

Sample Number
ES367

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared: 12/17/87
Date Analyzed: 01/07/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) 25.6

GPC Cleanup ___ Yes X No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		ug/Kg	CAS Number		ug/Kg
108-95-2	Phenol	27000 U	83-32-9	Acenaphthene	3100 J
111-44-4	bis(2-Chloroethyl)Ether	27000 U	51-28-5	2,4-Dinitrophenol	130000U
95-57-8	2-Chlorophenol	27000 U	100-02-7	4-Nitrophenol	130000U
541-73-1	1,3-Dichlorobenzene	27000 U	132-64-9	Dibenzofuran	2800 J
106-46-7	1,4-Dichlorobenzene	27000 U	121-14-2	2,4-Dinitrotoluene	27000 U
100-51-6	Benzyl Alcohol	27000 U	606-20-2	2,6-Dinitrotoluene	27000 U
95-50-1	1,2-Dichlorobenzene	27000 U	84-66-2	Diethylphthalate	27000 U
95-48-7	2-Methylphenol	27000 U	7005-72-3	4-Chlorophenyl-phenylether	27000 U
39638-32-9	bis(2-Chloroisopropyl)Ether	27000 U	86-73-7	Fluorene	4200 J
106-44-5	4-Methylphenol	27000 U	100-10-6	4-Nitroaniline	130000U
621-64-7	N-Nitroso-Di-n-Propylamine	27000 U	534-52-1	4,6-Dinitro-2-Methylphenol	130000U
67-72-1	Hexachloroethane	27000 U	86-30-6	N-Nitrosodiphenylamine (1)	27000 U
98-95-3	Nitrobenzene	27000 U	101-55-3	4-Bromophenyl-phenylether	27000 U
78-59-1	Isophorone	27000 U	118-74-1	Hexachlorobenzene	27000 U
88-75-5	2-Nitrophenol	27000 U	87-86-5	Pentachlorophenol	130000U
105-67-9	2,4-Dimethylphenol	27000 U	85-01-8	Phenanthrene	14000 J
65-85-0	Benzoic Acid	130000U	120-12-7	Anthracene	2100 J
111-91-1	bis(2-Chloroethoxy)Methane	27000 U	84-74-2	Di-n-Butylphthalate	2800 J
120-83-2	2,4-Dichlorophenol	27000 U	206-44-0	Fluoranthene	10000 J
120-82-1	1,2,4-Trichlorobenzene	27000 U	129-00-0	Pyrene	10000 J
91-20-3	Naphthalene	8400 J	85-68-7	Butylbenzylphthalate	27000 U
106-47-8	4-Chloroaniline	27000 U	91-94-1	3,3'-Dichlorobenzidine	53000 U
87-68-3	Hexachlorobutadiene	27000 U	56-55-3	Benzo(a)Anthracene	3900 J
59-50-7	4-Chloro-3-Methylphenol	27000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	56000
91-57-6	2-Methylnaphthalene	22000 J	218-01-9	Chrysene	4200 J
77-47-4	Hexachlorocyclopentadiene	27000 U	117-84-0	Di-n-Octyl Phthalate	1300 J
88-06-2	2,4,6-Trichlorophenol	27000 U	205-99-2	Benzo(b)Fluoranthene	27000 U
95-95-4	2,4,5-Trichlorophenol	130000U	207-08-9	Benzo(k)Fluoranthene	6000 J
91-58-7	2-Chloronaphthalene	27000 U	50-32-8	Benzo(a)Pyrene	3000 J
88-74-4	2-Nitroaniline	130000U	193-39-5	Indeno(1,2,3-cd)Pyrene	27000 U
131-11-3	Dimethyl Phthalate	27000 U	53-70-3	Dibenz(a,h)Anthracene	27000 U
208-96-8	Acenaphthylene	27000 U	191-24-2	Benzo(g,h,i)Perylene	27000 U
99-09-2	3-Nitroaniline	130000U			

(1) - Cannot be separated from diphenylamine

86880100

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES367

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 26%

GPC Cleanup NO
Sep Funnel Extraction NO
Continuous Liquid-Liquid Extraction NO

Cas Number		ug/Kg
319-84-8	Alpha BHC	323 U
319-85-7	Beta BHC	323 U
319-86-8	Delta BHC	323 U
58-89-9	Gamma BHC	323 U
76-44-8	Heptachlor	323 U
309-00-2	Aldrin	323 U
1024-57-3	Heptachlor Epoxide	323 U
959-98-8	Endosulfan I	323 U
60-57-1	Dieldrin	645 U
72-55-9	4,4'-DDE	645 U
72-20-8	Endrin	645 U
33213-65-9	Endosulfan II	645 U
72-54-8	4,4'DDD	645 U
1031-07-8	Endosulfan Sulfate	645 U
50-29-3	4,4'-DDT	645 U
72-43-5	Methoxychlor	3226 U
53494-70-5	Endrin Ketone	645 U
57-74-9	Chlordane	4300
8001-35-2	Toxaphene	6452 U
12674-11-2	Aroclor 1016	3226 U
11104-28-2	Aroclor 1221	3226 U
11141-16-5	Aroclor 1232	3226 U
53469-21-9	Aroclor 1242	3226 U
12672-29-6	Aroclor 1248	3226 U
11097-69-1	Aroclor 1254	6452 U
11096-82-5	Aroclor 1260	6452 U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

86880052

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES367

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1228I01R
CORR. FACTOR: 1700.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
3466-78-9	3-CARENE	859	27000
620-14-4	BENZENE, 1-ETHYL-3-METHYL-	935	32000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	947	25000
124-18-5	DECANE	963	32000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	996	53000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	1052	29000
1074-43-7	BENZENE, 1-METHYL-3-PROPYL-	1090	32000
98-06-6	BENZENE, (1,1-DIMETHYLETHYL)-	1102	45000
1758-88-9	BENZENE, 2-ETHYL-1,4-DIMETHYL-	1142	36000
1758-88-9	BENZENE, 2-ETHYL-1,4-DIMETHYL-	1154	41000
	UNKNOWN	1179	19000

86880053

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES367

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1228C01
CORR. FACTOR: 1340.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			~~UG/L~~ µg/Kg est
	~~UNDECANE, 4,7-DIMETHYL-~~ Unknown aliphatic hydrocarbon est	836	20000
	~~NONANE, 4,5-DIMETHYL-~~ Unknown aliphatic hydrocarbon est	950	19000
	NAPHTHALENE, ~~1~~-METHYL-	964	27000
	~~DODECANE, 2,7,10-TRIMETHYL-~~ Unknown aliphatic hydrocarbon est	1033	18000
	~~TETRADECANE~~ Unknown aliphatic hydrocarbon est	1057	26000
	NAPHTHALENE, ~~2,7~~-DIMETHYL-	1065	34000
	NAPHTHALENE, ~~1,8~~-DIMETHYL-	1080	38000
	~~HEXADECANE~~ Unknown aliphatic hydrocarbon est	1120	20000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~ Unknown aliphatic hydrocarbon est	1157	48000
	NAPHTHALENE, ~~1,4,6~~-TRIMETHYL-	1165	16000
	NAPHTHALENE, ~~1,6,7~~-TRIMETHYL-	1186	16000
	UNKNOWN	1207	55000
	NAPHTHALENE, ~~2,3,6~~-TRIMETHYL-	1223	15000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~ Unknown aliphatic hydrocarbon est	1251	54000
	~~HEXADECANE~~ Unknown hydrocarbon est	1295	19000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~ Unknown hydrocarbon est	1340	49000
	~~PENTADECANE, 2,6,10,14-TETRAMETHYL-~~ Unknown hydrocarbon est	1346	35000
	~~HEXADECANE, 2,6,10,14-TETRAMETHYL-~~ Unknown hydrocarbon est	1433	22000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~ Unknown hydrocarbon est	1505	18000
	UNKNOWN	1629	19000

Sample Number
ES368

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP.
Case No: 8688
Lab Sample ID No: 8712282
QC Report No:
Sample Matrix: SOIL
Contract No: 68-01-7142
Data Release Authorized By:
Date Sample Received: 12/09/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/17/87
Dil Factor: 200 pH 7.66
Percent Moisture: (Not Decanted) 22.6

CAS Number		UG/KG	CAS Number		UG/KG
74-87-3	Chloromethane	260000U	78-87-5	1,2-Dichloropropane	130000U
74-83-9	Bromomethane	260000U	10061-02-6	Trans-1,3-Dichloropropene	130000U
75-01-4	Vinyl Chloride	260000U	79-01-6	Trichloroethene	130000U
75-00-3	Chloroethane	260000U	124-48-1	Dibromochloromethane	130000U
75-09-2	Methylene Chloride	130000U	79-00-5	1,1,2-Trichloroethane	130000U
67-64-1	Acetone	470000B	71-43-2	Benzene	130000U
75-15-0	Carbon Disulfide	130000U	10061-01-5	cis-1,3-Dichloropropene	130000U
75-35-4	1,1-Dichloroethene	130000U	110-75-8	2-Chloroethylvinylether	260000U
75-35-3	1,1-Dichloroethane	130000U	75-25-2	Bromoform	130000U
156-60-5	Trans-1,2-Dichloroethene	130000U	108-10-1	4-Methyl-2-Pentanone	260000U
67-66-3	Chloroform	130000U	591-78-6	2-Hexanone	260000U
107-06-2	1,2-Dichloroethane	130000U	127-18-4	Tetrachloroethene	130000U
78-93-3	2-Butanone	260000U	79-34-5	1,1,2,2-Tetrachloroethane	260000U
71-55-6	1,1,1-Trichloroethane	130000U	108-88-3	Toluene	180000B
56-23-5	Carbon Tetrachloride	130000U	108-90-7	Chlorobenzene	130000U
108-05-4	Vinyl Acetate	260000U	100-41-4	Ethylbenzene	97000 BJ
75-27-4	Bromodichloromethane	130000U	100-42-5	Styrene	130000U
				Total Xylenes	2.3E6 B

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

86880055

Laboratory Name: ACUREX CORP.
Case No: 8688

Sample Number
ES368

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared: 12/17/87
Date Analyzed: 01/07/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) 22.6

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		ug/Kg	CAS Number		ug/Kg
108-95-2	Phenol	7700 J	83-32-9	Acenaphthene	3000 J
111-44-4	bis(2-Chloroethyl)Ether	26000 U	51-28-5	2,4-Dinitrophenol	120000U
95-57-8	2-Chlorophenol	26000 U	100-02-7	4-Nitrophenol	120000U
541-73-1	1,3-Dichlorobenzene	26000 U	132-64-9	Dibenzofuran	2600 J
106-46-7	1,4-Dichlorobenzene	26000 U	121-14-2	2,4-Dinitrotoluene	26000 U
100-51-6	Benzyl Alcohol	26000 U	606-20-2	2,6-Dinitrotoluene	26000 U
95-50-1	1,2-Dichlorobenzene	26000 U	84-66-2	Diethylphthalate	26000 U
95-48-7	2-Methylphenol	26000 U	7005-72-3	4-Chlorophenyl-phenylether	26000 U
39638-32-9	bis(2-Chloroisopropyl)Ether	26000 U	86-73-7	Fluorene	4000 J
106-44-5	4-Methylphenol	3400 J	100-10-6	4-Nitroaniline	120000U
621-64-7	N-Nitroso-Di-n-Propylamine	26000 U	534-52-1	4,6-Dinitro-2-Methylphenol	120000U
67-72-1	Hexachloroethane	26000 U	86-30-6	N-Nitrosodiphenylamine (1)	26000 U
98-95-3	Nitrobenzene	26000 U	101-55-3	4-Bromophenyl-phenylether	26000 U
78-59-1	Isophorone	4900 J	118-74-1	Hexachlorobenzene	26000 U
88-75-5	2-Nitrophenol	26000 U	87-86-5	Pentachlorophenol	120000U
105-67-9	2,4-Dimethylphenol	26000 U	85-01-8	Phenanthrene	26000 U
65-85-0	Benzoic Acid	120000U	120-12-7	Anthracene	26000 U
111-91-1	bis(2-Chloroethoxy)Methane	26000 U	84-74-2	Di-n-Butylphthalate	3800 J
120-83-2	2,4-Dichlorophenol	26000 U	206-44-0	Fluoranthene	7800 J
120-82-1	1,2,4-Trichlorobenzene	26000 U	129-00-0	Pyrene	7700 J
91-20-3	Naphthalene	19000 J	85-68-7	Butylbenzylphthalate	26000 U
106-47-8	4-Chloroaniline	26000 U	91-94-1	3,3'-Dichlorobenzidine	51000 U
87-68-3	Hexachlorobutadiene	26000 U	56-55-3	Benzo(a)Anthracene	2900 J
59-50-7	4-Chloro-3-Methylphenol	26000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	53000
91-57-6	2-Methylnaphthalene	26000	218-01-9	Chrysene	3000 J
77-47-4	Hexachlorocyclopentadiene	26000 U	117-84-0	Di-n-Octyl Phthalate	26000 U
88-06-2	2,4,6-Trichlorophenol	26000 U	205-99-2	Benzo(b)Fluoranthene	4100 J
95-95-4	2,4,5-Trichlorophenol	120000U	207-08-9	Benzo(k)Fluoranthene	26000 U
91-58-7	2-Chloronaphthalene	26000 U	50-32-8	Benzo(a)Pyrene	2300 J
88-74-4	2-Nitroaniline	120000U	193-39-5	Indeno(1,2,3-cd)Pyrene	26000 U
131-11-3	Dimethyl Phthalate	26000 U	53-70-3	Dibenz(a,h)Anthracene	26000 U
208-96-8	Acenaphthylene	26000 U	191-24-2	Benzo(g,h,i)Perylene	26000 U
99-09-2	3-Nitroaniline	120000U			

(1) - Cannot be separated from diphenylamine

86880101

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES368

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 23%

GPC Cleanup NO
Sep Funnel Extraction NO
Continuous Liquid-Liquid Extraction NO

Cas Number		ug/Kg	
319-84-8	Alpha BHC	310	U
319-85-7	Beta BHC	310	U
319-86-8	Delta BHC	310	U
58-89-9	Gamma BHC	310	U
76-44-8	Heptachlor	310	U
309-00-2	Aldrin	310	U
1024-57-3	Heptachlor Epoxide	310	U
959-98-8	Endosulfan I	310	U
60-57-1	Dieldrin	620	U
72-55-9	4,4'-DDE	620	U
72-20-8	Endrin	620	U
33213-65-9	Endosulfan II	620	U
72-54-8	4,4'DDD	620	U
1031-07-8	Endosulfan Sulfate	620	U
50-29-3	4,4'-DDT	620	U
72-43-5	Methoxychlor	3101	U
53494-70-5	Endrin Ketone	620	U
57-74-9	Chlordane	5500	
8001-35-2	Toxaphene	6202	U
12674-11-2	Aroclor 1016	3101	U
11104-28-2	Aroclor 1221	3101	U
11141-16-5	Aroclor 1232	3101	U
53469-21-9	Aroclor 1242	3101	U
12672-29-6	Aroclor 1248	46000	
11097-69-1	Aroclor 1254	6202	U
11096-82-5	Aroclor 1260	6202	U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

