# SDMS US EPA REGION V -1

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State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

141628

**MEMORANDUM**

Date: December 30, 1994

From: Paul E. Takács, IEPA/BOL/NPL

To: Monica Rebbe, IDPH

Subject: L1630200005 -- St. Clair County
Sauget Sites (Area 1, Area 2) -- Sauget
Superfund/Technical Reports

The primary purpose of this memorandum is to present and interpret the results from a sampling event that IEPA was tasked to perform on November 9 and 10, 1994 at the Sauget Area 1 and Area 2 Sites. This sampling entailed the collection of sixteen surface soil samples within Site Q and near Site G (see Attachment A).

As outlined in the September 6 proposal to the Illinois Department of Public Health (IDPH) (see Attachment B), the objective of the sampling event was to gather data on areas in the Sauget and Cahokia area that were impacted by last year's flooding. This project represents a cooperative effort between IEPA and IDPH. All analytical costs were paid for by IDPH.

Actual field sampling was performed by Tom Miller and Doug Hayward of IEPA's Collinsville office with Monica Rebbe (IDPH) and Paul Takacs (IEPA) providing general oversight and assistance. The sixteen soil samples were sent to Applied Research and Development Laboratory (ARDL) in Mt. Vernon for analysis. ARDL was picked because of its proximity to the site.

Each sample was collected with a stainless steel spoon, sealed in a glass jar and packed with blue ice before shipping as per normal IEPA guidelines. One trip blank was sent to ARDL along with each group of samples that were taken on both days. All samples arrived at ARDL on the same day they were taken. Analyses were then run for volatile and semivolatile organic compounds, pesticides, PCBs and inorganics. As per the Health and Safety Plan (Attachment C), the sampling was performed in Level C protection.

**Inorganics**

In general, the samples ranged from very low to high levels of contamination. The first group of samples were taken in the east borrow pit of Site Q. Previous site visits have noted two large mounded areas near the west-central portion of this pit. Two soil samples each were taken around the edges of both mounds where drums and waste piles were exposed. Sample X101 was a grayish waste



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material that had fairly high levels of antimony (157ppm), cadmium (2,260ppm), chromium (3,650ppm), lead (7,690ppm), mercury (4.9ppm), nickel (153ppm), selenium (59.9ppm) and cyanide (3.3ppm). Sample X102 was a white crumbly waste. It had only low levels of inorganic contamination with magnesium (4,259ppm) being most significant. The next sample, X103 was a bluish-grey waste that had high levels of antimony (17,900ppm), arsenic (216ppm), copper (1,630ppm), lead (195,000ppm) and silver (30.2ppm). Sample X104, similar to X102, contained the white crumbly substance that had similar contaminants (magnesium @ 4,600ppm). Samples X105 and X106 were both located in waste piles near the northern portion of the borrow pit along the west boundary. X105 was a grayish crystalline substance, which did not appear to have inorganic contamination (although the sample did have a pH of 2.6). X106 was a light blue flaky material that also did not appear to have significant inorganic contamination. Samples X107 and X108 were also taken at the northern portion of the pit. X107 was taken on a ridge of what appeared to be waste material, although the reddish material resembling clay in this sample did not appear to have significant inorganic contamination. X108 was the northernmost sample taken in the east borrow pit. It was dark grey in color and had rather significant concentrations of lead (571ppm).

Samples X109, X110 and X111 were collected along the east bank of the west borrow pit with X109 and X110 taken from one waste pile that resembled the one X105 and X106 came from in the other borrow pit. X109 was a reddish grey waste that did not contain high levels of organics, while X110 contained antimony (47.6ppm), arsenic (19.3ppm), copper (226ppm), lead (5,320ppm), nickel (371ppm), and silver (28.9ppm). Both samples also had pH's (3.6 and 3.7, respectively). Sample X111 was a grayish-white material collected south of the above-mentioned samples and contained nickel (25.9ppm) and vanadium (23.1ppm).

Samples X112 and X113 were taken along the river bank, just south of Site R. Both samples contained a hard blackish substance that appeared to have been disposed of in drums. X112 contained notable levels of cadmium (56.2ppm) and zinc (10,300ppm), while X113 was found to contain magnesium (4,710ppm).

The remaining samples (X114, X115 and X116) were collected around Site G. Both X114 and X115 were soil samples collected in lower elevation areas to the south of the southern Site G fence that could have received runoff from Site G. These samples showed rather high levels of copper (675ppm in X114 and 1,150ppm in X115), lead (172ppm in X114), nickel (32.7ppm in X114 and 38.5ppm in X115) and vanadium (23.3ppm in X114 and 22.7ppm in X115). The last sample (X116) was located in a ridge off of the southwest corner of Site G. X116 which was a brownish waste material containing significant levels of copper (515ppm), mercury (4.7ppm) and high levels of zinc (38,200ppm).

**Volatile Organic Contaminants**

Only X101, X106, X115 and X116 showed any significant measurable

levels of VOCs. VOCs at X101 consisted of chlorinated solvents and associated degradation products (1,2-DCA @ 240ppb, 1,1-DCE @ 24ppb and 1,1,1-TCA @ 10Jppb). There were also minor levels of BTX compounds, methylene chloride and acetone in this sample and a few others. X106 had a 1,1,1-TCA concentration of 18ppb. X115 and X116 had methylene chloride concentrations of 28ppb and 630Eppb, respectively (analyses at these locations did not flag these compounds as laboratory contaminants).

**Semivolatile Compounds**

With the exception of PNAs and the tentatively identified compounds (TICs), most of the samples did not show high measurable levels of semivolatile compounds. The analytical results may be somewhat misleading, however, because of the presence of very high levels of BEHP in the laboratory blanks. Because of these levels (up to 110,000,000Bppb), detection levels were very high and the presence of certain semivolatile compounds could have been masked. Sample X107 had a total concentration of 1030Jppb of 2-methylphenol, 4-methylphenol, isophorone and 2,4-dimethylphenol. As far as PNAs were concerned; X108 had PNAs at 310Jppb, X109 at 1182Jppb, X110 at 380Jppb and X111 at 723Jppb. Most of the TICs consisted of phthalates and unknown compounds. X115 had 55,200Jppb of TICs and X116 had 66,100,000Jppb. Many of the other samples had various phthalates on TIC sheets that ranged from 0 to 83,890,000Jppb.

**Pesticides and PCBs**

ARDL did not note any measurable levels of pesticides, but PCBs did show up with high levels at several locations. The more significant total PCB concentrations were 223,000ppb at X101, 26,000ppb at X104, 31,900ppb at X105DL, 39,000ppb at X107DL, 79,000ppb at X108DL and 90,000ppb at X116DL. Aroclors 1254 and 1260 were prevalent in most samples and Aroclor 1248 showed up at X103, X107, X108 and X116. Various PCB precursors also were noted on the semivolatile TIC sheets for several samples.

**Conclusions**

In general, the presence of the phthalate compounds caused very high detection limits in many of the samples that most likely masked the presence of sample contaminants. Also, given the appearance of the sample materials, the contaminant levels appeared to be lower than what was expected.

Samples of the mounded waste materials were rather high in metals, indicating the possible presence of paint sludge materials. Samples here also showed high levels of PCBs which indicated that the source of PCBs found in sediments of the east borrow pit might have originated from the mound or drums around the mound.

The presence of rather low pH levels at several of the [illegible]

might indicate the presence of an acid-type waste. Samples that had low pH levels had high sulfate concentrations as well as a yellowish color. This may indicate a sulfuric acid waste residue.

Although not initially a part if the sampling plan, the sampling at X116 showed the presence of a waste material with very high levels of unknown compounds. The significant levels of PCBs (total 90ppm and nearly identical Aroclors) may indicate similar waste generators/transporters or landfill operators associated with Site G. Aerial photos from the 1950s appear to indicate waste disposal occurred outside of the fenced areas of Site G.

**Recommendations**

Further sampling should be performed in many of the areas that were sampled because of lab contaminants causing interference.

Because of the presence of waste materials in areas that were impacted by last year's flood, further sampling should be performed in the borrow pits at Site Q. The above conclusions note the sampled waste materials at Site Q as probable sources of contamination within both borrow pits, however all sources within these pits have not yet been fully characterized.

Sampling at X116 shows PCB concentrations in excess of removal action levels and because of this, a recommendation should be made to either have the wastes removed or fenced in. At minimum, further sampling should be performed along the "ridge of waste material" having the same visual characteristics of X116.

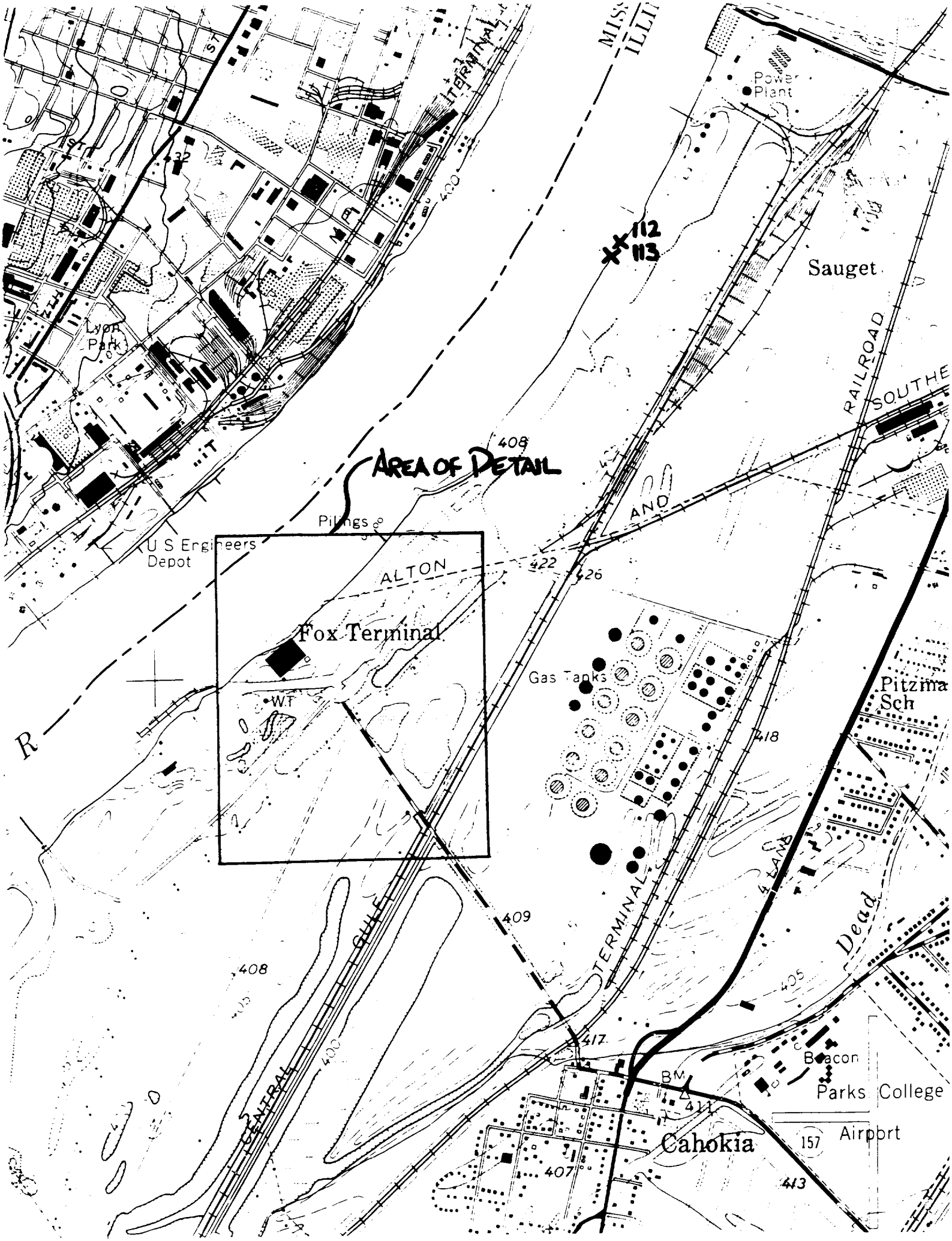
Further sampling should be performed in the low-lying areas south of the Site G fence. Two samples revealing only minor PCB contamination do not indicate a "clean" area given the PCB levels (74,000,000ppb) that were found in soils at Site G.

If you have questions or concerns about the above, please give me a call at 5-3912.

Attachments - Attachment A (Sampling Map)
Attachment B (IDPH Proposal/SAP)
Attachment C (Health and Safety Plan)
Attachment D (Analytical Results)

cc: Terry Ayers (w/o attachments)
Larry Eastep (w/o attachments)
Kim Hubbert
Tom Miller
David Webb, IDPH
Division File

**ATTACHMENT A**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U S Engineers Depot
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Airport
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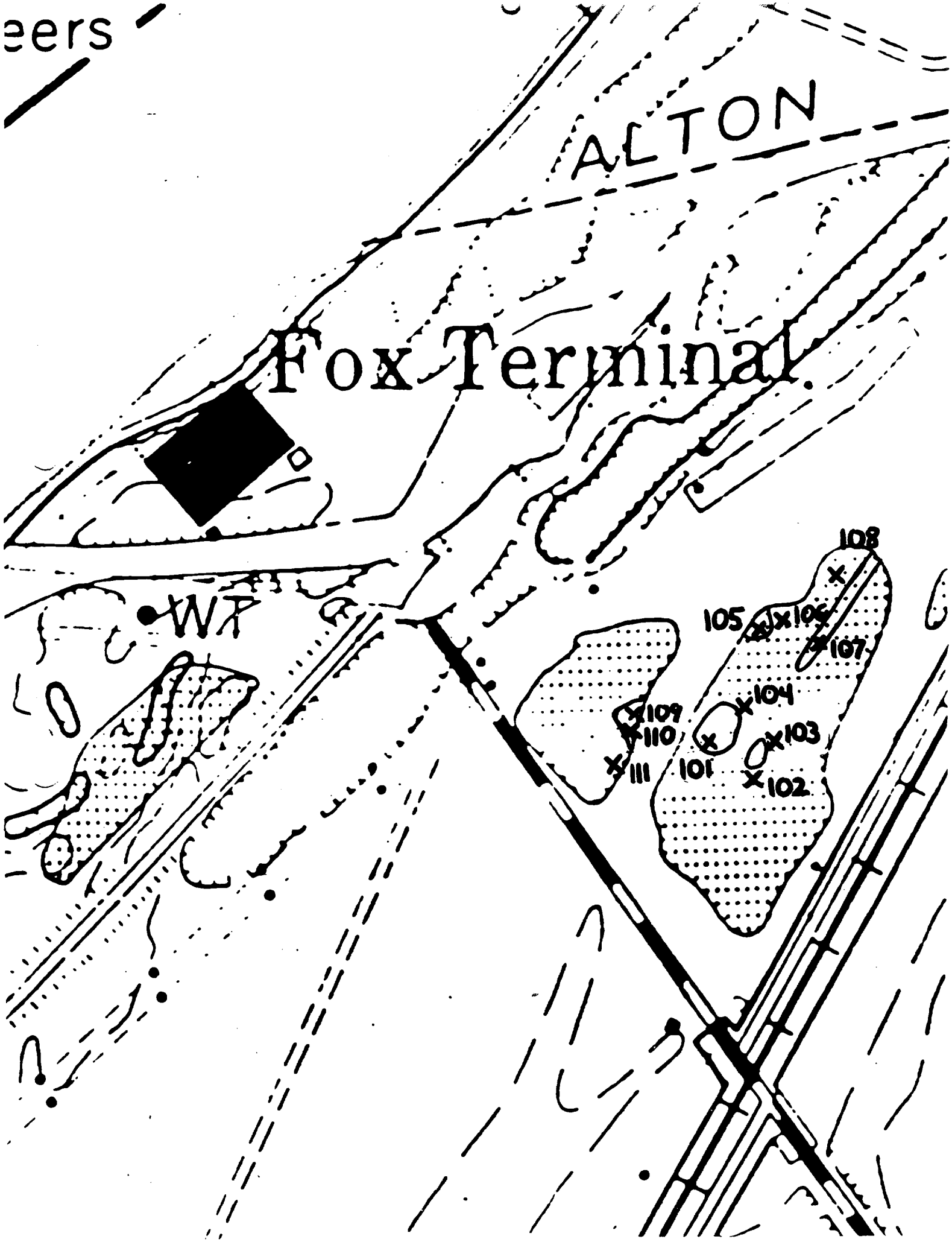
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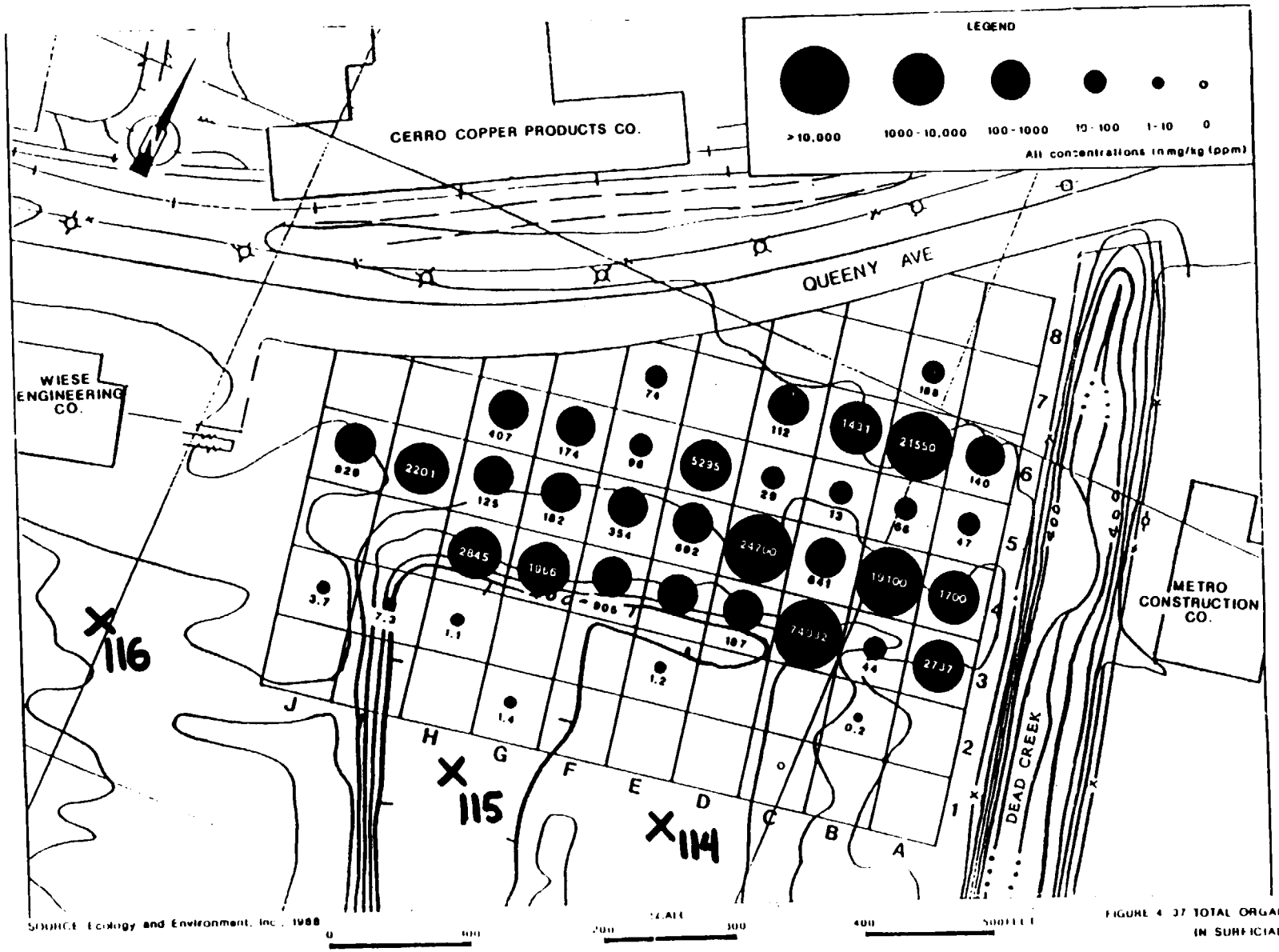


SOURCE: Ecology and Environment, Inc., 1988

SCALE 0 100 200 300 400 500 FEET

FIGURE 4-37 TOTAL ORGANIC CONCENTRATIONS IN SURFICIAL SOIL AT SITE G

**ATTACHMENT B**

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director
217/785-3912

2200 Churchill Road, Springfield, IL 62794-9276

Refer to: L1630200005 -- St. Clair County
Sauget Sites (Area 1, Area 2) -- Sauget
Superfund/Technical Reports

September 6, 1994

Dr. Tom Long
Illinois Department of Public Health
Environmental Toxicology Program
535 West Jefferson Boulevard, Room 500
Springfield, Illinois 62751

Dear Tom:

This is in reference to what we had talked about during our site visit to Site G and Site Q in Sauget with your staff. During our visit, you had indicated that funding may be available to perform limited sampling in flood-impacted areas. After consultation with David Webb, I would like to submit for your review (see enclosure) a proposed sampling plan that would include approximately 17 surface soil samples near Site G and Site Q that have never been investigated.

The justification of these proposed activities is to assess how the flooding has impacted suspected hazardous waste disposal locations and whether or not potential human health exposures are a concern.

As to the personnel involved, IEPA's Collinsville field office would be willing to perform the actual field sampling, while myself and David Webb could be present to assist and provide general direction throughout the project. The soil samples would be sent to ARDL for TCL/TAL analyses and validation. I would estimate that the analytical and validation costs of each soil sample to be about $1,440 for a 30 day turnaround. This would bring the project total to $24,480.

We had tentatively set the sampling dates for two days during the last week of October. The actual sampling date, however will be dependant more on the water levels at the borrow areas in Site Q. Sampling during these dates should be possible as long as there isn't an unusually high amount of rainfall between now and then.

Please review the enclosed detailed proposal that elaborates on the above. If you have any questions or concerns, give me a call.

Sincerely,

Paul E. Takács, Project Manager
National Priorities List Unit
Division of Remediation Management
Bureau of Land

Enclosure - Proposal for IEPA/IDPH Sampling near Site G and Site Q

cc: David Webb, IDPH
Ken Mensing
Terry Ayers
Larry Eastep
Kim Hubbert
Division File

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# PROPOSAL FOR IEPA/IDPH SAMPLING NEAR SITE G AND SITE Q

## I. Background

One of the most highly contaminated areas in Illinois are the Sauget Sites. Area 1 comprises three hazardous waste disposal landfills, a formerly used waste impoundment, two abandoned gravel pits and five intermittent segments of Dead Creek. The contaminants found at the Sauget Area 1 Sites consist mainly of chlorobenzenes, chlorophenols, chloroanilines, nitrophenols, nitroanilines, naphthalene, PCBs and PNAs. These sites were aggregated together on the basis of their relative proximity to each other, shared watershed, nearly identical contaminants, and a common property owner at many of the sites during the periods of disposal. Potential residential exposure to site contaminants is the greatest concern in Area 1. The Area 2 sites comprise four separate sites that include a covered lagoon containing hazardous sludges (Site O), an industrial landfill suspected of containing hazardous wastes (Site P), a closed landfill used by Monsanto for the disposal of their liquid chemical wastes (Site R) and an uncovered closed municipal landfill that accepted hazardous wastes (Site Q). Environmental impacts within wetlands and leachates that flow into the Mississippi River are the more significant concerns of Area 2. Provided below are brief descriptions of the sites that are being proposed for this sampling event:

### Site G

A former surface/subsurface hazardous waste disposal site which was originally used as a gravel pit. Site G occupies about 4.5 acres and is littered with demolition debris, metal wastes and corroded drums. Oily and tar-like wastes are found mainly in areas where drums are present; however, most of the landfill is only partially covered with fly ash and cinders. IEPA estimates that there is approximately 22,000 $yd^3$ of contaminated fill and about 60,000 $yd^3$ of saturated chemical waste materials. Past surface soil sampling revealed PCBs (74,000ppm total), 1,4-dichlorobenzene (22,000ppm), PCP (21,000ppm), 4-nitrophenol (1000ppm), 2-nitroaniline (220ppm), and PNAs. The primary contaminants detected in subsurface soils included naphthalene (5,429ppm), PCP (4,769ppm) and 4-chloroaniline (231ppm). Access to the site is restricted by a chain-link fence installed by USEPA. Aerial photos show major disposal activities occurring at Site G from the early to mid-1950s to the mid-1960s, after which sporadic disposal occurred until it was fenced in 1982.

On a more recent note, IEPA was informed that an underground fire began at this site in early April and continued through June of this year. IEPA assisted USEPA last June in a sampling event in and around Site G. As would be expected in a scenario of burning PCBs and other chlorophenols, the sample results indicated widespread dioxin contamination on the site and outside the

perimeter of the fence. The levels of 2,3,7,8-TCDD (137ppb) were high enough to justify a time-critical action by USEPA even for an industrial area. An interview with an employee of the property owner said that the Sauget Fire Department was called to put out the fires. This employee noted the burning area was flooded with water 24 hours a day for two weeks, thereby creating a large pond in back of the burn area. Although water samples from the pond did not show contamination, it is suspected that the sediments of the low-lying area to the south of Site G are contaminated. In addition to this area, this site contributed to further contamination of Dead Creek last year during last year's flooding.

**Site Q**

Site Q, also known as the former Sauget & Company Landfill (e.g. the Sauget Municipal Landfill) had been completely submerged by flooding last summer. There are numerous uncovered waste disposal areas scattered throughout the site. Oil-saturated materials as well as drums with unknown wastes are present at many of these disposal areas. Limited soil sampling has indicated high levels of semivolatiles, pesticides and PCBs. Of greatest concern to IEPA is the presence of several waste piles and drums located in the two borrow pits to the south of the site. No sampling has ever been performed at these locations because they are normally submerged. In addition to these areas, several drums are present along the bank of the river - many of which have been exposed by last year's floods. Recent sampling of these drums showed PCBs (over 200,000ppm), 2-chlorophenol (67ppm), 1,4-dichlorobenzene (49ppm), 1,2,4-trichlorobenzene (52ppm), phenol (71ppm) and 4-nitrophenol (45ppm). There are also various isolated waste disposal areas located throughout the site. This site was operated by Sauget & Company as a "municipal landfill". Aerial photos show major activities beginning in the mid-1950's and continuing through the 1970's. 103(c) notifications to USEPA note that BFI hauled unidentified hazardous wastes and chemicals to this landfill from 1963 to 1970. Another notification points out a massive liquid waste and drum disposal area at an unknown location on this site.

**II. General Sampling Information**

17 soil samples are planned for both the low-lying area behind Site G and several locations on Site Q that have never been sampled. Concentrations of contaminants are anticipated to be anywhere from low to very high concentrations. Sampling and handling of these samples will be performed in accordance with these anticipated concentrations.

Actual sampling activities will be performed by IEPA's Collinsville office personnel under the general direction of Paul Takacs (IEPA) and David Webb (IDPH). All samples will be placed in an iced cooler and delivered to ARDL, Inc. for same day shipment. Soil samples will be run for TCL/TAL parameters under Superfund protocol. Both IEPA sampling and chain-of-custody procedures will be followed throughout the project. Each sample will be assigned a sample location ID number that will be provided on a sample location map.

## III. Sampling Locations and Rationale

Five general locations that are proposed for sampling are noted on the map of the following page. The number of samples for each location and rationale are mentioned below:

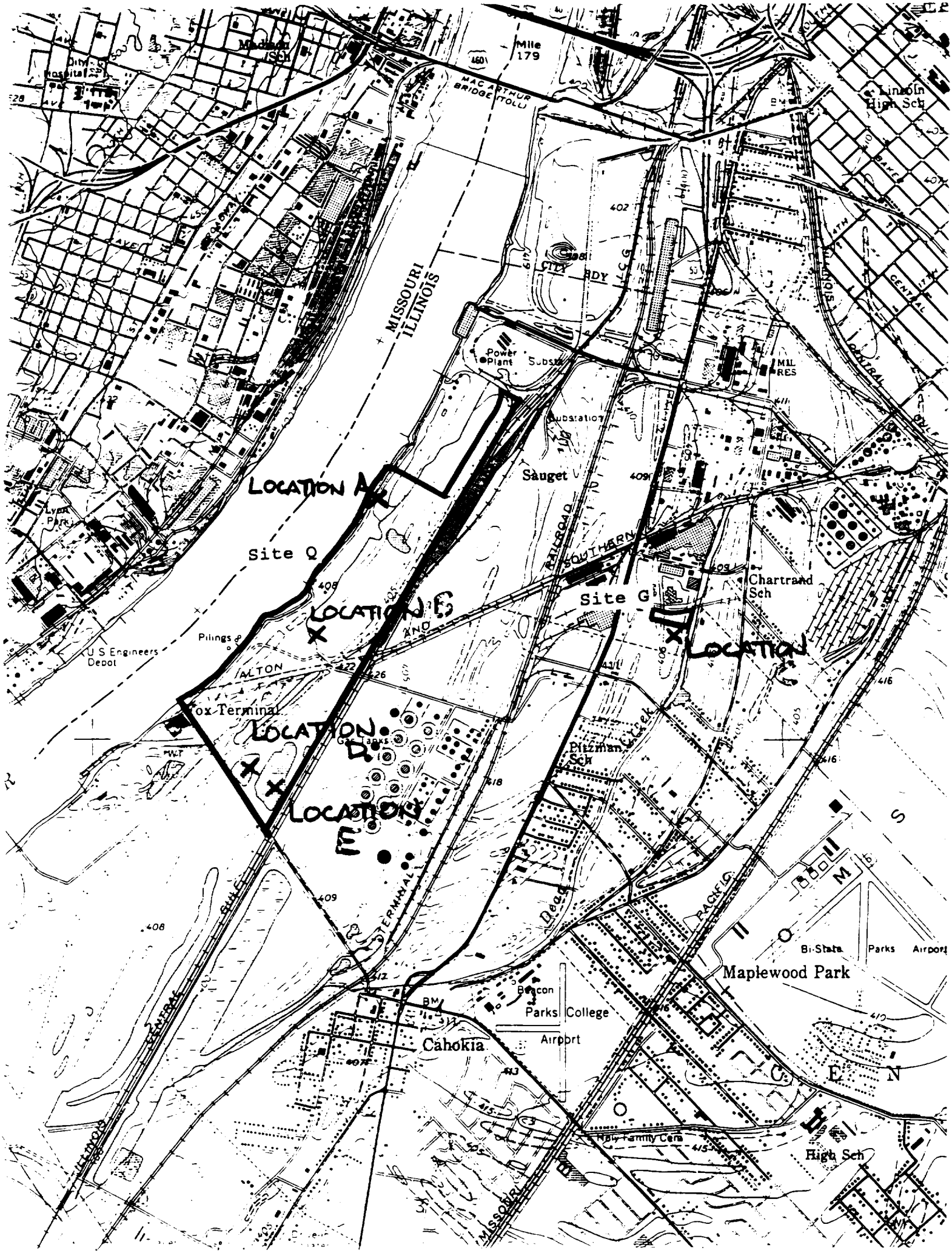
Location A - Two samples of waste materials found in several corroding drums. These drums are located about 300 feet south of Site R along the bank of the river. The waste materials appear to be inert with no unusual volatile vapors. Strong organic odors are periodically noted in the vicinity, but it is not known if they are coming from Site R or an unknown leachate seep along the river bank. The waste materials in the drums, which have never been sampled, were evidently disposed of with broken concrete and cinders and were present before the flood.

Location B - One sample in an isolated location at the south central portion of Site Q. The immediate vicinity shows stressed vegetation. Several blocks of a yellowish material resembling sulfur that has been seen at Site G and the borrow pits at the south end of this site were noted.

Location C - Two samples in a low-lying area to the south of Site G. This swampy area was impacted by high water table conditions that persisted during and shortly after last years flood. The rationale of sampling at this location is based on its proximity to very high levels of contaminants at the surface of Site G and the fact that contaminated sediment has likely been deposited into this area for years. Recent sampling results and activities associated with putting out underground fires at Site G have made knowing what may be present in sediments here a higher priority.

Location D - Four samples in the "southwest borrow pit". The Ecology & Environment report (1988) did not investigate a waste pile and a few drums of waste materials that were present in a low-lying area that is usually submerged. The waste pile contains a black oily material, blocks of yellow and dark grey crystalline substances and rubber gaskets. There are also drums present around the margins of the pit that should be sampled.

Location E - Seven samples in the larger "southeast borrow pit". As was the case at Location D, this area was never sampled. When the site was discovered three years ago, several corroded drums and waste materials were noted in piles and along ridges of this borrow pit. The grayish crystalline materials noted above are present, but in greater quantities. A very large pile of rusting drums and waste materials is present at the west-central portion of the pit and a ridge of waste materials is present in the north-central portions. Limited sampling around this pit has showed PCBs to be present in the 10-20ppm range.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MAC ARTHUR BRIDGE (TOLL)
Lincoln High Sch
MISSOURI
ILLINOIS
Power Plant
Substation
Sauget
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Site Q
LOCATION G
Site G
LOCATION
Chartrand Sch
Pilings
U S Engineers Depot
ALTON
Fox Terminal
LOCATION D
LOCATION E
Gas Tanks
Pitzman Sch
Dead Creek
TERMINAL
Bi-State Parks Airport
Maplewood Park
Beacon
Parks College
Airport
Cahokia
Holy Family Cem
High Sch

EPA - CLP
CHAIN OF CUSTODY

Seal # 9949

Date Sealed: 11/8/94 By: [illegible]

Facility
Name : SAUGET SITE AREA #1 + #2
Region: COLLINSVILLE
County: ST.CLAIR

Site Inventory # : IL3020000005
Site Billing Code: FDPH-Rebbe
Project Manager : PAUL TAKACS

| Laboratory # | Sample I.D. | Sample Date | Time |
|---|---|---|---|
| 2343-6 | X106 | 11-9-94 | 10:55 am. |

Sample Description : Brown - waste Material

Director Comments:

Sampler Signature : Tom Miller Division/Company IEPA \ FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA, PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS, CYANIDE, | N |
| | 287 | | | SULFIDE, SULFATE | |

CHAIN OF CUSTODY CHANGE #

I certify that I received the sample shipping container with the shipping container sealed and intact

Paul Takacs Signature: Paul Takacs

11-9-94 Time 10:50 a.m. Seal # 9949 Intact O

I certify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact in the sample shipping container and that I sealed the sample shipping container at the date and time listed below.

Print Name: Monica Rebbe Signature: Monica Rebbe

11-9-94 Time 2:35 p.m. Seal # 9950

Sample Delivery:

Courier - Sample Delivery: Courier

I certify that I received the sample shipping container from the courier listed above with the shipping container and seal intact and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): Donna Cochrum Signature: Donna Cochrum

Date: 11-9-94 Time: 1755 Seal #: 9949+9950 Intact: (Y)

Lab Name: ARDL INC Lab Comments:

EPA - CLP
CHAIN OF CUSTODY

Seal # 9955

Date Sealed: 11/8/94 By: [illegible]

Facility
Name : SAUGET SITE AREA #1 + #2
Location: COLLINSVILLE
County: ST.CLAIR

Site Inventory # : 1630200005
Site Billing Code: IDPH/MONICA REBBE
Project Manager : PAUL TAKACS

| Laboratory # | Sample I.D. | Sample Date | Sample Time |
|---|---|---|---|
| ARDL 2343-11 | X107 | 11-9-94 | 11:00 AM |

Sample Appearance : BROWN WASTE MATERIAL

Collector Comments:

Name of Collector : Tom Miller Division/Company IEPA/IFOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA, PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS, CYANIDE, | N |
| | 287 | | N | SULFIDE, SULFATE | N |

CHAIN OF CUSTODY CERTIFICATE

I certify that I received the sample shipping container with the shipping container sealed and intact.

PAUL TAKACS Signature: Paul S. Takacs

11-9-94 10:55AM 9955 Intact: O

I certify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact in the sample shipping container and that [illegible] the sample shipping container at the date and time stated below.

PAUL TAKACS Signature: Paul S. Takacs

11-9-94 2:35PM 9956

Agency: IEPA/ARDL

Courier - Sample Delivery: Courier

I certify that I received the sample shipping container from the courier listed above with the shipping container and seal intact and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): DONNA Cockrum Signature: Donna Cockrum

Date: 11-09-94 Time: 1755 Seal #: 9956 Intact: O

Lab Name: ARDL INC

RFC - CLP
CHAIN OF CUSTODY

Seal # 9955

Date Sealed: 11/8/94 By: [illegible]

Facility
Name : BARLETT SITE (ALA #1 - 12)
Region: COLLINSVILLE
County: ST CLAIR

Site Inventory # : [illegible]
Site Billing Code: JAPA/MONICA REBBE
Project Manager : PAUL TAKACS

| Laboratory # | Sampled By | Sample Date | Sample Time |
|---|---|---|---|
| ARDL 1343-8 | X108 | 11-9-94 | A-TOAM 11:15 AM |

Sample Description: BROWN WASTE MATERIAL

Field Observations:

Signature: Tom Miller Division/Company: IEPA/FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA, PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS, CYANIDE, | N |
| | 287 | | N | SULFIDE, SULFATE | N |

CHAIN OF CUSTODY CERTIFICATE

I certify that I have, at the time of the sampling, placed the sample in the shipping container sealed as above.

PAUL TAKACS — Paul T. Takacs
11-9-94 10:55AM 9955 D

I certify that the sample listed for A was collected and placed in bottles in my presence, that each bottle was placed intact in the official shipping container and that I delivered the sample shipping container at the date and time hereon.

PAUL TAKACS — Paul T. Takacs
11-9-94 2:35PM 9956
IEPA/ARDL

Courier - Sample Delivery: Courier

I certify that I received the sample shipping container from the courier listed above with the shipping container and seal intact and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by: (print): Donna Cochrum Signature: Donna Cochrum

Date: 11-09-94 Time: 1755 Seal #: 9956 Intact? Y / N

Lab Name: ARDL INC Comments:

EPA - CLP
CHAIN OF CUSTODY

Seal # 9951

Date Sealed: 11/8/94 By: [illegible]

Facility
Name : SAUGET SITE AREA #1 + #2
Region: COLLINSVILLE
County: ST CLAIR

Site Inventory # : IL5020000[illegible]
Site Billing Code: IDPH-Rebbe
Project Manager : PAUL TAKACS

| Laboratory # | Sample I.D. | Sample Date | Time |
|---|---|---|---|
| ARDL 2343-9 | X109 | 11-9-94 | 11:40 a.m. |

Sample Appearance : Brown - waste material

Collector Comments:

Name & Signature : Tom Miller Division/Company IEPA \ FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA, PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS, CYANIDE, | N |
| | 287 | | | SULFIDE, SULFATE | |

CHAIN OF CUSTODY

I certify that I received the sample shipping container with the shipping container sealed.

Paul Takacs [signature]

11-9-94 11:35 a.m. 9951 0

I certify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact in the sample shipping container and that I sealed the sample shipping container at the date and time listed below.

Monica Rebbe [signature]

11-9-94 2:55 pm. 9952

IEPA \ ARDL

Courier - Sample Delivery: Courier

I certify that I received the sample shipping container from the courier listed above with the shipping container and seal intact and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): Donna Cockrum Signature: [signature]

Date: 11-9-94 Time: 1755 Seal # 9952 Intact: Y

Lab Name: ARDL, Inc. Comments:

FFA - CLP
CHAIN OF CUSTODY

Seal # 9951

Date Sealed: 11/8/94 By: [illegible]

Facility
Type: TARGET SITE AREA #1 - C2
Location: COLLINSVILLE
County: ST CLAIR

Site Inventory #: IL5300[illegible]
Site Billing Code: IDPH - Rebbe
Project Manager: PAUL TAKACS

| Laboratory # | Matrix | Sample Date | Sample Time |
|---|---|---|---|
| ARDL 2343-10 | X110 | 11-9-94 | 11:50 a.m. |

Brown - waste material

Tom Miller — IEPA \ FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA, PEST/PCB | N |
| 1 | 206 | 16ozT | N | TOTAL METALS, CYANIDE, | N |
| | 287 | | | SULFIDE, SULFATE, | |

I certify that I sealed the sample shipping container with the shipping container sealed and intact.

Paul Takacs — Paul Takacs

11-9-94 — 11:45 a.m. — 9951 — 0

I certify that the bottle I identified & was collected into bottles in my presence, that each bottle was sealed intact in the sample shipping container and that I sealed the sample shipping container at the date and time listed below.

Monica Rebbe — Monica Rebbe

11-9-94 — 2:55 pm. — 9952

IEPA \ ARDL

Courier - Sample Delivery: Courier

I certify that I received the sample shipping container from the courier listed above with the shipping container and seal intact and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): Donna Cockrum Signature: Donna Cockrum

Date: 11-09-94 Time: 1755 Seal #: 9952 Intact: (Y) N

Lab Name: ARDL INC Comments:

TPM - CLP
CHAIN OF CUSTODY

Seal # 9959

Date Sealed: 11/8/94

Facility
Name: [illegible] SITE AREA [illegible]
Location: COLLINSVILLE
County: ST. CLAIR

Site Inventory #: [illegible]
Site Billing Code: IDPH/MONICA REBBE
Project Manager: PAUL TACKACS

Laboratory #: ARDL 2343-11

XIII 11-9-94 12:00PM

Sample Description: BROWN WASTE MAT'L

Collector Comments:

Collector: Tom Miller Division/Company: IEPA/FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 12 | 16ozO | N | BNA, PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS, CYANIDE, | N |
| | 287 | | N | SULFIDE, SULFATE | N |

Chain of Custody Signature

I certify that I am the person collecting the samples and the original container seals are intact.

Paul Tackacs Paul S. Okail

11-9-94 11:55AM 9959 0

I certify that the sample bottles as I have collected and closed or bottles in my presence, that each bottle was clean intact in the original container and that I sealed the sample container at the date and time listed below.

Paul Tackacs Paul S. Okail

11-9-94 2:55PM 9960

IEPA/ARDL

Courier - Sample Delivery: Courier

I certify that I received the sample shipping container from the courier listed above with the shipping container and seal intact and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): Donna Cockrum Signature: Donna Cockrum

Date: 11-9-94 Time: 1755 Seal #: 9960 Intact? (Y) N

Lab Name: ARDL INC. Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-1

Level (low/med): LOW Date Received: 11/09/94

% Solids: 74.2

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 10700 | | * | P |
| 7440-36-0 | Antimony | 157 | | N * | P |
| 7440-38-2 | Arsenic | 13.7 | | N * S | F |
| 7440-39-3 | Barium | 1220 | | N * | P |
| 7440-41-7 | Beryllium | 0.54 | B | | P |
| 7440-43-9 | Cadmium | 2260 | | * | P |
| 7440-70-2 | Calcium | 13400 | | | P |
| 7440-47-3 | Chromium | 3650 | | * | P |
| 7440-48-4 | Cobalt | 18.7 | | | P |
| 7440-50-8 | Copper | 324 | | | P |
| 7439-89-6 | Iron | 63500 | | * | P |
| 7439-92-1 | Lead | 7690 | | * | P |
| 7439-95-4 | Magnesium | 2940 | | | P |
| 7439-96-5 | Manganese | 606 | | | P |
| 7439-97-6 | Mercury | 4.9 | | | CV |
| 7440-02-0 | Nickel | 153 | | N * | P |
| 7440-09-7 | Potassium | 1310 | B | | P |
| 7782-49-2 | Selenium | 59.9 | | * S | F |
| 7440-22-4 | Silver | 3.3 | | N | P |
| 7440-23-5 | Sodium | 268 | B | | P |
| 7440-28-0 | Thallium | 0.27 | U | | F |
| 7440-62-2 | Vanadium | 7.3 | B | | P |
| 7440-66-6 | Zinc | 7290 | | * | P |
| | Cyanide | 3.3 | | | C |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: PEBBLES, LEAVES AND ROOTS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-1

Level (low/med): LOW Date Received: 11/09/94

% Solids: 74.2

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 82.4 | | | |
| | Sulfide | 26.9 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-2

Level (low/med): LOW Date Received: 11/09/94

% Solids: 77.2

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 5710 | | * | P |
| 7440-36-0 | Antimony | 5.2 | U | N * | P |
| 7440-38-2 | Arsenic | 1.4 | B | N * S | F |
| 7440-39-3 | Barium | 141 | | N * | P |
| 7440-41-7 | Beryllium | 0.49 | B | | P |
| 7440-43-9 | Cadmium | 3.9 | | * | P |
| 7440-70-2 | Calcium | 18000 | | | P |
| 7440-47-3 | Chromium | 12.1 | | * | P |
| 7440-48-4 | Cobalt | 7.4 | B | | P |
| 7440-50-8 | Copper | 18.7 | | | P |
| 7439-89-6 | Iron | 11600 | | * | P |
| 7439-92-1 | Lead | 152 | | * | P |
| 7439-95-4 | Magnesium | 4250 | | | P |
| 7439-96-5 | Manganese | 372 | | | P |
| 7439-97-6 | Mercury | 0.13 | U | | CV |
| 7440-02-0 | Nickel | 17.6 | | N * | P |
| 7440-09-7 | Potassium | 1030 | B | | P |
| 7782-49-2 | Selenium | 0.26 | U | * W | F |
| 7440-22-4 | Silver | 1.3 | U | N | P |
| 7440-23-5 | Sodium | 233 | U | | P |
| 7440-28-0 | Thallium | 0.26 | U | | F |
| 7440-62-2 | Vanadium | 16.0 | | | P |
| 7440-66-6 | Zinc | 689 | | * | P |
| | Cyanide | 0.61 | U | | C |

Color Before: GRAY/BROW Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: PEBBLES, LEAVES AND ROOTS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-2

Level (low/med): LOW Date Received: 11/09/94

% Solids: 77.2

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 51.4 | U | | |
| | Sulfide | 25.5 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-3

Level (low/med): LOW Date Received: 11/09/94

% Solids: 74.4

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 3240 | | * | P |
| 7440-36-0 | Antimony | 17900 | | N * | P |
| 7440-38-2 | Arsenic | 216 | | N * S | F |
| 7440-39-3 | Barium | 1680 | | N * | P |
| 7440-41-7 | Beryllium | 0.30 | B | | P |
| 7440-43-9 | Cadmium | 8.7 | | * | P |
| 7440-70-2 | Calcium | 10300 | | | P |
| 7440-47-3 | Chromium | 142 | | * | P |
| 7440-48-4 | Cobalt | 13.3 | B | | P |
| 7440-50-8 | Copper | 1630 | | | P |
| 7439-89-6 | Iron | 80500 | | * | P |
| 7439-92-1 | Lead | 195000 | | * | P |
| 7439-95-4 | Magnesium | 1350 | | | P |
| 7439-96-5 | Manganese | 1270 | | | P |
| 7439-97-6 | Mercury | 0.25 | | | CV |
| 7440-02-0 | Nickel | 101 | | N * | P |
| 7440-09-7 | Potassium | 446 | B | | P |
| 7782-49-2 | Selenium | 1.3 | U | * E | F |
| 7440-22-4 | Silver | 30.2 | | N | P |
| 7440-23-5 | Sodium | 242 | U | | P |
| 7440-28-0 | Thallium | 0.89 | B | | F |
| 7440-62-2 | Vanadium | 1.3 | U | | P |
| 7440-66-6 | Zinc | 9520 | | * | P |
| | Cyanide | 2.8 | | | C |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: PEBBLES, LEAVES AND ROOTS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-3

Level (low/med): LOW Date Received: 11/09/94

% Solids: 74.4

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 55.9 | | | |
| | Sulfide | 26.7 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-4

Level (low/med): LOW Date Received: 11/09/94

% Solids: 71.7

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 3500 | | * | P |
| 7440-36-0 | Antimony | 5.6 | U | N * | P |
| 7440-38-2 | Arsenic | 1.6 | B | N * W | F |
| 7440-39-3 | Barium | 63.3 | | N * | P |
| 7440-41-7 | Beryllium | 0.31 | B | | P |
| 7440-43-9 | Cadmium | 1.1 | B | * | P |
| 7440-70-2 | Calcium | 152000 | | | P |
| 7440-47-3 | Chromium | 5.8 | | * | P |
| 7440-48-4 | Cobalt | 2.9 | B | | P |
| 7440-50-8 | Copper | 7.6 | | | P |
| 7439-89-6 | Iron | 5450 | | * | P |
| 7439-92-1 | Lead | 18100 | | * | P |
| 7439-95-4 | Magnesium | 4600 | | | P |
| 7439-96-5 | Manganese | 275 | | | P |
| 7439-97-6 | Mercury | 0.14 | U | | CV |
| 7440-02-0 | Nickel | 8.1 | B | N * | P |
| 7440-09-7 | Potassium | 604 | B | | P |
| 7782-49-2 | Selenium | 1.4 | U | * W | F |
| 7440-22-4 | Silver | 1.4 | U | N | P |
| 7440-23-5 | Sodium | 810 | B | | P |
| 7440-28-0 | Thallium | 0.28 | U | | F |
| 7440-62-2 | Vanadium | 7.6 | B | | P |
| 7440-66-6 | Zinc | 95.0 | | * | P |
| | Cyanide | 0.70 | U | | C |

Color Before: BROWN/WHI Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: WOOD

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-4

Level (low/med): LOW Date Received: 11/09/94

% Solids: 71.7

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 54.8 | U | | |
| | Sulfide | 27.9 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-5

Level (low/med): LOW Date Received: 11/09/94

% Solids: 75.9

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 237 | | * | P |
| 7440-36-0 | Antimony | 5.3 | U | N * | P |
| 7440-38-2 | Arsenic | 0.47 | B | N * | F |
| 7440-39-3 | Barium | 188 | | N * | P |
| 7440-41-7 | Beryllium | 0.26 | U | | P |
| 7440-43-9 | Cadmium | 1.4 | | * | P |
| 7440-70-2 | Calcium | 456 | B | | P |
| 7440-47-3 | Chromium | 3.0 | | * | P |
| 7440-48-4 | Cobalt | 1.3 | U | | P |
| 7440-50-8 | Copper | 2.8 | B | | P |
| 7439-89-6 | Iron | 469 | | * | P |
| 7439-92-1 | Lead | 62.2 | | * | P |
| 7439-95-4 | Magnesium | 56.9 | B | | P |
| 7439-96-5 | Manganese | 4.0 | | | P |
| 7439-97-6 | Mercury | 0.13 | U | | CV |
| 7440-02-0 | Nickel | 5.3 | U | N * | P |
| 7440-09-7 | Potassium | 264 | U | | P |
| 7782-49-2 | Selenium | 2.1 | B | * | F |
| 7440-22-4 | Silver | 1.3 | U | N | P |
| 7440-23-5 | Sodium | 237 | U | | P |
| 7440-28-0 | Thallium | 0.26 | U | | F |
| 7440-62-2 | Vanadium | 1.3 | U | | P |
| 7440-66-6 | Zinc | 10.8 | | * | P |
| | Cyanide | 0.66 | U | | C |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments: PEBBLES AND LEAVES

