UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

rec'd 6/9/88
61 pages

DATE: 6/6/88

SUBJECT: Review of Region V CLP Data
Received for Review on 5-16-88

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

US EPA RECORDS CENTER REGION 5
532203

TO: Data User: Fit

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

SITE NAME: Burns Cold Forge (OH) SMO Case No. 9309

EPA Data Set No. SF 5023 No. of Samples: 5 D.U./Activity Numbers 4905 / C72122

CRL No. 88FF17529 - 533

SMO Traffic No. EW 288 - 292

CLP Laboratory: IEA Hrs. Required for Review: 8

Following are our findings:

Five soil samples were received in OK conditions. They were analyzed for volatile, semivolatile and pesticide at low level concentration. Only one lab was involved. Field blank and duplicate were not included in case. CCC did not come with case.

Perry N. Yamauchi
Weston/ESAT, 5/31/88

( ) 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: IEA

Case 9309

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

1. Sample Holding Times:

Holding times for VOA were 3 days over the 7 days limit from sampling date to analysis date, specified in TO CRF136, therefore the aromatics are flagged J as estimated.

Holding times for SVOA were 1 day over the 7 day limit from sampling date to extraction, therefore all compounds are estimated J.

Holding times for pest. analysis were 2 day over the sampling day to extraction day (7 day), therefore all compounds are estimated J.

2. GC/MS Tuning and GC Performance:

BFB and DFTPP mass listing corresponded with % Relative Ion Concentration and it checked with the ion abundance criteria.

DDT/Endrin breakdown of Eval Mix B were within the QC limits run on columns DB-5 and DB-608. %Ds of DBC RT shifts were within the QC limits for DB-5 and DB-608.

3. Calibration:

Initial and continuing calibration results of VOA & SVOA were checked for outliers and any found were recorded on the Outlier Forms and flagged J for positive results as estimated and R for non-detects as unusable.

Pest. CF of Eval Mix A, B & C were within %RSD limit (≤ 10%) on Column DB-5 & DB-608 - Initial calibration or linearity check. %Ds Pest. CF of IND A & B runs on DB-5 (quantitation) and DB-608 (Confirmation) were within the 15 and 20% range

Reviewed by: Terry N. Yamauchi

Phone: (312) 353-2960

Date: 5/31/88

DATA QUALIFIERS

Contractor: IEA

Case 9309

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

respectively, and the RTs were within the RT windows in SDG EW 288.

4. Method Blanks:

In VBlk, acetone common contaminant and 2-butanone and 2-hexanone as HSL compounds were detected. In the associated samples shown in Form IV, VO, acetone persisted throughout the volatile fractions and HSL compound, 2-butanone persisted throughout the fractions. The positive results were flagged "U" for samples >CRQL but <10X and/or 5X blank and /CRQL+"U" for samples <CRQL but <10X and/or 5X blank.

In SVOA Blk, no common contaminant detected and 4-hydroxy-4-methyl-2-pentanone and 3-methyloctane were detected as TICs. In the associated samples shown in Form IV, SV, Only the TICs, 4-hydroxy-4-methyl-2-pentanone and 3-methyloctane were detected throughout the SV fractions. They were flagged as stated above.

Pesticide fractions were clean and endosulfan sulfate and aldrin were detected in EW 289 and 292 respectively.

5. Surrogate Recoveries:

Soil surrogate recoveries were within the volatile, semi-volatile and pesticide standard's QC recovery limits for SDG EW 588

6. MS/MSD:

MS/MSD % Recs and % RPDs were within their respective QC limits of VOA, SVOA and Pest/PCB of sample EW291 fractions.

Reviewed by: Gary N. Yamanaki

Phone: (312) 353-2960

Date: 5/31/88

DATA QUALIFIERS

Contractor: IEA

Case 9309

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

7. Field Blank and Duplicate:
Both samples not included.

8. Internal Standard Performance:
Internal standard performance of volatile and semivolatile standards were within the standard area range and the RTs were within the standard's RT range for SDG EW 288.

9. Compound Quantitation and Reported Detection Limits:
Compound quantitation reports were conducted using library search method. Lab-generated current detection limits were not provided.

10. Compound ID:
TICs and TCLs were properly identified.
RTs of EW 289, 292 and 291 MS/MSD were within the RT window of pesticides using DB-5 and DB-608 for quantitation and confirmation.

11. System Performance:
SVOA total ion chromatograms indicated unstable baseline and noisy electronics.
Pesticide standard chromatograms showed rising baseline indicating dirty column.

12. Case Assessment:
The data in this case are acceptable with minor qualifications stated above.

Reviewed by: Jerry N. Yamauchi
Phone: (312) 353-2960
Date: 5/31/88

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

CASE/SAS # 9309 CONTRACTOR IEA

Instrument # EXTR21	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/22/88			4/23/88 2:24											
	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															
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:

S Blk
EW 288
EW 289
EW 290
EW 291
EW 291MS
EW 291MSD
EW 292

Reviewer's Initials/Date: T.G. 5/31/88

* 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 # 9309 CONTRACTOR IEA

Instrument # 105001	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/15/88			4/15/88 0824											
	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:

VBlk
EW288
EW289
EW290
EW291
EW291MS
EW291MSD
EW292

Reviewer Initials/Date: 7.4. 5/31/88

* 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 # 9309 CONTRACTOR IEA

Instrument # EXTR 2	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/22/88			4/23/88 2:24											
	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	1.38			1.72	25.1	J									
Benzo(k)Fluoranthene	1.26			1.73	37.3	J									
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: T.G. 5/31/88

Case: 9309

Contractor: IEA

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.

Gerry N. Yamanaki

APR 14 REC'D

PERFUND 5023

CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS

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

SAMPLE DATE: 4/5/88
LOG IN DATE: 4/20/88
DUE DATE: 6/14/88

CASE NUMBER/SAS No. 9309 SITE NAME Burns Cold Forge LABORATORY IEA/NLE DATE SHIPPED 4/5/88

SUPERFUND DU NUMBER 4905 EPA RPM or OSC (S.M.S.)/(CES) _____ CERCLIS NUMBER OHD004213047 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 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				
88FF17529	EW288	MEW811	✓	✓	✓										✓	✓	✓	✓	✓	✓						
88FF17530	EW289	MEW812	✓	✓	✓										✓	✓	✓	✓	✓	✓						
88FF17531	EW290	MEW813	✓	✓	✓										✓	✓	✓	✓	✓	✓						
88FF17532	EW291	MEW814	✓	✓	✓										✓	✓	✓	✓	✓	✓						
88FF17533	EW292	MEW815	✓	✓	✓										✓	✓	✓	✓	✓	✓						

Industrial & Environmental Analysts, Inc.
P.O. Box 12846 • Research Triangle Park, NC 27709 • 919-467-9919

RECEIVED
U.S. EPA CENTRAL REGIONAL LAB

CASE NARRATIVE

CONTRACT: 68-W8-0045
CASE: 9309
SDG: EW288
SAMPLES: 5 LOW SOILS
EW288, EW289, EW290, EW291 & EW292

All samples processed for this case were received in good condition on 4/06/88 with no discrepancies. Samples EW288-292 presented no analytical problems. The pH of sample EW289 was 3.7. SMO was notified per the SOW.

The samples in this case were analyzed for pesticides using a DB-5 wide bore capillary column, ID 0.53 mm. Confirmations were performed using a DB-608 wide bore capillary column, ID 0.53 mm. Acceptance criteria for the dibutylchlorendate (DBC) in all samples and standards was the retention time of DBC in the initial EVALA standard ±1.5%. All samples and standards analyzed for this case met that criteria. No breakdown was observed for endrin or 4,4'-DDT on either the quantitation column (DB-5) or the confirmation column (DB-608). The percent differences observed for all continuing calibration standards were within specifications for both columns.

EPA sample identifiers, date and time of analysis, description of column, instrument ID and attenuation have been included in the headers of each analysis. These items have been labelled 1-5 on the attached example chromatogram. All injection volumes were 2.0 ul. The injection volume has been hand-written in the lower left corner of each chromatogram header.

The retention time and area data for the quantitation and confirmation of each sample and quality control sample were compared to the standards via a spreadsheet program. The presence or absence of analytes was determined by comparison of the data from the two analyses. Preliminary concentration calculations were performed using the response of each analyte in a single standard. While this data approximates the final values calculated using the Terwilliger software, the concentrations do not match exactly. The difference is due to the use of average response in all standards by the Terwilliger software.

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina

Differences in calculations are most apparent for aldrin and dibutylchlorendate.

