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P. Arell

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Analytical Results Report

Barter Machinery
701 W. Bayaud
(#COD982584526)

Submitted to
Paul Arell
EPA Program Manager

Submitted by
Glenn F. Mallory
CDH Project Officer

Reviewed by:
Glenn F. Mallory
March 13,1990

I. Introduction

This report addresses the results of field samples, activities conducted on July 26, 1989 by Colorado Department of Health CDH personnel under a co-operative agreement with the U.S. Environmental Protection Agency (EPA). Included in this report are the analytical results data for this sample event. Previous reports include the sample plan and the sample activities report. These latter two reports contain more detailed information on site description project objectives and sampling rationale.

II. Objectives

Sampling objectives were to characterize potential contaminant of this site.

III. Site Description

The site in question is located at 701 West Bayaud, Denver, Colorado and is a portion of a salvage yard operation. The main office for Barter Machinery is located at 215 South Santa Fe Drive. Barter Machinery has been in operation in this area since 1944. Scrap metals, capacitor salvage and similar operations have been conducted on site. The site is restricted by a fence constructed from railroad box car parts and chain link fence, with locked gates. Railroad tracks form the west boundry with a siding to access this portion of the property. The south and east sides of the parcel are bound by paved streets and the north by a unpaved alleyway.

The surface soils have little to no humic materials and consist of light brown fine to coarse gravels. Vegetation is generally sparse consisting of forbs associated with disturbed sites. The northeast central portion of the property has a colony of young cottonwood (Populus spp.) averaging 4 to 6 feet in height. There is some evidence of soil staining, especially near the north end of this property.

IV. Sample Collection

Seven soil samples were collected onsite and trip and rinsate blanks were collected. The blanks were water samples to be analyzed for VOCs (Volatile Organic Compounds). Split samples were refused by the owner.

Samples collected for organics analysis were hand-delivered to:
ESECO:
7332 S. Alton Way, Suite H
Englewood, Colorado 80112

Inorganic samples were hand delivered to
Rocky Mountain Analytical
4955 Yarrow Street
Arvada, Colorado 80002

All samples were collected under Case Number 12387 and delivered within the required holding times. All samples were analyzed for the Hazardous Substance list (HSL) organics and inorganics including volatiles, base/neutral/acid, pesticides, PCB, Task 1 and Task 2 metals. Tables 1 and 2 show only those contaminants detected.

V. Quality Assurance

All data was examined by the FIT (Federal Investigatory Team) through an EPA contract for compliance with the EPA Functional Guidelines for Reviewing Organic and Inorganic Compounds and the approved Region VIII FIT CLP (Contract Laboratory Program) quality Assurance SOP. The quality assurance reports and data sheets are attached in appendix A. The data packages were judged acceptable with the following qualifications.

A. The overall data quality was found to be acceptable. Some positive samples results as well as undetected analyte values were"flagged" as estimated due to analytical problems noted.

Bias estimates are as follows: sample antimony results may be 65% low; arsenic results may be 120% high; chromuim results may be 50% high; copper results may be 95% high. During duplicate sample analysis, cadmium, calcuim, chromuim, and barium had relative percent difference values greater than the required limit.

ICP (Inductively Coupled Plasma) serial dilution results for cobalt exceeded EPA criteria.

The IDL (Instrument detection limit) and CRDL (Contract required detection limit) values for samples MHP836 and MHP838 are elevated above those used for other samples. Therefore, dilutions were necessary prior to ICP analysis due to high copper concentrations.

More detailed validation data can be found in Appendix A.

B. Organics

Several problems and defeciencies with the data package were found during the review process. Physical and chemical interfereces may have marked contaminant compounds actually present at lower levels and contaminant compounds might have gone undetected due to elevated detection limits brought about by dilution. The data indicate that analysis would have gone more smoothly if the samples had been submitted and run as medium level rather than low level samples.

Holding times for aqueous samples HG722 and HG723 were exceeded. This and various QA/QC inadequacies invalidate the VOA aqueous sample results.

Several semi-volatile Target Compound List (TCL) compounds were found in the soil samples at concentrations both above and below the CRQL (Contract Required Quanitation Limit). The elevated CRQLs for those samples which were deluted due to the high hydrocarbon matrix may have false negative results.

Aroclor-1260 was found in all samples and in levels greater than the CRQL in most samples. All sample aroclor-1260 values exceeds the blank value by a factor of five except in sample HG730. Sample aroclor 1260 results were flagged "B", HG730 aroclor-1260 results were flagged "UB".

More detailed validation data can be found in Appendix A.

VI. Conclusions

The analysis results of samples collected at the 701 W. Bayaud site reveal several areas for concern. One is elevated levels of metals in some samples (Table__1__). Sample BM-SO-F, in particular, contained 39,700 MG/KG lead, 138,000 MG/KG copper, 27,600 MG/KG iron, and 23,000 MG/KG zinc. This sample is a gray ash-like material that could become windblown.

A second area of concern is the quanity of Aroclor (polychlorienated biphenyls or PCB) that is found in various samples(Table 2). The range across the site was from 860 to 1,300,000 UG/KG, well in excess of the 50 UG/KG action limit. It is felt that the PCB levels encountered, even though hydrocarbon interferences have affected the quality of the data, are significant. It is a matter of record that transformers have been salvaged at various parcels belonging to Barter Machinery and allegations of oils being poured onto the ground have been made.

It is recommended that the 701 W. Bayaud site be placed in an emergency clean-up posture because of the high levels of contaminants and because the parcel is for sale. Secondly, the remaining parcels belonging to Barter Machinery should be listed for preliminary assessments and screening site investigation. All parcels may be listed for sale at this time and could contain similar hazards. The univestigated parcels from Santa Fe Drive which is being considered for expansion as a major traffic corridor. Both Colorado Department of Highways and The Regional Transportation District (RTD) may be in a property acquistion posture in this area at the present time.

Table 1
INORGANIC ANALYSIS RESULTS (MG/KG)
For Barter Machinery
Soils

Sample Number Traffic Number Location	MHP837 8-86421 BM-50-1	MHP836 8-86422 BM-50-2	MHP833 8-86407 BM-50-3	MHP832 8-86403 BM-50-4	MHP835 8-86413 BM-50-5	MHP834 8-86411 BM-50-6	MHP838 8-86416 BM-50-7	Normal Ranges in soil *
ALUMINIUM	22100	13100	7220	3280	6410	5560	38500	71,000
ANTIMONY	56.2J	[48.5]J	[10.9]J	5.0U	41.6J	[6.2]J	308J	2-10
ARSENIC	21.3J	71.8J	10.0J	6.0J	12.8J	5.6J	18.2J	1-50
BARIUM	814J	1040J	343J	212J	610J	317J	2010J	100-3000
BERYLLIUM	[0.28]	0.53U	[0.63]	[0.22]	[0.31]	[0.26]	1.0U	0.1-40
CADMUIM	40.7	42.7J	41.1J	12.2J	34.0J	7.8J	37.3J	0.1-0.7
CALCIUM	18300J	14700J	5400J	2280J	6340J	11,500J	29100J	
CHROMIUM	134J	257J	51.6J	32.6J	38.7J	26.2J	92.5J	1-1000
COLBALT	13.1J	[14.3]J	[9.3]J	[7.6]J	[8.0]J	]8.4]J	[10.6]J	1-40
COPPER	15100J	54800J	1430J	141J	5050J	1190J	138000J	2-100
IRON	68900	85400	34,600	37,000	29,900	39600	27600	
LEAD	9520	13,300	5130	599	6330	1240	39700	10-200
MAGNESIUM	3770	[3630]	1980	[999]	3430	1890	[7390]	
MANGANESE	709	726	582	506	409	501	430	20-3000
MERCURY	5.0	6.0	2.7	0.7	10	0.4	3.3	0.01-0.3
NICKEL	81.2	70.3	34.2	26.8	54.7	28.4	236	5-500
POTASSIUM	[866]	[729]	1470	[809]	[983]	2280	[603]	
SELENIUM	12.J	10.3J	2.6J	[0.30]	3.0J	[0.42]J	27.6J	0.1-2.0
SILVER	11.2	[9.2]	2.7	2.8	6.7	[1.7]	[19.6]	5-150
SODIUM	378U	1810U	346U	344U	348U	342U	3510U	
THALLIUM	0.44U	[0.79]J	0.41U	0.41U	0.41U	0.40U	0.41UJ	
VANADIUM	26.2	[21.0]	18.0	11.4	14.8	14.3	[21.7]	20-400
ZINC	7580	4240	2890	803	3280	1410	23000	10-300pgm

* Hazardous Waste Land Treatment. SW-874. April, 1983.

Table___2___
Organic Analysis Results (UG/KG)
For Barter Machinery
Soils

Samples Number	HG729	HG728	HG725	HG724	HG727	HG726HG	HG730
Traffic Number	8-86420	8-86424	8-86408	8-86404	8-86415	8-86412	8-86418
Location	8-86419	8-86423	8-86409	8-86406	8-86414	8-86412	8-86417
CHLOROMETHANE	15.UJ	-	-	-	-	-	12UJ
BROMOMETHANE	15.UJ	-	-	-	-	-	12UJ
VINYL CHLORIDE	15.UJ	-	-	-	-	-	12UJ
CHLOROETHANE	15.UJ	-					12UJ
METHYLENE CHLORIDE	5.J	680B	3UB	240B	5UB	3UB	13UB
ACETONE	15.R	1400R	10R	1200R	10R	10R	12R
CARBON DISULFIDE	7.UJ						6UJ
1,1-DICHLOROETHENE	7.UJ						6UJ
1,1-DICHLOROETHENE	7.UJ						6UJ
1,2-DICHLOROETHENE (TOTAL)	7.UJ						6UJ
CHLOROFORM	7.UJ						6UJ
1,2-DICHLOROETHENE	7.UJ						6UJ
2-BUTANONE	15.UJ						12UJ
1,1,1-TRICHLOROETHANE	7.UJ						6UJ
CARBON TETRACHLORIDE	7.UJ						6UJ
VINYL ACETATE	15.UJ						12UJ
BROMODICHLOROMETHANE	7.UJ						6UJ
1,2-DICHLOROPROPANE	7.UJ						6UJ
CIS-1,3-DICHLOROPROPENE	7.UJ						6UJ
TRICHLOROETHENE	7.UJ						6UJ
DIBROMOCHLOROMETHANE	7.UJ						6UJ
1,1,2-TRICHLOROETHANE	7.UJ						6UJ
BENZENE	7.UJ						6UJ
TRANS-1,3-DICHLOROPROPENE	7.UJ						6UJ
BROMOFORM	7.UJ						6UJ
4-METHYL-2-PENTANONE	15.UJ				10UJ		12UJ
2-HEXANONE	15.UJ				10UJ		12UJ
TETRACHLOROETHENE	7.UJ				5UJ		6UJ
1,1,2,2-TETRACHLOROETHANE	7.UJ				5UJ		6UJ
TOLUENE	90.J	1900	22		24J	9	210J

CHLOROBENZENE	7.UJ				5UJ		6UJ
ETHYLBENZENE	7.UJ				5UJ		6UJ
STYRENE	7.UJ				5UJ		6UJ
XYLENE (TOTAL)	7.UJ				5UJ		6UJ
2-METHYLNAPHTHALENE	3500.J						
PHENANTHRENE	23000			360J			
FLURANTHENE	8200J			570J	540J	470J	4500J
PYRENE	36000J		1500	550J	1300		7800J
CHRYSENE	21000J		929JN	590J	1200JN	370J	4600J
BIS-(2-ETHYLHEXYL)PHTHALATE	31000BJ	6000BJ	1300B	550BJ	13000B	220BJ	160,000
BENZO (b) FLUORANTHENE	14000J		1500	490J		570J	
BEMZO(a) PYRENE	8300J		500J	340J	360J		
INDENO (1,2,3-cd) PYRENE	8700J	11000J	840J		500J		
BENZO (G,H,I) PERYLENE	12000J	1200J	820J	320J	560J		
1,2,4-TRICHLOROBENZENE		5700J					
PHENATHRENE		10,000J					
DIBENZ(a,h)ANTHRACENE		12,000J			230J		
ISOPHORONE			3900				
BENZOIC ACID			260J				
NAPHTHALENE			540J		420J	82J	
2-METHYLNAPHTHALENE			1500	19J	570J	54J	
DIMETHYLPHTHALATE			140J				
ACENAPHTHYLENE			47J		82J	21J	
ACENAPHTHYLENE			62J	25J			
DIBENZAFURAN			90J	14J	100J	20J	
N-NITROSODIPHENYLAMINE			170J		160J		
PHENANTHRENE			710		600J	220J	
ANTHRACENE			120J	59J	130J	41J	
DI-n-BUTYLPHTHALATE			320J	130J	260J	51J	1300J
BUTYBENZYLPHTHLATE			490J				
BENZO(a)ANTHRACENE			820JN	340J	300J	170J	
DI-n-OCT.LPHTHALATE			11J				
DIETHLYPHTHALATE				32J	53J	34J	
FLUORENE				23J	38J		
INDENO(1,2,3-cd)PYRENE							
BENZO (k)FLUORANTHENE				330J	2300JN		
alpha-BHC	2300.UJ	17000UJ	160UJ	16UJ	160UJ		790UJ
beta-BHC	2300.UJ	17000UJ	160UJ	16UJ	160UJ		790UJ
delta-BHC	2300-UJ	17000UJ	160UJ	16UJ	160UJ		790UJ

gamma-BHC (LINDANE)	2300-UJ	17000UJ	160UJ	16UJ	160UJ		790UJ
HEPTACHLOR	2300-UJ	17000UJ	160UJ	16UJ	160UJ		790UJ
ALDRIN	2300-UJ	17000UJ	160UJ	16UJ	160UJ		790UJ
HEPTACHLOR EPOXIDE	2300-UJ	17000UJ	160UJ	16UJ	160UJ		790UJ
ENDOSULFAN I	2300-UJ	17000UJ	160UJ	16UJ	160UJ		790UJ
DIELDRIN-	4600-UJ	35000UJ	320UJ	32UJ	320UJ		1600UJ
4,4'-DDE	4600-UJ	35000UJ	320UJ	32UJ	320UJ		1600UJ
ENDRIN	4600-UJ	35000UJ	320UJ	32UJ	320UJ		1600UJ
ENDOSULFAN II	4600-UJ	35000UJ	320UJ	32UJ	320UJ		1600UJ
4,4-DDD	4600-UJ	35000UJ	320UJ	32UJ	320UJ		1600UJ
ENDOSULFAN SULFATE	4600-UJ	35000UJ	320UJ	32UJ	320UJ		1600UJ
4,4'DDT	4600-UJ	35000UJ	320UJ	32UJ	320UJ		1600UJ
METHOXYCHLOR	23000-UJ	170,000UJ	1600UJ	160UJ	1600UJ		7900UJ
ENDRIN KETONE	4600-UJ	35000UJ	320UJ	32UJ	320UJ		1600UJ
ALPHA-CHLORDANE	23000-UJ	170000UJ	1600UJ	160UJ	1600UJ		7900UJ
GAMMA-CHLORDANE	23000-UJ	170000UJ	1600UJ	160UJ	1600UJ		7900UJ
TOXAPHENE	46000-UJ	350000UJ	3200UJ	320UJ	3200UJ		16000UJ
AROCLOR-1016	23000-UJ	170000UJ	1600UJ	160UJ	1600UJ		7900UJ
AROCLOR-1221	23000-UJ	170000UJ	1600UJ	160UJ	1600UJ		7900UJ
AROCLOR-1232	23000-UJ	170000UJ	1600UJ	160UJ	1600UJ		7900UJ
AROCLOR-1242	23000-UJ	170000UJ	1600UJ	160UJ	1600UJ		7900UJ
AROCLOR-1248	23000-UJ	170000UJ	1600UJ	160UJ	!¢))UJ		7900UJ
AROCLOR-1254	46000-UJ	350000UJ	3200UJ	320UJ	3200UJ		16000UJ
AROCLOR-1260	160,000-UJ	1,300,000BJ	8100BJ	1100BJ	14000BJ	860B	46000UB

