EXPANDED SITE INSPECTION REPORT
FOR
H.O.D. LANDFILL
ANTIOCH, ILLINOIS
U.S. EPA ID: ILD980605836
SS ID: IL2F
TDD: F05-8702-124
PAN: FIL0141XB

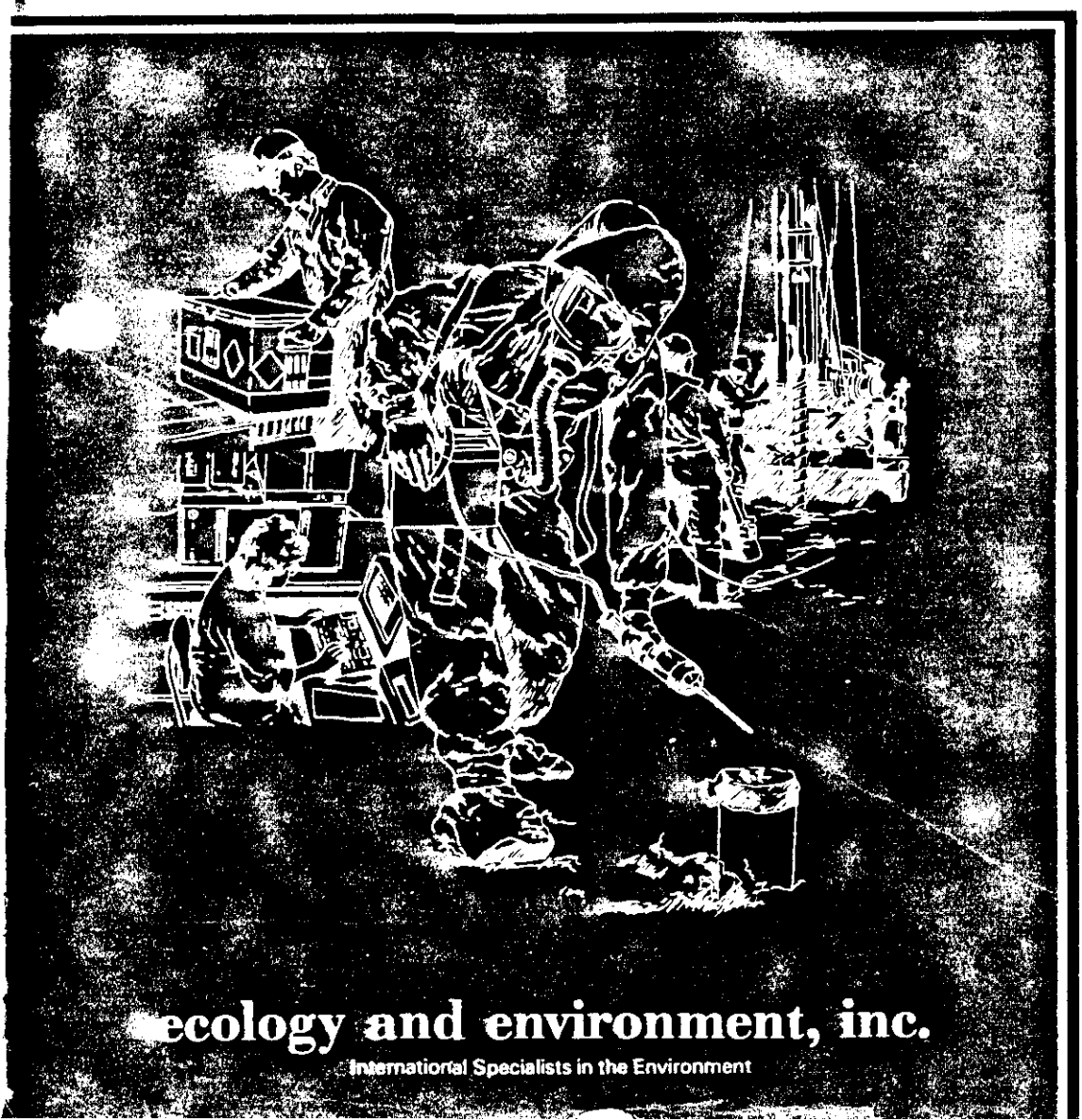
VOLUME 3 OF 4

39

EPA

HAZARDOUS
SITE
EVALUATION
DIVISION

Field Investigation Team Zone II



CONTRACT NO.
68-01-7347

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9/22/89
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FOR
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VOLUME 3 OF 4

SEPTEMBER 22, 1989

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APPENDIX G

LABORATORY ANALYTICAL DATA
OF
FIT-COLLECTED SUBSURFACE SOIL SAMPLES

ROUTINE ANALYTICAL SERVICES

CONTRACT REQUIRED DETECTION AND QUANTITATION LIMITS

Contract Laboratory Program
Target Analyte List
Inorganic Quantitation Limits

COMPOUND	PROCEDURE	SOIL WATER	SEDIMENT SLUDGE
Aluminum	ICP	200 ug/L	40 mg/Kg
Antimony	Furnace	60	2.4
Arsenic	Furnace	10	2
Barium	ICP	200	40
Beryllium	ICP	5	1
Cadmium	ICP	5	1
Calcium	ICP	5000	1000
Chromium	ICP	10	2
Cobalt	ICP	50	10
Copper	ICP	25	5
Iron	Icp	100	20
Lead	Furnace	5	1
Magnesium	ICP	5000	1000
Manganese	ICP	15	3
Mercury	Cold Vapor	0.2	0.008
Nickel	ICP	40	8
Potassium	ICP	5000	1000
Selenium	Furnace	5	1
Silver	ICP	10	2
Sodium	ICP	5000	1000
Thallium	Furnace	10	2
Vanadium	ICP	50	10
Zinc	ICP	20	4
Cyanide	Color	10	2

Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Tolene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

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Date Received for Review 9/3 Date Review Completed 9/8/87

To: Tom Pachowicz
From: Zena Gold-Kaufman
Subject: HOD Landfill

PAN: IL0141 Case # 7351

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 16	Low Soil 1 → 16	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting: _____

FIT Data Review Findings:
Samples EJ125-128 EL256 → 267
Reviewer rejected VOAS from EL267 as unusable. Also Pesticides from EL~~267~~ 127 and EL259.

Common lab artifacts detected - acetone, methylene chloride, and phthalates.

_____ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 / 6 Page No. 146 / 152

5/26
6/3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 9/1/87

RECEIVED SEP 3 1987

SUBJECT: Review of Region V CLP Data
Received for Review on 6/26/87

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

TO: Data User: FIT

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

SITE NAME: HOD LANDFILL SMO case No. 7351

EPA Data Set No. SF4068/SF4069 No. of Samples: 16 D.U./Activity Numbers Y905/C72100

CRL No. 87FP09578-87FP09585; 87FP09541-87FP09548

SMO Traffic No. EJ125-EJ128; EL256-EL267

CLP Laboratory: ENVIRODYNE Hrs. Required for Review: 3.5

Following are our findings:

THIS CASE CONSISTS OF 16 SOIL SAMPLES FOR RAS ANALYSIS OF VOLATILES, SEMI-VOLATILES AND PESTICIDE/PCB'S. SAMPLE EL267 WAS ANALYZED AT MEDIUM LEVEL FOR VOLATILES. ALL OTHER ANALYSES WERE AT LOW LEVEL. THE LAB WAS INCORRECT IN RUNNING EL267 AT MEDIUM LEVEL SINCE ALL THE MEDIUM LEVEL CONTAMINANTS ARE DUE TO LAB CONTAMINATION. THEREFORE, THE VOLATILE FRACTION OF EL267 IS REJECTED AS UNUSABLE.

SAMPLES EJ127 AND EL259 DID NOT MEET RETENTION TIME SHIFT CRITERIA FOR THE PESTICIDE FRACTION. THIS DATA IS REJECTED AS UNUSABLE.

Patrick J. Chenelle
9-1-87

( ) Data are acceptable for use.
(✗) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
(✗) Data are unacceptable. VOA EL267, PEST EJ127, EL259

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: ENVIRODYNE

Case 7351

RECEIVED SEP 3 1987

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

1. SAMPLE HOLDING TIMES WERE ALL MET EXCEPT FOR THE VOLATILE FRACTION OF EL267 WHICH EXCEEDED THE HOLDING TIME BY 2 DAYS BECAUSE THE LAB RE-ANALYZED AT MEDIUM LEVEL. NO QUALIFICATION IS MADE CONCERNING THESE HOLDING TIMES. HOWEVER, THIS DATA WILL BE REJECTED BECAUSE MEDIUM LEVEL ANALYSIS WAS NOT NEEDED. SEE SECTION 7 FOR MORE DETAILS.

2a. BFB AND DFTPP TUNING CRITERIA WERE ALL ACCEPTABLE.

b. DBC RETENTION TIME SHIFT WAS GREATER THAN 2.0% FOR SAMPLES EJ127 AND EL259. PESTICIDE RESULTS ARE UNUSABLE FOR THESE SAMPLES.

3. VOLATILE AND SEMI-VOLATILE INSTRUMENT CALIBRATIONS ARE GENERALLY ACCEPTABLE. SPECIFIC OUTLIERS ARE LISTED ON THE CALIBRATION OUTLIERS FORMS ATTACHED.

4. VOLATILE BLANKS CONTAINED METHYLENE CHLORIDE, ACETONE AND OTHER COMMON SOLVENTS NEAR THE CRDL. THE SEMI-VOLATILE BLANKS CONTAINED LOW LEVEL PHTHALATES. APPROPRIATE FLAGS ARE PLACED ON DATA SHEETS.

Reviewed by: _____

Phone: _____

Date: _____

3711

DATA QUALIFIERS

Case 7351

Contractor: ENVIRODYNE

RECEIVED SEP 3 1987

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

5. SURROGATE RECOVERIES ARE ACCEPTABLE. DBC WAS HIGH IN SEVERAL PESTICIDE SAMPLES DUE TO MATRIX INTERFERENCE.

6. LOW LEVEL MATRIX SPIKES AND MATRIX SPIKE DUPLICATES HAD GOOD RECOVERIES.

7. SAMPLE EL267 WAS ANALYZED AT MEDIUM LEVEL FOR VOLATILES. ALL OF THE COMPOUNDS DETECTED WERE LAB CONTAMINANTS EXCEPT FOR CHLOROBENZENE WHICH WAS FOUND AT LESS THAN THE MEDIUM LEVEL CRDL. THE LAB CAN NOT RE-ANALYZE BECAUSE HOLDING TIMES ARE WELL PAST. THEREFORE, VOLATILE DATA FOR THIS SAMPLE IS REJECTED AND WILL BE RETURNED TO THE LAB.

Reviewed by: _____

Phone: _____

Date: _____

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 3 1987

INSTRUMENT 5985-2	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6-3-87			6-3-87 / 12:42			6-4-87 / 6:17			6-4-87 / 18:23					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane								38.3	J						
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone					39.3	J									
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
rans-1,2-Dichloroethene															
hloroform															
2-Butanone					34.2	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															
-Methyl-2-Pentanone					32.0	J									
2-Hexanone					51.6	J									
Tetrachloroethene															
1,1,2,2-Tetrachloroethane					27.2	J									
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

EJ125-EJ128	EJ125-EJ128	EL258 MS	EL258 MSD
EL256-EL257	EL256-EL257		
EL258 MS			
EL258 MSD			

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

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 3 1987

INSTRUMENT 5985-1	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6-5-87			6-11-87/6:15			6-11-87/19:10			6-12-87/6:20					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane		35	J			J			J			J			
Bromomethane											48	J			
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone								29	J						
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane											26	J			
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:	EL260-EL266	EL260	EL261-EL263	EL264-EL266	

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

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 3 1987

INSTRUMENT 5985-1	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6-15-87			6-18-87/10:10											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride		70	J			J									
Acetone		68	J		86	J									
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone					35	J									
1,2-Dichloroethane					31	J									
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					48	J									
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene					27	J									
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

EL267	EL267
EL267MS	EL267MS
EL267MSD	EL267MSD

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

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RECEIVED SEP 3 1987

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

CASE# 7351 CONTRACTOR ENVRODYNE

INSTRUMENT 5996	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6/2-87														
	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		86.4	J												
Acenaphthene															
2,4-Dinitrophenol		68.0	J												
4-Nitrophenol		39.9	J												
Dibenzofuran															

AFFECTED SAMPLES:

EJ125
EJ125MS
EJ125MSD
EJ126

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

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 3 1987

INSTRUMENT 5996	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6-12-87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline		108	J												
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

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

RECEIVED SEP 9 1987

CASE# 7351 CONTRACTOR ENVIRODYNE

INSTRUMENT 5976	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6-13-87														
	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		40.6	J												
4-Nitrophenol		36.5	J												
Dibenzofuran															

AFFECTED SAMPLES:

EJ127
EJ128
EL256-EL267

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

10 of 11

RECEIVED SEP 9 1987

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

CASE# 7351 CONTRACTOR ENVIRODYNE

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6-13-87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline		68.2	J												
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

11 of 11

ENVIRODYNE
ENGINEERS

[illegible]
St. Louis, Missouri [illegible]
[illegible]

RECEIVED SEP 3 1987

June 25, 1987
1990-07351

Ms. Carol Shaeffer
Sample Management Office
300 North Lee Street, Suite 200
Alexandria, Virginia 22314

Dear Ms. Shaeffer:

Enclosed are the results of analysis of sixteen samples from Case 7351 for volatiles, semivolatiles, and pesticides/PCB's performed under Contract 68-01-7087. This report covers eight soil samples, EJ 125 through EJ 128 and EL 256 through EL 259, received by Envirodyne on May 27, 1987, and eight soil samples, EL 260 through EL 267, received on June 4, 1987. One matrix spike and matrix spike duplicate for low level is included with these samples.

All samples were screened and extracted by the low level method for BNA's and pesticides/PCB's. One volatile sample, EL 267, was outside the low level range in several compounds, so was analyzed by the medium level soil method. The limits of detection for the HSL's given on the data sheets for medium level VOA's in this package represent a dilution of 125 from the low level method, because 0.04 grams of soil was purged as compared to the normal 5 grams aliquot. A matrix spike and matrix spike duplicate were also prepared from sample EL 267 for volatile analysis.

If you have any questions about this report, please contact me.

Sincerely,

Margaret C. Winter

Margaret C. Winter
Project Manager

MCW/sgc
Enclosures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

RECEIVED SEP 3 1987

DATE: 9-1-87

SUBJECT: REGIONAL RESPONSE TO CCS FOR CASE 7351

FROM: CHUCK ELLY, DPO, REGION 5

TO: DORIS LING, SMO

SEVERAL SAMPLE FRACTIONS ARE BEING REJECTED:

1. THE VOLATILE FRACTION OF SAMPLE EL267 IS REJECTED BECAUSE IT WAS RUN AS A MEDIUM LEVEL SAMPLE WHICH WAS NOT NECESSARY. THE ONLY MEDIUM LEVEL CONTAMINANTS WERE LABORATORY CONTAMINANTS.

2. THE PESTICIDE FRACTION OF SAMPLES EJ127 AND EL259 DID NOT MEET THE RETENTION TIME SHIFT CRITERIA FOR DIBUTYLCHLORENDATE OF 2.0%. THE LAB DID NOT RE-ANALYZE THESE SAMPLES AS REQUIRED.

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 7351 Contract Laboratory ENVIRODYNE Contract No. 68-01-7087

Low ✓ Medium _____

	VOLATILE			SEMI-VOLATILE								PESTICIDE**
EPA SAMPLE 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)
EJ125	111	90	87	59	64	102			68	52	43	195*
EJ126	111	90	92	68	74	73			74	68	33	72
EJ127	95	103	96	55	63	79			64	55	52	20
EJ128	94	103	97	76	76	72			77	59	44	78
EL256	99	97	99	78	81	86			79	80	58	113
EL257	98	102	97	66	69	75			76	64	38	99
EL258	99	99	98	69	68	70			70	74	27	221*
EL259	98	96	98	71	84	86			66	67	32	524*
EJ125MS	NA	NA	NA	75	69	74			69	70	53	63
EJ125MSD	↓	↓	↓	79	78	78			104	83	60	89
MB#1	101	98	92	76	80	73			59	56	37	75
MB#2	98	105	94	50	53	82			66	62	59	75
EL260	105	90	81	52	62	87			51	66	55	80
EL261	110	96	94	58	67	114			81	78	66	89
EL262	114	90	110	41	47	49			45	47	36	1*
EL263	117	90	92	57	66	56			58	58	64	87
EL264	101	85	102	61	65	62			58	53	41	85
EL265	101	95	94	53	60	91			54	51	56	86
EL266	99	97	90	58	68	135			68	72	56	89
EL267	See	Med	Level →	64	72	71			78	72	62	89
MB#3	102	102	95	NA	NA	NA			NA	NA	NA	NA
EL258MS	88	86	90	↓	↓	↓			↓	↓	↓	↓
EL258MSD	97	91	93									

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 60 ; outside of QC limits

Semi-Volatiles: 0 out of 120 ; outside of QC limits

Pesticides: 4 out of 20 ; outside of QC limits

7/85

Comments: High DBC recovery due to matrix interference

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FORM II

SOIL SURROGATE ELEMENT RECOVERY SUMMARY

Case No. 7351 Contract Laboratory ENVIRODYNE Contract No. 68-01-7087

Low _____ 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)
MB#1	100	100	114	NA	NA	NA			NA	NA	NA	NA
EL 267	113	112	99									
EL 267 MS	108	99	98									
EL 267 MSD	97	111	85									

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 12 ; outside of QC limits

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

Pesticides: _____ out of _____ ; outside of QC limits

7/85

Comments: _____

FORM II

RECEIVED SEP 3 1987

SOIL MATRIX SURROGATE SPIKE DUPLICATE RECOVERY

Case No. 7351 Contractor ENVIRODYNE Contract No. 68-01-7087

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. E258	1,1-Dicholorethene	61.5	N.D	51.5	84	68.5	111	18	22	59-172
	Trichloroethene			44.5	72	51.5	84	15	24	62-137
	Chlorobenzene			52.2	85	56.4	92	8	21	60-133
	Toluene			54.3	88	59.7	97	10	21	59-139
	Benzene			50.5	82	55.8	91	10	21	66-142
B/N SMO SAMPLE NO. EJ125	1,2,4-Trichlorobenzene	8150	0	4540	56	4960	61	9	23	38-107
	Acenaphthene	↓	↓	5080	62	5980	73	16	19	31-137
	2,4 Dinitrotoluene			6070	74	7220	89	18	47	28-89
	Pyrene			4790	59	5160	63	7	36	35-142
	N-Nitrosodi-n-Propylamine			4870	60	7180	88	38	38	41-126
	1,4-Dichlorobenzene			3220	40	3580	44	10	27	28-104
ACID SMO SAMPLE NO. EJ125	Pentachlorophenol	16300	0	5820	36	7660	47	27	47	17-109
	Phenol	↓	↓	8600	53	13300	82	43*	35	26-90
	2-Chlorophenol			9950	61	14100	87	35	50	25-102
	4-Chloro-3-Methylphenol			9370	57	12300	75	27	33	26-103
	4-Nitrophenol			10500	64	14100	86	29	50	11-114
PEST SMO SAMPLE NO. EJ125	Lindane	65	0	46	70	54	83	17	50	46-127
	Heptachlor	65		66	101	48	73	82*	31	35-130
	Aldrin	65		92	140*	85	130	7	43	34-132
	Dieldrin	162		206	127	209	128	0.8	38	31-134
	Endrin	162		107	66	246	151*	78*	45	42-139
	4,4'-DDT	162		89	55	233	143*	89*	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 1 out of 5; outside QC limits
PEST 3 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 3 out of 12; outside QC limits

Comments: _____

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FORM III 7/85

JOI_ _JAT....(S (E. _ATI.... SI ...E L _.'LI. 'E CO RY

Case No. 7351 Contractor ENVIRODYNE Contract No. 68-01-7087

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. EL267	1,1-Dicholorethene	6960	ND	4010	58*	3790	54*	7	22	59-172
	Trichloroethene		ND	4840	70	4650	67	4	24	62-137
	Chlorobenzene		200	5430	75	6000	83	10	21	60-133
	Toluene		ND	5160	74	4720	68	8	21	59-139
	Benzene		ND	5000	72	4710	68	6	21	66-142
B/N SMO SAMPLE NO. NA	1,2,4-Trichlorobenzene								23	38-107
	Acenaphthene								19	31-137
	2,4 Dinitrotoluene								47	28-89
	Pyrene								36	35-142
	N-Nitrosodi-n-Propylamine								38	41-126
	1,4-Dichlorobenzene								27	28-104
ACID SMO SAMPLE NO. NA	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. NA	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 0 out of 5 ; outside QC limits
B/N ____ out of ____ ; outside QC limits
ACID ____ out of ____ ; outside QC limits
PEST ____ out of ____ ; outside QC limits

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

Comments: _____

7/85

FORM III

SOIL MATRIX SPI__/MATRIX SPIKE DUPLICA__ RECOVERY

Case No. 7351 Contractor Envirodyne Contract No. 68-01-7087

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.	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	100,000	0	88300	103	81800	94	8	23	38-107
	Acenaphthene	↓	↓	118000	135	118000	135	0	19	31-137
	2,4 Dinitrotoluene			95300	109 *	99000	114 *	4	47	28-89
	Pyrene			126000	144 *	114000	131	10	36	35-142
	N-Nitrosodi-n-Propylamine			107000	123	94700	109	12	38	41-126
EL 268	1,4-Dichlorobenzene			96600	111 *	85200	98	12	27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol	200,000	0	222000	127 *	163000	93	30	47	17-109
	Phenol	↓	↓	205000	118 *	184000	106 *	10	35	26-90
	2-Chlorophenol			225000	129 *	204000	117 *	11	50	25-102
	4-Chloro-3-Methylphenol			219000	125 *	207000	119 *	5	33	26-103
EL 268	4-Nitrophenol			154000	88	138000	79	11	50	11-114
PEST SMO SAMPLE NO.	Lindane	2000	<CRDL	4065	203 *	2050	103	65 *	50	46-127
	Heptachlor	↓	↓	4276	214 *	1994	100	55 *	31	35-130
	Aldrin			4821	241 *	3092	155 *	43	43	34-132
	Dieldrin	5000		7448	148 *	5238	105	34	38	31-134
	Endrin			7703	154 *	5348	107	36	45	42-139
EL 268	4,4'-DDT			6296	126	4540	91	32	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____; outside QC limits
B/N 0 out of 6; outside QC limits
ACID 0 out of 5; outside QC limits
PEST 2 out of 6; outside QC limits

RECOVERY: VOAs ____ out of ____; outside QC limits
B/N 4 out of 12; outside QC limits
ACID 7 out of 10; outside QC limits
PEST 6 out of 12; outside QC limits

Comments: _____

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FORM III 7/85

METHOD BLANK SUMMARY

Case No. 7351 Region V Contractor ENVIRODYNE Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (NBL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
(23375 cont.)	6-11-87	VOA	soil	L	5985-1	106-10-1	4-methyl-2-pentanone	2	ug/kg	10
						591-78-6	2-hexanone	10	"	10
23385	6-11-87	VOA	soil	L	5985-1	75-09-2	methylene chloride	6	"	5
						67-64-1	acetone	9	"	10
						78-93-3	2-butanone	8	"	10
						108-10-1	4-methyl-2-pentanone	4	"	10
						591-78-6	2-hexanone	13	"	10
						108-88-3	toluene	1	"	5
23392	6-12-87	VOA	soil	L	5985-1	75-09-2	methylene chloride	1	"	5
						67-64-1	acetone	6	"	10

Comments:

RECEIVED SEP 3 1987

METHOD BLANK SUMMARY

Case No. 7351 Region V Contractor ENVIRODYNE Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (INCL. TIC OR UNKNOWN)	CONC.	UNITS	CRQL
B6053	6-3-87	VOA	soil	L	5985-2	75-09-2	methylene chloride	2	ug/kg	5
						67-64-1	acetone	8	ug/kg	10
						108-88-3	toluene	1	ug/kg	5
23438	6-16-87	VOA	soil	M	5985-1	75-09-2	methylene chloride	2400	ug/kg	625 *
						67-64-1	acetone	2400	ug/kg	1250
						100-41-4	ethylbenzene	600	"	625
						–	xylenes	900	"	1875
							unknown	840J	"	–
						623427	butanoic acid, methyl ester	1200J	"	–
							unknown	560J	"	
B6068	6-4-87	VOA	soil	L	5985-2	75-09-2	methylene chloride	9	"	5
B6079	6-4-87	VOA	soil	L	5985-2	75-09-2	methylene chloride	12	"	5
						591-78-6	2-hexanone	10	"	10
23375	6-11-87	VOA	soil	L	5985-1	75-09-2	methylene chloride	4	"	5
						67-64-1	acetone	9	"	10
							(continued on Pg 3 of 3)			

Comments: * medium level detection limits reflect 125 x low level, since 0.04 g soil was purged rather than 5 g. (4 g soil -> 10 ml., 100 µl of this purged).

METHOD BLANK SUMMARY

Case No. 7351 Region V Contractor ENVIRODYNE Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
A7227	6-12-87	BNA	Soil	L	5996	117-81-7	bis(2-ethylhexyl)phthalate	130	ug/kg	330
						96480	2(3H)-Furanone, dihydro-	1000J	"	—
							unknown	820J	"	—
							unknown	390J	"	—
							unknown	720J	"	—
A7229	6-12-87	BNA	Soil	L	5996	117-81-7	bis(2-ethylhexyl) phthalate	240	"	330
						96480	2(3H)-Furanone, dihydro	540J	"	—
							unknown	910J	"	—
							unknown	900J	"	—
							unknown	500J	"	—
							unknown phthalate	1200J	"	—
							unknown phthalate	1300J	"	—
MB#1	6-15	Pest/RD	Soil	L	5		All cmpds < CRDL			
MB#2	6-16	Pest/RD	Soil	L	5		All compounds < CRDL			

Comments:

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FORM IV

Pg 3

7/85

Organics Analysis Data Sheet
(Page 1)

Sample Number: EJ 125

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002599
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 5-27-87

RECEIVED SEP 3 1987

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-3-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 18.24

CAS No:		ug/kg		CAS No:		ug/kg	
74-87-3	Chloromethane	12 U		78-87-5	1,2-Dichloropropane	6 U	
74-83-9	Bromomethane	12 U		10061-02-6	trans-1,3-Dichloropropene	6 U	
75-01-4	Vinyl Chloride	12 U		79-01-6	Trichloroethene	6 U	
75-00-3	Chloroethane	12 U		124-48-1	Dibromochloromethane	6 U	
75-09-2	Methylene Chloride	58	B	79-00-5	1,1,2-Trichloroethane	6 U	
67-64-1	Acetone	98	B	71-43-2	Benzene	6 U	
75-15-0	Carbon Disulfide	6 U		10061-01-5	cis-1,3-Dichloropropene	6 U	
75-35-4	1,1-Dichloroethene	6 U		110-75-8	2-Chloroethylvinylether	12 U	
75-34-3	1,1-Dichloroethane	6 U		75-25-2	Bromoform	6 U	
156-60-5	trans-1,2-Dichloroethene	6 U		108-10-1	4-Methyl-2-pentanone	12 U	
67-66-3	Chloroform	6 U		591-78-6	2-Hexanone	12 U	
107-06-2	1,2-Dichloroethane	6 U		127-18-4	Tetrachloroethene	6 U	
78-93-3	2-Butanone	12 U		79-34-5	1,1,2,2-Tetrachloroethane	6 U	
71-55-6	1,1,1-Trichloroethane	6 U		108-88-3	Toluene	6 U	
56-23-5	Carbon Tetrachloride	6 U		108-90-7	Chlorobenzene	6 U	
108-05-4	Vinyl Acetate	12 U		100-41-4	Ethylbenzene	6 U	
75-27-4	Bromodichloromethane	6 U		100-42-5	Styrene	6 U	
					Total Xylenes	6 U	

- -

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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 (eg. 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EJ[illegible]5

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-1-87
Date Analyzed: ~~6-12-87~~ 6-13-87 mcw 6-22-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 18.2

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	810 U	83-32-9	Acenaphthene	810 U
111-44-4	bis-(2-Chloroethyl)ether	810 U	51-28-5	2,4-Dinitrophenol	3900 U
95-57-8	2-Chlorophenol	810 U	100-02-7	4-Nitrophenol	3900 U
541-73-1	1,3-Dichlorobenzene	810 U	132-64-9	Dibenzofuran	810 U
106-46-7	1,4-Dichlorobenzene	810 U	121-14-2	2,4-Dinitrotoluene	810 U
100-51-6	Benzyl Alcohol	810 U	606-20-2	2,6-Dinitrotoluene	810 U
95-50-1	1,2-Dichlorobenzene	810 U	84-66-2	Diethyl phthalate	810 U
95-48-7	2-Methylphenol	810 U	7005-72-3	4-Chlorophenyl-phenyl ether	810 U
39638-32-9	bis-(2-Chloroisopropyl)ether	810 U	86-73-7	Fluorene	810 U
106-44-5	4-Methylphenol	810 U	100-01-6	4-Nitroaniline	3900 U
621-64-7	N-nitroso-Di-n-propylamine	810 U	534-52-1	4,6-Dinitro-2-Methylphenol	3900 U
67-72-1	Hexachloroethane	810 U	86-30-6	N-nitrosodiphenylamine (1)	810 U
98-95-3	Nitrobenzene	810 U	101-55-3	4-Bromophenyl-phenyl ether	810 U
78-59-1	Isophorone	810 U	118-74-1	Hexachlorobenzene	810 U
88-75-5	2-Nitrophenol	810 U	87-86-5	Pentachlorophenol	3900 U
105-67-9	2,4-Dimethylphenol	810 U	85-01-8	Phenanthrene	810 U
65-85-0	Benzoic Acid	3900 U	120-12-7	Anthracene	810 U
111-91-1	bis-(Chloroethoxy)Methane	810 U	84-74-2	Di-n-butyl phthalate	810 U
120-83-2	2,4-Dichlorophenol	810 U	206-44-0	Fluoranthene	810 U
120-82-1	1,2,4-Trichlorobenzene	810 U	129-00-0	Pyrene	810 U
91-20-3	Naphthalene	810 U	85-68-7	Butyl-benzyl-phthalate	810 U
106-47-8	4-Chloroaniline	810 U	91-94-1	3,3'-Dichlorobenzidine	1600 U
87-68-3	Hexachlorobutadiene	810 U	56-55-3	Benzo(a)anthracene	810 U
59-50-7	4-Chloro-3-methylphenol	810 U	117-81-7	bis-(2-Ethylhexyl)phthalate	310 ~~BJ~~ UJ PJC
91-57-6	2-Methylnaphthalene	810 U	218-01-9	Chrysene	810 U
77-47-4	Hexachlorocyclopentadiene	810 U	117-84-0	Di-n-octyl phthalate	810 U
88-06-2	2,4,6-Trichlorophenol	810 U	205-99-2	Benzo(b)fluoranthene	810 U
95-95-4	2,4,5-Trichlorophenol	3900 U	207-08-9	Benzo(k)fluoranthene	810 U
91-58-7	2-Chloronaphthalene	810 U	50-32-8	Benzo(a)pyrene	810 U
88-74-4	2-Nitroaniline	3900 U	193-39-5	Indeno(1,2,3-cd)pyrene	810 U
131-11-3	Dimethyl phthalate	810 U	53-70-3	Dibenzo(a,h)anthracene	810 U
208-96-8	Acenapthylene	810 U	191-24-2	Benzo(ghi)perylene	810 U
99-09-2	3-Nitroaniline	3900 U			

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name: ENVIRODYNE ENGINEERS INC.

Case No: -7351

Sample Number: EJ-125

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 6-1-87

Date Analyzed: 6-16-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 18.2

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4,4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4,4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4,4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0 ul

oratory Name ENVIRODYNE

No. 7351

Sample Number
EJ 125

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)
96480	2(3H)-Furanone, dihydro	BNA	7.0	1200 JB
	unknown	"	7.1	1400 JB
4436753	3-Hexene-2,5-dione	"	7.8	1400 J
	unknown	"	8.9	1700 J
	unknown	"	10.0	920 J
	hydrocarbon	"	11.1	360 J
	hydrocarbon	"	13.2	540 J
	hydrocarbon	"	13.5	320 J
	hydrocarbon	"	15.1	540 J
	hydrocarbon	"	16.9	680 J
	hydrocarbon	"	18.0	500 J
	hydrocarbon	"	18.5	550 J
	hydrocarbon	"	20.1	710 J
	hydrocarbon	"	20.8	260 J
	hydrocarbon	"	21.6	490 J
	hydrocarbon	"	21.7	890 J
	hydrocarbon	"	23.0	390 J
	hydrocarbon	"	23.1	410 J
	phthalate	"	23.9	1700 J
	hydrocarbon	"	24.3	330 J
	no library search peaks	VOA		

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EJ 126

RECEIVED SEP 3 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002600
Sample Matrix: SOIL
Data Release Authorised By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 5-27-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-3-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 15.43

CAS No:		ugkg		CAS No:		ugkg
74-87-3	Chloromethane	12 U		78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U		10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U		79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U		124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	31 B		79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	81 B		71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U		10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U		110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U		75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U		108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U		591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U		127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U		79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U		108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U		108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U		100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U		100-42-5	Styrene	6 U
					Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ugl and a concentration of 3 ugl is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EJ 126

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-1-87
Date Analyzed: 6-13-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 15.4

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	780 U	83-32-9	Acenaphthene	780 U
111-44-4	bis-(2-Chloroethyl)ether	780 U	51-28-5	2,4-Dinitrophenol	3800 U
95-57-8	2-Chlorophenol	780 U	100-02-7	4-Nitrophenol	3800 U
541-73-1	1,3-Dichlorobenzene	780 U	132-64-9	Dibenzofuran	780 U
106-46-7	1,4-Dichlorobenzene	780 U	121-14-2	2,4-Dinitrotoluene	780 U
100-51-6	Benzyl Alcohol	780 U	606-20-2	2,6-Dinitrotoluene	780 U
95-50-1	1,2-Dichlorobenzene	780 U	84-66-2	Diethyl phthalate	780 U
95-48-7	2-Methylphenol	780 U	7005-72-3	4-Chlorophenyl-phenyl ether	780 U
39638-32-9	bis-(2-Chloroisopropyl)ether	780 U	86-73-7	Fluorene	780 U
106-44-5	4-Methylphenol	780 U	100-01-6	4-Nitroaniline	3800 U
621-64-7	N-nitroso-Di-n-propylamine	780 U	534-52-1	4,6-Dinitro-2-Methylphenol	3800 U
67-72-1	Hexachloroethane	780 U	86-30-6	N-nitrosodiphenylamine (1)	780 U
98-95-3	Nitrobenzene	780 U	101-55-3	4-Bromophenyl-phenyl ether	780 U
78-59-1	Isophorone	780 U	118-74-1	Hexachlorobenzene	780 U
88-75-5	2-Nitrophenol	780 U	87-86-5	Pentachlorophenol	3800 U
105-67-9	2,4-Dimethylphenol	780 U	85-01-8	Phenanthrene	780 U
65-85-0	Benzoic Acid	3800 U	120-12-7	Anthracene	780 U
111-91-1	bis-(Chloroethoxy)Methane	780 U	84-74-2	Di-n-butyl phthalate	1100
120-83-2	2,4-Dichlorophenol	780 U	206-44-0	Fluoranthene	780 U
120-82-1	1,2,4-Trichlorobenzene	780 U	129-00-0	Pyrene	780 U
91-20-3	Naphthalene	780 U	85-68-7	Butyl-benzyl-phthalate	780 U
106-47-8	4-Chloroaniline	780 U	91-94-1	3,3'-Dichlorobenzidine	1600 U
87-68-3	Hexachlorobutadiene	780 U	56-55-3	Benzo(a)anthracene	780 U
59-50-7	4-Chloro-3-methylphenol	780 U	117-81-7	bis-(2-Ethylhexyl)phthalate	340 ~~BJ~~ UJ PJC
91-57-6	2-Methylnaphthalene	780 U	218-01-9	Chrysene	780 U
77-47-4	Hexachlorocyclopentadiene	780 U	117-84-0	Di-n-octyl phthalate	780 U
88-06-2	2,4,6-Trichlorophenol	780 U	205-99-2	Benzo(b)fluoranthene	780 U
95-95-4	2,4,5-Trichlorophenol	3800 U	207-08-9	Benzo(k)fluoranthene	780 U
91-58-7	2-Chloronaphthalene	780 U	50-32-8	Benzo(a)pyrene	780 U
88-74-4	2-Nitroaniline	3800 U	193-39-5	Indeno(1,2,3-cd)pyrene	780 U
131-11-3	Dimethyl phthalate	780 U	53-70-3	Dibenzo(a,h)anthracene	780 U
208-96-8	Acenapthylene	780 U	191-24-2	Benzo(ghi)perylene	780 U
99-09-2	3-Nitroaniline	3800 U			

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(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No 7351

Sample Number
EJ 126 : 2

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 6-1-87

Date Analyzed: 6-16-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 15.4

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0 ul

xatory Name ENVIRODYNE
e No. 7351

Sample Number
EJ 126

Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 3 1981

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
96480	2(3H)-Furanone, dihydro-	BNA	7.0	1300 JB
	unknown	"	7.1	1000 JB
4436753	3-hexene-2,5-dione	"	7.8	980 J
	unknown	"	8.9	1100 J
	unknown	"	10.1	910 J
	hydrocarbon	"	11.2	380 J
	hydrocarbon	"	13.2	950 J
	hydrocarbon	"	13.5	310 J
	hydrocarbon	"	15.1	550 J
	hydrocarbon	"	16.9	840 J
	hydrocarbon	"	18.0	530 J
	hydrocarbon	"	18.6	560 J
	hydrocarbon	"	20.2	600 J
	hydrocarbon	"	20.9	380 J
	hydrocarbon	"	21.6	420 J
	hydrocarbon	"	21.7	850 J
	hydrocarbon	"	23.0	290 J
	hydrocarbon	"	23.2	380 J
	phthalate	"	34.0	1500 J
	unknown	"	35.7	2000 J
	no library search peaks	VOA		

Organics Analysis Data Sheet
(Page 1)

Sample Number: EJ 127

RECEIVED SEP 3 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002601
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 5-27-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-3-87
Conc/Dil Factor: 5
Percent Moisture (not decanted): 15.98

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	60 U	78-87-5	1,2-Dichloropropane	30 U
74-83-9	Bromomethane	60 U	10061-02-6	trans-1,3-Dichloropropene	30 U
75-01-4	Vinyl Chloride	60 U	79-01-6	Trichloroethene	30 U
75-00-3	Chloroethane	60 U	124-48-1	Dibromochloromethane	30 U
75-09-2	Methylene Chloride	~~64~~ B	79-00-5	1,1,2-Trichloroethane	30 U
67-64-1	Acetone	840 B	71-43-2	Benzene	30 U
75-15-0	Carbon Disulfide	30 U	10061-01-5	cis-1,3-Dichloropropene	30 U
75-35-4	1,1-Dichloroethene	30 U	110-75-8	2-Chloroethylvinylether	60 U
75-34-3	1,1-Dichloroethane	30 U	75-25-2	Bromoform	30 U
156-60-5	trans-1,2-Dichloroethene	30 U	108-10-1	4-Methyl-2-pentanone	60 U
67-66-3	Chloroform	30 U	591-78-6	2-Hexanone	60 U
107-06-2	1,2-Dichloroethane	30 U	127-18-4	Tetrachloroethene	30 U
78-93-3	2-Butanone	60 U	79-34-5	1,1,2,2-Tetrachloroethane	30 U
71-55-6	1,1,1-Trichloroethane	30 U	108-88-3	Toluene	30 U
56-23-5	Carbon Tetrachloride	30 U	108-90-7	Chlorobenzene	30 U
108-05-4	Vinyl Acetate	60 U	100-41-4	Ethylbenzene	30 U
75-27-4	Bromodichloromethane	30 U	100-42-5	Styrene	30 U
				Total Xylenes	30 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EJ 127

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-1-87
Date Analyzed: 6-13-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 16

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	790 U	83-32-9	Acenaphthene	790 U
111-44-4	bis-(2-Chloroethyl)ether	790 U	51-28-5	2,4-Dinitrophenol	3800 U
95-57-8	2-Chlorophenol	790 U	100-02-7	4-Nitrophenol	3800 U
541-73-1	1,3-Dichlorobenzene	790 U	132-64-9	Dibenzofuran	790 U
106-46-7	1,4-Dichlorobenzene	790 U	121-14-2	2,4-Dinitrotoluene	790 U
100-51-6	Benzyl Alcohol	790 U	606-20-2	2,6-Dinitrotoluene	790 U
95-50-1	1,2-Dichlorobenzene	790 U	84-66-2	Diethyl phthalate	790 U
95-48-7	2-Methylphenol	790 U	7005-72-3	4-Chlorophenyl-phenyl ether	790 U
39638-32-9	bis-(2-Chloroisopropyl)ether	790 U	86-73-7	Fluorene	790 U
106-44-5	4-Methylphenol	790 U	100-01-6	4-Nitroaniline	3800 U
621-64-7	N-nitroso-Di-n-propylamine	790 U	534-52-1	4,6-Dinitro-2-Methylphenol	3800 U
67-72-1	Hexachloroethane	790 U	86-30-6	N-nitrosodiphenylamine (1)	790 U
98-95-3	Nitrobenzene	790 U	101-55-3	4-Bromophenyl-phenyl ether	790 U
78-59-1	Isophorone	790 U	118-74-1	Hexachlorobenzene	790 U
88-75-5	2-Nitrophenol	790 U	87-86-5	Pentachlorophenol	3800 U
105-67-9	2,4-Dimethylphenol	790 U	85-01-8	Phenanthrene	790 U
65-85-0	Benzoic Acid	3800 U	120-12-7	Anthracene	790 U
111-91-1	bis-(Chloroethoxy)Methane	790 U	84-74-2	Di-n-butyl phthalate	350 J
120-83-2	2,4-Dichlorophenol	790 U	206-44-0	Fluoranthene	790 U
120-82-1	1,2,4-Trichlorobenzene	790 U	129-00-0	Pyrene	790 U
91-20-3	Naphthalene	790 U	85-68-7	Butyl-benzyl-phthalate	790 U
106-47-8	4-Chloroaniline	790 U	91-94-1	3,3'-Dichlorobenzidine	1600 U
87-68-3	Hexachlorobutadiene	790 U	56-55-3	Benzo(a)anthracene	790 U
59-50-7	4-Chloro-3-methylphenol	790 U	117-81-7	bis-(2-Ethylhexyl)phthalate	510 ~~BJ~~ UJ psc
91-57-6	2-Methylnaphthalene	790 U	218-01-9	Chrysene	790 U
77-47-4	Hexachlorocyclopentadiene	790 U	117-84-0	Di-n-octyl phthalate	790 U
88-06-2	2,4,6-Trichlorophenol	790 U	205-99-2	Benzo(b)fluoranthene	790 U
95-95-4	2,4,5-Trichlorophenol	3800 U	207-08-9	Benzo(k)fluoranthene	790 U
91-58-7	2-Chloronaphthalene	790 U	50-32-8	Benzo(a)pyrene	790 U
88-74-4	2-Nitroaniline	3800 U	193-39-5	Indeno(1,2,3-cd)pyrene	790 U
131-11-3	Dimethyl phthalate	790 U	53-70-3	Dibenzo(a,h)anthracene	790 U
208-96-8	Acenapthylene	790 U	191-24-2	Benzo(ghi)perylene	790 U
99-09-2	3-Nitroaniline	3800 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name ENVIRODYNE

