
**ENGINEERING INVESTIGATION AT INACTIVE HAZARDOUS
WASTE SITES IN THE STATE OF NEW YORK**

PRELIMINARY SITE ASSESSMENTS

**HOLIDAY PARK
SITE NUMBER 932033**

**BOTANICAL GARDENS
SITE NUMBER 932068**

NOV 15 1999

**CITY OF NORTH TONAWANDA
NIAGARA COUNTY**

**PREPARED FOR
THE DIVISION OF HAZARDOUS WASTE REMEDIATION
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 WOLF ROAD
ALBANY, NEW YORK 12233**

OCTOBER 1999

MALCOLM PIRNIE, INC.

**P. O. Box 1938
Buffalo, New York 14219**

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PRELIMINARY SITE ASSESSMENTS**

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EXECUTIVE SUMMARY

The Holiday Park and Botanical Gardens Sites are located in the City of North Tonawanda in Niagara County, New York (Figure 1-1). Currently, a major portion of the Holiday Park property is the Deerwood Golf Course, which is owned and operated by the City of North Tonawanda. A smaller area of the Holiday Park Site along Zimmerman Road is currently used by the City of North Tonawanda for the disposal of tree trimmings, grass clippings, leaves, and street sweepings. The Botanical Gardens Site is currently used as a public park and contains a boat launch along the eastern edge of the property.

Both sites were operated in the 1950s, 1960s or 1970s as refuse disposal sites by the City of North Tonawanda Department of Public Works and both were reported to have received phenolic resins and molding compounds from the Durez Division of Hooker Chemical (currently a division of OxyChem). Based on this information, the NYSDEC placed the Holiday Park Site and Botanical Gardens Site on its Registry of Inactive Hazardous Waste Sites in 1980. Subsequently, several investigations were performed that identified various organic and inorganic analytes at elevated concentrations in samples collected from the sites. The portions of the sites suspected of receiving waste are shown on Figure 1-2.

As a result of the historical uses of the sites, the Holiday Park and Botanical Gardens Sites have been designated as Class 3 Inactive Hazardous Waste Disposal Sites. This Preliminary Site Assessment (PSA) was undertaken because previous investigations were inadequate to clearly confirm the presence or absence of listed or characteristic hazardous wastes and to assess the sites' potential as a threat to human health and the environment.

The investigative tasks of this PSA were implemented using a two-phased approach that included an initial investigation (Round One) and a secondary investigation (Round Two). The performance of the secondary investigation was contingent on the discovery of contamination during the initial phase of the investigation. The initial

investigation included the preparation of a site base map, the completion of geophysical surveys on both sites in the areas of concern, and the completion of a boring program in areas of concern. Screening samples were collected for analysis of phenolic compounds, and surface soil, subsurface soil, surface water, and groundwater samples were collected for analysis of Target Compound List (TCL) VOCs, SVOCs, pesticides/PCBs, Target Analyte List (TAL) metals and cyanide.

The results of the initial investigation were used to locate groundwater monitoring wells and test pits in the subsequent phase of site characterization. Round Two of the investigation included a site reconnaissance in an attempt to locate wells installed during previous investigations, the reconditioning and sampling of two previously existing monitoring wells at the Botanical Gardens Site, the installation and sampling of a total of eight overburden monitoring wells at the two sites, and a test pit program. A total of eight subsurface soil samples and ten groundwater samples were collected for analysis of TCL VOCs, SVOCs, pesticides/PCBs, and TAL metals and cyanide, and four subsurface soil samples were collected for analysis of TCL SVOCs.

CONCLUSIONS

Buried drums were not discovered during the investigation of the Holiday Park and Botanical Gardens Sites, and the concentrations of phenolic compounds that were detected in the samples were not high enough to indicate the presence of a significant amount of phenolic resins and molding compounds at the sites. No obvious sludge, ash, or other industrially-derived non-soil waste material was encountered in the borings completed at the two sites. However, the surface soil samples collected from mounds of an ash-like material in one of the four areas of investigation at Holiday Park contained the metals chromium, copper, nickel, and zinc at concentrations significantly above the soil cleanup guidelines. Because children use the area and may be exposed to the material in the mounds, additional action may be required in this area.

The concentrations of contaminants that were detected in the surface soil, subsurface soil, surface water, and groundwater samples collected in the other three areas

of investigation at Holiday Park above the standards and guidelines were not high enough to warrant further work in these areas. Additionally, the three areas are located within the Deerwood Golf Course. Therefore, landscaping materials have covered any contaminants that may present in these areas, thereby inhibiting the exposure to those contaminants.

The concentrations of contaminants that were detected in the surface and subsurface soil and groundwater samples collected at the Botanical Gardens Site above the standards and guidelines were not high enough to warrant further work at the site. However, because the Botanical Gardens Site is a recreational park, the potential exists for exposure to elevated concentrations of organic compounds and very high iron concentrations in the surface water. Additionally, the iron loadings to Tonawanda Creek, via exfiltration of groundwater in the fountain overflow channel and leachate seeps along the banks of the creek, may be high enough to warrant further study. Therefore additional action may be required at the Botanical Gardens Site.

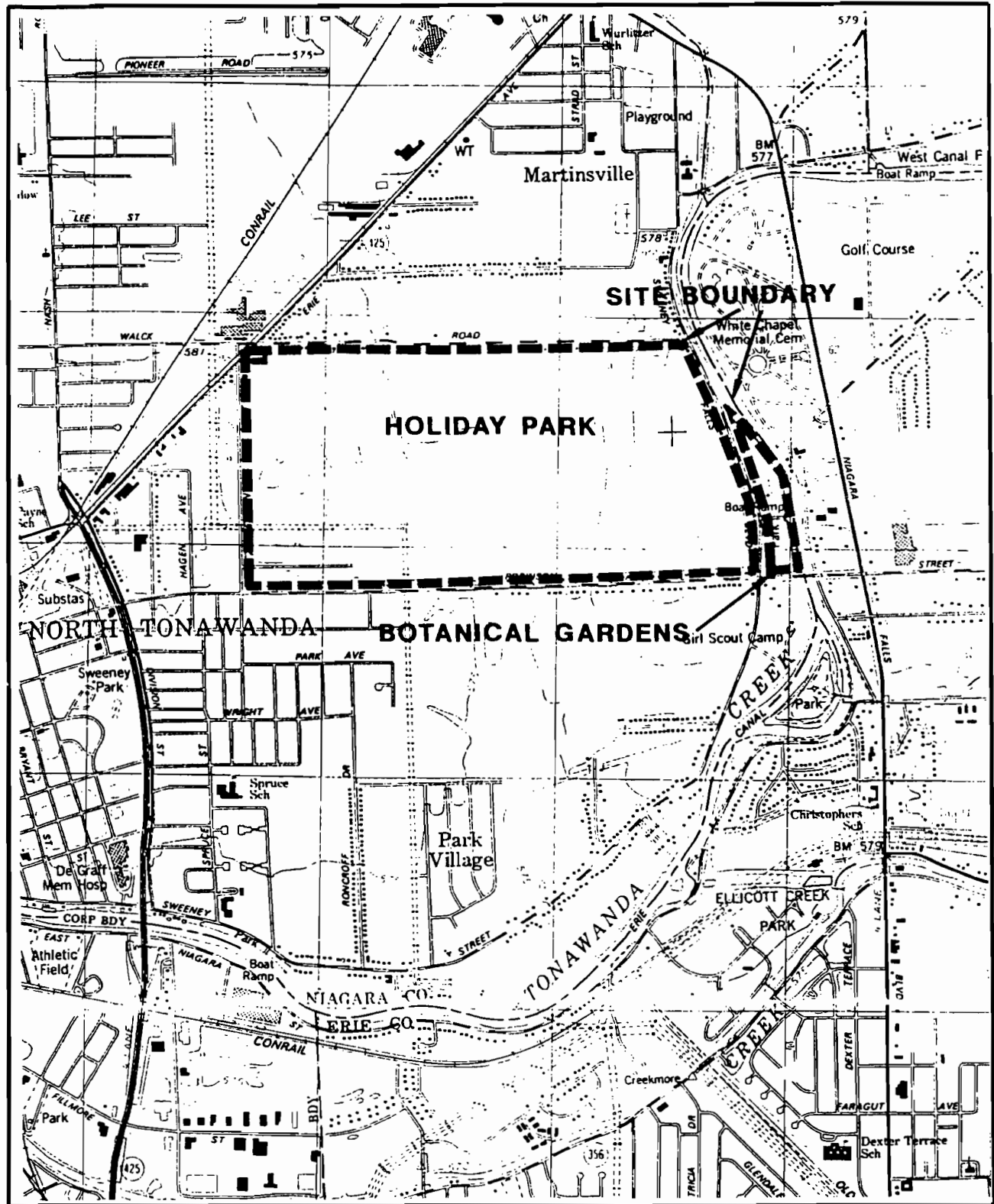
1.0 BACKGROUND, PURPOSE, AND SCOPE

1.1 BACKGROUND

The Holiday Park and Botanical Gardens Sites are located in the City of North Tonawanda in Niagara County, New York (Figure 1-1). The Holiday Park Site is located to the west of Old Falls Boulevard and extends west to Zimmerman Road, encompassing an area of approximately 370 acres between Walck Road and East Robinson Road. Currently, a major portion of the Holiday Park property is the Deerwood Golf Course, owned and operated by the City of North Tonawanda. A smaller area of the Holiday Park Site along Zimmerman Road is actively used by the City of North Tonawanda for the disposal of tree trimmings, grass clippings, leaves, and street sweepings.

The Botanical Gardens Site is located along a portion of the Tonawanda Creek/Barge Canal System east of Old Falls Boulevard (the opposite side of the road from the Holiday Park Site) and is approximately 11 acres in size. The Botanical Gardens Site is currently used as a public park and contains a boat launch along the eastern edge of the property.

Both sites were operated in the 1950s, 1960s or 1970s as refuse disposal sites by the City of North Tonawanda Department of Public Works and both were reported to have received phenolic resins and molding compounds from the Durez Division of Hooker Chemical (currently a division of OxyChem). Based on this information, the NYSDEC placed the Holiday Park Site and Botanical Gardens Site on its Registry of Inactive Hazardous Waste Disposal Sites in 1980. Subsequently, several investigations were performed which identified various organic and inorganic analytes at elevated concentrations in samples collected from the sites. The logs and analytical results from these sampling events are included in Appendix A. The portions of the sites suspected of receiving waste are shown on Figure 1-2.



BOTANICAL GARDENS/ HOLIDAY PARK SITE
PRELIMINARY SITE ASSESSMENT

SITE LOCATION MAP

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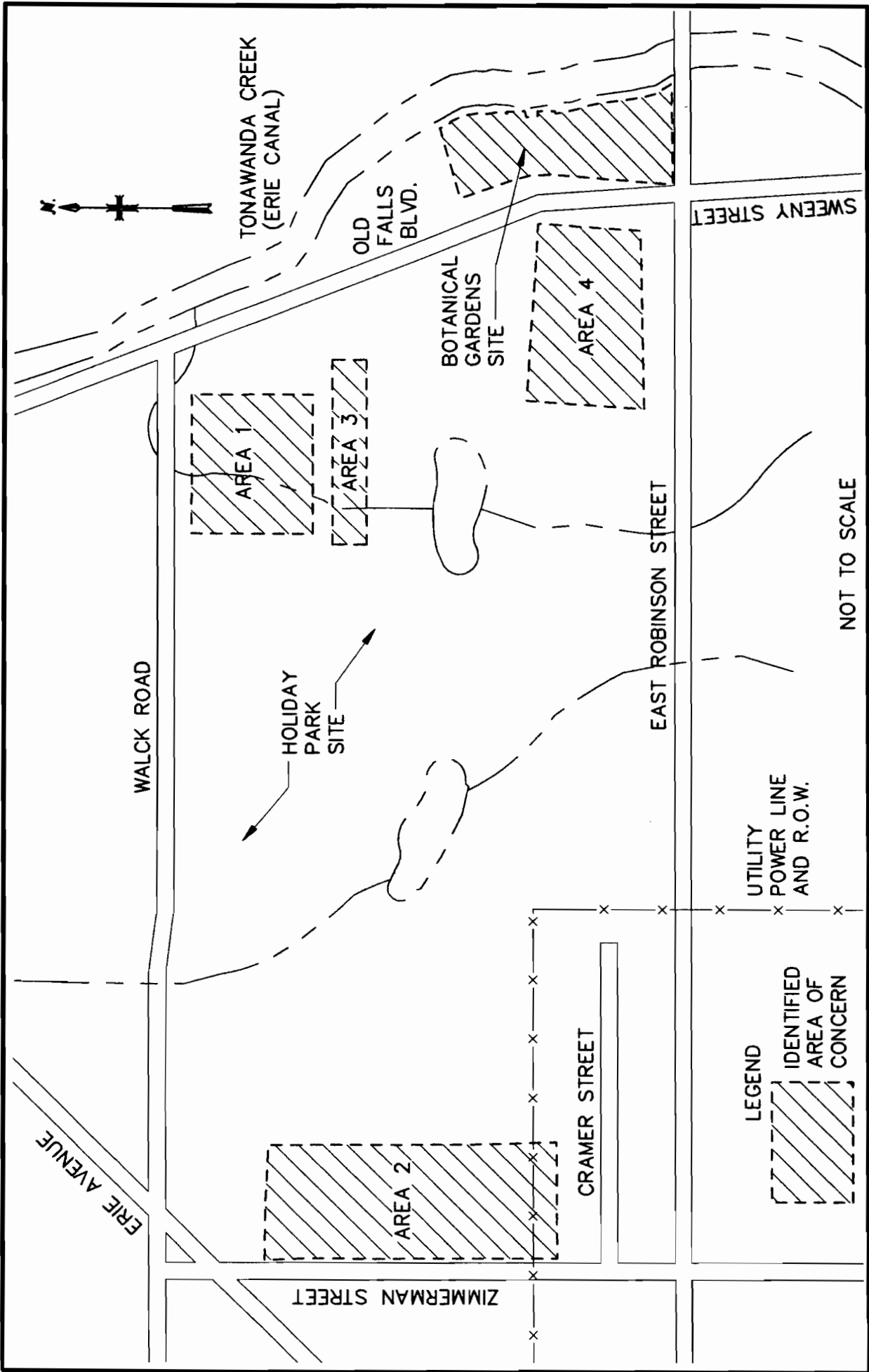
NYSDEC

APRIL 1997

BOTANICAL GARDENS/HOLIDAY PARK SITE
PRELIMINARY SITE ASSESSMENT
AREAS OF CONCERN

NYSDEC

MARCH 1999



**MALCOLM
PERRIE**

DWG. NO: 0266FIG2

1.1.1 Holiday Park Site

The Holiday Park Site is approximately 370 acres in size. Portions of the site were reportedly used by the City of North Tonawanda from the early 1960s to 1974 for disposal of municipal and industrial wastes. A Phase I investigation report prepared by Engineering-Science in 1983 identified potential disposal areas in the southeast corner (Area 4), the northeast corner (Areas 1 and 3), and the western portion (Area 2) of the site. These areas are shown on Figure 1-2. The precise dates of disposal at individual areas within the site are not known.

According to the Phase I report prepared by Engineering-Science, the western area (Area 2) appears to be the first disposal area, with disposal possibly beginning in 1964. The southeast area (Area 4) was opened in 1967, and the northeast area (Areas 1 and 3) operated from 1972 to 1974. All of the disposal areas in Holiday Park were reported to have received municipal wastes and are suspected of receiving industrial wastes including phenolic resins and molding compounds from the Durez Division of Hooker Chemical. The Interagency Task Force on Hazardous Wastes' March 1979 Draft Report on Hazardous Waste Disposal in Erie and Niagara Counties indicated that 625 tons of phenolic compounds, transported in drums, were disposed of at Holiday Park between 1972 and 1974. The draft report is included in Appendix B. The Phase II Investigation report prepared by Wehran in 1985 indicated that Areas 2 and 4 may have received ash from a municipal garbage incinerator. Additionally, Areas 2 and 4 were reportedly used to test a prototype solid waste disposal machine from 1964 to at least 1967. However, a neighboring property owner indicated in a discussion with Malcolm Pirnie and the NYSDEC on July 29, 1998, that the large disposal machine was used primarily in Area 3, as discussed in Section 3.4.6. The neighboring property owner and two golf course employees agree that Area 4 of Holiday Park was not used for the testing of the garbage disposal machine. A letter by the neighboring property owner that describes his recollections of the disposal machine is included in Appendix B.

Trenches observed in the northeast portion of Holiday Park by the Niagara County Department of Health inspections were assumed to be the locations of refuse disposal.

Recently, the Deerwood Golf Course completed an expansion into this portion area of the site. As described in Section 3.3.1, pockets of very organic-rich soil and pieces of appliances were encountered during the excavation of test pits in this area.