The compounds reported for this case are summarized below:

	EW288 ug/Kg	EW289 ug/Kg	EW290 ug/Kg	EW291 ug/Kg	EW292 ug/Kg
Aldrin					23
Endosulfan sulfate		50			

Quantitation of three spiked compounds was affected by the presence of interferences in the sample selected for spiking. Aldrin and heptachlor eluted on top of a broad non-pesticide peak native to the original sample. 4,4'-DDT coeluted with a non-pesticide compound. These interferences prohibited quantitation by peak area. However quantitation by peak height was not affected by the interference. For simplicity, all aldrin, heptachlor and 4,4'-DDT data contained in this report has been based on peak height. All other data has been based on peak area. A copy of the original chromatogram used for peak height determination of all quantitation standards for the DB-5 column and for each sample found to contain aldrin, heptachlor or 4,4'DDT has been included in the report. The peak height chromatograms have been labelled as such and may be found directly behind the corresponding peak area chromatogram produced by the data system. Peak heights have been noted and circled. Only aldrin, heptachlor and 4,4'-DDT have been identified on the peak height chromatograms.

Aldrin has been reported for EW292 due to the presence of a peak within the retention time window on both columns. The concentration calculated using the data from both columns was 25 ug/Kg on DB-5 and 5.0 on DB-608. Additional analyses outside the scope of this contract are necessary to determine the actual presence or absence of aldrin in this sample.

Version 9.5 of the public domain software written by D. Thomas Terwilliger for the generation of forms and disc deliverables was used for this case. A few problems were encountered which required manual correction of the forms.

1. The software does not allow reporting of the required

two (2) significant figures for pesticide values less than 10. The printed values and detection limits have been manually adjusted where necessary. A copy of the supplemental printout from the Terwilliger software has been included as the last page for each sample which required manual adjustment.

2. The software did not print the percent breakdown on Form VIII PEST-1. The calculated percent was manually added to each form.

3. The instrument number was not accessible after the initial entry of 1A for the confirmation data. The instrument ID on all forms associated with the DB-608 quantitation column have been manually changed to 1B.

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.

Lee Helms

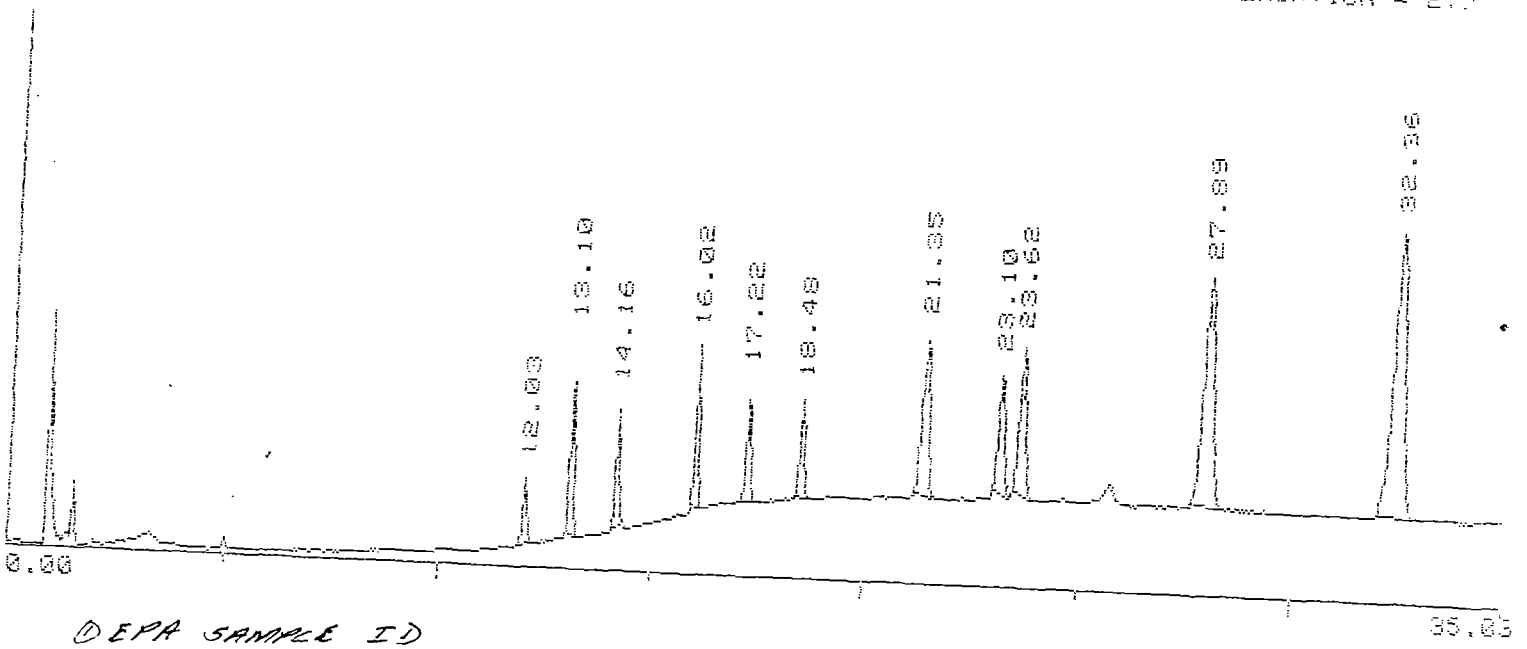
Lee Helms
CLP Coordinator

Patty L. Ragsdale 5/13/88

Patty L. Ragsdale
Quality Assurance Manager

SAMPLE: INDA ① AT 05/04/88 ② 19:45:25 ③
DISK FILE: ECHP172.RAW

FILENAME: DB-608 ④ 30M*0 FROM 74.3 ⑤
PEAK WIDTH = 6
ATTENUATION = 3.



① EPA SAMPLE ID

②+③ DATE + TIME OF ANALYSIS

④ COLUMN DESCRIPTION

⑤ INSTRUMENT ID

In Reference to Case No(s):

9309

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: 4/11/88

Laboratory Name: I.E.A.

Lab Contact: Lee Helms

Region: V

Regional Contact: Jeb Livingood

Call Initiated By: ✓ Laboratory ___ Region

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

EW289

Summary of Questions/Issues Discussed:

Soil sample had a pH value of 3.7. Should we proceed with analysis.

Summary of Resolution:

Proceed with analysis, and note pH in narrative. (per Jeb Livingood / Dennis Wesolowski

Lee Helms
Signature

Date 000005

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703/557-2490 FTS-557-2490

CASE NO: 9369

SAS NO: (IF APPLICABLE)

ORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA SI ESI RIFS RD RA ER NPLD O&M OTHER _____
NON-SUPERFUND—_____ PROGRAM

SAMPLE DESCRIPTION (ENTER IN BOX A)
1. SURFACE WATER
2. GROUND WATER
3. LEACHATE
4. SOIL
5. SEDIMENT
6. OIL (SAS)
7. WASTE (SAS)

REGION NO: D
SAMPLING COMPANY ② FIT
SAMPLER: (NAME) [illegible]

SHIP TO: ③ I I A
[illegible]
ATTN: [illegible]

SAMPLING DATE: ④
BEGIN: [illegible] END: [illegible]

DATE SHIPPED: [illegible] CARRIER: F ⑤
AIRBILL NO: 4994349716

DATE REC'D: 4-6-88
SDG NO: ⑥ EW 288
REC'D BY: Dwy Gilleland
LABORATORY CONTRACT NO. 0045
UNIT PRICE $919

TRANSFER TO:
DATE REC'D: ⑦
REC'D BY:
CONTRACT NO./PRICE:

Shipment is complete

CLP SAMPLE NUMBER (FROM LABELS)	Ⓐ SAMPLE DESCRIPTION (FROM BOX 1) 1 2 3 4 5 6 7	Ⓑ CONCENTRATION L = LOW/MED. H = HIGH (SAS)	Ⓒ RAS ANALYSIS: VOLATILE	BASE/NEUT /ACID	PESTICIDE /PCB's		Ⓓ SPECIAL HANDLING	Ⓔ STATION LOCATION	Ⓕ SAMPLE CONDITION ON RECEIPT	Ⓖ HIGH CONTAMINANT PHASES (CHECK): SOLID	WATER—MISCIBLE LIQUID	NON WATER—
EW 288	4	L	X	X	X			Soil SS	Okay			
EW 289	4	L	X	X	X			Soil SS				
EW 290	4	L	X	X	X			Soil SS				
EW 291	4	L	X	X	X			Soil SS				
EW 292	4	L	X	X	X			Soil SS	✓			

EPA Form 2075-7 (8-87)

00000

WHITE — SMO COPY PINK — CLIENT COPY WHITE — LAB COPY FOR RETURN TO SMO YELLOW — LAB COP

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK	96	96	96		0
2	EW288	99	92	96		0
3	EW289	98	91	98		0
4	EW290	97	94	97		0
5	EW291	97	93	95		0
6	EW291MS	97	90	95		0
7	EW291MSD	94	94	97		0
8	EW292	94	93	96		0
9						
10						
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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

