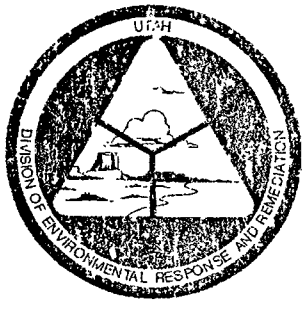
ANALYTICAL RESULTS REPORT

REDWOOD ROAD DUMP

Salt Lake County, Utah
UTD980961502



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Salt Lake City, Utah
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Utah Department of Environmental Quality
Division of Environmental Response and Remediation
Prepared by: Terry Hawkins

Final: January 14, 1992

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1.0 INTRODUCTION

This report has been prepared to provide the analytical results data collected from the Site Inspection (SI) sampling conducted on March 19 and 21, 1991, April 30, 1991, and May 2, 1991 at the Redwood Road Dump Site (RRDS), Salt Lake City, Utah. Previous reports, including the Preliminary Assessment, Sampling Plan, Field Activities Report, and EPA Site Inspection Form (Appendix I) provide detailed information on site description, background, project objectives, sampling rationale, and sampling procedures.

2.0 BACKGROUND

The RRDS is located between Indiana Avenue on the south and 500 South Street on the north in Salt Lake City, Utah, as indicated in Figure 1. The site extends from about 1900 West Street to 2100 West Street, and is bisected by Interstate 215 (I-215) and the City Drain. The Salt Lake City Parks and Recreation Department and the Salt Lake City Public Works Department use the east and west side of the site, respectively, as a landfill.

The property consists of approximately 70 acres, and was used as a public landfill from 1923 to 1962. Among the current activities at the RRDS are the disposal of leaves, grass clippings, tree trimmings, and storm-sewer sludge. There is no written record of past operations of the landfill.

The average depth of refuse and fill at the RRDS, calculated from 18 bore holes (Echoff, 1977) and 4 monitoring wells (UDERR, 1991), is 11.86 feet. The 70 acre site is calculated to contain approximately 1,340,000 cubic yards of refuse and fill. The refuse is municipal and commercial dry waste.

In preparation for building I-215, David W. Eckhoff prepared an engineering report for that portion of I-215 that runs through the RRDS for the Utah Department of Transportation (Eckhoff, 1977). During that investigation, 43 soil-gas sample locations were established and 21 borings made in the site. Seven of the 43 soil-gas sample locations consistently showed methane concentrations above the lower explosive limit (LEL). Two of the sampling locations showed methane concentrations above 10 percent by volume in the air. In 12 of the 21 borings, petroleum products were found at or near the water table.

In 1987, the Utah Bureau of Solid and Hazardous and Waste (UBSHW) personnel completed a Preliminary Assessment on the site. The UBSHW concluded that the landfill may contain hazardous wastes and that a site investigation should be undertaken based on the potential for contamination to enter the groundwater (UBSHW, 1987).

3.0 SITE CONDITIONS

3.1 Geology

The RRDS is located in the Jordan River Valley which lies between the Wasatch Mountains to the east and the Oquirrh Mountains to the west. The general stratigraphy of the area is characterized by several hundred feet of unconsolidated to poorly consolidated alluvial and lacustrine deposits. These deposits consist of interbedded highly lenticular sands, silts, and clays. They are estimated to be more than 500 feet thick. The fine-grained sediments were deposited by the ancient Lake Bonneville. The coarser-grained sediments were deposited along the margins of the lake as its level fluctuated and eventually receded to its present level as the Great Salt Lake (Seiler and Waddell, 1984).

Well logs from neighboring Portland Cement Site indicate that the site probably lies on beds of sand, silty-clays, and sandy-silts. The wells at the Portland site located immediately south of the RRDS extend up to 50 feet below the original land surface (Dames and Moore, 1989). Well logs installed by the Field Investigation Team (FIT) indicate layers of silty-sand, fine sand, silty-clay, sand, clay, silty soil, refuse material, and silt (Utah Division of Environmental Response and Remediation, 1991).

3.2 Groundwater

The regional groundwater system consists of 1 aquifer: a shallow, unconfined portion and a deeper, confined portion. The upper 50 to 70 feet of interbedded sediments form the unconfined portion of the aquifer. Below this lies a layer of clay, sand, and silt which form the confined or artesian portion of the aquifer. The unconfined portion of the aquifer is recharged by downward infiltration of surface water and an upward flow of water from the confined portion of the aquifer. The deeper portion of the aquifer is recharged by infiltration of water on the flanks of the surrounding mountains. The general groundwater flow for the region is west-northwest. The unconfined portion of the aquifer may discharge into surface coarses such as the Jordan River (Hely, et al., 1971).

Groundwater levels and physical parameters were measured at various times and are located in Table 1. Groundwater flow directions from these elevations indicate that flow is generally towards the northwest, except where groundwater may be influenced by the sewer line or the City Drain. Figure 2 is a groundwater contour map developed from the groundwater elevations measured on May 2, 1991.

3.3 Surface Water

The Jordan River Valley is located in the Great Basin drainage system. This drainage system is a closed system with no outlets. The Jordan River and its tributaries form the main drainage for the valley. The Jordan River is a class 3C stream and discharges into the Great Salt Lake (UBSHW, 1989).

The Jordan River, the Surplus Canal, and the City Drain are located in close proximity to the site. The Jordan River is approximately 7,000 feet east of the site and discharges into the Great Salt Lake. This discharge point is approximately 11 miles from the site. The Surplus Canal is located approximately 1,000 feet west of the site and discharges into the Great Salt Lake. This discharge point is approximately 5 miles north of the site. The discharge points for both the Jordan River and the Surplus Canal are characterized by freshwater marshes. Both discharge points are within the confines of the Farmington Bay Waterfowl Management Area.

The City Drain is located on the west side of I-215 and traverses the site. The City Drain joins the Sewer Canal approximately 6 miles from the site, which in turn discharges into the Great Salt Lake. This discharge point is approximately 13 miles north of the site.

4.0 SAMPLE COLLECTION

Sampling activities for the SI were conducted on March 19 & 21, 1991, April 30, 1991, and May 2, 1991 (see Figure 3, for sampling locations). Six groundwater monitoring wells were sampled including 2 background (RD-MW-06 and RD-MW-07) and 4 downgradient (RD-MW-01, RD-MW-02/05, RD-MW-03, and RD-MW-04) wells. Before sampling, the depth to groundwater was measured and at least 3 well casing volumes of water was purged from each of the 6 wells. Physical parameters of the groundwater, such as conductivity, pH, temperature, and groundwater elevation, were measured (see Table 1) as outlined in the Sampling Plan. The monitoring wells recharged rapidly which provided efficient sampling. Headspace in each well was monitored for organic vapors with an Hnu prior to purging the wells.

The groundwater samples collected for the analysis of organic compounds were poured directly from separate decontaminated teflon bailers into the appropriate sampling containers (2 VOA vials and 2 half-gallon amber bottles). Groundwater collected for the analysis of inorganic compounds was poured from the decontaminated teflon bailer into a decontaminated stainless-steel bucket. This groundwater was then pumped through a .45 micron filter with a peristaltic pump into 1-liter plastic bottles and preserved with 2 ml of 1:1 HNO_3.

Three surface water samples were collected at the RRDS. One sample (RD-SW-01) was collected from the north ditch, 15 feet south of 500 West Street and 6 feet south of the cement culvert. Two samples were collected from the City Drain (RD-SW-02, downgradient and RD-SW-03, upgradient). The downgradient sample was collected first, in order to prevent contaminants stirred up from the upgradient sampling location from influencing the downgradient sample. These samples were collected directly into the appropriate sample containers.

Ten soil samples were collected at the RRDS. Each of the soil samples was collected with a separate decontaminated stainless-steel spoon and put directly into the appropriate

sample containers.

Three sediment samples were collected in the same general area of the corresponding surface water sample (RD-SE-01, RD-SE-02, and RD-SE-03). These samples were taken with decontaminated stainless-steel spoons and put into the appropriate sample containers.

All samples were collected in level D protection. All samples were kept in an ice chest with ice for preservation at 4°C.

5.0 ANALYTICAL RESULTS

Analytical results for the 7 groundwater samples, 3 surface water samples, 3 sediment samples, and 10 soil samples are summarized in Tables 2 through 5. Sample locations corresponding to the data are located in Figure 3. All samples were analyzed for Target Compound List analytes including volatiles, base-neutral/acid extractables, pesticides and PCBs, and for Task 1 and 2 metals, with the exception of RD-SO-07 and RD-SO-08, which were analyzed for only Target Compound List analytes.

Samples RD-SO-06 and RD-SO-07 can be considered as source samples of "oily waste" taken near the water table from split spoon and drill cuttings from monitoring wells MW-2 and MW-4. Sample RD-SO-10 was taken from the south end of the bottle excavation in the north end of the west pile. This sample was taken directly above the refuse inside the excavation about 3 feet below ground surface. RD-SO-10, the downgradient groundwater samples, and to a lesser extent the downgradient surface water samples can be assumed to be observed releases.

5.1 Groundwater Samples

5.1.1 Organic Results

The organic data summarized in Table 2 indicates the presence of 3 BNA compounds in the groundwater samples. There were no pesticides or VOA compounds detected in the groundwater samples. However, several tentatively identified VOA and BNA compounds (TICs) have been identified:

Location	Contaminant	Amount in PPB
RD-GW-01	2,6 Dimethyl-6-nitro-2-Hept	6
	Unknowns	7-25
RD-GW-02	Unknowns	6-8
RD-GW-03	Unknowns	3-35
	Benzesolfonamide, N-Butyl	11

RD-GW-04	Unknown	7
RD-GW-05	Unknown	7
RD-GW-06	Unknowns	2-11
	Undecane, 4,7-Dimethyl	6
	Dodecane, 2,6,11-Trimethyl	5
	Heptadecane, 2,6-Dimethyl	78
	Undecane, 3,7-Dimethyl	4-7
	Octane, 3-Ethyl-2, 7-Dimethyl	1
RD-GW-07	Unknowns	2-9
	Decane,-6-Ethyl-2-Methyl	2

The 3 BNA compounds detected in the groundwater were phenanthrene, fluoranthene, and pyrene. Phenanthrene was detected in RD-GW-02 at 1 ppb. Fluoranthene and pyrene were detected in RD-GW-05, each at 3 ppb. There are no organic concentrations above the Maximum Contaminant Level (MCL) of drinking water standards in the groundwater samples.

5.1.2 Inorganic Results

Table 3 indicates that concentrations of aluminum, arsenic, barium, chromium, copper, iron, manganese, sodium and vanadium are 3 times that of the background well concentrations. Antimony, beryllium, cobalt, lead, and nickel were detected in downgradient wells, but not in the background wells.

Antimony was detected above the MCL of drinking water standards at 34.2 ppb from RD-MW-05. The MCL for antimony in drinking water is 10 ppb. Arsenic was detected above the MCL of drinking water standards at 248 ppb from RD-MW-01, 314 ppb from RD-MW-03, and 179 ppb from RD-MW-04. The MCL for arsenic in drinking water is 50 ppb. Selenium was detected above the MCL of drinking water standards at 14.8 ppb in RD-MW-01. The MCL for selenium in drinking water is 10 ppb.

Iron was detected above the recommended concentration limit for drinking water standards at 1260 ppb from RD-MW-02, 2570 ppb from RD-MW-03, 659 ppb from RD-MW-04, and 1210 ppb from RD-MW-05. The recommended concentration limit of iron for drinking water is 300 ppb. Manganese was detected above the recommended concentration limit for drinking water standards at 97.9 ppb from RD-MW-01, 538 ppb from RD-MW-2, 350 ppb from RD-MW-03, 775 ppb from RD-MW-04, 500 ppb from RD-MW-05, and 222 ppb from RD-MW-07. The recommended concentration limit of manganese in drinking water is 50 ppb.

5.2 Soil Samples

5.2.1 Organic Results

The organic data summarized in Table 4 indicates concentrations of 19 BNA compounds, 4 VOA compounds, 12 pesticide compounds, and 1 PCB compound in the soil samples. Several unknown VOA TICs have been identified in RD-SO-02, RD-SO-04, RD-SO-05, and RD-SO-10, ranging from 6 to 400 ppb. The VOA TIC, acetic acid, was detected in RD-SO-02 and RD-SO-10 at 14 and 33 ppb, respectively. There were many BNA TIC compounds detected in the soil samples ranging from 77 to 39,000 ppb. The majority of the VOA compounds were detected in RD-SO-07. The PCB compound, aroclor-1260, was detected in RD-SO-09 at 150 ppb.

5.2.2 Inorganic Results

Table 5 indicates that concentrations of barium, calcium, chromium, copper, iron, lead, mercury, nickel, sodium, and zinc were detected over 3 times that of the background sample, RD-SO-04. Antimony, cadmium, and selenium were not detected in the background sample, but were detected in other soil samples. The location of the highest concentration of inorganic soil sample contaminants are as follows:

Location	Contaminant	Amount of Contaminant in PPM
RD-SO-01	Antimony	28.80
	Cadmium	6.20
	Copper	375.00
	Nickel	72.70
	Zinc	2580.00
RD-SO-10	Barium	1760.00
	Chromium	125.00
	Iron	165000.00
	Lead	2610.00
	Mercury	0.77
	Selenium	0.86

5.3 Surface Water Samples

5.3.1 Organic Results

Table 2 indicates that concentrations of 1 VOA compound and 1 BNA compound were detected in the surface water samples. The VOA compound, tetrachloroethane, was detected in the upgradient surface water sample of the City Drain at 7 ppb. The BNA compound, bis (2-Ethylhexyl) Phthalate, was detected in the north ditch at 2 ppb. An

unknown VOA TIC was detected in RD-SW-03 at 6 ppb. Four BNA TIC compounds were detected in RD-SW-02, ranging from 3 to 7 ppb. There were no pesticide or PCB compounds detected in the surface water samples.

5.3.2 Inorganic Results

The concentrations detected in the upgradient and downgradient inorganic surface water samples are similar. Antimony was detected in the downgradient surface water sample of the City Drain, but was not detected in the upgradient sample of the City Drain. Lead was detected in the north ditch, RD-SW-01 at 23.6 ppb.

Antimony was detected above the MCL of drinking water standards at 25 ppb from RD-SW-02. The antimony MCL for drinking water is 10 ppb. Arsenic was detected above the MCL of drinking water standards at 53.4 ppb from RD-SW-02 and 59.2 ppb from RD-SW-03. The arsenic MCL for drinking water is 50 ppb.

Iron was detected above the recommended concentration limit of drinking water standards at 1460 ppb from RD-SW-01, 1060 ppb from RD-SW-02, and 710 ppb from RD-SW-03. The recommended concentration limit of iron for drinking water is 300 ppb. Manganese was detected above the recommended concentration limit of drinking water standards at 92.5 ppb from RD-SW-02 and 98.5 ppb from RD-SW-03. The recommended concentration limit of manganese for drinking water is 50 ppb.

5.4 Sediment Samples

5.4.1 Organic Results

Table 4 indicates that there are concentrations of 11 BNA compounds, 4 pesticide compounds, and 1 VOA compound in the sediment samples. The majority of the organic contamination is in the north ditch.

5.4.2 Inorganic Results

The downgradient sediment sample of the City Drain is generally lower in inorganic concentrations than the upgradient sediment sample (see Table 5). Antimony, beryllium, cobalt, copper, iron, lead, magnesium, potassium, vanadium, and zinc detected in the upgradient surface water sample of the City Drain are 3 times the concentration of the downgradient sample. The location of the highest inorganic levels are as follows:

Location	Contaminant	Amount in PPM
RD-SE-01	Barium	230.00
	Cadmium	1.10
	Lead	68.20

	Mercury	0.15
	Zinc	222.00
RD-SE-02	Calcium	107000.00
	Magnesium	36800.00
RD-SE-03	Aluminum	13800.00
	Antimony	45.80
	Arsenic	22.00
	Beryllium	1.00
	Chromium	18.40
	Cobalt	8.50
	Copper	55.80
	Iron	19000.00
	Manganese	345.00
	Nickel	17.50
	Potassium	5110.00
	Sodium	3770.00
	Vanadium	29.10

5.5 Quality Assurance

The organic data packages were examined thoroughly by the quality assurance officer for compliance with EPA functional guidelines for reviewing organic compounds. The quality assurance reports and data sheets are provided in Appendix II. These data packages were judged acceptable with the following qualifications:

5.5.1 Organic Data

The organic data is organized into 3 packages. The first package contains the 2 soil samples taken during drilling. The second package contains the soil and sediment samples. The third package contains the water samples.

The first organic data package had the following qualifications. Holding times for both samples were violated for benzene, toluene, chlorobenzene, ethlybenzene, styrene, and total xylene. The laboratory blank was contaminated with methylene chloride. The holding times for all BNA compounds were violated. Di-n-octylphtalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene have been qualified for a low internal standard.

The second organic data package had the following qualifications. The VOA compound, acetone, was qualified in all samples for a high initial calibration %RSD. The VOA compound, cis-1,3-dichloropropane, was qualified in all samples for continuing calibration

problem. The VOA compounds; chloromethane, methylene chloride, 2-butanone, and trans-1,3-dichloropropane; were qualified for continuing calibration problems in samples HN910RE, HN911, HN914RE, HN915, HN916, and HN917. The holding times for all BNA compounds in sample HN915 were violated. The BNA compounds, 3-nitroaniline and 4,6-dinitro-2-methylphenol, for all samples were qualified for a high initial calibration %RDS. The BNA compounds, hexachlorocyclopentadiene and hexachlorobenzene, for all samples were qualified for continuing calibration problems. The BNA compounds, 4-nitroaniline and di-n-octylphtalate, were qualified for continuing calibration problems in samples, HN908, HN909, HN910, HN913, HN914, HN915, HN916, and HN917. The BNA compound, pentachlorophenol, was qualified for continuing calibration problems in samples HN908, HN914, HN916, and HN917. The BNA compounds; 4-chloroaniline, N-nitrosodiphenylamine, and di-n-butylphtalate; were qualified for continuing calibration problems in samples HN907, HN911, and HN912.

The third organic data package had the following qualifications. The holding times for the VOA compounds benzene, toluene, chlorobenzene, ethylbenzene, styrene, and xylene of all samples were violated. The VOA compound, 1,2-dichloropropane, was qualified for continuing calibration problems in samples HN918 and HN921. All VOA compounds were qualified for surrogate recovery problems for sample HN918. The holding times for all BNA compounds were violated for samples HN918, HN919, and HN920. The BNA compounds 3-nitroaniline, 2,4-dinitrophenol, 4-nitrophenol, and 4,6-dinitro-2-methylphenol; were qualified for initial calibration problems in all samples. The BNA compounds, 4-nitroaniline and hexachlorobenzene, were qualified for continuing calibration problems in samples HN927 and HN928. The BNA compounds; hexachlorocyclopentadiene,3-nitroaniline,4-bromophenylphenylether,hexachlorobenzene, butylbenzylphtalate, bis(2-ethylhexyl) phthalate, and di-n-octylphtalte; were qualified for continuing calibration problems in samples HN918, HN919, HN920, HN922, and HN923. The BNA compounds; hexylchlorocyclopentadiene, 4-bromophenylether, hexachlorobenzene, pentachlorophenol, butylbenzylphtalate, bis(2-ethylhexyl)phthalate, and di-n-octylphtalate; were qualified for continuing calibration problems in samples HN924, HN925, and HN926.

5.5.2 Inorganic Data

The inorganic data is organized into two packages. The first package contains the soil and sediment samples. The second package contains the groundwater and surface water samples.

In the first data package, beryllium, cadmium and selenium were qualified as "U" in several samples because these elements were also detected in the blank with similar concentrations. Potassium was qualified as "J" in all samples because similar concentrations of potassium were found in the Interference Check Sample (ICP). All mercury results were qualified as "J" because reported values fell outside Field Duplicate control limits. The Matrix Spike Recoveries for selenium, antimony, mercury, and arsenic

were qualified as "J" or "UJ" depending upon sample concentrations. Selenium for samples MHN626 and MHN628 was qualified as "J" or "UJ" because Spike Recovery Results were outside the prescribed limits.

In the second data package, beryllium was found in the blank at concentrations similar to samples MHN635 and MHN640. Therefore, beryllium was qualified as "J" in these samples. The Matrix Spike Recoveries for selenium, mercury, and thallium were less than the required 75-125%. These elements were qualified as "J" or "UJ" in all samples. The Post Digestion Spikes were outside recovery limits for lead, selenium, and thallium. Lead was qualified as "J" or "UJ" in samples MHN633-MHN636 and MHN638-MHN642. Selenium was qualified as "J" or "UJ" in samples MHN632-MHN636 and MHN638-MHN641. Thallium was qualified as "R" in all samples except MHN635, MHN636, and MHN639. The percent difference between this sample and the serial dilution was above the limit for barium in all samples. Therefore, barium was qualified as "J".

6.0 EXPOSURE PATHWAYS

6.1 Groundwater

Nine of the metals were detected in downgradient wells that were more than 3 times the level detected in the background wells. These metals are aluminum, arsenic, barium, chromium, copper, iron, manganese, sodium and vanadium. Five metals were detected in the downgradient monitoring wells and not in the background wells. These metals are antimony, beryllium, cobalt, lead, and nickel. Antimony, arsenic, and selenium were detected in downgradient wells above their MCLs for drinking water standards. Iron and manganese were detected in downgradient wells above their recommended contamination limit for drinking water standards.

There are 20 municipal wells within a 4 mile radius of the site. The closest well is about 2.6 miles southeast of the site. There are many private wells within a 4 mile radius of the site. The closest private well used for domestic purposes is about 1500 feet southwest of the site. The private well used for domestic purposes is downgradient and approximately 1500 feet southwest of the site. Groundwater has the potential to be contaminated in this area. However municipal drinking water wells would not likely be impacted.

6.2 Direct Contact

The soil contains high levels of metals, 19 BNA compounds, 4 VOAs, 12 pesticide compounds and 1 PCB compound. The RRDS is located in an industrial area. There are approximately 5,845 people within 1 mile of the site. There are residents within a 1/4 mile of the site. Bottle collectors were seen on site during sampling. A potential exists for people to come in contact with the contaminated soil. Lead was detected in RD-SO-10 at 2610 ppm. The greatest threat potential would be exposure to these contaminants in the landfill. Since there is no fence around the property, there is a potential for people and

workers to come in contact with contaminated soil. Refuse, tires and other materials on the surface of landfill may also pose a physical risk to trespassers.

6.3 Surface Water

The Jordan River, the Surplus Canal, and the City Drain are located in close proximity to the site. The City Drain and a small unnamed ditch from the landfill are most likely to be impacted by contaminants on site.

Antimony was detected in the downgradient surface water sample of the City Drain, but was not detected in the upgradient sample of the City Drain. Lead was detected in the surface water sample of the north ditch, RD-SW-01 at 23.6 ppb. One BNA compound, bis (2-ethylhexyl) Phthalate (2 ppb), was detected in RD-SW-01. One VOA compound, tetrachloroethane (7 ppb), was detected in the upgradient surface water sample of the City Drain, RD-SW-03.

Ten BNA, 4 pesticide, and 1 VOA compound were detected in the sediment samples. The majority of these contaminants were detected in the north ditch. One pesticide, heptachlor (.22 ppb), was detected in the downgradient sample and not in the upgradient surface water sample of the City Drain. The downgradient sediment sample of the City Drain is generally lower in inorganic concentrations than the upgradient sediment sample. Antimony, beryllium, cobalt, copper, iron, lead, magnesium, potassium, vanadium, and zinc detected in the upgradient surface water sample of the City Drain are 3 times the concentration of the downgradient sample. The contaminant concentrations are low and there are few receptors. The impact to the surface water is probably small.

6.4 Air

There were no air samples taken at sampling time. There is a potential for exposure to pockets of methane gas. In a study by David W. Eckhoff for the Utah Department of Transportation soil-gas samples were taken in 1977. During that investigation, 43 soil-gas sample locations were established. Seven of the 43 soil-gas sample locations consistently showed methane concentrations above the lower explosive limit (LEL). Two of the sampling locations showed methane concentrations above 10 percent by volume in the air (Eckhoff, 1977).

7.0 CONCLUSIONS

The main objectives of the site investigation at the RRDS were to: 1. Determine if the groundwater is being contaminated by hazardous materials in the landfill, 2. Determine if surface water is being contaminated by hazardous materials in the landfill, 3. Determine if soil is being contaminated by hazardous materials in the landfill, 4. Assess the on-site exposure hazards.

It is uncertain how much blowing dust from the Portland CKD Superfund is contributing to the inorganic contamination at the RRDS. The Portland CKD Superfund Site is located south of the RRDS (see Figure 1).

1. Table 2 indicates that elevated concentrations of 3 BNA compounds are in the downgradient groundwater wells and are not detected in the upgradient wells. Table 3 indicates that 13 metals may have been released to the groundwater from the landfill.

2. Antimony and the pesticide heptachlor were detected in the downgradient surface water sample and not the upgradient surface water sample of the City Drain. The highest concentration of the majority of metals were detected in the upgradient City Drain sample location and the north ditch sample location. The majority of the contaminants detected in the surface water and sediment samples were from the north ditch, which emanates from the landfill.

3. The organic data summarized in Table 4 indicates concentrations of 19 BNA compounds, 4 VOA compounds, 12 pesticide compounds, and 1 PCB compound in the soil samples. Table 5 indicates a release of 13 metals to the soil.

4. There is a potential for on-site exposure to contaminants in the soil. Workers, bottle collectors, and transients were seen on site during the site investigation.

8.0 REFERENCES

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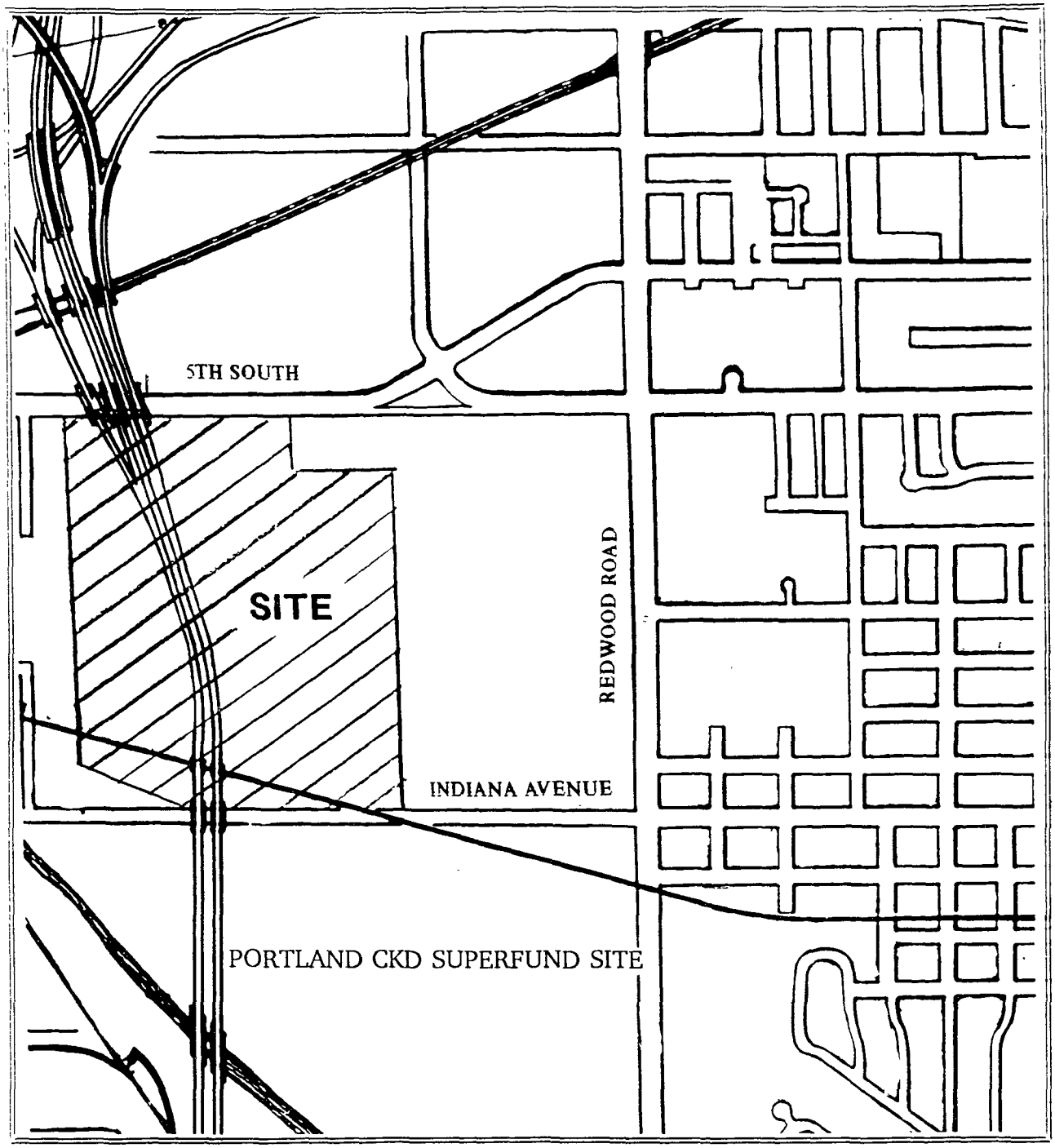
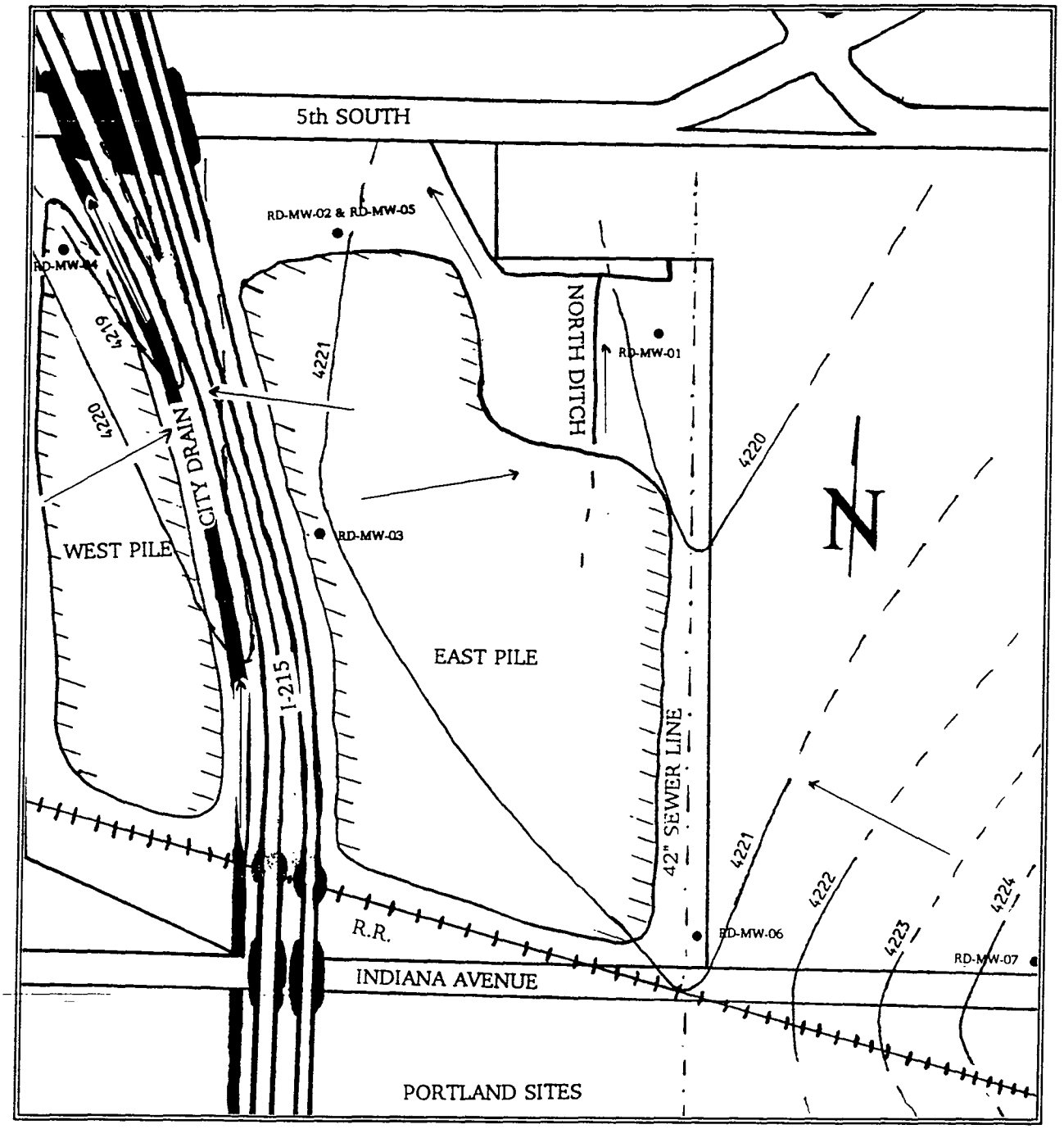