Appendix A

Data Validation Package

Barter Machinery
701 W. Bayaud

Being Filmed

Appendix B

Barter Machinery
701 W. Bayaud

being filmed

Appendix A

Data Validation Package

Barter Machinery
701 W. Bayaud

being filmed

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MHP837

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 12387 SAS No.: NA SDG No.: MHP832

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

Level (low/med): LOW Date Received: 07/26/89

% Solids: 90.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22100		*	P
7440-36-0	Antimony	56.2		N J	P
7440-38-2	Arsenic	21.3		SN J	F
7440-39-3	Barium	814		* J	P
7440-41-7	Beryllium	[0.28]	B		P
7440-43-9	Cadmium	40.7		* J	P
7440-70-2	Calcium	18300		* J	P
7440-47-3	Chromium	134		*N J	P
7440-48-4	Cobalt	13.1		J	P
7440-50-8	Copper	15100		*N J	P
7439-89-6	Iron	68900		*	P
7439-92-1	Lead	9520		*	P
7439-95-4	Magnesium	3770			P
7439-96-5	Manganese	709			P
7439-97-6	Mercury	5.0		*	CV
7440-02-0	Nickel	81.2			P
7440-09-7	Potassium	[866]	B		P
7482-49-2	Selenium	12.1		S J	F
7440-22-4	Silver	11.2			P
7440-23-5	Sodium	378	U	U	P
7440-28-0	Thallium	0.44	U	U	F
7440-62-2	Vanadium	26.2			P
7440-66-6	Zinc	7580			P
	Cyanide				NR

MC

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

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SITE / SITE ASSESSMENT SAS019

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MHP838

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 12387 SAS No.: NA SDG No.: MHP832

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

Level (low/med): LOW Date Received: 07/26/89

% Solids: 96.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	38500		*	P
7440-36-0	Antimony	308		N	P
7440-38-2	Arsenic	18.2		SN	F
7440-39-3	Barium	2010		*	P
7440-41-7	Beryllium	1.0	U	U	P
7440-43-9	Cadmium	37.3		*	P
7440-70-2	Calcium	29100		*	P
7440-47-3	Chromium	92.5		*N	P
7440-48-4	Cobalt	[10.6]	B		P
7440-50-8	Copper	138000		*N	P
7439-89-6	Iron	27600		*	P
7439-92-1	Lead	39700		*	P
7439-95-4	Magnesium	[7390]	B		P
7439-96-5	Manganese	430			P
7439-97-6	Mercury	3.3		*	CV
7440-02-0	Nickel	236			P
7440-09-7	Potassium	[603]	B		P
7482-49-2	Selenium	27.6		S	F
7440-22-4	Silver	[19.6]	B		P
7440-23-5	Sodium	3510	U	U	P
7440-28-0	Thallium	0.41	U	W UJ	F
7440-62-2	Vanadium	[21.7]	B		P
7440-66-6	Zinc	23000			P
	Cyanide				NR

MC

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ICP RESULTS REPORTED AT AN ADDITIONAL 10X DILUTION DUE TO HIGH CONCENTRAIONS OF COPPER AND LEAD IN THE SAMPLE

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MHP835

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 12387 SAS No.: NA SDG No.: MHP832

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

Level (low/med): LOW Date Received: 07/26/89

% Solids: 97.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6410		*	P
7440-36-0	Antimony	41.6		N J	P
7440-38-2	Arsenic	12.8		+N J	F
7440-39-3	Barium	610		* J	P
7440-41-7	Beryllium	[0.31]	B		P
7440-43-9	Cadmium	34.0		* J	P
7440-70-2	Calcium	6340		* J	P
7440-47-3	Chromium	38.7		*N J	P
7440-48-4	Cobalt	[8.0]	B	J	P
7440-50-8	Copper	5050		*N J	P
7439-89-6	Iron	29900		*	P
7439-92-1	Lead	6330		*	P
7439-95-4	Magnesium	3430			P
7439-96-5	Manganese	409			P
7439-97-6	Mercury	10		*	CV
7440-02-0	Nickel	54.7			P
7440-09-7	Potassium	[983]	B		P
7482-49-2	Selenium	3.0		S J	F
7440-22-4	Silver	6.7			P
7440-23-5	Sodium	348	U	U	P
7440-28-0	Thallium	0.41	U	U	F
7440-62-2	Vanadium	14.8			P
7440-66-6	Zinc	3280			P
	Cyanide				NR

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Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MHP836

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 12387 SAS No.: NA SDG No.: MHP832

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

Level (low/med): LOW Date Received: 07/26/89

% Solids: 93.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13100		*	P
7440-36-0	Antimony	[48.5]	B	N J	P
7440-38-2	Arsenic	71.8		SN J	F
7440-39-3	Barium	1040		* J	P
7440-41-7	Beryllium	0.53	U	U	P
7440-43-9	Cadmium	42.7		* J	P
7440-70-2	Calcium	14700		* J	P
7440-47-3	Chromium	257		*N J	P
7440-48-4	Cobalt	[14.3]	B	J	P
7440-50-8	Copper	54800		*N	P
7439-89-6	Iron	85400		*	P
7439-92-1	Lead	13300		*	P
7439-95-4	Magnesium	[3630]	B		P
7439-96-5	Manganese	726			P
7439-97-6	Mercury	6.0		*	CV
7440-02-0	Nickel	70.3			P
7440-09-7	Potassium	[729]	B		P
7482-49-2	Selenium	10.3		S J	F
7440-22-4	Silver	[9.2]	B		P
7440-23-5	Sodium	1810	U	U	P
7440-28-0	Thallium	[0.79]	B	W J	F
7440-62-2	Vanadium	[21.0]	B		P
7440-66-6	Zinc	4240			P
	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

ICP RESULTS REPORTED AT AN ADDITIONAL 5X DILUTION DUE TO HIGH CONCENTRAIONS OF COPPER IN THE SAMPLE

FORM I - IN 7/87

U.S. EPA - CLP

0000003

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MHP833

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 12387 SAS No.: NA SDG No.: MHP832

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

Level (low/med): LOW Date Received: 07/26/89

% Solids: 98.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7220		*	P
7440-36-0	Antimony	[10.9]	B	N J	P
7440-38-2	Arsenic	10.0		SN J	F
7440-39-3	Barium	343		* J	P
7440-41-7	Beryllium	[0.63]	B		P
7440-43-9	Cadmium	41.1		* J	P
7440-70-2	Calcium	5400		* J	P
7440-47-3	Chromium	51.6		*N J	P
7440-48-4	Cobalt	[9.3]	B	J	P
7440-50-8	Copper	1430		*N J	P
7439-89-6	Iron	34600		*	P
7439-92-1	Lead	5130		*	P
7439-95-4	Magnesium	1980			P
7439-96-5	Manganese	582			P
7439-97-6	Mercury	2.7		*	CV
7440-02-0	Nickel	34.2			P
7440-09-7	Potassium	1470			P
7482-49-2	Selenium	2.6		S J	F
7440-22-4	Silver	2.7			P
7440-23-5	Sodium	346	U	U	P
7440-28-0	Thallium	0.41	U	U	F
7440-62-2	Vanadium	18.0			P
7440-66-6	Zinc	2890			P
	Cyanide				NR

MC

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN 7/87

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1

INORGANIC ANALYSIS DATA SHEET

0000004

EPA SAMPLE NO.

MHP834

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 12387 SAS No.: NA SDG No.: MHP832

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

Level (low/med): LOW Date Received: 07/26/89

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5560		*	P
7440-36-0	Antimony	[6.2]	B	N J	P
7440-38-2	Arsenic	5.6		*N J	F
7440-39-3	Barium	317		* J	P
7440-41-7	Beryllium	[0.26]	B		P
7440-43-9	Cadmium	7.8		* J	P
7440-70-2	Calcium	11500		* J	P
7440-47-3	Chromium	26.2		*N J	P
7440-48-4	Cobalt	[8.4]	B	J	P
7440-50-8	Copper	1190		*N J	P
7439-89-6	Iron	39600		*	P
7439-92-1	Lead	1240		*	P
7439-95-4	Magnesium	1890			P
7439-96-5	Manganese	501			P
7439-97-6	Mercury	0.4		*	CV
7440-02-0	Nickel	28.4			P
7440-09-7	Potassium	2280			P
7482-49-2	Selenium	[0.42]	B	W J	F
7440-22-4	Silver	[1.7]	B		P
7440-23-5	Sodium	342	U	U	P
7440-28-0	Thallium	0.40	U	U	F
7440-62-2	Vanadium	14.3			P
7440-66-6	Zinc	1410			P
	Cyanide				NR

mc

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

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Holding Times

Limits: Metals - 6 months; Hg - 30 days; Cn - 28 days.

1. Verified date of sample receipt by laboratory 07/26/89
2. Were holding times met? yes X no

TRAFFIC REPORTS WERE NOT INCLUDED IN THE DATA PACKAGE, AND IT WAS NOT POSSIBLE TO VERIFY HOLDING TIMES.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

0000002
EPA SAMPLE NO.

MHP832

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476

Lab Code: ENSECO Case No.: 12387 SAS No.: NA SDG No.: MHP832

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

Level (low/med): LOW Date Received: 07/26/89

% Solids: 98.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3280		*	P
7440-36-0	Antimony	5.0	U	N J	P
7440-38-2	Arsenic	6.0		+N J	F
7440-39-3	Barium	212		* J	P
7440-41-7	Beryllium	[0.22]	B		P
7440-43-9	Cadmium	12.2		* J	P
7440-70-2	Calcium	2280		* J	P
7440-47-3	Chromium	32.6		*N J	P
7440-48-4	Cobalt	[7.6]	B	J	P
7440-50-8	Copper	141		*N J	P
7439-89-6	Iron	37000		*	P
7439-92-1	Lead	599		*	P
7439-95-4	Magnesium	[999]	B		P
7439-96-5	Manganese	506			P
7439-97-6	Mercury	0.7		*	CV
7440-02-0	Nickel	26.8			P
7440-09-7	Potassium	[809]	B		P
7482-49-2	Selenium	[0.30]	B		F
7440-22-4	Silver	2.8			P
7440-23-5	Sodium	344	U	J	P
7440-28-0	Thallium	0.41	U	J	F
7440-62-2	Vanadium	11.4			P
7440-66-6	Zinc	803			P
	Cyanide				NR

MC

Color Before: BROWN Clarity Before: _____ Texture: COARSE

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN 7/87

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6e. Were all MSA obtained data marked with an 'S' or an S+ on form I?

yes X no

Comments: POSITIVE SAMPLE RESULTS WHERE THE SAMPLE ABSORBANCE WAS < 50% OF THE SPIKE ABSORBANCE, AND HAVING SPIKE RECOVERY VALUES OUTSIDE OF CONTROL LIMITS WERE FLAGGED "J", ESTIMATED. UNDETECTED RESULTS WERE FLAGGED "UJ". VALUES OBTAINED USING MSA WERE SIMILARLY FLAGGED.

IX. ICP Serial Dilution (L) Analysis (guidelines pg. E-12, Form IX)

1. Was an ICP serial dilution performed on each group of samples of a similar matrix (i.e., soil, water) and concentration (i.e., low, high) or for each sample delivery group, whichever was more frequent?

yes X no

2. For elements with concentrations >10X the CRDL, did any exceed the serial dilution results by more than 10%? (if no, skip questions 3 and 4)

yes X no

$$\% \text{ difference} = \frac{I - S}{I} \times 100$$

I = Initial Sample Result
S = Serial Dilution Result (instrument reading X5)

3. Which elements had concentrations that exceeded the 10% criteria? COBALT

4. Did the laboratory flag these data with an 'E' on Form IX?

yes no X

5. Were the raw data correctly transcribed onto Form IX?

yes X no

Comments: THE %D RESULT FOR COBALT EXCEEDED THE 10% CRITERIA; COBALT RESULTS WERE THUS FLAGGED ESTIMATED, DUE TO POSSIBLE CHEMICAL OR PHYSICAL INTERFERENCE.

X. Instrument Detection Limits (IDL) (guidelines pg. E-13, Form XI)

1. Were IDLs reported for each analyzed element?
   yes X no

2. Were IDLs reported for each instrument used?
   yes X no

3. Did the IDLs meet the contract requirements? (refer to pg. E-13, SOW 787)
   yes X no

Comments:

XI. Interelement Corrections for ICP (guidelines pg. E-13, Form XII)

1. Were correction factors reported on Form XII?
   yes X no

Comments:

XII. Linear Range Analysis (LRA) (guidelines pg. E-14, Form XII)

1. Was a linear range verification standard analyzed?
   yes X no

2. Was the results within ±5% of the true value?
   yes ? no

Comments: NOT ENOUGH DATA IS TYPICALLY PROVIDED IN A CLP DATA PACKAGE TO QA/QC REVIEW THIS SECTION.

VIII. **Furnace Atomic Absorption (AA) QC Analysis** (guidelines pg. E-14, Form VIII)

1. Does the raw data package contain absorbance values for two injections per sample, the average values and the relative standard deviation (RSD)?

   yes X no

2. For analyte concentrations > the CRDL, did the RSD for the duplicate injections agree within 20%? (if yes, go to question 3)

   yes X no

   $$RSD = \frac{SD}{M} \times 100$$

   SD = Standard Deviation of Duplicate Injections
   M = Mean of Duplicate Injections

   2a. Were samples that exceeded the 20% criteria reanalyzed?

   yes no NA X

   2b. Did any reanalyzed samples exceed the 20% criteria?

   yes no NA X

   2c. If yes, did the laboratory flag the data of Form I with an 'M'?

   yes no NA X

3. Was the recovery of the spike > 40%? (if yes, go to question 4).

   yes no X

   If no, was the sample diluted and rerun with another spike?

   yes X no

4. Was sample absorbance >50% of spike absorbance?* (if yes, go to question 5).

   yes no X

* Spike absorbance = absorbance of spiked sample - absorbance of sample.

4a. For spike recoveries between 85 and 115%, were results reported to the IDL?

yes X no

$$RPD = \frac{(SSR - SR)}{SA} \times 100$$

SSR = Spike Sample Recovery
SR = Sample Result
SA = Spike Added

4b. For spike recoveries outside the 85 and 115% range, were results reported to the IDL and flagged with 'W'?

yes X no

5. Was spike recovery between 85 and 115%? (if no, go to question 6)

yes no X

5a. Were results quantified from calibration curve and reported to IDL?

yes no NA X

6. Was an MSA at 50, 100 and 150% of the sample absorbance analyzed?

yes X no

6a. Was each MSA analysis identified in the raw data along with the slope, intercept and correlation coefficient?

yes X no

6b. Were these data correctly transcribed onto Form VIII?

yes X no

6c. Were correlation coefficients(r) > 0.995?

yes no X

6d. If no, were MSAs run once more?

yes X no

- If the correlation coefficients were still > 0.995, data on Form I must be from the run with the best 'r' and the data on Forms I and VII must be flagged with a '+'.