86880056

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES368

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1228I02
CORR. FACTOR: 32000.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

86880057

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES368

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1228C02
CORR. FACTOR: 1290.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			µg/kg ~~UG/L~~ SDR
	BENZENE, ~~2-ETHYL-1,4-DIMETHYL-~~ C_3 substituted SDR	681	19000
	~~NONANE, 4,5-DIMETHYL-~~ Unknown hydrocarbon SDR	704	20000
	~~UNDECANE, 4,7-DIMETHYL-~~ unknown hydrocarbon SDR	832	26000
	~~NONANE, 4,5-DIMETHYL-~~ Unknown hydrocarbon SDR	948	25000
	NAPHTHALENE, ~~1-METHYL-~~	962	22000
	~~DODECANE, 2,7,10-TRIMETHYL-~~	1031	18000
	~~TETRADECANE~~ unknown hydrocarbon SDR	1056	41000
	NAPHTHALENE, ~~2,7-~~DIMETHYL-	1063	39000
	NAPHTHALENE, ~~1,8-~~DIMETHYL-	1079	53000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~	1156	57000
	NAPHTHALENE, ~~1,4,6-~~TRIMETHYL-	1164	17000
	NAPHTHALENE, ~~1,6,7-~~TRIMETHYL-	1185	17000
	UNKNOWN	1206	50000
	NAPHTHALENE, ~~2,3,6-~~TRIMETHYL-	1222	15000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~ Unknown hydrocarbon SDR	1250	59000
	~~HEXADECANE~~ Unknown aliphatic hydrocarbon SDR	1294	17000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~ Unknown hydrocarbon SDR	1340	57000
	~~PENTADECANE, 2,6,10,14-TETRAMETHYL-~~ Unknown hydrocarbon SDR	1345	27000
	~~HEPTADECANE~~ Unknown hydrocarbon SDR	1424	28000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~ Unknown	1504	20000

86880058

Sample Number
ES369

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP.
Case No: 8688
Lab Sample ID No: 8712283
QC Report No:
Sample Matrix: SOIL
Contract No: 68-01-7142
Data Release Authorized By: [signature]
Date Sample Received: 12/09/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/21/87
Conc/Dil Factor: 1. pH 7.66
Percent Moisture: (Not Decanted) 31.0

CAS Number		UG/KG		CAS Number		UG/KG	
74-87-3	Chloromethane	1400	U	78-87-5	1,2-Dichloropropane	720	U
74-83-9	Bromomethane	1400	U	10061-02-6	Trans-1,3-Dichloropropene	720	U
75-01-4	Vinyl Chloride	1400	U	79-01-6	Trichloroethene	3200	
75-00-3	Chloroethane	1400	U	124-48-1	Dibromochloromethane	720	U
75-09-2	Methylene Chloride	13000		79-00-5	1,1,2-Trichloroethane	720	U
67-64-1	Acetone	5700		71-43-2	Benzene	720	U
75-15-0	Carbon Disulfide	720	U	10061-01-5	cis-1,3-Dichloropropene	720	U
75-35-4	1,1-Dichloroethene	720	U	110-75-8	2-Chloroethylvinylether	1400	U
75-35-3	1,1-Dichloroethane	180	J	75-25-2	Bromoform	720	U
156-60-5	Trans-1,2-Dichloroethene	720	U	108-10-1	4-Methyl-2-Pentanone	1400	U
67-66-3	Chloroform	170	BJ	591-78-6	2-Hexanone	1400	U
107-06-2	1,2-Dichloroethane	720	U	127-18-4	Tetrachloroethene	580	J
78-93-3	2-Butanone	6700		79-34-5	1,1,2,2-Tetrachloroethane	1400	U
71-55-6	1,1,1-Trichloroethane	1700		108-88-3	Toluene	17000	
56-23-5	Carbon Tetrachloride	240	J	108-90-7	Chlorobenzene	720	U
108-05-4	Vinyl Acetate	1400	U	100-41-4	Ethylbenzene	3900	
75-27-4	Bromodichloromethane	720	U	100-42-5	Styrene	720	BU
					Total Xylenes	98000	

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

86880059

Laboratory Name: ACUREX CORP.
Case No: 8688

Sample Number
ES369

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared: 12/17/87
Date Analyzed: 01/08/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) 31.0

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		ug/Kg	CAS Number		ug/Kg
108-95-2	Phenol	29000 U	83-32-9	Acenaphthene	29000 U
111-44-4	bis(2-Chloroethyl)Ether	29000 U	51-28-5	2,4-Dinitrophenol	140000U
95-57-8	2-Chlorophenol	29000 U	100-02-7	4-Nitrophenol	140000U
541-73-1	1,3-Dichlorobenzene	29000 U	132-64-9	Dibenzofuran	29000 U
106-46-7	1,4-Dichlorobenzene	29000 U	121-14-2	2,4-Dinitrotoluene	29000 U
100-51-6	Benzyl Alcohol	29000 U	606-20-2	2,6-Dinitrotoluene	29000 U
95-50-1	1,2-Dichlorobenzene	29000 U	84-66-2	Diethylphthalate	29000 U
95-48-7	2-Methylphenol	29000 U	7005-72-3	4-Chlorophenyl-phenylether	29000 U
39638-32-9	bis(2-Chloroisopropyl)Ether	29000 U	86-73-7	Fluorene	29000 U
106-44-5	4-Methylphenol	29000 U	100-10-6	4-Nitroaniline	140000U
621-64-7	N-Nitroso-Di-n-Propylamine	29000 U	534-52-1	4,6-Dinitro-2-Methylphenol	140000U
67-72-1	Hexachloroethane	29000 U	86-30-6	N-Nitrosodiphenylamine (1)	29000 U
98-95-3	Nitrobenzene	29000 U	101-55-3	4-Bromophenyl-phenylether	29000 U
78-59-1	Isophorone	29000 U	118-74-1	Hexachlorobenzene	29000 U
88-75-5	2-Nitrophenol	29000 U	87-86-5	Pentachlorophenol	140000U
105-67-9	2,4-Dimethylphenol	29000 U	85-01-8	Phenanthrene	2200 J
65-85-0	Benzoic Acid	140000U	120-12-7	Anthracene	29000 U
111-91-1	bis(2-Chloroethoxy)Methane	29000 U	84-74-2	Di-n-Butylphthalate	1700 J
120-83-2	2,4-Dichlorophenol	29000 U	206-44-0	Fluoranthene	3000 J
120-82-1	1,2,4-Trichlorobenzene	29000 U	129-00-0	Pyrene	3900 J
91-20-3	Naphthalene	29000 U	85-68-7	Butylbenzylphthalate	29000 U
106-47-8	4-Chloroaniline	29000 U	91-94-1	3,3'-Dichlorobenzidine	57000 U
87-68-3	Hexachlorobutadiene	29000 U	56-55-3	Benzo(a)Anthracene	29000 U
59-50-7	4-Chloro-3-Methylphenol	29000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	11000 J
91-57-6	2-Methylnaphthalene	29000 U	218-01-9	Chrysene	2200 J
77-47-4	Hexachlorocyclopentadiene	29000 U	117-84-0	Di-n-Octyl Phthalate	29000 U
88-06-2	2,4,6-Trichlorophenol	29000 U	205-99-2	Benzo(b)Fluoranthene	2300 J
95-95-4	2,4,5-Trichlorophenol	140000U	207-08-9	Benzo(k)Fluoranthene	2500 J
91-58-7	2-Chloronaphthalene	29000 U	50-32-8	Benzo(a)Pyrene	3000 J
88-74-4	2-Nitroaniline	140000U	193-39-5	Indeno(1,2,3-cd)Pyrene	3800 J
131-11-3	Dimethyl Phthalate	29000 U	53-70-3	Dibenz(a,h)Anthracene	29000 U
208-96-8	Acenaphthylene	29000 U	191-24-2	Benzo(g,h,i)Perylene	5600 J
99-09-2	3-Nitroaniline	140000U			

(1) - Cannot be separated from diphenylamine

86880102

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES369

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 31%

GPC Cleanup ND
Sep Funnel Extraction ND
Continuous Liquid-Liquid Extraction ND

Cas Number		ug/kg
319-84-8	Alpha BHC	348 U
319-85-7	Beta BHC	348 U
319-86-8	Delta BHC	348 U
58-89-9	Gamma BHC	348 U
76-44-8	Heptachlor	348 U
309-00-2	Aldrin	348 U
1024-57-3	Heptachlor Epoxide	348 U
959-98-8	Endosulfan I	348 U
60-57-1	Dieldrin	696 U
72-55-9	4,4'-DDE	696 U
72-20-8	Endrin	696 U
33213-65-9	Endosulfan II	696 U
72-54-8	4,4'DDD	696 U
1031-07-8	Endosulfan Sulfate	696 U
50-29-3	4,4'-DDT	696 U
72-43-5	Methoxychlor	3478 U
53494-70-5	Endrin Ketone	696 U
57-74-9	Chlordane	3478 U
8001-35-2	Toxaphene	6957 U
12674-11-2	Aroclor 1016	3478 U
11104-28-2	Aroclor 1221	3478 U
11141-16-5	Aroclor 1232	3478 U
53469-21-9	Aroclor 1242	3478 U
12672-29-6	Aroclor 1248	3478 U
11097-69-1	Aroclor 1254	6957 U
11096-82-5	Aroclor 1260	6957 U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

86880060

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES369

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1228C03
CORR. FACTOR: 1450.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC. ug/kg ~~UG/L~~
88-19-7	BENZENESULFONAMIDE, 4-METHYL-	1299	7300
	UNKNOWN	1487	9100

86880061

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES369

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1228I03
CORR. FACTOR: 180.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
110-54-3	HEXANE (DOT)	280	2300
142-82-5	HEPTANE (DOT)	424	1900
108-87-2	CYCLOHEXANE, METHYL-	465	2100
98-82-8	BENZENE, (1-METHYLETHYL)-	865	1200
611-14-3	BENZENE, 1-ETHYL-2-METHYL-	934	1500
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	947	1100
124-18-5	DECANE	962	1700
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	995	2300
*108-67-8	BENZENE, 1,3,5-TRIMETHYL-	1051	930
1120-21-4	UNDECANE	1133	1100

Sample Number
ES370

86881238

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP.
Case No: 8688
Lab Sample ID No: 8712284
QC Report No:
Sample Matrix: SOIL
Contract No: 68-01-7142
Data Release Authorized By: [signature]
Date Sample Received: 12/09/87

VOLATILE COMPOUNDS

(7)

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/21/87
Dil Factor: 200 pH 7.11
Percent Moisture: (Not Decanted) 21.4

CAS Number		UG/KG	CAS Number		UG/KG
74-87-3	Chloromethane	250000U	78-87-5	1,2-Dichloropropane	130000U
74-83-9	Bromomethane	250000U	10061-02-6	Trans-1,3-Dichloropropene	130000U
75-01-4	Vinyl Chloride	250000U	79-01-6	Trichloroethene	300000
75-00-3	Chloroethane	250000U	124-48-1	Dibromochloromethane	130000U
75-09-2	Methylene Chloride	450000	79-00-5	1,1,2-Trichloroethane	130000U
67-64-1	Acetone	710000	71-43-2	Benzene	130000U
75-15-0	Carbon Disulfide	130000U	10061-01-5	cis-1,3-Dichloropropene	130000U
75-35-4	1,1-Dichloroethene	54000 J	110-75-8	2-Chloroethylvinylether	250000U
75-35-3	1,1-Dichloroethane	130000U	75-25-2	Bromoform	130000U
156-60-5	Trans-1,2-Dichloroethene	130000U	108-10-1	4-Methyl-2-Pentanone	250000U
67-66-3	Chloroform	~~20000 BJ~~ 250000 U	591-78-6	2-Hexanone	250000U
107-06-2	1,2-Dichloroethane	130000U	127-18-4	Tetrachloroethene	67000 J
78-93-3	2-Butanone	1.2E6	79-34-5	1,1,2,2-Tetrachloroethane	73000 J
71-55-6	1,1,1-Trichloroethane	71000 J	108-88-3	Toluene	2.6E6
56-23-5	Carbon Tetrachloride	130000U	108-90-7	Chlorobenzene	130000U
108-05-4	Vinyl Acetate	250000U	100-41-4	Ethylbenzene	720000
75-27-4	Bromodichloromethane	130000U	100-42-5	Styrene	130000BU
				Total Xylenes	3.0E6

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Form I

86880J62

Sample Number
ES370

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP.
Case No: 8688
Lab Sample ID No: 8712284
QC Report No:
Sample Matrix: SOIL
Contract No: 68-01-7142
Data Release Authorized By: [signature]
Date Sample Received: 12/09/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/21/87
Dil Factor: 200 pH 7.11
Percent Moisture: (Not Decanted) 21.4

CAS Number		UG/KG	CAS Number		UG/KG
74-87-3	Chloromethane	250000U	78-87-5	1,2-Dichloropropane	130000U
74-83-9	Bromomethane	250000U	10061-02-6	Trans-1,3-Dichloropropene	130000U
75-01-4	Vinyl Chloride	250000U	79-01-6	Trichloroethene	300000
75-00-3	Chloroethane	250000U	124-48-1	Dibromochloromethane	130000U
75-09-2	Methylene Chloride	450000	79-00-5	1,1,2-Trichloroethane	130000U
67-64-1	Acetone	710000	71-43-2	Benzene	130000U
75-15-0	Carbon Disulfide	130000U	10061-01-5	cis-1,3-Dichloropropene	130000U
75-35-4	1,1-Dichloroethene	54000 J	110-75-8	2-Chloroethylvinylether	250000U
75-35-3	1,1-Dichloroethane	130000U	75-25-2	Bromoform	130000U
156-60-5	Trans-1,2-Dichloroethene	130000U	108-10-1	4-Methyl-2-Pentanone	250000U
67-66-3	Chloroform	20000 BJ	591-78-6	2-Hexanone	250000U
107-06-2	1,2-Dichloroethane	130000U	127-18-4	Tetrachloroethene	67000 J
78-93-3	2-Butanone	1.2E6	79-34-5	1,1,2,2-Tetrachloroethane	73000 J
71-55-6	1,1,1-Trichloroethane	71000 J	108-88-3	Toluene	2.6E6
56-23-5	Carbon Tetrachloride	130000U	108-90-7	Chlorobenzene	130000U
108-05-4	Vinyl Acetate	250000U	100-41-4	Ethylbenzene	720000
75-27-4	Bromodichloromethane	130000U	100-42-5	Styrene	130000BU
				Total Xylenes	3.0E6

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

86880063

Laboratory Name: ACUREX CORP.
Case No: 8688

Sample Number
ES370

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared: 12/17/87
Date Analyzed: 01/07/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) 21.4