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-5

Level (low/med): LOW Date Received: 11/09/94

% Solids: 75.9

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 907 | | | |
| | Sulfide | 26.0 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-6

Level (low/med): LOW Date Received: 11/09/94

% Solids: 79.7

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 3250 | | * | P |
| 7440-36-0 | Antimony | 5.0 | U | N * | P |
| 7440-38-2 | Arsenic | 0.93 | B | N * | F |
| 7440-39-3 | Barium | 3620 | | N * | P |
| 7440-41-7 | Beryllium | 0.25 | U | | P |
| 7440-43-9 | Cadmium | 1.5 | | * | P |
| 7440-70-2 | Calcium | 1320 | | | P |
| 7440-47-3 | Chromium | 7.0 | | * | P |
| 7440-48-4 | Cobalt | 3.7 | B | | P |
| 7440-50-8 | Copper | 9.0 | | | P |
| 7439-89-6 | Iron | 2170 | | * | P |
| 7439-92-1 | Lead | 41.1 | | | F |
| 7439-95-4 | Magnesium | 2350 | | | P |
| 7439-96-5 | Manganese | 62.3 | | | P |
| 7439-97-6 | Mercury | 0.14 | | | CV |
| 7440-02-0 | Nickel | 6.5 | B | N * | P |
| 7440-09-7 | Potassium | 301 | B | | P |
| 7782-49-2 | Selenium | 0.25 | U | * W | F |
| 7440-22-4 | Silver | 1.3 | U | N | P |
| 7440-23-5 | Sodium | 226 | U | | P |
| 7440-28-0 | Thallium | 0.25 | U | W | F |
| 7440-62-2 | Vanadium | 10.0 | B | | P |
| 7440-66-6 | Zinc | 66.1 | | * | P |
| | Cyanide | 0.61 | U | | C |

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-6

Level (low/med): LOW Date Received: 11/09/94

% Solids: 79.7

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 49.7 | U | | |
| | Sulfide | 24.9 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-7

Level (low/med): LOW Date Received: 11/09/94

% Solids: 76.5

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 5630 | | * | P |
| 7440-36-0 | Antimony | 5.2 | U | N * | P |
| 7440-38-2 | Arsenic | 2.7 | | N * S | F |
| 7440-39-3 | Barium | 103 | | N * | P |
| 7440-41-7 | Beryllium | 0.44 | B | | P |
| 7440-43-9 | Cadmium | 28.7 | | * | P |
| 7440-70-2 | Calcium | 4360 | | | P |
| 7440-47-3 | Chromium | 287 | | * | P |
| 7440-48-4 | Cobalt | 8.2 | B | | P |
| 7440-50-8 | Copper | 32.8 | | | P |
| 7439-89-6 | Iron | 22500 | | * | P |
| 7439-92-1 | Lead | 191 | | * | P |
| 7439-95-4 | Magnesium | 2040 | | | P |
| 7439-96-5 | Manganese | 334 | | | P |
| 7439-97-6 | Mercury | 0.13 | U | | CV |
| 7440-02-0 | Nickel | 23.1 | | N * | P |
| 7440-09-7 | Potassium | 898 | B | | P |
| 7782-49-2 | Selenium | 1.5 | | * S | F |
| 7440-22-4 | Silver | 1.3 | U | N | P |
| 7440-23-5 | Sodium | 235 | U | | P |
| 7440-28-0 | Thallium | 0.26 | U | | F |
| 7440-62-2 | Vanadium | 13.8 | | | P |
| 7440-66-6 | Zinc | 2010 | | * | P |
| | Cyanide | 0.65 | U | | C |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts: YES

Comments: PEBBLES

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-7

Level (low/med): LOW Date Received: 11/09/94

% Solids: 76.5

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 76.1 | | | |
| | Sulfide | 26.0 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-8

Level (low/med): LOW Date Received: 11/09/94

% Solids: 80.6

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 3330 | | * | P |
| 7440-36-0 | Antimony | 5.0 | U | N * | P |
| 7440-38-2 | Arsenic | 3.3 | | N * S | F |
| 7440-39-3 | Barium | 150 | | N * | P |
| 7440-41-7 | Beryllium | 0.25 | U | | P |
| 7440-43-9 | Cadmium | 6.0 | | * | P |
| 7440-70-2 | Calcium | 2090 | | | P |
| 7440-47-3 | Chromium | 43.9 | | * | P |
| 7440-48-4 | Cobalt | 5.7 | B | | P |
| 7440-50-8 | Copper | 166 | | | P |
| 7439-89-6 | Iron | 7920 | | * | P |
| 7439-92-1 | Lead | 571 | | * | P |
| 7439-95-4 | Magnesium | 1230 | B | | P |
| 7439-96-5 | Manganese | 133 | | | P |
| 7439-97-6 | Mercury | 0.30 | | | CV |
| 7440-02-0 | Nickel | 18.7 | | N * | P |
| 7440-09-7 | Potassium | 598 | B | | P |
| 7782-49-2 | Selenium | 0.33 | B | * W | F |
| 7440-22-4 | Silver | 1.2 | U | N | P |
| 7440-23-5 | Sodium | 223 | U | | P |
| 7440-28-0 | Thallium | 0.25 | U | | F |
| 7440-62-2 | Vanadium | 9.1 | B | | P |
| 7440-66-6 | Zinc | 338 | | * | P |
| | Cyanide | 0.62 | U | | C |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: PEBBLES

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-8

Level (low/med): LOW Date Received: 11/09/94

% Solids: 80.6

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 170 | | | |
| | Sulfide | 24.7 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-9

Level (low/med): LOW Date Received: 11/09/94

% Solids: 72.8

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 5590 | | * | P |
| 7440-36-0 | Antimony | 5.5 | U | N * | P |
| 7440-38-2 | Arsenic | 3.0 | | N * S | F |
| 7440-39-3 | Barium | 123 | | N * | P |
| 7440-41-7 | Beryllium | 0.47 | B | | P |
| 7440-43-9 | Cadmium | 1.9 | | * | P |
| 7440-70-2 | Calcium | 9070 | | | P |
| 7440-47-3 | Chromium | 10.4 | | * | P |
| 7440-48-4 | Cobalt | 8.0 | B | | P |
| 7440-50-8 | Copper | 21.6 | | | P |
| 7439-89-6 | Iron | 10900 | | * | P |
| 7439-92-1 | Lead | 52.0 | | * | P |
| 7439-95-4 | Magnesium | 2830 | | | P |
| 7439-96-5 | Manganese | 455 | | | P |
| 7439-97-6 | Mercury | 0.14 | U | | CV |
| 7440-02-0 | Nickel | 18.9 | | N * | P |
| 7440-09-7 | Potassium | 940 | B | | P |
| 7782-49-2 | Selenium | 1.4 | U | * | F |
| 7440-22-4 | Silver | 1.4 | U | N | P |
| 7440-23-5 | Sodium | 247 | U | | P |
| 7440-28-0 | Thallium | 0.27 | U | | F |
| 7440-62-2 | Vanadium | 13.6 | B | | P |
| 7440-66-6 | Zinc | 206 | | * | P |
| | Cyanide | 0.67 | U | | C |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: PEBBLES AND ROOTS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-9

Level (low/med): LOW Date Received: 11/09/94

% Solids: 72.8

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 4780 | | | |
| | Sulfide | 27.4 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-10

Level (low/med): LOW Date Received: 11/09/94

% Solids: 71.0

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 1030 | | * | P |
| 7440-36-0 | Antimony | 47.6 | | N * | P |
| 7440-38-2 | Arsenic | 19.3 | | N * S | F |
| 7440-39-3 | Barium | 1120 | | N * | P |
| 7440-41-7 | Beryllium | 0.28 | U | | P |
| 7440-43-9 | Cadmium | 1.2 | B | * | P |
| 7440-70-2 | Calcium | 413 | B | | P |
| 7440-47-3 | Chromium | 40.8 | | * | P |
| 7440-48-4 | Cobalt | 6.9 | B | | P |
| 7440-50-8 | Copper | 226 | | | P |
| 7439-89-6 | Iron | 65200 | | * | P |
| 7439-92-1 | Lead | 5320 | | * | P |
| 7439-95-4 | Magnesium | 89.9 | B | | P |
| 7439-96-5 | Manganese | 152 | | | P |
| 7439-97-6 | Mercury | 0.64 | | | CV |
| 7440-02-0 | Nickel | 371 | | N * | P |
| 7440-09-7 | Potassium | 2430 | | | P |
| 7782-49-2 | Selenium | 1.4 | U | * W | F |
| 7440-22-4 | Silver | 28.9 | | N | P |
| 7440-23-5 | Sodium | 476 | B | | P |
| 7440-28-0 | Thallium | 0.28 | U | | F |
| 7440-62-2 | Vanadium | 1.4 | U | | P |
| 7440-66-6 | Zinc | 120 | | * | P |
| | Cyanide | 0.70 | U | | C |

Color Before: GRAY/BROW Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: PEBBLES

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-10

Level (low/med): LOW Date Received: 11/09/94

% Solids: 71.0

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 901 | | | |
| | Sulfide | 27.7 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111

Lab Name: ARDL, INC. Contract No.: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water) SOIL Lab Sample ID: 2343-11

Level (low/med): LOW Date Received: 11/09/94

% Solids: 71.2

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 10100 | | * | P |
| 7440-36-0 | Antimony | 5.6 | U | N * | P |
| 7440-38-2 | Arsenic | 4.4 | B | N * S | F |
| 7440-39-3 | Barium | 170 | | N * | P |
| 7440-41-7 | Beryllium | 0.73 | B | | P |
| 7440-43-9 | Cadmium | 1.9 | | * | P |
| 7440-70-2 | Calcium | 11500 | | | P |
| 7440-47-3 | Chromium | 15.6 | | * | P |
| 7440-48-4 | Cobalt | 9.7 | B | | P |
| 7440-50-8 | Copper | 38.0 | | | P |
| 7439-89-6 | Iron | 17100 | | * | P |
| 7439-92-1 | Lead | 58.1 | | * | P |
| 7439-95-4 | Magnesium | 3990 | | | P |
| 7439-96-5 | Manganese | 597 | | | P |
| 7439-97-6 | Mercury | 0.14 | U | | CV |
| 7440-02-0 | Nickel | 25.9 | | N * | P |
| 7440-09-7 | Potassium | 1520 | | | P |
| 7782-49-2 | Selenium | 1.4 | U | * | F |
| 7440-22-4 | Silver | 1.4 | U | N | P |
| 7440-23-5 | Sodium | 253 | U | | P |
| 7440-28-0 | Thallium | 0.28 | U | | F |
| 7440-62-2 | Vanadium | 23.1 | | | P |
| 7440-66-6 | Zinc | 216 | | * | P |
| | Cyanide | 0.70 | U | | C |

Color Before: GRAY/BROW Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: PEBBLES

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111

Lab Name: ARDL, INC. Contract: 2343

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X101

Matrix (soil/water): SOIL Lab Sample ID: 2343-11

Level (low/med): LOW Date Received: 11/09/94

% Solids: 71.2

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 300 | | | |
| | Sulfide | 27.7 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-1

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0741

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 26 Date Analyzed: 11/15/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 15. | |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 24. | |
| 540-59-0 | 1,2-Dichloroethene (total) | 240. | |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 10. | J |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 6. | J |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 5. | J |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 8. | J |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X101

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-1

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0741

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 26 Date Analyzed: 11/15/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 10.63 | 20. | J |
| 2. | UNKNOWN | 31.07 | 30. | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101RE

.ab Name: ARDL, INC. Contract: SAUGET SA 1&2

.ab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

iatrix: (soil/water) SOIL Lab Sample ID: 2343-1RE

:ample wt/vol: 5.0 (g/mL) G Lab File ID: >D0784

.evel: (low/med) LOW Date Received: 11/09/94

. Moisture: not dec. 26 Date Analyzed: 11/17/94

:C column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 5. | J |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 21. | |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 14. | U |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X101RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-1RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0784

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 26 Date Analyzed: 11/17/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | UNKNOWN | 8.26 | 8. | J |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| 13. | | | | | |
| 14. | | | | | |
| 15. | | | | | |
| 16. | | | | | |
| 17. | | | | | |
| 18. | | | | | |
| 19. | | | | | |
| 20. | | | | | |
| 21. | | | | | |
| 22. | | | | | |
| 23. | | | | | |
| 24. | | | | | |
| 25. | | | | | |
| 26. | | | | | |
| 27. | | | | | |
| 28. | | | | | |
| 29. | | | | | |
| 30. | | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

.ab Name: ARDL, INC. Contract: SAUGET SA 1&2

.ab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

latrix: (soil/water) SOIL Lab Sample ID: 2343-2

ample wt/vol: 5.0 (g/mL) G Lab File ID: >D0742

.evel: (low/med) LOW Date Received: 11/09/94

. Moisture: not dec. 23 Date Analyzed: 11/15/94

;C column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 13. | U |
| 74-83-9 | Bromomethane | 13. | U |
| 75-01-4 | Vinyl Chloride | 13. | U |
| 75-00-3 | Chloroethane | 13. | U |
| 75-09-2 | Methylene Chloride | 6. | J |
| 67-64-1 | Acetone | 13. | U |
| 75-15-0 | Carbon Disulfide | 13. | U |
| 75-35-4 | 1,1-Dichloroethene | 13. | U |
| 75-34-3 | 1,1-Dichloroethane | 13. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 13. | U |
| 67-66-3 | Chloroform | 10. | J |
| 107-06-2 | 1,2-Dichloroethane | 13. | U |
| 78-93-3 | 2-Butanone | 13. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 13. | U |
| 56-23-5 | Carbon Tetrachloride | 13. | U |
| 75-27-4 | Bromodichloromethane | 13. | U |
| 78-87-5 | 1,2-Dichloropropane | 13. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 13. | U |
| 79-01-6 | Trichloroethene | 13. | U |
| 124-48-1 | Dibromochloromethane | 13. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 13. | U |
| 71-43-2 | Benzene | 13. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 13. | U |
| 75-25-2 | Bromoform | 13. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 13. | U |
| 591-78-6 | 2-Hexanone | 13. | U |
| 127-18-4 | Tetrachloroethene | 13. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13. | U |
| 108-88-3 | Toluene | 13. | U |
| 108-90-7 | Chlorobenzene | 13. | U |
| 100-41-4 | Ethylbenzene | 13. | U |
| 100-42-5 | Styrene | 13. | U |
| 1330-20-7 | Xylene (total) | 13. | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102

ab Name: ARDL, INC. Contract: SAUGET SA 1&2

ab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

atrix: (soil/water) SOIL Lab Sample ID: 2343-2

ample wt/vol: 5.0 (g/mL) G Lab File ID: >D0742

evel: (low/med) LOW Date Received: 11/09/94

Moisture: not dec. 23 Date Analyzed: 11/15/94

C Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

umber TICs found: 6

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 8.31 | 20. | J |
| 2. | UNKNOWN | 10.68 | 9. | J |
| 3. | UNKNOWN | 15.10 | 8. | J |
| 4. | UNKNOWN ALKANE | 27.92 | 200. | J |
| 5. | UNKNOWN | 29.42 | 7. | J |
| 6. | UNKNOWN | 32.84 | 7. | J |
| 7. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102RE

ab Name: ARDL, INC. Contract: SAUGET SA 1&2

ab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

atrix: (soil/water) SOIL Lab Sample ID: 2343-2RE

ample wt/vol: 5.0 (g/mL) G Lab File ID: >D0764

evel: (low/med) LOW Date Received: 11/09/94

Moisture: not dec. 23 Date Analyzed: 11/16/94

C column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 13. | U |
| 74-83-9 | Bromomethane | 13. | U |
| 75-01-4 | Vinyl Chloride | 13. | U |
| 75-00-3 | Chloroethane | 13. | U |
| 75-09-2 | Methylene Chloride | 14. | |
| 67-64-1 | Acetone | 13. | U |
| 75-15-0 | Carbon Disulfide | 13. | U |
| 75-35-4 | 1,1-Dichloroethene | 13. | U |
| 75-34-3 | 1,1-Dichloroethane | 13. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 13. | U |
| 67-66-3 | Chloroform | 10. | J |
| 107-06-2 | 1,2-Dichloroethane | 13. | U |
| 78-93-3 | 2-Butanone | 13. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 13. | U |
| 56-23-5 | Carbon Tetrachloride | 13. | U |
| 75-27-4 | Bromodichloromethane | 13. | U |
| 78-87-5 | 1,2-Dichloropropane | 13. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 13. | U |
| 79-01-6 | Trichloroethene | 13. | U |
| 124-48-1 | Dibromochloromethane | 13. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 13. | U |
| 71-43-2 | Benzene | 13. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 13. | U |
| 75-25-2 | Bromoform | 13. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 13. | U |
| 591-78-6 | 2-Hexanone | 13. | U |
| 127-18-4 | Tetrachloroethene | 13. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13. | U |
| 108-88-3 | Toluene | 13. | U |
| 108-90-7 | Chlorobenzene | 13. | U |
| 100-41-4 | Ethylbenzene | 13. | U |
| 100-42-5 | Styrene | 13. | U |
| 1330-20-7 | Xylene (total) | 13. | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-2RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0764

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 23 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 8

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 6.93 | 7. | J |
| 2. | UNKNOWN | 7.30 | 9. | J |
| 3. | UNKNOWN | 10.72 | 8. | J |
| 4. | UNKNOWN | 28.68 | 10. | J |
| 5. | UNKNOWN | 29.46 | 20. | J |
| 6. | UNKNOWN | 30.96 | 8. | J |
| 7. | UNKNOWN | 32.10 | 20. | J |
| 8. | UNKNOWN | 33.01 | 7. | J |
| 9. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-3

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0763

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 26 Date Analyzed: 11/16/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 14. | U |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 14. | U |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 14. | U |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X103

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-3

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0763

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 26 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-3RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0769

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 26 Date Analyzed: 11/16/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 14. | U |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 14. | U |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 14. | U |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X103RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-3RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0769

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 26 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-4

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0744

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 28 Date Analyzed: 11/15/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 14. | U |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 14. | U |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 14. | U |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X104

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-4

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0744

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 28 Date Analyzed: 11/15/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 27.88 | 200. | J |
| 2. | UNKNOWN | 31.58 | 100. | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104RE

.ab Name: ARDL, INC. Contract: SAUGET SA 1&2

.ab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

latrix: (soil/water) SOIL Lab Sample ID: 2343-4RE

ample wt/vol: 5.0 (g/mL) G Lab File ID: >D0765

.evel: (low/med) LOW Date Received: 11/09/94

. Moisture: not dec. 28 Date Analyzed: 11/16/94

;C column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 14. | U |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 14. | U |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 14. | U |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X104RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-5RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0765

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 28 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | UNKNOWN | 31.13 | 20. | J |
| 2. | | UNKNOWN | 31.54 | 90. | J |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

.ab Name: ARDL, INC. Contract: SAUGET SA 1&2

.ab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

latrix: (soil/water) SOIL Lab Sample ID: 2343-5

ample wt/vol: 5.0 (g/mL) G Lab File ID: >D0745

.evel: (low/med) LOW Date Received: 11/09/94

. Moisture: not dec. 24 Date Analyzed: 11/15/94

;C column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 13. | U |
| 74-83-9 | Bromomethane | 13. | U |
| 75-01-4 | Vinyl Chloride | 13. | U |
| 75-00-3 | Chloroethane | 13. | U |
| 75-09-2 | Methylene Chloride | 5. | J |
| 67-64-1 | Acetone | 27. | |
| 75-15-0 | Carbon Disulfide | 13. | U |
| 75-35-4 | 1,1-Dichloroethene | 13. | U |
| 75-34-3 | 1,1-Dichloroethane | 13. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 13. | U |
| 67-66-3 | Chloroform | 13. | U |
| 107-06-2 | 1,2-Dichloroethane | 13. | U |
| 78-93-3 | 2-Butanone | 13. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 13. | U |
| 56-23-5 | Carbon Tetrachloride | 13. | U |
| 75-27-4 | Bromodichloromethane | 13. | U |
| 78-87-5 | 1,2-Dichloropropane | 13. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 13. | U |
| 79-01-6 | Trichloroethene | 13. | U |
| 124-48-1 | Dibromochloromethane | 13. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 13. | U |
| 71-43-2 | Benzene | 13. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 13. | U |
| 75-25-2 | Bromoform | 13. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 13. | U |
| 591-78-6 | 2-Hexanone | 13. | U |
| 127-18-4 | Tetrachloroethene | 5. | J |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13. | U |
| 108-88-3 | Toluene | 14. | |
| 108-90-7 | Chlorobenzene | 13. | U |
| 100-41-4 | Ethylbenzene | 13. | U |
| 100-42-5 | Styrene | 13. | U |
| 1330-20-7 | Xylene (total) | 14. | |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X105

.ab Name: ARDL, INC. Contract: SAUGET SA 1&2

.ab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

latrix: (soil/water) SOIL Lab Sample ID: 2343-5

ample wt/vol: 5.0 (g/mL) G Lab File ID: >D0745

.evel: (low/med) LOW Date Received: 11/09/94

. Moisture: not dec. 24 Date Analyzed: 11/15/94

:C Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

.umber TICs found: 2

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 15.09 | 10. | J |
| 2. | UNKNOWN ALKANE | 28.82 | 100. | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-6

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0749

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 20 Date Analyzed: 11/15/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 12. | U |
| 74-83-9 | Bromomethane | 12. | U |
| 75-01-4 | Vinyl Chloride | 12. | U |
| 75-00-3 | Chloroethane | 12. | U |
| 75-09-2 | Methylene Chloride | 12. | U |
| 67-64-1 | Acetone | 12. | U |
| 75-15-0 | Carbon Disulfide | 12. | U |
| 75-35-4 | 1,1-Dichloroethene | 12. | U |
| 75-34-3 | 1,1-Dichloroethane | 12. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 12. | U |
| 67-66-3 | Chloroform | 12. | U |
| 107-06-2 | 1,2-Dichloroethane | 12. | U |
| 78-93-3 | 2-Butanone | 12. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 18. | |
| 56-23-5 | Carbon Tetrachloride | 12. | U |
| 75-27-4 | Bromodichloromethane | 12. | U |
| 78-87-5 | 1,2-Dichloropropane | 12. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 12. | U |
| 79-01-6 | Trichloroethene | 12. | U |
| 124-48-1 | Dibromochloromethane | 12. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 12. | U |
| 71-43-2 | Benzene | 12. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 12. | U |
| 75-25-2 | Bromoform | 12. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 12. | U |
| 591-78-6 | 2-Hexanone | 12. | U |
| 127-18-4 | Tetrachloroethene | 12. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 12. | U |
| 108-88-3 | Toluene | 12. | U |
| 108-90-7 | Chlorobenzene | 12. | U |
| 100-41-4 | Ethylbenzene | 12. | U |
| 100-42-5 | Styrene | 12. | U |
| 1330-20-7 | Xylene (total) | 12. | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X106

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-6

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0749

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 20 Date Analyzed: 11/15/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 3

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 2.43 | 10. | J |
| 2. | UNKNOWN | 8.32 | 8. | J |
| 3. | BENZENE, ETHYL-DIMETHYL- | 28.02 | 100. | J |
| 4. | | | | |
| 5. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-6RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0770

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 20 Date Analyzed: 11/16/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 12. | U |
| 74-83-9 | Bromomethane | 12. | U |
| 75-01-4 | Vinyl Chloride | 12. | U |
| 75-00-3 | Chloroethane | 12. | U |
| 75-09-2 | Methylene Chloride | 12. | U |
| 67-64-1 | Acetone | 12. | U |
| 75-15-0 | Carbon Disulfide | 12. | U |
| 75-35-4 | 1,1-Dichloroethene | 12. | U |
| 75-34-3 | 1,1-Dichloroethane | 12. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 12. | U |
| 67-66-3 | Chloroform | 12. | U |
| 107-06-2 | 1,2-Dichloroethane | 12. | U |
| 78-93-3 | 2-Butanone | 12. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 31. | |
| 56-23-5 | Carbon Tetrachloride | 12. | U |
| 75-27-4 | Bromodichloromethane | 12. | U |
| 78-87-5 | 1,2-Dichloropropane | 12. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 12. | U |
| 79-01-6 | Trichloroethene | 12. | U |
| 124-48-1 | Dibromochloromethane | 12. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 12. | U |
| 71-43-2 | Benzene | 12. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 12. | U |
| 75-25-2 | Bromoform | 12. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 12. | U |
| 591-78-6 | 2-Hexanone | 12. | U |
| 127-18-4 | Tetrachloroethene | 12. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 12. | U |
| 108-88-3 | Toluene | 12. | U |
| 108-90-7 | Chlorobenzene | 12. | U |
| 100-41-4 | Ethylbenzene | 12. | U |
| 100-42-5 | Styrene | 12. | U |
| 1330-20-7 | Xylene (total) | 12. | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X106RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-6RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0770

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 20 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-7

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0758

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 24 Date Analyzed: 11/16/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 13. | U |
| 74-83-9 | Bromomethane | 13. | U |
| 75-01-4 | Vinyl Chloride | 13. | U |
| 75-00-3 | Chloroethane | 13. | U |
| 75-09-2 | Methylene Chloride | 13. | U |
| 67-64-1 | Acetone | 13. | U |
| 75-15-0 | Carbon Disulfide | 13. | U |
| 75-35-4 | 1,1-Dichloroethene | 13. | U |
| 75-34-3 | 1,1-Dichloroethane | 13. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 13. | U |
| 67-66-3 | Chloroform | 13. | U |
| 107-06-2 | 1,2-Dichloroethane | 13. | U |
| 78-93-3 | 2-Butanone | 13. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 13. | U |
| 56-23-5 | Carbon Tetrachloride | 13. | U |
| 75-27-4 | Bromodichloromethane | 13. | U |
| 78-87-5 | 1,2-Dichloropropane | 13. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 13. | U |
| 79-01-6 | Trichloroethene | 13. | U |
| 124-48-1 | Dibromochloromethane | 13. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 13. | U |
| 71-43-2 | Benzene | 13. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 13. | U |
| 75-25-2 | Bromoform | 13. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 13. | U |
| 591-78-6 | 2-Hexanone | 13. | U |
| 127-18-4 | Tetrachloroethene | 13. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13. | U |
| 108-88-3 | Toluene | 13. | U |
| 108-90-7 | Chlorobenzene | 13. | U |
| 100-41-4 | Ethylbenzene | 13. | U |
| 100-42-5 | Styrene | 13. | U |
| 1330-20-7 | Xylene (total) | 13. | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X107

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-7

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0758

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 24 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 8.04 | 8. | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-8

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0759

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 20 Date Analyzed: 11/16/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 12. | U |
| 74-83-9 | Bromomethane | 12. | U |
| 75-01-4 | Vinyl Chloride | 12. | U |
| 75-00-3 | Chloroethane | 12. | U |
| 75-09-2 | Methylene Chloride | 6. | J |
| 67-64-1 | Acetone | 12. | U |
| 75-15-0 | Carbon Disulfide | 12. | U |
| 75-35-4 | 1,1-Dichloroethene | 12. | U |
| 75-34-3 | 1,1-Dichloroethane | 12. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 12. | U |
| 67-66-3 | Chloroform | 12. | U |
| 107-06-2 | 1,2-Dichloroethane | 12. | U |
| 78-93-3 | 2-Butanone | 12. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 12. | U |
| 56-23-5 | Carbon Tetrachloride | 12. | U |
| 75-27-4 | Bromodichloromethane | 12. | U |
| 78-87-5 | 1,2-Dichloropropane | 12. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 12. | U |
| 79-01-6 | Trichloroethene | 12. | U |
| 124-48-1 | Dibromochloromethane | 12. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 12. | U |
| 71-43-2 | Benzene | 12. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 12. | U |
| 75-25-2 | Bromoform | 12. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 12. | U |
| 591-78-6 | 2-Hexanone | 12. | U |
| 127-18-4 | Tetrachloroethene | 12. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 12. | U |
| 108-88-3 | Toluene | 12. | U |
| 108-90-7 | Chlorobenzene | 12. | U |
| 100-41-4 | Ethylbenzene | 12. | U |
| 100-42-5 | Styrene | 12. | U |
| 1330-20-7 | Xylene (total) | 12. | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X108

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-8

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0759

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 20 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 33.42 | 40. | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-8RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0778

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 20 Date Analyzed: 11/17/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 12. | U |
| 74-83-9 | Bromomethane | 12. | U |
| 75-01-4 | Vinyl Chloride | 12. | U |
| 75-00-3 | Chloroethane | 12. | U |
| 75-09-2 | Methylene Chloride | 6. | J |
| 67-64-1 | Acetone | 12. | U |
| 75-15-0 | Carbon Disulfide | 12. | U |
| 75-35-4 | 1,1-Dichloroethene | 12. | U |
| 75-34-3 | 1,1-Dichloroethane | 12. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 12. | U |
| 67-66-3 | Chloroform | 12. | U |
| 107-06-2 | 1,2-Dichloroethane | 12. | U |
| 78-93-3 | 2-Butanone | 12. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 12. | U |
| 56-23-5 | Carbon Tetrachloride | 12. | U |
| 75-27-4 | Bromodichloromethane | 12. | U |
| 78-87-5 | 1,2-Dichloropropane | 12. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 12. | U |
| 79-01-6 | Trichloroethene | 12. | U |
| 124-48-1 | Dibromochloromethane | 12. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 12. | U |
| 71-43-2 | Benzene | 12. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 12. | U |
| 75-25-2 | Bromoform | 12. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 12. | U |
| 591-78-6 | 2-Hexanone | 12. | U |
| 127-18-4 | Tetrachloroethene | 12. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 12. | U |
| 108-88-3 | Toluene | 12. | U |
| 108-90-7 | Chlorobenzene | 12. | U |
| 100-41-4 | Ethylbenzene | 12. | U |
| 100-42-5 | Styrene | 12. | U |
| 1330-20-7 | Xylene (total) | 12. | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X108RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-8RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0778

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 20 Date Analyzed: 11/17/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 1.77 | 10. | J |
| 2. | UNKNOWN | 7.98 | 10. | J |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-9

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0768

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 27 Date Analyzed: 11/16/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 14. | U |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 14. | U |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 14. | U |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X109

ab Name: ARDL, INC. Contract: SAUGET SA 1&2

ab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

atrix: (soil/water) SOIL Lab Sample ID: 2343-9

ample wt/vol: 5.0 (g/mL) G Lab File ID: >D0768

evel: (low/med) LOW Date Received: 11/09/94

Moisture: not dec. 27 Date Analyzed: 11/16/94

C Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

umber TICs found: 2

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | 76131 | ETHANE, 1,1,2-TRICHLORO-1,2,2 | 13.56 | 20. | JN |
| 2. | | UNKNOWN ALKANE | 32.16 | 20. | J |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-9RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0779

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 27 Date Analyzed: 11/17/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 14. | U |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 14. | U |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 14. | U |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X109RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-9RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0779

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 27 Date Analyzed: 11/17/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0761

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 29 Date Analyzed: 11/16/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 12. | J |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 14. | U |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 8. | J |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X110

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0761

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 29 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 15.10 | 7. | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-10RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0780

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 29 Date Analyzed: 11/17/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 9. | J |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 14. | U |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 5. | J |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X110RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-10RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0780

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 29 Date Analyzed: 11/17/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | UNKNOWN | 15.10 | 7. | J |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
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| 22. | | | | | |
| 23. | | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0762

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 29 Date Analyzed: 11/16/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 14. | U |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 14. | U |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 14. | U |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X111

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0762

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 29 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-11RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0781

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 29 Date Analyzed: 11/17/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 14. | U |
| 67-64-1 | Acetone | 14. | U |
| 75-15-0 | Carbon Disulfide | 14. | U |
| 75-35-4 | 1,1-Dichloroethene | 14. | U |
| 75-34-3 | 1,1-Dichloroethane | 14. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 14. | U |
| 67-66-3 | Chloroform | 14. | U |
| 107-06-2 | 1,2-Dichloroethane | 14. | U |
| 78-93-3 | 2-Butanone | 14. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 14. | U |
| 56-23-5 | Carbon Tetrachloride | 14. | U |
| 75-27-4 | Bromodichloromethane | 14. | U |
| 78-87-5 | 1,2-Dichloropropane | 14. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 14. | U |
| 79-01-6 | Trichloroethene | 14. | U |
| 124-48-1 | Dibromochloromethane | 14. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 14. | U |
| 71-43-2 | Benzene | 14. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 14. | U |
| 75-25-2 | Bromoform | 14. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 14. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 14. | U |
| 108-88-3 | Toluene | 14. | U |
| 108-90-7 | Chlorobenzene | 14. | U |
| 100-41-4 | Ethylbenzene | 14. | U |
| 100-42-5 | Styrene | 14. | U |
| 1330-20-7 | Xylene (total) | 14. | U |

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X111RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-11RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >D0781

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 29 Date Analyzed: 11/17/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | UNKNOWN | 33.50 | 10. | J |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
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| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
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| 16. | | | | | |
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| 18. | | | | | |
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| 25. | | | | | |
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| 27. | | | | | |
| 28. | | | | | |
| 29. | | | | | |
| 30. | | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7279

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 26 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1000.0

GPC Cleanup: (Y/N) Y pH: 6.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 450000. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 450000. | U |
| 95-57-8 | 2-Chlorophenol | 450000. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 450000. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 450000. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 450000. | U |
| 95-48-7 | 2-Methylphenol | 450000. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 450000. | U |
| 106-44-5 | 4-Methylphenol | 450000. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 450000. | U |
| 67-72-1 | Hexachloroethane | 450000. | U |
| 98-95-3 | Nitrobenzene | 450000. | U |
| 78-59-1 | Isophorone | 450000. | U |
| 88-75-5 | 2-Nitrophenol | 450000. | U |
| 105-67-9 | 2,4-Dimethylphenol | 450000. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 450000. | U |
| 120-83-2 | 2,4-Dichlorophenol | 450000. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 450000. | U |
| 91-20-3 | Naphthalene | 450000. | U |
| 106-47-8 | 4-Chloroaniline | 450000. | U |
| 87-68-3 | Hexachlorobutadiene | 450000. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 450000. | U |
| 91-57-6 | 2-Methylnaphthalene | 450000. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 450000. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 450000. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 1100000. | U |
| 91-58-7 | 2-Chloronaphthalene | 450000. | U |
| 88-74-4 | 2-Nitroaniline | 1100000. | U |
| 131-11-3 | Dimethylphthalate | 450000. | U |
| 208-96-8 | Acenaphthylene | 450000. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 450000. | U |
| 99-09-2 | 3-Nitroaniline | 1100000. | U |
| 83-32-9 | Acenaphthene | 450000. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7279

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 26 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1000.0

GPC Cleanup: (Y/N) Y pH: 6.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 1100000. | U |
| 100-02-7 | 4-Nitrophenol | 1100000. | U |
| 132-64-9 | Dibenzofuran | 450000. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 450000. | U |
| 84-66-2 | Diethylphthalate | 450000. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 450000. | U |
| 86-73-7 | Fluorene | 450000. | U |
| 100-01-6 | 4-Nitroaniline | 1100000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 1100000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 450000. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 450000. | U |
| 118-74-1 | Hexachlorobenzene | 450000. | U |
| 87-86-5 | Pentachlorophenol | 1100000. | U |
| 85-01-8 | Phenanthrene | 450000. | U |
| 120-12-7 | Anthracene | 450000. | U |
| 86-74-8 | Carbazole | 450000. | U |
| 84-74-2 | Di-n-butylphthalate | 450000. | U |
| 206-44-0 | Fluoranthene | 450000. | U |
| 129-00-0 | Pyrene | 450000. | U |
| 85-68-7 | Butylbenzylphthalate | 450000. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 450000. | U |
| 56-55-3 | Benzo(a)anthracene | 450000. | U |
| 218-01-9 | Chrysene | 450000. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 1200000. | B |
| 117-84-0 | Di-n-octylphthalate | 450000. | U |
| 205-99-2 | Benzo(b)fluoranthene | 450000. | U |
| 207-08-9 | Benzo(k)fluoranthene | 450000. | U |
| 50-32-8 | Benzo(a)pyrene | 450000. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 450000. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 450000. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 450000. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X101

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7279

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 26 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1000.0

GPC Cleanup: (Y/N) Y pH: 6.6

Number TICs found: 5

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | UNKNOWN PHTHALATE | 28.00 | 200000. | J |
| 2. | | UNKNOWN PHTHALATE | 28.07 | 200000. | J |
| 3. | | UNKNOWN | 28.20 | 100000. | J |
| 4. | | UNKNOWN PHTHALATE | 28.31 | 100000. | J |
| 5. | | UNKNOWN PHTHALATE | 28.45 | 400000. | J |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4090

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 23 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 4300. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 4300. | U |
| 95-57-8 | 2-Chlorophenol | 4300. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 4300. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 4300. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 4300. | U |
| 95-48-7 | 2-Methylphenol | 4300. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 4300. | U |
| 106-44-5 | 4-Methylphenol | 4300. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 4300. | U |
| 67-72-1 | Hexachloroethane | 4300. | U |
| 98-95-3 | Nitrobenzene | 4300. | U |
| 78-59-1 | Isophorone | 4300. | U |
| 88-75-5 | 2-Nitrophenol | 4300. | U |
| 105-67-9 | 2,4-Dimethylphenol | 4300. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 4300. | U |
| 120-83-2 | 2,4-Dichlorophenol | 4300. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 4300. | U |
| 91-20-3 | Naphthalene | 4300. | U |
| 106-47-8 | 4-Chloroaniline | 4300. | U |
| 87-68-3 | Hexachlorobutadiene | 4300. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 4300. | U |
| 91-57-6 | 2-Methylnaphthalene | 4300. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 4300. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 4300. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 10000. | U |
| 91-58-7 | 2-Chloronaphthalene | 4300. | U |
| 88-74-4 | 2-Nitroaniline | 10000. | U |
| 131-11-3 | Dimethylphthalate | 4300. | U |
| 208-96-8 | Acenaphthylene | 4300. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 4300. | U |
| 99-09-2 | 3-Nitroaniline | 10000. | U |
| 83-32-9 | Acenaphthene | 4300. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4090

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 23 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 10000. | U |
| 100-02-7 | 4-Nitrophenol | 10000. | U |
| 132-64-9 | Dibenzofuran | 4300. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 4300. | U |
| 84-66-2 | Diethylphthalate | 4300. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 4300. | U |
| 86-73-7 | Fluorene | 4300. | U |
| 100-01-6 | 4-Nitroaniline | 10000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 4300. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 4300. | U |
| 118-74-1 | Hexachlorobenzene | 4300. | U |
| 87-86-5 | Pentachlorophenol | 10000. | U |
| 85-01-8 | Phenanthrene | 4300. | U |
| 120-12-7 | Anthracene | 4300. | U |
| 86-74-8 | Carbazole | 4300. | U |
| 84-74-2 | Di-n-butylphthalate | 4300. | U |
| 206-44-0 | Fluoranthene | 4300. | U |
| 129-00-0 | Pyrene | 4300. | U |
| 85-68-7 | Butylbenzylphthalate | 4300. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 4300. | U |
| 56-55-3 | Benzo(a)anthracene | 4300. | U |
| 218-01-9 | Chrysene | 4300. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 13000. | B |
| 117-84-0 | Di-n-octylphthalate | 4300. | U |
| 205-99-2 | Benzo(b)fluoranthene | 4300. | U |
| 207-08-9 | Benzo(k)fluoranthene | 4300. | U |
| 50-32-8 | Benzo(a)pyrene | 4300. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 4300. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 4300. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 4300. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4090

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 23 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.6

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN ALKANE | 8.97 | 2000. | J |
| 2. | UNKNOWN | 10.83 | 2000. | J |
| 3. | UNKNOWN | 11.23 | 2000. | J |
| 4. | UNKNOWN | 12.82 | 1000. | J |
| 5. | UNKNOWN | 13.09 | 2000. | J |
| 6. | UNKNOWN | 13.42 | 5000. | J |
| 7. | UNKNOWN | 13.66 | 4000. | J |
| 8. | UNKNOWN | 13.81 | 3000. | J |
| 9. | UNKNOWN | 23.27 | 1000. | J |
| 10. | UNKNOWN | 23.55 | 3000. | J |
| 11. | UNKNOWN | 24.20 | 2000. | J |
| 12. | UNKNOWN | 26.11 | 2000. | J |
| 13. | UNKNOWN | 27.05 | 2000. | J |
| 14. | UNKNOWN | 27.23 | 3000. | J |
| 15. | UNKNOWN | 27.31 | 5000. | J |
| 16. | UNKNOWN PHTHALATE | 27.61 | 2000. | J |
| 17. | UNKNOWN PHTHALATE | 27.72 | 1000. | J |
| 18. | UNKNOWN PHTHALATE | 27.83 | 2000. | J |
| 19. | UNKNOWN | 29.02 | 1000. | J |
| 20. | UNKNOWN PHTHALATE | 31.46 | 2000000. | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-2RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4094

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: --- decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 4300. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 4300. | U |
| 95-57-8 | 2-Chlorophenol | 4300. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 4300. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 4300. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 4300. | U |
| 95-48-7 | 2-Methylphenol | 4300. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 4300. | U |
| 106-44-5 | 4-Methylphenol | 4300. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 4300. | U |
| 67-72-1 | Hexachloroethane | 4300. | U |
| 98-95-3 | Nitrobenzene | 4300. | U |
| 78-59-1 | Isophorone | 4300. | U |
| 88-75-5 | 2-Nitrophenol | 4300. | U |
| 105-67-9 | 2,4-Dimethylphenol | 4300. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 4300. | U |
| 120-83-2 | 2,4-Dichlorophenol | 4300. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 4300. | U |
| 91-20-3 | Naphthalene | 4300. | U |
| 106-47-8 | 4-Chloroaniline | 4300. | U |
| 87-68-3 | Hexachlorobutadiene | 4300. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 4300. | U |
| 91-57-6 | 2-Methylnaphthalene | 4300. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 4300. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 4300. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 10000. | U |
| 91-58-7 | 2-Chloronaphthalene | 4300. | U |
| 88-74-4 | 2-Nitroaniline | 10000. | U |
| 131-11-3 | Dimethylphthalate | 4300. | U |
| 208-96-8 | Acenaphthylene | 4300. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 4300. | U |
| 99-09-2 | 3-Nitroaniline | 10000. | U |
| 83-32-9 | Acenaphthene | 4300. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-2RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4094

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: --- decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 10000. | U |
| 100-02-7 | 4-Nitrophenol | 10000. | U |
| 132-64-9 | Dibenzofuran | 4300. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 4300. | U |
| 84-66-2 | Diethylphthalate | 4300. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 4300. | U |
| 86-73-7 | Fluorene | 4300. | U |
| 100-01-6 | 4-Nitroaniline | 10000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 10000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 4300. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 4300. | U |
| 118-74-1 | Hexachlorobenzene | 4300. | U |
| 87-86-5 | Pentachlorophenol | 10000. | U |
| 85-01-8 | Phenanthrene | 4300. | U |
| 120-12-7 | Anthracene | 4300. | U |
| 86-74-8 | Carbazole | 4300. | U |
| 84-74-2 | Di-n-butylphthalate | 4300. | U |
| 206-44-0 | Fluoranthene | 4300. | U |
| 129-00-0 | Pyrene | 4300. | U |
| 85-68-7 | Butylbenzylphthalate | 4300. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 4300. | U |
| 56-55-3 | Benzo(a)anthracene | 4300. | U |
| 218-01-9 | Chrysene | 4300. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 15000. | B |
| 117-84-0 | Di-n-octylphthalate | 4300. | U |
| 205-99-2 | Benzo(b)fluoranthene | 4300. | U |
| 207-08-9 | Benzo(k)fluoranthene | 4300. | U |
| 50-32-8 | Benzo(a)pyrene | 4300. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 4300. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 4300. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 4300. | U |

(1) - Cannot be separated from Diphenylamine

1F

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-2RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4094

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 23 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.6

Number TICs found: 15

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 8.96 | 2000. | J |
| 2. | UNKNOWN | 10.82 | 2000. | J |
| 3. | UNKNOWN | 13.30 | 1000. | J |
| 4. | UNKNOWN | 13.41 | 5000. | J |
| 5. | UNKNOWN | 13.65 | 3000. | J |
| 6. | UNKNOWN | 13.81 | 3000. | J |
| 7. | UNKNOWN | 23.25 | 1000. | J |
| 8. | UNKNOWN | 23.54 | 3000. | J |
| 9. | UNKNOWN | 24.19 | 3000. | J |
| 10. | UNKNOWN | 26.10 | 2000. | J |
| 11. | UNKNOWN | 27.05 | 2000. | J |
| 12. | UNKNOWN | 27.30 | 2000. | J |
| 13. | UNKNOWN PHTHALATE | 27.59 | 3000. | J |
| 14. | UNKNOWN PHTHALATE | 27.83 | 2000. | J |
| 15. | UNKNOWN PHTHALATE | 31.40 | 4000000. | J |
| 16. | | | | |
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7267

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 26 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/29/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.8 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 4400. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 4400. | U |
| 95-57-8 | 2-Chlorophenol | 4400. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 4400. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 4400. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 4400. | U |
| 95-48-7 | 2-Methylphenol | 4400. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 4400. | U |
| 106-44-5 | 4-Methylphenol | 4400. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 4400. | U |
| 67-72-1 | Hexachloroethane | 4400. | U |
| 98-95-3 | Nitrobenzene | 4400. | U |
| 78-59-1 | Isophorone | 4400. | U |
| 88-75-5 | 2-Nitrophenol | 4400. | U |
| 105-67-9 | 2,4-Dimethylphenol | 4400. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 4400. | U |
| 120-83-2 | 2,4-Dichlorophenol | 4400. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 4400. | U |
| 91-20-3 | Naphthalene | 4400. | U |
| 106-47-8 | 4-Chloroaniline | 4400. | U |
| 87-68-3 | Hexachlorobutadiene | 4400. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 4400. | U |
| 91-57-6 | 2-Methylnaphthalene | 4400. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 4400. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 4400. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 11000. | U |
| 91-58-7 | 2-Chloronaphthalene | 4400. | U |
| 88-74-4 | 2-Nitroaniline | 11000. | U |
| 131-11-3 | Dimethylphthalate | 4400. | U |
| 208-96-8 | Acenaphthylene | 4400. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 4400. | U |
| 99-09-2 | 3-Nitroaniline | 11000. | U |
| 83-32-9 | Acenaphthene | 4400. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7267

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 26 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/29/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.8 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 11000. | U |
| 100-02-7 | 4-Nitrophenol | 11000. | U |
| 132-64-9 | Dibenzofuran | 4400. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 4400. | U |
| 84-66-2 | Diethylphthalate | 4400. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 4400. | U |
| 86-73-7 | Fluorene | 4400. | U |
| 100-01-6 | 4-Nitroaniline | 11000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 11000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 4400. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 4400. | U |
| 118-74-1 | Hexachlorobenzene | 4400. | U |
| 87-86-5 | Pentachlorophenol | 11000. | U |
| 85-01-8 | Phenanthrene | 4400. | U |
| 120-12-7 | Anthracene | 4400. | U |
| 86-74-8 | Carbazole | 4400. | U |
| 84-74-2 | Di-n-butylphthalate | 4400. | U |
| 206-44-0 | Fluoranthene | 4400. | U |
| 129-00-0 | Pyrene | 4400. | U |
| 85-68-7 | Butylbenzylphthalate | 4400. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 4400. | U |
| 56-55-3 | Benzo(a)anthracene | 4400. | U |
| 218-01-9 | Chrysene | 4400. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 9300. | B |
| 117-84-0 | Di-n-octylphthalate | 4400. | U |
| 205-99-2 | Benzo(b)fluoranthene | 4400. | U |
| 207-08-9 | Benzo(k)fluoranthene | 4400. | U |
| 50-32-8 | Benzo(a)pyrene | 4400. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 4400. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 4400. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 4400. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X103

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7627

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 26 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/29/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.8

Number TICs found: 7

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | 1,1'-BIPHENYL, TETRACHLORO- | 22.33 | 3000. | J |
| 2. | | 1,1'-BIPHENYL, TETRACHLORO- | 22.76 | 1000. | J |
| 3. | | 1,1'-BIPHENYL, PENTACHLORO- | 23.66 | 3000. | J |
| 4. | | 1,1'-BIPHENYL, PENTACHLORO- | 24.12 | 3000. | J |
| 5. | | 1,1'-BIPHENYL, PENTACHLORO- | 24.86 | 2000. | J |
| 6. | | 1,1'-BIPHENYL, HEXACHLORO- | 26.35 | 3000. | J |
| 7. | | UNKNOWN | 32.66 | 5000. | J |
| 8. | | | | | |
| 9. | | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-4

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7294

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 28 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 50000.0

GPC Cleanup: (Y/N) Y pH: 6.7 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 23000000. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 23000000. | U |
| 95-57-8 | 2-Chlorophenol | 23000000. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 23000000. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 23000000. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 23000000. | U |
| 95-48-7 | 2-Methylphenol | 23000000. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 23000000. | U |
| 106-44-5 | 4-Methylphenol | 23000000. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 23000000. | U |
| 67-72-1 | Hexachloroethane | 23000000. | U |
| 98-95-3 | Nitrobenzene | 23000000. | U |
| 78-59-1 | Isophorone | 23000000. | U |
| 88-75-5 | 2-Nitrophenol | 23000000. | U |
| 105-67-9 | 2,4-Dimethylphenol | 23000000. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 23000000. | U |
| 120-83-2 | 2,4-Dichlorophenol | 23000000. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 23000000. | U |
| 91-20-3 | Naphthalene | 23000000. | U |
| 106-47-8 | 4-Chloroaniline | 23000000. | U |
| 87-68-3 | Hexachlorobutadiene | 23000000. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 23000000. | U |
| 91-57-6 | 2-Methylnaphthalene | 23000000. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 23000000. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 23000000. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 56000000. | U |
| 91-58-7 | 2-Chloronaphthalene | 23000000. | U |
| 88-74-4 | 2-Nitroaniline | 56000000. | U |
| 131-11-3 | Dimethylphthalate | 23000000. | U |
| 208-96-8 | Acenaphthylene | 23000000. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 23000000. | U |
| 99-09-2 | 3-Nitroaniline | 56000000. | U |
| 83-32-9 | Acenaphthene | 23000000. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-4