Were these criteria met?

yes X no

V. **Spike Sample Analysis (S)** (guideline pg. E-8, Form V)

1. Were spikes analyzed at a frequency of 1 in 20 samples?
   yes X no

2. Were spike recoveries correctly calculated?
   yes X no

$$\% \text{ recovery} = \frac{(SSR - SR)}{SA} \times 100$$

SSR = Spiked Sample Result
SR = Sample Result
SA = Spike Added

3. Were spike recoveries within the range of 75-125%?
   yes no X

3a. For recoveries outside this range, were associated data flagged "N" by the laboratory on Forms I and V?
   yes X no NA

(an exception if granted where the sample concentration is >4X the spike concentration)

4. Were raw data correctly transcribed onto Form V?
   yes X no

* Refer to page E-9 (SOW 787) for information regarding the amount of spike to be added for each analyte and for other information about the Spike Sample Analysis.

Comments: THE FOLLOWING ELEMENTS HAD SPIKE RECOVERY VALUES OUTSIDE OF CONTROL LIMITS: SB (%R= 37.5%), AS (219%), CR (154%), CU (193%). FLAGS WERE ASSIGNED AS FOLLOWS:

1) SPIKE %R >125% AND:
   A) SAMPLE RESULTS < IDL; DATA NOT FLAGGED.
   B) SAMPLE RESULTS > IDL; DATA FLAGGED "J".
2) 30% < SPIKE %R < 75%:
   A) SAMPLE RESULTS < IDL; DATA FLAGGED "UJ".
   B) SAMPLE RESULTS > IDL; DATA FLAGGED "J".

VI. **Duplicates (D)** (guidelines pg. E-11, Form VI)

1. Were duplicates analyzed at a frequency of 1 in 20 samples?
   yes X no

2. Were RPDs correctly calculated?
   yes X no

$$RPD = \frac{S - D}{(S + D)/2} \times 100$$

3a. For sample concentrations >5x the CRDL, were RPDs ±20%? (limits of ±35% apply for soil/sediment/tailings samples)
yes no X NA

3b. For sample concentrations <5x the CRDL, did duplicate analysis results fall outside the control window of ± the CRDL?
yes X no NA

3c. Where the RPDs exceeded the control limits, were the data flagged '*' on Forms I and VI by the laboratory?
yes X no NA

4. Were raw data correctly transcribed onto Form VI?
yes X no

* Other Considerations:
- Field blanks cannot be used for duplicate analyses
- Duplicates must be analyzed for each analytical method

Comments: THE FOLLOWING ELEMENTS HAD RPD RESULTS > 35%: CD (44.1%), CA (41.9%), CR (47.7%), BA (37.9%). POSITIVE RESULTS WERE FLAGGED "J", ESTIMATED, UNDETECTED VALUES WERE FLAGGED "UJ".

VII. **Laboratory Control Sample (LCS) Analysis** (guideline pg. E-12, Form VII)

1. Was an LCS analyzed for every sample delivery group or batch of samples, whichever was more frequent?
yes X no

2. Were recoveries within the 80-120% limit?
yes X no

-if the recoveries were outside this range the analysis must be terminated, the problem corrected and the previous samples associated with that LCS redigested and reanalyzed.

3. Were the raw data correctly transcribed onto Form VII?
yes X no

Comments:

Contract Compliance

I. **Initial and Continuing Calibration Verification (ICV and CCV)** (guidelines pg. E-4, Form IIA)

1. Was instrument calibrated daily and each time it was set up?
   yes X no

2. Were instruments calibrated using 1 blank and several standards?
   yes X no

3. Were calibration verifications within 90-110%?
   yes X no

4. Were continuing calibrations run at 10% frequency?
   yes X no

5. Were the raw data correctly transcribed onto Form IIA?
   yes X no

Comments:

II. **CRDL Standards for ICP (CRI) and/or AA (CRA)** (guidelines pg. E-6, Form IIB)

1. For ICP analysis, were standards (CRI) @ 2x the CRDL or the IDL (whichever was greater) analyzed at the beginning and the end of each sample run, or at a minimum of twice/8 hour shift, whichever was more frequent?
   yes X no

2. For furnace AA analysis, were standards (CRA) analyzed at the beginning and the end of each sample run, or at a minimum of twice/8 hour shift, whichever was more frequent?
   yes no X

3. Were the CRI and/or CRA standards analyzed <u>after</u> the ICV?
   yes no X

4. Were these data reported on Form IIB?
   yes no X

5. Were the raw data correctly transcribed onto Form IIB?
   yes X no

Comments: CRA STANDARDS WERE NOT RUN FOR AS AND TL, AND ONLY PRIOR TO THE SE ANALYSIS. ACCORDING TO SOW787, SPECIFIC ACCEPTANCE CRITERIA FOR THE ICP AND AA CRDL STANDARDS HAVE NOT YET BEEN ESTABLISHED BY THE EPA. NO CORRECTIVE ACTION WAS TAKEN BY THE REVIEWING CHEMIST.

III. Blanks (guidelines pg. E-6, Form III)

1. Was the initial calibration blank (ICB) analyzed immediately after the initial calibration verification (ICV)?
   yes X no

2. Was a continuing calibration blank (CCB) analyzed immediately after each continuing calibration verification (CCV)?
   yes X no

3. Was a preparation blank (PB) analyzed at a frequency of at least 1 in 20 samples?
   yes X no NA

4. How many elements were detected above the CRDLs? 0 (if 0, go to question 5)

   4a. How many elements were detected in the blanks at greater than one-half the amount detected in any sample? NA

5. Were raw data correctly transcribed onto Form III?
   yes X no

Comments: NO ANALYTES WERE FOUND IN ANY OF THE BLANKS AT LEVELS ABOVE THE CRDL.

IV. ICP Interference Checks (ICS) (guidelines pg. E-7, Form IV)

1. Was the ICS analyzed twice per 8 hour shift?
   yes X no

2. Were the ICSs analyzed before and after samples?
   yes X no

3. Was any massive interference detected?
   yes no X

4. Were the ICSs within ±20% mean value?
   yes X no

5. Were raw data correctly transcribed onto Form IV?
   yes X no

Comments:

samples, dilutions were necessary prior ICP analysis due to high copper concentrations.

Inorganic Data Completeness Checklist

X Inorganic analysis data (Form I)

X Initial calibration and continuing calibration verification (Form IIA)

X CRDL standard for AA and ICP (Form IIB)

X Blanks (Form III)

X ICP interference Check sample (Form IV)

X Spike sample recovery (Form VA)

X Post digestion spike sample recovery (Form VB)

X Duplicates (Form VI)

X Laboratory control sample (Form VII)

X Standard addition results (Form VIII)

X ICP serial dilutions (Form IX)

Holding times (Form X)

X Instrument detection limits-quarterly (Form XI)

X ICP interelement correction factors-quarterly (Form XII)

X ICP linear ranges-quarterly (Form XIII)

X Raw data for interference checks

X Raw data for calibration standards

X Raw data for blanks

X Raw data for CRI and/or CRA

X Raw data for samples

X Raw data for duplicates

Raw data for spikes

NO Traffic reports

REGION VIII SUMMARY OF DATA QUALITY ASSURANCE REVIEW

guideline references are from Contract #787

Case No.: 12387 TDD No.: F08-8909-07

Site: BARTER MACHINERY (CDH)

Contractor Laboratory: ROCKY MOUNTAIN ANALYTICAL

Data Reviewer : MARK CHAPIN Date of Review: 12-03-89

Sample Matrix: 7 LOW SOIL SAMPLES

Analysis: TOTAL METALS (TASK I AND II, Hg)

Sample Nos.: MHP832, MHP833, MHP834, MHP835, MHP836, MHP837, MHP838

( ) Data are acceptable for use.

(X) Data are acceptable for use with qualifications noted.

( ) Data are preliminary - pending verification.

( ) Data are unacceptable.

Action required by DPO?

No X Yes The following items require action:

Action required by project officer?

No X Yes

The following are our findings:

Inorganic Task I and II metals, as well as mercury data for 7 low concentration soil samples were reviewed for data acceptability. The data package contained all required deliverables as directed in SOW 787, and the overall data quality was found to be acceptable. Some positive sample results as well as undetected analyte values were "flagged" as estimated, however, due to analytical problems noted during the review.

Antimony, arsenic, chromium, and copper all had spike % recovery values outside of established EPA data quality guidelines for soil samples. Sample results for these analytes were flagged "J" for positive results, "UJ" for undetected results, or left unflagged depending on the spike recovery value and individual sample concentration. The spiked sample analysis is designed to provide information about the effect of the sample matrix on the digestion and measurement methodology. Analyte spike recovery values which do not meet EPA/CLP criteria may indicate that elemental results are being attenuated in the digestion or preparation process. Using spiked sample results it is possible to estimate the bias of other sample results by noting the degree to which the spike concentration was elevated or lowered in the analysis procedure. These bias values should only be considered crude approximations however, as sample specific problems such as chemical or physical interference may be causing the discrepancy, particularly in soil samples. Bias estimates for the elements listed above are as follows: sample antimony results may be 65% low, arsenic results may be 120% high, chromium results may be 50% high, copper results may be 95% high.

During duplicate sample analysis, cadmium, calcium, chromium, and barium had relative percent difference values greater than the required limit. Positive results for these elements were flagged "J", undetected values were flagged "UJ". Duplicate samples are run to evaluate the precision of the sample results. The failure of the laboratory to reproduce similar results for a duplicate sample may indicate the sample was of a non-homogeneous nature (particularly in soil samples), or perhaps there are method defects in the laboratory technique.

For elements analyzed for by furnace atomic absorption (As, Se, Tl), sample results were flagged if post-digest spike recovery values were out of established limits. Values obtained using method of standard addition techniques were also flagged.

ICP serial dilution results for cobalt exceeded EPA criteria; cobalt results were therefore flagged. Serial dilution analysis is required to ascertain if significant physical or chemical interferences exist due to the sample matrix. A sample is reanalyzed following a 5-fold dilution and the results compared to the original, undiluted sample results. Poor comparability indicates that sample results may be affected by relative concentrations of analytes in the sample, and that some type of chemical or physical interference may be suspected.

The IDL and CRDL values indicated on Form I's for samples MHP836 and MHP838 are elevated above those used for other samples. For these two

CDH PO

REGION VIII SUMMARY OF DATA QUALITY ASSURANCE REVIEW

Case No.: 12386 QA TDD No.: F08-8909-07

Site: BARTER MACHINERY (CDH)

Contractor Laboratory: HUNTER/ESE

Data Reviewer : MARK CHAPIN Date of Review: 12/13/89

Sample Matrix: 2 LOW WATERS; 7 LOW/MED SOILS

Analysis: WATERS FOR VOA ONLY; SOILS FOR VOA, BNA, PEST.

Sample Nos.: HG722, HG723, HG724, HG725, HG726, HG727, HG728, HG729
HG730

( ) Data are acceptable for use.

(X) Data are acceptable for use with qualifications noted.

( ) Data are preliminary - pending verification.

( ) Data are unacceptable.

Action required by DPO?

No X Yes The following items require action:

Action required by project officer?

No X Yes

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HAZARDOUS MATERIALS
AND WASTE MANAGEMENT

The following are our findings:

SUMMARY:

Several problems and deficiencies with the data package were noted during the review process. Many of the QA/QC problems appeared to result from high sample dilutions, necessitated by what the lab termed a "high hydrocarbon matrix". It seems likely that interference from this unusual matrix could adversely affect reported results; contaminant compounds which may have been present might have gone undetected due to the elevated detection limits brought about by dilution. Physical and chemical interferences may also have masked contaminant compounds actually present at lower levels. For several sample specific QA/QC problems, sample re-analysis failed to erradicate the problem. In other cases sample re-analysis should have been carried out but the lab failed to do so, citing missed holding times or lack of sample. The data indicate that the analysis would have gone smoother if the samples had been submitted and run as medium level, rather than low level, samples.

Though the lab seemed to follow EPA analysis protocol, (except in the circumstances given below), the multitude of QA/QC problems encountered made the review process difficult, and the overall quality of the data submitted should perhaps be considered "questionable" in terms of accurately assessing qualitative and quantitative sample composition. Data flags used by the reviewing chemist are described on the accompanying CLP DATA FLAGS sheet. Lab flags listed on FORM I's hold unless crossed out or otherwise altered. THE IDENTITY AND QUANTITY OF ALL REPORTED VOLATILE AND SEMIVOLATILE TIC's SHOULD BE CONSIDERED TENTATIVE.

VOLATILE ORGANICS QA/QC SUMMARY:

Only common laboratory contaminants such as acetone, methylene chloride and toluene were found in the samples. In most cases these values were below the CRQL values. Methylene chloride was also found in the VOA blank. Some of the compounds noted had relatively poor library or standard spectral matches, but were not flagged due to appropriate retention times and likelihood of presence.

Actual holding times were exceeded for aqueous samples HG722 and HG723 (no indication was given if samples were chemically preserved). All results for these samples were flagged "J" or "UJ" due to possible loss of volatile compounds.

The initial calibration RRF value for acetone was less than the control limit. All non-detected acetone results were flagged "R", unusable. Percent difference (%D) values were out for continuing calibration analysis for methylene chloride and acetone.

Methylene chloride was found in the VOA blank at levels below the CRQL. Sample results for this contaminant were flagged "B" or "UB" depending on the sample concentration levels.

One surrogate recovery was out of specifications for aqueous sample

HG723; the sample was not re-analyzed. Two surrogate compounds were out of spec's for sample HG729. Re-analysis of this sample showed similar results. All positive rsults for this sample were flagged "J", estimated. Non-detected values were flagged "UJ".

It appears that no VOA aqueous matrix spike/matrix spike duplicate sample was run, perhaps due to lack of sample received by the lab. This in addition to the missed holding times and other QA/QC inadequecies noted further invalidate the VOA aqueous sample results.

Soil sample HG727 had one internal standard area out of control limits. For this sample, positive results quantitated using chlorobenzene-D5 as an internal standard were flagged "J"; non detected results were flagged "UJ". Soil sample HG729RE had two internal standards out of control limits. Soil sample HG730RE had all three internal standard areas out of control limits, and all results were flagged as estimated.

SEMIVOLATILE ORGANICS QA/QC SUMMARY

Several semivolatile Target Compound List (TCL) compounds were found in the soil samples at concentrations both above and below the CRQL levels. The semivolatile lab blank appeared clean except for low levels of phthalates. Several TIC's were also found to be present. During final data validation, 100% of the semivolatile TCL compounds which had concentrations greater than their respective CRQL's were checked for mass spectral confirmation against standard library spectra. Those sample compounds which showed poor matches in terms of ion peak presence and relative peak height when compared with the library spectra were flagged "J,N", estimated and unconfirmed, to indicate that MS confirmation was not achieved. Other compounds having concentrations less than the CRQL and TIC's were spot checked. Some of these compounds also had poor spectral match-ups against library spectra. It should again be mentioned that the elevated CRQL's for those sample which were diluted due to the high hydrocarbon matrix may have false negative results.

The initial and continuing calibration results showed %RSD and %D values which were out of required specifications for certain compounds. Positive results in samples associated with a particular calibration run were flagged "J" for those compounds. Non-detected results for those compounds were not flagged.

After initial sample analysis, samples HG728, HG729 and HG730 each had all six surrogate spiking compound recoveries out of quality control criteria. After re-analysis samples HG728 and HG730 still had 4 surrogates each out of specifications. All positive results for these samples were flagged "J"; non-detects were flagged "UJ". This problem was brought about by the high dilutions carried out on these samples. The lab stated in the case narrative that running these samples at a higher concentration was not possible, as the high hydrocarbon matrix overloaded the GC/MS system.