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		ug/Kg	CAS Number		ug/Kg
108-95-2	Phenol	25000 U	83-32-9	Acenaphthene	15000 J
111-44-4	bis(2-Chloroethyl)Ether	25000 U	51-28-5	2,4-Dinitrophenol	120000U
95-57-8	2-Chlorophenol	25000 U	100-02-7	4-Nitrophenol	120000U
541-73-1	1,3-Dichlorobenzene	25000 U	132-64-9	Dibenzofuran	12000 J
106-46-7	1,4-Dichlorobenzene	25000 U	121-14-2	2,4-Dinitrotoluene	25000 U
100-51-6	Benzyl Alcohol	25000 U	606-20-2	2,6-Dinitrotoluene	25000 U
95-50-1	1,2-Dichlorobenzene	25000 U	84-66-2	Diethylphthalate	3000 J
95-48-7	2-Methylphenol	76000	7005-72-3	4-Chlorophenyl-phenylether	25000 U
39638-32-9	bis(2-Chloroisopropyl)Ether	25000 U	86-73-7	Fluorene	17000 J
106-44-5	4-Methylphenol	25000 U	100-10-6	4-Nitroaniline	120000U
621-64-7	N-Nitroso-Di-n-Propylamine	25000 U	534-52-1	4,6-Dinitro-2-Methylphenol	120000U
67-72-1	Hexachloroethane	25000 U	86-30-6	N-Nitrosodiphenylamine (1)	25000 U
98-95-3	Nitrobenzene	25000 U	101-55-3	4-Bromophenyl-phenylether	25000 U
78-59-1	Isophorone	640000	118-74-1	Hexachlorobenzene	25000 U
88-75-5	2-Nitrophenol	25000 U	87-86-5	Pentachlorophenol	120000U
105-67-9	2,4-Dimethylphenol	45000	85-01-8	Phenanthrene	110000
65-85-0	Benzoic Acid	120000U	120-12-7	Anthracene	18000 J
111-91-1	bis(2-Chloroethoxy)Methane	25000 U	84-74-2	Di-n-Butylphthalate	110000
120-83-2	2,4-Dichlorophenol	25000 U	206-44-0	Fluoranthene	74000
120-82-1	1,2,4-Trichlorobenzene	25000 U	129-00-0	Pyrene	66000
91-20-3	Naphthalene	380000	85-68-7	Butylbenzylphthalate	46000
106-47-8	4-Chloroaniline	25000 U	91-94-1	3,3'-Dichlorobenzidine	50000 U
87-68-3	Hexachlorobutadiene	25000 U	56-55-3	Benzo(a)Anthracene	32000
59-50-7	4-Chloro-3-Methylphenol	25000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	660000
91-57-6	2-Methylnaphthalene	140000	218-01-9	Chrysene	33000
77-47-4	Hexachlorocyclopentadiene	25000 U	117-84-0	Di-n-Octyl Phthalate	25000 U
88-06-2	2,4,6-Trichlorophenol	25000 U	205-99-2	Benzo(b)Fluoranthene	26000
95-95-4	2,4,5-Trichlorophenol	120000U	207-08-9	Benzo(k)Fluoranthene	20000 J
91-58-7	2-Chloronaphthalene	25000 U	50-32-8	Benzo(a)Pyrene	23000 J
88-74-4	2-Nitroaniline	120000U	193-39-5	Indeno(1,2,3-cd)Pyrene	12000 J
131-11-3	Dimethyl Phthalate	42000	53-70-3	Dibenz(a,h)Anthracene	25000 U
208-96-8	Acenaphthylene	25000 U	191-24-2	Benzo(g,h,i)Perylene	13000 J
99-09-2	3-Nitroaniline	120000U			

(1) - Cannot be separated from diphenylamine

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
ES370

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 21%

GPC Cleanup ND
Sep Funnel Extraction ND
Continuous Liquid-Liquid Extraction ND

Cas Number		ug/Kg
319-84-8	Alpha BHC	305 U
319-85-7	Beta BHC	305 U
319-86-8	Delta BHC	305 U
58-89-9	Gamma BHC	305 U
76-44-8	Heptachlor	305 U
309-00-2	Aldrin	305 U
1024-57-3	Heptachlor Epoxide	305 U
959-98-8	Endosulfan I	305 U
60-57-1	Dieldrin	611 U
72-55-9	4,4'-DDE	611 U
72-20-8	Endrin	611 U
33213-65-9	Endosulfan II	611 U
72-54-8	4,4'DDD	611 U
1031-07-8	Endosulfan Sulfate	611 U
50-29-3	4,4'-DDT	611 U
72-43-5	Methoxychlor	3053 U
53494-70-5	Endrin Ketone	611 U
57-74-9	Chlordane	3053 U
8001-35-2	Toxaphene	6107 U
12674-11-2	Aroclor 1016	3053 U
11104-28-2	Aroclor 1221	3053 U
11141-16-5	Aroclor 1232	3053 U
53469-21-9	Aroclor 1242	3053 U
12672-29-6	Aroclor 1248	3053 U
11097-69-1	Aroclor 1254	6107 U
11096-82-5	Aroclor 1260	6107 U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

86880064

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES370

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1228I04
CORR. FACTOR: 32000.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
110-54-3	HEXANE (DOT)	280	240000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	996	320000
98-06-6	BENZENE, (1,1-DIMETHYLETHYL)-	1101	160000

86880065

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES370

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1228C04
CORR. FACTOR: 2540.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			ug/kg ~~ug/L~~ SDR
	BENZENE, ~~1,3~~-DIMETHYL- N	310	330000
	BENZENE, ~~1,3~~-DIMETHYL- N	355	200000
	UNKNOWN	391	250000
	BENZENE, ~~1,3,5~~-TRIMETHYL- N	538	280000
	BENZENE, ~~1,3,5~~-TRIMETHYL- N	583	150000
	BENZENE, ~~1~~-METHYL-~~4~~-PROPYL- N	629	150000
	UNKNOWN	635	200000
	BENZENE, ~~2~~-ETHYL-~~1,4~~-DIMETHYL- N	669	300000
	BENZENE, ~~2~~-ETHYL-~~1,4~~-DIMETHYL- N	680	370000
	~~NONANE, 2,5-DIMETHYL-~~ Unknown hydrocarbon SDR	705	360000
	BENZENE, ~~1,2,3,5~~-TETRAMETHYL- N	724	200000
	UNKNOWN	731	640000
	BENZENE, ~~2-ETHYL-1,4-DIMETHYL-~~ C_3 substituted SDR	771	110000
	~~NONANE, 4,5-DIMETHYL-~~ Unknown hydrocarbon SDR	1057	250000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~ Unknown hydrocarbon SDR	1157	270000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~ Unknown hydrocarbons SDR	1251	170000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~ Unknown hydrocarbon SDR	1341	110000
	UNKNOWN SDR	1698	200000
	UNKNOWN	1840	360000
	~~1,2-BENZENEDICARBOXYLIC ACID, ISODECYL OCTYL~~ Unknown SDR	2176	150000

minor cop

86881347

Sample Number
ES371

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP.
Lab Sample ID No: 8712285
Sample Matrix: SOIL
Data Release Authorized By: [signature]

Case No: 8688
QC Report No:
Contract No: 68-01-7142
Date Sample Received: 12/09/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/21/87
Dil Factor: 500 pH 7.22
Percent Moisture: (Not Decanted) 31.9

8

CAS Number		UG/KG	CAS Number		UG/KG
74-87-3	Chloromethane	730000U	78-87-5	1,2-Dichloropropane	370000U
74-83-9	Bromomethane	730000U	10061-02-6	Trans-1,3-Dichloropropene	370000U
75-01-4	Vinyl Chloride	730000U	79-01-6	Trichloroethene	1.5E6
75-00-3	Chloroethane	730000U	124-48-1	Dibromochloromethane	370000U
75-09-2	Methylene Chloride	2.1E6	79-00-5	1,1,2-Trichloroethane	370000U
67-64-1	Acetone	1.9E6	71-43-2	Benzene	370000U
75-15-0	Carbon Disulfide	370000U	10061-01-5	cis-1,3-Dichloropropene	370000U
75-35-4	1,1-Dichloroethene	130000J	110-75-8	2-Chloroethylvinylether	730000U
75-35-3	1,1-Dichloroethane	370000U	75-25-2	Bromoform	370000U
156-60-5	Trans-1,2-Dichloroethene	370000U	108-10-1	4-Methyl-2-Pentanone	730000U
67-66-3	Chloroform	76000 BJ	591-78-6	2-Hexanone	730000U
107-06-2	1,2-Dichloroethane	370000U	127-18-4	Tetrachloroethene	330000J
78-93-3	2-Butanone	2.3E6	79-34-5	1,1,2,2-Tetrachloroethane	160000J
71-55-6	1,1,1-Trichloroethane	360000J	108-88-3	Toluene	9.5E6
56-23-5	Carbon Tetrachloride	~~62000 J~~ 370000U pv	108-90-7	Chlorobenzene	370000U
108-05-4	Vinyl Acetate	730000U	100-41-4	Ethylbenzene	2.8E6
75-27-4	Bromodichloromethane	370000U	100-42-5	Styrene	370000BU
				Total Xylenes	1.1E7

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

Form I

Sample Number
ES371

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP.
Case No: 8688
Lab Sample ID No: 8712285
QC Report No:
Sample Matrix: SOIL
Contract No: 68-01-7142
Data Release Authorized By: [signature]
Date Sample Received: 12/09/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/21/87
Dil Factor: 500 pH 7.22
Percent Moisture: (Not Decanted) 31.9

CAS Number		UG/KG	CAS Number		UG/KG
74-87-3	Chloromethane	730000U	78-87-5	1,2-Dichloropropane	370000U
74-83-9	Bromomethane	730000U	10061-02-6	Trans-1,3-Dichloropropene	370000U
75-01-4	Vinyl Chloride	730000U	79-01-6	Trichloroethene	1.5E6
75-00-3	Chloroethane	730000U	124-48-1	Dibromochloromethane	370000U
75-09-2	Methylene Chloride	2.1E6	79-00-5	1,1,2-Trichloroethane	370000U
67-64-1	Acetone	1.9E6	71-43-2	Benzene	370000U
75-15-0	Carbon Disulfide	370000U	10061-01-5	cis-1,3-Dichloropropene	370000U
75-35-4	1,1-Dichloroethene	130000J	110-75-8	2-Chloroethylvinylether	730000U
75-35-3	1,1-Dichloroethane	370000U	75-25-2	Bromoform	370000U
156-60-5	Trans-1,2-Dichloroethene	370000U	108-10-1	4-Methyl-2-Pentanone	730000U
67-66-3	Chloroform	76000 BJ	591-78-6	2-Hexanone	730000U
107-06-2	1,2-Dichloroethane	370000U	127-18-4	Tetrachloroethene	330000J
78-93-3	2-Butanone	2.3E6	79-34-5	1,1,2,2-Tetrachloroethane	160000J
71-55-6	1,1,1-Trichloroethane	360000J	108-88-3	Toluene	9.5E6
56-23-5	Carbon Tetrachloride	62000 J	108-90-7	Chlorobenzene	370000U
108-05-4	Vinyl Acetate	730000U	100-41-4	Ethylbenzene	2.8E6
75-27-4	Bromodichloromethane	370000U	100-42-5	Styrene	370000BU
				Total Xylenes	1.1E7

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

86880071

Laboratory Name: ACUREX CORP.
Case No: 8688

Sample Number
ES371

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared: 12/17/87
Date Analyzed: 01/08/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) 31.9

GPC Cleanup ___ Yes X No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		ug/Kg	CAS Number		ug/Kg
108-95-2	Phenol	76000	83-32-9	Acenapnthene	9100 J
111-44-4	bis(2-Chloroethyl)Ether	29000 U	51-28-5	2,4-Dinitrophenol	140000U
95-57-8	2-Chlorophenol	29000 U	100-02-7	4-Nitrophenol	140000U
541-73-1	1,3-Dichlorobenzene	29000 U	132-64-9	Dibenzofuran	7400 J
106-46-7	1,4-Dichlorobenzene	29000 U	121-14-2	2,4-Dinitrotoluene	29000 U
100-51-6	Benzyl Alcohol	29000 U	606-20-2	2,6-Dinitrotoluene	29000 U
95-50-1	1,2-Dichlorobenzene	7400 J	84-66-2	Diethylphthalate	2000 J
95-48-7	2-Methylphenol	29000 U	7005-72-3	4-Chlorophenyl-phenylether	29000 U
39638-32-9	bis(2-Chloroisopropyl)Ether	29000 U	86-73-7	Fluorene	10000 J
106-44-5	4-Methylphenol	29000 U	100-10-6	4-Nitroaniline	140000U
621-64-7	N-Nitroso-Di-n-Propylamine	29000 U	534-52-1	4,6-Dinitro-2-Methylphenol	140000U
67-72-1	Hexachloroethane	29000 U	86-30-6	N-Nitrosodiphenylamine (1)	29000 U
98-95-3	Nitrobenzene	33000	101-55-3	4-Bromophenyl-phenylether	29000 U
78-59-1	Isophorone	300000	118-74-1	Hexachlorobenzene	29000 U
88-75-5	2-Nitrophenol	29000 U	87-86-5	Pentachlorophenol	140000U
105-67-9	2,4-Dimethylphenol	29000 U	85-01-8	Phenanthrene	62000
65-85-0	Benzoic Acid	140000U	120-12-7	Anthracene	13000 J
111-91-1	bis(2-Chloroethoxy)Methane	29000 U	84-74-2	Di-n-Butylphthalate	38000
120-83-2	2,4-Dichlorophenol	29000 U	206-44-0	Fluoranthene	48000
120-82-1	1,2,4-Trichlorobenzene	29000 U	129-00-0	Pyrene	49000
91-20-3	Naphthalene	190000	85-68-7	Butylbenzylphthalate	22000 J
106-47-8	4-Chloroaniline	29000 U	91-94-1	3,3'-Dichlorobenzidine	58000 U
87-68-3	Hexachlorobutadiene	29000 U	56-55-3	Benzo(a)Anthracene	19000 J
59-50-7	4-Chloro-3-Methylphenol	29000 U	117-81-7	bis(2-Ethylhexyl)Phthalate	180000
91-57-6	2-Methylnaphthalene	67000	218-01-9	Chrysene	21000 J
77-47-4	Hexachlorocyclopentadiene	29000 U	117-84-0	Di-n-Octyl Phthalate	6700 J
88-06-2	2,4,6-Trichlorophenol	29000 U	205-99-2	Benzo(b)Fluoranthene	21000 J
95-95-4	2,4,5-Trichlorophenol	140000U	207-08-9	Benzo(k)Fluoranthene	29000 U
91-58-7	2-Chloronaphthalene	29000 U	50-32-8	Benzo(a)Pyrene	15000 J
88-74-4	2-Nitroaniline	140000U	193-39-5	Indeno(1,2,3-cd)Pyrene	8900 J
131-11-3	Dimethyl Phthalate	21000 J	53-70-3	Dibenz(a,h)Anthracene	29000 U
208-96-8	Acenaphthylene	29000 U	191-24-2	Benzo(g,h,i)Perylene	9400 J
99-09-2	3-Nitroaniline	140000U			