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
1	SBLK	87	82	112	93	108	98		0
2	EW288	85	79	115	85	63	95		0
3	EW289	33	31	46	39	44	50		0
4	EW290	49	49	68	61	63	63		0
5	EW291	60	59	85	68	68	76		0
6	EW291MS	63	58	88	72	77	86		0
7	EW291MSD	56	53	77	67	69	72		0
8	EW292	66	71	122	96	94	85		0
9									
10									
11									
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27									
28									
29									
30									

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(23-120)
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4 (PHL)	= Phenol-d5	(24-113)
S5 (2FP)	= 2-Fluorophenol	(25-121)
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

000150

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (DBC)#	OTHER
1	PBLK	130	
2	~~XXXXX~~ ZZZZZ	105	
3	EW288	122	
4	EW290	104	
5	EW292	72	
6	EW291	87	
7	EW291MS	90	
8	EW291MSD	82	
9	PBLK	109	
10	EW289	86	
11			
12			
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30			

ADVISORY QC LIMITS (20-150)

S1 (DBC) = Dibutylchlorendate

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

000480

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3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Matrix Spike - EPA Sample No.: EW291 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	71.	0.	58.	82.	59-172
TRICHLOROETHENE	71.	0.	80.	113.	62-137
BENZENE	71.	0.	71.	101.	66-142
TOLUENE	71.	0.	72.	102.	59-139
CHLOROBENZENE	71.	0.	87.	122.	60-133

COMPOUND	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-DICHLOROETHENE	71.	55.	77.	6.	22	59-172
TRICHLOROETHENE	71.	82.	115.	2.	24	62-137
BENZENE	71.	73.	102.	2.	21	66-142
TOLUENE	71.	71.	100.	2.	21	59-139
CHLOROBENZENE	71.	88.	124.	1.	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:

000000

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Matrix Spike - EPA Sample No.: EW291 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (UG/KG)	SAMPLE CONCENTRATION (UG/KG)	MS CONCENTRATION (UG/KG)	MS % REC #	QC LIMITS REC.
Phenol	9217.	0.	5908.	64.	26- 90
2-Chlorophenol	9217.	0.	6065.	66.	25-102
1,4-Dichlorobenzene	4608.	0.	2886.	63.	28-104
N-Nitroso-di-n-prop.(1)	4608.	0.	2771.	60.	41-126
1,2,4-Trichlorobenzene	4608.	0.	3016.	65.	38-107
4-Chloro-3-methylphenol	9217.	0.	7003.	76.	26-103
Acenaphthene	4608.	0.	3332.	72.	31-137
4-Nitrophenol	9217.	0.	6756.	73.	11-114
2,4-Dinitrotoluene	4608.	0.	2587.	56.	28- 89
Pentachlorophenol	9217.	0.	5953.	65.	17-109
Pyrene	4608.	229.	4413.	91.	35-142

COMPOUND	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	9524.	5852.	61.	4.	35	26- 90
2-Chlorophenol	9524.	5786.	61.	8.	50	25-102
1,4-Dichlorobenzene	4762.	2724.	57.	9.	27	28-104
N-Nitroso-di-n-prop.(1)	4762.	2668.	56.	7.	38	41-126
1,2,4-Trichlorobenzene	4762.	2991.	63.	4.	23	38-107
4-Chloro-3-methylphenol	9524.	6716.	71.	7.	33	26-103
Acenaphthene	4762.	3030.	64.	13.	19	31-137
4-Nitrophenol	9524.	5894.	62.	17.	50	11-114
2,4-Dinitrotoluene	4762.	2021.	42.	28.	47	28- 89
Pentachlorophenol	9524.	5880.	62.	5.	47	17-109
Pyrene	4762.	3976.	79.	14.	36	35-142

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

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

* Values outside of QC limits

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

COMMENTS:

000151

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Matrix Spike - EPA Sample No.: EW291 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (UG/KG)	SAMPLE CONCENTRATION (UG/KG)	MS CONCENTRATION (UG/KG)	MS % REC #	QC LIMITS REC.
gamma-BHC	37.94	.00	46.87	124.	46-127
Heptachlor	37.94	.00	29.51	78.	35-130
Aldrin	37.94	.00	40.93	108.	34-132
Dieldrin	94.85	.00	108.75	115.	31-134
Endrin	94.85	.00	106.10	112.	42-139
4,4'-DDT	94.85	.00	98.30	104.	23-134

COMPOUND	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC	37.55	43.16	115.	7.	50	46-127
Heptachlor	37.55	28.51	76.	2.	31	35-130
Aldrin	37.55	37.55	100.	8.	43	34-132
Dieldrin	93.87	118.37	126.	10.	38	31-134
Endrin	93.87	124.74	133.	17.	45	42-139
4,4'-DDT	93.87	93.87	100.	4.	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

000481

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Lab File ID: 24VBLK Lab Sample ID:_____

Date Analyzed: 4/15/88 Time Analyzed: 9:32

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

Instrument ID: 105001

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	EW288		EW288V	10:31
2	EW289		EW289V	11:33
3	EW290		EW290V	12:33
4	EW291		EW291V	13:35
5	EW291MS		EW291MS	14:32
6	EW291MSD		EW291MSD	15:28
7	EW292		EW292V	17:03
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COMMENTS:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 24VBLK

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

% Moisture: not dec. 0. Date Analyzed: 4/15/88

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	21.	
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	6.	J
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
10061-01-5	CIS-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
10061-02-6	TRANS-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	2.	J
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: 24VBLK

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

% Moisture: not dec. 0. Date Analyzed: 4/15/88

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Lab File ID: 930901 Lab Sample ID:_____

Date Extracted: 4/13/88 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 4/23/88 Time Analyzed: 3:31

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

Instrument ID: EXTR2

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	EW288		930902	4/23/88
2	EW289		930903	4/23/88
3	EW290		930904	4/23/88
4	EW291		930905	4/23/88
5	EW291MS		930906	4/23/88
6	EW291MSD		930907	4/23/88
7	EW292		930908	4/23/88
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COMMENTS:

000152

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 930901

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

% Moisture: not dec. 0. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330.	U
111-44-4	bis(2-Chloroethyl)ether	330.	U
95-57-8	2-Chlorophenol	330.	U
541-73-1	1,3-Dichlorobenzene	330.	U
106-46-7	1,4-Dichlorobenzene	330.	U
100-51-6	Benzyl alcohol	330.	U
95-50-1	1,2-Dichlorobenzene	330.	U
95-48-7	2-Methylphenol	330.	U
108-60-1	bis(2-Chloroisopropyl)ether	330.	U
106-44-5	4-Methylphenol	330.	U
621-64-7	N-Nitroso-di-n-propylamine	330.	U
67-72-1	Hexachloroethane	330.	U
98-95-3	Nitrobenzene	330.	U
78-59-1	Isophorone	330.	U
88-75-5	2-Nitrophenol	330.	U
105-67-9	2,4-Dimethylphenol	330.	U
65-85-0	Benzoic acid	1700.	U
111-91-1	bis(2-Chloroethoxy)methane	330.	U
120-83-2	2,4-Dichlorophenol	330.	U
120-82-1	1,2,4-Trichlorobenzene	330.	U
91-20-3	Naphthalene	330.	U
106-47-8	4-Chloroaniline	330.	U
87-68-3	Hexachlorobutadiene	330.	U
59-50-7	4-Chloro-3-methylphenol	330.	U
91-57-6	2-Methylnaphthalene	330.	U
77-47-4	Hexachlorocyclopentadiene	330.	U
88-06-2	2,4,6-Trichlorophenol	330.	U
95-95-4	2,4,5-Trichlorophenol	1700.	U
91-58-7	2-Chloronaphthalene	330.	U
88-74-4	2-Nitroaniline	1700.	U
131-11-3	Dimethylphthalate	330.	U
208-96-8	Acenaphthylene	330.	U
606-20-2	2,6-Dinitrotoluene	330.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 930901

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

% Moisture: not dec. 0. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700.	U
83-32-9	Acenaphthene	330.	U
51-28-5	2,4-Dinitrophenol	1700.	U
100-02-7	4-Nitrophenol	1700.	U
132-64-9	Dibenzofuran	330.	U
121-14-2	2,4-Dinitrotoluene	330.	U
84-66-2	Diethylphthalate	330.	U
7005-72-3	4-Chlorophenyl-phenylether	330.	U
86-73-7	Fluorene	330.	U
100-01-6	4-Nitroaniline	1700.	U
534-52-1	4,6-Dinitro-2-methylphenol	1700.	U
86-30-6	N-Nitrosodiphenylamine (1)	330.	U
101-55-3	4-Bromophenyl-phenylether	330.	U
118-74-1	Hexachlorobenzene	330.	U
87-86-5	Pentachlorophenol	1700.	U
85-01-8	Phenanthrene	330.	U
120-12-7	Anthracene	330.	U
84-74-2	Di-n-butylphthalate	330.	U
206-44-0	Fluoranthene	330.	U
129-00-0	Pyrene	330.	U
85-68-7	Butylbenzylphthalate	330.	U
91-94-1	3,3'-Dichlorobenzidine	670.	U
56-55-3	Benzo(a)anthracene	330.	U
218-01-9	Chrysene	330.	U
117-81-7	bis(2-Ethylhexyl)phthalate	330.	U
117-84-0	Di-n-octylphthalate	330.	U
205-99-2	Benzo(b)fluoranthene	330.	U
207-08-9	Benzo(k)fluoranthene	330.	U
50-32-8	Benzo(a)pyrene	330.	U
193-39-5	Indeno(1,2,3-cd)pyrene	330.	U
53-70-3	Dibenz(a,h)anthracene	330.	U
191-24-2	Benzo(g,h,i)perylene	330.	U

