150657

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

217/785-3912

REF 38

Refer to: L1630200005 -- St. Clair County
Sauget Sites (Area 1) -- Sauget
Superfund/Technical Reports

November 2, 1993

Mr. Alan Altur
Site Assessment Unit
USEPA-Region V, HSM-5J
77 West Jackson Boulevard
Chicago, Illinois 60604

Dear Alan:

Attached, please find the most recent round of surface water sample results from Dead Creek. The sampling was performed by IEPA in response to complaints from local residents. In addition to the creek sampling, six homes were sampled for groundwater seepage in basements. Results from the basement sampling did not indicate contamination known to be present in Dead Creek or at the four main landfills of Area 1.

IEPA's principle concerns over the current situation in Dead Creek are indirectly related to the flooding and heavy precipitation events of this area. These prolonged events have caused the water table within the Mississippi River floodplain to rise within three feet of the ground surface, and in many cases above ground surface. During heavy precipitation periods, Dead Creek's capacity to absorb stormwater is greatly decreased. As the culverts at the north and south ends of "Creek Segment B" (CS-B) have been sealed, flooding has occured on Queeny Avenue, north of CS-B and at Judith Avenue (south of CS-B). The restricted flow at both ends causes CS-B to behave as an impoundment and as surface water rises in this "impoundment", it comes into contact with surfical contamination at Site G. Although contaminant levels in CS-B are rather low, it is clear that Site G is affecting surface water quality in the creek (e.g. the levels of PCP, phenol, chlorobenzenes, chlorophenols, and chloroaniline).

The IEPA has historically been more concerned about PCBs found in unfenced segments of Dead Creek within the residential areas of Cahokia, however this current scenario of contaminated stormwater migrating outside fenced areas of the more contaminated segments poses serious health concerns. The Illinois Department of Public Health and IEPA are evaluating these concerns.

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State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

If you have any questions about the attached or need additional background on Area 1, please call. Also, it would be greatly appreciated if you could keep me informed on the status of the Area 1 scoring package.