PESTICIDE QA/QC SUMMARY

Aroclor-1260 was found in all samples, and in levels greater than the CRQL in most samples. This compound was also found in the pesticide lab blank, though at lower levels.

Retention time shifts for DBC was greater than established control limits for samples HG725, HG727, HG728, HG729 and HG730. This problem was due to sample dilution; sample results were not flagged for this problem alone.

Aroclor-1260 was found in the pesticide lab blank at levels below the CRQL (120 ug/kg). All sample aroclor-1260 values exceeded the blank value by a factor of five except in sample HG730 (taking into account dilution factors). Sample aroclor-1260 results were flagged "B"; HG730 aroclor-1260 results were flagged "UB".

Sample HG724 and HG724RE had DBC surrogate recovery values outside of required limits, possibly due to interference from aroclor-1260. DBC was apparently diluted out of samples HG725, HG727, HG728, HG729, and HG730. It was felt by the reviewing chemist that high dilutions which effectively eliminated surrogate spiking compounds would also lead to erroneous sample results for pesticides which may be present, but at levels well below the elevated CRQL's. Positive results for the samples listed above were flagged "J", negative results were flagged "UJ".

Matrix spike/matrix spike duplicate recovery values were out of quality control criteria for several compounds. In all cases these compounds were already flagged for other QA/QC violations.

CLP DATA FLAGS

BASIC FLAGS
(Used in Tabulation)

j - The associated numerical value is an estimated quantity because the amount detected is below the contract required detection limit (CRDL) or because minor quality control criteria were not met. Presence of the material is reliable.

[] - The associated numerical value is an estimated quantity because the amount detected is below the contract required detection limit (CRDL). Presence of the material is reliable. (Inorganic data only).

u - The material was analyzed for, but was not detected. The associated numerical value is the estimated sample quantitation limit or CRDL.

uj - Detection limit is estimated because quality control criteria were not met. A false negative result may exist.

b - Material was detected in the laboratory blanks. Quantity reported is >5X the amount found in the blank (>10X for methylene chloride, acetone, toluene, and phthalates). A false positive result may exist.

ub - Estimated sample quantitation limit is increased. Material detected in sample at <5X the amount found in the blank(<10X for methylene chloride, acetone, toluene, and phthalates). A false positive result may exist.

r - Quality control indicates that data is not usable (material may or may not be present). DO NOT USE THIS DATA!.

n - Presumptive evidence of presence of material (tentative identification). MS data not reliable or MS not run.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG722

ab Name: ESECO Contract: 68-W8-0054

ab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

ample wt/vol: 5. (g/mL) ML Lab File ID: F9244

evel: (low/med) LOW Date Received: 7/27/89

Moisture: not dec.100. Date Analyzed: 8/ 3/89

olumn: (pack/cap) CAP Dilution Factor: 1.00

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

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HG722

ıb Name: ESECO Contract: 68-W8-0054

ıb Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

ımple wt/vol: 5. (g/mL) ML Lab File ID: F9244

evel: (low/med) LOW Date Received: 7/27/89

Moisture: not dec.100. Date Analyzed: 8/ 3/89

olumn: (pack/cap) CAP Dilution Factor: 1.00

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. - -	HEXANE	6.41	10.	J
2.				
3.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG723

L b Name: ESECO Contract: 68-W8-0054

L b Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

M trix: (soil/water) WATER Lab Sample ID: _____

S mple wt/vol: 5. (g/mL) ML Lab File ID: F9260

L vel: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec.100. Date Analyzed: 8/ 4/89

C lumn: (pack/cap) CAP Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U UJ
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	8.	J, UB
67-64-1	ACETONE	10.	~~U UJ~~ R
75-15-0	CARBON DISULFIDE	5.	U UJ
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	5.	U
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENE (TOTAL)	5.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HG723

L b Name: ESECO Contract: 68-W8-0054

L b Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

M trix: (soil/water) WATER Lab Sample ID: _____

S mple wt/vol: 5. (g/mL) ML Lab File ID: F9260

L vel: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec.100. Date Analyzed: 8/ 4/89

C lumn: (pack/cap) CAP Dilution Factor: 1.00

umber TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. - -	HEXANE	6.26	10.	J
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EPA SAMPLE NO.

HG724

b Name: ESECO Contract: 68-W8-0054

b Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

mple wt/vol: 4. (g/mL) G Lab File ID: F9255

vel: (low/med) MED Date Received: 7/27/89

Moisture: not dec. 0. Date Analyzed: 8/ 4/89

lumn: (pack/cap) CAP Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	1200.	U
74-83-9	BROMOMETHANE	1200.	U
75-01-4	VINYL CHLORIDE	1200.	U
75-00-3	CHLOROETHANE	1200.	U
75-09-2	METHYLENE CHLORIDE	240.	~~J~~ B
67-64-1	ACETONE	1200.	~~U~~ R
75-15-0	CARBON DISULFIDE	610.	U
75-35-4	1,1-DICHLOROETHENE	610.	U
75-34-3	1,1-DICHLOROETHANE	610.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	610.	U
67-66-3	CHLOROFORM	610.	U
107-06-2	1,2-DICHLOROETHANE	610.	U
78-93-3	2-BUTANONE	1200.	U
71-55-6	1,1,1-TRICHLOROETHANE	610.	U
56-23-5	CARBON TETRACHLORIDE	610.	U
108-05-4	VINYL ACETATE	1200.	U
75-27-4	BROMODICHLOROMETHANE	610.	U
78-87-5	1,2-DICHLOROPROPANE	610.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	610.	U
79-01-6	TRICHLOROETHENE	610.	U
124-48-1	DIBROMOCHLOROMETHANE	610.	U
79-00-5	1,1,2-TRICHLOROETHANE	610.	U
71-43-2	BENZENE	610.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	610.	U
75-25-2	BROMOFORM	610.	U
108-10-1	4-METHYL-2-PENTANONE	1200.	U
591-78-6	2-HEXANONE	1200.	U
127-18-4	TETRACHLOROETHENE	610.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	610.	U
108-88-3	TOLUENE	610.	U
108-90-7	CHLOROBENZENE	610.	U
100-41-4	ETHYLBENZENE	610.	U
100-42-5	STYRENE	610.	U
1330-20-7	XYLENE (TOTAL)	610.	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HG724

b Name: ESECO Contract: 68-W8-0054

b Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

mple wt/vol: 4. (g/mL) G Lab File ID: F9255

vel: (low/med) MED Date Received: 7/27/89

Moisture: not dec. 0. Date Analyzed: 8/ 4/89

lumn: (pack/cap) CAP Dilution Factor: 1.00

umber TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. - -	HEXANE	6.44	1000.	J
2. - -	UNKNOWN HYDROCARBON	28.39	100.	J
3. - -	UNKNOWN HYDROCARBON	31.40	200.	J
4. - -	UNKNOWN HYDROCARBON	31.68	500.	J
5. 57289-16-4	2,6-NAPHTHALENEDIONE, OCTAHY	31.76	100.	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG725

ab Name: ESECO Contract: 68-W8-0054

ab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

ample wt/vol: 5. (g/mL) G Lab File ID: F9239

evel: (low/med) LOW Date Received: 7/27/89

Moisture: not dec. 0. Date Analyzed: 8/ 3/89

olumn: (pack/cap) CAP Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	3.	~~BJ~~ UB
67-64-1	ACETONE	10.	~~J~~ R
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	U
591-78-6	2-HEXANONE	10.	U
127-18-4	TETRACHLOROETHENE	5.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	U
108-88-3	TOLUENE	22.	
108-90-7	CHLOROBENZENE	5.	U
100-41-4	ETHYLBENZENE	5.	U
100-42-5	STYRENE	5.	U
1330-20-7	XYLENE (TOTAL)	5.	U

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HG725

ıb Name: ESECO Contract: 68-W8-0054

ıb Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

ımple wt/vol: 5. (g/mL) G Lab File ID: F9239

ɜvel: (low/med) LOW Date Received: 7/27/89

Moisture: not dec. 0. Date Analyzed: 8/ 3/89

ɔlumn: (pack/cap) CAP Dilution Factor: 1.00

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

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. - -	HEXANE	6.39	30.	J
2. - -	UNKNOWN	7.63	3.	J
3.				
4.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG726

L b Name: ESECO Contract: 68-W8-0054

L b Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

M trix: (soil/water) SOIL Lab Sample ID: _____

S mple wt/vol: 5. (g/mL) G Lab File ID: F9240

L vel: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. Date Analyzed: 8/ 3/89

C lumn: (pack/cap) CAP Dilution Factor: 1.00

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

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HG726

Contract: 68-W8-0054

L b Name: ESECO

L b Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

M trix: (soil/water) SOIL Lab Sample ID: _____

S mple wt/vol: 5. (g/mL) G Lab File ID: F9240

L vel: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. Date Analyzed: 8/ 3/89

C lumn: (pack/cap) CAP Dilution Factor: 1.00

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

umber TICs found: 1

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	HEXANE	6.40	20.	J
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG727

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 5. (g/mL) G Lab File ID: F9241

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. Date Analyzed: 8/ 3/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	10.	U
74-83-9	BROMOMETHANE	10.	U
75-01-4	VINYL CHLORIDE	10.	U
75-00-3	CHLOROETHANE	10.	U
75-09-2	METHYLENE CHLORIDE	5.	~~B~~ UG
67-64-1	ACETONE	10.	~~U~~ R
75-15-0	CARBON DISULFIDE	5.	U
75-35-4	1,1-DICHLOROETHENE	5.	U
75-34-3	1,1-DICHLOROETHANE	5.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	5.	U
67-66-3	CHLOROFORM	5.	U
107-06-2	1,2-DICHLOROETHANE	5.	U
78-93-3	2-BUTANONE	10.	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	U
56-23-5	CARBON TETRACHLORIDE	5.	U
108-05-4	VINYL ACETATE	10.	U
75-27-4	BROMODICHLOROMETHANE	5.	U
78-87-5	1,2-DICHLOROPROPANE	5.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	U
79-01-6	TRICHLOROETHENE	5.	U
124-48-1	DIBROMOCHLOROMETHANE	5.	U
79-00-5	1,1,2-TRICHLOROETHANE	5.	U
71-43-2	BENZENE	5.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	U
75-25-2	BROMOFORM	5.	U
108-10-1	4-METHYL-2-PENTANONE	10.	~~U~~ UJ
591-78-6	2-HEXANONE	10.	~~U~~
127-18-4	TETRACHLOROETHENE	5.	~~U~~
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	~~U~~
108-88-3	TOLUENE	24.	J
108-90-7	CHLOROBENZENE	5.	~~U~~ UJ
100-41-4	ETHYLBENZENE	5.	~~U~~
100-42-5	STYRENE	5.	~~U~~
1330-20-7	XYLENE (TOTAL)	5.	~~U~~

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HG727

L b Name: ESECO Contract: 68-W8-0054

L b Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

M trix: (soil/water) SOIL Lab Sample ID: _____

S mple wt/vol: 5. (g/mL) G Lab File ID: F9241

L vel: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. Date Analyzed: 8/ 3/89

C lumn: (pack/cap) CAP Dilution Factor: 1.00

umber TICs found: 10 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	HEXANE	6.41	10.	J
2.	29812-79-1	HYDROXYLAMINE, O-DECYL-	29.04	2.	J
3.	- -	UNKNOWN HYDROCARBON	29.22	3.	J
4.	- -	UNKNOWN HYDROCARBON	29.49	1.	J
5.	17312-76-4	UNDECANE, 6,6-DIMETHYL-	29.79	3.	J
6.	- -	UNKNOWN HYDROCARBON	30.04	6.	J
7.	- -	UNKNOWN HYDROCARBON	30.19	2.	J
8.	2801-84-5	DECANE, 2,4-DIMETHYL-	30.68	3.	J
9.	- -	UNKNOWN HYDROCARBON	30.85	4.	J
10.	- -	UNKNOWN HYDROCARBON	30.96	2.	J
11.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG728

.b Name: ESECO Contract: 68-W8-0054

.b Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

.trix: (soil/water) SOIL Lab Sample ID:

.mple wt/vol: 4. (g/mL) G Lab File ID: F9258

.vel: (low/med) MED Date Received: 7/27/89

Moisture: not dec. 8. Date Analyzed: 8/ 4/89

.lumn: (pack/cap) CAP Dilution Factor: 1.00

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

CAS NO.	COMPOUND	Q
74-87-3	CHLOROMETHANE	1400. U
74-83-9	BROMOMETHANE	1400. U
75-01-4	VINYL CHLORIDE	1400. U
75-00-3	CHLOROETHANE	1400. U
75-09-2	METHYLENE CHLORIDE	680. ~~U~~ B
67-64-1	ACETONE	1400. ~~U~~ R
75-15-0	CARBON DISULFIDE	680. U
75-35-4	1,1-DICHLOROETHENE	680. U
75-34-3	1,1-DICHLOROETHANE	680. U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	680. U
67-66-3	CHLOROFORM	680. U
107-06-2	1,2-DICHLOROETHANE	680. U
78-93-3	2-BUTANONE	1400. U
71-55-6	1,1,1-TRICHLOROETHANE	680. U
56-23-5	CARBON TETRACHLORIDE	680. U
108-05-4	VINYL ACETATE	1400. U
75-27-4	BROMODICHLOROMETHANE	680. U
78-87-5	1,2-DICHLOROPROPANE	680. U
10061-01-5	CIS-1,3-DICHLOROPROPENE	680. U
79-01-6	TRICHLOROETHENE	680. U
124-48-1	DIBROMOCHLOROMETHANE	680. U
79-00-5	1,1,2-TRICHLOROETHANE	680. U
71-43-2	BENZENE	680. U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	680. U
75-25-2	BROMOFORM	680. U
108-10-1	4-METHYL-2-PENTANONE	1400. U
591-78-6	2-HEXANONE	1400. U
127-18-4	TETRACHLOROETHENE	680. U
79-34-5	1,1,2,2-TETRACHLOROETHANE	680. U
108-88-3	TOLUENE	1900.
108-90-7	CHLOROBENZENE	680. U
100-41-4	ETHYLBENZENE	680. U
100-42-5	STYRENE	680. U
1330-20-7	XYLENE (TOTAL)	680. U

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HG728

b Name: ESECO Contract: 68-W8-0054

b Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

mple wt/vol: 4. (g/mL) G Lab File ID: F9258

vel: (low/med) MED Date Received: 7/27/89

Moisture: not dec. 8. Date Analyzed: 8/ 4/89

lumn: (pack/cap) CAP Dilution Factor: 1.00

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

umber TICs found: 10

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	HEXANE	6.45	1000.	J
2.	- -	UNKNOWN	29.57	300.	J
3.	- -	UNKNOWN	29.86	100.	J
4.	- -	UNKNOWN HYDROCARBON	30.23	300.	J
5.	- -	UNKNOWN	30.72	500.	J
6.	- -	UNKNOWN	30.84	100.	J
7.	- -	UNKNOWN HYDROCARBON	30.96	400.	J
8.	- -	UNKNOWN	31.15	400.	J
9.	54832-83-6	1H-INDENE, OCTAHYDRO-2,2,4,4	31.40	1000.	J
10.	- -	UNKNOWN HYDROCARBON	31.68	2000.	J
11.					
12.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG729 RE

L b Name: ESECO Contract: 68-W8-0054

L b Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

M trix: (soil/water) SOIL Lab Sample ID: _____

S mple wt/vol: 5. (g/mL) G Lab File ID: F9253

L vel: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 31. Date Analyzed: 8/ 4/89