(1) - Cannot be separated from diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 930901

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

% Moisture: not dec. 0. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 7.0 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	6.48	200.	J
2.	123-42-2	2-Pentanone, 4-hydroxy-4-met	7.18	10000.	J A
3.	- -	UNKNOWN HYDROCARBON	7.47	500.	J
4.	- -	UNKNOWN HYDROCARBON	7.53	400.	J
5.	- -	UNKNOWN HYDROCARBON	7.67	1000.	J
6.	2216-33-3	Octane, 3-methyl-	7.83	2000.	J
7.	- -	UNKNOWN AROMATIC	9.07	1000.	J
8.	- -	UNKNOWN	9.53	200.	J
9.	- -	UNKNOWN	10.43	100.	J
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4C
PESTICIDE METHOD BLANK SUMMARY

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Lab Sample ID: _____ Lab File ID: HPEC178

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

Date Extracted: 4/14/88 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed (1): 5/ 5/88 Date Analyzed (2): 5/ 5/88

Time Analyzed (1): 4:03 Time Analyzed (2): 4:03

Instrument ID (1): H5891A Instrument ID (2): H5891~~A~~B

GC Column ID (1): DB-5 GC Column ID (2): DB-608

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2	
1	~~XXXXX~~ ~~ZZZZZ~~		5/ 5/88	5/ 5/88	
2	EW288		5/ 5/88	5/ 5/88	
3	EW290		5/ 5/88	5/ 5/88	
4	EW292		5/ 5/88	5/ 5/88	
5	EW291		5/ 5/88	5/ 5/88	
6	EW291MS		5/ 5/88	5/ 5/88	
7	EW291MSD		5/ 5/88	5/ 5/88	
8	~~XXXXX~~		~~5/ 5/88~~	~~5/ 5/88~~	
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Comments:

000482

4C
PESTICIDE METHOD BLANK SUMMARY

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Lab Sample ID: _____ Lab File ID: HPEC196

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

Date Extracted: 4/15/88 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed (1): 5/ 5/88 Date Analyzed (2): 5/ 5/88

Time Analyzed (1): 19:48 Time Analyzed (2): 16:27

Instrument ID (1): H5891A Instrument ID (2): H5891A B

GC Column ID (1): DB-5 GC Column ID (2): DB-608

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
1	EW289		5/ 5/88	5/ 5/88
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3				
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Comments:

000483

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Matrix: (soil/water) SOIL Lab Sample ID: [illegible]

Sample wt/vol: 30. (g/mL) G Lab File ID: HPEC178

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

% Moisture: not dec. 0. dec. 0. Date Extracted: 4/14/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/ 5/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.3	U
319-85-7	beta-BHC	8.3	U
319-86-8	delta-BHC	8.3	U
58-89-9	gamma-BHC	8.3	U
76-44-8	Heptachlor	8.3	U
309-00-2	Aldrin	8.3	U
1024-57-3	Heptachlor epoxide	8.3	U
959-98-8	Endosulfan I	8.3	U
60-57-1	Dieldrin	17.	U
72-55-9	4,4'-DDE	17.	U
72-20-8	Endrin	17.	U
33213-65-9	Endosulfan II	17.	U
72-54-8	4,4'-DDD	17.	U
1031-07-8	Endosulfan sulfate	17.	U
50-29-3	4,4'-DDT	17.	U
72-43-5	Methoxychlor	83.	U
53494-70-5	Endrin ketone	17.	U
5103-71-9	alpha-Chlordane	83.	U
5103-74-2	gamma-Chlordane	83.	U
8001-35-2	Toxaphene	170.	U
12674-11-2	Aroclor-1016	83.	U
11104-28-2	Aroclor-1221	83.	U
11141-16-5	Aroclor-1232	83.	U
53469-21-9	Aroclor-1242	83.	U
12672-29-6	Aroclor-1248	83.	U
11097-69-1	Aroclor-1254	170.	U
11096-82-5	Aroclor-1260	170.	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

Matrix: (soil/water) SOIL Lab Sample ID: [illegible]

Sample wt/vol: 30. (g/mL) G Lab File ID: HPEC196

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

% Moisture: not dec. 0. dec. 0. Date Extracted: 4/15/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/ 5/88

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.3	U
319-85-7	beta-BHC	8.3	U
319-86-8	delta-BHC	8.3	U
58-89-9	gamma-BHC	8.3	U
76-44-8	Heptachlor	8.3	U
309-00-2	Aldrin	8.3	U
1024-57-3	Heptachlor epoxide	8.3	U
959-98-8	Endosulfan I	8.3	U
60-57-1	Dieldrin	17.	U
72-55-9	4,4'-DDE	17.	U
72-20-8	Endrin	17.	U
33213-65-9	Endosulfan II	17.	U
72-54-8	4,4'-DDD	17.	U
1031-07-8	Endosulfan sulfate	17.	U
50-29-3	4,4'-DDT	17.	U
72-43-5	Methoxychlor	83.	U
53494-70-5	Endrin ketone	17.	U
5103-71-9	alpha-Chlordane	83.	U
5103-74-2	gamma-Chlordane	83.	U
8001-35-2	Toxaphene	170.	U
12674-11-2	Aroclor-1016	83.	U
11104-28-2	Aroclor-1221	83.	U
11141-16-5	Aroclor-1232	83.	U
53469-21-9	Aroclor-1242	83.	U
12672-29-6	Aroclor-1248	83.	U
11097-69-1	Aroclor-1254	170.	U
11096-82-5	Aroclor-1260	170.	U

000623

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW288

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: EW288V

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 19. Date Analyzed: 4/15/88

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	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	4.	J
67-64-1	ACETONE	5.	~~BJ~~ 10U
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	4.	~~BJ~~ 10U
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
10061-01-5	CIS-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
10061-02-6	TRANS-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	6.	U
108-90-7	CHLOROBENZENE	6.	U
100-41-4	ETHYLBENZENE	6.	U
100-42-5	STYRENE	6.	U
1330-20-7	XYLENE (TOTAL)	6.	U

TLH 6/31/88

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW288

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: EW288V

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 19. Date Analyzed: 4/15/88

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW289

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: EW289V

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 17. Date Analyzed: 4/15/88

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	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	8.	
67-64-1	ACETONE	24.	~~B~~ U
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	5.	~~BJ~~ 10 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
10061-01-5	CIS-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
10061-02-6	TRANS-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	4.	J
108-90-7	CHLOROBENZENE	6.	U
100-41-4	ETHYLBENZENE	6.	U
100-42-5	STYRENE	6.	U
1330-20-7	XYLENE (TOTAL)	6.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW289

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: EW289V

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 17. Date Analyzed: 4/15/88

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW290

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: EW290V

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 14. Date Analyzed: 4/15/88

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	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	3.	J
67-64-1	ACETONE	16.	~~B~~ U
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	5.	~~BJ~~ 10 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
10061-01-5	CIS-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
10061-02-6	TRANS-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	6.	U
108-90-7	CHLOROBENZENE	6.	U
100-41-4	ETHYLBENZENE	6.	U
100-42-5	STYRENE	6.	U
1330-20-7	XYLENE (TOTAL)	6.	U

T.G. 8/31/88

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW290

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: EW290V

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 14. Date Analyzed: 4/15/88

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW291

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: EW291V

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 30. Date Analyzed: 4/15/88

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	3.	J
67-64-1	ACETONE	15.	~~B~~
75-15-0	CARBON DISULFIDE	7.	U
75-35-4	1,1-DICHLOROETHENE	7.	U
75-34-3	1,1-DICHLOROETHANE	7.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	7.	U
67-66-3	CHLOROFORM	7.	U
107-06-2	1,2-DICHLOROETHANE	7.	U
78-93-3	2-BUTANONE	4.	~~BJ~~ 10U
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
10061-01-5	CIS-1,3-DICHLOROPROPENE	7.	U
79-01-6	TRICHLOROETHENE	7.	U
124-48-1	DIBROMOCHLOROMETHANE	7.	U
79-00-5	1,1,2-TRICHLOROETHANE	7.	U
71-43-2	BENZENE	7.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	7.	U
75-25-2	BROMOFORM	7.	U
108-10-1	4-METHYL-2-PENTANONE	14.	U
591-78-6	2-HEXANONE	14.	U
127-18-4	TETRACHLOROETHENE	7.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	7.	U
108-88-3	TOLUENE	7.	U
108-90-7	CHLOROBENZENE	7.	U
100-41-4	ETHYLBENZENE	7.	U
100-42-5	STYRENE	7.	U
1330-20-7	XYLENE (TOTAL)	7.	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW291