N

1,000'

MAP SOURCE: SALT LAKE COUNTY SURVEYOR

UTAH DEPT. OF HEALTH Bureau of Solid and Hazardous Waste		
Site Location Map REDWOOD ROAD DUMP Salt Lake City, Utah Figure 1		
by SJP	date 3/26/90	SCALE 1" = 1,000'



4222 Groundwater Contour (shallow)

Groundwater and Suface Water Flow Direction

• Monitor Well Location

42" Sewer Line

UTAH DEPARTMENT OF HEALTH

BUREAU OF ENVIRONMENTAL RESPONSE AND REMEDIATION

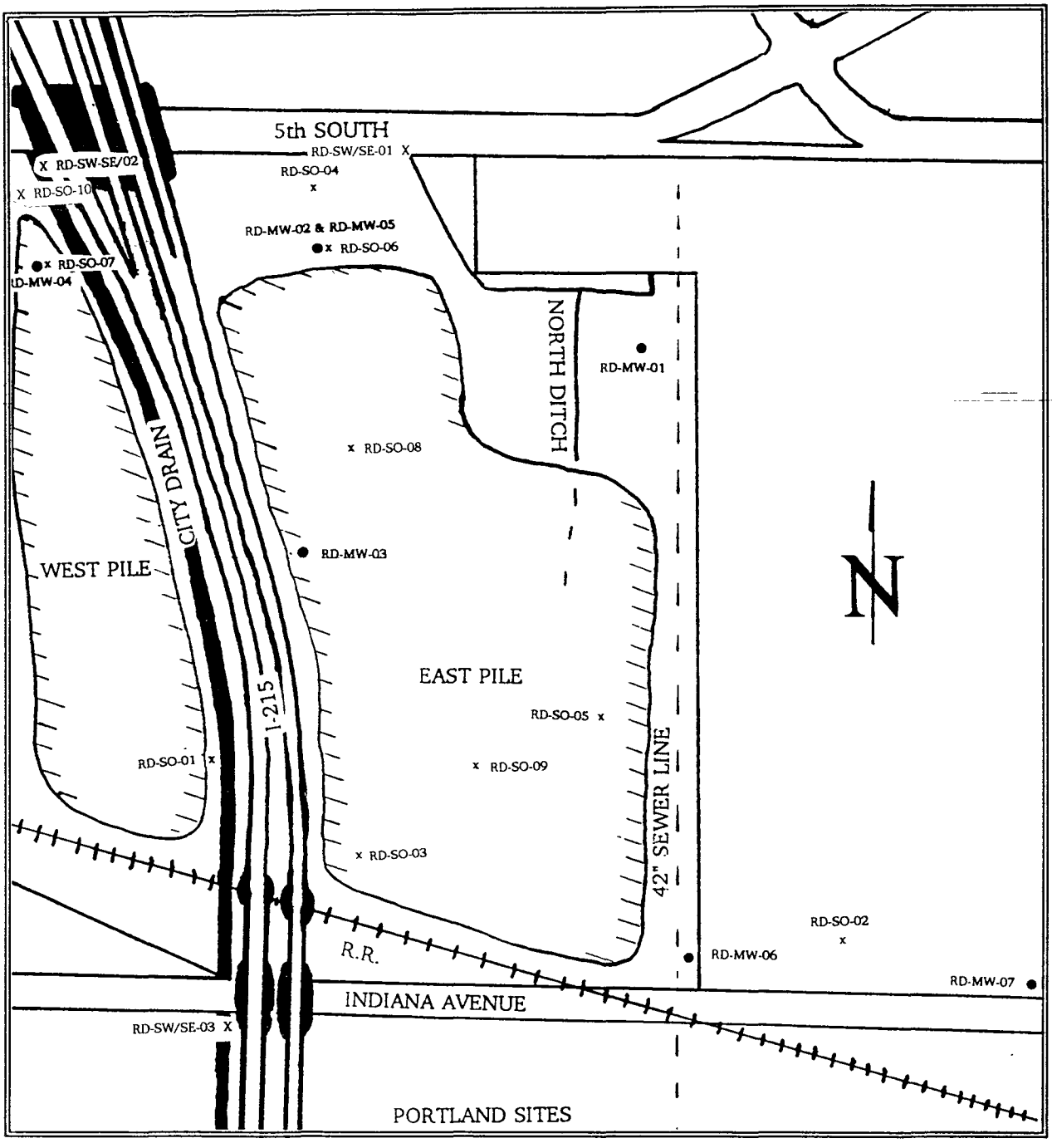
Groundwater Map

Redwood Road Dump Site

Figure 2

By	Date	Scale
TH	6/11/91	Not to Scale

(based upon monitor well data and Portland Cement 2 & 3 Sites potentiometric maps)



- Monitor Well Location
- x Sample Location

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Sample Location Map Redwood Road Dump Site Figure 3		
By TH	Date 6/11/91	Scale Not to Scale

TABLE 1 - Physical Groundwater Parameters

Well Number	pH	Specific Conductivity (µmhos)	Temperature (°C)	Sediment Content (%)	Groundwater Elevation (feet)
RD-MW-01					4218.30
RD-MW-02					4228.99
RD-MW-03					4229.06
RD-MW-04					4224.08
RD-MW-01	7.97	19440		7	
RD-MW-02	7.35	1635		7	
RD-MW-03	7.51	9345		5	
RD-MW-04	7.47	25750		8	
RD-MW-01	7.10	20900	12.10		4219.46
RD-MW-02	7.00	1783	13.20		4221.13
RD-MW-03	6.80	1040	22.30		4221.14
RD-MW-04	6.80	31100	21.10		4219.31
RD-MW-06	7.30	2640	9.30		4220.91
RD-MW-07	7.30	2780	10.60		4224.34

Sediment Content = Visusal Estimate of Percentage of Sediment Content in Groundwater

Groundwater Elevation in Feet Above Mean Sea Level

TABLE 2

ORGANIC DATA RESULTS FOR GROUNDWATER AND SURFACE WATER SAMPLES

Redwood Road Dump, Salt Lake County, Utah

Sample Number	RD-GW-01	RD-GW-02	RD-GW-03	RD-MW-04	RD-GW-05	RD-GW-06	RD-MW-07	RD-SW-01	RD-SW-02	RD-SW-03	RD-SW-04
Traffic Number	HN922	HN923	HN924	HN925	HN926	HN927	HN928	HN918	HN919	HN920	HN921
Sample Location	Downgradient	Downgradient	Downgradient	Downgradient	Duplicate	Background	Background	North Ditch	City Drain D	City Drain U	Blank
Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Surface Water	Surface Water	Surface Water	
VOLATILES											
Tetrachloroethane										7J	
SEMIVOLATILES											
bis (2-Ethylhexyl) Phthalate								2J			
Phenathrene		1J									
Fluoranthene					3J						
Pyrene					3J						

J - The associated numerical value is an estimated because.
1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - Organic analysis only

Measured in parts per Billion (ppb)

TABLE 3

INORGANIC ANALYSES FOR GROUNDWATER AND SURFACE WATER SAMPLES

Redwood Road Dump Site, Salt Lake City, Utah

Sample Number	RD-SW-01	RD-SW-02	RD-SW-03	RD-MW-01	RD-MW-02	RD-MW-03	RD-MW-04	RD-MW-05	RD-MW-06	RD-MW-07
Traffic Number	MHN632	MHN633	MHN634	MHN636	MH637	MHN638	MHN639	MHN640	MHN641	MHN642
Sample Location	North Ditch	City Drain D	City Drain U	Downgradient	Downgradient	Downgradient	Downgradient	Duplicate	Upgradient	Upgradient
TYPE	Surface Water	Surface Water	Surface Water	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Aluminum	1380	728	666	234	385	260	560	251	104	108
Antimony	<24.0	25	<24.0	<24.0	<24.0	<24.0	<24.0	34.2	<24.0	<24.0
Arsenic	16.7	53.4	59.2	248	40.8	314	179	41.1	11.6	19
Barium	69.4J	72.7J	76.6J	29.9J	429J	472J	81.7J	395J	37.7J	57.4J
Beryllium	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.3	<1.0	<1.0
Cadmium	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Calcium	46500	56300	70800	30600	59600	13400	38800	55800	54600	92300
Chromium	<6.0	<6.0	<6.0	10	<6.0	27.2	<6.0	<6.0	<6.0	8
Cobalt	<5.0	<5.0	<5.0	8.2	<5.0	17.3	8.2	<5.0	<5.0	<5.0
Copper	19	14.7	24.3	96.1	<5.0	15.2	5.4	6.7	21.9	26.2
Iron	1460	1060	710	148	1260	2570	659	1210	44.9	53.7
Lead	23.6	8	4.8	<1.0	9.7	4.8	1.1	3.3	<1.0	<1.0
Magnesium	16000	36500	48200	92900	63200	110000	162000	59900	101000	87300
Manganese	33	92.4	98.5	97.9	538	350	775	500	36.9	222
Mercury	<.20J	<.20J	<.20J	<.20J	<.20J	<.20J	<.20J	<20J	<.20J	<.20J
Nickel	<12.0	<12.0	<12.0	40	15.9	30.4	26.2	<12.0	<12.0	<12.0
Potassium	14400	37000	53900	157000	70300	141000	196000	67100	39600	57400
Selenium	2.5J	3J	2.5J	14.8J	<1.0J	<1.0J	<10.0J	<1.0J	<1.0J	7.1J
Silver	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Sodium	112000	460000	598000	5420000	2020000	495000	6250000	197000	352000	362000
Thallium	<10.0J	<10.0J	<10.0	<10.0R	<1.0J	<10.0J	<10.0R	<1.0J	<1.0J	<1.0J
Vanadium	6.8	8.4	6.1	78.3	4.6	17.2	37.4	7.2	8.1	10.4
Zinc	62.7	53.9	62.3	29.8	16.4	51	19.7	19	33	23.6

J - The associated numerical value is an estimate because:

1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - Organic analysis only

Measured in Parts Per Billion (ppb)

TABLE 4

ORGANIC DATA RESULTS FOR SOIL AND SEDIMENT SAMPLES

Redwood Road Dump, Salt Lake City, Utah

Sample Number	RD-SO-01	RD-SO-02	RD-SO-03	RD-SO-04	RD-SO-05	RD-SO-06	RD-SO-07	RD-SO-08	RD-SO-09	RD-SO-10	RD-SE-01	RD-SE-02	RD-SE-03
Traffic Number	HN907	HN908	HN909	HN910	HN911	HL951	HL952	HN912	HN913	HN914	HN915	HN916	HN917
Sample Location	Downgradient	Background	Downgradient	Downgradient	Downgradient	RD-MW-02	RD-MW-04	Downgradient	Downgradient	Downgradient	North Ditch	City Drain B	City Drain V
SEMIVOLATILES													
bis (2-Ethylhexyl) phtalate	86J		74J	63J	68J		620J	34J	82J			140J	100J
2-Methylnapthalene							86J						
Naptholene							120J						
Acenapthlene							80J						
Dibenzofuran							54J						
Fluorene							110J						
Phenanthrene	1200		38J	84J			1000J		500		240J		
Anthracene	270						140J		140J		50J		
Flouranthene	2700		56J	110J			1000J		800		240J		
Pyrene	2700		58J	130J			410J		650		280J		59J
Benzo(a)anthracene	1700			67J			410J		430		140J		
Chrysene	1500		35J				760J		350J		150J		
Benzo(b)fluoranthene	1100		25J	72J			410J		280J		110J		
Benzo(k)fluoranthene	1100		30J	79J			410J		280J		110J		
Carbazole	63J						63J						
Di-n-Butylphtalate	47J			37J					47J				
Benzo(a)Pyrene	1200		34J						290J		96J		
Ideno(1,2,3-cd)Pyrene	660			77J					200J				
Benzo(g,h,i)Perylene			140J										
N-Nitrosodiphenyamine (1)											110J		
PESTICIDES/PCB													
Methoxychlor	6J	4.3	1.9J	5.9J				1.6J	67	2.5J	7.3J		
Heptachlor	1J			1.5J	23J				.80J		.74J	.22J	
Endrin	.70J			56J					1.7J				
gamma-Chlordane	.54J		64J	97J					6.5J		1.3J		
4,4'-DDE		14		1J					11		.56J		
4,4'-DDD		5.2		1.2J					4.7J				
4,4'-DDT		16	11J	2.3J					30J				
Endosulfon II				1.1J									
Endrin aldehyde				99J									
Dieldrin									6.5J				
Endrin ketone									12				
alpha-Chlordane									1.6J				
Aroclor-1260									150				
VOLATILES													
Acetone			6J			53J	270				16J	5J	
Benzene							6J						
Ethylbenzene							8J						
Xylenes (total)							61						

J - The associated numerical value is an estimated because
1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - Organic analysis only

Measured in Parts Per Billion (PPB)

TABLE 5

INORGAINC ANALYSES FOR SOIL AND SEDIMENT SAMPLES

Redwood Road Dump Site, Salt Lake City, Utah

Sample Number	RD-SO-01	RD-SO-02	RD-SO-03	RD-SO-04	RD-SO-05	RD-SO-06	RD-SO-09	RD-SO-10	RD-SE-01	RD-SE-02	RD-SE-03
Traffic Number	MHN621	MHN622	MHN623	MHN624	MHN625	MHN626	MHN627	MHN628	MHN629	MHN630	MHN631
Sample Location	Downgradient	Downgradient	Downgradient	Background	Downgradient	Downgradient	Downgradient	Downgradient	North Ditch	City Drain D	City Drain U
Alluminum	10400	8250	5650	9920	8980	5590	6770	23600	8070	1210	13800
Antimony	28.8J	<6.6J	12.8J	<5.9J	8.4J	30J	14.9J	15.9J	11.9J	12.4J	45.8J
Arsenic	21.2J	10.8J	3.3J	9.4J	8.8J	4.7J	11.5J	28J	4.9J	7J	22J
Barium	534	198	87.5	126	145	61.6	263	1760	230	38.2	117
Beryllium	<1.2	<.49	<.39	<.58	<.82	<.54	<.81	<1.5	<.86	<.28	<1.0
Cadmium	6.2	<3.3J	<.68	<.85	<.69	<.84	<1.3	<3.3	<1.1	<.69	<.85
Calcium	33700	36700	61300	50700	40300	292000	57500	80200	79100	107000	51400
Chromium	56.7	14.2	14.6	16.5	12.4	21.8	17.2	125	12.6	2.5	18.4
Cobalt	14.5	4.1	4.3	6	5.7	1.5	4.4	16.3	5.8	1.7	8.5
Copper	375	59.9	17.9	47.5	22	11.4	58	235	40.5	5.6	55.8
Iron	104000	9710	8590	14800	13800	9900	12800	165000	21500	4520	19000
Lead	553	219	15.5	214	24.5	15.5	268	2610	68.2	5.2	23.8
Magnesium	8360	21100	5270	12400	9030	9770	8430	17200	33000	36800	16400
Manganese	529	250	171	293	328	117	246	645	261	129	345
Mercury	.41J	<.14J	<.11J	0.22J	<.12J	<.11J	0.22J	0.77J	0.15J	<.11J	<.14J
Nickel	72.7	9.1	7.4	13.8	14.4	11.7	13	52.5	10.9	7.2	17.5
Potassium	3200	3550	1580	3290	2860	1740	2270	1560	2910	345J	5110
Selenium	<.25J	<.28J	<.22J	<.25j	<.23J	<.23J	<.26J	<.86J	<.26J	<.23J	<.28J
Silver	2	<1.1	<.89	0.98	<.92	<.91	<.97	1.4	<1.0	<.92	<1.1
Sodium	1040	836	121	566	85.6	255	181	2910	625	272	3770
Thallium	0.36	0.32	<.22	0.32	0.26	<.23	<.24	<.27	<.26	<.23	0.31
Vanadium	26.3	21.8	15.6	24.1	17.6	44.8	18	39.3	18.8	7	29.1
Zinc	2580	112	49.7	103	55.2	28.9	207	1570	222	18.3	80.2

J - The associated numerical value is an estimate because:

1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - Organic analysis only

Measured in Parts Per Million (ppm)

APPENDIX I - EPA Site Inspection Form

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

I. IDENTIFICATION NO.
UTD980961502

PART 1 - SITE LOCATION AND INSPECTION INFORMATION

II. SITE NAME LOCATION

01	Site Name (Legal, common or descriptive name of site)				
	Redwood Road Dump				
02	Street, route no. or specific location identifier			03 City	
	approximately 2000 West Indiana Avenue				Salt Lake City
04	State UT	05 Zip Code 84104	06 County Salt Lake		
07	County Code 35	08 Congress District 2			
09	Coordinates (d,m,s)	10 Type of ownership (Check one)			
	Latitude 40,45,30.0	Private	Federal	State	Unknown
	Longitude 111,56,30.0	County	x Municipal	Other:	

III. INSPECTION INFORMATION

01 Date Of Inspection	02 Site Status	03 Years Of Operation	
05/02/91	x Active	Beginning Year	1923
	Inactive	Ending Year	1962
		Unknown	

04 Agency Performing Inspection (Check all that apply)

EPA	x State
EPA Contractor:	State Contractor:
Municipal	Other:
Municipal Contractor:	

05 Chief Inspector	06 Title	07 Organization	08 Telephone No.
Terry Hawkins	E.H. Scientist	UDERR	801-536-4100

09 Other Inspectors	10 Title	11 Organization	12 Telephone No.
Jerry Ripley	E.H. Scientist	UDERR	801-536-4100
Brent Everett	E.H. Scientist	UDERR	801-536-4100
Harold Sandbeck	E.H. Scientist	UDERR	801-536-4100
Michael Storck	E.H. Scientist	UDERR	801-536-4100

13 Site Representatives Interviewed	14 Title	15 Telephone No.
A. Brad Stewart	A. Asst. Director	A. 801-535-5775
B. Rick Graham	B. Dept. Director	B. 801-972-7800
C.	C.	C.

16 Address
A. 451 South State Street, SLC, Utah 84111
B. 1965 West 500 South Street, SLC, Utah 84104
C.

17 Access Gained By (Check one)	18 Time Of Inspection	19 Weather Conditions
x PERMISSION	9:00	Overcast, 50F
WARRANT		

IV. INFORMATION AVAILABLE FROM

01 Contact	02 Agency/Organization	03 Telephone	
Terry Hawkins	UDERR	801-538-6338	
04 Person Responsible For Site Inspection Form		05 Agency/Organization	
Terry Hawkins		UDERR	
06 Telephone No.	07 Date		
801-538-6338	08/03/91		

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 Physical States (Check all that apply)

- x Solid
- x Powder, Fines
- Other (Specify)
- Slurry
- x Liquid
- x Gas

02 Waste Quantity at Site (Measures of waste quantities must be independent)

8,000,000 Tons / Cubic Yards / Number of Drums

03 Waste Characteristics (Check all that apply)

x Toxic	x Persistent	x Flammable	x Explosive	Not Applicable
Corrosive	x Soluble	x Ignitable	Reactive	
x Radioactive	x Infectious	Highly Volatile	Incompatible	

III. WASTE TYPE

Category	Substance Name	01 Gross Amount	02 Unit of Measure	03 Comments
SLU	Sludge			
x OLW	Oily Waste	unknown		
SOL	Solvents			
PSD	Pesticides			
OCC	Other Organic Chem			
IOC	Inorganic Chem			
ACD	Acids			
BAS	Bases			
MES	Heavy Metals			

IV. HAZARDOUS SUBSTANCES (See appendix for most frequently cited CAS numbers)

01 Category	02 Substance Name	03 CAS Number	04 Storage/ Disposal Method	05 Concen- tration	06 Measure of Concen- tration

see next page

V. FEEDSTOCKS (See appendix for CAS numbers)

Category	01 Feedstock Name	02 CAS #	Category	01 Feedstock Name	02 CAS #
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (CITE specific references, e.f., state files, sample analysis, reports)

01 UBSHW, 1990, Sampling Plan, Redwood Road Dump
02 UDERR, 1991, Field Activities Report, Redwood Road Dump
03 UDERR, 1991, Analytical Results Report, Redwood Road Dump
04

II. HAZARDOUS CONDITIONS AND INCIDENTS

A. 01 GROUNDWATER CONTAMINATION 02 Observed Date 05/02/91 Potential
03 Population Potentially Affected 87463 Alleged
04 Narrative Description:
The population is that within 4 miles of the site.

B. 01 SURFACE WATER CONTAMINATION 02 Observed Date 04/30/91 Potential
03 Population Potentially Affected 5,845 Alleged
04 Narrative Description:
This is the population within 1 mile of the site.

C. 01 CONTAMINATION OF AIR 02 Observed Date __/__/__ x Potential
03 Population Potentially Affected 100 Alleged
04 Narrative Description:
Those visiting the sit may be exposed to methane gas.

D. 01 FIRE/EXPLOSIVE CONDITIONS 02 Observed Date __/__/__ x Potential
03 Population Potentially Affected 5,845 Alleged
04 Narrative Description:
Thsi is the population within 1 mile of the site. There is a potential that methane gas may burn. However, there has been no recent history of fires.

E. 01 DIRECT CONTACT 02 Observed Date 04/30/91 Potential
03 Population Potentially Affected 5,845 Alleged
04 Narrative Description:
The population is that within 1 mile of the site. There is a potential that those visiting the site will be exposed to hazardous materials.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

F. 01 CONTAMINATION OF SOIL 02 Observed Date 04/30/91 Potential
03 Area Potentially Affected 70 acres Alleged
04 Narrative Description:

G. 01 DRINKING WATER CONTAMINATION 02 Observed Date / / x Potential
03 Population Potentially Affected 87,463 Alleged
04 Narrative Description:
The poulation is that within 4 miles of the site.

H. 01 WORKER EXPOSURE/INJURY 02 Observed Date / / x Potential
03 Workers Potentially Affected 5 Alleged
04 Narrative Description:
Thos working at the site may be exposed to hazardous materials.

I. 01 POPULATION EXPOSURE/INJURY 02 Observed Date / / x Potential
03 Population Potentially Affected 5845 Alleged
04 Narrative Description:
The population is that within 1 mile of the site.

J. 01 DAMAGE TO FLORA 02 Observed Date 04/30/91 Potential
03 Narrative Description: Alleged
Small areas of the site have stressed vegation. This may be due to blowing CKD dust.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

K. 01 DAMAGE TO FAUNA 02 Observed Date __/__/__ Potential / Alleged
03 Narrative Description:
No recorded history.

L. 01 CONTAMINATION OF FOOD CHAIN 02 Observed Date __/__/__ Potential / Alleged
03 Narrative Description:
No recorded history.

M. 01 UNSTABLE CONTAINMENT OF WASTES (Soils/Runoff/Standing Liquids/Leaking Drums) 02 Observed Date __/__/__ x Potential / Alleged
03 Population Potentially Affected 5,845
04 Narrative Description:
This is the population within 1 mile of the site. There exists the potential for those visiting the site to come in contact with hazardous waste.

N. 01 DAMAGE TO OFFSITE PROPERTY 02 Observed Date __/__/__ x Potential / Alleged
03 Narrative Description:
There is the potential for hazardous material to migrate off-site by groundwater or surface water.

O. 01 CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS 02 Observed Date __/__/__ Potential / Alleged
03 Narrative Description:
No recorded history.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

P. 01 ILLEGAL/UNAUTHORIZED DUMPING 02 Observed Date __/__/__ x Potential Alleged
03 Narrative Description:
There exist the potential for illegal or unauthorized dumping at the site. There is no gate and has been used as a landfill in the past.

Q. 01 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS:

III. TOTAL POPULATION POTENTIALLY AFFECTED: 87463

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.f., state files, sample analysis, reports)

01 UBSHW, 1990, Sampling Plan, Redwood Road Dump Site
02 UDERR, 1991, Field Activities Report
03
04
05

II. PERMIT INFORMATION

01 Type Of Permit Issued	02 Permit No.	03 Date Issues	04 Expira/Date	05 Comments
NPDES		/ /	/ /	
UIC		/ /	/ /	
AIR		/ /	/ /	
RCRA		/ /	/ /	
RCRA INTERIM STATUS		/ /	/ /	
SPCC PLAN		/ /	/ /	
STATE		/ /	/ /	
LOCAL		/ /	/ /	
OTHER		/ /	/ /	
x NONE		/ /	/ /	

III. SITE DESCRIPTIONS

01 Storage/Disposal (Ckeck all that apply)	02 Amount	03 Unit Of Measure	04 Treatment (Check all that apply)
Surface Impoundment			Incineration
Pile			Underground Injection
Drums, Above Ground			Chemical/Physical
Tank, Above Ground			Biological
Tank, Below Ground			Waste Oil Processing
x Landfill	70	acres	Solvent Recovery
Landfarm			Other Recycling/Rcvry
Open Dump			Other
Other			

05 Buildings On Site:

06 Area Of Site: 70(Acres)

07 Comments:

IV. CONTAINMENT

01 Containment Of Wastes (Check one)

Adequate, Secure — x Inadequate, Poor
Moderate — Insecure, Unsound, Dangerous

02 Description Of Drums, Diking, Liners, Barriers, Etc.:

V. ACCESSIBILITY

01 Waste Easily Accessible: x Yes No

02 Comments:

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

01 UBSHW, 1990, Sampling Plan
02 UDERR, 1991, Field Activities Report
03
04
05

II. DRINKING WATER SUPPLY

01 Type Of Drinking Supply (Check as applicable)			02 Status			03 Distance To Site
	Surface	Well	Endangered	Affected	Monitored	
Community		x				2.60(mi)
Non-Community		x				0.30(mi)

III. GROUNDWATER

01 Groundwater Use In Vicinity (Check one)

A. Only Source For Drinking
B. Commercial, Industrial, Irrigation
x C. Not Used, Unusable
D. Drinking (Other sources available)
E. Commercial, Industrial, Irrigation (No other water sources available)

02 Population Served By Groundwater
03 Distance To Nearest Drinking Water Well 0.00(mi)
04 Depth To Groundwater (ft)
05 Direction Of Groundwater Flow variable
06 Depth To Aquifer Concerned (ft)
07 Potential Yld Of Aquifer (gpd)
08 Sole Source Aquifer Yes x No
09 Description Of Wells (Including usage, depth and location relative to population and buildings)

10 Recharge Area Yes No Comments:unknown
11 Discharge Area Yes x No Comments:

IV. SURFACE WATER

01 Surface Water Use (Check one)

A. Reservoir, Recreation Drinking Water Source
x B. Irrigation, Economically Important Resources
C. Commercial,Industrial
D. Not Currently Used

02 Affected/Potentially Affected Bodies Of Water

Name:	Affected:	Distance To Site:
City Drain		0.00(mi)
Surplus Canal		0.00(mi)
Unnamed ditch		0.00(mi)
		0.00(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 Total Population Within (Number of persons):
A. One (1) Mile Of Site 5845 B. Two (2) Miles Of Site 20234 C. Three (3) Miles Of Site 42903
02 Distance To Nearest Population 0.3(mi)
03 Number Of Buildings Within Two (2) Miles Of Site >5,000
04 Distance To Nearest Off-Site Building 0.1(mi)
05 Population Within Vicinity Of Site (Provide narrative description of nature of population within vicinity of site, e.g., rural, village densely populated urban area)
The site is in and industrial area. There are residential areas .3 miles (east), .75 miles (north), and 2.5 miles (south).

VI. ENVIRONMENTAL INFORMATION

01 Permeability Of Unsaturated Zone (Check one)
A. 10^{-6} - 10^{-8} cm/sec
x B. 10^{-4} - 10^{-6} cm/sec
C. 10^{-2} - 10^{-3} cm/sec
D. Greater Than 10^{-3} cm/sec
02 Permeability Of Bedrock (Check one)
A. Impermeable Less than 10^{-6} cm/sec
B. Relatively Impermeable 10^{-4} - 10^{-6} cm/sec
C. Relatively Permeable 10^{-2} - 10^{-4} cm/sec
D. Very Permeable Greater than 10^{-2} cm/sec
03 Depth To Bedrock 1000+(ft)
04 Depth Of Contaminated Soil Zone unknown(ft) 05 Soil pH 7-9
06 Net Precipation 15.3(in) 07 One Year 24 Hour Rainfall 0.00(in)
08 Slope:
A. Site slope 1-25(%) B. Direction Of Site Slope variable
C. Terrain Average Slope 5(%)
09 Flood Potential Site Is In 100 Year Flood Plain
10 Yes x No Site Is On Barrier Island, Coastal High Hazard Area, Riverine Floodway
11 Distance To Wetlands (5 Acre minimum)
A. Estuarine 3.50(mi) B. Other 0.00(mi)
12 Distance To Critical Habitat (Of endangered species)
A. 11.00(mi) B. Endangered Species:Bald Eagle & Perigri
13 Land Use In Vicinity Distance To:
A. Residential Areas: Commercial/Industrial 0.30(mi)
B. National/State Parks, Forests, Or Wildlife Reserves 7.50(mi)
C. Agricultural Lands: Prime Agricultural Land 0.00(mi)
D. Agricultural Lands: Agricultural Land 5.50(mi)
14 Description Of Site In Relation To Surrounding Topography:
The site is in an industrial area. There is a ditch that originates on-site and the City Drain flows through the site.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

01 UBSHW, 1990, Sampling Plan, Redwood Road Dump Site
02 UDERR, 1991, Field Activities Report
03
04
05

II. SAMPLES TAKEN

	01 Number Of Samples Taken	02 Samples Sent To	03 Estimated Date Results Available
Groundwater	6	Data Chem (inorganic)	/ /
Surface Water	3	Analytical Res. Inc. (organic)	/ /
Waste		Mid Pacific Env. Lab (organic)	/ /
Air			/ /
Runoff			/ /
Spill			/ /
Soil	10		/ /
Vegetation			/ /
Other	3		/ /

III. FIELD MEASUREMENTS TAKEN

01 Type	02 Comments
pH/Temp Conductivity	These were taken of groundwater sampled.
Hnu	Reading was taken to the well casing head space.