C lumn: (pack/cap) CAP Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	15.	U UJ
74-83-9	BROMOMETHANE	15.	U
75-01-4	VINYL CHLORIDE	15.	U
75-00-3	CHLOROETHANE	15.	U
75-09-2	METHYLENE CHLORIDE	5.	~~BJ~~ J UB
67-64-1	ACETONE	15.	~~U UJ~~ → R
75-15-0	CARBON DISULFIDE	7.	U UJ
75-35-4	1,1-DICHLOROETHENE	7.	U
75-34-3	1,1-DICHLOROETHANE	7.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	7.	U
67-66-3	CHLOROFORM	7.	U
107-06-2	1,2-DICHLOROETHANE	7.	U
78-93-3	2-BUTANONE	15.	U
71-55-6	1,1,1-TRICHLOROETHANE	7.	U
56-23-5	CARBON TETRACHLORIDE	7.	U
108-05-4	VINYL ACETATE	15.	U
75-27-4	BROMODICHLOROMETHANE	7.	U
78-87-5	1,2-DICHLOROPROPANE	7.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	7.	U
79-01-6	TRICHLOROETHENE	7.	U
124-48-1	DIBROMOCHLOROMETHANE	7.	U
79-00-5	1,1,2-TRICHLOROETHANE	7.	U
71-43-2	BENZENE	7.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	7.	U
75-25-2	BROMOFORM	7.	U
108-10-1	4-METHYL-2-PENTANONE	15.	U
591-78-6	2-HEXANONE	15.	U
127-18-4	TETRACHLOROETHENE	7.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	7.	U
108-88-3	TOLUENE	190.	J
108-90-7	CHLOROBENZENE	7.	U UJ
100-41-4	ETHYLBENZENE	7.	U
100-42-5	STYRENE	7.	U
1330-20-7	XYLENE (TOTAL)	7.	U

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HG729 RE

L b Name: ESECO Contract: 68-W8-0054

L b Code: ESELO Case No.: 12387 SAS No.: SDG No.: HG722

M trix: (soil/water) SOIL Lab Sample ID: _____

S mple wt/vol: 5. (g/mL) G Lab File ID: F9253

L vel: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 31. Date Analyzed: 8/ 4/89

C lumn: (pack/cap) CAP Dilution Factor: 1.00

umber TICs found: 9 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	HEXANE	6.44	40.	J
2.	- -	UNKNOWN	27.98	3.	J
3.	- -	UNKNOWN HYDROCARBON	28.36	4.	J
4.	- -	UNKNOWN	29.05	4.	J
5.	- -	UNKNOWN HYDROCARBON	29.57	9.	J
6.	- -	UNKNOWN HYDROCARBON	30.71	20.	J
7.	- -	UNKNOWN	30.85	3.	J
8.	54832-83-6	1H-INDENE, OCTAHYDRO-2,2,4,4	31.40	60.	J
9.	- -	UNKNOWN HYDROCARBON	31.67	100.	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG730 RE

.b Name: ESECO Contract: 68-W8-0054

.b Code: ESECO Case No.: 12387 SAS No.: SDG No.: GG482

.trix: (soil/water) SOIL Lab Sample ID: _____

.mple wt/vol: 5. (g/mL) G Lab File ID: F9262

.vel: (low/med) LOW Date Received: 7/27/89

Moisture: not dec. 19. Date Analyzed: 8/ 4/89

.lumn: (pack/cap) CAP Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	12.	U UJ
74-83-9	BROMOMETHANE	12.	U
75-01-4	VINYL CHLORIDE	12.	U
75-00-3	CHLOROETHANE	12.	U
75-09-2	METHYLENE CHLORIDE	13.	B UB
67-64-1	ACETONE	12.	~~U UJ~~ R
75-15-0	CARBON DISULFIDE	6.	U UJ
75-35-4	1,1-DICHLOROETHENE	6.	U
75-34-3	1,1-DICHLOROETHANE	6.	U
540-59-0	1,2-DICHLOROETHENE (TOTAL)	6.	U
67-66-3	CHLOROFORM	6.	U
107-06-2	1,2-DICHLOROETHANE	6.	U
78-93-3	2-BUTANONE	12.	U
71-55-6	1,1,1-TRICHLOROETHANE	6.	U
56-23-5	CARBON TETRACHLORIDE	6.	U
108-05-4	VINYL ACETATE	12.	U
75-27-4	BROMODICHLOROMETHANE	6.	U
78-87-5	1,2-DICHLOROPROPANE	6.	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	6.	U
79-01-6	TRICHLOROETHENE	6.	U
124-48-1	DIBROMOCHLOROMETHANE	6.	U
79-00-5	1,1,2-TRICHLOROETHANE	6.	U
71-43-2	BENZENE	6.	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	6.	U
75-25-2	BROMOFORM	6.	U
108-10-1	4-METHYL-2-PENTANONE	12.	U
591-78-6	2-HEXANONE	12.	U
127-18-4	TETRACHLOROETHENE	6.	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	6.	U
108-88-3	TOLUENE	210.	J
108-90-7	CHLOROBENZENE	6.	U UJ
100-41-4	ETHYLBENZENE	6.	U
100-42-5	STYRENE	6.	U
1330-20-7	XYLENE (TOTAL)	6.	U

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HG730 RE

.b Name: ESECO Contract: 68-W8-0054

.b Code: ESECO Case No.: 12387 SAS No.: SDG No.: GG482

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

.mple wt/vol: 5. (g/mL) G Lab File ID: F9262

:vel: (low/med) LOW Date Received: 7/27/89

Moisture: not dec. 19. Date Analyzed: 8/ 4/89

lumn: (pack/cap) CAP Dilution Factor: 1.00

umber TICs found: 8 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	HEXANE	6.42	20.	J
2.	112-70-9	1-TRIDECANOL	30.70	10.	J
3.	- -	UNKNOWN HYDROCARBON	30.96	6.	J
4.	- -	UNKNOWN HYDROCARBON	31.31	9.	J
5.	54832-83-6	1H-INDENE, OCTAHYDRO-2,2,4,4	31.40	20.	J
6.	- -	UNKNOWN HYDROCARBON	31.68	40.	J
7.	- -	UNKNOWN	31.77	10.	J
8.	- -	UNKNOWN	31.90	2.	J
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG724

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG724

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77057

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 0. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/11/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	670.	U
111-44-4	bis(2-Chloroethyl)ether	670.	U
95-57-8	2-Chlorophenol	670.	U
541-73-1	1,3-Dichlorobenzene	670.	U
106-46-7	1,4-Dichlorobenzene	670.	U
100-51-6	Benzyl alcohol	670.	U
95-50-1	1,2-Dichlorobenzene	670.	U
95-48-7	2-Methylphenol	670.	U
108-60-1	bis(2-Chloroisopropyl)ether	670.	U
106-44-5	4-Methylphenol	670.	U
621-64-7	N-Nitroso-di-n-propylamine	670.	U
67-72-1	Hexachloroethane	670.	U
98-95-3	Nitrobenzene	670.	U
78-59-1	Isophorone	670.	U
88-75-5	2-Nitrophenol	670.	U
105-67-9	2,4-Dimethylphenol	3300.	U
65-85-0	Benzoic acid	670.	U
111-91-1	bis(2-Chloroethoxy)methane	670.	U
120-83-2	2,4-Dichlorophenol	670.	U
120-82-1	1,2,4-Trichlorobenzene	670.	U
91-20-3	Naphthalene	670.	U
106-47-8	4-Chloroaniline	670.	U
87-68-3	Hexachlorobutadiene	670.	U
59-50-7	4-Chloro-3-methylphenol	19.	J
91-57-6	2-Methylnaphthalene	670.	U
77-47-4	Hexachlorocyclopentadiene	670.	U
88-06-2	2,4,6-Trichlorophenol	3300.	U
95-95-4	2,4,5-Trichlorophenol	670.	U
91-58-7	2-Chloronaphthalene	3300.	U
88-74-4	2-Nitroaniline	670.	U
131-11-3	Dimethylphthalate	670.	U
208-96-8	Acenaphthylene	670.	U
606-20-2	2,6-Dinitrotoluene	670.	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HG724

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG724

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77057

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 0. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/11/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3300.	U
83-32-9	Acenaphthene	25.	J
51-28-5	2,4-Dinitrophenol	3300.	U
100-02-7	4-Nitrophenol	6700.	U
132-64-9	Dibenzofuran	14.	J
121-14-2	2,4-Dinitrotoluene	670.	U
84-66-2	Diethylphthalate	32.	J
7005-72-3	4-Chlorophenyl-phenylether	670.	U
86-73-7	Fluorene	23.	J
100-01-6	4-Nitroaniline	3300.	U
534-52-1	4,6-Dinitro-2-methylphenol	3300.	U
86-30-6	N-Nitrosodiphenylamine	3300.	U
101-55-3	4-Bromophenyl-phenylether	670.	U
118-74-1	Hexachlorobenzene	670.	U
87-86-5	Pentachlorophenol	3300.	U
85-01-8	Phenanthrene	360.	J
120-12-7	Anthracene	59.	J
84-74-2	Di-n-butylphthalate	130.	J
206-44-0	Fluoranthene	570.	J
129-00-0	Pyrene	550.	J
85-68-7	Butylbenzylphthalate	670.	U
91-94-1	3,3'-Dichlorobenzidine	1300.	U
56-55-3	Benzo(a)anthracene	340.	J
218-01-9	Chrysene	590.	J
117-81-7	bis(2-Ethylhexyl)phthalate	550.	BJ
117-84-0	Di-n-octylphthalate	670.	U
205-99-2	Benzo(b)fluoranthene	490.	J
207-08-9	Benzo(k)fluoranthene	670.	U
50-32-8	Benzo(a)pyrene	340.	J
193-39-5	Indeno(1,2,3-cd)pyrene	330.	J
53-70-3	Dibenz(a,h)anthracene	670.	U
191-24-2	Benzo(g,h,i)perylene	320.	J

(1) - Cannot be separated from diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HG724

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG724

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77057

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 0. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/11/89

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

Number TICs found: 15

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	67-64-1	2-Propanone (9CI)	8.26	2000.	BJ
2.	115-22-0	2-Butanone, 3-hydroxy-3-meth	9.12	50000.	BJ
3.	- -	UNKNOWN	11.05	900.	J
4.	- -	UNKNOWN	12.11	800.	J
5.	79-29-8	Butane, 2,3-dimethyl- (8CI9C	15.09	300.	J
6.	17831-71-9	2-Propenoic acid, oxybis(2,1	35.41	10000.	BJ
7.	629-97-0	Docosane (8CI9CI)	36.94	200.	J
8.	123-79-5	Hexanedioic acid, dioctyl es	41.35	1000.	BJ
9.	17831-71-9	2-Propenoic acid, oxybis(2,1	41.94	900.	BJ
10.	23663-58-3	Purine-6(1H)-thione, 3,7-dim	42.72	300.	J
11.	629-78-7	Heptadecane (8CI9CI)	44.01	300.	J
12.	630-07-9	Pentatriacontane (8CI9CI)	45.28	300.	J
13.	205-82-3	Benzo[j]fluoranthene (8CI9CI	46.52	500.	J
14.	7225-64-1	Heptadecane, 9-octyl- (8CI9C	50.29	600.	J
15.	- -	UNKNOWN	51.42	400:	J
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SITE ASSESSMENT SECTION

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG725

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77108

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 0. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	670.	U
111-44-4	bis(2-Chloroethyl)ether	670.	U
95-57-8	2-Chlorophenol	670.	U
541-73-1	1,3-Dichlorobenzene	670.	U
106-46-7	1,4-Dichlorobenzene	670.	U
100-51-6	Benzyl alcohol	670.	U
95-50-1	1,2-Dichlorobenzene	670.	U
95-48-7	2-Methylphenol	670.	U
108-60-1	bis(2-Chloroisopropyl)ether	670.	U
106-44-5	4-Methylphenol	670.	U
621-64-7	N-Nitroso-di-n-propylamine	670.	U
67-72-1	Hexachloroethane	670.	U
98-95-3	Nitrobenzene	670.	U
78-59-1	Isophorone	3900.	
88-75-5	2-Nitrophenol	670.	U
105-67-9	2,4-Dimethylphenol	670.	U
65-85-0	Benzoic acid	260.	~~J~~ J
111-91-1	bis(2-Chloroethoxy)methane	670.	U
120-83-2	2,4-Dichlorophenol	670.	U
120-82-1	1,2,4-Trichlorobenzene	670.	U
91-20-3	Naphthalene	540.	J
106-47-8	4-Chloroaniline	670.	U
87-68-3	Hexachlorobutadiene	670.	U
59-50-7	4-Chloro-3-methylphenol	670.	U
91-57-6	2-Methylnaphthalene	1500.	
77-47-4	Hexachlorocyclopentadiene	670.	U
88-06-2	2,4,6-Trichlorophenol	670.	U
95-95-4	2,4,5-Trichlorophenol	3300.	U
91-58-7	2-Chloronaphthalene	670.	U
88-74-4	2-Nitroaniline	3300.	U
131-11-3	Dimethylphthalate	140.	J
208-96-8	Acenaphthylene	47.	J
606-20-2	2,6-Dinitrotoluene	670.	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HG725

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77108

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 0. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3300.	U
83-32-9	Acenaphthene	62.	J
51-28-5	2,4-Dinitrophenol	3300.	U
100-02-7	4-Nitrophenol	6700.	U
132-64-9	Dibenzofuran	90.	J
121-14-2	2,4-Dinitrotoluene	670.	U
84-66-2	Diethylphthalate	670.	U
7005-72-3	4-Chlorophenyl-phenylether	670.	U
86-73-7	Fluorene	670.	U
100-01-6	4-Nitroaniline	3300.	U
534-52-1	4,6-Dinitro-2-methylphenol	3300.	U
86-30-6	N-Nitrosodiphenylamine	170.	J
101-55-3	4-Bromophenyl-phenylether	670.	U
118-74-1	Hexachlorobenzene	670.	U
87-86-5	Pentachlorophenol	3300.	U
85-01-8	Phenanthrene	710.	
120-12-7	Anthracene	120.	J
84-74-2	Di-n-butylphthalate	320.	J
206-44-0	Fluoranthene	670.	U
129-00-0	Pyrene	1500.	
85-68-7	Butylbenzylphthalate	490.	J
91-94-1	3,3'-Dichlorobenzidine	1300.	U
56-55-3	Benzo(a)anthracene	820.	J,N
218-01-9	Chrysene	920.	J,N
117-81-7	bis(2-Ethylhexyl)phthalate	1300.	B
117-84-0	Di-n-octylphthalate	11.	J
205-99-2	Benzo(b)fluoranthene	1500.	
207-08-9	Benzo(k)fluoranthene	670.	U
50-32-8	Benzo(a)pyrene	500.	J
193-39-5	Indeno(1,2,3-cd)pyrene	840.	J
53-70-3	Dibenz(a,h)anthracene	670.	U
191-24-2	Benzo(g,h,i)perylene	820.	J

(1) - Cannot be separated from diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HG725

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77108

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 0. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.00