1.1.2 Botanical Gardens Site

In the 1950s, the City of North Tonawanda Department of Public Works was granted permission by the Canal Commission to fill a low area along the canal with refuse. This area is presently the southern portion of the Botanical Gardens Site. The City disposed of refuse at this location until approximately 1965. The use of this site was discontinued with the opening of other facilities in the area.

In 1964, the State Health Department reported violations including the disposal of putrescible material at the site and that inadequate material was used to cover the refuse. The City was then ordered to apply daily cover to wastes and to restrict the width of the working face to 50 feet. NYSDEC files indicate that the Durez Division of Hooker Chemical used this site in 1958 and 1959 to dispose of industrial wastes including 125 tons of phenolic resins and molding compounds.

1.2 HISTORICAL INVESTIGATIONS

1.2.1 Holiday Park Site

A United States Geological Survey (USGS) investigation of the site began in 1979 when two on-site monitoring wells were installed; one near the northeast corner of the site (Area 1) and a second near Zimmerman Road (Area 2). The logs and results of the historical investigations are included in Appendix A. The USGS continued investigation of the property in 1982 by installing and sampling five new wells and sampling the two older wells. Groundwater was sampled and analyzed from all seven wells located near the disposal areas. As summarized in Table A-1, only two organic compounds were detected in the groundwater. Dibutyl phthalate was detected at 32 ppb (below NYSDEC Class GA Groundwater Standards) in a well located in Area 2 and ethylbenzene was detected at 17 ppb (slightly above NYSDEC Class GA Groundwater

Standards) in a well located in Area 1. The only metals detected in the groundwater samples were copper and iron. Iron was detected at concentrations above Class GA Groundwater Quality Standards.

In addition, the USGS study included the sampling of pond water and three sediment samples. Analytical results from this study are summarized in Table A-2. The samples were analyzed for VOCs, SVOCs, and metals. Surface water sampling analytical results identified iron, lead, manganese, and zinc at concentrations below the applicable water quality standards guidance values. VOCs and SVOCs were not detected in the surface water. Sediment sample analytical results indicate that copper and iron were detected at concentrations below NYS Sediment Criteria. The SVOC dibutyl phthalate was the only organic compound detected in the sediment samples.

As part of a planned expansion of the Deerwood Golf Course at the Holiday Park site, Parsons-Engineering Science, Inc. implemented a test pit program. The soil samples were collected from test pits in areas where golf course expansion was proposed, and were analyzed for VOCs, SVOCs, and metals. The analytical results are summarized in Table A-3. The SVOCs detected in the samples include pentachlorophenol, benzoic acid, and hexanedioic acid. Pentachlorophenol and benzoic acid concentrations were below the NYSDEC soil cleanup guidelines. No NYSDEC soil cleanup value currently exists for hexanedioic acid. Inorganic compounds detected above the NYSDEC soil cleanup guidelines included chromium, copper, iron, mercury, nickel, selenium, and zinc. Mercury and selenium were detected in only one sample slightly above the soil cleanup guidelines. No site background concentrations exist for comparison.

1.2.2 Botanical Gardens Site

Two monitoring wells were installed at the Botanical Gardens Site in order to characterize the groundwater quality at the site. These wells still exist, and were used during the groundwater sampling event in 1998. Analytical results from a 1979 sampling event showed a concentration of total halogenated organics of 19.1 ppb in the sample collected from the monitoring well presently labeled USGS-1. Low concentrations of

chlorinated aliphatic and aromatic hydrocarbons, non-chlorinated aliphatic hydrocarbons and oxygenated hydrocarbons were detected in the samples from the wells.

Table A-4 summarizes the analytical results of four samples collected from the Botanical Gardens site in May 1992 by the NYSDOH. The VOCs acetone, methylene chloride, and chloroform were detected in the soil samples. Only acetone was detected at concentrations above the NYSDEC soil cleanup guideline. Although several SVOCs were detected in the samples, most were detected only in sample S-4, which was collected south of the boat launch near the parking area. All of the concentrations of SVOCs were below the NYSDEC soil cleanup guidelines. Several pesticide compounds and PCBs were detected at concentrations below the soil cleanup values. Inorganic analytes detected at concentrations above the soil cleanup guidelines included arsenic, mercury, barium, cadmium, chromium, copper, nickel, zinc, and lead.

1.3 HYDROLOGY/HYDROGEOLOGY

1.3.1 Surface Water

The Holiday Park Site is generally flat-lying with elevations ranging from 570 to 580 feet above mean sea level. The eastern portion of the site has been developed as the Deerwood Golf Course, while the western portion is undeveloped. The old golf course area includes ponds constructed between fairways that do not drain through surface streams, and the golf course expansion area contains low-lying areas approximately 4 feet deep that fill with water during wet periods. These newly-constructed ponds are connected to drainage systems that flow to the east and to the north of the site. The drainage ditch in Area 3 flows to the east and enters the canal via a buried conduit. The drainage ditch in Area 1 flows to the north and empties into a ditch along Walck Road that flows toward the canal. No streams flow into or out of the pond located in Area 4. Areas 1 and 3 of Holiday Park are included in the golf course expansion area, and Area 4 is in the southeast corner of the old golf course.

Located along Zimmerman Road, Area 2 of Holiday Park includes a significant area of wetlands that are heavily vegetated. According to the Water Main Installation Study by Environmental Field Services in 1991, the wetlands are NYS and federal protected wetlands. The wetlands begin at a distance of approximately 100 to 150 feet from Zimmerman Road. The area from the road to the wetlands is higher in elevation and therefore is less wet than the area farther from the road. This PSA investigation did not include sampling within the wetlands.

The Botanical Gardens Site is generally flat-lying, although the ground surface slightly slopes toward the Tonawanda Creek to the east. The site does not contain wetlands, but small amounts of surface water are present in southern portion of the site during wet periods. These areas of ponded water are often stained a rust color.

Additionally, two water fountains are present at the site. The fountain located between monitoring wells BG-USGS-1 and BG-USGS-2 uses water from the municipal supply, and the fountain near BG-MW-2 uses water pumped from the canal. The locations of the fountains are shown on Plate 3. The fountains are generally used only during the summer months. The fountain near BG-MW-2 discharges water to the canal via a man-made overflow channel approximately 4 to 5 feet wide and 6 to 12 inches deep. Although the fountain had not been used for more than 4 months prior to the sampling event and the pool surrounding the fountain was empty, the channel contained flowing water. The water was exfiltrating from the ground surface from a point midway between the fountain and the canal. The rate of flow of this groundwater/leachate issuing from the ground surface was approximately 3 to 4 gallons per minute. A rust-colored sediment was observed on the bottom of the stream.

1.3.2 Geology

The overburden at Holiday Park and Botanical Gardens is comprised of glaciolacustrine silt and clay deposits with lesser amounts of sand and gravel. These sediments were deposited when the area was covered by a proglacial lake which formed during the retreat of the Wisconsin glacier during the last ice age. The deposit has an

areal extent which fully encompasses North Tonawanda, New York. In areas of the sites in which fill material was encountered during the boring investigation, the fill appeared to be reworked native material. Previous investigations of the site indicated that bedrock is Camillus Shale at a depth of approximately 25 feet below grade. Bedrock was not encountered during this investigation.

1.3.3 Groundwater

The previous investigations indicated that the depth to the water table was approximately 6 feet below grade. During this investigation, groundwater was encountered in the overburden in borings at Holiday Park at depths of 2 to 8 feet below grade, and at Botanical Gardens at depths of 0 to 6 feet below grade.

On July 28, 1998, water levels were measured in the monitoring wells at the Holiday Park and Botanical Gardens Sites. The groundwater elevation measurements are shown in Table 1-1. Figure 1-3 illustrates that the water table in Area 1 of Holiday Park slopes to the northeast toward the canal at a relatively flat gradient. Although the canal is generally to the east of the Holiday Park Site, the orientation of the canal is more northwest-southeast near the northern portion of Holiday Park, as shown in Figure 1-2. Therefore, the groundwater flow direction is generally perpendicular towards the canal.

As shown in Figure 1-4, the direction of groundwater flow at the Botanical Gardens Site is generally to the east, toward the canal. However, in the southeast portion of the site, groundwater appears to be flowing toward the northeast. It is not clear why this occurs.

1.4 PURPOSE

Currently, the Holiday Park and Botanical Gardens Sites are designated as Class 3 Inactive Hazardous Waste Disposal Sites, but the NYSDEC has expressed interest in delisting the sites if site conditions warrant. This Preliminary Site Assessment (PSA) was undertaken because previous investigations are inadequate to clearly confirm the presence or absence of listed or characteristic hazardous wastes. The following are the main

TABLE 1-1**HOLIDAY PARK AND BOTANICAL GARDENS SITES
PRELIMINARY SITE ASSESSMENTS****JULY 28, 1998 GROUNDWATER ELEVATION MEASUREMENTS**

Location	Riser Elevation ⁽¹⁾	Well Depth ⁽²⁾	Depth to Water ⁽²⁾	Elevation ⁽¹⁾
HP1-MW-1	578.83	16.48	9.62	569.21
HP1-MW-2	575.90	13.70	6.54	569.36
HP1-MW-3	573.20	14.02	2.62	570.58
HP1-MW-4	578.00	15.20	7.55	570.45
BG-MW-1	570.18	13.25	4.15	566.03
BG-MW-2	570.31	15.10	5.45	564.86
BG-MW-3	573.66	13.10	5.32	568.34
BG-MW-4	574.55	13.80	6.10	568.45
BG-USGS-1	571.67	19.00	4.97	566.70
BG-USGS-2	571.61	9.20	2.10	569.51

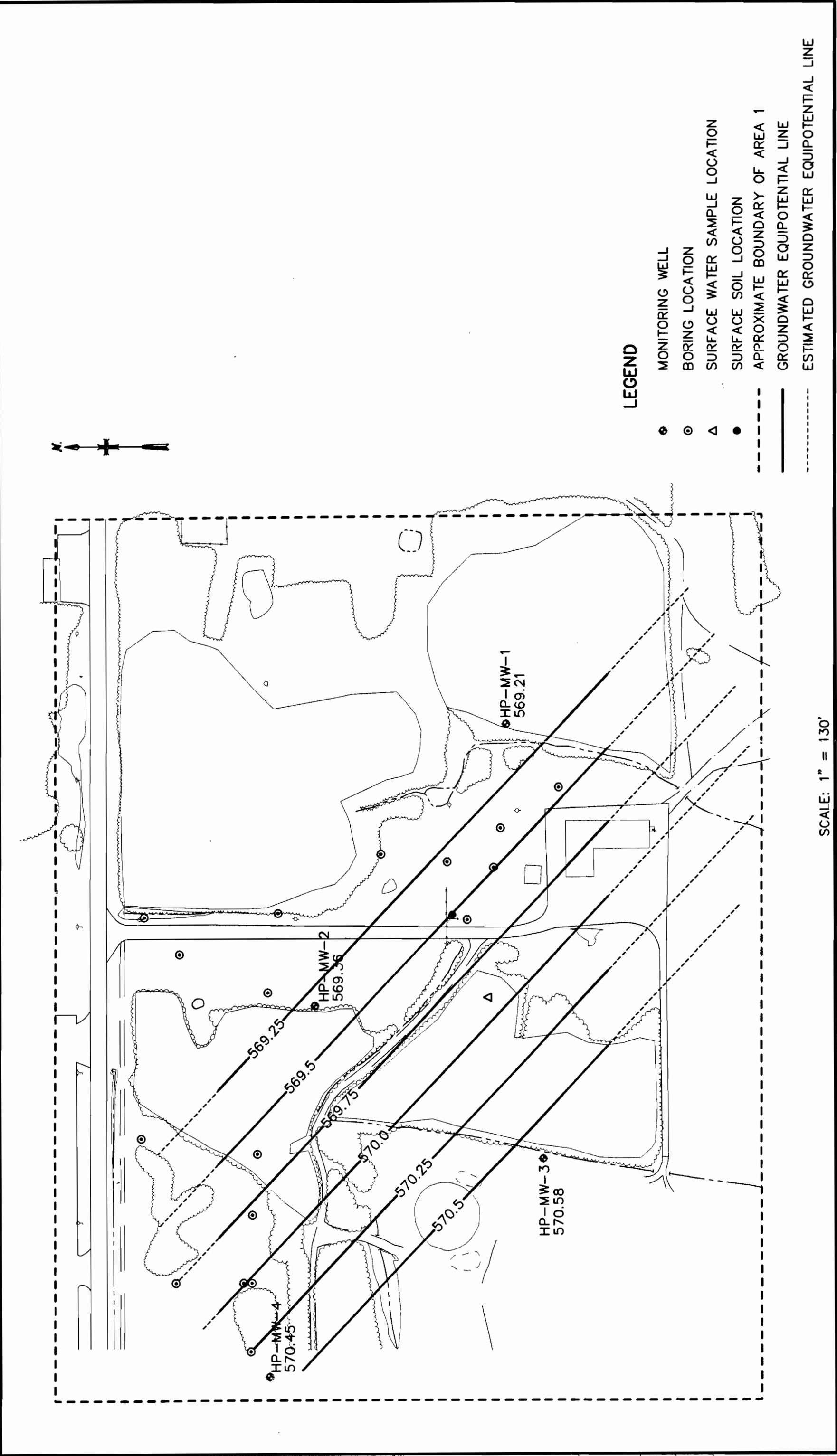
Notes:

1 - Measured in feet; distance above mean sea level.

2 - Measured in feet; distance below top of riser.