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: EW291V

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 30. Date Analyzed: 4/15/88

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW292

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: EW292V

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 11. Date Analyzed: 4/15/88

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	11.	U
74-83-9	BROMOMETHANE	11.	U
75-01-4	VINYL CHLORIDE	11.	U
75-00-3	CHLOROETHANE	11.	U
75-09-2	METHYLENE CHLORIDE	3.	J
67-64-1	ACETONE	12.	~~B~~
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	5.	~~BJ~~ 10U
71-55-6	1,1,1-TRICHLOROETHANE	6.	U
56-23-5	CARBON TETRACHLORIDE	6.	U
108-05-4	VINYL ACETATE	11.	U
75-27-4	BROMODICHLOROMETHANE	6.	U
78-87-5	1,2-DICHLOROPROPANE	6.	U
10061-01-5	CIS-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
10061-02-6	TRANS-1,3-DICHLOROPROPENE	6.	U
75-25-2	BROMOFORM	6.	U
108-10-1	4-METHYL-2-PENTANONE	11.	U
591-78-6	2-HEXANONE	11.	U
127-18-4	TETRACHLOROETHENE	6.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	6.	U
108-88-3	TOLUENE	6.	U
108-90-7	CHLOROBENZENE	6.	U
100-41-4	ETHYLBENZENE	6.	U
100-42-5	STYRENE	6.	U
1330-20-7	XYLENE (TOTAL)	6.	U

TLH 5/31/88

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW292

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 5. (g/mL) G Lab File ID: EW292V

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 11. Date Analyzed: 4/15/88

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW288

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 31. (g/mL) G Lab File ID: 930902

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 19. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400.	U
111-44-4	bis(2-Chloroethyl)ether	400.	U
95-57-8	2-Chlorophenol	400.	U
541-73-1	1,3-Dichlorobenzene	400.	U
106-46-7	1,4-Dichlorobenzene	400.	U
100-51-6	Benzyl alcohol	400.	U
95-50-1	1,2-Dichlorobenzene	400.	U
95-48-7	2-Methylphenol	400.	U
108-60-1	bis(2-Chloroisopropyl)ether	400.	U
106-44-5	4-Methylphenol	400.	U
621-64-7	N-Nitroso-di-n-propylamine	400.	U
67-72-1	Hexachloroethane	400.	U
98-95-3	Nitrobenzene	400.	U
78-59-1	Isophorone	400.	U
88-75-5	2-Nitrophenol	400.	U
105-67-9	2,4-Dimethylphenol	400.	U
65-85-0	Benzoic acid	2000.	U
111-91-1	bis(2-Chloroethoxy)methane	400.	U
120-83-2	2,4-Dichlorophenol	400.	U
120-82-1	1,2,4-Trichlorobenzene	400.	U
91-20-3	Naphthalene	400.	U
106-47-8	4-Chloroaniline	400.	U
87-68-3	Hexachlorobutadiene	400.	U
59-50-7	4-Chloro-3-methylphenol	400.	U
91-57-6	2-Methylnaphthalene	400.	U
77-47-4	Hexachlorocyclopentadiene	400.	U
88-06-2	2,4,6-Trichlorophenol	400.	U
95-95-4	2,4,5-Trichlorophenol	2000.	U
91-58-7	2-Chloronaphthalene	400.	U
88-74-4	2-Nitroaniline	2000.	U
131-11-3	Dimethylphthalate	400.	U
208-96-8	Acenaphthylene	400.	U
606-20-2	2,6-Dinitrotoluene	400.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW288

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 31. (g/mL) G Lab File ID: 930902

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 19. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2000.	U
83-32-9	Acenaphthene	400.	U
51-28-5	2,4-Dinitrophenol	2000.	U
100-02-7	4-Nitrophenol	2000.	U
132-64-9	Dibenzofuran	400.	U
121-14-2	2,4-Dinitrotoluene	400.	U
84-66-2	Diethylphthalate	400.	U
7005-72-3	4-Chlorophenyl-phenylether	400.	U
86-73-7	Fluorene	400.	U
100-01-6	4-Nitroaniline	2000.	U
534-52-1	4,6-Dinitro-2-methylphenol	2000.	U
86-30-6	N-Nitrosodiphenylamine (1)	400.	U
101-55-3	4-Bromophenyl-phenylether	400.	U
118-74-1	Hexachlorobenzene	400.	U
87-86-5	Pentachlorophenol	2000.	U
85-01-8	Phenanthrene	400.	U
120-12-7	Anthracene	400.	U
84-74-2	Di-n-butylphthalate	400.	U
206-44-0	Fluoranthene	400.	U
129-00-0	Pyrene	400.	U
85-68-7	Butylbenzylphthalate	400.	U
91-94-1	3,3'-Dichlorobenzidine	800.	U
56-55-3	Benzo(a)anthracene	400.	U
218-01-9	Chrysene	400.	U
117-81-7	bis(2-Ethylhexyl)phthalate	230.	J
117-84-0	Di-n-octylphthalate	400.	U
205-99-2	Benzo(b)fluoranthene	400.	U
207-08-9	Benzo(k)fluoranthene	400.	U
50-32-8	Benzo(a)pyrene	400.	U
193-39-5	Indeno(1,2,3-cd)pyrene	400.	U
53-70-3	Dibenz(a,h)anthracene	400.	U
191-24-2	Benzo(g,h,i)perylene	400.	U

(1) - Cannot be separated from diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW288

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 31. (g/mL) G Lab File ID: 930902

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 19. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

Number TICs found: 21

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-met	7.12	9000.	~~BJ~~ U A
2.	- -	UNKNOWN HYDROCARBON	7.47	900.	BJ
3.	- -	UNKNOWN HYDROCARBON	7.53	800.	BJ
4.	- -	UNKNOWN HYDROCARBON	7.67	2000.	BJ
5.	2216-33-3	Octane, 3-methyl-	7.83	3000.	~~BJ~~ U
6.	- -	UNKNOWN	8.33	4000.	J
7.	- -	UNKNOWN KETONE	8.48	4000.	J
8.	- -	UNKNOWN AROMATIC	9.07	1000.	BJ
9.	- -	UNKNOWN	9.53	700.	BJ
10.	- -	UNKNOWN	10.43	600.	BJ
11.	- -	UNKNOWN	10.53	800.	J
12.	- -	UNKNOWN	10.60	400.	J
13.	- -	UNKNOWN	10.77	300.	J
14.	- -	UNKNOWN	14.12	400.	J
15.	- -	SUBSTITUTED BENZOIC ACID	14.88	200.	J
16.	- -	UNKNOWN	14.93	200.	J
17.	- -	UNKNOWN	16.08	300.	J
18.	- -	UNKNOWN HYDROCARBON	32.42	1000.	J
19.	- -	UNKNOWN	32.65	400.	J
20.	- -	UNKNOWN	35.05	1000.	J
21.	- -	UNKNOWN HYDROCARBON	38.85	400.	J
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW289

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 930903

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 17. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 3.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400.	U
111-44-4	bis(2-Chloroethyl)ether	400.	U
95-57-8	2-Chlorophenol	400.	U
541-73-1	1,3-Dichlorobenzene	400.	U
106-46-7	1,4-Dichlorobenzene	400.	U
100-51-6	Benzyl alcohol	400.	U
95-50-1	1,2-Dichlorobenzene	400.	U
95-48-7	2-Methylphenol	400.	U
108-60-1	bis(2-Chloroisopropyl)ether	400.	U
106-44-5	4-Methylphenol	400.	U
621-64-7	N-Nitroso-di-n-propylamine	400.	U
67-72-1	Hexachloroethane	400.	U
98-95-3	Nitrobenzene	400.	U
78-59-1	Isophorone	400.	U
88-75-5	2-Nitrophenol	400.	U
105-67-9	2,4-Dimethylphenol	400.	U
65-85-0	Benzoic acid	2000.	U
111-91-1	bis(2-Chloroethoxy)methane	400.	U
120-83-2	2,4-Dichlorophenol	400.	U
120-82-1	1,2,4-Trichlorobenzene	400.	U
91-20-3	Naphthalene	110.	J
106-47-8	4-Chloroaniline	400.	U
87-68-3	Hexachlorobutadiene	400.	U
59-50-7	4-Chloro-3-methylphenol	400.	U
91-57-6	2-Methylnaphthalene	130.	J
77-47-4	Hexachlorocyclopentadiene	400.	U
88-06-2	2,4,6-Trichlorophenol	400.	U
95-95-4	2,4,5-Trichlorophenol	2000.	U
91-58-7	2-Chloronaphthalene	400.	U
88-74-4	2-Nitroaniline	2000.	U
131-11-3	Dimethylphthalate	400.	U
208-96-8	Acenaphthylene	400.	U
606-20-2	2,6-Dinitrotoluene	400.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW289