Case No 7351

Sample Number EJ-127

RECEIVED SEP 3 1987

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. 96480	2(3H)-Furanone, dihydro-	BNA	6.9	950 JB
2.	unknown	"	7.0	820 JB
3.	unknown	"	7.8	1100 J
4.	unknown	"	8.8	630 J
5.	unknown	"	10.0	710 J
6.	unknown	"	11.1	270 J
7.	hydrocarbon	"	13.2	340 J
8.	hydrocarbon	"	13.4	330 J
9.	hydrocarbon	"	15.1	360 J
10.	hydrocarbon + unknown	"	16.9	600 J
11.	hydrocarbon	"	17.9	460 J
12.	hydrocarbon	"	18.5	410 J
13.	hydrocarbon	"	20.1	720 J
14.	hydrocarbon	"	21.6	410 J
15.	hydrocarbon	"	21.8	750 J
16.	hydrocarbon	"	22.9	320 J
17.	hydrocarbon	"	23.1	370 J
18.	phthalate	"	23.9	1900 J
19.	hydrocarbon	"	24.3	300 J
20.	hydrocarbon	"	26.7	290 J
21.				
22.	no library search peaks	VOA		
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Organics Analysis Data Sheet
(Page 1)

Sample Number: EJ 128

RECEIVED SEP 3 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002602
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 5-27-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analysed: 6-3-87
Conc/Dil Factor: 5
Percent Moisture (not decanted): 14.76

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	56 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	330 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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

U:
Indicates compound was analysed for but not detected. Report the minimum detection limit for the sample with the U (eg,10U) based on necessary concent./dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analysed 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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EJ 128

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-1-87
Date Analyzed: 6-13-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 14.8

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg
108-95-2	Phenol	770 U
111-44-4	bis-(2-Chloroethyl)ether	770 U
95-57-8	2-Chlorophenol	770 U
541-73-1	1,3-Dichlorobenzene	770 U
106-46-7	1,4-Dichlorobenzene	770 U
100-51-6	Benzyl Alcohol	770 U
95-50-1	1,2-Dichlorobenzene	770 U
95-48-7	2-Methylphenol	770 U
39638-32-9	bis-(2-Chloroisopropyl)ether	770 U
106-44-5	4-Methylphenol	770 U
621-64-7	N-nitroso-Di-n-propylamine	770 U
67-72-1	Hexachloroethane	770 U
98-95-3	Nitrobenzene	770 U
78-59-1	Isophorone	770 U
88-75-5	2-Nitrophenol	770 U
105-67-9	2,4-Dimethylphenol	770 U
65-85-0	Benzoic Acid	3800 U
111-91-1	bis-(Chloroethoxy)Methane	770 U
120-83-2	2,4-Dichlorophenol	770 U
120-82-1	1,2,4-Trichlorobenzene	770 U
91-20-3	Naphthalene	770 U
106-47-8	4-Chloroaniline	770 U
87-68-3	Hexachlorobutadiene	770 U
59-50-7	4-Chloro-3-methylphenol	770 U
91-57-6	2-Methylnaphthalene	770 U
77-47-4	Hexachlorocyclopentadiene	770 U
88-06-2	2,4,6-Trichlorophenol	770 U
95-95-4	2,4,5-Trichlorophenol	3800 U
91-58-7	2-Chloronaphthalene	770 U
88-74-4	2-Nitroaniline	3800 U
131-11-3	Dimethyl phthalate	770 U
208-96-8	Acenapthylene	770 U
99-09-2	3-Nitroaniline	3800 U

CAS No:		ug/kg
83-32-9	Acenaphthene	770 U
51-28-5	2,4-Dinitrophenol	3800 U
100-02-7	4-Nitrophenol	3800 U
132-64-9	Dibenzofuran	770 U
121-14-2	2,4-Dinitrotoluene	770 U
606-20-2	2,6-Dinitrotoluene	770 U
84-66-2	Diethyl phthalate	770 U
7005-72-3	4-Chlorophenyl-phenyl ether	770 U
86-73-7	Fluorene	770 U
100-01-6	4-Nitroaniline	3800 U
534-52-1	4,6-Dinitro-2-Methylphenol	3800 U
86-30-6	N-nitrosodiphenylamine (1)	770 U
101-55-3	4-Bromophenyl-phenyl ether	770 U
118-74-1	Hexachlorobenzene	770 U
87-86-5	Pentachlorophenol	3800 U
85-01-8	Phenanthrene	770 U
120-12-7	Anthracene	770 U
84-74-2	Di-n-butyl phthalate	760 J
206-44-0	Fluoranthene	770 U
129-00-0	Pyrene	770 U
85-68-7	Butyl-benzyl-phthalate	770 U
91-94-1	3,3'-Dichlorobenzidine	1500 U
56-55-3	Benzo(a)anthracene	770 U
117-81-7	bis-(2-Ethylhexyl)phthalate	560 ~~BJ~~ UJ PJC
218-01-9	Chrysene	770 U
117-84-0	Di-n-octyl phthalate	770 U
205-99-2	Benzo(b)fluoranthene	770 U
207-08-9	Benzo(k)fluoranthene	770 U
50-32-8	Benzo(a)pyrene	770 U
193-39-5	Indeno(1,2,3-cd)pyrene	770 U
53-70-3	Dibenzo(a,h)anthracene	770 U
191-24-2	Benzo(ghi)perylene	770 U

==========
(1)-Cannot be separated from diphenylamine

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No 7351

Sample Number
EJ-128

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 6-1-87

Date Analyzed 6-16-87

Conc/Dil Factor 1

Percent Moisture (decanted) 14.8

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0 ul

Laboratory Name ENVIRODYNE

Case No 7351

Sample Number EJ-128

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. 96480	2(3H)-Furanone, dihydro-	BNA	7.0	1200 JB
2.	unknown	"	7.1	1000 JB
3.	unknown	"	7.8	1100 J
4.	unknown	"	8.8	910 J
5.	unknown	"	10.0	1000 J
6.	hydrocarbon	"	11.2	390 J
7.	hydrocarbon	"	13.2	550 J
8.	hydrocarbon	"	13.5	270 J
9.	hydrocarbon	"	15.1	630 J
10.	hydrocarbon	"	16.9	730 J
11.	hydrocarbon	"	18.0	470 J
12.	hydrocarbon	"	18.6	500 J
13.	hydrocarbon	"	20.2	650 J
14.	hydrocarbon	"	21.7	750 J
15.	phthalate	"	24.0	2100 J
16.	hydrocarbon	"	24.3	400 J
17.	hydrocarbon	"	25.6	340 J
18.	hydrocarbon	"	26.8	310 J
19.	hydrocarbon	"	29.0	240 J
20.	hydrocarbon	"	30.1	240 J
21.				
22.	no library match peaks	VOA		
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 23[illegible]

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002603
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7551
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 5-27-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-3-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 14.76

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	27 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	220 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was confirmed by GC/MS. Single component pesticides>10 ug/ml in the final extract should be confirmed by GC/MS

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

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 35

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-1-87
Date Analyzed: 6-13-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 14.8

GPC Cleanup : YES
Sep. Funnel Extraction : YES (NO) (circle one)
Contin. Liq.-Liq. Ext. : YES (NO) (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	770 U	83-32-9	Acenaphthene	770 U
111-44-4	bis-(2-Chloroethyl)ether	770 U	51-28-5	2,4-Dinitrophenol	3800 U
95-57-8	2-Chlorophenol	770 U	100-02-7	4-Nitrophenol	3800 U
541-73-1	1,3-Dichlorobenzene	770 U	132-64-9	Dibenzofuran	770 U
106-46-7	1,4-Dichlorobenzene	770 U	121-14-2	2,4-Dinitrotoluene	770 U
100-51-6	Benzyl Alcohol	770 U	606-20-2	2,6-Dinitrotoluene	770 U
95-50-1	1,2-Dichlorobenzene	770 U	84-66-2	Diethyl phthalate	770 U
95-48-7	2-Methylphenol	770 U	7005-72-3	4-Chlorophenyl-phenyl ether	770 U
39638-32-9	bis-(2-Chloroisopropyl)ether	770 U	86-73-7	Fluorene	770 U
106-44-5	4-Methylphenol	770 U	100-01-6	4-Nitroaniline	3800 U
621-64-7	N-nitroso-Di-n-propylamine	770 U	534-52-1	4,6-Dinitro-2-Methylphenol	3800 U
67-72-1	Hexachloroethane	770 U	86-30-6	N-nitrosodiphenylamine (1)	770 U
98-95-3	Nitrobenzene	770 U	101-55-3	4-Bromophenyl-phenyl ether	770 U
78-59-1	Isophorone	770 U	118-74-1	Hexachlorobenzene	770 U
88-75-5	2-Nitrophenol	770 U	87-86-5	Pentachlorophenol	3800 U
105-67-9	2,4-Dimethylphenol	770 U	85-01-8	Phenanthrene	770 U
65-85-0	Benzoic Acid	3800 U	120-12-7	Anthracene	770 U
111-91-1	bis-(Chloroethoxy)Methane	770 U	84-74-2	Di-n-butyl phthalate	700 J
120-83-2	2,4-Dichlorophenol	770 U	206-44-0	Fluoranthene	770 U
120-82-1	1,2,4-Trichlorobenzene	770 U	129-00-0	Pyrene	770 U
91-20-3	Naphthalene	770 U	85-68-7	Butyl-benzyl-phthalate	770 U
106-47-8	4-Chloroaniline	770 U	91-94-1	3,3'-Dichlorobenzidine	1500 U
87-68-3	Hexachlorobutadiene	770 U	56-55-3	Benzo(a)anthracene	770 U
59-50-7	4-Chloro-3-methylphenol	770 U	117-81-7	bis-(2-Ethylhexyl)phthalate	490 BJ 45 pm
91-57-6	2-Methylnaphthalene	770 U	218-01-9	Chrysene	770 U
77-47-4	Hexachlorocyclopentadiene	770 U	117-84-0	Di-n-octyl phthalate	770 U
88-06-2	2,4,6-Trichlorophenol	770 U	205-99-2	Benzo(b)fluoranthene	770 U
95-95-4	2,4,5-Trichlorophenol	3800 U	207-08-9	Benzo(k)fluoranthene	770 U
91-58-7	2-Chloronaphthalene	770 U	50-32-8	Benzo(a)pyrene	770 U
88-74-4	2-Nitroaniline	3800 U	193-39-5	Indeno(1,2,3-cd)pyrene	770 U
131-11-3	Dimethyl phthalate	770 U	53-70-3	Dibenzo(a,h)anthracene	770 U
208-96-8	Acenapthylene	770 U	191-24-2	Benzo(ghi)perylene	770 U
99-09-2	3-Nitroaniline	3800 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No -7351

Sample Number
EL 256

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 6-1-87

Date Analyzed 6-16-87

Conc/Dil Factor 1

Percent Moisture (decanted) 14.8

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0 ul

Laboratory Name ~~ENVIRODYNE~~

Case No 7351

Sample Number
EL-256

RECEIVED SEP 3 1987

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. 96480	2(3H)-Furanone, dihydro	BNA	7.0	1100 JB
2.	unknown	"	7.1	870 JB
3.	unknown	"	7.8	950 J
4.	unknown	"	8.8	1500 J
5.	unknown	"	10.0	480 J
6. 1120214	Undecane	"	11.1	400 J
7.	hydrocarbon	"	13.2	540 J
8.	hydrocarbon	"	15.1	560 J
9.	unknown	"	16.9	720 J
10.	hydrocarbon	"	17.9	510 J
11.	hydrocarbon	"	18.5	520 J
12.	hydrocarbon	"	20.1	820 J
13.	hydrocarbon	"	21.6	840 J
14.	phthalate	"	23.9	2100 J
15.	hydrocarbon	"	25.5	400 J
16.	hydrocarbon	"	26.7	400 J
17.	hydrocarbon	"	29.0	300 J
18.	hydrocarbon	"	30.1	290 J
19.	hydrocarbon	"	33.0	440 J
20.	unknown	"	35.6	1800 J
21.				
22.	no library search peaks	VOA		
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 257

RECEIVED SEP 3 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002604
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 5-27-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-3-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 14.6

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	17 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	180 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a *concentration of 2 ug/l is calculated, report as 2J.*

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.*

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 25

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-1-87
Date Analyzed: 6-13-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 14.6

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	770 U	83-32-9	Acenaphthene	770 U
111-44-4	bis-(2-Chloroethyl)ether	770 U	51-28-5	2,4-Dinitrophenol	3700 U
95-57-8	2-Chlorophenol	770 U	100-02-7	4-Nitrophenol	3700 U
541-73-1	1,3-Dichlorobenzene	770 U	132-64-9	Dibenzofuran	770 U
106-46-7	1,4-Dichlorobenzene	770 U	121-14-2	2,4-Dinitrotoluene	770 U
100-51-6	Benzyl Alcohol	770 U	606-20-2	2,6-Dinitrotoluene	770 U
95-50-1	1,2-Dichlorobenzene	770 U	84-66-2	Diethyl phthalate	770 U
95-48-7	2-Methylphenol	770 U	7005-72-3	4-Chlorophenyl-phenyl ether	770 U
39638-32-9	bis-(2-Chloroisopropyl)ether	770 U	86-73-7	Fluorene	770 U
106-44-5	4-Methylphenol	770 U	100-01-6	4-Nitroaniline	3700 U
621-64-7	N-nitroso-Di-n-propylamine	770 U	534-52-1	4,6-Dinitro-2-Methylphenol	3700 U
67-72-1	Hexachloroethane	770 U	86-30-6	N-nitrosodiphenylamine (1)	770 U
98-95-3	Nitrobenzene	770 U	101-55-3	4-Bromophenyl-phenyl ether	770 U
78-59-1	Isophorone	770 U	118-74-1	Hexachlorobenzene	770 U
88-75-5	2-Nitrophenol	770 U	87-86-5	Pentachlorophenol	3700 U
105-67-9	2,4-Dimethylphenol	770 U	85-01-8	Phenanthrene	770 U
65-85-0	Benzoic Acid	3700 U	120-12-7	Anthracene	770 U
111-91-1	bis-(Chloroethoxy)Methane	770 U	84-74-2	Di-n-butyl phthalate	910
120-83-2	2,4-Dichlorophenol	770 U	206-44-0	Fluoranthene	770 U
120-82-1	1,2,4-Trichlorobenzene	770 U	129-00-0	Pyrene	770 U
91-20-3	Naphthalene	770 U	85-68-7	Butyl-benzyl-phthalate	770 U
106-47-8	4-Chloroaniline	770 U	91-94-1	3,3'-Dichlorobenzidine	1500 U
87-68-3	Hexachlorobutadiene	770 U	56-55-3	Benzo(a)anthracene	770 U
59-50-7	4-Chloro-3-methylphenol	770 U	117-81-7	bis-(2-Ethylhexyl)phthalate	390 ~~86~~ US PJC
91-57-6	2-Methylnaphthalene	770 U	218-01-9	Chrysene	770 U
77-47-4	Hexachlorocyclopentadiene	770 U	117-84-0	Di-n-octyl phthalate	770 U
88-06-2	2,4,6-Trichlorophenol	770 U	205-99-2	Benzo(b)fluoranthene	770 U
95-95-4	2,4,5-Trichlorophenol	3700 U	207-08-9	Benzo(k)fluoranthene	770 U
91-58-7	2-Chloronaphthalene	770 U	50-32-8	Benzo(a)pyrene	770 U
88-74-4	2-Nitroaniline	3700 U	193-39-5	Indeno(1,2,3-cd)pyrene	770 U
131-11-3	Dimethyl phthalate	770 U	53-70-3	Dibenzo(a,h)anthracene	770 U
208-96-8	Acenapthylene	770 U	191-24-2	Benzo(ghi)perylene	770 U
99-09-2	3-Nitroaniline	3700 U			

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No 87-7351

Sample Number EL-257:

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 6-7-87

Date Analyzed: 6-16-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 14.6

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0ul

Laboratory Name ENVIRODYNE

Case No. 7351

Sample Number EL 257

RECEIVED SEP 3 1987

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. 96480	2(3H)-Furanone, dihydro-	BNA	7.0	1100 JB
2.	unknown	"	7.1	820 JB
3.	unknown	"	7.8	970 J
4.	unknown	"	8.8	1100 J
5.	unknown	"	10.0	940 J
6.	hydrocarbon	"	11.1	300 J
7.	hydrocarbon	"	13.2	400 J
8.	hydrocarbon	"	13.4	330 J
9.	hydrocarbon	"	15.1	500 J
10.	hydrocarbon	"	16.9	570 J
11.	unknown	"	17.9	490 J
12.	hydrocarbon	"	18.5	440 J
13.	hydrocarbon	"	20.1	560 J
14.	hydrocarbon	"	21.6	440 J
15.	hydrocarbon	"	21.6(s)	770 J
16.	hydrocarbon	"	23.1	430 J
17.	phthalate	"	23.9	1600 J
18.	hydrocarbon	"	24.3	300 J
19.	hydrocarbon	"	25.5	330 J
20.	unknown	"	35.4	1200 J
21.				
22.	no library search peaks	VOA		
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 258

RECEIVED SEP 3 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002605
Sample Matrix: SOIL
Data Release Authorized By: DMCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 5-27-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-3-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 18.71

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	20 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	90 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 258

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-1-87
Date Analyzed: 6-13-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 18.7

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	810 U	83-32-9	Acenaphthene	810 U
111-44-4	bis-(2-Chloroethyl)ether	810 U	51-28-5	2,4-Dinitrophenol	3900 U
95-57-8	2-Chlorophenol	810 U	100-02-7	4-Nitrophenol	3900 U
541-73-1	1,3-Dichlorobenzene	810 U	132-64-9	Dibenzofuran	810 U
106-46-7	1,4-Dichlorobenzene	810 U	121-14-2	2,4-Dinitrotoluene	810 U
100-51-6	Benzyl Alcohol	810 U	606-20-2	2,6-Dinitrotoluene	810 U
95-50-1	1,2-Dichlorobenzene	810 U	84-66-2	Diethyl phthalate	810 U
95-48-7	2-Methylphenol	810 U	7005-72-3	4-Chlorophenyl-phenyl ether	810 U
39638-32-9	bis-(2-Chloroisopropyl)ether	810 U	86-73-7	Fluorene	810 U
106-44-5	4-Methylphenol	810 U	100-01-6	4-Nitroaniline	3900 U
621-64-7	N-nitroso-Di-n-propylamine	810 U	534-52-1	4,6-Dinitro-2-Methylphenol	3900 U
67-72-1	Hexachloroethane	810 U	86-30-6	N-nitrosodiphenylamine (1)	810 U
98-95-3	Nitrobenzene	810 U	101-55-3	4-Bromophenyl-phenyl ether	810 U
78-59-1	Isophorone	810 U	118-74-1	Hexachlorobenzene	810 U
88-75-5	2-Nitrophenol	810 U	87-86-5	Pentachlorophenol	3900 U
105-67-9	2,4-Dimethylphenol	810 U	85-01-8	Phenanthrene	810 U
65-85-0	Benzoic Acid	3900 U	120-12-7	Anthracene	810 U
111-91-1	bis-(Chloroethoxy)Methane	810 U	84-74-2	Di-n-butyl phthalate	1700
120-83-2	2,4-Dichlorophenol	810 U	206-44-0	Fluoranthene	810 U
120-82-1	1,2,4-Trichlorobenzene	810 U	129-00-0	Pyrene	810 U
91-20-3	Naphthalene	810 U	85-68-7	Butyl-benzyl-phthalate	810 U
106-47-8	4-Chloroaniline	810 U	91-94-1	3,3'-Dichlorobenzidine	1600 U
87-68-3	Hexachlorobutadiene	810 U	56-55-3	Benzo(a)anthracene	810 U
59-50-7	4-Chloro-3-methylphenol	810 U	117-81-7	bis-(2-Ethylhexyl)phthalate	320 ~~BJ~~ 45 PSC
91-57-6	2-Methylnaphthalene	810 U	218-01-9	Chrysene	810 U
77-47-4	Hexachlorocyclopentadiene	810 U	117-84-0	Di-n-octyl phthalate	810 U
88-06-2	2,4,6-Trichlorophenol	810 U	205-99-2	Benzo(b)fluoranthene	810 U
95-95-4	2,4,5-Trichlorophenol	3900 U	207-08-9	Benzo(k)fluoranthene	810 U
91-58-7	2-Chloronaphthalene	810 U	50-32-8	Benzo(a)pyrene	810 U
88-74-4	2-Nitroaniline	3900 U	193-39-5	Indeno(1,2,3-cd)pyrene	810 U
131-11-3	Dimethyl phthalate	810 U	53-70-3	Dibenzo(a,h)anthracene	810 U
208-96-8	Acenapthylene	810 U	191-24-2	Benzo(ghi)perylene	810 U
99-09-2	3-Nitroaniline	3900 U			

==========

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No -7351

Sample Number
EL-258

Organics Analysis Data Sheet
(Page 3)

RECEIVED SEP 3 1987

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 6-1-87

Date Analyzed: 6-16-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 18.7

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0 ul

Laboratory: ENVIRODYNE

EL 258

No: M351

Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 3 1987

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
96480	2(3H)-Furanone, dihydro-	BNA	6.9	1500 JB
	unknown	"	7.0	980 JB
	unknown	"	7.8	900 J
	unknown	"	8.8	1100 J
	unknown	"	10.0	1200 J
1120214	undecane	"	11.1	960 J
	hydrocarbon	"	13.2	1200 J
	hydrocarbon	"	13.4	650 J
629505	Tridecane	"	15.1	1400 J
	unknown	"	16.9	1700 J
	unknown	"	17.9	980 J
	hydrocarbon	"	18.5	1200 J
	hydrocarbon	"	20.1	930 J
	hydrocarbon	"	20.8	820 J
	hydrocarbon	"	21.6	830 J
	hydrocarbon	"	21.7	1600 J
	phthalate	"	23.9	1700 J
	hydrocarbon	"	24.3	540 J
	hydrocarbon	"	26.7	640 J
	hydrocarbon	"	29.0	560 J
	no library search peaks	VOA		

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 259

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002606
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 5-27-87

RECEIVED SEP 3 1987

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-3-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 19.19

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	20 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	190 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was confirmed by GC/MS. Single component pesticides)>10 ug/ml in the final extract should be confirmed by GC/MS

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

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 25

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-1-87
Date Analyzed: 6-13-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 19.2

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	820 U	83-32-9	Acenaphthene	820 U
111-44-4	bis-(2-Chloroethyl)ether	820 U	51-28-5	2,4-Dinitrophenol	4000 U
95-57-8	2-Chlorophenol	820 U	100-02-7	4-Nitrophenol	4000 U
541-73-1	1,3-Dichlorobenzene	820 U	132-64-9	Dibenzofuran	820 U
106-46-7	1,4-Dichlorobenzene	820 U	121-14-2	2,4-Dinitrotoluene	820 U
100-51-6	Benzyl Alcohol	820 U	606-20-2	2,6-Dinitrotoluene	820 U
95-50-1	1,2-Dichlorobenzene	820 U	84-66-2	Diethyl phthalate	820 U
95-48-7	2-Methylphenol	820 U	7005-72-3	4-Chlorophenyl-phenyl ether	820 U
39638-32-9	bis-(2-Chloroisopropyl)ether	820 U	86-73-7	Fluorene	820 U
106-44-5	4-Methylphenol	820 U	100-01-6	4-Nitroaniline	4000 U
621-64-7	N-nitroso-Di-n-propylamine	820 U	534-52-1	4,6-Dinitro-2-Methylphenol	4000 U
67-72-1	Hexachloroethane	820 U	86-30-6	N-nitrosodiphenylamine (1)	820 U
98-95-3	Nitrobenzene	820 U	101-55-3	4-Bromophenyl-phenyl ether	820 U
78-59-1	Isophorone	820 U	118-74-1	Hexachlorobenzene	820 U
88-75-5	2-Nitrophenol	820 U	87-86-5	Pentachlorophenol	4000 U
105-67-9	2,4-Dimethylphenol	820 U	85-01-8	Phenanthrene	820 U
65-85-0	Benzoic Acid	4000 U	120-12-7	Anthracene	820 U
111-91-1	bis-(Chloroethoxy)Methane	820 U	84-74-2	Di-n-butyl phthalate	410 J
120-83-2	2,4-Dichlorophenol	820 U	206-44-0	Fluoranthene	820 U
120-82-1	1,2,4-Trichlorobenzene	820 U	129-00-0	Pyrene	820 U
91-20-3	Naphthalene	820 U	85-68-7	Butyl-benzyl-phthalate	820 U
106-47-8	4-Chloroaniline	820 U	91-94-1	3,3'-Dichlorobenzidine	1600 U
87-68-3	Hexachlorobutadiene	820 U	56-55-3	Benzo(a)anthracene	820 U
59-50-7	4-Chloro-3-methylphenol	820 U	117-81-7	bis-(2-Ethylhexyl)phthalate	370 BJ 45 est
91-57-6	2-Methylnaphthalene	820 U	218-01-9	Chrysene	820 U
77-47-4	Hexachlorocyclopentadiene	820 U	117-84-0	Di-n-octyl phthalate	820 U
88-06-2	2,4,6-Trichlorophenol	820 U	205-99-2	Benzo(b)fluoranthene	820 U
95-95-4	2,4,5-Trichlorophenol	4000 U	207-08-9	Benzo(k)fluoranthene	820 U
91-58-7	2-Chloronaphthalene	820 U	50-32-8	Benzo(a)pyrene	820 U
88-74-4	2-Nitroaniline	4000 U	193-39-5	Indeno(1,2,3-cd)pyrene	820 U
131-11-3	Dimethyl phthalate	820 U	53-70-3	Dibenzo(a,h)anthracene	820 U
208-96-8	Acenapthylene	820 U	191-24-2	Benzo(ghi)perylene	820 U
99-09-2	3-Nitroaniline	4000 U			

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory: ENVIRODYNE

EL 259

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)
96480	2(3H)-Furanone, dihydro-	BNA	6.9	1500 JB
	unknown	"	7.0	1000 JB
	unknown	"	7.8	1400 J
	unknown	"	8.8	1400 J
	unknown	"	10.0	800 J
1120214	undecane	"	11.1	790 J
	unknown	"	13.2	1400 J
	hydrocarbon	"	13.4	670 J
629505	tridecane	"	15.1	1400 J
	hydrocarbon	"	16.9	2100 J
	hydrocarbon	"	17.9	1300 J
	hydrocarbon	"	18.5	1400 J
	hydrocarbon	"	20.1	1100 J
	hydrocarbon	"	20.8	1300 J
	hydrocarbon	"	21.6	1100 J
	hydrocarbon	"	21.7	1700 J
	hydrocarbon	"	23.1	1100 J
	phthalate	"	23.9	2000 J
	hydrocarbon	"	26.7	670 J
	hydrocarbon	"	29.0	760 J
	no library search peaks	VOA		

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 260

RECEIVED SEP 3 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002776
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 6-4-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-11-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 10.2

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	11 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	11 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	11 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	11 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	95 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	53 ~~B~~ UJ DJC	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	11 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	11 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	11 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	11 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	11 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (ug,10U) based on necessary concent./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

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 260

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-10-87
Date Analyzed: 6-13-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 10.2

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg
108-95-2	Phenol	730 U
111-44-4	bis-(2-Chloroethyl)ether	730 U
95-57-8	2-Chlorophenol	730 U
541-73-1	1,3-Dichlorobenzene	730 U
106-46-7	1,4-Dichlorobenzene	730 U
100-51-6	Benzyl Alcohol	730 U
95-50-1	1,2-Dichlorobenzene	730 U
95-48-7	2-Methylphenol	730 U
39638-32-9	bis-(2-Chloroisopropyl)ether	730 U
106-44-5	4-Methylphenol	730 U
621-64-7	N-nitroso-Di-n-propylamine	730 U
67-72-1	Hexachloroethane	730 U
98-95-3	Nitrobenzene	730 U
78-59-1	Isophorone	730 U
88-75-5	2-Nitrophenol	730 U
105-67-9	2,4-Dimethylphenol	730 U
65-85-0	Benzoic Acid	3600 U
111-91-1	bis-(Chloroethoxy)Methane	730 U
120-83-2	2,4-Dichlorophenol	730 U
120-82-1	1,2,4-Trichlorobenzene	730 U
91-20-3	Naphthalene	730 U
106-47-8	4-Chloroaniline	730 U
87-68-3	Hexachlorobutadiene	730 U
59-50-7	4-Chloro-3-methylphenol	730 U
91-57-6	2-Methylnaphthalene	730 U
77-47-4	Hexachlorocyclopentadiene	730 U
88-06-2	2,4,6-Trichlorophenol	730 U
95-95-4	2,4,5-Trichlorophenol	3600 U
91-58-7	2-Chloronaphthalene	730 U
88-74-4	2-Nitroaniline	3600 U
131-11-3	Dimethyl phthalate	730 U
208-96-8	Acenapthylene	730 U
99-09-2	3-Nitroaniline	3600 U

CAS No:		ug/kg
83-32-9	Acenaphthene	730 U
51-28-5	2,4-Dinitrophenol	3600 U
100-02-7	4-Nitrophenol	3600 U
132-64-9	Dibenzofuran	730 U
121-14-2	2,4-Dinitrotoluene	730 U
606-20-2	2,6-Dinitrotoluene	730 U
84-66-2	Diethyl phthalate	730 U
7005-72-3	4-Chlorophenyl-phenyl ether	730 U
86-73-7	Fluorene	730 U
100-01-6	4-Nitroaniline	3600 U
534-52-1	4,6-Dinitro-2-Methylphenol	3600 U
86-30-6	N-nitrosodiphenylamine (1)	730 U
101-55-3	4-Bromophenyl-phenyl ether	730 U
118-74-1	Hexachlorobenzene	730 U
87-86-5	Pentachlorophenol	3600 U
85-01-8	Phenanthrene	730 U
120-12-7	Anthracene	730 U
84-74-2	Di-n-butyl phthalate	5500
206-44-0	Fluoranthene	730 U
129-00-0	Pyrene	730 U
85-68-7	Butyl-benzyl-phthalate	730 U
91-94-1	3,3'-Dichlorobenzidine	1500 U
56-55-3	Benzo(a)anthracene	730 U
117-81-7	bis-(2-Ethylhexyl)phthalate	1300 B
218-01-9	Chrysene	730 U
117-84-0	Di-n-octyl phthalate	730 U
205-99-2	Benzo(b)fluoranthene	730 U
207-08-9	Benzo(k)fluoranthene	730 U
50-32-8	Benzo(a)pyrene	730 U
193-39-5	Indeno(1,2,3-cd)pyrene	730 U
53-70-3	Dibenzo(a,h)anthracene	730 U
191-24-2	Benzo(ghi)perylene	730 U

(1)-Cannot be separated from diphenylamine

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No -7351

Sample Number
EL 260

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 6-10-87

Date Analyzed 6-16-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 10.2

GPC Cleanup ☒Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

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CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0 ul

ratory: ENVIRODYNE

EL-260

e No: 7351

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

RECEIVED SEP 3 1987

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
96480	2(3H)- Furanone, dihydro-	BNA	7.0	990 JB
	unknown	"	7.0(4)	1100 JB
	unknown	"	7.8	640 J
	hydrocarbon	"	13.2	270 J
	hydrocarbon	"	13.4	240 J
	hydrocarbon	"	15.1	450 J
	unknown	"	16.9	540 J
	unknown	"	17.9	420 J
	hydrocarbon	"	18.5	450 J
	hydrocarbon	"	20.1	850 J
	hydrocarbon	"	21.6	530 J
	hydrocarbon	"	21.7	840 J
	hydrocarbon	"	23.1	580 J
	phthalate	"	23.9	3500 J
	hydrocarbon	"	24.3	340 J
	hydrocarbon	"	23.5	310 J
	hydrocarbon	"	26.7	220 J
	hydrocarbon	"	29.0	680 J
	hydrocarbon	"	32.1	550 J
	unknown	"	35.6	1200 J
	no library search peaks	VOA		

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 261

RECEIVED SEP 3 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002777
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 6-4-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-11-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 14.2

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	17 #45	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	16 #45	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U Pre	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

VALUE:

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

U

ndicates compound was analyzed for but not detected. Report the inimum detection limit for the sample with the U (eg,10U) based n necessary concent./dilution action. (This is not necessarily he instrument detection limit.) The footnote should read: U= ompound was analyzed for but not detected. The number is the inimum attainable detection limit for the sample.

ndicates an estimated value. This flag is used either when stimating a concentration for tentatively identified compounds here a 1:1 response is assumed or when the mass spectral data ndicated the presence of a compound that meets the identification riteria but the result is less than the specified detection limit but

G:

This flag applies to pesticide parameters where the identification was confirmed by GC/MS. (Sample component pesticides>10 ng/ul in the final extract should be confirmed by GC/MS

B:

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

OTHERS:

Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 261

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-10-87
Date Analyzed: 6-13-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 14.2

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg
108-95-2	Phenol	770 U
111-44-4	bis-(2-Chloroethyl)ether	770 U
95-57-8	2-Chlorophenol	770 U
541-73-1	1,3-Dichlorobenzene	770 U
106-46-7	1,4-Dichlorobenzene	770 U
100-51-6	Benzyl Alcohol	770 U
95-50-1	1,2-Dichlorobenzene	770 U
95-48-7	2-Methylphenol	770 U
39638-32-9	bis-(2-Chloroisopropyl)ether	770 U
106-44-5	4-Methylphenol	770 U
621-64-7	N-nitroso-Di-n-propylamine	770 U
67-72-1	Hexachloroethane	770 U
98-95-3	Nitrobenzene	770 U
78-59-1	Isophorone	770 U
88-75-5	2-Nitrophenol	770 U
105-67-9	2,4-Dimethylphenol	770 U
65-85-0	Benzoic Acid	3700 U
111-91-1	bis-(Chloroethoxy)Methane	770 U
120-83-2	2,4-Dichlorophenol	770 U
120-82-1	1,2,4-Trichlorobenzene	770 U
91-20-3	Naphthalene	770 U
106-47-8	4-Chloroaniline	770 U
87-68-3	Hexachlorobutadiene	770 U
59-50-7	4-Chloro-3-methylphenol	770 U
91-57-6	2-Methylnaphthalene	770 U
77-47-4	Hexachlorocyclopentadiene	770 U
88-06-2	2,4,6-Trichlorophenol	770 U
95-95-4	2,4,5-Trichlorophenol	3700 U
91-58-7	2-Chloronaphthalene	770 U
88-74-4	2-Nitroaniline	3700 U
131-11-3	Dimethyl phthalate	770 U
208-96-8	Acenaphthylene	770 U
99-09-2	3-Nitroaniline	3700 U

CAS No:		ug/kg
83-32-9	Acenaphthene	770 U
51-28-5	2,4-Dinitrophenol	3700 U
100-02-7	4-Nitrophenol	3700 U
132-64-9	Dibenzofuran	770 U
121-14-2	2,4-Dinitrotoluene	770 U
606-20-2	2,6-Dinitrotoluene	770 U
84-66-2	Diethyl phthalate	770 U
7005-72-3	4-Chlorophenyl-phenyl ether	770 U
86-73-7	Fluorene	770 U
100-01-6	4-Nitroaniline	3700 U
534-52-1	4,6-Dinitro-2-Methylphenol	3700 U
86-30-6	N-nitrosodiphenylamine (1)	770 U
101-55-3	4-Bromophenyl-phenyl ether	770 U
118-74-1	Hexachlorobenzene	770 U
87-86-5	Pentachlorophenol	3700 U
85-01-8	Phenanthrene	770 U
120-12-7	Anthracene	770 U
84-74-2	Di-n-butyl phthalate	1800
206-44-0	Fluoranthene	770 U
129-00-0	Pyrene	770 U
85-68-7	Butyl-benzyl-phthalate	770 U
91-94-1	3,3'-Dichlorobenzidine	1500 U
56-55-3	Benzo(a)anthracene	770 U
117-81-7	bis-(2-Ethylhexyl)phthalate	300 BJ 45 pgc
218-01-9	Chrysene	770 U
117-84-0	Di-n-octyl phthalate	770 U
205-99-2	Benzo(b)fluoranthene	770 U
207-08-9	Benzo(k)fluoranthene	770 U
50-32-8	Benzo(a)pyrene	770 U
193-39-5	Indeno(1,2,3-cd)pyrene	770 U
53-70-3	Dibenzo(a,h)anthracene	770 U
191-24-2	Benzo(ghi)perylene	770 U

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No -7351

Sample Number
EL-261

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 6-10-87

Date Analyzed: 6-16-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 14.2

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0 ul

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: No 17351

EL-261

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)
96480	2(3H)-Furanone, dihydro-	BNA	6.9	1100 JB
	unknown	"	7.0	960 JB
	unknown	"	7.7	640 J
	unknown	"	8.9	500 J
	unknown	"	10.0	320 J
	hydrocarbon	"	11.1	240 J
	hydrocarbon	"	13.2	320 J
	unknown	"	13.4	190 J
	hydrocarbon	"	15.1	430 J
	unknown	"	16.8	540 J
	hydrocarbon	"	17.9	410 J
	hydrocarbon	"	18.5	500 J
	hydrocarbon	"	20.1	620 J
	hydrocarbon	"	21.6	390 J
	hydrocarbon	"	21.7	440 J
	hydrocarbon	"	22.9	450 J
	hydrocarbon	"	23.1	380 J
	phthalate	"	23.9	2000 J
	hydrocarbon	"	24.3	420 J
	hydrocarbon	"	26.7	310 J
	no peaks	VOA		

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 262

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002778
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 6-4-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-11-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 14.5

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	46 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	190 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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

P:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 262

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-10-87
Date Analyzed: 6-13-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 14.5

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg
108-95-2	Phenol	770 U
111-44-4	bis-(2-Chloroethyl)ether	770 U
95-57-8	2-Chlorophenol	770 U
541-73-1	1,3-Dichlorobenzene	770 U
106-46-7	1,4-Dichlorobenzene	770 U
100-51-6	Benzyl Alcohol	770 U
95-50-1	1,2-Dichlorobenzene	770 U
95-48-7	2-Methylphenol	770 U
39638-32-9	bis-(2-Chloroisopropyl)ether	770 U
106-44-5	4-Methylphenol	770 U
621-64-7	N-nitroso-Di-n-propylamine	770 U
67-72-1	Hexachloroethane	770 U
98-95-3	Nitrobenzene	770 U
78-59-1	Isophorone	770 U
88-75-5	2-Nitrophenol	770 U
105-67-9	2,4-Dimethylphenol	770 U
65-85-0	Benzoic Acid	3700 U
111-91-1	bis-(Chloroethoxy)Methane	770 U
120-83-2	2,4-Dichlorophenol	770 U
120-82-1	1,2,4-Trichlorobenzene	770 U
91-20-3	Naphthalene	770 U
106-47-8	4-Chloroaniline	770 U
87-68-3	Hexachlorobutadiene	770 U
59-50-7	4-Chloro-3-methylphenol	770 U
91-57-6	2-Methylnaphthalene	770 U
77-47-4	Hexachlorocyclopentadiene	770 U
88-06-2	2,4,6-Trichlorophenol	770 U
95-95-4	2,4,5-Trichlorophenol	3700 U
91-58-7	2-Chloronaphthalene	770 U
88-74-4	2-Nitroaniline	3700 U
131-11-3	Dimethyl phthalate	770 U
208-96-8	Acenapthylene	770 U
99-09-2	3-Nitroaniline	3700 U

CAS No:		ug/kg
83-32-9	Acenaphthene	770 U
51-28-5	2,4-Dinitrophenol	3700 U
100-02-7	4-Nitrophenol	3700 U
132-64-9	Dibenzofuran	770 U
121-14-2	2,4-Dinitrotoluene	770 U
606-20-2	2,6-Dinitrotoluene	770 U
84-66-2	Diethyl phthalate	770 U
7005-72-3	4-Chlorophenyl-phenyl ether	770 U
86-73-7	Fluorene	770 U
100-01-6	4-Nitroaniline	3700 U
534-52-1	4,6-Dinitro-2-Methylphenol	3700 U
86-30-6	N-nitrosodiphenylamine (1)	770 U
101-55-3	4-Bromophenyl-phenyl ether	770 U
118-74-1	Hexachlorobenzene	770 U
87-86-5	Pentachlorophenol	3700 U
85-01-8	Phenanthrene	770 U
120-12-7	Anthracene	770 U
84-74-2	Di-n-butyl phthalate	1000
206-44-0	Fluoranthene	770 U
129-00-0	Pyrene	770 U
85-68-7	Butyl-benzyl-phthalate	770 U
91-94-1	3,3'-Dichlorobenzidine	1500 U
56-55-3	Benzo(a)anthracene	770 U
117-81-7	bis-(2-Ethylhexyl)phthalate	210 ~~BJ~~ UJ PSC
218-01-9	Chrysene	770 U
117-84-0	Di-n-octyl phthalate	770 U
205-99-2	Benzo(b)fluoranthene	770 U
207-08-9	Benzo(k)fluoranthene	770 U
50-32-8	Benzo(a)pyrene	770 U
193-39-5	Indeno(1,2,3-cd)pyrene	770 U
53-70-3	Dibenzo(a,h)anthracene	770 U
191-24-2	Benzo(ghi)perylene	770 U

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No 7351

Sample Number
EL 262

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 6-10-87

Date Analyzed 6-16-87

Conc/Dil Factor 1

Percent Moisture (decanted) 14.5

GPC Cleanup ☒Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

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CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0ul

oratory Name ENVIRODYNE
No 7351

Sample Number
EL 262

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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)
16480	2(3H)-Furanone, dihydro-	BNA	7.0	700 JB
	unknown	"	7.1	840 JB
	unknown	"	7.8	460 J
	unknown	"	8.9	290 J
	hydrocarbon	"	15.2	180 J
	unknown	"	16.5	180 J
	hydrocarbon + unknown	"	17.0	260 J
	hydrocarbon	"	18.0	220 J
	hydrocarbon	"	18.6	230 J
74381401	Propanoic acid, 2-methyl-, 1-(1,1-dimethyl-ethyl)-2-methyl-1,3-propanediyl ester	"	20.2	410 J
	hydrocarbon	"	21.6	240 J
	hydrocarbon	"	21.7	430 J
	hydrocarbon	"	23.6	250 J
	hydrocarbon	"	23.2	260 J
	phthalate	"	24.0	1500 J
	hydrocarbon	"	24.4	180 J
	hydrocarbon	"	25.6	120 J
	hydrocarbon	"	26.8	120 J
	hydrocarbon	"	29.1	210 J
	no library search peaks	VOA		

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 263

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002779
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 6-4-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-11-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 15.0

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	18 ~~B~~ UJ	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	77 ~~B~~ UJ RJC	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

VALUE:
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 (eg.,10U) based on necessary concent./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 (eg. 10J). If limit of detection is 10 ug/l and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 263

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-10-87
Date Analyzed: 6-14-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 15

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	780 U	83-32-9	Acenaphthene	780 U
111-44-4	bis-(2-Chloroethyl)ether	780 U	51-28-5	2,4-Dinitrophenol	3800 U
95-57-8	2-Chlorophenol	780 U	100-02-7	4-Nitrophenol	3800 U
541-73-1	1,3-Dichlorobenzene	780 U	132-64-9	Dibenzofuran	780 U
106-46-7	1,4-Dichlorobenzene	780 U	121-14-2	2,4-Dinitrotoluene	780 U
100-51-6	Benzyl Alcohol	780 U	606-20-2	2,6-Dinitrotoluene	780 U
95-50-1	1,2-Dichlorobenzene	780 U	84-66-2	Diethyl phthalate	780 U
95-48-7	2-Methylphenol	780 U	7005-72-3	4-Chlorophenyl-phenyl ether	780 U
39638-32-9	bis-(2-Chloroisopropyl)ether	780 U	86-73-7	Fluorene	780 U
106-44-5	4-Methylphenol	780 U	100-01-6	4-Nitroaniline	3800 U
621-64-7	N-nitroso-Di-n-propylamine	780 U	534-52-1	4,6-Dinitro-2-Methylphenol	3800 U
67-72-1	Hexachloroethane	780 U	86-30-6	N-nitrosodiphenylamine (1)	780 U
98-95-3	Nitrobenzene	780 U	101-55-3	4-Bromophenyl-phenyl ether	780 U
78-59-1	Isophorone	780 U	118-74-1	Hexachlorobenzene	780 U
88-75-5	2-Nitrophenol	780 U	87-86-5	Pentachlorophenol	3800 U
105-67-9	2,4-Dimethylphenol	780 U	85-01-8	Phenanthrene	780 U
65-85-0	Benzoic Acid	3800 U	120-12-7	Anthracene	780 U
111-91-1	bis-(Chloroethoxy)Methane	780 U	84-74-2	Di-n-butyl phthalate	650 J
120-83-2	2,4-Dichlorophenol	780 U	206-44-0	Fluoranthene	780 U
120-82-1	1,2,4-Trichlorobenzene	780 U	129-00-0	Pyrene	780 U
91-20-3	Naphthalene	780 U	85-68-7	Butyl-benzyl-phthalate	780 U
106-47-8	4-Chloroaniline	780 U	91-94-1	3,3'-Dichlorobenzidine	1600 U
87-68-3	Hexachlorobutadiene	780 U	56-55-3	Benzo(a)anthracene	780 U
59-50-7	4-Chloro-3-methylphenol	780 U	117-81-7	bis-(2-Ethylhexyl)phthalate	240 BJ 45
91-57-6	2-Methylnaphthalene	780 U	218-01-9	Chrysene	780 U
77-47-4	Hexachlorocyclopentadiene	780 U	117-84-0	Di-n-octyl phthalate	780 U
88-06-2	2,4,6-Trichlorophenol	780 U	205-99-2	Benzo(b)fluoranthene	780 U
95-95-4	2,4,5-Trichlorophenol	3800 U	207-08-9	Benzo(k)fluoranthene	780 U
91-58-7	2-Chloronaphthalene	780 U	50-32-8	Benzo(a)pyrene	780 U
88-74-4	2-Nitroaniline	3800 U	193-39-5	Indeno(1,2,3-cd)pyrene	780 U
131-11-3	Dimethyl phthalate	780 U	53-70-3	Dibenzo(a,h)anthracene	780 U
208-96-8	Acenapthylene	780 U	191-24-2	Benzo(ghi)perylene	780 U
99-09-2	3-Nitroaniline	3800 U			

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No 60 .7351

Sample Number EL 263:

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

Date Extracted/Prepared 6-10-87

Date Analyzed 6-16-87

Conc/Dil Factor 1

Percent Moisture (decanted) 15.0

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0 ul

ENVIRODYNE

EL 263

No: 7351

Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 3 1987

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
16480	2(3H)-Furanone, dihydro	BNA	7.0	880JB
	unknown	"	7.1	890JB
	unknown	"	7.8	450J
	unknown	"	8.8	460J
	unknown	"	15.1	180J
	hydrocarbon	"	16.9	150J
	hydrocarbon	"	18.0	170J
	hydrocarbon	"	18.6	210J
	unknown	"	20.1	520J
	hydrocarbon	"	21.6	240J
	hydrocarbon	"	21.7	400J
	hydrocarbon	"	23.1	270J
	phthalate	"	23.9	2100J
	hydrocarbon	"	24.3	200J
	hydrocarbon	"	25.5	170J
	hydrocarbon	"	26.8	210J
	hydrocarbon	"	29.0	210J
	hydrocarbon	"	32.1	150J
	unknown	"	33.1	300J
	unknown	"	35.8	350J
	no library search peaks	VOA		

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 264

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002780
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 6-4-87

RECEIVED SEP 3 1987

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-12-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 15.8

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	17 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	57 B 4J	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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 obtainable detection limit for the sample.