IV. PHOTOGRAPHS AND MAPS

01 Type: Ground Aerial

02 In Custody Of (Name of organization or individual):

03 Maps: Yes No

04 Location Of Maps:

V. OTHER FIELD DATA COLLECTED (Provide Narrative Description)

VI. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UBSHW, 1990, Sampling Plan
02 UDERR, 1991, Field Activities Report
03
04
05

II. CURRENT OWNER(S) | **PARENT COMPANY (If Applicable)**

01 Name: Department of Parks & Re	02 D&B Number	08 Name: Salt Lake City Corp.	09 D&B Number
03 Street Address (P.O.B. or RFD#): 1965 West 500 South		10 Street Address (P.O.B. or RFD#):	
04 SIC Code:		11 SIC Code:	
05 City: Salt Lake City	06 State: UT	12 City:	13 State:
07 Zip Code: 84104		14 Zip Code:	
01 Name: Department of Public Wrk	02 D&B Number	08 Name: Salt Lake City Corp.	09 D&B Number
03 Street Address (P.O.B. or RFD#): 451 South State		10 Street Address (P.O.B. or RFD#):	
04 SIC Code:		11 SIC Code:	
05 City Salt Lake City	06 State: UT	12 City:	13 State:
07 Zip Code: 84111		14 Zip Code:	
01 Name:	02 D&B Number	08 Name:	09 D&B Number
03 Street Address (P.O.B. or RFD#):		10 Street Address (P.O.B. or RFD#):	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	

III. PREVIOUS OWNERS
List Most Recent First

REALTY OWNER(S)
If Applicable, List Most Recent First

01 Name:	02 D&B Number	08 Name:	09 D&B Number
03 Street Address (P.O.B. or RFD#):		10 Street Address (P.O.B. or RFD#):	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	
01 Name:	02 D&B Number	08 Name:	09 D&B Number
03 Street Address (P.O.B. or RFD#):		10 Street Address (P.O.B. or RFD#):	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	

IV. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UBSHW, 1990, Sampling Plan
02 UDERR, 1991, Field Activities Report
03
04
05

II. CURRENT OPERATOR (Provide If Different From Owner) | **OPERATOR'S PARENT COMPANY (If Applicable)**

01 Name	02 D&B Number	10 Name	11 D&B Number
03 Street Address (P.O.B. or RFD#)		12 Sreet Address (P.O.B. or RFD#)	
04 SIC Code:		13 SIC Code:	
05 City:	06 State:	14 City:	15 State:
07 Zip Code:		16 Zip Code:	
08 Years Of Operation			
09 Name Of Owner			

III. PREVIOUS OPERATOR(S) (List Most Recent First; Provide Only If Different From Owner) | **PREVIOUS OPERATOR'S PARENT COMPANIES (If Applicable)**

01 Name	02 D&B Number	10 Name	11 D&B Number
03 Street Address (P.O.B. or RFD#)		12 Sreet Address (P.O.B. or RFD#)	
04 SIC Code:		13 SIC Code:	
05 City:	06 State:	14 City:	15 State:
07 Zip Code:		16 Zip Code:	
08 Years Of Operation			
09 Name Of Owner During This Period			
01 Name	02 D&B Number	10 Name	11 D&B Number
03 Street Address (P.O.B. or RFD#)		12 Sreet Address (P.O.B. or RFD#)	
04 SIC Code:		13 SIC Code:	
05 City:	06 State:	14 City:	15 State:
07 Zip Code:		16 Zip Code:	
08 Years Of Operation			
09 Name Of Owner During This Period			

IV. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UBSHW, 1990, Sampling Plan
02 UDERR, 1991, Field Actities Report
03
04
05

II. ON SITE GENERATOR

01 Name	02 D&B Number
03 Street Address (P.O.B. or RFD#)	
04 SIC Code:	
05 City:	06 State:
07 Zip Code:	

III. OFF-SITE GENERATOR(S)

01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	

IV. TRANSPORTER(S)

01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	

IV. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UBSHW, files.
02 UDERR, files.
03
04
05

II. PAST RESPONSE ACTIVITIES

A. 01 Water Supply Closed 02 Date __/__/__ 03 Agency:
04 Description:

B. 01 Temporary H2O Supply Provided 02 Date __/__/__ 03 Agency:
04 Desciption:

C. 01 Permanent H2O Supply Provided 02 Date __/__/__ 03 Agency:
04 Description:

D. 01 Spilled Material Removed 02 Date __/__/__ 03 Agency:
04 Desciption:

E. 01 Contaminated Soil Removed 02 Date __/__/__ 03 Agency:
04 Description:

F. 01 Waste Repackaged 02 Date __/__/__ 03 Agency:
04 Desciption:

G. 01 Waste Disposed Elsewhere 02 Date __/__/__ 03 Agency:
04 Description:

H. 01 On Site Burial 02 Date __/__/__ 03 Agency:
04 Desciption:

I. 01 In Situ Chemical Treatment 02 Date __/__/__ 03 Agency:
04 Desciption:

J. 01 In Situ Biological Treatment 02 Date __/__/__ 03 Agency:
04 Description:

K. 01 Encapsulation 02 Date __/__/__ 03 Agency:
04 Desciption:

II. PAST RESPONSE ACTIVITIES (Continued)

L. 01 Emergency Waste Treatment — 02 Date __/__/__ 03 Agency:
04 Description:

M. 01 Cutoff Walls — 02 Date __/__/__ 03 Agency:
04 Desciption:

N. 01 Emergency Diking/Surface Water Diversion — 02 Date __/__/__ 03 Agency:
04 Description:

O. 01 Cutoff Trenches/Sump — 02 Date __/__/__ 03 Agency:
04 Desciption:

P. 01 Subsurface Cutoff Wall — 02 Date __/__/__ 03 Agency:
04 Description:

Q. 01 Barrier Walls Constructed — 02 Date __/__/__ 03 Agency:
04 Desciption:

R. 01 Capping/Covering — 02 Date __/__/__ 03 Agency:
04 Description:

S. 01 Bulk Tankage Repaired — 02 Date __/__/__ 03 Agency:
04 Desciption:

T. 01 Grout Curtain Constructed — 02 Date __/__/__ 03 Agency:
04 Desciption:

U. 01 Bottom Sealed — 02 Date __/__/__ 03 Agency:
04 Description:

V. 01 Gas Control — 02 Date __/__/__ 03 Agency:
04 Desciption:

II. PAST RESPONSE ACTIVITIES (Continued)

W. 01 Fire Control 02 Date __/__/__ 03 Agency:
04 Description:

X. 01 Leachate Treatment 02 Date __/__/__ 03 Agency:
04 Desciption:

Y. 01 Area Evacuated 02 Date __/__/__ 03 Agency:
04 Description:

Z. 01 Access To Site Restricted 02 Date __/__/__ 03 Agency:
04 Desciption:

1. 01 Population Relocated 02 Date __/__/__ 03 Agency:
04 Description:

2. 01 Other Remedial Activities 02 Date __/__/__ 03 Agency:
04 Desciption:

III. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UBSHW, files.
02 UDERR, files.
03
04
05

II. ENFORCEMENT INFORMATION

01 Past Regulatory/Enforcement Action	Yes	x No

02 Description Of Federal, State, Local Regulatoy/Enforcement Action:

III. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UBSHW, files.
02 UDERR, files.
03
04
05

APPENDIX II - Quality Assurance Review

REGION VIII
SUMMARY OF CLP DATA QUALITY ASSURANCE REVIEW
ORGANICS - VOA, BNA, PEST/PCB

CASE/SAS NO.	SITE NAME		OPERABLE UNIT
16115	Redwood Road Dump		ZZ
RPM NAME	ESAT TID: 08-9103-536		
Luke Chavez	ESAT WAD: 23		
CONTRACTOR LABORATORY	CONTRACT NO.	REPORT NO.	LABORATORY DPO/REGION
Analytical Resources	68-D9-0023	SDG-HL951	Gerald Muth/X

Review Assigned Date 07/31/91 Data Reviewer Elizabeth Darland/ESAT
Review Completion Date 08/23/91

SAMPLE ID	SAMPLE LOCATION	MATRIX
HL951	NOT LISTED	SOIL
HL952	NOT LISTED	SOIL

DATA QUALITY STATEMENT*
( ) Data are ACCEPTABLE according to EPA Functional Guidelines with no qualifiers (flags) added by the reviewer.
( ) Data are UNACCEPTABLE according to EPA Functional Guidelines.
(X) Data are acceptable with QUALIFICATIONS noted in review.

Telephone/Communication Logs Enclosed? Yes ___ No X

DPO Attention Required? Yes X No ___ If yes, list the items that require attention: Internal Standard Recovery

* Please see Data Qualifier Definitions, attached to the end of this report.

ORGANIC DATA QUALITY ASSURANCE REVIEW

REVIEW NARRATIVE SUMMARY

This data package was reviewed according to the EPA document "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses", February 1, 1988 revision.

Case 16115 SDG HL951 consisted of two soil samples for CLP RAS organics analyses.

Sample HL951 was analyzed using a 1 gram and a 5 gram sample weight for the volatile fraction. The second analysis, HL951RE has a lower detection limit. Both analyses have been reported by the data reviewer.

Extraction logs and % moisture calculation information was not provided in the data package.

The laboratory used the x qualifier for semivolatile compounds, benzo(b)fluoranthene and benzo(k)fluoranthene in sample HL952. The laboratory failed to mention the reason for this qualification in the case narrative as required in the contract.

No qualification was added to the pesticide fraction of this data package.

The following tables list all qualification added to the data by the data reviewer.

VOA COMPOUND	SAMPLE NUMBER	QUALIFIER	REASON FOR QUALIFICATION	REVIEW SECTION
benzene, toluene, chlorobenzene, ethylbenzene, styrene, total xylene	ALL	J or UJ	Holding Time Violation	II
methylene chloride	HL951	U	Blank Contamination	VIII
methylene chloride	HL952	8U	Blank Contamination	VIII

SEMIVOLATILE COMPOUND	SAMPLE NUMBER	QUALIFIER	REASON FOR QUALIFICATION	REVIEW SECTION
ALL	HL951	UJ	Holding Time Violation	II
ALL	HL952	J or UJ	Holding Time Violation	II
Di-n-octylphthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene,	HL952	J or UJ	Low Internal Standard	VII

ORGANIC DATA QUALITY ASSURANCE REVIEW

SOW Number 1/87

RAS ORGANIC DATA COMPLETENESS CHECKLIST

VOA

Quality Control Summary Package
- P Surrogate Recovery Summary (Form II)
- P MS/MSD Summary (Form III)
- P Method Blank Summary (Form IV)
- P GC/MS Tuning and Mass Calibration (Form V)

Sample Data Package
- P Holding Times (SMO Sample Traffic Reports)
- P Organic Analysis Data Sheets (Form I)
- P Reconstructed Ion Chromatogram(s) (RIC)
- P Quantitation Reports
- P Mass Spectral Data
- P EPA/NIH Mass Spectral Library Search for TICs

Standards Data Package
- NR Current List of Laboratory/Instrument Detection Limits
- P Initial Calibration Data (Form VI) for each instrument
- P Continuing Calibration Data (Form VII) for each instrument
- P Internal Standard Area Summary (Form VIII)
- P VOA Standards RICs
- P VOA Standards Quantitation Reports

Raw QC Package
- P BFB mass spectra and mass listings

Reagent Blank data
- P Organic Analysis Data Sheets (Form I)
- P RIC or Total Ion Chromatogram
- P Quantitation Reports
- P Mass Spectral Data
- P EPA/NIH Library Search for TICs

Matrix Spike/Matrix Spike Duplicate Data
- P Organic Analysis Data Sheets
- P RIC
- P Quantitation Reports
- P Mass Spectral Data
- P EPA/NIH Library search for TICs

KEY:
- P = Provided in original data package, as required by contract
- R = Provided as Resubmission
- NP = Not provided in original data package or as resubmission
- NR = Not required under contract
- NA = Not applicable to this data package or analysis

ORGANIC DATA QUALITY ASSURANCE REVIEW

I. DELIVERABLES

All deliverables were present as specified in the statement of work.

VOA: Yes X No ____

Comments: NONE

II. HOLDING TIMES

All CLP-SOW holding times were met.

VOA: Yes X No ____

Comments: NONE

All 40 CFR Part 136 holding times were met.

VOA: Yes ____ No X

Comments: The traffic report listed 3/19-3/21 as the date samples were taken. Samples were analyzed on 3/30. There was no indication of sample preservation on the traffic report. 40 CFR Part 136 holding time of seven days for aromatic volatile samples was violated. All aromatic volatiles (i.e., benzene, toluene, chlorobenzene, ethylbenzene, styrene, and total xylene) have been qualified as estimated, "J" or undetected estimated, "UJ" by the data reviewer.

III. BFB PERFORMANCE RESULTS

VOA: The BFB performance results were within the specified control limits. All appropriate BFB results were included.

Yes X No ____

Comments: NONE

IV. INSTRUMENT CALIBRATIONS: STANDARDS and BLANKS

Initial instrument calibrations were performed according to contract requirements and met the specified control limits.

VOA: Yes X No ___

Comments: NONE

Continuing instrument calibration was performed according to contract requirements and met specified control limits.

VOA: Yes X No ___

Comments: NONE

ORGANIC DATA QUALITY ASSURANCE REVIEW

V. SURROGATE COMPOUND RECOVERY

Surrogate compound recovery analysis was performed according to contract requirements and results met specified control limits.

VOA: Yes _X_ No ___

Comments: NONE

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Matrix Spike/Matrix Spike Duplicate analysis was performed according to contract requirements and results met recommended recovery and precision limits.

VOA: Yes _X_ No ___

Comments: NONE

VII. INTERNAL STANDARD AREA

Internal standard area analysis was performed according to contract requirements and results met specified control limits.

VOA: Yes _X_ No ___

Comments: NONE

VIII. LABORATORY BLANK ANALYSIS RESULTS

Blank ID	Date	Contaminants	Concentration	CRQL	Associated Samples
VBLK1	3/30	2-Hexanone	1 ug/Kg	10 ug/Kg	ALL
		Methylene Chloride	1 ug/Kg	5 ug/Kg	

Comments: 2-Hexanone was not detected in either sample. The quantitation limit for methylene chloride was changed according to the rules set forth in the EPA document "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses", February 1, 1988 revision. See the data review summary for sample qualification.

IX. SAMPLE RESULTS

The sample results were reviewed and all compound identifications were acceptable and met contract requirements.

VOA: Yes _X_ No ___

Comments: NONE

X. Additional Comments or Problems/Resolutions not addressed above.

Comments: Sample HL951 was analyzed using a 1 gram and a 5 gram sample weight. The second analysis HL951RE has a lower detection limit. Both analyses have been qualified and reported by the data reviewer.

ORGANIC DATA QUALITY ASSURANCE REVIEW

SOW Number 1/87

RAS ORGANIC DATA COMPLETENESS CHECKLIST

BNA

Quality Control Summary Package
- P Surrogate Recovery Summary (Form II)
- P MS/MSD Summary (Form III)
- P Method Blank Summary (Form IV)
- P GC/MS Tuning and Mass Calibration (Form V)

Sample Data Package
- P Holding Times (SMO Sample Traffic Reports)
- P Organic Analysis Data Sheets (Form I)
- P Reconstructed Ion Chromatogram(s) (RIC)
- P Quantitation Reports
- P Mass Spectral Data
- P EPA/NIH Mass Spectral Library Search for TICs

Standards Data Package
- NR Current List of Laboratory/Instrument Detection Limits
- P Initial Calibration Data (Form VI) for each instrument
- P Continuing Calibration Data (Form VII) for each instrument
- P Internal Standard Area Summary (Form VIII)
- P BNA Standards RICs
- P BNA Standards Quantitation Reports

Raw QC Package
- P DFTPP mass spectra and mass listings

Reagent Blank data
- P Organic Analysis Data Sheets (Form I)
- P RIC or Total Ion Chromatogram
- P Quantitation Reports
- NR Mass Spectral Data
- P EPA/NIH Library Search for TICs

Matrix Spike/Matrix Spike Duplicate Data
- P Organic Analysis Data Sheets
- P RIC
- P Quantitation Reports
- NR Mass Spectral Data
- NR EPA/NIH Library search for TICs

KEY: P = Provided in original data package, as required by contract
R = Provided as Resubmission
NP = Not provided in original data package or as resubmission
NR = Not required under contract
NA = Not applicable to this data package or analysis

ORGANIC DATA QUALITY ASSURANCE REVIEW

I. DELIVERABLES

All deliverables were present as specified in the statement of work.

BNA: Yes X No ____

Comments: NONE

II. HOLDING TIMES

All CLP-SOW holding times were met.

BNA: Yes X No ____

Comments: NONE

All 40 CFR Part 136 holding times were met.

BNA: Yes ____ No X

Comments: The traffic report listed 3/19-3/21 as the date samples were taken. Samples were extracted on 3/28. There was no indication of sample preservation on the traffic report. 40 CFR Part 136 holding time of seven days for extraction of semivolatile compounds may have been violated. All semivolatile compounds in sample HL951 have been qualified as undetected estimated, "UJ" by the data reviewer. All semivolatile compounds in sample HL952 have been qualified as estimated, "J" or as undetected estimated, "UJ" by the data reviewer.

III. DFTPP PERFORMANCE RESULTS

The DFTPP performance results were within the specified control limits. All appropriate BFB results were included.

BNA: Yes X No ____

Comments: NONE

IV. INSTRUMENT CALIBRATIONS: STANDARDS and BLANKS

Initial instrument calibrations were performed according to contract requirements and met the specified control limits.

BNA: Yes ___ No X

Comments: 2,4-Dinitrophenol with a relative standard deviation (RSD) of 33.4% was outside control limits of $\leq$ 30.0%. 2,4-Dinitrophenol was undetected in both samples. No additional qualifiers were added to the data already qualified for holding time violations.

Continuing instrument calibration was performed according to contract requirements and met specified control limits.

BNA: Yes _X_ No ___

Comments: NONE

V. SURROGATE COMPOUND RECOVERY

Surrogate compound recovery analysis was performed according to contract requirements and results met specified control limits.

BNA: Yes _X_ No ___

Comments: NONE

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Matrix Spike/Matrix Spike Duplicate analysis was performed according to contract requirements and results met recommended recovery and precision limits.

BNA: Yes ___ No _X_

Comments: Pyrene was outside control limits for matrix spike/matrix spike duplicate analyses. No additional qualifiers were added to the data previously qualified for holding time violations. Listed below are the quality control limits and matrix spike results outside control limits.

COMPOUND	MS % REC	QC % REC	% RPD	QC % RPD
pyrene	26	35-142	-40	36

VII. INTERNAL STANDARD AREA

Internal standard area analysis was performed according to contract requirements and results met specified control limits.

BNA: Yes ___ No __X

Comments: Sample HL952 had an internal standard area recovery of 50800 for internal standard 6 (Perylene-d_{12}). The lower limit for the associated 12-hour standard was 71500. The compounds associated with this internal standard are listed in the review summary section of this report. The laboratory listed this problem as a matrix effect due to the matrix spike and matrix spike duplicate samples being below the control limit for this internal standard. No attempt was made to re-extract or re-analyze the samples as required in the contract. The data reviewer did not add additional qualification to the already qualified samples.

VIII. LABORATORY BLANK ANALYSIS RESULTS

Blank ID	Date	Contaminants	Concentration	CRQL	Associated Samples
SBLK1	3/28	NO TCL COMPOUNDS			ALL

Comments: No TCL compounds were detected in the semivolatile blank.

ORGANIC DATA QUALITY ASSURANCE REVIEW

IX. SAMPLE RESULTS

The sample results were reviewed and all compound identifications were acceptable and met contract requirements.

BNA: Yes _X_ No ___

Comments: NONE

X. Additional Comments or Problems/Resolutions not addressed above.

Extraction logs and % moisture calculation information was not provided in the data package.

The laboratory used the x qualifier for benzo(b)fluoranthene and benzo(k)fluoranthene in sample HL952. The laboratory failed to mention the reason for this qualification in the case narrative as required in the contract.

ORGANIC DATA QUALITY ASSURANCE REVIEW

PEST/PCB

Quality Control Summary Package

- P Surrogate Recovery Summary (Form II)
- P MS/MSD Summary (Form III)
- P Method Blank Summary (Form IV)
- NA GC/MS Tuning and Mass Calibration (Form V)

Sample Data Package

- P Holding Times (SMO Sample Traffic Reports)
- P Organic Analysis Data Sheets (Form I)
- P GC/EC Chromatograms

Standards Data Package

- NR Current List of Laboratory/Instrument Detection Limits
- P Pesticide Evaluation Standards Summary (Form VIII)
- P Pesticide/PCB Standards Summary (Form IX)
- NA Pesticide/PCB Identification (Form X) - for positive results only
- P Pesticide/PCB Standard Chromatograms and Data System Printouts

Reagent Blank data

- P Organic Analysis Data Sheets (Form I)
- P GC/EC Chromatograms and Data System Printouts

Matrix Spike/Matrix Spike Duplicate Data

- P Organic Analysis Data Sheets
- P GC/EC Chromatograms and Data System Printouts

KEY: P = Provided in original data package, as required by contract
R = Provided as Resubmission
NP = Not provided in original data package or as resubmission
NR = Not required under contract
NA = Not applicable to this data package or analysis

ORGANIC DATA QUALITY ASSURANCE REVIEW

I. DELIVERABLES

All deliverables were present as specified in the statement of work.

PEST/PCB: Yes X No ___

Comments: NONE

II. HOLDING TIMES

All CLP-SOW holding times were met.

PEST/PCB: Yes X No ___

Comments: NONE

All 40 CFR Part 136 holding times were met.

PEST/PCB: Yes X No ___

Comments: NONE

III. SURROGATE COMPOUND RECOVERY

Surrogate compound recovery analysis was performed according to contract requirements and results met specified control limits.

PEST/PCB: Yes X No ___

Comments: NONE

IV. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Matrix Spike/Matrix Spike Duplicate analysis was performed according to contract requirements and results met recommended recovery and precision limits.

PEST/PCB: Yes X No ___

Comments: NONE

V. INTERNAL STANDARD AREA

Internal standard area analysis was performed according to contract requirements and results met specified control limits.

PEST/PCB: Yes ___ No ___ N/A X

Comments: NONE

VI. PESTICIDES / PCBS STANDARDS CRITERIA

The pesticide linearity check criteria were met for the quantitation column.

Yes X No ___

Comments: NONE

The breakdown of 4,4'DDT and of Endrin was less than 20%.

Yes X No ___

Comments: NONE

The dibutylchlorendate (DBC) retention time shifts were within the specified control limits.

Yes X No ___

Comments: NONE

The pesticide standard compounds showed a % difference of the calibration factor of no more than 15% for the quantification runs and 20% for the confirmation runs for all compounds identified.

Yes X No ___

Comments: NONE

The retention time of 4,4'DDT was greater than or equal to 12 minutes, for all columns.

Yes X No ___

Comments: NONE

VII. LABORATORY BLANK ANALYSIS RESULTS

Blank ID	Date	Contaminants	Concentration	CRQL	Associated Samples
5097MB	3/28	NONE			ALL

Comments: NONE

VIII. SAMPLE RESULTS

The sample results were reviewed and all compound identifications were acceptable and met contract requirements.

PEST/PCBs: Yes ___ No ___ N/A X

Comments: There were no confirmed positive pesticide or PCB identifications in the samples.

IX. Additional Comments or Problems/Resolutions not addressed above.

NONE

ORGANIC DATA QUALITY ASSURANCE REVIEW

REGION VIII

DATA QUALIFIER DEFINITIONS

For the purpose of Data Validation, the following code letters and associated definitions are provided for use by the data validator to summarize the data quality. Use of additional qualifiers should be carefully considered. Definitions for all qualifiers used should be provided with each report.

GENERAL QUALIFIERS for use with both INORGANIC and ORGANIC DATA

R - Quality Control indicates that any positive values or reported detection limits are not reliable. Reported value is "rejected". Resampling or reanalysis may be necessary to verify the presence or absence of the compound.

J - The associated numerical value is an estimated quantity because:
1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - ORGANICS analysis only.

U J - The reported detection limit is estimated because Quality Control criteria were not met. Compound was not detected.

J N - Estimated value of a tentatively identified compound (TIC). Normal standard calibration and Quality Control Criteria do not apply for the reported result - ORGANICS analysis only.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HL951

Lab Name: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097A

Sample wt/vol: 1.1 (g/mL) G Lab File ID: F15097A

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 31 Date Analyzed: 03/30/91

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	66	U
74-83-9	Bromomethane	66	U
75-01-4	Vinyl Chloride	66	U
75-00-3	Chloroethane	66	U
75-09-2	Methylene Chloride	7	BJ
67-64-1	Acetone	53	J
75-15-0	Carbon Disulfide	33	U
75-35-4	1,1-Dichloroethene	33	U
75-34-3	1,1-Dichloroethane	33	U
540-59-0	1,2-Dichloroethene (total)	33	U
67-66-3	Chloroform	33	U
107-06-2	1,2-Dichloroethane	33	U
78-93-3	2-Butanone	66	U
71-55-6	1,1,1-Trichloroethane	33	U
56-23-5	Carbon Tetrachloride	33	U
108-05-4	Vinyl Acetate	66	U
75-27-4	Bromodichloromethane	33	U
78-87-5	1,2-Dichloropropane	33	U
10061-01-5	cis-1,3-Dichloropropene	33	U
79-01-6	Trichloroethene	33	U
124-48-1	Dibromochloromethane	33	U
79-00-5	1,1,2-Trichloroethane	33	U
71-43-2	Benzene	33	U
10061-02-6	trans-1,3-Dichloropropene	33	U
75-25-2	Bromoform	33	U
108-10-1	4-Methyl-2-pentanone	66	U
591-78-6	2-Hexanone	66	U
127-18-4	Tetrachloroethene	33	U
79-34-5	1,1,2,2-Tetrachloroethane	33	U
108-88-3	Toluene	33	U
108-90-7	Chlorobenzene	33	U
100-41-4	Ethylbenzene	33	U
100-42-5	Styrene	33	U
1330-20-7	Xylenes (total)	33	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HL951RE

Lab Name: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097ARE

Sample wt/vol: 5.1 (g/mL) G Lab File ID: F15097ARE

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 31 Date Analyzed: 03/30/91

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	2	BJX
67-64-1	Acetone	35	
75-15-0	Carbon Disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon Tetrachloride	7	U
108-05-4	Vinyl Acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Xylenes (total)	7	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HL951RE

Lab Name: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097ARE

Sample wt/vol: 5.1 (g/mL) G Lab File ID: F15097ARE

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 31 Date Analyzed: 03/30/91

Column (pack/cap) PACK Dilution Factor: 1.00

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

LE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HL952

ALYTICAL RESOURCES INC. Contract: 68D90023

. ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

X: (soil/water) SOIL Lab Sample ID: 5097B

mple wt/vol: 1.1 (g/mL) G Lab File ID: F15097B

evel: (low/med) LOW Date Received: 03/23/91

Moisture: not dec. 24 Date Analyzed: 03/30/91

olumn: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	60	U
74-83-9	Bromomethane	60	U
75-01-4	Vinyl Chloride	60	U
75-00-3	Chloroethane	60	U
75-09-2	Methylene Chloride	6	BJ
67-64-1	Acetone	270	
75-15-0	Carbon Disulfide	30	U
75-35-4	1,1-Dichloroethene	30	U
75-34-3	1,1-Dichloroethane	30	U
540-59-0	1,2-Dichloroethene (total)	30	U
67-66-3	Chloroform	30	U
107-06-2	1,2-Dichloroethane	30	U
78-93-3	2-Butanone	60	U
71-55-6	1,1,1-Trichloroethane	30	U
56-23-5	Carbon Tetrachloride	30	U
108-05-4	Vinyl Acetate	60	U
75-27-4	Bromodichloromethane	30	U
78-87-5	1,2-Dichloropropane	30	U
10061-01-5	cis-1,3-Dichloropropene	30	U
79-01-6	Trichloroethene	30	U
124-48-1	Dibromochloromethane	30	U
79-00-5	1,1,2-Trichloroethane	30	U
71-43-2	Benzene	6	J
10061-02-6	trans-1,3-Dichloropropene	30	U
75-25-2	Bromoform	30	U
108-10-1	4-Methyl-2-pentanone	60	U
591-78-6	2-Hexanone	60	U
127-18-4	Tetrachloroethene	30	U
79-34-5	1,1,2,2-Tetrachloroethane	30	U
108-88-3	Toluene	30	U
108-90-7	Chlorobenzene	30	U
100-41-4	Ethylbenzene	8	J
100-42-5	Styrene	30	U
1330-20-7	Xylenes (total)	61	

00044

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HL952

Lab Name: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097B

Sample wt/vol: 1.1 (g/mL) G Lab File ID: F15097B

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 24 Date Analyzed: 03/30/91

Column (pack/cap) PACK Dilution Factor: 1.0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	110-82-7	CYCLOHEXANE(DOT	11.40	40	J
2.	108-87-2	METHYLCYCLOHEXANE	17.50	58	J
3.		C7.H10 ISOMER (BP M/E 79)	20.80	27	J
4.		C10.H16 ISOMER (BP M/E 93)	24.00	190	J
5.		COELUTING TRIMETHYL-BICYCLOH	24.97	78	J
6.		C10.H16.O ISOMER (BP M/E 95)	27.64	240	J
7.		C10.H16 ISOMER (BP M/E 91)	29.31	43	J
8.		UNKNOWN (BP M/E 105)	31.47	36	J

1B

EMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HL951

me: ANALYTICAL RESOURCES INC. Contract: 68D90023

Code: ARI Case No.: 16115 SAS No.: SDG No.: HL951

rix: (soil/water) SOIL Lab Sample ID: 5097A

le wt/vol: 31.8 (g/mL) G Lab File ID: F45097A

el: (low/med) LOW Date Received: 03/23/91

isture: not dec. 31 dec. 32 Date Extracted: 03/28/91

action: (SepF/Cont/Sonc) SONC Date Analyzed: 04/01/91

Cleanup: (Y/N) Y pH: 10.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	920	U
111-44-4	bis(2-Chloroethyl)ether	920	U
95-57-8	2-Chlorophenol	920	U
541-73-1	1,3-Dichlorobenzene	920	U
106-46-7	1,4-Dichlorobenzene	920	U
100-51-6	Benzyl alcohol	920	U
95-50-1	1,2-Dichlorobenzene	920	U
95-48-7	2-Methylphenol	920	U
108-60-1	bis(2-Chloroisopropyl)ether	920	U
106-44-5	4-Methylphenol	920	U
621-64-7	N-Nitroso-di-n-propylamine	920	U
67-72-1	Hexachloroethane	920	U
98-95-3	Nitrobenzene	920	U
78-59-1	Isophorone	920	U
88-75-5	2-Nitrophenol	920	U
105-67-9	2,4-Dimethylphenol	920	U
65-85-0	Benzoic Acid	4400	U
111-91-1	bis(2-Chloroethoxy)methane	920	U
120-83-2	2,4-Dichlorophenol	920	U
120-82-1	1,2,4-Trichlorobenzene	920	U
91-20-3	Naphthalene	920	U
106-47-8	4-Chloroaniline	920	U
87-68-3	Hexachlorobutadiene	920	U
59-50-7	4-Chloro-3-methylphenol	920	U
91-57-6	2-Methylnaphthalene	920	U
77-47-4	Hexachlorocyclopentadiene	920	U
88-06-2	2,4,6-Trichlorophenol	920	U
95-95-4	2,4,5-Trichlorophenol	4400	U
91-58-7	2-Chloronaphthalene	920	U
88-74-4	2-Nitroaniline	4400	U
131-11-3	Dimethylphthalate	920	U
208-96-8	Acenaphthylene	920	U
606-20-2	2,6-Dinitrotoluene	920	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HL951