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

Number TICs found: 20

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	67-64-1	2-Propanone (9CI)	9.44	2000.	BJ
2.	- -	UNKNOWN	10.31	60000.	J
3.	- -	UNKNOWN	12.24	1000.	J
4.	36678-43-0	4-Hepten-2-one, (E)- (9CI)	13.24	800.	J
5.	100-52-7	Benzaldehyde (ACN)(DOT)(8CI9	13.53	700.	J
6.	- -	UNKNOWN	14.24	900.	J
7.	112-40-3	Dodecane (8CI9CI)	20.40	500.	J
8.	90-12-0	Naphthalene, 1-methyl- (8CI9	23.29	700.	J
9.	62238-11-3	Decane, 2,3,5-trimethyl- (9C	25.32	900.	J
10.	571-61-9	Naphthalene, 1,5-dimethyl- (	25.51	900.	J
11.	569-41-5	Naphthalene, 1,8-dimethyl- (	25.85	700.	J
12.	629-62-9	Pentadecane (8CI9CI)	27.52	500.	J
13.	54833-48-6	Heptadecane, 2,6,10,15-tetra	29.58	600.	J
14.	54833-23-7	Eicosane, 10-methyl- (9CI)	31.54	700.	J
15.	1921-70-6	Pentadecane, 2,6,10,14-tetra	31.67	1000.	J
16.	55045-10-8	Tridecane, 6-propyl- (9CI)	33.59	600.	J
17.	629-92-5	Nonadecane (8CI9CI)	35.17	700.	J
18.	17831-71-9	2-Propenoic acid, oxybis(2,1	36.71	700.	BJ
19.	17831-71-9	2-Propenoic acid, oxybis(2,1	36.92	9000.	BJ
20.	- -	UNKNOWN HYDROCARBON	38.48	600.	J
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG726

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77082

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/15/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	670.	U
111-44-4	bis(2-Chloroethyl)ether	670.	U
95-57-8	2-Chlorophenol	670.	U
541-73-1	1,3-Dichlorobenzene	670.	U
106-46-7	1,4-Dichlorobenzene	670.	U
100-51-6	Benzyl alcohol	670.	U
95-50-1	1,2-Dichlorobenzene	670.	U
95-48-7	2-Methylphenol	670.	U
108-60-1	bis(2-Chloroisopropyl)ether	670.	U
106-44-5	4-Methylphenol	670.	U
621-64-7	N-Nitroso-di-n-propylamine	670.	U
67-72-1	Hexachloroethane	670.	U
98-95-3	Nitrobenzene	670.	U
78-59-1	Isophorone	670.	U
88-75-5	2-Nitrophenol	670.	U
105-67-9	2,4-Dimethylphenol	670.	U
65-85-0	Benzoic acid	3400.	U
111-91-1	bis(2-Chloroethoxy)methane	670.	U
120-83-2	2,4-Dichlorophenol	670.	U
120-82-1	1,2,4-Trichlorobenzene	670.	U
91-20-3	Naphthalene	82.	J
106-47-8	4-Chloroaniline	670.	U
87-68-3	Hexachlorobutadiene	670.	U
59-50-7	4-Chloro-3-methylphenol	670.	U
91-57-6	2-Methylnaphthalene	54.	~~B~~ J
77-47-4	Hexachlorocyclopentadiene	670.	U
88-06-2	2,4,6-Trichlorophenol	670.	U
95-95-4	2,4,5-Trichlorophenol	3400.	U
91-58-7	2-Chloronaphthalene	670.	U
88-74-4	2-Nitroaniline	3400.	U
131-11-3	Dimethylphthalate	670.	U
208-96-8	Acenaphthylene	21.	J
606-20-2	2,6-Dinitrotoluene	670.	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HG726

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77082

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/15/89

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

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

CAS NO.	COMPOUND		Q
99-09-2	3-Nitroaniline	3400.	U
83-32-9	Acenaphthene	670.	U
51-28-5	2,4-Dinitrophenol	3400.	U
100-02-7	4-Nitrophenol	6700.	U
132-64-9	Dibenzofuran	20.	J
121-14-2	2,4-Dinitrotoluene	670.	U
84-66-2	Diethylphthalate	34.	J
7005-72-3	4-Chlorophenyl-phenylether	670.	U
86-73-7	Fluorene	670.	U
100-01-6	4-Nitroaniline	3400.	U
534-52-1	4,6-Dinitro-2-methylphenol	3400.	U
86-30-6	N-Nitrosodiphenylamine	3400.	U
101-55-3	4-Bromophenyl-phenylether	670.	U
118-74-1	Hexachlorobenzene	670.	U
87-86-5	Pentachlorophenol	3400.	U
85-01-8	Phenanthrene	220.	J
120-12-7	Anthracene	41.	J
84-74-2	Di-n-butylphthalate	51.	J
206-44-0	Fluoranthene	300.	J
129-00-0	Pyrene	470.	J
85-68-7	Butylbenzylphthalate	670.	U
91-94-1	3,3'-Dichlorobenzidine	1300.	U
56-55-3	Benzo(a)anthracene	170.	J
218-01-9	Chrysene	370.	J
117-81-7	bis(2-Ethylhexyl)phthalate	220.	BJ
117-84-0	Di-n-octylphthalate	670.	U
205-99-2	Benzo(b)fluoranthene	570.	J
207-08-9	Benzo(k)fluoranthene	670.	U
50-32-8	Benzo(a)pyrene	670.	U
193-39-5	Indeno(1,2,3-cd)pyrene	670.	U
53-70-3	Dibenz(a,h)anthracene	670.	U
191-24-2	Benzo(g,h,i)perylene	670.	U

(1) - Cannot be separated from diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HG726

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77082

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/15/89

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

Number TICs found: 17 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	67-64-1	2-Propanone (9CI)	8.30	2000.	BJ
2.	115-22-0	2-Butanone, 3-hydroxy-3-meth	9.14	40000.	J
3.	- -	UNKNOWN HYDROCARBON	9.22	400.	J
4.	- -	UNKNOWN KETONE	11.15	800.	J
5.	- -	UNKNOWN	25.59	200.	J
6.	- -	UNKNOWN	30.12	900.	J
7.	1921-70-6	Pentadecane, 2,6,10,14-tetra	30.25	900.	J
8.	- -0	PBM found no hits for this U	32.41	300.	J
9.	- -	UNKNOWN	33.62	300.	J
10.	54833-48-6	Heptadecane, 2,6,10,15-tetra	33.75	1000.	J
11.	17831-71-9	2-Propenoic acid, oxybis(2,1	35.43	9000.	BJ
12.	54833-48-6	Heptadecane, 2,6,10,15-tetra	37.01	1000.	J
13.	629-97-0	Docosane (8CI9CI)	40.01	600.	J
14.	- -	UNKNOWN HYDROCARBON	41.42	900.	J
15.	17831-71-9	2-Propenoic acid, oxybis(2,1	42.04	1000.	BJ
16.	630-06-8	Hexatriacontane (8CI9CI)	45.35	2000.	J
17.	- -	UNKNOWN HYDROCARBON	47.80	3000.	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG7_7

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77064

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/12/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	670.	U
111-44-4	bis(2-Chloroethyl)ether	670.	U
95-57-8	2-Chlorophenol	670.	U
541-73-1	1,3-Dichlorobenzene	670.	U
106-46-7	1,4-Dichlorobenzene	670.	U
100-51-6	Benzyl alcohol	670.	U
95-50-1	1,2-Dichlorobenzene	670.	U
95-48-7	2-Methylphenol	670.	U
108-60-1	bis(2-Chloroisopropyl)ether	670.	U
106-44-5	4-Methylphenol	670.	U
621-64-7	N-Nitroso-di-n-propylamine	670.	U
67-72-1	Hexachloroethane	670.	U
98-95-3	Nitrobenzene	670.	U
78-59-1	Isophorone	670.	U
88-75-5	2-Nitrophenol	670.	U
105-67-9	2,4-Dimethylphenol	670.	U
65-85-0	Benzoic acid	3400.	U
111-91-1	bis(2-Chloroethoxy)methane	670.	U
120-83-2	2,4-Dichlorophenol	670.	U
120-82-1	1,2,4-Trichlorobenzene	670.	U
91-20-3	Naphthalene	420.	J
106-47-8	4-Chloroaniline	670.	U
87-68-3	Hexachlorobutadiene	670.	U
59-50-7	4-Chloro-3-methylphenol	670.	U
91-57-6	2-Methylnaphthalene	570.	~~J~~
77-47-4	Hexachlorocyclopentadiene	670.	U
88-06-2	2,4,6-Trichlorophenol	670.	U
95-95-4	2,4,5-Trichlorophenol	3400.	U
91-58-7	2-Chloronaphthalene	670.	U
88-74-4	2-Nitroaniline	3400.	U
131-11-3	Dimethylphthalate	670.	U
208-96-8	Acenaphthylene	82.	J
606-20-2	2,6-Dinitrotoluene	670.	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HG727

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77064

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. dec. 0. Date Extracted: 8/ 3/89

Extraction (SepF/Cont/Sonc) SONC Date Analyzed: 8/12/89

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

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

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3400.	U
83-32-9	Acenaphthene	670.	U
51-28-5	2,4-Dinitrophenol	3400.	U
100-02-7	4-Nitrophenol	6700.	U
132-64-9	Dibenzofuran	100.	J
121-14-2	2,4-Dinitrotoluene	670.	U
84-66-2	Diethylphthalate	53.	J
7005-72-3	4-Chlorophenyl-phenylether	670.	U
86-73-7	Fluorene	38.	J
100-01-6	4-Nitroaniline	3400.	U
534-52-1	4,6-Dinitro-2-methylphenol	3400.	U
86-30-6	N-Nitrosodiphenylamine	160.	J
101-55-3	4-Bromophenyl-phenylether	670.	U
118-74-1	Hexachlorobenzene	670.	U
87-86-5	Pentachlorophenol	3400.	U
85-01-8	Phenanthrene	600.	~~J~~ J
120-12-7	Anthracene	130.	J
84-74-2	Di-n-butylphthalate	260.	J
206-44-0	Fluoranthene	540.	J
129-00-0	Pyrene	1300.	
85-68-7	Butylbenzylphthalate	670.	U
91-94-1	3,3'-Dichlorobenzidine	1300.	U
56-55-3	Benzo(a)anthracene	300.	J
218-01-9	Chrysene	1200.	J,N
117-81-7	bis(2-Ethylhexyl)phthalate	1300.	B
117-84-0	Di-n-octylphthalate	670.	U
205-99-2	Benzo(b)fluoranthene	670.	U
207-08-9	Benzo(k)fluoranthene	2300.	J,N
50-32-8	Benzo(a)pyrene	360.	J
193-39-5	Indeno(1,2,3-cd)pyrene	500.	J
53-70-3	Dibenz(a,h)anthracene	230.	J
191-24-2	Benzo(g,h,i)perylene	560.	J

(1) - Cannot be separated from diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HG727

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77064

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/12/89

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

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	67-64-1	2-Propanone (9CI)	8.26	3000.	BJ
2.	115-22-0	2-Butanone, 3-hydroxy-3-meth	9.10	70000.	J
3.	3744-02-3	4-Penten-2-one, 4-methyl- (8	11.09	1000.	BJ
4.	- -	UNKNOWN	12.09	2000.	J
5.	- -	UNKNOWN AROMATIC	15.42	900.	J
6.	74645-98-0	Dodecane, 2,7,10-trimethyl-	23.41	700.	J
7.	629-50-5	Tridecane (8CI9CI)	23.94	1000.	J
8.	569-41-5	Naphthalene, 1,8-dimethyl- (	24.04	600.	J
9.	571-61-9	Naphthalene, 1,5-dimethyl- (	24.47	400.	J
10.	17312-82-2	Undecane, 4,6-dimethyl- (8CI	25.33	900.	J
11.	629-62-9	Pentadecane (8CI9CI)	26.15	2000.	J
12.	829-26-5	Naphthalene, 2,3,6-trimethyl	27.17	500.	J
13.	- -	UNKNOWN HYDROCARBON	27.52	500.	J
14.	2245-38-7	Naphthalene, 1,6,7-trimethyl	28.03	300.	J
15.	1795-15-9	Cyclohexane, octyl- (9CI)	29.34	1000.	J
16.	55045-11-9	Tridecane, 5-propyl- (9CI)	30.31	2000.	J
17.	54833-48-6	Heptadecane, 2,6,10,15-tetra	32.21	2000.	J
18.	54833-23-7	Eicosane, 10-methyl- (9CI)	33.82	1000.	J
19.	17831-71-9	2-Propenoic acid, oxybis(2,1	35.55	20000.	BJ
20.	629-78-7	Heptadecane (8CI9CI)	30.18	2000.	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG728 RE

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77105

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 8. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 7.4 Dilution Factor: 50.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	36000.	U
111-44-4	bis(2-Chloroethyl)ether	36000.	U
95-57-8	2-Chlorophenol	36000.	U
541-73-1	1,3-Dichlorobenzene	36000.	U
106-46-7	1,4-Dichlorobenzene	36000.	U
100-51-6	Benzyl alcohol	36000.	U
95-50-1	1,2-Dichlorobenzene	36000.	U
95-48-7	2-Methylphenol	36000.	U
108-60-1	bis(2-Chloroisopropyl)ether	36000.	U
106-44-5	4-Methylphenol	36000.	U
621-64-7	N-Nitroso-di-n-propylamine	36000.	U
67-72-1	Hexachloroethane	36000.	U
98-95-3	Nitrobenzene	36000.	U
78-59-1	Isophorone	36000.	U
88-75-5	2-Nitrophenol	36000.	U
105-67-9	2,4-Dimethylphenol	180000.	U
65-85-0	Benzoic acid	36000.	U
111-91-1	bis(2-Chloroethoxy)methane	36000.	U
120-83-2	2,4-Dichlorophenol	5700.	J
120-82-1	1,2,4-Trichlorobenzene	36000.	U
91-20-3	Naphthalene	36000.	U
106-47-8	4-Chloroaniline	36000.	U
87-68-3	Hexachlorobutadiene	36000.	U
59-50-7	4-Chloro-3-methylphenol	36000.	U
91-57-6	2-Methylnaphthalene	36000.	U
77-47-4	Hexachlorocyclopentadiene	36000.	U
88-06-2	2,4,6-Trichlorophenol	180000.	U
95-95-4	2,4,5-Trichlorophenol	36000.	U
91-58-7	2-Chloronaphthalene	180000.	U
88-74-4	2-Nitroaniline	36000.	U
131-11-3	Dimethylphthalate	36000.	U
208-96-8	Acenaphthylene	36000.	U
606-20-2	2,6-Dinitrotoluene	36000.	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HG728 RE

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77105

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 8. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 7.4 Dilution Factor: 50.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	180000.	U
83-32-9	Acenaphthene	36000.	U
51-28-5	2,4-Dinitrophenol	180000.	U
100-02-7	4-Nitrophenol	360000.	U
132-64-9	Dibenzofuran	36000.	U
121-14-2	2,4-Dinitrotoluene	36000.	U
84-66-2	Diethylphthalate	36000.	U
7005-72-3	4-Chlorophenyl-phenylether	36000.	U
86-73-7	Fluorene	36000.	U
100-01-6	4-Nitroaniline	180000.	U
534-52-1	4,6-Dinitro-2-methylphenol	180000.	U
86-30-6	N-Nitrosodiphenylamine	180000.	U
101-55-3	4-Bromophenyl-phenylether	36000.	U
118-74-1	Hexachlorobenzene	36000.	U
87-86-5	Pentachlorophenol	180000.	U
85-01-8	Phenanthrene	10000.	J
120-12-7	Anthracene	36000.	U
84-74-2	Di-n-butylphthalate	36000.	U
206-44-0	Fluoranthene	36000.	U
129-00-0	Pyrene	36000.	U
85-68-7	Butylbenzylphthalate	36000.	U
91-94-1	3,3'-Dichlorobenzidine	72000.	U
56-55-3	Benzo(a)anthracene	36000.	U
218-01-9	Chrysene	36000.	U
117-81-7	bis(2-Ethylhexyl)phthalate	16000.	BJ
117-84-0	Di-n-octylphthalate	36000.	U
205-99-2	Benzo(b)fluoranthene	36000.	U
207-08-9	Benzo(k)fluoranthene	36000.	U
50-32-8	Benzo(a)pyrene	9500.	J
193-39-5	Indeno(1,2,3-cd)pyrene	11000.	~~J~~ J
53-70-3	Dibenz(a,h)anthracene	4300.	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	12000.	~~J~~ J