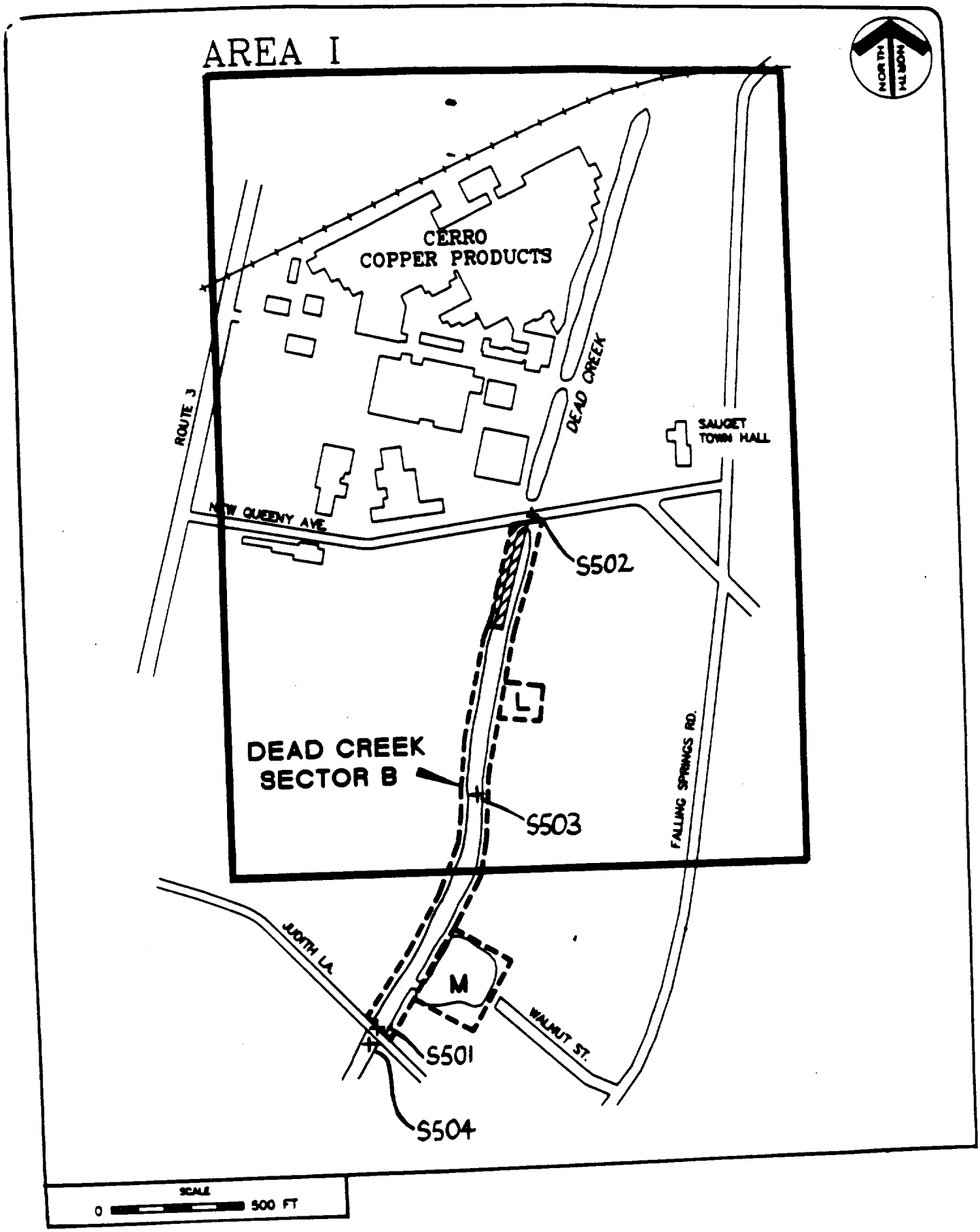
Sincerely,

Paul E. Takács, Project Manager
Federal Sites Management Unit
Division of Remediation Management
Bureau of Land

Attachment - Dead Creek Sample Results, Sample Location Map

cc: Terry Ayers (w/o attachment)
Division File

Printed on Recycled Paper


AREA I
NORTH
CERRO
COPPER PRODUCTS
DEAD CREEK
ROUTE 3
SAUGET
TOWN HALL
NEW QUEENY AVE.
S502
L
DEAD CREEK
SECTOR B
S503
FALLING SPRINGS RD.
JUDITH LA.
M
WALNUT ST.
S501
S504
SCALE
0
500 FT

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S501

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: -- Case No.: --- SAS No.: --- SDG No.: S501

Matrix: (soil/water) WATER Lab Sample ID: 2265-1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >J5522

Level: (low/med) LOW Date Received: 9/24/93

% Moisture: not dec. --- Date Analyzed: 9/25/93

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.00000

Soil Extract Volume: --- (uL) Soil Aliquot Volume: --- (uL)

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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S501

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S501

Matrix: (soil/water) WATER Lab Sample ID: 2265-1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >J5522

Level: (low/med) LOW Date Received: 9/24/93

% Moisture: not dec. --- Date Analyzed: 9/25/93

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.00000

Soil Extract Volume: --- (uL) Soil Aliquot Volume: --- (uL)

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76131	ETHANE, 1,1,2-TRICHLORO-1,2,	13.73	30.	JNB
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S501

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S501

Matrix: (soil/water) WATER Lab Sample ID: 2265-1

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4169

Level: (low/med) LOW Date Received: 9/24/93

% Moisture: --- decanted: (Y/N) N Date Extracted: 9/25/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 9/27/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

GPC Cleanup: (Y/N) N pH: --- Conversion Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)Ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	2.	J
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U
106-44-5	4-Methylphenol	10.	J
621-64-7	N-Nitroso-Di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	2.	J
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	2.	J
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	25.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	25.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U
99-09-2	3-Nitroaniline	25.	U
83-32-9	Acenaphthene	10.	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S501