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 930903

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 17. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 3.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2000.	U
83-32-9	Acenaphthene	400.	U
51-28-5	2,4-Dinitrophenol	2000.	U
100-02-7	4-Nitrophenol	2000.	U
132-64-9	Dibenzofuran	400.	U
121-14-2	2,4-Dinitrotoluene	400.	U
84-66-2	Diethylphthalate	400.	U
7005-72-3	4-Chlorophenyl-phenylether	400.	U
86-73-7	Fluorene	400.	U
100-01-6	4-Nitroaniline	2000.	U
534-52-1	4,6-Dinitro-2-methylphenol	2000.	U
86-30-6	N-Nitrosodiphenylamine (1)	400.	U
101-55-3	4-Bromophenyl-phenylether	400.	U
118-74-1	Hexachlorobenzene	400.	U
87-86-5	Pentachlorophenol	2000.	U
85-01-8	Phenanthrene	400.	U
120-12-7	Anthracene	400.	U
84-74-2	Di-n-butylphthalate	400.	U
206-44-0	Fluoranthene	400.	U
129-00-0	Pyrene	400.	U
85-68-7	Butylbenzylphthalate	400.	U
91-94-1	3,3'-Dichlorobenzidine	800.	U
56-55-3	Benzo(a)anthracene	400.	U
218-01-9	Chrysene	400.	U
117-81-7	bis(2-Ethylhexyl)phthalate	400.	U
117-84-0	Di-n-octylphthalate	400.	U
205-99-2	Benzo(b)fluoranthene	400.	U
207-08-9	Benzo(k)fluoranthene	400.	U
50-32-8	Benzo(a)pyrene	400.	U
193-39-5	Indeno(1,2,3-cd)pyrene	400.	U
53-70-3	Dibenz(a,h)anthracene	400.	U
191-24-2	Benzo(g,h,i)perylene	400.	U

(1) - Cannot be separated from diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW289

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 930903

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 17. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 3.7 Dilution Factor: 1.00

Number TICs found: 11

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	6.47	200.	BJ
2.	123-42-2	2-Pentanone, 4-hydroxy-4-met	7.15	8000.	~~BJ~~ A
3.	- -	UNKNOWN HYDROCARBON	7.45	300.	BJ
4.	- -	UNKNOWN HYDROCARBON	7.53	300.	BJ
5.	- -	UNKNOWN HYDROCARBON	7.67	800.	BJ
6.	2216-33-3	Octane, 3-methyl-	7.83	900.	~~BJ~~
7.	- -	UNKNOWN AROMATIC	9.07	600.	BJ
8.	- -	UNKNOWN	9.53	500.	BJ
9.	- -	UNKNOWN	10.43	300.	BJ
10.	- -	UNKNOWN HYDROCARBON	19.75	400.	J
11.	- -	UNKNOWN HYDROCARBON	21.05	200.	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW290

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 31. (g/mL) G Lab File ID: 930904

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 14. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380.	U
111-44-4	bis(2-Chloroethyl)ether	380.	U
95-57-8	2-Chlorophenol	380.	U
541-73-1	1,3-Dichlorobenzene	380.	U
106-46-7	1,4-Dichlorobenzene	380.	U
100-51-6	Benzyl alcohol	380.	U
95-50-1	1,2-Dichlorobenzene	380.	U
95-48-7	2-Methylphenol	380.	U
108-60-1	bis(2-Chloroisopropyl)ether	380.	U
106-44-5	4-Methylphenol	380.	U
621-64-7	N-Nitroso-di-n-propylamine	380.	U
67-72-1	Hexachloroethane	380.	U
98-95-3	Nitrobenzene	380.	U
78-59-1	Isophorone	380.	U
88-75-5	2-Nitrophenol	380.	U
105-67-9	2,4-Dimethylphenol	380.	U
65-85-0	Benzoic acid	1900.	U
111-91-1	bis(2-Chloroethoxy)methane	380.	U
120-83-2	2,4-Dichlorophenol	380.	U
120-82-1	1,2,4-Trichlorobenzene	380.	U
91-20-3	Naphthalene	380.	U
106-47-8	4-Chloroaniline	380.	U
87-68-3	Hexachlorobutadiene	380.	U
59-50-7	4-Chloro-3-methylphenol	380.	U
91-57-6	2-Methylnaphthalene	380.	U
77-47-4	Hexachlorocyclopentadiene	380.	U
88-06-2	2,4,6-Trichlorophenol	380.	U
95-95-4	2,4,5-Trichlorophenol	1900.	U
91-58-7	2-Chloronaphthalene	380.	U
88-74-4	2-Nitroaniline	1900.	U
131-11-3	Dimethylphthalate	380.	U
208-96-8	Acenaphthylene	380.	U
606-20-2	2,6-Dinitrotoluene	380.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW290

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 31. (g/mL) G Lab File ID: 930904

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 14. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1900.	U
83-32-9	Acenaphthene	380.	U
51-28-5	2,4-Dinitrophenol	1900.	U
100-02-7	4-Nitrophenol	1900.	U
132-64-9	Dibenzofuran	380.	U
121-14-2	2,4-Dinitrotoluene	380.	U
84-66-2	Diethylphthalate	380.	U
7005-72-3	4-Chlorophenyl-phenylether	380.	U
86-73-7	Fluorene	380.	U
100-01-6	4-Nitroaniline	1900.	U
534-52-1	4,6-Dinitro-2-methylphenol	1900.	U
86-30-6	N-Nitrosodiphenylamine (1)	380.	U
101-55-3	4-Bromophenyl-phenylether	380.	U
118-74-1	Hexachlorobenzene	380.	U
87-86-5	Pentachlorophenol	1900.	U
85-01-8	Phenanthrene	380.	U
120-12-7	Anthracene	380.	U
84-74-2	Di-n-butylphthalate	380.	U
206-44-0	Fluoranthene	380.	U
129-00-0	Pyrene	380.	U
85-68-7	Butylbenzylphthalate	380.	U
91-94-1	3,3'-Dichlorobenzidine	750.	U
56-55-3	Benzo(a)anthracene	380.	U
218-01-9	Chrysene	380.	U
117-81-7	bis(2-Ethylhexyl)phthalate	380.	U
117-84-0	Di-n-octylphthalate	380.	U
205-99-2	Benzo(b)fluoranthene	380.	U
207-08-9	Benzo(k)fluoranthene	380.	U
50-32-8	Benzo(a)pyrene	380.	U
193-39-5	Indeno(1,2,3-cd)pyrene	380.	U
53-70-3	Dibenz(a,h)anthracene	380.	U
191-24-2	Benzo(g,h,i)perylene	380.	U

(1) - Cannot be separated from diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW290

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 31. (g/mL) G Lab File ID: 930904

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 14. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 1.00

Number TICs found: 14 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	6.47	300.	BJ
2.	123-42-2	2-Pentanone, 4-hydroxy-4-met	7.15	10000.	~~BJ~~ A
3.	- -	UNKNOWN HYDROCARBON	7.47	500.	BJ
4.	- -	UNKNOWN HYDROCARBON	7.53	400.	BJ
5.	- -	UNKNOWN HYDROCARBON	7.67	1000.	BJ
6.	2216-33-3	Octane, 3-methyl-	7.83	2000.	~~BJ~~
7.	- -	UNKNOWN AROMATIC	9.07	900.	BJ
8.	- -	UNKNOWN	9.15	300.	J
9.	- -	UNKNOWN	9.53	500.	BJ
10.	- -	UNKNOWN	10.43	500.	BJ
11.	- -	UNKNOWN HYDROCARBON	19.75	300.	J
12.	- -	UNKNOWN	26.10	200.	J
13.	- -	UNKNOWN	27.93	200.	J
14.	- -	UNKNOWN	28.87	200.	J
15.					
16.					
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW291

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 32. (g/mL) G Lab File ID: 930905