MW = Monitoring Well P = Piezometer WP = Well Point

FIGURE 1-3



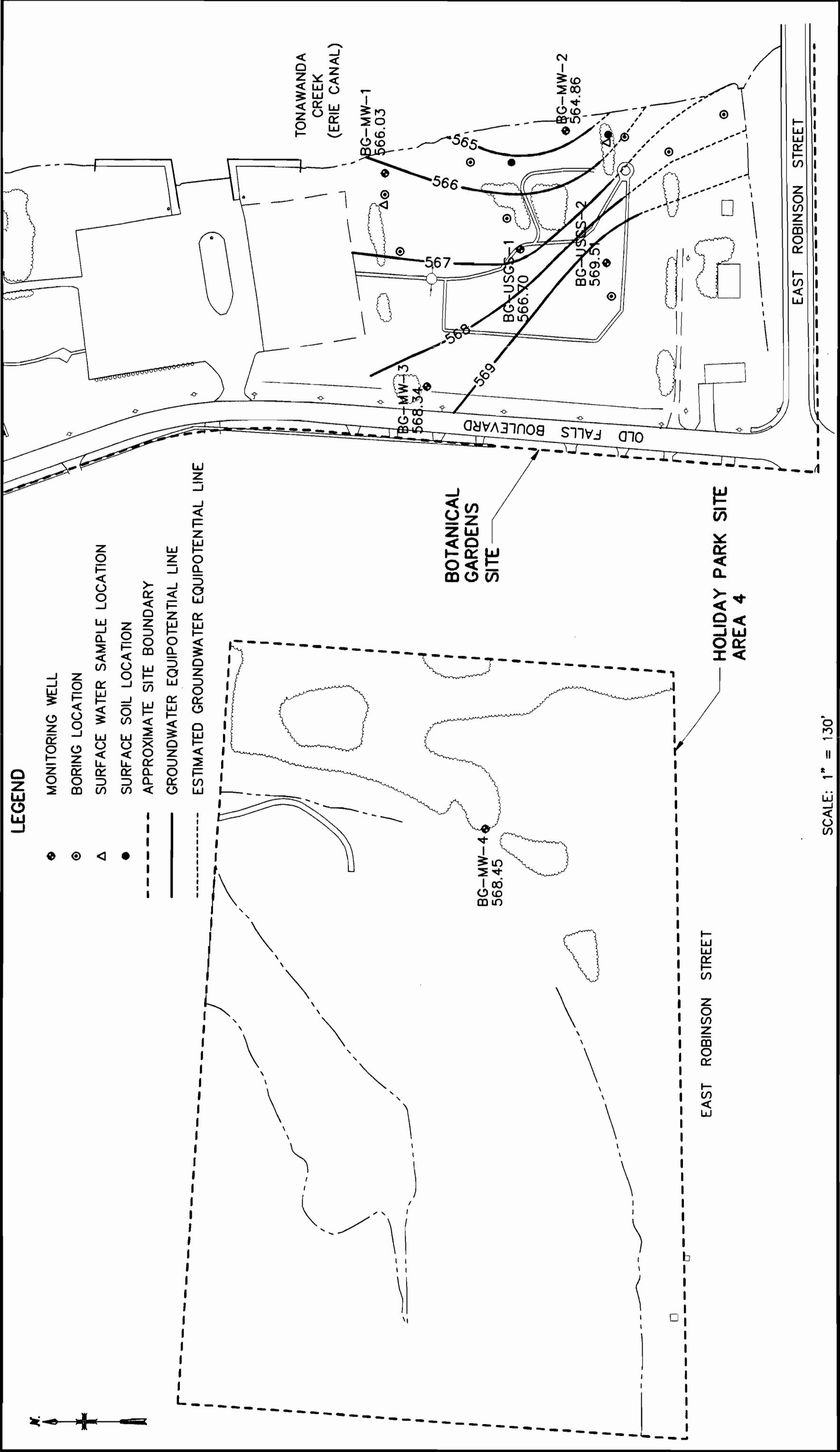


FIGURE 2-2

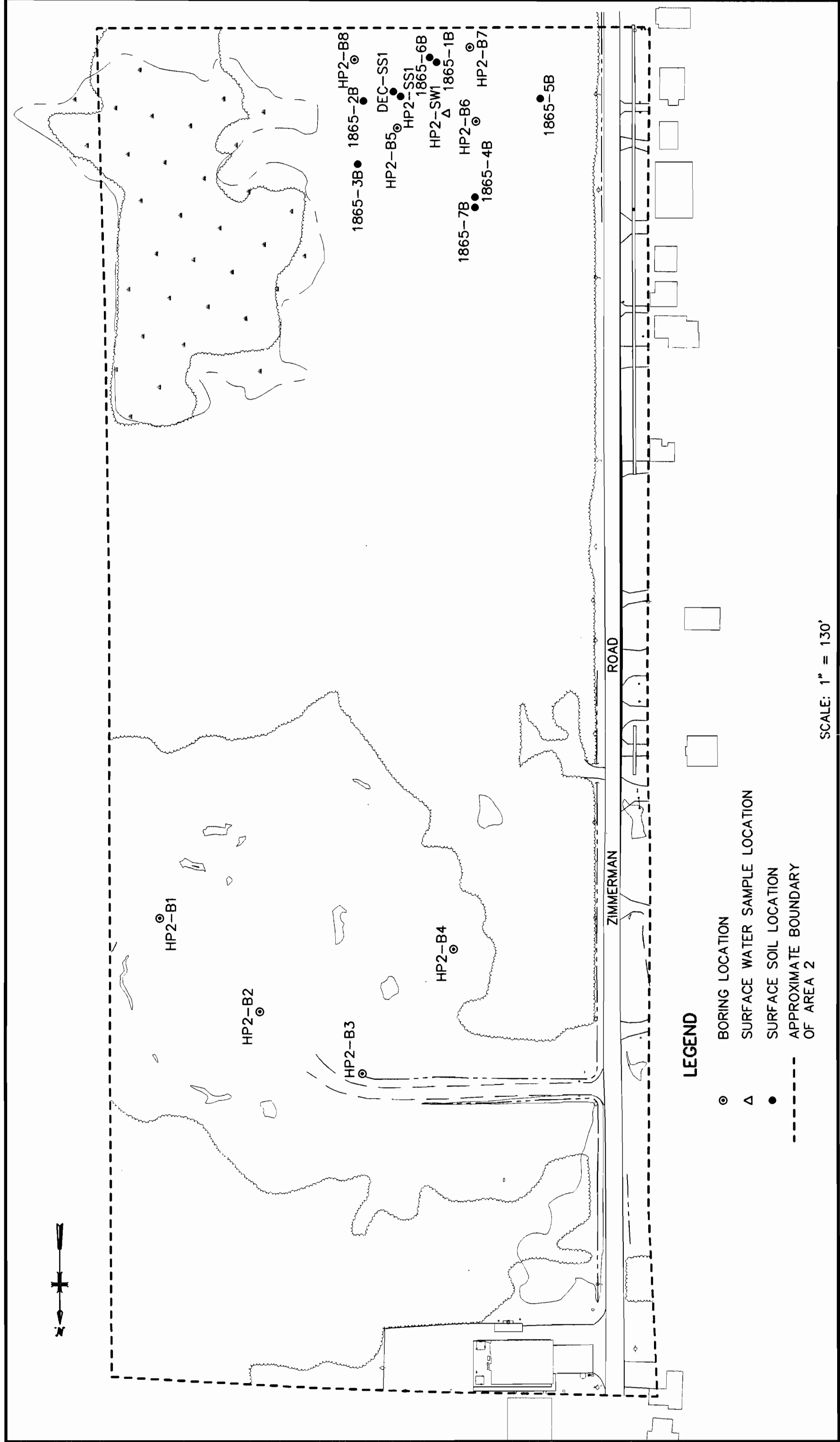
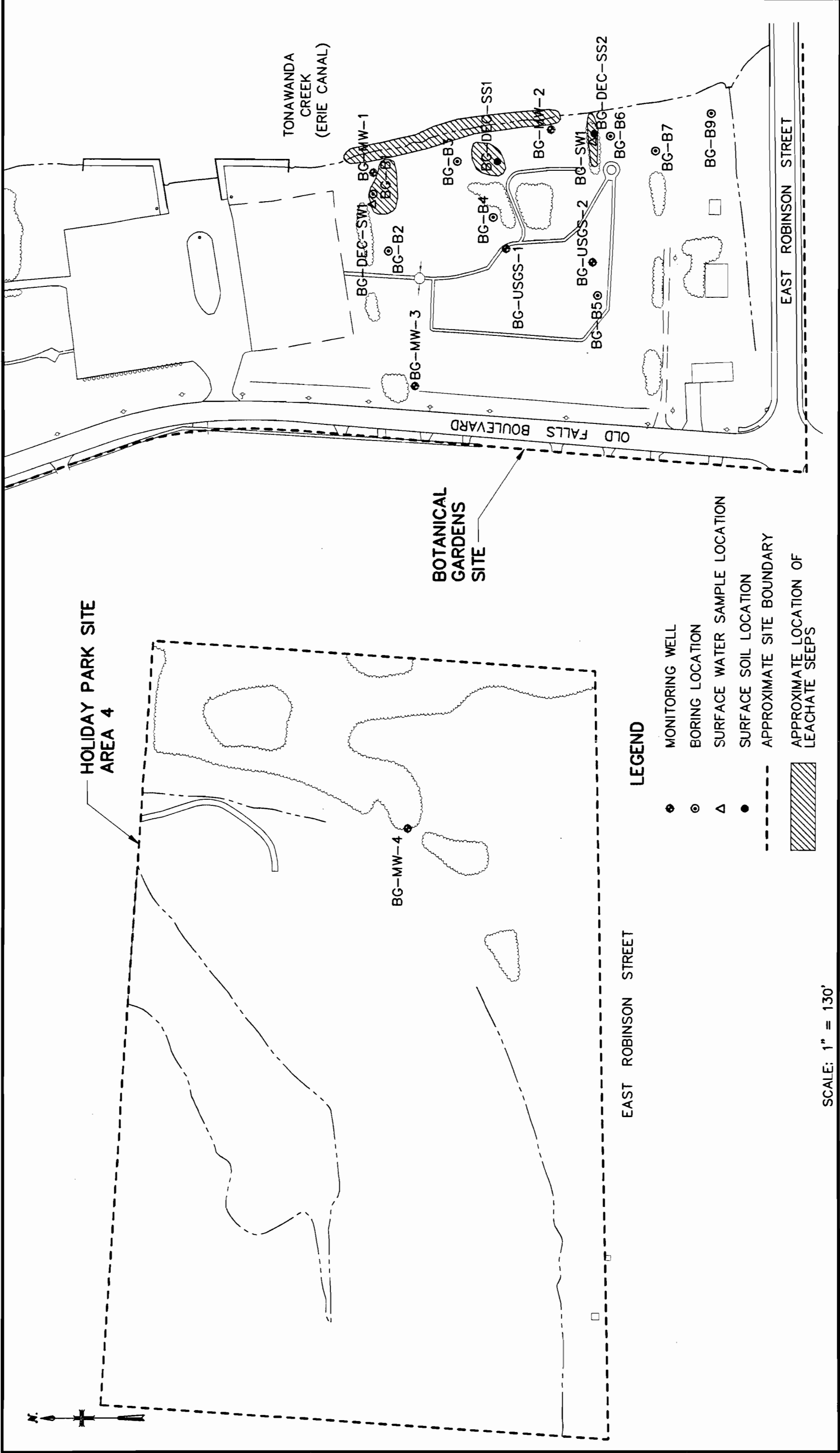
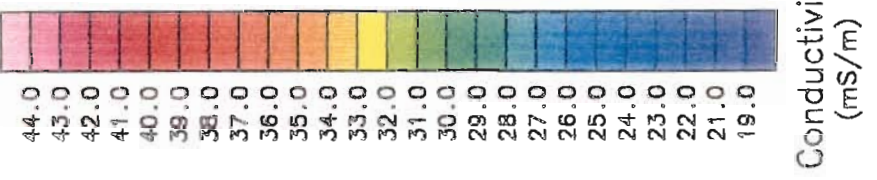
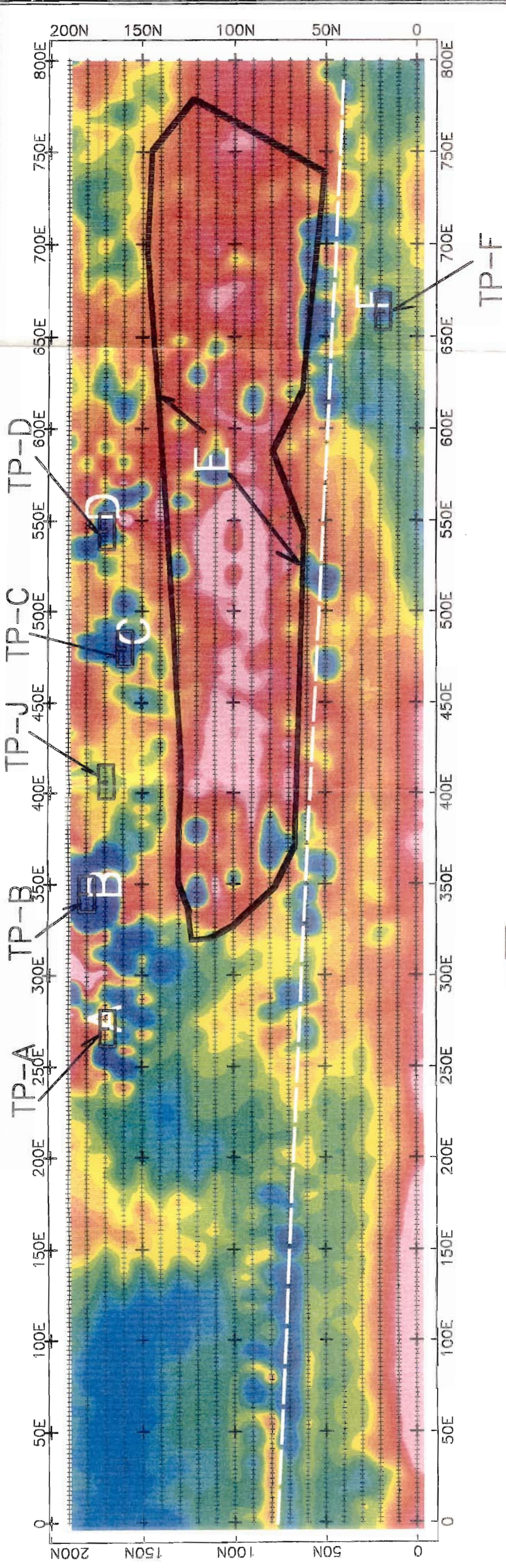


FIGURE 2-3





TP-A Test pit location and designation



Interpreted linear anomaly



Anomaly designation

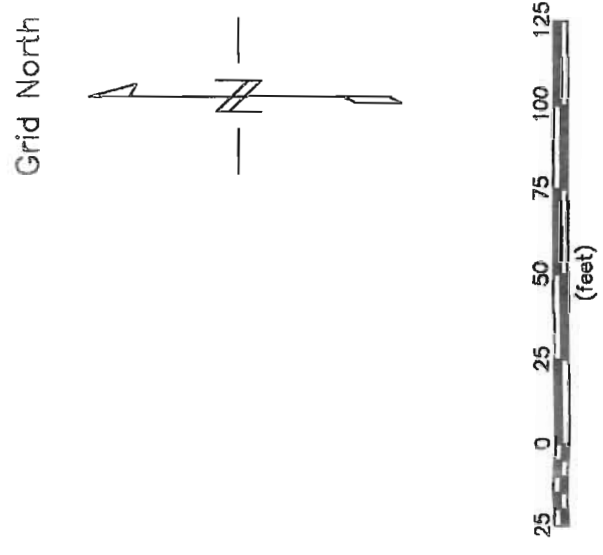


FIGURE 2-4

Holiday Park Site North Tonawanda, NY
Golf Course - Pro Shop Area (Area 3)

Color Contours of EM31 Data
Conductivity (mS/m)
Malcolm Pirnie

objectives of this PSA:

- Determine whether hazardous waste disposal occurred on-site as defined in 6NYCRR Part 371 including characterization of waste, if present.
- Determination of the site's significance as to its threat to public health and the environment due to the presence of hazardous waste, as defined in 6NYCRR Part 375.
- Identification and characterization of contaminated media at the site.

1.5 SCOPE OF WORK

The investigative tasks were designed to generate information sufficient to enable the NYSDEC to identify the presence and characteristics of chemical constituents at the sites. The scope of work identified for this site in the Project Management Plan was approved by the NYSDEC. The Site Specific Work Plan (SSWP) was conditionally approved in a letter dated July 15, 1997 by the NYSDEC to Malcolm Pirnie. The modifications requested by the NYSDEC in the letter were incorporated into the SSWP. The scope of work was developed as a two-phased approach that included an initial investigation (Round One) and a secondary investigation (Round Two). The completion of the secondary investigation was contingent on the discovery of contamination during the initial phase of the investigation. The SSWP included the following items in Round One of the investigation:

- Completion of an initial site visit to verify site access and assess sampling locations.
- Preparation of a site base map.
- Completion of a geophysical survey encompassing a total of approximately 60 acres located on both sites in the areas of concern.
- Completion of 50 boreholes in suspected areas identified during the geophysical survey.
- Collection and analysis of a total of 50 soil samples for the acid extractable compounds.

- Collection and analysis of a maximum of four groundwater samples, one from each area of concern, for acid extractable compounds during the completion of the 50 boreholes.
- Collection and analysis of a total of five surface soil samples for Target Compound List (TCL) VOCs, SVOCs, pesticides/PCBs, Target Analyte List (TAL) metals and cyanide.
- Collection and analysis of one surface water sample from the drainage swales in the northeast area for TCL VOCs, SVOCs, pesticides/PCBs, TAL metals, and cyanide.

The results of the initial investigation were used to identify locations of groundwater monitoring wells and test pits in the subsequent phase of site characterization. The SSWP included the following items in Round Two of the investigation:

- Installation of a total of four overburden monitoring wells at the two sites.
- Collection and analysis of soil samples for grain size and Atterberg Limits testing in the screened section of each well location.
- Collection and analysis of a total of six subsurface soil samples for Target Compound List (TCL) VOCs, SVOCs, pesticides/PCBs, Target Analyte List (TAL) metals and cyanide.
- Collection and analysis of a total of four groundwater samples for TCL VOCs, SVOCs, pesticides/PCBs, TAL metals and cyanide.
- Completion of a site reconnaissance to attempt to locate wells installed during previous investigations.
- Completion of an additional 10 soil borings to collect and analyze 10 soil samples for TCL VOCs and SVOCs.
- Collection and analysis of a maximum of four samples for TCLP if waste is encountered.
- Collection and analysis of a maximum of two samples for RCRA characteristics if waste is encountered.

- Collection and analysis of an equipment blank from water used for drilling and decontamination for full TCL VOCs, SVOCs, pesticides/PCBs, TAL metals and cyanide.

The scope of work identified in the SSWP for the Holiday Park Site and Botanical Gardens Site is based on information provided by the NYSDEC and the Project Work Plan (Malcolm Pirnie, 1997). A generic Quality Assurance Project Plan and a Field Sampling Plan (QAPP/FSP) describing the specific field sampling procedures and the means for quality assurance during the project was prepared for use during the performance of each of the four PSAs identified in this Work Assignment. Field activities conducted at the Holiday Park Site and Botanical Gardens Site were performed in accordance with a Site Specific Health and Safety Plan prepared for these sites.

2.0 SITE CHARACTERIZATION PROCEDURES

2.1 PRELIMINARY INVESTIGATION PROCEDURES

Site reconnaissance was conducted by the NYSDEC and Malcolm Pirnie at the Holiday Park and Botanical Gardens Sites on October 29, 1996 to verify site access and assess sampling locations. The selection of sampling locations was based on the past history of landfilling activities, historical analytical results, and anticipated groundwater flow direction.