J:
the results. If used, they must be fully described and such 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

B:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other flags and footnotes may be required to properly define the results. If used, then:

description attached to the data summary report.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 26

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-10-87
Date Analyzed: 6-14-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 15.8

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	780 U	83-32-9	Acenaphthene	780 U
111-44-4	bis-(2-Chloroethyl)ether	780 U	51-28-5	2,4-Dinitrophenol	3800 U
95-57-8	2-Chlorophenol	780 U	100-02-7	4-Nitrophenol	3800 U
541-73-1	1,3-Dichlorobenzene	780 U	132-64-9	Dibenzofuran	780 U
106-46-7	1,4-Dichlorobenzene	780 U	121-14-2	2,4-Dinitrotoluene	780 U
100-51-6	Benzyl Alcohol	780 U	606-20-2	2,6-Dinitrotoluene	780 U
95-50-1	1,2-Dichlorobenzene	780 U	84-66-2	Diethyl phthalate	780 U
95-48-7	2-Methylphenol	780 U	7005-72-3	4-Chlorophenyl-phenyl ether	780 U
39638-32-9	bis-(2-Chloroisopropyl)ether	780 U	86-73-7	Fluorene	780 U
106-44-5	4-Methylphenol	780 U	100-01-6	4-Nitroaniline	3800 U
621-64-7	N-nitroso-Di-n-propylamine	780 U	534-52-1	4,6-Dinitro-2-Methylphenol	3800 U
67-72-1	Hexachloroethane	780 U	86-30-6	N-nitrosodiphenylamine (1)	780 U
98-95-3	Nitrobenzene	780 U	101-55-3	4-Bromophenyl-phenyl ether	780 U
78-59-1	Isophorone	780 U	118-74-1	Hexachlorobenzene	780 U
88-75-5	2-Nitrophenol	780 U	87-86-5	Pentachlorophenol	3800 U
105-67-9	2,4-Dimethylphenol	780 U	85-01-8	Phenanthrene	780 U
65-85-0	Benzoic Acid	3800 U	120-12-7	Anthracene	780 U
111-91-1	bis-(Chloroethoxy)Methane	780 U	84-74-2	Di-n-butyl phthalate	2400
120-83-2	2,4-Dichlorophenol	780 U	206-44-0	Fluoranthene	780 U
120-82-1	1,2,4-Trichlorobenzene	780 U	129-00-0	Pyrene	780 U
91-20-3	Naphthalene	780 U	85-68-7	Butyl-benzyl-phthalate	780 U
106-47-8	4-Chloroaniline	780 U	91-94-1	3,3'-Dichlorobenzidine	1600 U
87-68-3	Hexachlorobutadiene	780 U	56-55-3	Benzo(a)anthracene	780 U
59-50-7	4-Chloro-3-methylphenol	780 U	117-81-7	bis-(2-Ethylhexyl)phthalate	350 BJ UJ psc
91-57-6	2-Methylnaphthalene	780 U	218-01-9	Chrysene	780 U
77-47-4	Hexachlorocyclopentadiene	780 U	117-84-0	Di-n-octyl phthalate	780 U
88-06-2	2,4,6-Trichlorophenol	780 U	205-99-2	Benzo(b)fluoranthene	780 U
95-95-4	2,4,5-Trichlorophenol	3800 U	207-08-9	Benzo(k)fluoranthene	780 U
91-58-7	2-Chloronaphthalene	780 U	50-32-8	Benzo(a)pyrene	780 U
88-74-4	2-Nitroaniline	3800 U	193-39-5	Indeno(1,2,3-cd)pyrene	780 U
131-11-3	Dimethyl phthalate	780 U	53-70-3	Dibenzo(a,h)anthracene	780 U
208-96-8	Acenapthylene	780 U	191-24-2	Benzo(ghi)perylene	780 U
99-09-2	3-Nitroaniline	3800 U			

****
(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No -7351

Sample Number
EL 264

Organics Analysis Data Sheet
(Page 3)

RECEIVED SEP 3 1987

Pesticide/PCBs

Concentration Low Medium (Circle One)

Date Extracted/Prepared 6-10-87

Date Analyzed 6-16-87

Conc/Dil Factor 1

Percent Moisture (decanted) 15.9

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0ul

ENVIRODYNE

No: 7351

EL 264

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

RECEIVED SEP 3 1987

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
96480	2(3H)-Furanone, dihydro-	BNA	7.0	990 JB
	unknown	"	7.1	1000 JB
	unknown	"	7.8	460 J
	unknown	"	8.4	120 J
	unknown	"	14.3	140 J
	unknown	"	20.1	250 J
	phthalate	"	23.9	2000 J
	unknown	"	35.7	1100 J
	no library search peaks	VOA		

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 26

RECEIVED SEP 3 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002781
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 6-4-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-12-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 14.8

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	29 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	190 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	1 BJ 4 J
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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 (eg. 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EP 265

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-10-87
Date Analyzed: 6-14-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 14.8

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ugkg
108-95-2	Phenol	770 U
111-44-4	bis-(2-Chloroethyl)ether	770 U
95-57-8	2-Chlorophenol	770 U
541-73-1	1,3-Dichlorobenzene	770 U
106-46-7	1,4-Dichlorobenzene	770 U
100-51-6	Benzyl Alcohol	770 U
95-50-1	1,2-Dichlorobenzene	770 U
95-48-7	2-Methylphenol	770 U
39638-32-9	bis-(2-Chloroisopropyl)ether	770 U
106-44-5	4-Methylphenol	770 U
621-64-7	N-nitroso-Di-n-propylamine	770 U
67-72-1	Hexachloroethane	770 U
98-95-3	Nitrobenzene	770 U
78-59-1	Isophorone	770 U
88-75-5	2-Nitrophenol	770 U
105-67-9	2,4-Dimethylphenol	770 U
65-85-0	Benzoic Acid	3800 U
111-91-1	bis-(Chloroethoxy)Methane	770 U
120-83-2	2,4-Dichlorophenol	770 U
120-82-1	1,2,4-Trichlorobenzene	770 U
91-20-3	Naphthalene	770 U
106-47-8	4-Chloroaniline	770 U
87-68-3	Hexachlorobutadiene	770 U
59-50-7	4-Chloro-3-methylphenol	770 U
91-57-6	2-Methylnaphthalene	770 U
77-47-4	Hexachlorocyclopentadiene	770 U
88-06-2	2,4,6-Trichlorophenol	770 U
95-95-4	2,4,5-Trichlorophenol	3800 U
91-58-7	2-Chloronaphthalene	770 U
88-74-4	2-Nitroaniline	3800 U
131-11-3	Dimethyl phthalate	770 U
208-96-8	Acenapthylene	770 U
99-09-2	3-Nitroaniline	3800 U

CAS No:		ugkg
83-32-9	Acenaphthene	770 U
51-28-5	2,4-Dinitrophenol	3800 U
100-02-7	4-Nitrophenol	3800 U
132-64-9	Dibenzofuran	770 U
121-14-2	2,4-Dinitrotoluene	770 U
606-20-2	2,6-Dinitrotoluene	770 U
84-66-2	Diethyl phthalate	770 U
7005-72-3	4-Chlorophenyl-phenyl ether	770 U
86-73-7	Fluorene	770 U
100-01-6	4-Nitroaniline	3800 U
534-52-1	4,6-Dinitro-2-Methylphenol	3800 U
86-30-6	N-nitrosodiphenylamine (1)	770 U
101-55-3	4-Bromophenyl-phenyl ether	770 U
118-74-1	Hexachlorobenzene	770 U
87-86-5	Pentachlorophenol	3800 U
85-01-8	Phenanthrene	770 U
120-12-7	Anthracene	770 U
84-74-2	Di-n-butyl phthalate	1100
206-44-0	Fluoranthene	770 U
129-00-0	Pyrene	770 U
85-68-7	Butyl-benzyl-phthalate	770 U
91-94-1	3,3'-Dichlorobenzidine	1500 U
56-55-3	Benzo(a)anthracene	770 U
117-81-7	bis-(2-Ethylhexyl)phthalate	320-~~BJ~~ UJ
218-01-9	Chrysene	770 U
117-84-0	Di-n-octyl phthalate	770 U
205-99-2	Benzo(b)fluoranthene	770 U
207-08-9	Benzo(k)fluoranthene	770 U
50-32-8	Benzo(a)pyrene	770 U
193-39-5	Indeno(1,2,3-cd)pyrene	770 U
53-70-3	Dibenzo(a,h)anthracene	770 U
191-24-2	Benzo(ghi)perylene	770 U

==========

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name ENVIROSYNE ENGINEERS INC.

Case No 7351

Sample Number
EL 265

RECEIVED JUL 3 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 6-10-87

Date Analyzed 6-16-87

Conc/Dil Factor 1

Percent Moisture (decanted) 14.8

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0 ul

Laboratory: ENVIRODYNE

CASE NO: 7351

EL 265

Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 3 1987

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 96480	2(3H)-Furanone, dihydro-	BNA	6.9	890 JB
2.	unknown	"	7.0	830 JB
3.	unknown	"	20.1	420 J
4.	phthalate	"	23.9	2200 J
5.				
6.	no library search peaks	VOA		
7.				
8.				
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29.				
30.				

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 266

RECEIVED SEP 3 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87002782
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 130
Contract No: 68-01-7087
Date Sample Received: 6-4-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-12-87
Conc/Dil Factor: 5
Percent Moisture (not decanted): 15.4

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	59 U	78-87-5	1,2-Dichloropropane	30 U
74-83-9	Bromomethane	59 U	10061-02-6	trans-1,3-Dichloropropene	30 U
75-01-4	Vinyl Chloride	59 U	79-01-6	Trichloroethene	30 U
75-00-3	Chloroethane	59 U	124-48-1	Dibromochloromethane	30 U
75-09-2	Methylene Chloride	170 B	79-00-5	1,1,2-Trichloroethane	30 U
67-64-1	Acetone	990 B	71-43-2	Benzene	30 U
75-15-0	Carbon Disulfide	30 U	10061-01-5	cis-1,3-Dichloropropene	30 U
75-35-4	1,1-Dichloroethene	30 U	110-75-8	2-Chloroethylvinylether	59 U
75-34-3	1,1-Dichloroethane	30 U	75-25-2	Bromoform	30 U
156-60-5	trans-1,2-Dichloroethene	30 U	108-10-1	4-Methyl-2-pentanone	59 U
67-66-3	Chloroform	30 U	591-78-6	2-Hexanone	59 U
107-06-2	1,2-Dichloroethane	30 U	127-18-4	Tetrachloroethene	30 U
78-93-3	2-Butanone	59 U	79-34-5	1,1,2,2-Tetrachloroethane	30 U
71-55-6	1,1,1-Trichloroethane	30 U	108-88-3	Toluene	30 U
56-23-5	Carbon Tetrachloride	30 U	108-90-7	Chlorobenzene	30 U
108-05-4	Vinyl Acetate	59 U	100-41-4	Ethylbenzene	30 U
75-27-4	Bromodichloromethane	30 U	100-42-5	Styrene	30 U
				Total Xylenes	30 U

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 266

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-10-87
Date Analyzed: 6-14-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 15.4

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	780 U	83-32-9	Acenaphthene	780 U
111-44-4	bis-(2-Chloroethyl)ether	780 U	51-28-5	2,4-Dinitrophenol	3800 U
95-57-8	2-Chlorophenol	780 U	100-02-7	4-Nitrophenol	3800 U
541-73-1	1,3-Dichlorobenzene	780 U	132-64-9	Dibenzofuran	780 U
106-46-7	1,4-Dichlorobenzene	780 U	121-14-2	2,4-Dinitrotoluene	780 U
100-51-6	Benzyl Alcohol	780 U	606-20-2	2,6-Dinitrotoluene	780 U
95-50-1	1,2-Dichlorobenzene	780 U	84-66-2	Diethyl phthalate	780 U
95-48-7	2-Methylphenol	780 U	7005-72-3	4-Chlorophenyl-phenyl ether	780 U
39638-32-9	bis-(2-Chloroisopropyl)ether	780 U	86-73-7	Fluorene	780 U
106-44-5	4-Methylphenol	780 U	100-01-6	4-Nitroaniline	3800 U
621-64-7	N-nitroso-Di-n-propylamine	780 U	534-52-1	4,6-Dinitro-2-Methylphenol	3800 U
67-72-1	Hexachloroethane	780 U	86-30-6	N-nitrosodiphenylamine (1)	780 U
98-95-3	Nitrobenzene	780 U	101-55-3	4-Bromophenyl-phenyl ether	780 U
78-59-1	Isophorone	780 U	118-74-1	Hexachlorobenzene	780 U
88-75-5	2-Nitrophenol	780 U	87-86-5	Pentachlorophenol	3800 U
105-67-9	2,4-Dimethylphenol	780 U	85-01-8	Phenanthrene	780 U
65-85-0	Benzoic Acid	3800 U	120-12-7	Anthracene	780 U
111-91-1	bis-(Chloroethoxy)Methane	780 U	84-74-2	Di-n-butyl phthalate	470 J
120-83-2	2,4-Dichlorophenol	780 U	206-44-0	Fluoranthene	780 U
120-82-1	1,2,4-Trichlorobenzene	780 U	129-00-0	Pyrene	780 U
91-20-3	Naphthalene	780 U	85-68-7	Butyl-benzyl-phthalate	780 U
106-47-8	4-Chloroaniline	780 U	91-94-1	3,3'-Dichlorobenzidine	1600 U
87-68-3	Hexachlorobutadiene	780 U	56-55-3	Benzo(a)anthracene	780 U
59-50-7	4-Chloro-3-methylphenol	780 U	117-81-7	bis-(2-Ethylhexyl)phthalate	650 ~~BJ~~ 45 JPC
91-57-6	2-Methylnaphthalene	780 U	218-01-9	Chrysene	780 U
77-47-4	Hexachlorocyclopentadiene	780 U	117-84-0	Di-n-octyl phthalate	780 U
88-06-2	2,4,6-Trichlorophenol	780 U	205-99-2	Benzo(b)fluoranthene	780 U
95-95-4	2,4,5-Trichlorophenol	3800 U	207-08-9	Benzo(k)fluoranthene	780 U
91-58-7	2-Chloronaphthalene	780 U	50-32-8	Benzo(a)pyrene	780 U
88-74-4	2-Nitroaniline	3800 U	193-39-5	Indeno(1,2,3-cd)pyrene	780 U
131-11-3	Dimethyl phthalate	780 U	53-70-3	Dibenzo(a,h)anthracene	780 U
208-96-8	Acenaphthylene	780 U	191-24-2	Benzo(ghi)perylene	780 U
99-09-2	3-Nitroaniline	3800 U			

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No [illegible]-7351

Sample Number
EL 2660

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

Date Extracted/Prepared 6-10-87

Date Analyzed 6-16-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 15.4

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0 ul

Laboratory ENVIRODYNE

Case No. 7351

EL 266

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

RECEIVED SEP 3 1987

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 96480	2(3H)-Furanone, dihydro-	BNA	7.0	1100 JB
2.	unknown	"	7.0(s)	1000 JB
3.	unknown	"	7.8	680 J
4.	unknown	"	8.8	550 J
5.	hydrocarbon	"	13.2	310 J
6.	hydrocarbon	"	15.1	380 J
7.	hydrocarbon	"	16.9	590 J
8.	hydrocarbon	"	17.9	390 J
9.	hydrocarbon	"	18.5	470 J
10. 74381401	Propanoic acid, 2-methyl-, 1-(1,1-dimethyl-	"	20.1	800 J
11.	ethyl-1,3-propanediyl ester			
12.	hydrocarbon	"	21.6	540 J
13.	hydrocarbon	"	21.7	860 J
14.	hydrocarbon	"	23.0	430 J
15.	hydrocarbon	"	23.1	560 J
16.	phthalate	"	23.9	2300 J
17.	hydrocarbon	"	24.3	380 J
18.	hydrocarbon	"	25.5	290 J
19.	hydrocarbon	"	26.9	300 J
20.				
21.	no library search peaks	VOA		
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 267

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-10-87
Date Analyzed: 6-14-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 15.4

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	780 U	83-32-9	Acenaphthene	780 U
111-44-4	bis-(2-Chloroethyl)ether	780 U	51-28-5	2,4-Dinitrophenol	3800 U
95-57-8	2-Chlorophenol	780 U	100-02-7	4-Nitrophenol	3800 U
541-73-1	1,3-Dichlorobenzene	780 U	132-64-9	Dibenzofuran	780 U
106-46-7	1,4-Dichlorobenzene	780 U	121-14-2	2,4-Dinitrotoluene	780 U
100-51-6	Benzyl Alcohol	780 U	606-20-2	2,6-Dinitrotoluene	780 U
95-50-1	1,2-Dichlorobenzene	780 U	84-66-2	Diethyl phthalate	780 U
95-48-7	2-Methylphenol	780 U	7005-72-3	4-Chlorophenyl-phenyl ether	780 U
39638-32-9	bis-(2-Chloroisopropyl)ether	780 U	86-73-7	Fluorene	780 U
106-44-5	4-Methylphenol	780 U	100-01-6	4-Nitroaniline	3800 U
621-64-7	N-nitroso-Di-n-propylamine	780 U	534-52-1	4,6-Dinitro-2-Methylphenol	3800 U
67-72-1	Hexachloroethane	780 U	86-30-6	N-nitrosodiphenylamine (1)	780 U
98-95-3	Nitrobenzene	780 U	101-55-3	4-Bromophenyl-phenyl ether	780 U
78-59-1	Isophorone	780 U	118-74-1	Hexachlorobenzene	780 U
88-75-5	2-Nitrophenol	780 U	87-86-5	Pentachlorophenol	3800 U
105-67-9	2,4-Dimethylphenol	780 U	85-01-8	Phenanthrene	780 U
65-85-0	Benzoic Acid	3800 U	120-12-7	Anthracene	780 U
111-91-1	bis-(Chloroethoxy)Methane	780 U	84-74-2	Di-n-butyl phthalate	760 J
120-83-2	2,4-Dichlorophenol	780 U	206-44-0	Fluoranthene	780 U
120-82-1	1,2,4-Trichlorobenzene	780 U	129-00-0	Pyrene	780 U
91-20-3	Naphthalene	780 U	85-68-7	Butyl-benzyl-phthalate	780 U
106-47-8	4-Chloroaniline	780 U	91-94-1	3,3'-Dichlorobenzidine	1600 U
87-68-3	Hexachlorobutadiene	780 U	56-55-3	Benzo(a)anthracene	780 U
59-50-7	4-Chloro-3-methylphenol	780 U	117-81-7	bis-(2-Ethylhexyl)phthalate	800 ~~B~~ 45 PJC
91-57-6	2-Methylnaphthalene	780 U	218-01-9	Chrysene	780 U
77-47-4	Hexachlorocyclopentadiene	780 U	117-84-0	Di-n-octyl phthalate	780 U
88-06-2	2,4,6-Trichlorophenol	780 U	205-99-2	Benzo(b)fluoranthene	780 U
95-95-4	2,4,5-Trichlorophenol	3800 U	207-08-9	Benzo(k)fluoranthene	780 U
91-58-7	2-Chloronaphthalene	780 U	50-32-8	Benzo(a)pyrene	780 U
88-74-4	2-Nitroaniline	3800 U	193-39-5	Indeno(1,2,3-cd)pyrene	780 U
131-11-3	Dimethyl phthalate	780 U	53-70-3	Dibenzo(a,h)anthracene	780 U
208-96-8	Acenaphthylene	780 U	191-24-2	Benzo(ghi)perylene	780 U
99-09-2	3-Nitroaniline	3800 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name ENVIRODYNE ENGINEERS INC.

Case No 7351

Sample Number EL-267

RECEIVED 2 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

Date Extracted/Prepared 6-10-87

Date Analyzed 6-16-87

Conc/Dil Factor 1

Percent Moisture (decanted) 15.4

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	16 U
319-85-7	Beta-BHC	16 U
319-86-8	Delta-BHC	16 U
58-89-9	Gamma-BHC (Lindane)	16 U
76-44-8	Heptachlor	16 U
309-00-2	Aldrin	16 U
1024-57-3	Heptachlor Epoxide	16 U
959-98-8	Endosulfan I	16 U
60-57-1	Dieldrin	32 U
72-55-9	4, 4'-DDE	32 U
72-20-8	Endrin	32 U
33213-65-9	Endosulfan II	32 U
72-54-8	4, 4'-DDD	32 U
1031-07-8	Endosulfan Sulfate	32 U
50-29-3	4, 4'-DDT	32 U
72-43-5	Methoxychlor	160 U
53494-70-5	Endrin Ketone	32 U
57-74-9	Chlordane	160 U
8001-35-2	Toxaphene	320 U
12674-11-2	Aroclor-1016	160 U
11104-28-2	Aroclor-1221	160 U
11141-16-5	Aroclor-1232	160 U
53469-21-9	Aroclor-1242	160 U
12672-29-6	Aroclor-1248	160 U
11097-69-1	Aroclor-1254	320 U
11096-82-5	Aroclor-1260	320 U

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 _____ or W_s 30g V_t 10,000 V_i 2.0ul

Laboratory: ENVIRODYNE

EL 267

Case No: 7351

Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 3 1987

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 96480	2(3H)-Furanone, dihydro	BNA	7.0	1200 JB
2.	unknown	"	7.1	1100 JB
3.	unknown	"	7.8	890 J
4.	unknown	"	8.8	580 J
5.	hydrocarbon	"	13.2	320 J
6.	hydrocarbon	"	15.1	450 J
7.	hydrocarbon	"	16.9	560 J
8.	hydrocarbon	"	18.0	420 J
9.	hydrocarbon	"	18.6	460 J
10. 74381-40-1	Propanoic acid, 2-methyl-, 1-(1,1-dimethy-	"	20.1	730 J
11.	ethyl)-2-methyl-1,3-propanediyl ester			
12.	hydrocarbon	"	21.6	370 J
13.	hydrocarbon	"	21.7	650 J
14.	hydrocarbon	"	23.0	370 J
15.	hydrocarbon	"	23.1	390 J
16.	phthalate	"	23.9	2100 J
17.	hydrocarbon	"	24.3	280 J
18.	hydrocarbon	"	25.6	230 J
19.	hydrocarbon	"	26.8	240 J
20.	hydrocarbon	"	29.6	400 J
21.	hydrocarbon	"	30.1	400 J
22.				
23.	unknown	VOA	9.4	610 JB
24.	butanoic acid, methyl ester	"	22.7	1300 JB
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

Date Received for Review 9/15 Date Review Completed 9/18/87

To: Tom Pachowice

From: Zena Gold-Kaufman

Subject: HOD LNOFI

PAN: ILO141 Case # 73511

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 11	Low Soil (M-27)	# 1	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting: _____

FIT Data Review Findings:

Check CADS forms for transcription error
Smpl # EL 2608 – EM858 in this package
Some PAH

✓ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 Page No. 164

6/11

recycled paper

(1)

HOD LNdf1 COMPOUND	SAMPLE	DET. LIMIT	268	269	270	851	852	854	855	856
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride										
acetone										
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								5J		
4-methyl-2-pentanone										
tetrachloroethene										
toluene			7J	8J	6J					
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										
2,4,5-trichlorophenol										
2-chloronapthalene										

VOA

(2)

HOD. LND 7

	COMPOUND	SAMPLE	DET. LIMIT	268	269	270	851	852	854	855	856
↓	dimethyl phthalate										
	acenapthylene										
	3-nitroaniline										
	acenaphthene										
	2,4-dinitrophenol										
	4-nitrophenol										
	dibenzofuran										
	2,4-dinitrotoluene										
	2,6-dinitrotoluene										
S	diethylphthalate								50 J		
	4-chlorophenyl-phenylether										
	fluorene										
V	4-nitroaniline										
	4,6-dinitro-2-methylphenol										
	N-nitrosodiphenylamine										
	4-bromophenyl-phenylether										
	hexachlorobenzene										
	pentachlorophenol										
	phenanthrene								56 J		
	anthracene										
	di-n-butylphthalate						920	540	770	1100	1600
	fluoranthene					49 J			64 J		
	benzidine					5					
	pyrene					52 J			55 J		
	butylbenzylphthalate					51 J					
	3,3'-dichlorobenzidine			MED							
	benzo(a)anthracene			↓		65 J					
	bis(2-ethylhexyl)phthalate			2400 J	480 J						
	chrysene										
	di-n-octylphthalate					67 J					
	benzo(b&k)fluoranthene					53 J / 69 J			57 J /		
	benzo(a)pyrene										
	indeno(1,2,3-cd)pyrene					62 J					
	dibenzo(a,h)anthracene					65 J					
↑	benzo(g,h,i)perylene										
↓	alpha-BHC										
	beta-BHC										
	delta-BHC										
	gamma-BHC(lindane)										
P	heptachlor										
	aldrin										
E	heptachlor epoxide										
	endosulfan I										
S	dieldrin										
T	4,4'-DDE										
	endrin										
	endosulfan II										
	4,4'-DDD										
	endrin aldehyde										
	endosulfan sulfate										
	4,4'-DDT										
	methoxychlor										
	endrin ketone										
	chlordane										
	toxaphene										
P	Aroclor-1016										
	Aroclor-1221										
C	Aroclor-1232										
B	Aroclor-1242										
	Aroclor-1248										
	Aroclor-1254										
	Aroclor-1260										

HOD LNOF/

COMPOUND	SAMPLE	DET. LIMIT	857	858						
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride										
acetone										
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			2J	2J						
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										
2,4,5-trichlorophenol										
2-chloronapthalene										

VOA

5

3

H00 LNDF1

(4)

	COMPOUND	SAMPLE DET. LIMIT	857	858						
V	dimethyl phthalate									
	acenapthylene									
	3-nitroaniline									
	acenaphthene									
	2,4-dinitrophenol									
	4-nitrophenol									
	dibenzofuran									
	2,4-dinitrotoluene									
S	2,6-dinitrotoluene									
	diethylphthalate									
	4-chlorophenyl-phenylether									
V	fluorene									
	4-nitroaniline									
	4,6-dinitro-2-methylphenol									
	N-nitrosodiphenylamine									
	4-bromophenyl-phenylether									
	hexachlorobenzene									
	pentachlorophenol									
	phenanthrene									
	anthracene									
	di-n-butylphthalate		2300							
	fluoranthene									
	benzidine									
	pyrene									
	butylbenzylphthalate									
	3,3'-dichlorobenzidine									
	benzo(a)anthracene									
	bis(2-ethylhexyl)phthalate									
	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)									
P	heptachlor									
	aldrin									
E	heptachlor epoxide									
	endosulfan I									
S	dieldrin									
T	4,4'-DDE									
	endrin									
	endosulfan II									
	4,4'-DDD									
	endrin aldehyde									
	endosulfan sulfate									
	4,4'-DDT									
	methoxychlor									
	endrin ketone									
	chlordane									
	toxephene									
P	Aroclor-1016									
	Aroclor-1221									
C	Aroclor-1232									
B	Aroclor-1242									
	Aroclor-1248									
	Aroclor-1254									
	Aroclor-1260									

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

15
1 of 8

DATE: 9/14/87

SUBJECT: Review of Region V CLP Data
Received for Review on 7/13/87

RECEIVED SEP 15 1987

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

TO: Data User: FIT

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

SITE NAME: HOD Landfill SMO case No. 7351

EPA Data Set No. SF4123 No. of Samples: 11 D.U./Activity Numbers Y905/C72100

CRL No. 87FP10547-87FP10557

SMO Traffic No. EL 268-EM858

CLP Laboratory: Envirodyne Hrs. Required for Review: 20

Following are our findings:

1. Holding Time. VOA Fraction. Holding Time accepted, but exceeded contract required Time on all samples.
Sample EL 268 1 Day Late
Samples EL 269, EL 270, EM 851-EM 854, EM 856-EM 858. 2 Days Late
Sample EM 855 3 Days Late
SV Fraction Sample EM 853 Extraction 4 days Late Holding Time accepted.

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above. R.H. 9/9/87
( ) 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)

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2 OF 8

RECEIVED SEP 15 1987

DATA QUALIFIERS

Contractor: ENVIRODYNE

Case 7351

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

2. Three Volatile Samples, EM 856, EM 857, EM 858 Analyzed 6/24/87 Showed Solvents (methylene Chloride + Acetone) above the Calibration range. These Samples were rerun 7/7/87 (15 days beyond contract required Time) with Smaller aliquots. The dilutions also Showed the methylene Chloride above the Calibration range. Use the data from analysis date 6/24/87 + Flag methylene Chloride + Acetone J

Reviewed by: _____

Phone: _____

Date: _____

RECEIVED SEP 15 1987

DATA QUALIFIERS

Contractor: ENVIRODYNE

Case 7351

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

3. METHOD BLANK VOA FRACTION

(A) DATE OF ANALYSIS 6/23/87 SAMPLE EL 268 - O.K.

(B) " " " 6/24/87 SAMPLES EL 269, EL 270 EM 851 - EM 85F. FLAG METHYLENE CHLORIDE IF THE CONCENTRATION IS < 40 UG/KG. FLAG ACETONE IF THE CONCENTRATION IS < 130 UG/KG

(C) DATE OF ANALYSIS 6/25/87. SAMPLE EM 85T. FLAG THE FOLLOWING COMPOUNDS IF THE CONCENTRATION IS:

METHYLENE CHLORIDE	< 60 UG/KG
ACETONE	< 110 UG/KG
4-METHYL-2-PENTANONE	< 15 UG/KG
2-HEXANONE	< 35 UG/KG
TOLUENE	< 10 UG/KG

Reviewed by: _____

Phone: _____

Date: _____

RECEIVED SEP 15 1987

DATA QUALIFIERS

Contractor: Ennirodyne

Case 7351

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

4. Surrogate of Recovery. pesticide fraction.
7 out of 12 outside QC Limits. No pesticide
found in samples.

5. MS/MSD } QC Acceptable.
6. GC/MS tuning }
7. VOA Initial + Continuing Calibration. see page 6
8 SV " + " " See pages 7+8

pesticide

Packed Column 6/30/87		Capillary Column 7/7/87	
Linearity	QC	Linearity - out of QC Limit	
4,4'-DDT/Endrin Breakdown/Acceptable		4,4'-DDT/Endrin Breakdown	QC
Rt Shift for DBC		Rt Shift for DBC	O.K.

Reviewed by: _____

Phone: _____

Date: _____

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5 OF 6

RECEIVED SEP 15 1987

DATA QUALIFIERS

Contractor: ENVIRODYNE

Case 7351

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

Pesticide Cont.
7/1/87 Quantitation out of QC Limit
7/7/87 " QC Acceptable
No pesticide found in samples

ALL of the data does not meet contract criteria but usable

Reviewed by: Robert Hill

Phone: (312) 886-1970

Date: 9-9-87

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 15 1987

INSTRUMENT 5985-1	Init. Cal.			Cont. Cal. 7:45			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6-15-87			6-15-87/											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride		70	J		40	J									
Acetone		68	J		31	J									
Carbon Disulfide					33	J									
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

MB#3	MB#3				
EM855	EM855				

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

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 15 1987

INSTRUMENT 5985-2	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6-18-87			6-23-87/18:20			6-24-87/11:38								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone		44.1	J		30.9	J		43.7	J						
Carbon Disulfide								35.4	J						
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

MB #1	MB #1	MB #2	
MB #2	EL268-EL270	EM854	
EL268-EL270	EM851-EM853	EM856-EM858	
EM851-EM854			
EM856-EM858			

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

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 15 1987

INSTRUMENT 5985-1	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7-7-87														
	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:

MB#4
EM856DL
EM857DL
EM858DL

* 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# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 15 1987

INSTRUMENT 5996	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7-1-87														
	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	.027		R												
Acenaphthene															
2,4-Dinitrophenol		34.8	J												
4-Nitrophenol		32.5	J												
Dibenzofuran															

AFFECTED SAMPLES:

EL269
EL270
EM851
EM852

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

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 15 1987

INSTRUMENT 5996	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7-1-87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline	.016	36.1	R												
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 15 1987

INSTRUMENT 5996	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7-2-87														
	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		31.3	J												
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline	.025		R												
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol		43.8	J												
Dibenzofuran		42.2	J												

AFFECTED SAMPLES:

EM554-EM858
EM858 MS
EM858 MSD

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

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 15 1987

INSTRUMENT 5996	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7-2-87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline	016		R												
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

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

CASE# 7357 CONTRACTOR ENVIRODYNE

RECEIVED SEP 15 1987

INSTRUMENT 5985-2	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7-2-87														
	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		36.7	J												
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline		48.7	J												
Acenaphthene															
2,4-Dinitrophenol		40.3	J												
4-Nitrophenol		37.4	J												
Dibenzofuran															

AFFECTED SAMPLES:

EL268
EM853
EL268MS
EL268MSD

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

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

CASE# 7351 CONTRACTOR ENVIRODYNE

RECEIVED SEP 15 1987

INSTRUMENT 5985-2	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7-2-87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline	.011		R												
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

15-15

ENVIRODYNE
ENGINEERS

12161 Lackland Road
St. Louis, Missouri 63146
(314) 434-6960

RECEIVED SEP 15 1987

July 10, 1987

Ms. Carol Shaeffer
Sample Management Office
209 Madison Street, Suite 200
Alexandria, Virginia 22314

Dear Ms. Shaeffer:

Enclosed are partial results of analysis of Case 7351 for Volatiles, BNAs, and Pesticide/PCBs performed by Envirodyne under Contract No. 68-01-7087. Eleven soil samples, EL268 through EL270, and EM851 through EM858, were received on June 12, 1987. The samples were screened for semivolatile levels by GC; EL268 and EM853 were run as medium level samples based on screening results. All low level semivolatile extracts were cleaned up on GPC.

A matrix spike and matrix spike duplicate, the second for this case, were run for both levels of semivolatiles. Volatile QC to cover the second set of twenty samples on the case will be submitted with the samples received on June 19, 1987.

Three volatile samples, EM856, EM857, and EM858, showed solvents (methylene chloride and acetone) above the calibration range. These samples were rerun with smaller aliquots on July 7. The dilutions also showed the methylene chloride above the calibration range, and concentrations of the compound were much higher than those on the 5 gram aliquot. The samples had a very muddy consistency, and we feel that the surface area of soil exposed during purging is a factor in determining purge efficiency of methylene chloride. Another explanation for these results could be that the solvents were a contamination from the sample bottles; if this were the case, different locations of the sample in the bottle could yield different solvent concentrations. We are submitting both the undiluted and diluted sample results, but have no results below the calibration range. Toluene-d_8 was higher than the control limits for two of the three undiluted samples, but in control on one of the diluted samples.

If you have any questions about this report, please contact me.