(1) - Cannot be separated from diphenylamine

Form I

86880104

Laboratory Name: ACUREX
Case No. 8688

Sample Number:
E5371

Organic Analysis Data Sheet
(Page 3)
Pesticide/PCBs

Concentration: Med
Date Extracted/prep. 12/18/87
Date Analyzed 01/14/88
Conc./Dil Factor 2.00
% Moisture (decanted) 32%

GPC Cleanup NO
Sep Funnel Extraction NO
Continuous Liquid-Liquid Extraction NO

Cas Number		ug/Kg
319-84-8	Alpha BHC	352 U
319-85-7	Beta BHC	352 U
319-86-8	Delta BHC	352 U
58-89-9	Gamma BHC	352 U
76-44-8	Heptachlor	352 U
309-00-2	Aldrin	352 U
1024-57-3	Heptachlor Epoxide	352 U
959-98-8	Endosulfan I	352 U
60-57-1	Dieldrin	705 U
72-55-9	4,4'-DDE	705 U
72-20-8	Endrin	705 U
33213-65-9	Endosulfan II	705 U
72-54-8	4,4'DDD	705 U
1031-07-8	Endosulfan Sulfate	705 U
50-29-3	4,4'-DDT	705 U
72-43-5	Methoxychlor	3524 U
53494-70-5	Endrin Ketone	705 U
57-74-9	Chlordane	3524 U
8001-35-2	Toxaphene	7048 U
12674-11-2	Aroclor 1016	3524 U
11104-28-2	Aroclor 1221	3524 U
11141-16-5	Aroclor 1232	3524 U
53469-21-9	Aroclor 1242	3524 U
12672-29-6	Aroclor 1248	3524 U
11097-69-1	Aroclor 1254	7048 U
11096-82-5	Aroclor 1260	7048 U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Wieght of sample extracted
Vt = Volume of total extract (ul)

Vs _____ or Ws 0.01 Vt 1000 Vi 2

FORM 1

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES371

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 4

DATAFILE: E1228I05
CORR. FACTOR: 92000.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			PPB
110-54-3	HEXANE (DOT)	281	740000
108-87-2	CYCLOHEXANE, METHYL-	466	760000
620-14-4	BENZENE, 1-ETHYL-3-METHYL-	935	890000
124-18-5	DECANE	963	780000
108-67-8	BENZENE, 1,3,5-TRIMETHYL-	996	1300000
1074-17-5	BENZENE, 1-METHYL-2-PROPYL-	1091	510000
98-06-6	BENZENE, (1,1-DIMETHYLETHYL)-	1102	690000
1120-21-4	UNDECANE	1134	530000
1758-88-9	BENZENE, 2-ETHYL-1,4-DIMETHYL-	1154	510000

86880073

LABORATORY NAME: ACUREX CORPORATION SAMPLE NUMBER: ES371

CASE NO: 8688

ORGANICS ANALYSIS DATA SHEET - PAGE 5

DATAFILE: E1228C05
CORR. FACTOR: 1470.00

TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	EST. CONC.
			ug/kg ~~UG/L~~ SDR
	BENZENE, ~~1,3~~ 1,2-DIMETHYL-	347	250000
	BENZENE, ~~1,3~~ 1,2-DIMETHYL-	385	120000
111-76-2	ETHANOL, 2-BUTOXY-	417	100000
	BENZENE, ~~1~~ 1,2-ETHYL-~~3~~-METHYL-	500	82000
	BENZENE, ~~1,3,5~~ 1,2-TRIMETHYL-	549	150000
	BENZENE, ~~1,3,5~~-TRIMETHYL-	590	71000
	BENZENE, ~~1~~-METHYL-~~3~~-PROPYL-	633	77000
	~~BENZENE, DIETHYL~~- Unknown SDR	639	78000
	BENZENE, ~~2~~-ETHYL-~~1,4~~-DIMETHYL-	644	84000
	BENZENE, ~~2~~-ETHYL-~~1,4~~-DIMETHYL-	672	140000
	~~NONANE, 4,5-DIMETHYL~~- Unknown hydrocarbon SDR	703	130000
	BENZENE, ~~1,2,3,5~~-TETRAMETHYL-	721	110000
	BENZENE, ~~1-ETHYL-3,5-DIMETHYL~~- C_3 Substituted SDR	767	78000
	UNKNOWN	826	83000
	~~NONANE, 4,5-DIMETHYL~~- Unknown hydrocarbon SDR	1046	64000
	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL~~- Unknown hydrocarbon	1145	75000
	UNKNOWN SDR	1693	68000
	UNKNOWN	1705	82000
	UNKNOWN	1795	48000
	UNKNOWN	1825	200000

ecology and environment, inc.

111 WEST JACKSON BLVD , CHICAGO, ILLINOIS 60604, TEL 312-663-9415
International Specialists in the Environment

CRL Receipt Date 1-19-88 FIT Receipt Date 2-3-88 Review Completed 2-16-88

TO: JEFF CARMAN
FROM: James Mertes
SUBJECT: U.S. SCRAP
PAN: IL0102VA (1 hour charged for review) Case # 8688

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 15	~~Low~~ MED. Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

X Incomplete, awaiting organics

FIT Data Review Findings:
- Samples analyzed as MED conc. so CRDL's on Summary Sheet don't apply.
- CYANIDE IN MANY SAMPLES
- Elevated levels of many heavy metals including lead, mercury.
- New data qualifier sheet enclosed. Circled qualifiers apply.
- EPA data reviewer uses old qualifiers in data summary. Old qualifier definitions also enclosed.

Check Data Sheets for Transcription Errors

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

Book No. 7 Page No. 174 Date Sampled 12-3/4/7/8-88

recycled paper

TABLES: ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
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.	Compound was confirmed by mass spectroscopy
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.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
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.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Metals

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
s	s	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not calculated since chemical is not a carcinogen.
( ) Estimated value.

ecology and environment, inc.
CHICAGO, ILLINOIS

page 1 of 3

CHEMICAL EVALUATION FORM

SITE NAME: U.S. SCRAP PAN #: DATE: 2-16-88

CASE # 8688 UNITS - mg/kg REVIEWER: J. MERTES

COMPOUND	CRDL** RAS SOIL mg/Kg (ppm)	CRDL** RAS WATER ug/L (ppb)	CRDL** SAS DRINKING WATER ug/L (ppb)	MEQ 458	MEQ 459	MEQ 503	MEQ 504	MEQ 505	506	507
ALUMINUM *	40	200	100	6330	7840	8010	11400	17700	11400	12000
ANTIMONY	24	60	5	27.3 *N	42.2 *N	29.1 *N				13.9 B*N
ARSENIC	2	10	5	13.6 S	7.1 S	16.6 S	9.9 +	23.7 +	13.4 S	19.4 S
BARIUM *	40	200	50	588 *N	1180 *N	399 *N	57.8 B*N	63.5 *N	57.5 *N	876 *N
BERYLLIUM	1	5	5	.36 B	.37 B	.66 B	.50 B	1.1 B	.55 B	.89 B
CADMIUM	1	5	0.5	33.5 *	26.4 *	3.4 *				6.9 *
CALCIUM *	1000	5000	1000	56000 *	37000 *	40200 *	5820 *	6160 *	67700 *	64500 *
CHROMIUM	2	10	10	817 *	193 *	41.3 *	23.6 *	72.0 *	20.3 *	324 *
COBALT	10	50	10	14.9 E	20.2 E	20.8 E	8.0 BE	14.0 BE	9.6 BE	
COPPER	5	25	10	288 *	539 *	209 *	30.6 *	37.1 *	25.5 *	592 *
IRON *	20	100	100	28200 *	16700 *	86500 *	19400 *	44800 *	20300 *	28200 *
LEAD	1	5	2	3650 E*	7890 E*	318 E*	29.4 S*	46.3 E*	15.7 S*	1540 E*
MAGNESIUM *	1000	5000	1000	24400 *	13400 *	11600 *	5250 *	750 *	26600 *	21500 *
MANGANESE *	3	15	10	395	304	628	216	339	402	648
MERCURY	0.008	0.2	0.2	3.3 *	8.7 *	0.6 *				0.7 *
NICKEL	8	40	20	160 E*N	103 E*N	28.3 E*N	22.7 E*N	38.9 E*N	30.3 E*N	251 E*N
POTASSIUM *	1000	5000	2000	984 BE	1410 BE	1870 E	2720 E	3800 E	2240 E	1880 E
SELENIUM	1	5	2		3.3 N					
SILVER	2	10	5							
SODIUM *	1000	5000	1000	1040	1080 B	572 B	1050	578 B		1280
THALLIUM	2	10	2							
VANADIUM	10	50	10	13.7 E*	18.0 E*	44.4 E*	23.4 E*	42.4 E*	21.4 E*	26.5 E*
ZINC *	4	20	20	2460	2060 E	820 E	879 E	113 E	53.4 E	1900 E
CYANIDE	2	10	10	6.5 *N	25.2 *N					4.2 *N

* NOT GENERALLY USED FOR HRS SCORING

** SPECIFIC DETECTION LIMITS ARE HIGHLY MATRIX DEPENDENT. THE DETECTION LIMITS LISTED HEREIN ARE PROVIDED FOR GUIDANCE AND MAY NOT ALWAYS BE ACHIEVABLE.

ecology and environment, inc.
CHICAGO, ILLINOIS

page 2 of 3

CHEMICAL EVALUATION FORM

SITE NAME: U.S. SCRAP PAN #: DATE: 2-16-88

CASE #: 8688 UNITS: mg/kg REVIEWER: J. MERTES

COMPOUND	CRDL** RAS SOIL mg/Kg (ppm)	CRDL** RAS WATER ug/L (ppb)	CRDL** SAS DRINKING WATER ug/L (ppb)	MEQ 508	509	510	511	512	513	514
ALUMINUM *	40	200	100	10000	5460	8390	6300	8070	5560	6000
ANTIMONY	24	60	5	14.5 BW			47.0 *N	30.0 *N		16.0 *N
ARSENIC	2	10	5	30.9	19.8 S	7.6 S	14.0 +	17.3 S	29.5 S	13.3 S
BARIUM *	40	200	50	555 *N	59.1 *N	49.3 B *N	123 *N	125 *N	262 *N	637 *N
BERYLLIUM	1	5	5	1.2 B	1.4 B	.44 B	.67 B	.50 B	.58 B	.46 B
CADMIUM	1	5	0.5	7.7 *	7.0 *		12.7 *	20.2 *	3.1 *	13.8 *
CALCIUM *	1000	5000	1000	33800 *	12200 *	58200 *	32300 *	41200 *	28500 *	44000 *
CHROMIUM	2	10	10	385 *	16.0 *	15.1 *	1120 *	1030 *	177 *	553 *
COBALT	10	50	10	15.0 E	6.8 BE	7.9 BE	27.2 E	20.2 E	9.7 BE	14.3 E
COPPER	5	25	10	302 *	29.2 *	14.6 *	345 *	574 *	133 *	280 *
IRON *	20	100	100	33100 *	23600 *	17200 *	46700 *	65100 *	32500 *	29300 *
LEAD	1	5	2	1560 E *	77.4 E *	11.3 S *	4580 E *	4620 E *	1100 E *	2440 E *
MAGNESIUM *	1000	5000	1000	9990 *	2630 *	31300 *	9620 *	10900 *	7750 *	11900 *
MANGANESE *	3	15	10	858	471	558	656	847	459	470
MERCURY	0.008	0.2	0.2	1.0 *	3.4 *		4.4 *	9.7 *	1.9 *	3.6 *
NICKEL	8	40	20	108 E *N	102 E *N	19.7 E *N	183 E *N	82.1 E *N	432 E *N	330 E *N
POTASSIUM *	1000	5000	2000	1590 E	1560 E	1440 E	930 BE	936 BE	965 BE	838 BE
SELENIUM	1	5	2			3.3 N			3.0 N	
SILVER	2	10	5							
SODIUM *	1000	5000	1000	1310	1120 B	525 B	609 B	937 B	472 B	852 B
THALLIUM	2	10	2		0.71 B			.88 BW		.65 BW
VANADIUM	10	50	10	325 E *	53.7 E *	20.9 E *	13.3 E *	30.3 E *	16.2 E *	17.6 E *
ZINC *	4	20	20	1000 E	420 E	44.7 E	2450 E	4520 E	1860 E	3670 E
CYANIDE	2	10	10	1.2 *N			1.0 *N	2.2 *N	.93 *N	1.2 *N

* NOT GENERALLY USED FOR HRS SCORING

** SPECIFIC DETECTION LIMITS ARE HIGHLY MATRIX DEPENDENT. THE DETECTION LIMITS LISTED HEREIN ARE PROVIDED FOR GUIDANCE AND MAY NOT ALWAYS BE ACHIEVABLE.

ecology and environment, inc.
CHICAGO, ILLINOIS

page 3 of 3

CHEMICAL EVALUATION FORM

SITE NAME: U.S. SCRAP PAN #: DATE: 2-16-88

CASE # 8688 UNITS - mg/kg REVIEWER: J. MERTES

COMPOUND	CRDL** RAS SOIL mg/Kg (ppm)	CRDL** RAS WATER ug/L (ppb)	CRDL** SAS DRINKING WATER ug/L (ppb)	MEQ 515						
ALUMINUM *	40	200	100	11500						
ANTIMONY	2.4	60	5	39.9 *N						
ARSENIC	2	10	5	19.9 S						
BARIUM *	40	200	50	857 *N						
BERYLLIUM	1	5	5	.868						
CADMIUM	1	5	0.5	60.4 *						
CALCIUM *	1000	5000	1000	57000 *						
CHROMIUM	2	10	10	1220 *						
COBALT	10	50	10	29.1 E						
COPPER	5	25	10	405 *						
IRON *	20	100	100	23500 *						
LEAD	1	5	2	3910 E *						
MAGNESIUM *	1000	5000	1000	14300 *						
MANGANESE *	3	15	10	1240						
MERCURY	0.008	0.2	0.2	3.4 *						
NICKEL	8	40	20	260 E *N						
POTASSIUM *	1000	5000	2000	1230 BE						
SELENIUM	1	5	2							
SILVER	2	10	5							
SODIUM *	1000	5000	1000	839						
THALLIUM	2	10	2							
VANADIUM	10	50	10	24.4 E *						
ZINC *	4	20	20	1790 E						
CYANIDE	2	10	10	155 *N						

* NOT GENERALLY USED FOR HRS SCORING

** SPECIFIC DETECTION LIMITS ARE HIGHLY MATRIX DEPENDENT. THE DETECTION LIMITS LISTED HEREIN ARE PROVIDED FOR GUIDANCE AND MAY NOT ALWAYS BE ACHIEVABLE.

2/3/88
33 pages

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 1-26-88

SUBJECT: Review of Region V CLP Data
Received for Review on 1-19-88

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

TO: Data User: FIT

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

SITE NAME: U. S. Scrap SMO case No. 8688

EPA Data Set No. SF 4721 No. of Samples: 15 D.U./Activity Numbers Y905/C721Z8

CRL No. 88FC09S48- S62

SMO Traffic No. MEQ503 - 515, 458, 459

CLP Laboratory: RMAL Hrs. Required for Review: 8

Following are our findings:

This review covers fifteen soil samples analyzed for metals and cyanide.