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S501

Matrix: (soil/water) WATER Lab Sample ID: 2265-1

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4169

Level: (low/med) LOW Date Received: 9/24/93

% Moisture: --- decanted: (Y/N) N Date Extracted: 9/25/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 9/27/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

GPC Cleanup: (Y/N) N pH: --- Conversion Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25.	U
100-02-7	4-Nitrophenol	25.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	25.	U
534-52-1	4,6-Dinitro-2-methylphenol	25.	U
86-30-6	N-Nitrosodiphenylamine (1)	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	25.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
86-74-8	Carbazole	10.	U
84-74-2	Di-n-butylphthalate	20.	B
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	10.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S501

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S501

Matrix: (soil/water) WATER Lab Sample ID: 2265-1

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4169

Level: (low/med) LOW Date Received: 9/24/93

% Moisture: not dec. --- decanted:(Y/N) N Date Extracted: 9/25/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 9/27/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

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

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 106489	PHENOL, 4-CHLORO-	13.27	80.	JN
2. 118901	BENZOIC ACID, 2-METHYL-	14.17	40.	JN
3.	UNKNOWN	15.15	200.	J
4.	BENZENAMINE, DICHLORO-	15.29	10.	J
5. 612204	BENZOIC ACID, 2-(HYDROXYMETH	15.59	40.	JN
6. 124174	ETHANOL, 2-(2-BUTOXYETHOXY)-	15.70	20.	JNB
7.	UNKNOWN	18.82	20.	J B
8.	UNKNOWN	19.37	80.	J
9.	UNKNOWN	19.76	20.	J
10. 2169871	2,3-NAPHTHALENEDICARBOXYLIC	21.79	20.	JN
11.	UNKNOWN	23.92	10.	J
12. 84651	9,10-ANTHRACENEDIONE	25.81	90.	JN
13.	UNKNOWN	26.40	30.	J
14.	UNKNOWN	26.73	20.	J
15.	UNKNOWN	28.18	30.	J
16.	UNKNOWN	28.54	10.	J
17.	UNKNOWN	31.42	20.	J
18.	UNKNOWN	32.70	20.	J
19.	UNKNOWN	33.25	20.	J
20.	UNKNOWN	34.60	20.	J
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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S501

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: Case No.: SAS No.: SDG No.: S501
Matrix(soil/water) : WATER Lab Sample ID : 2265-1
Sample(wt/vol) : 1000 (g/mL) ML Lab File ID :
% Moisture: decanted:(Y/N) N Date Received : 09/24/93
Extraction(SepF/Cont/Sonc) SEPF Date Extracted : 09/25/93
Concentrated Extract Volume:10000(uL) Date Analyzed : 09/26/93
Injection Volume: 1 (uL) Dilution Factor: 1.0
GPC Cleanup:(Y/N) N pH: --- Sulfur Cleanup : N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC(Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1013-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	2.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

S501

Lab Name: ARDL, INC. Contract No.: 2265

Lab Code: _____ SAS No.: _____ SDG No.: S501

Matrix (soil/water) WATER Lab Sample ID: 2265-1

Level (low/med): LOW Date Received: 09/24/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	952			P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic				
7440-39-3	Barium	273			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	83800			P
7440-47-3	Chromium	5.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	141			P
7439-89-6	Iron	2450			P
7439-92-1	Lead				
7439-95-4	Magnesium	7530			P
7439-96-5	Manganese	519			P
7439-97-6	Mercury				
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	6560			P
7782-49-2	Selenium				
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	14900			P
7440-28-0	Thallium				
7440-62-2	Vanadium	6.6	B		P
7440-66-6	Zinc	412			P
	Cyanide	8.3	U		C

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN ILM02.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S502

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: G106

Matrix: (soil/water) WATER Lab Sample ID: 2266-7

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >J5563

Level: (low/med) LOW Date Received: 9/28/93

% Moisture: not dec. --- Date Analyzed: 9/30/93

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.00000

Soil Extract Volume: --- (uL) Soil Aliquot Volume: --- (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	51.	
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	19.	
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	6.	J
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	Xylene (total)	10.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S502