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7294

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 28 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 50000.0

GPC Cleanup: (Y/N) Y pH: 6.7 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 56000000. | U |
| 100-02-7 | 4-Nitrophenol | 56000000. | U |
| 132-64-9 | Dibenzofuran | 23000000. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 23000000. | U |
| 84-66-2 | Diethylphthalate | 23000000. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 23000000. | U |
| 86-73-7 | Fluorene | 23000000. | U |
| 100-01-6 | 4-Nitroaniline | 56000000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 56000000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 23000000. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 23000000. | U |
| 118-74-1 | Hexachlorobenzene | 23000000. | U |
| 87-86-5 | Pentachlorophenol | 56000000. | U |
| 85-01-8 | Phenanthrene | 23000000. | U |
| 120-12-7 | Anthracene | 23000000. | U |
| 86-74-8 | Carbazole | 23000000. | U |
| 84-74-2 | Di-n-butylphthalate | 23000000. | U |
| 206-44-0 | Fluoranthene | 23000000. | U |
| 129-00-0 | Pyrene | 23000000. | U |
| 85-68-7 | Butylbenzylphthalate | 23000000. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 23000000. | U |
| 56-55-3 | Benzo(a)anthracene | 23000000. | U |
| 218-01-9 | Chrysene | 23000000. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 110000000. | B |
| 117-84-0 | Di-n-octylphthalate | 23000000. | U |
| 205-99-2 | Benzo(b)fluoranthene | 23000000. | U |
| 207-08-9 | Benzo(k)fluoranthene | 23000000. | U |
| 50-32-8 | Benzo(a)pyrene | 23000000. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 23000000. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 23000000. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 23000000. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X104

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-4

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7294

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 28 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 50000.0

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

Number TICs found: 0

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-5

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7270

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 24 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 2.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 4300. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 4300. | U |
| 95-57-8 | 2-Chlorophenol | 4300. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 4300. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 4300. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 4300. | U |
| 95-48-7 | 2-Methylphenol | 4300. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 4300. | U |
| 106-44-5 | 4-Methylphenol | 4300. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 4300. | U |
| 67-72-1 | Hexachloroethane | 4300. | U |
| 98-95-3 | Nitrobenzene | 4300. | U |
| 78-59-1 | Isophorone | 4300. | U |
| 88-75-5 | 2-Nitrophenol | 4300. | U |
| 105-67-9 | 2,4-Dimethylphenol | 4300. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 4300. | U |
| 120-83-2 | 2,4-Dichlorophenol | 4300. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 4300. | U |
| 91-20-3 | Naphthalene | 4300. | U |
| 106-47-8 | 4-Chloroaniline | 4300. | U |
| 87-68-3 | Hexachlorobutadiene | 4300. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 4300. | U |
| 91-57-6 | 2-Methylnaphthalene | 4300. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 4300. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 4300. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 11000. | U |
| 91-58-7 | 2-Chloronaphthalene | 4300. | U |
| 88-74-4 | 2-Nitroaniline | 11000. | U |
| 131-11-3 | Dimethylphthalate | 4300. | U |
| 208-96-8 | Acenaphthylene | 4300. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 4300. | U |
| 99-09-2 | 3-Nitroaniline | 11000. | U |
| 83-32-9 | Acenaphthene | 4300. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-5

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7270

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 24 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 2.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 11000. | U |
| 100-02-7 | 4-Nitrophenol | 11000. | U |
| 132-64-9 | Dibenzofuran | 4300. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 4300. | U |
| 84-66-2 | Diethylphthalate | 4300. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 4300. | U |
| 86-73-7 | Fluorene | 4300. | U |
| 100-01-6 | 4-Nitroaniline | 11000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 11000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 4300. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 4300. | U |
| 118-74-1 | Hexachlorobenzene | 4300. | U |
| 87-86-5 | Pentachlorophenol | 11000. | U |
| 85-01-8 | Phenanthrene | 4300. | U |
| 120-12-7 | Anthracene | 4300. | U |
| 86-74-8 | Carbazole | 4300. | U |
| 84-74-2 | Di-n-butylphthalate | 4300. | U |
| 206-44-0 | Fluoranthene | 4300. | U |
| 129-00-0 | Pyrene | 4300. | U |
| 85-68-7 | Butylbenzylphthalate | 4300. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 4300. | U |
| 56-55-3 | Benzo(a)anthracene | 4300. | U |
| 218-01-9 | Chrysene | 4300. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 13000. | B |
| 117-84-0 | Di-n-octylphthalate | 4300. | U |
| 205-99-2 | Benzo(b)fluoranthene | 4300. | U |
| 207-08-9 | Benzo(k)fluoranthene | 4300. | U |
| 50-32-8 | Benzo(a)pyrene | 4300. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 4300. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 4300. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 4300. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X105

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-5

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7270

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 24 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 2.6

Number TICs found: 17

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | UNKNOWN | 17.19 | 3000. | J |
| 2. | | 1,1'-BIPHENYL, TETRACHLORO- | 22.30 | 2000. | J |
| 3. | | UNKNOWN | 22.39 | 1000. | J |
| 4. | | 1,1'-BIPHENYL, TETRACHLORO- | 22.74 | 1000. | J |
| 5. | | 1,1'-BIPHENYL, TETRACHLORO- | 23.02 | 900. | J |
| 6. | | UNKNOWN | 23.47 | 3000. | J |
| 7. | | 1,1'-BIPHENYL, TETRACHLORO- | 23.63 | 2000. | J |
| 8. | | 1,1'-BIPHENYL, TETRACHLORO- | 23.97 | 1000. | J |
| 9. | | 1,1'-BIPHENYL, PENTACHLORO- | 24.08 | 2000. | J |
| 10. | | 1,1'-BIPHENYL, PENTACHLORO- | 24.82 | 1000. | J |
| 11. | | 1,1'-BIPHENYL, PENTACHLORO- | 25.33 | 1000. | J |
| 12. | | UNKNOWN | 26.18 | 2000. | J |
| 13. | | UNKNOWN PHTHALATE | 28.00 | 2000. | J |
| 14. | | UNKNOWN | 28.20 | 2000. | J |
| 15. | | UNKNOWN PHTHALATE | 28.45 | 2000. | J |
| 16. | | UNKNOWN PHTHALATE | 29.61 | 1000. | J |
| 17. | | UNKNOWN ALKANE | 30.19 | 1000. | J |
| 18. | | | | | |
| 19. | | | | | |
| 20. | | | | | |
| 21. | | | | | |
| 22. | | | | | |
| 23. | | | | | |
| 24. | | | | | |
| 25. | | | | | |
| 26. | | | | | |
| 27. | | | | | |
| 28. | | | | | |
| 29. | | | | | |
| 30. | | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-6

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7281

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 20 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 250.0

GPC Cleanup: (Y/N) Y pH: 6.1 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 100000. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 100000. | U |
| 95-57-8 | 2-Chlorophenol | 100000. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 100000. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 100000. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 100000. | U |
| 95-48-7 | 2-Methylphenol | 100000. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 100000. | U |
| 106-44-5 | 4-Methylphenol | 100000. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 100000. | U |
| 67-72-1 | Hexachloroethane | 100000. | U |
| 98-95-3 | Nitrobenzene | 100000. | U |
| 78-59-1 | Isophorone | 100000. | U |
| 88-75-5 | 2-Nitrophenol | 100000. | U |
| 105-67-9 | 2,4-Dimethylphenol | 100000. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 100000. | U |
| 120-83-2 | 2,4-Dichlorophenol | 100000. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 100000. | U |
| 91-20-3 | Naphthalene | 100000. | U |
| 106-47-8 | 4-Chloroaniline | 100000. | U |
| 87-68-3 | Hexachlorobutadiene | 100000. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 100000. | U |
| 91-57-6 | 2-Methylnaphthalene | 100000. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 100000. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 100000. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 250000. | U |
| 91-58-7 | 2-Chloronaphthalene | 100000. | U |
| 88-74-4 | 2-Nitroaniline | 250000. | U |
| 131-11-3 | Dimethylphthalate | 100000. | U |
| 208-96-8 | Acenaphthylene | 100000. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 100000. | U |
| 99-09-2 | 3-Nitroaniline | 250000. | U |
| 83-32-9 | Acenaphthene | 100000. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-6

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7281

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 20 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 250.0

GPC Cleanup: (Y/N) Y pH: 6.1 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 250000. | U |
| 100-02-7 | 4-Nitrophenol | 250000. | U |
| 132-64-9 | Dibenzofuran | 100000. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 100000. | U |
| 84-66-2 | Diethylphthalate | 100000. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 100000. | U |
| 86-73-7 | Fluorene | 100000. | U |
| 100-01-6 | 4-Nitroaniline | 250000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 250000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 100000. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 100000. | U |
| 118-74-1 | Hexachlorobenzene | 100000. | U |
| 87-86-5 | Pentachlorophenol | 250000. | U |
| 85-01-8 | Phenanthrene | 100000. | U |
| 120-12-7 | Anthracene | 100000. | U |
| 86-74-8 | Carbazole | 100000. | U |
| 84-74-2 | Di-n-butylphthalate | 100000. | U |
| 206-44-0 | Fluoranthene | 100000. | U |
| 129-00-0 | Pyrene | 100000. | U |
| 85-68-7 | Butylbenzylphthalate | 100000. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 100000. | U |
| 56-55-3 | Benzo(a)anthracene | 100000. | U |
| 218-01-9 | Chrysene | 100000. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 120000. | B |
| 117-84-0 | Di-n-octylphthalate | 100000. | U |
| 205-99-2 | Benzo(b)fluoranthene | 100000. | U |
| 207-08-9 | Benzo(k)fluoranthene | 100000. | U |
| 50-32-8 | Benzo(a)pyrene | 100000. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 100000. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 100000. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 100000. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X106

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-6

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7281

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 20 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 250.0

GPC Cleanup: (Y/N) Y pH: 6.1

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN AROMATIC | 8.48 | 70000. | J |
| 2. | UNKNOWN AROMATIC | 9.58 | 200000. | J |
| 3. | UNKNOWN AROMATIC | 10.15 | 100000. | J |
| 4. | UNKNOWN AROMATIC | 10.28 | 80000. | J |
| 5. | UNKNOWN ALKANE | 11.01 | 200000. | J |
| 6. | UNKNOWN | 11.11 | 60000. | J |
| 7. | UNKNOWN AROMATIC | 11.31 | 90000. | J |
| 8. | UNKNOWN AROMATIC | 11.40 | 70000. | J |
| 9. | UNKNOWN | 11.47 | 60000. | J |
| 10. | UNKNOWN | 11.82 | 80000. | J |
| 11. | UNKNOWN AROMATIC | 11.94 | 200000. | J |
| 12. | UNKNOWN | 12.11 | 80000. | J |
| 13. | UNKNOWN | 15.07 | 200000. | J |
| 14. | UNKNOWN | 24.70 | 2000000. | J |
| 15. | UNKNOWN PHTHALATE | 28.91 | 100000. | J |
| 16. | UNKNOWN PHTHALATE | 29.14 | 200000. | J |
| 17. | UNKNOWN PHTHALATE | 29.38 | 100000. | J |
| 18. | UNKNOWN PHTHALATE | 30.73 | 80000000. | J |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-7

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4083

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 24 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 430. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 430. | U |
| 95-57-8 | 2-Chlorophenol | 430. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 430. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 430. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 430. | U |
| 95-48-7 | 2-Methylphenol | 270. | J |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 430. | U |
| 106-44-5 | 4-Methylphenol | 280. | J |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 430. | U |
| 67-72-1 | Hexachloroethane | 430. | U |
| 98-95-3 | Nitrobenzene | 430. | U |
| 78-59-1 | Isophorone | 210. | J |
| 88-75-5 | 2-Nitrophenol | 430. | U |
| 105-67-9 | 2,4-Dimethylphenol | 270. | J |
| 111-91-1 | bis(2-Chloroethoxy)methane | 430. | U |
| 120-83-2 | 2,4-Dichlorophenol | 430. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 430. | U |
| 91-20-3 | Naphthalene | 430. | U |
| 106-47-8 | 4-Chloroaniline | 430. | U |
| 87-68-3 | Hexachlorobutadiene | 430. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 430. | U |
| 91-57-6 | 2-Methylnaphthalene | 430. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 430. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 430. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 1000. | U |
| 91-58-7 | 2-Chloronaphthalene | 430. | U |
| 88-74-4 | 2-Nitroaniline | 1000. | U |
| 131-11-3 | Dimethylphthalate | 430. | U |
| 208-96-8 | Acenaphthylene | 430. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 430. | U |
| 99-09-2 | 3-Nitroaniline | 1000. | U |
| 83-32-9 | Acenaphthene | 430. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-7

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4083

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 24 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 1000. | U |
| 100-02-7 | 4-Nitrophenol | 1000. | U |
| 132-64-9 | Dibenzofuran | 430. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 430. | U |
| 84-66-2 | Diethylphthalate | 430. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 430. | U |
| 86-73-7 | Fluorene | 430. | U |
| 100-01-6 | 4-Nitroaniline | 1000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 1000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 430. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 430. | U |
| 118-74-1 | Hexachlorobenzene | 430. | U |
| 87-86-5 | Pentachlorophenol | 1000. | U |
| 85-01-8 | Phenanthrene | 430. | U |
| 120-12-7 | Anthracene | 430. | U |
| 86-74-8 | Carbazole | 430. | U |
| 84-74-2 | Di-n-butylphthalate | 430. | U |
| 206-44-0 | Fluoranthene | 430. | U |
| 129-00-0 | Pyrene | 430. | U |
| 85-68-7 | Butylbenzylphthalate | 120. | J |
| 91-94-1 | 3,3'-Dichlorobenzidine | 430. | U |
| 56-55-3 | Benzo(a)anthracene | 430. | U |
| 218-01-9 | Chrysene | 430. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 1900. | B |
| 117-84-0 | Di-n-octylphthalate | 430. | U |
| 205-99-2 | Benzo(b)fluoranthene | 430. | U |
| 207-08-9 | Benzo(k)fluoranthene | 430. | U |
| 50-32-8 | Benzo(a)pyrene | 430. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 430. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 430. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 430. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X107

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-7

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4083

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 24 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 15.19 | 900. | J |
| 2. | UNKNOWN | 15.80 | 3000. | J |
| 3. | UNKNOWN | 16.40 | 900. | J |
| 4. | UNKNOWN | 19.91 | 1000. | J |
| 5. | 1,1'-BIPHENYL, TETRACHLORO- | 23.05 | 3000. | J |
| 6. | 1,1'-BIPHENYL, TETRACHLORO- | 23.49 | 800. | J |
| 7. | UNKNOWN | 24.13 | 1000. | J |
| 8. | 1,1'-BIPHENYL, TETRACHLORO- | 24.30 | 1000. | J |
| 9. | 1,1'-BIPHENYL, PENTACHLORO- | 24.40 | 2000. | J |
| 10. | 1,1'-BIPHENYL, PENTACHLORO- | 24.72 | 800. | J |
| 11. | 1,1'-BIPHENYL, PENTACHLORO- | 24.85 | 2000. | J |
| 12. | 1,1'-BIPHENYL, PENTACHLORO- | 24.95 | 2000. | J |
| 13. | 1,1'-BIPHENYL, HEXACHLORO- | 26.06 | 2000. | J |
| 14. | 1,1'-BIPHENYL, PENTACHLORO- | 26.10 | 1000. | J |
| 15. | 1,1'-BIPHENYL, HEXACHLORO- | 26.53 | 1000. | J |
| 16. | UNKNOWN | 26.99 | 2000. | J |
| 17. | 1,1'-BIPHENYL, HEXACHLORO- | 27.08 | 2000. | J |
| 18. | UNKNOWN | 28.97 | 1000. | J |
| 19. | UNKNOWN | 29.32 | 4000. | J |
| 20. | UNKNOWN | 30.91 | 900. | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-8

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4086

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 20 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 830. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 830. | U |
| 95-57-8 | 2-Chlorophenol | 830. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 830. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 830. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 830. | U |
| 95-48-7 | 2-Methylphenol | 830. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 830. | U |
| 106-44-5 | 4-Methylphenol | 830. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 830. | U |
| 67-72-1 | Hexachloroethane | 830. | U |
| 98-95-3 | Nitrobenzene | 830. | U |
| 78-59-1 | Isophorone | 830. | U |
| 88-75-5 | 2-Nitrophenol | 830. | U |
| 105-67-9 | 2,4-Dimethylphenol | 830. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 830. | U |
| 120-83-2 | 2,4-Dichlorophenol | 830. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 830. | U |
| 91-20-3 | Naphthalene | 830. | U |
| 106-47-8 | 4-Chloroaniline | 830. | U |
| 87-68-3 | Hexachlorobutadiene | 160. | J |
| 59-50-7 | 4-Chloro-3-methylphenol | 830. | U |
| 91-57-6 | 2-Methylnaphthalene | 830. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 830. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 830. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 2000. | U |
| 91-58-7 | 2-Chloronaphthalene | 830. | U |
| 88-74-4 | 2-Nitroaniline | 2000. | U |
| 131-11-3 | Dimethylphthalate | 830. | U |
| 208-96-8 | Acenaphthylene | 830. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 830. | U |
| 99-09-2 | 3-Nitroaniline | 2000. | U |
| 83-32-9 | Acenaphthene | 830. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-8

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4086

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 20 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 2000. | U |
| 100-02-7 | 4-Nitrophenol | 2000. | U |
| 132-64-9 | Dibenzofuran | 830. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 830. | U |
| 84-66-2 | Diethylphthalate | 830. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 830. | U |
| 86-73-7 | Fluorene | 830. | U |
| 100-01-6 | 4-Nitroaniline | 2000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 2000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 830. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 830. | U |
| 118-74-1 | Hexachlorobenzene | 830. | U |
| 87-86-5 | Pentachlorophenol | 2000. | U |
| 85-01-8 | Phenanthrene | 830. | U |
| 120-12-7 | Anthracene | 830. | U |
| 86-74-8 | Carbazole | 830. | U |
| 84-74-2 | Di-n-butylphthalate | 340. | J |
| 206-44-0 | Fluoranthene | 830. | U |
| 129-00-0 | Pyrene | 830. | U |
| 85-68-7 | Butylbenzylphthalate | 830. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 830. | U |
| 56-55-3 | Benzo(a)anthracene | 830. | U |
| 218-01-9 | Chrysene | 830. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 3800. | B |
| 117-84-0 | Di-n-octylphthalate | 830. | U |
| 205-99-2 | Benzo(b)fluoranthene | 830. | U |
| 207-08-9 | Benzo(k)fluoranthene | 830. | U |
| 50-32-8 | Benzo(a)pyrene | 830. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 830. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 830. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 830. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X108

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-8

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4086

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 20 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

PC Cleanup: (Y/N) Y pH: 6.6

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 15.21 | 600. | J |
| 2. | UNKNOWN | 15.57 | 500. | J |
| 3. | UNKNOWN | 17.31 | 500. | J |
| 4. | UNKNOWN | 19.93 | 1000. | J |
| 5. | 1,1'-BIPHENYL, TRICHLORO- | 21.75 | 400. | J |
| 6. | 1,1'-BIPHENYL, TRICHLORO- | 22.33 | 1000. | J |
| 7. | 1,1'-BIPHENYL, TETRACHLORO- | 22.56 | 300. | J |
| 8. | 1,1'-BIPHENYL, TETRACHLORO- | 23.19 | 1000. | J |
| 9. | 1,1'-BIPHENYL, TETRACHLORO- | 23.26 | 700. | J |
| 10. | 1,1'-BIPHENYL, TETRACHLORO- | 23.54 | 1000. | J |
| 11. | 1,1'-BIPHENYL, TETRACHLORO- | 23.79 | 1000. | J |
| 12. | 1,1'-BIPHENYL, TETRACHLORO- | 24.28 | 700. | J |
| 13. | 1,1'-BIPHENYL, TETRACHLORO- | 24.37 | 2000. | J |
| 14. | 1,1'-BIPHENYL, TETRACHLORO- | 24.44 | 1000. | J |
| 15. | UNKNOWN | 24.70 | 700. | J |
| 16. | 1,1'-BIPHENYL, TETRACHLORO- | 24.79 | 700. | J |
| 17. | 1,1'-BIPHENYL, PENTACHLORO- | 24.90 | 1000. | J |
| 18. | 1,1'-BIPHENYL, PENTACHLORO- | 25.01 | 400. | J |
| 19. | UNKNOWN | 26.51 | 1000. | J |
| 20. | UNKNOWN | 29.10 | 700. | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-9

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4087

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 27 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 450. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 450. | U |
| 95-57-8 | 2-Chlorophenol | 450. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 450. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 450. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 450. | U |
| 95-48-7 | 2-Methylphenol | 450. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 450. | U |
| 106-44-5 | 4-Methylphenol | 450. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 450. | U |
| 67-72-1 | Hexachloroethane | 450. | U |
| 98-95-3 | Nitrobenzene | 450. | U |
| 78-59-1 | Isophorone | 450. | U |
| 88-75-5 | 2-Nitrophenol | 450. | U |
| 105-67-9 | 2,4-Dimethylphenol | 450. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 450. | U |
| 120-83-2 | 2,4-Dichlorophenol | 450. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 450. | U |
| 91-20-3 | Naphthalene | 450. | U |
| 106-47-8 | 4-Chloroaniline | 450. | U |
| 87-68-3 | Hexachlorobutadiene | 450. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 450. | U |
| 91-57-6 | 2-Methylnaphthalene | 450. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 450. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 450. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 1100. | U |
| 91-58-7 | 2-Chloronaphthalene | 450. | U |
| 88-74-4 | 2-Nitroaniline | 1100. | U |
| 131-11-3 | Dimethylphthalate | 450. | U |
| 208-96-8 | Acenaphthylene | 450. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 450. | U |
| 99-09-2 | 3-Nitroaniline | 1100. | U |
| 83-32-9 | Acenaphthene | 450. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-9

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4087

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 27 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.6 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 1100. | U |
| 100-02-7 | 4-Nitrophenol | 1100. | U |
| 132-64-9 | Dibenzofuran | 450. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 450. | U |
| 84-66-2 | Diethylphthalate | 450. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 450. | U |
| 86-73-7 | Fluorene | 450. | U |
| 100-01-6 | 4-Nitroaniline | 1100. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 1100. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 450. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 450. | U |
| 118-74-1 | Hexachlorobenzene | 450. | U |
| 87-86-5 | Pentachlorophenol | 1100. | U |
| 85-01-8 | Phenanthrene | 76. | J |
| 120-12-7 | Anthracene | 450. | U |
| 86-74-8 | Carbazole | 450. | U |
| 84-74-2 | Di-n-butylphthalate | 310. | J |
| 206-44-0 | Fluoranthene | 160. | J |
| 129-00-0 | Pyrene | 170. | J |
| 85-68-7 | Butylbenzylphthalate | 450. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 450. | U |
| 56-55-3 | Benzo(a)anthracene | 89. | J |
| 218-01-9 | Chrysene | 110. | J |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 310. | JB. |
| 117-84-0 | Di-n-octylphthalate | 450. | U |
| 205-99-2 | Benzo(b)fluoranthene | 87. | J |
| 207-08-9 | Benzo(k)fluoranthene | 96. | J |
| 50-32-8 | Benzo(a)pyrene | 84. | J |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 450. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 450. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 450. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X109

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-9

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4087

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 27 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.6

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. 3658808 | TRISULFIDE, DIMETHYL | 9.22 | 300. | JN |
| 2. | UNKNOWN | 10.73 | 400. | J |
| 3. | UNKNOWN | 13.75 | 600. | J |
| 4. | UNKNOWN | 15.20 | 200. | J |
| 5. | UNKNOWN | 22.82 | 400. | J |
| 6. | UNKNOWN | 24.13 | 200. | J |
| 7. | 1,1'-BIPHENYL, TETRACHLORO- | 24.23 | 200. | J |
| 8. | 1,1'-BIPHENYL, TETRACHLORO- | 24.30 | 500. | J |
| 9. | 1,1'-BIPHENYL, TETRACHLORO- | 24.72 | 400. | J |
| 10. | 1,1'-BIPHENYL, PENTACHLORO- | 24.84 | 400. | J |
| 11. | UNKNOWN | 25.25 | 200. | J |
| 12. | 1,1'-BIPHENYL, PENTACHLORO- | 26.09 | 200. | J |
| 13. | 1,1'-BIPHENYL, HEXACHLORO- | 26.51 | 200. | J |
| 14. | 1,1'-BIPHENYL, PENTACHLORO- | 26.62 | 200. | J |
| 15. | 1,1'-BIPHENYL, HEXACHLORO- | 27.06 | 200. | J |
| 16. | UNKNOWN ALKANE | 27.84 | 300. | J |
| 17. | UNKNOWN | 29.41 | 700. | J |
| 18. | UNKNOWN | 30.15 | 200. | J |
| 19. | UNKNOWN ALKANE | 30.89 | 800. | J |
| 20. | UNKNOWN ALKANE | 32.53 | 700. | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4088

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 29 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.7 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 460. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 460. | U |
| 95-57-8 | 2-Chlorophenol | 460. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 460. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 460. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 460. | U |
| 95-48-7 | 2-Methylphenol | 460. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 460. | U |
| 106-44-5 | 4-Methylphenol | 460. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 460. | U |
| 67-72-1 | Hexachloroethane | 460. | U |
| 98-95-3 | Nitrobenzene | 460. | U |
| 78-59-1 | Isophorone | 460. | U |
| 88-75-5 | 2-Nitrophenol | 460. | U |
| 105-67-9 | 2,4-Dimethylphenol | 460. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 460. | U |
| 120-83-2 | 2,4-Dichlorophenol | 460. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 460. | U |
| 91-20-3 | Naphthalene | 460. | U |
| 106-47-8 | 4-Chloroaniline | 460. | U |
| 87-68-3 | Hexachlorobutadiene | 460. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 460. | U |
| 91-57-6 | 2-Methylnaphthalene | 460. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 460. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 460. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 1100. | U |
| 91-58-7 | 2-Chloronaphthalene | 460. | U |
| 88-74-4 | 2-Nitroaniline | 1100. | U |
| 131-11-3 | Dimethylphthalate | 460. | U |
| 208-96-8 | Acenaphthylene | 460. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 460. | U |
| 99-09-2 | 3-Nitroaniline | 1100. | U |
| 83-32-9 | Acenaphthene | 460. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4088

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 29 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.7 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 1100. | U |
| 100-02-7 | 4-Nitrophenol | 1100. | U |
| 132-64-9 | Dibenzofuran | 460. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 460. | U |
| 84-66-2 | Diethylphthalate | 460. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 460. | U |
| 86-73-7 | Fluorene | 460. | U |
| 100-01-6 | 4-Nitroaniline | 1100. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 1100. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 460. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 460. | U |
| 118-74-1 | Hexachlorobenzene | 460. | U |
| 87-86-5 | Pentachlorophenol | 1100. | U |
| 85-01-8 | Phenanthrene | 460. | U |
| 120-12-7 | Anthracene | 460. | U |
| 86-74-8 | Carbazole | 460. | U |
| 84-74-2 | Di-n-butylphthalate | 380. | J |
| 206-44-0 | Fluoranthene | 460. | U |
| 129-00-0 | Pyrene | 460. | U |
| 85-68-7 | Butylbenzylphthalate | 460. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 460. | U |
| 56-55-3 | Benzo(a)anthracene | 460. | U |
| 218-01-9 | Chrysene | 460. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 1000. | B |
| 117-84-0 | Di-n-octylphthalate | 460. | U |
| 205-99-2 | Benzo(b)fluoranthene | 460. | U |
| 207-08-9 | Benzo(k)fluoranthene | 460. | U |
| 50-32-8 | Benzo(a)pyrene | 460. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 460. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 460. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 460. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X110

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4088

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 29 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

PC Cleanup: (Y/N) Y pH: 3.7

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 8.94 | 100. | J |
| 2. | UNKNOWN | 10.73 | 100. | J |
| 3. | UNKNOWN | 12.58 | 200. | J |
| 4. | UNKNOWN | 13.75 | 100. | J |
| 5. | UNKNOWN | 14.44 | 200. | J |
| 6. | UNKNOWN | 21.08 | 100. | J |
| 7. | UNKNOWN | 24.98 | 500. | J |
| 8. | UNKNOWN ALKANE | 25.25 | 100. | J |
| 9. | UNKNOWN | 25.82 | 400. | J |
| 10. | UNKNOWN ALKANE | 26.15 | 200. | J |
| 11. | UNKNOWN | 26.88 | 100. | J |
| 12. | UNKNOWN ALKANE | 27.02 | 200. | J |
| 13. | UNKNOWN ALKANE | 27.85 | 400. | J |
| 14. | UNKNOWN | 28.31 | 200. | J |
| 15. | UNKNOWN ALKANE | 28.66 | 400. | J |
| 16. | UNKNOWN ALKANE | 29.42 | 500. | J |
| 17. | UNKNOWN ALKANE | 30.17 | 600. | J |
| 18. | UNKNOWN ALKANE | 30.90 | 800. | J |
| 19. | UNKNOWN ALKANE | 32.54 | 800. | J |
| 20. | UNKNOWN ALKANE | 33.54 | 400. | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4089

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 29 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 460. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 460. | U |
| 95-57-8 | 2-Chlorophenol | 460. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 460. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 460. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 460. | U |
| 95-48-7 | 2-Methylphenol | 460. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 460. | U |
| 106-44-5 | 4-Methylphenol | 460. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 460. | U |
| 67-72-1 | Hexachloroethane | 460. | U |
| 98-95-3 | Nitrobenzene | 460. | U |
| 78-59-1 | Isophorone | 460. | U |
| 88-75-5 | 2-Nitrophenol | 460. | U |
| 105-67-9 | 2,4-Dimethylphenol | 460. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 460. | U |
| 120-83-2 | 2,4-Dichlorophenol | 460. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 460. | U |
| 91-20-3 | Naphthalene | 460. | U |
| 106-47-8 | 4-Chloroaniline | 460. | U |
| 87-68-3 | Hexachlorobutadiene | 460. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 460. | U |
| 91-57-6 | 2-Methylnaphthalene | 460. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 460. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 460. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 1100. | U |
| 91-58-7 | 2-Chloronaphthalene | 460. | U |
| 88-74-4 | 2-Nitroaniline | 1100. | U |
| 131-11-3 | Dimethylphthalate | 460. | U |
| 208-96-8 | Acenaphthylene | 460. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 460. | U |
| 99-09-2 | 3-Nitroaniline | 1100. | U |
| 83-32-9 | Acenaphthene | 460. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4089

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: 29 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 1100. | U |
| 100-02-7 | 4-Nitrophenol | 1100. | U |
| 132-64-9 | Dibenzofuran | 460. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 460. | U |
| 84-66-2 | Diethylphthalate | 460. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 460. | U |
| 86-73-7 | Fluorene | 460. | U |
| 100-01-6 | 4-Nitroaniline | 1100. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 1100. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 460. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 460. | U |
| 118-74-1 | Hexachlorobenzene | 460. | U |
| 87-86-5 | Pentachlorophenol | 1100. | U |
| 85-01-8 | Phenanthrene | 73. | J |
| 120-12-7 | Anthracene | 62. | J |
| 86-74-8 | Carbazole | 460. | U |
| 84-74-2 | Di-n-butylphthalate | 250. | J |
| 206-44-0 | Fluoranthene | 140. | J |
| 129-00-0 | Pyrene | 140. | J |
| 85-68-7 | Butylbenzylphthalate | 460. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 460. | U |
| 56-55-3 | Benzo(a)anthracene | 460. | U |
| 218-01-9 | Chrysene | 110. | J |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 1500. | |
| 117-84-0 | Di-n-octylphthalate | 460. | U |
| 205-99-2 | Benzo(b)fluoranthene | 110. | J |
| 207-08-9 | Benzo(k)fluoranthene | 88. | J |
| 50-32-8 | Benzo(a)pyrene | 460. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 460. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 460. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 460. | U |

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X111

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X101

Matrix: (soil/water) SOIL Lab Sample ID: 2343-11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >W4089

Level: (low/med) LOW Date Received: 11/09/94

% Moisture: not dec. 29 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 10.72 | 300. | J |
| 2. | UNKNOWN | 15.20 | 600. | J |
| 3. | UNKNOWN | 16.41 | 300. | J |
| 4. | UNKNOWN ALKANE | 20.07 | 600. | J |
| 5. | UNKNOWN | 20.88 | 600. | J |
| 6. | UNKNOWN | 21.66 | 400. | J |
| 7. | UNKNOWN | 21.95 | 300. | J |
| 8. | UNKNOWN | 22.34 | 700. | J |
| 9. | UNKNOWN | 22.78 | 500. | J |
| 10. | UNKNOWN | 22.92 | 3000. | J |
| 11. | UNKNOWN | 22.99 | 900. | J |
| 12. | UNKNOWN | 24.13 | 300. | J |
| 13. | UNKNOWN | 24.20 | 300. | J |
| 14. | UNKNOWN | 24.84 | 3000. | J |
| 15. | UNKNOWN | 26.88 | 800. | J |
| 16. | UNKNOWN ALKANE | 27.86 | 600. | J |
| 17. | UNKNOWN | 29.43 | 1000. | J |
| 18. | UNKNOWN ALKANE | 30.91 | 900. | J |
| 19. | UNKNOWN ALKANE | 32.56 | 900. | J |
| 20. | UNKNOWN | 33.42 | 700. | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 26 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.6

Contract: SAUGET SA 1+2
SDG No.: X101
Lab Sample ID : 2343-1
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/24/94
Dilution Factor: 200.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 460 | U |
| 319-85-7 | beta-BHC | 460 | U |
| 319-86-8 | delta-BHC | 460 | U |
| 58-89-9 | gamma-BHC(Lindane) | 460 | U |
| 76-44-8 | Heptachlor | 460 | U |
| 309-00-2 | Aldrin | 460 | U |
| 1024-57-3 | Heptachlor Epoxide | 460 | U |
| 959-98-8 | Endosulfan I | 460 | U |
| 60-57-1 | Dieldrin | 880 | U |
| 72-55-9 | 4,4'-DDE | 880 | U |
| 72-20-8 | Endrin | 880 | U |
| 33213-65-9 | Endosulfan II | 880 | U |
| 72-54-8 | 4,4'-DDD | 880 | U |
| 1013-07-8 | Endosulfan sulfate | 880 | U |
| 50-29-3 | 4,4'-DDT | 880 | U |
| 72-43-5 | Methoxychlor | 4600 | U |
| 53494-70-5 | Endrin ketone | 880 | U |
| 7421-36-3 | Endrin aldehyde | 880 | U |
| 5103-71-9 | alpha-Chlordane | 460 | U |
| 5103-74-2 | gamma-Chlordane | 460 | U |
| 8001-35-2 | Toxaphene | 46000 | U |
| 12674-11-2 | Aroclor 1016 | 8800 | U |
| 11104-28-2 | Aroclor 1221 | 18000 | U |
| 11141-16-5 | Aroclor 1232 | 8800 | U |
| 53469-21-9 | Aroclor 1242 | 8800 | U |
| 12672-29-6 | Aroclor 1248 | 8800 | U |
| 11097-69-1 | Aroclor 1254 | 140000 | E |
| 11096-82-5 | Aroclor 1260 | 83000 | |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101DL

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 26 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.6

Contract: SAUGET SA 1+2
SDG No.: X101
Lab Sample ID : 2343-1DL
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/24/94
Dilution Factor: 500.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 1200 | U |
| 319-85-7 | beta-BHC | 1200 | U |
| 319-86-8 | delta-BHC | 1200 | U |
| 58-89-9 | gamma-BHC(Lindane) | 1200 | U |
| 76-44-8 | Heptachlor | 1200 | U |
| 309-00-2 | Aldrin | 1200 | U |
| 1024-57-3 | Heptachlor Epoxide | 1200 | U |
| 959-98-8 | Endosulfan I | 1200 | U |
| 60-57-1 | Dieldrin | 2200 | U |
| 72-55-9 | 4,4'-DDE | 2200 | U |
| 72-20-8 | Endrin | 2200 | U |
| 33213-65-9 | Endosulfan II | 2200 | U |
| 72-54-8 | 4,4'-DDD | 2200 | U |
| 1013-07-8 | Endosulfan sulfate | 2200 | U |
| 50-29-3 | 4,4'-DDT | 2200 | U |
| 72-43-5 | Methoxychlor | 12000 | U |
| 53494-70-5 | Endrin ketone | 2200 | U |
| 7421-36-3 | Endrin aldehyde | 2200 | U |
| 5103-71-9 | alpha-Chlordane | 1200 | U |
| 5103-74-2 | gamma-Chlordane | 1200 | U |
| 8001-35-2 | Toxaphene | 120000 | U |
| 12674-11-2 | Aroclor 1016 | 22000 | U |
| 11104-28-2 | Aroclor 1221 | 45000 | U |
| 11141-16-5 | Aroclor 1232 | 22000 | U |
| 53469-21-9 | Aroclor 1242 | 22000 | U |
| 12672-29-6 | Aroclor 1248 | 22000 | U |
| 11097-69-1 | Aroclor 1254 | 110000 | P |
| 11096-82-5 | Aroclor 1260 | 72000 | |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 23 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.6

Contract: SAUGET SA 1+2
SDG No.: X101
Lab Sample ID : 2343-2
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 1.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 2.2 | U |
| 319-85-7 | beta-BHC | 2.2 | U |
| 319-86-8 | delta-BHC | 2.2 | U |
| 58-89-9 | gamma-BHC(Lindane) | 2.2 | U |
| 76-44-8 | Heptachlor | 2.2 | U |
| 309-00-2 | Aldrin | 2.2 | U |
| 1024-57-3 | Heptachlor Epoxide | 2.2 | U |
| 959-98-8 | Endosulfan I | 2.2 | U |
| 60-57-1 | Dieldrin | 4.3 | U |
| 72-55-9 | 4,4'-DDE | 4.3 | U |
| 72-20-8 | Endrin | 4.3 | U |
| 33213-65-9 | Endosulfan II | 4.3 | U |
| 72-54-8 | 4,4'-DDD | 4.3 | U |
| 1013-07-8 | Endosulfan sulfate | 4.3 | U |
| 50-29-3 | 4,4'-DDT | 4.3 | U |
| 72-43-5 | Methoxychlor | 22 | U |
| 53494-70-5 | Endrin ketone | 4.3 | U |
| 7421-36-3 | Endrin aldehyde | 4.3 | U |
| 5103-71-9 | alpha-Chlordane | 2.2 | U |
| 5103-74-2 | gamma-Chlordane | 2.2 | U |
| 8001-35-2 | Toxaphene | 220 | U |
| 12674-11-2 | Aroclor 1016 | 43 | U |
| 11104-28-2 | Aroclor 1221 | 87 | U |
| 11141-16-5 | Aroclor 1232 | 43 | U |
| 53469-21-9 | Aroclor 1242 | 43 | U |
| 12672-29-6 | Aroclor 1248 | 43 | U |
| 11097-69-1 | Aroclor 1254 | 730 | PE |
| 11096-82-5 | Aroclor 1260 | 460 | |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102DL

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 23 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.6

Contract: SAUGET SA 1+2
SDG No.: X101
Lab Sample ID : 2343-2DL
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 5.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 11 | U |
| 319-85-7 | beta-BHC | 11 | U |
| 319-86-8 | delta-BHC | 11 | U |
| 58-89-9 | gamma-BHC(Lindane) | 11 | U |
| 76-44-8 | Heptachlor | 11 | U |
| 309-00-2 | Aldrin | 11 | U |
| 1024-57-3 | Heptachlor Epoxide | 11 | U |
| 959-98-8 | Endosulfan I | 11 | U |
| 60-57-1 | Dieldrin | 22 | U |
| 72-55-9 | 4,4'-DDE | 22 | U |
| 72-20-8 | Endrin | 22 | U |
| 33213-65-9 | Endosulfan II | 22 | U |
| 72-54-8 | 4,4'-DDD | 22 | U |
| 1013-07-8 | Endosulfan sulfate | 22 | U |
| 50-29-3 | 4,4'-DDT | 22 | U |
| 72-43-5 | Methoxychlor | 110 | U |
| 53494-70-5 | Endrin ketone | 22 | U |
| 7421-36-3 | Endrin aldehyde | 22 | U |
| 5103-71-9 | alpha-Chlordane | 11 | U |
| 5103-74-2 | gamma-Chlordane | 11 | U |
| 8001-35-2 | Toxaphene | 1100 | U |
| 12674-11-2 | Aroclor 1016 | 220 | U |
| 11104-28-2 | Aroclor 1221 | 440 | U |
| 11141-16-5 | Aroclor 1232 | 220 | U |
| 53469-21-9 | Aroclor 1242 | 220 | U |
| 12672-29-6 | Aroclor 1248 | 220 | U |
| 11097-69-1 | Aroclor 1254 | 1100 | P |
| 11096-82-5 | Aroclor 1260 | 820 | |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 26 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.8

Contract: SAUGET SA 1+2
SDG No.: X101
Lab Sample ID : 2343-3
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/24/94
Dilution Factor: 1.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 2.3 | U |
| 319-85-7 | beta-BHC | 2.3 | U |
| 319-86-8 | delta-BHC | 2.3 | U |
| 58-89-9 | gamma-BHC(Lindane) | 2.3 | U |
| 76-44-8 | Heptachlor | 2.3 | U |
| 309-00-2 | Aldrin | 2.3 | U |
| 1024-57-3 | Heptachlor Epoxide | 2.3 | U |
| 959-98-8 | Endosulfan I | 2.3 | U |
| 60-57-1 | Dieldrin | 4.4 | U |
| 72-55-9 | 4,4'-DDE | 4.4 | U |
| 72-20-8 | Endrin | 4.4 | U |
| 33213-65-9 | Endosulfan II | 4.4 | U |
| 72-54-8 | 4,4'-DDD | 4.4 | U |
| 1013-07-8 | Endosulfan sulfate | 4.4 | U |
| 50-29-3 | 4,4'-DDT | 4.4 | U |
| 72-43-5 | Methoxychlor | 23 | U |
| 53494-70-5 | Endrin ketone | 4.4 | U |
| 7421-36-3 | Endrin aldehyde | 4.4 | U |
| 5103-71-9 | alpha-Chlordane | 2.3 | U |
| 5103-74-2 | gamma-Chlordane | 2.3 | U |
| 8001-35-2 | Toxaphene | 230 | U |
| 12674-11-2 | Aroclor 1016 | 44 | U |
| 11104-28-2 | Aroclor 1221 | 90 | U |
| 11141-16-5 | Aroclor 1232 | 44 | U |
| 53469-21-9 | Aroclor 1242 | 44 | U |
| 12672-29-6 | Aroclor 1248 | 500 | |
| 11097-69-1 | Aroclor 1254 | 1400 | E |
| 11096-82-5 | Aroclor 1260 | 960 | E |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103DL

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 26 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.8

Contract: SAUGET SA 1+2
SDG No.: X101
Lab Sample ID : 2343-3DL
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 10.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 23 | U |
| 319-85-7 | beta-BHC | 23 | U |
| 319-86-8 | delta-BHC | 23 | U |
| 58-89-9 | gamma-BHC(Lindane) | 23 | U |
| 76-44-8 | Heptachlor | 23 | U |
| 309-00-2 | Aldrin | 23 | U |
| 1024-57-3 | Heptachlor Epoxide | 23 | U |
| 959-98-8 | Endosulfan I | 23 | U |
| 60-57-1 | Dieldrin | 44 | U |
| 72-55-9 | 4,4'-DDE | 44 | U |
| 72-20-8 | Endrin | 44 | U |
| 33213-65-9 | Endosulfan II | 44 | U |
| 72-54-8 | 4,4'-DDD | 44 | U |
| 1013-07-8 | Endosulfan sulfate | 44 | U |
| 50-29-3 | 4,4'-DDT | 44 | U |
| 72-43-5 | Methoxychlor | 230 | U |
| 53494-70-5 | Endrin ketone | 44 | U |
| 7421-36-3 | Endrin aldehyde | 44 | U |
| 5103-71-9 | alpha-Chlordane | 23 | U |
| 5103-74-2 | gamma-Chlordane | 23 | U |
| 8001-35-2 | Toxaphene | 2300 | U |
| 12674-11-2 | Aroclor 1016 | 440 | U |
| 11104-28-2 | Aroclor 1221 | 900 | U |
| 11141-16-5 | Aroclor 1232 | 440 | U |
| 53469-21-9 | Aroclor 1242 | 440 | U |
| 12672-29-6 | Aroclor 1248 | 720 | |
| 11097-69-1 | Aroclor 1254 | 2300 | |
| 11096-82-5 | Aroclor 1260 | 1500 | |

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 28 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.7

Contract: SAUGET SA 1+2
SDG No.: X101
Lab Sample ID : 2343-4
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 50
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 120 | U |
| 319-85-7 | beta-BHC | 120 | U |
| 319-86-8 | delta-BHC | 120 | U |
| 58-89-9 | gamma-BHC(Lindane) | 120 | U |
| 76-44-8 | Heptachlor | 120 | U |
| 309-00-2 | Aldrin | 120 | U |
| 1024-57-3 | Heptachlor Epoxide | 120 | U |
| 959-98-8 | Endosulfan I | 120 | U |
| 60-57-1 | Dieldrin | 230 | U |
| 72-55-9 | 4,4'-DDE | 230 | U |
| 72-20-8 | Endrin | 230 | U |
| 33213-65-9 | Endosulfan II | 230 | U |
| 72-54-8 | 4,4'-DDD | 230 | U |
| 1013-07-8 | Endosulfan sulfate | 230 | U |
| 50-29-3 | 4,4'-DDT | 230 | U |
| 72-43-5 | Methoxychlor | 1200 | U |
| 53494-70-5 | Endrin ketone | 230 | U |
| 7421-36-3 | Endrin aldehyde | 230 | U |
| 5103-71-9 | alpha-Chlordane | 120 | U |
| 5103-74-2 | gamma-Chlordane | 120 | U |
| 8001-35-2 | Toxaphene | 12000 | U |
| 12674-11-2 | Aroclor 1016 | 2300 | U |
| 11104-28-2 | Aroclor 1221 | 4600 | U |
| 11141-16-5 | Aroclor 1232 | 2300 | U |
| 53469-21-9 | Aroclor 1242 | 2300 | U |
| 12672-29-6 | Aroclor 1248 | 2300 | U |
| 11097-69-1 | Aroclor 1254 | 14000 | P |
| 11096-82-5 | Aroclor 1260 | 12000 | |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

Lab Name: ARDL, INC. Contract: SAUGET 1+2
Lab Code: Case No.: 2343 SDG No.: X101
Matrix(soil/water) : SOIL Lab Sample ID : 2343-5
Sample(wt/vol) : 30.0 (g/mL) g Lab File ID :
% Moisture: 24 decanted:(Y/N) N Date Received : 11/09/94
Extraction(Sepf/Cont/Sonc) SONC Date Extracted : 11/16/94
Concentrated Extract Volume:5000(uL) Date Analyzed : 11/24/94
Injection Volume: 1 (uL) Dilution Factor: 10.0
GPC Cleanup:(Y/N) Y pH: 2.6 Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 22 | U |
| 319-85-7 | beta-BHC | 22 | U |
| 319-86-8 | delta-BHC | 22 | U |
| 58-89-9 | gamma-BHC(Lindane) | 22 | U |
| 76-44-8 | Heptachlor | 22 | U |
| 309-00-2 | Aldrin | 22 | U |
| 1024-57-3 | Heptachlor Epoxide | 22 | U |
| 959-98-8 | Endosulfan I | 22 | U |
| 60-57-1 | Dieldrin | 43 | U |
| 72-55-9 | 4,4'-DDE | 43 | U |
| 72-20-8 | Endrin | 43 | U |
| 33213-65-9 | Endosulfan II | 43 | U |
| 72-54-8 | 4,4'-DDD | 43 | U |
| 1013-07-8 | Endosulfan sulfate | 43 | U |
| 50-29-3 | 4,4'-DDT | 43 | U |
| 72-43-5 | Methoxychlor | 220 | U |
| 53494-70-5 | Endrin ketone | 43 | U |
| 7421-36-3 | Endrin aldehyde | 43 | U |
| 5103-71-9 | alpha-Chlordane | 22 | U |
| 5103-74-2 | gamma-Chlordane | 22 | U |
| 8001-35-2 | Toxaphene | 2200 | U |
| 12674-11-2 | Aroclor 1016 | 430 | U |
| 11104-28-2 | Aroclor 1221 | 880 | U |
| 11141-16-5 | Aroclor 1232 | 430 | U |
| 53469-21-9 | Aroclor 1242 | 430 | U |
| 12672-29-6 | Aroclor 1248 | 430 | U |
| 11097-69-1 | Aroclor 1254 | 14000 | E |
| 11096-82-5 | Aroclor 1260 | 6500 | P |

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105DL

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 24 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 2.6

Contract: SAUGET 1+2
SDG No.: X101
Lab Sample ID : 2343-5DL
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/24/94
Dilution Factor: 100.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 220 | U |
| 319-85-7 | beta-BHC | 220 | U |
| 319-86-8 | delta-BHC | 220 | U |
| 58-89-9 | gamma-BHC(Lindane) | 220 | U |
| 76-44-8 | Heptachlor | 220 | U |
| 309-00-2 | Aldrin | 220 | U |
| 1024-57-3 | Heptachlor Epoxide | 220 | U |
| 959-98-8 | Endosulfan I | 220 | U |
| 60-57-1 | Dieldrin | 430 | U |
| 72-55-9 | 4,4'-DDE | 430 | U |
| 72-20-8 | Endrin | 430 | U |
| 33213-65-9 | Endosulfan II | 430 | U |
| 72-54-8 | 4,4'-DDD | 430 | U |
| 1013-07-8 | Endosulfan sulfate | 430 | U |
| 50-29-3 | 4,4'-DDT | 430 | U |
| 72-43-5 | Methoxychlor | 2200 | U |
| 53494-70-5 | Endrin ketone | 430 | U |
| 7421-36-3 | Endrin aldehyde | 430 | U |
| 5103-71-9 | alpha-Chlordane | 220 | U |
| 5103-74-2 | gamma-Chlordane | 220 | U |
| 8001-35-2 | Toxaphene | 22000 | U |
| 12674-11-2 | Aroclor 1016 | 4300 | U |
| 11104-28-2 | Aroclor 1221 | 8800 | U |
| 11141-16-5 | Aroclor 1232 | 4300 | U |
| 53469-21-9 | Aroclor 1242 | 4300 | U |
| 12672-29-6 | Aroclor 1248 | 4300 | U |
| 11097-69-1 | Aroclor 1254 | 22000 | |
| 11096-82-5 | Aroclor 1260 | 9900 | P |