Sincerely,

Margaret C. Winter

Margaret C. Winter
Project Manager

MCW/jag
Enclosure

METHOD BLANK SUMMARY

Case No. 7351 Region V Contractor ENVIRODYNE Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (NSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
MB med (BN483)	7-7-87	BNA	Soil	M	5985-2		unknown	13 000J	ug/kg	—
							unknown	11 000J	"	—
MB low (A7458)	7-8-87	BNA	soil	L	5996	117-81-7	bis (2-ethylhexyl) phthalate	230	"	330
							unknown	2600J	"	
							unknown	670J	"	
							unknown	760J	"	
							unknown	690J	"	
							unknown	410J	"	
							unknown	200J	"	
							unknown	400J	"	
							unknown	2100J	"	
							unknown	1000J	"	
MB*1 B6362	6-23-87	VOA	Soil	L	5985-2	75-09-2	methylene chloride	5	"	5
MB*2 B6376	6-24-87	VOA	Soil	L	5985-2	75-09-2	methylene chloride	4	"	5
						67-64-1	acetone	13	"	10

Comments:

RECEIVED SEP 15 1987

FORM IV

Pg 1 of 2

7/85

METHOD BLANK SUMMARY

Case No. 7351 Region V Contractor ENVIRODYNE ENGINEERS INC Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
M. BLANK #1	7/1/87	BNA/PEST	SOIL	L	5		ALL COMPOUNDS < CRDL			
M. BLANK #1	7/6/87	BNA/PEST	SOIL	M	5		ALL COMPOUNDS < CRDL			
MB# 3 (23535)	6-25-87	VOA	SOIL	L	5985-1	75-09-2	methylene chloride	6	ug/kg	5
						67-64-1	acetone	11	"	10
						108-10-1	4-methyl-2-pentanone	3	"	10
						591-78-6	2-hexanone	7	"	10
						108-88-3	toluene	1	"	5
MB# 4 (23632)	7-7-87	VOA	SOIL	L	5985-1	75-09-2	methylene chloride	11	"	5
						67-64-1	acetone	7	"	10
						591-78-6	2-hexanone	3	"	10
						79-34-5	1,1,2,2-tetrachloroethane	1	"	5
						108-88-3	toluene	1	"	5

Comments:

FORM IV

Pg 2 of 6

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SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 7951 Contract Laboratory ENVIRODYNE Contract No. 68-01-7087

Low ✓ 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)
EL 268	106	97	96	see	med	level						
EL 269	109	94	97	56	75	79			60	58	41	305 *
EL 270	103	100	97	52	63	95			59	63	43	278 *
EM 851	114	87	97	58	60	63			62	59	95	323 *
EM 852	111	94	97	47	43	85			98	109	35	303 *
EM 853	110	99	96	see	Med	level						
EM 854	114	92	95	77	86	84			49	60	39	132
EM 855	107	86	94	79	57	81			82	88	47	152 *
EM 856	117	88	91	74	58	73			38	64	35	125
EM 857	118 *	112	95	78	62	87			42	55	40	274 *
EM 858	136 *	79	90	75	44	111			66	78	30	31
EM 858 MS	X	X	X	83	59	47			102	130 *	52	0 *
EM 858 MSD	X	X	X	81	96	75			98	128 *	60	47
MB #1	100	99	89	64	113	67			66	37	37	95
MB #2	105	105	95	X	X	X			X	X	X	X
MB #3	99	92	97									X
MB #4	96	96	85									X
EM 856 DL	110	86	86									
EM 857 DL	107	86	84									
EM 858 DL	122 *	99	88									

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: _____ out of _____ ; outside of QC limits

Semi-Volatiles: 2 out of 72 ; outside of QC limits

Pesticides: 7 out of 12 ; outside of QC limits

7/85

Comments: _____

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FORM II

SOIL SURROGATE RECOVERY SUMMARY

Case No. 7351 Contract Laboratory ENVIRODYNE Contract No. 68-01-7087

Low _____ Medium ✓

SMO TRAFFIC NO.	VOLATILE: TOLUENE-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLOROETHANE-D4 (70-121)	SEMI-VOLATILE: NITROBENZENE-D5 (23-120)	SEMI-VOLATILE: 2-FLUOROBIPHENYL (30-115)	SEMI-VOLATILE: TERPHENYL-D14 (18-137)	SEMI-VOLATILE:	SEMI-VOLATILE:	SEMI-VOLATILE: PHENOL-D5 (24-113)	SEMI-VOLATILE: 2-FLUOROPHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMOPHENOL (19-122)	PESTICIDE: DIBUTYL-CHLORENDATE ** (20-150)
EL268				83	93	95			87	101	90	64
EM853				87	83	84			81	95	78	42
MB#1				65	76	76			66	71	64	112
EL268MS				78	89	96			84	89	90	123
EL268MSD				71	83	85			77	83	90	295*

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 0 ; outside of QC limits

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

Pesticides: 1 out of 5 ; outside of QC limits

7/85

Comments:

FORM II

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SOIL MATRIX SPIKE MATRIX SPIKE DUPLICATE RECOVERY

Case No. 7951 Contractor ENVIRODYNE Contract No. 68-01-7087

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.	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. EL 268	1,2,4-Trichlorobenzene	100,000	0	88300	88	81300	82	7	23	38-107
	Acenaphthene			118000	118	118000	118	0	19	31-137
	2,4 Dinitrotoluene			95300	95*	99000	99*	4	47	28-89
	Pyrene			126000	126	114000	114	10	36	35-142
	N-Nitrosodi-n-Propylamine			107000	107	94700	95	12	38	41-126
	1,4-Dichlorobenzene			96600	97	85200	85	13	27	28-104
ACID SMO SAMPLE NO. EL 268	Pentachlorophenol	200,000	0	222000	111*	163000	82	30	47	17-109
	Phenol			205000	103*	184000	92*	10	35	26-90
	2-Chlorophenol			225000	112*	204000	102	11	50	25-102
	4-Chloro-3-Methylphenol			218000	107*	207000	104*	5	33	26-103
	4-Nitrophenol			154000	77	138000	69	11	50	11-114
PEST SMO SAMPLE NO. EL 268	Lindane	2000	<CRDL	4065	203*	2050	103	65*	50	46-127
	Heptachlor			4276	214*	1914	100	55*	31	35-130
	Aldrin			4821	241*	3042	155*	43	43	34-132
	Dieldrin	5000		7448	148*	5238	105	34	38	31-134
	Endrin			7703	154*	5348	107	36	45	42-139
	4,4'-DDT			6296	126	4540	91	32	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____ ; outside QC limits
B/N 0 out of 6 ; outside QC limits
ACID 0 out of 5 ; outside QC limits
PEST 2 out of 6 ; outside QC limits

RECOVERY: VOAs ____ out of ____ ; outside QC limits
B/N 2 out of 12 ; outside QC limits
ACID 6 out of 10 ; outside QC limits
PEST 6 out of 12 ; outside QC limits

Comments: _____

FORM III 7/85

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SOIL MATRIX SPI /MATRIX SPIKE DUPLICAT RECOVERY

Case No. 7351 Contractor ENVIRODYNE Contract No. 68-01-7087

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.	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	6670	0	3710	56	4630	69	21	23	38-107
	Acenaphthene			5230	78	6510	99	23*	19	31-137
	2,4 Dinitrotoluene			6730	101*	5680	85	17	47	28-89
	Pyrene			4810	72	5350	80	11	36	35-142
	N-Nitrosodi-n-Propylamine			5910	89	6270	94	4	38	41-126
EM858	1,4-Dichlorobenzene			2940	44	3200	48	9	27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol	13300	0	5790	44	9890	74	51*	47	17-109
	Phenol			12000	90	13100	98*	8	35	26-90
	2-Chlorophenol			13400	101	15100	114*	12	50	25-102
	4-Chloro-3-Methylphenol			11000	83	18400	138*	50*	33	26-103
EM858	4-Nitrophenol			20100	151*	21900	165*	9	50	11-114
PEST SMO SAMPLE NO.	Lindane	60	<CRDL	81	135*	69	115	16	50	46-127
	Heptachlor	60		37	62	49	82	28	31	35-130
	Aldrin	60		59	98	70	117	18	43	34-132
	Dieldrin	150		110	73	130	87	18	38	31-134
	Endrin	150		98	65	120	80	21	45	42-139
EM858	4,4'-DDT	150		74	49	98	65	28	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____ ; outside QC limits
B/N 1 out of 6 ; outside QC limits
ACID 2 out of 5 ; outside QC limits
PEST 0 out of 6 ; outside QC limits

RECOVERY: VOAs ____ out of ____ ; outside QC limits
B/N 1 out of 12 ; outside QC limits
ACID 5 out of 10 ; outside QC limits
PEST 1 out of 12 ; outside QC limits

Comments: _____

FORM III 7/85

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 268

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003034
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

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Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-23-87
Conc/Dil Factor: 5
Percent Moisture (not decanted): 12.8

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	57 U	78-87-5	1,2-Dichloropropane	29 U
74-83-9	Bromomethane	57 U	10061-02-6	trans-1,3-Dichloropropene	29 U
75-01-4	Vinyl Chloride	57 U	79-01-6	Trichloroethene	29 U
75-00-3	Chloroethane	57 U	124-48-1	Dibromochloromethane	29 U
75-09-2	Methylene Chloride	1100 B	79-00-5	1,1,2-Trichloroethane	29 U
67-64-1	Acetone	280	71-43-2	Benzene	29 U
75-15-0	Carbon Disulfide	29 U	10061-01-5	cis-1,3-Dichloropropene	29 U
75-35-4	1,1-Dichloroethene	29 U	110-75-8	2-Chloroethylvinylether	57 U
75-34-3	1,1-Dichloroethane	29 U	75-25-2	Bromoform	29 U
156-60-5	trans-1,2-Dichloroethene	29 U	108-10-1	4-Methyl-2-pentanone	57 U
67-66-3	Chloroform	29 U	591-78-6	2-Hexanone	57 U
107-06-2	1,2-Dichloroethane	29 U	127-18-4	Tetrachloroethene	29 U
78-93-3	2-Butanone	57 U	79-34-5	1,1,2,2-Tetrachloroethane	29 U
71-55-6	1,1,1-Trichloroethane	29 U	108-88-3	Toluene	7 J
56-23-5	Carbon Tetrachloride	29 U	108-90-7	Chlorobenzene	29 U
108-05-4	Vinyl Acetate	57 U	100-41-4	Ethylbenzene	29 U
75-27-4	Bromodichloromethane	29 U	100-42-5	Styrene	29 U
				Total Xylenes	29 U

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 268

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: MEDIUM
Date Extracted/Prepared: 6-26-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 12.8

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	23000 U	83-32-9	Acenaphthene	23000 U
111-44-4	bis-(2-Chloroethyl)ether	23000 U	51-28-5	2,4-Dinitrophenol	110000 U
95-57-8	2-Chlorophenol	23000 U	100-02-7	4-Nitrophenol	110000 U
541-73-1	1,3-Dichlorobenzene	23000 U	132-64-9	Dibenzofuran	23000 U
106-46-7	1,4-Dichlorobenzene	23000 U	121-14-2	2,4-Dinitrotoluene	23000 U
100-51-6	Benzyl Alcohol	23000 U	606-20-2	2,6-Dinitrotoluene	23000 U
95-50-1	1,2-Dichlorobenzene	23000 U	84-66-2	Diethyl phthalate	23000 U
95-48-7	2-Methylphenol	23000 U	7005-72-3	4-Chlorophenyl-phenyl ether	23000 U
39638-32-9	bis-(2-Chloroisopropyl)ether	23000 U	86-73-7	Fluorene	23000 U
106-44-5	4-Methylphenol	23000 U	100-01-6	4-Nitroaniline	110000 U
621-64-7	N-nitroso-Di-n-propylamine	23000 U	534-52-1	4,6-Dinitro-2-Methylphenol	110000 U
67-72-1	Hexachloroethane	23000 U	86-30-6	N-nitrosodiphenylamine (1)	23000 U
98-95-3	Nitrobenzene	23000 U	101-55-3	4-Bromophenyl-phenyl ether	23000 U
78-59-1	Isophorone	23000 U	118-74-1	Hexachlorobenzene	23000 U
88-75-5	2-Nitrophenol	23000 U	87-86-5	Pentachlorophenol	110000 U
105-67-9	2,4-Dimethylphenol	23000 U	85-01-8	Phenanthrene	23000 U
65-85-0	Benzoic Acid	110000 U	120-12-7	Anthracene	23000 U
111-91-1	bis-(Chloroethoxy)Methane	23000 U	84-74-2	Di-n-butyl phthalate	23000 U
120-83-2	2,4-Dichlorophenol	23000 U	206-44-0	Fluoranthene	23000 U
120-82-1	1,2,4-Trichlorobenzene	23000 U	129-00-0	Pyrene	23000 U
91-20-3	Naphthalene	23000 U	85-68-7	Butyl-benzyl-phthalate	23000 U
106-47-8	4-Chloroaniline	23000 U	91-94-1	3,3'-Dichlorobenzidine	45000 U
87-68-3	Hexachlorobutadiene	23000 U	56-55-3	Benzo(a)anthracene	23000 U
59-50-7	4-Chloro-3-methylphenol	23000 U	117-81-7	bis-(2-Ethylhexyl)phthalate	2400 J
91-57-6	2-Methylnaphthalene	23000 U	218-01-9	Chrysene	23000 U
77-47-4	Hexachlorocyclopentadiene	23000 U	117-84-0	Di-n-octyl phthalate	23000 U
88-06-2	2,4,6-Trichlorophenol	23000 U	205-99-2	Benzo(b)fluoranthene	23000 U
95-95-4	2,4,5-Trichlorophenol	110000 U	207-08-9	Benzo(k)fluoranthene	23000 U
91-58-7	2-Chloronaphthalene	23000 U	50-32-8	Benzo(a)pyrene	23000 U
88-74-4	2-Nitroaniline	110000 U	193-39-5	Indeno(1,2,3-cd)pyrene	23000 U
131-11-3	Dimethyl phthalate	23000 U	53-70-3	Dibenzo(a,h)anthracene	23000 U
208-96-8	Acenapthylene	23000 U	191-24-2	Benzo(ghi)perylene	23000 U
99-09-2	3-Nitroaniline	110000 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name Envirodyne Engineers, Inc.
Case No 7351

Sample Number
EL-268

Organics Analysis Data Sheet
(Page 3)

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Soil

Pesticide/PCBs

Concentration Low Medium (Circle One)
Date Extracted/Prepared 6-21-87
Date Analyzed 7-7-87
Conc/Dil Factor 1
Percent Moisture (decanted) —

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	120.0 U
319-85-7	Beta-BHC	120.0 U
319-86-8	Delta-BHC	120.0 U
58-89-9	Gamma-BHC (Lindane)	120 U
76-44-8	Heptachlor	120 U
309-00-2	Aldrin	120 U
1024-57-3	Heptachlor Epoxide	120.0 U
959-98-8	Endosulfan I	120.0 U
60-57-1	Dieldrin	240 U
72-55-9	4,4'-DDE	240.0 U
72-20-8	Endrin	240 U
33213-65-9	Endosulfan II	240.0 U
72-54-8	4,4'-DDD	240.0 U
1031-07-8	Endosulfan Sulfate	240.0 U
50-29-3	4,4'-DDT	240 U
72-43-5	Methoxychlor	1200.0 U
53494-70-5	Endrin Ketone	240.0 U
57-74-9	Chlordane	1200.0 U
8001-35-2	Toxaphene	2400.0 U
12674-11-2	Aroclor-1016	1200.0 U
11104-28-2	Aroclor-1221	1200.0 U
11141-16-5	Aroclor-1232	1200.0 U
53469-21-9	Aroclor-1242	1200.0 U
12672-29-6	Aroclor-1248	1200.0 U
11097-69-1	Aroclor-1254	2400.0 U
11096-82-5	Aroclor-1260	2400.0 U

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 ____ or W_s 1g V_t 10,000 ml V_i 2.0 ml

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL269

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003035
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-24-87
Conc/Dil Factor: 5
Percent Moisture (not decanted): 13.0

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	57 U	78-87-5	1,2-Dichloropropane	29 U
74-83-9	Bromomethane	57 U	10061-02-6	trans-1,3-Dichloropropene	29 U
75-01-4	Vinyl Chloride	57 U	79-01-6	Trichloroethene	29 U
75-00-3	Chloroethane	57 U	124-48-1	Dibromochloromethane	29 U
75-09-2	Methylene Chloride	730 B	79-00-5	1,1,2-Trichloroethane	29 U
67-64-1	Acetone	300 B	71-43-2	Benzene	29 U
75-15-0	Carbon Disulfide	29 U	10061-01-5	cis-1,3-Dichloropropene	29 U
75-35-4	1,1-Dichloroethene	29 U	110-75-8	2-Chloroethylvinylether	57 U
75-34-3	1,1-Dichloroethane	29 U	75-25-2	Bromoform	29 U
156-60-5	trans-1,2-Dichloroethene	29 U	108-10-1	4-Methyl-2-pentanone	57 U
67-66-3	Chloroform	29 U	591-78-6	2-Hexanone	57 U
107-06-2	1,2-Dichloroethane	29 U	127-18-4	Tetrachloroethene	29 U
78-93-3	2-Butanone	57 U	79-34-5	1,1,2,2-Tetrachloroethane	29 U
71-55-6	1,1,1-Trichloroethane	29 U	108-88-3	Toluene	8 J
56-23-5	Carbon Tetrachloride	29 U	108-90-7	Chlorobenzene	29 U
108-05-4	Vinyl Acetate	57 U	100-41-4	Ethylbenzene	29 U
75-27-4	Bromodichloromethane	29 U	100-42-5	Styrene	29 U
				Total Xylenes	29 U

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL269

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-1-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 13

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg
108-95-2	Phenol	760 U
111-44-4	bis-(2-Chloroethyl)ether	760 U
95-57-8	2-Chlorophenol	760 U
541-73-1	1,3-Dichlorobenzene	760 U
106-46-7	1,4-Dichlorobenzene	760 U
100-51-6	Benzyl Alcohol	760 U
95-50-1	1,2-Dichlorobenzene	760 U
95-48-7	2-Methylphenol	760 U
39638-32-9	bis-(2-Chloroisopropyl)ether	760 U
106-44-5	4-Methylphenol	760 U
621-64-7	N-nitroso-Di-n-propylamine	760 U
67-72-1	Hexachloroethane	760 U
98-95-3	Nitrobenzene	760 U
78-59-1	Isophorone	760 U
88-75-5	2-Nitrophenol	760 U
105-67-9	2,4-Dimethylphenol	760 U
65-85-0	Benzoic Acid	3700 U
111-91-1	bis-(Chloroethoxy)Methane	760 U
120-83-2	2,4-Dichlorophenol	760 U
120-82-1	1,2,4-Trichlorobenzene	760 U
91-20-3	Naphthalene	760 U
106-47-8	4-Chloroaniline	760 U
87-68-3	Hexachlorobutadiene	760 U
59-50-7	4-Chloro-3-methylphenol	760 U
91-57-6	2-Methylnaphthalene	760 U
77-47-4	Hexachlorocyclopentadiene	760 U
88-06-2	2,4,6-Trichlorophenol	760 U
95-95-4	2,4,5-Trichlorophenol	3700 U
91-58-7	2-Chloronaphthalene	760 U
88-74-4	2-Nitroaniline	3700 U
131-11-3	Dimethyl phthalate	760 U
208-96-8	Acenapthylene	760 U
99-09-2	3-Nitroaniline	3700 U

CAS No:		ug/kg
83-32-9	Acenaphthene	760 U
51-28-5	2,4-Dinitrophenol	3700 U
100-02-7	4-Nitrophenol	3700 U
132-64-9	Dibenzofuran	760 U
121-14-2	2,4-Dinitrotoluene	760 U
606-20-2	2,6-Dinitrotoluene	760 U
84-66-2	Diethyl phthalate	760 U
7005-72-3	4-Chlorophenyl-phenyl ether	760 U
86-73-7	Fluorene	760 U
100-01-6	4-Nitroaniline	3700 U
534-52-1	4,6-Dinitro-2-Methylphenol	3700 U
86-30-6	N-nitrosodiphenylamine (1)	760 U
101-55-3	4-Bromophenyl-phenyl ether	760 U
118-74-1	Hexachlorobenzene	760 U
87-86-5	Pentachlorophenol	3700 U
85-01-8	Phenanthrene	760 U
120-12-7	Anthracene	760 U
84-74-2	Di-n-butyl phthalate	710 J
206-44-0	Fluoranthene	760 U
129-00-0	Pyrene	760 U
85-68-7	Butyl-benzyl-phthalate	760 U
91-94-1	3,3'-Dichlorobenzidine	1500 U
56-55-3	Benzo(a)anthracene	760 U
117-81-7	bis-(2-Ethylhexyl)phthalate	480 J
218-01-9	Chrysene	760 U
117-84-0	Di-n-octyl phthalate	760 U
205-99-2	Benzo(b)fluoranthene	760 U
207-08-9	Benzo(k)fluoranthene	760 U
50-32-8	Benzo(a)pyrene	760 U
193-39-5	Indeno(1,2,3-cd)pyrene	760 U
53-70-3	Dibenzo(a,h)anthracene	760 U
191-24-2	Benzo(ghi)perylene	760 U

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(1)-Cannot be separated from diphenylamine

Laboratory Name: Envirodyne Engineers Inc.

Case No: 7351

Sample Number: EL-269

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-19-87

Date Analyzed: 7-1-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 13.0

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4,4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4,4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4,4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ul

Organics Analysis Data Sheet
(Page 1)

Sample Number: EL 270

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003036
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

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Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-24-87
Conc/Dil Factor: 5
Percent Moisture (not decanted): 14.0

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	58 U	78-87-5	1,2-Dichloropropane	29 U
74-83-9	Bromomethane	58 U	10061-02-6	trans-1,3-Dichloropropene	29 U
75-01-4	Vinyl Chloride	58 U	79-01-6	Trichloroethene	29 U
75-00-3	Chloroethane	58 U	124-48-1	Dibromochloromethane	29 U
75-09-2	Methylene Chloride	940 B	79-00-5	1,1,2-Trichloroethane	29 U
67-64-1	Acetone	170 B	71-43-2	Benzene	29 U
75-15-0	Carbon Disulfide	29 U	10061-01-5	cis-1,3-Dichloropropene	29 U
75-35-4	1,1-Dichloroethene	29 U	110-75-8	2-Chloroethylvinylether	58 U
75-34-3	1,1-Dichloroethane	29 U	75-25-2	Bromoform	29 U
156-60-5	trans-1,2-Dichloroethene	29 U	108-10-1	4-Methyl-2-pentanone	58 U
67-66-3	Chloroform	29 U	591-78-6	2-Hexanone	58 U
107-06-2	1,2-Dichloroethane	29 U	127-18-4	Tetrachloroethene	29 U
78-93-3	2-Butanone	58 U	79-34-5	1,1,2,2-Tetrachloroethane	29 U
71-55-6	1,1,1-Trichloroethane	29 U	108-88-3	Toluene	6 J
56-23-5	Carbon Tetrachloride	29 U	108-90-7	Chlorobenzene	29 U
108-05-4	Vinyl Acetate	58 U	100-41-4	Ethylbenzene	29 U
75-27-4	Bromodichloromethane	29 U	100-42-5	Styrene	29 U
				Total Xylenes	29 U

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg. 10J). If limit of detection is 10 ug/l and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EL 27

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-1-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 14

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	770 U	83-32-9	Acenaphthene	770 U
111-44-4	bis-(2-Chloroethyl)ether	770 U	51-28-5	2,4-Dinitrophenol	3700 U
95-57-8	2-Chlorophenol	770 U	100-02-7	4-Nitrophenol	3700 U
541-73-1	1,3-Dichlorobenzene	770 U	132-64-9	Dibenzofuran	770 U
106-46-7	1,4-Dichlorobenzene	770 U	121-14-2	2,4-Dinitrotoluene	770 U
100-51-6	Benzyl Alcohol	770 U	606-20-2	2,6-Dinitrotoluene	770 U
95-50-1	1,2-Dichlorobenzene	770 U	84-66-2	Diethyl phthalate	770 U
95-48-7	2-Methylphenol	770 U	7005-72-3	4-Chlorophenyl-phenyl ether	770 U
39638-32-9	bis-(2-Chloroisopropyl)ether	770 U	86-73-7	Fluorene	770 U
106-44-5	4-Methylphenol	770 U	100-01-6	4-Nitroaniline	3700 U
621-64-7	N-nitroso-Di-n-propylamine	770 U	534-52-1	4,6-Dinitro-2-Methylphenol	3700 U
67-72-1	Hexachloroethane	770 U	86-30-6	N-nitrosodiphenylamine (1)	770 U
98-95-3	Nitrobenzene	770 U	101-55-3	4-Bromophenyl-phenyl ether	770 U
78-59-1	Isophorone	770 U	118-74-1	Hexachlorobenzene	770 U
88-75-5	2-Nitrophenol	770 U	87-86-5	Pentachlorophenol	3700 U
105-67-9	2,4-Dimethylphenol	770 U	85-01-8	Phenanthrene	770 U
65-85-0	Benzoic Acid	3700 U	120-12-7	Anthracene	770 U
111-91-1	bis-(Chloroethoxy)Methane	770 U	84-74-2	Di-n-butyl phthalate	1000
120-83-2	2,4-Dichlorophenol	770 U	206-44-0	Fluoranthene	49 J
120-82-1	1,2,4-Trichlorobenzene	770 U	129-00-0	Pyrene	52 J
91-20-3	Naphthalene	770 U	85-68-7	Butyl-benzyl-phthalate	51 J
106-47-8	4-Chloroaniline	770 U	91-94-1	3,3'-Dichlorobenzidine	1500 U
87-68-3	Hexachlorobutadiene	770 U	56-55-3	Benzo(a)anthracene	65 J
59-50-7	4-Chloro-3-methylphenol	770 U	117-81-7	bis-(2-Ethylhexyl)phthalate	550 ~~B~~ 45 PSC
91-57-6	2-Methylnaphthalene	770 U	218-01-9	Chrysene	770 U
77-47-4	Hexachlorocyclopentadiene	770 U	117-84-0	Di-n-octyl phthalate	67 J
88-06-2	2,4,6-Trichlorophenol	770 U	205-99-2	Benzo(b)fluoranthene	53 J
95-95-4	2,4,5-Trichlorophenol	3700 U	207-08-9	Benzo(k)fluoranthene	69 J
91-58-7	2-Chloronaphthalene	770 U	50-32-8	Benzo(a)pyrene	770 U
88-74-4	2-Nitroaniline	3700 U	193-39-5	Indeno(1,2,3-cd)pyrene	62 J
131-11-3	Dimethyl phthalate	770 U	53-70-3	Dibenzo(a,h)anthracene	65 J
208-96-8	Acenapthylene	770 U	191-24-2	Benzo(ghi)perylene	770 U
99-09-2	3-Nitroaniline	3700 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name: Envirodyne Engineers, Inc.
Case No: 7351

Sample Number: EL-270

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-1-87
Conc/Dil Factor: 1
Percent Moisture (decanted) 14.1

GPC Cleanup ☑Yes ☐No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

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CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4,4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4,4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4,4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ml

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 854

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003037
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

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Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-24-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 12.9

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	11 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	11 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	11 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	11 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	28 B U5	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	73 B45 PJC	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	11 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	11 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	11 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	11 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	11 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg,10U) based on recovery concent./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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 851

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-1-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 12.9

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg
108-95-2	Phenol	760 U
111-44-4	bis-(2-Chloroethyl)ether	760 U
95-57-8	2-Chlorophenol	760 U
541-73-1	1,3-Dichlorobenzene	760 U
106-46-7	1,4-Dichlorobenzene	760 U
100-51-6	Benzyl Alcohol	760 U
95-50-1	1,2-Dichlorobenzene	760 U
95-48-7	2-Methylphenol	760 U
39638-32-9	bis-(2-Chloroisopropyl)ether	760 U
106-44-5	4-Methylphenol	760 U
621-64-7	N-nitroso-Di-n-propylamine	760 U
67-72-1	Hexachloroethane	760 U
98-95-3	Nitrobenzene	760 U
78-59-1	Isophorone	760 U
88-75-5	2-Nitrophenol	760 U
105-67-9	2,4-Dimethylphenol	760 U
65-85-0	Benzoic Acid	3700 U
111-91-1	bis-(Chloroethoxy)Methane	760 U
120-83-2	2,4-Dichlorophenol	760 U
120-82-1	1,2,4-Trichlorobenzene	760 U
91-20-3	Naphthalene	760 U
106-47-8	4-Chloroaniline	760 U
87-68-3	Hexachlorobutadiene	760 U
59-50-7	4-Chloro-3-methylphenol	760 U
91-57-6	2-Methylnaphthalene	760 U
77-47-4	Hexachlorocyclopentadiene	760 U
88-06-2	2,4,6-Trichlorophenol	760 U
95-95-4	2,4,5-Trichlorophenol	3700 U
91-58-7	2-Chloronaphthalene	760 U
88-74-4	2-Nitroaniline	3700 U
131-11-3	Dimethyl phthalate	760 U
208-96-8	Acenapthylene	760 U
99-09-2	3-Nitroaniline	3700 U

CAS No:		ug/kg
83-32-9	Acenaphthene	760 U
51-28-5	2,4-Dinitrophenol	3700 U
100-02-7	4-Nitrophenol	3700 U
132-64-9	Dibenzofuran	760 U
121-14-2	2,4-Dinitrotoluene	760 U
606-20-2	2,6-Dinitrotoluene	760 U
84-66-2	Diethyl phthalate	760 U
7005-72-3	4-Chlorophenyl-phenyl ether	760 U
86-73-7	Fluorene	760 U
100-01-6	4-Nitroaniline	3700 U
534-52-1	4,6-Dinitro-2-Methylphenol	3700 U
86-30-6	N-nitrosodiphenylamine (1)	760 U
101-55-3	4-Bromophenyl-phenyl ether	760 U
118-74-1	Hexachlorobenzene	760 U
87-86-5	Pentachlorophenol	3700 U
85-01-8	Phenanthrene	760 U
120-12-7	Anthracene	760 U
84-74-2	Di-n-butyl phthalate	920
206-44-0	Fluoranthene	760 U
129-00-0	Pyrene	760 U
85-68-7	Butyl-benzyl-phthalate	760 U
91-94-1	3,3'-Dichlorobenzidine	1500 U
56-55-3	Benzo(a)anthracene	760 U
117-81-7	bis-(2-Ethylhexyl)phthalate	370 ~~BJ~~ 45 PJC
218-01-9	Chrysene	760 U
117-84-0	Di-n-octyl phthalate	760 U
205-99-2	Benzo(b)fluoranthene	760 U
207-08-9	Benzo(k)fluoranthene	760 U
50-32-8	Benzo(a)pyrene	760 U
193-39-5	Indeno(1,2,3-cd)pyrene	760 U
53-70-3	Dibenzo(a,h)anthracene	760 U
191-24-2	Benzo(ghi)perylene	760 U

(1)-Cannot be separated from diphenylamine

Laboratory Name Envirodyne Engineers Inc.
Case No 7351

Sample Number
EM 851

Organics Analysis Data Sheet
(Page 3)

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Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-1-87
Conc/Dil Factor: 1
Percent Moisture (decanted) 12.9

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ul V_i 2.0ul

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 852

RECEIVED SEP 15 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003038
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-24-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 12.8

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	11 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	11 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	11 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	11 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	56 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	45 BJ psc	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	11 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	11 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	11 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	11 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	11 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ugl and a concentration of 3 ugl is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 852

RECEIVED SEP 15 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-1-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 12.8

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	760 U	83-32-9	Acenaphthene	760 U
111-44-4	bis-(2-Chloroethyl)ether	760 U	51-28-5	2,4-Dinitrophenol	3700 U
95-57-8	2-Chlorophenol	760 U	100-02-7	4-Nitrophenol	3700 U
541-73-1	1,3-Dichlorobenzene	760 U	132-64-9	Dibenzofuran	760 U
106-46-7	1,4-Dichlorobenzene	760 U	121-14-2	2,4-Dinitrotoluene	760 U
100-51-6	Benzyl Alcohol	760 U	606-20-2	2,6-Dinitrotoluene	760 U
95-50-1	1,2-Dichlorobenzene	760 U	84-66-2	Diethyl phthalate	760 U
95-48-7	2-Methylphenol	760 U	7005-72-3	4-Chlorophenyl-phenyl ether	760 U
39638-32-9	bis-(2-Chloroisopropyl)ether	760 U	86-73-7	Fluorene	760 U
106-44-5	4-Methylphenol	760 U	100-01-6	4-Nitroaniline	3700 U
621-64-7	N-nitroso-Di-n-propylamine	760 U	534-52-1	4,6-Dinitro-2-Methylphenol	3700 U
67-72-1	Hexachloroethane	760 U	86-30-6	N-nitrosodiphenylamine (1)	760 U
98-95-3	Nitrobenzene	760 U	101-55-3	4-Bromophenyl-phenyl ether	760 U
78-59-1	Isophorone	760 U	118-74-1	Hexachlorobenzene	760 U
88-75-5	2-Nitrophenol	760 U	87-86-5	Pentachlorophenol	3700 U
105-67-9	2,4-Dimethylphenol	760 U	85-01-8	Phenanthrene	760 U
65-85-0	Benzoic Acid	3700 U	120-12-7	Anthracene	760 U
111-91-1	bis-(Chloroethoxy)Methane	760 U	84-74-2	Di-n-butyl phthalate	840
120-83-2	2,4-Dichlorophenol	760 U	206-44-0	Fluoranthene	760 U
120-82-1	1,2,4-Trichlorobenzene	760 U	129-00-0	Pyrene	760 U
91-20-3	Naphthalene	760 U	85-68-7	Butyl-benzyl-phthalate	760 U
106-47-8	4-Chloroaniline	760 U	91-94-1	3,3'-Dichlorobenzidine	1500 U
87-68-3	Hexachlorobutadiene	760 U	56-55-3	Benzo(a)anthracene	760 U
59-50-7	4-Chloro-3-methylphenol	760 U	117-81-7	bis-(2-Ethylhexyl)phthalate	410 ~~J~~ 45 PJC
91-57-6	2-Methylnaphthalene	760 U	218-01-9	Chrysene	760 U
77-47-4	Hexachlorocyclopentadiene	760 U	117-84-0	Di-n-octyl phthalate	760 U
88-06-2	2,4,6-Trichlorophenol	760 U	205-99-2	Benzo(b)fluoranthene	760 U
95-95-4	2,4,5-Trichlorophenol	3700 U	207-08-9	Benzo(k)fluoranthene	760 U
91-58-7	2-Chloronaphthalene	760 U	50-32-8	Benzo(a)pyrene	760 U
88-74-4	2-Nitroaniline	3700 U	193-39-5	Indeno(1,2,3-cd)pyrene	760 U
131-11-3	Dimethyl phthalate	760 U	53-70-3	Dibenzo(a,h)anthracene	760 U
208-96-8	Acenapthylene	760 U	191-24-2	Benzo(ghi)perylene	760 U
99-09-2	3-Nitroaniline	3700 U			

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM 952

Organics Analysis Data Sheet
(Page 3)

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Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-19-87

Date Analyzed: 7-1-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 12.8

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4,4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4,4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4,4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ml

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 853

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: B7003039
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-24-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 13.7

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	32 B as PSC	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	83 B as PSC	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg.,10U) based on necessary concent./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 (eg. 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

P:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 853

RECEIVED SEP 15 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: MEDIUM
Date Extracted/Prepared: 6-26-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 13.7

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	23000 U	83-32-9	Acenaphthene	23000 U
111-44-4	bis-(2-Chloroethyl)ether	23000 U	51-28-5	2,4-Dinitrophenol	110000 U
95-57-8	2-Chlorophenol	23000 U	100-02-7	4-Nitrophenol	110000 U
541-73-1	1,3-Dichlorobenzene	23000 U	132-64-9	Dibenzofuran	23000 U
106-46-7	1,4-Dichlorobenzene	23000 U	121-14-2	2,4-Dinitrotoluene	23000 U
100-51-6	Benzyl Alcohol	23000 U	606-20-2	2,6-Dinitrotoluene	23000 U
95-50-1	1,2-Dichlorobenzene	23000 U	84-66-2	Diethyl phthalate	23000 U
95-48-7	2-Methylphenol	23000 U	7005-72-3	4-Chlorophenyl-phenyl ether	23000 U
39638-32-9	bis-(2-Chloroisopropyl)ether	23000 U	86-73-7	Fluorene	23000 U
106-44-5	4-Methylphenol	23000 U	100-01-6	4-Nitroaniline	110000 U
621-64-7	N-nitroso-Di-n-propylamine	23000 U	534-52-1	4,6-Dinitro-2-Methylphenol	110000 U
67-72-1	Hexachloroethane	23000 U	86-30-6	N-nitrosodiphenylamine (1)	23000 U
98-95-3	Nitrobenzene	23000 U	101-55-3	4-Bromophenyl-phenyl ether	23000 U
78-59-1	Isophorone	23000 U	118-74-1	Hexachlorobenzene	23000 U
88-75-5	2-Nitrophenol	23000 U	87-86-5	Pentachlorophenol	110000 U
105-67-9	2,4-Dimethylphenol	23000 U	85-01-8	Phenanthrene	23000 U
65-85-0	Benzoic Acid	110000 U	120-12-7	Anthracene	23000 U
111-91-1	bis-(Chloroethoxy)Methane	23000 U	84-74-2	Di-n-butyl phthalate	23000 U
120-83-2	2,4-Dichlorophenol	23000 U	206-44-0	Fluoranthene	23000 U
120-82-1	1,2,4-Trichlorobenzene	23000 U	129-00-0	Pyrene	23000 U
91-20-3	Naphthalene	23000 U	85-68-7	Butyl-benzyl-phthalate	23000 U
106-47-8	4-Chloroaniline	23000 U	91-94-1	3,3'-Dichlorobenzidine	46000 U
87-68-3	Hexachlorobutadiene	23000 U	56-55-3	Benzo(a)anthracene	23000 U
59-50-7	4-Chloro-3-methylphenol	23000 U	117-81-7	bis-(2-Ethylhexyl)phthalate	23000 U
91-57-6	2-Methylnaphthalene	23000 U	218-01-9	Chrysene	23000 U
77-47-4	Hexachlorocyclopentadiene	23000 U	117-84-0	Di-n-octyl phthalate	23000 U
88-06-2	2,4,6-Trichlorophenol	23000 U	205-99-2	Benzo(b)fluoranthene	23000 U
95-95-4	2,4,5-Trichlorophenol	110000 U	207-08-9	Benzo(k)fluoranthene	23000 U
91-58-7	2-Chloronaphthalene	23000 U	50-32-8	Benzo(a)pyrene	23000 U
88-74-4	2-Nitroaniline	110000 U	193-39-5	Indeno(1,2,3-cd)pyrene	23000 U
131-11-3	Dimethyl phthalate	23000 U	53-70-3	Dibenzo(a,h)anthracene	23000 U
208-96-8	Acenapthylene	23000 U	191-24-2	Benzo(ghi)perylene	23000 U
99-09-2	3-Nitroaniline	110000 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name Envirodyne Engineers, Inc.

Case No 7351

Sample Number EM 853

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Organics Analysis Data Sheet
(Page 3)

Soil

Pesticide/PCBs

Concentration Low Medium (Circle One)

Date Extracted/Prepared: 6-21-87

Date Analyzed: 7-7-87

Conc/Dil Factor: 1

Percent Moisture (decanted) —

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	120.0 U
319-85-7	Beta-BHC	120.0 U
319-86-8	Delta-BHC	120.0 U
58-89-9	Gamma-BHC (Lindane)	120 U
76-44-8	Heptachlor	120 U
309-00-2	Aldrin	120 U
1024-57-3	Heptachlor Epoxide	120.0 U
959-98-8	Endosulfan I	120.0 U
60-57-1	Dieldrin	240 U
72-55-9	4, 4'-DDE	240.0 U
72-20-8	Endrin	240 U
33213-65-9	Endosulfan II	240.0 U
72-54-8	4, 4'-DDD	240.0 U
1031-07-8	Endosulfan Sulfate	240.0 U
50-29-3	4, 4'-DDT	240 U
72-43-5	Methoxychlor	1200.0 U
53494-70-5	Endrin Ketone	240.0 U
57-74-9	Chlordane	1200.0 U
8001-35-2	Toxaphene	2400.0 U
12674-11-2	Aroclor-1016	1200.0 U
11104-28-2	Aroclor-1221	1200.0 U
11141-16-5	Aroclor-1232	1200.0 U
53469-21-9	Aroclor-1242	1200.0 U
12672-29-6	Aroclor-1248	1200.0 U
11097-69-1	Aroclor-1254	2400.0 U
11096-82-5	Aroclor-1260	2400.0 U

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 ____ or W_s 1g V_t 10,000ml V_i 2.0ml

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 854

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003040
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-24-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 13.6

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	31 B ug	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	60 B ug PJC	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	5 J
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg.,10U) based on necessary concent./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 (eg. 10J). If limit of detection is 10 ug/l and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

RECEIVED SEP 15 '87

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 854

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 13.6

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ugkg	CAS No:		ugkg
108-95-2	Phenol	760 U	83-32-9	Acenaphthene	760 U
111-44-4	bis-(2-Chloroethyl)ether	760 U	51-28-5	2,4-Dinitrophenol	3700 U
95-57-8	2-Chlorophenol	760 U	100-02-7	4-Nitrophenol	3700 U
541-73-1	1,3-Dichlorobenzene	760 U	132-64-9	Dibenzofuran	760 U
106-46-7	1,4-Dichlorobenzene	760 U	121-14-2	2,4-Dinitrotoluene	760 U
100-51-6	Benzyl Alcohol	760 U	606-20-2	2,6-Dinitrotoluene	760 U
95-50-1	1,2-Dichlorobenzene	760 U	84-66-2	Diethyl phthalate	50 J
95-48-7	2-Methylphenol	760 U	7005-72-3	4-Chlorophenyl-phenyl ether	760 U
39638-32-9	bis-(2-Chloroisopropyl)ether	760 U	86-73-7	Fluorene	760 U
106-44-5	4-Methylphenol	760 U	100-01-6	4-Nitroaniline	3700 U
621-64-7	N-nitroso-Di-n-propylamine	760 U	534-52-1	4,6-Dinitro-2-Methylphenol	3700 U
67-72-1	Hexachloroethane	760 U	86-30-6	N-nitrosodiphenylamine (1)	760 U
98-95-3	Nitrobenzene	760 U	101-55-3	4-Bromophenyl-phenyl ether	760 U
78-59-1	Isophorone	760 U	118-74-1	Hexachlorobenzene	760 U
88-75-5	2-Nitrophenol	760 U	87-86-5	Pentachlorophenol	3700 U
105-67-9	2,4-Dimethylphenol	760 U	85-01-8	Phenanthrene	56 J
65-85-0	Benzoic Acid	3700 U	120-12-7	Anthracene	760 U
111-91-1	bis-(Chloroethoxy)Methane	760 U	84-74-2	Di-n-butyl phthalate	770
120-83-2	2,4-Dichlorophenol	760 U	206-44-0	Fluoranthene	64 J
120-82-1	1,2,4-Trichlorobenzene	760 U	129-00-0	Pyrene	68 J
91-20-3	Naphthalene	760 U	85-68-7	Butyl-benzyl-phthalate	55 J
106-47-8	4-Chloroaniline	760 U	91-94-1	3,3'-Dichlorobenzidine	1500 U
87-68-3	Hexachlorobutadiene	760 U	56-55-3	Benzo(a)anthracene	760 U
59-50-7	4-Chloro-3-methylphenol	760 U	117-81-7	bis-(2-Ethylhexyl)phthalate	380 ~~JB~~ UJ PJC
91-57-6	2-Methylnaphthalene	760 U	218-01-9	Chrysene	760 U
77-47-4	Hexachlorocyclopentadiene	760 U	117-84-0	Di-n-octyl phthalate	760 U
88-06-2	2,4,6-Trichlorophenol	760 U	205-99-2	Benzo(b)fluoranthene	57 J
95-95-4	2,4,5-Trichlorophenol	3700 U	207-08-9	Benzo(k)fluoranthene	760 U
91-58-7	2-Chloronaphthalene	760 U	50-32-8	Benzo(a)pyrene	760 U
88-74-4	2-Nitroaniline	3700 U	193-39-5	Indeno(1,2,3-cd)pyrene	760 U
131-11-3	Dimethyl phthalate	760 U	53-70-3	Dibenzo(a,h)anthracene	760 U
208-96-8	Acenapthylene	760 U	191-24-2	Benzo(ghi)perylene	760 U
99-09-2	3-Nitroaniline	3700 U			

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM 854

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-19-87

Date Analyzed: 7-1-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 13.6

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ul V_i 2.0ul

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 855

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003041
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-25-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 12.7

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	11 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	11 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	11 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	11 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	21 B 45	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	82 B 45 pjc	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	11 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	11 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	11 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	11 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	11 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 855

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 12.7

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	760 U	83-32-9	Acenaphthene	760 U
111-44-4	bis-(2-Chloroethyl)ether	760 U	51-28-5	2,4-Dinitrophenol	3700 U
95-57-8	2-Chlorophenol	760 U	100-02-7	4-Nitrophenol	3700 U
541-73-1	1,3-Dichlorobenzene	760 U	132-64-9	Dibenzofuran	760 U
106-46-7	1,4-Dichlorobenzene	760 U	121-14-2	2,4-Dinitrotoluene	760 U
100-51-6	Benzyl Alcohol	760 U	606-20-2	2,6-Dinitrotoluene	760 U
95-50-1	1,2-Dichlorobenzene	760 U	84-66-2	Diethyl phthalate	760 U
95-48-7	2-Methylphenol	760 U	7005-72-3	4-Chlorophenyl-phenyl ether	760 U
39638-32-9	bis-(2-Chloroisopropyl)ether	760 U	86-73-7	Fluorene	760 U
106-44-5	4-Methylphenol	760 U	100-01-6	4-Nitroaniline	3700 U
621-64-7	N-nitroso-Di-n-propylamine	760 U	534-52-1	4,6-Dinitro-2-Methylphenol	3700 U
67-72-1	Hexachloroethane	760 U	86-30-6	N-nitrosodiphenylamine (1)	760 U
98-95-3	Nitrobenzene	760 U	101-55-3	4-Bromophenyl-phenyl ether	760 U
78-59-1	Isophorone	760 U	118-74-1	Hexachlorobenzene	760 U
88-75-5	2-Nitrophenol	760 U	87-86-5	Pentachlorophenol	3700 U
105-67-9	2,4-Dimethylphenol	760 U	85-01-8	Phenanthrene	760 U
65-85-0	Benzoic Acid	3700 U	120-12-7	Anthracene	760 U
111-91-1	bis-(Chloroethoxy)Methane	760 U	84-74-2	Di-n-butyl phthalate	1100
120-83-2	2,4-Dichlorophenol	760 U	206-44-0	Fluoranthene	760 U
120-82-1	1,2,4-Trichlorobenzene	760 U	129-00-0	Pyrene	760 U
91-20-3	Naphthalene	760 U	85-68-7	Butyl-benzyl-phthalate	760 U
106-47-8	4-Chloroaniline	760 U	91-94-1	3,3'-Dichlorobenzidine	1500 U
87-68-3	Hexachlorobutadiene	760 U	56-55-3	Benzo(a)anthracene	760 U
59-50-7	4-Chloro-3-methylphenol	760 U	117-81-7	bis-(2-Ethylhexyl)phthalate	650 BJ UJ PJC
91-57-6	2-Methylnaphthalene	760 U	218-01-9	Chrysene	760 U
77-47-4	Hexachlorocyclopentadiene	760 U	117-84-0	Di-n-octyl phthalate	760 U
88-06-2	2,4,6-Trichlorophenol	760 U	205-99-2	Benzo(b)fluoranthene	760 U
95-95-4	2,4,5-Trichlorophenol	3700 U	207-08-9	Benzo(k)fluoranthene	760 U
91-58-7	2-Chloronaphthalene	760 U	50-32-8	Benzo(a)pyrene	760 U
88-74-4	2-Nitroaniline	3700 U	193-39-5	Indeno(1,2,3-cd)pyrene	760 U
131-11-3	Dimethyl phthalate	760 U	53-70-3	Dibenzo(a,h)anthracene	760 U
208-96-8	Acenaphthylene	760 U	191-24-2	Benzo(ghi)perylene	760 U
99-09-2	3-Nitroaniline	3700 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM 8[illegible]

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-19-87

Date Analyzed: 7-1-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 12.7

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ml

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 856

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003042
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-24-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 12

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	11 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	11 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	11 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	11 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	300 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	110 B 5 PSC	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	11 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	11 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	11 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	11 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	11 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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 (eg. 10J). If limit of detection is 10 ug/l and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 85oDL

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003042
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 7-7-87
Conc/Dil Factor: 3
Percent Moisture (not decanted): 12

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	34 U	78-87-5	1,2-Dichloropropane	17 U
74-83-9	Bromomethane	34 U	10061-02-6	trans-1,3-Dichloropropene	17 U
75-01-4	Vinyl Chloride	34 U	79-01-6	Trichloroethene	17 U
75-00-3	Chloroethane	34 U	124-48-1	Dibromochloromethane	17 U
75-09-2	Methylene Chloride	1600 B	79-00-5	1,1,2-Trichloroethane	17 U
67-64-1	Acetone	300 B	71-43-2	Benzene	17 U
75-15-0	Carbon Disulfide	17 U	10061-01-5	cis-1,3-Dichloropropene	17 U
75-35-4	1,1-Dichloroethene	17 U	110-75-8	2-Chloroethylvinylether	34 U
75-34-3	1,1-Dichloroethane	17 U	75-25-2	Bromoform	17 U
156-60-5	trans-1,2-Dichloroethene	17 U	108-10-1	4-Methyl-2-pentanone	34 U
67-66-3	Chloroform	17 U	591-78-6	2-Hexanone	34 U
107-06-2	1,2-Dichloroethane	17 U	127-18-4	Tetrachloroethene	17 U
78-93-3	2-Butanone	34 U	79-34-5	1,1,2,2-Tetrachloroethane	17 U
71-55-6	1,1,1-Trichloroethane	17 U	108-88-3	Toluene	4 BJ
56-23-5	Carbon Tetrachloride	17 U	108-90-7	Chlorobenzene	17 U
108-05-4	Vinyl Acetate	34 U	100-41-4	Ethylbenzene	17 U
75-27-4	Bromodichloromethane	17 U	100-42-5	Styrene	17 U
				Total Xylenes	17 U

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

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Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 85o

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 12

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	750 U	83-32-9	Acenaphthene	750 U
111-44-4	bis-(2-Chloroethyl)ether	750 U	51-28-5	2,4-Dinitrophenol	3600 U
95-57-8	2-Chlorophenol	750 U	100-02-7	4-Nitrophenol	3600 U
541-73-1	1,3-Dichlorobenzene	750 U	132-64-9	Dibenzofuran	750 U
106-46-7	1,4-Dichlorobenzene	750 U	121-14-2	2,4-Dinitrotoluene	750 U
100-51-6	Benzyl Alcohol	750 U	606-20-2	2,6-Dinitrotoluene	750 U
95-50-1	1,2-Dichlorobenzene	750 U	84-66-2	Diethyl phthalate	750 U
95-48-7	2-Methylphenol	750 U	7005-72-3	4-Chlorophenyl-phenyl ether	750 U
39638-32-9	bis-(2-Chloroisopropyl)ether	750 U	86-73-7	Fluorene	750 U
106-44-5	4-Methylphenol	750 U	100-01-6	4-Nitroaniline	3600 U
621-64-7	N-nitroso-Di-n-propylamine	750 U	534-52-1	4,6-Dinitro-2-Methylphenol	3600 U
67-72-1	Hexachloroethane	750 U	86-30-6	N-nitrosodiphenylamine (1)	750 U
98-95-3	Nitrobenzene	750 U	101-55-3	4-Bromophenyl-phenyl ether	750 U
78-59-1	Isophorone	750 U	118-74-1	Hexachlorobenzene	750 U
88-75-5	2-Nitrophenol	750 U	87-86-5	Pentachlorophenol	3600 U
105-67-9	2,4-Dimethylphenol	750 U	85-01-8	Phenanthrene	750 U
65-85-0	Benzoic Acid	3600 U	120-12-7	Anthracene	750 U
111-91-1	bis-(Chloroethoxy)Methane	750 U	84-74-2	Di-n-butyl phthalate	1600
120-83-2	2,4-Dichlorophenol	750 U	206-44-0	Fluoranthene	750 U
120-82-1	1,2,4-Trichlorobenzene	750 U	129-00-0	Pyrene	750 U
91-20-3	Naphthalene	750 U	85-68-7	Butyl-benzyl-phthalate	750 U
106-47-8	4-Chloroaniline	750 U	91-94-1	3,3'-Dichlorobenzidine	1500 U
87-68-3	Hexachlorobutadiene	750 U	56-55-3	Benzo(a)anthracene	750 U
59-50-7	4-Chloro-3-methylphenol	750 U	117-81-7	bis-(2-Ethylhexyl)phthalate	250 J 45 pre
91-57-6	2-Methylnaphthalene	750 U	218-01-9	Chrysene	750 U
77-47-4	Hexachlorocyclopentadiene	750 U	117-84-0	Di-n-octyl phthalate	750 U
88-06-2	2,4,6-Trichlorophenol	750 U	205-99-2	Benzo(b)fluoranthene	750 U
95-95-4	2,4,5-Trichlorophenol	3600 U	207-08-9	Benzo(k)fluoranthene	750 U
91-58-7	2-Chloronaphthalene	750 U	50-32-8	Benzo(a)pyrene	750 U
88-74-4	2-Nitroaniline	3600 U	193-39-5	Indeno(1,2,3-cd)pyrene	750 U
131-11-3	Dimethyl phthalate	750 U	53-70-3	Dibenzo(a,h)anthracene	750 U
208-96-8	Acenapthylene	750 U	191-24-2	Benzo(ghi)perylene	750 U
99-09-2	3-Nitroaniline	3600 U			

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name: Envirodyne Engineers Inc.