The matrix spike recovery for Se (204%) indicates a high bias; however, the sample result is less than IDL and the data are acceptable.

The RPD for duplicates for Cr (186), Fe (44.2), Mg (78.1) and Hg (75) are out of control limits and the results are estimated(J). The RPD for Cd (29.5), Ca (23.3) and Cu (30.6) are within control limits for soils (35%) and the data are acceptable.

(next page)

Winston Vyzeswarapu
1/22/88

( ) Data are acceptable for use.
(X) 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

Contractor: RMAL CASE NO. 8688

Serial dilution for Zn (11%) indicates interference and the results are estimated (J). Serial dilution for Co (19.3%) and K (35%) does not indicate interference (sample results are less than 50xIDL) and the data are acceptable.

For Ba, the matrix spike recovery (150%) indicates a high bias and the RPD for duplicates (38.5) are out of control limits. Therefore, the data for Ba are estimated(J).

For Ni, the matrix spike recovery (177.2%) indicates a high bias, the duplicates (80.1 RPD)are out of control limits and the serial dilution (12.3%) indicates interference. Therefore, the data for Ni are estimated (J).

For Pb_P the duplicates (188.9 RPD) are out of control limits and the serial dilution (10.4%) indicates interference. Therefore, the ICP data for lead are estimated(J). The duplicates for Pb_F are within control limits for soils (35%) and the furnace lead data are acceptable.

For V, the serial dilution (10.5%) does not indicate interference (sample result is less than 50xIDL); however, the RPD for duplicates (200) is out of control limits and the data are estimated (J).

For Sb, the matrix spike recovery (36.9%) indicates low bias and the RPD for duplicates fall out of control limits(±15.2 mg/kg). Therefore, the data for Sb are estimated (J).

For CN, the matrix spike recovery (171.4%) indicates a high bias and the RPD for duplicates (70%) fall out of control limits. Therefore, the data for CN are estimated (J).

Reviewed by: Winston Vijjeswarapu
Phone: 312-353-3103
Date: January 22, 1988

Winston Vijjeswarapu

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE 000001

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

SOW No.: 7/87

EPA Sample No.	Lab Sample ID.
MEQ458	
MEQ458D	
MEQ458S	
MEQ459	
MEQ503	
MEQ504	
MEQ505	
MEQ506	
MEQ507	
MEQ508	
MEQ509	
MEQ510	
MEQ511	
MEQ512	
MEQ513	
MEQ514	
MEQ515	

RECEIVED
JAN 13 1988
U.S. EPA, CENTRAL REGIONAL LAB
536 S CLARK STREET
CHICAGO, ILLINOIS 60605

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES
If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:
15 MEDIUM SOILS FOR TOTAL METALS AND CYANIDE ANALYSIS
INTERFERENCE NOTED FOR COBALT, LEAD, NICKEL, POTASSIUM, VANADIUM AND ZINC ON SERIAL DILUTION
RMA QC# 87503 THE SOLID LCS RESULTS FOR SE AND TL ARE DETERMINED BY MSA

Release of the data contained in this hardcopy data package and in the computer readable data submitted on floppy diskette have been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Lab Manager: CIC

Date: 01/12/88

Sample Number
ES367

86881007

(6)

ORGANICS ANALYSIS DATA SHEET
(Page 1)

Laboratory Name: ACUREX CORP. Case No: 8688
Lab Sample ID No: 8712281 QC Report No:
Sample Matrix: SOIL Contract No: 68-01-7142
Data Release Authorized By: Charlie Date Sample Received: 12/09/87

VOLATILE COMPOUNDS

Concentration: MED
Date Extracted/Prepared:
Date Analyzed: 12/22/87
Dil Factor: 10.0 pH 7.35
Percent Moisture: (Not Decanted) 25.6

CAS Number		UG/KG	CAS Number		UG/KG
74-87-3	Chloromethane	13000 U	78-87-5	1,2-Dichloropropane	6700 U
74-83-9	Bromomethane	13000 U	10061-02-6	Trans-1,3-Dichloropropene	6700 U
75-01-4	Vinyl Chloride	13000 U	79-01-6	Trichloroethene	6700 U
75-00-3	Chloroethane	13000 U	124-48-1	Dibromochloromethane	6700 U
75-09-2	Methylene Chloride	6700 U	79-00-5	1,1,2-Trichloroethane	6700 U
67-64-1	Acetone	17000	71-43-2	Benzene	6700 U
75-15-0	Carbon Disulfide	~~450 J~~ 13000 U PV	10061-01-5	cis-1,3-Dichloropropene	6700 U
75-35-4	1,1-Dichloroethene	6700 U	110-75-8	2-Chloroethylvinylether	13000 U
75-35-3	1,1-Dichloroethane	~~650 J~~ 6700 U PV	75-25-2	Bromoform	6700 U
156-60-5	Trans-1,2-Dichloroethene	6700 U	108-10-1	4-Methyl-2-Pentanone	13000 U
67-66-3	Chloroform	6700 BU	591-78-6	2-Hexanone	13000 U
107-06-2	1,2-Dichloroethane	6700 U	127-18-4	Tetrachloroethene	6700 U
78-93-3	2-Butanone	13000 U	79-34-5	1,1,2,2-Tetrachloroethane	13000 U
71-55-6	1,1,1-Trichloroethane	6700 U	108-88-3	Toluene	23000
56-23-5	Carbon Tetrachloride	6700 U	108-90-7	Chlorobenzene	6700 U
108-05-4	Vinyl Acetate	13000 U	100-41-4	Ethylbenzene	44000
75-27-4	Bromodichloromethane	6700 U	100-42-5	Styrene	6700 BU
				Total Xylenes	930000

B - Compound was detected in the QC blank.
J - Reported value is less than the detection limit.
U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

See page 1A for complete definitions of the data reporting qualifiers.

U.S. EPA - CLP

000003

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ458

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/09/87

% Solids: 78.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6330			P
7440-36-0	Antimony	27.3		*N	P
7440-38-2	Arsenic	13.6		S	F
7440-39-3	Barium	588		*N	P
7440-41-7	Beryllium	0.36	B		P
7440-43-9	Cadmium	33.5		*	P
7440-70-2	Calcium	56000		*	P
7440-47-3	Chromium	817		*	P
7440-48-4	Cobalt	14.9		E	P
7440-50-8	Copper	288		*	P
7439-89-6	Iron	28200		*	P
7439-92-1	Lead	3650		E*	P
7439-95-4	Magnesium	24400		*	P
7439-96-5	Manganese	395			P
7439-97-6	Mercury	3.3		*	CV
7440-02-0	Nickel	160		E*N	P
7440-09-7	Potassium	984	B	E	P
7482-49-2	Selenium	2.5	U	N	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	1040	B	*	P
7440-28-0	Thallium	0.51	U	W	F
7440-62-2	Vanadium	13.7		E *	P
7440-66-6	Zinc	2460		E	P
	Cyanide	6.5		*N	AS

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ARSENIC VALUE IS DETERMINED BY MSA

SELENIUM VALUE IS REPORTED AT AN ADDITIONAL 10X. LEAD AT ADDITIONAL 400X AND MERCURY AT ADDITIONAL 5X DILUTIONS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ459

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/09/87

% Solids: 66.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7840			P
7440-36-0	Antimony	42.2		*N	P
7440-38-2	Arsenic	7.1		S	F
7440-39-3	Barium	1180		*N	P
7440-41-7	Beryllium	0.37	B		P
7440-43-9	Cadmium	26.4		*	P
7440-70-2	Calcium	37000		*	P
7440-47-3	Chromium	1930		*	P
7440-48-4	Cobalt	20.2		E	P
7440-50-8	Copper	539		*	P
7439-89-6	Iron	16700		*	P
7439-92-1	Lead	7890		E*	P
7439-95-4	Magnesium	13400		*	P
7439-96-5	Manganese	304			P
7439-97-6	Mercury	8.7		*	CV
7440-02-0	Nickel	103		E*N	P
7440-09-7	Potassium	1410	B	E	P
7482-49-2	Selenium	3.3		N	F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	1080	B	~~*~~ 140	P
7440-28-0	Thallium	0.60	U	W	F
7440-62-2	Vanadium	18.0		E *	P
7440-66-6	Zinc	2060		E	P
	Cyanide	25.2		*N	AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ARSENIC VALUE DETERMINED BY MSA

SELENIUM AND MERCURY VALUES REPORTED AT ADDITIONAL 10X DILUTIONS

U.S. EPA - CLP

000005

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ503

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/09/87

% Solids: 75.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8010			P
7440-36-0	Antimony	29.1		*N	P
7440-38-2	Arsenic	16.6		S	F
7440-39-3	Barium	399		*N	P
7440-41-7	Beryllium	0.66	B		P
7440-43-9	Cadmium	3.4		*	P
7440-70-2	Calcium	40200		*	P
7440-47-3	Chromium	41.3		*	P
7440-48-4	Cobalt	20.8		E	P
7440-50-8	Copper	209		*	P
7439-89-6	Iron	86500		*	P
7439-92-1	Lead	318		E*	P
7439-95-4	Magnesium	11600		*	P
7439-96-5	Manganese	628			P
7439-97-6	Mercury	0.6		*	CV
7440-02-0	Nickel	28.3		E*N	P
7440-09-7	Potassium	1870		E	P
7482-49-2	Selenium	2.6	U	N	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	572	B	*	P
7440-28-0	Thallium	0.53	U	W	F
7440-62-2	Vanadium	44.4		E	P
7440-66-6	Zinc	820		E	P
	Cyanide	0.66	U	*N	AS

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ARSENIC VALUE DETERMINED BY MSA

SELENIUM VALUE REPORTED AT ADDITIONAL 10X DILUTION

000006

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ504

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/08/87

% Solids: 62.5

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	9.9	U	*N	P
7440-38-2	Arsenic	9.9		+	F
7440-39-3	Barium	57.8	B	*N	P
7440-41-7	Beryllium	0.50	B		P
7440-43-9	Cadmium	1.6	U	*	P
7440-70-2	Calcium	5820		*	P
7440-47-3	Chromium	23.6		*	P
7440-48-4	Cobalt	8.0	B	E	P
7440-50-8	Copper	30.6		*	P
7439-89-6	Iron	19400		*	P
7439-92-1	Lead	29.4		S*	F
7439-95-4	Magnesium	5250		*	P
7439-96-5	Manganese	216			P
7439-97-6	Mercury	0.2	U	*	CV
7440-02-0	Nickel	22.7		E*N	P
7440-09-7	Potassium	2720		E	P
7482-49-2	Selenium	0.32	U	WN	F
7440-22-4	Silver	1.6	U		P
7440-23-5	Sodium	1050	B	*	P
7440-28-0	Thallium	0.64	U	W	F
7440-62-2	Vanadium	23.4		E *	P
7440-66-6	Zinc	879		E	P
	Cyanide	0.80	U	*N	AS

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ARSENIC AND LEAD VALUES ARE DETERMINED BY MSA

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ505

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/08/87

% Solids: 68.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17700			P
7440-36-0	Antimony	9.0	U	*N	P
7440-38-2	Arsenic	23.7		+	F
7440-39-3	Barium	63.5		*N	P
7440-41-7	Beryllium	1.1	B		P
7440-43-9	Cadmium	1.5	U	*	P
7440-70-2	Calcium	6160		*	P
7440-47-3	Chromium	72.0		*	P
7440-48-4	Cobalt	14.0	B	E	P
7440-50-8	Copper	37.1		*	P
7439-89-6	Iron	44800		*	P
7439-92-1	Lead	46.3		E*	P
7439-95-4	Magnesium	7510		*	P
7439-96-5	Manganese	339			P
7439-97-6	Mercury	0.2	U	*	CV
7440-02-0	Nickel	38.9		E*N	P
7440-09-7	Potassium	3800		E	P
7482-49-2	Selenium	0.29	U	WN	F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	578	B		P
7440-28-0	Thallium	0.58	U		F
7440-62-2	Vanadium	42.4		E	P
7440-66-6	Zinc	113		E	P
	Cyanide	0.73	U	*N	AS

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ARSENIC VALUE IS DETERMINED BY MSA

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ506

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/08/87

% Solids: 77.5

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	8.0	U	*N	P
7440-38-2	Arsenic	13.4		S	F
7440-39-3	Barium	57.5		*N	P
7440-41-7	Beryllium	0.55	B		P
7440-43-9	Cadmium	1.3	U	*	P
7440-70-2	Calcium	67700		*	P
7440-47-3	Chromium	20.3		*	P
7440-48-4	Cobalt	9.6	B	E	P
7440-50-8	Copper	25.5		*	P
7439-89-6	Iron	20300		*	P
7439-92-1	Lead	15.7		S*	F
7439-95-4	Magnesium	26600		*	P
7439-96-5	Manganese	402			P
7439-97-6	Mercury	0.1	U	*	CV
7440-02-0	Nickel	30.3		E*N	P
7440-09-7	Potassium	2240		E	P
7482-49-2	Selenium	2.6	U	N	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	387	U	~~*~~	P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	21.4		E *	P
7440-66-6	Zinc	53.4		E	P
	Cyanide	0.65	U	*N	AS

Color Before: GREY Clarity Before: _____ Texture: MEDIUM
Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:
ARSENIC AND LEAD VALUES ARE DETERMINED BY MSA
SELENIUM VALUE IS REPORTED AT AN ADDITIONAL 10X DILUTION

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ507

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/08/87

% Solids: 80.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12000			P
7440-36-0	Antimony	13.9	B	*N	P
7440-38-2	Arsenic	19.4		S	F
7440-39-3	Barium	876		*N	P
7440-41-7	Beryllium	0.89	B		P
7440-43-9	Cadmium	6.9		*	P
7440-70-2	Calcium	64500		*	P
7440-47-3	Chromium	324		*	P
7440-48-4	Cobalt	16.0		E	P
7440-50-8	Copper	592		*	P
7439-89-6	Iron	28200		*	P
7439-92-1	Lead	1540		E*	P
7439-95-4	Magnesium	21500		*	P
7439-96-5	Manganese	648			P
7439-97-6	Mercury	0.7		*	CV
7440-02-0	Nickel	251		E*N	P
7440-09-7	Potassium	1880		E	P
7482-49-2	Selenium	2.5	U	N	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	1280		*	P
7440-28-0	Thallium	0.50	U	W	F
7440-62-2	Vanadium	26.5		E *	P
7440-66-6	Zinc	1500		E	P
	Cyanide	4.2		*N	AS

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ARSENIC VALUE IS DETERMINED BY MSA

SELENIUM VALUE IS REPORTED AT AN ADDITIONAL 10X DILUTION

U.S. EPA - CLP

000010

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ508

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/08/87

% Solids: 77.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10000			P
7440-36-0	Antimony	14.5	B	*N	P
7440-38-2	Arsenic	30.9			F
7440-39-3	Barium	555		*N	P
7440-41-7	Beryllium	1.2	B		P
7440-43-9	Cadmium	7.7		*	P
7440-70-2	Calcium	33800		*	P
7440-47-3	Chromium	385		*	P
7440-48-4	Cobalt	15.0		E	P
7440-50-8	Copper	302		*	P
7439-89-6	Iron	33100		*	P
7439-92-1	Lead	1560		E*	P
7439-95-4	Magnesium	9990		*	P
7439-96-5	Manganese	858			P
7439-97-6	Mercury	1.0		*	CV
7440-02-0	Nickel	108		E*N	P
7440-09-7	Potassium	1590		E	P
7482-49-2	Selenium	2.6	U	N	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	1310		*	P
7440-28-0	Thallium	0.52	U	W	F
7440-62-2	Vanadium	39.5		E *	P
7440-66-6	Zinc	1000		E	P
	Cyanide	1.2		*N	AS