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 30. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 7.1 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	450.	U
111-44-4	bis(2-Chloroethyl)ether	450.	U
95-57-8	2-Chlorophenol	450.	U
541-73-1	1,3-Dichlorobenzene	450.	U
106-46-7	1,4-Dichlorobenzene	450.	U
100-51-6	Benzyl alcohol	450.	U
95-50-1	1,2-Dichlorobenzene	450.	U
95-48-7	2-Methylphenol	450.	U
108-60-1	bis(2-Chloroisopropyl)ether	450.	U
106-44-5	4-Methylphenol	450.	U
621-64-7	N-Nitroso-di-n-propylamine	450.	U
67-72-1	Hexachloroethane	450.	U
98-95-3	Nitrobenzene	450.	U
78-59-1	Isophorone	450.	U
88-75-5	2-Nitrophenol	450.	U
105-67-9	2,4-Dimethylphenol	450.	U
65-85-0	Benzoic acid	240.	J
111-91-1	bis(2-Chloroethoxy)methane	450.	U
120-83-2	2,4-Dichlorophenol	450.	U
120-82-1	1,2,4-Trichlorobenzene	450.	U
91-20-3	Naphthalene	450.	U
106-47-8	4-Chloroaniline	450.	U
87-68-3	Hexachlorobutadiene	450.	U
59-50-7	4-Chloro-3-methylphenol	450.	U
91-57-6	2-Methylnaphthalene	450.	U
77-47-4	Hexachlorocyclopentadiene	450.	U
88-06-2	2,4,6-Trichlorophenol	450.	U
95-95-4	2,4,5-Trichlorophenol	2200.	U
91-58-7	2-Chloronaphthalene	450.	U
88-74-4	2-Nitroaniline	2200.	U
131-11-3	Dimethylphthalate	450.	U
208-96-8	Acenaphthylene	450.	U
606-20-2	2,6-Dinitrotoluene	450.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW291

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 32. (g/mL) G Lab File ID: 930905

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 30. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 7.1 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2200.	U
83-32-9	Acenaphthene	450.	U
51-28-5	2,4-Dinitrophenol	2200.	U
100-02-7	4-Nitrophenol	2200.	U
132-64-9	Dibenzofuran	450.	U
121-14-2	2,4-Dinitrotoluene	450.	U
84-66-2	Diethylphthalate	450.	U
7005-72-3	4-Chlorophenyl-phenylether	450.	U
86-73-7	Fluorene	450.	U
100-01-6	4-Nitroaniline	2200.	U
534-52-1	4,6-Dinitro-2-methylphenol	2200.	U
86-30-6	N-Nitrosodiphenylamine (1)	450.	U
101-55-3	4-Bromophenyl-phenylether	450.	U
118-74-1	Hexachlorobenzene	450.	U
87-86-5	Pentachlorophenol	2200.	U
85-01-8	Phenanthrene	130.	J
120-12-7	Anthracene	450.	U
84-74-2	Di-n-butylphthalate	450.	U
206-44-0	Fluoranthene	180.	J
129-00-0	Pyrene	230.	J
85-68-7	Butylbenzylphthalate	450.	U
91-94-1	3,3'-Dichlorobenzidine	890.	U
56-55-3	Benzo(a)anthracene	450.	U
218-01-9	Chrysene	450.	U
117-81-7	bis(2-Ethylhexyl)phthalate	450.	U
117-84-0	Di-n-octylphthalate	450.	U
205-99-2	Benzo(b)fluoranthene	450.	U
207-08-9	Benzo(k)fluoranthene	450.	U
50-32-8	Benzo(a)pyrene	450.	U
193-39-5	Indeno(1,2,3-cd)pyrene	450.	U
53-70-3	Dibenz(a,h)anthracene	450.	U
191-24-2	Benzo(g,h,i)perylene	450.	U

(1) - Cannot be separated from diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW291

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 32. (g/mL) G Lab File ID: 930905

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 30. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

GPC Cleanup: (Y/N) N pH: 7.1 Dilution Factor: 1.00

Number TICs found: 21

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN KETONE	5.97	500.	J
2.	123-42-2	2-Pentanone, 4-hydroxy-4-met	7.12	5000.	~~BJ~~ A
3.	- -	UNKNOWN HYDROCARBON	7.45	500.	BJ
4.	- -	UNKNOWN HYDROCARBON	7.52	400.	BJ
5.	- -	UNKNOWN HYDROCARBON	7.65	1000.	BJ
6.	2216-33-3	Octane, 3-methyl-	7.83	1000.	~~BJ~~
7.	- -	UNKNOWN AROMATIC	9.07	400.	BJ
8.	- -	UNKNOWN	9.15	200.	J
9.	- -	UNKNOWN	9.53	1000.	BJ
10.	- -	UNKNOWN	9.73	300.	J
11.	- -	UNKNOWN	10.43	800.	BJ
12.	- -	UNKNOWN	11.22	200.	J
13.	- -	UNKNOWN	16.10	400.	J
14.	- -	UNKNOWN	27.67	500.	J
15.	- -	UNKNOWN	28.13	400.	J
16.	- -	UNKNOWN	30.63	700.	J
17.	- -	UNKNOWN	30.93	500.	J
18.	- -	UNKNOWN	32.27	2000.	J
19.	- -	UNKNOWN	32.75	2000.	J
20.	- -	UNKNOWN	35.85	2000.	J
21.	- -	UNKNOWN	37.33	2000.	J
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW292

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 930908

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 11. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370.	U
111-44-4	bis(2-Chloroethyl)ether	370.	U
95-57-8	2-Chlorophenol	370.	U
541-73-1	1,3-Dichlorobenzene	370.	U
106-46-7	1,4-Dichlorobenzene	370.	U
100-51-6	Benzyl alcohol	370.	U
95-50-1	1,2-Dichlorobenzene	370.	U
95-48-7	2-Methylphenol	370.	U
108-60-1	bis(2-Chloroisopropyl)ether	370.	U
106-44-5	4-Methylphenol	370.	U
621-64-7	N-Nitroso-di-n-propylamine	370.	U
67-72-1	Hexachloroethane	370.	U
98-95-3	Nitrobenzene	370.	U
78-59-1	Isophorone	370.	U
88-75-5	2-Nitrophenol	370.	U
105-67-9	2,4-Dimethylphenol	370.	U
65-85-0	Benzoic acid	1900.	U
111-91-1	bis(2-Chloroethoxy)methane	370.	U
120-83-2	2,4-Dichlorophenol	370.	U
120-82-1	1,2,4-Trichlorobenzene	370.	U
91-20-3	Naphthalene	370.	U
106-47-8	4-Chloroaniline	370.	U
87-68-3	Hexachlorobutadiene	370.	U
59-50-7	4-Chloro-3-methylphenol	370.	U
91-57-6	2-Methylnaphthalene	370.	U
77-47-4	Hexachlorocyclopentadiene	370.	U
88-06-2	2,4,6-Trichlorophenol	370.	U
95-95-4	2,4,5-Trichlorophenol	1900.	U
91-58-7	2-Chloronaphthalene	370.	U
88-74-4	2-Nitroaniline	1900.	U
131-11-3	Dimethylphthalate	370.	U
208-96-8	Acenaphthylene	370.	U
606-20-2	2,6-Dinitrotoluene	370.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW292

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 930908

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 11. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1900.	U
83-32-9	Acenaphthene	370.	U
51-28-5	2,4-Dinitrophenol	1900.	U
100-02-7	4-Nitrophenol	1900.	U
132-64-9	Dibenzofuran	370.	U
121-14-2	2,4-Dinitrotoluene	370.	U
84-66-2	Diethylphthalate	370.	U
7005-72-3	4-Chlorophenyl-phenylether	370.	U
86-73-7	Fluorene	370.	U
100-01-6	4-Nitroaniline	1900.	U
534-52-1	4,6-Dinitro-2-methylphenol	1900.	U
86-30-6	N-Nitrosodiphenylamine (1)	370.	U
101-55-3	4-Bromophenyl-phenylether	370.	U
118-74-1	Hexachlorobenzene	370.	U
87-86-5	Pentachlorophenol	1900.	U
85-01-8	Phenanthrene	570.	
120-12-7	Anthracene	130.	J
84-74-2	Di-n-butylphthalate	370.	U
206-44-0	Fluoranthene	1100.	
129-00-0	Pyrene	1600.	
85-68-7	Butylbenzylphthalate	370.	U
91-94-1	3,3'-Dichlorobenzidine	750.	U
56-55-3	Benzo(a)anthracene	630.	
218-01-9	Chrysene	1100.	
117-81-7	bis(2-Ethylhexyl)phthalate	370.	U
117-84-0	Di-n-octylphthalate	370.	U
205-99-2	Benzo(b)fluoranthene	710.	
207-08-9	Benzo(k)fluoranthene	1100.	
50-32-8	Benzo(a)pyrene	800.	
193-39-5	Indeno(1,2,3-cd)pyrene	1000.	
53-70-3	Dibenz(a,h)anthracene	1100.	
191-24-2	Benzo(g,h,i)perylene	1100.	