Case No: 7351

Sample Number: EM 856

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-19-87

Date Analyzed: 7-1-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 12.1

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ul V_i 2.0ul

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 857

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003043
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-24-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 12.7

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	11 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	11 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	11 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	11 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	350 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	200 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	11 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	11 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	11 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	11 U	79-34-5	1,1,2,2-Tetrachloroethane	~~6 U~~
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	2 J
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	11 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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 (eg. 10J). If limit of detection is 10 ug/l and a concentration of 7 ug/l is calculated, report it 7J

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 857DL

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003043
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 7-7-87
Conc/Dil Factor: 5
Percent Moisture (not decanted): 12.7

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	57 U	78-87-5	1,2-Dichloropropane	29 U
74-83-9	Bromomethane	57 U	10061-02-6	trans-1,3-Dichloropropene	29 U
75-01-4	Vinyl Chloride	57 U	79-01-6	Trichloroethene	29 U
75-00-3	Chloroethane	57 U	124-48-1	Dibromochloromethane	29 U
75-09-2	Methylene Chloride	1600 B	79-00-5	1,1,2-Trichloroethane	29 U
67-64-1	Acetone	340 B	71-43-2	Benzene	29 U
75-15-0	Carbon Disulfide	29 U	10061-01-5	cis-1,3-Dichloropropene	29 U
75-35-4	1,1-Dichloroethene	29 U	110-75-8	2-Chloroethylvinylether	57 U
75-34-3	1,1-Dichloroethane	29 U	75-25-2	Bromoform	29 U
156-60-5	trans-1,2-Dichloroethene	29 U	108-10-1	4-Methyl-2-pentanone	57 U
67-66-3	Chloroform	29 U	591-78-6	2-Hexanone	57 U
107-06-2	1,2-Dichloroethane	29 U	127-18-4	Tetrachloroethene	29 U
78-93-3	2-Butanone	57 U	79-34-5	1,1,2,2-Tetrachloroethane	29 U
71-55-6	1,1,1-Trichloroethane	29 U	108-88-3	Toluene	7 ~~BJ~~ 45 PJC
56-23-5	Carbon Tetrachloride	29 U	108-90-7	Chlorobenzene	29 U
108-05-4	Vinyl Acetate	57 U	100-41-4	Ethylbenzene	29 U
75-27-4	Bromodichloromethane	29 U	100-42-5	Styrene	29 U
				Total Xylenes	29 U

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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 indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J). If limit of detection is 10 ug/l and a concentration of 7 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 857

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 12.7

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg
108-95-2	Phenol	760 U
111-44-4	bis-(2-Chloroethyl)ether	760 U
95-57-8	2-Chlorophenol	760 U
541-73-1	1,3-Dichlorobenzene	760 U
106-46-7	1,4-Dichlorobenzene	760 U
100-51-6	Benzyl Alcohol	760 U
95-50-1	1,2-Dichlorobenzene	760 U
95-48-7	2-Methylphenol	760 U
39638-32-9	bis-(2-Chloroisopropyl)ether	760 U
106-44-5	4-Methylphenol	760 U
621-64-7	N-nitroso-Di-n-propylamine	760 U
67-72-1	Hexachloroethane	760 U
98-95-3	Nitrobenzene	760 U
78-59-1	Isophorone	760 U
88-75-5	2-Nitrophenol	760 U
105-67-9	2,4-Dimethylphenol	760 U
65-85-0	Benzoic Acid	3700 U
111-91-1	bis-(Chloroethoxy)Methane	760 U
120-83-2	2,4-Dichlorophenol	760 U
120-82-1	1,2,4-Trichlorobenzene	760 U
91-20-3	Naphthalene	760 U
106-47-8	4-Chloroaniline	760 U
87-68-3	Hexachlorobutadiene	760 U
59-50-7	4-Chloro-3-methylphenol	760 U
91-57-6	2-Methylnaphthalene	760 U
77-47-4	Hexachlorocyclopentadiene	760 U
88-06-2	2,4,6-Trichlorophenol	760 U
95-95-4	2,4,5-Trichlorophenol	3700 U
91-58-7	2-Chloronaphthalene	760 U
88-74-4	2-Nitroaniline	3700 U
131-11-3	Dimethyl phthalate	760 U
208-96-8	Acenapthylene	760 U
99-09-2	3-Nitroaniline	3700 U

CAS No:		ug/kg
83-32-9	Acenaphthene	760 U
51-28-5	2,4-Dinitrophenol	3700 U
100-02-7	4-Nitrophenol	3700 U
132-64-9	Dibenzofuran	760 U
121-14-2	2,4-Dinitrotoluene	760 U
606-20-2	2,6-Dinitrotoluene	760 U
84-66-2	Diethyl phthalate	760 U
7005-72-3	4-Chlorophenyl-phenyl ether	760 U
86-73-7	Fluorene	760 U
100-01-6	4-Nitroaniline	3700 U
534-52-1	4,6-Dinitro-2-Methylphenol	3700 U
86-30-6	N-nitrosodiphenylamine (1)	760 U
101-55-3	4-Bromophenyl-phenyl ether	760 U
118-74-1	Hexachlorobenzene	760 U
87-86-5	Pentachlorophenol	3700 U
85-01-8	Phenanthrene	760 U
120-12-7	Anthracene	~~760 U~~
84-74-2	Di-n-butyl phthalate	2300
206-44-0	Fluoranthene	760 U
129-00-0	Pyrene	760 U
85-68-7	Butyl-benzyl-phthalate	760 U
91-94-1	3,3'-Dichlorobenzidine	1500 U
56-55-3	Benzo(a)anthracene	760 U
117-81-7	bis-(2-Ethylhexyl)phthalate	370 J B 45 ppc
218-01-9	Chrysene	760 U
117-84-0	Di-n-octyl phthalate	760 U
205-99-2	Benzo(b)fluoranthene	760 U
207-08-9	Benzo(k)fluoranthene	760 U
50-32-8	Benzo(a)pyrene	760 U
193-39-5	Indeno(1,2,3-cd)pyrene	760 U
53-70-3	Dibenzo(a,h)anthracene	760 U
191-24-2	Benzo(ghi)perylene	760 U

(1)-Cannot be separated from diphenylamine

Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM 857

Organics Analysis Data Sheet
(Page 3)

RECEIVED SEP 15 1987

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-19-87

Date Analyzed: 7-1-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 12.7

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ul V_i 2.0ul

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 858

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003044
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No:
Contract No: 68-01-7087
Date Sample Received: 6-12-87

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Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-24-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 11.6

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	11 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	11 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	11 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	11 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	300 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	180 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	11 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	11 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	11 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	11 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	2 J
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	11 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg.,10U) based on necessary concent./dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detectay. 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 indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J). If limit of detection is 10 ug/l and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM 8580L

RECEIVED SEP 15 1987

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003044
Sample Matrix: SOIL
Data Release Authorized By: MCW

Case No: 7351
QC Report No: 131
Contract No: 68-01-7087
Date Sample Received: 6-12-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 7-7-87
Conc/Dil Factor: 5
Percent Moisture (not decanted): 11.6

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	57 U	78-87-5	1,2-Dichloropropane	28 U
74-83-9	Bromomethane	57 U	10061-02-6	trans-1,3-Dichloropropene	28 U
75-01-4	Vinyl Chloride	57 U	79-01-6	Trichloroethene	28 U
75-00-3	Chloroethane	57 U	124-48-1	Dibromochloromethane	28 U
75-09-2	Methylene Chloride	1100 B	79-00-5	1,1,2-Trichloroethane	28 U
67-64-1	Acetone	150 B	71-43-2	Benzene	28 U
75-15-0	Carbon Disulfide	28 U	10061-01-5	cis-1,3-Dichloropropene	28 U
75-35-4	1,1-Dichloroethene	28 U	110-75-8	2-Chloroethylvinylether	57 U
75-34-3	1,1-Dichloroethane	28 U	75-25-2	Bromoform	28 U
156-60-5	trans-1,2-Dichloroethene	28 U	108-10-1	4-Methyl-2-pentanone	57 U
67-66-3	Chloroform	28 U	591-78-6	2-Hexanone	57 U
107-06-2	1,2-Dichloroethane	28 U	127-18-4	Tetrachloroethene	28 U
78-93-3	2-Butanone	57 U	79-34-5	1,1,2,2-Tetrachloroethane	28 U
71-55-6	1,1,1-Trichloroethane	28 U	108-88-3	Toluene	8 ~~BJ~~ HJ PJC
56-23-5	Carbon Tetrachloride	28 U	108-90-7	Chlorobenzene	28 U
108-05-4	Vinyl Acetate	57 U	100-41-4	Ethylbenzene	28 U
75-27-4	Bromodichloromethane	28 U	100-42-5	Styrene	28 U
				Total Xylenes	28 U

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 858

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 11.6

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ugkg
108-95-2	Phenol	750 U
111-44-4	bis-(2-Chloroethyl)ether	750 U
95-57-8	2-Chlorophenol	750 U
541-73-1	1,3-Dichlorobenzene	750 U
106-46-7	1,4-Dichlorobenzene	750 U
100-51-6	Benzyl Alcohol	750 U
95-50-1	1,2-Dichlorobenzene	750 U
95-48-7	2-Methylphenol	750 U
39638-32-9	bis-(2-Chloroisopropyl)ether	750 U
106-44-5	4-Methylphenol	750 U
621-64-7	N-nitroso-Di-n-propylamine	750 U
67-72-1	Hexachloroethane	750 U
98-95-3	Nitrobenzene	750 U
78-59-1	Isophorone	750 U
88-75-5	2-Nitrophenol	750 U
105-67-9	2,4-Dimethylphenol	750 U
65-85-0	Benzoic Acid	3600 U
111-91-1	bis-(Chloroethoxy)Methane	750 U
120-83-2	2,4-Dichlorophenol	750 U
120-82-1	1,2,4-Trichlorobenzene	750 U
91-20-3	Naphthalene	750 U
106-47-8	4-Chloroaniline	750 U
87-68-3	Hexachlorobutadiene	750 U
59-50-7	4-Chloro-3-methylphenol	750 U
91-57-6	2-Methylnaphthalene	750 U
77-47-4	Hexachlorocyclopentadiene	750 U
88-06-2	2,4,6-Trichlorophenol	750 U
95-95-4	2,4,5-Trichlorophenol	3600 U
91-58-7	2-Chloronaphthalene	750 U
88-74-4	2-Nitroaniline	3600 U
131-11-3	Dimethyl phthalate	750 U
208-96-8	Acenapthylene	750 U
99-09-2	3-Nitroaniline	3600 U

CAS No:		ugkg
83-32-9	Acenaphthene	750 U
51-28-5	2,4-Dinitrophenol	3600 U
100-02-7	4-Nitrophenol	3600 U
132-64-9	Dibenzofuran	750 U
121-14-2	2,4-Dinitrotoluene	750 U
606-20-2	2,6-Dinitrotoluene	750 U
84-66-2	Diethyl phthalate	750 U
7005-72-3	4-Chlorophenyl-phenyl ether	750 U
86-73-7	Fluorene	750 U
100-01-6	4-Nitroaniline	3600 U
534-52-1	4,6-Dinitro-2-Methylphenol	3600 U
86-30-6	N-nitrosodiphenylamine (1)	750 U
101-55-3	4-Bromophenyl-phenyl ether	750 U
118-74-1	Hexachlorobenzene	750 U
87-86-5	Pentachlorophenol	3600 U
85-01-8	Phenanthrene	750 U
120-12-7	Anthracene	750 U
84-74-2	Di-n-butyl phthalate	1000
206-44-0	Fluoranthene	750 U
129-00-0	Pyrene	750 U
85-68-7	Butyl-benzyl-phthalate	750 U
91-94-1	3,3'-Dichlorobenzidine	1500 U
56-55-3	Benzo(a)anthracene	750 U
117-81-7	bis-(2-Ethylhexyl)phthalate	490 BJ UJ PJC
218-01-9	Chrysene	750 U
117-84-0	Di-n-octyl phthalate	750 U
205-99-2	Benzo(b)fluoranthene	750 U
207-08-9	Benzo(k)fluoranthene	750 U
50-32-8	Benzo(a)pyrene	750 U
193-39-5	Indeno(1,2,3-cd)pyrene	750 U
53-70-3	Dibenzo(a,h)anthracene	750 U
191-24-2	Benzo(ghi)perylene	750 U

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name Envirodyne Engineers, Inc.
Case No 7351

Sample Number
EM 858

Organics Analysis Data Sheet
(Page 3)

RECEIVED SEP 15 1987

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6-19-87
Date Analyzed: 7-6-87
Conc/Dil Factor: 1
Percent Moisture (decanted) 11.7

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ul V_i 2.0ul

Case: 7351

Contractor: ENVIRODYNE

RECEIVED SEP 15 1987

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.

Case No: 7351

EL 268

Laboratory ENVIRODYNE Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 15 1987

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		unknown	BNA	4.5	12,000JB
2.		unknown	"	4.8	20,000JB
3.		no peaks	VOA		
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
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28.					
29.					
30.					

Case No: 7351

Sample Number: EC 269

Laboratory: Envirodyne

Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 15 1987

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 96480	2(3H)-Furanone, dihydro	BNA	7.4	580 J
2.	unknown	"	7.5	2200 J
3.	unknown	"	8.1	760 J
4.	unknown	"	9.1	630 J
5.	unknown	"	10.3	500 J
6.	unknown	"	13.1	370 J
7.	hydrocarbon	"	13.3	220 J
	hydrocarbon	"	15.2	440 J
9.	unknown	"	16.6	320 J
10.	hydrocarbon	"	17.0	380 J
11.	hydrocarbon	"	18.7	350 J
12.	unknown	"	20.2	900 J
13.	hydrocarbon	"	21.7	320 J
14.	hydrocarbon	"	21.8	440 J
15.	hydrocarbon	"	23.2	280 J
16.	phthalate	"	24.0	630 J
17.	phthalate	"	24.1	1900 J
18.	phthalate	"	25.2	440 J
19.	hydrocarbon	"	25.7	270 J
20.	hydrocarbon	"	26.9	190 J
21.				
22.	no peaks	VOA		
23.				
24.				
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Case No: 7351

Laboratory: ENVIRODYNE

Sample Number: EL 270

Organics Analysis Data Sheet
(Page 4)

RECEIVED DEC 15 1981

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	96480	2(3H)-Furanone, dihydro	BNA	7.3	780 J
2.		unknown	"	7.4	2100 J
3.		unknown	"	8.0	660 J
4.		unknown	"	9.0	810 J
5.		unknown	"	10.3	1200 J
6.		hydrocarbon	"	13.3	350 J
7.		hydrocarbon	"	15.2	540 J
		hydrocarbon	"	17.0	480 J
9.		hydrocarbon	"	18.1	340 J
10.		hydrocarbon	"	18.7	460 J
11.		unknown	"	20.3	1300 J
12.		hydrocarbon	"	21.0	340 J
13.		hydrocarbon	"	21.7	400 J
14.		hydrocarbon	"	21.8	720 J
15.		hydrocarbon	"	23.3	270 J
16.		phthalate	"	24.1	2700 J
17.		hydrocarbon	"	24.4	280 J
18.		hydrocarbon	"	26.9	330 J
19.		hydrocarbon	"	29.2	620 J
20.		hydrocarbon	"	33.2	400 J
		no library search peaks	VOA		
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Case No: 7351

EM 851

ab: ENVIRODYNE

Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 15 1981

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 96480	2(3H)-Furanone, dihydro-	BNA	7.3	560 J
2.	unknown	"	7.4	2000 J
3.	unknown	"	8.0	640 J
4.	unknown	"	9.0	940 J
5.	unknown	"	10.2	1800 J
6.	hydrocarbon	"	11.3	320 J
7.	hydrocarbon	"	13.3	450 J
8.	hydrocarbon	"	13.6	320 J
9.	hydrocarbon	"	15.2	460 J
10.	hydrocarbon	"	17.0	840 J
11.	hydrocarbon	"	18.0	870 J
12.	hydrocarbon	"	18.7	1100 J
13.	unknown	"	20.2	2200 J
14.	hydrocarbon	"	21.7	2100 J
15.	hydrocarbon	"	21.8	1600 J
16.	phthalate	"	24.0	2500 J
17.	phthalate	"	24.1	4200 J
18.	hydrocarbon	"	24.4	1700 J
19.	phthalate	"	25.2	2300 J
20.	hydrocarbon	"	26.9	1400 J
21.				
2.	no library search peaks	VOA		
23.				
24.				
25.				
26.				
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28.				
29.				
30.				

Case No: 7351

EM852

Laboratory: ENVIRODYNE Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 15 1987

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	96480	2(3H)-Furanone, dihydro-	BNA	7.3	570 J
2.		unknown	"	7.5	2200 J
3.		unknown	"	9.0	690 J
4.		unknown	"	10.2	580 J
5.		hydrocarbon	"	13.3	470 J
6.		hydrocarbon	"	15.6	350 J
7.		hydrocarbon	"	15.2	700 J
8.		hydrocarbon	"	17.0	680 J
9.		hydrocarbon	"	18.1	300 J
10.		hydrocarbon	"	18.7	470 J
11.		hydrocarbon	"	20.2	880 J
12.		hydrocarbon	"	21.0	550 J
13.		hydrocarbon	"	21.7	620 J
14.		hydrocarbon	"	21.8	980 J
15.		hydrocarbon	"	23.1	660 J
16.		hydrocarbon	"	23.2	740 J
17.		phthalate	"	24.0	1900 J
18.		hydrocarbon	"	24.4	360 J
19.		hydrocarbon	"	25.7	370 J
20.		hydrocarbon	"	27.9	1200 J
21.					
22.		no library search peaks	VOA		
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Case No: 7351

Sample Number: EM853

aboratory: ENVIRODYNE Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 1 5 1987

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown	BNA	4.5	8600JB
2.	Unknown	"	4.8	22000JB
3.				
4.	no library search peaks	VOA		
5.				
6.				
7.				
8.				
9.				
10.				
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Laboratory Name: ENVIRODYNE

Case No: 7351

Sample Number: EM854

RECEIVED SEP 15 1981

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	7.5	1900 J
2.	unknown	"	8.0	880 J
3.	unknown	"	9.0	700 J
4.	hydrocarbon	"	11.9	380 J
5.	hydrocarbon	"	13.3	670 J
6.	hydrocarbon	"	15.2	780 J
7.	hydrocarbon	"	17.0	890 J
8.	hydrocarbon	"	18.1	600 J
9.	hydrocarbon	"	18.7	610 J
10. 74381401	Propanoic acid, 2-methyl-, 1-(1,1-dimethyl	"	20.2	1100 J
11.	ethyl)-2-methyl-1,3-propanediyl ester			
12.	hydrocarbon	"	21.7	590 J
13.	hydrocarbon	"	21.8	850 J
14.	hydrocarbon	"	23.1	440 J
15.	hydrocarbon	"	23.2	460 J
16.	phthalate	"	24.0	2900 J
17.	hydrocarbon	"	24.4	330 J
18.	hydrocarbon	"	25.7	350 J
19.	unknown	"	27.9	1500 J
20.	hydrocarbon	"	29.2	550 J
21.	unknown organic acid ester	"	30.1	1000 J
22.				
23.	no library search peaks	VOA		
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Case No: 7351

Laboratory: Enviro-dyne

Sample Number: EM 855

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. 96480	2(3H)-Furanone, dihydro-	BNA	7.2	790 J
2.	unknown	"	7.3	1900 J
3.	unknown	"	8.0	800 J
4.	unknown	"	9.0	620 J
5.	hydrocarbon	"	17.0	490 J
6.	hydrocarbon	"	18.7	430 J
7. 74381401	Propanoic acid, 2-methyl-, 1-(1,1-dimethyl-	"	20.2	1600 J
8.	ethyl)-2-methyl-1,3-propanediyl ester			
9.	hydrocarbon	"	21.7	420 J
10.	hydrocarbon	"	21.8	670 J
11.	hydrocarbon	"	23.1	430 J
12.	hydrocarbon	"	23.2	420 J
13.	phthalate	"	24.1	2800 J
14.	hydrocarbon	"	24.4	280 J
15.	hydrocarbon	"	25.7	320 J
16.	hydrocarbon	"	26.9	300 J
17.	unknown	"	27.9	2100 J
18.	hydrocarbon	"	29.2	560 J
19.	unknown	"	30.1	1300 J
20.	hydrocarbon	"	30.2	480 J
21.	hydrocarbon	"	33.2	450 J
22.				
23. 110543	n-hexane	VOA	224	24 J
24.				
25.				
26.				
27.				
28.				
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Laboratory Name: ENVIRODYNE

Case No: 7351

Sample Number: EM856

RECEIVED SEP 15 1987

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. 96480	2(3H)-Furanone, dihydro-	BNA	7.3	1200 J
2.	unknown	"	7.4	3100 J
3.	unknown	"	8.0	1100 J
4.	unknown	"	9.0	510 J
	hydrocarbon	"	11.3	450 J
6.	hydrocarbon	"	15.2	640 J
7.	hydrocarbon	"	17.0	480 J
8.	hydrocarbon	"	18.7	460 J
9. 74381401	propanoic acid, 2-methyl-, 1-(1-dimethyl	"	20.2	900 J
10.	ethyl-1,3-propanediyl ester			
11.	hydrocarbon	"	21.7	480 J
12.	hydrocarbon	"	21.8	680 J
13.	hydrocarbon	"	23.1	470 J
14.	hydrocarbon	"	23.2	510 J
15.	phthalate	"	24.1	2300 J
16.	hydrocarbon	"	24.4	280 J
17.	hydrocarbon	"	25.7	330 J
18.	hydrocarbon	"	26.9	360 J
	unknown	"	27.9	1600 J
20.	hydrocarbon	"	29.2	670 J
21.	unknown	"	30.1	1200 J
22.	hydrocarbon	"	30.2	540 J
23.				
24.	no library search peaks	VOA		
25.				
26.				
27.				
28.				
29.				
30.				

Laboratory Name: ENVIRODYNE

Case No: 7351

Sample Number: EM 856 DL

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.	no peaks	VOA		
2.				
3.				
4.				
5.				
7.				
8.				
9.				
10.				
1.				
2.				
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RECEIVED SEP 1 5 1987

Case No. 7351

Laboratory. Envirosyne

EM 857

Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 15 1987

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	96450	2(3H)-Furanone, dihydro	BNA	7.3	560 J
2.		unknown	"	7.4	1400 J
3.		unknown	"	8.1	320 J
4.		unknown	"	9.1	470 J
5.		hydrocarbon	"	13.4	400 J
6.		hydrocarbon	"	13.7	420 J
7.		hydrocarbon	"	15.4	1100 J
8.		hydrocarbon	"	16.7	500 J
9.		hydrocarbon	"	17.1	440 J
10.		hydrocarbon	"	18.2	290 J
11.		hydrocarbon	"	18.5	430 J
12.	74381401	propanoic-acid, 2-methyl-1-(1,1-dimethylethyl)	"	20.4	770 J
13.		2-methyl-1,3-propanediyl ester			
14.		hydrocarbon	"	21.8	390 J
15.		hydrocarbon	"	21.9	690 J
16.		hydrocarbon	"	23.2	530 J
17.		hydrocarbon	"	23.4	470 J
18.		phthalate	"	24.2	2300 J
19.		hydrocarbon	"	24.6	330 J
20.		hydrocarbon	"	27.0	270 J
21.	123284	Propanoic acid, 3,3'-thiobis-, di-	"	32.8	1200 J
22.		dodecylester			
23.					
24.		-no library search peaks	VOA		
25.					
26.					
27.					
28.					
29.					
30.					

Laboratory Name: ENVIRODYNE

Case No: 7351

Sample Number: EM857DL

Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 15 1981

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	no peaks	UOA		
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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30.				

Case No. 7351
Laboratory: ENVIRODYNE

Sample Number: EM 858

Organics Analysis Data Sheet
(Page 4)

RECEIVED SEP 15 1987

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	unknown	BNA	7.4	2400 J
2.	unknown	"	8.0	1200 J
3.	hydrocarbon	"	11.3	720 J
4.	hydrocarbon	"	13.4	510 J
5.	hydrocarbon	"	15.3	680 J
6.	hydrocarbon + unknown	"	17.0	1000 J
7.	hydrocarbon	"	18.7	740 J
	hydrocarbon	"	20.3	1100 J
9.	hydrocarbon	"	21.7	790 J
10.	hydrocarbon	"	21.8	1300 J
1.	hydrocarbon	"	23.3	640 J
12.	phthalate	"	24.1	2700 J
13.	hydrocarbon	"	24.4	460 J
4.	hydrocarbon	"	25.7	370 J
15.	hydrocarbon	"	26.9	380 J
16.	unknown	"	27.9	1500 J
7.	hydrocarbon	"	29.2	1200 J
18.	unknown	"	30.1	2800 J
9.	hydrocarbon	"	30.3	920 J
0.	hydrocarbon	"	33.2	790 J
	no library search peaks	VOA		
23.				
24.				
5.				
26.				
27.				
28.				
29.				
30.				

aboratory Name: ENVIRODYNE

Case No: 7351

Sample Number: EM 858DL

RECEIVED SEP 15 1987

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.	no peaks	VOA		
2.				
3.				
4.				
5.				
6.				
8.				
9.				
0.				
11.				
2.				
3.				
14.				
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19.				
20.				
22.				
3.				
4.				
25.				
6.				
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28.				
29.				
30.				

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

Date Received for Review 9/3/87 Date Review Completed 9/8/87

To: Tom Pachowicz

From: Zena Gold-Kaufman

Subject: HOD Landfill

COPY

PAN: ILO141 Case # 7351

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 8	Low Soil 28 → 35	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting: _____

FIT Data Review Findings:
Samples EM 859 - EM 866
Some compounds detected - below CRDL.

_____ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 Page No. 172

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: ~~HO~~ HOD Landfill PAN# IL141 DATE: 9/3/87

CASE # 7351 UNITS- REVIEWER: ZGK

TOX/ PERS	COMPOUND	CRDL	3-5x CRDL	EM 859	EM 862	~~EM~~ 862	864	865		
	Chloromethane	10		8J						
	Chrysene	330		58J						
	Toluene	5			1J					
	Phenanthrene	330			58J	52J ~~58J~~	66J			
	Di-n-octyl phthalate	330				82J		83J		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 9/2/87

RECEIVED SEP 3 1987

SUBJECT: Review of Region V CLP Data
Received for Review on 7/20/87

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

TO: Data User: FIT

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

SITE NAME: HOD Landfill SMO case No. 7351

EPA Data Set No. SF 4129 No. of Samples: 8 D.U./Activity Numbers Y905/C72100

CRL No. 87FP10595-87FP11503

SMO Traffic No. EM859-EM866

CLP Laboratory: Envirodyne Hrs. Required for Review: 8

Following are our findings: This data set consists of eight samples that were analyzed for full organics. all sample holding times were met, GC/MS tuning, column degradation and linearity criteria observed. Initial and continuing calibrations were performed and outliers noted.

Volatile method Blanks contain methylene chloride, acetone, 4-methyl-2-Pentanone, 2-Hexanone, 1,1,2,2-Tetra chloroethane and toluene all of which are less than five times the CRDL.

Semi volatile blanks contained Di-n-Butylphthalate and bis(2-ethylhexyl) Phthalate both less than the CRDL.

All volatile and Pesticide surrogates were within QC limits. One out of 4 semi-volatile surrogates were outside QC limits.

Matrix spike & Matrix spike Duplicate data were submitted for volatile fraction only. All MS/MSD recoveries were ok, one out of five RPD's were out of QC limits

K Gunter 9/1/87

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

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

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

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

CASE# 7357 CONTRACTOR ENVIRODYNE

RECEIVED SEP 3 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6-15-87			6-25-87 / 7:45			6-26-87 / 7:30			6-26-87 / 19:55					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane											28	J			
Vinyl Chloride															
Chloroethane															
Methylene Chloride		70	J		40	J					40	J			
Acetone		68	J		31	J		41	J		51	J			
Carbon Disulfide					33	J		40	J						
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane											28	J			
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											29	J			
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

ALL SAMPLES	EM860	EM861-EM865	EM866
	EM859		

* 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)

RECEIVED SEP 3 1987

CASE# 7351 CONTRACTOR ENVIRODYNE

	Init. Cal.						Init. Cal.						Init. Cal.		
DATE/TIME:	7-2-87						7-6-87						7-10-87		
	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		33.4	J					36.7	J					30.6	J
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline	.049	50.0	R					48.7	J				.027		R
Acenaphthene															
2,4-Dinitrophenol		39.2	J					40.3	J					33.3	J
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

EM861-EM865		EM859		EM866

* 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

RECEIVED SEP 2 1987

CASE# 7351 CONTRACTOR ENVIRODYNE

	Init. Cal.						Init. Cal.						Init. Cal.		
DATE/TIME:	7-2-87						7-6-87						7-10-87		
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline	.011		R				.011		R				.029		R
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

ENVIRODYNE ENGINEERS

12161 Lackland Road,
St. Louis, Missouri 63146
(314) 434-6960

RECEIVED SEP 3 1987

July 17, 1987

Ms. Carol Schaeffer
Sample Management Office
290 Madison Street, Suite 200
Alexandria, Virginia 22314

Dear Ms. Schaeffer:

Enclosed are partial results of analysis of Case 7351 for Volatiles, BNA's and Pesticide/PCB's performed by Envirodyne under contract no. 68-01-7087. Soil samples, EM859 through EM866 were received on June 19, 1987.

The samples were screened for Semi-Volatile levels by GC and they were all shown to be low level samples. All samples were cleaned up on GPC for Pesticide analyses.

A matrix spike and matrix spike duplicate, the second for this case, were run for volatile organic analysis only. Semi-Volatiles and Pesticide/PCB Quality Control Samples were submitted with previous samples on July 10, 1987.

In general, all quality control criteria were met, except sample EM866 had to be re-extracted and analyzed for BNA due to low recovery of one surrogate.

In second column confirmation of pesticides, we observed higher than allowed percent difference for the compounds of interest. However, the samples had been analyzed in between the calibration check standards. The analyses were terminated for corrective action for samples following the last calibration standard.

If you have any questions, please call Dr. Margaret Winter at 314/434-6960.

Sincerely,

Shaaban Ben-Poorat

Shaaban Ben-Poorat
Laboratory Operations Manager

SBP/smb:198
Enclosures

RECEIVED
JUL 20 1987
U.S. EPA, CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 1990-7351 Contract Laboratory Envirodyne Contract No. 68-01-7087

Low ✓ Medium _____

SMO TRAFFIC NO.	VOLATILE: TOLUENE-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLOROETHANE-D4 (70-121)	SEMI-VOLATILE: NITROBENZENE-D5 (23-120)	SEMI-VOLATILE: 2-FLUOROBIPHENYL (30-115)	SEMI-VOLATILE: TERPHENYL-D14 (18-137)			SEMI-VOLATILE: PHENOL-D5 (24-113)	SEMI-VOLATILE: 2-FLUOROPHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMOPHENOL (19-122)	PESTICIDE: ** DIBUTYLCHLORENDATE (20-150)
Em 859	104	87	92	73	93	137			116*	77	25	138
Em 860	105	92	90	44	59	85			56	59	60	95
Em 861	109	92	88	39	54	80			72	56	58	84
Em 862	110	88	87	63	66	68			63	44	36	90
Em 863	107	95	97	45	55	63			69	41	45	79
Em 864	107	80	83	39	44	54			51	38	32	58
Em 865	104	93	89	26	45	67			51	25	40	88
Em 866	107	102	89	70	85	74			81	82	54	74
Em 859 m.s.	114	101	71	NA	NA	NA			NA	NA	NA	NA
Em 859 msd	117	96	94	↓	↓	↓			↓	↓	↓	↓
MB #1	100	92	97	55	59	93			66	51	61	97
MB #2	100	98	94	82	97	92			81	86	69	NA
MB #3	105	109	98	NA	NA	NA			NA	NA	NA	↓

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 39 ; outside of QC limits

Semi-Volatiles: 1 out of 40 ; outside of QC limits

Pesticides: 0 out of 9 ; outside of QC limits

7/86

Comments:

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FORM II

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 1990-7351 Contractor ENVIRODYNE Contract No. 68-01-7087

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. EM859	1,1-Dicholorethene	58	ND	56	97	63	109	12	22	59-172
	Trichloroethene	58	ND	56	97	44	76	24	24	62-137
	Benzene	58	ND	67	116	54	93	22	21*	60-133
	Toluene	58	1.0	57	97	56	95	2	21	59-139
	Chlorobenzene	58	ND	48	83	50	86	4	21	66-142
B/N SMO SAMPLE NO. NA	1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	23	38-107
	Acenaphthene								19	31-137
	2,4 Dinitrotoluene								47	28-89
	Pyrene								36	35-142
	N-Nitrosodi-n-Propylamine								38	41-126
	1,4-Dichlorobenzene								27	28-104
ACID SMO SAMPLE NO. NA	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. NA	Lindane	NA	NA	NA	NA	NA	NA	NA	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 1 out of 5 outside QC limits
B/N 0 out of 0 outside QC limits
ACID 0 out of 0 outside QC limits
PEST 0 out of 0 outside QC limits

RECOVERY: VOAs 0 out of 5 outside QC limits
B/N 0 out of 0 outside QC limits
ACID 0 out of 0 outside QC limits
PEST 0 out of 0 outside QC limits

Comments:

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FORM III 7/85

METHOD BLANK SUMMARY

Case No. 7351 Region IV Contractor Envirodyne Engrs. Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
MB #1	7/2/87	BNA	soil	L	5985-2	84-74-2	Di-n-Butylphthalate	51	ug/kg	330
						117-81-7	bis(2-Ethylhexyl)Phthlate	224	J-J	330
MB #2	7/9/87	BNA	soil	L	5996	117-81-7	bis(2-Ethylhexyl)Phthlate	286	"	330
MB #1	7/9/87	Pest/PCB	soil	L	GC#54		all cmpds < CRDL	–	–	—

Comments:

RECEIVED SEP 3 1987

FORM IV 7/85

MET OD BLANK SUMMA Y

Case No. 7153 Region V Contractor Envirodyne Engrs. Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRQL
MB #1	6/25/87	VOA	Soil	L	5985-1	75-09-2	Methylene Chloride	6	ug/kg	5
						67-64-1	Acetone	11	"	10
						108-10-1	4-methyl-2-Pentanone	3	"	10
						591-78-6	2-Hexanone	7	"	10
MB #2	6/26/87	VOA	Soil	L	5985-1	75-09-2	Methylene Chloride	10	"	5
						67-64-1	Acetone	20	"	10
						108-10-1	4-methyl-2-Pentanone	4	"	10
						591-78-6	2-Hexanone	4	"	10
						79-34-5	1,1,2,2-tetrachloroethane	2	"	5
MB #3	6/26/87	VOA	Soil	L	5985-1	75-09-2	Methylene Chloride	6	"	5
						67-64-1	Acetone	23	"	10
						108-10-1	4-methyl-2-Pentanone	6	"	10
						591-78-6	2-Hexanone	10	"	10
						108-88-3	Toluene	1	"	5

Comments:

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FORM IV 7/85

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EM859

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003138
Sample Matrix: SOIL
Data Release Authorized By: SBB

Case No: 7351
QC Report No: 132
Contract No: 68-01-7087
Date Sample Received: 6/19/87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-25-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 13.73

CAS No:		ugkg	CAS No:		ugkg
74-87-3	Chloromethane	8 J	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	28 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	39 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ugl and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM85

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-24-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 13.73

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	380 U	83-32-9	Acenaphthene	380 U
111-44-4	bis-(2-Chloroethyl)ether	380 U	51-28-5	2,4-Dinitrophenol	1900 U
95-57-8	2-Chlorophenol	380 U	100-02-7	4-Nitrophenol	1900 U
541-73-1	1,3-Dichlorobenzene	380 U	132-64-9	Dibenzofuran	380 U
106-46-7	1,4-Dichlorobenzene	380 U	121-14-2	2,4-Dinitrotoluene	380 U
100-51-6	Benzyl Alcohol	380 U	606-20-2	2,6-Dinitrotoluene	380 U
95-50-1	1,2-Dichlorobenzene	380 U	84-66-2	Diethyl phthalate	380 U
95-48-7	2-Methylphenol	380 U	7005-72-3	4-Chlorophenyl-phenyl ether	380 U
39638-32-9	bis-(2-Chloroisopropyl)ether	380 U	86-73-7	Fluorene	380 U
106-44-5	4-Methylphenol	380 U	100-01-6	4-Nitroaniline	1900 U
621-64-7	N-nitroso-Di-n-propylamine	380 U	534-52-1	4,6-Dinitro-2-Methylphenol	1900 U
67-72-1	Hexachloroethane	380 U	86-30-6	N-nitrosodiphenylamine (1)	380 U
98-95-3	Nitrobenzene	380 U	101-55-3	4-Bromophenyl-phenyl ether	380 U
78-59-1	Isophorone	380 U	118-74-1	Hexachlorobenzene	380 U
88-75-5	2-Nitrophenol	380 U	87-86-5	Pentachlorophenol	1900 U
105-67-9	2,4-Dimethylphenol	380 U	85-01-8	Phenanthrene	380 U
65-85-0	Benzoic Acid	1900 U	120-12-7	Anthracene	380 U
111-91-1	bis-(Chloroethoxy)Methane	380 U	84-74-2	Di-n-butyl phthalate	420 B
120-83-2	2,4-Dichlorophenol	380 U	206-44-0	Fluoranthene	380 U
120-82-1	1,2,4-Trichlorobenzene	380 U	129-00-0	Pyrene	380 U
91-20-3	Naphthalene	380 U	85-68-7	Butyl-benzyl-phthalate	380 U
106-47-8	4-Chloroaniline	380 U	91-94-1	3,3'-Dichlorobenzidine	770 U
87-68-3	Hexachlorobutadiene	380 U	56-55-3	Benzo(a)anthracene	380 U
59-50-7	4-Chloro-3-methylphenol	380 U	117-81-7	bis-(2-Ethylhexyl)phthalate	710 B
91-57-6	2-Methylnaphthalene	380 U	218-01-9	Chrysene	380 U
77-47-4	Hexachlorocyclopentadiene	380 U	117-84-0	Di-n-octyl phthalate	58 J
88-06-2	2,4,6-Trichlorophenol	380 U	205-99-2	Benzo(b)fluoranthene	380 U
95-95-4	2,4,5-Trichlorophenol	1900 U	207-08-9	Benzo(k)fluoranthene	380 U
91-58-7	2-Chloronaphthalene	380 U	50-32-8	Benzo(a)pyrene	380 U
88-74-4	2-Nitroaniline	1900 U	193-39-5	Indeno(1,2,3-cd)pyrene	380 U
131-11-3	Dimethyl phthalate	380 U	53-70-3	Dibenzo(a,h)anthracene	380 U
208-96-8	Acenaphthylene	380 U	191-24-2	Benzo(ghi)perylene	380 U
99-09-2	3-Nitroaniline	1900 U			

(1)-Cannot be separated from diphenylamine

FORM I

Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM 859

Organics Analysis Data Sheet
(Page 3)

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Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-24-87

Date Analyzed: 7-9-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 13.7

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ul

Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM 858

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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	B/N	4.68	2737 J
2.	"	"	5.53	657 J
3.	"	"	6.75	1406 J
4.	"	"	7.98	886 J
5.	a brominated cmpd.	"	10.0	468 J
6. 74540	propanoic acid 2-methyl,	"	17.67	533 J
7.	1,1-dimethylethyl-2-methyl-			
8.	1,3-propanediyl ester)			
9.	unknown	"	19.01	477 J
10.	a phthalate	"	21.31	1550 J
11.	no peaks for I.S.	VOA		
12.				
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Organics Analysis Data Sheet
(Page 1)

Sample Number: EM868

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003140
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 132
Contract No: 68-01-7087
Date Sample Received: 6/19/87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-25-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 14.8

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	92 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	54 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	1 BJ
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	2 BJ
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM0[illegible]

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-24-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 14.78

GPC Cleanup : NO
Sep. Funnel Extraction : YES (NO) (circle one)
Contin. Liq.-Liq. Ext. : YES (NO) (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	390 U	83-32-9	Acenaphthene	390 U
111-44-4	bis-(2-Chloroethyl)ether	390 U	51-28-5	2,4-Dinitrophenol	1900 U
95-57-8	2-Chlorophenol	390 U	100-02-7	4-Nitrophenol	1900 U
541-73-1	1,3-Dichlorobenzene	390 U	132-64-9	Dibenzofuran	390 U
106-46-7	1,4-Dichlorobenzene	390 U	121-14-2	2,4-Dinitrotoluene	390 U
100-51-6	Benzyl Alcohol	390 U	606-20-2	2,6-Dinitrotoluene	390 U
95-50-1	1,2-Dichlorobenzene	390 U	84-66-2	Diethyl phthalate	390 U
95-48-7	2-Methylphenol	390 U	7005-72-3	4-Chlorophenyl-phenyl ether	390 U
39638-32-9	bis-(2-Chloroisopropyl)ether	390 U	86-73-7	Fluorene	390 U
106-44-5	4-Methylphenol	390 U	100-01-6	4-Nitroaniline	1900 U
621-64-7	N-nitroso-Di-n-propylamine	390 U	534-52-1	4,6-Dinitro-2-Methylphenol	1900 U
67-72-1	Hexachloroethane	390 U	86-30-6	N-nitrosodiphenylamine (1)	390 U
98-95-3	Nitrobenzene	390 U	101-55-3	4-Bromophenyl-phenyl ether	390 U
78-59-1	Isophorone	390 U	118-74-1	Hexachlorobenzene	390 U
88-75-5	2-Nitrophenol	390 U	87-86-5	Pentachlorophenol	1900 U
105-67-9	2,4-Dimethylphenol	390 U	85-01-8	Phenanthrene	390 U
65-85-0	Benzoic Acid	1900 U	120-12-7	Anthracene	390 U
111-91-1	bis-(Chloroethoxy)Methane	390 U	84-74-2	Di-n-butyl phthalate	1400 B
120-83-2	2,4-Dichlorophenol	390 U	206-44-0	Fluoranthene	390 U
120-82-1	1,2,4-Trichlorobenzene	390 U	129-00-0	Pyrene	390 U
91-20-3	Naphthalene	390 U	85-68-7	Butyl-benzyl-phthalate	390 U
106-47-8	4-Chloroaniline	390 U	91-94-1	3,3'-Dichlorobenzidine	770 U
87-68-3	Hexachlorobutadiene	390 U	56-55-3	Benzo(a)anthracene	390 U
59-50-7	4-Chloro-3-methylphenol	390 U	117-81-7	bis-(2-Ethylhexyl)phthalate	450 B
91-57-6	2-Methylnaphthalene	390 U	218-01-9	Chrysene	390 U
77-47-4	Hexachlorocyclopentadiene	390 U	117-84-0	Di-n-octyl phthalate	390 U
88-06-2	2,4,6-Trichlorophenol	390 U	205-99-2	Benzo(b)fluoranthene	390 U
95-95-4	2,4,5-Trichlorophenol	1900 U	207-08-9	Benzo(k)fluoranthene	390 U
91-58-7	2-Chloronaphthalene	390 U	50-32-8	Benzo(a)pyrene	390 U
88-74-4	2-Nitroaniline	1900 U	193-39-5	Indeno(1,2,3-cd)pyrene	390 U
131-11-3	Dimethyl phthalate	390 U	53-70-3	Dibenzo(a,h)anthracene	390 U
208-96-8	Acenapthylene	390 U	191-24-2	Benzo(ghi)perylene	390 U
99-09-2	3-Nitroaniline	1900 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM 860

Organics Analysis Data Sheet
(Page 3)

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Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-24-87

Date Analyzed: 7-9-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 14.8

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ul V_i 2.0ul

Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM860

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caj 6/87

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	4.45	1875 J
2.	"	"	5.33	660 J
3.	"	"	6.57	996 J
4.	"	"	7.82	1765 J
5.	hydrocarbon	"	12.75	304 J
6.	"	"	14.44	262 J
7.	"	"	16.02	299 J
8.	unknown	"	17.50	624 J
9.	hydrocarbon	"	19.01	473 J
10.	phthalate	"	21.13	2032 J
11.	hydrocarbon	"	26.09	448 J
12.	unknown	"	26.71	317 J
13.	"	"	26.98	765 J
14.	hydrocarbon	"	27.11	655 J
15.	"	"	28.11	556 J
16.	phthalate	"	28.27	628 J
17.	hydrocarbon	"	29.05	436 J
18.	"	"	29.97	481 J
19.	no peaks for LS	VOA		
20.				
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30.				