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ARSENIC VALUE IS REPORTED AT AN ADDITIONAL 5X AND SELENIUM AT ADDITIONAL 10X DILUTIONS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ509

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/08/87

% Solids: 70.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5460			P
7440-36-0	Antimony	8.8	U	*N	P
7440-38-2	Arsenic	19.8		S	F
7440-39-3	Barium	59.1		*N	P
7440-41-7	Beryllium	1.4	B		P
7440-43-9	Cadmium	7.0		*	P
7440-70-2	Calcium	12200		*	P
7440-47-3	Chromium	16.0		*	P
7440-48-4	Cobalt	6.8	B	E	P
7440-50-8	Copper	29.2		*	P
7439-89-6	Iron	23600		*	P
7439-92-1	Lead	77.4		E*	P
7439-95-4	Magnesium	2630		*	P
7439-96-5	Manganese	471			P
7439-97-6	Mercury	3.4		*	CV
7440-02-0	Nickel	102		E*N	P
7440-09-7	Potassium	1560		E	P
7482-49-2	Selenium	2.8	U	N	F
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	1120	B	~~*~~	P
7440-28-0	Thallium	0.71	B		F
7440-62-2	Vanadium	53.7		E ~~*~~	P
7440-66-6	Zinc	420		E	P
	Cyanide	0.71	U	*N	AS

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ARSENIC VALUE IS DETERMINED BY MSA

SELENIUM VALUE IS REPORTED AT ADDITIONAL 10X AND MERCURY AT ADDITIONAL 5X DILUTIONS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ510

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/08/87

% Solids: 78.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8390			P
7440-36-0	Antimony	7.9	U	*N	P
7440-38-2	Arsenic	7.6		S	F
7440-39-3	Barium	49.3	B	*N	P
7440-41-7	Beryllium	0.44	B		P
7440-43-9	Cadmium	1.3	U	*	P
7440-70-2	Calcium	58200		*	P
7440-47-3	Chromium	15.1		*	P
7440-48-4	Cobalt	7.9	B	E	P
7440-50-8	Copper	14.6		*	P
7439-89-6	Iron	17200		*	P
7439-92-1	Lead	11.3		S*	F
7439-95-4	Magnesium	31300		*	P
7439-96-5	Manganese	558			P
7439-97-6	Mercury	0.1	U	*	CV
7440-02-0	Nickel	19.7		E*N	P
7440-09-7	Potassium	1490		E	P
7482-49-2	Selenium	3.3		N	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	525	B		P
7440-28-0	Thallium	0.51	U	W	F
7440-62-2	Vanadium	20.9		E	P
7440-66-6	Zinc	44.7		E	P
	Cyanide	0.64	U	*N	AS

Color Before: GREEN Clarity Before: _____ Texture: MEDIUM

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ARSENIC AND LEAD VALUES ARE DETERMINED BY MSA

SELENIUM VALUE IS REPORTED AT AN ADDITIONAL 10X DILUTION

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ511

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/08/87

% Solids: 77.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6300			P
7440-36-0	Antimony	47.0		*N	P
7440-38-2	Arsenic	14.0		+	F
7440-39-3	Barium	1230		*N	P
7440-41-7	Beryllium	0.67	B		P
7440-43-9	Cadmium	12.7		*	P
7440-70-2	Calcium	32300		*	P
7440-47-3	Chromium	1120		*	P
7440-48-4	Cobalt	27.2		E	P
7440-50-8	Copper	345		*	P
7439-89-6	Iron	40700		*	P
7439-92-1	Lead	4580		E*	P
7439-95-4	Magnesium	9620		*	P
7439-96-5	Manganese	656			P
7439-97-6	Mercury	4.4		*	CV
7440-02-0	Nickel	1830		E*N	P
7440-09-7	Potassium	930	B	E	P
7482-49-2	Selenium	2.6	U	N	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	609	B	~~E~~	P
7440-28-0	Thallium	0.52	U	W	F
7440-62-2	Vanadium	13.3		E *	P
7440-66-6	Zinc	2450		E	P
	Cyanide	1.0		*N	AS

Color Before: BROWN Clarity Before: _____ Texture: COARSE
Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:
ARSENIC VALUE IS DETERMINED BY MSA
SELENIUM VALUE IS REPORTED AT ADDITIONAL 10X AND MERCURY AT ADDITIONAL 5X DILUTIONS

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ512

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/08/87

% Solids: 68.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8070			P
7440-36-0	Antimony	30.0		*N	P
7440-38-2	Arsenic	17.3		S	F
7440-39-3	Barium	1250		*N	P
7440-41-7	Beryllium	0.50	B		P
7440-43-9	Cadmium	20.2		*	P
7440-70-2	Calcium	41200		*	P
7440-47-3	Chromium	1030		*	P
7440-48-4	Cobalt	20.2		E	P
7440-50-8	Copper	574		*	P
7439-89-6	Iron	65100		*	P
7439-92-1	Lead	4620		E*	P
7439-95-4	Magnesium	10900		*	P
7439-96-5	Manganese	847			P
7439-97-6	Mercury	9.7		*	CV
7440-02-0	Nickel	82.1		E*N	P
7440-09-7	Potassium	936	B	E	P
7482-49-2	Selenium	2.9	U	N	F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	937	B	*	P
7440-28-0	Thallium	0.88	B	W	F
7440-62-2	Vanadium	30.3		E *	P
7440-66-6	Zinc	4520		E	P
	Cyanide	2.2		*N	AS

Color Before: BROWN Clarity Before: _____ Texture: COARSE
Color After: GREEN Clarity After: _____ Artifacts: _____

Comments:
ARSENIC VALUE IS DETERMINED BY MSA
SELENIUM AND MERCURY VALUES ARE REPORTED AT ADDITIONAL 10X DILUTIONS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ513

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/09/87

% Solids: 74.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5560			P
7440-36-0	Antimony	8.3	U	*N	P
7440-38-2	Arsenic	29.5		S	F
7440-39-3	Barium	262		*N	P
7440-41-7	Beryllium	0.58	B		P
7440-43-9	Cadmium	3.1		*	P
7440-70-2	Calcium	28500		*	P
7440-47-3	Chromium	177		*	P
7440-48-4	Cobalt	9.7	B	E	P
7440-50-8	Copper	133		*	P
7439-89-6	Iron	32500		*	P
7439-92-1	Lead	1100		E*	P
7439-95-4	Magnesium	7790		*	P
7439-96-5	Manganese	459			P
7439-97-6	Mercury	1.9		*	CV
7440-02-0	Nickel	43.2		E*N	P
7440-09-7	Potassium	965	B	E	P
7482-49-2	Selenium	3.0		N	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	412	B	*W	P
7440-28-0	Thallium	0.54	U	W	F
7440-62-2	Vanadium	16.2		E *	P
7440-66-6	Zinc	1860		E	P
	Cyanide	0.93		*N	AS

Color Before: BLACK Clarity Before: _____ Texture: MEDIUM

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ARSENIC VALUE IS DETERMINED BY MSA

SELENIUM VALUE REPORTED AT ADDITIONAL 10X AND MERCURY AT ADDITIONAL 5X DILUTIONS

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ514

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/09/87

% Solids: 77.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6000			P
7440-36-0	Antimony	16.0		*N	P
7440-38-2	Arsenic	13.3		S	F
7440-39-3	Barium	637		*N	P
7440-41-7	Beryllium	0.46	B		P
7440-43-9	Cadmium	13.8		*	P
7440-70-2	Calcium	44000		*	P
7440-47-3	Chromium	553		*	P
7440-48-4	Cobalt	14.3		E	P
7440-50-8	Copper	280		*	P
7439-89-6	Iron	29300		*	P
7439-92-1	Lead	2640		E*	P
7439-95-4	Magnesium	11900		*	P
7439-96-5	Manganese	470			P
7439-97-6	Mercury	3.6		*	CV
7440-02-0	Nickel	370		E*N	P
7440-09-7	Potassium	838	B	E	P
7482-49-2	Selenium	2.6	U	N	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	852	B	~~*~~	P
7440-28-0	Thallium	0.65	B	W	F
7440-62-2	Vanadium	17.6		E *	P
7440-66-6	Zinc	3670		E	P
	Cyanide	1.2		*N	AS

Color Before: BLACK Clarity Before: _____ Texture: MEDIUM
Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:
ARSENIC VALUE IS DETERMINED BY MSA
SELENIUM VALUE REPORTED AT ADDITIONAL 10X AND MERCURY AT ADDITIONAL 5X DILUTIONS

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEQ515

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Level (low/med): MED Date Recieved: 12/09/87

% Solids: 58.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11500			P
7440-36-0	Antimony	39.9		*N	P
7440-38-2	Arsenic	19.9		S	F
7440-39-3	Barium	857		*N	P
7440-41-7	Beryllium	0.86	B		P
7440-43-9	Cadmium	60.4		*	P
7440-70-2	Calcium	51000		*	P
7440-47-3	Chromium	1220		*	P
7440-48-4	Cobalt	29.1		E	P
7440-50-8	Copper	405		*	P
7439-89-6	Iron	23500		*	P
7439-92-1	Lead	3910		E*	P
7439-95-4	Magnesium	14300		*	P
7439-96-5	Manganese	1240			P
7439-97-6	Mercury	3.4		*	CV
7440-02-0	Nickel	260		E*N	P
7440-09-7	Potassium	1230	B	E	P
7482-49-2	Selenium	3.4	U	N	F
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	839	B	~~*N~~	P
7440-28-0	Thallium	0.68	U		F
7440-62-2	Vanadium	24.4		E ~~*~~	P
7440-66-6	Zinc	1790		E	P
	Cyanide	15.5		*N	AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM
Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:
ARSENIC VALUE IS DETERMINED BY MSA
SELENIUM VALUE REPORTED AT ADDITIONAL 10X AND MERCURY AT ADDITIONAL 5X DILUTIONS

U.S. EPA - CLP

3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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	20.0	U	20.0	U	20.0	U	20.0	U	7.0	B	P
Antimony	31.0	U	31.0	U	31.0	U	31.0	U	6.2	U	P
Arsenic											
Barium	3.0	U	3.0	U	3.0	U	3.0	U	0.60	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	1.0	U	P
Calcium	92.0	U	92.0	U	92.0	U	92.0	U	18.4	U	P
Chromium	5.0	U	5.0	U	5.0	U	5.0	U	1.0	U	P
Cobalt	6.0	U	6.0	U	6.0	U	6.0	U	1.2	U	P
Copper	9.0	U	9.0	U	9.0	U	9.0	U	3.1	B	P
Iron	31.0	U	31.0	U	31.0	U	31.0	U	6.2	U	P
Lead	28.0	U	28.0	U	28.0	U	28.0	U	5.6	U	P
Magnesium	90.0	U	90.0	U	90.0	U	90.0	U	18.0	U	P
Manganese	5.0	U	5.0	U	5.0	U	5.0	U	1.0	U	P
Mercury											
Nickel	7.0	U	7.0	U	7.0	U	7.0	U	1.4	U	P
Potassium	111	U	111	U	111	U	111	U	22.2	U	P
Selenium											
Silver	5.0	U	5.0	U	5.0	U	5.0	U	1.0	U	P
Sodium	1500	U	1500	U	1500	U	1500	U	300	U	P
Thallium											
Vanadium	2.0	U	2.0	U	2.0	U	2.0	U	0.40	U	P
Zinc	13.0	U	13.0	U	13.0	U	13.0	U	2.6	U	P
Cyanide											

U.S. EPA - CLP

3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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			20.0	U							P
Antimony			31.0	U							P
Arsenic											
Barium			3.0	U							P
Beryllium			1.0	U							P
Cadmium			5.0	U							P
Calcium			92.0	U							P
Chromium			5.0	U							P
Cobalt			6.0	U							P
Copper			9.0	U							P
Iron			31.0	U							P
Lead			28.0	U							P
Magnesium			90.0	U							P
Manganese			5.0	U							P
Mercury											
Nickel			7.0	U							P
Potassium			111	U							P
Selenium											
Silver			5.0	U							P
Sodium			1500	U							P
Thallium											
Vanadium			2.0	U							P
Zinc			13.0	U							P
Cyanide											

U.S. EPA - CLP

3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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											
Antimony											
Arsenic	4.0	U	4.0	U	4.0	U	4.0	U	0.80	U	F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead	1.0	U	1.0	U	1.0	U	1.0	U	0.54	B	F
Magnesium											
Manganese											
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.1	U	CV
Nickel											
Potassium											
Selenium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	F
Silver											
Sodium											
Thallium	2.0	U	2.0	U	2.0	U	2.0	U	0.40	U	F
Vanadium											
Zinc											
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	0.50	U	AS

U.S. EPA - CLP

3
BLANKS

000030

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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											
Antimony											
Arsenic			4.0	U	4.0	U	4.0	U			F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			1.2	B	2.2	B	2.4	B			F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium			1.0	U	1.0	U					F
Silver											
Sodium											
Thallium			2.0	U	2.0	U	2.0	U			F
Vanadium											
Zinc											
Cyanide			10.0	U	10.0	U	10.0	U			AS

U.S. EPA - CLP

3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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											
Antimony											
Arsenic			4.0	U	4.0	U	4.0	U			F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			2.3	B	2.7	B	2.9	B			F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

3
BLANKS

000032

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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											
Antimony											
Arsenic			4.0	U							F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead											
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEQ458

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

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		10100		6330					NR
Antimony	75-125	74.1		27.3		127	36.9	N	P
Arsenic	75-125	25.0		13.6		10.2	111.8		F
Barium	75-125	1350		588		508	150.0	N	P
Beryllium	75-125	13.0		0.36	B	12.7	99.5		P
Cadmium	75-125	47.0		33.5		12.7	106.3		P
Calcium		48400		56000					NR
Chromium		1000		817		50.8	360.2		P
Cobalt	75-125	140		14.9		127	98.5		P
Copper		407		288		63.5	187.4		P
Iron		17700		28200					NR
Lead		4480		3650		127	653.5		P
Magnesium		18400		24400					NR
Manganese	75-125	496		395		127	79.5		P
Mercury		3.7		3.3		0.6	66.7		CV
Nickel	75-125	385		160		127	177.2	N	P
Potassium		1530		984	B				NR
Selenium	75-125	5.1		2.5	U	2.5	204.0	N	F
Silver	75-125	12.3		1.3	U	12.7	96.9		P
Sodium		1740		1040	B				NR
Thallium	75-125	12.3		0.51	U	12.7	96.9		F
Vanadium	75-125	138		13.7		127	97.9		P
Zinc		1960		2460		127	-393.7		P
Cyanide	75-125	17.3		6.5		6.3	171.4	N	AS