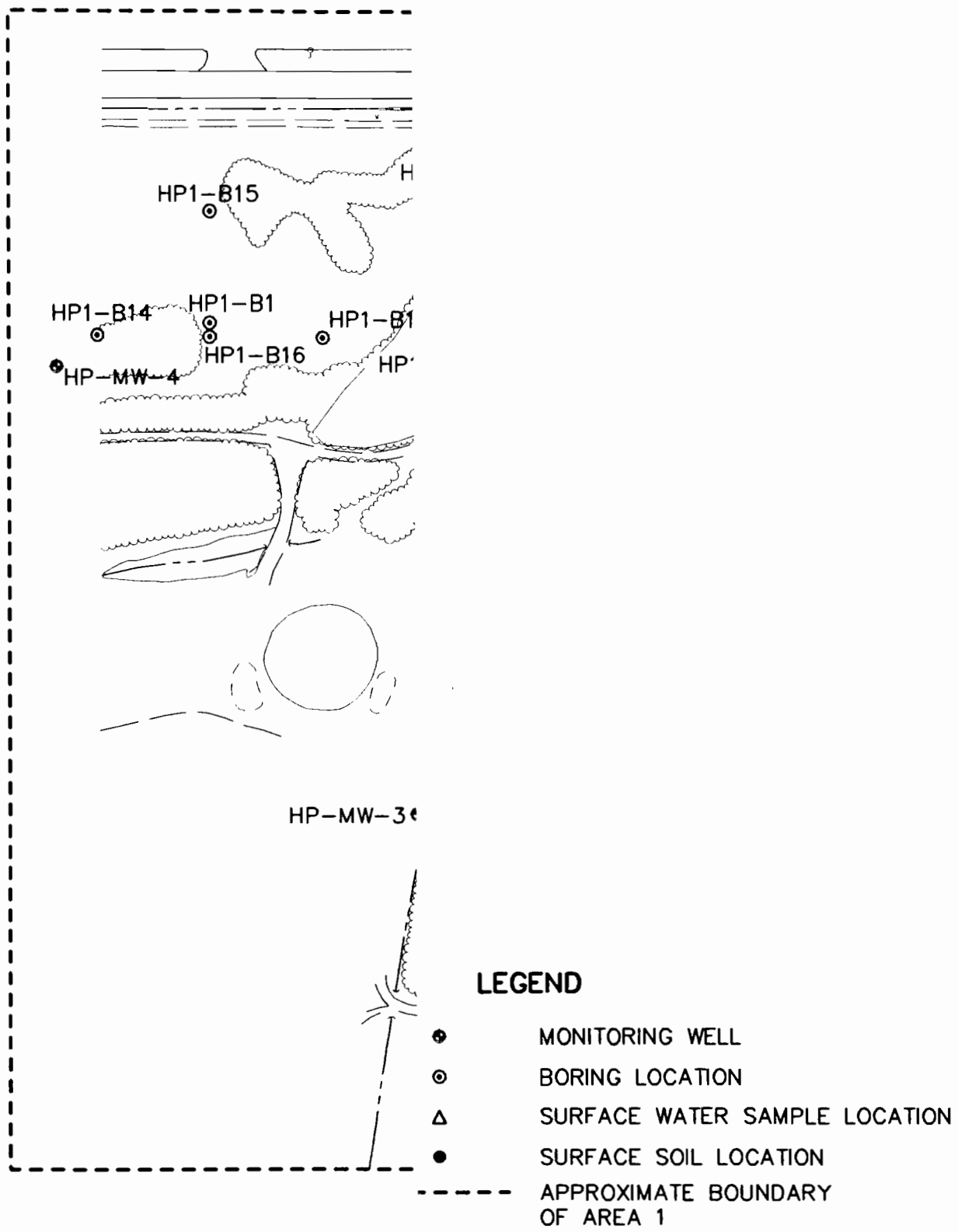
2.1.1 Base Map Development

Base maps were developed by Om Popli of Penfield, New York to facilitate the field work and subsequent reporting activities. The initial site survey was initiated on April 11, 1997. The objective of the site survey was to provide the information necessary to prepare detailed site maps which delineate site features including topography, buildings, roadways, above-ground utilities, and drainage. Topographic contours were provided at intervals of two feet. Following the completion of the sampling program, the horizontal and vertical coordinates of the monitoring well locations were surveyed for use in this report. Because a golf course was constructed over Holiday Park Areas 1 and 3, soil and brush was piled over some of the sampling locations in Area 2, and the sampling location pin flags at Botanical Gardens were removed, the sampling locations were not surveyed, and are shown on the figures as approximate locations. Plates 1, 2, and 3 are the base maps created for the sites, and Figures 2-1, 2-2, and 2-3 illustrate the sampling locations.

2.1.2 Geophysical Survey

An EM-31 geophysical survey was performed by Geomatrix Consultants, Inc. of Williamsville, New York on January 21 through 26, 1998 in Areas 1 and 2 of the Holiday Park Site and at the Botanical Gardens Site in areas suspected of receiving hazardous

7516 0266325450 I:\ACAD\PROJ\02663251\0266FIG4 Scale: 1:1 Date: 01/19/1999 Time: 10:42



**MALCOLM
PIRNIE**

0266FIG4

HOLIDAY PARK SITE
AREA 1
SAMPLE LOCATION MAP

NYSDEC
NORTH TONAWANDA, NY

MARCH 1999

waste. The EM-31 geophysical surveys were completed in order to more accurately identify areas where disposal occurred and, if possible, to determine the existence of contaminant plumes within the subsurface.

Prior to the initiation of the geophysical surveys, Bush Trucking-Landscaping, Inc. of North Tonawanda, New York cleared survey paths using a tractor equipped with a large mowing deck in areas of dense vegetation in Areas 1 and 2 of Holiday Park. Malcolm Pirnie then created the grids for the EM-31 geophysical surveys on January 19 to 21, 1997 using pin flags spaced every 100 feet within each row and 25 feet between the rows. The size of the geophysical survey grid at Botanical Gardens was approximately 400 feet by 300 to 400 feet. The grid at Holiday Park Area 1 was 950 feet by 300 to 800 feet, and at Area 2 the grid was 1500 feet by 150 to 750 feet.

The Project Management Plan proposed full coverage of Holiday Park Areas 1 and 2 and the southern half of Botanical Gardens by the EM-31 geophysical surveys. The surveys included the entire intended area at Botanical Gardens, but the two areas at Holiday Park were not covered entirely by the survey grids. However, the NYSDEC agreed that the coverage was adequate based on site conditions. In Area 1 of Holiday Park, the area to the west of the maintenance shop was not fully covered because of a large pond that was excavated during the construction of the new golf course. The pond was approximately 4 feet deep, and was full of water at the time of the survey. The landscaping firm responsible for the construction of the new golf course, Birch Grove, indicated that no waste material or drums were observed during the excavation of the pond.

The land elevation to the east of the survey grid in Area 2 was lower than that of the area that was included in the grid, and much of the land surface in that area was covered by 1 to 12 inches of water. Bush Trucking-Landscaping was therefore unable to clear survey lines in this wet area, and the grid was advanced to the east to the greatest extent possible. It is unlikely that filling activities occurred in areas not covered by the geophysical survey grid in Area 2 because access to vehicles used for dumping the material would be difficult due to the presence of standing water. Additionally, filling

activities would likely have created areas with higher elevations that would preclude the ponding of water on the surface.

In addition to color plots showing the results of the geophysical surveys, the geophysical survey results reports, included as Appendix C, contain descriptions of the methodologies and other background information on geophysical surveys. Based on the results of the EM-31 geophysical survey, Malcolm Pirnie and the NYSDEC selected 7 locations for soil borings at Botanical Gardens, 10 in Area 1 of Holiday Park, and 8 in Area 2. In addition, two areas located near the East Robinson Road Bridge that crosses the Tonawanda Creek, an area not included in the geophysical survey at Botanical Gardens, were selected by the NYSDEC to determine whether industrial waste was used in the construction of the bridge. Three additional soil boring locations were selected in Area 4 in order to investigate any filling activities in that area. Based on conversations with Deerwood Golf Course employees and a neighboring property owner, Area 4 was later removed from the soil boring investigation. These people indicated that waste was not deposited in this area.

An EM-61 geophysical survey was conducted on March 14 and 15, 1998 at each of the boring locations to identify subsurface drilling hazards in the vicinity of each borehole. The boring locations were surveyed with the EM-61 using grids 25 feet by 25 feet with line spacing 5 feet apart.

2.2 GOLF COURSE EXPANSION SAMPLING

On July 24, 1997, Birch Grove, the landscaping company in charge of the construction of the Deerwood Golf Course Expansion, encountered fill material during the excavation of a pond to the south of the golf course maintenance shop. The location of the pond is between Area 1 and Area 3. Malcolm Pirnie and the NYSDEC visited the site to examine the pond excavations to determine if hazardous waste material might be present in this area. During the site visit on July 24, 1997, Malcolm Pirnie and the NYSDEC observed dark gray-to-black stained soil in the north and southeastern portions of the new pond. This stained soil contained many sticks and other pieces of wood, and

PID measurements in this area indicated that VOCs were not present at concentrations above background. No metal debris was encountered in this pond excavation during the site visit. The pond was approximately 4 feet deep, and observations of the excavation floor indicated that all of the visible material was either native soil or reworked native soil with pockets of organic-rich soil. This gray-to-black stained soil was not sampled.

A second site visit was performed by Malcolm Pirnie and the NYSDEC on July 31, 1997 following the discovery of metal debris and rust-stained soil and water in the pond discussed above. Birch Grove encountered this material while expanding the pond in the southwest direction. Observations of the area indicated that rust-stained water and sediment were contained in a small pool within the pond, and metal debris was present in the sidewall of the excavation. The project foreman, Mr. Ray Fisher, indicated that water began flowing out of the sidewall of the excavation when the backhoe removed some of the metal fill material. The water was said to flow for approximately 20 minutes. Birch Grove constructed a soil berm around the expanding pool to contain the water discharging from the excavation sidewall. Inspection of the area revealed that the majority of the metal debris was from a discarded refrigerator, and pieces of other appliances were observed in the area. PID measurements in this area indicated that VOCs were not present at concentrations above background. Although the source of the stained water was likely water perched in and around the buried appliances, one soil sample (P-1SL) and one water sample (P-1AQ) were collected from the stained area to determine if any contaminants were present. The samples were analyzed for TCL VOCs and SVOCs.

2.3 SITE INVESTIGATION ROUND ONE

2.3.1 Initial Screening Program

Based on the results of the geophysical survey, Malcolm Pirnie and the NYSDEC initially selected 10 locations in Area 1 of Holiday Park (HP1-B1 through HP1-B10), 8 locations in Area 2 (HP2-B1 through HP2-B8), and 9 locations at Botanical Gardens (BG-B1 through BG-B9) for soil borings. A total of 32 borings were completed during

the initial screening program (Round One of the investigation), which occurred April 6 through April 9, 1998. Based on the findings in the first borings completed at the sites, one originally proposed boring location was deleted from the program while six new boring locations were added. The boring locations are shown on Figures 2-1, 2-2, and 2-3.

At the Botanical Gardens Site, boring BG-B8 was not completed because no material appearing to be waste was encountered in borings BG-B7 and BG-B9. Two additional borings (HP1-B11 and HP1-B12) were completed in Area 1 of Holiday Park in an area that a neighboring property owner believed was the location of buried drums. Significant anomalies were detected in this area during the geophysical survey in Area 1. Four borings (HP1-B13 through HP1-B16) were completed in April near the boring location (HP1-B1) from which a sample with detectable concentrations of phenols was collected.

The drilling was completed by SJB Services of Buffalo, New York with a CME-550X All-Terrain Vehicle rig. Plywood was used at Botanical Gardens to reduce the impact of the rig on the ground surface. The borings were drilled using conventional 4.25-inch hollow stem augers. Split spoon samples two inches in diameter were continuously collected during the advancement of each boring, and the borings were completed upon the first encounter of native material.

The soil samples were inspected and described by a geologist to characterize subsurface soil conditions and any waste present. At each borehole location, split spoon soil samples were screened with a PID and the maximum value recorded on the boring log. The boring logs, field notes, and photographic logs are included as Appendix D. A sample from each split spoon interval exhibiting the highest PID reading, the presence of visually contaminated soil, and/or olfactory evidence of contamination were placed in laboratory pre-cleaned jars, labeled and placed in a storage chest filled with ice. Of the multiple samples collected from each borehole, one sample was selected from each borehole and submitted to the laboratory for the phenol screening analysis. Sample selection was based visual and olfactory observations, and PID measurements. When no

evidence of contamination was present in the boring, the sample was collected from the interval just above the water table. During the completion of the boreholes, at least one groundwater sample from each area at Holiday Park was collected and analyzed for phenols.

Cuttings from the borings at the Botanical Gardens Site were containerized in drums based on the presence of waste including slag, plastic, and cardboard, slightly elevated PID measurements, and an observed oily appearance of a few of the soil samples. Because the analytical results indicated that on-site soil was not contaminated, the drummed cuttings were later broadcast on the site. The cuttings from the borings at Holiday Park were not drummed because the NYSDEC and NYSDOH agreed that the material present in each of the borings in Areas 1 and 2 did not present any hazards. This conclusion was based on the absence of elevated PID measurements, oily staining or sheens, and odors in the soil borings at Holiday Park.

The presence of phenolic compounds at the sites was considered to be the most appropriate indicator of Hooker-Durez waste because the reported waste buried in drums at the sites was phenolic resins and molding compounds. According to the NYSDEC, other compounds indicative of Hooker-Durez waste are chlorinated benzenes, dioxins, and furans. Other Tentatively Identified Compounds (TICs) were not considered by the NYSDEC to be significant in the fingerprinting of Hooker-Durez wastes.

From the soil borings, a total of 31 soil samples were collected for screening analysis of 14 phenolic compounds with rapid turnaround (24 hours) of analytical results. In addition, four groundwater samples collected from the borings (HP1-B11W, HP2-B1W, HP2-B4W, and HP2-B5W), one surface soil sample (HP1-SS1) and two surface water samples (HP1-SW1 and HP2-SW1) were analyzed for phenols. Waste Stream Technologies of Buffalo, New York performed the sample analysis. The list of phenolic compounds included phenol, 2-methylphenol, 3&4-methylphenol, 2,4-dimethylphenol, 2-chlorophenol, 2-nitrophenol, 2,4-dichlorophenol, 4-chloro-3-methylphenol, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, 2,4-nitrophenol, 4-nitrophenol, 4,6-dinitro-2-methylphenol, and pentachlorophenol. Because analytical

results were provided within a short time period after sampling, the laboratory did not analyze the samples using the NYSDEC Analytical Services Protocol (ASP) Method 95-2. Therefore, the analytical results were not validated by a third party. Expedited analysis of these samples enabled the boring program to focus on areas in which phenols were detected.

Based on the results of the phenol screening, four additional borings (HP1-B13 through HP1-B16) were completed in Area 1 of Holiday Park near the sample locations with detectable concentrations of phenols. Soil borings HP1-B13, HP1-B14, and HP1-B15 were placed approximately 100 feet from HP1-B1 to determine the extent of phenols in the subsurface. Phenols were not detected in samples collected from these borings. A boring was not completed to the south of boring HP1-B1 because a pond approximately 4 feet deep had recently been constructed in this area. No waste material was encountered during the excavation of this pond. Boring HP1-B16 was advanced approximately 7 feet from the location of boring HP1-B1 to determine if any other contaminants were associated with the elevated phenols detected in the sample from HP1-B1. The boring locations are shown on Figures 2-1, 2-2 and 2-3.

The surface soil sample (HP1-SS1) was collected from a location in Area 1 of Holiday Park that was stained a rust color, and appeared to have been impacted by groundwater exfiltrating from the ground surface. The sample location is shown on Figure 2-1. The PID measurements in this area indicated that VOCs were not present at concentrations above background. The surface soil sample was collected using a decontaminated stainless steel spoon, and placed in a sample bottle supplied by the laboratory.

Surface water samples were collected from Area 1 and Area 2 of Holiday Park (HP1-SW1 and HP2-SW1, respectively) for phenol analysis. The locations of the surface water samples are shown on Figures 2-1 and 2-2. HP1-SW1 was collected from the pond that the exfiltrating water discussed above discharged into, and HP2-SW1 was collected from a pool of water containing rust-colored staining in the soil on the pool's bottom. To collect the surface water samples, bottles provided by the laboratory were dipped into the

surface water and filled. To fill those bottles that contained a preservative, a bottle without preservative was first filled, and the contents were carefully poured into the bottle with the preservative.

Groundwater samples were collected from one boring in Area 1 (HP1-B11W) and three borings in Area 2 (HP2-B1W, HP2-B4W, and HP2-B5W) for phenol analysis. The samples were collected using disposable bailers lowered inside the augers once the final depths of the borings were reached. The contents of the bailers were carefully poured into bottles provided by the laboratory.