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 20 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.1

Contract: SAUGET 1+2
SDG No.: X101
Lab Sample ID : 2343-6
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 50.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 100 | U |
| 319-85-7 | beta-BHC | 100 | U |
| 319-86-8 | delta-BHC | 100 | U |
| 58-89-9 | gamma-BHC(Lindane) | 100 | U |
| 76-44-8 | Heptachlor | 100 | U |
| 309-00-2 | Aldrin | 100 | U |
| 1024-57-3 | Heptachlor Epoxide | 100 | U |
| 959-98-8 | Endosulfan I | 100 | U |
| 60-57-1 | Dieldrin | 200 | U |
| 72-55-9 | 4,4'-DDE | 200 | U |
| 72-20-8 | Endrin | 200 | U |
| 33213-65-9 | Endosulfan II | 200 | U |
| 72-54-8 | 4,4'-DDD | 200 | U |
| 1013-07-8 | Endosulfan sulfate | 200 | U |
| 50-29-3 | 4,4'-DDT | 200 | U |
| 72-43-5 | Methoxychlor | 1000 | U |
| 53494-70-5 | Endrin ketone | 200 | U |
| 7421-36-3 | Endrin aldehyde | 200 | U |
| 5103-71-9 | alpha-Chlordane | 200 | U |
| 5103-74-2 | gamma-Chlordane | 200 | U |
| 8001-35-2 | Toxaphene | 10000 | U |
| 12674-11-2 | Aroclor 1016 | 2000 | U |
| 11104-28-2 | Aroclor 1221 | 4200 | U |
| 11141-16-5 | Aroclor 1232 | 2000 | U |
| 53469-21-9 | Aroclor 1242 | 2000 | U |
| 12672-29-6 | Aroclor 1248 | 2000 | U |
| 11097-69-1 | Aroclor 1254 | 1700 | P |
| 11096-82-5 | Aroclor 1260 | 2300 | |

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 24 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.0

Contract: SAUGET 1+2
SDG No.: X101
Lab Sample ID : 2343-7
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/24/94
Dilution Factor: 10.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 22 | U |
| 319-85-7 | beta-BHC | 22 | U |
| 319-86-8 | delta-BHC | 22 | U |
| 58-89-9 | gamma-BHC(Lindane) | 22 | U |
| 76-44-8 | Heptachlor | 22 | U |
| 309-00-2 | Aldrin | 22 | U |
| 1024-57-3 | Heptachlor Epoxide | 22 | U |
| 959-98-8 | Endosulfan I | 22 | U |
| 60-57-1 | Dieldrin | 43 | U |
| 72-55-9 | 4,4'-DDE | 43 | U |
| 72-20-8 | Endrin | 43 | U |
| 33213-65-9 | Endosulfan II | 43 | U |
| 72-54-8 | 4,4'-DDD | 43 | U |
| 1013-07-8 | Endosulfan sulfate | 43 | U |
| 50-29-3 | 4,4'-DDT | 43 | U |
| 72-43-5 | Methoxychlor | 220 | U |
| 53494-70-5 | Endrin ketone | 43 | U |
| 7421-36-3 | Endrin aldehyde | 43 | U |
| 5103-71-9 | alpha-Chlordane | 22 | U |
| 5103-74-2 | gamma-Chlordane | 22 | U |
| 8001-35-2 | Toxaphene | 2200 | U |
| 12674-11-2 | Aroclor 1016 | 430 | U |
| 11104-28-2 | Aroclor 1221 | 880 | U |
| 11141-16-5 | Aroclor 1232 | 430 | U |
| 53469-21-9 | Aroclor 1242 | 430 | U |
| 12672-29-6 | Aroclor 1248 | 4800 | P |
| 11097-69-1 | Aroclor 1254 | 11000 | E |
| 11096-82-5 | Aroclor 1260 | 8800 | PE |

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107DL

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 24 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.0

Contract: SAUGET 1+2
SDG No.: X101
Lab Sample ID : 2343-7DL
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/24/94
Dilution Factor: 100.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 220 | U |
| 319-85-7 | beta-BHC | 220 | U |
| 319-86-8 | delta-BHC | 220 | U |
| 58-89-9 | gamma-BHC(Lindane) | 220 | U |
| 76-44-8 | Heptachlor | 220 | U |
| 309-00-2 | Aldrin | 220 | U |
| 1024-57-3 | Heptachlor Epoxide | 220 | U |
| 959-98-8 | Endosulfan I | 220 | U |
| 60-57-1 | Dieldrin | 430 | U |
| 72-55-9 | 4,4'-DDE | 430 | U |
| 72-20-8 | Endrin | 430 | U |
| 33213-65-9 | Endosulfan II | 430 | U |
| 72-54-8 | 4,4'-DDD | 430 | U |
| 1013-07-8 | Endosulfan sulfate | 430 | U |
| 50-29-3 | 4,4'-DDT | 430 | U |
| 72-43-5 | Methoxychlor | 2200 | U |
| 53494-70-5 | Endrin ketone | 430 | U |
| 7421-36-3 | Endrin aldehyde | 430 | U |
| 5103-71-9 | alpha-Chlordane | 220 | U |
| 5103-74-2 | gamma-Chlordane | 220 | U |
| 8001-35-2 | Toxaphene | 22000 | U |
| 12674-11-2 | Aroclor 1016 | 4300 | U |
| 11104-28-2 | Aroclor 1221 | 8800 | U |
| 11141-16-5 | Aroclor 1232 | 4300 | U |
| 53469-21-9 | Aroclor 1242 | 4300 | U |
| 12672-29-6 | Aroclor 1248 | 11000 | P |
| 11097-69-1 | Aroclor 1254 | 17000 | |
| 11096-82-5 | Aroclor 1260 | 11000 | |

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 20 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.6

Contract: SAUGET 1+2
SDG No.: X101
Lab Sample ID : 2343-8
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/24/94
Dilution Factor: 10.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 21 | U |
| 319-85-7 | beta-BHC | 21 | U |
| 319-86-8 | delta-BHC | 21 | U |
| 58-89-9 | gamma-BHC(Lindane) | 21 | U |
| 76-44-8 | Heptachlor | 21 | U |
| 309-00-2 | Aldrin | 21 | U |
| 1024-57-3 | Heptachlor Epoxide | 21 | U |
| 959-98-8 | Endosulfan I | 21 | U |
| 60-57-1 | Dieldrin | 41 | U |
| 72-55-9 | 4,4'-DDE | 41 | U |
| 72-20-8 | Endrin | 41 | U |
| 33213-65-9 | Endosulfan II | 41 | U |
| 72-54-8 | 4,4'-DDD | 41 | U |
| 1013-07-8 | Endosulfan sulfate | 41 | U |
| 50-29-3 | 4,4'-DDT | 41 | U |
| 72-43-5 | Methoxychlor | 210 | U |
| 53494-70-5 | Endrin ketone | 41 | U |
| 7421-36-3 | Endrin aldehyde | 41 | U |
| 5103-71-9 | alpha-Chlordane | 21 | U |
| 5103-74-2 | gamma-Chlordane | 21 | U |
| 8001-35-2 | Toxaphene | 2100 | U |
| 12674-11-2 | Aroclor 1016 | 410 | U |
| 11104-28-2 | Aroclor 1221 | 840 | U |
| 11141-16-5 | Aroclor 1232 | 410 | U |
| 53469-21-9 | Aroclor 1242 | 410 | U |
| 12672-29-6 | Aroclor 1248 | 16000 | PE |
| 11097-69-1 | Aroclor 1254 | 21000 | E |
| 11096-82-5 | Aroclor 1260 | 9300 | PE |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108DL

Lab Name: ARDL, INC. Contract: SAUGET 1+2
Lab Code: Case No.: 2343 SDG No.: X101
Matrix(soil/water) : SOIL Lab Sample ID : 2343-8DL
Sample(wt/vol) : 30.0 (g/mL) g Lab File ID :
% Moisture: 20 decanted:(Y/N) N Date Received : 11/09/94
Extraction(Sepf/Cont/Sonc) SONC Date Extracted : 11/16/94
Concentrated Extract Volume:5000(uL) Date Analyzed : 11/24/94
Injection Volume: 1 (uL) Dilution Factor: 100.0
GPC Cleanup:(Y/N) Y pH: 6.6 Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 210 | U |
| 319-85-7 | beta-BHC | 210 | U |
| 319-86-8 | delta-BHC | 210 | U |
| 58-89-9 | gamma-BHC(Lindane) | 210 | U |
| 76-44-8 | Heptachlor | 210 | U |
| 309-00-2 | Aldrin | 210 | U |
| 1024-57-3 | Heptachlor Epoxide | 210 | U |
| 959-98-8 | Endosulfan I | 210 | U |
| 60-57-1 | Dieldrin | 410 | U |
| 72-55-9 | 4,4'-DDE | 410 | U |
| 72-20-8 | Endrin | 410 | U |
| 33213-65-9 | Endosulfan II | 410 | U |
| 72-54-8 | 4,4'-DDD | 410 | U |
| 1013-07-8 | Endosulfan sulfate | 410 | U |
| 50-29-3 | 4,4'-DDT | 410 | U |
| 72-43-5 | Methoxychlor | 2100 | U |
| 53494-70-5 | Endrin ketone | 410 | U |
| 7421-36-3 | Endrin aldehyde | 410 | U |
| 5103-71-9 | alpha-Chlordane | 210 | U |
| 5103-74-2 | gamma-Chlordane | 210 | U |
| 8001-35-2 | Toxaphene | 21000 | U |
| 12674-11-2 | Aroclor 1016 | 4100 | U |
| 11104-28-2 | Aroclor 1221 | 8400 | U |
| 11141-16-5 | Aroclor 1232 | 4100 | U |
| 53469-21-9 | Aroclor 1242 | 4100 | U |
| 12672-29-6 | Aroclor 1248 | 28000 | |
| 11097-69-1 | Aroclor 1254 | 36000 | |
| 11096-82-5 | Aroclor 1260 | 15000 | P |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 27 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 3.6

Contract: SAUGET SA 1+2
SDG No.: X101
Lab Sample ID : 2343-9
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 1.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 2.3 | U |
| 319-85-7 | beta-BHC | 2.3 | U |
| 319-86-8 | delta-BHC | 2.3 | U |
| 58-89-9 | gamma-BHC(Lindane) | 2.3 | U |
| 76-44-8 | Heptachlor | 2.3 | U |
| 309-00-2 | Aldrin | 2.3 | U |
| 1024-57-3 | Heptachlor Epoxide | 2.3 | U |
| 959-98-8 | Endosulfan I | 2.3 | U |
| 60-57-1 | Dieldrin | 4.5 | U |
| 72-55-9 | 4,4'-DDE | 4.5 | U |
| 72-20-8 | Endrin | 4.5 | U |
| 33213-65-9 | Endosulfan II | 4.5 | U |
| 72-54-8 | 4,4'-DDD | 4.5 | U |
| 1013-07-8 | Endosulfan sulfate | 4.5 | U |
| 50-29-3 | 4,4'-DDT | 4.5 | U |
| 72-43-5 | Methoxychlor | 23 | U |
| 53494-70-5 | Endrin ketone | 4.5 | U |
| 7421-36-3 | Endrin aldehyde | 4.5 | U |
| 5103-71-9 | alpha-Chlordane | 2.3 | U |
| 5103-74-2 | gamma-Chlordane | 2.3 | U |
| 8001-35-2 | Toxaphene | 230 | U |
| 12674-11-2 | Aroclor 1016 | 45 | U |
| 11104-28-2 | Aroclor 1221 | 92 | U |
| 11141-16-5 | Aroclor 1232 | 45 | U |
| 53469-21-9 | Aroclor 1242 | 45 | U |
| 12672-29-6 | Aroclor 1248 | 45 | U |
| 11097-69-1 | Aroclor 1254 | 72 | P |
| 11096-82-5 | Aroclor 1260 | 140 | |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 29 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 3.7

Contract: SAUGET SA 1+2
SDG No.: X101
Lab Sample ID : 2343-10
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 1.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 2.4 | U |
| 319-85-7 | beta-BHC | 2.4 | U |
| 319-86-8 | delta-BHC | 2.4 | U |
| 58-89-9 | gamma-BHC(Lindane) | 2.4 | U |
| 76-44-8 | Heptachlor | 2.4 | U |
| 309-00-2 | Aldrin | 2.4 | U |
| 1024-57-3 | Heptachlor Epoxide | 2.4 | U |
| 959-98-8 | Endosulfan I | 2.4 | U |
| 60-57-1 | Dieldrin | 4.6 | U |
| 72-55-9 | 4,4'-DDE | 4.6 | U |
| 72-20-8 | Endrin | 4.6 | U |
| 33213-65-9 | Endosulfan II | 4.6 | U |
| 72-54-8 | 4,4'-DDD | 4.6 | U |
| 1013-07-8 | Endosulfan sulfate | 4.6 | U |
| 50-29-3 | 4,4'-DDT | 4.6 | U |
| 72-43-5 | Methoxychlor | 24 | U |
| 53494-70-5 | Endrin ketone | 4.6 | U |
| 7421-36-3 | Endrin aldehyde | 4.6 | U |
| 5103-71-9 | alpha-Chlordane | 2.4 | U |
| 5103-74-2 | gamma-Chlordane | 2.4 | U |
| 8001-35-2 | Toxaphene | 240 | U |
| 12674-11-2 | Aroclor 1016 | 46 | U |
| 11104-28-2 | Aroclor 1221 | 94 | U |
| 11141-16-5 | Aroclor 1232 | 46 | U |
| 53469-21-9 | Aroclor 1242 | 46 | U |
| 12672-29-6 | Aroclor 1248 | 46 | U |
| 11097-69-1 | Aroclor 1254 | 410 | P |
| 11096-82-5 | Aroclor 1260 | 390 | |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111

Lab Name: ARDL, INC.
Lab Code: Case No.: 2343
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 29 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 5.8

Contract: SAUGET SA 1+2
SDG No.: X101
Lab Sample ID : 2343-11
Lab File ID :
Date Received : 11/09/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 1.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 2.4 | U |
| 319-85-7 | beta-BHC | 2.4 | U |
| 319-86-8 | delta-BHC | 2.4 | U |
| 58-89-9 | gamma-BHC(Lindane) | 2.4 | U |
| 76-44-8 | Heptachlor | 2.4 | U |
| 309-00-2 | Aldrin | 2.4 | U |
| 1024-57-3 | Heptachlor Epoxide | 2.4 | U |
| 959-98-8 | Endosulfan I | 2.4 | U |
| 60-57-1 | Dieldrin | 4.6 | U |
| 72-55-9 | 4,4'-DDE | 4.6 | U |
| 72-20-8 | Endrin | 4.6 | U |
| 33213-65-9 | Endosulfan II | 4.6 | U |
| 72-54-8 | 4,4'-DDD | 4.6 | U |
| 1013-07-8 | Endosulfan sulfate | 4.6 | U |
| 50-29-3 | 4,4'-DDT | 4.6 | U |
| 72-43-5 | Methoxychlor | 24 | U |
| 53494-70-5 | Endrin ketone | 4.6 | U |
| 7421-36-3 | Endrin aldehyde | 4.6 | U |
| 5103-71-9 | alpha-Chlordane | 2.4 | U |
| 5103-74-2 | gamma-Chlordane | 2.4 | U |
| 8001-35-2 | Toxaphene | 240 | U |
| 12674-11-2 | Aroclor 1016 | 46 | U |
| 11104-28-2 | Aroclor 1221 | 94 | U |
| 11141-16-5 | Aroclor 1232 | 46 | U |
| 53469-21-9 | Aroclor 1242 | 46 | U |
| 12672-29-6 | Aroclor 1248 | 46 | U |
| 11097-69-1 | Aroclor 1254 | 470 | |
| 11096-82-5 | Aroclor 1260 | 300 | |

**ATTACHMENT C**

1630200005-

ARDL inc. applied research & development laboratory

CHEMISTRY · BIOLOGY · PHYSIOLOGY
ENGINEERING · ENVIRONMENTAL ANALYSIS

24 November 1994

Mr. Ron Turpin
Division of Laboratories # 4
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, IL 62706

SUBJECT: Data Package Submittal
Facility: Sauget SA 1 & 2
ARDL ID No.: 2343
Site Inventory No.: 1630200005
Due Date: 12/09/94

Dear Mr. Turpin:

Enclosed please find ARDL's data package for analyses performed on samples delivered to our laboratory on 11/09/94. The data package consists of the following:

1. Letter of Transmittal
2. Tabulated Analytical Results
3. Chain-of-Custody Documentation
4. Data Package - Paginated and submitted in the following order:

   a. Volume 1 - Inorganic Analysis Data Package
   b. Volume 2 - Organic Sample Data Summary Package
   c. Volume 3 - Volatiles Analysis Data Package
   d. Volume 4 - Semi-Volatiles Analysis Data Package
   e. Volume 5 - Pesticide/PCB Analysis Data Package

I have forwarded one (1) copy of the sample results for this package to Sue Doubet, IEPA.

We appreciate the opportunity to be of service to the IEPA.

Thank you

Sincerely yours,

Daniel J. Gillespie
Technical Services Manager

DJG/jcm

Enclosure

RECEIVED
DEC 09 1994
IEPA/DLPC

P.O. Box 1566 · Mt. Vernon Airport, Route 15 East · Mt. Vernon, Illinois 62864 · (618) 244-3235 · FAX (618) 244-1149
"Test Everything - Keep The Good" 1 Thes. 5:21

EPA - CLP
CHAIN OF CUSTODY

Seal # 9957

Date Sealed: 11/8/94 By: [illegible]

Facility
Name : SAUGET SITE AREA #1 + #2
Region: COLLINSVILLE
County: ST.CLAIR

Site Inventory # : 1630200005
Site Billing Code: IDPH-Rebbe
Project Manager : PAUL TACKACS

| Laboratory # | Sample # | Sample Date | Time |
|---|---|---|---|
| ARDL 2343-2 | X102 | 11-9-94 | 10:20 a.m. |

Sample Appearance : Dark + light Brown - waste material

Sampler Comments:

Sampler Signature : Tom Miller Division/Company IEPA\FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA,PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS,CYANIDE, | N |
| | 287 | | | SULFIDE,SULFATE | |

CHAIN OF CUSTODY RECORD

I certify that I received the sample shipping container with the shipping container seals and [illegible]

Paul Takacs Signature: Paul Takacs

11-9-94 10:05 a.m. 9957 [illegible] 0

I certify that the sample listed below was collected and placed in bottles in my presence, that each bottle was placed intact in the sample shipping container and that I sealed the sample shipping container at the date and time listed below.

Sampler Name: Monica Rebbe Signature: Monica Rebbe

11-9-94 2:10 p.m. 9958

Company: IEPA\ARDL

Courier - Sample Delivery: [illegible]

I certify that I received the sample shipping container from the courier listed above with the shipping container and seal intact and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): Donna Cockrum Signature: [illegible]

Date: 11/9/94 Time: 1755 Seal: 9957-9958

Lab Name: ARDL-IN

EPA - CLP
CHAIN OF CUSTODY

Seal # 9953

Date Sealed: 11/8/94 By: [illegible]

Facility
Site : SQUEET SITE AREA #1 + #2
Location: COLLINSVILLE
County: ST CLAIR

Site Inventory # : 1630700005
Site Billing Code: JDPH/MONICA REBBE
Project Manager : PAUL TAKACS

| Laboratory # | Sample # | Sample Date | |
|---|---|---|---|
| ARDL 2343-3 | X103 | 11-9-94 | 10:25 AM |

Sample Description: BROWNISH WASTE MATERIAL

Collector Comments:

Collector Signature: TOM MILLER Division/Company: IEPA/FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA, PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS, CYANIDE, | N |
| | 287 | | N | SULFIDE, SULFATE | N |

CHAIN OF CUSTODY COMMENTS

I certify that I received the sample shipping container with the shipping container sealed and intact.

PAUL TAKACS Paul S. Takacs
11-9-94 10:20AM 9953 O

I certify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact in the sample shipping container and that I sealed the sample shipping container at the date and time listed below.

Signature (print): PAUL TAKACS Signature: Paul S. Takacs
11-9-94 2:10PM 9954
IEPA/ARDL

Courier - Sample Delivery: Courier

I certify that I received the sample shipping container from the courier listed above with the shipping container and seal intact and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): Donna Cockrum Signature: Donna Cockrum

Date: 11-9-94 Time: 1755 Seal #: 9954 Intact: (Y) N

Lab Name: ARDL, INC. Comments: [illegible]

ARC - CLP
CHAIN OF CUSTODY

Seal # 9953

Date Sealed: 11/8/94

Facility
Name : SAUGET SITE AREA #1 + #2
Location: COLLINSVILLE
County: ST.CLAIR

Site Inventory # : 1630200005
Site Billing Code: 8 IDPH/MONICA REBBE
Project Manager : PAUL TAKACS

Laboratory #: ARDL 2343-4

Sample # X104

Sampling Date 11-9-94 10:30AM

Sample Description: WHITISH WASTE MATERIAL

Other Comments:

Sampler Signature: Tom Miller Division/Company: IEPA/FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA,PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS,CYANIDE, | N |
| | 287 | | N | SULFIDE,SULFATE | N |

CHAIN OF CUSTODY RECORD

I certify that I sealed the sample shipping container with the shipping container sealed and intact.

Signature: PAUL TAKACS Signature: Paul S. Takacs

11-9-94 10:20AM 9953 0

I certify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact in the sample shipping container and that I sealed the sample shipping container at the date and time listed below.

Signature: PAUL TAKACS Signature: Paul S. Takacs

11-9-94 2:10PM 9954

Division: IEPA/ARDL

Courier - Sample Delivery: Courier

I certify that I received the sample shipping container from the courier listed above with the shipping container and seal intact and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): Donna Cockrum Signature: Donna Cockrum

Date: 11/9/94 Time: 1755 Seal # 9954 Broken (Y/N)

Lab Name: ARDL INC. Comments: [illegible]

EPA - CLP
CHAIN OF CUSTODY

Seal # 9949

Date Sealed: 11/8/94 By: [illegible]

Facility Name: SAUGET SITE AREA #1 + #2
Region: COLLINSVILLE
County: ST.CLAIR

Site Inventory #: IL0020000
Site Billing Code: IDPH - Rebbe
Project Manager: PAUL TAKACS

| Laboratory # | Collected | Sampled Date | Sampled Time |
|---|---|---|---|
| 2343-5 | X105 | 11-9-94 | 10:45am |

Sample Source Place: Brown - waste material

Filtered Containers:

Sampler Signature: Tom Miller Division/Company: IEPA\FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA, PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS, CYANIDE, | N |
| | 287 | | | SULFIDE, SULFATE | |

CHAIN OF CUSTODY CHRONICLE

I certify that I relinquished the sample shipping container with the shipping container sealed as [illegible]

Paul Takacs Signature: Paul S. Takacs

11-9-94 10:40 a.m. 9949 0

I certify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact in the sample shipping container and that I sealed the sample shipping container at the date and time listed below.

Monica Rebbe Signature: Monica Rebbe

11-9-94 2:35 p.m. 9950

Courier - Sample Delivery: Courier

I certify that I received the sample shipping container from the courier listed above with the shipping container and seal intact and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): Donna Cockrum Signature: Donna Cockrum

Date: 11-9-94 Time: 1755 Seal #: 9949, 9950 Intact: (Y) N

Lab Name: ARDL, INC Comments:

**ATTACHMENT D**

# Illinois EPA
# SAUGET SITES
# Site Safety Plan

Attached is a site safety plan (SSP) written for the tasks performed by IEPA personnel on hazardous waste sites. It is divided into sections which correspond directly with OSHA 29 CFR 1910.120(b)(4)(ii) standard.

The health and safety protocols established in a SSP are based on the site conditions and chemical hazards known and/or anticipated to be present from available site data. The possibility of undocumented disposal within the site requires a conservative approach to on-site procedures. A SSP is intended solely for use during the proposed activities described in the site investigation work plan. Specifications therein are subject to review and revision based on actual conditions encountered in the field during site characterization activities.

Work to Begin : 11/09/94 End : 11/10/94

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INTRODUCTION

SECTION [A] Safety and Health Hazard Analysis

Job Tasks — Table A
- Health and Safety Hazards
- Levels of Protection
- Personal Protective Equipment
- Air Monitoring

Health Analysis — Table B
- Contaminants
- Standard Operating Procedures
- Personal Precautions

SECTION [B] Employee Training

SECTION [C] Personal Protective Equipment

SECTION [D] Medical Surveillance

SECTION [E] Air Monitoring/Sampling Procedures

SECTION [F] Site Security and Control

SECTION [G] Decontamination
- Equipment
- Procedures

SECTION [H] Contingency Plan

SECTION [I] Confined Space Entry

SECTION [J] Spill Containment Program

Appendix 1: Hazard Communication

Appendix 2: Heat and Cold Stress Monitoring

Appendix 3: Material Safety Date Sheets

Appendix 4: Site Access Authorization Forms

Project Name: SAUGET SITES (Area G and Q)
IEPA Identification Numbers: L1630200005
L1631210001

Location: SAUGET AND CAHOKIA, ST. CLAIR COUNTY (SF/TECH)

Date Plan Reviewed: November 3, 1994.

Reviewer Signature: MARK BRITTON OCS/HSU

Site Description and History:

One of the most highly contaminated areas in Illinois are the Sauget Sites. Area 1 comprises three hazardous waste disposal landfills, a formerly used waste impoundment, two abandoned gravel pits and five intermittent segments of Dead Creek. The contaminants found at the Sauget Area 1 Sites consist mainly of chlorobenzenes, chlorophenols, chloroanilines, nitrophenols, nitroanilines, naphthalene, PCB's and PNA's. These sites were aggregated together on the basis of their relative proximity to each other, shared watershed, nearly identical contaminants, and a common property owner at many of the sites during the periods of disposal. Potential residential exposure to site contaminants is the greatest concern in Area 1. The Area 2 sites comprise four separate sites that include a covered lagoon containing hazardous sludges (Site O), an industrial landfill suspected of containing hazardous wastes (Site P), a closed landfill used by Monsanto for the disposal of their liquid chemical wastes (Site R) and an uncovered closed municipal landfill that accepted hazardous wastes (Site Q). Environmental impacts within wetlands and leachates that flow into the Mississippi River are the more significant concerns of Area 2. Provided below are brief descriptions of the sites that are being proposed for this sampling event.

Site G

A former surface/subsurface hazardous waste disposal site which was originally used as a gravel pit. Site G occupies about 4.5 acres and is littered with demolition debris, metal wastes and corroded drums. Oily and tar-like wastes are found mainly in areas where drums are present; however, most of the landfill is only partially covered with fly ash and cinders. IEPA estimates that there is approximately 22,000 cubic yards of contaminated fill and about 60,000 cubic yards of saturated chemical waste materials. Past surface soils sampling revealed PCBs (74,000 ppm total), 1,4-dichlorobenzene (22,000 ppm), PCP (21,000 ppm), 4-nitrophenol (1000 ppm), 2-nitroaniline (220 ppm), and PNAs. The primary contaminants detected in subsurface soils included naphthalene (5,429 ppm), PCP (4,769 ppm) and 4-chloroaniline (231 ppm). Access to the site is restricted by a chain-link fence

installed by USEPA. Aerial photos show major disposal activities occurring at Site G from the early to mid-1950's to the mid-1960's, after which sporadic disposal occurred until it was fenced in 1982.

On a more recent note, IEPA was informed that an underground fire began at this site in early April and continued through June of this year. IEPA assisted USEPA last June in a sampling event in and around Site G. As would be expected in a scenario of burning PCBs and other chlorophenols, the sample results indicated widespread dioxin contamination on the site and outside the perimeter of the fence. The levels of 2,3,7,8-TCDD (137 ppb) were high enough to justify a time-critical action by USEPA even for an industrial area. An interview with an employee of the property owner said that the Sauget Fire Department was called to put out the fires. This employee noted the burning area was flooded with water 24 hours a day for two weeks, thereby creating a large pond in back of the burn area. Although water samples from the pond did not show contamination, it is suspected that the sediments of the low-lying area to the south of Site G are contaminated. In addition to this area, this site contributed to further contamination of Dead Creek last year during last year's flooding.

Site Q

Site Q, also known as the former Sauget & Company Landfill (e.g. the Sauget Municipal Landfill) had been completely submerged by flooding last summer. There are numerous uncovered waste disposal areas scattered throughout the site. Oil-saturated materials as well as drums with unknown wastes are present at many of these disposal areas. Limited soil sampling has indicated high levels of semivolatiles, pesticides and PCBs. Of greatest concern to IEPA is the presence of several waste piles and drums located in the two borrow pits to the south of the site. No sampling has ever been performed at these locations because they are normally submerged. In addition to these areas, several drums are present along the bank of the river - many of which have been exposed by last year's floods. Recent sampling of these drums showed PCBs (over 200,000 ppm), 2-chlorophenol (67 ppm), 1,4-dichlorobenzene (49 ppm), 1,2,4-trichlorobenzene (52 ppm), phenol (71 ppm) and 4-nitrophenol (45 ppm). There are also various isolated waste disposal areas located throughout the site. This site was operated by Sauget & Company as a "municipal landfill". Aerial photos show major activities beginning in the mid-1950's and continuing through the 1970's. 103(c) notifications to USEPA note that BFI hauled unidentified hazardous wastes and chemicals to this landfill from 1963 to 1970. Another notification points out a massive liquid waste and drum disposal area at an unknown location on this site.

Site Topography : Irregular Terrain
Soil Type : Silt/Sand
Site Zoning : Industrial

Work to Begin : 11/09/94 End : 11/10/94

All operations and equipment will comply with OSHA Regulations 29 CFR 1910.120 and applicable parts of OSHA 29 CFR 1910 and 1926.

Before site operations begin all employees involved in these operations will have read and understood this site safety plan and all of the subsequent revisions.

Key Personnel:

Designated Site Health and Safety Officer : Tom Miller
Alternate : Paul Takacs

IEPA Health and Safety Office: (217)-785-0830
Project Manager : Paul Takacs
Alternate : Monica Rebbe, IDPH

Field Team :
1. Tom Miller
2. Paul Takacs
3. Monica Rebbe
4. IEPA assistant (to be assigned)

The following individual(s) located on site will have the authority and responsibility to change levels of protection and, when necessary, shutdown the operation:

1. Tom Miller

Personnel trained in first aid/CPR:
1. Paul Takacs
2. Tom Miller

SECTION [A] HEALTH AND SAFETY HAZARD ANALYSIS

Refer to attached Table A (Health Risk Analysis) and Table B (Safety Risk Analysis), below.

Table A Health Risk Analysis

JOB TASK: **Surface soil sampling**
INITIAL LEVEL OF PROTECTION: C

AIR SAMPLING EQUIPMENT:

| Equipment | Frequency | Location |
|---|---|---|
| PID (10.2) and FID | twice daily | Immediate Work Area |

Hazards:
For the purposes of this hazard identification section, surface soil sampling will be considered any soil sampling completed by hand using a trowel, split spoon, shovel, auger, or other type of handheld tool. Hazards generally associated with surface soil sampling include:

- o Contact with or inhalation of contaminants in moderate concentrations in the sampling media.
- o Back strain and muscle fatigue due to lifting, shoveling and auguring techniques.

Standard Operating Procedures:

- o To minimize exposure to chemical contaminants, a thorough review of suspected contaminants should be completed and implementation of personal protective equipment and the use of air monitoring equipment according to the appropriate sections of this document shall be initiated.
- o Proper lifting (pre-lift weight assessment, use of legs, multiple personnel, etc.) techniques will prevent back strain. Use slow easy motions when shoveling, auguring, and digging to decrease muscle strain.
- o First aid equipment should be available based on job task and suspected chemical hazards.

PERSONAL PROTECTIVE EQUIPMENT:

Coverall : Double Laminated Tyvek (Saranex)
Boots : Chemical resistant boots
Boot Covers : Rubber booties Boot Liner : Thick socks
Head Protection: Warm Head Cover Liner: None Required
Respiratory : Full-face Air Purifying Respirator - Combination cartridge (HEPA filter with organic vapor cartridge)
Outer Gloves : Viton or Silvershield (Silvershield recommended)
Inner Gloves : Wool
Face/Eye Protection : None Required

NOTE: The preceding recommendations are based upon the reported hazards associated with the performance of this job task. They cannot be changed without the approval of the Health and Safety Officer.

ACTION LEVELS

See chart on page 13 for action level responses.

For generic information about action levels for specific pieces of equipment consult Section C.

## Table B Safety Risk Analysis

The following is a listing of the contaminants and the safety risks associated with them. In order to understand the notations and abbreviations in that listing please use the following key.

KEY TO ABBREVIATIONS IN TABLE B

? Question mark notation given for this property in the NIOSH "Pocket Guide to Chemical Hazards."

CA: Carcinogen.

eV: Electron Volts.

F: Degrees Fahrenheit

IDLH: Immediately Dangerous to Life or Health. Maximum 30-minute exposure. Units given in parts per million or milligrams per cubic meter of air.

mm Hg: Millimeters of mercury.

mg/M3: Milligrams per cubic meter of air.

NA: Not applicable.

NONE: No information available.

PEL: Permissible Exposure Limit. Units given in parts per million or milligrams per cubic meter of air.

ppm: Parts per million.

TLV: Threshold Limit Value. Units given in parts per million or milligrams per cubic meter of air. Where relevant, affected areas of the body are indicated.

TLV-STEL: Threshold Limit Value -- Short Term Exposure Limit. Maximum 15-minute exposure. Units given in parts per million or milligrams per cubic meter of air.

## Table B Safety Risk Analysis

Contaminant: **1,4-DICHLOROBENZENE**
CAS number: 106467

Exposure Limits: TLV: 75.000 ppm PEL: 75.000 ppm
IDLH: 1000 ppm CA TLV-STEL: 110.00 ppm

Symptoms of Overexposure: Headache; eye irritation, swelling, periorbital; Nose irritation; Anorexia, nausea, vomiting ; Weight loss, jaundice, cirrhosis; [Carcinogen]

Chemical Properties: Flashpoint: 150 F
Vapor Pressure: 0.4 mm Hg 77F
Specific Gravity of Vapor: 5.10 68F
Lower Explosive Limit: "?"%
Upper Explosive Limit: "?"%
Ionization Potential: 8.98 eV
Flame Ionization Detector: NONE% (percent Relative Response)
PID: 139.00% (percent Relative Response)

Contaminant: **AROCLOR 1254** [Chlorodiphenyl 54% Chlorine]
CAS number: 11097690

Exposure Limits: TLV: 0.500 mg/m3 SKIN PEL: 0.500 mg/m3
IDLH: 5 mg/m3 CA TLV-STEL: NONE

Symptoms of Overexposure: Irritation to eyes; acne-form dermatitis; liver damage; [Carcinogen]

Chemical Properties: Flashpoint:"?" F
Vapor Pressure: 0.0001 mm Hg 68 F
Specific Gravity of Vapor: NONE
Lower Explosive Limit: "?"%
Upper Explosive Limit: "?"%
Ionization Potential: "?")eV
Flame Ionization Detector: NA% (percent Relative Response)
PID: "?"% (percent Relative Response)

Contaminant: **PENTACHLOROPHENOL**
CAS number: 87865

Exposure Limits: TLV: 0.500 mg/m3 SKIN PEL: 0.500 mg/m3 SKIN
IDLH: 150 mg/m3 TLV-STEL: NONE

Symptoms of Overexposure: Irritation to eyes, nose and throat; Sneezing, coughing, weakness, anorexia, weight loss; Sweating,

headache, dizziness, nausea, vomiting; Chest pains; high fever, dermatitis;

Chemical Properties: Flashpoint: NA
Vapor Pressure: 0.0001 mm Hg 68 F
Specific Gravity of Vapor: 9.20 68 F
Lower Explosive Limit: NA%
Upper Explosive Limit: NA%
Ionization Potential: NA
Flame Ionization Detector: NA% (percent Relative Response)
PID: 118.00% (percent Relative Response)

SECTION [B] EMPLOYEE TRAINING

All employees involved in on-site operations must participate in routine health and safety education and training programs. These programs are designed to provide the employees with a thorough knowledge of hazardous materials and health and safety hazard potentials. This training must comply with federal OSHA 29 CFR 1910.120(e): 40-hour initial training, 8-hour annual refresher training, 8-hour supervisor training, and emergency response training where required.

General Topic Covered in Safety Training:

-Overview of the applicable paragraphs of 29 CFR 1910.120 and the elements of an employer's effective occupational safety and health program.

-Effect of chemical exposures to hazardous substance (i.e., toxicity, carcinogens, irritants, sensitizers, etc.).

-Effects of biological and radiological exposures.

-Fire and explosion hazards (i.e., flammable and combustible liquids, reactive materials).

-General Safety hazards, including electrical hazards, powered equipment hazards, walking-working surface hazards and those hazards associated with hot and cold temperature extremes.

-Confined space, tank and vault hazards and entry procedures.

-Specific safety, health and other hazards that are to be addressed at a site and in the site safety and health plan.

-Use of personal protective equipment and the implementation of the personal protective equipment program.

-Work practices that will minimize employee risk from site hazards.

-Safe use of engineering controls and equipment and any new relevant technology or procedure.

-Content of the medical surveillance program and requirements.

-The contents of an effective site safety and health plan.

-Use of monitoring equipment with "hands-on" experience and the implementation of the employee and site monitoring program.

-Decontamination program and procedures.

-Review of the applicable appendices to 29 CFR 1910.120.

-Sources of reference, additional information and efficient use of relevant manuals and hazard coding systems.

-Principles of toxicology and biological monitoring.

-Hands-on field exercises and demonstrations.

-Final examination.

SECTION [C] Personal Protective Equipment

Personal protective equipment (PPE) has been selected which will protect employees from the hazards and potential hazards they are likely to encounter and identified during the site characterization and facility records. Personal protective equipment selection is based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site.

Action Levels Based on PID or FID readings where petroleum products are the only contaminants of concern are as follows:

Readings are to be taken in the breathing zone of employee. Readings must be sustained one minute to be considered valid. Background readings should be taken before operations begin and upwind of site if possible.

All action levels are readings above background.

Detailed listings of personal protective equipment are provided on a task-by-task basis in Section A of this report.

## SECTION [D] Medical Surveillance

All employees on site will have participated in a medical surveillance program under the direction of a licensed physician. The content of medical examinations or consultations made available to employees shall be determined by the attending physician. The guidelines in the "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities" should be consulted. The following identifies the types of tests that will be given:

1. Occupational and Medical History

2. Physical Examination

   - Height, weight, temperature, pulse, respiration, and blood pressure
   - Head, nose, and throat
   - Eyes. Include vision tests that measure refraction, depth perception and color vision.
   - Ears. Include audiometric tests, performed at 500, 1,000, 2,000, 3,000, 4,000, and 6,000 hertz (Hz) pure tone in an approved booth.
   - Chest (heart and lungs).
   - Peripheral vascular system.
   - Abdomen and rectum (including hernia exam).
   - Spine and other components of musculoskeletal system.
   - Genitourinary system.
   - Skin.
   - Nervous system.

3. Tests

   - Blood
   - Urine.
   - A 14 x 17 inch posterior/anterior view chest x-ray with lateral or oblique views only if indicated. The x-ray should be taken by a certified radiology technician and interpreted by a board-certified or board eligible radiologist.

4. Ability to Perform While Wearing Protective Equipment

   - Pulmonary function testing. Measurement should include forced expiratory volume in 1 second (FEV1), forced vital capacity (FVC), and FEV - to FVC ratio, with interpretation and comparison to normal predicted values corrected for age, height, race, and sex.

     Other factors such as FEF, MEFR, MVV, FRC, RV, and TLC may be included for additional information. A permanent

- record of flow curves should be placed in the worker's medical records. The tests should be conducted by a certified technician and the results interpreted by a physician.

- Electrocardiogram (EKG). At least one standard, 12 lead resting EKG should be performed at the discretion of the physician. A "stress test" (graded exercise) may be administered at the discretion of the examining physician, particularly where heat stress may occur.

The employee has been furnished with a copy of the medical results which would include the following:

1. The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from work in hazardous waste operations or emergency response, or from respirator.

2. The physician's recommended limitations upon the employee's assigned work.

3. The results of the medical examination and tests.

Medical examinations and consultations have been made available by the employer to each employee on the following schedule:

1. Prior to assignment;

2. At least once every twelve months for each employee covered unless the attending physician believes a longer interval (not greater than biannually) is appropriate;

3. At termination of employment or reassignment to an area where the employee would not be covered if the employee has not had an examination within the last six months.

4. As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards, or that the employee has been injured or exposed above the permissible exposure limits or published exposure levels in an emergency.

5. At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

An accurate record of the medical surveillance shall be

retained. This record shall be retained for the period specified and meet the criteria of 29 CFR 1910.120.

Location of Medical Records:
Up until 12/89
SIU Family Practice Center, Springfield
Dr. Daniel O'Brien
(217) 782-0215

CURRENTLY with:
Health Evaluation Programs, Park Ridge
Dr. Steven Bunting (IEPA's Contracted Occupational Doctor)
1-(800) 323-2178

ACTION LEVELS

| Monitoring Equipment | Hazard | Level | Action |
|---|---|---|---|
| Photoionization Detector | Organic Vapors & Gases | 50 m.u. or greater | Upgrade to Level B |
| Flame Ionization Detector | Organic Vapors & Gases | 50 m.u. or greater | Upgrade to Level B |

The following PID and FID equipment is recommended:

PID (10.2 eV) (HNU PI-101)
PID (10.2 eV) (HNU DL-101)
FID (Foxboro OVA-108)

SECTION [F] SITE SECURITY AND CONTROL

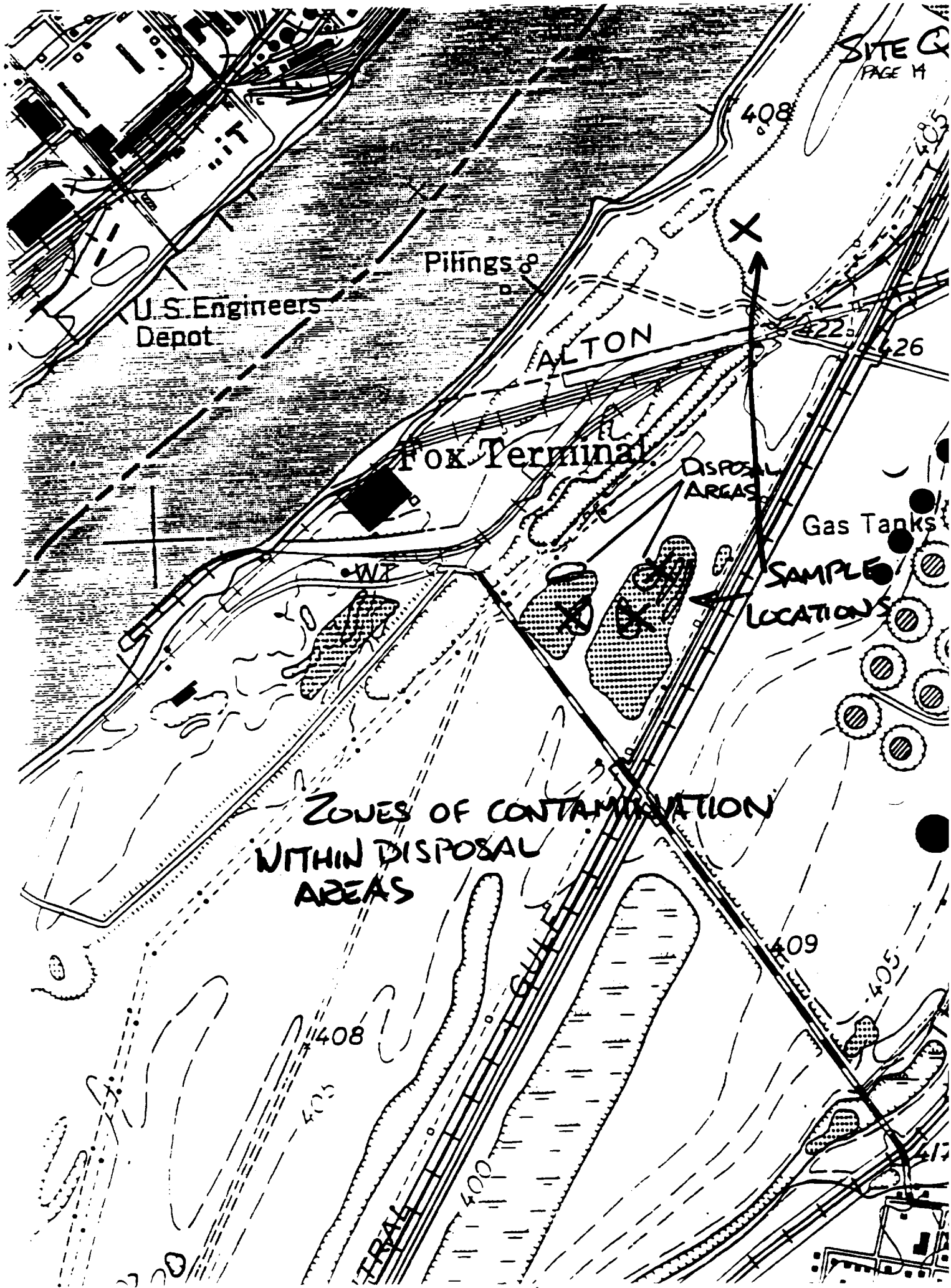
Appropriate control procedures shall be implemented to control employees (and the public) exposure to hazardous substances before work begins.

Access to the Site:

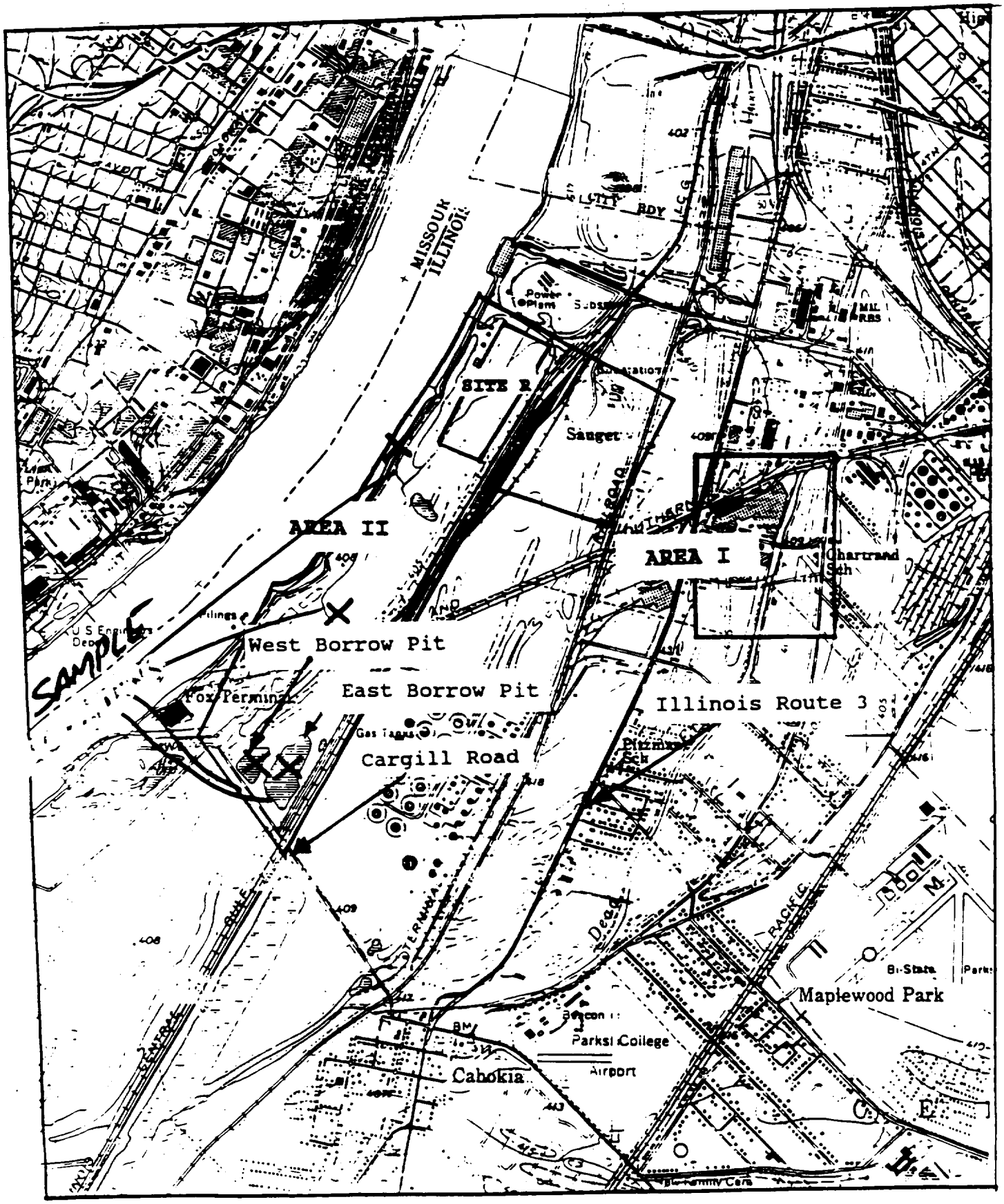
Site G - Park in the Wiese Engineering parking lot and enter site on west side.