Organics Analysis Data Sheet
(Page 1)

Sample Number: EN[illegible]1

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87993141
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 132
Contract No: 68-01-7087
Date Sample Received: 6/19/87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-26-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 15.29

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	21 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	16 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ugl and a concentration of 5 ugl is calculated report as 5J

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM861

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-24-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 15.29

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	390 U	83-32-9	Acenaphthene	390 U
111-44-4	bis-(2-Chloroethyl)ether	390 U	51-28-5	2,4-Dinitrophenol	1900 U
95-57-8	2-Chlorophenol	390 U	100-02-7	4-Nitrophenol	1900 U
541-73-1	1,3-Dichlorobenzene	390 U	132-64-9	Dibenzofuran	390 U
106-46-7	1,4-Dichlorobenzene	390 U	121-14-2	2,4-Dinitrotoluene	390 U
100-51-6	Benzyl Alcohol	390 U	606-20-2	2,6-Dinitrotoluene	390 U
95-50-1	1,2-Dichlorobenzene	390 U	84-66-2	Diethyl phthalate	390 U
95-48-7	2-Methylphenol	390 U	7005-72-3	4-Chlorophenyl-phenyl ether	390 U
39638-32-9	bis-(2-Chloroisopropyl)ether	390 U	86-73-7	Fluorene	390 U
106-44-5	4-Methylphenol	390 U	100-01-6	4-Nitroaniline	1900 U
621-64-7	N-nitroso-Di-n-propylamine	390 U	534-52-1	4,6-Dinitro-2-Methylphenol	1900 U
67-72-1	Hexachloroethane	390 U	86-30-6	N-nitrosodiphenylamine (1)	390 U
98-95-3	Nitrobenzene	390 U	101-55-3	4-Bromophenyl-phenyl ether	390 U
78-59-1	Isophorone	390 U	118-74-1	Hexachlorobenzene	390 U
88-75-5	2-Nitrophenol	390 U	87-86-5	Pentachlorophenol	1900 U
105-67-9	2,4-Dimethylphenol	390 U	85-01-8	Phenanthrene	390 U
65-85-0	Benzoic Acid	1900 U	120-12-7	Anthracene	390 U
111-91-1	bis-(Chloroethoxy)Methane	390 U	84-74-2	Di-n-butyl phthalate	280 BJ
120-83-2	2,4-Dichlorophenol	390 U	206-44-0	Fluoranthene	390 U
120-82-1	1,2,4-Trichlorobenzene	390 U	129-00-0	Pyrene	390 U
91-20-3	Naphthalene	390 U	85-68-7	Butyl-benzyl-phthalate	390 U
106-47-8	4-Chloroaniline	390 U	91-94-1	3,3'-Dichlorobenzidine	780 U
87-68-3	Hexachlorobutadiene	390 U	56-55-3	Benzo(a)anthracene	390 U
59-50-7	4-Chloro-3-methylphenol	390 U	117-81-7	bis-(2-Ethylhexyl)phthalate	390 B
91-57-6	2-Methylnaphthalene	390 U	218-01-9	Chrysene	390 U
77-47-4	Hexachlorocyclopentadiene	390 U	117-84-0	Di-n-octyl phthalate	390 U
88-06-2	2,4,6-Trichlorophenol	390 U	205-99-2	Benzo(b)fluoranthene	390 U
95-95-4	2,4,5-Trichlorophenol	1900 U	207-08-9	Benzo(k)fluoranthene	390 U
91-58-7	2-Chloronaphthalene	390 U	50-32-8	Benzo(a)pyrene	390 U
88-74-4	2-Nitroaniline	1900 U	193-39-5	Indeno(1,2,3-cd)pyrene	390 U
131-11-3	Dimethyl phthalate	390 U	53-70-3	Dibenzo(a,h)anthracene	390 U
208-96-8	Acenaphthylene	390 U	191-24-2	Benzo(ghi)perylene	390 U
99-09-2	3-Nitroaniline	1900 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name: Envirodyne Engineers, Inc.
Case No: 7351

Sample Number: EM 861

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6-24-87
Date Analyzed: 7-9-87
Conc/Dil Factor: 1
Percent Moisture (decanted) 15.3

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ml

Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM861

RECEIVED SEP 3 1987

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	4.34	2263 J
2.	"	"	5.24	1025 J
3.	"	"	6.46	665 J
4.	hydrocarbon	"	7.72	1422 J
5.	"	"	10.90	290 J
6.	"	"	12.74	389 J
7.	"	"	14.44	311 J
8.	"	"	15.42	414 J
9.	"	"	16.02	374 J
10.	"	"	17.52	311 J
11.	"	"	18.93	422 J
12.	"	"	19.02	650 J
13.	"	"	20.26	253 J
14.	"	"	20.39	312 J
15.	"	"	21.54	313 J
16.	unknown	"	27.00	1257 J
17.	"	"	27.15	26014 J
18.				
19.	no peaks for S.S.	VOA		
20.				
21.				
22.				
23.				
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RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM862

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003142
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 132
Contract No: 68-01-7087
Date Sample Received: 6/19/87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analysed: 6-26-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 15.63

CAS No:		ugkg	CAS No:		ugkg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	38 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	49 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	1 J
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

VALUE:
If the result is a value greater than or equal to the detection limit, report the value.
U:
Indicates compound was analysed for but not detected. Report the minimum detection limit for the sample with the U (eg,10U) based on necessary concent./dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analysed 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 (ee. 10J). If limit of detection is 10 ugl and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM862

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-24-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 15.63

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	390 U	83-32-9	Acenaphthene	390 U
111-44-4	bis-(2-Chloroethyl)ether	390 U	51-28-5	2,4-Dinitrophenol	1900 U
95-57-8	2-Chlorophenol	390 U	100-02-7	4-Nitrophenol	1900 U
541-73-1	1,3-Dichlorobenzene	390 U	132-64-9	Dibenzofuran	390 U
106-46-7	1,4-Dichlorobenzene	390 U	121-14-2	2,4-Dinitrotoluene	390 U
100-51-6	Benzyl Alcohol	390 U	606-20-2	2,6-Dinitrotoluene	390 U
95-50-1	1,2-Dichlorobenzene	390 U	84-66-2	Diethyl phthalate	390 U
95-48-7	2-Methylphenol	390 U	7005-72-3	4-Chlorophenyl-phenyl ether	390 U
39638-32-9	bis-(2-Chloroisopropyl)ether	390 U	86-73-7	Fluorene	390 U
106-44-5	4-Methylphenol	390 U	100-01-6	4-Nitroaniline	1900 U
621-64-7	N-nitroso-Di-n-propylamine	390 U	534-52-1	4,6-Dinitro-2-Methylphenol	1900 U
67-72-1	Hexachloroethane	390 U	86-30-6	N-nitrosodiphenylamine (1)	390 U
98-95-3	Nitrobenzene	390 U	101-55-3	4-Bromophenyl-phenyl ether	390 U
78-59-1	Isophorone	390 U	118-74-1	Hexachlorobenzene	390 U
88-75-5	2-Nitrophenol	390 U	87-86-5	Pentachlorophenol	1900 U
105-67-9	2,4-Dimethylphenol	390 U	85-01-8	Phenanthrene	58 J
65-85-0	Benzoic Acid	1900 U	120-12-7	Anthracene	390 U
111-91-1	bis-(Chloroethoxy)Methane	390 U	84-74-2	Di-n-butyl phthalate	150 BJ
120-83-2	2,4-Dichlorophenol	390 U	206-44-0	Fluoranthene	390 U
120-82-1	1,2,4-Trichlorobenzene	390 U	129-00-0	Pyrene	390 U
91-20-3	Naphthalene	390 U	85-68-7	Butyl-benzyl-phthalate	390 U
106-47-8	4-Chloroaniline	390 U	91-94-1	3,3'-Dichlorobenzidine	780 U
87-68-3	Hexachlorobutadiene	390 U	56-55-3	Benzo(a)anthracene	390 U
59-50-7	4-Chloro-3-methylphenol	390 U	117-81-7	bis-(2-Ethylhexyl)phthalate	480 B
91-57-6	2-Methylnaphthalene	390 U	218-01-9	Chrysene	390 U
77-47-4	Hexachlorocyclopentadiene	390 U	117-84-0	Di-n-octyl phthalate	390 U
88-06-2	2,4,6-Trichlorophenol	390 U	205-99-2	Benzo(b)fluoranthene	390 U
95-95-4	2,4,5-Trichlorophenol	1900 U	207-08-9	Benzo(k)fluoranthene	390 U
91-58-7	2-Chloronaphthalene	390 U	50-32-8	Benzo(a)pyrene	390 U
88-74-4	2-Nitroaniline	1900 U	193-39-5	Indeno(1,2,3-cd)pyrene	390 U
131-11-3	Dimethyl phthalate	390 U	53-70-3	Dibenzo(a,h)anthracene	390 U
208-96-8	Acenapthylene	390 U	191-24-2	Benzo(ghi)perylene	390 U
99-09-2	3-Nitroaniline	1900 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name: Envirodyne Engineers, Inc.
Case No: 7351

Sample Number
EM 862

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 6-24-87
Date Analyzed: 7-9-87
Conc/Dil Factor: 1
Percent Moisture (decanted) 15.6

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ml

Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM882

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cag 7/16/87

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	4.33	2199 J
2.	"	"	4.90	761 J
3.	"	"	5.22	992 J
4.	hydrocarbon	"	6.46	549 J
5.	unknown	"	7.74	1038 J
6.	hydrocarbon	"	8.86	491 J
7.	"	"	10.91	499 J
8.	"	"	11.17	493 J
9.	"	"	12.75	719 J
10.	"	"	14.45	564 J
11.	"	"	15.43	767 J
12.	"	"	16.03	616 J
13.	"	"	17.52	456 J
14.	"	"	18.23	258 J
15.	"	"	18.94	361 J
16.	"	"	19.03	1108 J
17.	"	"	20.27	392 J
18.	"	"	20.40	499 J
19.	"	"	21.54	468 J
20.	unknown	"	27.16	23861 J
21.				
22.	no peaks for I.S.	VOA		
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EM863

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003143
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 132
Contract No: 68-01-7087
Date Sample Received: 6/19/87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-26-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 17.54

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	31 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	44 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analysed 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 (eg, 10J). If limit of detection is 10 ugl and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM863

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-24-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 17.54

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	400 U	83-32-9	Acenaphthene	400 U
111-44-4	bis-(2-Chloroethyl)ether	400 U	51-28-5	2,4-Dinitrophenol	1900 U
95-57-8	2-Chlorophenol	400 U	100-02-7	4-Nitrophenol	1900 U
541-73-1	1,3-Dichlorobenzene	400 U	132-64-9	Dibenzofuran	400 U
106-46-7	1,4-Dichlorobenzene	400 U	121-14-2	2,4-Dinitrotoluene	400 U
100-51-6	Benzyl Alcohol	400 U	606-20-2	2,6-Dinitrotoluene	400 U
95-50-1	1,2-Dichlorobenzene	400 U	84-66-2	Diethyl phthalate	400 U
95-48-7	2-Methylphenol	400 U	7005-72-3	4-Chlorophenyl-phenyl ether	400 U
39638-32-9	bis-(2-Chloroisopropyl)ether	400 U	86-73-7	Fluorene	400 U
106-44-5	4-Methylphenol	400 U	100-01-6	4-Nitroaniline	1900 U
621-64-7	N-nitroso-Di-n-propylamine	400 U	534-52-1	4,6-Dinitro-2-Methylphenol	1900 U
67-72-1	Hexachloroethane	400 U	86-30-6	N-nitrosodiphenylamine (1)	400 U
98-95-3	Nitrobenzene	400 U	101-55-3	4-Bromophenyl-phenyl ether	400 U
78-59-1	Isophorone	400 U	118-74-1	Hexachlorobenzene	400 U
88-75-5	2-Nitrophenol	400 U	87-86-5	Pentachlorophenol	1900 U
105-67-9	2,4-Dimethylphenol	400 U	85-01-8	Phenanthrene	51 J
65-85-0	Benzoic Acid	1900 U	120-12-7	Anthracene	400 U
111-91-1	bis-(Chloroethoxy)Methane	400 U	84-74-2	Di-n-butyl phthalate	160 BJ
120-83-2	2,4-Dichlorophenol	400 U	206-44-0	Fluoranthene	400 U
120-82-1	1,2,4-Trichlorobenzene	400 U	129-00-0	Pyrene	400 U
91-20-3	Naphthalene	400 U	85-68-7	Butyl-benzyl-phthalate	400 U
106-47-8	4-Chloroaniline	400 U	91-94-1	3,3'-Dichlorobenzidine	800 U
87-68-3	Hexachlorobutadiene	400 U	56-55-3	Benzo(a)anthracene	400 U
59-50-7	4-Chloro-3-methylphenol	400 U	117-81-7	bis-(2-Ethylhexyl)phthalate	660 B
91-57-6	2-Methylnaphthalene	400 U	218-01-9	Chrysene	400 U
77-47-4	Hexachlorocyclopentadiene	400 U	117-84-0	Di-n-octyl phthalate	82 J
88-06-2	2,4,6-Trichlorophenol	400 U	205-99-2	Benzo(b)fluoranthene	400 U
95-95-4	2,4,5-Trichlorophenol	1900 U	207-08-9	Benzo(k)fluoranthene	400 U
91-58-7	2-Chloronaphthalene	400 U	50-32-8	Benzo(a)pyrene	400 U
88-74-4	2-Nitroaniline	1900 U	193-39-5	Indeno(1,2,3-cd)pyrene	400 U
131-11-3	Dimethyl phthalate	400 U	53-70-3	Dibenzo(a,h)anthracene	400 U
208-96-8	Acenapthylene	400 U	191-24-2	Benzo(ghi)perylene	400 U
99-09-2	3-Nitroaniline	1900 U			

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name: Envirodyne Engineers, Inc.
Case No: 7351

Sample Number
EM 863

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6-24-87
Date Analyzed: 7-9-87
Conc/Dil Factor: 1
Percent Moisture (decanted) 17.5

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ml

Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM863

RECEIVED SEP 3 1987

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

Caj 7/16/87

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (µg/l or µg/kg)
1.	unknown	BNA	4.61	2163 J
2.	"	"	5.48	798 J
3.	unknown hydrocarbon	"	6.64	710 J
4.	unknown	"	7.86	493 J
5.	hydrocarbon	"	8.06	368 J
6.	"	"	8.97	370 J
7.	"	"	10.99	509 J
8.	"	"	11.25	442 J
9.	"	"	12.81	571 J
10.	"	"	14.51	482 J
11.	"	"	15.49	582 J
12.	"	"	16.09	484 J
13.	"	"	17.58	473 J
14.	"	"	18.28	544 J
15.	"	"	18.99	520 J
16.	"	"	19.07	759 J
17.	"	"	20.33	318 J
18.	"	"	20.45	364 J
19.	"	"	21.60	370 J
20.	unknown	"	27.21	19547 J
21.				
22.				
23.	no peaks for I.S.			
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EM864

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003144
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 132
Contract No: 68-01-7087
Date Sample Received: 6/19/87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-26-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 22.93

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	13 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	13 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	13 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	13 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	41 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	84 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	13 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	13 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	13 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	13 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	13 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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. For GC/MS, if limit of detection is 10 ug/l,

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

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Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM864

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-24-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 22.93

GPC Cleanup : NO
Sep. Funnel Extraction : YES ~~NO~~ (circle one)
Contin. Liq.-Liq. Ext. : YES ~~NO~~ (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	430 U	83-32-9	Acenaphthene	430 U
111-44-4	bis-(2-Chloroethyl)ether	430 U	51-28-5	2,4-Dinitrophenol	2100 U
95-57-8	2-Chlorophenol	430 U	100-02-7	4-Nitrophenol	2100 U
541-73-1	1,3-Dichlorobenzene	430 U	132-64-9	Dibenzofuran	430 U
106-46-7	1,4-Dichlorobenzene	430 U	121-14-2	2,4-Dinitrotoluene	430 U
100-51-6	Benzyl Alcohol	430 U	606-20-2	2,6-Dinitrotoluene	430 U
95-50-1	1,2-Dichlorobenzene	430 U	84-66-2	Diethyl phthalate	430 U
95-48-7	2-Methylphenol	430 U	7005-72-3	4-Chlorophenyl-phenyl ether	430 U
39638-32-9	bis-(2-Chloroisopropyl)ether	430 U	86-73-7	Fluorene	430 U
106-44-5	4-Methylphenol	430 U	100-01-6	4-Nitroaniline	2100 U
621-64-7	N-nitroso-Di-n-propylamine	430 U	534-52-1	4,6-Dinitro-2-Methylphenol	2100 U
67-72-1	Hexachloroethane	430 U	86-30-6	N-nitrosodiphenylamine (1)	430 U
98-95-3	Nitrobenzene	430 U	101-55-3	4-Bromophenyl-phenyl ether	430 U
78-59-1	Isophorone	430 U	118-74-1	Hexachlorobenzene	430 U
88-75-5	2-Nitrophenol	430 U	87-86-5	Pentachlorophenol	2100 U
105-67-9	2,4-Dimethylphenol	430 U	85-01-8	Phenanthrene	66 J
65-85-0	Benzoic Acid	2100 U	120-12-7	Anthracene	430 U
111-91-1	bis-(Chloroethoxy)Methane	430 U	84-74-2	Di-n-butyl phthalate	120 BJ
120-83-2	2,4-Dichlorophenol	430 U	206-44-0	Fluoranthene	430 U
120-82-1	1,2,4-Trichlorobenzene	430 U	129-00-0	Pyrene	430 U
91-20-3	Naphthalene	430 U	85-68-7	Butyl-benzyl-phthalate	430 U
106-47-8	4-Chloroaniline	430 U	91-94-1	3,3'-Dichlorobenzidine	860 U
87-68-3	Hexachlorobutadiene	430 U	56-55-3	Benzo(a)anthracene	430 U
59-50-7	4-Chloro-3-methylphenol	430 U	117-81-7	bis-(2-Ethylhexyl)phthalate	220 BJ
91-57-6	2-Methylnaphthalene	430 U	218-01-9	Chrysene	430 U
77-47-4	Hexachlorocyclopentadiene	430 U	117-84-0	Di-n-octyl phthalate	430 U
88-06-2	2,4,6-Trichlorophenol	430 U	205-99-2	Benzo(b)fluoranthene	430 U
95-95-4	2,4,5-Trichlorophenol	2100 U	207-08-9	Benzo(k)fluoranthene	430 U
91-58-7	2-Chloronaphthalene	430 U	50-32-8	Benzo(a)pyrene	430 U
88-74-4	2-Nitroaniline	2100 U	193-39-5	Indeno(1,2,3-cd)pyrene	430 U
131-11-3	Dimethyl phthalate	430 U	53-70-3	Dibenzo(a,h)anthracene	430 U
208-96-8	Acenapthylene	430 U	191-24-2	Benzo(ghi)perylene	430 U
99-09-2	3-Nitroaniline	2100 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name: Envirodyne Engineers Inc.

Case No: 2251

Sample Number: EM 864

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-24-87

Date Analyzed: 7-9-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 22.9

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ml

Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM864

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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	4.85	1856 J
2.	"	"	6.74	822 J
3.	"	"	7.93	1548 J
4.	hydrocarbon	"	8.09	565 J
5.	"	"	8.98	458 J
6.	"	"	10.96	632 J
7.	"	"	11.22	537 J
8.	"	"	12.77	800 J
9.	"	"	14.08	319 J
10.	"	"	14.47	687 J
11.	unknown	"	15.44	782 J
12.	hydrocarbon	"	16.03	711 J
13.	"	"	17.54	525 J
14.	"	"	18.24	465 J
15.	"	"	18.95	710 J
16.	"	"	19.04	1108 J
17.	"	"	20.27	501 J
18.	"	"	20.40	526 J
19.	"	"	21.54	501 J
20. 849990	Hexanedioic acid, dicyclo-	"	27.15	16074 J
21.	hexyl ester			
22.				
23.				
24.	no peaks for J.S.			
25.				
26.				
27.				
28.				
29.				
30.				

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EM865

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003145
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 132
Contract No: 68-01-7087
Date Sample Received: 6/19/87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-26-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 21.86

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	13 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	13 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	13 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	13 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	26 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	86 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	13 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	13 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	13 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	13 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	6 U
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	13 U	100-41-4	Ethylbenzene	1 BJ
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ug/l and a

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM865

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 6-24-87
Date Analyzed: 7-2-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 21.86

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	420 U	83-32-9	Acenaphthene	420 U
111-44-4	bis-(2-Chloroethyl)ether	420 U	51-28-5	2,4-Dinitrophenol	2000 U
95-57-8	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
106-46-7	1,4-Dichlorobenzene	420 U	121-14-2	2,4-Dinitrotoluene	420 U
100-51-6	Benzyl Alcohol	420 U	606-20-2	2,6-Dinitrotoluene	420 U
95-50-1	1,2-Dichlorobenzene	420 U	84-66-2	Diethyl phthalate	420 U
95-48-7	2-Methylphenol	420 U	7005-72-3	4-Chlorophenyl-phenyl ether	420 U
39638-32-9	bis-(2-Chloroisopropyl)ether	420 U	86-73-7	Fluorene	420 U
106-44-5	4-Methylphenol	420 U	100-01-6	4-Nitroaniline	2000 U
621-64-7	N-nitroso-Di-n-propylamine	420 U	534-52-1	4,6-Dinitro-2-Methylphenol	2000 U
67-72-1	Hexachloroethane	420 U	86-30-6	N-nitrosodiphenylamine (1)	420 U
98-95-3	Nitrobenzene	420 U	101-55-3	4-Bromophenyl-phenyl ether	420 U
78-59-1	Isophorone	420 U	118-74-1	Hexachlorobenzene	420 U
88-75-5	2-Nitrophenol	420 U	87-86-5	Pentachlorophenol	2000 U
105-67-9	2,4-Dimethylphenol	420 U	85-01-8	Phenanthrene	420 U
65-85-0	Benzoic Acid	2000 U	120-12-7	Anthracene	420 U
111-91-1	bis-(Chloroethoxy)Methane	420 U	84-74-2	Di-n-butyl phthalate	260 BJ
120-83-2	2,4-Dichlorophenol	420 U	206-44-0	Fluoranthene	420 U
120-82-1	1,2,4-Trichlorobenzene	420 U	129-00-0	Pyrene	420 U
91-20-3	Naphthalene	420 U	85-68-7	Butyl-benzyl-phthalate	420 U
106-47-8	4-Chloroaniline	420 U	91-94-1	3,3'-Dichlorobenzidine	840 U
87-68-3	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	420 BJ
91-57-6	2-Methylnaphthalene	420 U	218-01-9	Chrysene	420 U
77-47-4	Hexachlorocyclopentadiene	420 U	117-84-0	Di-n-octyl phthalate	83 J
88-06-2	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
91-58-7	2-Chloronaphthalene	420 U	50-32-8	Benzo(a)pyrene	420 U
88-74-4	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	Dibenzo(a,h)anthracene	420 U
208-96-8	Acenapthylene	420 U	191-24-2	Benzo(ghi)perylene	420 U
99-09-2	3-Nitroaniline	2000 U			

(1)-Cannot be separated from diphenylamine

FORM 1

Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM 865

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-24-87

Date Analyzed: 7-9-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 21.6

GPC Cleanup ☑Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

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CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ul V_i 2.0ul

Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM865

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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	4.43	2601 J
2.	"	"	5.32	765 J
3.	"	"	7.77	1400 J
4.	hydrocarbon	"	12.35	409 J
5.	"	"	14.45	514 J
6.	"	"	16.02	590 J
7.	"	"	17.52	435 J
8.	"	"	19.02	879 J
9.	"	"	26.10	684 J
10.	an amide	"	26.23	594 J
11.	dioctyl adipate	"	27.15	21952 J
12.	hydrocarbon	"	28.11	707 J
13.	"	"	29.06	444 J
14.	"	"	29.97	545 J
15.				
16.				
17.	no peaks for I.S.			
18.				
19.				
20.				
21.				
22.				
23.				
24.				
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27.				
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29.				
30.				

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM866

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Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003146
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 132
Contract No: 68-01-7087
Date Sample Received: 6/19/87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 6-26-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 23.68

CAS No:		ugkg	CAS No:		ugkg
74-87-3	Chloromethane	13 U	78-87-5	1,2-Dichloropropane	7 U
74-83-9	Bromomethane	13 U	10061-02-6	trans-1,3-Dichloropropene	7 U
75-01-4	Vinyl Chloride	13 U	79-01-6	Trichloroethene	7 U
75-00-3	Chloroethane	13 U	124-48-1	Dibromochloromethane	7 U
75-09-2	Methylene Chloride	211 B	79-00-5	1,1,2-Trichloroethane	7 U
67-64-1	Acetone	69 B	71-43-2	Benzene	7 U
75-15-0	Carbon Disulfide	7 U	10061-01-5	cis-1,3-Dichloropropene	7 U
75-35-4	1,1-Dichloroethene	7 U	110-75-8	2-Chloroethylvinylether	13 U
75-34-3	1,1-Dichloroethane	7 U	75-25-2	Bromoform	7 U
156-60-5	trans-1,2-Dichloroethene	7 U	108-10-1	4-Methyl-2-pentanone	13 U
67-66-3	Chloroform	7 U	591-78-6	2-Hexanone	13 U
107-06-2	1,2-Dichloroethane	7 U	127-18-4	Tetrachloroethene	7 U
78-93-3	2-Butanone	13 U	79-34-5	1,1,2,2-Tetrachloroethane	7 U
71-55-6	1,1,1-Trichloroethane	7 U	108-88-3	Toluene	1 BJ
56-23-5	Carbon Tetrachloride	7 U	108-90-7	Chlorobenzene	7 U
108-05-4	Vinyl Acetate	13 U	100-41-4	Ethylbenzene	7 U
75-27-4	Bromodichloromethane	7 U	100-42-5	Styrene	7 U
				Total Xylenes	7 U

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM866

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 7-6-87
Date Analyzed: 7-9-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 23.68

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	430 U	83-32-9	Acenaphthene	430 U
111-44-4	bis-(2-Chloroethyl)ether	430 U	51-28-5	2,4-Dinitrophenol	2100 U
95-57-8	2-Chlorophenol	430 U	100-02-7	4-Nitrophenol	2100 U
541-73-1	1,3-Dichlorobenzene	430 U	132-64-9	Dibenzofuran	430 U
106-46-7	1,4-Dichlorobenzene	430 U	121-14-2	2,4-Dinitrotoluene	430 U
100-51-6	Benzyl Alcohol	430 U	606-20-2	2,6-Dinitrotoluene	430 U
95-50-1	1,2-Dichlorobenzene	430 U	84-66-2	Diethyl phthalate	430 U
95-48-7	2-Methylphenol	430 U	7005-72-3	4-Chlorophenyl-phenyl ether	430 U
39638-32-9	bis-(2-Chloroisopropyl)ether	430 U	86-73-7	Fluorene	430 U
106-44-5	4-Methylphenol	430 U	100-01-6	4-Nitroaniline	2100 U
621-64-7	N-nitroso-Di-n-propylamine	430 U	534-52-1	4,6-Dinitro-2-Methylphenol	2100 U
67-72-1	Hexachloroethane	430 U	86-30-6	N-nitrosodiphenylamine (1)	430 U
98-95-3	Nitrobenzene	430 U	101-55-3	4-Bromophenyl-phenyl ether	430 U
78-59-1	Isophorone	430 U	118-74-1	Hexachlorobenzene	430 U
88-75-5	2-Nitrophenol	430 U	87-86-5	Pentachlorophenol	2100 U
105-67-9	2,4-Dimethylphenol	430 U	85-01-8	Phenanthrene	430 U
65-85-0	Benzoic Acid	2100 U	120-12-7	Anthracene	430 U
111-91-1	bis-(Chloroethoxy)Methane	430 U	84-74-2	Di-n-butyl phthalate	340 BJ
120-83-2	2,4-Dichlorophenol	430 U	206-44-0	Fluoranthene	430 U
120-82-1	1,2,4-Trichlorobenzene	430 U	129-00-0	Pyrene	430 U
91-20-3	Naphthalene	430 U	85-68-7	Butyl-benzyl-phthalate	430 U
106-47-8	4-Chloroaniline	430 U	91-94-1	3,3'-Dichlorobenzidine	860 U
87-68-3	Hexachlorobutadiene	430 U	56-55-3	Benzo(a)anthracene	430 U
59-50-7	4-Chloro-3-methylphenol	430 U	117-81-7	bis-(2-Ethylhexyl)phthalate	190 BJ
91-57-6	2-Methylnaphthalene	430 U	218-01-9	Chrysene	430 U
77-47-4	Hexachlorocyclopentadiene	430 U	117-84-0	Di-n-octyl phthalate	430 U
88-06-2	2,4,6-Trichlorophenol	430 U	205-99-2	Benzo(b)fluoranthene	430 U
95-95-4	2,4,5-Trichlorophenol	2100 U	207-08-9	Benzo(k)fluoranthene	430 U
91-58-7	2-Chloronaphthalene	430 U	50-32-8	Benzo(a)pyrene	430 U
88-74-4	2-Nitroaniline	2100 U	193-39-5	Indeno(1,2,3-cd)pyrene	430 U
131-11-3	Dimethyl phthalate	430 U	53-70-3	Dibenzo(a,h)anthracene	430 U
208-96-8	Acenapthylene	430 U	191-24-2	Benzo(ghi)perylene	430 U
99-09-2	3-Nitroaniline	2100 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7251

Sample Number
EM 866

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6-24-87

Date Analyzed: 7-10-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 23.7

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ul V_i 2.0ul

Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM866

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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)		6.83	1179 J
2.	"	"	6.95	2228 J
3.	"	"	7.61	1096 J
4.	"	"	8.64	484 J
5.	"	"	9.92	2253 J
6.	hydrocarbon	"	12.97	602 J
7.	"	"	13.25	423 J
8.	"	"	14.88	784 J
9.	hydrocarbon/unknown	"	16.65	890 J
10.	" "	"	17.72	708 J
11.	"	"	18.31	847 J
12.	"	"	19.87	769 J
13.	"	"	21.33	779 J
14.	"	"	21.41	1205 J
15.	phthalate	"	23.65	1448 J
16.	hydrocarbon	"	25.28	486 J
17.	"	"	26.48	481 J
18.	"	"	28.75	412 J
19.	hydrocarbon/hexanedioic	"	29.80	955 J
20.	acid dioctyl ester	—	—	—
21.	hydrocarbon	"	32.78	614 J
22.				
23.	no peaks for I.S.	VOA		
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

Date Received for Review 8/18 Date Review Completed 8/20

To: Tom Pachowicz

From: Zena Gold-Kaufman

Subject: HOD Lndfl

PAN: ILO141EX Case # 7351

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 5	Low Soil (36→40)	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting: _____

FIT Data Review Findings:

Toluene found below CRDL

Di-N-Butylphthalate detected in samples above CRDL.

SEE enclosed sheet - check OADS forms

_____ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 Page No. 178

HOD LNDFL 7351

	COMPOUND	SAMPLE DET. LIMIT	869	870	871					
V	dimethyl phthalate									
	acenapthylene									
	3-nitroaniline									
	acenaphthene									
	2,4-dinitrophenol									
	4-nitrophenol									
	dibenzofuran									
	2,4-dinitrotoluene									
S	2,6-dinitrotoluene									
	diethylphthalate									
	4-chlorophenyl-phenylether									
V	fluorene									
	4-nitroaniline									
	4,6-dinitro-2-methylphenol									
	N-nitrosodiphenylamine									
	4-bromophenyl-phenylether									
	hexachlorobenzene									
	pentachlorophenol									
	phenanthrene									
	anthracene									
	di-n-butylphthalate		810/390	320/430						
	fluoranthene									
	benzidine									
	pyrene									
	butylbenzylphthalate									
	3,3'-dichlorobenzidine									
	benzo(a)anthracene									
	bis(2-ethylhexyl)phthalate									
	chrysene									
	di-n-octylphthalate									
	benzo(bâk)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)									
P	heptachlor									
	aldrin									
E	heptachlor epoxide									
	endosulfan I									
S	dieldrin									
T	4,4'-DDE									
	endrin									
	endosulfan II									
	4,4'-DDD									
	endrin aldehyde									
	endosulfan sulfate									
	4,4'-DDT									
	methoxychlor									
	endrin ketone									
	chlordane									
	toxaphene									
P	Aroclor-1016									
	Aroclor-1221									
C	Aroclor-1232									
B	Aroclor-1242									
	Aroclor-1248									
	Aroclor-1254									
	Aroclor-1260									

HOD UNDFL

COMPOUND	SAMPLE DET. LIMIT	EM 869	EM 870	871	867	868			
chloromethane									
bromomethane									
vinyl chloride									
chloroethane									
methylene chloride									
acetone									
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		1J	1J	2J	2J	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									
2,4,5-trichlorophenol									
2-chloronaphthalene									
2-nitroaniline									

L

VOA

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 8/17/87

RECEIVED AUG 18 1987

SUBJECT: Review of Region V CLP Data Received for Review on 7-27-87

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

TO: Data User: FIT

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

SITE NAME: HOD LANDFILL SMO case No. 7351

EPA Data Set No. SF 4136 No. of Samples: 5 D.U./Activity Numbers Y905/C72100

CRL No. 87FP11519

SMO Traffic No. EM-867-871

CLP Laboratory: ENVIRODYNE Hrs. Required for Review: 7 hrs

Following are our findings:

This review covers 5 soil samples which were analyzed for Low level full organics. Holding times were met for all sample extractions GC/MS tuning and calibration was okay. (1) Calibration outliers for VOA. & semivolatile fractions are noted on outlier sheets which follow. (2) Surrogate recoveries are all acceptable (3) Matrix spike/MS recoveries/RPD had outliers as follows 3 acid compounds out of 12 were slightly out of range. 4 out of 6 pesticide recoveries were out for RPD values, this was due to the matrix effect of the sample.

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

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

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

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DATA QUALIFIERS

Contractor: Envirodyne

Case 7351

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

(4) Method blank had minor contaminants (i.e. methylene chloride, acetone) levels were <10x level in blank are flagged UI on QASC data report [illegible] level [illegible] but the contaminant concentration was also 10x less than the CRDL limit.

(5) The samples data fell well within prescribed contractual ranges. In my opinion is acceptable for use.

Reviewed by: AK Lau

Phone: 353-9079

Date: 8/11/87

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

CASE# 7357 CONTRACTOR Envirodyne

RECEIVED AUG 18 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6/16/87			7/1/87											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane					38										
Methylene Chloride		38													
Acetone															
Carbon Disulfide					29										
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene					29										
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		53			46										
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene					52										
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

EM868	EM868				
EM869	EM869				
EM870	EM870				
EM871	EM871				
EM867	EM867				

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

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

CASE# 7357 CONTRACTOR Envirodyne

RECEIVED AUG 18 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7/8/87			7/8											
	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		41.3													
Benzoic Acid															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline		58.5													
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene		33.9													
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: EM867

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

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

CASE# 7351 CONTRACTOR Envirodyne

RECEIVED JAN 19 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7/18 7														
	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															
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.

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

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CASE# 7351 CONTRACTOR Envirodyne

RECEIVED AUG 18 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7/10/87														
	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		127.0													
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol		180.6													
Benzoic Acid															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene		197.8													
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline		43.6													
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

EM868
EM869
EM870
EM871

* 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# 7351 CONTRACTOR Envirodyne

RECEIVED AUG 18 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7/14/87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline	.011														
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

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ENVIRODYNE
ENGINEERS

July 24, 1987

RECEIVED AUG 18 1987

Ms. Carol Schaeffer
Sample Management Office
209 Madison Avenue, Suite 200
Alexandria, Virginia 22314

Dear Ms. Schaeffer:

Enclosed are the results of analysis of five samples from Case 7351 for volatiles, semivolatiles, and pesticide PCBs performed under Contract 68-01-7087. This report covers five soil samples, EM867 through EM871, received by Envirodyne on June 27, 1987. One matrix spike and matrix spike duplicate for low level is included with these samples, and will apply to the next set of soil samples on the case that was received on July 17, 1987.

All samples were screened and extracted by low-level methods for BNAs and Pesticide/PCBs. For Base/Neutral Acid fraction there are two blanks reported to correspond with the samples run for two instruments.

If you have any questions about this report, please contact me.