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: G106

Matrix: (soil/water) WATER Lab Sample ID: 2266-7

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >J5563

Level: (low/med) LOW Date Received: 9/28/93

% Moisture: not dec. --- Date Analyzed: 9/30/93

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.00000

Soil Extract Volume: --- (uL) Soil Aliquot Volume: --- (uL)

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.19	7.	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S502

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: G106

Matrix: (soil/water) WATER Lab Sample ID: 2266-7

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4242

Level: (low/med) LOW Date Received: 9/28/93

% Moisture: --- decanted: (Y/N) N Date Extracted: 9/30/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 10/02/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

GPC Cleanup: (Y/N) N pH: --- Conversion Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)Ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U
106-44-5	4-Methylphenol	7.	J
621-64-7	N-Nitroso-Di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	5.	J
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	25.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	25.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U
99-09-2	3-Nitroaniline	25.	U
83-32-9	Acenaphthene	10.	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S502

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: G106

Matrix: (soil/water) WATER Lab Sample ID: 2266-7

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4242

Level: (low/med) LOW Date Received: 9/28/93

% Moisture: --- decanted: (Y/N) N Date Extracted: 9/30/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 10/02/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

GPC Cleanup: (Y/N) N pH: --- Conversion Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25.	U
100-02-7	4-Nitrophenol	25.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	25.	U
534-52-1	4,6-Dinitro-2-methylphenol	25.	U
86-30-6	N-Nitrosodiphenylamine (1)	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	4.	J
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
86-74-8	Carbazole	10.	U
84-74-2	Di-n-butylphthalate	3.	J
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	10.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE No.

S502

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: G106

Matrix: (soil/water) WATER Lab Sample ID: 2266-7

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4242

Level: (low/med) LOW Date Received: 9/28/93

% Moisture: not dec. --- decanted:(Y/N) N Date Extracted: 9/30/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 10/02/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

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

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.90	7.	J
2.	106489	PHENOL, 4-CHLORO-	13.20	40.	JN
3.	118901	BENZOIC ACID, 2-METHYL-	14.08	20.	JN
4.	88993	1,2-BENZENEDICARBOXYLIC ACID	15.02	50.	JN
5.	612204	BENZOIC ACID, 2-(HYDEOXYMETH	15.50	30.	JN
6.	124174	ETHANOL, 2-(2-BUTOXYETHOXY)-	15.64	5.	JN
7.		UNKNOWN	17.60	5.	J
8.		UNKNOWN	18.74	8.	J B
9.	88197	BENZENESULFONAMIDE, 2-METHYL	19.28	80.	JN
10.		UNKNOWN	19.66	10.	J
11.	62442	ACETAMIDE, N-(4-ETHOXYPHENYL	20.17	5.	JN
12.		UNKNOWN	20.26	6.	J
13.	2169871	2,3-NAPHTHALENEDICARBOXYLIC	21.70	5.	JN
14.		UNKNOWN PHTHALATE	21.87	8.	J B
15.		UNKNOWN	23.54	5.	J
16.	81845	1,8-NAPHTHALIC ANHYDRIDE	23.83	20.	JN
17.	84651	9,10-ANTHRACENEDIONE	25.69	60.	JN
18.		UNKNOWN	26.29	10.	J
19.		UNKNOWN	26.63	10.	J
20.		UNKNOWN	28.08	20.	J
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S502

Lab Name: ARDL, INC. Contract: SAUGET

Lab Code: Case No.: SAS No.: SDG No.: G106
Matrix(soil/water) : WATER Lab Sample ID : 2266-7
Sample(wt/vol) : 1000 (g/mL) mL Lab File ID :
% Moisture: -- decanted:(Y/N) N Date Received : 09/28/93
Extraction(SepF/Cont/Sonc) SEPF Date Extracted : 09/30/93
Concentrated Extract Volume:10000(uL) Date Analyzed : 10/03/93
Injection Volume: 1 (uL) Dilution Factor: 1.0
GPC Cleanup:(Y/N) N pH: 6.7 Sulfur Cleanup : N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC(Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1013-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	2.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