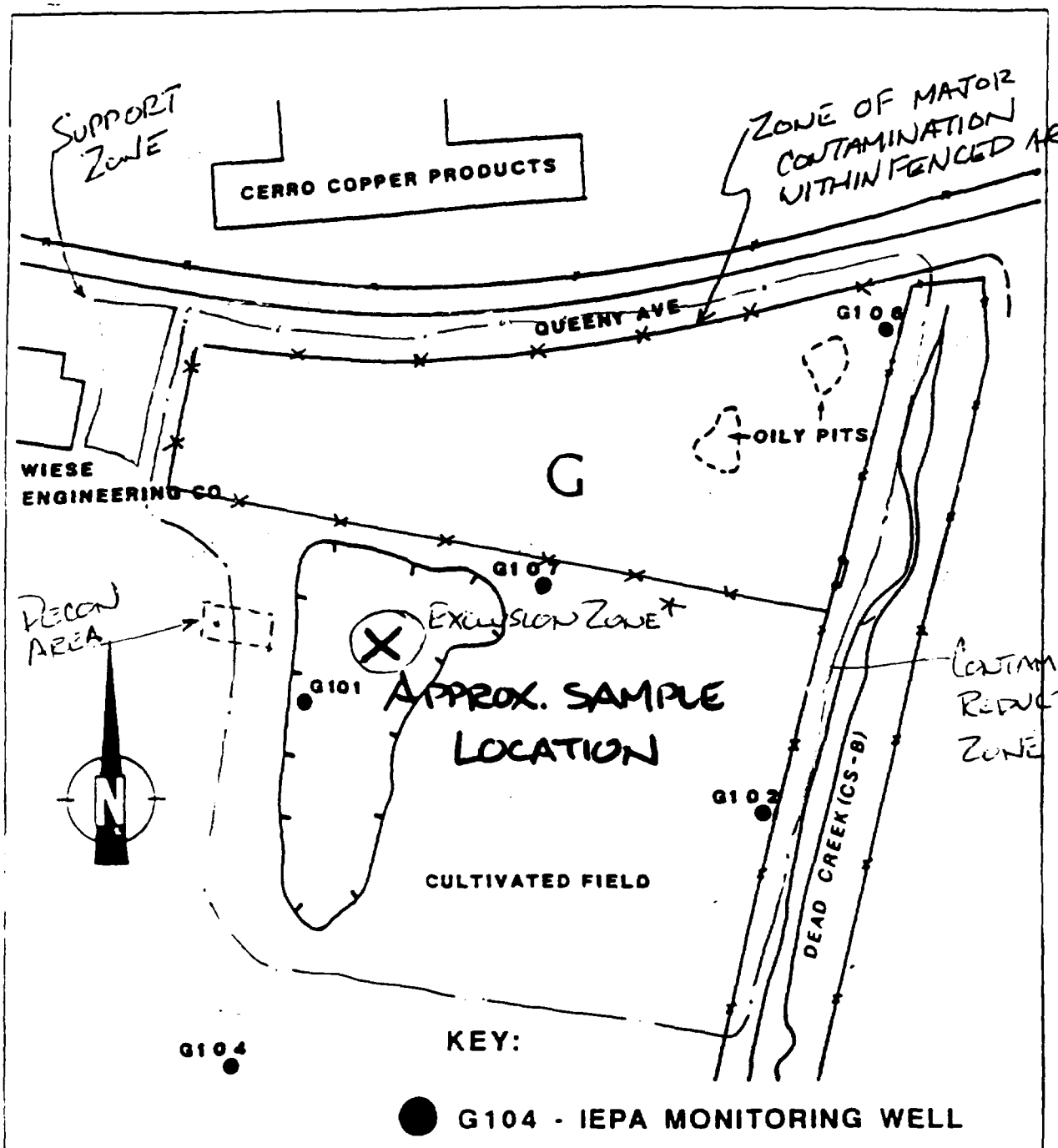
Site Q - Park on the access road and enter from that area.

Site Map: The following is a map of the site indicating zones of contamination:


SITE G
PAGE 14
408
405
Pilings
U.S. Engineers
Depot
ALTON
422
426
Fox Terminal
DISPOSAL
AREAS
Gas Tanks
SAMPLE
LOCATIONS
ZONES OF CONTAMINATION
WITHIN DISPOSAL
AREAS
409
405
408
405
400
GULF
TRAL

# SAUGET SITES INVESTIGATIONS





ecology and environment, inc.
Technical Assistance Team
Region V
111 West Jackson Blvd.
Chicago, IL 60604

| | |
|---|---|
| TITLE: SITE FEATURES MAP | FIGURE #: 2 |
| SITE: SAUGET AREA 1 - SITE G | SCALE: NOT TO SCALE |
| CITY: SAUGET / STATE: ILLINOIS | PAN: EIL0836SAA |

*EXCLUSION ZONE WILL BE A 20' RADIUS AROUND THE SAMPLE POINT

EXCLUSION ZONE:

Exclusion zone will comprise of 20 foot diameter circle around any sample location. Other possibly hazardous areas will be noted on the site map and will be discussed at the pre-entry site meeting.

CONTAMINATION REDUCTION ZONE (DECONTAMINATION):

Site G - the CRZ starts at the treeline. The decon line will exit to the support zone on the near side of the treeline. See attached site map.

Site Q - two separate areas will be set up.

Area 1 - support zone is limited to the abandoned access road. Decon will be done downwind of activity or supply areas.

Area 2 - support zone is located at the top of the river bluff.

SUPPORT ZONE:

Support zone will be marked on the attached site map. All vehicles, supplies, and non-protected personnel will remain in the noted support zones.

SITE COMMUNICATION:

All areas are within sight and audible communication distance.

SECTION [G] DECONTAMINATION PROCEDURES

Decontamination procedures for all phases shall be developed, communicated to employees and implemented before any employee or equipment may enter areas on site where the potential for exposure to hazardous substances exists. These procedures include but are not limited to the following:

1. Standard operating procedures shall be developed to minimize employee contact with hazardous substances or with equipment that has contacted hazardous substances. These SOPs may be incorporated into Section [A] and [C].

2. All employees leaving a contaminated area shall be appropriately decontaminated; all contaminated clothing and equipment leaving a contaminated area shall be appropriately

disposed of or decontaminated. Any PPE utilized will be removed, bagged, and if possible let on site. If this is not possible, the bagged PPE will be brought back to the Agency.

3. When possible use disposable sampling equipment, all other equipment should be wiped off, bagged, and brought back to the agency for further decontamination.

Note: Use private contractor's decontamination facilities if established.

The following example of personal decontamination is based on the exclusive use of disposable boot covers, gloves, and coveralls.

LEVEL C:

Job Tasks: Surface soil sampling

Steps

1. Segregated equipment drop
2. Remove outer booties and outer gloves whichever is the most contaminated remove first
3. Remove coveralls
4. Remove first pair of surgical gloves
5. Remove hard hat
6. Remove respirator
7. Remove second pair pr surgical gloves
8. Replace hard hat and put on eye protection until leaving the site

Personal Decontamination Equipment Necessary for All Levels:

Garbage bags, wet ones, paper towels, visqueen, water pressure sprayer (OPTIONAL).

## DISPOSITION OF DECONTAMINATION WASTES

All equipment and solvents used for decontamination shall be decontaminated or disposed of properly. Commercial laundries of cleaning establishments that decontaminate clothing or equipment shall be informed of the potentially harmful effects of exposure.

## EQUIPMENT DECONTAMINATION

Reusable, non-disposable equipment (stainless steel spoons, split spoons, measuring tape, etc.) will be decontaminated before removal from the site. The minimum decontamination

procedure for all equipment is as follows:

1. Water rinse;
2. Soap wash (Alconox);
3. Water rinse (distilled water rinse is optional);
4. Air dry;
5. Seal with aluminum foil.

## SECTION [H] CONTINGENCY PLAN

Emergency numbers should be kept in-site vehicle.

Nearest Telephone: Support Vehicle

Location: Support vehicle

Number: (618) 973-6129

Medical Emergencies:
Any person that becomes ill or injured in the active area should remove potentially contaminated clothing, if possible prior to transport to a medical facility. If the patient's condition is serious but not a heat stress related illness, at least partial decontamination, should be completed (i.e. complete disrobing of the victim and redressing in clean coveralls or wrapping in a blanket).

Safety Equipment Including First Aid Kit is Located:

Support vehicles and decon area.

For radiation contact:

Illinois Department of Nuclear Safety
Office of Environmental Safety
1-217-785-9889

First Aid Measures:

In the event that personnel exposure symptoms occur the following procedures will be used:

Petroleum Products

Eye Contact: Flush eye immediately with copious amounts of water repeat until irritation is eliminated. If prolonged irritation occurs for more than 15 minutes, seed medical attention.

Skin Contact: Wash exposed area with soap and water. If dermatitis or severe reddening occurs seek medical attention.

Inhalation: Remove person into fresh air, if symptoms occur for than 15 minutes seek medical attention.
Ingestion: Do not induce vomiting, seek immediate medical attention.

Anyone being transported to a medical facility for treatment should take with them information on the health hazards potentially present on site. This information is located in Section [B] of this Site Safety Plan.

Hospital or Nearest Medical Facility:

St. Mary's Hospital of East St. Louis
129 North Eighth Street
East St. Louis, Illinois 62201

Directions to Nearest Medical Facility:
(A map to the nearest Medical Facility is Attached - next page)

Enter onto Route 3 from either Queeny Avenue or access road from Site Q - Proceed north and turn right on Eighth Street to East St. Louis - Hospital is about a half mile away at 8th street and Missouri Avenue on the right side (east).

Emergency Telephone Numbers

Ambulance: 911

Hospital: 911

Fire Department: 911

Police Department: Sauget/Cahokia
Contact: Operator

Air Monitoring for FLAMMABLE CONDITIONS:

In the event that gasoline vapors exceeds 10% of the Lower Explosion Limit (LEL) or strong odors are detected in sewers or residence, the following actions should be taken:

Eliminate all ignition sources, NO SMOKING, cutoff electric switches away from odors. DO NOT allow cars to operate or travel over manholes.

Remove personnel away from odors, structures, or manhole covers.

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Belleville/East St. Louis, Ill.-C 018420-019333 © DonTech 1993

Call Fire Department: Sauget and Cahokia Fire Departments @ 911
IEPA-ERU
IEMA (Formerly IESDA) 800/782-7860

Provide answering personnel with the call back number(s), locations, directions, and situation assessment.

On the event gasoline vapors are greater than 0% of the LEL but less than 10% LEL in sewers or residences and/or slight to mild gasoline odors are present the following actions should be taken:

Eliminate all ignition sources if safe to do so. NO SMOKING
Call: Sauget and Cahokia Fire Departments @ 911 and (IEPA-ERU for guidance)

Note: Gasoline has an odor threshold ranging from 0.005 ppm to 10 ppm. If the LEL for gasoline is 1.4% 50% LEL} this would amount to around 7000 ppm of potentially hazardous vapors in air.

Fire or Explosion:

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival the field supervisor will advise the fire commander of the location, nature and identification of the hazardous materials on-site.

If it is safe to do so, employees may:

1. Use fire fighting equipment (fire extinguishers) on site to control or extinguish the fire.

2. Remove or isolate flammable or other hazardous materials which may contribute to the fire.

3. Extinguish other ignitable sources.

Evacuation Routes:

If possible coordinate evacuation protocol with the Contractor on site. If this is not possible, establish evacuation routes for each site. Evacuation should be conducted immediately, without regard for equipment, under conditions of extreme emergency. Personnel should preferably exit through the decontamination station. Personnel should decon if possible.

SECTION [I] CONFINED SPACE ENTRY

Confined space procedures do not apply to this Site.

SECTION [J] SPILL CONTAINMENT PROGRAM

Spill Containment procedures are not applicable to this site.

## APPENDIX 1: HAZARD COMMUNICATION

In order to comply with 29 CFR 1910.1200, Hazard Communication, the following written Hazard Communication Program has been established. All employees will be briefed on this program, and have a written copy for review.

A. Container Labeling

All containers received on site will be inspected to ensure the following:

1. All containers will be labeled as to the contents;
2. The appropriate hazard warnings will be noted; and
3. The name and address of the manufacturer will be listed.

All secondary containers will be labeled with either an extra copy of the original manufacturer's label or with generic labels which have a block for identification and blocks for the hazard warning.

B. Material Safety Data Sheets (MSDSs)

Copies of the MSDSs for all hazardous chemicals known or suspected on site will be maintained in the work area. MSDSs will be available to all employees for review during each work shift.

C. Employee Training and Information

Prior to starting work, each employee will attend a health and safety orientation and will receive information and training on the following:

1. An overview of the requirements contained in the Hazard Communication Standard, 29 CFR 1910.1200;
2. Chemicals present in their workplace operations;
3. Location and availability of a written hazard program;
4. Physical and health effects of the hazardous chemicals;
5. Methods and observation techniques used to determine the presence or release of hazardous chemicals;
6. How to lessen or prevent exposure to these hazardous chemicals through usage of control/work practices and personal protective equipment;
7. Emergency procedures to follow if they are exposed to these chemicals;
8. How to read labels and review MSDSs to obtain appropriate hazard information;
9. Location of MSDS appendix; and
10. Location of hazardous chemicals list within the Site Safety Plan.

## APPENDIX 2: TEMPERATURE EXTREMES

Each job task noted in this site safety plan needs to be evaluated for potential temperature extremes to be sure that both the selection of personal protective clothing and control measures are appropriate for current site conditions.

GUIDELINES

A. Cold Stress

The following are the primary effects of cold exposure:

1. Frost Nip

Frost nip occurs as a result of surface tissue freezing at the tips of the ears, nose, cheeks, chin, fingers and the toes.

Symptoms: Skin appears to be white and shiny.

Treatment: Warm the affected area(s) with a hand or breath. Do not rub. As the rewarming process takes place, tingling may be felt.

2. Frost Bite

Frost bite occurs as a result of surface and subsurface tissue freezing.

Symptoms: Erythema, blistering, throbbing pain, numbness, swelling and, if untreated, gangrene.

Treatment: Relocate individual to a warm location and steadily rewarm the affected area(s) slowly. Seek medical attention if symptoms persist.

3. Trench Foot

Trench foot occurs as a result of continuous exposure to damp and cold often combined with immersion in water. Areas other than the feet can be affected.

Symptoms: The feet or affected area will be swollen and waxy in appearance. Severe pain followed by blistering and the possibility of gangrene of the skin, muscles and nerves can occur.

Treatment: Relocate individual to a warm location, remove wet clothing and steadily rewarm the affected area(s) slowly. Seek medical attention if symptoms persist.

4. Hypothermia

Hypothermia occurs as a result of severe whole body cooling from prolonged exposure to cold and body heat loss.

- Symptoms: Shivering, slow reactions, mental confusion, glassy facial stare, low body temperature, and slow pulse and respiration. Death can occur within 2 hours if untreated.

Treatment: Relocate individual to a warm location, remove any wet clothing and rewarm as rapidly as possible. Provide both external (i.e. blankets, rescuer's body heat, etc.) and internal (i.e. hot liquids if the victim is conscious) heat. If possible, place individual in a tub of warm water at 105 - 110 degrees F. Seek medical attention.

CONTROL MEASURES

The following control measures are recommended to prevent the potential body core temperature loss of 2 degrees F from normal and/or whenever cold injury to body extremities is likely.

1. Air temperatures and wind speed shall be monitored in order to evaluate the potential of cold stress conditions.

2. Monitoring shall be performed prior to the start of work, during the scheduled breaks, and whenever there is a noticeable change in environmental conditions.

3. The monitoring results shall be compared to the attached windchill index chart.

4. If the equivalent temperature is between 20 and 50 degrees F within the "Little Danger" region of the chart, then a routine of 90 minutes of work followed by a 10 minute warm-up break will be implemented (for properly clothed individuals).

5. If the equivalent temperature is below 20 degrees F and within the "Little Danger" region of the chart, then a routine of 45 minutes of work followed by a 10 minute warm-up break will be implemented (for properly clothed individuals).

6. If the equivalent temperature is within the "Increasing Danger" or "Great Danger" region of the chart, work activities will cease.

The preceding work/warm-up routine must be adjusted by the supervisor, team leader, or head driller if any member of the work party manifests symptoms of cold stress.

EQUIPMENT

The following personal protective equipment is recommended in situations where the potential for cold stress exists:

1. Total body protection shall consist of clothing including an insulated head liner (hand, ear and full face coverage), heavy

socks, insulated long underwear, insulated coveralls and chemical resistant boots with liner.

2. Gloves shall be worn according to temperature and work levels (i.e. 60 F for sedentary work, 40 F for light work, and 20 F for moderate work). Mittens should be worn whenever air temperatures fall below 0 F provided that chemical protection is not an issue.

The following considerations are recommended in situations where the potential for cold stress exists:

1. If the outer layer of protective clothing will likely become wet, then a water repellent suit/coveralls should be worn over the normal protective clothing.

2. Protective clothing that becomes wet from water or sweat should be immediately replaced since the insulating properties will be greatly reduced.

3. The work area should be shielded with vehicles or tarps in order to reduce the wind chill effects.

4. Individuals who have an illness or are taking medication which might interfere with the regulation of normal body temperature should not be allowed to work in temperatures below 20 degrees F.

B. Heat Stress

Heat stress is the exposure to temperatures and humidity which can effect the individual's body core temperature.

The following are the primary effects of heat exposure:

1. Heat Rash

Heat rash occurs as a result to continuous exposure to heat or humid air usually contained with the clothing. This combination causes the sweat ducts to become plugged and inflamed due to the swelling of the keratin layer of the skin.

Symptoms: Skin is covered with visible tiny red vesicles.

Treatment: Dry the affected area(s). A talcum powder may then be used to prevent the return of the symptoms.

2. Heat Cramps

Heat cramps occurs as a result of profuse sweating and inadequate replacement of salt/electrolytes. This loss causes a salt/water

imbalance within the muscle tissue resulting in uncontrolled spasms (cramps).

Symptoms: Spasms (cramps) and pain in the muscles of the abdomen and/or extremities.

Treatment: Increase the individual's oral intake of salt/electrolyte beverages (i.e. 50:50 dilution of Gatorade and water).

3. Heat Exhaustion

Heat exhaustion occurs as a result of sustained exertion in a hot environment with dehydration from insufficient water and/or salt/electrolyte intake. The cardiovascular system is therefore unable to compensate for the insufficiencies and places the individual into a mild shock.

Symptoms: Extreme weakness, dizziness, nausea, headache, body temperature normal or subnormal, and skin is clammy, moist and pale.

Treatment: Relocate individual to a cool environment and administer salt/electrolyte beverages (i.e. 50:50 dilution of Gatorade and water at 50 F if the victim is conscious). Seek medical attention.

4. Heat Stroke

Heat stroke occurs as a result of when the body's heat regulatory process fails, shutting down the sweating process. Deprived of the body's primary cooling mechanism, the body's core temperature rises destroying cells in the central nervous system.

Symptoms: Dizziness, nausea, headache, delirium, collapse, coma, and hot dry skin. If untreated, death can occur.

Treatment: Relocate individual to a cooler location and if possible immerse in chilled water. **SEEK MEDICAL ATTENTION - IMMEDIATELY!!!!**

MONITORING

The following control measures are recommended to prevent the potential body core temperature rise of 2 degrees above the normal and/or whenever heat injury is likely.

1. Heart Rate

Determine the individual's normal heart rate by monitoring the pulse at the beginning of the day's activities. At the beginning

of the first rest period, determine the current heart rate. If the heart rate is greater than 40 beats per minute above normal, then shorten the next work period by 1/3.

If after the next rest period, the heart rate is greater than 40 beats per minute above normal, then shorten the following work period by 1/3.

2. Body Water Loss

The individual may determine body weight on a scale accurate to +/- 0.25 lb at the beginning and end of each work day. Weights should be taken at home and the body weight loss (water loss) should not exceed 1.5 percent total body weight in a work day.

PREVENTION

1. Adjust Work Schedules
Modify work/rest schedules according to the monitoring requirements.

Mandate work slowdowns as needed.

Rotate personnel: alternate job functions to minimize overstress or overexertion at one task.

Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided.

2. Maintain Body Fluids
Maintain drinking water temperature at 50 to 60 F.

Have individuals drink 16 oz of fluid BEFORE beginning work.

A total of 1 to 1.6 gallons of fluid per day is recommended, but more may be necessary to maintain body weight.

3. Provide shelter (air-conditioned automobile or tarps, if possible) or shaded areas to protect personnel during rest periods.

4. Provide cooling devices (Steele Vest) to aid natural body heat exchange during prolonged work or severe heat exposure.

5. Individuals should be trained to recognize and treat heat stress.

RESPONSIBILITIES

A It is the responsibility of the HSU to assist the team leader and/or supervisor in selecting the appropriate temperature

extreme personal protective equipment for site activities as noted in the Site Safety Plan.

B. It is the responsibility of the team leader and/or supervisor to insure that each employee wears the designated temperature extreme personal protective equipment outlined in the Site Safety Plan for each specific site.

C. It is the responsibility of the user to maintain in good order temperature-extreme personal protective equipment assigned to them.

D. It is the responsibility of the central property control officer and the LPC regional property control officer to maintain adequate supplies of temperature extreme equipment.

E. It is the responsibility of the team leader and/or supervisor to insure that any visitors, contractors, or other Agency employees abide by the temperature extremes requirements specified in the Site Safety Plan.

F. With the exception of the regional offices that maintain a limited supply, all temperature extreme personal protective equipment will be stored by the central property control officer at the LPC warehouse. Any employees requiring temperature extreme personal protective equipment will arrange with their respective LPC regional property control officer to obtain these materials from the LPC warehouse.

MATERIAL SAFETY DATA SHEETS

If you want additional information obtain MSDSs for the following contaminants:

1,4-DICHLOROBENZENE CAS number: 106467

AROCLOR 1254 [Chlorodiphenyl 54% Chlorine] CAS number: 11097690

PENTACHLOROPHENOL CAS number: 87865

Contact: IEPA Health and Safety Office: (217) 785-0830

# IEPA EMPLOYEE/CONTRACTOR
## SITE ACCESS REQUEST AND SAFETY CERTIFICATION FORM

for: (site name) _____

All employees and independent contractors of the Illinois Environmental Protection Agency and employees of designated contractors of the IEPA who request/require access to this site beyond the designated support zone must complete the following form prior to performing any activities on the site beyond the designated support zone.

I, TOM MILLER, am:
(print name)

X an employee of the IEPA

or

___ a contractor

or

___ an employee of a contractor

designated by IEPA to perform work at this site and I certify that:

1.) I am currently qualified, according to 29 CFR 1910.120 (HAZWOPER), to perform my job task(s) at this site.

2.) I have read and understand the site safety plan, including information pertaining to the hazards identified in the site safety plan.

3.) I will abide by the provisions of the site safety plan, and if I am not an employee of the IEPA, I agree to release IEPA from any claims which may arise because of my entry upon this site, except to the extent that the Illinois Response Action Contractor's Indemnification Act may apply.

Tom Miller — 11/9/94
Employee/Contractor Signature — Date

IEPA
Organization

2009 Mall Street, Collinsville, IL 62234
Address/City/State/Zip

(This form must be kept in the project manager's copy of the site safety plan and is considered a permanent document.)

# NON-IEPA EMPLOYEE/CONTRACTOR
## SITE ACCESS REQUEST AND SAFETY CERTIFICATION FORM

for: (site name) [redacted]

All personnel not employed by the Illinois Environmental Protection Agency or a designated contractor of the Agency who request access to this site beyond the designated support zone must complete the following form prior to performing any activity on the site beyond the support zone.

I, MONICA REBBE, certify that:
(print name)

1.) X I am currently qualified, according to 29 CFR 1910.120 (HAZWOPER) training, to work at this site. I have been advised by the project manager (or staff) that access beyond the support area is not recommended without proper equipment. I understand the real or possible hazards as stated in the site safety plan and I request access to the site for the following reason(s) and agree to release IEPA from any claims which may arise because of my entrance upon the site:
OVERSITE AND OBSERVATION - JOINT PROJECT, IDPH - employee.

or

2.) ____ I am not currently qualified, according to 29 CFR 1910.120 (HAZWOPER) training, to work at this site. I have been advised by the project manager (or staff) that access beyond the support area is not recommended without proper training and equipment. I understand the real or possible hazards as stated in the site safety plan and I request access to the site for the following reason(s) and agree to release IEPA from any claims which may arise because of my entrance upon the site:
_____.

Monica J. Rebbe
Signature

11-9-94
Date

Ill. Dept of Public Health
Organization

525 W. Jefferson, Springfield, IL 62761
Address/City/State/Zip

*[This form must be kept in the project manager's copy of the site safety plan and is considered a permanent document.]*

# IEPA EMPLOYEE/CONTRACTOR
## SITE ACCESS REQUEST AND SAFETY CERTIFICATION FORM

for: (site name) SAUGET, SITES (AREA 1, 2)

All employees and independent contractors of the Illinois Environmental Protection Agency and employees of designated contractors of the IEPA who request/require access to this site beyond the designated support zone must complete the following form prior to performing any activities on the site beyond the designated support zone.

I, PAUL TAKACS, am:
(print name)

X an employee of the IEPA

or

___ a contractor

or

___ an employee of a contractor

designated by IEPA to perform work at this site and I certify that:

1.) I am currently qualified, according to 29 CFR 1910.120 (HAZWOPER), to perform my job task(s) at this site.

2.) I have read and understand the site safety plan, including information pertaining to the hazards identified in the site safety plan.

3.) I will abide by the provisions of the site safety plan, and if I am not an employee of the IEPA, I agree to release IEPA from any claims which may arise because of my entry upon this site, except to the extent that the Illinois Response Action Contractor's Indemnification Act may apply.

Employee/Contractor Signature

Date 9 NOV 94

IEPA

Organization

2200 CHURCHILL RD

Address/City/State/Zip

*(This form must be kept in the project manager's copy of the site safety plan and is considered a permanent document.)*

# IEPA EMPLOYEE/CONTRACTOR
## SITE ACCESS REQUEST AND SAFETY CERTIFICATION FORM

for: (site name)

All employees and independent contractors of the Illinois Environmental Protection Agency and employees of designated contractors of the IEPA who request/require access to this site beyond the designated support zone must complete the following form prior to performing any activities on the site beyond the designated support zone.

I, Douglas Hayward, am:
(print name)

X an employee of the IEPA

or

___ a contractor

or

___ an employee of a contractor

designated by IEPA to perform work at this site and I certify that:

1.) I am currently qualified, according to 29 CFR 1910.120 (HAZWOPER), to perform my job task(s) at this site.

2.) I have read and understand the site safety plan, including information pertaining to the hazards identified in the site safety plan.

3.) I will abide by the provisions of the site safety plan, and if I am not an employee of the IEPA, I agree to release IEPA from any claims which may arise because of my entry upon this site, except to the extent that the Illinois Response Action Contractor's Indemnification Act may apply.

Douglas E. Hayward
Employee/Contractor Signature

11/9/94
Date

IEPA
Organization

2009 Mall Collinsville IL 62234
Address/City/State/Zip

*(This form must be kept in the project manager's copy of the site safety plan and is considered a permanent document.)*

1630200005/ST.C6
Sauget Sites
S.F. Tech

ARDL Inc.
applied research & development laboratory

CHEMISTRY · BIOLOGY · PHYSIOLOGY
ENGINEERING · ENVIRONMENTAL ANALYSIS

9 December 1994

Mr. Ron Turpin
Division of Laboratories # 4
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, IL 62706

RECEIVED
DEC 12 1994
IEPA/DLPC

SUBJECT: Data Package Submittal
Facility: Sauget SA 1 & 2
ARDL ID No.: 2344
Site Inventory No.: 1630200005
Due Date: 12/12/94

Dear Mr. Turpin:

Enclosed please find ARDL's data package for analyses performed on samples delivered to our laboratory on 11/12/94. The data package consists of the following:

1. Letter of Transmittal
2. Tabulated Analytical Results
3. Chain-of-Custody Documentation
4. Data Package - Paginated and submitted in the following order:

   a. Volume 1 - Inorganic Analysis Data Package
   b. Volume 2 - Organic Sample Data Summary Package
   c. Volume 3 - Volatiles Analysis Data Package
   d. Volume 4 - Semi-Volatiles Analysis Data Package
   e. Volume 5 - Pesticide/PCB Analysis Data Package

I have forwarded one (1) copy of the sample results for this package to Sue Doubet, IEPA.

We appreciate the opportunity to be of service to the IEPA.

Thank you.

Sincerely yours,

Daniel J. Gillespie
Technical Services Manager

DJG/jcm

Enclosure

P.O. Box 1566 · Mt. Vernon Airport, Route 15 East · Mt. Vernon, Illinois 62864 · (618) 244-3235 · FAX (618) 244-1149
*"Test Everything - Keep The Good" 1 Thes. 5:21*

SPH - CLP
CHAIN OF CUSTODY

Seal # [illegible]
Date Sealed: 11/8/94 By: [illegible]

Facility Name : SAUGET SITE AREA #1 + #2
Location: COLLINSVILLE
County: ST CLAIR

Site Inventory # : 1630200005
Site Billing Code: IDPH/MONICA REBBE
Project Manager : PAUL TAKACS

| Laboratory # | Sample No. | Sample Date | Sample Time |
|---|---|---|---|
| ARDL 33[illegible] | X112 | 11-10-94 | 10:00AM |

Sample Appearance : BLACKISH WASTE MAT'L W/ SOIL CRUMBLY

Collector Comments:

Sampler Signature : Tom Miller Division/Company IEPA/FOS

| CONTAINER | | | | ANALYSIS | FILTERED | |
|---|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) | Date |
| 2 | 14 | 2oz | N | VOA | N | |
| 1 | 19 | 16ozO | N | BNA, PEST/PCB | N | |
| 1 | 286 | 16ozI | N | TOTAL METALS, CYANIDE, | N | |
| | 287 | | N | SULFIDE, SULFATE | N | |

CHAIN OF CUSTODY RECORD

I certify that I received the sample shipping container with the shipping container sealed and [illegible]

Signature: PAUL TAKACS Signature: Paul Takacs
Date: 11-10-94 Time: 7:20AM Seal #: 9947 Initials: G

I certify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact in the sample shipping container and that I sealed the sample shipping container at the date and time specified.

Signature: PAUL TAKACS Signature: Paul Takacs
Date: 11-10-94 Time: 12:57PM Seal #: 9948
IEPA/ARDL

Courier - Sample Delivery Group

I certify that I received the sample shipping container from the courier listed above [illegible] that each bottle in the shipping container was intact after recording the sample [illegible] the custody of competent laboratory personnel at all times or locked in a secure area [illegible]

Opened by (print): Dawn Cochran Signature: Dawn Cochran

Date: 11-10-94 Time: 1700 Seal #: 9948

Lab Name: ARDL INC

CHAIN OF CUSTODY

Date Sealed: 11/8/94 By: [illegible]

Facility
Name : SAUGET SITE AREA #1 + #2
Region: COLLINSVILLE
County: ST CLAIR

Site Inventory # : 1630[illegible]
Site Billing Code: IDPH/MONICA REDBE
Project manager : PAUL TACKACS

| Laboratory #: | | Sample Date | Time |
|---|---|---|---|
| ARDL 23442 | X113 | 11-10-94 | 10:15AM |

Sample Appearance : SIMILAR TO X112

Director Comments:

Sampler Signature : Tom Miller Division/Company IEPA/FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA,PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS,CYANIDE, | N |
| | 287 | | N | SULFIDE,SULFATE | N |

CHAIN OF CUSTODY CHRONICLE

I certify that I received the sample shipping container with the shipping container sealed [illegible]

Name: PAUL TAKACS Signature: Paul S. Takacs

11-10-94 Time: 7:20AM Seal #: 9947 [illegible]: O

I certify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact in the bottle shipping container and that I sealed the shipping container at the date and time listed below.

Sealed by (print): PAUL TAKACS Signature: Paul S. Takacs

11-10-94 Time: 12:57PM Seal #: 9948

Delivered to: IEPA/ARDL

Courier - Sample Delivery: [illegible]

I certify that I received the sample shipping container from the courier listed above with the shipping container sealed [illegible] that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be kept in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): DONNA COLLISON Signature: [illegible]

Date: 11/10/94 Time: 1700 Seal #: 9948 [illegible]

Lab Name: ARDL, INC Comments: [illegible]

CHAIN OF CUSTODY

Date Sealed: 11/8/94 By: [illegible]

Facility Name : SAUGET SITE AREA #1 + #2
Region: COLLINSVILLE
County: ST.CLAIR

Site Inventory # : 1630200005
Site Billing Code: IDPH/MONICA REBBE
Project Manager : PAUL TACKACS

| Laboratory # | | | |
|---|---|---|---|
| ARDL 23453 | X114 | 11-10-94 | 11:15 a.m. |

Sample Appearance: Brown - waste material

Collector Comments:

Transfer Signature: Tom Miller Division/Company: IEPA/FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA,PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS,CYANIDE, | N |
| | 287 | | N | SULFIDE,SULFATE | N |

CHAIN OF CUSTODY CONDITIONS

I certify that I read at the sample shipping container with the shipping container sealed and intact.

Name: PAUL TARACS Signature: Paul E. Taracs

11-10-94 7:43AM 9945 0

I certify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact into the sample shipping container and that I sealed the sample shipping container at the date and time listed below.

Name (print): Monica Rebbe Signature: Monica Rebbe

Date: 11-10-94 Time: 12:55 p.m. Seal #: 9946

Agency: IEPA \ ARDL

Courier - Sample Delivery: Courier

I certify that I received the sample shipping container from the courier listed above, that the shipping container and seal were intact, and that each bottle in the shipping container was intact. After recording the sample in the appropriate record book, the sample will be in the custody of competent laboratory personnel at all times, or locked in a secured area.

Opened by (print): DONNA COCKRUM Signature: [illegible]

Date: 11/10/94 Time: 1700 Seal #: 9946 Intact: (Y) N

Lab Name: ARDL INC Comments:

HAIN OF CUSTODY

Date Sealed: 11/8/94 By: [illegible]

acility
ame : SAUGET SITE AREA #1 + #2
egion: COLLINSVILLE
ounty: ST.CLAIR

Site Inventory # : [illegible]
Site Billing Code: IDPH/MONICA REBBE
Project Manager : PAUL TAKACS

| Laboratory # | | | |
|---|---|---|---|
| ARDL 1344-1 | X115 | 11-10-94 | 11:30 a.m. |

ample Appearance : Brown - waste material

ollector Comments:

ollector Signature : Tom Miller Division/Company IEPA/FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 3 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozU | N | BNA,PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS,CYANIDE, | N |
| | 287 | | N | SULFIDE,SULFATE | N |

CHAIN OF CUSTODY CHRONICLE

ertify that I received the sample shipping container with the shipping container sealed and intact

PAUL TAKACS Signature: [signature]

11-10-94 7:43AM 9945

ertify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact in the ample shipping container and that I sealed the sample shipping container at the date and time listed below.

ame (print): Monica Rebbe Signature: [signature]

11-10-94 Time: 12:55pm. Seal # 9946

IEPA\ ARDL

ourier - Sample Delivery: Courier

certify that I received the sample shipping container from the courier listed above, with the shipping container sealed and intact, and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

pened by (print): Donna Cockrum Signature: [signature]

ate: 11-10-94 Time: 1700 Seal # 9946 Intact: (Y) N

ab Name: ARDL, INC Comments:

HAIN OF CUSTODY

Date Sealed: 11/8/94 By: [illegible]

acility
ame : SAUGET SITE AREA #1 + #2
egion: COLLINSVILLE
ounty: ST.CLAIR

Site Inventory # : 1030200105
Site Billing Code: IDPH MONICA REBBE
Project Manager : PAUL TAKACS

| Laboratory # | Sample # | Sample Date | Time |
|---|---|---|---|
| ARDL 9944 | X116 | 11-10-94 | 11:40 AM |

Sample Appearance : YELLOWISH-BROWN WASTE MATL. ODOR

Collector Comments:

Sampler Signature: Tom Miller Division/Company: IEPA/FOS

| CONTAINER | | | | ANALYSIS | |
|---|---|---|---|---|---|
| No. | Code | Size | Preser | | (Y/N) |
| 2 | 14 | 2oz | N | VOA | N |
| 1 | 19 | 16ozO | N | BNA, PEST/PCB | N |
| 1 | 286 | 16ozI | N | TOTAL METALS, CYANIDE, | N |
| | 287 | | N | SULFIDE, SULFATE | N |

CHAIN OF CUSTODY RECORD

I certify that I received the sample shipping container with the shipping container sealed.

Name: PAUL TAKACS Signature: [signature]

11-10-94 Time: 8:00AM Seal #: 9943 Intact: Y

I certify that the sample listed above was collected and placed in bottles in my presence, that each bottle was placed intact in the sample shipping container and that I sealed the sample shipping container at the date and time listed below.

Name (print): PAUL TAKACS Signature: [signature]

11-10-94 Time: 1:05PM Seal #: 9944

Company: IEPA/ARDL

Courier - Sample Delivery: [signature]

I certify that I received the sample shipping container from the courier listed above with the shipping container sealed and that each bottle in the shipping container was intact. After recording the sample in the official record book, the sample will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Opened by (print): David Cockrum Signature: [signature]

Date: 11/10/94 Time: 1700 Seal #: 9944 Intact? Y/N

Lab Name: NCL INC Comments:

EPA SAMPLE NO.

X112

# INORGANIC ANALYSIS DATA SHEET

Lab Name: ARDL, INC. Contract No.: 2344

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X112

Matrix (soil/water): SOIL Lab Sample ID: 2344-1

Level (low/med): LOW Date Received: 11/12/94

% Solids: 82.8

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 1470 | | | P |
| 7440-36-0 | Antimony | 4.8 | U | N | P |
| 7440-38-2 | Arsenic | 6.4 | | S | F |
| 7440-39-3 | Barium | 47.8 | B | | P |
| 7440-41-7 | Beryllium | 0.24 | U | | P |
| 7440-43-9 | Cadmium | 56.2 | | | P |
| 7440-70-2 | Calcium | 8680 | | | P |
| 7440-47-3 | Chromium | 4.5 | | | P |
| 7440-48-4 | Cobalt | 3.6 | B | | P |
| 7440-50-8 | Copper | 20.1 | | | P |
| 7439-89-6 | Iron | 11000 | | | P |
| 7439-92-1 | Lead | 16.7 | | | F |
| 7439-95-4 | Magnesium | 2020 | | | P |
| 7439-96-5 | Manganese | 280 | | | P |
| 7439-97-6 | Mercury | 0.12 | U | | CV |
| 7440-02-0 | Nickel | 8.4 | B | | P |
| 7440-09-7 | Potassium | 292 | B | | P |
| 7782-49-2 | Selenium | 0.24 | U | N W | F |
| 7440-22-4 | Silver | 1.2 | U | | P |
| 7440-23-5 | Sodium | 217 | U | | P |
| 7440-28-0 | Thallium | 0.24 | U | | F |
| 7440-62-2 | Vanadium | 4.7 | B | | P |
| 7440-66-6 | Zinc | 10300 | | | P |
| | Cyanide | 0.60 | U | | C |

Color Before BRN/RED/BLK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

# INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X112

Lab Name: ARDL, INC. Contract: 2344

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X112

Matrix (soil/water): SOIL Lab Sample ID: 2344-1

Level (low/med): LOW Date Received: 11/12/94

% Solids: 82.8

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 279 | | | |
| | Sulfide | 91.7 | | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

EPA SAMPLE NO.

X113

# INORGANIC ANALYSIS DATA SHEET

Lab Name: ARDL, INC. Contract No.: 2344

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X112

Matrix (soil/water) SOIL Lab Sample ID: 2344-2

Level (low/med): LOW Date Received: 11/12/94

% Solids: 77.4

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 3350 | | | P |
| 7440-36-0 | Antimony | 5.2 | U | N | P |
| 7440-38-2 | Arsenic | 3.6 | | S | F |
| 7440-39-3 | Barium | 106 | | | P |
| 7440-41-7 | Beryllium | 0.28 | B | | P |
| 7440-43-9 | Cadmium | 0.78 | U | | P |
| 7440-70-2 | Calcium | 12400 | | | P |
| 7440-47-3 | Chromium | 6.4 | | | P |
| 7440-48-4 | Cobalt | 5.0 | B | | P |
| 7440-50-8 | Copper | 6.3 | B | | P |
| 7439-89-6 | Iron | 8260 | | | P |
| 7439-92-1 | Lead | 6.8 | | | F |
| 7439-95-4 | Magnesium | 4710 | | | P |
| 7439-96-5 | Manganese | 147 | | | P |
| 7439-97-6 | Mercury | 0.13 | U | | CV |
| 7440-02-0 | Nickel | 12.9 | | | P |
| 7440-09-7 | Potassium | 923 | B | | P |
| 7782-49-2 | Selenium | 0.26 | U | N W | F |
| 7440-22-4 | Silver | 1.3 | U | | P |
| 7440-23-5 | Sodium | 233 | U | | P |
| 7440-28-0 | Thallium | 0.26 | U | | F |
| 7440-62-2 | Vanadium | 9.8 | B | | P |
| 7440-66-6 | Zinc | 43.3 | | | P |
| | Cyanide | 0.64 | U | | C |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROOTS/LEAVES/PEBBLES

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Lab Name: ARDL, INC. Contract: 2344

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X112

Matrix (soil/water): SOIL Lab Sample ID: 2344-2

Level (low/med): LOW Date Received: 11/12/94

% Solids: 77.4

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 61.3 | | | |
| | Sulfide | 25.8 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN ILM02.0

EPA SAMPLE NO.

X114

# INORGANIC ANALYSIS DATA SHEET

Lab Name: ARDL, INC. Contract No.: 2344

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X112

Matrix (soil/water) SOIL Lab Sample ID: 2344-3

Level (low/med): LOW Date Received: 11/12/94

% Solids: 75.3

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 10100 | | | P |
| 7440-36-0 | Antimony | 5.3 | U | N | P |
| 7440-38-2 | Arsenic | 7.3 | | S | F |
| 7440-39-3 | Barium | 219 | | | P |
| 7440-41-7 | Beryllium | 0.90 | B | | P |
| 7440-43-9 | Cadmium | 5.8 | | | P |
| 7440-70-2 | Calcium | 5760 | | | P |
| 7440-47-3 | Chromium | 16.2 | | | P |
| 7440-48-4 | Cobalt | 11.4 | B | | P |
| 7440-50-8 | Copper | 675 | | | P |
| 7439-89-6 | Iron | 21200 | | | P |
| 7439-92-1 | Lead | 172 | | | F |
| 7439-95-4 | Magnesium | 3550 | | | P |
| 7439-96-5 | Manganese | 419 | | | P |
| 7439-97-6 | Mercury | 0.21 | | | CV |
| 7440-02-0 | Nickel | 32.7 | | | P |
| 7440-09-7 | Potassium | 2400 | | | P |
| 7782-49-2 | Selenium | 0.27 | U | N W | F |
| 7440-22-4 | Silver | 1.3 | U | | P |
| 7440-23-5 | Sodium | 239 | U | | P |
| 7440-28-0 | Thallium | 0.27 | U | | F |
| 7440-62-2 | Vanadium | 23.3 | | | P |
| 7440-66-6 | Zinc | 612 | | | P |
| | Cyanide | 0.63 | U | | C |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROOTS/STEMS

1

# INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Lab Name: ARDL, INC. Contract: 2344

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X112

Matrix (soil/water): SOIL Lab Sample ID: 2344-3

Level (low/med): LOW Date Received: 11/12/94

% Solids: 75.3

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 127 | | | |
| | Sulfide | 26.2 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

EPA SAMPLE NO.

X115

# INORGANIC ANALYSIS DATA SHEET

Lab Name: ARDL, INC. Contract No.: 2344

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X112

Matrix (soil/water) SOIL Lab Sample ID: 2344-4

Level (low/med): LOW Date Received: 11/12/94

% Solids: 63.9

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 9680 | | | P |
| 7440-36-0 | Antimony | 6.3 | U | N | P |
| 7440-38-2 | Arsenic | 11.7 | B | S | F |
| 7440-39-3 | Barium | 209 | | | P |
| 7440-41-7 | Beryllium | 0.94 | B | | P |
| 7440-43-9 | Cadmium | 4.4 | | | P |
| 7440-70-2 | Calcium | 5950 | | | P |
| 7440-47-3 | Chromium | 16.8 | | | P |
| 7440-48-4 | Cobalt | 35.3 | | | P |
| 7440-50-8 | Copper | 1150 | | | P |
| 7439-89-6 | Iron | 26800 | | | P |
| 7439-92-1 | Lead | 0.31 | U | | F |
| 7439-95-4 | Magnesium | 3220 | | | P |
| 7439-96-5 | Manganese | 268 | | | P |
| 7439-97-6 | Mercury | 0.41 | | | CV |
| 7440-02-0 | Nickel | 38.5 | | | P |
| 7440-09-7 | Potassium | 2230 | | | P |
| 7782-49-2 | Selenium | 0.31 | U | N W | F |
| 7440-22-4 | Silver | 1.6 | U | | P |
| 7440-23-5 | Sodium | 282 | U | | P |
| 7440-28-0 | Thallium | 0.31 | U | | F |
| 7440-62-2 | Vanadium | 22.7 | | | P |
| 7440-66-6 | Zinc | 864 | | | P |
| | Cyanide | 0.78 | U | | C |

Color Before: BROWN/BLA Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: LEAVES/ROOTS/STEMS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ARDL, INC. Contract: 2344

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X112

Matrix (soil/water): SOIL Lab Sample ID: 2344-4

Level (low/med): LOW Date Received: 11/12/94

% Solids: 63.9

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 4430 | | | |
| | Sulfide | 31.3 | U | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

EPA SAMPLE NO.