Sincerely,

Shaaban Ben-Poorat

Shaaban Ben-Poorat
Laboratory Director

CAJ/smb

Enclosures

RECEIVED

JUL 27 1987

U.S. EPA, CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

REAGENT BLANK SUMMARY

RECEIVED AUG 1 8 1987

Case No. 1821 Contractor Envirodyne Engrs. Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (INSL.TIC OR UNKNOWN)	CONC.	UNITS	CRDL
MB#	7/1/87	VOA	soil	L	5985-1	75-09-2	Methylene Chloride	12	ug/kg	5
						67-64-1	Acetone	15	"	10
						108-10-1	4-methyl-2-Pentanone	4	"	10
						591-78-6	2-Hexanone	5	"	10
MB# 2	7/1/87	VOA	soil	L	5985-1	75-09-2	Methylene Chloride	3	"	5
						67-64-1	Acetone	9	"	10
						71-43-2	Benzene	1	"	5
MB #1	7/4/87	BNA	soil	L	5985	117-81-7	bis(2-Ethylhexyl)Phthalate	338	"	330
MB#2	7/4/87	BNA	soil	L	5996	117-81-7	bis(2-Ethylhexyl)Phthalate	388	"	330
MB#1	7/10/87	Pest/PCB	soil	L	GC#5	—	all cmpds < CRDL	—	—	—

Comments:

FORM IV

4/84

RECEIVED AUG 1 8 1987

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 1990 - 7351 Contract Laboratory ENVIRODYNE Contract No. 68-01-7087

Low ✓ 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)
EM867	94	89	85	57	73	72			63	65	50	80
EM868	114	85	84	66	63	85			74	100	67	54
EM869	108	82	81	56	55	82			92	102	87	89
EM870	109	90	87	64	59	82			78	99	81	93
EM871	111	86	87	65	62	80			67	88	59	34
EM870MS	115	99	94	63	62	74			72	93	105	NA
EM870MSD	97	88	95	70	58	75			74	89	111	NA
MB#1	104	94	86	55	51	90			71	69	67	92
MB#2	99	108	98	81	77	86			102	79	71	NA
EM868MS	NA	NA	NA	NA	NA	NA			NA	NA	NA	33
EM868MSD	NA	NA	NA	NA	NA	NA			NA	NA	NA	85

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 37 ; outside of QC limits

Semi-Volatiles: 0 out of 54 ; outside of QC limits

Pesticides: 0 out of 8 ; outside of QC limits

7/8

Comments:

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 1990-7351 Contractor ENVIRODYNE Contract No. 68-01-7087

Low Level ✓ Medium Level

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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. EM870	1,1-Dichloroethene	59	ND	83	141	86	146	4	22	59-172
	Trichloroethene		ND	56	95	56	95	0	24	62-137
	Chlorobenzene		ND	57	96	53	81	7	21	60-133
	Toluene		13	70	119	63	107	10	21	59-139
	Benzene		ND	65	110	64	108	2	21	66-142
B/N SMO SAMPLE NO. EM868	1,2,4-Trichlorobenzene	7755	ND	4574	59	5599	72	20	23	38-107
	Acenaphthene			6583	85	7536	97	13	19	31-137
	2,4 Dinitrotoluene			8156	105	8851	114	8	47	28-89
	Pyrene			4701	61	5331	69	13	36	35-142
	N-Nitrosodi-n-Propylamine			6074	78	5858	76	4	38	41-126
	1,4-Dichlorobenzene			3568	46	4358	56	20	27	28-104
ACID SMO SAMPLE NO. EM868	Pentachlorophenol	15465		15889	103	14839	96	7	47	17-109
	Phenol			15950	103	13514	87	16	35	26-90
	2-Chlorophenol			16307	105	14334	93	13	50	25-102
	4-Chloro-3-Methylphenol			17673	114	18698	121*	6	33	26-103
	4-Nitrophenol			25071	162*	20903	135*	18	50	11-114
PEST SMO SAMPLE NO. EM868	Lindane	61	ND	15	24*	33	54	77*	50	46-127
	Heptachlor	61		32	52	59	97	60*	31	35-130
	Aldrin	61		53	86	69	113	27	43	34-132
	Dieldrin	154		78	51	144	93	58*	38	31-134
	Endrin	154		94	61	171	111	58*	45	42-139
	4,4'-DDT	154		82	53	139	84	46	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 3; outside QC limits
PEST 4 out of 6; outside QC limits

RECOVERY: VOAs 0 out of 10; outside QC limits
B/N 0 out of 10; outside QC limits
ACID 3 out of 10; outside QC limits
PEST 1 out of 12; outside QC limits

Comments:

FORM III 7/85

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM867

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003291
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 133
Contract No: 68-01-7086
Date Sample Received: 6-27-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 07-01-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 15.4

CAS No:		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	226 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	34 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	2 J
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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 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 (eg. 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

RECEIVED 1987

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM867

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 07-02-87
Date Analyzed: 07-11-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 15.4

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No.		ug/g	CAS No.		ug/g
108-95-2	Phenol	390 U	83-32-9	Acenaphthene	390 U
111-44-4	bis-(2-Chloroethyl)ether	390 U	51-28-5	2,4-Dinitrophenol	1900 U
95-57-8	2-Chlorophenol	390 U	100-02-7	4-Nitrophenol	1900 U
541-73-1	1,3-Dichlorobenzene	390 U	132-64-9	Dibenzofuran	390 U
106-46-7	1,4-Dichlorobenzene	390 U	121-14-2	2,4-Dinitrotoluene	390 U
100-51-6	Benzyl Alcohol	390 U	606-20-2	2,6-Dinitrotoluene	390 U
95-50-1	1,2-Dichlorobenzene	390 U	84-66-2	Diethyl phthalate	390 U
95-48-7	2-Methylphenol	390 U	7005-72-3	4-Chlorophenyl-phenyl ether	390 U
39638-32-9	bis-(2-Chloroisopropyl)ether	390 U	86-73-7	Fluorene	390 U
106-44-5	4-Methylphenol	390 U	100-01-6	4-Nitroaniline	1900 U
621-64-7	N-nitroso-Di-n-propylamine	390 U	534-52-1	4,6-Dinitro-2-Methylphenol	1900 U
67-72-1	Hexachloroethane	390 U	86-30-6	N-nitrosodiphenylamine (1)	390 U
98-95-3	Nitrobenzene	390 U	101-55-3	4-Bromophenyl-phenyl ether	390 U
78-59-1	Isophorone	390 U	118-74-1	Hexachlorobenzene	390 U
88-75-5	2-Nitrophenol	390 U	87-86-5	Pentachlorophenol	1900 U
105-67-9	2,4-Dimethylphenol	390 U	85-01-8	Phenanthrene	390 U
65-85-0	Benzoic Acid	1900 U	120-12-7	Anthracene	390 U
111-91-1	bis-(Chloroethoxy)Methane	390 U	84-74-2	Di-n-butyl phthalate	830
120-83-2	2,4-Dichlorophenol	390 U	206-44-0	Fluoranthene	390 U
120-82-1	1,2,4-Trichlorobenzene	390 U	129-00-0	Pyrene	390 U
91-20-3	Naphthalene	390 U	85-68-7	Butyl-benzyl-phthalate	390 U
106-47-8	4-Chloroaniline	390 U	91-94-1	3,3'-Dichlorobenzidine	780 U
87-68-3	Hexachlorobutadiene	390 U	56-55-3	Benzo(a)anthracene	390 U
59-50-7	4-Chloro-3-methylphenol	390 U	117-81-7	bis-(2-Ethylhexyl)phthalate	170 BJ
91-57-6	2-Methylnaphthalene	390 U	218-01-9	Chrysene	390 U
77-47-4	Hexachlorocyclopentadiene	390 U	117-84-0	Di-n-octyl phthalate	390 U
88-06-2	2,4,6-Trichlorophenol	390 U	205-99-2	Benzo(b)fluoranthene	390 U
95-95-4	2,4,5-Trichlorophenol	1900 U	207-08-9	Benzo(k)fluoranthene	390 U
91-58-7	2-Chloronaphthalene	390 U	50-32-8	Benzo(a)pyrene	390 U
88-74-4	2-Nitroaniline	1900 U	193-39-5	Indeno(1,2,3-cd)pyrene	390 U
131-11-3	Dimethyl phthalate	390 U	53-70-3	Dibenzo(a,h)anthracene	390 U
208-96-8	Acenaphthylene	390 U	191-24-2	Benzo(ghi)perylene	390 U
99-09-2	3-Nitroaniline	1900 U			

(1)-Cannot be separated from diphenylamine

FORM 1

RECEIVED AUG 1 8 1987

Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM 867

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7-2-87

Date Analyzed: 7-10-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 15.4

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4,4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4,4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4,4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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)

_____ or W_s 30g V_t 10,000ul V_i 2.0ul

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Laboratory Name: Envirodyne Engineers

Case No: 9351

Sample Number: EM7867

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.	Tic peaks for F.S.	VOA		
2.				
3.				
4. 96480	2(3H)-Furanone dihydro	BNA	6.82	1008 J
5.	unknown	"	6.89	1277 J
6.	"	"	7.13	334 J
7.	"	"	7.55	84 J
8.	"	"	8.56	1048 J
9.	"	"	9.72	675 J
10.	hydrocarbon	"	10.75	993 J
11.	"	"	12.79	384 J
12.	"	"	13.08	223 J
13.	"	"	14.70	409 J
14.	unknown	"	16.47	469 J
15. —	$C_{14}H_{22}$ aromatic hydrocarbon	"	17.52	348 J
16. —	a saturated hydrocarbon background	—	—	—
17.	Saturated hydrocarbon	"	18.11	423 J
18. 74381-41	propanoic acid 2-methyl 1-(1-		19.67	779 J
19.	dimethylethyl)-2-methyl-1,3	—	—	—
20.	propanediyl ester)	—	—	—
21.	hydrocarbon	"	21.12	401 J
22.	"	"	21.71	630 J
23.	"	"	22.49	328 J
24.	"	"	22.64	337 J
25.	Phthalate	"	23.44	2829 J
26.	Saturated hydrocarbon	"	23.82	201 J
27.	" "	"	25.05	215 J
28.	" "	"	26.25	215 J
29.	" "	"	28.50	177 J
30.	" "	"	30.59	182 J
31.	" "	"	32.53	305 J

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Organics Analysis Data Sheet
(Page 1)

Sample Number EM868

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003292
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 133
Contract No: 68-01-7087
Date Sample Received: 6-27-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 07-01-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 14

CAS No:		ugkg	CAS No:		ugkg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	61 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	58 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	1 J
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

REC TED AUG 1 8 1987

- -

Data Reporting Qualifiers

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 (eg,10U) based on necessary concent./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 (eg, 10J). If limit of detection is 10 ugl and a concentration of 3 ugl is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No 7351

Sample Number: EM868

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 07-02-87
Date Analyzed: 07-14-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 14

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	380 U	83-32-9	Acenaphthene	380 U
111-44-4	bis-(2-Chloroethyl)ether	380 U	51-28-5	2,4-Dinitrophenol	1900 U
95-57-8	2-Chlorophenol	380 U	100-02-7	4-Nitrophenol	1900 U
541-73-1	1,3-Dichlorobenzene	380 U	132-64-9	Dibenzofuran	380 U
106-46-7	1,4-Dichlorobenzene	380 U	121-14-2	2,4-Dinitrotoluene	380 U
100-51-6	Benzyl Alcohol	380 U	606-20-2	2,6-Dinitrotoluene	380 U
95-50-1	1,2-Dichlorobenzene	380 U	84-66-2	Diethyl phthalate	380 U
95-48-7	2-Methylphenol	380 U	7005-72-3	4-Chlorophenyl-phenyl ether	380 U
39638-32-9	bis-(2-Chloroisopropyl)ether	380 U	86-73-7	Fluorene	380 U
106-44-5	4-Methylphenol	380 U	100-01-6	4-Nitroaniline	1900 U
621-64-7	N-nitroso-Di-n-propylamine	380 U	534-52-1	4,6-Dinitro-2-Methylphenol	1900 U
67-72-1	Hexachloroethane	380 U	86-30-6	N-nitrosodiphenylamine (1)	380 U
98-95-3	Nitrobenzene	380 U	101-55-3	4-Bromophenyl-phenyl ether	380 U
78-59-1	Isophorone	380 U	118-74-1	Hexachlorobenzene	380 U
88-75-5	2-Nitrophenol	380 U	87-86-5	Pentachlorophenol	1900 U
105-67-9	2,4-Dimethylphenol	380 U	85-01-8	Phenanthrene	380 U
65-85-0	Benzoic Acid	1900 U	120-12-7	Anthracene	380 U
111-91-1	bis-(Chloroethoxy)Methane	380 U	84-74-2	Di-n-butyl phthalate	1100
120-83-2	2,4-Dichlorophenol	380 U	206-44-0	Fluoranthene	380 U
120-82-1	1,2,4-Trichlorobenzene	380 U	129-00-0	Pyrene	380 U
91-20-3	Naphthalene	380 U	85-68-7	Butyl-benzyl-phthalate	380 U
106-47-8	4-Chloroaniline	380 U	91-94-1	3,3'-Dichlorobenzidine	770 U
87-68-3	Hexachlorobutadiene	380 U	56-55-3	Benzo(a)anthracene	380 U
59-50-7	4-Chloro-3-methylphenol	380 U	117-81-7	bis-(2-Ethylhexyl)phthalate	160 BJ
91-57-6	2-Methylnaphthalene	380 U	218-01-9	Chrysene	380 U
77-47-4	Hexachlorocyclopentadiene	380 U	117-84-0	Di-n-octyl phthalate	380 U
88-06-2	2,4,6-Trichlorophenol	380 U	205-99-2	Benzo(b)fluoranthene	380 U
95-95-4	2,4,5-Trichlorophenol	1900 U	207-08-9	Benzo(k)fluoranthene	380 U
91-58-7	2-Chloronaphthalene	380 U	50-32-8	Benzo(a)pyrene	380 U
88-74-4	2-Nitroaniline	1900 U	193-39-5	Indeno(1,2,3-cd)pyrene	380 U
131-11-3	Dimethyl phthalate	380 U	53-70-3	Dibenzo(a,h)anthracene	380 U
208-96-8	Acenapthylene	380 U	191-24-2	Benzo(ghi)perylene	380 U
99-09-2	3-Nitroaniline	1900 U			

(1)-Cannot be separated from diphenylamine

FORM 1

RECEIVED AUG 1 8 1987

Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number
EM 868

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7-2-87

Date Analyzed: 7-10-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 13.9

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4,4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4,4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4,4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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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 _____ or W_s 30g V_t 10,000ul V_i 2.0ul

Laboratory Name: Envirodyne Engineers

Case No: 9351

Sample Number: EM868

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)
	No peaks found F.S.	VOA		
1.				
2.	Unknown	BNA	4.96	794 J
3.	"	"	5.07	1839 J
4.	"	"	5.77	961 J
5.	"	"	7.95	3633 J
6.	Hydrocarbon	"	12.61	363 J
7.	Unknown	"	14.22	143 J
8.	Hydrocarbon	"	14.28	260 J
9.	Hydrocarbon of C8 sub. benzene	"	15.36	319 J
10.	Hydrocarbon	"	15.86	336 J
11.		"	17.33	830 J
12. 7438140	Propanoic acid 2-methyl	—	—	—
13.	1-(1,1-dimethylethyl)-2-hy	—	—	—
14.	ethyl-1,3 propanediyl ester	"	18.78	384 J
15.	Hydrocarbon	"	18.86	702 J
16.	"	"	20.11	269 J
17.	"	"	20.23	324 J
18.	"	"	20.94	3645 J
19.	Phthalate	"	23.78	177 J
20.	Hydrocarbon	"	25.94	411 J
21.	"	"	26.85	521 J
22.	Unknown	"	27.97	351 J
23.	Hydrocarbon	"	28.93	310 J
24.	"			
25.				
26.				
27.				
28.				
29.				
30.				

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Organics Analysis Data Sheet
(Page 1)

Sample Number: EMB69

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003293
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 133
Contract No: 68-01-7087
Date Sample Received: 6-27-87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 07-01-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 13.9

CAS No:		ugkg	CAS No:		ugkg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	41 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	31 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	1 J
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

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Data Reporting Qualifiers

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

U:
Indicates compound was analysed for but not detected. Report the minimum detection limit for the sample with the U (eg,10U) based on necessary concent./dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analysed 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 (eg, 10J). If limit of detection is 10 ugl and a concentration of 3 ugl is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM869

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 07-02-87
Date Analyzed: 07-14-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 13.9

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	380 U	83-32-9	Acenaphthene	380 U
111-44-4	bis-(2-Chloroethyl)ether	380 U	51-28-5	2,4-Dinitrophenol	1900 U
95-57-8	2-Chlorophenol	380 U	100-02-7	4-Nitrophenol	1900 U
541-73-1	1,3-Dichlorobenzene	380 U	132-64-9	Dibenzofuran	380 U
106-46-7	1,4-Dichlorobenzene	380 U	121-14-2	2,4-Dinitrotoluene	380 U
100-51-6	Benzyl Alcohol	380 U	606-20-2	2,6-Dinitrotoluene	380 U
95-50-1	1,2-Dichlorobenzene	380 U	84-66-2	Diethyl phthalate	380 U
95-48-7	2-Methylphenol	380 U	7005-72-3	4-Chlorophenyl-phenyl ether	380 U
39638-32-9	bis-(2-Chloroisopropyl)ether	380 U	86-73-7	Fluorene	380 U
106-44-5	4-Methylphenol	380 U	100-01-6	4-Nitroaniline	1900 U
621-64-7	N-nitroso-Di-n-propylamine	380 U	534-52-1	4,6-Dinitro-2-Methylphenol	1900 U
67-72-1	Hexachloroethane	380 U	86-30-6	N-nitrosodiphenylamine (1)	380 U
98-95-3	Nitrobenzene	380 U	101-55-3	4-Bromophenyl-phenyl ether	380 U
78-59-1	Isophorone	380 U	118-74-1	Hexachlorobenzene	380 U
88-75-5	2-Nitrophenol	380 U	87-86-5	Pentachlorophenol	1900 U
105-67-9	2,4-Dimethylphenol	380 U	85-01-8	Phenanthrene	380 U
65-85-0	Benzoic Acid	1900 U	120-12-7	Anthracene	380 U
111-91-1	bis-(Chloroethoxy)Methane	380 U	84-74-2	Di-n-butyl phthalate	820
120-83-2	2,4-Dichlorophenol	380 U	206-44-0	Fluoranthene	380 U
120-82-1	1,2,4-Trichlorobenzene	380 U	129-00-0	Pyrene	380 U
91-20-3	Naphthalene	380 U	85-68-7	Butyl-benzyl-phthalate	380 U
106-47-8	4-Chloroaniline	380 U	91-94-1	3,3'-Dichlorobenzidine	770 U
87-68-3	Hexachlorobutadiene	380 U	56-55-3	Benzo(a)anthracene	380 U
59-50-7	4-Chloro-3-methylphenol	380 U	117-81-7	bis-(2-Ethylhexyl)phthalate	310 BJ
91-57-6	2-Methylnaphthalene	380 U	218-01-9	Chrysene	380 U
77-47-4	Hexachlorocyclopentadiene	380 U	117-84-0	Di-n-octyl phthalate	380 U
88-06-2	2,4,6-Trichlorophenol	380 U	205-99-2	Benzo(b)fluoranthene	380 U
95-95-4	2,4,5-Trichlorophenol	1900 U	207-08-9	Benzo(k)fluoranthene	380 U
91-58-7	2-Chloronaphthalene	380 U	50-32-8	Benzo(a)pyrene	380 U
88-74-4	2-Nitroaniline	1900 U	193-39-5	Indeno(1,2,3-cd)pyrene	380 U
131-11-3	Dimethyl phthalate	380 U	53-70-3	Dibenzo(a,h)anthracene	380 U
208-96-8	Acenapthylene	380 U	191-24-2	Benzo(ghi)perylene	380 U
99-09-2	3-Nitroaniline	1900 U			

(1)-Cannot be separated from diphenylamine

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Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM 8 9

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7-2-87

Date Analyzed: 7-10-87

Conc/Dil Factor: 1

Percent Moisture (decanted): 13.9

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4, 4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4, 4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4, 4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ml

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Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM1869

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.	No peaks for T.S.	VOA		
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.				

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Organics Analysis Data Sheet
(Page 1)

Sample Number: CM870

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003294
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 133
Contract No: 68-01-7087
Date Sample Received: 6/27/87

Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 07-01-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 15.3

CAS No		ug/kg	CAS No		ug/kg
74-87-3	Chloromethane	12 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	12 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	12 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	12 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	29 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	26 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	12 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	12 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	12 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	12 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	1 J
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	12 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

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- -

Data Reporting Qualifiers

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

:
Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (eg,10U) based on necessary concent./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.

:
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 (eg, 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM870

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 07-02-87
Date Analyzed: 07-14-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 15.3

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	390 U	83-32-9	Acenaphthene	390 U
111-44-4	bis-(2-Chloroethyl)ether	390 U	51-28-5	2,4-Dinitrophenol	1900 U
95-57-8	2-Chlorophenol	390 U	100-02-7	4-Nitrophenol	1900 U
541-73-1	1,3-Dichlorobenzene	390 U	132-64-9	Dibenzofuran	390 U
106-46-7	1,4-Dichlorobenzene	390 U	121-14-2	2,4-Dinitrotoluene	390 U
100-51-6	Benzyl Alcohol	390 U	606-20-2	2,6-Dinitrotoluene	390 U
95-50-1	1,2-Dichlorobenzene	390 U	84-66-2	Diethyl phthalate	390 U
95-48-7	2-Methylphenol	390 U	7005-72-3	4-Chlorophenyl-phenyl ether	390 U
39638-32-9	bis-(2-Chloroisopropyl)ether	390 U	86-73-7	Fluorene	390 U
106-44-5	4-Methylphenol	390 U	100-01-6	4-Nitroaniline	1900 U
621-64-7	N-nitroso-Di-n-propylamine	390 U	534-52-1	4,6-Dinitro-2-Methylphenol	1900 U
67-72-1	Hexachloroethane	390 U	86-30-6	N-nitrosodiphenylamine (1)	390 U
98-95-3	Nitrobenzene	390 U	101-55-3	4-Bromophenyl-phenyl ether	390 U
78-59-1	Isophorone	390 U	118-74-1	Hexachlorobenzene	390 U
88-75-5	2-Nitrophenol	390 U	87-86-5	Pentachlorophenol	1900 U
105-67-9	2,4-Dimethylphenol	390 U	85-01-8	Phenanthrene	390 U
65-85-0	Benzoic Acid	1900 U	120-12-7	Anthracene	390 U
111-91-1	bis-(Chloroethoxy)Methane	390 U	84-74-2	Di-n-butyl phthalate	810
120-83-2	2,4-Dichlorophenol	390 U	206-44-0	Fluoranthene	390 U
120-82-1	1,2,4-Trichlorobenzene	390 U	129-00-0	Pyrene	390 U
91-20-3	Naphthalene	390 U	85-68-7	Butyl-benzyl-phthalate	390 U
106-47-8	4-Chloroaniline	390 U	91-94-1	3,3'-Dichlorobenzidine	780 U
87-68-3	Hexachlorobutadiene	390 U	56-55-3	Benzo(a)anthracene	390 U
59-50-7	4-Chloro-3-methylphenol	390 U	117-81-7	bis-(2-Ethylhexyl)phthalate	730 B
91-57-6	2-Methylnaphthalene	390 U	218-01-9	Chrysene	390 U
77-47-4	Hexachlorocyclopentadiene	390 U	117-84-0	Di-n-octyl phthalate	390 U
88-06-2	2,4,6-Trichlorophenol	390 U	205-99-2	Benzo(b)fluoranthene	390 U
95-95-4	2,4,5-Trichlorophenol	1900 U	207-08-9	Benzo(k)fluoranthene	390 U
91-58-7	2-Chloronaphthalene	390 U	50-32-8	Benzo(a)pyrene	390 U
88-74-4	2-Nitroaniline	1900 U	193-39-5	Indeno(1,2,3-cd)pyrene	390 U
131-11-3	Dimethyl phthalate	390 U	53-70-3	Dibenzo(a,h)anthracene	390 U
208-96-8	Acenapthylene	390 U	191-24-2	Benzo(ghi)perylene	390 U
99-09-2	3-Nitroaniline	1900 U			

(1)-Cannot be separated from diphenylamine

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Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM870

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7-2-87

Date Analyzed: 7-10-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 15.3

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4,4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4,4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4,4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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 _____ or W_s 30g V_t 10,000ml V_i 2.0ml

RECEIVED AUG 18 1987

Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM870

RECEIVED AUG 18 1987

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)
	10 peaks for LS	VOA		
1.				
2.	unknown	BNA	4.92	771 J
3.	"	"	5.03	1746 J
4.	"	"	5.76	753 J
5.	"	"	6.80	1538 J
6.	"	"	7.95	4026 J
7.	"	"	10.81	356 J
8.	hydrocarbon	"	12.60	460 J
9.	"	"	14.29	341 J
10.	"	"	15.27	431 J
11.	hydrocarbon fragment	"	15.87	405 J
12.	hydrocarbon	"	17.34	897 J
13.	unknown	"	18.07	496 J
14.	hydrocarbon	"	18.79	477 J
15.	"	"	18.87	843 J
16.	"	"	20.12	334 J
17.	"	"	20.24	390 J
18.	"	"	21.00	2674 J
19.	phthalate	"	21.40	343 J
20.	hydrocarbon	"	23.79	256 J
21.	"	"	25.91	581 J
22.	"	"	26.87	820 J
23.	unknown	"	27.00	494 J
24.	hydrocarbon	"	27.98	538 J
25.	"			
26.				
27.				
28.				
29.				
30.				

Organics Analysis Data Sheet
(Page 1)

Sample Number: EM871

Laboratory Name: ENVIRODYNE
Lab Sample ID No: 87003295
Sample Matrix: SOIL
Data Release Authorized By: SBP

Case No: 7351
QC Report No: 133
Contract No: 68-01-7087
Date Sample Received: 6-27-87

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Volatile Compounds

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 07-01-87
Conc/Dil Factor: 1
Percent Moisture (not decanted): 23

CAS No.		ug/kg	CAS No:		ug/kg
74-87-3	Chloromethane	13 U	78-87-5	1,2-Dichloropropane	6 U
74-83-9	Bromomethane	13 U	10061-02-6	trans-1,3-Dichloropropene	6 U
75-01-4	Vinyl Chloride	13 U	79-01-6	Trichloroethene	6 U
75-00-3	Chloroethane	13 U	124-48-1	Dibromochloromethane	6 U
75-09-2	Methylene Chloride	41 B	79-00-5	1,1,2-Trichloroethane	6 U
67-64-1	Acetone	44 B	71-43-2	Benzene	6 U
75-15-0	Carbon Disulfide	6 U	10061-01-5	cis-1,3-Dichloropropene	6 U
75-35-4	1,1-Dichloroethene	6 U	110-75-8	2-Chloroethylvinylether	13 U
75-34-3	1,1-Dichloroethane	6 U	75-25-2	Bromoform	6 U
156-60-5	trans-1,2-Dichloroethene	6 U	108-10-1	4-Methyl-2-pentanone	13 U
67-66-3	Chloroform	6 U	591-78-6	2-Hexanone	13 U
107-06-2	1,2-Dichloroethane	6 U	127-18-4	Tetrachloroethene	6 U
78-93-3	2-Butanone	13 U	79-34-5	1,1,2,2-Tetrachloroethane	6 U
71-55-6	1,1,1-Trichloroethane	6 U	108-88-3	Toluene	2 J
56-23-5	Carbon Tetrachloride	6 U	108-90-7	Chlorobenzene	6 U
108-05-4	Vinyl Acetate	13 U	100-41-4	Ethylbenzene	6 U
75-27-4	Bromodichloromethane	6 U	100-42-5	Styrene	6 U
				Total Xylenes	6 U

- -

Data Reporting Qualifiers

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 (eg.10U) based on necessary concent./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 (eg. 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C:
This flag applies to pesticide parameters where the identification was 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 analyte is found in blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER:
Other 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.

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM871

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 07-02-87
Date Analyzed: 07-14-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 23

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	430 U	83-32-9	Acenaphthene	430 U
111-44-4	bis-(2-Chloroethyl)ether	430 U	51-28-5	2,4-Dinitrophenol	2100 U
95-57-8	2-Chlorophenol	430 U	100-02-7	4-Nitrophenol	2100 U
541-73-1	1,3-Dichlorobenzene	430 U	132-64-9	Dibenzofuran	430 U
106-46-7	1,4-Dichlorobenzene	430 U	121-14-2	2,4-Dinitrotoluene	430 U
100-51-6	Benzyl Alcohol	430 U	606-20-2	2,6-Dinitrotoluene	430 U
95-50-1	1,2-Dichlorobenzene	430 U	84-66-2	Diethyl phthalate	430 U
95-48-7	2-Methylphenol	430 U	7005-72-3	4-Chlorophenyl-phenyl ether	430 U
39638-32-9	bis-(2-Chloroisopropyl)ether	430 U	86-73-7	Fluorene	430 U
106-44-5	4-Methylphenol	430 U	100-01-6	4-Nitroaniline	2100 U
621-64-7	N-nitroso-Di-n-propylamine	430 U	534-52-1	4,6-Dinitro-2-Methylphenol	2100 U
67-72-1	Hexachloroethane	430 U	86-30-6	N-nitrosodiphenylamine (1)	430 U
98-95-3	Nitrobenzene	430 U	101-55-3	4-Bromophenyl-phenyl ether	430 U
78-59-1	Isophorone	430 U	118-74-1	Hexachlorobenzene	430 U
88-75-5	2-Nitrophenol	430 U	87-86-5	Pentachlorophenol	2100 U
105-67-9	2,4-Dimethylphenol	430 U	85-01-8	Phenanthrene	430 U
65-85-0	Benzoic Acid	2100 U	120-12-7	Anthracene	430 U
111-91-1	bis-(Chloroethoxy)Methane	430 U	84-74-2	Di-n-butyl phthalate	820 J
120-83-2	2,4-Dichlorophenol	430 U	206-44-0	Fluoranthene	430 U
120-82-1	1,2,4-Trichlorobenzene	430 U	129-00-0	Pyrene	430 U
91-20-3	Naphthalene	430 U	85-68-7	Butyl-benzyl-phthalate	430 U
106-47-8	4-Chloroaniline	430 U	91-94-1	3,3'-Dichlorobenzidine	860 U
87-68-3	Hexachlorobutadiene	430 U	56-55-3	Benzo(a)anthracene	430 U
59-50-7	4-Chloro-3-methylphenol	430 U	117-81-7	bis-(2-Ethylhexyl)phthalate	280 BJ
91-57-6	2-Methylnaphthalene	430 U	218-01-9	Chrysene	430 U
77-47-4	Hexachlorocyclopentadiene	430 U	117-84-0	Di-n-octyl phthalate	430 U
88-06-2	2,4,6-Trichlorophenol	430 U	205-99-2	Benzo(b)fluoranthene	430 U
95-95-4	2,4,5-Trichlorophenol	2100 U	207-08-9	Benzo(k)fluoranthene	430 U
91-58-7	2-Chloronaphthalene	430 U	50-32-8	Benzo(a)pyrene	430 U
88-74-4	2-Nitroaniline	2100 U	193-39-5	Indeno(1,2,3-cd)pyrene	430 U
131-11-3	Dimethyl phthalate	430 U	53-70-3	Dibenzo(a,h)anthracene	430 U
208-96-8	Acenapthylene	430 U	191-24-2	Benzo(ghi)perylene	430 U
99-09-2	3-Nitroaniline	2100 U			

(1)-Cannot be separated from diphenylamine

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Laboratory Name: Envirodyne Engineers, Inc.

Case No: 7351

Sample Number: EM871

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7-2-87

Date Analyzed: 7-10-87

Conc/Dil Factor: 1

Percent Moisture (decanted) 23.0

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	16.0 U
319-85-7	Beta-BHC	16.0 U
319-86-8	Delta-BHC	16.0 U
58-89-9	Gamma-BHC (Lindane)	16.0 U
76-44-8	Heptachlor	16.0 U
309-00-2	Aldrin	16.0 U
1024-57-3	Heptachlor Epoxide	16.0 U
959-98-8	Endosulfan I	16.0 U
60-57-1	Dieldrin	32.0 U
72-55-9	4,4'-DDE	32.0 U
72-20-8	Endrin	32.0 U
33213-65-9	Endosulfan II	32.0 U
72-54-8	4,4'-DDD	32.0 U
1031-07-8	Endosulfan Sulfate	32.0 U
50-29-3	4,4'-DDT	32.0 U
72-43-5	Methoxychlor	160.0 U
53494-70-5	Endrin Ketone	32.0 U
57-74-9	Chlordane	160.0 U
8001-35-2	Toxaphene	320.0 U
12674-11-2	Aroclor-1016	160.0 U
11104-28-2	Aroclor-1221	160.0 U
11141-16-5	Aroclor-1232	160.0 U
53469-21-9	Aroclor-1242	160.0 U
12672-29-6	Aroclor-1248	160.0 U
11097-69-1	Aroclor-1254	320.0 U
11096-82-5	Aroclor-1260	320.0 U

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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 _____ or W_s 30g V_t 10,000ul V_i 2.0ul

Laboratory Name: Envirodyne Engineers

Case No: 7351

Sample Number: EM871

RECEIVED AUG 18 1987

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)
	See peaks for I.S.	VOA		
1.	unknown	"	4.97	917 J
2.	"	"	5.07	2320 J
3.	"	"	5.78	890 J
4.	"	"	6.82	2415 J
5.	"	"	8.00	5723 J
6.	"	"	8.89	445 J
7.	hydrocarbon	"	10.82	591 J
8.	"	"	11.07	412 J
9.	hydrocarbon & unknown	"	12.62	697 J
10.	hydrocarbon	"	14.23	239 J
11.	unknown	"	14.30	623 J
12.	hydrocarbon	"	15.28	584 J
13.	hydrocarbon & unknown	"	15.88	614 J
14.	hydrocarbon	"	17.34	1218 J
15.	unknown	"	18.07	546 J
16.	"	"	18.79	622 J
17.	hydrocarbon	"	18.88	1149 J
18.	"	"	20.13	479 J
19.	"	"	20.25	499 J
20.	"	"	21.01	3055 J
21.	phthalate	"	21.41	449 J
22.	hydrocarbon	"	22.63	293 J
23.	"	"	23.79	272 J
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

Date Received for Review 9/3 Date Review Completed 9/8/87

To: Tom Pachowicz

From: Zena Gold-Kaufman ZGK

Subject: HOD Lnafl

COPY

PAN: IL0141 Case # 7351

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 5	Low Soil (41 → 45)	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting: _____

FIT Data Review Findings:

Samples EM 872-876
Reviewer rejected all VOA results.
All BNA exceeded holding times
BNA rejected for BNA for EM 872, EM 874
Reviewer flagged BNAs UJ for exceeding holding times.
Compounds detected: EM876 - Phenanthrene 83J, Chrysene 51J

_____ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 Page No. 178 sampled 7/6

1, 43

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 9/1/87

SUBJECT: Review of Region V CLP Data Received for Review on 8-10-87

RECEIVED SEP 3 1987

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

TO: Data User: FIT

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

SITE NAME: HOD LANDFILL SMO case No. 7351

EPA Data Set No. SF 4168 No. of Samples: 5 D.U./Activity Numbers Y905/C72100

CRL No. 87FP11S24 - S28

SMO Traffic No. EM 872 - 876

CLP Laboratory: ENVIRODYNE Hrs. Required for Review: 40

Following are our findings:

This review covers 5 soil samples analyzed for VOA's, BNA's and pest/PCB's.

All VOA results are rejected due to several of the absolute areas for the internal standard chlorobenzene-d_5 for calibration standards and samples being outside the "window" of minus 50% to plus 100%.

All BNA samples exceeded the holding time as did one of the pest/PCB samples. MB#1, EM872 and EM874 each have the absolute area for the BNA internal standards bromochloromethane and 1,4 difluorobenzene outside the minus 50% to plus 100% "window" relative to the base calibration standard of 40 ppm. Thus BNA samples for EM872 and EM874 are rejected.

For detection limits, see case 7351 (SMO sample nos. EM877-80).

Mike Terry (8/31/87)

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above. pest/PCB and BN samples EM873, EM875 and EM
( ) Data are preliminary - pending verification by Contractor Laboratory.
(X) Data are unacceptable. All VOAs, BNAs for EM872 and EM874

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: Envirodyne

Case 7351

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

1. Sample Holding Times

VOA's: All holding times met.

BNA's: no holding times met. Extraction was 23 days after VTSR (10 days are allowed for soil samples). Therefore flag all positive results as estimated (J) and sample quantitation limits as estimated (UJ).

Pest/PCB: Holding times were met for sample numbers EM873-6a. Holding time for EM872 was not met as 16 days were taken when the contract allows for 10. The action is the same as for the BNA's above.

2. GC/MS Tuning and GC Instrument Performance

All GC/MS BFB (4 of them) and DFTPP (1 of them) tuning criteria were achieved.

GC instrument performance meets contract requirements for pest/PCB analysis.

3. Calibration:

VOA and BNA outliers for initial and continuing calibrations are noted on the calibration outlier forms which follow.

Pest/PCB's: The contract lab neglected to enter the values for % RSD for quantitation column GC 5B on form VIII, p-2 (the initial calibration).

In order to review the results for samples quantitated on this column, the reviewer calculated the % RSD's. They were found to be < 10% meeting the contract requirement.

Reviewed by: Mike Terry 8/28/87

Phone: 312-886-0875

DATA QUALIFIERS

Contractor: Envirodyne

Case 7351

RECEIVED SEP 3 1987

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

3. Calibration (continued)

The percent difference for calibration factors for quantitation column GC 5A for two of the HSL's is greater than the 15% allowed by the contract. The HSL's were aldrin (24%) and 4,4'-DDE (at 18%). Strict adherence to the contract would require the lab to repeat the analyses of all samples run following the running of the calibration standard which failed to meet the 15% requirement. The reviewer was advised to not require this repeat if the HSL's for which the 15% requirement was not met were not detected in any samples run following the run of the out of compliance calibration standard. As aldrin and 4,4'-DDE were not detected in these samples, they need not be rerun. Finally since aldrin had a % diff > 20%, we flagged affected samples for which the contract required limit for aldrin as estimated (UJ).

4. Blanks:

In both VOA blanks less than 5X CRDL of methylene chloride and acetone was detected. 2-hexanone was detected at less than the CRDL in both blanks. 4-methyl-2-pentanone was detected at less than the CRDL in the blank of 7/13.

The single BNA blank reported 5 unknowns plus 2 phthalates (di-N-butyl and bis(2-ethylhexyl)) at less than 5X CRDL.

Reviewed by: Mike Terry 8/28/87

Phone: 312 886-0275

DATA QUALIFIERS

Contractor: Envirodyne

Case 7351

RECEIVED SEP 3 1987

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

4. Blanks (continued):

Appropriate qualification of the results on the Organic Analysis Data Sheets (OADS) (page 1 for VOA's and page 2 for BNA's) for compounds detected in blanks was done

Note: The lab should have marked with "B" the two phthalates detected in the BNA blank ~~for~~ on the OADS sheets for the samples EM875MS, EM872, EM874, and EM875.

Also sample EM876 reports a J for bis-(2-Ethylhexyl) phthalate on the OADS (page 2) when the value is greater than the CRDL. Of course the contractor should only use the J when the result is less than the CRDL.

Note: ~~The~~ The lab used the same name (MB#1) for three different blanks, namely one of the VOA blanks, the BNA blank and the pest/PCB blank. This practice did not contribute to the clarity of their presentation.

Pest/PCB: The method blanks run for both of the quantitation columns ~~appear~~ appear to have contaminants in them (columns 5B and 5A)

5. Surrogate Recoveries

VOA's: All recoveries were acceptable except for samples EM872 and EM872RE [high toluene-D8 (120%) for both original and reanalysis]. For samples EM872 and EM872RE, positive results for all parameters in VOA fraction are flagged (J) and negative

Reviewed by: Mike Terry 8/28/87

Phone: 312 886-0875

DATA QUALIFIERS

Contractor: Envirodyne

Case 7351

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

5. Surrogate Recoveries (continued):
results are flagged with the sample quantitation limit classified as estimated (UJ).
BNA's: There was one outlier. Sample EM874 had Surrogate 2-fluoro biphenyl out of specification. No action is required by the contract.
Pest/PCB's: One surrogate outlier apparently for EM872MS. Since one of the recovery values on form II is not associated with any sample or blank, we cannot be sure which sample the outlier is associated with.

6. Matrix Spike/MSD
VOA's: No outliers for recovery or RPD's.
BNA's: EM875MS and EM875MSD had 2,4 dinitrotoluene as an outlier. EM875MSD had 4-nitrophenol as an outlier.
Pest/PCB's: No outliers reported.

Reviewed by: Mike Terry 8/28/87

Phone: 312 886-0875

DATA QUALIFIERS

RECEIVED SEP 3 1987

Contractor: Enviredyne

Case 7351

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

7. Detailed Case Specific Problems:

Regarding System Performance:

Specifically the absolute areas of the internal standards for VOA and BNA analyses.

VOA's:

- the data pages reporting internal standard chlorobenzene-d_5 for the 20 ppm calibration standard were not found.
- the absolute area of internal standard chlorobenzene-d_5 in the 100 ppm calibration standard is less than minus 50% of both the 150 ppm and the 200 ppm calibration standards (29% and 30.6% respectively).
- the method blank and sample EM872 internal standard absolute areas (for chlorobenzene-d_5) are 42% (i.e. less than the minus 50% criterion) of the relevant calibration standard (50 ppm standard). We conclude for the method blank and EM872, the HSL's assigned to internal standard chlorobenzene-d_5 may be high.
- for sample EM874, the data pages for the absolute areas for all VOA internal standards were not found. We conclude the reported values for all VOA's in this sample are not useable without this data.

BNA's:

- variations in the absolute areas of internal standards (acenapthene-d_{10} and phenanthrene-d_{10}) greater than the minus 50% criterion relative to the 40 ppm calibration standard were noted for the method blank and samples EM872, EM873 and EM874.

Reviewed by: Mike Terry 8/28/87

Phone: 312 886-0875

Incl. 5985-2
#

RECEIVED SEP 3 1987

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

CASE# 7351 CONTRACTOR Envirodyne

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8-4-87														
	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		34	J												
Benzoic Acid															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline	.008	40	J/R												
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		36	J												
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

MB #1
EM872
EM873
EM874
EM875
EM876
EM875MSD
EM875MS

* 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# 7351 CONTRACTOR Envirodyne

RECEIVED 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:															
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline		58	J												
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

ENVIRODYNE
ENGINEERS

12161 Lackland Road,
St. Louis, Missouri 63146
(314) 434-6960

RECEIVED
AUG 10 1987
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

August 7, 1987
1990-7351

Ms. Carol Schaeffer
Sample Management Office
209 Madison Street, Suite 200
Alexandria, Virginia 22314

Dear Ms. Schaeffer:

Enclosed are partial results of analysis of Case 7351 for volatiles, BNAs and Pesticide/PCBs performed by Envirodyne under Contract No. 68-01-7087. Five soil samples, EM872 through EM876, were received by Envirodyne on July 7, 1987.

The semivolatile fractions were screened for concentration levels by GC, and extracted by the low level method. Because surrogates were out of control on the BNA blanks from the original extraction, the BNA fractions were re-extracted on July 30, 1987.

A matrix spike and matrix spike duplicate were extracted with all fractions with these samples.

If you have any questions about this report, please contact me.

Sincerely,

Margaret C. Winter
cag

Margaret C. Winter
Project Manager

MCW/jag
Enclosures

RECEIVED SEP 3 1987

Case: 7351

Contractor: Envirodyne

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: Philip M. Terry 8/31/87

CONTRACT LABORATORY PROGRAM

Deputy Project Officer Communication Summary

RECEIVED SEP 3 1987

Date DPO Notified of Issue: 9-1-87 DPO Notified By: [illegible]

Subject Laboratory: ENVIRODYNE Case/Sas No: 7351

Contact for Resolution: _____
(Laboratory or PO)

Date of Contact: _____ Call or Visit (Circle One)

Summary of Issues & Resolutions:

Document the issue(s), resolution(s), and action deadlines, if any.

CASE 7351 CONSISTED OF SEVERAL SAMPLE PACKAGES ANALYZED OVER SEVERAL WEEKS BY ENVIRODYNE SOME PACKAGES HAD SIGNIFICANT PROBLEMS WHICH NEED TO BE ADDRESSED.

1 SAMPLE EL267 VOLATILES WAS ANALYZED AT MEDIUM LEVEL BUT SHOULD HAVE BEEN LOW LEVEL.

2 SAMPLES EJ187 AND EL259 PESTICIDES DID NOT MEET RETENTION TIME SHIFT CRITERIA FOR DBC.

3 INTERNAL STANDARD AREAS FOR VOLATILE FRACTION OF EM272-EM276 FLUCTUATED MORE THAN THE -50%, +100% WINDOWS. THIS ALSO OCCURED FOR SEMI-VOLATILE SAMPLES EM272 AND EM274. THIS INDICATES SERIOUS INSTRUMENT PROBLEMS.

4 SEE ATTACHED RESPONSES TO CCS FOR MORE DETAIL.

Charles J. Ellis
Signature

9/1/87
Date

5
Region

(1) DPO Copy (2) Project Officer Copy (3) SMO Copy (4) Lab Copy

5/84

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

RECEIVED SEP 3 1987

DATE: 9-1-87

SUBJECT: REGIONAL RESPONSE TO CASE 7351 CCS

FROM: CHUCK ELLY, DPO, REGION 5 CE

TO: DORIS LING, SMO

DUE TO POOR INSTRUMENT PERFORMANCE SEVERAL SAMPLE FRACTIONS ARE BEING REJECTED:

1. DURING THE INITIAL CALIBRATION FOR VOLATILE SAMPLES EM872--EM876 THE INTERNAL STANDARD AREAS CHANGED SO MUCH THAT IT WAS OBVIOUS THAT THERE WAS A PROBLEM WITH INSTRUMENT STABILITY. THE LAB DID NOT TAKE ANY STEPS TO CORRECT THIS PROBLEM. THEREFORE, ALL VOLATILE DATA IS REJECTED.