S502

Lab Name: ARDL, INC. Contract No.: 2266

Lab Code: _____ SAS No.: _____ SDG No.: G106

Matrix (soil/water) WATER Lab Sample ID: 2266-7

Level (low/med): LOW Date Received: 09/28/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	630			P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	5.6	B	N W	F
7440-39-3	Barium	259.0			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.8	B		P
7440-70-2	Calcium	121000			P
7440-47-3	Chromium	8.3	B		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	1150			P
7439-89-6	Iron	3310			P
7439-92-1	Lead	120.0		N	F
7439-95-4	Magnesium	11800			P
7439-96-5	Manganese	589			P
7439-97-6	Mercury	0.20			CV
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	4570	B		P
7782-49-2	Selenium	1.0	U	N W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	16100			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	8.1	B		P
7440-66-6	Zinc	432			P
	Cyanide				NR

Color Before: GRAY Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S503

Name: ARDL, INC. Contract: SAUGET #1

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S503

Matrix: (soil/water) WATER Lab Sample ID: 2268-1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >J5766

Level: (low/med) LOW Date Received: 10/15/93

% Moisture: not dec. --- Date Analyzed: 10/18/93

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.00000

Soil Extract Volume: --- (uL) Soil Aliquot Volume: --- (uL)

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S503

Name: ARDL, INC. Contract: SAUGET #1

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S503

Matrix: (soil/water) WATER Lab Sample ID: 2268-1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >J5766

Level: (low/med) LOW Date Received: 10/15/93

% Moisture: not dec. --- Date Analyzed: 10/18/93

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.00000

Soil Extract Volume: --- (uL) Soil Aliquot Volume: --- (uL)

Number TICs found: 0

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

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

EPA SAMPLE NO.

S503

Lab Name: ARDL, INC. Contract: SAUGET #1

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S503

Matrix: (soil/water) WATER Lab Sample ID: 2268-1

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4433

Level: (low/med) LOW Date Received: 10/15/93

% Moisture: --- decanted: (Y/N) N Date Extracted: 10/16/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 10/18/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	25.	
111-44-4	bis(2-Chloroethyl)_ether	10.	U
95-57-8	2-Chlorophenol	7.	J
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	4.	J
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U
106-44-5	4-Methylphenol	35.	
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	5.	J
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	J
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	8.	J
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	25.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	25.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U
99-09-2	3-Nitroaniline	25.	U
83-32-9	Acenaphthene	10.	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S503

Lab Name: ARDL, INC. Contract: SAUGET #1

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S503

Matrix: (soil/water) WATER Lab Sample ID: 2268-1

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4433

Level: (low/med) LOW Date Received: 10/15/93

% Moisture: --- decanted: (Y/N) N Date Extracted: 10/16/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 10/18/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25.	U
100-02-7	4-Nitrophenol	25.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	25.	U
534-52-1	4,6-Dinitro-2-methylphenol	25.	U
86-30-6	N-Nitrosodiphenylamine (1)	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	25.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
86-74-8	Carbazole	10.	U
84-74-2	Di-n-butylphthalate	6.	JB
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	10.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from Diphenylamine

21

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S503

Lab Name: ARDL, INC. Contract: SAUGET #1

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S503

Matrix: (soil/water) WATER Lab Sample ID: 2268-1

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4433

Level: (low/med) LOW Date Received: 10/15/93

% Moisture: not dec. --- decanted:(Y/N) N Date Extracted: 10/16/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 10/18/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