Lab: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097A

Sample wt/vol: 31.8 (g/mL) G Lab File ID: F45097A

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 31 dec. 32 Date Extracted: 03/28/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/01/91

Cleanup: (Y/N) Y pH: 10.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4400	U
83-32-9	Acenaphthene	920	U
51-28-5	2,4-Dinitrophenol	4400	U
100-02-7	4-Nitrophenol	4400	U
132-64-9	Dibenzofuran	920	U
121-14-2	2,4-Dinitrotoluene	920	U
84-66-2	Diethylphthalate	920	U
7005-72-3	4-Chlorophenyl-phenylether	920	U
86-73-7	Fluorene	920	U
100-01-6	4-Nitroaniline	4400	U
534-52-1	4,6-Dinitro-2-methylphenol	4400	U
86-30-6	N-Nitrosodiphenylamine (1)	920	U
101-55-3	4-Bromophenyl-phenylether	920	U
118-74-1	Hexachlorobenzene	920	U
87-86-5	Pentachlorophenol	4400	U
85-01-8	Phenanthrene	920	U
120-12-7	Anthracene	920	U
84-74-2	Di-n-butylphthalate	920	U
206-44-0	Fluoranthene	920	U
129-00-0	Pyrene	920	U
85-68-7	Butylbenzylphthalate	920	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
56-55-3	Benzo(a)anthracene	920	U
218-01-9	Chrysene	920	U
117-81-7	bis(2-Ethylhexyl)phthalate	920	U
117-84-0	Di-n-octylphthalate	920	U
205-99-2	Benzo(b)fluoranthene	920	U
207-08-9	Benzo(k)fluoranthene	920	U
50-32-8	Benzo(a)pyrene	920	U
193-39-5	Indeno(1,2,3-cd)pyrene	920	U
53-70-3	Dibenz(a,h)anthracene	920	U
191-24-2	Benzo(g,h,i)perylene	920	U

(1) - Cannot be separated from Diphenylamine

00144

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HL951

Lab Name: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097A

Sample wt/vol: 31.8 (g/mL) G Lab File ID: F45097A

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 31 dec. 32 Date Extracted: 03/28/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/01/91

GC Cleanup: (Y/N) Y pH: 10.3 Dilution Factor: 1.0

Number TICs found: 11 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN (BP M/E 43)	3.42	3700	J
2.	C9.H20 ISOMER (BP M/E 43)	3.65	1500	J
3.	C10.H22 ISOMER (BP M/E 57)	3.87	910	J
4.	UNKNOWN (BP M/E 43)	5.27	1500	J
5.	UNKNOWN (BP M/E 43)	5.70	590	J
6.	UNKNOWN (BP M/E 43)	6.35	1200	J
7.	UNKNOWN (BP M/E 43)	7.92	390	J
8.	UNKNOWN (BP M/E 43)	8.84	1100	J
9.	UNKNOWN (BP M/E 43)	15.94	440	J
10.	UNKNOWN (BP M/E 43)	19.72	820	J
11.	UNKNOWN HC (BP M/E 57)	33.81	430	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HL952

Lab Name: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097BR

Sample wt/vol: 33.1 (g/mL) G Lab File ID: F45097BR

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 24 dec. 23 Date Extracted: 03/28/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/91

GPC Cleanup: (Y/N) Y pH: 9.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	780	U
111-44-4	bis(2-Chloroethyl)ether	780	U
95-57-8	2-Chlorophenol	780	U
541-73-1	1,3-Dichlorobenzene	780	U
106-46-7	1,4-Dichlorobenzene	780	U
100-51-6	Benzyl alcohol	780	U
95-50-1	1,2-Dichlorobenzene	780	U
95-48-7	2-Methylphenol	780	U
108-60-1	bis(2-Chloroisopropyl)ether	780	U
106-44-5	4-Methylphenol	780	U
621-64-7	N-Nitroso-di-n-propylamine	780	U
67-72-1	Hexachloroethane	780	U
98-95-3	Nitrobenzene	780	U
78-59-1	Isophorone	780	U
88-75-5	2-Nitrophenol	780	U
105-67-9	2,4-Dimethylphenol	780	U
65-85-0	Benzoic Acid	3800	U
111-91-1	bis(2-Chloroethoxy)methane	780	U
120-83-2	2,4-Dichlorophenol	780	U
120-82-1	1,2,4-Trichlorobenzene	780	U
91-20-3	Naphthalene	120	J
106-47-8	4-Chloroaniline	780	U
87-68-3	Hexachlorobutadiene	780	U
59-50-7	4-Chloro-3-methylphenol	780	U
91-57-6	2-Methylnaphthalene	86	J
77-47-4	Hexachlorocyclopentadiene	780	U
88-06-2	2,4,6-Trichlorophenol	780	U
95-95-4	2,4,5-Trichlorophenol	3800	U
91-58-7	2-Chloronaphthalene	780	U
88-74-4	2-Nitroaniline	3800	U
131-11-3	Dimethylphthalate	780	U
208-96-8	Acenaphthylene	780	U
606-20-2	2,6-Dinitrotoluene	780	U

00165

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HL952

Lab Name: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097BR

Sample wt/vol: 33.1 (g/mL) G Lab File ID: F45097BR

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 24 dec. 23 Date Extracted: 03/28/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/91

GPC Cleanup: (Y/N) Y pH: 9.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800	U
83-32-9	Acenaphthene	80	J
51-28-5	2,4-Dinitrophenol	3800	U
100-02-7	4-Nitrophenol	3800	U
132-64-9	Dibenzofuran	54	J
121-14-2	2,4-Dinitrotoluene	780	U
84-66-2	Diethylphthalate	780	U
7005-72-3	4-Chlorophenyl-phenylether	780	U
86-73-7	Fluorene	110	J
100-01-6	4-Nitroaniline	3800	U
534-52-1	4,6-Dinitro-2-methylphenol	3800	U
86-30-6	N-Nitrosodiphenylamine (1)	780	U
101-55-3	4-Bromophenyl-phenylether	780	U
118-74-1	Hexachlorobenzene	780	U
87-86-5	Pentachlorophenol	3800	U
85-01-8	Phenanthrene	1000	
120-12-7	Anthracene	140	J
84-74-2	Di-n-butylphthalate	780	U
206-44-0	Fluoranthene	1000	
129-00-0	Pyrene	410	J
85-68-7	Butylbenzylphthalate	780	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)anthracene	410	J
218-01-9	Chrysene	760	J
117-81-7	bis(2-Ethylhexyl)phthalate	620	J
117-84-0	Di-n-octylphthalate	780	U
205-99-2	Benzo(b)fluoranthene	410	JX
207-08-9	Benzo(k)fluoranthene	410	JX
50-32-8	Benzo(a)pyrene	780	U
193-39-5	Indeno(1,2,3-cd)pyrene	780	U
53-70-3	Dibenz(a,h)anthracene	780	U
191-24-2	Benzo(g,h,i)perylene	780	U

(1) - Cannot be separated from Diphenylamine

00166

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HL952

Lab Name: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097BR

Sample wt/vol: 33.1 (g/mL) G Lab File ID: F45097BR

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 24 dec. 23 Date Extracted: 03/28/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/91

GPC Cleanup: (Y/N) Y pH: 9.3 Dilution Factor: 1.0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN (BP M/E 43)	3.42	2400	J
2.		UNKNOWN (BP M/E 43)	5.28	2000	J
3.		UNKNOWN HC (BP M/E 57)	23.05	1100	J
4.	57-10-3	HEXADECANOIC ACID	23.85	1300	J
5.		UNKNOWN (BP M/E 223)	25.52	3500	J
6.		UNKNOWN (BP M/E 73)	25.74	1300	J
7.		UNKNOWN HC (BP M/E 57)	26.72	5100	J
8.		UNKNOWN HC (BP M/E 57)	27.84	8900	J
9.		UNKNOWN HC (BP M/E 57)	28.92	7000	J
10.		UNKNOWN (BP M/E 55)	29.36	3700	J
11.		UNKNOWN HC (BP M/E 57)	29.97	8200	J
12.		UNKNOWN HC (BP M/E 57)	30.97	6200	J
13.		UNKNOWN HC (BP M/E 57)	31.96	7600	J
14.		UNKNOWN HC (BP M/E 57)	32.91	7600	J
15.		UNKNOWN HC (BP M/E 57)	33.84	6600	J
16.		UNKNOWN HC (BP M/E 57)	34.76	9300	J
17.		UNKNOWN (BP M/E 191)	35.21	6100	J
18.		UNKNOWN (BP M/E 191)	35.96	4900	J
19.		UNKNOWN HC (BP M/E 43)	36.24	5700	J
20.		UNKNOWN (BP M/E 43)	37.59	5800	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HL951

Lab Name: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097A

Sample wt/vol: 31.8 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 31 dec. 32 Date Extracted: 03/28/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/91

GPC Cleanup: (Y/N) Y pH: 10.3 Dilution Factor: 1.00

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	44	U
72-55-9	4,4'-DDE	44	U
72-20-8	Endrin	44	U
33213-65-9	Endosulfan II	44	U
72-54-8	4,4'-DDD	44	U
1031-07-8	Endosulfan sulfate	44	U
50-29-3	4,4'-DDT	44	U
72-43-5	Methoxychlor	220	U
53494-70-5	Endrin ketone	44	U
5103-71-9	alpha-Chlordane	220	U
5103-74-2	gamma-Chlordane	220	U
8001-35-2	Toxaphene	440	U
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	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	440	U
11096-82-5	Aroclor-1260	440	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HL952

Lab: ANALYTICAL RESOURCES INC. Contract: 68D90023

Lab Code: ARI Case No.: 16115 SAS No.: _____ SDG No.: HL951

Matrix: (soil/water) SOIL Lab Sample ID: 5097B

Sample wt/vol: 33.1 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/23/91

% Moisture: not dec. 24 dec. 23 Date Extracted: 03/28/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/91

GPC Cleanup: (Y/N) Y pH: 9.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	19	U
319-85-7	beta-BHC	19	U
319-86-8	delta-BHC	19	U
58-89-9	gamma-BHC (Lindane)	19	U
76-44-8	Heptachlor	19	U
309-00-2	Aldrin	19	U
1024-57-3	Heptachlor epoxide	19	U
959-98-8	Endosulfan I	19	U
60-57-1	Dieldrin	38	U
72-55-9	4,4'-DDE	38	U
72-20-8	Endrin	38	U
33213-65-9	Endosulfan II	38	U
72-54-8	4,4'-DDD	38	U
1031-07-8	Endosulfan sulfate	38	U
50-29-3	4,4'-DDT	38	U
72-43-5	Methoxychlor	190	U
53494-70-5	Endrin ketone	38	U
5103-71-9	alpha-Chlordane	190	U
5103-74-2	gamma-Chlordane	190	U
8001-35-2	Toxaphene	380	U
12674-11-2	Aroclor-1016	190	U
11104-28-2	Aroclor-1221	190	U
11141-16-5	Aroclor-1232	190	U
53469-21-9	Aroclor-1242	190	U
12672-29-6	Aroclor-1248	190	U
11097-69-1	Aroclor-1254	380	U
11096-82-5	Aroclor-1260	380	U

00321

REGION VIII
SUMMARY OF CLP DATA QUALITY ASSURANCE REVIEW
ORGANICS - VOA, BNA, PEST/PCB

CASE/SAS NO.	SITE NAME		OPERABLE UNIT
16324	Redwood Road Dump		ZZ
RPM NAME	ESAT TID: 08-9103-536		
Luke Chavez	ESAT WAD: 27		
CONTRACTOR LABORATORY	CONTRACT NO.	REPORT NO.	LABORATORY DPO/REGION
Mid-Pacific Environmental Laboratory	68-D0-0157	SDG-HN907	Kent Kitchingman/IX

Review Assigned Date 08/13/91 Data Reviewer Lynn A. Kubowicz/ESAT

Review Completion Date 09/13/91

SAMPLE ID	SAMPLE LOCATION	MATRIX
HN907	RD-SO-01	SOIL
HN908	RD-SO-02	SOIL
HN909	RD-SO-03	SOIL
HN910	RD-SO-04	SOIL
HN911	RD-SO-05	SOIL
HN912	RD-SO-08	SOIL
HN913	RD-SO-09	SOIL
HN914	RD-SO-10	SOIL
HN915	RD-SE-01	SOIL
HN916	RD-SE-02	SOIL
HN917	RD-SE-03	SOIL

ORGANIC DATA QUALITY ASSURANCE REVIEW

DATA QUALITY STATEMENT*
( ) Data are ACCEPTABLE according to EPA Functional Guidelines with no qualifiers (flags) added by the reviewer.
( ) Data are UNACCEPTABLE according to EPA Functional Guidelines.
(X) Data are acceptable with QUALIFICATIONS noted in review.

Telephone/Communication Logs Enclosed? Yes ___ No X

DPO Attention Required? Yes X No ___ If yes, list the items that require attention: Holding time violations; calibration, surrogate and matrix spike problems; and blank contamination. See Volatiles sections II and VI, Semi-volatiles sections II, IV, VI, and X, and Pesticides/PCBs sections V and VI.

* Please see Data Qualifier Definitions, attached to the end of this report.

ORGANIC DATA QUALITY ASSURANCE REVIEW

REVIEW NARRATIVE SUMMARY

This data package was reviewed according to the EPA document "Laboratory Data Validation Functional Guidelines For Evaluating Organics Analyses" 12/90 draft, 6/91 revision.

Case 16324 SDG HN907 consisted of 11 soil samples for full CLP RAS organics analysis.

40 CFR holding time was exceeded for one semivolatile sample. Results were qualified by the data reviewer as estimated "J" or undetected estimated "UJ".

One volatile compound, acetone, had a %RSD outside quality control limits for the initial calibration, and six volatile compounds were outside %D control limits for continuing calibrations. Positive results were qualified as estimated "J" and non-detects as undetected estimated "UJ" by the data reviewer.

Four semivolatile compounds had % RSDs outside quality control limits for initial calibration. Fifteen compounds had % D outside control limits for continuing calibration. See section IV for an explanation of qualifications.

Surrogate recoveries were outside quality control limits for three volatile samples; this did not result in the qualification of data. Surrogate recoveries were outside quality control limits for two pesticide samples. Positive results in samples HN908 and HN914 were qualified as estimated "J", and non-detects in sample HN908 were qualified as undetected estimated "UJ" by the data reviewer.

All semivolatile surrogate recoveries were within quality control limits. However, the laboratory had hand-corrected five of the eight surrogate recoveries on the quantitation reports, but these corrections were not made on Form II. The corrected recoveries were checked by the data reviewer and were all found to be within quality control limits.

One volatile matrix spike percent recovery was outside quality control limits; no qualification of the data was necessary. One pesticide matrix spike recovery was below quality control limits. No qualification of the data was added by the data reviewer.

In the semivolatile matrix spike/matrix spike duplicate analysis, pyrene recovery is a negative value. Pyrene was present in the unspiked sample, HN907, at 2700 ug/Kg. There is poor replication of amounts of unspiked compounds in HN907, HN907MS, and HN907MSD. No qualification of the data was added.

One semivolatile compound was detected in the blank associated with all samples except HN915. Sample quantitation limits were raised accordingly.

All tentatively identified compounds (TIC) have been qualified as "JN" by the data reviewer. See the data qualifier definitions at the end of this report for details.

The OTR lists the sampling date of HN917 as 04/3/91; all other samples in this SDG are listed as 04/30/91. A note from the laboratory to SMO on 05/09/91 mentions this, and states that the bottles all have 04/30/91 listed as the sampling date, including HN917. The data reviewer assumed that all samples were taken on 04/30/91. Technical holding times were calculated from that date for all samples.

The following table lists all compounds with qualification added by the data reviewer.

ORGANIC DATA QUALITY ASSURANCE REVIEW

This data set contains numerous quality control violations. Often specific compounds have multiple violations. In order to minimize confusion in the following summary tables, the data reviewer lists the sample number for only the first violation for which a data qualifier was added. The details of all the violations for each compound can be found in the appropriate section of the data review.

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VOLATILE COMPOUND	SAMPLE NUMBER	QUALIFIER	REASON FOR QUALIFICATION	REVIEW SECTION
acetone	ALL	J or UJ	HIGH INITIAL CALIBRATION %RSD	IV
cis-1,3-dichloropropene	ALL	UJ	CONTINUING CALIBRATION	IV
chloromethane; methylene chloride; 2-butanone; trans-1,3-dichloropropene	HN910RE HN911 HN914RE HN915 HN916 HN917	UJ		

SEMIVOLATILE COMPOUND	SAMPLE NUMBER	QUALIFIER	REASON FOR QUALIFICATION	REVIEW SECTION
ALL	HN915	J or UJ	HOLDING TIME VIOLATION	II
3-nitroaniline 4,6-dinitro-2-methylphenol	ALL	UJ	HIGH INITIAL CALIBRATION %RSD	IV
hexachlorocyclopentadiene hexachlorobenzene	ALL	J or UJ	CONTINUING CALIBRATION	IV
4-nitroaniline di-n-octylphthalate	HN908 HN909 HN910 HN913 HN914 HN915 HN916 HN917	J or UJ		
pentachlorophenol	HN908 HN914 HN916 HN917	J or UJ		
4-chloroaniline N-nitrosodiphenylamine di-n-butylphthalate	HN907 HN911 HN912	J or UJ		

2,4-dinitrophenol	HN907 HN909 HN910 HN911 HN912 HN913 HN915	J or UJ	CONTINUING CALIBRATION	IV
2,4-dimethylphenol 4-bromophenyl phenyl ether carbazole bis(2-ethylhexyl)phthalate	HN909 HN910 HN913 HN915	J or UJ		
N-nitrosodiphenylamine	HN907	88UJ	BLANK CONTAMINATION	X
	HN908	130U		
	HN910	63U		
	HN911	81UJ		
	HN913	84U		
	HN914	110U		
	HN916	91U		
	HN917	140U		

PESTICIDE COMPOUND	SAMPLE NUMBER	QUALIFIER	REASON FOR QUALIFICATION	REVIEW SECTION
ALL	HN908	J or UJ	LOW SURROGATE RECOVERIES	V
methoxychlor	HN914	J	HIGH SURROGATE RECOVERIES	V

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ORGANIC DATA QUALITY ASSURANCE REVIEW

SOW Number 03/90

RAS ORGANIC DATA COMPLETENESS CHECKLIST

P Case Narrative

VOA

Quality Control Summary Package
- P Surrogate Recovery Summary (Form II)
- P MS/MSD Summary (Form III)
- P Method Blank Summary (Form IV)
- P GC/MS Tuning and Mass Calibration (Form V)

Sample Data Package
- P Holding Times (SMO Sample Traffic Reports)
- P Organic Analysis Data Sheets (Form I)
- P Reconstructed Ion Chromatogram(s) (RIC)
- P Quantitation Reports
- P Mass Spectral Data
- P EPA/NIH Mass Spectral Library Search for TICs

Standards Data Package
- NR Current List of Laboratory/Instrument Detection Limits
- P Initial Calibration Data (Form VI) for each instrument
- P Continuing Calibration Data (Form VII) for each instrument
- P Internal Standard Area Summary (Form VIII)
- P VOA Standards RICs
- P VOA Standards Quantitation Reports

Raw QC Package
- P BFB mass spectra and mass listings

Reagent Blank data
- P Organic Analysis Data Sheets (Form I)
- P RIC or Total Ion Chromatogram
- P Quantitation Reports
- NR Mass Spectral Data
- NR EPA/NIH Library Search for TICs

Matrix Spike/Matrix Spike Duplicate Data
- P Organic Analysis Data Sheets
- P RIC
- P Quantitation Reports
- NR Mass Spectral Data
- NR EPA/NIH Library search for TICs

KEY: P = Provided in original data package, as required by contract
R = Provided as Resubmission
NP = Not provided in original data package or as resubmission
NR = Not required under contract
NA = Not applicable to this data package or analysis

ORGANIC DATA QUALITY ASSURANCE REVIEW

I. **DELIVERABLES**
All deliverables were present as specified in the statement of work.

VOA: Yes _X_ No ____

Comments: NONE

II. **HOLDING TIMES**
All **CLP-SOW** holding times were met.

VOA: Yes _X_ No ____

Comments: NONE

All 40 CFR Part 136 holding times were met.

VOA: Yes _X_ No ___

Comments: NONE.

III. **BFB PERFORMANCE RESULTS**

VOA: The BFB performance results were within the specified control limits. All appropriate BFB results were included.

Yes _X_ No ____

Comments: NONE

IV. **INSTRUMENT CALIBRATIONS: STANDARDS and BLANKS**
Initial instrument calibrations were performed according to contract requirements and met the specified control limits.

VOA: Yes ___ No _X_

Comments: Acetone was outside control limits for the initial calibration. Positive results in two samples were qualified as estimated "J" and non-detects in all other samples were qualified as undetected estimated "UJ" by the data reviewer. Listed below are the qualified samples, the percent relative standard deviation (%RSD), and the quality control requirement for %RSD.

COMPOUND	DATE	%RSD	QC %RSD	QUALIFIER ADDED	QUALIFIED SAMPLES
acetone	05/09/91	41.1	30.0	J	HN909, HN915
				UJ	ALL OTHERS

Continuing instrument calibration was performed according to contract requirements and met specified control limits.

VOA: Yes ___ No X

Comments: Six compounds were outside control limits for the continuing calibrations. Acetone was the only one of these compounds found, and it had been previously qualified due to a high initial calibration %RSD, so no additional qualification was added by the data reviewer. The other compounds were undetected and were qualified as undetected estimated "UJ" in the samples associated with the out of control standards. Listed below are the compounds, the percent differences (%D), the quality control requirements for %D, and the qualifications added.

COMPOUND	DATE	%D	QC %D	QUALIFIER ADDED	QUALIFIED SAMPLES
acetone	05/13/91	-49.0	25.0	J	HN909
				UJ	HN907 HN908 HN908RE HN910 HN912 HN913 HN914
cis-1,3-dichloropropene	05/13/91	31.0	25.0	UJ	HN907 HN908 HN908RE HN910 HN912 HN913 HN914
acetone	05/14/91	-59.1	25.0	J	HN915
				UJ	HN910RE HN911 HN914RE HN916 HN917
chloromethane	05/14/91	30.5	25.0	UJ	HN910RE HN911 HN914RE HN915 HN916 HN917
methylene chloride	05/14/91	-25.7	25.0	UJ	
2-butanone	05/14/91	-25.3	25.0	UJ	
cis-1,3-dichloropropene	05/14/91	25.8	25.0	UJ	
trans-1,3-dichloropropene	05/14/91	28.3	25.0	UJ	

V. SURROGATE COMPOUND RECOVERY

Surrogate compound recovery analysis was performed according to contract requirements and results met specified control limits.

VOA: Yes ___ No _X_

Comments: Three samples were outside control limits for surrogate compound recovery. The recoveries for toluene-D_8 (TOL) are high. Reanalysis of each sample yielded similarly high results. No positive results are associated with any of these samples, so no qualification was added by the data reviewer. Listed below are the sample numbers, and toluene-D_8 surrogate recoveries (%R) and quality control limits.

SAMPLE	(TOL) % R	(TOL) QC LIMITS	QUALIFICATIONS
HN908	143	84-138	NONE
HN908RE	145	84-138	NONE
HN910	155	84-138	NONE
HN910RE	151	84-138	NONE
HN914	177	84-138	NONE
HN914RE	169	84-138	NONE

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Matrix Spike/Matrix Spike Duplicate analysis was performed according to contract requirements and results met recommended recovery and precision limits.

VOA: Yes ___ No _X_

Comments: Matrix spike/matrix spike duplicate analysis was performed on sample HN909. Listed below are the recoveries, RPD, and quality control limits for toluene, the only compound outside control limits. The asterisks (*) denote the values outside control limits. No qualifications were added by the data reviewer on the basis of matrix spike results alone.

SAMPLE	COMPOUND	MS %REC	MSD %REC	% REC QC LIMITS	RPD	RPD QC LIMITS
HN909	toluene	170 *	96	59-139	56 *	21

VII. **INTERNAL STANDARD AREA**

Internal standard area analysis was performed according to contract requirements and results met specified control limits.

VOA: Yes _X_ No ___

Comments: NONE.

VIII. **LABORATORY / INSTRUMENT DETECTION LIMITS**

All Quarterly Laboratory/Instrument Detection Limits met contract requirements.

VOA: Yes ___ No ___ N/A _X_

Comments: NONE

X. **LABORATORY BLANK ANALYSIS RESULTS**

Blank ID	Date	Contaminants	Concentration	CRQL	Associated Samples
VBLK3	05/13/91	NONE	----	----	HN907, HN908, HN908RE HN909, HN910, HN912 HN913, HN914
VBLK4	05/14/91	NONE	----	----	HN910RE, HN911, HN914RE HN915, HN916, HN917

Comments: There was no blank contamination in either of the volatile blanks.

XI. **SAMPLE RESULTS**

The sample results were reviewed and all compound identifications were acceptable and met contract requirements.

VOA: Yes _X_ No ___

Comments: NONE.

XII. **Additional Comments or Problems/Resolutions not addressed above.**

NONE.

ORGANIC DATA QUALITY ASSURANCE REVIEW

SOW Number 03/90

RAS ORGANIC DATA COMPLETENESS CHECKLIST

P Case Narrative

BNA

Quality Control Summary Package
- P Surrogate Recovery Summary (Form II)
- P MS/MSD Summary (Form III)
- P Method Blank Summary (Form IV)
- P GC/MS Tuning and Mass Calibration (Form V)

Sample Data Package
- P Holding Times (SMO Sample Traffic Reports)
- P Organic Analysis Data Sheets (Form I)
- P Reconstructed Ion Chromatogram(s) (RIC)
- P Quantitation Reports
- P Mass Spectral Data
- P EPA/NIH Mass Spectral Library Search for TICs

Standards Data Package
- NR Current List of Laboratory/Instrument Detection Limits
- P Initial Calibration Data (Form VI) for each instrument
- P Continuing Calibration Data (Form VII) for each instrument
- P Internal Standard Area Summary (Form VIII)
- P BNA Standards RICs
- P BNA Standards Quantitation Reports

Raw QC Package
- P DFTPP mass spectra and mass listings

Reagent Blank data
- P Organic Analysis Data Sheets (Form I)
- P RIC or Total Ion Chromotogram
- P Quantitation Reports
- NR Mass Spectral Data
- NR EPA/NIH Library Search for TICs

Matrix Spike/Matrix Spike Duplicate Data
- P Organic Analysis Data Sheets (Form I)
- P RIC or Total Ion Chromatogram
- P Quantitation Reports
- NR Mass Spectral Data
- NR EPA/NIH Library search for TICs

KEY: P = Provided in original data package, as required by contract
R = Provided as Resubmission
NP = Not provided in original data package or as resubmission
NR = Not required under contract
NA = Not applicable to this data package or analysis

ORGANIC DATA QUALITY ASSURANCE REVIEW

I. **DELIVERABLES**

All deliverables were present as specified in the statement of work.

BNA: Yes _X_ No ____

Comments: NONE.

II. **HOLDING TIMES**

All **CLP-SOW** holding times were met.

BNA: Yes ____ No _X_

Comments: One sample, HN915, was extracted five days outside the SOW holding time. All positive results in this sample were qualified as estimated "J" and non-detects as undetected estimated "UJ" by the data reviewer.

All **40 CFR Part 136** holding times were met.

BNA: Yes ____ No _X_

Comments: One sample, HN915, was extracted seven days outside the 40 CFR recommended holding time. No additional qualification was added by the data reviewer for the holding time violation.

III. **DFTPP PERFORMANCE RESULTS**

The DFTPP performance results were within the specified control limits. All appropriate BFB results were included.

BNA: Yes _X_ No ____

Comments: NONE.

IV. **INSTRUMENT CALIBRATIONS: STANDARDS and BLANKS**

Initial instrument calibrations were performed according to contract requirements and met the specified control limits.

BNA: Yes ___ No _X_

Comments: Four compounds had %RSDs above the quality control limit of 30.0%. One of these compounds also had a RRF20 below the minimum quality control limit of 0.050. The lowest concentration standard was dropped from each compound and the %RSDs were recalculated as if a four-point curve had been used. Two compounds then had %RSDs within control limits. No qualification was added to sample results for these compounds. The other two compounds still had %RSDs outside control limits. These compounds were qualified by the data reviewer as undetected estimated "UJ" in all samples. The compound with the low RRF20, 2,4-dinitrophenol, had a %RSD within

control limits when the RRF20 was dropped from the calculation. No action was taken by the data reviewer for the out-of-control RRF20.

COMPOUND	DATE	% RSD	% RSD USING 4-PT CURVE	QC % RSD	QUALIFIER	QUALIFIED SAMPLES
3-nitroaniline	04/30/91	30.6	31.4	30.0	UJ	ALL
4,6-dinitro-2-methylphenol	04/30/91	34.0	37.8	30.0	UJ	ALL
4-nitrophenol	04/30/91	32.1	21.5	30.0	NONE	ALL
2,4-dinitrophenol	04/30/91	56.3	18.9	30.0	NONE	ALL

COMPOUND	DATE	RRF20	QC RRF	QUALIFICATIONS
2,4-dinitrophenol	04/30/91	0.034	> 0.050	NONE

Continuing instrument calibration was performed according to contract requirements and met specified control limits.

BNA: Yes ___ No _X_

Comments: Fifteen compounds in three continuing calibrations had %D outside the 25.0% quality control limit. Positive results were qualified by the data reviewer as estimated "J" and non-detects were qualified as undetected estimated "UJ".

COMPOUND	DATE	% D	QC % D	QUALIFIED SAMPLES	QUALIFIERS ADDED
hexachlorocyclopentadiene	05/21/91	31.2	25.0	HN908 HN914 HN916 HN917	UJ
4-nitroaniline	05/21/91	-29.6	25.0		UJ
hexachlorobenzene	05/21/91	26.3	25.0		UJ
pentachlorophenol	05/21/91	35.8	25.0		UJ
di-n-octylphthalate	05/21/91	-44.3	25.0		UJ
4-chloroaniline	05/22/91	40.1	25.0	HN907 HN911 HN912	UJ
hexachlorocyclopentadiene	05/22/91	40.4	25.0		UJ
3-nitroaniline	05/22/91	58.5	25.0		UJ
2,4-dinitrophenol	05/22/91	36.4	25.0		UJ
4,6-dinitro-2-methylphenol	05/22/91	28.2	25.0		UJ
hexachlorobenzene	05/22/91	26.6	25.0		UJ

N-nitrosodiphenylamine	05/22/91	34.3	25.0	HN907 HN911	J
				HN912	UJ
di-n-butylphthalate	05/22/91	26.3	25.0	HN907 HN912	J
				HN911	UJ
2,4-dimethylphenol	05/23/91	25.3	25.0	HN909 HN910 HN913 HN915	UJ
hexachlorocyclopentadiene	05/23/91	36.5	25.0		UJ
2,4-dinitrophenol	05/23/91	34.1	25.0		UJ
4-nitroaniline	05/23/91	-36.6	25.0		UJ
4,6-dinitro-2-methylphenol	05/23/91	30.6	25.0		UJ
4-bromophenyl phenyl ether	05/23/91	27.8	25.0		UJ
hexachlorobenzene	05/23/91	30.0	25.0		UJ
carbazole	05/23/91	-29.6	25.0		UJ
di-n-octylphthalate	05/23/91	-54.0	25.0		UJ
bis(2-ethyl hexyl)phthalate	05/23/91	-28.5	25.0	HN909 HN910 HN913	J
				HN915	UJ

V. SURROGATE COMPOUND RECOVERY

Surrogate compound recovery analysis was performed according to contract requirements and results met specified control limits.