2. SEMI-VOLATILE SAMPLES EM872 AND EM874 SUFFERED SIMILAR INTERNAL STANDARD PROBLEMS AS THE VOLATILE FRACTIONS AND ARE ALSO REJECTED.

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 7351 Contract Laboratory ENVIRODYNE Contract No. 68-01-7087

Low ✓ Medium

	VOLATILE			SEMI-VOLATILE								PESTICIDE
SMO TRAFFIC NO.	TOLUENE-D8 81-117 (81-117)	BFB 74-121 (74-121)	1,2 DICHLORO-ETHANE-D4 70-121 (70-121)	NITRO-BENZENE-D5 23-120 (23-120)	2-FLUORO-BIPHENYL 30-115 (30-115)	TERPHENYL-D14 18-137 (18-137)			PHENOL-D5 24-113 (24-113)	2-FLUORO-PHENOL 25-121 (25-121)	2,4,6 TRIBROMO-PHENOL 19-122 (19-122)	DIBUTYL-CHLORENDATE** 20-150 (20-150)
MB#1	105	93	99	71	89	103			78	78	62	102
EM872	120*	89	96	77	102	73			81	52	52	107
EM873	111	85	98	79	93	93			87	54	80	101
EM874	110	86	94	109	129*	99			88	55	74	94
EM875	113	88	93	56	70	62			69	40	42	102
EM876	110	86	93	71	94	80			86	54	45	79
EM872RE	120*	82	88									
MB#2	94	95	84									113
EM873MS	107	87	78									
EM873MSD	112	91	92									
EM875MS				77	98	79			74	63	84	
EM875MSD				90	102	77			80	81	77	
EM872MS												
EM872MSD												170*
												87

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: 2 out of 30 ; outside of QC limits

Semi-Volatiles: 1 out of 48 ; outside of QC limits

Pesticides: 1 out of 9 ; outside of QC limits

7/86

Comments: * interference causes high DBC surrogate recovery.

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FORM II

METHOD BLANK SUMMARY

Case No. 7351 Region V Contractor ENVIRODYNE Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRQL
23656	7-9-87	VOA	Soil	L	5985-1		methylene chloride	10	ug/kg	5
							acetone	12	"	10
							2-hexanone	7	"	10
23705	7-13-87	VOA	Soil	L	5985-1		methylene chloride	7	"	5
							acetone	24	"	10
							4-methyl-2-pentanone	3	"	10
							2-hexanone	4	"	10
B6772	8-4-87	BNA	Soil	L	5985-2		Di-N-butyl phthalate	49	"	330
							bis(2-ethylhexyl) phthalate	280	"	330
							unknown	970	"	—
							unknown	810	"	—
							unknown	23	"	—
							unknown	150	"	—
							unknown	280	"	—
MB#1	7/28/87	Pest/PCB	soil	L	GC5B	—	All compounds < CRQL	-	-	-
						—	" "	—	—	—
MB#2	7/28/87	Pest	soil	L	GC5A					

Comments:

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FORM IV 7/85

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 7351 Contractor ENVIRODYNE Contract No. 68-01-7087

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. EM873	1,1-Dichloroethene	62.3	0	44.2	71	43.2	69	3	22	59-172
	Trichloroethene			42.2	68	38.8	62	9	24	62-137
	Chlorobenzene			43.6	70	46.2	74	6	21	60-133
	Toluene		7.7	50.9	69	54.5	75	8	21	59-139
	Benzene		0	54.4	87	51.6	83	5	21	66-142
B/N SMO SAMPLE NO. EM875	1,2,4-Trichlorobenzene	3470	0	2220	64	2570	74	14	23	38-107
	Acenaphthene			3210	92	3260	94	2	19	31-137
	2,4 Dinitrotoluene			3830	110*	3920	113*	3	47	28-89
	Pyrene			2350	68	2280	66	3	36	35-142
	N-Nitrosodi-n-Propylamine			2050	59	2330	67	13	38	41-126
	1,4-Dichlorobenzene			1640	47	1980	57	19	27	28-104
ACID SMO SAMPLE NO. EM875	Pentachlorophenol	6940	0	2550	37	3340	48	26	47	17-109
	Phenol			4700	68	4940	71	4	35	26-90
	2-Chlorophenol			4800	69	5040	73	6	50	25-102
	4-Chloro-3-Methylphenol			4550	66	5380	78	17	33	26-103
	4-Nitrophenol			9230	133*	8480	122*	9	50	11-114
PEST SMO SAMPLE NO. EM872	Lindane	68	0	76	112	68	100	11	50	46-127
	Heptachlor			65	96	63	92	4	31	35-130
	Aldrin			59	87	61	89	2	43	34-132
	Dieldrin	168		170	102	155	92	10	38	31-134
	Endrin			195	117	171	102	14	45	42-139
	4,4'-DDT			149	89	125	74	18	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 0 out of 6; outside QC limits

RECOVERY: VOAs 0 out of 10; outside QC limits
B/N 2 out of 12; outside QC limits
ACID 2 out of 10; outside QC limits
PEST 0 out of 12; outside QC limits

Comments:

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FORM III

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Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM-872

Organics Analysis Data Sheet
(Page 3)

Pesticides & PCB s

Concentration: LOW
Date Extracted/Prepared: 7-23-87
Date Analyzed: 7-28-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 21

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ugkg
319-84-6	Alpha-BHC	20 U
319-85-7	Beta-BHC	20 U
319-86-8	Delta-BHC	20 U
58-89-9	Gamma-BHC (Lindane)	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	200 U
53494-70-5	Endrin Ketone	41 U
57-74-9	Chlordane	200 U
8001-35-2	Toxaphene	410 U
12674-11-2	Aroclor-1016	200 U
11104-28-2	Aroclor-1221	200 U
53469-21-9	Aroclor-1232	200 U
53469-21-9	Aroclor-1242	200 U
12672-29-6	Aroclor-1248	200 U
11097-69-1	Aroclor-1254	410 U
11096-82-5	Aroclor-1260	410 U

All sample quantitation limits are flagged as estimated (UJ) since holding time for this sample exceeded contract requirement (16 days taken when 10 are allowed).

mTerry
8/26/87

Vi = Volume of extract injected (ul)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Ws = 30 g Vt = 40,000 ul Vi = 2.0 ul

FORM 1

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Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 873

All sample quantitation limits are flagged as estimated (UJ) since holding time for this sample exceeded contract requirement (23 days used where 10 were allowed).

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 7-30-87
Date Analyzed: 8-5-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 19.7

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	410 U	83-32-9	Acenaphthene	410 U
111-44-4	bis-(2-Chloroethyl)ether	410 U	51-28-5	2,4-Dinitrophenol	2000 U
95-57-8	2-Chlorophenol	410 U	100-02-7	4-Nitrophenol	2000 U
541-73-1	1,3-Dichlorobenzene	410 U	132-64-9	Dibenzofuran	410 U
106-46-7	1,4-Dichlorobenzene	410 U	121-14-2	2,4-Dinitrotoluene	410 U
100-51-6	Benzyl Alcohol	410 U	606-20-2	2,6-Dinitrotoluene	410 U
95-50-1	1,2-Dichlorobenzene	410 U	84-66-2	Diethyl phthalate	410 U
95-48-7	2-Methylphenol	410 U	7005-72-3	4-Chlorophenyl-phenyl ether	410 U
39638-32-9	bis-(2-Chloroisopropyl)ether	410 U	86-73-7	Fluorene	410 U
106-44-5	4-Methylphenol	410 U	100-01-6	4-Nitroaniline	2000 U
621-64-7	N-nitroso-Di-n-propylamine	410 U	534-52-1	4,6-Dinitro-2-Methylphenol	2000 U
67-72-1	Hexachloroethane	410 U	86-30-6	N-nitrosodiphenylamine (1)	410 U
98-95-3	Nitrobenzene	410 U	101-55-3	4-Bromophenyl-phenyl ether	410 U
78-59-1	Isophorone	410 U	118-74-1	Hexachlorobenzene	410 U
88-75-5	2-Nitrophenol	410 U	87-86-5	Pentachlorophenol	2000 U
105-67-9	2,4-Dimethylphenol	410 U	85-01-8	Phenanthrene	410 U
65-85-0	Benzoic Acid	2000 U	120-12-7	Anthracene	410 U
111-91-1	bis-(Chloroethoxy)Methane	410 U	84-74-2	Di-n-butyl phthalate	390 ~~U~~ (UJ)
120-83-2	2,4-Dichlorophenol	410 U	206-44-0	Fluoranthene	410 U
120-82-1	1,2,4-Trichlorobenzene	410 U	129-00-0	Pyrene	410 U
91-20-3	Naphthalene	410 U	85-68-7	Butyl-benzyl-phthalate	410 U
106-47-8	4-Chloroaniline	410 U	91-94-1	3,3'-Dichlorobenzidine	820 U
87-68-3	Hexachlorobutadiene	410 U	56-55-3	Benzo(a)anthracene	410 U
59-50-7	4-Chloro-3-methylphenol	410 U	117-81-7	bis-(2-Ethylhexyl)phthalate	520 ~~U~~ (UJ)
91-57-6	2-Methylnaphthalene	410 U	218-01-9	Chrysene	410 U
77-47-4	Hexachlorocyclopentadiene	410 U	117-84-0	Di-n-octyl phthalate	410 U
88-06-2	2,4,6-Trichlorophenol	410 U	205-99-2	Benzo(b)fluoranthene	410 U
95-95-4	2,4,5-Trichlorophenol	2000 U	207-08-9	Benzo(k)fluoranthene	410 U
91-58-7	2-Chloronaphthalene	410 U	50-32-8	Benzo(a)pyrene	410 U
88-74-4	2-Nitroaniline	2000 U	193-39-5	Indeno(1,2,3-cd)pyrene	410 U
131-11-3	Dimethyl phthalate	410 U	53-70-3	Dibenzo(a,h)anthracene	410 U
208-96-8	Acenaphthylene	410 U	191-24-2	Benzo(ghi)perylene	410 U
99-09-2	3-Nitroaniline	2000 U			

(1)-Cannot be separated from diphenylamine

FORM 1

mlerg 8/25/87

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Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: CM-873

Organics Analysis Data Sheet
(Page 3)

Pesticides & PCB's

Concentration: LOW
Date Extracted/Prepared: 7-10-87
Date Analyzed: 7-21-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 20

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ugkg
319-84-6	Alpha-BHC	20 U
319-85-7	Beta-BHC	20 U
319-86-8	Delta-BHC	20 U
58-89-9	Gamma-BHC (Lindane)	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	40 U
72-55-9	4,4'-DDE	40 U
72-20-8	Endrin	40 U
33213-65-9	Endosulfan-II	40 U
72-54-8	4,4'-DDD	40 U
1031-07-8	Endosulfan Sulfate	40 U
50-29-3	4,4'-DDT	40 U
72-43-5	Methoxychlor	200 U
53494-70-5	Endrin Ketone	40 U
57-74-9	Chlordane	200 U
8001-35-2	Toxaphene	400 U
12674-11-2	Aroclor-1016	200 U
11104-28-2	Aroclor-1221	200 U
53469-21-9	Aroclor-1232	200 U
53469-21-9	Aroclor-1242	200 U
12672-29-6	Aroclor-1248	200 U
11097-69-1	Aroclor-1254	400 U
11096-82-5	Aroclor-1260	400 U

Vi = Volume of extract injected (ul)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Ws = 30 g Vt = 40,000 ul Vi = 2.0 ul

FORM 1

Laboratory Name: ENVIRODYNE

Case No: 7351

Sample Number: EM873

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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	4.5	1400 J
2.	unknown	"	5.0	240 J
3.	unknown	"	6.8	160 J
4.	hydrocarbon	"	11.7	180 J
5.	hydrocarbon	"	12.5	200 J
6.	hydrocarbon	"	13.0	200 J
7.	hydrocarbon	"	14.2	210 J
8.	hydrocarbon	"	14.7	200 J
9.	hydrocarbon	"	15.3	260 J
10.	hydrocarbon	"	16.4	180 J
11.	hydrocarbon	"	16.5	190 J
12.	phthalate	"	17.1	1200 J
13.	unknown hydrocarbon	"	17.4	180 J
14.	hydrocarbon	"	18.4	130 J
15.	hydrocarbon	"	19.3	180 J
16.	hydrocarbon	"	20.2	160 J
17.	hydrocarbon	"	21.0	180 J
18. 123795	hexanedioic acid, dioctyl ester	"	21.8	920 J
19.	unknown	"	25.0	140 J
20.	hydrocarbon	"	25.5	160 J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM-874

Organics Analysis Data Sheet
(Page 3)

Pesticides & PCB s

Concentration: LOW
Date Extracted/Prepared: 7-10-87
Date Analyzed: 7-21-87
Conc/Dil Factor: 1, 10*
Percent Moisture (decanted): 12

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ugkg
319-84-6	Alpha-BHC	180 U *
319-85-7	Beta-BHC	180 U *
319-86-8	Delta-BHC	180 U *
58-89-9	Gamma-BHC (Lindane)	180 U *
76-44-8	Heptachlor	180 U *
309-00-2	Aldrin	180 U * (UJ)
1024-57-3	Heptachlor Epoxide	18 U
959-98-8	Endosulfan I	18 U
60-57-1	Dieldrin	36 U
72-55-9	4,4'-DDE	36 U
72-20-8	Endrin	36 U
33213-65-9	Endosulfan-II	36 U
72-54-8	4,4'-DDD	36 U
1031-07-8	Endosulfan Sulfate	36 U
50-29-3	4,4'-DDT	36 U
72-43-5	Methoxychlor	180 U
53494-70-5	Endrin Ketone	36 U
57-74-9	Chlordane	180 U
8001-35-2	Toxaphene	360 U
12674-11-2	Aroclor-1016	180 U
11104-28-2	Aroclor-1221	180 U
53469-21-9	Aroclor-1232	180 U
53469-21-9	Aroclor-1242	180 U
12672-29-6	Aroclor-1248	180 U
11097-69-1	Aroclor-1254	360 U
11096-82-5	Aroclor-1260	360 U

mtwg 8/27/87

Vi = Volume of extract injected (ul)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

* D.F. 1:10

Ws = 30 g
Vt = 40,000 ul
* 400,000 ul
Vi = 2.0 ul

FORM 1

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Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 975

All sample quantitation limits are flagged as estimated (UJ) since holding time for this sample exceeded contract requirement (23 days where 10 are allowed)

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 7-30-87
Date Analyzed: 8-5-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 4

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ugkg	CAS No:		ugkg
108-95-2	Phenol	340 U	83-32-9	Acenaphthene	340 U
111-44-4	bis-(2-Chloroethyl)ether	340 U	51-28-5	2,4-Dinitrophenol	1700 U
95-57-8	2-Chlorophenol	340 U	100-02-7	4-Nitrophenol	1700 U
541-73-1	1,3-Dichlorobenzene	340 U	132-64-9	Dibenzofuran	340 U
106-46-7	1,4-Dichlorobenzene	340 U	121-14-2	2,4-Dinitrotoluene	340 U
100-51-6	Benzyl Alcohol	340 U	606-20-2	2,6-Dinitrotoluene	340 U
95-50-1	1,2-Dichlorobenzene	340 U	84-66-2	Diethyl phthalate	340 U
95-48-7	2-Methylphenol	340 U	7005-72-3	4-Chlorophenyl-phenyl ether	340 U
39638-32-9	bis-(2-Chloroisopropyl)ether	340 U	86-73-7	Fluorene	340 U
106-44-5	4-Methylphenol	340 U	100-01-6	4-Nitroaniline	1700 U
621-64-7	N-nitroso-Di-n-propylamine	340 U	534-52-1	4,6-Dinitro-2-Methylphenol	1700 U
67-72-1	Hexachloroethane	340 U	86-30-6	N-nitrosodiphenylamine (1)	340 U
98-95-3	Nitrobenzene	340 U	101-55-3	4-Bromophenyl-phenyl ether	340 U
78-59-1	Isophorone	340 U	118-74-1	Hexachlorobenzene	340 U
88-75-5	2-Nitrophenol	340 U	87-86-5	Pentachlorophenol	1700 U
105-67-9	2,4-Dimethylphenol	340 U	85-01-8	Phenanthrene	340 U
65-85-0	Benzoic Acid	1700 U	120-12-7	Anthracene	340 U
111-91-1	bis-(Chloroethoxy)Methane	340 U	84-74-2	Di-n-butyl phthalate	150 ~~BJ~~ (UJ)
120-83-2	2,4-Dichlorophenol	340 U	206-44-0	Fluoranthene	340 U
120-82-1	1,2,4-Trichlorobenzene	340 U	129-00-0	Pyrene	340 U
91-20-3	Naphthalene	340 U	85-68-7	Butyl-benzyl-phthalate	340 U
106-47-8	4-Chloroaniline	340 U	91-94-1	3,3'-Dichlorobenzidine	690 U
87-68-3	Hexachlorobutadiene	340 U	56-55-3	Benzo(a)anthracene	340 U
59-50-7	4-Chloro-3-methylphenol	340 U	117-81-7	bis-(2-Ethylhexyl)phthalate	130 ~~J~~ B (UJ)
91-57-6	2-Methylnaphthalene	340 U	218-01-9	Chrysene	340 U
77-47-4	Hexachlorocyclopentadiene	340 U	117-84-0	Di-n-octyl phthalate	340 U
88-06-2	2,4,6-Trichlorophenol	340 U	205-99-2	Benzo(b)fluoranthene	340 U
95-95-4	2,4,5-Trichlorophenol	1700 U	207-08-9	Benzo(k)fluoranthene	340 U
91-58-7	2-Chloronaphthalene	340 U	50-32-8	Benzo(a)pyrene	340 U
88-74-4	2-Nitroaniline	1700 U	193-39-5	Indeno(1,2,3-cd)pyrene	340 U
131-11-3	Dimethyl phthalate	340 U	53-70-3	Dibenzo(a,h)anthracene	340 U
208-96-8	Acenapthylene	340 U	191-24-2	Benzo(ghi)perylene	340 U
99-09-2	3-Nitroaniline	1700 U			

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(1)-Cannot be separated from diphenylamine

FORM 1

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Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM-875

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Organics Analysis Data Sheet
(Page 3)

Pesticides & PCB s

Concentration: LOW
Date Extracted/Prepared: 7-10-87
Date Analyzed: 7-21-87
Conc/Dil Factor: 1, 10 *
Percent Moisture (decanted): 4

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ugkg
319-84-6	Alpha-BHC	170 U *
319-85-7	Beta-BHC	170 U *
319-86-8	Delta-BHC	170 U *
58-89-9	Gamma-BHC (Lindane)	170 U *
76-44-8	Heptachlor	170 U *
309-00-2	Aldrin	170 U * (UJ)
1024-57-3	Heptachlor Epoxide	17 U
959-98-8	Endosulfan I	17 U
60-57-1	Dieldrin	33 U
72-55-9	4,4'-DDE	33 U
72-20-8	Endrin	33 U
33213-65-9	Endosulfan-II	33 U
72-54-8	4,4'-DDD	33 U
1031-07-8	Endosulfan Sulfate	33 U
50-29-3	4,4'-DDT	33 U
72-43-5	Methoxychlor	170 U
53494-70-5	Endrin Ketone	33 U
57-74-9	Chlordane	170 U
8001-35-2	Toxaphene	330 U
12674-11-2	Aroclor-1016	170 U
11104-28-2	Aroclor-1221	170 U
53469-21-9	Aroclor-1232	170 U
53469-21-9	Aroclor-1242	170 U
12672-29-6	Aroclor-1248	170 U
11097-69-1	Aroclor-1254	330 U
11096-82-5	Aroclor-1260	330 U

Vi = Volume of extract injected (ul)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Ws = 30 g

* Dil. 1:10
Vt = 40,000 ul
X 400,000 ul

Vi = 2.0 ul

FORM 1

mterry 8/26/87

Laboratory Name: ENVIROLYNE

Case No: 7351

Sample Number: EM87

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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	4.2	200 J
2.	unknown	"	4.9	230 J
3.	unknown	"	6.1	310 J
4.	hydrocarbon	"	7.4	360 J
5.	hydrocarbon	"	9.0	320 J
6.	hydrocarbon	"	9.2	380 J
7.	hydrocarbon	"	10.8	220 J
8.	hydrocarbon	"	10.4	400 J
9.	C5-alkyl benzene	"	11.7	160 J
10.	hydrocarbon	"	13.0	430 J
11.	hydrocarbon	"	14.2	300 J
12.	hydrocarbon	"	14.7	260 J
13.	hydrocarbon	"	15.3	500 J
14.	hydrocarbon	"	15.4	790 J
15.	hydrocarbon	"	16.4	280 J
16.	phthalate	"	17.0	660 J
17.	hydrocarbon	"	17.4	290 J
18.	hydrocarbon	"	21.0	290 J
19. 123795	hexanedioic acid, dioctyl ester	"	21.8	670 J
20.	hydrocarbon	"	25.5	280 J
21. 123284	Propanoic acid, 3,3'-thiobis-, didodecyl ester	"	30.4	390 J
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM 878

All sample quantitation limits are flagged as estimated (UJ) since holding time for this sample exceeded contract requirement (23 days where 10 are allowed).

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW
Date Extracted/Prepared: 7-30-87
Date Analyzed: 8-5-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 26.8

GPC Cleanup : NO
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ug/kg	CAS No:		ug/kg
108-95-2	Phenol	450 U	83-32-9	Acenaphthene	450 U
111-44-4	bis-(2-Chloroethyl)ether	450 U	51-28-5	2,4-Dinitrophenol	2200 U
95-57-8	2-Chlorophenol	450 U	100-02-7	4-Nitrophenol	2200 U
541-73-1	1,3-Dichlorobenzene	450 U	132-64-9	Dibenzofuran	450 U
106-46-7	1,4-Dichlorobenzene	450 U	121-14-2	2,4-Dinitrotoluene	450 U
100-51-6	Benzyl Alcohol	450 U	606-20-2	2,6-Dinitrotoluene	450 U
95-50-1	1,2-Dichlorobenzene	450 U	84-66-2	Diethyl phthalate	450 U
95-48-7	2-Methylphenol	450 U	7005-72-3	4-Chlorophenyl-phenyl ether	450 U
39638-32-9	bis-(2-Chloroisopropyl)ether	450 U	86-73-7	Fluorene	450 U
106-44-5	4-Methylphenol	450 U	100-01-6	4-Nitroaniline	2200 U
621-64-7	N-nitroso-Di-n-propylamine	450 U	534-52-1	4,6-Dinitro-2-Methylphenol	2200 U
67-72-1	Hexachloroethane	450 U	86-30-6	N-nitrosodiphenylamine (1)	450 U
98-95-3	Nitrobenzene	450 U	101-55-3	4-Bromophenyl-phenyl ether	450 U
78-59-1	Isophorone	450 U	118-74-1	Hexachlorobenzene	450 U
88-75-5	2-Nitrophenol	450 U	87-86-5	Pentachlorophenol	2200 U
105-67-9	2,4-Dimethylphenol	450 U	85-01-8	Phenanthrene	83 J
65-85-0	Benzoic Acid	2200 U	120-12-7	Anthracene	450 U
111-91-1	bis-(Chloroethoxy)Methane	450 U	84-74-2	Di-n-butyl phthalate	1300 B
120-83-2	2,4-Dichlorophenol	450 U	206-44-0	Fluoranthene	450 U
120-82-1	1,2,4-Trichlorobenzene	450 U	129-00-0	Pyrene	450 U
91-20-3	Naphthalene	450 U	85-68-7	Butyl-benzyl-phthalate	450 U
106-47-8	4-Chloroaniline	450 U	91-94-1	3,3'-Dichlorobenzidine	900 U
87-68-3	Hexachlorobutadiene	450 U	56-55-3	Benzo(a)anthracene	450 U
59-50-7	4-Chloro-3-methylphenol	450 U	117-81-7	bis-(2-Ethylhexyl)phthalate	440 BJ (UJ)
91-57-6	2-Methylnaphthalene	51 J	218-01-9	Chrysene	51 J
77-47-4	Hexachlorocyclopentadiene	450 U	117-84-0	Di-n-octyl phthalate	450 U
88-06-2	2,4,6-Trichlorophenol	450 U	205-99-2	Benzo(b)fluoranthene	450 U
95-95-4	2,4,5-Trichlorophenol	2200 U	207-08-9	Benzo(k)fluoranthene	450 U
91-58-7	2-Chloronaphthalene	450 U	50-32-8	Benzo(a)pyrene	450 U
88-74-4	2-Nitroaniline	2200 U	193-39-5	Indeno(1,2,3-cd)pyrene	450 U
131-11-3	Dimethyl phthalate	450 U	53-70-3	Dibenzo(a,h)anthracene	450 U
208-96-8	Acenapthylene	450 U	191-24-2	Benzo(ghi)perylene	450 U
99-09-2	3-Nitroaniline	2200 U			

(1)-Cannot be separated from diphenylamine

FORM 1

mterry 8/25/87

Laboratory Name: ENVIRODYNE
Case No: 7351

Sample Number: EM-87o

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Organics Analysis Data Sheet
(Page 3)

Pesticides & PCB s

Concentration: LOW
Date Extracted/Prepared: 7-10-87
Date Analyzed: 7-21-87
Conc/Dil Factor: 1
Percent Moisture (decanted): 27

GPC Cleanup : YES
Sep. Funnel Extraction : YES NO (circle one)
Contin. Liq.-Liq. Ext. : YES NO (circle one)

CAS No:		ugkg
319-84-6	Alpha-BHC	22 U
319-85-7	Beta-BHC	22 U
319-86-8	Delta-BHC	22 U
58-89-9	Gamma-BHC (Lindane)	22 U
76-44-8	Heptachlor	22 U
309-00-2	Aldrin	22 U
1024-57-3	Heptachlor Epoxide	22 U
959-98-8	Endosulfan I	22 U
60-57-1	Dieldrin	44 U
72-55-9	4,4'-DDE	44 U
72-20-8	Endrin	44 U
33213-65-9	Endosulfan-II	44 U
72-54-8	4,4'-DDD	44 U
1031-07-8	Endosulfan Sulfate	44 U
50-29-3	4,4'-DDT	44 U
72-43-5	Methoxychlor	220 U
53494-70-5	Endrin Ketone	44 U
57-74-9	Chlordane	220 U
8001-35-2	Toxaphene	440 U
12674-11-2	Aroclor-1016	220 U
11104-28-2	Aroclor-1221	220 U
53469-21-9	Aroclor-1232	220 U
53469-21-9	Aroclor-1242	220 U
12672-29-6	Aroclor-1248	220 U
11097-69-1	Aroclor-1254	440 U
11096-82-5	Aroclor-1260	440 U

Vi = Volume of extract injected (ul)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Ws = 30 g Vt = 40,000 ul Vi = 2.0 ul

FORM 1

Laboratory Name: ENVIRODYNE

Case No: 7351

Sample Number: EM 876

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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. 3744023	4-methyl 4 penten-2-one	BNA	4.3	710J
2.	hydrocarbon (branched)	"	6.1	250J
3.	hydrocarbon	"	7.4	940J
4.	hydrocarbon	"	9.0	800J
5.	hydrocarbon (branched)	"	9.2	1100J
6.	hydrocarbon	"	10.0	590J
7.	hydrocarbon	"	10.4	1100J
8.	hydrocarbon	"	11.8	980J
9.	hydrocarbon	"	12.5	1200J
10.	hydrocarbon	"	13.0	1300J
11.	hydrocarbon	"	14.2	820J
12.	hydrocarbon	"	14.8	620J
13.	hydrocarbon	"	15.3	1300J
14.	hydrocarbon	"	15.4	2100J
15.	hydrocarbon	"	16.4	620J
16.	hydrocarbon	"	16.5	930J
17.	phthalate	"	17.0	840J
18.	hydrocarbon	"	19.3	580J
19.	hydrocarbon	"	21.0	720J
20.	hydrocarbon	"	21.8	980J
21.	hydrocarbon	"	22.6	630J
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

Date Received for Review 9/1/87 Date Review Completed 9/8/87 COPY

To: Tom Pachowicz
From: Zena Gold-Kaufman
Subject: HOD LN071

PAN: IL0141XB Case # 7351

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 4	Low Soil (46→49)	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

✓ Incomplete, awaiting: _____

FIT Data Review Findings:
Sample EM877-880
Common lab ~~co~~ artifacts - acetone, di-n-butyl-phthalate.

_____ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 Page No. 200

7/16

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 8/31/87

RECEIVED SEP 1 1987

SUBJECT: Review of Region V CLP Data
Received for Review on 8-17-87

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

TO: Data User: FIT

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

SITE NAME: HOD LANDFILL SMO case No. 7351

EPA Data Set No. SF 4183 No. of Samples: 4 D.U./Activity Numbers Y905/C72100

CRL No. 87FP12S66 - S69

SMO Traffic No. EM 877 - 880

CLP Laboratory: ENVIRODYNE Hrs. Required for Review: 24

Following are our findings:

This review covers 4 soil samples analyzed for VOA's BNA's and pest/pcB's.

Mike Terry 8/24/87

( ) 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)

2738

DATA QUALIFIERS

Contractor: Envirodyne

Case 7351

RECEIVED SEP 1 1987

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

1. Sample Holding Times
Times for all samples, VOA's, BNA's and Pest/PCB's are in compliance.

2. GC/MS Tuning and GC Instrument Performance
VOA's: 3 BFB tunes all within abundance criteria.
BNA's: 2 DFTPP " " " " " .
Pest/PCB's: GC instrument performance criteria met.

3. Calibration:
VOA's and BNA's: See calibration outlier forms for HSL compounds whose results are qualified.
Pest/PCB's: The calibration steps done by the lab satisfy the requirements of the contract.

4. Blanks:
VOA's and BNA's: The method blank for VOA's contained methylene chloride and acetone below 5X the CRDL for these compounds.
The method blank for BNA's contains one HSL compound, bis-(2-ethylhexyl)phthalate and one TIC, propanoic acid, 3,3'-thiobis-didodecyl ester.
Pest/PCB's: This blank has several peaks. It has some contaminants.

Reviewed by: Mike Terry 8/24/87

Phone: (312) 886-0875

3138

DATA QUALIFIERS

RECEIVED SEP 1 1987

Contractor: Envirodyne

Case 7351

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

5. Surrogate Recovery
VOA's: no outliers
BNA's: two outliers (for sample EM877, 2,4,6 tri-bromophenol, for EM879, 2-fluorophenol)
No action is required of lab by contract.
Pest/PCB's: no outliers.

6. Matrix Spike/MSD
no data. Please refer to telephone log for explanation.

7. Detailed Case Specific Problems

- sample EM880
the lab failed to zerox the GC/MS bar graphs for the second T.I.C. identified. Since this TIC is also identified in samples EM877-9, therefore it is identified here also.
- for GC/MS tune of 8/11/87 for BNA's, if 40 ppm is taken as the base calibration standard, then internal standard perylene is outside the minus 50% to plus 100% "window" for calibration standards for 80 (123%) and 25 (140%) ppm. For internal standard chrysene the calibration standard of 25 ppm is outside the "window" (131%).
- sample EM877
internal standard perylene is slightly outside

Reviewed by: Mike Tevry 8/24/87

Phone: 312 886-0875

4 of 38

RECEIVED SEP 1 1987

DATA QUALIFIERS

Contractor: Envirodyne

Case 7351

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

7. Detailed Case Specific Problems (continued)

the "window" (±10%) suggesting that quantitation of all BNA's which utilize this internal standard in EM877 have results which are low.

- initial calibration date for VOA's reads 7/24/87. However the date on the tuning form is 7/23/87. From context, appears the 7/23 date is correct.

Reviewed by: M. Terry 8/24/87

Phone: 312 886-0875

RECEIVED SEP 1 1987

Case: 7351

Contractor: Envirodyne

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: Philip M. Terry 8/24/87

6938

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

CASE# 7351 CONTRACTOR Envirodyne

RECEIVED SEP 1 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7/23			7/24 (22:40)			7/25 (10:37)								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone		61	J												
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone		44	J												
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

all	MB #1	MB #2		
	EM878	EM877		
		EM879		
		EM880		

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

7738

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

CASE# 7351 CONTRACTOR Envirodyne

RECEIVED 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8/6														
	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	.02		J/R												
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		37	J												
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

MB #1
EM 878
EM 879
EM 880

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

8/38

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

CASE# 7351 CONTRACTOR Envirodyne

RECEIVED SEP 1 1987

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8/6														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline		33	J												
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

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

CASE# 7351 CONTRACTOR Envirodyne

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8/11														
	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	.0339		S/R												
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene	.01		S/R												
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: EM 877

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

10 738

RECEIVED SEP 1 1987

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

CASE# 7351 CONTRACTOR Envirodyne

	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8/11														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline		35	J												
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

ENVIRODYNE ENGINEERS

18101 Lackland Road
St. Louis, Missouri 63146
(314) 434-6960

RECEIVED
AUG 17 1987
US EPA REGIONAL LAB.
CHICAGO, ILLINOIS 60605

RECEIVED SEP 1 1987

August 14, 1987
1990-7351

Ms. Carol Schaeffer
Sample Management Office
209 Madison Street, Suite 200
Alexandria, Virginia 22314

Dear Ms. Schaeffer:

Enclosed are partial results of analysis of Case 7351 for Volatiles, BNAs, and Pesticides/PCBs performed under Contract Number 68-01-7087. Four soil samples, EM877 through EM880, were received on July 17, 1987. It is our understanding that the case is completed with the submission of these results.

All semivolatiles were extracted and analyzed according to the low level soil protocol. No Pesticide/PCBs were detected on the first GC quantitation runs, so second column confirmation was not required.

If you have any questions about this report, please contact me.

Sincerely,

Margaret C. Winter

Margaret C. Winter
Project Manager

MCW/jag
Enclosure

12738

In Reference to Case No(s):

[illegible]

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Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: [illegible]

Laboratory Name: [illegible] (E[illegible])

Lab Contact: [illegible]

Region: [illegible]

Regional Contact: [illegible]

Call Initiated By: ____ Laboratory ✓ Region

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

EM877

Summary of Questions/Issues Discussed:

1) Did not find data for MS/MSD in region 5's data package?

2) Discrepancy date for initial calibration for VOA's 7/24 and date on tuning form of 7/23.

3) Unable to recalculate value of 36 ug/kg for acetone for EM877.

4) Ask about calculation of surr. recovery of 2-fluorophenol in EM877 where the [illegible] 19[illegible] was [illegible]

Summary of Resolution:

1) Samples EM877-[illegible] part of a large case over 40 samples received over period several weeks in seven shipments. EEI ran 2 or 3 sets of MS/MSD samples earlier in case.

2) EEI will receive feedback from SMO concerning these dates and they will correct them at that time.

3) Way EEI sets up expt don't use Wc in denomination to calculate results so when I make this change I get their answer.

4) Information to calculate this not present in submitted case, but in EEI computer used to make calculation.

Philip M. Terry
Signature

8/24/87
Date

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

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. 7351 Contract Laboratory ENVIRODYNE Contract No. 68-01-7087

Low ✓ Medium _____

	VOLATILE			SEMI-VOLATILE								PESTICIDE**
SMO Traffic No.	Toluene-D8 (81-117)	BFB (74-121)	1,2 D-Chloro-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 (10-150)
MB#1	104	104	98	61	67	91			65	30	41	106
EM878	110	101	95	26	48	91			46	33	39	111
MB# 2	102	103	98	NA	NA	NA			NA	NA	NA	NA
EM880	114	91	98	40	55	90			47	31	37	130
EM877	115	92	100	36	54	69			43	26	17*	113
EM879	109	97	101	25	46	81			31	19*	36	122

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 18 ; outside of QC limits

Semi-Volatiles: 2 out of 30 ; outside of QC limits

Pesticides: 0 out of 5 ; outside of QC limits

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Comments:

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FORM II

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METHOD BLANK SUMMARY

Case No. 7351 Region V Contractor ENVIRODYNE Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
B6662	7-25-87	VOA	Soil	L	5985-2	75-09-2	Methylene chloride	7	ug/kg	5
						67-64-1	acetone	11	"	10
B6669	7-25-87	VOA	Soil	L	5985-2	75-09-2	methylene chloride	5	"	5

Comments:

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FORM IV

Pg 1 of 1

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METHOD BLANK SUMMARY

Case No. 7351 Region V Contractor Envirodyne Contract No. 68-01-7087

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
B6808	8-6-87	BNA	Soil	L	5985-2	117-81-7	bis-(2-ethylhexyl) phthalate	300	ug/kg	330
							unknown	1000J	"	—
							unknown	540J	"	—
							unknown	250J	"	—
						123284	Propanoic acid, 3,3'-thiobis,-didodecyl ester	380J	"	—
Method Blank	8-12-87	Bnt/KB	Soil	L	GC 5A	--	all compounds < CRDL			

Comments:

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Pg 2 of 2

FORM IV 7/85

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CALCULATED INSTRUMENT DETECTION LIMITS

5985-2 VOA

			ng
V)	107-02-8	acrolein	100
3V)	107-13-1	acrylonitrile	100
V)	71-43-2	benzene	25
V)	56-23-5	carbon tetrachloride	25
(7V)	108-90-7	chlorobenzene	25
0V)	107-06-2	1,2-dichloroethane	25
1V)	71-55-6	1,1,1-trichloroethane	25
(13V)	75-34-3	1,1-dichloroethane	25
4V)	79-00-5	1,1,2-trichloroethane	25
5V)	79-34-5	1,1,2,2-tetrachloroethane	25
(16V)	75-00-3	chloroethane	50
(19V)	110-75-8	2-chloroethylvinyl ether	50
23V)	67-66-3	chloroform	25
(29V)	75-35-4	1,1-dichloroethene	25
(30V)	156-60-5	trans-1,2-dichloroethene	25
3	78-87-5	1,2-dichloropropene	25
(33V)	10061-02-6	trans-1,3-dichloropropene	25
	10061-01-05	cis-1,3-dichloropropene	25
38V)	100-41-4	ethylbenzene	25
(44V)	75-09-2	methylene chloride	25
(45V)	74-87-3	chloromethane	50
(46V)	74-83-9	bromomethane	50
(47V)	75-25-2	bromoform	50
(48V)	75-27-4	bromodichloromethane	25
(49V)	75-69-4	fluorotrichloromethane	25
(50V)	75-71-8	dichlorodifluoromethane	-
(51V)	124-48-1	chlorodibromomethane	25
(55V)	127-18-4	tetrachloroethene	25
(56V)	108-88-3	toluene	25
(57V)	79-01-6	trichloroethene	25
(58V)	75-01-4	vinyl chloride	50
	67-64-1	acetone	100
	78-93-3	2-butanone	100
	75-15-0	carbondisulfide	25
	591-78-6	2-hexanone	100
	108-10-1	4-methyl-2-pentanone	100
	100-42-5	styrene	25
	108-05-4	vinyl acetate	50
	1330-207	total xylenes	25

PEST/PCB GC#5

			ng
(89P)	309-00-2	aldrin	1.5
(90P)	60-57-1	dieldrin	1.5
(91P)	57-74-9	chlordane	12
(92P)	50-29-3	4,4'-DDT	2.2
(93P)	72-55-9	4,4'-DDE	1.2
(94P)	72-54-8	4,4'-DDD	1.2
(95P)	115-29-7	α-endosulfan	2.1
(96P)	115-29-7	β-endosulfan	1.4
(97P)	1031-07-8	endosulfan sulfate	2.1
(98P)	72-20-8	endrin	1.8
(99P)	7421-93-4	endrin aldehyde	2.1
(100P)	76-44-8	heptachlor	1.5
(101P)	1024-57-3	heptachlor epoxide	1.5
(102P)	319-84-6	α-BHC	1.2
(103P)	319-85-7	β-BHC	2.0
(104P)	319-86-8	δ-BHC	2.0
(105P)	58-89-9	γ-BHC (lindane)	1.5
(106P)	53469-21-9	PCB-1242	30
(107P)	11097-69-1	PCB-1254	20
(108P)	11104-28-2	PCB-1221	40
(109P)	11141-16-5	PCB-1232	40
(110P)	12672-29-6	PCB-1248	20
(111P)	11096-82-5	PCB-1260	20
(112P)	12674-11-2	PCB-1016	40
(113P)	8001-35-2	toxaphene	200

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CALCULATED INSTRUMENT DETECTION LIMITS

			ng
(21A)	88-06-2	2,4,6- trichlorophenol	10
(22A)	59-50-7	p-chloro-m-cresol	10
(24A)	95-57-8	2- chlorophenol	10
(31A)	120-83-2	2,4-dichlorophenol	10
(34A)	105-67-9	2,4-dimethylphenol	10
(57A)	88-75-5	2- nitrophenol	10
(58A)	100-02-7	4-nitrophenol	20
(59A)	51-28-5	2,4-dinitrophenol	20
(60A)	534-52-1	4,6-dinitro-2-methylphenol	10
(64A)	87-86-5	pentachlorophenol	20
(65A)	108-95-2	phenol	10
	65-85-0	benzoic acid	20
	95-48-7	2-methylphenol	10
	108-39-4	4-methylphenol	10
	95-95-4	2,4,5-trichlorophenol	10
(1B)	83-32-9	acenaphthene	10
(5B)	92-87-5	benzidine	10
(8B)	120-82-1	1,2,4-trichlorobenzene	10
(9B)	118-74-1	hexachlorobenzene	10
(12B)	67-72-1	hexachloroethane	10
(18B)	111-44-4	bis(2-chloroethyl)ether	10
(20B)	91-58-7	2-chloronaphthalene	10
(25B)	95-50-1	1,2-dichlorobenzene	10
(26B)	541-73-1	1,3-dichlorobenzene	10
(27B)	106-46-7	1,4-dichlorobenzene	10
(28B)	91-94-1	3,3'-dichlorobenzidine	10
(35B)	121-14-2	2,4-dinitrotoluene	20
(36B)	606-20-2	2,6-dinitrotoluene	20
(37B)	122-66-7	1,2-diphenylhydrazine	10
(39B)	206-44-0	fluoranthene	10
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10
(41B)	101-55-3	4-bromophenyl phenyl ether	10
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	10
(43B)	111-91-1	bis (2-chloroethoxy) methane	10

			ng
(52B)	87-68-3	hexachlorobutadiene	10
(53B)	77-47-4	hexachlorocyclopentadiene	10
(54B)	78-59-1	isophorone	10
(55B)	91-20-3	naphthalene	10
(56B)	98-95-3	nitrobenzene	10
(61B)	62-75-9	N-nitrosodimethylamine	20
(62B)	86-30-6	N-nitrosodiphenylamine	10
(63B)	621-64-7	N-nitrosodipropylamine	10
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10
(67B)	85-68-7	benzyl butyl phthalate	10
(68B)	84-74-2	di-n-butyl phthalate	10
(69B)	117-84-0	di-n-octyl phthalate	10
(70B)	84-66-2	diethyl phthalate	10
(71B)	131-11-3	dimethyl phthalate	10
(72B)	56-55-3	benzo(a)anthracene	10
(73B)	50-32-8	benzo(a)pyrene	10
(74B)	205-99-2	benzo(b)fluoranthene	10
(75B)	207-08-9	benzo(k)fluoranthene	10
(76B)	218-01-9	chrysene	10
(77B)	208-96-8	acenaphthylene	10
(78B)	120-12-7	anthracene	10
(79B)	191-24-2	benzo(ghi)perylene	10
(80B)	86-73-7	fluorene	10
(81B)	85-01-8	phenanthrene	10
(82B)	53-70-3	dibenzo(a,h)anthracene	10
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	10
(84B)	129-00-0	pyrene	10
	62-53-3	aniline	10
	100-51-6	benzyl alcohol	10
	106-47-8	4-chloroaniline	10
	132-64-9	dibenzofuran	10
	91-57-6	2-methylnaphthalene	10
	88-74-4	2-nitroaniline	10
	99-09-2	3-nitroaniline	10
	100-01-6	4-nitroaniline	10