(1) - Cannot be separated from diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW292

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 930908

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 11. dec. 0. Date Extracted: 4/13/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 4/23/88

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

Number TICs found: 21

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN KETONE	6.00	500.	J
2.	- -	UNKNOWN	6.50	200.	BJ
3.	123-42-2	2-Pentanone, 4-hydroxy-4-met	7.18	7000.	~~BJ~~ A
4.	- -	UNKNOWN HYDROCARBON	7.50	400.	BJ
5.	- -	UNKNOWN HYDROCARBON	7.57	400.	BJ
6.	- -	UNKNOWN HYDROCARBON	7.70	1000.	BJ
7.	2216-33-3	Octane, 3-methyl-	7.87	1000.	~~BJ~~
8.	- -	UNKNOWN AROMATIC	9.10	700.	BJ
9.	- -	UNKNOWN	9.20	400.	J
10.	- -	UNKNOWN	9.57	1000.	BJ
11.	- -	UNKNOWN	9.78	300.	J
12.	- -	UNKNOWN	10.48	500.	BJ
13.	- -	UNKNOWN HYDROCARBON	21.02	600.	J
14.	- -	UNKNOWN	23.28	200.	J
15.	- -	UNKNOWN	24.02	200.	J
16.	- -	UNKNOWN HYDROCARBON	24.32	200.	J
17.	- -	UNKNOWN AROMATIC	24.55	300.	J
18.	- -	UNKNOWN AROMATIC	28.62	300.	J
19.	- -	UNKNOWN HYDROCARBON	32.52	800.	J
20.	- -	UNKNOWN POLYNUCLEAR AROMATIC	33.15	1000.	J
21.	- -	UNKNOWN AROMATIC	35.20	800.	J
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW288

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: HPEC180

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 19. dec. 0. Date Extracted: 4/14/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/ 5/88

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	10.	U
319-85-7	beta-BHC	10.	U
319-86-8	delta-BHC	10.	U
58-89-9	gamma-BHC	10.	U
76-44-8	Heptachlor	10.	U
309-00-2	Aldrin	10.	U
1024-57-3	Heptachlor epoxide	10.	U
959-98-8	Endosulfan I	10.	U
60-57-1	Dieldrin	20.	U
72-55-9	4,4'-DDE	20.	U
72-20-8	Endrin	20.	U
33213-65-9	Endosulfan II	20.	U
72-54-8	4,4'-DDD	20.	U
1031-07-8	Endosulfan sulfate	20.	U
50-29-3	4,4'-DDT	20.	U
72-43-5	Methoxychlor	100.	U
53494-70-5	Endrin ketone	20.	U
5103-71-9	alpha-Chlordane	100.	U
5103-74-2	gamma-Chlordane	100.	U
8001-35-2	Toxaphene	200.	U
12674-11-2	Aroclor-1016	100.	U
11104-28-2	Aroclor-1221	100.	U
11141-16-5	Aroclor-1232	100.	U
53469-21-9	Aroclor-1242	100.	U
12672-29-6	Aroclor-1248	100.	U
11097-69-1	Aroclor-1254	200.	U
11096-82-5	Aroclor-1260	200.	U

000486

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW289

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: HPEC197

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 17. dec. 0. Date Extracted: 4/15/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/ 5/88

GPC Cleanup: (Y/N) N pH: 3.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	10.	U
319-85-7	beta-BHC	10.	U
319-86-8	delta-BHC	10.	U
58-89-9	gamma-BHC	10.	U
76-44-8	Heptachlor	10.	U
309-00-2	Aldrin	10.	U
1024-57-3	Heptachlor epoxide	10.	U
959-98-8	Endosulfan I	10.	U
60-57-1	Dieldrin	20.	U
72-55-9	4,4'-DDE	20.	U
72-20-8	Endrin	20.	U
33213-65-9	Endosulfan II	20.	U
72-54-8	4,4'-DDD	20.	U
1031-07-8	Endosulfan sulfate	50.	
50-29-3	4,4'-DDT	20.	U
72-43-5	Methoxychlor	100.	U
53494-70-5	Endrin ketone	20.	U
5103-71-9	alpha-Chlordane	100.	U
5103-74-2	gamma-Chlordane	100.	U
8001-35-2	Toxaphene	200.	U
12674-11-2	Aroclor-1016	100.	U
11104-28-2	Aroclor-1221	100.	U
11141-16-5	Aroclor-1232	100.	U
53469-21-9	Aroclor-1242	100.	U
12672-29-6	Aroclor-1248	100.	U
11097-69-1	Aroclor-1254	200.	U
11096-82-5	Aroclor-1260	200.	U

000488

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW290

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: HPEC184

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 14. dec. 0. Date Extracted: 4/14/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/ 5/88

GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	10.	U
319-85-7	beta-BHC	10.	U
319-86-8	delta-BHC	10.	U
58-89-9	gamma-BHC	10.	U
76-44-8	Heptachlor	10.	U
309-00-2	Aldrin	10.	U
1024-57-3	Heptachlor epoxide	10.	U
959-98-8	Endosulfan I	10.	U
60-57-1	Dieldrin	19.	U
72-55-9	4,4'-DDE	19.	U
72-20-8	Endrin	19.	U
33213-65-9	Endosulfan II	19.	U
72-54-8	4,4'-DDD	19.	U
1031-07-8	Endosulfan sulfate	19.	U
50-29-3	4,4'-DDT	19.	U
72-43-5	Methoxychlor	95.	U
53494-70-5	Endrin ketone	19.	U
5103-71-9	alpha-Chlordane	95.	U
5103-74-2	gamma-Chlordane	95.	U
8001-35-2	Toxaphene	190.	U
12674-11-2	Aroclor-1016	95.	U
11104-28-2	Aroclor-1221	95.	U
11141-16-5	Aroclor-1232	95.	U
53469-21-9	Aroclor-1242	95.	U
12672-29-6	Aroclor-1248	95.	U
11097-69-1	Aroclor-1254	190.	U
11096-82-5	Aroclor-1260	190.	U

000495

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW291

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: HPEC189

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 30. dec. 0. Date Extracted: 4/14/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/ 5/88

GPC Cleanup: (Y/N) N pH: 7.1 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	12.	U
319-85-7	beta-BHC	12.	U
319-86-8	delta-BHC	12.	U
58-89-9	gamma-BHC	12.	U
76-44-8	Heptachlor	12.	U
309-00-2	Aldrin	12.	U
1024-57-3	Heptachlor epoxide	12.	U
959-98-8	Endosulfan I	12.	U
60-57-1	Dieldrin	24.	U
72-55-9	4,4'-DDE	24.	U
72-20-8	Endrin	24.	U
33213-65-9	Endosulfan II	24.	U
72-54-8	4,4'-DDD	24.	U
1031-07-8	Endosulfan sulfate	24.	U
50-29-3	4,4'-DDT	24.	U
72-43-5	Methoxychlor	120.	U
53494-70-5	Endrin ketone	24.	U
5103-71-9	alpha-Chlordane	120.	U
5103-74-2	gamma-Chlordane	120.	U
8001-35-2	Toxaphene	240.	U
12674-11-2	Aroclor-1016	120.	U
11104-28-2	Aroclor-1221	120.	U
11141-16-5	Aroclor-1232	120.	U
53469-21-9	Aroclor-1242	120.	U
12672-29-6	Aroclor-1248	120.	U
11097-69-1	Aroclor-1254	240.	U
11096-82-5	Aroclor-1260	240.	U

000500

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW292

Lab Name: IEA Contract: 68-W8-0045

Lab Code: IEA Case No.: 9309 SAS No.: SDG No.: EW288

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

Sample wt/vol: 30. (g/mL) G Lab File ID: HPEC185

Level: (low/med) LOW Date Received: 4/ 6/88

% Moisture: not dec. 11. dec. 0. Date Extracted: 4/14/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/ 5/88

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.3	U
319-85-7	beta-BHC	9.3	U
319-86-8	delta-BHC	9.3	U
58-89-9	gamma-BHC	9.3	U
76-44-8	Heptachlor	9.3	U
309-00-2	Aldrin	23.	
1024-57-3	Heptachlor epoxide	9.3	U
959-98-8	Endosulfan I	9.3	U
60-57-1	Dieldrin	19.	U
72-55-9	4,4'-DDE	19.	U
72-20-8	Endrin	19.	U
33213-65-9	Endosulfan II	19.	U
72-54-8	4,4'-DDD	19.	U
1031-07-8	Endosulfan sulfate	19.	U
50-29-3	4,4'-DDT	19.	U
72-43-5	Methoxychlor	93.	U
53494-70-5	Endrin ketone	19.	U
5103-71-9	alpha-Chlordane	93.	U
5103-74-2	gamma-Chlordane	93.	U
8001-35-2	Toxaphene	190.	U
12674-11-2	Aroclor-1016	93.	U
11104-28-2	Aroclor-1221	93.	U
11141-16-5	Aroclor-1232	93.	U
53469-21-9	Aroclor-1242	93.	U
12672-29-6	Aroclor-1248	93.	U
11097-69-1	Aroclor-1254	190.	U
11096-82-5	Aroclor-1260	190.	U

000507