2.3.2 Expanded Compound List Sample Analysis

During Round One of the sampling program (April 6 through 9, 1998), a total of four soil samples and three aqueous samples were submitted to Mitkem for analysis of Target Compound List (TCL) VOCs, SVOCs, and Pesticides/PCBs, and Target Analyte List (TAL) metals plus cyanide. This analyte list will herein be termed the Full TCL Analysis. The rationale for the collection of each of those samples is discussed below. Mitkem Corporation provided the bottles for the samples, and analyzed the samples using the NYSDEC Analytical Services Protocol. The NYSDEC also collected samples to be analyzed by the NYSDEC laboratory. The sampling locations are shown on Figures 2-1, 2-2, and 2-3.

No sludge, ash, or other non-soil industrially-derived waste material was encountered during the boring program. Therefore, in accordance with the Site Specific Work Plan, no additional samples were collected from the borings by Malcolm Pirnie for TCLP analysis and analysis of RCRA characteristics.

2.3.2.1 Subsurface Soil Samples

The soil sample HP1-B12 was selected for full TCL analysis based on anomalous geophysical measurements in the area of the boring and a discussion with a neighboring property owner. The neighbor indicated that he believed that drums were buried in this area in the early 1970's, but did not give a written statement regarding filling activities at

the site. Although no material appearing to be a hazardous waste was encountered in the borings, fill material including sticks and pieces of cut wood were observed at depths of 3 to 10 feet below grade.

The soil sample HP1-B16 was collected from the same depth interval as that sample HP1-B1 (9 to 10 feet below grade) in a boring positioned within 7 feet of boring HP1-B1, in which phenols were detected during the phenol screening analysis. This sample was submitted to determine if additional compounds are present in the area of elevated phenol concentrations..

During the placement of an utility pole on April 9, 1998, Niagara Mohawk employees noted an odor emanating from a shallow boring in Area 1 of Holiday Park. NYSDEC and Malcolm Pirnie screened the soil from the boring with a PID, and measurements up to 25 ppm were recorded. The NYSDEC collected a sample from the boring for analysis of SVOCs.

2.3.2.2 Surface Soil Samples

A surface soil sample (HP1-SS1A) was collected in the rust-stained area impacted by exfiltrating groundwater in Area 1 of Holiday Park, approximately in the same location as HP1-SS1, which was previously screened for phenols. Although phenols were not detected in sample HP1-SS1, the additional sample was collected to confirm that the exfiltrating groundwater did not contain hazardous compounds.

A number of mounds composed of an ash-like material 1 to 3 feet in height were observed in the southern portion of Area 2. On April 9, 1998, Malcolm Pirnie and the NYSDEC collected surface soil samples HP2-SS1 and DEC-SS1, respectively, from the mounds. Sample HP2-SS1 was submitted to Mitkem for full TCL analysis, and sample DEC-SS1 was submitted to the NYSDEC laboratory for TCL SVOC analysis. The NYSDEC collected seven additional samples from the mounds on July 1, 1998 for analysis by Recra LabNet. Five surface soil samples (1865-1B through 1865-5B) were submitted for analysis of TAL metals, and two samples (1865-6B and 1865-7B) were submitted for TCLP analysis.

The NYSDEC collected and analyzed two surface soil samples from the Botanical Gardens Site. Surface soil sample BG-DEC-SS1 was collected from a shallow depression in the East-Central portion of the Site for analysis of SVOCs. The depression was observed to intermittently hold water, and the vegetation in the depression was stained a rust color. Sample BG-DEC-SS2 was collected from rust-colored sediment within the fountain overflow channel.

2.3.2.3 Groundwater Samples

A groundwater sample (HP1-B16W) was collected from boring HP1-B16 to determine the impact of phenols in the soil to the groundwater in the area. The boring was placed in a location within 7 feet of boring HP1-B1, in which elevated phenol concentrations were detected during the phenol screening analysis.

The groundwater sample (BG-B2W) was collected from boring BG-B2 because slightly elevated PID measurements were detected in the boring. Additionally, the soil in the 4 to 6 foot interval had an oily appearance.

2.3.2.4 Surface Water Samples

One surface water sample (BG-SW1) was collected from Botanical Gardens in the area of a water fountain on April 7, 1998. In the summer months, the fountain discharges water to the canal via a man-made overflow channel approximately 4 to 5 feet wide and 6 to 12 inches deep. The fountain is not used during other months of the year. Although the fountain had not been used for more than 4 months prior to the sampling event and the pool surrounding the fountain was empty, the channel contained flowing water. The water was exfiltrating from the ground surface from a point midway between the fountain and the canal. The rate of flow of this groundwater/leachate issuing from the ground surface was estimated at approximately 3 to 4 gallons per minute. A rust-colored sediment was observed on the bottom of the stream. A water sample was collected from the water flowing in the streambed to determine if the exfiltrating groundwater contained contaminants that might adversely affect the canal.

The NYSDEC collected one surface water sample (BG-NYSDEC-SW1) from water that had ponded in a shallow depression in the northeastern portion of the site, near the parking lot. The ponded area was approximately 8 feet by 15 feet, and the vegetation within the ponded area was stained a rust color.

Rust-stained leachate seeps were observed along the bank of the canal. However, it was not possible to collect samples from the seeps due to low flow rates and the presence of rip-rap along the bank of the canal. The estimated locations of the leachate seeps are shown on Figure 2-3.

2.4 SITE INVESTIGATION ROUND TWO

2.4.1 Installation and Development of Monitoring Wells

Because the results of Round One of the site investigation indicated a potential for adverse impacts to groundwater quality, a total of eight groundwater monitoring wells were installed to assess groundwater quality in the vicinity of the impacted areas. Four monitoring wells were installed at the Botanical Gardens, and four wells were installed in Area 1 of Holiday Park. Monitoring wells were not installed in Area 2 of Holiday Park because sampling results indicated that contamination was absent in the borings completed during Round One of the site investigation. In the SSWP, a total of only 4 wells were proposed to be installed at Holiday Park and Botanical Gardens, but Malcolm Pirnie and the NYSDEC agreed that the installation and sampling of 4 wells at each site would yield more accurate information regarding groundwater flow direction, and magnitude and extent of groundwater contamination, if present.

Monitoring well installation, development, and sampling were conducted as described in the QAPP/FSP. The monitoring wells were installed using conventional hollow stem auger techniques by SJB Services. Each well was constructed using 2-inch diameter, flush joint PVC riser pipe with a screened interval 10 feet in length straddling the surface of the water table. Morie No. 0 filter sand was placed in the borehole around the 0.010-inch slot screen, and the sandpack generally extended two feet above the top of the screen. Two feet of bentonite pellets were placed above the top of the sandpack and

2.6 ANALYSIS/DATA USABILITY

The laboratory analytical packages prepared by Mitkem were reviewed and evaluated by an independent data validator, Chemworld Environmental, Inc. (Chemworld) of Rockville, Maryland, to assess compliance with the analytical method protocols described in the NYSDEC Analytical Services Protocol (ASP). Data Usability Summary Reports (DUSRs) were prepared by Chemworld that compare the quality of the performance of the laboratory analyses to that described in the ASP. The DUSRs have been included in Appendix E. All of the analytical results generated by Mitkem has been validated by Chemworld. The analytical results from Waste Stream, Recra Labnet, Expresslab, and the NYSDEC laboratory have not been validated by a third party validator.

The evaluation of the analytical results of samples collected at the Holiday Park and Botanical Gardens Sites indicated that the laboratory generally followed ASP. Although a number of the analytical results were qualified as estimated concentrations, none of the concentrations of targeted compounds were rejected during the validation. Reasons for the qualification of some of the results include elevated percent differences in continuing calibrations, slight exceedances of holding times, and compounds detected in associated blanks.

3.0 PRELIMINARY ASSESSMENT RESULTS

This section discusses the results of the investigation program performed in 1997 and 1998 during the Preliminary Site Assessment. The analytical results are compared to the applicable NYSDEC guidelines. The discussion of the surface and subsurface soil sample analytical results uses the Recommended Soil Cleanup Guidelines in the NYSDEC January 1994 Technical Administrative Guideline Memorandum (TAGM) 4046. When no cleanup guideline for inorganic analytes is included in TAGM 4046, the highest value of the Eastern United States of America Background Concentrations listed in TAGM 4046 is used for comparison. The United States Environmental Protection Agency's Maximum Concentrations for Toxicity Characteristics are used for the Toxicity Characteristic Leaching Procedure results. The aqueous sample results are evaluated using the NYSDEC June 1998 Ambient Water Quality Standards and Guidance Values for Class GA waters.

3.1 PRELIMINARY SITE ASSESSMENT SAMPLING ANALYTICAL RESULTS

3.1.1 Golf Course Expansion Sampling Results

One soil sample (P-1SL) and one water sample (P-1AQ) were collected from the stained area of the pond excavation in the golf course expansion area to determine if any contaminants were present. The samples were analyzed for TCL VOCs and SVOCs. The only compound detected in the samples was dibenzofuran, which was detected at an estimated concentration of 5 µg/L in the aqueous sample. Presently, there is no NYSDEC standard or guidance value for dibenzofuran in aqueous samples and the concentration is well below the NYSDOH guideline of 50 ug/L for organic compounds. The analytical results are shown on Tables 3-1 and 3-2.

TABLE 3-1 HOLIDAY PARK/BOTANICAL GARDENS PRELIMINARY SITE ASSESSMENTS SUMMARY OF ANALYTICAL RESULTS - HOLIDAY PARK AREA 1 - SOIL SAMPLES								
<i>Sample Location</i>	P-1 (SL)	HP1-SS1A	HP1-B12	HP1-B16	HP1-B10*	HP1-NM-SB1*	NYSDEC	Eastern USA
<i>Sampling Depth</i>	0-1	0-1	10-12	8-10	12-14	2-3	TAGM ⁽¹⁾	Background
<i>Collection Date</i>	7/31/97	4/9/98	4/9/98	4/9/98	4/6/98	4/9/98	4046	Concentrations
Volatile Organic Compounds (mg/kg)								
Methylene Chloride			0.01 J		NA	NA	0.1	-
2-Butanone				0.011 J	NA	NA	0.3	-
Toluene			0.008 J	0.036	NA	NA	1.5	-
Semivolatle Organic Compounds (mg/kg)								
4-Methylphenol				0.22 J			0.9	-
Acenaphthylene				0.062 J			41	-
Fluoranthene		0.134 J		0.046 J			50	-
Pyrene		0.143 J		0.058 J			50	-
Benzo(a)anthracene		0.085 J					0.224	-
Chrysene		0.105 J		0.05 J			0.4	-
Benzo(b)fluoranthene		0.183 J		0.16 J			1.1	-
Benzo(k)fluoranthene		0.077 J		0.07 J			1.1	-
Benzo(a)pyrene		0.115 J		0.15 J			0.061	-
Di-n-butylphthalate					1.5 B		8.1	-
Phenanthrene		0.075 J					7.1	-
Indeno(1,2,3-cd)pyrene		0.069 J		0.11 J			3.2	-
Benzo(g,h,i)perylene				0.12 J			50	-
Pesticides/PCBs (mg/kg)								
Aroclor-1260	NA	0.11			NA	NA	1	-
Endrine aldehyde	NA	0.005 JN			NA	NA	-	-
Metals (mg/kg)								
Aluminum	NA	7380	5830	2440	NA	NA	SB	33000
Antimony	NA	0.61 J	0.97 J		NA	NA	SB	-
Arsenic	NA	3.3 J	4.5 J	2.5 J	NA	NA	7.5 or SB	3 - 12
Barium	NA	137	45.8	10.9 B	NA	NA	300 or SB	15 - 600
Beryllium	NA	0.63 B	0.27 B		NA	NA	0.016 or SB	0 - 1.75
Cadmium	NA				NA	NA	1 or SB	0.1 - 1
Calcium	NA	49500	55200	49000	NA	NA	SB	130-35000
Chromium	NA	7.9	10.0	4.7	NA	NA	10 or SB	1.5 - 40
Cobalt	NA	4.2 B	7.3 B	3.2 B	NA	NA	30 or SB	2.5 - 60
Copper	NA	11.6	15.8	7.0	NA	NA	25 or SB	1 - 50
Iron	NA	31800	14800	6920	NA	NA	2000 or SB	2000 - 550000
Lead	NA	10.4			NA	NA	30 or SB	4 - 500
Magnesium	NA	10900	17300	11400	NA	NA	SB	100 - 5000
Manganese	NA	349	399	248	NA	NA	SB	50 - 5000
Mercury	NA				NA	NA	0.1	0.001 - 0.2
Nickel	NA	15.4	15.4	6.8 B	NA	NA	13 or SB	0.5 - 25
Potassium	NA	1540	959 B		NA	NA	SB	8500 - 43000
Sodium	NA	142 B			NA	NA	SB	6000 - 8000
Vanadium	NA	14.1	15	8.4 B	NA	NA	150 or SB	1 - 300
Zinc	NA	82.8	52.4	29	NA	NA	20 or SB	9 - 50
Cyanide	NA	3.4 B	0.23 B	0.31 B	NA	NA	-	-
Notes: ⁽¹⁾ Soil Cleanup objectives from NYSDEC January 24, 1994 TAGM 4046. "- " - No cleanup objective or background concentration range in TAGM 4046. * - Sample collected by NYSDEC representative and analyzed by NYSDEC laboratory. Blank space denotes analyte was not detected. Only compounds detected in at least one sample included in table. Shading indicates that concentration exceeds Guidance Value, and the background range is used when there is no Guidance Value. N - Spike recovery of analyte for spiked sample was not within control limits. B - Analyte detected in associated method blank. J - Reported value is estimated due to variance from quality control limits. E - Reported value is estimated because of presence of interference. NA - Parameter not included in analysis. SB - Site background concentration.								

TABLE 3-2
HOLIDAY PARK/BOTANICAL GARDENS
PRELIMINARY SITE ASSESSMENTS
SUMMARY OF ANALYTICAL RESULTS - HOLIDAY PARK AREA 1 GROUNDWATER SAMPLES

<i>Sample Location</i>	P-I (AQ)	HP1-B16W	HP-MW-1	HP-MW-2	HP-MW-3	HP-MW-4	Class GA
<i>Collection Date</i>	07/31/1999	04/09/1998	07/29/98	07/29/98	07/29/98	07/29/98	WQS ⁽¹⁾
Volatile Organic Compounds (ug/L)							
2-Butanone		30 J					-
Toluene		440					5
Xylenes (total)						1 J	5
Semivolatile Organic Compounds (ug/L)							
Naphthalene						1 J	10 ⁽²⁾
Dibenzofuran		5 J					-
4-Methylphenol		460					1
Phenol		29					1
2-Methylnaphthalene						3 J	-
Pesticides/PCBs (ug/L)							
None Detected	NA						
Metals (ug/L)							
Aluminum	NA	444000 J	1580	483 J	235 J	1350 J	-
Antimony	NA	22.5 B	4.3 B	5.8 B	5.7 B	5.4 B	3
Arsenic	NA	444	3.1 B			4.6 B	25
Barium	NA	2120 J	92.1 J	121 J	77.4 J	117 J	1000
Beryllium	NA	19.8 J				0.36 B	3 ⁽²⁾
Cadmium	NA	7.1	0.68 J	0.54 J	0.63 J	1.4 J	5
Calcium	NA	3440000	144000	170000	102000	271000	-
Chromium	NA	717 J	2.4 J	0.48 J		2.3 J	50
Cobalt	NA	409 J	3.3 B			2.8 B	-
Copper	NA	1620	4.6 J			11.9 J	200
Iron	NA	1190000	8560 J	7650 J	2620 J	13000 J	300
Lead	NA	826 J	13.3			7.4 J	25
Magnesium	NA	865000	50100	56900	27800	53600	35000
Manganese	NA	13700 J	454	198	208	1010	300
Mercury	NA	0.29 J		0.16 J			0.7
Nickel	NA	999 J	4.3 B			2.0 B	100
Potassium	NA	111000	1100 B	1560 B	737 B	1340 B	-
Selenium	NA	55.4 J					10
Silver	NA	5.4 J	1.2 J				50
Sodium	NA	13300	9350 J	26000 J	7300 J	23500 J	20000
Thallium	NA	41.3					0.5 ⁽²⁾
Vanadium	NA	855 J	4.6 B	1.5 B		9.5 B	-
Zinc	NA	3360 J	29.7 J	9.9 J	3.5 J	36.6 J	2000 ⁽²⁾
Cyanide	NA		1.1 B	0.8 B	1.5 B	1 B	200

Notes:

⁽¹⁾ Class GA WQS - NYSDEC Water Quality Standard for Class GA Waters, from NYSDEC June 1998

Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

⁽²⁾ NYSDEC Water Quality Guidelines for Class GA Waters, from NYSDEC June 1998 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

Blank space denotes analyte was not detected. Only compounds detected in at least one sample included in table.

Shading indicates that concentration exceeds Standard or Guidance Value.

"-" - No Standard or Guidance Value available.

B - Indicates analyte result is between IDL and CRDL.

NA - Parameter not included in analysis.

J - Reported value is estimated due to variance from quality control limits.