Comments:
AS MATRIX SPIKE AND SAMPLE RESULTS DETERMINED BY MSA.SE MATRIX SPIKE & SAMPLE RESULTS REPORTED AT ADDITIONAL 10X DILUTIONS & HG AT ADDITIONAL 5X DILUTIONS.TL MATRIX SPIKE RESULT DETERMINED BY MSA.PB SAMPLE RESULT REPORTED AT ADDITIONAL 400X AND MATRIX SPIKE DETERMINED BY MSA PB FURNACE

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEQ458

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

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									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead		5660		5090		5.1	11176.5		F
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

Comments:
AS MATRIX SPIKE AND SAMPLE RESULTS DETERMINED BY MSA.SE MATRIX SPIKE & SAMPLE RESULTS REPORTED AT ADDITIONAL 10X DILUTIONS & HG AT ADDITIONAL 5X DILUTIONS.TL MATRIX SPIKE RESULT DETERMINED BY MSA.PB SAMPLE RESULT REPORTED AT ADDITIONAL 400X AND MATRIX SPIKE DETERMINED BY MSA

000036

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEQ458

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony		293		107		210	88.6		P
Arsenic									NR
Barium		6300		2320		4630	86.0		P
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel		1720		631		1260	86.4		P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide		172 ~~13.6~~ IR		102 ~~5.1~~ IR		200 ~~2000~~ IR	~~85.20.4~~ IR		AS

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

MEQ458

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

% Solids for Sample: 78.8 % Solids for Duplicate: 77.4

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		6330		6320		0.2		P
Antimony	15.2	27.3		278		164	*	P
Arsenic	2.5	13.6		12.3		10.0		F
Barium		588		868		38.5	*	P
Beryllium		0.36	B	2.5 ~~1.1~~ U	B UC	~~101~~ 200		P
Cadmium		33.5		45.1		29.5	*	P
Calcium		56000		44300		23.3	*	P
Chromium		817		22600		186	*	P
Cobalt	12.7	14.9		23.9	B	46.4		P
Copper		288		392		30.6	*	P
Iron		28200		18000		44.2	*	P
Lead		3650		119000		188	*	P
Magnesium		24400		10700	B	78.1	*	P
Manganese		395		445		11.9		P
Mercury		3.3		1.5		75.0	*	CV
Nickel		160		374		80.1	*	P
Potassium	~~1269~~ UC	984	B	1880	B	62.6		P
Selenium		2.5	U	2.5	U			F
Silver		1.3	U	12.7 ~~13~~ ~~1.8~~ U	B UC	~~200~~ UC		P
Sodium	~~1269~~ UC	1040	B	UC ~~2720~~ 3810	U	200 ~~89.4~~	* UC	P
Thallium		0.51	U	0.51	U	UC		F
Vanadium	12.7	13.7		5.1 ~~1.4~~ U	~~B~~ UC	UC ~~163~~ 200	*	P
Zinc		2460		2230		9.8		P
Cyanide		6.5		13.5		70.0	*	AS

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

MEQ458

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

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

% Solids for Sample: 78.8 % Solids for Duplicate: 77.4

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead		5090		4040		23.0	*	F
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

Solid LCS Source: EMSL-LV

Aqueous LCS Source: EMSL-LV

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum				325	298		225	424	91.7
Antimony				211	225		127	294	107
Arsenic									
Barium				4.8	5.4	B	0.0	40.0	113
Beryllium				19.4	19.1		16.5	22.3	98.5
Cadmium				45.4	43.8		35.7	55.1	96.5
Calcium				196200	186000		166800	225600	94.8
Chromium				99.6	94.2		79.2	120	94.6
Cobalt				144	140		125	162	97.2
Copper				6910	6900		6006	7820	99.9
Iron				22430	21600		17770	27080	96.3
Lead				236	206		188	285	87.3
Magnesium				118100	118000		100400	129900	99.9
Manganese				208	212		177	239	102
Mercury									
Nickel				60.9	56.9		49.2	72.6	93.4
Potassium				50.0	37.0	B	0.0	1000	74.0
Selenium									
Silver				22.2	20.6		15.5	29.0	92.8
Sodium				50.0	300	U	0.0	1000	
Thallium									
Vanadium				65.8	66.1		51.7	79.9	100
Zinc				187	163		138	236	87.2
Cyanide									

U.S. EPA - CLP

000041

7

LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

Solid LCS Source: _____

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury				12.7	15.0		8.5	17.0	118
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

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

CRL Receipt Date 2-12-88 FIT Receipt Date 2-29-88 Review Completed 3-1-88

TO: JEFF CARMAN
FROM: James Mertes
SUBJECT: U.S. SCRAP
PAN: IL 0102 (1 hour charged for review) Case # 8736

Sample Description

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

Project Data Status _____ Completed!!

X Incomplete, awaiting organics

FIT Data Review Findings:
- OLD data qualifiers apply, definitions enclosed.
- Note reviewers summary for qualified data.
- detection limits (CRDL) on summary sheets due not applies to these MEDIUM LEVEL SOILS

Check Data Sheets for Transcription Errors

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

Book No. 7 Page No. 176 Date Sampled 12-8/10-87

recycled paper

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
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.	Compound was confirmed by mass spectroscopy.
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.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
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.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Metals

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
s	s	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not calculated since chemical is not a carcinogen.
( ) Estimated value.

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: U.S. SCRAP PAN #: DATE: 3-1-88
CASE #: 8736 UNITS - mg/kg REVIEWER: J. Marks

COMPOUND	CRDL** RAS LOW SOIL mg/Kg (ppm)	CRDL** RAS WATER ug/L (ppb)	CRDL** SAS DRINKING WATER ug/L (ppb)	MEQ 460	MEQ 461	MEQ 462	MEQ 463	MEQ 464	MEQ 465	MES 022
ALUMINUM *	40	200	100	9150	4740	2070	1840	9450	9130	5180
ANTIMONY	2.4	60	5	[9.4]N	22 N					
ARSENIC	2	10	5	16	5.4	6.2	12	14	11	3.3 S
BARIUM *	40	200	50	290	832	78	291	188	86	389
BERYLLIUM	1	5	5		8.2					
CADMIUM	1	5	0.5	22N	32 N	3.7 N	11 N	317 N	2.55N	3.42 N
CALCIUM *	1000	5000	1000	39500	20500	5020	45700	46200	49100	56500
CHROMIUM	2	10	10	419	1290	88	79	44	48	1040
COBALT	10	50	10	20	19	[5.53]	[6.2]	[7.57]	[9.68]	8.8
COPPER	5	25	10	194	366	39	107	43	50	28
IRON *	20	100	100	24600*	12900*	7100*	2920*	19100*	21200*	7670*
LEAD	1	5	2	1350	6040	257	508	399	175	4590
MAGNESIUM *	1000	5000	1000	14000	65000	2190	22600	14400	17500	16200
MANGANESE *	3	15	10	475	248	74	434	528	397	238
MERCURY	0.008	0.2	0.2	2.3*N	.41*N	.33*N	.48*N	.25*N	.26*N	.84*N
NICKEL	8	40	20	48	61	15	24	29	35	[7.97]
POTASSIUM *	1000	5000	2000	1650	698	426	358	1920	2070	777
SELENIUM	1	5	2			2.2 SN	[.9] N			
SILVER	2	10	5			[1.56]N				
SODIUM *	1000	5000	1000	[1340]	1600	1280	[997]	[596]	[568]	[614]
THALLIUM	2	10	2							
VANADIUM	10	50	10	22	[15]	[7.66]	18	25	24	17
ZINC *	4	20	20	2050 E	5670 E	357E	1300 E	221E	286	488E
CYANIDE	2	10	10	2.0	109	1.4		2.5		

* NOT GENERALLY USED FOR HRS SCORING
** SPECIFIC DETECTION LIMITS ARE HIGHLY MATRIX DEPENDENT. THE DETECTION LIMITS LISTED HEREIN ARE PROVIDED FOR GUIDANCE AND MAY NOT ALWAYS BE ACHIEVABLE.

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: U.S. SCRAP PAN #: DATE: 3-1-88
CASE #: 8736 UNITS: mg/kg REVIEWER: J. Mulk

COMPOUND	CRDL** RAS SOIL mg/Kg (ppm)	CRDL** RAS WATER ug/L (ppb)	CRDL** SAS DRINKING WATER ug/L (ppb)	MES 023						
ALUMINUM *	40	200	100	5530						
ANTIMONY	2.4	60	5							
ARSENIC	2	10	5	10						
BARIUM *	40	200	50	340						
BERYLLIUM	1	5	5							
CADMIUM	1	5	0.5	3.64N						
CALCIUM *	1000	5000	1000	47500						
CHROMIUM	2	10	10	445						
COBALT	10	50	10	[6.63]						
COPPER	5	25	10	110						
IRON *	20	100	100	12500*						
LEAD	1	5	2	2010						
MAGNESIUM *	1000	5000	1000	13300						
MANGANESE *	3	15	10	385						
MERCURY	0.008	0.2	0.2	.68*N						
NICKEL	8	40	20	27						
POTASSIUM *	1000	5000	2000	773						
SELENIUM	1	5	2							
SILVER	2	10	5							
SODIUM *	1000	5000	1000	[754]						
THALLIUM	2	10	2							
VANADIUM	10	50	10	21						
ZINC *	4	20	20	708E						
CYANIDE	2	10	10							

* NOT GENERALLY USED FOR HRS SCORING
** SPECIFIC DETECTION LIMITS ARE HIGHLY MATRIX DEPENDENT. THE DETECTION LIMITS LISTED HEREIN ARE PROVIDED FOR GUIDANCE AND MAY NOT ALWAYS BE ACHIEVABLE.

2/29
15 pages

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 2.29.88

SUBJECT: Review of Region V CLP Data
Received for Review on 2-12-88

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory Ida Levin

TO: Data User: FIT

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

SITE NAME: U.S. Scrap (IL) SMO case No. 8736

EPA Data Set No. SF4827 No. of Samples: 8 D.U./Activity Numbers Y905/C721Z8

CRL No. 88FC10S49-S56

SMO Traffic No. MEQ460-465; MEQ022, 023

CLP Laboratory: Chemtech Hrs. Required for Review: 3+1

Following are our findings:
This review covers eight medium soils analyzed for metals and cyanide.

The matrix spike recovery for Cd (70%) indicates a low bias and the data are estimated (J). For Sb the spike recovery (42%) indicates a low bias; for MEQ 462-MES 465, and MES 022- MES 023the data are estimated (UJ) and for MES 460-MES 461the data are estimated (J). The spike recovery for Ag (42%) indicates a low bias and the detection limits may be elevated. Therefore, the data for Ag are estimated (UJ). The spike recovery for Se (170%) indicates a high bias; however, the the sample result is less than IDL and the data are acceptable. The spike recovery for Cr (-345%), Zn (-420%), Pb (-680%) and Cu (44%) are all out of control limits; however, the sample concentrations are much greater than 4 x spike level and the data are acceptable.

For Hg, the spike recovery (130%) indicates a high bias and the duplicates (47 RPD) are out of control limits. Therefore, the data for Hg, is estimated (J). The RPD for duplicates for Fe (23) is within control limits for soils (control limits = 35) and the data are acceptable.

The serial dilution for Zn (16%) indicates interference and the data are estimated (J). All QC data for CN are acceptable.

( ) Data are acceptable for use. Winston Vyzeswaran 2.24.88
(X) 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

WA85-J830 - AMENDMENT THREE (3)
U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

Date 1/21/88

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name Chemtech Consulting Group Case No. 8736

SOW No. 785 Q.C. Report No. G2-1110

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEQ-460	G2-1110-01		
461	02		
462	03		
463	04		
464	05		
465	06		
MES-022	07		
MES-023	08		

RECEIVED
JAN 22 1988
U.S. EPA CENTRAL REGIONAL LAB

Comments:

ICP interelement and background corrections applied? Yes X No ____.

If yes, corrections applied before X or after ____ generation of raw data.

Footnotes:

NR - Not required by contract at this time

Form I:

Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP), A (for Flame AA) or F (for Furnace AA).

U - Indicates element was analyzed for but not detected. Report with the instrument detection limit value (e.g., 10U).

E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.

S - Indicates value determined by Method of Standard Addition.

N - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis is not within control limits.

+ - Indicates the correlation coefficient for method of standard addition is less than 0.995

M - Indicates duplicate injection results exceeded control limits.

Indicate method used: P for ICP; A for Flame AA and F for Furnace.

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEQ - 460

Date 1/24/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group
SOW NO. 785
LAB SAMPLE ID. NO. G2-1110-01

CASE NO. 8736
Lab Receipt Date 12/17/87
QC REPORT NO. G2-

Elements Identified and Measured

Concentration: Low _____ Medium X

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg dry weight) (Circle One)

1.	Aluminum	9150	P	13.	Magnesium	14000	P
2.	Antimony	[9.4]	P N	14.	Manganese	475	P
3.	Arsenic	16	F	15.	Mercury	2.3	* N
4.	Barium	290	P	16.	Nickel	48	P
5.	Beryllium	1.4 U	P	17.	Potassium	1650	A
6.	Cadmium	22	P N	18.	Selenium	0.82 U	F N
7.	Calcium	39500	P	19.	Silver	1.9 U	P N
8.	Chromium	419	P	20.	Sodium	[1340]	P
9.	Cobalt	20	P	21.	Thallium	1.9 U	F
10.	Copper	194	P	22.	Vanadium	22	P
11.	Iron	24600	P *	23.	Zinc	2050	P E
12.	Lead	1350	F P		Percent Solids (%)	73	

Cyanide 2.0

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Gray After- Yellow Texture: Coarse

Lab Manager [signature]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MEQ-461

Date 1/21/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 8736

SDG NO. 785

Lab Receipt Date 12/17/87

LAB SAMPLE ID. NO. G2-1110-02

QC REPORT NO. G2-

Elements Identified and Measured

Concentration: Low _____ Medium X

Matrix: Water _____ Soil T Sludge _____ Other _____

ug/L or (mg/kg dry weight) (Circle One)

1. Aluminum	4740	P	12. Magnesium	65000	P
2. Antimony	22	P N	14. Manganese	248	P
3. Arsenic	5.4	F	15. Mercury	0.47	N *
4. Barium	832	P	16. Nickel	61	P
5. Beryllium	8.2	P	17. Potassium	698	A
6. Cadmium	32	P N	18. Selenium	.88 U	F N
7. Calcium	20500	P	19. Silver	2 U	P N
8. Chromium	1290	P	20. Sodium	1600	P
9. Cobalt	19	P	21. Thallium	2.0 U	F
10. Copper	366	P	22. Vanadium	[15]	P
11. Iron	12900	P *	23. Zinc	5670	P E
12. Lead	6040	F P	Percent Solids (%)	68	
Cyanide	109				

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Black. After- Yellow. Texture: Coarse

Lab Manager: [signature]

Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEQ - 462

Date 1/21/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group
SOW NO. 785
LAB SAMPLE ID. NO. G2-1110-03