BNA: Yes _X_ No ___

Comments: Recoveries for five of the eight surrogates were hand-corrected by the laboratory on the quantitation report but were not changed on Form II. The corrected recoveries were checked by the data reviewer and were all found to be within QC control limits. In addition, sample HN917 had no hand-corrections on the quantitation report; these recoveries were recalculated by the reviewer. The data reviewer did not make changes on Form II due to the fact that all surrogate recoveries, whether the corrected or uncorrected ones, were within quality control limits; there were no violations.

ORGANIC DATA QUALITY ASSURANCE REVIEW

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Matrix Spike/Matrix Spike Duplicate analysis was performed according to contract requirements and results met recommended recovery and precision limits.

BNA: Yes ___ No _X_

Comments: Pyrene was present at 2700 ug/Kg in the unspiked sample, HN907. Pyrene was spiked at 1980 ug/Kg. Percent recoveries of pyrene in the matrix spike and matrix spike duplicate were less than zero. No action was taken by the data reviewer.

COMPOUND	% REC MS	% REC MSD	QC REC LIMITS	RPD	QC RPD LIMITS
pyrene	-44 %	-36 %	35-142	20	36

VII. INTERNAL STANDARD AREA

Internal standard area analysis was performed according to contract requirements and results met specified control limits.

BNA: Yes _X_ No ___

Comments: NONE.

VIII. LABORATORY / INSTRUMENT DETECTION LIMITS

All Quarterly Laboratory/Instrument Detection Limits met contract requirements.

BNA: Yes ___ No ___ N/A _X_

Comments: NONE.

X. LABORATORY BLANK ANALYSIS RESULTS

Blank ID	Date	Contaminants	Concentration	CRQL	Associated Samples
SBLKSJ	05/08/91	N-nitrosodiphenylamine	82J ug/Kg	330 ug/Kg	HN907, HN908
					HN909, HN910
					HN911, HN912
					HN913, HN914
					HN916, HN917
SBLKSM	05/21/91	NONE	-----	----	HN915

Comments: No target compounds were detected in the blank associated with HN915, which was a re-extraction. One compound was present in the blank associated with all the samples except HN915. Sample quantitation limits were raised accordingly. HN907 and HN911 were the only samples with positive results for this compound. Quantitation limits were raised and qualified as undetected estimated "UJ" due to the blank contamination (U) combined with the high %D from the continuing calibration (J).

XI. SAMPLE RESULTS

The sample results were reviewed and all compound identifications were acceptable and met contract requirements.

BNA: Yes X No ___

Comments: NONE.

XII. Additional Comments or Problems/Resolutions not addressed above.

Sample HN915 was re-extracted five days outside the contractual holding time and seven days outside the suggested technical holding time. There is no indication why re-extraction was required.

The unspiked compounds in HN907, HN907MS, and HN907MSD exhibit poor replication of values across the three samples. This may indicate a grossly non-uniform sample matrix.

ORGANIC DATA QUALITY ASSURANCE REVIEW

SOW Number 03/90

RAS ORGANIC DATA COMPLETENESS CHECKLIST

P Case Narrative

PEST/PCB

Quality Control Summary Package

P Surrogate Recovery Summary (Form II)
P MS/MSD Summary (Form III)
P Method Blank Summary (Form IV)

Sample Data Package

P Holding Times (SMO Sample Traffic Reports)
P Organic Analysis Data Sheets (Form I)
P GC/EC Chromatograms
P GC Integration Reports or Data System Printouts
NA Confirmational Mass Spectral Data

Standards Data Package

NR Current List of Laboratory/Instrument Detection Limits
P Pesticide Initial Calibration Data of Single and Multi-Component Analytes (Form VI) for each instrument
P Pesticide Analyte Resolution Summary (Form VI PEST-4)
P Pesticide Calibration Verification Summary (Form VII)
P Pesticide Analytical Sequence (Form VIII)
P Pesticide Florisil Cartridge Check (Form IX PEST-1)
P Pesticide GPC Calibration (Form IX PEST-2)
P Pesticide/PCB Identification (Form X) - for positive results only
P Pesticide/PCB Standard Chromatograms, Data System Printouts, and GPC Calibration Data

Reagent Blank data

P Organic Analysis Data Sheets (Form I)
P GC/EC Chromatograms and Data System Printouts

Matrix Spike/Matrix Spike Duplicate Data

P Organic Analysis Data Sheets (Form I)
P GC/EC Chromatograms and Data System Printouts

KEY: P = Provided in original data package, as required by contract
R = Provided as Resubmission
NP = Not provided in original data package or as resubmission
NR = Not required under contract
NA = Not applicable to this data package or analysis

ORGANIC DATA QUALITY ASSURANCE REVIEW

I. **DELIVERABLES**

All deliverables were present as specified in the statement of work.

PEST/PCB: Yes _X_ No ___

Comments: NONE.

II. **HOLDING TIMES**

All CLP-SOW holding times were met.

PEST/PCB: Yes _X_ No ___

Comments: NONE.

All 40 CFR Part 136 holding times were met.

PEST/PCB: Yes _X_ No ___

Comments: NONE.

III. **GC/ECD INSTRUMENT PERFORMANCE CHECK**

Resolution check mixture and Performance Evaluation Mixture analyses were performed according to contract requirements and results met specified control limits.

PEST/PCB: Yes _X_ No ___

Comments: NONE.

The breakdown of 4,4'DDT and of Endrin was less than 20% for each compound, and less than 30% combined.

PEST/PCB: Yes _X_ No ___

Comments: NONE.

IV. **PESTICIDES / PCBS STANDARDS CRITERIA (CALIBRATION)**

The pesticide linearity check criteria were met for both columns.

PEST/PCB: Yes _X_ No ___

Comments: NONE.

The pesticide standard compounds showed a % relative standard deviation (RSD) of the calibration factor of no more than 20% for the single-component target compounds and no more than 30% for the two surrogates on both columns.

PEST/PCB: Yes _X_ No ___

Comments: NONE.

V. SURROGATE COMPOUND RECOVERY

Surrogate compound recovery analysis was performed according to contract requirements and results met specified control limits.

PEST/PCB: Yes ___ No _X_

Comments: One surrogate recovery in sample HN908 and two surrogate recoveries in sample HN914 were outside quality control limits. Listed below are the outlying recoveries and the qualifications added by the data reviewer.

SAMPLE	TCX		DCB		ADVISORY LIMITS	COMPOUNDS	QUALIFICATION
	PRIMARY	CONFIRM	PRIMARY	CONFIRM			
HN908	57	---	---	---	60-150	4,4'-DDE 4,4'-DDT 4,4'-DDD methoxy-chlor	J
						ALL OTHERS	UJ
HN914	---	---	174	173	60-150	methoxy-chlor	J

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Matrix Spike/Matrix Spike Duplicate analysis was performed according to contract requirements and results met recommended recovery and precision limits.

PEST/PCB: Yes ___ No _X_

Comments: One matrix spike (MS) percent recovery was below quality control limits for the spiked sample, HN912. All matrix spike duplicate (MSD) recoveries were slightly less than twice the MS recoveries. All relative percent differences (RPDs) were outside quality control limits. No qualifications were added by the data reviewer. Listed below are the percent recoveries and RPDs in the MS/MSD analysis of HN912. Only the values with an asterisk (*) are outside control limits.

COMPOUND	MS % RECOVERY	MSD % RECOVERY	% REC QC LIMITS	RPD	RPD QC LIMITS
gamma-BHC	44 *	81	46-127	-59 *	50
heptachlor	35	68	35-130	-64 *	31
aldrin	48	86	34-132	-57 *	43
dieldrin	49	87	31-134	-56 *	38
endrin	49	88	42-139	-57 *	45
4,4'-DDT	49	87	23-134	-56 *	50

VII. **INTERNAL STANDARD AREA**

Internal standard area analysis was performed according to contract requirements and results met specified control limits.

PEST/PCB: Yes ___ No ___ N/A _X_

Comments: NONE.

VIII. **LABORATORY/INSTRUMENT DETECTION LIMITS**

All Quarterly Laboratory/Instrument Detection Limits met contract requirements.

PEST/PCB: Yes ___ No ___ N/A _X_

Comments: NONE.

IX. **PESTICIDE CLEANUP CHECKS**

Florisil: The spiked compounds in the Florisil cartridge check analysis showed recoveries within 80-120%, and 2,4,5-trichlorophenol showed a recovery of less than 5%.

PEST/PCB: Yes _X_ No ___

Comments: NONE.

GPC: The compounds in the matrix spiking solution showed recoveries within 80-110%, and the Aroclor patterns match those generated for previously run standards.

PEST/PCB: Yes _X_ No ___

Comments: NONE.

ORGANIC DATA QUALITY ASSURANCE REVIEW

X. LABORATORY BLANK ANALYSIS RESULTS

Blank ID	Date	Contaminants	Concentration	CRQL	Associated Samples
PBLKSI	05/10/91	NONE	----	---	ALL

Comments: There were no contaminants found in the blank.

XI. SAMPLE RESULTS

The sample results were reviewed and all compound identifications were acceptable and met contract requirements.

PEST/PCB: Yes X No ___

Comments: NONE.

XII. Additional Comments or Problems/Resolutions not addressed above.

NONE.

REGION VIII

DATA QUALIFIER DEFINITIONS

For the purpose of Data Validation, the following code letters and associated definitions are provided for use by the data validator to summarize the data quality. Use of additional qualifiers should be carefully considered. Definitions for all qualifiers used should be provided with each report.

GENERAL QUALIFIERS for use with both INORGANIC and ORGANIC DATA

R - Quality Control indicates that any positive values or reported detection limits are not reliable. Reported value is "rejected". Resampling or reanalysis may be necessary to verify the presence or absence of the compound.

J - The associated numerical value is an estimated quantity because:
1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - ORGANICS analysis only

U J - The reported detection limit is estimated because Quality Control criteria were not met. Compound was not detected.

J N - Estimated value of a tentatively identified compound (TIC). Normal standard calibration and Quality Control Criteria do not apply for the reported result - ORGANICS analysis only.

00000160
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN907

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-01A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504601A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 16 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'oxybis(1-Chloropropane)	390	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-Di-n-Propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-Methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	950	U
131-11-3	Dimethyl Phthalate	390	U
208-96-8	Acenaphthylene	25	J
606-20-2	2,6-Dinitrotoluene	390	U
99-09-2	3-Nitroaniline	950	U
83-32-9	Acenaphthene	390	U

00000161
EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN907

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-01A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504601A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 16 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	950	U	UJ
100-02-7	4-Nitrophenol	950	U	
132-64-9	Dibenzofuran	390	U	
121-14-2	2,4-Dinitrotoluene	390	U	
84-66-2	Diethylphthalate	390	U	
7005-72-3	4-Chlorophenyl-phenylether	390	U	
86-73-7	Fluorene	390	U	
100-01-6	4-Nitroaniline	950	U	
534-52-1	4,6-Dinitro-2-Methylphenol	950	U	UJ
86-30-6	N-Nitrosodiphenylamine (1)	88	BJ	UJ
101-55-3	4-Bromophenyl-phenylether	390	U	
118-74-1	Hexachlorobenzene	390	U	UJ
87-86-5	Pentachlorophenol	950	U	
85-01-8	Phenanthrene	1200		
120-12-7	Anthracene	270	J	
86-74-8	Carbazole	63	J	
84-74-2	Di-n-Butylphthalate	47	J	J
206-44-0	Fluoranthene	2700		
129-00-0	Pyrene	2700		
85-68-7	Butylbenzylphthalate	390	U	
91-94-1	3,3'-Dichlorobenzidine	390	U	
56-55-3	Benzo(a)Anthracene	1700		
218-01-9	Chrysene	1500		
117-81-7	bis(2-Ethylhexyl)Phthalate	86	J	
117-84-0	Di-n-Octyl Phthalate	390	U	
205-99-2	Benzo(b)Fluoranthene	1100		
207-08-9	Benzo(k)Fluoranthene	1100		
50-32-8	Benzo(a)Pyrene	1200		
193-39-5	Indeno(1,2,3-cd)Pyrene	660		
53-70-3	Dibenz(a,h)Anthracene	390	U	
191-24-2	Benzo(g,h,i)Perylene	390	U	

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

HN907

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-01A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504601A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 16 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

Number TICs found: 16

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	7.08	790	JN
2.		UNKNOWN	7.53	1000	JN
3.		UNKNOWN	8.15	3100	JN
4.		UNKNOWN	16.32	590	JN
5.	238-84-6	11H-BENZO(A)FLUORENE	18.07	160	JN
6.	2381-21-7	PYRENE, 1-METHYL-	18.24	120	JN
7.		UNKNOWN	18.80	160	JN
8.	203-12-3	BENZO(GHI)FLUORANTHENE	19.24	79	JN
9.	629-99-2	PENTACOSANE	20.47	160	JN
10.	6111-78-0	BENZ(A)ANTHRACENE, 11-METHY	20.57	120	JN
11.	629-99-2	PENTACOSANE	22.49	2600	JN
12.	205-82-3	BENZO(J)FLUORANTHENE	23.57	830	JN
13.	629-99-2	PENTACOSANE	24.72	590	JN
14.	629-99-2	PENTACOSANE	25.32	2400	JN
15.		UNKNOWN	28.39	440	JN
16.	214-58-7	BENZO(B)TRIPHENYLENE	30.19	400	JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000213

HN908

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE0504602C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 34 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	500	U
111-44-4	bis(2-Chloroethyl)Ether	500	U
95-57-8	2-Chlorophenol	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
95-50-1	1,2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	2,2'oxybis(1-Chloropropane)	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-Di-n-Propylamine	500	U
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
111-91-1	bis(2-Chloroethoxy)Methane	500	U
120-83-2	2,4-Dichlorophenol	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
91-20-3	Naphthalene	500	U
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-Methylphenol	500	U
91-57-6	2-Methylnaphthalene	500	U
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethyl Phthalate	500	U
208-96-8	Acenaphthylene	500	U
606-20-2	2,6-Dinitrotoluene	500	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	500	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN908

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE0504602C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 34 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	500	U
121-14-2	2,4-Dinitrotoluene	500	U
84-66-2	Diethylphthalate	500	U
7005-72-3	4-Chlorophenyl-phenylether	500	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-Methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	130	BJ
101-55-3	4-Bromophenyl-phenylether	500	U
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
86-74-8	Carbazole	500	U
84-74-2	Di-n-Butylphthalate	500	U
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	500	U
85-68-7	Butylbenzylphthalate	500	U
91-94-1	3,3'-Dichlorobenzidine	500	U
56-55-3	Benzo(a)Anthracene	500	U
218-01-9	Chrysene	500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	500	U
117-84-0	Di-n-Octyl Phthalate	500	U
205-99-2	Benzo(b)Fluoranthene	500	U
207-08-9	Benzo(k)Fluoranthene	500	U
50-32-8	Benzo(a)Pyrene	500	U
193-39-5	Indeno(1,2,3-cd)Pyrene	500	U
53-70-3	Dibenz(a,h)Anthracene	500	U
191-24-2	Benzo(g,h,i)Perylene	500	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

HN908

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE0504602C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 34 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9

Number TICs found: 7 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-PENTANONE, 4-HYDROXY-4-ME	6.30	39000	JNAB
2.		UNKNOWN HYDROCARBON	6.53	550	JNB
3.		UNKNOWN	7.30	400	JNB
4.		UNKNOWN	7.37	660	JN
5.		UNKNOWN	7.57	400	JN
6.		UNKNOWN	7.77	610	JN
7.		UNKNOWN	8.30	760	JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

00000228

HN909

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-03A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504603C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 12 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	370	U	
111-44-4	bis(2-Chloroethyl)Ether	370	U	
95-57-8	2-Chlorophenol	370	U	
541-73-1	1,3-Dichlorobenzene	370	U	
106-46-7	1,4-Dichlorobenzene	370	U	
95-50-1	1,2-Dichlorobenzene	370	U	
95-48-7	2-Methylphenol	370	U	
108-60-1	2,2'oxybis(1-Chloropropane)	370	U	
106-44-5	4-Methylphenol	370	U	
621-64-7	N-Nitroso-Di-n-Propylamine	370	U	
67-72-1	Hexachloroethane	370	U	
98-95-3	Nitrobenzene	370	U	
78-59-1	Isophorone	370	U	
88-75-5	2-Nitrophenol	370	U	
105-67-9	2,4-Dimethylphenol	370	U	UJ
111-91-1	bis(2-Chloroethoxy)Methane	370	U	
120-83-2	2,4-Dichlorophenol	370	U	
120-82-1	1,2,4-Trichlorobenzene	370	U	
91-20-3	Naphthalene	370	U	
106-47-8	4-Chloroaniline	370	U	
87-68-3	Hexachlorobutadiene	370	U	
59-50-7	4-Chloro-3-Methylphenol	370	U	
91-57-6	2-Methylnaphthalene	370	U	
77-47-4	Hexachlorocyclopentadiene	370	U	UJ
88-06-2	2,4,6-Trichlorophenol	370	U	
95-95-4	2,4,5-Trichlorophenol	910	U	
91-58-7	2-Chloronaphthalene	370	U	
88-74-4	2-Nitroaniline	910	U	
131-11-3	Dimethyl Phthalate	370	U	
208-96-8	Acenaphthylene	370	U	
606-20-2	2,6-Dinitrotoluene	370	U	
99-09-2	3-Nitroaniline	910	U	UJ
83-32-9	Acenaphthene	370	U	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN909

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-03A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504603C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 12 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	910	U
100-02-7	4-Nitrophenol	910	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
86-73-7	Fluorene	370	U
100-01-6	4-Nitroaniline	910	U
534-52-1	4,6-Dinitro-2-Methylphenol	910	U
86-30-6	N-Nitrosodiphenylamine (1)	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	910	U
85-01-8	Phenanthrene	38	J
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	370	U
206-44-0	Fluoranthene	56	J
129-00-0	Pyrene	58	J
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	34	J
218-01-9	Chrysene	35	J
117-81-7	bis(2-Ethylhexyl)Phthalate	74	J
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	25	J
207-08-9	Benzo(k)Fluoranthene	30	J
50-32-8	Benzo(a)Pyrene	34	J
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U
53-70-3	Dibenz(a,h)Anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	140	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
~~00000230~~
HN909

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-03A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504603C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 12 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-PENTANONE, 4-HYDROXY-4-ME	6.10	21000	JNAB
2.		UNKNOWN	6.33	190	JNB
3.		UNKNOWN HYDROCARBON	6.42	190	JNB
4.	2216-33-3	OCTANE, 3-METHYL-	6.53	150	JN
5.		UNKNOWN	7.15	260	JNB
6.		UNKNOWN	7.22	450	JN
7.		UNKNOWN	7.43	300	JN
8.		UNKNOWN	7.65	300	JN
9.		UNKNOWN	8.22	720	JN
10.		UNKNOWN	8.97	150	JN
11.	91-64-5	2H-1-BENZOPYRAN-2-ONE	12.80	530	JN
12.	123-79-5	HEXANEDIOIC ACID, DIOCTYL E	18.49	110	JN
13.		UNKNOWN	19.15	110	JN
14.	630-02-4	OCTACOSANE	20.47	190	JN
15.	629-97-0	DOCOSANE	22.47	570	JN
16.	3891-98-3	DODECANE, 2,6,10-TRIMETHYL-	25.32	420	JN
17.		UNKNOWN	29.61	110	JN

1B

00000271
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN910

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-04A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504604C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 16 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'oxybis(1-Chloropropane)	390	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-Di-n-Propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-Methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	950	U
131-11-3	Dimethyl Phthalate	390	U
208-96-8	Acenaphthylene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
99-09-2	3-Nitroaniline	950	U
83-32-9	Acenaphthene	390	U

00000272

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN910

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-04A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504604C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 16 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	950	U	UJ
100-02-7	4-Nitrophenol	950	U	
132-64-9	Dibenzofuran	390	U	
121-14-2	2,4-Dinitrotoluene	390	U	
84-66-2	Diethylphthalate	390	U	
7005-72-3	4-Chlorophenyl-phenylether	390	U	
86-73-7	Fluorene	390	U	
100-01-6	4-Nitroaniline	950	U	UJ
534-52-1	4,6-Dinitro-2-Methylphenol	950	U	UJ
86-30-6	N-Nitrosodiphenylamine (1)	63	BJ	UL
101-55-3	4-Bromophenyl-phenylether	390	U	UJ
118-74-1	Hexachlorobenzene	390	U	UJ
87-86-5	Pentachlorophenol	950	U	
85-01-8	Phenanthrene	84	J	
120-12-7	Anthracene	390	U	
86-74-8	Carbazole	390	U	UJ
84-74-2	Di-n-Butylphthalate	37	J	
206-44-0	Fluoranthene	110	J	
129-00-0	Pyrene	130	J	
85-68-7	Butylbenzylphthalate	390	U	
91-94-1	3,3'-Dichlorobenzidine	390	U	
56-55-3	Benzo(a)Anthracene	67	J	
218-01-9	Chrysene	83	J	
117-81-7	bis(2-Ethylhexyl)Phthalate	63	J	J
117-84-0	Di-n-Octyl Phthalate	390	U	UJ
205-99-2	Benzo(b)Fluoranthene	72	J	
207-08-9	Benzo(k)Fluoranthene	79	J	
50-32-8	Benzo(a)Pyrene	63	J	
193-39-5	Indeno(1,2,3-cd)Pyrene	77	J	
53-70-3	Dibenz(a,h)Anthracene	390	U	
191-24-2	Benzo(g,h,i)Perylene	390	U	

(1) - Cannot be separated from Diphenylamine

00000273

1F

EPA SAMPLE NO.

HN910

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-04A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504604C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 16 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8

Number TICs found: 19 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.13	360	JNB
2.		UNKNOWN HYDROCARBON	6.22	360	JNB
3.	52896-87-4	HEPTANE, 4-(1-METHYLETHYL)-	6.37	280	JN
4.		UNKNOWN	7.02	590	JNB
5.		UNKNOWN	7.10	630	JN
6.		UNKNOWN	7.32	440	JN
7.		UNKNOWN	7.55	1000	JN
8.		UNKNOWN	8.42	160	JN
9.		UNKNOWN	8.92	200	JN
10.	123-79-5	HEXANEDIOIC ACID, DIOCTYL E	18.52	14000	JN
11.		UNKNOWN	19.15	200	JN
12.	629-99-2	PENTACOSANE	20.47	120	JN
13.		UNKNOWN	21.39	160	JN
14.	630-07-9	PENTATRIACONTANE	22.45	440	JN
15.		UNKNOWN	22.62	79	JN
16.	3891-98-3	DODECANE, 2,6,10-TRIMETHYL	25.34	400	JN
17.		UNKNOWN	26.44	240	JN
18.		UNKNOWN	28.11	79	JN
19.		UNKNOWN	29.56	79	JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN911

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-05A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504605C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 13 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-Di-n-Propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	920	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	920	U
131-11-3	Dimethyl Phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	920	U
83-32-9	Acenaphthene	380	U

00000321

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN911

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-05A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504605C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 13 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	920	U	UJ
100-02-7	4-Nitrophenol	920	U	
132-64-9	Dibenzofuran	380	U	
121-14-2	2,4-Dinitrotoluene	380	U	
84-66-2	Diethylphthalate	380	U	
7005-72-3	4-Chlorophenyl-phenylether	380	U	
86-73-7	Fluorene	380	U	
100-01-6	4-Nitroaniline	920	U	
534-52-1	4,6-Dinitro-2-Methylphenol	920	U	UJ
86-30-6	N-Nitrosodiphenylamine (1)	81	BJ	UJ
101-55-3	4-Bromophenyl-phenylether	380	U	
118-74-1	Hexachlorobenzene	380	U	UJ
87-86-5	Pentachlorophenol	920	U	
85-01-8	Phenanthrene	380	U	
120-12-7	Anthracene	380	U	
86-74-8	Carbazole	380	U	
84-74-2	Di-n-Butylphthalate	380	U	UJ
206-44-0	Fluoranthene	380	U	
129-00-0	Pyrene	380	U	
85-68-7	Butylbenzylphthalate	380	U	
91-94-1	3,3'-Dichlorobenzidine	380	U	
56-55-3	Benzo(a)Anthracene	380	U	
218-01-9	Chrysene	380	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	68	J	
117-84-0	Di-n-Octyl Phthalate	380	U	
205-99-2	Benzo(b)Fluoranthene	380	U	
207-08-9	Benzo(k)Fluoranthene	380	U	
50-32-8	Benzo(a)Pyrene	380	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U	
53-70-3	Dibenz(a,h)Anthracene	380	U	
191-24-2	Benzo(g,h,i)Perylene	380	U	

(1) - Cannot be separated from Diphenylamine

00000322

1F

EPA SAMPLE NO.

HN911

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-05A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504605C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 13 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3

Number TICs found: 14

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-PENTANONE, 4-HYDROXY-4-ME	6.18	24000	JNAB
2.		UNKNOWN HYDROCARBON	6.43	270	JNB
3.		UNKNOWN HYDROCARBON	6.52	190	JNB
4.	52896-87-4	HEPTANE, 4-(1-METHYLETHYL)-	6.63	150	JN
5.		UNKNOWN	7.22	270	JNB
6.		UNKNOWN	7.30	500	JN
7.		UNKNOWN	7.50	540	JN
8.		UNKNOWN	7.70	190	JN
9.		UNKNOWN	9.02	150	JN
10.	4337-65-9	HEXANEDIOIC ACID, MONO(2-ET	18.52	31000	JN
11.	630-02-4	OCTACOSANE	20.47	230	JN
12.	629-97-0	DOCOSANE	22.44	1000	JN
13.	629-97-0	DOCOSANE	25.32	1200	JN
14.		UNKNOWN	29.54	230	JN

00000344
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN912

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504606A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 13 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-Di-n-Propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	920	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	920	U
131-11-3	Dimethyl Phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	920	U
83-32-9	Acenaphthene	380	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

00000345
EPA SAMPLE NO.

HN912

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504606A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 13 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	920	U	UJ
100-02-7	4-Nitrophenol	920	U	
132-64-9	Dibenzofuran	380	U	
121-14-2	2,4-Dinitrotoluene	380	U	
84-66-2	Diethylphthalate	380	U	
7005-72-3	4-Chlorophenyl-phenylether	380	U	
86-73-7	Fluorene	380	U	
100-01-6	4-Nitroaniline	920	U	
534-52-1	4,6-Dinitro-2-Methylphenol	920	U	UJ
86-30-6	N-Nitrosodiphenylamine (1)	380	U	UJ
101-55-3	4-Bromophenyl-phenylether	380	U	
118-74-1	Hexachlorobenzene	380	U	UJ
87-86-5	Pentachlorophenol	920	U	
85-01-8	Phenanthrene	380	U	
120-12-7	Anthracene	380	U	
86-74-8	Carbazole	380	U	
84-74-2	Di-n-Butylphthalate	34	J	J
206-44-0	Fluoranthene	380	U	
129-00-0	Pyrene	380	U	
85-68-7	Butylbenzylphthalate	380	U	
91-94-1	3,3'-Dichlorobenzidine	380	U	
56-55-3	Benzo(a)Anthracene	380	U	
218-01-9	Chrysene	380	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	380	U	
117-84-0	Di-n-Octyl Phthalate	380	U	
205-99-2	Benzo(b)Fluoranthene	380	U	
207-08-9	Benzo(k)Fluoranthene	380	U	
50-32-8	Benzo(a)Pyrene	380	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U	
53-70-3	Dibenz(a,h)Anthracene	380	U	
191-24-2	Benzo(g,h,i)Perylene	380	U	

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

HN912

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-D0-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504606A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 13 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9

Number TICs found: 13

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	6.32	380	JNB
2.		UNKNOWN HYDROCARBON	6.40	230	JNB
3.	52896-87-4	HEPTANE, 4-(1-METHYLETHYL)-	6.53	190	JN
4.		UNKNOWN	7.15	270	JNB
5.		UNKNOWN	7.22	800	JN
6.		UNKNOWN	7.43	610	JN
7.		UNKNOWN	7.65	230	JN
8.		UNKNOWN	8.22	730	JN
9.		UNKNOWN	8.99	230	JN
10.	74381-40-1	PROPANOIC ACID, 2-METHYL-,	13.80	110	JN
11.	54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	14.45	110	JN
12.	17851-53-5	1,2-BENZENEDICARBOXYLIC ACI	15.62	270	JN
13.		UNKNOWN	17.35	77	JN

00000365

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN913

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-07A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504607C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 20 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	410	U	
111-44-4	bis(2-Chloroethyl)Ether	410	U	
95-57-8	2-Chlorophenol	410	U	
541-73-1	1,3-Dichlorobenzene	410	U	
106-46-7	1,4-Dichlorobenzene	410	U	
95-50-1	1,2-Dichlorobenzene	410	U	
95-48-7	2-Methylphenol	410	U	
108-60-1	2,2'oxybis(1-Chloropropane)	410	U	
106-44-5	4-Methylphenol	410	U	
621-64-7	N-Nitroso-Di-n-Propylamine	410	U	
67-72-1	Hexachloroethane	410	U	
98-95-3	Nitrobenzene	410	U	
78-59-1	Isophorone	410	U	
88-75-5	2-Nitrophenol	410	U	
105-67-9	2,4-Dimethylphenol	410	U	UJ
111-91-1	bis(2-Chloroethoxy)Methane	410	U	
120-83-2	2,4-Dichlorophenol	410	U	
120-82-1	1,2,4-Trichlorobenzene	410	U	
91-20-3	Naphthalene	410	U	
106-47-8	4-Chloroaniline	410	U	
87-68-3	Hexachlorobutadiene	410	U	
59-50-7	4-Chloro-3-Methylphenol	410	U	
91-57-6	2-Methylnaphthalene	410	U	
77-47-4	Hexachlorocyclopentadiene	410	U	UJ
88-06-2	2,4,6-Trichlorophenol	410	U	
95-95-4	2,4,5-Trichlorophenol	1000	U	
91-58-7	2-Chloronaphthalene	410	U	
88-74-4	2-Nitroaniline	1000	U	
131-11-3	Dimethyl Phthalate	410	U	
208-96-8	Acenaphthylene	410	U	
606-20-2	2,6-Dinitrotoluene	410	U	
99-09-2	3-Nitroaniline	1000	U	
83-32-9	Acenaphthene	410	U	