GPC Cleanup: (Y/N) N pH: 6.5

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 95512	O-CHLOROANILINE	11.90	20.	JN
2.	UNKNOWN	13.13	200.	J
3. 118901	BENZOIC ACID, 2-METHYL-	14.27	100.	JN
4.	BENZENEDIOL	14.48	40.	J
5.	UNKNOWN	15.15	100.	J
6. 87412	1(3H)-ISOBENZOFURANONE	15.55	20.	JN
7.	UNKNOWN	16.64	20.	J
8. 88197	BENZENESULFONAMIDE, 2-METHYL	19.18	10.	JN
9.	UNKNOWN	19.45	80.	J
10. 70553	BENZENESULFONAMIDE, 4-METHYL	19.82	30.	JN
11.	UNKNOWN	20.17	6.	J
12.	UNKNOWN	21.65	20.	J
13. 2169871	2,3-NAPHTHALENEDICARBOXYLIC	22.62	10.	JN
14. 81845	1,8-NAPHTHALIC ANHYDRIDE	23.81	20.	JN
15. 84651	9,10-ANTHRACENEDIONE	25.71	60.	JN
16.	UNKNOWN	26.27	20.	J
17.	UNKNOWN	26.61	20.	J
18.	UNKNOWN	28.04	20.	J
19.	UNKNOWN	28.43	10.	J
20.	UNKNOWN	29.32	20.	J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S503

Lab Name: ARDL, INC. Contract: SAUGET#1

Lab Code: Case No.: SAS No.: SDG No.: S503

Matrix(soil/water) : WATER Lab Sample ID : 2268-1

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

% Moisture: decanted:(Y/N) N Date Received : 10/16/93

Extraction(SepF/Cont/Sonc) SEPF Date Extracted : 10/16/93

Concentrated Extract Volume: 10000(uL) Date Analyzed : 10/16/93

Injection Volume: 1 (uL) Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 6.7 Sulfur Cleanup : N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC(Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1013-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	2.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

S503

Lab Name: ARDL, INC. Contract No.: 2268

Lab Code: _____ SAS No.: _____ SDG No.: S503

Matrix (soil/water) WATER Lab Sample ID: 2268-1

Level (low/med): LOW Date Received: 10/15/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	2.6	B	N W	F
7440-39-3	Barium	192	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	103000			P
7440-47-3	Chromium	5.3	B		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	96.4			P
7439-89-6	Iron	5800			P
7439-92-1	Lead	9.2		*	F
7439-95-4	Magnesium	10700			P
7439-96-5	Manganese	796			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	8440			P
7782-49-2	Selenium	5.0	U	N	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	27300			P
7440-28-0	Thallium	1.0	U	N W	F
7440-62-2	Vanadium	5.1	B		P
7440-66-6	Zinc	71.4			P
	Cyanide	8.3	U		C

Color Before: GRAY Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

S503

Lab Name: ARDL, INC. Contract: 2268

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: S503

Matrix (soil/water): WATER Lab Sample ID: 2268-1

Level (low/med): LOW Date Received: 10/15/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
Sulfate		7670			
Sulfide		1140			

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S504

Name: ARDL, INC. Contract: SAUGET #1

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S503

Matrix: (soil/water) WATER Lab Sample ID: 2268-2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >J5767

Level: (low/med) LOW Date Received: 10/15/93

% Moisture: not dec. --- Date Analyzed: 10/18/93

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.00000

Soil Extract Volume: --- (uL) Soil Aliquot Volume: --- (uL)

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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S504

Name: ARDL, INC. Contract: SAUGET #1

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S503

Matrix: (soil/water) WATER Lab Sample ID: 2268-2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >J5767

Level: (low/med) LOW Date Received: 10/15/93

% Moisture: not dec. --- Date Analyzed: 10/18/93

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.00000

Soil Extract Volume: --- (uL) Soil Aliquot Volume: --- (uL)

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	27.46	10.	J
2.					
3.					
4.					
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12.					
13.					
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18.					
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29.					
0.					