X116

# INORGANIC ANALYSIS DATA SHEET

Lab Name: ARDL, INC. Contract No.: 2344

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X112

Matrix (soil/water) SOIL Lab Sample ID: 2344-5

Level (low/med): LOW Date Received: 11/12/94

% Solids: 63.2

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 1720 | | | P |
| 7440-36-0 | Antimony | 6.3 | U | N | P |
| 7440-38-2 | Arsenic | 47.9 | B | + | F |
| 7440-39-3 | Barium | 414 | | | P |
| 7440-41-7 | Beryllium | 0.38 | B | | P |
| 7440-43-9 | Cadmium | 6.2 | | | P |
| 7440-70-2 | Calcium | 7280 | | | P |
| 7440-47-3 | Chromium | 19.3 | | | P |
| 7440-48-4 | Cobalt | 12.7 | B | | P |
| 7440-50-8 | Copper | 515 | | | P |
| 7439-89-6 | Iron | 5690 | | | P |
| 7439-92-1 | Lead | 0.32 | U | | F |
| 7439-95-4 | Magnesium | 471 | B | | P |
| 7439-96-5 | Manganese | 43.4 | | | P |
| 7439-97-6 | Mercury | 4.7 | | | CV |
| 7440-02-0 | Nickel | 15.3 | | | P |
| 7440-09-7 | Potassium | 316 | U | | P |
| 7782-49-2 | Selenium | 1.6 | U | N E | F |
| 7440-22-4 | Silver | 2.6 | B | | P |
| 7440-23-5 | Sodium | 322 | B | | P |
| 7440-28-0 | Thallium | 0.32 | U | | F |
| 7440-62-2 | Vanadium | 18.7 | | | P |
| 7440-66-6 | Zinc | 38200 | | | P |
| | Cyanide | 0.77 | U | | C |

Color Before: BROWN/BLA Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

# INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

Lab Name: ARDL, INC. Contract: 2344

Lab Code: ARDL Case No.: BBE SAS No.: _____ SDG No.: X112

Matrix (soil/water): SOIL Lab Sample ID: 2344-5

Level (low/med): LOW Date Received: 11/12/94

% Solids: 63.2

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

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| | Sulfate | 63.3 | U | | |
| | Sulfide | 503 | | | |

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

VOLATILE ORGANICS ANALYSIS DATA SHEET

X112

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-1

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8108

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 17 Date Analyzed: 11/15/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 12. | U |
| 74-83-9 | Bromomethane | 12. | U |
| 75-01-4 | Vinyl Chloride | 12. | U |
| 75-00-3 | Chloroethane | 12. | U |
| 75-09-2 | Methylene Chloride | 61. | |
| 67-64-1 | Acetone | 12. | U |
| 75-15-0 | Carbon Disulfide | 12. | U |
| 75-35-4 | 1,1-Dichloroethene | 12. | U |
| 75-34-3 | 1,1-Dichloroethane | 12. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 12. | U |
| 67-66-3 | Chloroform | 12. | U |
| 107-06-2 | 1,2-Dichloroethane | 12. | U |
| 78-93-3 | 2-Butanone | 12. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 12. | U |
| 56-23-5 | Carbon Tetrachloride | 12. | U |
| 75-27-4 | Bromodichloromethane | 12. | U |
| 78-87-5 | 1,2-Dichloropropane | 12. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 12. | U |
| 79-01-6 | Trichloroethene | 12. | U |
| 124-48-1 | Dibromochloromethane | 12. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 12. | U |
| 71-43-2 | Benzene | 12. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 12. | U |
| 75-25-2 | Bromoform | 12. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 12. | U |
| 591-78-6 | 2-Hexanone | 12. | U |
| 127-18-4 | Tetrachloroethene | 12. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 12. | U |
| 108-88-3 | Toluene | 12. | U |
| 108-90-7 | Chlorobenzene | 12. | U |
| 100-41-4 | Ethylbenzene | 12. | U |
| 100-42-5 | Styrene | 12. | U |
| 1330-20-7 | Xylene (total) | 12. | U |

1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

X112

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-1

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8108

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 17 Date Analyzed: 11/15/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
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1A

# VOLATILE ORGANICS ANALYSIS DATA SHEET

X113

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-2

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8109

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 23 Date Analyzed: 11/15/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 13. | U |
| 74-83-9 | Bromomethane | 13. | U |
| 75-01-4 | Vinyl Chloride | 13. | U |
| 75-00-3 | Chloroethane | 13. | U |
| 75-09-2 | Methylene Chloride | 28. | |
| 67-64-1 | Acetone | 33. | |
| 75-15-0 | Carbon Disulfide | 13. | U |
| 75-35-4 | 1,1-Dichloroethene | 13. | U |
| 75-34-3 | 1,1-Dichloroethane | 13. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 13. | U |
| 67-66-3 | Chloroform | 13. | U |
| 107-06-2 | 1,2-Dichloroethane | 13. | U |
| 78-93-3 | 2-Butanone | 13. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 13. | U |
| 56-23-5 | Carbon Tetrachloride | 13. | U |
| 75-27-4 | Bromodichloromethane | 13. | U |
| 78-87-5 | 1,2-Dichloropropane | 13. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 13. | U |
| 79-01-6 | Trichloroethene | 13. | U |
| 124-48-1 | Dibromochloromethane | 13. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 13. | U |
| 71-43-2 | Benzene | 13. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 13. | U |
| 75-25-2 | Bromoform | 13. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 13. | U |
| 591-78-6 | 2-Hexanone | 13. | U |
| 127-18-4 | Tetrachloroethene | 13. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13. | U |
| 108-88-3 | Toluene | 13. | U |
| 108-90-7 | Chlorobenzene | 13. | U |
| 100-41-4 | Ethylbenzene | 13. | U |
| 100-42-5 | Styrene | 13. | U |
| 1330-20-7 | Xylene (total) | 13. | U |

1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

X113

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-2

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8109

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 23 Date Analyzed: 11/15/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | UNKNOWN | 4.41 | 7. | J B |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
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# VOLATILE ORGANICS ANALYSIS DATA SHEET

| X114 |
|---|

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-3

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8110

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 25 Date Analyzed: 11/15/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 13. | U |
| 74-83-9 | Bromomethane | 13. | U |
| 75-01-4 | Vinyl Chloride | 13. | U |
| 75-00-3 | Chloroethane | 13. | U |
| 75-09-2 | Methylene Chloride | 49. | |
| 67-64-1 | Acetone | 13. | U |
| 75-15-0 | Carbon Disulfide | 13. | U |
| 75-35-4 | 1,1-Dichloroethene | 13. | U |
| 75-34-3 | 1,1-Dichloroethane | 13. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 13. | U |
| 67-66-3 | Chloroform | 13. | U |
| 107-06-2 | 1,2-Dichloroethane | 13. | U |
| 78-93-3 | 2-Butanone | 13. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 13. | U |
| 56-23-5 | Carbon Tetrachloride | 13. | U |
| 75-27-4 | Bromodichloromethane | 13. | U |
| 78-87-5 | 1,2-Dichloropropane | 13. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 13. | U |
| 79-01-6 | Trichloroethene | 13. | U |
| 124-48-1 | Dibromochloromethane | 13. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 13. | U |
| 71-43-2 | Benzene | 13. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 13. | U |
| 75-25-2 | Bromoform | 13. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 13. | U |
| 591-78-6 | 2-Hexanone | 13. | U |
| 127-18-4 | Tetrachloroethene | 13. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 13. | U |
| 108-88-3 | Toluene | 13. | U |
| 108-90-7 | Chlorobenzene | 13. | U |
| 100-41-4 | Ethylbenzene | 13. | U |
| 100-42-5 | Styrene | 13. | U |
| 1330-20-7 | Xylene (total) | 13. | U |

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

X114

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-3

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8110

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 25 Date Analyzed: 11/15/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | UNKNOWN | 10.64 | 10. | J |
| 2. | | UNKNOWN | 26.17 | 8. | J |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
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# VOLATILE ORGANICS ANALYSIS DATA SHEET

X115

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-4

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8121

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 36 Date Analyzed: 11/16/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 16. | U |
| 74-83-9 | Bromomethane | 16. | U |
| 75-01-4 | Vinyl Chloride | 16. | U |
| 75-00-3 | Chloroethane | 16. | U |
| 75-09-2 | Methylene Chloride | 28. | |
| 67-64-1 | Acetone | 16. | U |
| 75-15-0 | Carbon Disulfide | 16. | U |
| 75-35-4 | 1,1-Dichloroethene | 16. | U |
| 75-34-3 | 1,1-Dichloroethane | 16. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 16. | U |
| 67-66-3 | Chloroform | 16. | U |
| 107-06-2 | 1,2-Dichloroethane | 16. | U |
| 78-93-3 | 2-Butanone | 16. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 16. | U |
| 56-23-5 | Carbon Tetrachloride | 16. | U |
| 75-27-4 | Bromodichloromethane | 16. | U |
| 78-87-5 | 1,2-Dichloropropane | 16. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 16. | U |
| 79-01-6 | Trichloroethene | 16. | U |
| 124-48-1 | Dibromochloromethane | 16. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 16. | U |
| 71-43-2 | Benzene | 16. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 16. | U |
| 75-25-2 | Bromoform | 16. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 16. | U |
| 591-78-6 | 2-Hexanone | 16. | U |
| 127-18-4 | Tetrachloroethene | 16. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 16. | U |
| 108-88-3 | Toluene | 16. | U |
| 108-90-7 | Chlorobenzene | 16. | U |
| 100-41-4 | Ethylbenzene | 16. | U |
| 100-42-5 | Styrene | 16. | U |
| 1330-20-7 | Xylene (total) | 16. | U |

1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X115

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-4

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8121

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 36 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 2.80 | 20. | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
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1A

# VOLATILE ORGANICS ANALYSIS DATA SHEET

X116

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-5

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8112

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 37 Date Analyzed: 11/15/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 16. | U |
| 74-83-9 | Bromomethane | 16. | U |
| 75-01-4 | Vinyl Chloride | 16. | U |
| 75-00-3 | Chloroethane | 16. | U |
| 75-09-2 | Methylene Chloride | 630. | E |
| 67-64-1 | Acetone | 16. | U |
| 75-15-0 | Carbon Disulfide | 16. | U |
| 75-35-4 | 1,1-Dichloroethene | 16. | U |
| 75-34-3 | 1,1-Dichloroethane | 16. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 16. | U |
| 67-66-3 | Chloroform | 16. | U |
| 107-06-2 | 1,2-Dichloroethane | 16. | U |
| 78-93-3 | 2-Butanone | 16. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 16. | U |
| 56-23-5 | Carbon Tetrachloride | 16. | U |
| 75-27-4 | Bromodichloromethane | 16. | U |
| 78-87-5 | 1,2-Dichloropropane | 16. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 16. | U |
| 79-01-6 | Trichloroethene | 16. | U |
| 124-48-1 | Dibromochloromethane | 16. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 16. | U |
| 71-43-2 | Benzene | 16. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 16. | U |
| 75-25-2 | Bromoform | 16. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 16. | U |
| 591-78-6 | 2-Hexanone | 16. | U |
| 127-18-4 | Tetrachloroethene | 16. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 16. | U |
| 108-88-3 | Toluene | 16. | U |
| 108-90-7 | Chlorobenzene | 16. | U |
| 100-41-4 | Ethylbenzene | 16. | U |
| 100-42-5 | Styrene | 16. | U |
| 1330-20-7 | Xylene (total) | 16. | U |

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

X116

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-5

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8112

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 37 Date Analyzed: 11/15/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 7

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | C |
|---|---|---|---|---|
| 1. | UNKNOWN | 9.83 | 9. | J |
| 2. | UNKNOWN | 13.07 | 10. | J |
| 3. | UNKNOWN | 20.48 | 50. | J |
| 4. | UNKNOWN | 27.83 | 10. | J |
| 5. | UNKNOWN | 31.26 | 40. | J |
| 6. | UNKNOWN | 31.58 | 40. | J |
| 7. | UNKNOWN | 34.36 | 10. | J |
| 8. | | | | |
| 9. | | | | |
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# VOLATILE ORGANICS ANALYSIS DATA SHEET

X116RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-5RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8122

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 37 Date Analyzed: 11/16/94

GC column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 16. | U |
| 74-83-9 | Bromomethane | 16. | U |
| 75-01-4 | Vinyl Chloride | 16. | U |
| 75-00-3 | Chloroethane | 16. | U |
| 75-09-2 | Methylene Chloride | 270. | |
| 67-64-1 | Acetone | 56. | |
| 75-15-0 | Carbon Disulfide | 16. | U |
| 75-35-4 | 1,1-Dichloroethene | 16. | U |
| 75-34-3 | 1,1-Dichloroethane | 16. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 16. | U |
| 67-66-3 | Chloroform | 16. | U |
| 107-06-2 | 1,2-Dichloroethane | 16. | U |
| 78-93-3 | 2-Butanone | 16. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 16. | U |
| 56-23-5 | Carbon Tetrachloride | 16. | U |
| 75-27-4 | Bromodichloromethane | 16. | U |
| 78-87-5 | 1,2-Dichloropropane | 16. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 16. | U |
| 79-01-6 | Trichloroethene | 16. | U |
| 124-48-1 | Dibromochloromethane | 16. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 16. | U |
| 71-43-2 | Benzene | 16. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 16. | U |
| 75-25-2 | Bromoform | 16. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 16. | U |
| 591-78-6 | 2-Hexanone | 16. | U |
| 127-18-4 | Tetrachloroethene | 16. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 16. | U |
| 108-88-3 | Toluene | 16. | U |
| 108-90-7 | Chlorobenzene | 16. | U |
| 100-41-4 | Ethylbenzene | 16. | U |
| 100-42-5 | Styrene | 16. | U |
| 1330-20-7 | Xylene (total) | 16. | U |

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

X116RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1&2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-5RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >J8122

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 37 Date Analyzed: 11/16/94

GC Column: 1%SP-1000 ID: 2.0 (mm) Dilution Factor: 1.0

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

Number TICs found: 9

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 3.54 | 8. | J |
| 2. | UNKNOWN | 13.59 | 10. | J |
| 3. | UNKNOWN | 20.53 | 30. | J |
| 4. | UNKNOWN | 29.39 | 10. | J |
| 5. | UNKNOWN | 29.67 | 10. | J |
| 6. | UNKNOWN | 31.27 | 20. | J |
| 7. | UNKNOWN | 32.09 | 20. | J |
| 8. | UNKNOWN | 34.01 | 30. | J |
| 9. | UNKNOWN | 34.47 | 9. | J |
| 10. | | | | |
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# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

X112RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-1RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7298

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 12/01/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 400. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 400. | U |
| 95-57-8 | 2-Chlorophenol | 400. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 400. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 400. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 400. | U |
| 95-48-7 | 2-Methylphenol | 400. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 400. | U |
| 106-44-5 | 4-Methylphenol | 400. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 400. | U |
| 67-72-1 | Hexachloroethane | 400. | U |
| 98-95-3 | Nitrobenzene | 400. | U |
| 78-59-1 | Isophorone | 400. | U |
| 88-75-5 | 2-Nitrophenol | 400. | U |
| 105-67-9 | 2,4-Dimethylphenol | 400. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 400. | U |
| 120-83-2 | 2,4-Dichlorophenol | 400. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 400. | U |
| 91-20-3 | Naphthalene | 810. | |
| 106-47-8 | 4-Chloroaniline | 400. | U |
| 87-68-3 | Hexachlorobutadiene | 400. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 400. | U |
| 91-57-6 | 2-Methylnaphthalene | 300. | J |
| 77-47-4 | Hexachlorocyclopentadiene | 400. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 400. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 960. | U |
| 91-58-7 | 2-Chloronaphthalene | 400. | U |
| 88-74-4 | 2-Nitroaniline | 960. | U |
| 131-11-3 | Dimethylphthalate | 400. | U |
| 208-96-8 | Acenaphthylene | 42. | J |
| 606-20-2 | 2,6-Dinitrotoluene | 400. | U |
| 99-09-2 | 3-Nitroaniline | 960. | U |
| 83-32-9 | Acenaphthene | 2200. | |

1C

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X112RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-1RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7298

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 12/01/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 960. | U |
| 100-02-7 | 4-Nitrophenol | 960. | U |
| 132-64-9 | Dibenzofuran | 1600. | |
| 121-14-2 | 2,4-Dinitrotoluene | 400. | U |
| 84-66-2 | Diethylphthalate | 400. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 400. | U |
| 86-73-7 | Fluorene | 2500. | |
| 100-01-6 | 4-Nitroaniline | 960. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 960. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 400. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 400. | U |
| 118-74-1 | Hexachlorobenzene | 400. | U |
| 87-86-5 | Pentachlorophenol | 960. | U |
| 85-01-8 | Phenanthrene | 22000. | E |
| 120-12-7 | Anthracene | 4600. | E |
| 86-74-8 | Carbazole | 1600. | |
| 84-74-2 | Di-n-butylphthalate | 400. | U |
| 206-44-0 | Fluoranthene | 20000. | E |
| 129-00-0 | Pyrene | 15000. | E |
| 85-68-7 | Butylbenzylphthalate | 400. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 400. | U |
| 56-55-3 | Benzo(a)anthracene | 5200. | E |
| 218-01-9 | Chrysene | 4600. | E |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 400. | U |
| 117-84-0 | Di-n-octylphthalate | 400. | U |
| 205-99-2 | Benzo(b)fluoranthene | 5500. | E |
| 207-08-9 | Benzo(k)fluoranthene | 1700. | |
| 50-32-8 | Benzo(a)pyrene | 3700. | E |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 2100. | |
| 53-70-3 | Dibenz(a,h)anthracene | 790. | |
| 191-24-2 | Benzo(g,h,i)perylene | 1500. | |

(1) - Cannot be separated from Diphenylamine

1F

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X112RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-1RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7298

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 17 decanted:(Y/N) N Date Extracted: 12/01/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN PAH | 21.91 | 400. | J |
| 2. | UNKNOWN | 22.14 | 900. | J |
| 3. | UNKNOWN | 22.63 | 500. | J |
| 4. | UNKNOWN | 23.99 | 900. | J |
| 5. 243425 | BENZO[B]NAPHTHO[2,3-D]FURAN | 24.51 | 400. | JN |
| 6. | UNKNOWN PAH | 25.08 | 1000. | J |
| 7. | UNKNOWN | 26.40 | 4000. | J B |
| 8. | BENZO[B]NAPHTHO-THIOPHENE | 26.60 | 400. | J |
| 9. | UNKNOWN | 26.71 | 800. | J |
| 10. | UNKNOWN | 26.79 | 300. | J |
| 11. | UNKNOWN | 27.55 | 900. | J |
| 12. | UNKNOWN | 27.78 | 400. | J |
| 13. | UNKNOWN | 27.91 | 400. | J |
| 14. 2498773 | BENZ[A]ANTHRACENE, 1-METHYL- | 28.26 | 300. | JN |
| 15. | UNKNOWN | 28.49 | 300. | J |
| 16. | UNKNOWN PAH | 30.03 | 500. | J |
| 17. | UNKNOWN PAH | 30.41 | 3000. | J |
| 18. | UNKNOWN | 31.61 | 300. | J |
| 19. | UNKNOWN | 32.91 | 300. | J |
| 20. | UNKNOWN PAH | 34.30 | 400. | J |
| 21. | | | | |
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X112REDL

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-1REDL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7300

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 12/01/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.8 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 4000. | U D |
| 111-44-4 | bis(2-Chloroethyl)ether | 4000. | U D |
| 95-57-8 | 2-Chlorophenol | 4000. | U D |
| 541-73-1 | 1,3-Dichlorobenzene | 4000. | U D |
| 106-46-7 | 1,4-Dichlorobenzene | 4000. | U D |
| 95-50-1 | 1,2-Dichlorobenzene | 4000. | U D |
| 95-48-7 | 2-Methylphenol | 4000. | U D |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 4000. | U D |
| 106-44-5 | 4-Methylphenol | 4000. | U D |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 4000. | U D |
| 67-72-1 | Hexachloroethane | 4000. | U D |
| 98-95-3 | Nitrobenzene | 4000. | U D |
| 78-59-1 | Isophorone | 4000. | U D |
| 88-75-5 | 2-Nitrophenol | 4000. | U D |
| 105-67-9 | 2,4-Dimethylphenol | 4000. | U D |
| 111-91-1 | bis(2-Chloroethoxy)methane | 4000. | U D |
| 120-83-2 | 2,4-Dichlorophenol | 4000. | U D |
| 120-82-1 | 1,2,4-Trichlorobenzene | 4000. | U D |
| 91-20-3 | Naphthalene | 670. | J D |
| 106-47-8 | 4-Chloroaniline | 4000. | U D |
| 87-68-3 | Hexachlorobutadiene | 4000. | U D |
| 59-50-7 | 4-Chloro-3-methylphenol | 4000. | U D |
| 91-57-6 | 2-Methylnaphthalene | 180. | J D |
| 77-47-4 | Hexachlorocyclopentadiene | 4000. | U D |
| 88-06-2 | 2,4,6-Trichlorophenol | 4000. | U D |
| 95-95-4 | 2,4,5-Trichlorophenol | 9600. | U D |
| 91-58-7 | 2-Chloronaphthalene | 4000. | U D |
| 88-74-4 | 2-Nitroaniline | 9600. | U D |
| 131-11-3 | Dimethylphthalate | 4000. | U D |
| 208-96-8 | Acenaphthylene | 4000. | U D |
| 606-20-2 | 2,6-Dinitrotoluene | 4000. | U D |
| 99-09-2 | 3-Nitroaniline | 9600. | U D |
| 83-32-9 | Acenaphthene | 1800. | J D |

1C

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X112REDL

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-1REDL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7300

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 12/01/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.8 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 9600. | U D |
| 100-02-7 | 4-Nitrophenol | 9600. | U D |
| 132-64-9 | Dibenzofuran | 1200. | J D |
| 121-14-2 | 2,4-Dinitrotoluene | 4000. | U D |
| 84-66-2 | Diethylphthalate | 4000. | U D |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 4000. | U D |
| 86-73-7 | Fluorene | 2100. | J D |
| 100-01-6 | 4-Nitroaniline | 9600. | U D |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 9600. | U D |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 4000. | U D |
| 101-55-3 | 4-Bromophenyl-phenylether | 4000. | U D |
| 118-74-1 | Hexachlorobenzene | 4000. | U D |
| 87-86-5 | Pentachlorophenol | 9600. | U D |
| 85-01-8 | Phenanthrene | 15000. | D |
| 120-12-7 | Anthracene | 3900. | J D |
| 86-74-8 | Carbazole | 1400. | J D |
| 84-74-2 | Di-n-butylphthalate | 4000. | U D |
| 206-44-0 | Fluoranthene | 14000. | D |
| 129-00-0 | Pyrene | 12000. | D |
| 85-68-7 | Butylbenzylphthalate | 4000. | U D |
| 91-94-1 | 3,3'-Dichlorobenzidine | 4000. | U D |
| 56-55-3 | Benzo(a)anthracene | 4300. | D |
| 218-01-9 | Chrysene | 4300. | D |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 4000. | U D |
| 117-84-0 | Di-n-octylphthalate | 4000. | U D |
| 205-99-2 | Benzo(b)fluoranthene | 2900. | J D |
| 207-08-9 | Benzo(k)fluoranthene | 2500. | J D |
| 50-32-8 | Benzo(a)pyrene | 3100. | J D |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 2400. | J D |
| 53-70-3 | Dibenz(a,h)anthracene | 330. | J D |
| 191-24-2 | Benzo(g,h,i)perylene | 1800. | J D |

(1) - Cannot be separated from Diphenylamine

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# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X112REDL

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-1REDL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7300

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 17 decanted:(Y/N) N Date Extracted: 12/01/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.8

Number TICs found: 12 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 20.27 | 800. | J D |
| 2. | UNKNOWN PAH | 21.89 | 900. | J D |
| 3. | UNKNOWN | 22.08 | 2000. | J D |
| 4. | UNKNOWN PAH | 25.02 | 2000. | J D |
| 5. | UNKNOWN PAH | 25.18 | 2000. | J D |
| 6. | UNKNOWN | 26.35 | 8000. | J BD |
| 7. | UNKNOWN | 26.67 | 1000. | J D |
| 8. | UNKNOWN | 27.46 | 2000. | J D |
| 9. | UNKNOWN | 28.55 | 800. | J D |
| 10. | UNKNOWN PAH | 29.96 | 1000. | J D |
| 11. | UNKNOWN | 30.16 | 3000. | J D |
| 12. | UNKNOWN PAH | 30.33 | 2000. | J D |
| 13. | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X113RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-2RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7299

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 23 decanted: (Y/N) N Date Extracted: 12/01/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 430. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 430. | U |
| 95-57-8 | 2-Chlorophenol | 430. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 430. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 430. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 430. | U |
| 95-48-7 | 2-Methylphenol | 430. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 430. | U |
| 106-44-5 | 4-Methylphenol | 430. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 430. | U |
| 67-72-1 | Hexachloroethane | 430. | U |
| 98-95-3 | Nitrobenzene | 430. | U |
| 78-59-1 | Isophorone | 430. | U |
| 88-75-5 | 2-Nitrophenol | 430. | U |
| 105-67-9 | 2,4-Dimethylphenol | 430. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 430. | U |
| 120-83-2 | 2,4-Dichlorophenol | 430. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 430. | U |
| 91-20-3 | Naphthalene | 240. | J |
| 106-47-8 | 4-Chloroaniline | 430. | U |
| 87-68-3 | Hexachlorobutadiene | 430. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 430. | U |
| 91-57-6 | 2-Methylnaphthalene | 70. | J |
| 77-47-4 | Hexachlorocyclopentadiene | 430. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 430. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 1000. | U |
| 91-58-7 | 2-Chloronaphthalene | 430. | U |
| 88-74-4 | 2-Nitroaniline | 1000. | U |
| 131-11-3 | Dimethylphthalate | 430. | U |
| 208-96-8 | Acenaphthylene | 430. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 430. | U |
| 99-09-2 | 3-Nitroaniline | 1000. | U |
| 83-32-9 | Acenaphthene | 340. | J |

1C

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X113RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-2RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7299

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 23 decanted: (Y/N) N Date Extracted: 12/01/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 1000. | U |
| 100-02-7 | 4-Nitrophenol | 1000. | U |
| 132-64-9 | Dibenzofuran | 220. | J |
| 121-14-2 | 2,4-Dinitrotoluene | 430. | U |
| 84-66-2 | Diethylphthalate | 430. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 430. | U |
| 86-73-7 | Fluorene | 230. | J |
| 100-01-6 | 4-Nitroaniline | 1000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 1000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 430. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 430. | U |
| 118-74-1 | Hexachlorobenzene | 430. | U |
| 87-86-5 | Pentachlorophenol | 1000. | U |
| 85-01-8 | Phenanthrene | 1100. | |
| 120-12-7 | Anthracene | 250. | J |
| 86-74-8 | Carbazole | 150. | J |
| 84-74-2 | Di-n-butylphthalate | 72. | J |
| 206-44-0 | Fluoranthene | 740. | |
| 129-00-0 | Pyrene | 700. | |
| 85-68-7 | Butylbenzylphthalate | 430. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 430. | U |
| 56-55-3 | Benzo(a)anthracene | 230. | J |
| 218-01-9 | Chrysene | 240. | J |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 28. | JB |
| 117-84-0 | Di-n-octylphthalate | 430. | U |
| 205-99-2 | Benzo(b)fluoranthene | 160. | J |
| 207-08-9 | Benzo(k)fluoranthene | 160. | J |
| 50-32-8 | Benzo(a)pyrene | 200. | J |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 150. | J |
| 53-70-3 | Dibenz(a,h)anthracene | 51. | J |
| 191-24-2 | Benzo(g,h,i)perylene | 150. | J |

(1) - Cannot be separated from Diphenylamine

1F

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X113RE

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-2RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7299

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 23 decanted:(Y/N) N Date Extracted: 12/01/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/02/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 7

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 22.08 | 100. | J |
| 2. | UNKNOWN | 26.35 | 200. | J B |
| 3. | UNKNOWN | 28.86 | 100. | J |
| 4. | UNKNOWN | 29.09 | 200. | J |
| 5. | UNKNOWN ALKANE | 30.15 | 100. | J |
| 6. | UNKNOWN PAH | 30.32 | 200. | J |
| 7. | UNKNOWN ALKANE | 31.61 | 100. | J |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X114

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7276

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 25 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 440. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 440. | U |
| 95-57-8 | 2-Chlorophenol | 440. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 440. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 440. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 440. | U |
| 95-48-7 | 2-Methylphenol | 440. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 440. | U |
| 106-44-5 | 4-Methylphenol | 440. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 440. | U |
| 67-72-1 | Hexachloroethane | 440. | U |
| 98-95-3 | Nitrobenzene | 440. | U |
| 78-59-1 | Isophorone | 440. | U |
| 88-75-5 | 2-Nitrophenol | 440. | U |
| 105-67-9 | 2,4-Dimethylphenol | 440. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 440. | U |
| 120-83-2 | 2,4-Dichlorophenol | 440. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 440. | U |
| 91-20-3 | Naphthalene | 440. | U |
| 106-47-8 | 4-Chloroaniline | 440. | U |
| 87-68-3 | Hexachlorobutadiene | 440. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 440. | U |
| 91-57-6 | 2-Methylnaphthalene | 440. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 440. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 440. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 1100. | U |
| 91-58-7 | 2-Chloronaphthalene | 440. | U |
| 88-74-4 | 2-Nitroaniline | 1100. | U |
| 131-11-3 | Dimethylphthalate | 440. | U |
| 208-96-8 | Acenaphthylene | 440. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 440. | U |
| 99-09-2 | 3-Nitroaniline | 1100. | U |
| 83-32-9 | Acenaphthene | 440. | U |

1C

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X114

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7276

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 25 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 1100. | U |
| 100-02-7 | 4-Nitrophenol | 1100. | U |
| 132-64-9 | Dibenzofuran | 440. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 440. | U |
| 84-66-2 | Diethylphthalate | 440. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 440. | U |
| 86-73-7 | Fluorene | 440. | U |
| 100-01-6 | 4-Nitroaniline | 1100. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 1100. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 440. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 440. | U |
| 118-74-1 | Hexachlorobenzene | 440. | U |
| 87-86-5 | Pentachlorophenol | 1100. | U |
| 85-01-8 | Phenanthrene | 440. | U |
| 120-12-7 | Anthracene | 440. | U |
| 86-74-8 | Carbazole | 440. | U |
| 84-74-2 | Di-n-butylphthalate | 230. | J |
| 206-44-0 | Fluoranthene | 86. | J |
| 129-00-0 | Pyrene | 89. | J |
| 85-68-7 | Butylbenzylphthalate | 440. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 440. | U |
| 56-55-3 | Benzo(a)anthracene | 440. | U |
| 218-01-9 | Chrysene | 59. | J |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 650. | B |
| 117-84-0 | Di-n-octylphthalate | 440. | U |
| 205-99-2 | Benzo(b)fluoranthene | 440. | U |
| 207-08-9 | Benzo(k)fluoranthene | 440. | U |
| 50-32-8 | Benzo(a)pyrene | 440. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 440. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 440. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 440. | U |

(1) - Cannot be separated from Diphenylamine

1F

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X114

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7276

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 25 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 10.20 | 200. | J |
| 2. | UNKNOWN | 20.25 | 200. | J |
| 3. | UNKNOWN | 21.75 | 200. | J |
| 4. | UNKNOWN | 24.23 | 500. | J |
| 5. | UNKNOWN | 26.06 | 200. | J |
| 6. | UNKNOWN | 26.17 | 300. | J B |
| 7. | UNKNOWN | 28.54 | 300. | J |
| 8. | UNKNOWN ALKANE | 28.73 | 600. | J |
| 9. | UNKNOWN | 29.29 | 600. | J |
| 10. | UNKNOWN PAH | 29.76 | 300. | J B |
| 11. | UNKNOWN ALKANE | 30.20 | 1000. | J |
| 12. | UNKNOWN ALKANE | 31.69 | 1000. | J |
| 13. | UNKNOWN | 31.89 | 300. | J |
| 14. | UNKNOWN | 33.40 | 300. | J |
| 15. | UNKNOWN ALKANE | 33.57 | 700. | J |
| 16. | UNKNOWN | 33.72 | 800. | J |
| 17. | UNKNOWN | 33.88 | 400. | J |
| 18. | UNKNOWN | 34.45 | 1000. | J |
| 19. | UNKNOWN | 34.80 | 400. | J |
| 20. | UNKNOWN | 35.10 | 400. | J |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
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| 26. | | | | |
| 27. | | | | |
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| 29. | | | | |
| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X115

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-4

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7277

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.5 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 520. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 520. | U |
| 95-57-8 | 2-Chlorophenol | 520. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 520. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 520. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 520. | U |
| 95-48-7 | 2-Methylphenol | 520. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 520. | U |
| 106-44-5 | 4-Methylphenol | 520. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 520. | U |
| 67-72-1 | Hexachloroethane | 520. | U |
| 98-95-3 | Nitrobenzene | 520. | U |
| 78-59-1 | Isophorone | 520. | U |
| 88-75-5 | 2-Nitrophenol | 520. | U |
| 105-67-9 | 2,4-Dimethylphenol | 520. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 520. | U |
| 120-83-2 | 2,4-Dichlorophenol | 520. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 520. | U |
| 91-20-3 | Naphthalene | 520. | U |
| 106-47-8 | 4-Chloroaniline | 520. | U |
| 87-68-3 | Hexachlorobutadiene | 520. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 520. | U |
| 91-57-6 | 2-Methylnaphthalene | 520. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 520. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 520. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 1300. | U |
| 91-58-7 | 2-Chloronaphthalene | 520. | U |
| 88-74-4 | 2-Nitroaniline | 1300. | U |
| 131-11-3 | Dimethylphthalate | 520. | U |
| 208-96-8 | Acenaphthylene | 520. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 520. | U |
| 99-09-2 | 3-Nitroaniline | 1300. | U |
| 83-32-9 | Acenaphthene | 520. | U |

1C

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X115

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-4

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7277

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.5 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 1300. | U |
| 100-02-7 | 4-Nitrophenol | 1300. | U |
| 132-64-9 | Dibenzofuran | 520. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 520. | U |
| 84-66-2 | Diethylphthalate | 520. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 520. | U |
| 86-73-7 | Fluorene | 520. | U |
| 100-01-6 | 4-Nitroaniline | 1300. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 1300. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 520. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 520. | U |
| 118-74-1 | Hexachlorobenzene | 520. | U |
| 87-86-5 | Pentachlorophenol | 1300. | U |
| 85-01-8 | Phenanthrene | 520. | U |
| 120-12-7 | Anthracene | 520. | U |
| 86-74-8 | Carbazole | 520. | U |
| 84-74-2 | Di-n-butylphthalate | 430. | J |
| 206-44-0 | Fluoranthene | 520. | U |
| 129-00-0 | Pyrene | 520. | U |
| 85-68-7 | Butylbenzylphthalate | 520. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 520. | U |
| 56-55-3 | Benzo(a)anthracene | 520. | U |
| 218-01-9 | Chrysene | 520. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 1000. | B |
| 117-84-0 | Di-n-octylphthalate | 520. | U |
| 205-99-2 | Benzo(b)fluoranthene | 520. | U |
| 207-08-9 | Benzo(k)fluoranthene | 520. | U |
| 50-32-8 | Benzo(a)pyrene | 520. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 520. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 520. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 520. | U |

(1) - Cannot be separated from Diphenylamine

1F

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X115

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-4

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7277

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 36 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.5

Number TICs found: 20

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | UNKNOWN | 13.04 | 700. | J |
| 2. | | UNKNOWN | 20.19 | 1000. | J |
| 3. | | UNKNOWN | 20.25 | 700. | J |
| 4. | | UNKNOWN | 23.51 | 2000. | J |
| 5. | | UNKNOWN | 24.14 | 2000. | J |
| 6. | | UNKNOWN | 24.25 | 900. | J |
| 7. | 57114 | OCTADECANOIC ACID | 24.35 | 1000. | JN |
| 8. | | UNKNOWN | 24.63 | 700. | J |
| 9. | | UNKNOWN | 26.11 | 800. | J |
| 10. | | UNKNOWN ALKANE | 27.16 | 700. | J |
| 11. | | UNKNOWN | 27.80 | 700. | J |
| 12. | 482235 | 1(3H)-ISOBENZOFURANONE,3-(3- | 28.73 | 1000. | JN |
| 13. | | UNKNOWN ALKANE | 30.22 | 7000. | J |
| 14. | | UNKNOWN ALAKNE | 31.71 | 7000. | J |
| 15. | | UNKNOWN | 32.11 | 3000. | J |
| 16. | | UNKNOWN | 32.31 | 4000. | J |
| 17. | | UNKNOWN | 32.83 | 3000. | J |
| 18. | | UNKNOWN ALKANE | 33.59 | 3000. | J |
| 19. | | UNKNOWN | 33.78 | 9000. | J |
| 20. | | UNKNOWN | 34.49 | 7000. | J |
| 21. | | | | | |
| 22. | | | | | |
| 23. | | | | | |
| 24. | | | | | |
| 25. | | | | | |
| 26. | | | | | |
| 27. | | | | | |
| 28. | | | | | |
| 29. | | | | | |
| 30. | | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X116

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-5

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7282

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 37 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 4.9 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 26000. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 26000. | U |
| 95-57-8 | 2-Chlorophenol | 26000. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 26000. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 26000. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 26000. | U |
| 95-48-7 | 2-Methylphenol | 26000. | U |
| 108-60-1 | 2,2'-oxybis(1-Chloropropane) | 26000. | U |
| 106-44-5 | 4-Methylphenol | 26000. | U |
| 621-64-7 | N-Nitroso-Di-n-propylamine | 26000. | U |
| 67-72-1 | Hexachloroethane | 26000. | U |
| 98-95-3 | Nitrobenzene | 26000. | U |
| 78-59-1 | Isophorone | 26000. | U |
| 88-75-5 | 2-Nitrophenol | 26000. | U |
| 105-67-9 | 2,4-Dimethylphenol | 26000. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 26000. | U |
| 120-83-2 | 2,4-Dichlorophenol | 26000. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 26000. | U |
| 91-20-3 | Naphthalene | 26000. | U |
| 106-47-8 | 4-Chloroaniline | 26000. | U |
| 87-68-3 | Hexachlorobutadiene | 26000. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 26000. | U |
| 91-57-6 | 2-Methylnaphthalene | 26000. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 26000. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 26000. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 63000. | U |
| 91-58-7 | 2-Chloronaphthalene | 26000. | U |
| 88-74-4 | 2-Nitroaniline | 63000. | U |
| 131-11-3 | Dimethylphthalate | 26000. | U |
| 208-96-8 | Acenaphthylene | 26000. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 26000. | U |
| 99-09-2 | 3-Nitroaniline | 63000. | U |
| 83-32-9 | Acenaphthene | 26000. | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X116

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-5

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7282

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: 37 decanted: (Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 4.9 Conversion Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 63000. | U |
| 100-02-7 | 4-Nitrophenol | 63000. | U |
| 132-64-9 | Dibenzofuran | 26000. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 26000. | U |
| 84-66-2 | Diethylphthalate | 26000. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 26000. | U |
| 86-73-7 | Fluorene | 26000. | U |
| 100-01-6 | 4-Nitroaniline | 63000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 63000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 26000. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 26000. | U |
| 118-74-1 | Hexachlorobenzene | 26000. | U |
| 87-86-5 | Pentachlorophenol | 63000. | U |
| 85-01-8 | Phenanthrene | 26000. | U |
| 120-12-7 | Anthracene | 26000. | U |
| 86-74-8 | Carbazole | 26000. | U |
| 84-74-2 | Di-n-butylphthalate | 26000. | U |
| 206-44-0 | Fluoranthene | 26000. | U |
| 129-00-0 | Pyrene | 26000. | U |
| 85-68-7 | Butylbenzylphthalate | 26000. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 26000. | U |
| 56-55-3 | Benzo(a)anthracene | 26000. | U |
| 218-01-9 | Chrysene | 26000. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 26000. | U |
| 117-84-0 | Di-n-octylphthalate | 26000. | U |
| 205-99-2 | Benzo(b)fluoranthene | 26000. | U |
| 207-08-9 | Benzo(k)fluoranthene | 26000. | U |
| 50-32-8 | Benzo(a)pyrene | 26000. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 26000. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 26000. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 26000. | U |

(1) - Cannot be separated from Diphenylamine

1F

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X116

Lab Name: ARDL, INC. Contract: SAUGET SA 1 & 2

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: X112

Matrix: (soil/water) SOIL Lab Sample ID: 2344-5

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >M7282

Level: (low/med) LOW Date Received: 11/12/94

% Moisture: not dec. 37 decanted:(Y/N) N Date Extracted: 11/18/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 11/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 4.9

Number TICs found: 19

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 9.82 | 300000. | J |
| 2. | UNKNOWN | 10.64 | 400000. | J |
| 3. | UNKNOWN | 16.62 | 600000. | J |
| 4. | UNKNOWN | 17.47 | 20000. | J |
| 5. | UNKNOWN | 17.66 | 400000. | J |
| 6. | UNKNOWN | 19.66 | 60000. | J |
| 7. | UNKNOWN | 20.95 | 1000000. | J |
| 8. | UNKNOWN | 21.32 | 100000. | J |
| 9. | UNKNOWN | 21.69 | 50000. | J |
| 10. | UNKNOWN | 23.24 | 300000. | J |
| 11. | UNKNOWN | 23.33 | 200000. | J |
| 12. | UNKNOWN | 24.45 | 200000. | J |
| 13. | UNKNOWN | 26.15 | 300000. | J |
| 14. | UNKNOWN | 26.30 | 1000000. | J |
| 15. | UNKNOWN | 27.11 | 100000. | J |
| 16. | UNKNOWN | 28.77 | 1000000. | J |
| 17. | UNKNOWN | 28.94 | 200000. | J |
| 18. | UNKNOWN | 30.29 | 80000. | J |
| 19. | UNKNOWN | 30.95 | 300000. | J |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X112

Lab Name: ARDL, INC. Contract: SAUGET SA 1+2
Lab Code: Case No.: 2344 SDG No.: X112
Matrix(soil/water) : SOIL Lab Sample ID : 2344-1
Sample(wt/vol) : 30.0 (g/mL) g Lab File ID :
% Moisture: 17 decanted:(Y/N) N Date Received : 11/12/94
Extraction(Sepf/Cont/Sonc) SONC Date Extracted : 11/16/94
Concentrated Extract Volume:5000(uL) Date Analyzed : 11/23/94
Injection Volume: 1 (uL) Dilution Factor: 1.0
GPC Cleanup:(Y/N) Y pH: 5.8 Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 2.0 | U |
| 319-85-7 | beta-BHC | 2.0 | U |
| 319-86-8 | delta-BHC | 2.0 | U |
| 58-89-9 | gamma-BHC(Lindane) | 2.0 | U |
| 76-44-8 | Heptachlor | 2.0 | U |
| 309-00-2 | Aldrin | 2.0 | U |
| 1024-57-3 | Heptachlor Epoxide | 2.0 | U |
| 959-98-8 | Endosulfan I | 2.0 | U |
| 60-57-1 | Dieldrin | 4.0 | U |
| 72-55-9 | 4,4'-DDE | 4.0 | U |
| 72-20-8 | Endrin | 4.0 | U |
| 33213-65-9 | Endosulfan II | 4.0 | U |
| 72-54-8 | 4,4'-DDD | 4.0 | U |
| 1013-07-8 | Endosulfan sulfate | 4.0 | U |
| 50-29-3 | 4,4'-DDT | 4.0 | U |
| 72-43-5 | Methoxychlor | 20 | U |
| 53494-70-5 | Endrin ketone | 4.0 | U |
| 7421-36-3 | Endrin aldehyde | 4.0 | U |
| 5103-71-9 | alpha-Chlordane | 2.0 | U |
| 5103-74-2 | gamma-Chlordane | 2.0 | U |
| 8001-35-2 | Toxaphene | 200 | U |
| 12674-11-2 | Aroclor 1016 | 40 | U |
| 11104-28-2 | Aroclor 1221 | 81 | U |
| 11141-16-5 | Aroclor 1232 | 40 | U |
| 53469-21-9 | Aroclor 1242 | 40 | U |
| 12672-29-6 | Aroclor 1248 | 40 | U |
| 11097-69-1 | Aroclor 1254 | 40 | U |
| 11096-82-5 | Aroclor 1260 | 40 | U |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X113

Lab Name: ARDL, INC.
Lab Code: Case No.: 2344
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 23 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 6.5

Contract: SAUGET SA 1+2
SDG No.: X112
Lab Sample ID : 2344-2
Lab File ID :
Date Received : 11/12/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 1.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 2.2 | U |
| 319-85-7 | beta-BHC | 2.2 | U |
| 319-86-8 | delta-BHC | 2.2 | U |
| 58-89-9 | gamma-BHC(Lindane) | 2.2 | U |
| 76-44-8 | Heptachlor | 2.2 | U |
| 309-00-2 | Aldrin | 2.2 | U |
| 1024-57-3 | Heptachlor Epoxide | 2.2 | U |
| 959-98-8 | Endosulfan I | 2.2 | U |
| 60-57-1 | Dieldrin | 4.3 | U |
| 72-55-9 | 4,4'-DDE | 4.3 | U |
| 72-20-8 | Endrin | 4.3 | U |
| 33213-65-9 | Endosulfan II | 4.3 | U |
| 72-54-8 | 4,4'-DDD | 4.3 | U |
| 1013-07-8 | Endosulfan sulfate | 4.3 | U |
| 50-29-3 | 4,4'-DDT | 4.3 | U |
| 72-43-5 | Methoxychlor | 22 | U |
| 53494-70-5 | Endrin ketone | 4.3 | U |
| 7421-36-3 | Endrin aldehyde | 4.3 | U |
| 5103-71-9 | alpha-Chlordane | 2.2 | U |
| 5103-74-2 | gamma-Chlordane | 2.2 | U |
| 8001-35-2 | Toxaphene | 220 | U |
| 12674-11-2 | Aroclor 1016 | 43 | U |
| 11104-28-2 | Aroclor 1221 | 87 | U |
| 11141-16-5 | Aroclor 1232 | 43 | U |
| 53469-21-9 | Aroclor 1242 | 43 | U |
| 12672-29-6 | Aroclor 1248 | 43 | U |
| 11097-69-1 | Aroclor 1254 | 43 | U |
| 11096-82-5 | Aroclor 1260 | 39 | J |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X114

Lab Name: ARDL, INC.
Lab Code: Case No.: 2344
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 25 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 5.8

Contract: SAUGET SA 1+2
SDG No.: X112
Lab Sample ID : 2344-3
Lab File ID :
Date Received : 11/12/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 1.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 2.3 | U |
| 319-85-7 | beta-BHC | 2.3 | U |
| 319-86-8 | delta-BHC | 2.3 | U |
| 58-89-9 | gamma-BHC(Lindane) | 2.3 | U |
| 76-44-8 | Heptachlor | 2.3 | U |
| 309-00-2 | Aldrin | 2.3 | U |
| 1024-57-3 | Heptachlor Epoxide | 2.3 | U |
| 959-98-8 | Endosulfan I | 2.3 | U |
| 60-57-1 | Dieldrin | 4.4 | U |
| 72-55-9 | 4,4'-DDE | 4.4 | U |
| 72-20-8 | Endrin | 4.4 | U |
| 33213-65-9 | Endosulfan II | 4.4 | U |
| 72-54-8 | 4,4'-DDD | 4.4 | U |
| 1013-07-8 | Endosulfan sulfate | 4.4 | U |
| 50-29-3 | 4,4'-DDT | 4.4 | U |
| 72-43-5 | Methoxychlor | 23 | U |
| 53494-70-5 | Endrin ketone | 4.4 | U |
| 7421-36-3 | Endrin aldehyde | 4.4 | U |
| 5103-71-9 | alpha-Chlordane | 2.3 | U |
| 5103-74-2 | gamma-Chlordane | 2.3 | U |
| 8001-35-2 | Toxaphene | 230 | U |
| 12674-11-2 | Aroclor 1016 | 44 | U |
| 11104-28-2 | Aroclor 1221 | 89 | U |
| 11141-16-5 | Aroclor 1232 | 44 | U |
| 53469-21-9 | Aroclor 1242 | 44 | U |
| 12672-29-6 | Aroclor 1248 | 44 | U |
| 11097-69-1 | Aroclor 1254 | 88 | P |
| 11096-82-5 | Aroclor 1260 | 180 | |

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X115

Lab Name: ARDL, INC.
Lab Code: Case No.: 2344
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 36 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 3.5

Contract: SAUGET SA 1+2
SDG No.: X112
Lab Sample ID : 2344-4
Lab File ID :
Date Received : 11/12/94
Date Extracted : 11/16/94
Date Analyzed : 11/23/94
Dilution Factor: 1.0
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 2.6 | U |
| 319-85-7 | beta-BHC | 2.6 | U |
| 319-86-8 | delta-BHC | 2.6 | U |
| 58-89-9 | gamma-BHC(Lindane) | 2.6 | U |
| 76-44-8 | Heptachlor | 2.6 | U |
| 309-00-2 | Aldrin | 2.6 | U |
| 1024-57-3 | Heptachlor Epoxide | 2.6 | U |
| 959-98-8 | Endosulfan I | 2.6 | U |
| 60-57-1 | Dieldrin | 5.2 | U |
| 72-55-9 | 4,4'-DDE | 5.2 | U |
| 72-20-8 | Endrin | 5.2 | U |
| 33213-65-9 | Endosulfan II | 5.2 | U |
| 72-54-8 | 4,4'-DDD | 5.2 | U |
| 1013-07-8 | Endosulfan sulfate | 5.2 | U |
| 50-29-3 | 4,4'-DDT | 5.2 | U |
| 72-43-5 | Methoxychlor | 26 | U |
| 53494-70-5 | Endrin ketone | 5.2 | U |
| 7421-36-3 | Endrin aldehyde | 5.2 | U |
| 5103-71-9 | alpha-Chlordane | 2.6 | U |
| 5103-74-2 | gamma-Chlordane | 2.6 | U |
| 8001-35-2 | Toxaphene | 260 | U |
| 12674-11-2 | Aroclor 1016 | 52 | U |
| 11104-28-2 | Aroclor 1221 | 110 | U |
| 11141-16-5 | Aroclor 1232 | 52 | U |
| 53469-21-9 | Aroclor 1242 | 52 | U |
| 12672-29-6 | Aroclor 1248 | 52 | U |
| 11097-69-1 | Aroclor 1254 | 440 | |
| 11096-82-5 | Aroclor 1260 | 550 | |

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X116

Lab Name: ARDL, INC.
Lab Code: Case No.: 2344
Matrix(soil/water) : SOIL
Sample(wt/vol) : 30.0 (g/mL) g
% Moisture: 37 decanted:(Y/N) N
Extraction(Sepf/Cont/Sonc) SONC
Concentrated Extract Volume:5000(uL)
Injection Volume: 1 (uL)
GPC Cleanup:(Y/N) Y pH: 4.9

Contract: SAUGET SA 1+2
SDG No.: X112
Lab Sample ID : 2344-5
Lab File ID :
Date Received : 11/12/94
Date Extracted : 11/16/94
Date Analyzed : 11/24/94
Dilution Factor: 100
Sulfur Cleanup : N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/Kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 270 | U |
| 319-85-7 | beta-BHC | 270 | U |
| 319-86-8 | delta-BHC | 270 | U |
| 58-89-9 | gamma-BHC(Lindane) | 270 | U |
| 76-44-8 | Heptachlor | 270 | U |
| 309-00-2 | Aldrin | 270 | U |
| 1024-57-3 | Heptachlor Epoxide | 270 | U |
| 959-98-8 | Endosulfan I | 270 | U |
| 60-57-1 | Dieldrin | 520 | U |
| 72-55-9 | 4,4'-DDE | 520 | U |
| 72-20-8 | Endrin | 520 | U |
| 33213-65-9 | Endosulfan II | 520 | U |
| 72-54-8 | 4,4'-DDD | 520 | U |
| 1013-07-8 | Endosulfan sulfate | 520 | U |
| 50-29-3 | 4,4'-DDT | 520 | U |
| 72-43-5 | Methoxychlor | 2700 | U |
| 53494-70-5 | Endrin ketone | 520 | U |
| 7421-36-3 | Endrin aldehyde | 520 | U |
| 5103-71-9 | alpha-Chlordane | 270 | U |
| 5103-74-2 | gamma-Chlordane | 270 | U |
| 8001-35-2 | Toxaphene | 27000 | U |
| 12674-11-2 | Aroclor 1016 | 5200 | U |
| 11104-28-2 | Aroclor 1221 | 11000 | U |
| 11141-16-5 | Aroclor 1232 | 5200 | U |
| 53469-21-9 | Aroclor 1242 | 5200 | U |
| 12672-29-6 | Aroclor 1248 | 15000 | |
| 11097-69-1 | Aroclor 1254 | 29000 | |
| 11096-82-5 | Aroclor 1260 | 46000 | |

Recycled paper

**BROWNING-FERRIS INDUSTRIES**

P.O. BOX 3151 • HOUSTON, TEXAS 77253 • 713/870-7680

E. William Hutton
Attorney

MAR 27 1990

March 23, 1990

Bruce L. Carlson, Esq.
Technical Advisor
Enforcement Programs
Illinois Environmental
Protection Agency
P. O. Box 19276
Springfield, Illinois 62794-9276

Re: L1630200005-St. Clair County
Sauget Sites, Area 2

Dear Bruce:

This letter is written in response to your oral request of March 4, 1990 for additional information concerning the above site. This information is being provided in addition to that previously provided in the January 18, 1990 response of Browning-Ferris Industries of St. Louis, Inc. ("BFISTL") to the Agency's request for information. Your oral information request addressed four separate matters.

First, you requested that BFISTL reconcile the information contained in its January 18, 1990 response with previous information submitted in 1981 pursuant to Section 103 of CERCLA ("103 Notification"). Following a review of the circumstances surrounding the making of the 103 Notification, it was learned that the document was prepared by the corporate office in a generic fashion for each of the company's operating districts. In other words, corporate headquarters checked the boxes regarding waste characterization, and then sent the form to the operating district for the purpose of filling out the name, address and contact person only. The 103 Notification was then submitted to the appropriate governmental agencies. As a result, the 103 Notification does not represent the waste transported to any particular site but rather the types of waste which might be transported on a national level. You will note, however, that in addition to the boxes checked by the corporate office, the operating district has checked the "other" box and wrote the further notation "paint sludges". That notation was consistent with the statement of Bernard Grewe that paint sludges were transported to Sauget Sites, Area 2 from U.S. Paint.

12761

Second, you asked that BFISTL investigate further to identify additional information that might exist with respect to the disposal of waste materials at Sauget Sites, Area 2. This further investigation has been completed, and is presented in the form of the attached affidavits, representing the statements of various individuals who had personal knowledge of disposal practices at the site. You will note that this additional investigation has uncovered additional information and clarified information previously provided to the Agency. This is not unexpected given the fact that these individuals were asked to recollect events occurring approximately twenty years ago. You should consider the information contained in these affidavits a- representing the best recollection of these events, and that statements contained in the affidavits supersede any other statements or representations made by these individuals.