00000366
EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN913

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-07A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504607C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 20 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	1000	U	UJ
100-02-7	4-Nitrophenol	1000	U	
132-64-9	Dibenzofuran	410	U	
121-14-2	2,4-Dinitrotoluene	410	U	
84-66-2	Diethylphthalate	410	U	
7005-72-3	4-Chlorophenyl-phenylether	410	U	
86-73-7	Fluorene	410	U	
100-01-6	4-Nitroaniline	1000	U	UJ
534-52-1	4,6-Dinitro-2-Methylphenol	1000	U	UJ
86-30-6	N-Nitrosodiphenylamine (1)	84	BJ	
101-55-3	4-Bromophenyl-phenylether	410	U	UJ
118-74-1	Hexachlorobenzene	410	U	UJ
87-86-5	Pentachlorophenol	1000	U	
85-01-8	Phenanthrene	500		
120-12-7	Anthracene	140	J	
86-74-8	Carbazole	410	U	UJ
84-74-2	Di-n-Butylphthalate	47	J	
206-44-0	Fluoranthene	800		
129-00-0	Pyrene	650		
85-68-7	Butylbenzylphthalate	410	U	
91-94-1	3,3'-Dichlorobenzidine	410	U	
56-55-3	Benzo(a)Anthracene	430		
218-01-9	Chrysene	350	J	
117-81-7	bis(2-Ethylhexyl)Phthalate	82	J	UJ
117-84-0	Di-n-Octyl Phthalate	410	U	UJ
205-99-2	Benzo(b)Fluoranthene	280	J	
207-08-9	Benzo(k)Fluoranthene	280	J	
50-32-8	Benzo(a)Pyrene	290	J	
193-39-5	Indeno(1,2,3-cd)Pyrene	200	J	
53-70-3	Dibenz(a,h)Anthracene	410	U	
191-24-2	Benzo(g,h,i)Perylene	410	U	

(1) - Cannot be separated from Diphenylamine

00000367
EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN913

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-07A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504607C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 20 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.12	500	JNB
2.		UNKNOWN HYDROCARBON	6.22	330	JNB
3.	52896-87-4	HEPTANE, 4-(1-METHYLETHYL)-	6.35	250	JN
4.		UNKNOWN	7.00	420	JNB
5.		UNKNOWN	7.08	920	JN
6.		UNKNOWN	7.32	420	JN
7.		UNKNOWN	7.55	1500	JN
8.		UNKNOWN	8.94	290	JN
9.	123-79-5	HEXANEDIOIC ACID, DIOCTYL E	18.50	4200	JN
10.	74685-33-9	3-EICOSENE, (E)-	19.15	120	JN
11.	629-78-7	HEPTADECANE	20.47	120	JN
12.		UNKNOWN	20.67	120	JN
13.		UNKNOWN	21.37	250	JN
14.	36237-66-8	6,10,14-HEXADECATRIEN-1-OL,	21.85	250	JN
15.	629-99-2	PENTACOSANE	22.45	1500	JN
16.	629-99-2	PENTACOSANE	25.36	1300	JN
17.		UNKNOWN	26.36	170	JN
18.	55162-61-3	TETRACONTANE, 3,5,24-TRIMET	29.56	330	JN
19.		UNKNOWN	32.24	330	JN
20.		UNKNOWN	32.71	790	JN

JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN914

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-08A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE0504608C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 27 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

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	Dimethyl Phthalate	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

00000118

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN914

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-08A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE0504608C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 27 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

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	UJ
534-52-1	4,6-Dinitro-2-Methylphenol	1100	U	UJ
86-30-6	N-Nitrosodiphenylamine (1)	110	BJ	UL
101-55-3	4-Bromophenyl-phenylether	450	U	
118-74-1	Hexachlorobenzene	450	U	UJ
87-86-5	Pentachlorophenol	1100	U	UJ
85-01-8	Phenanthrene	450	U	
120-12-7	Anthracene	450	U	
86-74-8	Carbazole	450	U	
84-74-2	Di-n-Butylphthalate	450	U	
206-44-0	Fluoranthene	450	U	
129-00-0	Pyrene	450	U	
85-68-7	Butylbenzylphthalate	450	U	
91-94-1	3,3'-Dichlorobenzidine	450	U	
56-55-3	Benzo(a)Anthracene	450	U	
218-01-9	Chrysene	450	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	450	U	
117-84-0	Di-n-Octyl Phthalate	450	U	UJ
205-99-2	Benzo(b)Fluoranthene	450	U	
207-08-9	Benzo(k)Fluoranthene	450	U	
50-32-8	Benzo(a)Pyrene	450	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	450	U	
53-70-3	Dibenz(a,h)Anthracene	450	U	
191-24-2	Benzo(g,h,i)Perylene	450	U	

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

HN914

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-08A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE0504608C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 27 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

Number TICs found: 12 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	6.17	680	JNB
2.		UNKNOWN HYDROCARBON	6.25	410	JNB
3.	52896-87-4	HEPTANE, 4-(1-METHYLETHYL)-	6.38	360	JN
4.		UNKNOWN	7.03	410	JNB
5.		UNKNOWN	7.12	1100	JN
6.		UNKNOWN	7.33	270	JN
7.		UNKNOWN	7.57	640	JN
8.		UNKNOWN	8.44	230	JN
9.	123-79-5	HEXANEDIOIC ACID, DIOCTYL E	18.52	31000	JN
10.		UNKNOWN	21.44	270	JN
11.		UNKNOWN	22.47	140	JN
12.		UNKNOWN	25.31	500	JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN915

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-09A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504609RC

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 24 decanted: (Y/N) N Date Extracted: 05/21/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
108-95-2	Phenol	430	U	UJ
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	UJ
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	UJ
88-06-2	2,4,6-Trichlorophenol	430	U	
95-95-4	2,4,5-Trichlorophenol	1100	U	
91-58-7	2-Chloronaphthalene	430	U	
88-74-4	2-Nitroaniline	1100	U	
131-11-3	Dimethyl Phthalate	430	U	
208-96-8	Acenaphthylene	430	U	
606-20-2	2,6-Dinitrotoluene	430	U	
99-09-2	3-Nitroaniline	1100	U	UJ
83-32-9	Acenaphthene	430	U	UJ

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET 00000438

EPA SAMPLE NO.

HN915

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-09A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504609RC

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 24 decanted: (Y/N) N Date Extracted: 05/21/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	1100	U	UJ
100-02-7	4-Nitrophenol	1100	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	1100	U	UJ
534-52-1	4,6-Dinitro-2-Methylphenol	1100	U	UJ
86-30-6	N-Nitrosodiphenylamine (1)	110	J	J
101-55-3	4-Bromophenyl-phenylether	430	U	UJ
118-74-1	Hexachlorobenzene	430	U	UJ
87-86-5	Pentachlorophenol	1100	U	UJ
85-01-8	Phenanthrene	240	J	J
120-12-7	Anthracene	50	J	J
86-74-8	Carbazole	430	U	UJ
84-74-2	Di-n-Butylphthalate	430	U	UJ
206-44-0	Fluoranthene	240	J	J
129-00-0	Pyrene	280	J	J
85-68-7	Butylbenzylphthalate	430	U	UJ
91-94-1	3,3'-Dichlorobenzidine	430	U	UJ
56-55-3	Benzo(a)Anthracene	140	J	J
218-01-9	Chrysene	150	J	J
117-81-7	bis(2-Ethylhexyl)Phthalate	430	U	UJ
117-84-0	Di-n-Octyl Phthalate	430	U	UJ
205-99-2	Benzo(b)Fluoranthene	110	J	J
207-08-9	Benzo(k)Fluoranthene	110	J	J
50-32-8	Benzo(a)Pyrene	96	J	J
193-39-5	Indeno(1,2,3-cd)Pyrene	430	U	UJ
53-70-3	Dibenz(a,h)Anthracene	430	U	UJ
191-24-2	Benzo(g,h,i)Perylene	430	U	UJ

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: HN915

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-09A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504609RC

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 24 decanted: (Y/N) N Date Extracted: 05/21/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/23/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 19 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.08	570	JNB
2.	921-47-1	HEXANE, 2,3,4-TRIMETHYL	6.18	440	JNB
3.	52896-87-4	HEPTANE, 4-(1-METHYLETHYL)-	6.32	350	JNB
4.		UNKNOWN	6.98	480	JN
5.		UNKNOWN	7.05	1100	JNB
6.		UNKNOWN	7.28	350	JN
7.		UNKNOWN	7.50	480	JNB
8.	55162-61-3	TETRACONTANE, 3,5,24-TRIMET	18.44	350	JN
9.	544-76-3	HEXADECANE	19.02	88	JN
10.		UNKNOWN	19.15	180	JN
11.	18344-37-1	HEPTADECANE, 2,6,10,14-TETR	20.45	180	JN
12.		UNKNOWN	21.85	180	JN
13.	630-02-4	OCTACOSANE	22.44	440	JN
14.		UNKNOWN	22.57	220	JN
15.	3891-98-3	DODECANE, 2,6,10-TRIMETHYL	25.29	350	JN
16.		UNKNOWN	26.42	310	JN
17.	17301-30-3	UNDECANE, 3,8-DIMETHYL	27.22	130	JN
18.		UNKNOWN	28.09	220	JN
19.		UNKNOWN	32.31	220	JN

JN

1B

00000482

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN916

Lab Name: MIDPAC ENV LAB Contract: 68-D0-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-10A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504610C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 12 decanted: (Y/N) Y Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-Di-n-Propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-Methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	910	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	910	U
131-11-3	Dimethyl Phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	910	U
83-32-9	Acenaphthene	370	U

1C

00000183

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN916

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-10A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504610C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 12 decanted: (Y/N) Y Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	910	U	
100-02-7	4-Nitrophenol	910	U	
132-64-9	Dibenzofuran	370	U	
121-14-2	2,4-Dinitrotoluene	370	U	
84-66-2	Diethylphthalate	370	U	
7005-72-3	4-Chlorophenyl-phenylether	370	U	
86-73-7	Fluorene	370	U	
100-01-6	4-Nitroaniline	910	U	UJ
534-52-1	4,6-Dinitro-2-Methylphenol	910	U	UJ
86-30-6	N-Nitrosodiphenylamine (1)	91	BJ	U
101-55-3	4-Bromophenyl-phenylether	370	U	
118-74-1	Hexachlorobenzene	370	U	UJ
87-86-5	Pentachlorophenol	910	U	UJ
85-01-8	Phenanthrene	370	U	
120-12-7	Anthracene	370	U	
86-74-8	Carbazole	370	U	
84-74-2	Di-n-Butylphthalate	370	U	
206-44-0	Fluoranthene	370	U	
129-00-0	Pyrene	370	U	
85-68-7	Butylbenzylphthalate	370	U	
91-94-1	3,3'-Dichlorobenzidine	370	U	
56-55-3	Benzo(a)Anthracene	370	U	
218-01-9	Chrysene	370	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	140	J	
117-84-0	Di-n-Octyl Phthalate	370	U	UJ
205-99-2	Benzo(b)Fluoranthene	370	U	
207-08-9	Benzo(k)Fluoranthene	370	U	
50-32-8	Benzo(a)Pyrene	370	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U	
53-70-3	Dibenz(a,h)Anthracene	370	U	
191-24-2	Benzo(g,h,i)Perylene	370	U	

(1) - Cannot be separated from Diphenylamine

09/09

00000484

1F

EPA SAMPLE NO.

HN916

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-10A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EC0504610C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 12 decanted: (Y/N) Y Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

Number TICs found: 11 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.22	420	JNB
2.		UNKNOWN HYDROCARBON	6.30	230	JNB
3.	17302-33-9	UNDECANE, 6-METHYL-	6.43	190	JN
4.		UNKNOWN	7.07	230	JNB
5.		UNKNOWN	7.15	610	JN
6.		UNKNOWN	7.37	340	JN
7.		UNKNOWN	7.58	790	JN
8.		UNKNOWN	8.18	1000	JN
9.	84-64-0	1,2-BENZENEDICARBOXYLIC ACI	15.60	150	JN
10.		UNKNOWN	18.40	150	JN
11.	4337-65-9	HEXANEDIOIC ACID,MONO(2-ETH	18.49	420	JN

JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN917

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-11A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE0504611C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 26 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.4

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	UJ
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	Dimethyl Phthalate	450	U	
208-96-8	Acenaphthylene	450	U	
606-20-2	2,6-Dinitrotoluene	450	U	
99-09-2	3-Nitroaniline	1100	U	UJ
83-32-9	Acenaphthene	450	U	

SC4 SDF

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN917

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-11A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE0504611C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 26 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.4

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	UJ
534-52-1	4,6-Dinitro-2-Methylphenol	1100	U	UJ
86-30-6	N-Nitrosodiphenylamine (1)	140	BJ	U
101-55-3	4-Bromophenyl-phenylether	450	U	
118-74-1	Hexachlorobenzene	450	U	UJ
87-86-5	Pentachlorophenol	1100	U	UJ
85-01-8	Phenanthrene	450	U	
120-12-7	Anthracene	450	U	
86-74-8	Carbazole	450	U	
84-74-2	Di-n-Butylphthalate	450	U	
206-44-0	Fluoranthene	450	U	
129-00-0	Pyrene	59	J	
85-68-7	Butylbenzylphthalate	450	U	
91-94-1	3,3'-Dichlorobenzidine	450	U	
56-55-3	Benzo(a)Anthracene	450	U	
218-01-9	Chrysene	450	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	100	J	
117-84-0	Di-n-Octyl Phthalate	450	U	UJ
205-99-2	Benzo(b)Fluoranthene	450	U	
207-08-9	Benzo(k)Fluoranthene	450	U	
50-32-8	Benzo(a)Pyrene	450	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	450	U	
53-70-3	Dibenz(a,h)Anthracene	450	U	
191-24-2	Benzo(g,h,i)Perylene	450	U	

(1) - Cannot be separated from Diphenylamine

09/09/91

00000505

00000504

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HN917

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-11A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE0504611C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: 26 decanted: (Y/N) N Date Extracted: 05/08/91

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.4

Number TICs found: 18

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-PENTANONE, 4-HYDROXY-4-ME	6.28	40000	JNAB
2.		UNKNOWN	6.52	400	JNB
3.		UNKNOWN HYDROCARBON	6.60	320	JNB
4.	52896-87-4	HEPTANE, 4-(1-METHYLETHYL)-	6.72	220	JN
5.		UNKNOWN	7.28	270	JNB
6.	3744-02-3	4-PENTEN-2-ONE, 4-METHYL-	7.35	940	JN
7.		UNKNOWN	7.57	320	JN
8.		UNKNOWN	7.75	1100	JN
9.		UNKNOWN	8.30	1200	JN
10.		UNKNOWN	14.67	400	JN
11.		UNKNOWN	14.95	220	JN
12.	17851-53-5	1,2-BENZENDICARBOXYLIC ACID	15.64	220	JN
13.	54105-67-8	HEPTADECANE,2,6-DIMETHYL-	15.70	180	JN
14.	629-59-4	TETRADECANE	16.30	140	JN
15.	630-02-4	OCTACOSANE	18.47	320	JN
16.	630-02-4	OCTACOSANE	19.05	180	JN
17.	55162-61-3	TETRACONTANE, 3,5,24-TRIMET	22.47	270	JN
18.		UNKNOWN	30.86	450	JN

JN

09/09/91

00000015

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN907

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504601A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 16 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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	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

00000016
EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN907

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504601A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 16 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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

00000020

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN908

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504602A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 34 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	15	U
67-64-1	Acetone	15	U
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene (total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-88-3	Toluene	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Xylene (total)	15	U

00000021

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN908

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504602A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 34 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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. 64-19-7	ACETIC ACID	11.27	14	JN

00000026

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN908RE

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-02RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504602JA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 34 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	15	U
67-64-1	Acetone	15	U
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene (total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-88-3	Toluene	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Xylene (total)	15	U

00000027

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN908RE

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-02RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504602JA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 34 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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. 64-19-7	ACETIC ACID	11.35	12	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN909

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504603A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 12 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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	11	U	
74-83-9	Bromomethane	11	U	
75-01-4	Vinyl Chloride	11	U	
75-00-3	Chloroethane	11	U	
75-09-2	Methylene Chloride	11	U	
67-64-1	Acetone	6	J	J
75-15-0	Carbon Disulfide	11	U	
75-35-4	1,1-Dichloroethene	11	U	
75-34-3	1,1-Dichloroethane	11	U	
540-59-0	1,2-Dichloroethene (total)	11	U	
67-66-3	Chloroform	11	U	
107-06-2	1,2-Dichloroethane	11	U	
78-93-3	2-Butanone	11	U	
71-55-6	1,1,1-Trichloroethane	11	U	
56-23-5	Carbon Tetrachloride	11	U	
75-27-4	Bromodichloromethane	11	U	
78-87-5	1,2-Dichloropropane	11	U	
10061-01-5	cis-1,3-Dichloropropene	11	U	UJ
79-01-6	Trichloroethene	11	U	
124-48-1	Dibromochloromethane	11	U	
79-00-5	1,1,2-Trichloroethane	11	U	
71-43-2	Benzene	11	U	
10061-02-6	trans-1,3-Dichloropropene	11	U	
75-25-2	Bromoform	11	U	
108-10-1	4-Methyl-2-Pentanone	11	U	
591-78-6	2-Hexanone	11	U	
127-18-4	Tetrachloroethene	11	U	
79-34-5	1,1,2,2-Tetrachloroethane	11	U	
108-88-3	Toluene	11	U	
108-90-7	Chlorobenzene	11	U	
100-41-4	Ethylbenzene	11	U	
100-42-5	Styrene	11	U	
1330-20-7	Xylene (total)	11	U	

00000033

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN909

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504603A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 12 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN909

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504603A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 12 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	6	J
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

1E

EPA SAMPLE NO.

HN909

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504603A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 12 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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

00000039
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

HN910

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504604A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 16 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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	UJ
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	UJ
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	

00000040

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN910

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504604A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 16 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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	9.95	68	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN910RE

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-04RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504604JA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 16 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (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	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

00000040

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN910RE

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-04RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504604JA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 16 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

~~0000050~~ HN911

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504605KA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 13 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (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	11	U	UJ
74-83-9	Bromomethane	11	U	
75-01-4	Vinyl Chloride	11	U	
75-00-3	Chloroethane	11	U	
75-09-2	Methylene Chloride	11	U	UJ
67-64-1	Acetone	11	U	UJ
75-15-0	Carbon Disulfide	11	U	
75-35-4	1,1-Dichloroethene	11	U	
75-34-3	1,1-Dichloroethane	11	U	
540-59-0	1,2-Dichloroethene (total)	11	U	
67-66-3	Chloroform	11	U	
107-06-2	1,2-Dichloroethane	11	U	
78-93-3	2-Butanone	11	U	UJ
71-55-6	1,1,1-Trichloroethane	11	U	
56-23-5	Carbon Tetrachloride	11	U	
75-27-4	Bromodichloromethane	11	U	
78-87-5	1,2-Dichloropropane	11	U	
10061-01-5	cis-1,3-Dichloropropene	11	U	UJ
79-01-6	Trichloroethene	11	U	
124-48-1	Dibromochloromethane	11	U	
79-00-5	1,1,2-Trichloroethane	11	U	
71-43-2	Benzene	11	U	
10061-02-6	trans-1,3-Dichloropropene	11	U	UJ
75-25-2	Bromoform	11	U	
108-10-1	4-Methyl-2-Pentanone	11	U	
591-78-6	2-Hexanone	11	U	
127-18-4	Tetrachloroethene	11	U	
79-34-5	1,1,2,2-Tetrachloroethane	11	U	
108-88-3	Toluene	11	U	
108-90-7	Chlorobenzene	11	U	
100-41-4	Ethylbenzene	11	U	
100-42-5	Styrene	11	U	
1330-20-7	Xylene (total)	11	U	

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

00000051
HN911

Lab Name: MIDPAC ENV LAB Contract: 68-D0-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504605KA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 13 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (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	3.48	16	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN907200056

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504606A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 13 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

00000057
EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN912

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504606A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 13 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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

00000061

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HN913

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504607A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 20 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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	uJ
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	uJ
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	

00000062

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN913

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504607A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 20 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 00000066

HN914

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504608A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 27 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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

00000067

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN914

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504608A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 27 Date Analyzed: 05/13/91

GC Column: DB-624 ID: 0.320 (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. 64-19-7	ACETIC ACID	11.67	33	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN914RE

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-08RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504608JA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 27 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	14	U	UJ
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	UJ
67-64-1	Acetone	14	U	UJ
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	UJ
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	UJ
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	UJ
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	

00000073

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HN914RE

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-08RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504608JA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 27 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (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

00000077

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
HN915

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504609A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 24 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (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	16		
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

EPA SAMPLE NO.

HN915

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504609A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 24 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

00000084

HN916

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504610A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 12 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (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	11	U	UJ
74-83-9	Bromomethane	11	U	
75-01-4	Vinyl Chloride	11	U	
75-00-3	Chloroethane	11	U	
75-09-2	Methylene Chloride	11	U	UJ
67-64-1	Acetone	11	U	UJ
75-15-0	Carbon Disulfide	11	U	
75-35-4	1,1-Dichloroethene	11	U	
75-34-3	1,1-Dichloroethane	11	U	
540-59-0	1,2-Dichloroethene (total)	11	U	
67-66-3	Chloroform	11	U	
107-06-2	1,2-Dichloroethane	11	U	
78-93-3	2-Butanone	11	U	UJ
71-55-6	1,1,1-Trichloroethane	11	U	
56-23-5	Carbon Tetrachloride	11	U	
75-27-4	Bromodichloromethane	11	U	
78-87-5	1,2-Dichloropropane	11	U	
10061-01-5	cis-1,3-Dichloropropene	11	U	UJ
79-01-6	Trichloroethene	11	U	
124-48-1	Dibromochloromethane	11	U	
79-00-5	1,1,2-Trichloroethane	11	U	
71-43-2	Benzene	11	U	
10061-02-6	trans-1,3-Dichloropropene	11	U	UJ
75-25-2	Bromoform	11	U	
108-10-1	4-Methyl-2-Pentanone	11	U	
591-78-6	2-Hexanone	11	U	
127-18-4	Tetrachloroethene	11	U	
79-34-5	1,1,2,2-Tetrachloroethane	11	U	
108-88-3	Toluene	11	U	
108-90-7	Chlorobenzene	11	U	
100-41-4	Ethylbenzene	11	U	
100-42-5	Styrene	11	U	
1330-20-7	Xylene (total)	11	U	

00000085

1E

EPA SAMPLE NO.

HN916

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504610A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 12 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (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	3.05	6	JN
2.	UNKNOWN	3.12	12	JN

JN

5/16/91

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN917 00000091

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504611A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 27 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (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	UJ
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	UJ
67-64-1	Acetone	14	U	UJ
75-15-0	Carbon Disulfide	5	J	
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	UJ
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	UJ
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	UJ
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.

HN917 00000092

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: 9105046-11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ES0504611A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. 27 Date Analyzed: 05/14/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.12	51	JN
2.		UNKNOWN	3.25	400	JN
3.		UNKNOWN	3.35	48	JN
4.		UNKNOWN	3.62	11	JN

JN ↓

5/09/91

00000616

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN907

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN907

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

% Moisture: 16 decanted: (Y/N) N Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.4 Sulfur Cleanup: (Y/N) 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	1.0	JP
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	3.9	U
72-55-9	4,4'-DDE	3.9	U
72-20-8	Endrin	0.70	J
33213-65-9	Endosulfan II	3.9	U
72-54-8	4,4'-DDD	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	3.9	U
72-43-5	Methoxychlor	6.0	JP
53494-70-5	Endrin ketone	3.9	U
7421-36-3	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	0.54	JP
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

00000623

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN908

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN908

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

% Moisture: 34 decanted: (Y/N) N Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.9 Sulfur Cleanup: (Y/N) 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	5.0	U
72-55-9	4,4'-DDE	14	
72-20-8	Endrin	5.0	U
33213-65-9	Endosulfan II	5.0	U
72-54-8	4,4'-DDD	5.2	
1031-07-8	Endosulfan sulfate	5.0	U
50-29-3	4,4'-DDT	16	
72-43-5	Methoxychlor	4.3	J
53494-70-5	Endrin ketone	5.0	U
7421-36-3	Endrin aldehyde	5.0	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	50	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	50	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET 00000628

EPA SAMPLE NO.: HN909

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN909

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

% Moisture: 12 decanted: (Y/N) N Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	3.7	U
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	3.7	U
1031-07-8	Endosulfan sulfate	3.7	U
50-29-3	4,4'-DDT	1.1	JP
72-43-5	Methoxychlor	1.9	JP
53494-70-5	Endrin ketone	3.7	U
7421-36-3	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	0.64	JP
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	76	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

00000634

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN910

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN910

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

% Moisture: 16 decanted: (Y/N) N Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.9 Sulfur Cleanup: (Y/N) 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	1.5	J
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	3.9	U
72-55-9	4,4'-DDE	1.0	JP
72-20-8	Endrin	0.56	J
33213-65-9	Endosulfan II	1.1	JP
72-54-8	4,4'-DDD	1.2	JP
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	2.3	J
72-43-5	Methoxychlor	5.9	JP
53494-70-5	Endrin ketone	3.9	U
7421-36-3	Endrin aldehyde	0.99	J
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	0.97	JP
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	42	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN911

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN911

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

% Moisture: 13 decanted: (Y/N) N Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.3 Sulfur Cleanup: (Y/N) 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	0.23	JP
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	3.8	U
72-55-9	4,4'-DDE	3.8	U
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.8	U
7421-36-3	Endrin aldehyde	3.8	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	38	U
11104-28-2	Aroclor-1221	77	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

1D 00000652 EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN912

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN912

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

% Moisture: 13 decanted: (Y/N) N Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/15/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.9 Sulfur Cleanup: (Y/N) 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	3.8	U
72-55-9	4,4'-DDE	3.8	U
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	1.6	J
53494-70-5	Endrin ketone	3.8	U
7421-36-3	Endrin aldehyde	3.8	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	38	U
11104-28-2	Aroclor-1221	77	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

1D 00000657

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: HN913

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN913

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

% Moisture: 20 decanted: (Y/N) N Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/15/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	0.80	JP
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	6.5	P
72-55-9	4,4'-DDE	11	
72-20-8	Endrin	1.7	JP
33213-65-9	Endosulfan II	4.1	U
72-54-8	4,4'-DDD	4.7	P
1031-07-8	Endosulfan sulfate	4.1	U
50-29-3	4,4'-DDT	30	P
72-43-5	Methoxychlor	67	
53494-70-5	Endrin ketone	12	
7421-36-3	Endrin aldehyde	4.1	U
5103-71-9	alpha-Chlordane	1.6	JP
5103-74-2	gamma-Chlordane	6.5	P
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	150	

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EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN914

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN914

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

% Moisture: 27 decanted: (Y/N) N Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/15/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) 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
1031-07-8	Endosulfan sulfate	4.5	U
50-29-3	4,4'-DDT	4.5	U
72-43-5	Methoxychlor	2.5	JP
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	45	U
11096-82-5	Aroclor-1260	45	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN915

Lab Name: MIDPAC ENV LAB Contract: 68-D0-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN915

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

% Moisture: 24 decanted: (Y/N) N Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/15/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: (Y/N) 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	0.74	JP
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	0.56	JP
72-20-8	Endrin	4.3	U
33213-65-9	Endosulfan II	2.5	J
72-54-8	4,4'-DDD	4.3	U
1031-07-8	Endosulfan sulfate	4.3	U
50-29-3	4,4'-DDT	4.3	U
72-43-5	Methoxychlor	7.3	JP
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	1.3	JP
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	88	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	43	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN916

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN916

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

% Moisture: 12 decanted: (Y/N) Y Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/15/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	0.22	JP
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	3.7	U
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	3.7	U
1031-07-8	Endosulfan sulfate	3.7	U
50-29-3	4,4'-DDT	3.7	U
72-43-5	Methoxychlor	19	U
53494-70-5	Endrin ketone	3.7	U
7421-36-3	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	1.9	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	76	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

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EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN917

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN907

Matrix: (soil/water) SOIL Lab Sample ID: HN917

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

% Moisture: 27 decanted: (Y/N) N Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/10/91

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 05/15/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 9.3 Sulfur Cleanup: (Y/N) 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
1031-07-8	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	45	U
11096-82-5	Aroclor-1260	45	U

REGION VIII
SUMMARY OF CLP DATA QUALITY ASSURANCE REVIEW
ORGANICS - VOA, BNA, PEST/PCB

CASE/SAS NO.	SITE NAME		OPERABLE UNIT
16324	REDWOOD ROAD DUMP		ZZ
RPM NAME	ESAT TID: 08-9103-536		
Luke Chavez	ESAT WAD: 28		
CONTRACTOR LABORATORY	CONTRACT NO.	REPORT NO.	LABORATORY DPO/REGION
Mid Pacific Environment	68-DO-0157	SDG-HN918	Kent Kitchingman/IX

Review Assigned Date 08/23/91 Data Reviewer Elizabeth Darland/ESAT
Review Completion Date 09/12/91

SAMPLE ID	SAMPLE LOCATION	MATRIX
HN918	RD-SW-01	WATER
HN919	RD-SW-02	WATER
HN920	RD-SW-03	WATER
HN921	RD-SW-04	WATER
HN922	RD-GW-01	WATER
HN923	RD-GW-02	WATER
HN924	RD-GW-03	WATER
HN925	RD-GW-04	WATER
HN926	--------	WATER
HN927	--------	WATER
HN928	--------	WATER

DATA QUALITY STATEMENT*
( ) Data are ACCEPTABLE according to EPA Functional Guidelines with no qualifiers (flags) added by the reviewer.
( ) Data are UNACCEPTABLE according to EPA Functional Guidelines.
(X) Data are acceptable with QUALIFICATIONS noted in review.

Telephone/Communication Logs Enclosed? Yes ___ No X

DPO Attention Required? Yes ___ No X If yes, list the items that require attention: _____

* Please see Data Qualifier Definitions, attached to the end of this report.

ORGANIC DATA QUALITY ASSURANCE REVIEW

REVIEW NARRATIVE SUMMARY

This data package was reviewed in accordance with the draft EPA document "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses", Revision 6/19.

Case 16324 SDG HN918 consisted of 10 water samples for CLP RAS organic analyses and one water sample for RAS VOA analysis only.

All tentatively identified compounds (TIC) have been qualified as JN by the data reviewer. See the data qualifier definitions at the end of this report.

The pesticide fraction of this data package was not validated as per instruction of the Region VIII Data Validation Chemist.

The following tables list all data qualifiers added by the data reviewer.