CASE NO. 8736
Lab Receipt Date 12/17/87
QC REPORT NO. G2-

Elements Identified and Measured

Concentration: Low _____ Medium X

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg dry weight) (Circle One)

1.	Aluminum	2070	P	13.	Magnesium	2190	P
2.	Antimony	6 U	P N	14.	Manganese	74	P
3.	Arsenic	6.2	F	15.	Mercury	0.33	N*
4.	Barium	78	P	16.	Nickel	15	P
5.	Beryllium	1 U	P	17.	Potassium	426	A
6.	Cadmium	3.7	P N	18.	Selenium	8.20	F S N
7.	Calcium	5020	P	19.	Silver	[1.56]	P N
8.	Chromium	88	P	20.	Sodium	1280	P
9.	Cobalt	[5.53]	P	21.	Thallium	1.6 U	F
10.	Copper	39	P	22.	Vanadium	[7.66]	P
11.	Iron	7100	P*	23.	Zinc	357	P E
12.	Lead	257	F P		Percent Solids (%)	90	

Cyanide 1.4

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Black After- Yellow. Texture: Coarse

Lab Manager [signature]

7

LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 8688 SAS No.: _____ SDG No.: MEQ503

Solid LCS Source: EMSL-LV

Aqueous LCS Source: EMSL-LV

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic				917	852		635	1199	92.9
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead				236	203		188	285	86.0
Magnesium									
Manganese									
Mercury				12.7	11.0		8.5	17.0	86.6
Nickel									
Potassium									
Selenium				39.2	44.1		19.1	59.4	112
Silver									
Sodium									
Thallium				39.0	43.6		24.6	53.5	112
Vanadium									
Zinc									
Cyanide									

Form I

EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEQ - 463

Date 1/21/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 8736

SOW NO. 785

Lab Receipt Date 12/17/87

EPA SAMPLE ID. NO. G2-1110-04

QC REPORT NO. G2-

Elements Identified and Measured

Concentration: Low _____ Medium X

Matrix: Water _____ Soil T Sludge _____ Other _____

ug/L or (ug/kg dry weight) (Circle One)

1. Aluminum	1840	P	13. Magnesium	22600	P
2. Antimony	6.06 U	P N	14. Manganese	434	P
3. Arsenic	12	P	15. Mercury	0.48	N*
4. Barium	291	P	16. Nickel	24	P
5. Beryllium	1.12 U	P	17. Potassium	358	A
6. Cadmium	11	P N	18. Selenium	[.90]	P N
7. Calcium	45900	P	19. Silver	1.57 U	P N
8. Chromium	79	P	20. Sodium	[997]	P
9. Cobalt	[6.2]	P	21. Thallium	1.6 U	P
10. Copper	107	P N	22. Vanadium	18	P
11. Iron	2920	P *	23. Zinc	1300	P E
12. Lead	508	P	Percent Solids (%)	89	
Cyanide	1.1 U				

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Black. After- Yellow. Texture: Coarse

Lab Manager [signature]

ITS Amend. One

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MEQ-464

Date 1/21/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 8736

SOW NO. 785

Lab Receipt Date 12/17/87

LAB SAMPLE ID. NO. G2-1110-05

QC REPORT NO. G2-1110

Elements Identified and Measured

Concentration: Low ___ Medium X Not

Matrix: Water ___ Soil X Sludge ___ Other ___

ug/L or (mg/kg dry weight) (Circle One)

1.	Aluminum	9950	P	13.	Magnesium	14400	P
2.	Antimony	6.75 U	P N	14.	Manganese	528	P
3.	Arsenic	14	F	15.	Mercury	0.25	N*
4.	Barium	188	P	16.	Nickel	29	P
5.	Beryllium	1.25 U	P	17.	Potassium	1920	A
6.	Cadmium	3.17	P N	18.	Selenium	0.75 U	F N
7.	Calcium	46200	P	19.	Silver	1.75 U	P N
8.	Chromium	44	P	20.	Sodium	[596]	P
9.	Cobalt	[7.57]	P	21.	Thallium	1.8 U	F
10.	Copper	43	P	22.	Vanadium	25	P
11.	Iron	19100	P *	23.	Zinc	221	P E
12.	Lead	399	F P		Percent Solids (%)	80	

Cyanide 2.5

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Grey. After- Yellow. Texture: Gelatinous

Lab Manager: [signature]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MEQ-465

Date 1/21/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 8736

SOW NO. 785

Lab Receipt Date 12/17/87

LAB SAMPLE ID. NO. G2-1110-06

QC REPORT NO. G2-

Elements Identified and Measured

Concentration: Low ____ Medium X

Matrix: Water ____ Soil X Sludge ____ Other ____

ug/L or (mg/kg dry weight) (Circle One)

1.	Aluminum	9130 P	13.	Magnesium	17500 P
2.	Antimony	7.10 U P N	14.	Manganese	397 P
3.	Arsenic	11 P	15.	Mercury	0.26 N*
4.	Barium	86 P	16.	Nickel	35 P
5.	Beryllium	1.31 U P	17.	Potassium	2070 A
6.	Cadmium	2.55 P N	18.	Selenium	0.79 U P N
7.	Calcium	49100 P	19.	Silver	1.84 U P N
8.	Chromium	48 P	20.	Sodium	[568] P
9.	Cobalt	[9.68] P	21.	Thallium	1.8 U P
10.	Copper	50 P N	22.	Vanadium	24 P
11.	Iron	21200 P*	23.	Zinc	286 P E
12.	Lead	175 ≠ P		Percent Solids (%)	76
	Cyanide	1.3 U			

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Grey. After- Yellow. Texture- Coarse

Lab Manager [signature]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MES - 022

Date 1/21/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group
CLP NO. 785
LAB SAMPLE ID. NO. G2-1110-07

CASE NO. 8736
Lab Receipt Date 12/17/87
QC REPORT NO. G2-

Elements Identified and Measured

Concentration: Low _____ Medium X

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg dry weight) (Circle One)

1.	Aluminum	5180 P	13.	Magnesium	16200 P
2.	Antimony	6.06 U P N	14.	Manganese	238 P
3.	Arsenic	3.3 F S	15.	Mercury	0.84 N*
4.	Barium	389 P	16.	Nickel	(7.97) P
5.	Beryllium	1.12 U P	17.	Potassium	777 A
6.	Cadmium	3.42 P N	18.	Selenium	0.67 U F N
7.	Calcium	56500 P	19.	Silver	1.57 U P N
8.	Chromium	1040 P	20.	Sodium	(614) P
9.	Cobalt	8.8 P	21.	Thallium	1.6 U F
10.	Copper	28 P N	22.	Vanadium	17 P
11.	Iron	7670 P*	23.	Zinc	488 P E
12.	Lead	4590 F P		Percent Solids (%)	89

Cyanide 1.1 U

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Black After- Yellow Texture: Coarse

Lab Manager: [signature]

Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MES - 023

Date 1/21/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group
SDW NO. 785
LAB SAMPLE ID. NO. G2-1110-08

CASE NO. 8736
Lab Receipt Date 12/17/87
QC REPORT NO. G2-

Elements Identified and Measured

Concentration: Low _____ Medium X

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg dry weight) (Circle One)

1.	Aluminum	5530 ?	13.	Magnesium	13300 ?
2.	Antimony	7.39 U ? N	14.	Manganese	385 ?
3.	Arsenic	10 ?	15.	Mercury	0.68 N*
4.	Barium	340 ?	16.	Nickel	27 ?
5.	Beryllium	1.36 U ?	17.	Potassium	773 A
6.	Cadmium	3.64 ? N	18.	Selenium	0.01 U ? N
7.	Calcium	47500 ?	19.	Silver	1.91 U ? N
8.	Chromium	445 ?	20.	Sodium	[754] ?
9.	Cobalt	[6.63] ?	21.	Thallium	1.9 U ?
10.	Copper	110 ?	22.	Vanadium	21 ?
11.	Iron	12500 ? *	23.	Zinc	708 ? E
12.	Lead	2010 ? P		Percent Solids (%)	73

Cyanide 1.4 U

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Grey. After- Yellow. Texture: Coarse

Lab Manager: [signature]

DFS Amend. One

Form III

Q. C. Report No. 1110

BLANKS

LAB NAME Chemtech Consulting Group

DATE 1/21/88

CASE NO. 8736

UNITS ug/L

Compound	Initial Calibration Blank Value		Continuing Calibration Blank Value 1	2	3	4	Preparation Blank[1] Matrix: Soil mg/kg	Matrix:
Metals:								
1. Aluminum	52	U	52 U	52 U	52 U		10 U	
2. Antimony	27	U	27 U	27 U	27 U		5.4 U	
3. Arsenic	5	U	5U	5U	5U	5U	1 U	
4. Barium	28	U	28 U	28 U	28 U		5.6 U	
5. Beryllium	5	U	5 U	5 U	5 U		1 U	
6. Cadmium	4	U	4 U	4 U	4 U		0.8 U	
7. Calcium	746	U	746 U	746 U	746 U		149 U	
8. Chromium	9	U	9 U	9 U	9 U		1.8 U	
9. Cobalt	9	U	9 U	9 U	9 U		1.8 U	
10. Copper	25	U	25 U	25 U	25 U		5 U	
11. Iron	100	U	100 U	100 U	100 U		20 U	
12. Lead		U						
13. Magnesium	290	U	290 U	290 U	290 U		58 U	
14. Manganese	6	U	6 U	6 U	6 U		1.2 U	
15. Mercury	0.2	U	0.2U	0.2U			0.1 U	
16. Nickel	12	U	12 U	12 U	12 U		2.4 U	
17. Potassium	500	U	500U	500U	500U		100 U	
18. Selenium	3	U	3 U	3 U	3U	3U	0.6 U	
19. Silver	7	U	7 U	7 U	7 U		1.4 U	
20. Sodium	1002	U	1002U	1002U	1002U		200 U	
21. Thallium	7	U	7U	7U	7U		1.4 U	
22. Vanadium	9	U	9 U	9 U	9 U		1.8 U	
23. Zinc	20	U	20 U	20 U	20 U		4 U	
Other: Lead (P)	21	U	21 U	21 U	21 U		4.2 U	
Cyanide	10	U	10 U	10 U			1 U	

[1] Reporting Units: aqueous, ug/L; solid, mg/kg

Form V

Q. C. Report No. 1110

SPIKE SAMPLE RECOVERY

LAB NAME Chemtech Consulting Group

DATE 1/21/88 EM

CASE NO. 8736

EPA Sample No. MEB-461

Lab Sample ID No. 1110.02

Units ug/L

Matrix MED. SOIL

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	75-125			--	NR
2. Antimony	-	291	76	500	43N
3. Arsenic	-	53	18	40	88
4. Barium	-	4460	2830	2000	82
5. Beryllium	-	52	5 U	50	104
6. Cadmium	-	143	108	50	70N
7. Calcium	-			--	NR
8. Chromium	-	3700	4390	200	-345
9. Cobalt	-	555	64	500	98
10. Copper	-	1350	1240	250	44
11. Iron	-			--	NR
12. Lead	-	—	—	50	NR
13. Magnesium	-			--	NR
14. Manganese	-	1230	843	500	77
15. Mercury	-	1.97	0.64	1.0	130N
16. Nickel	-	670	208	500	92
17. Potassium	-			--	NR
18. Selenium	-	17	3U	10	170N
19. Silver	-	21	7 U	50	42N
20. Sodium	-			--	NR
21. Thallium	-	50	7U	50	100
22. Vanadium	-	536	50	500	97
23. Zinc	-	17200	19300	500	-420
Other: Lead(P)		17100	20500	500	-680
Cyanide	-	850	743	100	107

[1] %R = [(SSR - SR)/SA] x 100

"N" - out of control

"NR" - Not required

Comments: NO 'N' FLAG REQUIRED FOR CR, CU, ZN, PB(P) SINCE SR>4xSA

Form VI

Q. C. Report No. 1110

DUPLICATES

LAB NAME Chemtech Consulting Group

DATE 1/21/88 RH

CASE NO. 8736

EPA Sample No. MEB-400

Lab Sample ID No. 1110-01

Units ug/L

Matrix MED. SOIL

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum	± 20 %	33400	34400	2.9
2. Antimony		[34]	[39]	NC
3. Arsenic	± 20 %	58	60	3.4
4. Barium	± 20 %	1060	1390	27
5. Beryllium		5 U	5 U	NC
6. Cadmium	± 20 %	80	73	9.2
7. Calcium	± 20 %	144000	137000	4.9
8. Chromium	± 20 %	1530	1540	0.6
9. Cobalt	± 50 %	72	56	25
10. Copper	± 20 %	707	712	0.7
11. Iron	± 20 %	89900	71600	23*
12. Lead		—	—	NC
13. Magnesium	± 20 %	50900	45300	12
14. Manganese	± 20 %	1740	1710	1.7
15. Mercury	± 20 %	3.40	2.10	47*
16. Nickel	± 40 %	176	177	0.6
17. Potassium	± 5000	6010	6130	2.0
18. Selenium	---	3 U	[3.7]	NC
19. Silver		7 U	[8]	NC
20. Sodium		[4910]	5410	NC
21. Thallium		7 U	7 U	NC
22. Vanadium	± 50 %	79	89	12
23. Zinc	± 20 %	7480	8000	6.7
Other: Lead cpl	± 20 %	4920	5250	6.5
Cyanide	± 1.0	1.8	1.5	18

* Out of Control

[1] To be added at a later date.

[2] RPD = [|S - D|/((S + D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

Form VII

Q. C. Report No. 1110

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE.

LAB NAME Chemtech Consulting Group CASE NO. 8736 DATE 1/21/88 84

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL) - ug/l ICP/AA ID # ICP 9000	Furnace ID# 1	2	3	4	Lab Control Sample ug/L mg/kg (circle one) True	Found	%R
Metals:									
1. Aluminum	200	52					990	991	100
2. Antimony	60	27					505	489	97
3. Arsenic	10		3	5	7		49	45	92
4. Barium	200	28					990	998	101
5. Beryllium	5	5					240	257	107
6. Cadmium	5	4					244	261	107
7. Calcium	5000	745					24900	24600	99
8. Chromium	10	9					253	259	102
9. Cobalt	50	9					237	258	109
10. Copper	25	25					271	286	106
11. Iron	100	100					995	1180	118
12. Lead	5		3	2	2		49	—	NR
13. Magnesium	5000	290					12500	12600	101
14. Manganese	15	6					256	253	99
15. Mercury	0.2	0.2					5.2	4.9	94
16. Nickel	40	12					248	256	103
17. Potassium	5000	500*					10000	11100	111
18. Selenium	5		3	3	3	3	98	94	96
19. Silver	10	7					254	251	99
20. Sodium	5000	1002					25350	25500	100
21. Thallium	10		7	5	3	2	49	52	106
22. Vanadium	50	9					256	255	100
23. Zinc	20	20					1550	1740	112
Other Lead (P)	5	21					2255	2230	99
Cyanide	10	NR	NR				100	96	96

NR- Not required

AA ID # 1. Hitachi
2. P.E. 30/30
3. P.E. 5000
4. P.E. 30/302

* Hitachi flame