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S504

Lab Name: ARDL, INC. Contract: SAUGET #1

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S503

Matrix: (soil/water) WATER Lab Sample ID: 2268-2

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4434

Level: (low/med) LOW Date Received: 10/15/93

% Moisture: --- decanted: (Y/N) N Date Extracted: 10/16/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 10/18/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

GPC Cleanup: (Y/N) N pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)_ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
111-91-1	bis(2-Chloroethoxy)méthane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	25.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	25.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U
99-09-2	3-Nitroaniline	25.	U
83-32-9	Acenaphthene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S504

Lab Name: ARDL, INC. Contract: SAUGET #1

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S503

Matrix: (soil/water) WATER Lab Sample ID: 2268-2

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4434

Level: (low/med) LOW Date Received: 10/15/93

% Moisture: --- decanted: (Y/N) N Date Extracted: 10/16/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 10/18/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

GPC Cleanup: (Y/N) N pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25.	U
100-02-7	4-Nitrophenol	25.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	25.	U
534-52-1	4,6-Dinitro-2-methylphenol	25.	U
86-30-6	N-Nitrosodiphenylamine (1)	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	25.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
86-74-8	Carbazole	10.	U
84-74-2	Di-n-butylphthalate	5.	JB
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	10.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S504

Lab Name: ARDL, INC. Contract: SAUGET #1

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: S503

Matrix: (soil/water) WATER Lab Sample ID: 2268-2

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >M4434

Level: (low/med) LOW Date Received: 10/15/93

% Moisture: not dec. --- decanted:(Y/N) N Date Extracted: 10/16/93

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 10/18/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.00000

GPC Cleanup: (Y/N) N pH: 6.9

Number TICs found: 17

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	7.54	4.	J
2.		UNKNOWN	7.73	4.	J
3.		UNKNOWN	8.40	2.	J
4.	20324327	2-PROPANOL, 1-(2-METHOXY-1-M	9.61	4.	JN
5.		UNKNOWN	9.87	3.	J
6.		UNKNOWN	12.70	4.	J
7.		UNKNOWN	13.54	10.	J
8.		UNKNOWN	13.60	8.	J
9.	85449	PHTHALIC ANHYDRIDE	14.90	4.	JN
10.		UNKNOWN	15.43	9.	J
11.	124174	ETHANOL, 2-(2-BUTOXYETHOXY)-	15.55	20.	JN
12.		UNKNOWN	18.66	6.	J B
13.	57103	HEXADECANOIC ACID	22.70	10.	JNB
14.		UNKNOWN	24.66	4.	J
15.		UNKNOWN	26.80	3.	J
16.		UNKNOWN	28.15	6.	J
17.		UNKNOWN	30.22	3.	J
18.					
19.					
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23.					
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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S504

Lab Name: ARDL, INC. Contract: SAUGET#1

Lab Code: Case No.: SAS No.: SDG No.: S503

Matrix(soil/water) : WATER Lab Sample ID : 2268-2

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

% Moisture: decanted:(Y/N) N Date Received : 10/16/93

Extraction(SepF/Cont/Sonc) SEPF Date Extracted : 10/16/93

Concentrated Extract Volume: 10000(uL) Date Analyzed : 10/16/93

Injection Volume: 1 (uL) Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 6.7 Sulfur Cleanup : N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC(Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1013-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	2.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

S504

Lab Name: ARDL, INC. Contract No.: 2268

Lab Code: _____ SAS No.: _____ SDG No.: S503

Matrix (soil/water) WATER Lab Sample ID: 2268-2

Level (low/med): LOW Date Received: 10/15/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	733			P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	3.8	B	N W	F
7440-39-3	Barium	355			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	153000			P
7440-47-3	Chromium	5.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	18.5	B		P
7439-89-6	Iron	1460			P
7439-92-1	Lead	16.0		* S	F
7439-95-4	Magnesium	32800			P
7439-96-5	Manganese	97.1			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.9	B		P
7440-09-7	Potassium	5490			P
7782-49-2	Selenium	1.0	U	N W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	22000			P
7440-28-0	Thallium	1.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	286			P
	Cyanide	13.5	B		C

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

S504

Lab Name: ARDL, INC. Contract: 2268

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: S503

Matrix (soil/water): WATER Lab Sample ID: 2268-2

Level (low/med): LOW Date Received: 10/15/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
Sulfate		86700			
Sulfide		1000	U		

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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March 29, 1995
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