VOLATILE COMPOUND	QUALIFIER	SAMPLE NUMBER(s)	REASON FOR QUALIFICATION	REVIEW SECTION
Benzene,toluene,chlorobenzene, ethylbenzene,stryene,xylene	UJ	HN918, HN921	HOLDING TIME VIOLATION	II
1,2-Dichloropropane	UJ	HN918,HN921, HN922,HN923, HN926,HN927	CONTINUING CALIBRATION PROBLEMS	IV
ALL	UJ	HN918	SURROGATE RECOVERY PROBLEMS	V

SEMIVOLATILE COMPOUND	QUALIFIER	SAMPLE NUMBER(s)	REASON FOR QUALIFICATION	REVIEW SECTION
ALL	J or UJ	HN918,HN919, HN920	HOLDING TIME VIOLATION	II
3-Nitroaniline,2,4-Dinitrophenol,4-Nitrophenol,4,6-Dinitro-2-Methylphenol	UJ	ALL	INITIAL CALIBRATION PROBLEMS	IV
4-Nitroaniline,Hexachlorobenzene	UJ	HN927, HN928	CONTINUING CALIBRATION PROBLEMS	IV
Hexachlorocyclopentadiene,3-Nitroaniline,4-Bromophenyl-phenylether,Hexachlorobenzene,Butylbenzylphthalate,bis(2-Ethylhexyl)phthalate,Di-n-Octylphthalate	J or UJ	HN918,HN919, HN920,HN922, HN923	CONTINUING CALIBRATION PROBLEMS	IV
Hexachlorocyclopentadiene,4-Bromophenyl-phenylether,Hexachlorobenzene,Pentachlorophenol,Butylbenzylphthalate,bis(2-Ethylhexyl)phthalate,Di-n-Octylphthalate	UJ	HN924,HN925, HN926	CONTINUING CALIBRATION PROBLEMS	IV

ORGANIC DATA QUALITY ASSURANCE REVIEW

SOW Number 3/90

RAS ORGANIC DATA COMPLETENESS CHECKLIST

VOA

Quality Control Summary Package
- P Surrogate Recovery Summary (Form II)
- P MS/MSD Summary (Form III)
- P Method Blank Summary (Form IV)
- P GC/MS Tuning and Mass Calibration (Form V)

Sample Data Package
- P Holding Times (SMO Sample Traffic Reports)
- P Organic Analysis Data Sheets (Form I)
- P Reconstructed Ion Chromatogram(s) (RIC)
- P Quantitation Reports
- P Mass Spectral Data
- P EPA/NIH Mass Spectral Library Search for TICs

Standards Data Package
- NR Current List of Laboratory/Instrument Detection Limits
- P Initial Calibration Data (Form VI) for each instrument
- P Continuing Calibration Data (Form VII) for each instrument
- P Internal Standard Area Summary (Form VIII)
- P VOA Standards RICs
- P VOA Standards Quantitation Reports

Raw QC Package
- P BFB mass spectra and mass listings

Reagent Blank data
- P Organic Analysis Data Sheets (Form I)
- P RIC or Total Ion Chromatogram
- P Quantitation Reports
- P Mass Spectral Data
- P EPA/NIH Library Search for TICs

Matrix Spike/Matrix Spike Duplicate Data
- P Organic Analysis Data Sheets
- P RIC
- P Quantitation Reports
- NR Mass Spectral Data
- NR EPA/NIH Library search for TICs

KEY: P = Provided in original data package, as required by contract
R = Provided as Resubmission
NP = Not provided in original data package or as resubmission
NR = Not required under contract
NA = Not applicable to this data package or analysis

ORGANIC DATA QUALITY ASSURANCE REVIEW

I. DELIVERABLES

All deliverables were present as specified in the statement of work.

VOA: Yes ____ No __X__

Comments: The mass listing and reconstructed total ion chromatogram (RIC) for bromofluorobenzene were not included in the data review copy of this data package. The traffic report containing samples HN926, HN927, and HN928 also was not included in this data package.

II. HOLDING TIMES

All CLP-SOW holding times were met.

VOA: Yes __X__ No ____

Comments: NONE

All 40 CFR Part 136 holding times were met.

VOA: Yes ____ No __X__

Comments: Samples HN918 and HN921 were analyzed one day outside holding time requirements for aromatic volatile compounds (i.e., benzene, toluene, chlorobenzene, ethylbenzene, stryene, and total xylenes). All aromatic compounds in the above samples have been qualified as undetected estimated, "UJ" by the data reviewer.

III. BFB PERFORMANCE RESULTS

VOA: The BFB performance results were within the specified control limits. All appropriate BFB results were included.

Yes ____ No __X__

Comments: The BFB results listed on Form 5A were within the control limits. The raw data for the BFB tune was not included in the data package. No action was taken by the data reviewer.

IV. INSTRUMENT CALIBRATIONS: STANDARDS and BLANKS

Initial instrument calibrations were performed according to contract requirements and met the specified control limits.

VOA: Yes __X__ No ___

Comments: NONE

Continuing instrument calibration was performed according to contract requirements and met specified control limits.

ORGANIC DATA QUALITY ASSURANCE REVIEW

VOA: Yes _X_ No ___

Comments: 1,2-Dichloropropane at -84.5 percent difference (%D) was outside quality control limits of less than 25 %D. 1,2-Dichloropropane in samples HN918, HN921, HN922, HN923, HN926, and HN927 was qualified as undetected estimated, "UJ" by the data reviewer. This in not a laboratory contract violation.

V. SURROGATE COMPOUND RECOVERY

Surrogate compound recovery analysis was performed according to contract requirements and results met specified control limits.

VOA: Yes ___ No __X

Comments: Bromofluorobenzene at 83 percent recovery (%R) was outside control limits of 86-115 %R in sample HN918. The sample was re-analyzed with similar results. All compounds in sample HN918 have been qualified as undetected estimated, "UJ" by the data reviewer.

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Matrix Spike/Matrix Spike Duplicate analysis was performed according to contract requirements and results met recommended recovery and precision limits.

VOA: Yes _X_ No ___

Comments: NONE

VII. INTERNAL STANDARD AREA

Internal standard area analysis was performed according to contract requirements and results met specified control limits.

VOA: Yes _X_ No ___

Comments: NONE

VIII. LABORATORY BLANK ANALYSIS RESULTS

Blank ID	Date	Contaminants	Concentration	CRQL	Associated Samples
VBLK01	5/7	NONE			HN919, HN920, HN924, HN925, HN928
VBLK02	5/8	NONE			HN918, HN921, HN922, HN923,HN926, HN927

Comments: NONE

IX. SAMPLE RESULTS

The sample results were reviewed and all compound identifications were acceptable and met contract requirements.

VOA: Yes _X_ No ___

Comments: NONE

ORGANIC DATA QUALITY ASSURANCE REVIEW

X. **Additional Comments or Problems/Resolutions not addressed above.**

Comments: NONE

ORGANIC DATA QUALITY ASSURANCE REVIEW

SOW Number 3/90

RAS ORGANIC DATA COMPLETENESS CHECKLIST

BNA

Quality Control Summary Package
- P Surrogate Recovery Summary (Form II)
- P MS/MSD Summary (Form III)
- P Method Blank Summary (Form IV)
- P GC/MS Tuning and Mass Calibration (Form V)

Sample Data Package
- P Holding Times (SMO Sample Traffic Reports)
- P Organic Analysis Data Sheets (Form I)
- P Reconstructed Ion Chromatogram(s) (RIC)
- P Quantitation Reports
- P Mass Spectral Data
- P EPA/NIH Mass Spectral Library Search for TICs

Standards Data Package
- NR Current List of Laboratory/Instrument Detection Limits
- P Initial Calibration Data (Form VI) for each instrument
- P Continuing Calibration Data (Form VII) for each instrument
- P Internal Standard Area Summary (Form VIII)
- P BNA Standards RICs
- P BNA Standards Quantitation Reports

Raw QC Package
- P DFTPP mass spectra and mass listings

Reagent Blank data
- P Organic Analysis Data Sheets (Form I)
- P RIC or Total Ion Chromatogram
- P Quantitation Reports
- NA Mass Spectral Data
- NA EPA/NIH Library Search for TICs

Matrix Spike/Matrix Spike Duplicate Data
- P Organic Analysis Data Sheets
- P RIC
- P Quantitation Reports
- NR Mass Spectral Data
- NR EPA/NIH Library search for TICs

KEY: P = Provided in original data package, as required by contract
R = Provided as Resubmission
NP = Not provided in original data package or as resubmission
NR = Not required under contract
NA = Not applicable to this data package or analysis

ORGANIC DATA QUALITY ASSURANCE REVIEW

I. DELIVERABLES

All deliverables were present as specified in the statement of work.

BNA: Yes ____ No X

Comments: The traffic report listing samples HN926, HN927, and HN928 was not included in this data package.

II. HOLDING TIMES

All CLP-SOW holding times were met.

BNA: Yes X No ____

Comments: NONE

All 40 CFR Part 136 holding times were met.

BNA: Yes ____ No X

Comments: Samples HN918, HN919, and HN920 were extracted one day outside holding time criteria. All compounds in the above samples have been qualified as undetected estimated, "UJ" or as estimated, "J" by the data reviewer.

III. DFTPP PERFORMANCE RESULTS

The DFTPP performance results were within the specified control limits. All appropriate DFTPP results were included.

BNA: Yes X No ____

Comments: NONE

IV. INSTRUMENT CALIBRATIONS: STANDARDS and BLANKS

Initial instrument calibrations were performed according to contract requirements and met the specified control limits.

BNA: Yes ___ No X

Comments: Four compounds were outside control limits of less than 30% relative standard deviation (RSD) for initial calibration. Listed below are the compounds and %RSD. These compounds in all samples have been qualified as undetected estimated, "UJ" by the data reviewer.

COMPOUND	%RSD
3-Nitroaniline	30.6
2,4-Dinitrophenol	56.3
4-Nitrophenol	32.1
4,6-Dinitro-2-Methylphenol	34.0

Continuing instrument calibration was performed according to contract requirements and met specified control limits.

BNA: Yes ___ No _X_

Comments: Sixteen compounds were outside control limits of less than 25 percent difference (%D) for continuing calibration. Listed below are the compounds, %D, associated samples, and qualification added by the data reviewer.

COMPOUND	% DIFFERENCE	ASSOCIATED SAMPLES	QUALIFIER ADDED
4-Nitroaniline	-33.1	HN927,HN928	UJ
Hexachlorobenzene	28.4	HN927,HN928	UJ
Hexachlorocyclopentadiene	36.7	HN918,HN919, HN920, HN922,HN923	UJ
3-Nitroaniline	31.4	HN918,HN919, HN920, HN922,HN923	UJ
4-Bromophenyl-phenylether	27.0	HN918,HN919, HN920, HN922,HN923	UJ
Hexachlorobenzene	28.4	HN918,HN919, HN920, HN922,HN923	UJ
Butylbenzylphthalate	28.8	HN918,HN919, HN920, HN922,HN923	UJ
bis(2-Ethylhexyl)Phthalate	-30.9	HN918,HN919, HN920, HN922,HN923	J or UJ
Di-n-Octylphthalate	-49.4	HN918,HN919, HN920, HN922,HN923	UJ
Hexachlorocyclopentadiene	41.7	HN924,HN925, HN926	UJ
4-Bromophenyl-phenylether	28.2	HN924,HN925, HN926	UJ
Hexachlorobenzene	28.1	HN924,HN925, HN926	UJ
Pentachlorophenol	25.4	HN924,HN925, HN926	UJ

COMPOUND	% DIFFERENCE	ASSOCIATED SAMPLES	QUALIFIER
Butylbenzylphthalate	-30.2	HN924,HN925, HN926	UJ
bis(2-Ethylhexyl)Phthalate	-34.0	HN924,HN925, HN926	UJ
Di-n-Octylphthalate	-62.2	HN924,HN925, HN926	UJ

V. **SURROGATE COMPOUND RECOVERY**

Surrogate compound recovery analysis was performed according to contract requirements and results met specified control limits.

BNA: Yes ___ No __X__

Comments: Terphenyl-d14 was outside control limits of 33-141 percent recovery (%R) for four samples. This is not a contract violation. No qualification of the data is added unless at least two surrogates are outside control limits. Listed below are the sample numbers and %R for terphenyl-d14.

SAMPLE NUMBER	TERPHENYL-D14 %R
HN923	22
HN924	17
HN925	12
HN926	22

VI. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

Matrix Spike/Matrix Spike Duplicate analysis was performed according to contract requirements and results met recommended recovery and precision limits.

BNA: Yes ___ No __X__

Comments: Pyrene was outside control limits for relative percent difference (RPD). The percent recovery (%R) for pyrene was within control limits for both matrix spike and matrix spike duplicate samples. No qualification was added to the data for matrix spike problems by the data reviewer.

VII. **INTERNAL STANDARD AREA**

Internal standard area analysis was performed according to contract requirements and results met specified control limits.

BNA: Yes __X__ No ___

Comments: NONE

ORGANIC DATA QUALITY ASSURANCE REVIEW

VIII. **LABORATORY BLANK ANALYSIS RESULTS**

Blank ID	Date	Contaminants	Concentration	CRQL	Associated Samples
SBLKWH	5/8	NONE			ALL

Comments: NONE

IX. **SAMPLE RESULTS**

The sample results were reviewed and all compound identifications were acceptable and met contract requirements.

BNA: Yes X No ___

Comments: NONE

X. **Additional Comments or Problems/Resolutions not addressed above.**

Comments: NONE

IX. **Additional Comments or Problems/Resolutions not addressed above.**

REGION VIII

DATA QUALIFIER DEFINITIONS

For the purpose of Data Validation, the following code letters and associated definitions are provided for use by the data validator to summarize the data quality. Use of additional qualifiers should be carefully considered. Definitions for all qualifiers used should be provided with each report.

GENERAL QUALIFIERS for use with both INORGANIC and ORGANIC DATA

R - Quality Control indicates that any positive values or reported detection limits are not reliable. Reported value is "rejected". Resampling or reanalysis may be necessary to verify the presence or absence of the compound.

J - The associated numerical value is an estimated quantity because:
1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - ORGANICS analysis only.

U J - The reported detection limit is estimated because Quality Control criteria were not met. Compound was not detected.

J N - Estimated value of a tentatively identified compound (TIC). Normal standard calibration and Quality Control Criteria do not apply for the reported result - ORGANICS analysis only.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN918

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503201C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
HN918

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503201C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

00000129

1F

EPA SAMPLE NO.

HN918

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503201C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

00000133

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN919

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-02A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503202C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET 00000134

EPA SAMPLE NO.

HN919

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-02A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503202C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

1F 00000135 EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN919

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-02A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503202C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	73583-56-9	2,6-DIMETHYL-6-NITRO-2-HEPT	10.09	3	JN
2.	18344-37-1	HEPTADECANE,2,6,10,14-TETRA	14.09	3	JNB
3.	54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	14.49	7	JN
4.	74645-98-0	DODECANE, 2,7,10-TRIMETHYL-	15.17	4	JNB
5.	117-82-8	1,2-BENZENEDICARBOXYLIC ACI	15.65	4	JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
00000146
HN920

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-03A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503203C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN920 00000147

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-03A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503203C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00000148
HN920

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-03A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503203C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

00000152
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN922

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-05A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503205C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

00000153
EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN922

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-05A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503205C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

00000154

1F

EPA SAMPLE NO.

HN922

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-05A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503205C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.28	7	JN
2.	UNKNOWN	10.84	25	JN

1B

00000160
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN923

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-06A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503206C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

00000161

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN923

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-06A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503206C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

00000162

1F

EPA SAMPLE NO.

HN923

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-06A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503206C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.32	8	JN
2.	UNKNOWN	17.39	6	JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN924

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-07A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503207C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

00000173

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN924

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-07A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503207C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

HN924

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-07A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503207C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 16

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	9.69	3	JN
2.		UNKNOWN	10.05	4	JN
3.		UNKNOWN	10.89	10	JN
4.		UNKNOWN	11.62	8	JN
5.		UNKNOWN	12.79	21	JN
6.		UNKNOWN	13.10	33	JN
7.		UNKNOWN	14.19	19	JN
8.	1907-65-9	BENZENESULFONAMIDE,N-BUTYL-	14.87	11	JN
9.		UNKNOWN	15.75	11	JN
10.		UNKNOWN	17.02	3	JN
11.		UNKNOWN	17.67	15	JN
12.		UNKNOWN	18.05	16	JN
13.		UNKNOWN	18.37	35	JN
14.		UNKNOWN	18.45	21	JN
15.		UNKNOWN	18.67	17	JN
16.		UNKNOWN	21.80	11	JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET 00000194

EPA SAMPLE NO.

HN925

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-08A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503208C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

00000195

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN925

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-08A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503208C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

00000196

1F

EPA SAMPLE NO.

HN925

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-08A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503208C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.13	7	JN

1B

00000201
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN926

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-09A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503209C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

00000202
EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN926

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-09A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503209C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

00000203
EPA SAMPLE NO.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN926

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-09A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ED0503209C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/20/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.15	7	JN

S.V

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN927

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-10A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EC0503210C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/16/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HN927

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-10A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EC0503210C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/16/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

214

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
C0000214
HN927

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-10A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EC0503210C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/16/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 11 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	7.10	3	JN
2.		UNKNOWN	10.82	9	JN
3.	17301-32-5	UNDECANE,4,7-DIMETHYL-	13.75	6	JN
4.	31295-56-4	DODECANE,2,6,11-TRIMETHYL-	14.10	5	JN
5.	54105-67-8	HEPTADECANE,2,6-DIMETHYL-	15.12	7	JN
6.		UNKNOWN	15.19	2	JN
7.	17301-29-0	UNDECANE,3,7-DIMETHYL-	15.74	7	JN
8.	17301-29-0	UNDECANE,3,7-DIMETHYL-	16.34	4	JN
9.	62183-55-5	OCTANE,3-ETHYL-2,7-DIMETHYL	16.92	2	JN
10.		UNKNOWN	17.67	3	JN
11.		UNKNOWN	18.20	11	JN

JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN928

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-11A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EC0503211C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/16/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN928 00000230

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-11A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EC0503211C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/16/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00000231
HN928

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-11A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EC0503211C

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/08/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/16/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 62108-21-8	DECANE,6-ETHYL-2METHYL	14.10	2	JN
2.	UNKNOWN	15.12	2	JNB
3.	UNKNOWN	15.19	2	JN
4.	UNKNOWN	15.75	4	JNB
5.	UNKNOWN	18.19	9	JNB
6.	UNKNOWN	25.46	5	JN

JN

9/12/91

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN918

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-12

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503212CA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN918

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-12

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503212CA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
HN918RE

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-01RE

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503212JA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. _____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

1E

EPA SAMPLE NO.

HN918RE

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-01RE

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503212JA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
HN919

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503213A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/07/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

1E

EPA SAMPLE NO.

HN919

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503213A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/07/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

00000031

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN920

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503214A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/07/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.00	6	JN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
HN921

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503215CA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. _____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

UJ

UJ

33 Substances

00000039

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN921

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503215CA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

00000043

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
HN922

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503216CA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

05

00000044

EPA SAMPLE NO.

HN922

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503216CA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

·0000004S

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HN923

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503217CA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. _____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

UJ

00000049
EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN923

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503217CA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
HN924

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503218A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/07/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN924

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503218A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/07/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

00000059

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN925

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503219A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. _____ Date Analyzed: 05/07/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN925

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503219A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. _____ Date Analyzed: 05/07/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.08	10	JNB

00000064
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

HN926

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-09

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503220CA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

00000065

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN926

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-09

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503220CA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. _____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

00000069

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN927

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-10

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503221JA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. _____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

UJ

·0000070

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN927

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-10

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503221JA

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/08/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
HN928

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-11

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503222A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/07/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

00000075
EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HN928

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-11

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503222A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. ____ Date Analyzed: 05/07/91

GC Column: DB-624 ID: 0.320 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.07	7	JNB

JN

1D

00000303
EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN918

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: HN918

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 05/08/91

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

00000308

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN919

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: HN919

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 05/08/91

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

00000313
EPA SAMPLE NO.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN920

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: HN920

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 05/08/91

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

00000318

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN922

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: HN922

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 05/08/91

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

00000323

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN923

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: HN923

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 05/08/91

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

00000328
EPA SAMPLE NO.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN924

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: HN924

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 05/08/91

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

00000333

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN925

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: HN925

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 05/08/91

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

00000338
EPA SAMPLE NO.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN926

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: HN926

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 05/08/91

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HN927

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: HN927

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 05/08/91

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

00000348

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

HN928

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: HN928

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 05/06/91

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 05/08/91

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/14/91

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

00000030

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
HN920

Lab Name: MIDPAC ENV LAB Contract: 68-DO-0157

Lab Code: MPELI Case No.: 16324 SAS No.: _____ SDG No.: HN918

Matrix: (soil/water) WATER Lab Sample ID: 9105032-03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EW0503214A

Level: (low/med) LOW Date Received: 05/06/91

% Moisture: not dec. _____ Date Analyzed: 05/07/91

GC Column: DB-624 ID: 0.320 (mm) Dilution Factor: 1.0

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

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

DRAFT
LETTER REPORT
REDWOOD DUMP
DATA VALIDATION
INORGANIC VALIDATION
EPA CASE #16324

OCTOBER 18, 1991

Prepared For

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF RESPONSE AND REMEDIATION
SALT LAKE CITY, UTAH

Prepared By

VERSAR A & E, INC.
380 WEST 920 NORTH
OREM, UTAH 84057

TABLE OF CONTENTS

INTRODUCTION

This report summarizes the findings of Versar A & E, Inc., in the validation of Inorganic Analyses performed by EPA contracted laboratories. The validation process was completed by a Versar team following the Functional Guidelines used by the U.S. EPA Hazardous Site Evaluation Division.

Approximately ten percent of the reported test data within the sample groups was examined to check for accuracy. The limits of this data validation did not include cation - anion balances or statistical evaluation as prescribed by EPA. This limited scope of work was performed as directed by the Utah Division of Environmental Response and Remediation (UDERR).

Validation was performed on all samples within Case Number 16324. Included in this case were two Inorganic Sample Delivery Groups, SDG Number MHN 621 and MHN 632.

SAMPLES ANALYZED

Inorganic Sample Delivery Group (SDG) Number MHN 621 and MHN 632 each contained 11 soil samples for full Inorganic validation. Samples included in the SDG included samples MHN 621 through MHN 642.

All samples from both Sample Delivery Groups were tested by Datachem Laboratories, Inc., of Salt Lake City, Utah. Sample data for this case was delivered to Versar A & E through the Utah Division of Environmental Response and Remediation (UDERR).

STATEMENT OF WORK, FUNCTIONAL GUIDELINES

The testing laboratory followed the protocol in the U.S. EPA Statement of Work (SOW) dated 7/88 during the Inorganic testing. The validation team used the same SOW during the validation, and no problems were encountered. One item of interest with EPA Functional Guidelines was that the U.S. EPA Functional Guidelines for Evaluating Inorganics Analyses used by the validation team was dated 2/88 and was based on the 10/86 Low/Mod concentration SOW. Limits and criteria found in these guidelines were checked against corresponding limits and criteria in the 3/90 SOW to ensure proper validation of EPA limits and criteria. Any differences between the 2/88 Functional Guidelines and 7/88 SOW were corrected according to the 7/88 SOW criteria.

EVALUATION CRITERIA

The evaluation of data was based on compliance of data with criteria given in the 7/88 SOW for the categories on the following page.

Inorganic Analysis Criteria

1. Holding Times
2. Calibration
3. Blank Analyses
4. ICP Interference Check Sample Results
5. Lab Control Sample Results
6. Duplicate Sample Results
7. Matrix Spike Sample Results
8. Furnace Atomic Absorption
9. ICP Serial Dilution Results
10. Sample Result Verification
11. Field Duplicates
12. Overall Assessment of Data

GENERAL CASE ASSESSMENT

In most cases, the data contained in the validation complied with the EPA Functional Guidelines or qualified due to only minor problems (See Attachment I for a complete listing of regional data assessments and Attachment III for sample compound qualifications). Although most of the data was rated as acceptable, several problems were discovered.

For SDG Number MHN 621, several problems were found. No EPA Traffic Report was included in the data packet. According to receipt dates contained within available data, the laboratory performed all tests within holding time limits. Therefore, no data was qualified. Several elements were found in the blank at concentrations close to the samples. Beryllium, Cadmium, and Selenium were each qualified in several samples (see Problems and Actions section of this report for a detailed list of samples qualified). Potassium was qualified as estimated (J) in all samples because of similar concentrations to that of the ICP sample. All Mercury results were qualified as estimated (J) because reported values fell outside Field Duplicate control limits. The Matrix Spike Recoveries for Selenium, Antimony, Mercury, and Arsenic were less than the required 75-125%. These elements were qualified as estimated (J) or estimated/undetected (UJ) depending on the sample concentrations. Selenium for samples MHN 626 and 628 was qualified as J or UJ because Spike Recovery Results were outside prescribed limits.

For SDG Number MHN 632, several problems similar to SDG MHN 621 were found. Beryllium was found in the blank at concentrations similar to samples MHN 635 and MHN 640. Therefore, Beryllium was qualified as undetected (U) in these samples. The Matrix Spike Recoveries for Selenium, Mercury, and Thallium were less than the required 75-125%. These elements were qualified as estimated (J) or estimated/undetected (UJ) in all samples. Lead, Selenium, and Thallium were outside Post-Digestion Spike recovery limits. Therefore, these elements were qualified for samples related to these spikes (see Problems and Actions section of this report for a detailed list of samples qualified). The Percent Difference (%D) between the sample and the Serial Dilution was above the

limit for Barium in all samples. Therefore, Barium was qualified in all samples as estimated (J). No Traffic Report was included in the data packet, but it appeared that no Field Duplicates were a part of the testing.

PROBLEMS AND ACTIONS

SDG/MATRIX:	**ANALYSIS:**	**SAMPLES VALIDATED:**
MHN 621	INORGANIC	MHN 621-631

Holding Times: No EPA Traffic Report was included in the data packet. According to receipt dates contained within available data, the laboratory performed all tests with holding time limits. Therefore, no data was qualified because of a lack of information concerning sampling dates. Pages 251-264 and 266-270 were missing from the data packet.

Blank Results: Several elements were found in the blank at concentrations close to the samples. The following is a list of elements qualified because of blank contamination:

Element	Samples Qualified	Qualification
Be	All Samples	U
Cd	All but 621	U
Se	MHN 627, 628	U

ICP Interference Check Sample (ICS): Potassium was qualified as estimated (J) in all samples because of similar concentrations to that of the ICP sample.

Duplicate Sample Results: All Mercury results were qualified as estimated (J) because reported values fell outside Field Duplicate control limits.

Matrix Spike and Matrix Spike Duplicate Results: The Matrix Spike Recoveries for Selenium, Antimony, Mercury, and Arsenic were less than the required 75-125%. These elements were qualified as estimated (J) or estimated/undetected (UJ) depending on the sample concentrations.

Furnace Atomic Absorption: Selenium for samples MHN 626 and 628 was qualified as J or UJ because Spike Recovery Results were outside prescribed limits.

Overall Assessment: The data was minimally qualified.

SDG/MATRIX:	ANALYSIS:	SAMPLES VALIDATION:
MHN 632	INORGANIC	MHN 632-642

Blank Results: Beryllium was found in the blank at concentrations similar to samples MHN 635 and MHN 640. Therefore, Beryllium was qualified as undetected (U) in these samples (as per Functional Guidelines).

Matrix Spike and Matrix Spike Duplicate Results: The Matrix Spike Recoveries for Selenium, Mercury, and Thallium were less than the required 75-125%. These elements were qualified as estimated (J) or estimated/undetected (UJ) in all samples.

Furnace Atomic Absorption: The following table lists the elements, samples and qualifications made as a result of Post-Digestion Spikes being outside recovery limits.

Element	Samples Qualified	Qualifications
Pb	MHN 633-636, 638-642	J or UJ
Se	MHN 632-636, 638-641	J or UJ
Ti	All except 635, 636, 639	R

ICP Interference Check Sample (ICS): The Percent Difference (%D) between the sample and the Serial Dilution was above the limit for Barium in all samples. Therefore, Barium was qualified in all samples as estimated (J).

Field Duplicates: No Traffic Report was included in the data packet, but it appeared that no Field Duplicates were included.

Overall Assessment: The data was minimally qualified. The major qualifications were made because of poor Furnace Atomic Absorption performance.

ATTACHMENT I

DATA ASSESSMENT SUMMARIES

INORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 16324
LABORATORY
SDG # MHN 621
SOW #
DPO: ACTION FYI

SITE REDWOOD DUMP
NO. OF SAMPLES/ 11
MATRIX SOIL
REVIEWER (IF NOT ESD)
REVIEWER'S NAME TYLER YORGASON
COMPLETION DATE OCTOBER 17, 1991

DATA ASSESSMENT SUMMARY

		ICP	AA	Hg	CYANIDE
1.	HOLDING TIMES	O	O	O	
2.	CALIBRATIONS	O	O	O	
3.	BLANKS	O	O	O	
4.	ICS	M			
5.	LCS	O	O		
6.	DUPLICATE ANALYSIS	O	O	M	
7.	MATRIX SPIKE	M	M	O	
8.	MSA		O		
9.	SERIAL DILUTION	O			
10.	SAMPLE VERIFICATION	O	O	O	
11.	OTHER QC	O	O	O	
12.	OVERALL ASSESSMENT	O	O	O	

O = Data had no problems/or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS:

AREAS OF CONCERN:

NOTABLE PERFORMANCE:

INORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 16324
LABORATORY
SDG # MHN 632
SOW #
DPO: ACTION FYI

SITE REDWOOD DUMP
NO. OF SAMPLES/ 11
MATRIX SOIL
REVIEWER (IF NOT ESD)
REVIEWER'S NAME TYLER YORGASON
COMPLETION DATE OCTOBER 17, 1991

DATA ASSESSMENT SUMMARY

		ICP	AA	Hg	CYANIDE
1.	HOLDING TIMES	O	O	O	
2.	CALIBRATIONS	O	O	O	
3.	BLANKS	O	O	O	
4.	ICS	O			
5.	LCS	O	O		
6.	DUPLICATE ANALYSIS	O	O	O	
7.	MATRIX SPIKE	M	M	M	
8.	MSA		O		
9.	SERIAL DILUTION	O			
10.	SAMPLE VERIFICATION	O	O	O	
11.	OTHER QC	M	M	O	
12.	OVERALL ASSESSMENT	O	O	O	

O = Data had no problems/or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS:

AREAS OF CONCERN:

NOTABLE PERFORMANCE:

ATTACHMENT II

DATA QUALIFICATION KEY

& LIST OF ACRONYMS

DATA QUALIFICATION KEY

A - Acceptable data.

J - The associated numerical value is an estimated quantity.

R - Reject data due to quality control criteria. The data is unusable (compound may or may not be present). Resampling and reanalysis is necessary for verification.

U - The compound was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The compound was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

INORGANIC ANALYSIS QUALIFIERS

C (concentration) qualifier - either B or U. B indicates that sample result is less than CRQL, but is greater than IDL. U indicates that sample result was below the IDL.

Q qualifier - Given in a column on Form I. Entered by the laboratory and indicates specific problems with quality control. Specific entries and meanings can be found on page B-20 of the 3/90 Inorganics Statement of Work.

M (method) qualifier - Given in a column on the right side of Form I. Indicates the analysis method used and reported on Form I. Specific entries and meanings can be found on page B-20 of the 3/90 Inorganics Statement of Work.

ORGANIC ANALYSIS QUALIFIERS

U - Indicates compound was analyzed for but not detected.

J - Indicates an estimated value.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X).

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - Other specific laboratory defined qualifier.

LIST OF ACRONYMS

AA	Atomic Absorption
BNA	Base/Neutral/Acid Compounds - compounds analyzed by semivolatile technique
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
GC/MS	Gas Chromatograph/Mass Spectrometer
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
IDL	Instrument Detection Limit
Initial Calibration	The establishment of a calibration curve with the appropriate number of standards and concentration range. The calibration curve plots absorbance or emission versus concentration of standards.
IS	Internal Standards - Compounds added to every VOA and BNA standard, blank, matrix spike duplicate, and sample extract at a known concentration, prior to instrumental analysis. Internal standards are used as the basis for quantitation of the target compounds.
MS	Matrix Spike - introduction of a known concentration of analyte into a sample to provide information about the effect of the sample matrix on the digestion and measurement methodology.
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS.
%D	Percent Difference
Pest	Pesticides
Post digestion Spike	The addition of a known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

QC	Quality Control - Routine application of procedures for controlling the monitoring process.
RPD	Relative Percent Difference (between matrix spike and matrix spike duplicate).
RRF	Relative Response Factor
$\overline{RRF}$	Average Relative Response Factor
RRT	Relative Retention Time (with relation to internal standard).
RSD	Relative Standard Deviation
RT	Retention Time
Serial Dilution	A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effects (ICP only).
SDG	Sample Delivery Group - Defined by one of the following, whichever occurs first: ° Case of field samples ° Each 20 field samples within a Case ° Each 14-day calendar period during which field samples in a Case are received, beginning with receipt of the first sample in the SDG. (For VOA contracts, the calendar period is 7-day.)
SOW	Statement of Work
SV	Semivolatile analysis - Method based on analysis by GC/MS for BNA organic compounds.
TCL	Target Compound List
TIC	Tentatively Identified Compound - A compound not on the TCL.
VOA	Volatile Organic Analysis - Method based on the purge and trap technique for organic compound analysis.