3.1.2 Area 1 - Holiday Park

3.1.2.1 Area 1 - Holiday Park; Surface Soil Sample Results

The surface soil sample HP1-SS1 was collected from a location in Area 1 of Holiday Park that was stained a rust color, and appeared to have been impacted by groundwater exfiltrating from the ground surface. The soil in the area was moist, but no flowing water was observed during the sampling event. The sample location is shown on Figure 2-1, and Table 3-3 summarizes the phenol screening results. No compounds were detected in the sample in the phenol screening.

Although phenols were not detected in sample HP1-SS1, an additional surface soil sample was collected to determine if the exfiltrating groundwater contained other hazardous substances. A surface soil sample (HP1-SS1A) was collected from the same location as HP1-SS1 for analysis of TCL VOCs, SVOCs and Pesticides/PCBs, and TAL metals plus cyanide. The analytical results for this sample are shown on Table 3-1. The only SVOC detected at concentrations above the soil cleanup guidelines was benzo(a)pyrene. Benzo(a)pyrene was detected in samples HP1-SS1A at a concentration of 0.115 mg/kg, above the soil cleanup guideline of 0.061 mg/kg. VOCs were not detected in this sample. The Pesticide/PCB analytical results indicated that Aroclor 1260 was detected at a concentration of 0.11 mg/kg, below the guideline of 1 mg/kg. Endrine aldehyde was also detected at an estimated concentration of 0.005 mg/kg. Currently, there is no soil cleanup guideline for endrine aldehyde. Although the four metals beryllium, iron, nickel, and zinc were detected at concentrations above the soil cleanup guidelines, only concentrations of zinc exceeded the background concentration range for soil in the Eastern U.S. The detected concentration of zinc was less than two times the highest value in the background range.

3.1.2.2 Area 1 - Holiday Park; Subsurface Soil Sample Results

The only waste material encountered in the borings in Area 1 was cut wood, concrete, red brick, and sticks. The soil most commonly encountered in the borings was a gray to brown silty very fine sand. The analytical results of the screening for phenolic

TABLE 3-3
HOLIDAY PARK/BOTANICAL GARDENS
PRELIMINARY SITE ASSESSMENTS
SUMMARY OF ANALYTICAL RESULTS - PHENOLIC COMPOUND ANALYSIS

Sample Location	Date	Media	Phenol	2-methylphenol	3&4-methylphenol	2,4-dimethylphenol
HP1-B1	4/6/98	SBS	117 J		2940	
HP1-B2	4/6/98	SBS				
HP1-B3	4/6/98	SBS				
HP1-B4	4/6/98	SBS				
HP1-B5	4/6/98	SBS				
HP1-B6	4/6/98	SBS				
HP1-B7	4/6/98	SBS				
HP1-B8	4/6/98	SBS				
HP1-B9	4/6/98	SBS				
HP1-B10	4/6/98	SBS				
HP1-B11	4/9/98	SBS				
HP1-B13	4/9/98	SBS				
HP1-B14	4/9/98	SBS				
HP1-B15	4/9/98	SBS				
HP1-SS1	4/6/98	SS				
HP1-B11W	4/9/98	BW		4 J	6 J	9 J
HP1-SW1	4/9/98	SW				
HP2-B1	4/8/98	SBS				
HP2-B2	4/8/98	SBS				
HP2-B3	4/8/98	SBS				
HP2-B4	4/8/98	SBS				
HP2-B5	4/8/98	SBS				
HP2-B6	4/8/98	SBS				
HP2-B7	4/9/98	SBS				
HP2-B8	4/8/98	SBS				
HP2-B1W	4/8/98	BW				
HP2-B4W	4/8/98	BW				
HP2-B5W	4/8/98	BW				
HP2-SW1	4/9/98	SW				

Notes:

Concentrations in ug/kg (soil) or ug/L (aqueous).

Blank spaces denotes compound not detected.

Only compounds detected in at least one sample included in table.

J - Indicates estimated concentration value.

BW - Groundwater sample collected from boring.

SBS - Subsurface soil sample.

SW - Surface soil sample

SW - Surface water sample

compounds indicated that phenols were detected in only 1 of 14 subsurface soil samples that were collected from borings in Area 1 of Holiday Park. Figure 2-1 shows the sample locations, and Table 3-3 summarizes the phenol screening results.

In the sample from the 9- to 10-foot interval of boring HP1-B1, phenol was detected at an estimated concentration of 117 µg/kg, and 3&4-methylphenol was detected at a concentration of 2940 µg/kg. These concentrations exceeded the NYSDEC Recommended Soil Cleanup Objectives of 30 and 900 µg/kg, respectively. Phenols were not detected in the samples collected from the borings surrounding HP1-B1 (HP1-B13 through HP1-B15).

The analytical results of the subsurface soil samples collected for analysis of TCL, VOCs, SVOCs Pesticides, and PCBs and TAL metals plus cyanide from borings in Area 1 of Holiday Park indicated that methylene chloride, acetone, 2-butanone, and toluene were detected at concentrations less than the applicable NYSDEC soil cleanup guidelines. The analytical results are shown on Table 3-4. The only SVOC detected at concentrations above the soil cleanup guidelines was benzo(a)pyrene. Benzo(a)pyrene was detected in samples HP1-B16 and HP-MW-3 at concentrations of 0.15 and 0.094 mg/kg, respectively. The soil cleanup guideline for benzo(a)pyrene is 0.061 mg/kg. Pesticides and PCBs were not detected in the samples. Although the concentrations of beryllium and iron in the soil samples from Area 1 were above the soil cleanup guidelines, the concentrations were below the Eastern U.S. Background Concentration Range. Chromium and nickel were detected at concentrations slightly above the background concentration range while calcium, magnesium, and zinc concentrations were less than four times the highest value in the range.

Two additional samples, HP1-B10 and HP1-NM-SB1, were collected at depths of 12 to 14 feet and 2 to 3 feet, respectively, and analyzed for SVOCs by the NYSDEC laboratory. The only SVOC detected in these samples was di-n-butylphthalate, which was detected at a concentration of 1.5 mg/kg in HP1-B10. The soil cleanup guideline for di-n-butylphthalate is 8.1 mg/kg.

TABLE 3-4
HOLIDAY PARK/BOTANICAL GARDENS
PRELIMINARY SITE ASSESSMENTS
SUMMARY OF ANALYTICAL RESULTS - HOLIDAY PARK AREA 1 - SOIL SAMPLES

<i>Sample Location</i>	HP-MW-1	HP-MW-2	HP-MW-3	HP-MW-4	EB-7-2 ⁽²⁾	NYSDEC	Eastern USA
<i>Sampling Depth</i>	2-4	2-4	2-4	4-6	Drill Water	TAGM	Background
<i>Collection Date</i>	07/02/98	07/08/98	07/08/98	07/02/98	07/02/98	4046 ⁽¹⁾	Concentrations
Volatile Organic Compounds (mg/kg)							
Methylene Chloride	0.012			0.016		1	-
Acetone				0.033 J		0.2	-
Chloroform					0.009 J	0.3	-
Bromodichloromethane					0.004 J	NA	-
Toluene					0.002 J	1.5	-
Semivolatile Organic Compounds (mg/kg)							
Phenol					0.001 J	0.03	-
Phenanthrene			0.17 J			50	-
Fluoranthene			0.19 J			50	-
Pyrene			0.21 J			50	-
Benzo(a)anthracene			0.11 J			0.224	-
Chrysene			0.14 J			0.4	-
bis(2-Ethylhexyl)phthalate	0.049 J	0.054 J	0.10 J	0.047 J	0.006 J	50	-
Benzo(b)fluoranthene			0.17 J			1.1	-
Benzo(k)fluoranthene			0.054 J			1.1	-
Benzo(a)pyrene			0.094 J			0.061	-
Indeno(1,2,3-cd)pyrene			0.074 J			3.2	-
Benzo(g,h,i)perylene			0.07 J			50	-
Pesticides/PCBs (mg/kg)							
None Detected							-
Metals (mg/kg)							
Aluminum	3510	9560	14300	3720	1550 J	SB	33000
Antimony	0.47 B		0.72 B	0.49 B	3.3 B	SB	-
Arsenic	0.73 B	2.8	4.1	1.7		7.5 or SB	3 - 12
Barium	23.8 B	83	142	24.8 B	49.7 B	300 or SB	15 - 600
Beryllium	0.24 B	0.47 B	0.65 B	0.37 B		.016 or SB	0 - 1.75
Cadmium	0.53 B	0.34 B	1.0 B	0.40 B	3.1 B	1 or SB	0.1 - 1
Calcium	63800	2550	3920	1430	30600	SB	130-35000
Chromium	6.7	12.8	42.5	6.5	2.9 B	10 or SB	1.5 - 40
Cobalt	3.3 B	2.7 B	5.3 B	3.1 B	1.6 B	30 or SB	2.5 - 60
Copper	8.9	5.3	20.5	9.1	22.1 B	25 or SB	1 - 50
Iron	9370	13800	22700 J	7670	7980	2000 or SB	2000 - 550000
Lead		15.9	26.5	7.3	20.8	SB	4 - 500
Magnesium	12500	2010	3610 J	1090	9020	SB	100 - 5000
Manganese	310 J	48.8 J	130	42.6 J	549	SB	50 - 5000
Nickel	9.5	12.3	32.5	9.7	3.1 B	13 or SB	0.5-25
Silver	0.43 J				4.4 J	SB	-
Sodium	187 B	99.2 B	126 B	174 B	6300	SB	6000 - 8000
Thallium		1.5 B	1.7 B	0.95 B		SB	-
Vanadium	10.7	19.9	22.6	9.5	4.8 B	150 or SB	1 - 300
Zinc	34.5 J	33.6 J	152 J	27.4 J	145 J	20 or SB	9 - 50
Cyanide	2.9 B	64.2	1.3 B	3.0 B	6.9 B	-	-

Notes: (1) - Soil Cleanup objective from NYSDEC January 24, 1994 TAGM 4046.

Blank space denotes analyte was not detected.

(2) - Drill Water concentrations in ug/L.

"-" - No soil cleanup objective or background concentration range in TAGM 4046.

B - Analyte detected in associated method blank.

SB - Site Background.

J - Reported value is estimated due to variance from quality control limits.

Shading indicates that concentration exceeds soil cleanup objective, and the background range is used when there is no Guidance Value.

3.1.2.3 Area 1 - Holiday Park; Surface Water Sample Results

One surface water sample was collected from the central portion of Area 1 of Holiday Park for analysis of phenols. The sample HP1-SW1 was collected from a newly-constructed pond in the central portion of Area 1. No phenols were detected in the sample HP1-SW1. Figure 2-1 shows the approximate sample location, and Table 3-3 summarizes the phenol screening results.

3.1.2.4 Area 1 - Holiday Park; Groundwater Sample Results

One groundwater sample (HP1-B11W) was collected from the borings in Area 1 during Round One of the site investigation for analysis of phenolic compounds. Figure 2-1 shows the sample location, and Table 3-3 summarizes the phenol screening results. Three phenolic compounds (2-methylphenol, 3&4-methylphenol, and 2,4-dimethylphenol) were detected in the groundwater sample collected from boring HP1-B11 at concentrations above the New York State Ambient Water Quality Standard for total phenolic compounds (1 µg/L) in Class GA groundwater. However, these compounds were detected at low concentrations (less than 10 µg/L), and the compounds were not chlorinated phenolic compounds. It is possible that the breakdown of the cardboard and wood fragments observed in boring HP1-B11 contributed to the concentrations of phenolic compounds in this sample.

The groundwater sample HP1-B16W was collected during Round One of the investigative program in Area 1 for analysis of TCL VOCs, SVOCs, Pesticides and PCBs, and TAL metals plus cyanide. Table 3-2 summarizes the analytical results. In the sample HP1-B16W, 2-butanone and toluene were detected at concentrations of 30 and 440 µg/L, respectively. While 2-butanone does not currently have a standard or guidance value for Class GA water, the detected concentration does not exceed the NYSDOH guideline of 50 ug/L for organic compounds. The toluene concentration exceeded the standard of 5 µg/L. Phenol (29 µg/L) and 4-methylphenol (460 µg/L) were also detected at concentrations significantly above the standard (1 µg/L) for each of the compounds. Pesticides and PCBs were not detected in sample HP1-B16W. A total of 15 of the 23

detected metal analytes were detected in the sample at concentrations above the groundwater quality standards, and 5 of the 8 metals with concentrations that do not exceed the standards do not currently have any standards or guidelines for Class GA waters. Therefore, only three of the detected metal analytes were detected in concentrations below the current ground water quality standards. The concentrations of metals in sample HP-B16W may be elevated because the sample for metals analysis was not field-filtered.

The only organic compounds detected in groundwater samples from the monitoring wells were xylene, naphthalene, and 2-methylnaphthalene, which were detected in sample HP-MW-4. The concentrations of these compounds were below the water quality standards. Pesticides and PCBs were not detected in any of the samples. Of the 22 inorganic analytes detected in the groundwater samples collected from the monitoring wells, 5 were detected in at least one sample at concentrations exceeding the standards. Concentrations of antimony, magnesium, and sodium were less than two times the water quality standards, and concentrations of manganese were less than four times the standard. Estimated iron concentrations ranged from 2,620 to 13,000 µg/L, and the standard is 300 µg/L.

3.1.3 Area 2 - Holiday Park

3.1.3.1 Area 2 - Holiday Park; Surface Soil Sample Results

In the southern portion of Area 2 of Holiday Park, Malcolm Pirnie and the NYSDEC collected surface soil samples from mounds of an ash-like material. The analytical results of the sample Malcolm Pirnie collected for Full TCL analysis (HP2-SS1) indicate that the only VOC detected was toluene, at an estimated concentration of 0.002 mg/kg. The soil cleanup guideline for toluene is 1.5 mg/kg. Table 3-5 summarizes the surface soil sampling results, and Figure 2-2 shows the sampling locations. A total of five SVOCs were detected in the sample, but only benzo(a)pyrene was detected at a concentration above the cleanup guidelines. The benzo(a)pyrene concentration was 0.069 mg/kg, while the soil cleanup guideline is 0.061 mg/kg. Seven metals were detected

at concentrations above the soil cleanup guidelines, but only concentrations of zinc exceeded the background concentration range in the Eastern U.S. The detected concentration of zinc was less than 2 times the highest value in the background range.

The NYSDEC collected a total of eight surface soil samples in Area 2 of Holiday Park. Of these samples, one (DEC-SS1) was analyzed for SVOCs, five (1865-1B through 1865-5B) were analyzed for TAL metals, and two (1865-6B and 1865-7B) were analyzed for Toxicity Characteristic Leaching Procedure (TCLP). Tables 3-5 and 3-6 summarize the surface soil sampling results, and Figure 2-2 shows the approximate sampling locations.

The only SVOC detected in DEC-SS1 was di-n-butylphthalate, at an estimated concentration of 0.75 mg/kg. The soil cleanup guideline for di-n-butylphthalate is 8.1 mg/kg. In samples 1865-1B through 1865-5B, a total of 13 of the 20 detected metal analytes were detected in at least one sample at concentrations above the soil cleanup guidelines. However, chromium and iron were detected at concentrations within the background concentration range in the Eastern U.S. and the highest concentrations of beryllium, mercury, and selenium were only slightly above the highest value in the background range. The detected concentration of barium, calcium, magnesium, and manganese were less than four times the highest value in the background range. Concentrations of chromium and zinc were approximately 10 times the highest value in the background concentration range, and copper and nickel were detected at concentrations approximately 20 and 26 times, respectively, the background concentration range.