Third, you requested information concerning the corporate history of BFISTL. BFISTL was incorporated on May 10, 1971 as WMI, Inc. Its name was changed to BFISTL on January 26, 1973. BFISTL is a Delaware corporation authorized to do business in Missouri and Illinois. Over the years, the company has grown in size through the acquisition of other disposal companies. These included C&E Hauling Company, Hilltop Hauling, Inc. and Waste-Pak Company (who in turn was the owner of Disposal Services Company). Affiants Jerry Loveless, Bernard Grewe, Kenneth Smith and James Wieberg were all employees of these companies (and subsequently BFISTL) during pertinent time periods. Ralph Hatchet was at all times an employee of BFISTL.

Pursuant to our gathering of additional information, we have also included the affidavit of Herman Hueffmeier, who was previously an employee of Hueffmeier Brothers, Inc. ("Hueffmeier"). Certain assets of Hueffmeier were purchased for cash by BFISTL on January 1, 1976 (subsequent to the closing of Sauget Area 2) from the Macke Company, which was the sole stockholder of Hueffmeier. The Macke Company is based in Cheverly, Maryland. Those assets included motor vehicles and material handling equipment, the facility telephone number, customer contracts, accounts receivable, fuel inventories and other vehicle parts, and real property. BFISTL did not accept any claims or liabilities which arose during or related to the period of time prior to this transaction, and specifically obtained an indemnity from Macke with respect to such claims and demands. Moreover, upon taking possession of these assets, BFISTL acted in the reasonable course of business to paint the vehicles and other equipment so as to identify these as belonging to BFISTL. Finally, none of the principals or officers of Macke continued in a similar capacity with BFISTL. As a result, the Macke Company is the correct corporate entity with respect to transportation and disposal activities at Sauget Area 2 by Hueffmeimer.

Fourth, you asked whether written records concerning the disposal of waste materials at Sauget Sites, Area 2 were available. Our further investigation revealed that these records were destroyed in 1986. Please see the affidavit of Adrian G. Andrzejewski.

I trust that this letter and the attached materials adequately respond to your oral request for additional information. Please feel free to contact me if you have any questions concerning this matter.

Sincerely,

E. William Hutton/gw

E. William Hutton

EWH/ta
Enclosures
cc: Bruce L. Jernigan
Gwen S. Walsh

# AFFIDAVIT OF JAMES WIEBERG

I, JAMES WIEBERG, BEING OF FULL AGE AND FIRST DULY SWORN ON OATH, DEPOSE AND STATE THE FOLLOWING:

1. I reside at Route 1, Box 30C, Robertsville, Missouri. I am currently employed as a landfill laborer by Browning-Ferris Industries of St. Louis, Inc. ("BFISTL").

2. I was employed as a driver by Hilltop Hauling, Inc. on July 16, 1967.

3. I drove a rear-end loader truck for Hilltop Hauling. My routes were residential and commercial and included customers such as private residences, restaurants and grocery stores in the Crestwood area of St. Louis, Missouri.

4. The waste was normally taken to landfills other than the Sauget Landfill, Area II.

5. I am familiar with the Sauget Landfill, Area II, which is located in the southern portion of the City of Sauget, Illinois. I transported commercial waste to the Sauget Landfill, Area II, on not more than twelve occasions, using side-loader equipment.

6. While I cannot recall the customers due to the passage of time, I do recall taking this waste to the Sauget Landfill, Area II, during the very late 1960's.

7. I hereby swear that the contents of this Affidavit are true and correct and are based on my personal knowledge.

Further Affiant Sayeth Not

James Wieberg

James Wieberg

CAROLYN D. LAUER
NOTARY [illegible] STATE [illegible]
MY C[illegible]
ST. LOUIS COUNTY

Sworn to and subscribed
before me this 22 day
of March, 1990.

Carolyn D. Lauer

Notary Public

# AFFIDAVIT OF KENNETH SMITH

I, KENNETH SMITH, BEING OF FULL AGE AND FIRST DULY SWORN ON OATH, DEPOSE AND STATE THE FOLLOWING:

1. I reside at One Telluride Court, St. Peters, Missouri. I am currently employed as Shop Maintenance Supervisor by Browning- Ferris Industries of St. Louis, Inc. ("BFISTL").

2. I was employed as a driver by C & E Hauling on November 22, 1970.

3. I drove roll-off equipment for C & E Hauling. My routes generally included customers in the southwestern portion of St. Louis, near Six Flags and Pacific, Missouri in South County. The waste emanating from these areas was taken to landfills other than the Sauget Landfill, Area II.

4. I am familiar with the Sauget Landfill, Area II, which is located in the southern portion of the City of Sauget, Illinois.

5. I previously stated that I used the Sauget Landfill, Area II, on approximately three occasions sometime in the late 1960's.

6. I previously stated that I hauled waste from Cooper, now Ethyl Petroleum, to the Sauget Landfill, Area II on these three occasions.

7. On March 12, 1990, I visited the Sauget Landfill, Area II, and upon a careful review of the area, I determined that this was not the area in which I hauled Cooper's waste to.

8. To the best of my recollection, I took Cooper's waste to the Sauget Landfill to an area north of Area II, and which is also known to me as the Monsanto Landfill.

9. I hereby swear that the contents of this Affidavit are true and correct and are based on my personal knowledge.

Further Affiant Sayeth Not

Kenneth Smith

Kenneth Smith

Sworn to and subscribed before me this 22 day of March, 1990.

Carolyn D. Lauer

Notary Public

CAROLYN D. LAUER
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES JAN. 7, 1992
ST. LOUIS COUNTY

# AFFIDAVIT OF RALPH HATCHET

I, RALPH HATCHET, BEING OF FULL AGE AND FIRST DULY SWORN ON OATH, DEPOSE AND STATE THE FOLLOWING:

1. I reside at 6914 Glenvale Court, St. Louis, Missouri. I am currently employed as an Operations Manager by Browning-Ferris Industries of St. Louis, Inc. ("BFISTL").

2. I was employed as a driver by BFISTL in June, 1972.

3. I drove a side-loader for BFISTL. My routes generally were residential and I used landfills other than the Sauget Landfill, Area II, for disposal of this waste.

4. I began driving roll-off equipment sometime in 1972, and while I cannot recall all customers due to the passage of time, some of the customers on my route for which I was responsible for included J. Weaver, Container Corp., Inmont Corp., St. Mary's Hospital, Pepsi-Cola, Chase Bag, Nabisco, and National Vendors.

5. I recall hauling waste from J. Weaver to the Sauget Landfill, Area II, on only a few occasions.

6. J. Weaver's waste consisted primarily of metal shavings.

7. I hauled drums for National Vendors at 5661 Natural Bridge Road, St. Louis, Missouri, to the Sauget Landfill, Area II, on not more than two occasions. The drums

were full and I do not know what the material was comprised of.

8. The waste which I hauled for St. Mary's Hospital, Container Corp., Inmont Corp., Pepsi-Cola, Chase Bag, Nabisco, and Venture Department Stores was disposed at landfills other than the Sauget Landfill, Area II.

9. I stopped using the Sauget Landfill, Area II, sometime in 1972 due to it closure.

10. I hereby swear to the best of my knowledge and belief that the contents of this Affidavit are true and correct and are based on my personal knowledge.

Further Affiant Sayeth Not

Ralph L Hatchet

Ralph Hatchet

Sworn to and subscribed
before me this 22 day
of March, 1990.

Carolyn D. Lauer

Notary Public

CAROLYN D. LAUER
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES JAN. 7, 1992
ST. LOUIS COUNTY

# AFFIDAVIT OF BERNARD GREWE

I, BERNARD GREWE, BEING OF FULL AGE AND FIRST DULY SWORN ON OATH, DEPOSE AND STATE THE FOLLOWING:

1. I reside at 5432 Carter Drive, House Springs, Missouri. I am currently employed as a sales representative by Browning-Ferris Industries of St. Louis, Inc. ("BFISTL").

2. I was employed as a driver by Disposal Services Company ("DSC") on June 6, 1968.

3. I drove roll-off equipment for DSC. My routes generally included industrial customers.

4. I am familiar with the Sauget Landfill, Area II, which is located in the southern portion of the City of Sauget, Illinois. I used the Sauget Landfill, Area II, on a daily basis from the time of my employment with DSC until sometime in 1972 which is when I was promoted to a supervisory position within the offices of BFISTL.

5. While I cannot recall all customers due to the passage of time, I do recall hauling wastes from U.S. Paint, Dennis Chemical, Inmont Corp., Crown Cork & Seal, and The Barry Weinmiller Company which were taken to the Sauget Landfill, Area II.

6. I hauled drums from U.S. Paint to the Sauget Landfill, Area II. The wastes consisted primarily of paint sludge and pigments. I do not recall the frequency of the disposals.

7. I hauled drums from Dennis Chemical to the Sauget Landfill, Area II. The waste was liquid and I do not know what the material was comprised of, nor do I recall the frequency of the disposals.

8. I hauled drums from Inmont Corp. and Crown Cork & Seal to the Sauget Landfill, Area II. The waste was liquid and was comprised of a rubbery-type glue. I do not recall the frequency of the disposals.

9. I hauled construction debris from various downtown St. Louis locations, and for which I cannot recall specific customer names, to the Sauget Landfill, Area II. I do not recall the frequency of the disposals.

10. I recall that most of the trucks which I saw while I was dumping my loads at the Sauget Landfill, Area II, were Monsanto company vehicles and had the Monsanto name on the cabs. I also recall seeing Monsanto vehicles dumping drums at the Sauget Landfill, Area II.

11. I hereby swear that the contents of this Affidavit are true and correct and are based on my personal knowledge.

CAROLYN D. LAUER
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES MAY 7, 19[illegible]
ST. LOUIS COUNTY

Further Affiant Sayeth Not

Bernard A Grewe Jr

Bernard Grewe

Sworn to and subscribed before me this 22 day of March, 1990.

Carolyn D. Lauer

Notary Public

# AFFIDAVIT OF JERRY LOVELESS

I, JERRY LOVELESS, BEING OF FULL AGE AND FIRST DULY SWORN ON OATH, DEPOSE AND STATE THE FOLLOWING:

1. I reside at Route 5, Box 169, DeSoto, Missouri. I am currently employed as a Roll-off Driver by Browning-Ferris Industries of St. Louis, Inc. ("BFISTL").

2. I was employed as a helper by Hilltop Hauling, Inc. on February 2, 1962.

3. I was a helper for approximately six months and was then promoted to a driver.

4. I drove a side-loader for Hilltop Hauling, Inc. My routes generally were residential and I used the Lonedale Road Landfill for disposal of this waste.

5. I was drafted into the United States Army in 1964 and served for a period of two years. I resumed my employment at Hilltop Hauling, Inc. when I was released from the armed forces. My routes generally were residential and commercial at this time.

6. I am familiar with the Sauget Landfill, Area II, which is located in the southern portion of the City of Sauget, Illinois. I used the Sauget Landfill, Area II, sporadically from sometime in 1968 or ~~[illegible]~~ until just before its closure.

7. Dumping occurred over an extensive area located approximately west of Illinois State Route 3 and due west of the railroad tracks and the Mississippi River was the landfill's western boundary. The area of the landfill which I dumped at was south of the Monsanto Landfill.

8. Sauget Landfill, Area II, was known to me as a landfill which would accept all types of waste.

9. While I cannot recall all customers due to the passage of time, I do recall hauling wastes from Monsanto's Idaho Street facility to the Sauget Landfill, Area II. The wastes contained water with a white, gritty substance and a combustible white powder which was thought to be quick lime.

10. I also hauled wastes from Street Industry in St. Louis to the Sauget Landfill, Area II. The wastes contained empty bottles which may have at one time contained antifreeze.

11. I also hauled commercial waste to the Sauget Landfill, Area II. The waste emanated from commercial customers such as restaurants and grocery stores in and near the City of St. Louis.

12. I hereby swear that the contents of this Affidavit are true and correct and are based on my personal knowledge.

Further Affiant Sayeth Not

Jerry Loveless

CAROLYN D. LAUER
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES [illegible]
ST. LOUIS COUNTY

Sworn to and subscribed
before me this 22 day
of March, 1990.

Notary Public

# AFFIDAVIT OF HERMAN HUEFFMEIER

I, HERMAN HUEFFMEIER, BEING OF FULL AGE AND FIRST DULY SWORN ON OATH, DEPOSE AND STATE THE FOLLOWING:

1. I reside at Route 2, Box 230, Marthasville, Missouri. Missouri. I am currently employed as driver by Browning-Ferris Industries of St. Louis, Inc. ("BFISTL").

2. I was employed as swing-shift driver by Hueffmeir Brothers Inc. on May 21, 1971.

3. I drove front-end loaders and roll-off equipment. My routes generally included customers such as factories and construction sites.

4. I am familiar with the Sauget Landfill, Area II, which is located in the southern portion of the City of Sauget, Illinois.

5. I used the Sauget Landfill, Area II, on an infrequent basis while filling in for sick or vacationing drivers.

7. The waste which I hauled to the Sauget Landfill, Area II, consisted primarily of paper, packing material and pallets which came from commercial locations such as restaurants and grocery stores.

8. I hereby swear that the contents of this Affidavit are true and correct and are based on my personal knowledge.

Further Affiant Sayeth Not

Herman Hueffmeir

Sworn to and subscribed
before me this 22 day
of March, 1990.

Notary Public

CAROLYN D. LAUER
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES JAN. 7, 1992
ST. LOUIS COUNTY

# AFFIDAVIT OF ADRIAN G. ANDRZEJEWSKI

I, ADRIAN G. ANDRZEJEWSKI, BEING OF FULL AGE AND FIRST DULY SWORN ON OATH, DEPOSE AND STATE THE FOLLOWING:

1. I reside at 2048 Lost Meadow Drive., St. Charles, Missouri. I am currently employed as District Accounting Manager by Browning-Ferris Industries of St. Louis, Inc. ("BFISTL").

2. I was employed as Assistant Regional Controller by Browning-Ferris Industries of Tennessee, Inc. on February 24, 1986.

3. I am responsible for BFISTL's record retention program, whose guidelines are set forth by Browning-Ferris Industries, Inc. ("BFI") and is outlined in its Policy and Procedures Manual.

4. Sometime in September 1986, I arranged for the removal and destruction of company records which, pursuant to BFI policy, were eligible for destruction.

5. Generally, these company records were from vintage years starting in approximately 1940 and ending in approximately 1979.

6. I received guidance from BFI's legal department in regard to the destruction of these company records.

7. These company records were taken to the County Landfill, located off Lindbergh Highway and Page Avenue, in St. Louis, Missouri, for disposal sometime in September 1986.

8. I hereby swear that the contents of this Affidavit are true and correct and are based on my personal knowledge.

Further Affiant Sayeth Not

Adrian G. Andrzejewski

Adrian G. Andrzejewski

CAROLYN D. LAUER
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES JUN. 7, 1992
ST. LOUIS COUNTY

Sworn to and subscribed
before me this 22 day
of March, 1990.

Carolyn D. Lauer

Notary Public

Sauget Sites Area II / Sauget SP / [illegible] Corp

LAW OFFICES
FRANK L. PELLEGRINI
A PROFESSIONAL CORPORATION
SUITE 400
CHOUTEAU CENTER
133 SOUTH ELEVENTH STREET
ST. LOUIS, MISSOURI 63102

FRANK L. PELLEGRINI
JULIE A. EMMERICH

TELEPHONE (314) 241 7445
FAX (314) 241 7449

April 3, 1990

Mr. James L. Morgan
Assistant Attorney General
Environmental Control Division
Attorney General
State of Illinois
Springfield, Illinois 62706

Re: Sauget Sites Area II--Comments to Interim Consent Order and De Minimis Partial Consent Decree

Dear Mr. Morgan:

This is in response to your request for comments to the draft Interim Consent Order for the performance of the RI/FS for Site Q and to the De Minimis Partial Consent Decree which you submitted to Frank Pellegrini for review. Our comments are general in nature and do not fully address every item with which we are in disagreement, meaning that our failure to object to a specific provision should not preclude us from later objecting to such provision once formal negotiations are commenced. It is my understanding that you are seeking our input to provide IEPA with an indication of the terms we wish to include in the final Consent Order for the performance of the RI/FS for Site Q.

To comment on the general framework of the Interim Consent Order, it does not seem structured to address the relationship of the parties to Site Q. All of the known and willing PRPs for Site Q at the time of the effective date of the Order should be made parties, with Eagle Marine Industries assuming the lead. It is important to afford Eagle Marine the latitude to maintain the lead, but permitting it to relinquish this role, if desired, should it enter into a De Minimis Consent Decree. The Order appears to be tailored to a situation wherein the "Defendant" is the only PRP, i.e., V.B. requires "Defendant" to remediate any release or threatened release at or from the Site. That provision is not appropriate where, as here, there are several PRPs. While it may be advisable to have Eagle Marine as the lead, to serve as a representative for the PRPs as a collective group, Eagle Marine is not willing to assume any liability for

the group. The references to "Defendant" in the Order will have to be adapted to reflect this relationship.

Addressing specific provisions, most noticeable is the absence of certain basic protective provisions. It is important to include a procedure for the identification of additional PRPs by both IEPA and other PRPs, requiring IEPA input and further providing that response costs may be recovered from non-cooperative and non-participating PRPs. It is also necessary to include a provision that this Consent Order is inadmissible as evidence in any court proceeding. In some sections IEPA has imposed time restrictions for responding and providing information, whereas in others it has not. For example, in Paragraph X(A), Certification and Termination, it is necessary to put a time limit, such as 30 days, within which Plaintiff must notify Defendants of what needs to be done to complete the required work. We would also insist on a provision requiring that IEPA make available, upon request, all information and documentation regarding the Site subsequent to the commencement of the RI/FS. We would also like to designate an individual to serve as Defendants' Executive, for purposes of receiving all reports and comments and general representation of Defendants in addition to the Project Coordinator. Also, in Paragraph XVII(E), we should be given the option to have an Alternate Project Coordinator present in the event the designated Project Coordinator is unavailable for whatever reason. Under Paragraph IX, we would like to see a provision for conferral prior to the requirement by Plaintiff of additional work. A provision is necessary stating that penalties do not run during the dispute resolution phase. Under Paragraph XVIII(E), Dispute Resolution, Defendants should be given a notice of when a 30 day period begins to run. Also, the 90 day period for the State is excessive and seems rather arbitrary. Finally, in Subpart (B)(F) of that paragraph, we simply cannot agree to the accrual of penalties during the challenge to stipulated penalties.

Other provisions are too restrictive and need to be amended to impose good faith efforts by IEPA. Otherwise, the whims of personnel involved can dictate whether the RI/FS is given a fair opportunity to be carried out. For example, Paragraph V(E)(6) permits IEPA to reject the RI/FS for any reason and requires Defendants to incorporate all of IEPA's modifications, even those

April 3, 1990



that may be unreasonable. Similarly, Paragraph VI(C) requires incorporation of all of IEPA's modifications. In a complex RI/FS such as this, a requirement of good faith and reasonableness needs to be imposed to prevent impasse on minor items. Under Paragraph VII, Remedies Selection, we would like to see included a provision to the effect that, in selecting a remedy, factors such as cost effectiveness must be considered.

Some provisions merely need refinement. For example, Paragraph IX(C) is duplicative of the guidelines contained in USEPA Document QAMS-005-80 and seems unnecessary. Similarly, Paragraph X(B), beginning with "if the Plaintiff . . . " is in large part a repetition of Paragraph X(A). Moreover, in Paragraph IX(C)(3), we would insist that IEPA absorb the cost for requiring laboratories to analyze additional samples. Also, Paragraph VIII(A), Access, allows only 30 days for Defendants to obtain access to the Site; more time may be required given the nature of the Site. With respect to that provision, we would also add a provision requiring IEPA to use reasonable authority to assist Defendants in obtaining access to the Site. Under Paragraph IX(B), we would add a requirement that Plaintiff provide reasonable notice prior to inspecting the premises. The confidentiality provisions of Paragraph VIII(C) should be incorporated by reference here. In Paragraph XIV, Force Majeure, we would add a specification of what may constitute a force majeure, i.e., fire, flood, compliance with a governmental directive or order, etc. Also, Defendants should be required to report circumstances which Defendants have "reason to believe has caused or may cause a violation of the Order." To amend Paragraph XIV(C), the parties should be given the opportunity to extend performance themselves, rather than requiring the court to make that determination. The $50,000.00 security agreement deposit and maintenance of $50,000.00 limit of Paragraph XV is excessive and unnecessary. We propose to delete that entire section which requires a security deposit. Paragraph XVII(A) gives the On-Scene Coordinator too much authority to require extra work to be performed. Some degree of input from Defendants should be permitted.

As I prefaced, these comments are general in nature and do not address all of the problem areas. I hope this gives you an indication of our position regarding the specific terms of a

April 3, 1990



Consent Order. We are certainly willing to negotiate on all items and are prepared to do that once formal negotiations are commenced.

You also requested comments regarding the draft De Minimis Consent Decree which you submitted to Frank Pellegrini. Having reviewed the De Minimis Decree, it does not appear to serve as a suitable model for any De Minimis Decree to which we would eventually agree. While your draft does have certain standard provisions, such as a covenant not to sue, and denial of liability, the fact situation upon which it is based is not similar to the situation at Site Q, and we feel it necessary to tailor the De Minimis Decree to our specific circumstances. Therefore, we are reserving more extensive comments regarding the possible De Minimis Consent Decree for a later time. If you are able to locate a De Minimis Consent Decree which more parallels our fact situation, please forward it to this office, and we will provide comments. In the meantime, if you have any questions, please do not hesitate to call.

Sincerely yours,

Julie A. Emmerich

JAE/db

cc: Richard D. Burke
Robert Schreiber
Richard L. Waters
Milton Greenfield, Jr.

Paul Tracks


BRYAN, CAVE, McPHEETERS & McROBERTS

A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

500 NORTH BROADWAY

ST. LOUIS, MISSOURI 63102-2186

(314) 231-8600

TELEX 4312030 BCMM STL

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29 QUEEN ANNE'S GATE
LONDON SW1H 9BU
44-1-222-0511
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POST OFFICE BOX 20883
RIYADH 11465 SAUDI ARABIA
966-1-465-1371
TELEX 926-403093 INTLAW SJ

POST OFFICE BOX 6750
DEIRA, DUBAI, U.A.E.
971-4-283194
TELEX 858-47216 USLAW EM

ROBERT H. McROBERTS, JR.

1015 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005-2689
202) 289-6100
TELEX 440321 BCMM UI

3100 CROCKER CENTER
333 SOUTH GRAND AVENUE
LOS ANGELES, CALIFORNIA 90071-3171
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TELEX 4720314 BCMM LSA

350 PARK AVENUE
NEW YORK, NEW YORK 10022-6022
(212) 888-1199
TELEX 425757 BCMM NYK

GREAT AMERICAN TOWER
3200 NORTH CENTRAL AVENUE
PHOENIX, ARIZONA 85012-2415
(602) 230-7000


February 27, 1990

Mr. William C. Child, Manager
Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794-9276

Dear Mr. Child:

I enclose affidavit and attachments.

While I have attached copies of two agreements referring to easements, I have not attached copies of easement agreements as such.

I found no records for the earlier years of the Cahokia Trust and assume that they were destroyed.

Based upon the enclosed affidavit, would you please confirm that the trust and my father as trustee have been removed from the list of potentially responsible parties regarding the "Area II" sites in St. Clair County, Illinois.

Very truly yours,

R. H. McRoberts, Jr.

RHMcR,Jr/sas

Enclosures


RECEIVED

IEPA/DLPC

AFFIDAVIT

Mr. William C. Child's letter dated February 1, 1990 to "Robert H. McRoberts, Trustee" was directed to me. My father was a trustee of a trust known as "Cahokia Trust". It is my understanding that this was a "liquidating Trust" and that the sole purpose of the trust was to dispose of real property held in the trust. Our records show that the assets of the trust were distributed and the trust terminated on December 26, 1988.

My father died June 1, 1989.

Items 1 through 7 on page 3 of Mr. Child's letter are inapplicable.

In response to Item 8 on page 3 of Mr. Child's letter, I have attached copies of all "transactions and/or agreements" called for which are contained in our files.

R. H. McRoberts, Jr.

I certify that the information set out above is true and accurate to the best of my knowledge and belief.

I certify that the documents attached hereto are true and authentic to the best of my knowledge and belief.

R. H. McRoberts, Jr.

Subscribed and sworn to before me this 27th day of February, 1990.

Sandra A. Solomon
Notary Public

My Commission Expires:

SANDRA A. SOLOMON
NOTARY PUBLIC-STATE OF MISSOURI
ST. LOUIS COUNTY
MY COMMISSION EXPIRES ON 9-7-93

CONFIDENTIAL MEMORANDUM

DATE: January 29, 1990

TO: Paul Takacs, RPMS/DLPC

FROM: Bruce Carlson, Enforcement Programs B.C.

SUBJECT: Addresses for Third Round of Information Request Letters to Sauget Sites PRPs

In follow-up to our meeting on January 26, 1990, the following addresses should be used for the PRPs that were selected for the next round of information request letters. All of these PRPs pertain to Area II of the Sauget Sites.

Donald Elsaesser, Trustee
c/o Don C. Elsaesser Cahokia Trust
1718 Warson Estates Drive
St. Louis, Missouri 63124

Russell P. Richardson, Trustee
400 Southwind Drive
Belleville, Illinois 62221

Robert H. McRoberts, Trustee
Bryan, Cave, McPheeters & McRoberts
500 North Broadway
St. Louis, Missouri 63102-2186

For each of the three persons listed above, include the following lines in the letter just below the address:

Re: Trust under Deed dated December 26, 1928 recorded in Book 723, Page 371 of the St. Clair County Records, extended and modified December 17, 1968 and recorded as Document Number A303205 in Book 2155, Page 25-54 of the St. Clair County Records.

The corporate addresses for the remaining information request letters are:

CT Corporation System
Registered Agent for
Ethyl Corporation
208 South LaSalle Street
Chicago, Illinois 60604-1135

B. C. Gottwald, President
Ethyl Corporation
330 South 4th Street
Richmond, Virginia 23219

CT Corporation System
Registered Agent for
Ethyl Petroleum Additives, Inc.
208 South LaSalle Street
Chicago, Illinois 60604-1135

B. B. Abrahamson, President
Ethyl Petroleum Additives, Inc.
4501 Lindell, Apt. 8G
St. Louis, Missouri 63108

Joseph C. Larem, Registered Agent
Rogers Cartage Company
10735 South Cicero Avenue
Oak Lawn, Illinois 60453-5400

Robert P. Johnson, President
Rogers Cartage Company
9150 South Damen Avenue
Chicago, Illinois 60620

Prentice Hall Corporation
Registered Agency for
Mobil Oil Corporation
33 North LaSalle Street
Chicago, Illinois 60602-2607

R. F. Tucker, President
Mobil Oil Corporation
150 East 42nd Street
New York, New York 10017

Note: The corporate name of Edwin Cooper, Inc. was changed to Ethyl Petroleum Additives, Inc. as of August 13, 1984. As to Notre Dame Fleeting & Towing Service, Inc., its corporate name was changed to Eagle Marine Industries, Inc. as of December 13, 1973. A previous information request letter has been sent to Eagle Marine Industries, Inc.

cc: James Morgan
Christine Zeman

Recycled paper

**BROWNING-FERRIS INDUSTRIES**

P O BOX 3151 • HOUSTON, TEXAS 77253 • 713/870-7680

E. William Hutton
Attorney

VIA FEDERAL EXPRESS
December 26, 1989

William C. Child, Manager
Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794-9276

RE: Sauget Sites, Area II
L1630200005 - St. Clair County

Dear Mr. Child:

I am responding on behalf of Browning-Ferris Industries of St. Louis, Inc. ("BFI") to the Section 4(q) notice which was received on December 20, 1989. BFI, to the extent that it is a potentially responsible party ("PRP") at this site, and without waiving any right or defense, is willing to participate with other PRPs to conduct the remedial investigation, feasibility study and remedial action necessary at such site.

A representative of BFI has made contact with the IEPA Remedial Project Manager, Paul Takacs, to obtain information in regard to the PRP Committee and, specifically, the name, phone number and address of its chairperson. As soon as Mr. Takacs provides BFI with this information, contact will made with the PRP Chairperson and BFI will express its willingness to participate with other PRPs to the extent that it is a responsible party.

BFI will be submitting its response to the request for information on or before January 18, 1989. Please address all future correspondence dealing with this matter to the undersigned in care of Browning-Ferris Services, Inc.

Sincerely,

E. William Hutton

E. William Hutton
Counsel for Browning-Ferris Industries
of St. Louis, Inc.

RECEIVED
DEC 28 1989
IEPA/DLPC

EWH/ps
xc: Mr. Bruce L. Jernigan
Ms. Gwen S. Walsh
File

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BROWNING-FERRIS INDUSTRIES
P O BOX 3151 • HOUSTON TEXAS 77253 • 713/870-7680

E. William Hutton
Attorney

January 18, 1990

**FEDERAL EXPRESS**

William C. Child
Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
Springfield, Illinois 62794-9276

RECEIVED
JAN 19 1990
IEPA/DLPC

RE: Sauget Sites, Area 2
L1630200005 - St. Clair County

Dear Mr. Child:

Browning-Ferris Industries of St. Louis, Inc. ("BFI") received a letter from William C. Child, Manager, Division of Land Pollution Control, Illinois Environmental Protection Agency on December 20, 1989, requesting information regarding the above-referenced site pursuant to Section 104(e) of CERCLA 42 U.S.C. 9604, Section 3007 of RCRA, 42 U.S.C. 6927 and Section 4 of the Environmental Protection Act, Illinois Revised Statute, Chapter 111 1/2, Paragraph 1004. This response to the request for information is submitted on behalf of BFI.

1. Copies of all shipping documents or other business documents relating to the transportation, storage and/or disposal of waste materials substances at the above-referenced Area.

After a diligent search of all available documents, Respondent has been unable to locate shipping documents or other business documents relating to the transportation, storage and/or disposal of waste materials at the Sauget Landfill.

Based upon employee interviews, Respondent has determined that it transported waste to the Sauget Landfill Area 2. Most of the waste transported was generated by commercial and residential customers. The industrial waste which was transported to the site was done on an irregular basis during the mid to late 1960's and early 1970's. Due to the passage of time, the employees' recollection of specificities in regard to transportation, volume and chemical composition of the industrial waste material are unclear. Some of the facts that could be recalled by these employees are indicated below. Any contact with these individuals should be arranged through me.

1879

Jerry Lovelace, an employee of Respondent, recalls transporting waste from Monsanto's Idaho Street facility in 10-yard containers to Area 2. The waste was a white, gritty-like substance and was water based. This employee was unable to recall the industrial process for which this material was a waste by-product. In addition, he recalled transporting quick lime in a white powder form from Monsanto's facility to the Sauget Landfill Area 2.

Bernard Grewe, an employee of Respondent, recalls transporting barrels of liquid and sludge material to Sauget Landfill Area 2. He could recall transporting paint sludge and pigments for U.S. Paint, an unknown liquid for Dennis Chemical, rubber-type glues for Inmont Corp. and Crown Cork and Seal, and barrels of an unknown material for Barry Weinmiller Steel Fabrication. Due to the passage of time, Mr. Grewe was unable to recall with specificity the volume of these waste materials, but thinks that he may have been transported to the Sauget Landfill Area 2 on an almost daily basis.
Kenneth Smith, an employee of Respondent, recalls transporting approximately three loads of waste material to Sauget Landfill Area 2 from Cooper, now known as Ethyl Petroleum. The material was of a honey-like consistency and it had granules in it.

Ralph Hatchet, an employee of Respondent, recalls transporting waste for J. Weaver which contained metal shavings. In addition, he transported commercial waste from Venture Department Stores and empty oil cans from Container Corp. to Sauget Landfill.

James Wieberg, an employee of Respondent, recalls transporting residential and commercial waste to the Sauget Landfill Area 2 for the city of Crestwood, Missouri.

2. <u>A detailed description of the generic, common and/or trade names and the chemical composition and character (i.e., liquid, solid, sludge) of the material offered by you for transportation to, storage and/or disposal at the above referenced Area.</u>

Other than the information which has been provided in Respondent's Answer to Question 1, information in regard to the generic, common and/or trade names of the waste material and the chemical composition of such material is unknown.

3. <u>For each waste material or substance identified above please give the total volume (gallons for liquids and sludges and cubic yards for solids) which you transported to, stored or disposed of at the above-referenced Area, and list when transportation storage or disposal occurred. Also, describe as accurately as possible the precise location where said activities took place.</u>

Other than the information which has been provided in Respondent's Answer to Question 1, information in regard to the total volume of each waste stream or the date of transportation is unknown.

Each employee was shown the map of the Sauget Landfill Areas 1 and 2 and which was provided to Respondent in Illinois EPA's Request for Information. Each employee said that the map was unclear and that it was not possible to indicate precisely where site activities took place.

4. A description of arrangements that were made for transportation of your waste materials or substances to the above-referenced Area, including method(s) of transportation used (i.e., tankers, dump trucks, drums).

   Not applicable.

5. The names of the transporter(s) of your waste materials or substances, including the former and current address of the transporter(s).

   Not applicable.

6. Copies of all records, including analytical results and material safety data sheets, which indicate the chemical composition and/or chemical character of waste material(s) transported to, stored or disposed of at the above-referenced Area.

   After a diligent search of all available documents, Respondent has been unable to locate analytical results or material safety data sheets which would indicate the chemical composition or character of the waste material transported to Sauget Landfill Area 2.

7. A list and description of any and all liability insurance that is and was carried by you, including but not limited to any self-insurance provisions, which relate to waste materials or substances and the above-referenced Area. Include copies of all such insurance policies.

   See attached as Exhibit A a list of insurance carriers that may have issued insurance policies and which may provide coverage to Respondent.

8. Evidence of transactions and/or agreements made between yourself and owners of property within the above-referenced Area during the period of disposal.

   After a diligent search of all available documents, Respondent has been unable to locate any documents indicating any transactions or agreements made between Respondent and the owners of the property on which the Sauget Landfill is located.

The information provided herein is as complete and accurate as possible at this time. BFI will voluntarily submit to Illinois EPA any additional information which comes to its attention that supplements or modifies any of its responses to this Request for Information.

Please direct all future correspondence and questions concerning this information response and the Sauget Sites, Area 2, to the undersigned at Browning-Ferris Services, Inc., P.O. Box 3151, Houston, Texas 77253, 713/870-7680.

Sincerely,

E. William Hutton

E. William Hutton
Counsel for Browning-Ferris
Industries of St. Louis, Inc.

cc: Mr. Bruce Lee Jernigan
Ms. Gwen S. Walsh
File

KIRKLAND & ELLIS
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

200 East Randolph Drive
Chicago, Illinois 60601
Telex 25-4361

312 861-2000

Denver Office
1999 Broadway
Denver, Colorado 80202
303 291-3000

Washington Office
655 Fifteenth Street, N.W.
Washington, D.C. 20005
202 879-5000

To Call Writer Direct
312 861-2302

December 2, 1989

**VIA FEDERAL EXPRESS**

Christine Zeman, Esq.
Assistant Attorney General
Office of Attorney General
Environmental Control Division
500 South Second Street
Springfield, Illinois 62706

Re: Sauget Sites -- Area II

Dear Ms. Zeman:

As a follow-up to our November 27, 1989 meeting in Springfield, Illinois, I enclose supplemental documents supporting the issuance of PRP notification letters and information requests to several additional PRPs.

First, enclosed is a copy of title search documentation reflecting the ownership of property apparently within the metes and bounds of Site Q, the Sauget landfill. These documents indicate that the following companies held title to parcels within Site Q during the relevant period of disposal at Site Q: Phillips Petroleum Company, Pillsbury Company, Patgood, Inc., Peavey Company, Con-Agra, Inc., Cahokia Trust, Donald C. Elsaesser, or Successor Trustee, Robert H. McRoberts, or Successor Trustee, Russell P. Richardson, or Successor Trustee, St. Louis Union Trust, River Port Fleeting, Inc., Notre Dame Fleeting and Towing Service, Inc., and Fred H. Leyhe.

Second, with respect to the involvement of Union Electric Company at Site Q, we would refer you to Section 2, Pages 58-64, of the August, 1988 report by Ecology & Environment, Inc., an Illinois EPA contractor. This report clearly indicates that Union Electric Company operated several fly ash ponds at Site Q during the relevant period of disposal at Site Q.

Third, our understanding is that Sterling Steel Casting Company is otherwise known as Sterling Steel Foundry, Inc. However, we further understand that the Sterling Steel entity sold or transferred certain assets used in the generation of hazardous waste to St. Louis Steel Foundry, Inc. in Sauget, Illinois.

Fourth, with respect to Site O -- Sauget Treatment Plant pits and lagoons, we identifed the following additional PRPs that should be issued PRP notification letters and information requests: Mobil Oil Corporation, Ethyl Corporation, Goldfields American Corporation, Blue Tee Corporation, Russell Bliss, Rodgers Cartage, Wiese Planning & Engineering, Inc. and the Sauget Sanitary District Research Association ("SSDRA"). Our understanding is that each of these companies either discharged wastes to the pits and lagoons or operated the treatment plants. We understand that the SSDRA has custody or control of those documents which reflect the nature and volume of wastes discharged and disposed of by the above companies at Site O. We would suggest that you direct an information request to the SSDRA seeking this information, all of which should be publicly available. In the alternative, some of this information may be in the discharge monitoring reports filed regularly by the SSDRA with the Illinois EPA, Division of Water Pollution Control.

Finally, supplemental information regarding additional generator PRPs at Site Q may possibly be obtained by issuing an administrative deposition subpoena to the operator/owner of the Sauget landfill, Paul Sauget.

Should you have questions regarding the enclosure, please call me.

Sincerely,

Thomas O. Kuhns

Enclosure

SAS100R

## PROPERTY DESCRIPTION

Subject property consists of two parcels of land located on the south side of Riverview Avenue and being part of the Third Subdivision of Cahokia Commons in St. Clair County, Illinois.

Parcel #1 is identified by St. Clair County as Parcel #01-27-400-015 and contains 164.67 acres. It has a total assessed valuation of $27,950.

Parcel #2 is identified by St. Clair County as Parcel #01-34-100-006 and contains 63.33 acres. It has a total assessed valuation of $10,710.

TRANSFER NUMBER 1

PARCEL NUMBER 01-27-400-015

| | |
|---|---|
| Book/Page: | Deed recorded in Book 2376, Page 854 through 847. |
| Date: | The instrument was dated December 31, 1974 and filed for record January 30, 1975. |
| Grantor: | Fred H. Leyhe and Louise K. Leyhe, his wife. |
| Grantee: | River Port Fleeting, Inc.<br>Suite 1 252<br>Pierce Building<br>St. Louis, MO 63102 |
| Remarks: | Deed prepared by William H. Leyhe, III, Attorney<br>Suite 653, 7701 Forsyth<br>Clayton, MO 63105 |

## TRANSFER NUMBER 2

## PARCEL NUMBER 01-27-400-015 & PARCEL NUMBER 01-34-100-006

**Parcel Number 01-27-400-015**

**Book/Page:** Book 2344, Trustee's Deed Page 164 through 170, Mortgage Page 171 through 186.

**Date:** March 30, 1973.

**Grantor:** Donald C. Elsaesser, Robert H. McRoberts (Successor Trustee to Charles E. Richardson, deceased), and Russell P. Richardson, not individually but as Trustees under Deed dated December 26, 1928 recorded in Book 723, Page 371 of the St. Clair County Records, extended and modified December 17, 1968 and recorded as Document Number A303205 in Book 2155, Page 25-54 of the St. Clair County Records.

**Grantee:** Fred H. Leyhe.

**Mortgage:** Mortgagor - Fred H. Leyhe and Louise K. Leyhe, Mortgagee - Grantors. Loan amount $1,526,430.00 with interest at 7% per annum payable in annual installments (nine at $101,762, one at unpaid balance), last payment due and payable April 2, 1988.

**Parcel Number 01-34-100-006**

**Book/Page:** Book 2344, Trustee's Deed Page 187 through 193, Mortgage Page 194 through 209.

**Date:** March 30, 1973.

**Grantor:** Same as above.

**Grantee:** Notre Dame Fleeting and Towing Service, Inc., a Missouri Corporation.

**Mortgage:** Mortgagor - same as Grantee, executed by Fred H. Leyhe, President and attested by Gordon I. Herzog, Secretary; Mortgagee - same as Grantor. Loan amount $1,156,736.00 at 7% per annum payable in 15 annual installments with the last payment of $77,115.73 due April 2, 1988.

## TRANSFER NUMBER 3

**(Both Parcels)**

**Book/Page:** Book 2155, Page 25 through 54.

**Date:** December 17, 1968.

**Grantor:** St. Louis Union Trust, Robert H. McRoberts, Pauline S. Eades, Trustees (23% of 24/126 interest in Trust).
St. Louis Union Trust, Robert H. McRoberts, Carolyn Essmann, Trustees (77% of 24/126 interest in Trust).
Pauline S. Eades (formerly Pitzman) and Dr. Dee W. Eades, her husband, Trustees (18/126).
Russell P. Richardson and Irma Richardson, his wife, Trustees (11/126).
Lucy R. Hurst and James L. Hurst, her husband, Trustees, (11/126).
Louise P. Lucas, a widow, Trustee, (18/126).
St. Louis Union Trust, Charles E. Richardson, Trustees (44/126).

**Grantee:** Donald C. Elsaesser, Charles E. Richardson, Russell P. Richardson, Trustees.

**Remarks:** This instrument is an "Extension of Agreement" extending the Trust established by Deed recorded in Book 723, Page 371 which conveyed properties to Fredrick Pitzman and Josephine E. Methudy, Trustees. Between the time the Deed was recorded in Book 723, Page 371, December 26, 1928, and the date of this "Extension of Agreeement", December 17, 1968, this Deed was extended three times as follows:
September 23, 1938, Book 885, Page 336.
September 20, 1948, Book 1121, Page 391.
November 26, 1958, Book 1594, Page 391.

The "Extension of Agreement" dated December 17, 1968 extended the Trust to December 26, 1978 and among other things gave the Trustees the authority to deed properties.

TRANSFER NUMBER 4

(Both Parcels)

**Book/Page:** Book 723, Page 371 through 381.

**Date:** December 26, 1928.

**Grantor:** Pitzman Interest -
Fredrick Pitzman, a single person, 1/8 interest.
Marsh Pitzman, a single person, 1/8 interest.
Louise P. Lucas and Oliver G. Lucas, her husband, 1/8 interest.
Florence P. Herman and Edward Herman, her husband, 1/8 interest.

Kehr Interest -
Josephine E. Methudy, a single person, 1/8 interest.
Eugene R. Methudy and Frances K. Methudy, his wife, 1/8 interest.
Edward J. Methudy and Laura B. Methudy, his wife, 1/8 interest.
Lucy E. L Richardson and Russell A. Richardson, her husband, 1/8 interest.

**Grantee:** Fredrick Pitzman (representing the beneficial interest of Julius Pitzman) and Josephine E. Methudy (representing the beneficial interest of Edward C. Kehr).

**Remarks:** This document was titled "Cahokia Trust Agreement" which made the Grantees Trustees of the Grantors. 13 parcels were conveyed to the Trustees and any "other property owned by Julius Pitzman and Edward C. Kehr that said Julius Pitzman and Edward C. Kehr owned as tenants in common at the time of Kehrs death", whether those properties were described in this instrument or not. The Trustees were given the power to sell.

## TRANSFER NUMBER 5

**(Both Parcels)**

**Book/Page:** Book 523, Page 69 through 75.

**Date:** May 22, 1918.

**Grantor:** Julius Pitzman and Caroline Pitzman, his wife.
Josephine E. Methudy, a single person.
Lucy E. I. Richardson and Russell Richardson, her husband.
Eugene R. Methudy and Edna Methudy, his wife.
Edward J. Methudy, a single person.

**Grantee:** Julius Pitzman and Josephine E. Methudy.

**Remarks:** This Deed conveyed 20 parcels of real estate and all "other property owned by Julius Pitzman and Edward C. Kehr as tenants in common at the time of Kehrs death". The 20 legal descriptions in this instrument were of such a broad description that subject parcels could have been any one of a number of properties described or could have been those properties described as "all other properties owned by Pitzman and Kehr at the time of Kehrs death".

Grantees were "imposed upon" to serve as Trustees and Josephine E. Methudy was described as the Executrix and Legatee of Edward C. Kehr. At death, Kehr left his interest in real estate as follows:

Julius Pitzman (1/2).
Josephine E. Methudy (1/8).
Lucy E. I. Richardson (1/8).
Eugene R. Methudy (1/8).
Edward J. Methudy (1/8).

Since Julius Pitzman and Edward C. Kehr were tenants in common in these properties, after Kehr left a 1/2 interest in his properties to Julius Pitzman, Pitzman should have then had approximately 3/4's interest in the real estate.

## TRANSFER NUMBER 6

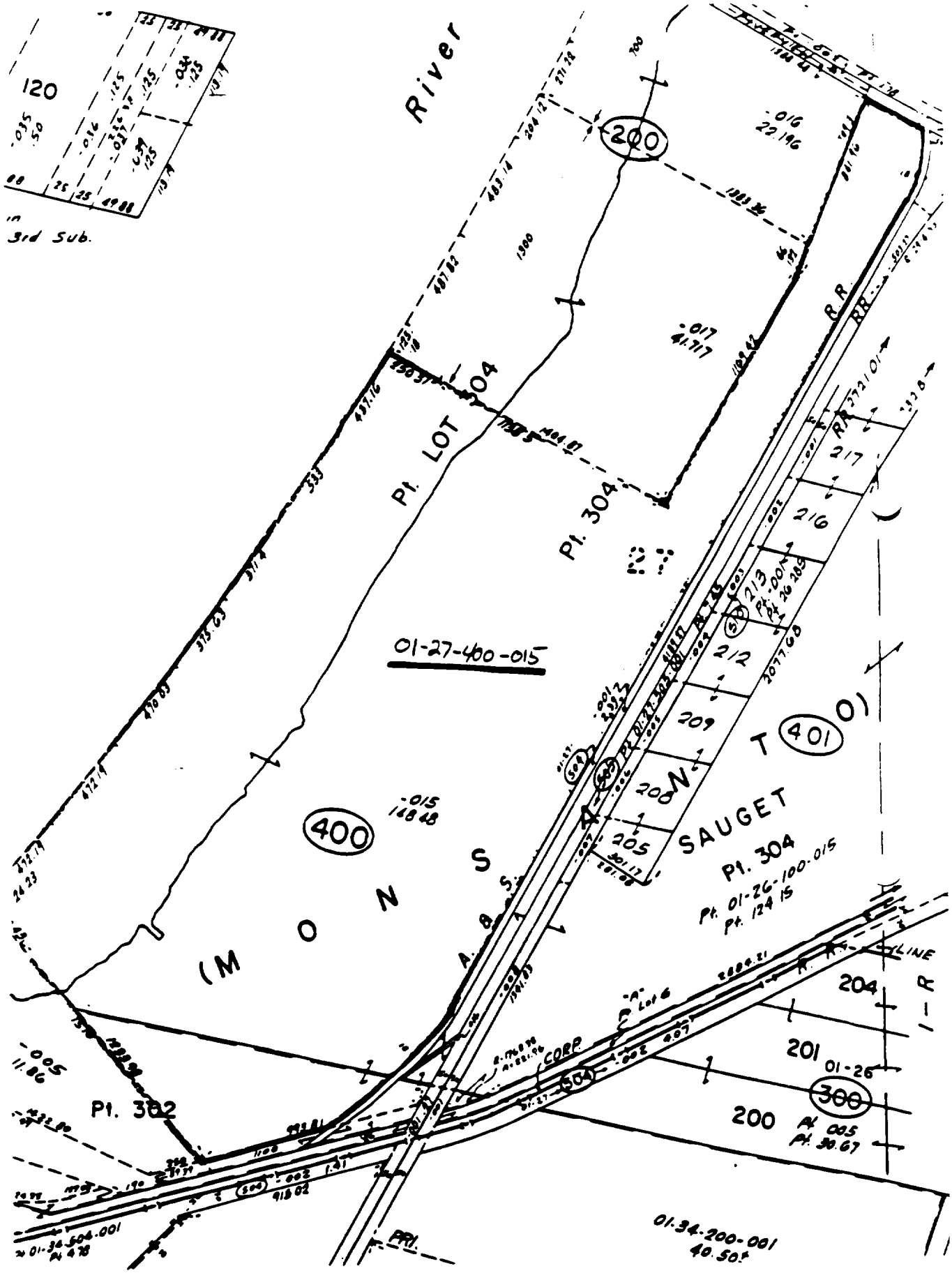
The document recorded in Book 523, Page 69 through 75 and dated May 22, 1918, ties subject parcels from 1918 to present. In order to tie Julius Pitzman and Edward C. Kehr to the document of May 22, 1918, a Deed or other instrument must be found conveying interest in subject parcels to them. The following table is a listing of properties conveyed to Julius Pitzman, Julius Pitzman, etal, or Julius Pitzman and Edward C. Kehr from a period of time between 1877 and 1907. In order to tie Pitzman and Kehr to the document of May 22, 1918, each one of these instruments would have to be reviewed.