(1) - Cannot be separated from diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HG728 RE

Lab Name: ESECO Contract: 68-W3-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77105

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 8. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 7.4 Dilution Factor: 50.00

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

Number TICs found: 20

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	9.84	100000.	J
2.	54832-83-6	1H-Indene, octahydro-2,2,4,4	26.03	70000.	J
3.	- -	UNKNOWN AROMATIC	26.68	30000.	J
4.	- -	UNKNOWN AROMATIC	26.86	60000.	J
5.	- -	UNKNOWN AROMATIC	28.68	40000.	J
6.	- -	UNKNOWN	28.82	30000.	J
7.	- -	UNKNOWN	28.95	70000.	J
8.	- -	UNKNOWN AROMATIC	29.40	20000.	J
9.	1921-70-6	Pentadecane, 2,6,10,14-tetra	31.77	100000.	J
10.	629-99-2	Pentacosane (8CI9CI)	41.59	50000.	J
11.	- -	UNKNOWN HYDROCARBON	42.97	70000.	J
12.	54833-48-6	Heptadecane, 2,6,10,15-tetra	44.31	80000.	J
13.	54833-23-7	Eicosane, 10-methyl- (9CI)	45.59	100000.	J
14.	7225-64-1	Heptadecane, 9-octyl- (8CI9C	46.83	100000.	J
15.	55282-13-8	Octadecane, 5,14-dibutyl- (9	48.05	200000.	J
16.	629-97-0	Docosane (8CI9CI)	49.33	100000.	J
17.	630-07-9	Pentatriacontane (8CI9CI)	50.81	100000.	J
18.	629-99-2	Pentacosane (8CI9CI)	52.52	100000.	J
19.	- -	UNKNOWN	54.18	70000.	J
20.	7098-22-8	Tetratetracontane (8CI9CI)	54.55	80000.	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG729 RE

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77106

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 31. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 50.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	48000.	U
111-44-4	bis(2-Chloroethyl)ether	48000.	U
95-57-8	2-Chlorophenol	48000.	U
541-73-1	1,3-Dichlorobenzene	48000.	U
106-46-7	1,4-Dichlorobenzene	48000.	U
100-51-6	Benzyl alcohol	48000.	U
95-50-1	1,2-Dichlorobenzene	48000.	U
95-48-7	2-Methylphenol	48000.	U
108-60-1	bis(2-Chloroisopropyl)ether	48000.	U
106-44-5	4-Methylphenol	48000.	U
621-64-7	N-Nitroso-di-n-propylamine	48000.	U
67-72-1	Hexachloroethane	48000.	U
98-95-3	Nitrobenzene	48000.	U
78-59-1	Isophorone	48000.	U
88-75-5	2-Nitrophenol	48000.	U
105-67-9	2,4-Dimethylphenol	48000.	U
65-85-0	Benzoic acid	240000.	U
111-91-1	bis(2-Chloroethoxy)methane	48000.	U
120-83-2	2,4-Dichlorophenol	48000.	U
120-82-1	1,2,4-Trichlorobenzene	48000.	U
91-20-3	Naphthalene	48000.	U
106-47-8	4-Chloroaniline	48000.	U
87-68-3	Hexachlorobutadiene	48000.	U
59-50-7	4-Chloro-3-methylphenol	48000.	U
91-57-6	2-Methylnaphthalene	3500.	J
77-47-4	Hexachlorocyclopentadiene	48000.	U
88-06-2	2,4,6-Trichlorophenol	48000.	U
95-95-4	2,4,5-Trichlorophenol	240000.	U
91-58-7	2-Chloronaphthalene	48000.	U
88-74-4	2-Nitroaniline	240000.	U
131-11-3	Dimethylphthalate	48000.	U
208-96-8	Acenaphthylene	48000.	U
606-20-2	2,6-Dinitrotoluene	48000.	U

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SITE/SITE ASSESSMENT SASO19

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HG729 RE

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77106

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 31. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 50.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	240000.	U
83-32-9	Acenaphthene	48000.	U
51-28-5	2,4-Dinitrophenol	240000.	U
100-02-7	4-Nitrophenol	480000.	U
132-64-9	Dibenzofuran	48000.	U
121-14-2	2,4-Dinitrotoluene	48000.	U
84-66-2	Diethylphthalate	48000.	U
7005-72-3	4-Chlorophenyl-phenylether	48000.	U
86-73-7	Fluorene	48000.	U
100-01-6	4-Nitroaniline	240000.	U
534-52-1	4,6-Dinitro-2-methylphenol	240000.	U
86-30-6	N-Nitrosodiphenylamine	240000.	U
101-55-3	4-Bromophenyl-phenylether	48000.	U
118-74-1	Hexachlorobenzene	48000.	U
87-86-5	Pentachlorophenol	240000.	U
85-01-8	Phenanthrene	23000.	J
120-12-7	Anthracene	48000.	U
84-74-2	Di-n-butylphthalate	48000.	U
206-44-0	Fluoranthene	8200.	J
129-00-0	Pyrene	36000.	J
85-68-7	Butylbenzylphthalate	48000.	U
91-94-1	3,3'-Dichlorobenzidine	97000.	U
56-55-3	Benzo(a)anthracene	48000.	U
218-01-9	Chrysene	21000.	J
117-81-7	bis(2-Ethylhexyl)phthalate	31000.	BJ
117-84-0	Di-n-octylphthalate	48000.	U
205-99-2	Benzo(b)fluoranthene	14000.	J
207-08-9	Benzo(k)fluoranthene	48000.	U
50-32-8	Benzo(a)pyrene	8300.	J
193-39-5	Indeno(1,2,3-cd)pyrene	8700.	~~J~~
53-70-3	Dibenz(a,h)anthracene	48000.	U
191-24-2	Benzo(g,h,i)perylene	12000.	~~J~~

(1) - Cannot be separated from diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HG729 RE

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77106

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 31. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 50.00

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	9.87	200000.	J
2.	54832-83-6	1H-Indene, octahydro-2,2,4,4	26.03	60000.	J
3.	17312-82-2	Undecane, 4,6-dimethyl- (8CI	26.72	50000.	J
4.	- -	UNKNOWN	28.41	50000.	J
5.	- -	UNKNOWN AROMATIC	28.68	50000.	J
6.	- -	UNKNOWN AROMATIC	28.82	30000.	J
7.	- -	UNKNOWN	28.95	90000.	J
8.	17301-28-9	Undecane, 3,6-dimethyl- (8CI	30.62	60000.	J
9.	1921-70-6	Pentadecane, 2,6,10,14-tetra	31.77	200000.	J
10.	- -	UNKNOWN	33.46	90000.	J
11.	638-36-8	Hexadecane, 2,6,10,14-tetram	33.70	200000.	J
12.	629-92-5	Nonadecane (8CI9CI)	35.29	[illegible]0000.	J
13.	629-99-2	Pentacosane (8CI9CI)	41.54	[illegible]0000.	J
14.	- -	UNKNOWN HYDROCARBON	42.95	100000.	J
15.	112-95-8	Eicosane (8CI9CI)	45.59	100000.	J
16.	7225-64-1	Heptadecane, 9-octyl- (8CI9C	46.84	200000.	J
17.	- -	UNKNOWN HYDROCARBON	48.06	200000.	J
18.	- -	UNKNOWN HYDROCARBON	50.82	200000.	J
19.	630-07-9	Pentatriacontane (8CI9CI)	52.54	200000.	J
20.	630-06-8	Hexatriacontane (8CI9CI)	54.57	100000.	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG730 RE

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77107

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 19. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 100.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	82000.	U
111-44-4	bis(2-Chloroethyl)ether	82000.	U
95-57-8	2-Chlorophenol	82000.	U
541-73-1	1,3-Dichlorobenzene	82000.	U
106-46-7	1,4-Dichlorobenzene	82000.	U
100-51-6	Benzyl alcohol	82000.	U
95-50-1	1,2-Dichlorobenzene	82000.	U
95-48-7	2-Methylphenol	82000.	U
108-60-1	bis(2-Chloroisopropyl)ether	82000.	U
106-44-5	4-Methylphenol	82000.	U
621-64-7	N-Nitroso-di-n-propylamine	82000.	U
67-72-1	Hexachloroethane	82000.	U
98-95-3	Nitrobenzene	82000.	U
78-59-1	Isophorone	82000.	U
88-75-5	2-Nitrophenol	82000.	U
105-67-9	2,4-Dimethylphenol	82000.	U
65-85-0	Benzoic acid	410000.	U
111-91-1	bis(2-Chloroethoxy)methane	82000.	U
120-83-2	2,4-Dichlorophenol	82000.	U
120-82-1	1,2,4-Trichlorobenzene	82000.	U
91-20-3	Naphthalene	82000.	U
106-47-8	4-Chloroaniline	82000.	U
87-68-3	Hexachlorobutadiene	82000.	U
59-50-7	4-Chloro-3-methylphenol	82000.	U
91-57-6	2-Methylnaphthalene	82000.	U
77-47-4	Hexachlorocyclopentadiene	82000.	U
88-06-2	2,4,6-Trichlorophenol	82000.	U
95-95-4	2,4,5-Trichlorophenol	410000.	U
91-58-7	2-Chloronaphthalene	82000.	U
88-74-4	2-Nitroaniline	410000.	U
131-11-3	Dimethylphthalate	82000.	U
208-96-8	Acenaphthylene	82000.	U
606-20-2	2,6-Dinitrotoluene	82000.	U

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SITE / SITE ASSESSMENT SASO19

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HG730 RE

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77107

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 19. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 100.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
99-09-2	3-Nitroaniline	410000.	U
83-32-9	Acenaphthene	82000.	U
51-28-5	2,4-Dinitrophenol	410000.	U
100-02-7	4-Nitrophenol	820000.	U
132-64-9	Dibenzofuran	82000.	U
121-14-2	2,4-Dinitrotoluene	82000.	U
84-66-2	Diethylphthalate	82000.	U
7005-72-3	4-Chlorophenyl-phenylether	82000.	U
86-73-7	Fluorene	82000.	U
100-01-6	4-Nitroaniline	410000.	U
534-52-1	4,6-Dinitro-2-methylphenol	410000.	U
86-30-6	N-Nitrosodiphenylamine	410000.	U
101-55-3	4-Bromophenyl-phenylether	82000.	U
118-74-1	Hexachlorobenzene	82000.	U
87-86-5	Pentachlorophenol	410000.	U
85-01-8	Phenanthrene	82000.	U
120-12-7	Anthracene	82000.	U
84-74-2	Di-n-butylphthalate	1300.	J
206-44-0	Fluoranthene	4500.	J
129-00-0	Pyrene	7800.	J
85-68-7	Butylbenzylphthalate	82000.	U
91-94-1	3,3'-Dichlorobenzidine	160000.	U
56-55-3	Benzo(a)anthracene	82000.	U
218-01-9	Chrysene	4600.	J
117-81-7	bis(2-Ethylhexyl)phthalate	160000.	B
117-84-0	Di-n-octylphthalate	82000.	U
205-99-2	Benzo(b)fluoranthene	82000.	U
207-08-9	Benzo(k)fluoranthene	82000.	U
50-32-8	Benzo(a)pyrene	82000.	U
193-39-5	Indeno(1,2,3-cd)pyrene	82000.	U
53-70-3	Dibenz(a,h)anthracene	82000.	U
191-24-2	Benzo(g,h,i)perylene	82000.	U

(1) - Cannot be separated from diphenylamine

400525

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HG730 RE

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG722

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

Sample wt/vol: 30. (g/mL) G Lab File ID: 77107

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 19. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/16/89

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 100.00

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	9.85	200000.	BJ
2.	630-01-3	Hexacosane (8CI9CI)	27.50	20000.	J
3.	- -	UNKNOWN HYDROCARBON	28.64	20000.	J
4.	- -	UNKNOWN HYDROCARBON	28.89	30000.	J
5.	55162-61-3	Tetracontane, 3,5,24-trimeth	29.40	20000.	J
6.	629-62-9	Pentadecane (8CI9CI)	29.58	70000.	J
7.	55045-11-9	Tridecane, 5-propyl- (9CI)	30.56	70000.	J
8.	- -	UNKNOWN HYDROCARBON	30.74	20000.	J
9.	- -	UNKNOWN HYDROCARBON	31.54	70000.	J
10.	1921-70-6	Pentadecane, 2,6,10,14-tetra	31.68	200000.	J
11.	- -	UNKNOWN HYDROCARBON	32.25	30000.	J
12.	- -	UNKNOWN HYDROCARBON	32.54	40000.	J
13.	- -	UNKNOWN HYDROCARBON	32.62	20000.	J
14.	1331-43-7	Cyclohexane, diethyl- (8CI9C	32.91	60000.	J
15.	74645-98-0	Dodecane, 2,7,10-trimethyl-	33.40	100000.	J
16.	75163-97-2	Octadecane, 2,6-dimethyl- (9	33.58	200000.	J
17.	629-92-5	Nonadecane (8CI9CI)	35.14	100000.	J
18.	25117-27-5	Nonadecane, 4-methyl- (8CI9C	38.42	100000.	J
19.	54833-48-6	Heptadecane, 2,6,10,15-tetra	42.78	60000.	J
20.	- -	UNKNOWN HYDROCARBON	44.13	60000.	J
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG724 RE

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG724

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

Sample wt/vol: 30. (g/mL) G Lab File ID: QHG724RE

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 0. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/22/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	16.	U UJ
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
5103-71-9	alpha-Chlordane	160.	U
5103-74-2	gamma-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	1100.	~~B~~ B,J

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG730

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG724

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

Sample wt/vol: 30. (g/mL) G Lab File ID: QHG730D2

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 19. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/22/89

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 40.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	790.	U UJ
319-85-7	beta-BHC	790.	U
319-86-8	delta-BHC	790.	U
58-89-9	gamma-BHC (Lindane)	790.	U
76-44-8	Heptachlor	790.	U
309-00-2	Aldrin	790.	U
1024-57-3	Heptachlor epoxide	790.	U
959-98-8	Endosulfan I	790.	U
60-57-1	Dieldrin	1600.	U
72-55-9	4,4'-DDE	1600.	U
72-20-8	Endrin	1600.	U
33213-65-9	Endosulfan II	1600.	U
72-54-8	4,4'-DDD	1600.	U
1031-07-8	Endosulfan sulfate	1600.	U
50-29-3	4,4'-DDT	1600.	U
72-43-5	Methoxychlor	7900.	U
53494-70-5	Endrin ketone	1600.	U
5103-71-9	alpha-Chlordane	7900.	U
5103-74-2	gamma-Chlordane	7900.	U
8001-35-2	Toxaphene	16000.	U
12674-11-2	Aroclor-1016	7900.	U
11104-28-2	Aroclor-1221	7900.	U
11141-16-5	Aroclor-1232	7900.	U
53469-21-9	Aroclor-1242	7900.	U
12672-29-6	Aroclor-1248	7900.	U
11097-69-1	Aroclor-1254	16000.	U
11096-82-5	Aroclor-1260	4600.	~~BJD~~ UB

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EPA SAMPLE NO.