The TCLP analytical results of surface samples in Area 2 of Holiday Park indicated that VOCs and pesticides and herbicides were not detected in the two samples. Although 1,4-dichlorobenzene was detected during the second analysis of sample 1865-7B at an estimated concentration of 3 µg/L, the initial analysis of the sample did not detect the compound. Additionally, the detected concentration is well below the Maximum Concentration for Toxicity Characteristics value of 7500 µg/L for 1,4-dichlorobenzene. Although 5 of the 8 metals were detected in at least one sample, the

TABLE 3-5
HOLIDAY PARK/BOTANICAL GARDENS
PRELIMINARY SITE ASSESSMENTS

SUMMARY OF ANALYTICAL RESULTS - HOLIDAY PARK AREA 2 - SURFACE SOIL SAMPLES

<i>Sample Location</i>	HP2-SS1	DEC-SS1*	1865-1B*	1865-2B*(2)	1865-3B*	1865-4B*	1865-5B*	NYSDEC ⁽¹⁾	Eastern USA
<i>Sampling Depth</i>	0-1	0-1	0-1	0-1	0-1	0-1	0-1	TAGM	Background
<i>Collection Date</i>	04/09/98	04/09/98	07/01/98	07/01/98	07/01/98	07/01/98	07/01/98	4046	Concentrations
Volatile Organic Compounds (mg/kg)									
Toluene	0.002 J	NA	NA	NA	NA	NA	NA	1.5	-
Semivolatile Organic Compounds (mg/kg)									
Fluoranthene	0.068 J		NA	NA	NA	NA	NA	50	-
Pyrene	0.062 J		NA	NA	NA	NA	NA	50	-
Chrysene	0.048 J		NA	NA	NA	NA	NA	0.4	-
Benzo(b)fluoranthene	0.059 J		NA	NA	NA	NA	NA	1.1	-
Benzo(a)pyrene	0.069 J		NA	NA	NA	NA	NA	0.061	-
Di-n-butylphthalate		0.75 JB	NA	NA	NA	NA	NA	8.1	-
Pesticides/PCBs (mg/kg)									
None Detected		NA	NA	NA	NA	NA	NA	-	-
Metals (mg/kg)									
Aluminum	9360	NA	16000 M	4330/8220	18100	14800 M	20600 M	SB	33000
Arsenic	5.1 J	NA	5.0	ND/3.9	5.7	4.5	5.6	7.5 or SB	3 - 12
Barium	95.9	NA	123	51.6/112 B	140	105	1290	300 or SB	15 - 600
Beryllium	0.55 B	NA	0.52 B		0.92 B	0.61 B	2.4	.016 or SB	0 - 1.75
Cadmium	0.65 J	NA	8.7 M	4.8/9.8 M	9.3 M	9.9 M	5.9 M	1 or SB	0.1 - 1
Calcium	5820	NA	11300 M	17500/37300 M	11300 M	17100 M	110000 M	SB	130-35000
Chromium	11.8	NA	17.9 M	8/16.4 M	20.8 M	18.5 M	3.7 M	10 or SB	1.5 - 40
Cobalt	3.9 B	NA	5.0 B	3.7/7.2 B	5.4 B	6.0 B	4 B	30 or SB	2.5 - 60
Copper	17.9	NA	100 M	173/934 M	52.8 M	61.3 M	20.8 M	25 or SB	1 - 50
Iron	11200	NA	14800 M	6440/13300 M	14300 M	17200 M	9820 M	2000 or SB	2000 - 550000
Lead	44.5	NA	52.4 M	30.4/140 M	50.9 M	28.0 M	79.2 M	SB	4 - 500
Magnesium	1740	NA	3810 M	2980/5900 M	2720 M	5790 M	10800 M	SB	100 - 5000
Manganese	116	NA	177 M	92.8/196 M	361 M	263 M	15200 M	SB	50 - 5000
Mercury	0.16 J	NA		0.33/0.31				0.1	0.001 - 0.2
Nickel	17.0	NA	32.4 M	328/649 M	33.6 M	22 M	11.3 M	13 or SB	0.5 - 25
Potassium	1540	NA	1850	797/1290 B	1620	1610	1640	SB	8500 - 43000
Selenium		NA			1.8		6.9	2 or SB	0.1 - 3.9
Sodium	53.4 B	NA	1150 B	1210/1760 B	1490	1100 B	895 B	SB	6000 - 8000
Vanadium	18.3	NA	27.0	9.5/18.2 B	30.3	27.1	14.6	150 or SB	1 - 300
Zinc	81.8	NA	105 M	221/448 M	137 M	89.4 M	108 M	20 or SB	9 - 50
Cyanide	2.3 B	NA	NA	NA	NA	NA	NA	-	-

Notes:

⁽¹⁾ Soil cleanup objective from NYSDEC January 24, 1994 TAGM 4046.

⁽²⁾ Analytical results shown are for sample and duplicate sample.

* - Sample collected and analyzed by NYSDEC.

"-" - No cleanup objective or background concentration range in TAGM 4046.

Shading indicates that concentration exceeds Guidance Value, and the background range is used when there is no Guidance Value.

Blank space denotes analyte was not detected.

N - Spike recovery of analyte was not within control limits.

B - Analyte detected in associated method blank.

J - Reported value is estimated due to variance from quality control limits.

E - Reported value is estimated because of presence of interference.

M - Difference between multiple sample analysis runs out of control limits.

NA - Parameter not included in analysis.

TABLE 3-6
HOLIDAY PARK/BOTANICAL GARDENS
HOLIDAY PARK AREA 2
SUMMARY OF ANALYTICAL RESULTS -
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

<i>Sample Location</i>	1865-6B*	1865-7B*	<i>USEPA Maximum</i>
<i>Sampling Depth (feet)</i>	0-1	0-1	<i>Concentration for</i>
<i>Collection Date</i>	07/01/1998	07/01/1998	<i>Toxicity Characteristics</i>
TCLP Volatile Organic Compounds (ug/L)			
Benzene			500
Chlorobenzene			100000
2-Butanone			200000
Carbon Tetrachloride			500
Chloroform			6000
1,2-Dichloroethane			500
1,1-Dichloroethene			700
Trichloroethene			500
Tetrachlorethene			700
Vinyl Chloride			200
TCLP Semivolatile Organic Compounds (ug/L)			
2-Methylphenol			-
3-Methylphenol			-
4-Methylphenol			-
1,4-Dichlorobenzene		3 J	7500
2,4-Dinitrotoluene			130
Hexachlorobenzene			130
Hexachlorobutadiene			500
Hexachloroethane			3000
Nitrobenzene			2000
Pentachlorophenol			100000
2,4,5-Trichlorophenol			400000
Pyridine			5000
2,4,6-Trichlorophenol			2000
TCLP Pesticides/Herbicides(ug/L)			
gamma-BHC (Lindane)			400
Chlordane			30
Endrin			20
Heptachlor			8
Heptachlor epoxide			-
Methoxychlor			10000
Toxaphene			500
2,4-D			10000
2,4,5-TP (Silvex)			1000
TCLP Metals (ug/L)			
Arsenic	8.3 BN	4.3 BN	5,000
Barium	1890 N	952 N	100,000
Cadmium	2.7 BN	3.6 BN	1,000
Chromium	3.5 BN		1,000
Lead	29.3 N	6.2 N	5,000
Mercury			200
Selenium			1,000
Silver			5,000
Notes: * Samples collected and analyzed by NYSDEC. "- " - No Guidance Value available. Shading indicates that concentration exceeds Guidance Value. Blank space denotes analyte was not detected. N - Spike recovery was not within control limits. B - Indicates a value greater than or equal to the IDL, but less than the CDL. J - Reported value is estimated.			

detected concentrations are well below the Maximum Concentration for Toxicity Characteristics values for each analyte.

3.1.3.2 Area 2 - Holiday Park; Subsurface Soil Sample Results

Four of the eight borings completed in Area 2 of Holiday Park were completed in the recycling area and, due to the amount of stored material, these borings were 6 to 10 feet deeper than other borings completed in Area 2. The recycling area is used by the City of North Tonawanda for the disposal of leaves, grass clippings, tree trimmings, and street sweepings. Some broken concrete was also observed in the recycling area. The fill material encountered in the borings in the recycling area was brown silty very fine sand with intermixed woody material (cut wood, stumps, and branches). Similarly, a tan to brown silty very fine sand was encountered in the borings in southern portion of Area 2. No visually or olfactory evidence of contamination was observed in the borings in Area 2, and all PID screening measurements were at background levels.

A total of 8 subsurface soil samples were collected from the borings in Area 2 for phenol screening analysis. As shown in Table 3-3, no phenolic compounds were detected in the samples.

3.1.3.3 Area 2 - Holiday Park; Surface Water Sample Results

One surface water sample was collected from Area 2 of Holiday Park (HP2-SW1) for phenol screening. The location of the surface water samples are shown on Figure 2-2, and Table 3-3 summarizes the analytical results. The sample HP2-SW1 was collected from a pool of water that contained rust-colored staining in its soil on the pool's bottom. No phenols were detected in the sample.

3.1.3.4 Area 2 - Holiday Park; Groundwater Sample Results

Groundwater samples were collected from borings HP2-B1, HP2-B2, and HP2-B5 for analysis of phenolic compounds. As shown in Table 3-3, no phenolic compounds were detected in the samples.

3.1.4 Area 3 - Holiday Park; Test Pit and Analytical Results

A test pit program was conducted on August 25, 1998 to examine the subsurface conditions in the area described by a neighboring property owner as having been used as the location for drum disposal at the Holiday Park Site (Area 3). The location of the test pits are shown on Figure 2-4. The test pits were advanced into native material, and Malcolm Pirnie described the material encountered in the test pits. As shown in the test pit logs, included in Appendix D, the source of the magnetic anomalies were buried appliances and scrap metal. Other material in the test pits included cut wood and stumps and limbs of trees. Although dark-stained soil was present in some of the test pits, only background concentrations of VOCs were recorded on the PID. It is likely that the dark-staining was caused by the decomposition of organic matter.

The test pit subcontractor collected five soil samples (Site A through D and Site F) from the test pits for analysis of SVOCs. The analytical results are included in Appendix E. No SVOCs were detected in any of the samples collected from the test pits.

3.1.5 Area 4 - Holiday Park; Sample Results

One groundwater sample (BG-MW-4) was collected from the monitoring well that was installed in Area 4 of Holiday Park in order to assess groundwater conditions upgradient of Botanical Gardens. During the well installation process, one soil sample was also collected from this location. Table 3-7 summarizes the soil analytical results, and Table 3-8 summarizing the groundwater analytical results.

Four metals (beryllium, iron, nickel, and zinc) were detected in the soil sample at concentrations above the soil cleanup guidelines, and these concentrations were below the maximum value in the Eastern U. S. background range. A total of 5 VOCs and SVOCs were detected at concentrations below the soil cleanup guidelines and no pesticides and PCBs were detected in the sample.

Pesticides, PCBs, and VOCs were not detected in the groundwater sample collected from BG-MW-4. One SVOC (4-chloroaniline) was detected at a concentration below the water quality standards. Three metals (antimony, magnesium and manganese)

TABLE 3-7
HOLIDAY PARK/BOTANICAL GARDENS
PRELIMINARY SITE ASSESSMENTS
SUMMARY OF ANALYTICAL RESULTS - BOTANICAL GARDENS - SOIL SAMPLES

<i>Sample Location</i>	BG-DEC-SS1*	BG-DEC-SS2*	BG-MW-1	BG-MW-2	BG-MW-3	BG-MW-4	EB-7-2	NYSDEC	Eastern USA
<i>Sampling Depth</i>	0-1	0-1	2-4	10-12	2-4	2-4	Drill Water Blank ⁽²⁾	TAGM	Background
<i>Collection Date</i>	04/07/1998	04/07/1998	07/01/98	07/01/98	07/02/98	07/02/98	07/02/98	4046 ⁽¹⁾	Concentrations
Volatile Organic Compounds (mg/kg)									
Methylene Chloride	NA	NA	0.110 J		0.011 J			1	-
Acetone	NA	NA					0.009 J	0.2	-
Chloroform	NA	NA	0.025 J					0.3	-
2-Butanone	NA	NA						0.3	-
Bromodichloromethane	NA	NA					0.004 J	NS	-
Tetrachloroethene	NA	NA			0.001 J			1.4	-
Toluene	NA	NA	0.002 J				0.002 J	1.5	-
Chlorobenzene	NA	NA	0.002 J					1.7	-
Xylene (total)	NA	NA	0.002 J		0.003 J			1.2	-
Semivolatile Organic Compounds (mg/kg)									
Phenol							0.001 J	0.03	-
Naphthalene		0.64 J						13	-
Di-n-butylphthalate	1.2 JB	0.47 JB						8.1	-
Fluoranthene	0.43 J			0.044 J				50	-
Pyrene	0.36 J			0.04 J				50	-
bis(2-Ethylhexyl)phthalate	0.92 J	0.36 J		4.8 E	0.2 J	0.086 J	0.006 J	50	-
Pesticides/PCBs (mg/kg)									
None Detected	NA	NA							-
Notes: ⁽¹⁾ Soil Cleanup objective from NYSDEC January 24, 1994 TAGM 4046. ⁽²⁾ Drill water blank concentrations in ug/L. "- " - No cleanup objective or background concentration range in TAGM 4046. * - Sample collected and analyzed by NYSDEC. Shading indicates that concentration exceeds soil cleanup objective, and the background range is used when there is no soil cleanup objective. Blank space denotes analyte was not detected. Only compounds detected in at least one sample included in table.									

TABLE 3-7

**HOLIDAY PARK/BOTANICAL GARDENS
PRELIMINARY SITE ASSESSMENTS
SUMMARY OF ANALYTICAL RESULTS - BOTANICAL GARDENS - SOIL SAMPLES**

Sample Location	BG-DEC-SS1*	BG-DEC-SS2*	BG-MW-1	BG-MW-2	BG-MW-3	BG-MW-4	EB-7-2	NYSDEC	Eastern USA
Sampling Depth	0-1	0-1	2-4	10-12	2-4	2-4	Drill Water Blank ⁽²⁾	TAGM	Background
Collection Date	04/07/1998	04/07/1998	07/01/98	07/01/98	07/02/98	07/02/98	07/02/98	4046 ⁽¹⁾	Concentrations
Metals (mg/kg)									
Aluminum	NA	NA	7710	4620	15200	3790	1550 J	SB	33000
Antimony	NA	NA			0.7 B	0.56 B	3.3 B	SB	-
Arsenic	NA	NA	2.7	2.7	5.5	2.8		7.5 or SB	3 - 12
Barium	NA	NA	61.2	56.2	137	30.2 B	49.7 B	300 or SB	15 - 600
Beryllium	NA	NA	0.42 B	0.26 B	0.92 B	0.26 B		0.16 or SB	0 - 1.75
Cadmium	NA	NA	0.58 B	0.67 B	1.0 B	0.68 B	3.1 B	1 or SB	0.1 - 1
Calcium	NA	NA	8350	48500	5930	2320	30600	SB	130-35000
Chromium	NA	NA	13.7	9.3	26.7	6.8	2.9 B	10 or SB	1.5 - 40
Cobalt	NA	NA	6.4 B	4.1 B	21.6	7.1 B	1.6 B	30 or SB	2.5 - 60
Copper	NA	NA	18.9	17.3	25.2	11.9	22.1 B	25 or SB	1 - 50
Iron	NA	NA	17200	11000	33900	8310	7980 J	2000 or SB	2000 - 550000
Lead	NA	NA	33.2 J		29.9 J	8.2	20.8	SB	4 - 500
Magnesium	NA	NA	6190	14300	6230	1840	9020	SB	100 - 5000
Manganese	NA	NA	331 J	435 J	570 J	574 J	549	SB	50 - 5000
Nickel	NA	NA	20	10.4	36.5	17.3	3.1 B	13 or SB	0.5-25
Selenium	NA	NA			1.4			SB	-
Silver	NA	NA	2.1 J	1.7 J	0.51 J	0.78 J	4.4 J	SB	-
Sodium	NA	NA	180 B	212 B	210 B	90.2 B	6300	SB	6000 - 8000
Vanadium	NA	NA	16	10.2	30.2	9.3	4.8 B	150 or SB	1 - 300
Zinc	NA	NA	83.5 J	59.6 J	128 J	36.6 J	145 J	20 or SB	9 - 50
Cyanide	NA	NA	1.7 B	1.3 B	2.0 B	1.2 B	6.9 B	NS	-

Notes:⁽¹⁾ Soil Cleanup objective from NYSDEC January 24, 1994 TAGM 4046.⁽²⁾ Drill water blank concentrations in ug/L.

"- " - No cleanup objective or background concentration range in TAGM 4046.

* - Sample collected and analyzed by NYSDEC.

Shading indicates that concentration exceeds soil cleanup objective, and the background range is used when there is no soil cleanup objective.

Blank space denotes analyte was not detected. Only compounds detected in at least one sample included in table.

J - Reported value is estimated due to variance from quality control limits.

B - Analyte detected in associated blank.

NA - Parameter not included in analysis.

SB - Site Background Concentration.