ATTACHMENT III

SAMPLE COMPOUND QUALIFICATIONS

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN621

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7293

Level (low/med): LOW Date Received: 05/03/91

% Solids: 78.9

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	10400			P	
7440-36-0	Antimony	28.8		N	P	J
7440-38-2	Arsenic	21.2		NS	F	J
7440-39-3	Barium	534			P	
7440-41-7	Beryllium	1.2	B		P	U
7440-43-9	Cadmium	6.2			P	
7440-70-2	Calcium	33700			P	
7440-47-3	Chromium	56.7			P	
7440-48-4	Cobalt	14.5			P	
7440-50-8	Copper	375			P	
7439-89-6	Iron	104000			P	
7439-92-1	Lead	553			F	
7439-95-4	Magnesium	8360			P	
7439-96-5	Manganese	529			P	
7439-97-6	Mercury	0.41		N*	CV	J
7440-02-0	Nickel	72.7			P	
7440-09-7	Potassium	3200			P	
7782-49-2	Selenium	0.25	U	N	F	J
7440-22-4	Silver	2.0	B		P	
7440-23-5	Sodium	1040	B		P	
7440-28-0	Thallium	0.36	B		F	
7440-62-2	Vanadium	26.3			P	
7440-66-6	Zinc	2580			P	
	Cyanide				NR	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

2

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN622

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7294

Level (low/med): LOW Date Received: 05/03/91

% Solids: 72.5

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8250			P	
7440-36-0	Antimony	6.6	U	N	P	UJ
7440-38-2	Arsenic	10.8		N	F	J
7440-39-3	Barium	198			P	
7440-41-7	Beryllium	0.49	B		P	J U
7440-43-9	Cadmium	3.3			P	UJ
7440-70-2	Calcium	36700			P	
7440-47-3	Chromium	14.2			P	
7440-48-4	Cobalt	4.1	B		P	
7440-50-8	Copper	59.9			P	
7439-89-6	Iron	9710			P	
7439-92-1	Lead	219			F	
7439-95-4	Magnesium	21100			P	
7439-96-5	Manganese	250			P	
7439-97-6	Mercury	0.14	U	N*	CV	UJ
7440-02-0	Nickel	9.1	B		P	
7440-09-7	Potassium	3550			P	
7782-49-2	Selenium	0.28	U	N	F	UJ
7440-22-4	Silver	1.1	U		P	
7440-23-5	Sodium	836	B		P	
7440-28-0	Thallium	0.32	B		F	
7440-62-2	Vanadium	21.8			P	
7440-66-6	Zinc	112			P	
	Cyanide				NR	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

3

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN623

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7295

Level (low/med): LOW Date Received: 05/03/91

% Solids: 89.8

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5650			P	
7440-36-0	Antimony	12.8	B	N	P	J
7440-38-2	Arsenic	3.3		N	F	J
7440-39-3	Barium	87.5			P	
7440-41-7	Beryllium	0.39	B		P	U
7440-43-9	Cadmium	0.68	B		P	U
7440-70-2	Calcium	61300			P	
7440-47-3	Chromium	14.6			P	
7440-48-4	Cobalt	4.3	B		P	
7440-50-8	Copper	17.9			P	
7439-89-6	Iron	8590			P	
7439-92-1	Lead	15.5			F	
7439-95-4	Magnesium	5270			P	
7439-96-5	Manganese	171			P	
7439-97-6	Mercury	0.11	U	N*	CV	UJ
7440-02-0	Nickel	7.4	B		P	
7440-09-7	Potassium	1580			P	
7782-49-2	Selenium	0.22	U	N	F	UJ
7440-22-4	Silver	0.89	U		P	
7440-23-5	Sodium	121	B		P	
7440-28-0	Thallium	0.22	U		F	
7440-62-2	Vanadium	15.6			P	
7440-66-6	Zinc	49.7			P	
	Cyanide				NR	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

4

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN624

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

ab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7296

evel (low/med): LOW Date Received: 05/03/91

Solids: 81.3

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	9920			P	
7440-36-0	Antimony	5.9	U	N	P	UJ
7440-38-2	Arsenic	9.4		N	F	J
7440-39-3	Barium	126			P	
7440-41-7	Beryllium	0.58	B		P	U
7440-43-9	Cadmium	0.85	B		P	U
7440-70-2	Calcium	50700			P	
7440-47-3	Chromium	16.5			P	
7440-48-4	Cobalt	6.0	B		P	
7440-50-8	Copper	47.5			P	
7439-89-6	Iron	14800			P	
7439-92-1	Lead	214		S	F	
7439-95-4	Magnesium	12400			P	
7439-96-5	Manganese	293			P	
7439-97-6	Mercury	0.22		N*	CV	J
7440-02-0	Nickel	13.8			P	
7440-09-7	Potassium	3290			P	
7782-49-2	Selenium	0.25	U	N	F	UJ
7440-22-4	Silver	0.98	U		P	
7440-23-5	Sodium	566	B		P	
7440-28-0	Thallium	0.32	B		F	
7440-62-2	Vanadium	24.1			P	
7440-66-6	Zinc	103			P	
	Cyanide				NR	

or Before: BROWN Clarity Before: Texture: MEDIUM

olor After: COLORLESS Clarity After: Artifacts:

ments:

5

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN625

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7297

Level (low/med): LOW Date Received: 05/03/91

% Solids: 86.6

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8980			P	
7440-36-0	Antimony	8.4	B	N	P	J
7440-38-2	Arsenic	8.8		N	F	J
7440-39-3	Barium	145			P	
7440-41-7	Beryllium	0.82	B		P	U
7440-43-9	Cadmium	0.69	U		P	UJ TH
7440-70-2	Calcium	40300			P	
7440-47-3	Chromium	12.4			P	
7440-48-4	Cobalt	5.7	B		P	
7440-50-8	Copper	22.0			P	
7439-89-6	Iron	13800			P	
7439-92-1	Lead	24.5		S	F	
7439-95-4	Magnesium	9030			P	
7439-96-5	Manganese	328			P	
7439-97-6	Mercury	0.12	U	N*	CV	UJ
7440-02-0	Nickel	14.4			P	
7440-09-7	Potassium	2860			P	
7782-49-2	Selenium	0.23	U	N	F	UJ
7440-22-4	Silver	0.92	U		P	
7440-23-5	Sodium	85.6	B		P	
7440-28-0	Thallium	0.26	B		F	
7440-62-2	Vanadium	17.6			P	
7440-66-6	Zinc	55.2			P	
	Cyanide				NR	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

6

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN626

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7298

Level (low/med): LOW Date Received: 05/03/91

% Solids: 87.6

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	30.0		N	P	J
7440-38-2	Arsenic	4.7		N	F	J
7440-39-3	Barium	61.6			P	
7440-41-7	Beryllium	0.54	B		P	J U
7440-43-9	Cadmium	0.84	B		P	U
7440-70-2	Calcium	292000			P	
7440-47-3	Chromium	21.8			P	
7440-48-4	Cobalt	1.5	B		P	
7440-50-8	Copper	11.4			P	
7439-89-6	Iron	9900			P	
7439-92-1	Lead	15.5		S	F	
7439-95-4	Magnesium	9770			P	
7439-96-5	Manganese	117			P	
7439-97-6	Mercury	0.11	U	N*	CV	UJ
7440-02-0	Nickel	11.7			P	
7440-09-7	Potassium	1740			P	
7782-49-2	Selenium	0.23	U	NW	F	UJ
7440-22-4	Silver	0.91	U		P	
7440-23-5	Sodium	255	B		P	
7440-28-0	Thallium	0.23	U		F	
7440-62-2	Vanadium	44.8			P	
7440-66-6	Zinc	28.9			P	
	Cyanide				NR	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

7

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN627

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7299

Level (low/med): LOW Date Received: 05/03/91

% Solids: 82.3

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6770			P	
7440-36-0	Antimony	14.9		N	P	J
7440-38-2	Arsenic	11.5		NS	F	J
7440-39-3	Barium	263			P	
7440-41-7	Beryllium	0.81	B		P	J U
7440-43-9	Cadmium	1.3			P	U
7440-70-2	Calcium	57500			P	
7440-47-3	Chromium	17.2			P	
7440-48-4	Cobalt	4.4	B		P	
7440-50-8	Copper	58.0			P	
7439-89-6	Iron	12800			P	
7439-92-1	Lead	268		S	F	
7439-95-4	Magnesium	8430			P	
7439-96-5	Manganese	246			P	
7439-97-6	Mercury	0.22		N*	CV	J
7440-02-0	Nickel	13.0			P	
7440-09-7	Potassium	2270			P	
7782-49-2	Selenium	0.26	B	N	F	U J
7440-22-4	Silver	0.97	U		P	
7440-23-5	Sodium	181	B		P	
7440-28-0	Thallium	0.24	U		F	
7440-62-2	Vanadium	18.0			P	
7440-66-6	Zinc	207			P	
	Cyanide				NR	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

8

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN628

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7300

Level (low/med): LOW Date Received: 05/03/91

% Solids: 74.5

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	23600			P	
7440-36-0	Antimony	15.9	B	N	P	J
7440-38-2	Arsenic	28.0		NS	F	J
7440-39-3	Barium	1760			P	
7440-41-7	Beryllium	1.5			P	U
7440-43-9	Cadmium	3.3			P	U
7440-70-2	Calcium	80200			P	
7440-47-3	Chromium	125			P	
7440-48-4	Cobalt	16.3			P	
7440-50-8	Copper	235			P	
7439-89-6	Iron	165000			P	
7439-92-1	Lead	2610			F	
7439-95-4	Magnesium	17200			P	
7439-96-5	Manganese	645			P	
7439-97-6	Mercury	0.77		N*	CV	J
7440-02-0	Nickel	52.5			P	
7440-09-7	Potassium	1560			P	
7782-49-2	Selenium	0.86	B	NW	F	U J
7440-22-4	Silver	1.4	B		P	
7440-23-5	Sodium	2910			P	
7440-28-0	Thallium	0.27	U		F	
7440-62-2	Vanadium	39.3			P	
7440-66-6	Zinc	1570			P	
	Cyanide				NR	

lor Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

mments:

9

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN629

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7301

Level (low/med): LOW Date Received: 05/03/91

% Solids: 77.3

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8070			P	
7440-36-0	Antimony	11.9	B	N	P	J
7440-38-2	Arsenic	4.9		N	F	J
7440-39-3	Barium	230			P	
7440-41-7	Beryllium	0.86	B		P	J U TQ
7440-43-9	Cadmium	1.1	B		P	J U TQ
7440-70-2	Calcium	79100			P	
7440-47-3	Chromium	12.6			P	
7440-48-4	Cobalt	5.8	B		P	
7440-50-8	Copper	40.5			P	
7439-89-6	Iron	21500			P	
7439-92-1	Lead	68.2			F	
7439-95-4	Magnesium	33000			P	
7439-96-5	Manganese	261			P	
7439-97-6	Mercury	0.15		N*	CV	J
7440-02-0	Nickel	10.9			P	
7440-09-7	Potassium	2910			P	
7782-49-2	Selenium	0.26	U	N	F	UJ
7440-22-4	Silver	1.0	U		P	
7440-23-5	Sodium	625	B		P	
7440-28-0	Thallium	0.26	U		F	
7440-62-2	Vanadium	18.8			P	
7440-66-6	Zinc	222			P	
	Cyanide				NR	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

10

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN630

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7302

Level (low/med): LOW Date Received: 05/03/91

% Solids: 87.1

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1210			P	
7440-36-0	Antimony	12.4	B	N	P	J
7440-38-2	Arsenic	7.0		N	F	J
7440-39-3	Barium	38.2	B		P	
7440-41-7	Beryllium	0.28	B		P	U
7440-43-9	Cadmium	0.69	U		P	UJ T4
7440-70-2	Calcium	107000			P	
7440-47-3	Chromium	2.5			P	
7440-48-4	Cobalt	1.7	B		P	
7440-50-8	Copper	5.6	B		P	
7439-89-6	Iron	4520			P	
7439-92-1	Lead	5.2			F	
7439-95-4	Magnesium	36800			P	
7439-96-5	Manganese	129			P	
7439-97-6	Mercury	0.11	U	N*	CV	UJ
7440-02-0	Nickel	7.2	B		P	
7440-09-7	Potassium	345	B		P	J
7782-49-2	Selenium	0.23	U	N	F	UJ
7440-22-4	Silver	0.92	U		P	
7440-23-5	Sodium	272	B		P	
7440-28-0	Thallium	0.23	U		F	
7440-62-2	Vanadium	7.0	B		P	
7440-66-6	Zinc	18.3			P	
	Cyanide				NR	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

11

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MHN631

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN621

Matrix (soil/water): SOIL Lab Sample ID: CLP7303

Level (low/med): LOW Date Received: 05/03/91

% Solids: 70.4

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13800			P	
7440-36-0	Antimony	45.8		N	P	J
7440-38-2	Arsenic	22.0		NS	F	J
7440-39-3	Barium	117			P	
7440-41-7	Beryllium	1.0	B		P	U
7440-43-9	Cadmium	0.85	U		P	
7440-70-2	Calcium	51400			P	
7440-47-3	Chromium	18.4			P	
7440-48-4	Cobalt	8.5	B		P	
7440-50-8	Copper	55.8			P	
7439-89-6	Iron	19000			P	
7439-92-1	Lead	23.8			F	
7439-95-4	Magnesium	16400			P	
7439-96-5	Manganese	345			P	
7439-97-6	Mercury	0.14	U	N*	CV	UJ
7440-02-0	Nickel	17.5			P	
7440-09-7	Potassium	5110			P	
7782-49-2	Selenium	0.28	U	N	F	UJ
7440-22-4	Silver	1.1	U		P	
7440-23-5	Sodium	3770			P	
7440-28-0	Thallium	0.31	B		F	
7440-62-2	Vanadium	29.1			P	
7440-66-6	Zinc	80.2			P	
	Cyanide				NR	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

12 11

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN632

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7304

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1380			P	
7440-36-0	Antimony	24.0	U		P	
7440-38-2	Arsenic	16.7			F	
7440-39-3	Barium	69.4	B	E	P	J
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	46500			P	
7440-47-3	Chromium	6.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	19.0	B		P	
7439-89-6	Iron	1460			P	
7439-92-1	Lead	23.6		S	F	
7439-95-4	Magnesium	16000			P	
7439-96-5	Manganese	33.0			P	
7439-97-6	Mercury	0.20	U	N	CV	UJ
7440-02-0	Nickel	12.0	U		P	
7440-09-7	Potassium	14400			P	
7782-49-2	Selenium	2.5	B	NW	F	J
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	112000			P	
7440-28-0	Thallium	10.0 ~~1.0~~	U	NW	F	UJ
7440-62-2	Vanadium	6.8	B		P	
7440-66-6	Zinc	62.7			P	
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

E - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MHN633

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7305

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	728			P	
7440-36-0	Antimony	25.0	B		P	
7440-38-2	Arsenic	53.4			F	
7440-39-3	Barium	72.7	B	E	P	J
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	56300			P	
7440-47-3	Chromium	6.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	14.7	B		P	
7439-89-6	Iron	1060			P	
7439-92-1	Lead	8.0		W	F	
7439-95-4	Magnesium	36500			P	
7439-96-5	Manganese	92.4			P	
7439-97-6	Mercury	0.20	U	N	CV	UJ
7440-02-0	Nickel	12.0	U		P	
7440-09-7	Potassium	37000			P	
7782-49-2	Selenium	3.0	B	NW	F	J
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	460000			P	
7440-28-0	Thallium	10.0	U	NW	F	UJ
7440-62-2	Vanadium	8.4	B		P	
7440-66-6	Zinc	53.9			P	
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
E - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN634

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7306

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	666			P	
7440-36-0	Antimony	24.0	U		P	
7440-38-2	Arsenic	59.2			F	
7440-39-3	Barium	76.6	B	E	P	J
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	70800			P	
7440-47-3	Chromium	6.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	24.3	B		P	
7439-89-6	Iron	710			P	
7439-92-1	Lead	4.8		W	F	
7439-95-4	Magnesium	48200			P	
7439-96-5	Manganese	98.5			P	
7439-97-6	Mercury	0.20	U	N	CV	UJ
7440-02-0	Nickel	12.0	U		P	
7440-09-7	Potassium	53900			P	
7782-49-2	Selenium	2.5	B	NW	F	J
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	598000			P	
7440-28-0	Thallium	10.0	U	NW	F	UJ
7440-62-2	Vanadium	6.1	B		P	
7440-66-6	Zinc	62.3			P	
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

E - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.

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ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET | MHN635 |

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7307

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1690			P	
7440-36-0	Antimony	24.0	U		P	
7440-38-2	Arsenic	186			F	
7440-39-3	Barium	103	~~B~~	E	P	J
7440-41-7	Beryllium	1.4	~~B~~		P	U
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	40900			P	
7440-47-3	Chromium	9.5	B		P	
7440-48-4	Cobalt	9.4	B		P	
7440-50-8	Copper	15.2	B		P	
7439-89-6	Iron	2870			P	
7439-92-1	Lead	4.6		W	F	
7439-95-4	Magnesium	157000			P	
7439-96-5	Manganese	780			P	
7439-97-6	Mercury	0.20	~~U~~	N	CV	UJ
7440-02-0	Nickel	26.9	B		P	
7440-09-7	Potassium	185000			P	
7782-49-2	Selenium	10.0	~~U~~	NW	F	UJ
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	6030000			P	
7440-28-0	Thallium	10.0	~~U~~	NW	F	R
7440-62-2	Vanadium	38.7	B		P	
7440-66-6	Zinc	26.9			P	
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

J - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN636

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7308

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	234			P	
7440-36-0	Antimony	24.0	U		P	
7440-38-2	Arsenic	248			F	
7440-39-3	Barium	29.9	B	E	P	J
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	30600			P	
7440-47-3	Chromium	10.0			P	
7440-48-4	Cobalt	8.2	B		P	
7440-50-8	Copper	96.1			P	
7439-89-6	Iron	148			P	
7439-92-1	Lead	1.0	U	W	F	
7439-95-4	Magnesium	92900			P	
7439-96-5	Manganese	97.7			P	
7439-97-6	Mercury	0.20	U	N	CV	UJ
7440-02-0	Nickel	40.0			P	
7440-09-7	Potassium	157000			P	
7782-49-2	Selenium	14.8	B	NW	F	J
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	5420000			P	
7440-28-0	Thallium	10.0	U	EN	F	R
7440-62-2	Vanadium	78.3			P	
7440-66-6	Zinc	29.8			P	
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

E - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.

E - THALLIUM/FURNACE, SAMPLE INTERFERENCE PROBLEMS.

8

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MHN637

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7309

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	385			P	
7440-36-0	Antimony	24.0	U		P	
7440-38-2	Arsenic	40.8			F	
7440-39-3	Barium	429		E	P	J
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	59600			P	
7440-47-3	Chromium	6.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	1260			P	
7439-92-1	Lead	9.7			F	
7439-95-4	Magnesium	63200			P	
7439-96-5	Manganese	538			P	
7439-97-6	Mercury	0.20	U	N	CV	UJ
7440-02-0	Nickel	15.9	B		P	
7440-09-7	Potassium	70300			P	
7782-49-2	Selenium	1.0	U	N	F	UJ
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	202000			P	
7440-28-0	Thallium	1.0	U	NW	F	UJ
7440-62-2	Vanadium	4.6	B		P	
7440-66-6	Zinc	16.4	B		P	
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

E - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MHN638

ab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

ab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7310

evel (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	260			P	
7440-36-0	Antimony	24.0	U		P	
7440-38-2	Arsenic	314			F	
7440-39-3	Barium	472		E	P	J
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	13400			P	
7440-47-3	Chromium	27.2			P	
7440-48-4	Cobalt	17.3	B		P	
7440-50-8	Copper	15.2	B		P	
7439-89-6	Iron	2570			P	
7439-92-1	Lead	4.8		W	F	
7439-95-4	Magnesium	110000			P	
7439-96-5	Manganese	350			P	
7439-97-6	Mercury	0.20	U	N	CV	UJ
7440-02-0	Nickel	30.4	B		P	
7440-09-7	Potassium	141000			P	
7782-49-2	Selenium	1.0	U	NW	F	UJ
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	495000			P	
7440-28-0	Thallium	10.0	U	NW	F	UJ
7440-62-2	Vanadium	17.2	B		P	
7440-66-6	Zinc	51.0			P	
	Cyanide				NR	

olor Before: YELLOW Clarity Before: CLEAR Texture:

o or After: YELLOW Clarity After: CLEAR Artifacts:

10

omments:

J - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MHN639

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7311

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	560			P	
7440-36-0	Antimony	24.0	U		P	
7440-38-2	Arsenic	179			F	
7440-39-3	Barium	81.7	B	E	P	J
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	38800			P	
7440-47-3	Chromium	6.0	U		P	
7440-48-4	Cobalt	8.2	B		P	
7440-50-8	Copper	5.4	B		P	
7439-89-6	Iron	659			P	
7439-92-1	Lead	1.1	B	W	F	
7439-95-4	Magnesium	162000			P	
7439-96-5	Manganese	775			P	
7439-97-6	Mercury	0.20	U	N	CV	UJ
7440-02-0	Nickel	26.2	B		P	
7440-09-7	Potassium	196000			P	
7782-49-2	Selenium	10.0	U	NW	F	UJ
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	6250000			P	
7440-28-0	Thallium	10.0	U	EN	F	R
7440-62-2	Vanadium	37.4	B		P	
7440-66-6	Zinc	19.7	B		P	
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

E - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.
E - THALLIUM/FURNACE, SAMPLE INTERFERENCE PROBLEMS.

11

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MHN640

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7312

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	251			P	
7440-36-0	Antimony	34.2	B		P	
7440-38-2	Arsenic	41.1			F	
7440-39-3	Barium	395		E	P	J
7440-41-7	Beryllium	2.3	B		P	U
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	55800			P	
7440-47-3	Chromium	6.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	6.7	B		P	
7439-89-6	Iron	1210			P	
7439-92-1	Lead	3.3			F	
7439-95-4	Magnesium	59900			P	
7439-96-5	Manganese	500			P	
7439-97-6	Mercury	0.20	U	N	CV	UJ
7440-02-0	Nickel	12.0	U		P	
7440-09-7	Potassium	67100		OK	P	
7782-49-2	Selenium	1.0	U	NW	F	UJ
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	197000			P	
7440-28-0	Thallium	1.0	U	NW	F	UJ
7440-62-2	Vanadium	7.2	B		P	
7440-66-6	Zinc	19.0	B		P	
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

E - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.

12

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

MHN641

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7313

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	104	B		P	
7440-36-0	Antimony	24.0	U		P	
7440-38-2	Arsenic	11.6			F	
7440-39-3	Barium	37.7	B	E	P	J
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	54600			P	
7440-47-3	Chromium	6.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	21.9	B		P	
7439-89-6	Iron	44.9	B		P	
7439-92-1	Lead	1.0	U		F	
7439-95-4	Magnesium	101000			P	
7439-96-5	Manganese	36.9			P	
7439-97-6	Mercury	0.20	U	N	CV	UJ
7440-02-0	Nickel	12.0	U		P	
7440-09-7	Potassium	39600			P	
7782-49-2	Selenium	1.0	U	NW	F	UJ
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	352000			P	
7440-28-0	Thallium	1.0	U	NW	F	UJ
7440-62-2	Vanadium	8.1	B		P	
7440-66-6	Zinc	33.0			P	
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

E - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MHN642

Lab Name: DATACHEM LABORATORIES Contract: 68-D0-0149

Lab Code: DATAC Case No.: 16324 SAS No.: SDG No.: MHN632

Matrix (soil/water): WATER Lab Sample ID: CLP7314

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	108	B		P	
7440-36-0	Antimony	24.0	U		P	
7440-38-2	Arsenic	19.0			F	
7440-39-3	Barium	57.4	B	E	P	J
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	3.0	U		P	
7440-70-2	Calcium	92300			P	
7440-47-3	Chromium	8.0	B		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	26.2			P	
7439-89-6	Iron	53.7	B		P	
7439-92-1	Lead	1.0	U	W	F	
7439-95-4	Magnesium	87300			P	
7439-96-5	Manganese	222			P	
7439-97-6	Mercury	0.20	U	N	CV	UJ
7440-02-0	Nickel	12.0	U		P	
7440-09-7	Potassium	57400			P	
7782-49-2	Selenium	7.1		N	F	J
7440-22-4	Silver	4.0	U		P	
7440-23-5	Sodium	362000			P	
7440-28-0	Thallium	1.0	U	NW	F	UJ
7440-62-2	Vanadium	10.4	B		P	
7440-66-6	Zinc	23.6			P	
	Cyanide				NR	

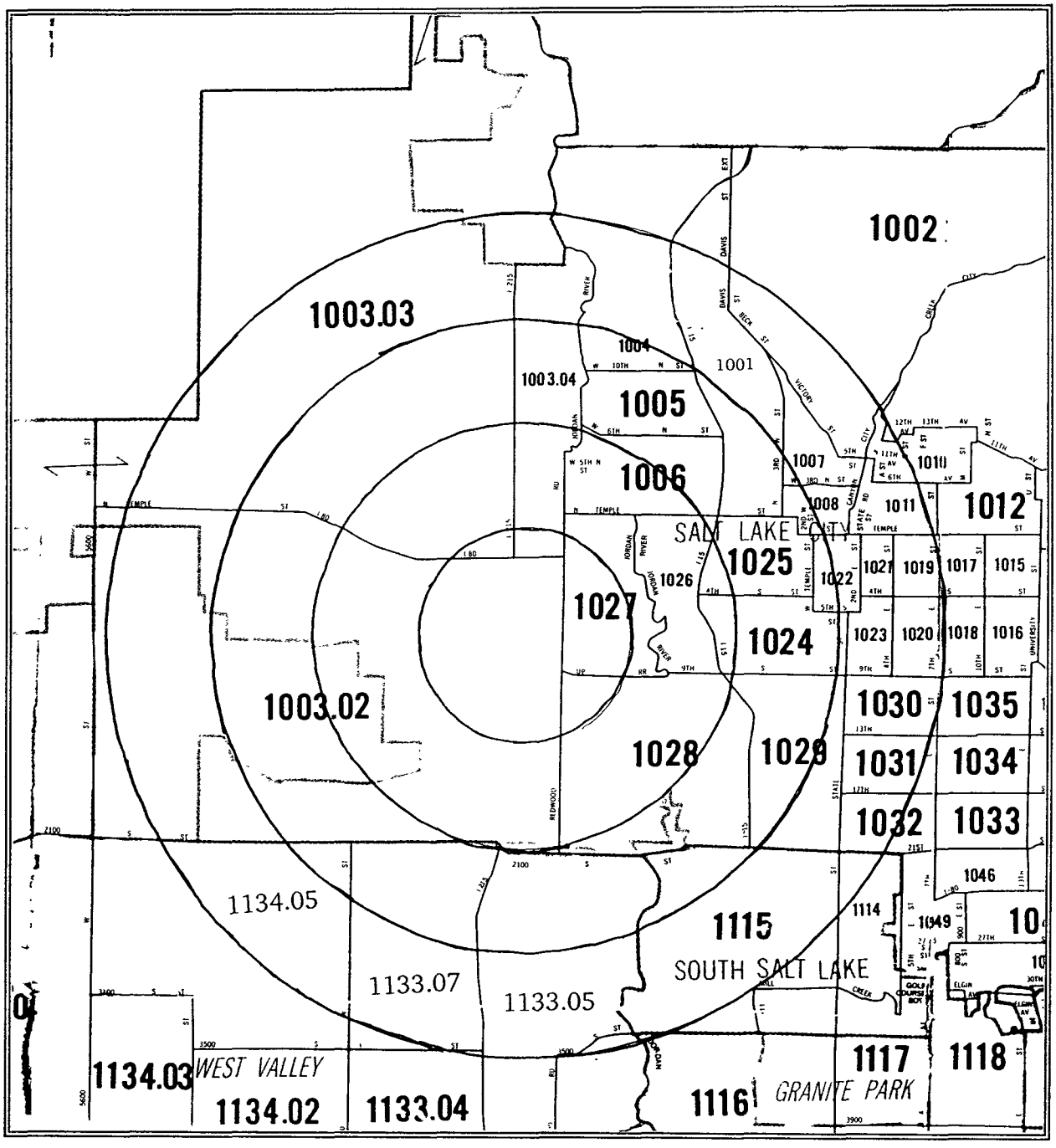
Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

E - ICP SERIAL DILUTION IS OUTSIDE OF CONTROL LIMITS.

APPENDIX III - POPULATION DENSITY INFORMATION



Edited from 1980 U.S. Census to match U.S. 1990 Census Tracks

U D E Q

DIVISION OF ENVIRONMENTAL RESPONSE AND REMEDIATION

4-Mile Influence
Redwood Road Dump Site

By	Date	Scale
TH	8/21/91	95,040

POPULATION TABLE

4 - Mile Radius

Track #	%	Total Population	Population
1004	41	3270	1537
1001	82	1449	1188
1002	13	943	123
1010	90	3185	2867
1011	78	5031	3924
1019	93	1848	1719
1018	7	2532	177
1030	94	2790	2623
1031	82	4065	3333
1032	60	4506	2703
1114	22	5986	1317
1115	76	1356	1031
1133.05	7	5177	362
1133.07	95	3937	3740
1134.05	37	2763	1022
1003.03	59	178	105
1003.04	100	8515	8515
1004	100	3270	3270
1005	100	5356	5356
1006	100	5007	5007
1007	100	2767	2767
1008	100	2197	2197
1021	100	1113	1113
1022	100	577	577
1025	100	937	937
1024	100	527	527
1023	100	2679	2679
1020	100	2540	2540
1026	100	3224	3224
1027	100	6116	6116
1028	100	7520	7520
1029	100	2744	2744
1133.05	100	4603	4603
		TOTAL	87463

3 - Mile Radius

Track #	%	Total Population	Population
1001	33	3270	1079
1115	13	1356	176
1133.05	49	4603	2255
1133.07	46	3937	1811
1003.02	67	141	94
1003.03	31	178	55
1003.04	81	8515	6897
1004	62	3270	2027
1007	7	2767	194
1008	41	2197	901
1022	44	577	254
1024	94	527	495
1029	63	2744	1729
1028	100	7520	7520
1027	100	6116	6116
1025	100	937	937
1006	100	5007	5007
1005	100	5356	5356
		TOTAL	42903

2 - Mile Radius

Track #	%	Total Population	Population
1003.04	33	8515	2810
1003.03	17	178	30
1003.02	47	141	66
1028	62	7520	4662
1029	2	2744	55
1024	27	527	142
1025	24	937	225
1006	57	5007	2854
1027	100	6166	6166
1026	100	3224	3224
		TOTAL	20234

1 - Mile Radius

Track #	%	Total Population	Population
1027	49	6166	3021
1028	19	7520	1429
1003.02	22	141	31
1003.04	16	8515	1362
1003.03	3	71	2
		TOTAL	5845