The document most likely to connect these individuals would be one dated January 14, 1892 (recorded in Book 217, Page 353) whereby Edward C. Kehr conveyed an undivided 1/2 interest to Julius Pitzman. However, because the description of the properties conveyed in this instrument were of such a general nature (that is, describing tracts of land that could include subject property plus much more property) it is very difficult to determine the exact document connecting these individuals to the document of May 22, 1918. Further, this is only a listing of the properties acquired by Pitzman. A similar list for Kehr would have to be obtained and reviewed.

| Date | Grantee | Grantor | Book/Page |
|---|---|---|---|
| 12/19/1877 | Julius Pitzman | Surwald Clara | 166/253 |
| 3/8/1882 | Julius Pitzman | Borsmenue Josephine | 165/92 |
| 3/7/1883 | Julius Pitzman | Cahokia by Supervising | 169/546 |
| 5/7/1887 | Julius Pitzman | Rombauer Real Estate | 190/123 |
| 10/3/1889 | Julius Pitzman, etal | Koerner Gustavus | 206/46 |
| 1/14/1892 | Julius Pitzman, etal (undivided 1/2 interest) | Kehr, Edward C. | 217/353 |
| 12/3/1892 | Julius Pitzman, etal | Carlton, James N. & wife | 231/402 |
| 12/3/1892 | Julius Pitzman, etal | Neel, James Canlouge | 231/402 |
| 12/2/1893 | Julius Pitzman | Kehr, Edward C. | 224/422 |
| 3/31/1896 | Julius Pitzman, etal | McCracken, Nick etal | 201/357 |
| 3/31/1896 | Julius Pitzman, etal | McCracken, Nick etal | 201/358 |
| 5/1/1896 | Julius Pitzman, etal | Cahokia, Village of | 244/552 |
| 5/1/1896 | Julius Pitzman, etal | Cahokia, Village of | 244/553 |
| 6/22/1898 | Julius Pitzman, etal | Lavalle, Francis by Exec. | 262/144 |
| 7/20/1898 | Julius Pitzman, etal | Brachett, Louise | 262/260 |
| 7/25/1898 | Julius Pitzman, etal | Comderalle, Mary | 252/482 |
| 8/27/1898 | Julius Pitzman, etal | Droit, Camille W. | 262/394 |
| 11/16/1898 | Julius Pitzman Trustee etal | Karr, A. | 266/345 |
| 11/16/1898 | Julius Pitzman Trustee etal | Kehr, Edward C., etal | 266/345 |

## TRANSFER NUMBER 6

| Date | Grantee | Grantee | Book/Page |
|---|---|---|---|
| 11/16/1898 | Julius Pitzman Trustee etal | Franklin Bank | 266/345 |
| 11/16/1898 | Julius Pitzman Trustee etal | Perio Cinderalle | 264/13 |
| 2/15/1899 | Julius Pitzman, etal | Palmier, Mary | 252/581 |
| 3/7/1899 | Julius Pitzman, etal | Doerr | 264/364 |
| 5/26/1899 | Julius Pitzman, etal | Bordeaux Lizzee | 270/143 |
| 5/26/1899 | Julius Pitzman, etal | Gerber Rose, etal | 270/143 |
| 6/11/1900 | Julius Pitzman, etal | St. Louis Belle-South | 268/310 |
| 6/11/1900 | Julius Pitzman, etal | Jarvis, George F. | 278/179 |
| 1/2/1901 | Julius Pitzman | St. John Frederick | 228/627 |
| 7/11/1901 | Julius Pitzman | Cahokia | 292/70 |
| 7/11/1901 | Julius Pitzman | Cahokia | 268/551 |
| 7/11/1901 | Julius Pitzman | Cahokia | 292/71 |
| 7/11/1901 | Julius Pitzman | Cahokia | 292/72 |
| 7/11/1901 | Julius Pitzman | Cahokia | 292/73 |
| 7/14/1903 | Julius Pitzman, etal | Bosancon, Adeline | 318/11 |
| 12/15/1906 | Julius Pitzman, etal | Martin, Charles | 356/509 |
| 8/8/1907 | Julius Pitzman, etal | Marigold August | 372/350 |


River
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3rd Sub.
200
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Pt. 304
01-27-400-015
400
(M O N S
A. B. S.
SAUGET
Pt. 304
Pt. 01-26-100-015
Pt. 124.15
401
R.R.
217
216
213
212
209
208
205
204
201
01-26
300
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Pt. 005
Pt. 30.67
Pt. 382
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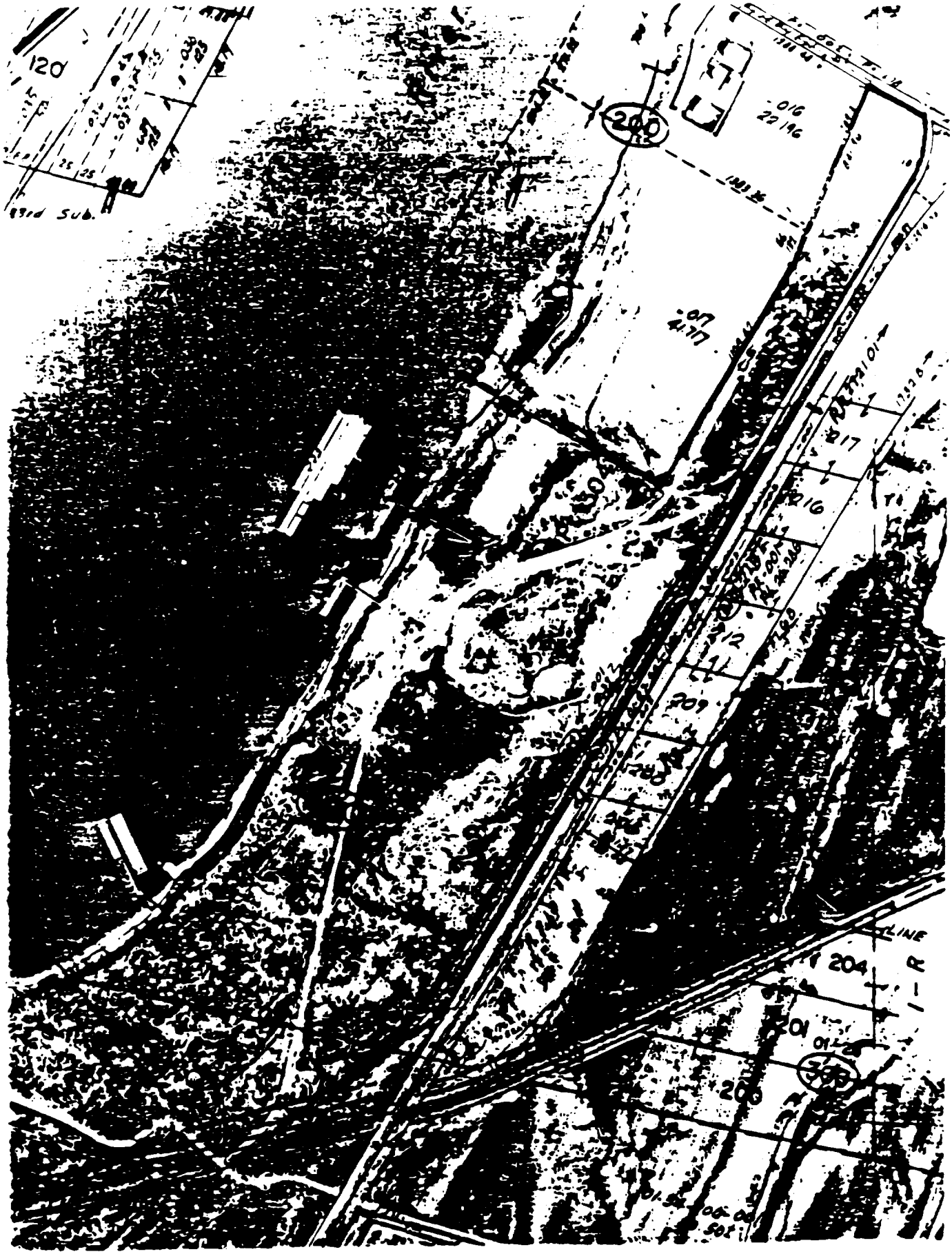
120'
93rd Sub.
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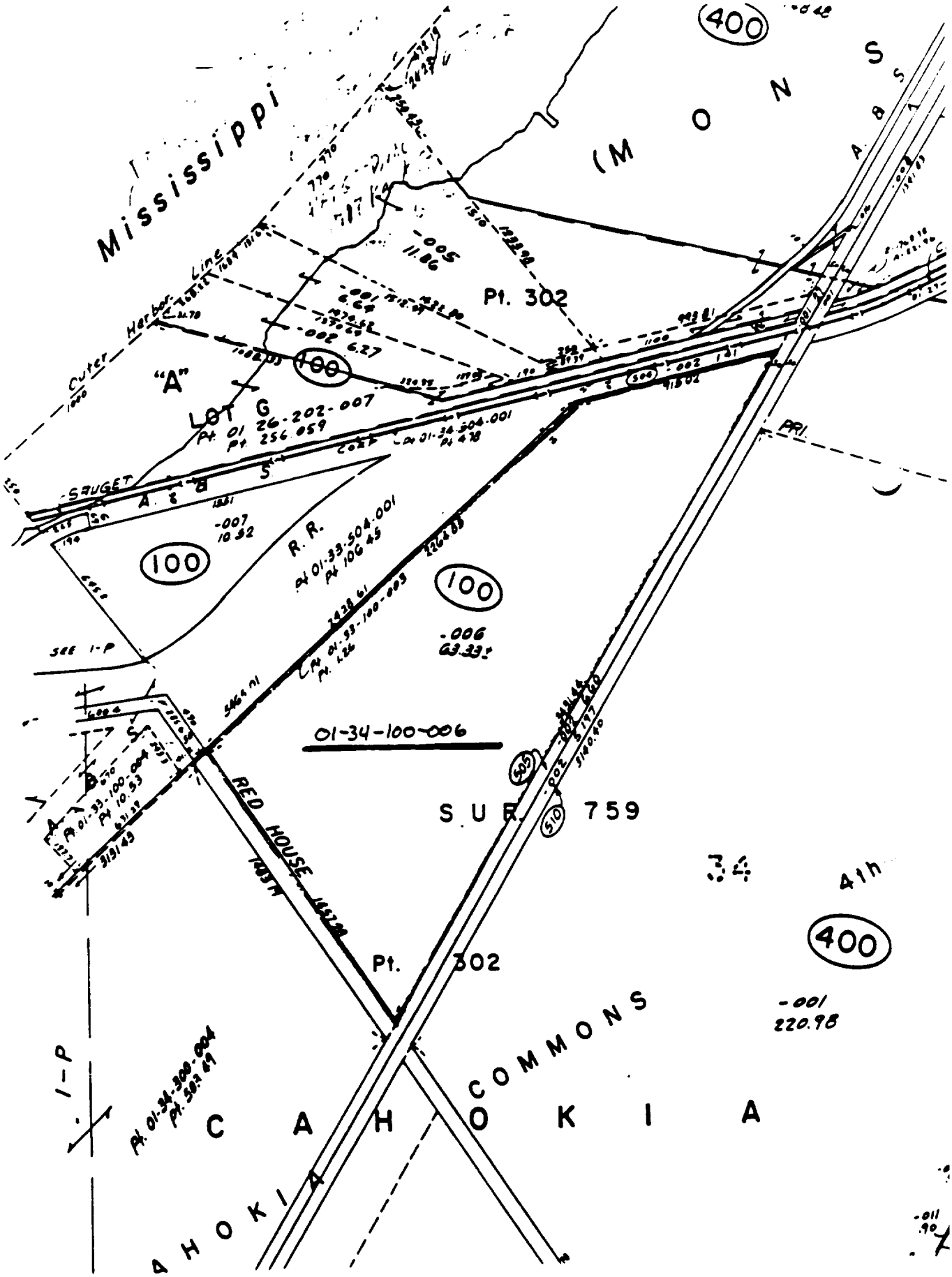
LINE


Mississippi
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"A"
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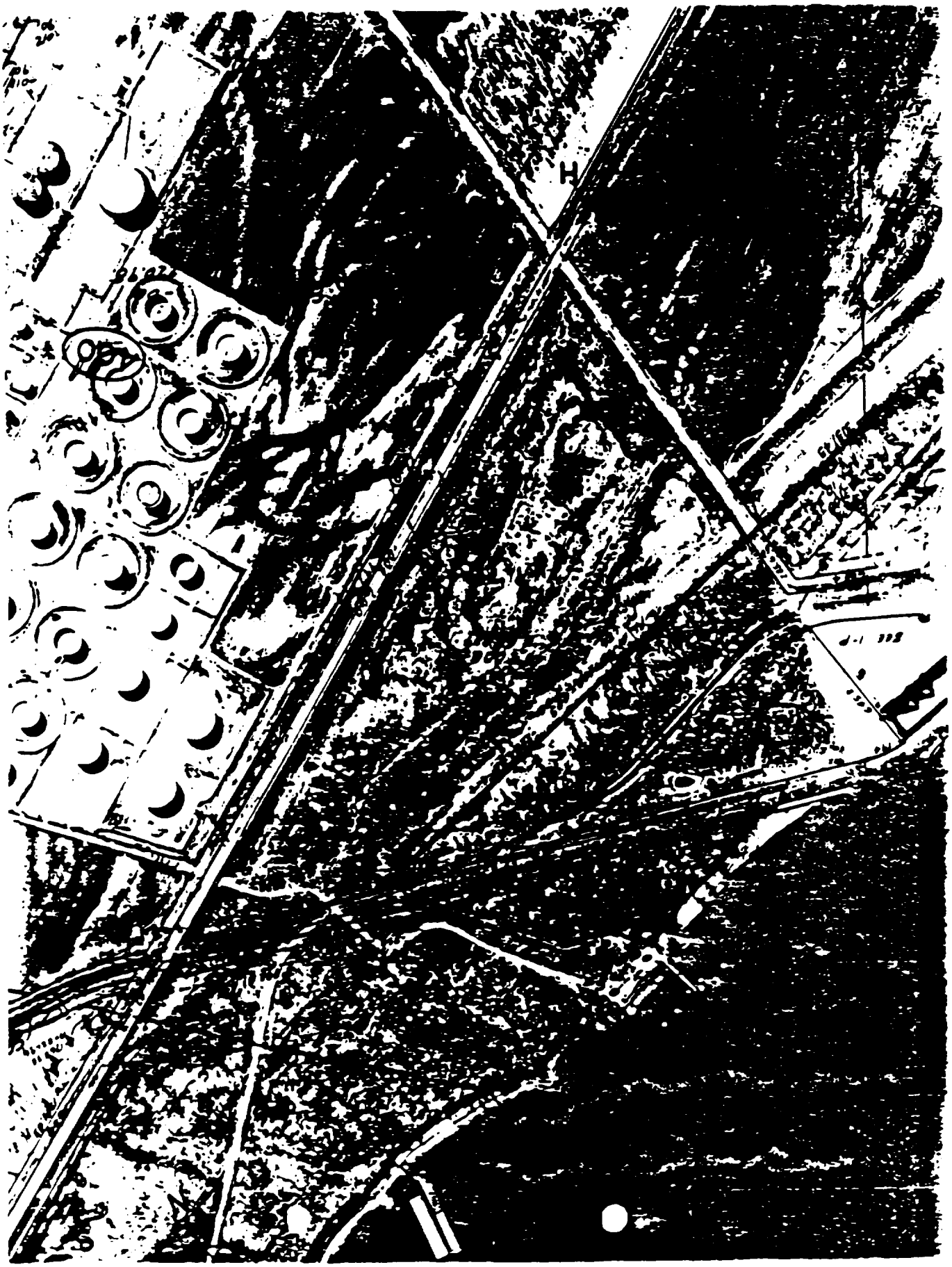
Pt. 01 26-202-007
Pt. 256.059
100
SAUGET
A. & S.
R. R.
Pt 01-33-504-001
Pt 106.45
100
-006
03.33
SEE I-P
01-34-100-006
RED HOUSE
SUB 759
Pt. 302
400
-001
220.98
COMMONS
C A H O K I A
A H O K I A
I-P
Pt. 01-34-300-004
Pt. 50.69



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mtg 27 nov

31 0.50

## Site O - Sauget Treatment Plant Lagoons & Pits

**Landowners**

- Village of Sauget
- Clayton Chemical Company (Past owner of the Site)

**Operators**

- Sauget Sanitary Development & Research Association
- Goldfields American Corporation (Successor firm To American Zinc Company who operated the Amax site.)
- Blue Tee Corporation (Successor firm To American Zinc Company who operated the Amax site.)

**Users/Disposers**

- Clayton Chemical Company
- Amax Zinc Company
- Cerro Copper
- Midwest Rubber Reclaiming
- Mobil Oil Corporation
- Monsanto
- Wiese Planning And Engineering
- Russell Bliss (Stored contaminated oil on-site in a tank leased from Clayton Chemical)
- Sterling Steel Foundry, Inc.
- Rodgers Cartage

## Sale Q - Sauget Landfill

**Landowners**

- Cahokia Trust (Donald C. Elsaesser, Robert H. McRoberts & Russell P. Richardson -- Trustees)
- St. Louis Union Trust
- Fred H. Leyhe
- Monsanto
- Notre Dame Fleeting & Towing Service, Inc.
- Phillips Pipeline Company
- Patgood Inc.
- River Port Fleeting, Inc.
- River port Terminal and Fleeting Company

**Operators**

- Sauget & Company
- Paul Sauget
- Eagle Marine Industries, Inc. (Terminal Operators)
- Peavy Inc. (Subsidiary of Con Agra - successor to leaseholder at grain terminal)
- Pillsbury, Inc. (Terminal Operator)
- Union Electric (Operated Flyash Ponds on Site)

**Users/Disposers**

- Village of Sauget
- City of St. Louis
- Local Industries

Village of Sauget

Paul Sauget
Mayor

2897 Falling Springs Road
Sauget, Illinois 62206

(618) 337-5267

October 6, 1989

RECEIVED
OCT 10 1989
IEPA DLPC

Illionis Environmental Protection Agency
Attn: Mr. William C. Child, Manager
Division of Land Pollution Control
P.O. Box 19276
Springfield, Illinois 62794-9276

Re: Village of Sauget
(Sauget Sites - Area II)
(1974 Sewerage Fund)

Your Ref: L1630200005 - St. Clair County
Sauget Sites - Area II

Dear Sirs:

This letter is in response to your letter of August 7, 1989 which, on its face, is limited to Area II.

Before we state our position, we must clarify the description of Area II. On the rough sketch attached to your letter referred to above, Area II seems to encompass an area on the east side of the Terminal Railroad Association right-of-way. We believe this to have been an error. This response assumes elimination thereof from Area II.

Secondly, we believe that Area II ought to be divided into two (2) separate parts by the Mississippi River Levee. At any rate, this response is limited to the part of Area II which is east of the levee.

Except for the dedicated rights-of-way of Pitzman and Riverview Avenues, part of the former having been vacated and title having passed thereby to Monsanto Company, the Village of Sauget to my knowledge has never owned or used, directly or indirectly, any part of Area II lying westerly of the Levee. Hence as stated above, this response is limited to the part of Area II lying easterly of the Levee.

Even then, the part of Area II lying easterly of the Levee is further limited, for the purposes of this response, by excluding the parts owned by Clayton Chemical and Trade Waste Incineration.

As to so much of Area II as is bounded on the north by the Union Electric substation, on the east by the TRRA right-of-way, on the south by the American Bottoms plant and on the west by the Levee, but excluding Clayton and Trade Waste, the Village of Sauget hereby agrees to unofficially "chair" the PRPs.

That part of Area II described in the preceeding paragraph is the site of the Village's Physical/Chemical Wastewater Treatment Plant constructed in the mid 1970s and also the site of the former sludge lagoons built in the mid-1960s and closed in 1980.

The contract operator of that "P/Chem Plant" may have some records of the sludge disposed of in such lagoons between 1977-1980. We are having it search for such records and will advise you in the immediate future so you can inspect and copy the same. Those records, if they exist, will disclose billings to dischargers to that Plant and perhaps the analysis of the discharges on which those billings were based.

In addition, prior to construction of the P/Chem Plant, Monsanto Biodize (later known as Monsanto Envirochem) made certain studies of discharges to the Village's sewerage system. We are attempting to locate these for they may have a bearing on the contents of the closed sludge lagoons.

The original Village treatment plant, constructed in the mid 1960s on the same site as the P/Chem Plant, was designed by Metcalf & Eddy. That happened before I became the Village Attorney and I know not what their reports contained. Nor have I ever seen them. We are, however, searching. (By the way, your Water Division may have some of that information. I know your Collinsville office has some of the 1960s plans for the sludge lagoons.)

Other than such records, we are not presently aware of any other information requested by you, but are making inquiries. Responses by other PRPs might be helpful.

Nothing herein shall be deemed to be an admission that the Village is a responsible party or that it "polluted" any part or parts of Area II howsoever described.

Very truly yours,

HAROLD G. BAKER, JR.
Village Attorney

618 397-6444

cc: Amax Zinc Company, Inc.
Cerro Copper Products Co.
Clayton Chemical Company
Eagle Marine Industries, Inc.
Midwest Rubber Reclaiming co.
Monsanto Company
Monsanto Company, Sauget (Attn: McCombs)
Riverport Terminal and Fleeting Company
Sterling Steel Foundry, Inc.
Mr. Paul Sauget
Big River Zinc
Mr. George R. Schillinger
Mr. Carl Marciante
Mr. Richard J. Kissel

HGBjr/gmt

LAW OFFICES
FRANK L. PELLEGRINI
A PROFESSIONAL CORPORATION
FRANK L. PELLEGRINI
SUITE 400
CHOUTEAU CENTER
133 SOUTH ELEVENTH STREET
ST. LOUIS, MISSOURI 63102
TELEPHONE (314) 241 7445
FAX (314) 241 7449

August 21, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

William C. Child, Manager
Division of Land Pollution Control
Illinois Environmental Protection Agency
P. O. Box 19276
Springfield, Illinois 62794-9276

RE: L1630200005 ST. CLAIR COUNTY
SAUGET SITES - AREA II
YOUR LETTER OF AUGUST 7, 1989 ADDRESSED TO
FRED H. LEYHE, PRESIDENT, EAGLE MARINE INDUSTRIES, INC.
AND RICHARD BURKE AND TIM THOMAS, RIVERPORT TERMINAL &
FLEETING COMPANY

Dear Mr. Child:

We wish to advise that this office will be representing Eagle Marine Industries, Inc. and Riverport Terminal and Fleeting Company with reference to the PRP Notice set out in your letter of August 7th to both parties. We would appreciate it if you would mark your records accordingly so that all future correspondence comes directly to the undersigned.

The purpose of this letter is to respond to a portion of your letter in that both Eagle Marine Industries, Inc. and Riverport Terminal and Fleeting Company are desirous of entering into "good faith" negotiations with the other stated PRP's, the IEPA and the Illinois Attorney General's Office. It is our understanding that within 45 days the State will contact us with reference to a schedule of [illegible] negotiations.

With reference to the other request which you state in your letter, that is for a series of documentation, we wish to advise that our clients are in the process of putting all the information together which you have requested, and we will be forwarding that to you within the 30 day time frame from the receipt of your notification letter.

RECEIVED
AUG [illegible] 1989
IEPA/DLPC

August 21, 1989



If you have any questions in the mean time or desire any further information, please do not hesitate to contact us.

Very truly yours,

Frank L. Pellegrini

FLP/db

cc: Richard D. Burke
Executive Vice President
Eagle Marine Industries, Inc.
200 North Broadway, Suite 1725
St. Louis, Missouri 63102

Milton Greenfield, Jr., Attorney and Counselor at Law
7751 Carondelet, Suite 500
St. Louis, Missouri 63105

Joe Madonia, Illinois Attorney General's Office
Nancy Mackiewicz, Illinois Attorney General's Office

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/782-6762

L1630200006 -- St. Clair County
Sauget Sites - Area II

August 7, 1989

Earle H. Harbison, Jr., President
Monsanto Company
800 North Lindbergh Blvd.
St. Louis, Missouri 63167

Dear Sir or Madam:

The Illinois Environmental Protection Agency (IEPA) has documented the release or threatened release of hazardous substances, pollutants and contaminants at the above-referenced Area. A diagram indicating the property included in Area II is provided as Attachment 1 to this letter. IEPA is planning to spend public funds to investigate and control these releases and has completed HRS documentation for Area II sites. Recommendation will be made to USEPA Headquarters for nomination to the National Priorities List (NPL). The Area II score is above that required for NPL listing and such listing is, therefore, anticipated. Upon listing, action will be taken by USEPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. §9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499 (SARA), unless both USEPA and IEPA determine that appropriate action will be properly executed by a responsible party. Responsible parties under CERCLA include the current and former owners and operators, and persons who generated the hazardous substances or were involved in transport, treatment, or disposal of hazardous substances at the subject Area.

Based on data generated during the State's investigation of Area II, IEPA has information indicating that you are a potential responsible party (PRP). Before the State of Illinois undertakes necessary action at Area II, IEPA will give you the opportunity to work with other PRPs to voluntarily perform your share of the work required to abate any release or threatened release of hazardous substances, pollutants, and contaminants from this Area. You should be aware that under Section 107(a) of CERCLA, 42 U.S.C. §9607, and Section 22.2(f) of the Environmental Protection Act, Ill. Rev. Stat., Ch. 111 1/2, par. 1022.2(f), where the State uses public funds to conduct removal or remedial action, you may be liable for all costs associated with such action including investigation, planning, enforcement and cleanup costs.

IEPA is planning to conduct the following studies at Area II:

1. A Remedial Investigation (RI) to identify the local hydrogeological characteristics, and define the nature and extent of soil, air, groundwater, and surface water contamination; and

2. A Feasibility Study (FS) to evaluate possible remedial alternatives to remove or contain hazardous substances, pollutants, and contaminants.

In addition to the above studies, corrective measures will be necessary to protect public health, welfare or the environment. These corrective measures will include, but are not necessarily limited to:

1. Implementation of initial remedial measures, e.g., securing unfenced property to prevent contact with any potentially hazardous or toxic materials at Area II and/or removal of contaminated material from the surface;

2. Designing and implementing the IEPA-approved remedy for Area II; and

3. Providing any necessary ongoing monitoring and maintenance.

The State would like to encourage "good faith" negotiations among you, other PRPs, the IEPA and the Illinois Attorney General's Office, leading to the entry of consent decrees for conduct of the RI/FS studies and the corrective measures mentioned above. To facilitate such negotiations, Attachment 2 of this letter is a list of names and addresses of other PRPs who are also receiving this letter. As PRPs, it would be advisable to organize yourselves into a single representative body to begin negotiation with IEPA and the Attorney General's Office for a privately funded RI/FS. The obvious benefit is that PRPs are able to excercise a greater degree of control over remedial design and implementation.

If you wish to be a part of these negotiations, you should notify the undersigned in writing within fourteen (14) calendar days within receipt of this letter. If you do not provide such written notification to the undersigned indicating your willingness to participate with other PRPs, IEPA will assume that you decline participation. Within forty-five (45) days, the State will contact those PRPs who have indicated a willingness to participate to schedule negotiations.

In addition, IEPA is seeking to obtain certain other information from you pursuant to authority granted under Section 104 of CERCLA, 42 U.S.C. §9604, Section 3007 of the Resource Conservation and Recovery Act (RCRA) as amended, 42 U.S.C. §6927, and Section 4 of the Environmental Protection Act, Ill. Rev. Stat., Ch. 111 1/2, par. 1004. This information is needed to enforce CERCLA, RCRA and the Environmental Protection Act and to assist in determining the need for response to a release of hazardous substance(s) under CERCLA and the Environmental Protection Act. Pursuant to these statutory provisions, you are hereby requested to submit the information describe below.

1. Copies of all shipping documents or other business documents relating to the transportation, storage and/or disposal of waste materials or substances at the above-referenced Area.

2. A detailed description of the generic, common and/or trade names and the chemical composition and character (i.e. liquid, solid, sludge) of the material offered by you for transportation to, storage and/or disposal at the above referenced Area.

3. For each waste material or substance identified above please give the total volume (gallons for liquids and sludges and cubic yards for solids) which you transported to, stored or disposed of at the above-referenced Area, and list when transportation storage or disposal occurred. Also, describe as accurately as possible the precise location where said activities took place.

4. A description of arrangements that were made for transportation of your waste materials or substances to the above-referenced Area, including method(s) of transportation used (i.e. tankers, dump trucks, drums).

5. The names of the transporter(s) of your waste materials or substances, including the former and current address of the transporter(s).

6. Copies of all records, including analytical results and material safety data sheets, which indicate the chemical composition and/or chemical character of the waste material(s) transported to, stored or disposed of at the above-referenced Area.

7. A list and description of any and all liability insurance that is and was carried by you, including but not limited to any self-insurance provisions, which relate to waste materials or substances and the above-referenced Area. Include copies of all such insurance policies.

8. Evidence of transactions and/or agreements made between yourself and owners of property within the above-referenced Area during the period of disposal.

The information sought pertains to any and all information in your possession, custody, or control relating to the operation of the above-referenced Area and to the transportation, storage, and/or disposal of hazardous substances or the generation of hazardous substances which were ultimately disposed of or offered for disposal at the Area. The relevant time period for this request is from 1930 through the present.

For purposes of this information request, "shipping documents" shall mean all contracts, agreements, purchase orders, requisitions, pick-up or delivery tickets, customs forms, freight bills, shipping memoranda, order forms, weight tickets, work orders, manifests, shipping orders, packing slips, bills of lading, invoices, bills and any other similar documents that evidence discrete transactions involving shipment, or the arrangement for shipment, of materials to, through, or from, the above-referenced Area. "Waste materials" shall mean any material which is reclaimed or intended to be discarded, including, but

not limited to, hazardous substances, solid wastes and hazardous wastes, and other material which may or may not contain pollutants or contaminants, and shall include reclaimed and off-specification materials of any kind.

The information sought herein must be sent to IEPA within thirty (30) calendar days of your receipt of this letter. Any person who generates, stores, treats, transports, disposes, arranges for the disposal of, or otherwise handles hazardous wastes and hazardous substances, as those terms are defined in Section 1004(5) of RCRA, 42 U.S.C. §6903(5), and Section 101(14) of CERCLA, 42 U.S.C. §9607(14), and fails to furnish IEPA with requested information related to such activities is subject to sanctions. Under Section 3008 of RCRA, 42 U.S.C. §6982, failure to comply with this request may result in an order requiring compliance or in a civil action for appropriate relief. These provisions also provide for civil penalties. Failure to comply with this request under Section 104 CERCLA, 42 U.S.C. §9604, may result in a civil enforcement action being brought against you.

The information requested herein must be provided notwithstanding its possible characterization as confidential information or trade secrets. You may request, however, that any such information be afforded confidential protection. A request for confidential protection must be made when the information is provided since any information not so identified will not be accorded this protection by the IEPA. Information claimed as confidential will be handled in accordance with the provisions of 35 Ill. Adm. Code, Part 161.

The written statements submitted pursuant to this request must be notarized and submitted under an authorized signature certifying that all information contained therein is true and accurate to the best of the signatory's knowledge and belief. Moreover, any documents submitted to IEPA pursuant to this information request should be certified as true and authentic to the best of the signatory's knowledge and belief. Should the signatory find, at any time after the submittal of the requested information, that any portion of the submitted information is false, the signatory should so notify IEPA. If any answer certified as true should be found to be untrue, the signatory can and may be prosecuted.

Your reply to the request for information under Section 104 of CERCLA and Section 3007 of RCRA should be considered separate and distinct from that relating to participation in response activities at Area I. Your reply to IEPA's request for information should be sent to:

William C. Child, Manager
Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794-9276

If you need further information or wish to indicate to IEPA your willingness to participate in response activities, please contact Paul Takacs, IEPA Remedial Project Manager at the above number, or Joseph Madonia, Assistant Attorney General, at (217) 782-9030.

Thank you for giving this matter your immediate attention.

Respectfully,

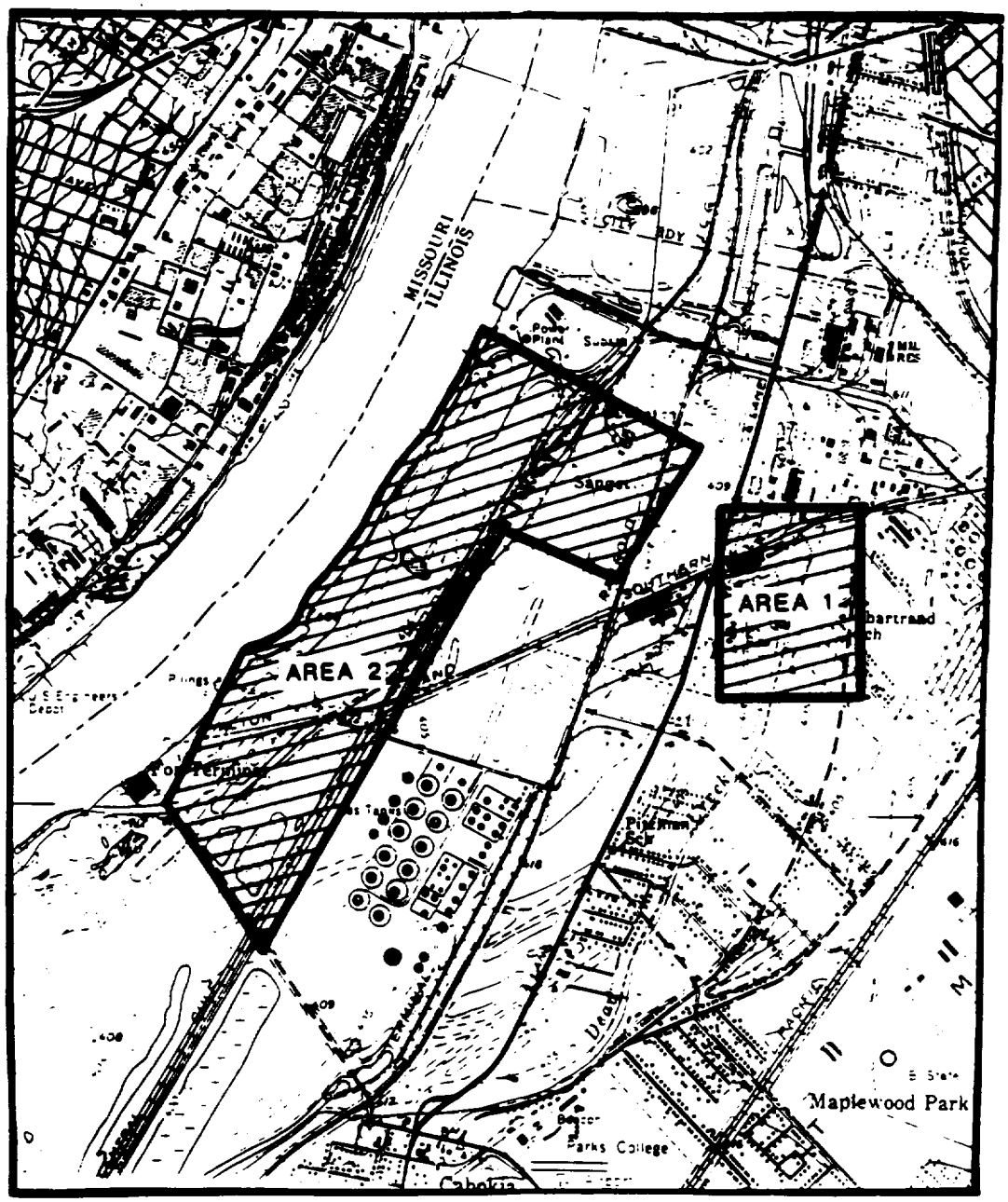
William C. Child, Manager
Division of Land Pollution Control

WCC:PT:jab/2417,2590R/1-5

cc: Bharat Mathur - IEPA
Jim Frank - IEPA
Terry Ayers - IEPA
Paul Takacs - IEPA
Bruce Carlson - IEPA
Joe Madonia - IAGO
Nancy Macklewicz - IAGO

Attachment 1

Reference Area Map




SOURCE: USGS Cahokia Quad. 1974.

SCALE

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ATTACHMENT 2
PRP List - Area II

Amax Zinc Company, Inc.
Amax Center
Greenwich, Connecticut 06836

Cerro Copper Products Co.
Queeny Avenue
Sauget, IL 62706

Clayton Chemical Company
#1 Mobile Ave.
Sauget, IL 62201

Eagle Marine Industries, Inc.
2701 North Geyer Rd.
St. Louis, MO 63131

Midwest Rubber Reclaiming Co.
3101 Mississippi Avenue
Sauget, IL 62206

Monsanto Company
800 North Lindbergh Blvd.
St. Louis, MO 63167

Riverport.Terminal and Fleeting Company
Suite 1725
200 North Broadway
St. Louis, MO 63102-2716

Sterling Steel Foundry, Inc.
7441 Navarre Circle
St. Louis, MO 63123

Village of Sauget
2350 Monsanto Avenue
Sauget, IL 62206

Paul Sauget

Sauget, IL 62201

SITE Q

Case: ENVIRONMENTAL PROTECTION AGENCY v. PAUL SAUGET, individually, and SAUGET AND COMPANY, a Delaware Corporation.

File #: 3602

By: Don Means

I. DESCRIPTION OF FACILITY

The facility which is the subject of this enforcement action is a refuse disposal site located near the Mississippi River in St. Clair County, Illinois (pp. 1, 11). The site is located in Centreville Township (T2N, R10W of the 3rd principal meridian) and lies partly within the limits of the Village of Sauget (p. 1). The total area of the site is approximately thirty-five acres (p. 24). Immediately to the west of the site is the Mississippi River (p. 1). A Union Electric power plant is located to the north of the site (reference: information provided by Pat McCarthy). Also to the north of the site is a dumping site for toxic chemicals operated by the Monsanto Company (reference: information provided by Pat McCarthy). The tracks of the Alton and Southern Railroad intersect the site from northeast to southwest (p. 1). To the east of the site is the levee and Gulf Mobile and Ohio railroad tracks (p. 1). This site had begun operation by at least 1967 (p. 3). The site accepted general refuse (p. 8). Cinders were used as cover (pp. 230, 272). The site was totally inundated by flood waters from the Mississippi in the spring of 1973 (pp. 134-139).

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That portion of the site south of the Alton and Southern tracks was not operated after the flood (p. 260). The northern portion was permanently closed some time after August 21, 1974 (p. 284). The site currently is not in operation, nor has it received adequate final cover (p. 302). In September, 1976, a fire occurred at the site, and refuse smouldered underground for at least two weeks (pp. 301-314).

During most of the time of the operation of this site, the land was owned by Cahokia Trust Properties of Cahokia, Illinois (p. 55). On April 2, 1973, the property was sold to Notre Dame Fleeting and Towing Service, Inc., which later was merged into Eagle Marine Industries (pp. 43, 55). Eagle Marine was probably instrumental in the cessation of the unpermitted operation of this site (pp. 112, 113, 285).

The operation of the site was conducted by Sauget and Company (Sauget). Sauget is a Delaware corporation which until November 15, 1973 was authorized to do business in the State of Illinois (pp. 57 and 58). On November 15, 1973, the Secretary of State of the State of Illinois revoked the authority of Sauget to transact business in Illinois for failure to file its annual report and pay its annual franchise tax (pp. 57 and 58). Since November 15, 1973, Sauget has been doing business in Illinois without a Certificate of Authority. Paul Sauget is an officer of Sauget and Company and a principal owner (reference: information provided by Pat McCarthy). Because of his personal involvement in the operation of this facility, he should be named as an individual respondent.

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## II. DESCRIPTION OF POLLUTION SOURCE

The primary cause of pollution at this facility is the lack of adequate final cover. All refuse has not received at least two feet of cover as required by Rule 305(c) of Chapter 7. Additionally, the cover which has been applied is not a suitable material. Cinders have been used as cover instead of well-compacted clay or earth. As a consequence, three sorts of pollution occur:

1. Surface water infiltrates the refuse, causing the generation of leachate which migrates into the groundwater and hence into the Mississippi River.

2. When the Mississippi River is up, as in the spring of 1973, refuse is carried into the River.

3. Surface fires, such as the one which occurred in September of 1976, ignite underground refuse, causing a smouldering, smoky fire which is very difficult to extinguish.

## III. PREVIOUS AGENCY INVOLVEMENT

The site was registered with the Department of Public Health on March 6, 1967 (pp. 3-5). An application for a permit was submitted to the Agency on February 7, 1972 (pp. 6-11). The application was denied on March 9, 1972 (p. 12). Another application was made on July 3, 1972 (pp. 13-28). This application was denied on August 7, 1972 (pp. 29-33). A request to reactivate the application and supplemental material were submitted to the Agency on August 1, 1974 (pp. 41-48). The application was again denied on September 16, 1974 (pp. 51-53). No further attempts to obtain a permit have been made.

Sauget was ordered by the Pollution Control Board on May 26, 1971 to pay a penalty of $1,000 for violations in operations on a portion of the facility (PCB 71-29). Sauget was also ordered at that time to cease using cinders for cover.

The Agency has sent many letters to Sauget since it began inspecting the facility which included notification of violations observed at the site. Since April 26, 1972 many letters have advised Sauget of its failure to provide adequate final cover in required areas (pp. 60-119).

Agency personnel have spoken to Paul Sauget on several instances (pp. 112, 134, 135, 141, 290, 301, 310). On January 21, 1975, he orally agreed to the need for final cover at the site and indicated his intent to provide it (p. 290). On September 8, 1976, and September 15, 1976, he acknowledged his responsibility for the fire then burning on the site and stated that he would take corrective action (pp. 301-310).

IV. VIOLATIONS

1. (a) Chapter 7 - Rule 305(c) provides that a compacted layer of not less than two feet of suitable material shall be placed over completed portions of a landfill, not later than sixty (60) days following the final placement of refuse.

(b) Proof - Disposal operations were discontinued at the site some time before January 21, 1975 (p. 289). Under Rule 305(c), completion of final cover was required over the entire site before March 22, 1975. However, Agency inspections reveal that final cover is not yet complete (p. 311). Final cover was required even earlier

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on specific areas of the site where dumping had ceased earlier (e.g., p. 140). In other words, the site has been in violation of Rule 305(c) for years. On March 8, 1974, an inspection of the site was conducted for the purpose of determining how much final cover was in place at the site (pp. 271-275). The inspection disclosed that cover varied in depth from 4" to 12" and consisted entirely of cinders (p. 272). Five photographs verify these findings (pp. 273-275). A similar inspection was conducted on January 26, 1976 (pp. 292-300). This inspection disclosed that the southern portion of the site had cover of dirt rather than cinders, but that it was only two to three inches in depth (p. 293). It also disclosed that conditions on the northern portion were similar or identical to those observed on March 8, 1974 (p. 293). Also, much refuse was observed with no cover (p. 293). Photographs were also taken during this inspection (pp. 296-300). The site was visited most recently on September 27, 1976, at which time it had not yet received adequate final cover (p. 314).

(c) Dates - From on or before March 22, 1975, to the filing of the complaint, final cover has been required over the entire site, and from even earlier on portions of the site (see proof, above).

2. (a) Chapter 3 - Rule 203(a) provides that all waters of the State shall be free from unnatural bottom deposits, oil, and floating debris, and Section 12(a) of the Environmental Protection Act provides in relevant part that no person shall cause or threaten or allow the discharge of any contaminants into the environment so as to violate regulations adopted by the Board.

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(b) Proof - In the spring of 1973, the Mississippi River rose and inundated the subject site (pp. 134-228). All refuse previously deposited which had not received cover then became either a bottom deposit or floating debris in the Mississippi River. Also during this time Sauget caused refuse to be dumped into the water on the site (pp. 140, 141, 144, 146, 204, 208, 209, 235). Receding flood waters carried refuse off the site and into the main channel of the Mississippi (pp. 199, 202, 213, 223A). Refuse from the site was observed to have been carried at least two miles downstream (pp. 147-148). Many photographs were taken during this period which show debris in the water (pp. 153-175, 178-187, 189-192, 195-198, 200-202, 205-207, 214-222, 224-226, 228, 232-234). The violation of Rule 203(a) of Chapter 3 is also a violation of Section 12(a) of the Act.

(c) Dates - The initial observation of the site during the period of the flood occurred on March 26, 1973 (pp. 134, 140). Flood conditions persisted through at least May 11, 1973 (pp. 227-228) and refuse was observed in water until at least October 17, 1973 (p. 243).

3. (a) Section 12(d) of the Act provides that no person shall deposit any contaminants upon the land in such place and manner so as to create a water pollution hazard.

(b) Proof - See proof of violation of Rule 203(a) of Chapter 3 above. Also, because of the inadequacy of final cover, there is a great hazard that leachate will be generated and will migrate into the

groundwater and into the Mississippi (see proof of violation of Rule 305(c) of Chapter 7, above).

(c) Dates - All refuse placed at this site from the effective date of the Act, July 1, 1970, until the cessation of dumping some time after August 21, 1974, was deposited in such place and manner so as to create a water pollution hazard.

4. (a) Section 9(c) of the Act provides that no person shall cause or allow the open burning of refuse.

(b) Proof - On September 8, 1976, a fire was observed on the subject site (pp. 301, 311). It had started at the north end of the site in some piles of openly dumped demolition refuse and had spread across the vegetation growing in the thin cover over the northern portion of the site (p. 311). The fire on the surface ignited the refuse underground, due in part to refuse protruding through the thin cover and in part to rat holes on this area of the site (p. 311). The site was again observed on September 9, 1976, and was still burning (pp. 302-303). Several photographs taken on September 9, 1976 show evidence of burning (pp. 304-309). The site was visited again on September 15, 1976, and on September 27, 1976, and found to be burning each time (pp. 310-314).

(c) Dates - Open burning of refuse occurred at the site from on or before September 8, 1976, until at least September 27, 1976 (pp. 301, 314).

V. AVAILABLE TECHNICAL SOLUTIONS

The best solution to the pollution problems presented by this

Two feet of well-compacted, relatively impermeable earthen material will protect the refuse from encroaching flood waters. Observation of the site during the 1973 flood indicated that refuse which had been covered was much less likely to be washed out and carried into the channel of the Mississippi. Also proper cover will inhibit the formation of leachate and the ignition of underground refuse by surface fires.

The only technological difficulty that might arise at this facility is extinguishing an underground fire should it be found that such a fire continues to burn there. If so, the smouldering refuse will have to be excavated and dragged through water to ensure that the fire is totally extinguished.

The cost of these solutions is likely to be quite high, particularly in light of the shortage of cover material on the site. The field staff estimates that approximately 100,000 cubic yards of earthen material will be needed to properly cover the site pursuant to Rule 305(c) of Chapter 7. It is estimated (conservatively) that $2.00 per cubic yard would be necessary to haul in earthen material, bringing the cost of covering to about $200,000. In addition, the Agency will probably request that monitoring wells be installed in certain areas.

VI. WITNESS LIST

1. Pat McCarthy
   Division of Land Pollution Control
   Field Operations Section
   Collinsville, Illinois

7936 (100907

2. Kenneth Mensing
   Division of Land Pollution Control
   Field Operations Section
   Collinsville, Illinois

3. Bill Child
   Division of Land Pollution Control
   Field Operations Section
   Aurora, Illinois

4. Andy Vollmer
   Division of Land Pollution Control
   Springfield, Illinois

5. Michael G. Neumann
   Division of Water Pollution Control

6. James Kammueller
   Division of Water Pollution Control

7. Donald Chrismore
   St. Louis District
   U.S. Army Corps of Engineers

8. Louis Benzek
   St. Louis District
   U.S. Army Corps of Engineers

(Reference may be made to pages 315-323 for qualifications of Agency witnesses).

VII. RELIEF

1. The pleadings should request the maximum penalty under Section 42 of the Act. In the event of a settlement, a penalty in the range of $5,000-$10,000 should be sought.

2. The Board should be requested to order that Sauget cease and desist from all violations within 60 days of the date of the Board's Order. A performance bond in the amount of $200,000 should be obtained to ensure compliance with the Order.

LM:kb/Sp1-9

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File

CBU

# STATE OF ILLINOIS
# DEPARTMENT OF PUBLIC HEALTH
## Division of Sanitary Engineering

## APPLICATION FOR REGISTRATION OF REFUSE DISPOSAL SITE OR FACILITY

RECEIVED
MAR 6 1967
DIVISION OF SANITARY ENGINEERING
ILLINOIS DEPT. OF PUBLIC HEALTH

7 3 6 0 0 0 0 6 1 1

1. NAME OF REGISTRANT: Saugat & Co.

2. ADDRESS: 2902 Monsanto Ave. (STREET) Saugat, (CITY) 62206 (ZIP CODE)

3. REGISTRATION REQUESTED FOR: (Check one or combination if applicable)

   ____ Dump  ____ Incinerator

   _X_ Sanitary Landfill  ____ Other

4. LEGAL DESCRIPTION OF SITE LOCATION: County St. Clair Range ____
   Township 2 north Range 10 west of 3rd Principal Meridian
   Township ____ Section ____ Quarter ____
   Lot #304, Sixth Subd., Cahokia Commons

5. IS REGISTRANT THE OWNER OF THE DISPOSAL SITE OR FACILITY? ___ ### ___ No

6. IF ANSWER TO (5) IS NO, GIVE NAME & ADDRESS OF OWNER: ____

   Cahokia Trust, Charles Richardson, Trustee
   Arcade Building, East St. Louis, Illinois

In conformance with Section 2 of the Refuse Disposal Law of the State of Illinois, application is made herewith for registration of the refuse disposal site or facility described above.

DATE March 3, 1967

Pat Saugat
Authorized Representative

March 10, 1967

ST. CLAIR COUNTY - Solid Waste Disposal
Sauget/Sauget & Co.

Mr. Paul Sauget
Sauget & Company
2902 Monsanto Avenue
Sauget, Illinois 62206

Dear Mr. Sauget:

This will acknowledge receipt of two applications for registration of refuse disposal sites in duplicate.

We are returning the applications to you herewith. The legal description of the site, Item #4, is identical and incomplete on each of the applications. Please complete the legal description as to Section and Quarter Section.

It is presumed that the site registration which lists the Monsanto Company as the owner is the site used for disposal of the industrial wastes in barrels, and that the other site registration is for the area used for a landfill. If this presumption is not correct, please include a brief explanation on the reverse side of the application forms.

Thank you.

Very truly yours,

C. W. Klassen
Chief Sanitary Engineer

CEC/sh
Encl.
cc/West Central Region

7,360000612

LEO SAUGET
PRESIDENT

PAUL SAUGET
SECRETARY AND MANAGER

Sauget and Company
2902 MONSANTO AVENUE
SAUGET, ILLINOIS 62206

March 16, 1976

RECEIVED
MAR 19 1976
DIVISION OF SANITARY ENGINEERING
ILL. DEPT. OF PUBLIC HEALTH

Mr. C. W. Klassen
Chief Sanitary Engineer
Department of Public Health
State of Illinois
Springfield, Illinois 62706

Re: Solid Waste Disposal
Sauget/Sauget & Co.

Dear Mr. Klassen:

Your request for a legal description of our disposal sites as to Section and Quarter Section, we do not have Section and Quarter Section descriptions in this area.

The legal description of the waste disposal sites are Lot No. 304 of the Sixth Subdivision of the Cahokia Commons.

Both of the disposal sites have the same description as they are adjoining sites.

The site owned by the Monsanto Company is fenced and only toxic residue is dumped in this enclosed area.

The site owned by the Cahokia Trust is the Industrial Waste and Refuse Dumping.

Very truly yours,

Paul Sauget

Paul Sauget