HG725

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG724

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

Sample wt/vol: 30. (g/mL) G Lab File ID: QHG725D

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/21/89

GPC Cleanup: (Y/N) Y pH: 4.8 Dilution Factor: 10.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	160.	U UJ
319-85-7	beta-BHC	160.	U
319-86-8	delta-BHC	160.	U
58-89-9	gamma-BHC (Lindane)	160.	U
76-44-8	Heptachlor	160.	U
309-00-2	Aldrin	160.	U
1024-57-3	Heptachlor epoxide	160.	U
959-98-8	Endosulfan I	160.	U
60-57-1	Dieldrin	320.	U
72-55-9	4,4'-DDE	320.	U
72-20-8	Endrin	320.	U
33213-65-9	Endosulfan II	320.	U
72-54-8	4,4'-DDD	320.	U
1031-07-8	Endosulfan sulfate	320.	U
50-29-3	4,4'-DDT	320.	U
72-43-5	Methoxychlor	1600.	U
53494-70-5	Endrin ketone	320.	U
5103-71-9	alpha-Chlordane	1600.	U
5103-74-2	gamma-Chlordane	1600.	U
8001-35-2	Toxaphene	3200.	U
12674-11-2	Aroclor-1016	1600.	U
11104-28-2	Aroclor-1221	1600.	U
11141-16-5	Aroclor-1232	1600.	U
53469-21-9	Aroclor-1242	1600.	U
12672-29-6	Aroclor-1248	1600.	U
11097-69-1	Aroclor-1254	3200.	U
11096-82-5	Aroclor-1260	8100.	~~B~~ B, J

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EPA SAMPLE NO.

HG726

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG724

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

Sample wt/vol: 30. (g/mL) G Lab File ID: QHG726

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 1. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/21/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	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
5103-71-9	alpha-Chlordane	160.	U
5103-74-2	gamma-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	860.	~~B~~ B

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EPA SAMPLE NO.

HG727

Contract: 68-W8-0054

Lab Name: ESECO

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG724

Lab Sample ID:

Matrix: (soil/water) SOIL

Lab File ID: QHG727D

Sample wt/vol: 30. (g/mL) G

Date Received: 7/27/89

Level: (low/med) LOW

Date Extracted: 8/ 3/89

% Moisture: not dec. 1. dec. 0.

Date Analyzed: 8/21/89

Extraction: (SepF/Cont/Sonc) SONC

Dilution Factor: 10.00

GPC Cleanup: (Y/N) Y pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	160.	U UJ
319-85-7	beta-BHC	160.	U
319-86-8	delta-BHC	160.	U
58-89-9	gamma-BHC (Lindane)	160.	U
76-44-8	Heptachlor	160.	U
309-00-2	Aldrin	160.	U
1024-57-3	Heptachlor epoxide	160.	U
959-98-8	Endosulfan I	320.	U
60-57-1	Dieldrin	320.	U
72-55-9	4,4'-DDE	320.	U
72-20-8	Endrin	320.	U
33213-65-9	Endosulfan II	320.	U
72-54-8	4,4'-DDD	320.	U
1031-07-8	Endosulfan sulfate	320.	U
50-29-3	4,4'-DDT	1600.	U
72-43-5	Methoxychlor	320.	U
53494-70-5	Endrin ketone	1600.	U
5103-71-9	alpha-Chlordane	1600.	U
5103-74-2	gamma-Chlordane	3200.	U
8001-35-2	Toxaphene	1600.	U
12674-11-2	Aroclor-1016	1600.	U
11104-28-2	Aroclor-1221	1600.	U
11141-16-5	Aroclor-1232	1600.	U
53469-21-9	Aroclor-1242	1600.	U
12672-29-6	Aroclor-1248	3200.	U
11097-69-1	Aroclor-1254	14000.	~~B~~ B, J
11096-82-5	Aroclor-1260		

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EPA SAMPLE NO.

HG728

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG724

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

Sample wt/vol: 30. (g/mL) G Lab File ID: QHG728D3

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 8. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/23/89

GPC Cleanup: (Y/N) pH: 7.4 Dilution Factor: 1000.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	17000.	U UJ
319-85-7	beta-BHC	17000.	U
319-86-8	delta-BHC	17000.	U
58-89-9	gamma-BHC (Lindane)	17000.	U
76-44-8	Heptachlor	17000.	U
309-00-2	Aldrin	17000.	U
1024-57-3	Heptachlor epoxide	17000.	U
959-98-8	Endosulfan I	17000.	U
60-57-1	Dieldrin	35000.	U
72-55-9	4,4'-DDE	35000.	U
72-20-8	Endrin	35000.	U
33213-65-9	Endosulfan II	35000.	U
72-54-8	4,4'-DDD	35000.	U
1031-07-8	Endosulfan sulfate	35000.	U
50-29-3	4,4'-DDT	35000.	U
72-43-5	Methoxychlor	170000.	U
53494-70-5	Endrin ketone	35000.	U
5103-71-9	alpha-Chlordane	170000.	U
5103-74-2	gamma-Chlordane	170000.	U
8001-35-2	Toxaphene	350000.	U
12674-11-2	Aroclor-1016	170000.	U
11104-28-2	Aroclor-1221	170000.	U
11141-16-5	Aroclor-1232	170000.	U
53469-21-9	Aroclor-1242	170000.	U
12672-29-6	Aroclor-1248	170000.	U
11097-69-1	Aroclor-1254	350000.	U
11096-82-5	Aroclor-1260	1300000.	~~BD~~ B, J

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HG729

Lab Name: ESECO Contract: 68-W8-0054

Lab Code: ESECO Case No.: 12387 SAS No.: SDG No.: HG724

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

Sample wt/vol: 30. (g/mL) G Lab File ID: QHG729D

Level: (low/med) LOW Date Received: 7/27/89

% Moisture: not dec. 31. dec. 0. Date Extracted: 8/ 3/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 8/21/89

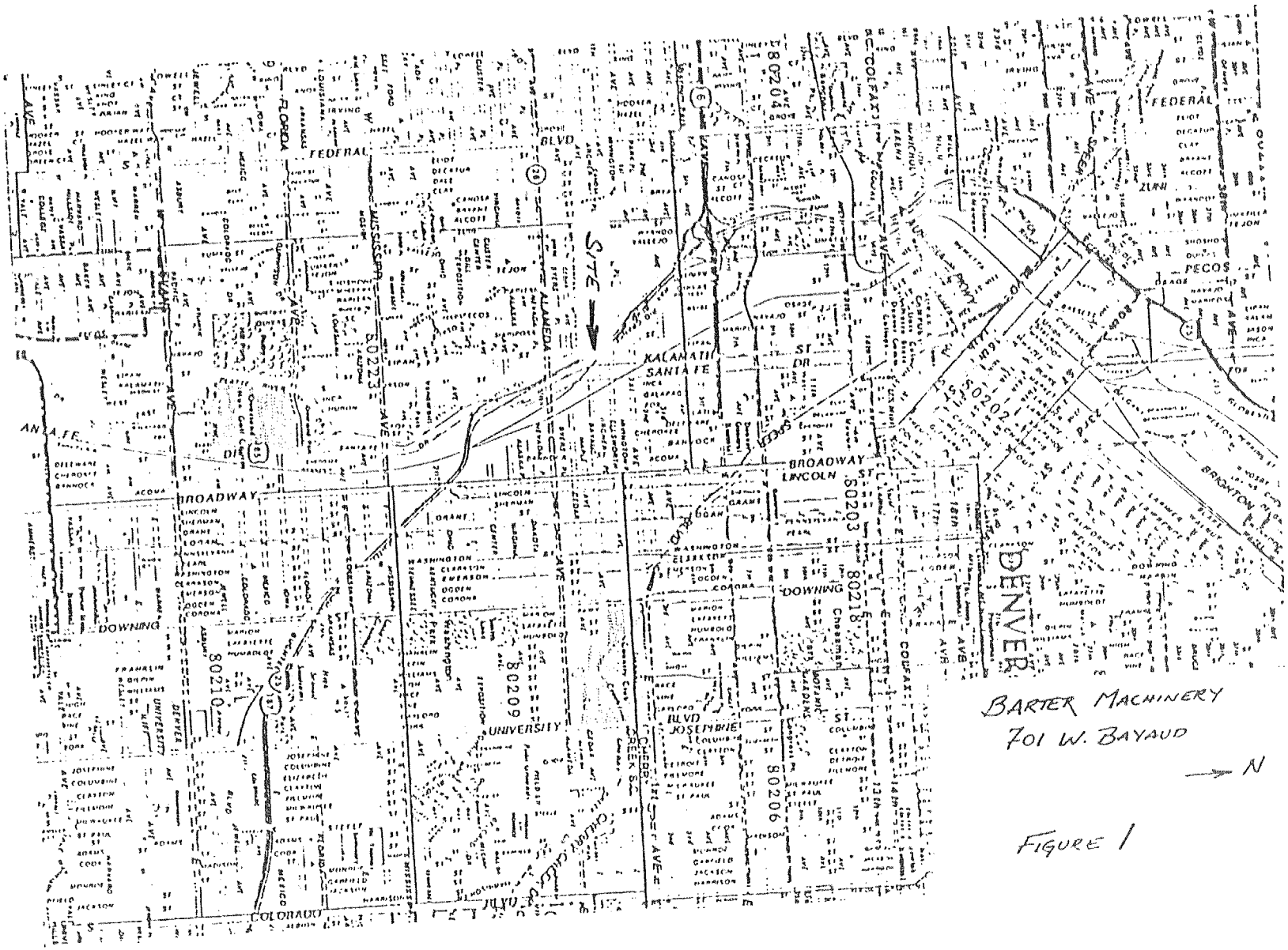
GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 100.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2300.	U UJ
319-85-7	beta-BHC	2300.	U
319-86-8	delta-BHC	2300.	U
58-89-9	gamma-BHC (Lindane)	2300.	U
76-44-8	Heptachlor	2300.	U
309-00-2	Aldrin	2300.	U
1024-57-3	Heptachlor epoxide	2300.	U
959-98-8	Endosulfan I	2300.	U
60-57-1	Dieldrin	4600.	U
72-55-9	4,4'-DDE	4600.	U
72-20-8	Endrin	4600.	U
33213-65-9	Endosulfan II	4600.	U
72-54-8	4,4'-DDD	4600.	U
1031-07-8	Endosulfan sulfate	4600.	U
50-29-3	4,4'-DDT	4600.	U
72-43-5	Methoxychlor	23000.	U
53494-70-5	Endrin ketone	4600.	U
5103-71-9	alpha-Chlordane	23000.	U
5103-74-2	gamma-Chlordane	23000.	U
8001-35-2	Toxaphene	46000.	U
12674-11-2	Aroclor-1016	23000.	U
11104-28-2	Aroclor-1221	23000.	U
11141-16-5	Aroclor-1232	23000.	U
53469-21-9	Aroclor-1242	23000.	U
12672-29-6	Aroclor-1248	23000.	U
11097-69-1	Aroclor-1254	46000.	U
11096-82-5	Aroclor-1260	160000.	~~BD~~ B, J

Appendix B

Barter Machinery
701 W. Bayaud

being filmed



BARTER MACHINERY
701 W. BAYAUD

→ N

FIGURE 1

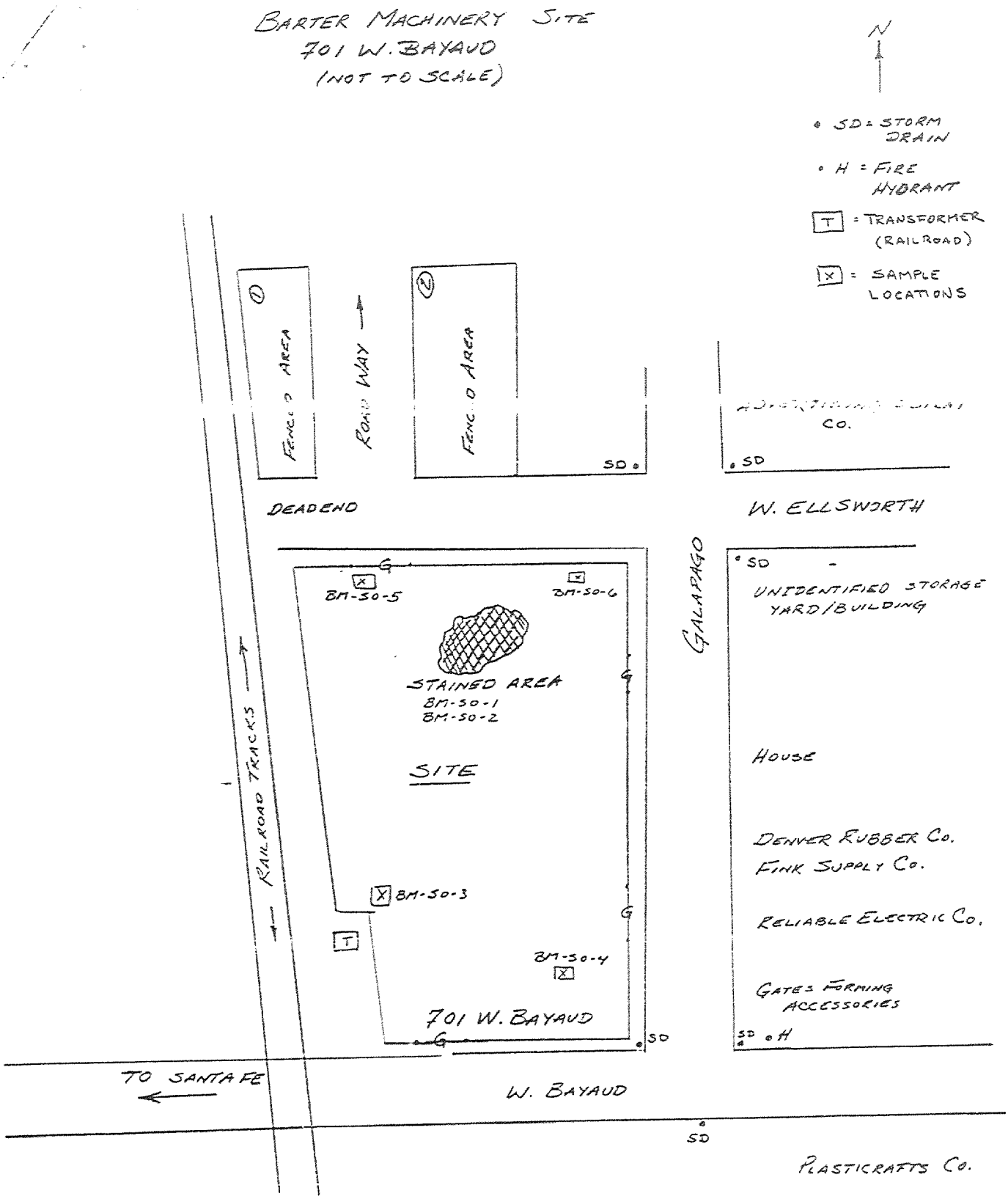

BARTER MACHINERY SITE
701 W. BAYAUD
(NOT TO SCALE)
N
• SD = STORM DRAIN
• H = FIRE HYDRANT
T = TRANSFORMER (RAILROAD)
X = SAMPLE LOCATIONS
1
FENCED AREA
ROAD WAY
2
FENCED AREA
SD
CO.
SD
DEADEND
W. ELLSWORTH
GALAPAGO
SD
UNIDENTIFIED STORAGE YARD/BUILDING
BM-SO-5
BM-SO-6
STAINED AREA
BM-SO-1
BM-SO-2
SITE
HOUSE
DENVER RUBBER CO.
FINK SUPPLY CO.
RELIABLE ELECTRIC CO.
GATES FORMING ACCESSORIES
RAILROAD TRACKS
BM-SO-3
T
BM-SO-4
701 W. BAYAUD
SD
SD H
TO SANTA FE
W. BAYAUD
SD
PLASTICRAFTS CO.

FIGURE 2