TABLE 3-8
HOLIDAY PARK/BOTANICAL GARDENS
PRELIMINARY SITE ASSESSMENTS

SUMMARY OF ANALYTICAL RESULTS - BOTANICAL GARDENS - GROUNDWATER SAMPLES

<i>Sample Location</i>	BG-B2W	BG-MW-1	BG-MW-2	BG-MW-3	BG-MW-4	BG-USGS-1	BG-USGS-2	Class GA
<i>Collection Date</i>	04/07/1998	07/28/98	07/28/98	07/28/98	07/28/98	07/28/98	07/28/98	WQS ⁽¹⁾
Volatile Organic Compounds (ug/L)								
Benzene		5 J						1
Carbon Disulfide	2 J							-
Chlorobenzene		2 J						5
Semivolatile Organic Compounds (ug/L)								
4-Chloroaniline					2 J			5
bis(2-Ethylhexyl)phthalate	27							5
Pesticides/PCBs (ug/L)								
4,4-DDT				0.23 J				0.2
Metals (ug/L)								
Aluminum	40100 J	1680	3810	1370	6800	5720	2340	-
Antimony	2.2 B	4.3 B	4.7 B	3.6 B	3.1 B		3.1 B	3
Arsenic	18.1			5.3 B	5.9 B	9.2 B	8.8 B	25
Barium	481 J	480	398	72.9 B	220	468	179 B	1000
Beryllium	1.8 B				0.5 B	1.4 B		3 ⁽²⁾
Cadmium	2.9 B	1.2 B	0.66 B	0.66 B	1.5 B	2.4 B	2.1 B	5
Calcium	136000	160000	159000	203000	174000		120000	-
Chromium	83.8 J	4.5 B	6.6 B	2.4 B	9.8 B	59.6 B	13.2	50
Cobalt	31.4 J	0.5 B	2.8 B	2 B	7.5 B	3.8 B	1.4 B	-
Copper	111.0	5.2 B	6.5 B	2 B	32.8		12.5 B	200
Iron	104000	40500	20600	11600	24600	82000	49400	300
Lead	251 J		4.7 J	7.8 J	22.1	143		25
Magnesium	33400	44700	43900	59700	52300	208000	30700	35000
Manganese	1310 J	871	576	418	582	6870	1330	300
Mercury	0.59 J							0.7
Nickel	76.8 J	3.2 B	5.6 B	4.7 B	17.7 B	24.6 B	12.7 B	100
Potassium	18000	14000	13900	965 B	2690 B	5570	2050 B	-
Silver	7.6 J	2.9 J	1.9 J	1.2 J	1.5 J	5.3 J	1.6 J	50
Sodium	17400	24300	27400	34800	5700	57700	13400	20000
Thallium	4.3 B							0.5 ⁽²⁾
Vanadium	78.9 J	7.9 B	8.3 B	5.6 B	15.9 B	106	6.6 B	-
Zinc	598 J	46.9 J	26.9 J	40.9 J	129	200	52.9 J	2000 ⁽²⁾
Cyanide	3.7 B	0.9 B	0.5 B					200

Notes:

⁽¹⁾ Class GA WQS - NYSDEC Water Quality Standard for Class GA Waters, from NYSDEC June 1998 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

⁽²⁾ NYSDEC Water Quality Guideline for Class GA Waters, from NYSDEC June 1998 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

Shading indicates that concentration exceeds Guidance Value.

Blank space denotes analyte was not detected. Only compounds detected in at least one sample included in table.

"-" - No Guidance Value or Standard available.

B - Indicates analyte result is between IDL and CRDL.

J - Reported value is estimated due to variance from quality control limits.

were detected at concentrations slightly above the water quality standards. Iron concentrations (40,500 ug/L) significantly exceeded the water quality standards of 300 ug/L.

3.1.6 Botanical Gardens

3.1.6.1 Botanical Gardens; Surface Soil Sample Results

The NYSDEC collected two surface soil samples from the Botanical Gardens Site for analysis of SVOCs. Table 3-7 summarizes the surface soil analytical results, and Figure 2-3 shows the approximate sampling locations. Four SVOCs were detected at concentrations well below the soil cleanup guidelines in the surface soil sample BG-DEC-SS1, collected from a shallow depression in the east-central portion of the site. The three SVOCs that were detected in sample BG-DEC-SS2 (collected from rust-colored sediment within the fountain overflow channel) were also detected at concentrations well below the soil cleanup guidelines.

3.1.6.2 Botanical Gardens; Subsurface Soil Sample Results

The only waste material encountered in the borings in Botanical Gardens was cut wood, cardboard, and plastic bags. The soil most commonly encountered in the borings was a gray to brown sandy silt and clay.

Nine subsurface soil samples were submitted to Waste Stream for analysis of phenolic compounds. No phenolic compounds were detected in the samples.

Although a total of nine VOCs and SVOCs were detected in the four subsurface soil samples collected from the Botanical Gardens Site for analysis of full TCL, none of the detected concentrations exceeded the soil cleanup guidelines. Table 3-7 summarizes the subsurface soil sampling results, and Figure 2-3 shows the approximate sampling locations. Pesticides and PCBs were not detected in the samples. The metals that were detected at concentrations above the cleanup guidelines were beryllium, calcium, chromium, copper, iron, magnesium, nickel, and zinc. However, the beryllium, chromium, copper, and iron concentrations fell within the Eastern U.S. Background

Concentration Range, and the highest calcium and nickel concentrations were only slightly above the range. Magnesium and zinc were each detected in 3 of the 4 subsurface samples at concentrations above the background concentrations, but the detected concentrations were less than three times the highest value in the background range.

3.1.6.3 Botanical Gardens; Surface Water Sample Results

Two water samples were collected at the ground surface during Round One of the site investigation at Botanical Gardens. Sample BG-SW1 was collected by Malcolm Pirnie from exfiltrating groundwater near the fountain at the Botanical Gardens Site. The NYSDEC collected one surface water sample (BG-NYSDEC-SW1) from water that had ponded in a shallow depression in the northeastern portion of the Botanical Gardens site, near the parking lot. Table 3-9 summarizes the analytical results of the surface water samples, and Figure 2-3 shows the sampling locations.

The analysis of BG-NYSDEC-SW1 revealed the presence of phenol and 4-methylphenol at concentrations of 15 and 97 µg/L, respectively, well above the water quality standard for both compounds (1 µg/L). Pesticides, PCBs, and VOCs were not detected in the sample. Similar to the analytical results of sample BG-SW1, iron concentrations in BG-NYSDEC-SW1 (76,000 µg/L) were significantly higher than the standard of 300 µg/L. Additionally, concentrations of manganese and sodium were slightly above the standards.

The analysis of the sample collected water exfiltrating from the fountain overflow channel (BG-SW1) showed detectable concentrations of chlorobenzene, 1,2-dichloroethene, and vinyl chloride. The estimated concentrations of 1,2-dichloroethene (8 µg/L), vinyl chloride (7 µg/L), bis(2-ethylhexyl)phthalate (92µg/L) were above the water quality standards of 5, 2, and 5 µg/L, respectively. Chlorobenzene concentrations were below the water quality standard. Pesticides and PCBs were not detected in sample BG-SW1. The only metals detected at concentrations above the standards were iron and manganese. The detected concentrations of iron and manganese were 37,600 and

TABLE 3-9
HOLIDAY PARK/BOTANICAL GARDENS
PRELIMINARY SITE ASSESSMENTS
SUMMARY OF ANALYTICAL RESULTS
BOTANICAL GARDENS - SURFACE WATER/LEACHATE SAMPLES

<i>Sample Location:</i>	BG-SW1	BG-NYSDEC-SW-1 *	CLASS GA WQS ⁽¹⁾
<i>Site:</i>	Botanical Gardens	Botanical Gardens	
<i>Sample Date:</i>	04/07/1998	04/07/1998	
Volatile Organic Compounds (µg/L)			
Chlorobenzene	4 J		5
1,2-Dichloroethene (total)	8 J		5
Vinyl Chloride	7 J		2
Semivolatile Organic Compounds (µg/L)			
4-Methylphenol	1 J	97	1
Phenol		15	1
Dibenzofuran			-
bis(2-Ethylhexyl)phthalate	92 EB		5
Pesticides/PCBs (µg/L)			
None detected			
Inorganics (µg/L)			
Aluminum		720	-
Antimony	2.3 B		3
Barium	272 J	490	1000
Calcium	120000	160000	-
Cobalt	0.86 B		-
Copper		30	200
Iron	37600	76000	300
Lead		12	25
Magnesium	18000	27000	35000
Manganese	339 J	680	300
Potassium		5600	-
Silver	3.9 J		50
Sodium	16300	35000	20000
Zinc	6 B	70	2000 ⁽²⁾
Cyanide	2.8 B	NA	200

Notes:

⁽¹⁾ Class GA NYSDEC WQS - NYSDEC Water Quality Standard for Class GA Waters, from NYSDEC June 1998 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

⁽²⁾ NYSDEC Water Quality Guideline for Class GA Waters, from NYSDEC June 1998 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

* - Sample collected and analyzed by NYSDEC.

"-" - No Guidance Value or standard available.

Blank space denotes analyte was not detected. Only compounds detected in at least one sample included in table.

Shading indicates that concentration exceeds standard or Guidance Value.

B - Indicates analyte result is between IDL and CRDL.

J - Reported value is estimated due to variance from quality control limits.

E - Reported value is estimated because of presence of interference.

NA - Parameter not included in analysis.

339 µg/L, respectively, and the water quality standard for each of the analytes is 300 µg/L.

Assuming a flow rate in the overflow channel of 4 gallons per minute and an iron concentration of 37,600 µg/L, the annual iron loadings to Tonawanda Creek are approximately 660 pounds. This value does not include iron entering the creek via the leachate seeps observed along the creek bank.

3.1.6.4 Botanical Gardens; Groundwater Sample Results

The groundwater sample BG-B2W was collected during Round One of the site investigation at Botanical Gardens. Table 3-8 summarizes the groundwater sampling results. The analytical results of groundwater sample BG-B2W indicated that the only VOC detected was carbon disulfide. The estimated concentration of carbon disulfide was 2 µg/L, and there currently is no standard or guidance value for this compound. Bis(2-ethylhexyl)phthalate was the only SVOC detected in sample BG-B2W, and the detected concentration of 27 µg/L was above the standard of 5 µg/L. The metals chromium, iron, lead, manganese, and thallium were detected at concentrations above the water quality standards.

Two VOCs and one SVOC were detected in the groundwater samples collected from the monitoring wells, and, of those, only benzene was detected at concentrations above the water quality standards. The estimated concentration of benzene in sample BG-MW-1 was 5 µg/L, and the standard is 1 µg/L. Additionally, 4,4-DDT was detected at a concentration of 0.23 µg/L, slightly above the standard of 0.2 µg/L. Of the 21 inorganic analytes detected in the groundwater samples collected from the monitoring wells, 7 were detected in at least one sample at concentrations exceeding the standards. Concentrations of antimony, chromium, and sodium were less than three times the water quality standards, and concentrations of lead and magnesium were less than six times the standards. Estimated iron concentrations ranged from 11,600 to 82,000 µg/L, and manganese concentrations ranged from 418 to 6,870 µg/L. The standards for iron and manganese are each 300 µg/L.

3.2 CONTAMINATION ASSESSMENT SUMMARIES

3.2.1 Area 1 - Holiday Park; Contamination Assessment Summary

In the surface soil samples, one SVOC was detected at concentrations slightly above the soil cleanup guidelines, and one metal was detected at concentrations slightly above the range of background concentrations in the Eastern United States. In the subsurface samples, one SVOC was detected at concentrations exceeding the soil cleanup guidelines, and three metals were detected at concentrations above the background concentration range. The concentrations of one VOC and a number of metals in the groundwater samples exceeded the water quality guidelines, with iron concentrations most significantly above the guidelines. However, these analytes are not indicative of the Hooker-Durez waste that is potentially present at the site. Additionally, with the exception of iron, the guidelines are not significantly exceeded in most of the samples.

This investigation focused on phenolic compounds at high concentrations as an indicator of the location of the drums of phenolic resins and molding compounds buried at the site. Phenolic compounds were detected in one subsurface sample at concentrations exceeding the soil cleanup guidelines, and were detected at concentrations above the water quality guidelines in the groundwater sample collected from a boring in the same area. Phenolic compounds were also detected in a groundwater sample collected from an additional boring at low concentrations that were above the water quality standards.

The absence of phenolic compounds in 23 of 24 soil samples and 5 of 7 aqueous samples in Area 1 of Holiday Park indicates that the extent of phenolic compounds is localized and the compounds are not significantly migrating. Although samples from three borings in Area 1 (HP1-B1, HP1-B11, and HP1-B16) contained phenols, the samples from adjacent borings did not contain detectable concentrations of phenols.

Buried drums were not discovered during the investigation of Area 1 of Holiday Park, and the concentrations of phenolic compounds that were detected in the samples were not high enough to indicate the presence of a significant amount of phenolic resins

and molding compounds at the site. The concentrations of other contaminants (VOCs, SVOCs, metals) that were detected in the surface soil, subsurface soil, and groundwater samples above the standards and guidelines were not high enough to warrant further work at the site. Additionally, a golf course was recently constructed over the entire extent of Area 1. Therefore, any contaminants present at the site have been covered by landscaping material, inhibiting the exposure and migration of those contaminants.

3.2.2 Area 2 - Holiday Park; Contamination Assessment Summary

Phenolic compounds were not detected in the 8 subsurface soil samples, 3 groundwater samples, and 1 surface water sample collected from Area 2 of Holiday Park. Additionally, no drums or potentially hazardous waste material was observed during the investigation of this area. Therefore, no further action regarding the surface water, groundwater, and subsurface soil appears warranted in Area 2 of Holiday Park.

In the surface soil samples collected from mounds of ash-like material in the southern portion of Area 2, one SVOC and 14 metals were detected at concentrations contravening the soil cleanup guidelines. The SVOC was detected at a concentration just above the soil cleanup guideline, 6 of the metals were detected at concentrations within or slightly above the range of background concentrations in the Eastern United States, and the concentrations of seven of the metals were less than 4 times the highest value in the background range. Concentrations of chromium and zinc were approximately 10 times the highest value in the background concentration range, and copper and nickel were detected at concentrations approximately 20 and 26 times, respectively, the background concentration range. The TCLP results for samples collected from the mounds indicate that the only contaminant present in leachable quantities is 1,4-dichlorobenzene. Very low concentrations of 1,4-dichlorobenzene were detected in one of the TCLP samples.

Malcolm Pirnie and the NYSDEC observed that holes were dug in some of the mounds of ash-like material, and that bicycle paths went over some of the mounds. This evidence indicates that children use the area, and may be exposed to the soil in the mounds. Therefore, additional action may be required in Area 2 of Holiday Park.

3.2.3 Area 3 - Holiday Park; Contamination Assessment Summary

During the test pit program in Area 3 of Holiday park, drums and any evidence of contamination were not observed. All magnetic anomalies investigated during the test pit program were caused by scrap metal and discarded appliances. Contaminants were not detected in the four soil samples collected from the test pits. Additionally, a golf course was recently constructed over the entire extent of Area 3. Therefore, if any contaminants are present in Area 3 of Holiday Park, the potential for exposure has been reduced by the golf course landscaping material.

3.2.4 Area 4 - Holiday Park; Contamination Assessment Summary

With the exception of iron, concentrations of contaminants in samples collected in Area 4 of Holiday Park are below or slightly above the applicable standards. Additionally, a golf course is constructed over a large portion of Area 4. Therefore, if any contaminants are present in Area 4, the potential for exposure has been reduced by the golf course landscaping material.

3.2.5 Botanical Gardens; Contamination Assessment Summary

The analysis of surface and subsurface soil samples collected from the Botanical Gardens Site indicated that only metals were present at concentrations above the soil cleanup guidelines. Of those eight metals, four were detected at concentrations within the background concentration range for the Eastern United States, and the remaining four were detected at concentrations less than three times the highest concentration in the range. Because these concentrations do not significantly exceed the background concentration range, no further work is required to address surface and subsurface soils at the Botanical Gardens Site.

The analysis of groundwater samples collected at the Botanical Gardens Site revealed concentrations of benzene, bis(2-ethylhexyl)phthalate, and 4-DDT slightly above the water quality standards. Eight metals were detected in at least one of the groundwater samples at concentrations above the water quality standards, with iron and

4.0 CONCLUSIONS

4.1 HOLIDAY PARK - AREA 1

Buried drums were not discovered during the investigation of Area 1 of Holiday Park, and the concentrations of phenolic compounds that were detected in the samples were not high enough to indicate the presence of a significant volume of phenolic resins and molding compounds in this area. The concentrations of other contaminants (VOCs, SVOCs, and metals) that were detected in the surface soil, subsurface soil, and groundwater samples above the standards and guidelines were not high enough to warrant further work at the site. Additionally, a golf course was recently constructed over Area 1 of Holiday Park. Therefore, if any contaminants are present at the site, the golf course landscaping material has covered the contaminants, thereby inhibiting the exposure to and migration of those contaminants.

4.2 HOLIDAY PARK - AREA 2

No drums or potentially hazardous waste material were observed during the investigation of Area 2 of Holiday Park. Additionally, phenols, the compounds likely buried at the site by Hooker-Durez, were not detected in the samples from this area. However, some of the surface soil samples contained the metals chromium, copper, nickel, and zinc at concentrations significantly above the soil cleanup guidelines. Because children use the area and may be exposed to the material in the mounds, additional action may be required in Area 2 of Holiday Park. No further action regarding the surface water, groundwater, and subsurface soil is warranted in Area 2 of Holiday Park.

4.3 HOLIDAY PARK - AREA 3

Buried drums were not discovered during the test pit investigation of Area 3 of Holiday Park, and no SVOCs were detected in the soil samples collected from the test pits. Additionally, a golf course was recently constructed over Area 3 of Holiday Park. Therefore, if any contaminants are present in Area 3, the golf course landscaping material has covered the contamination, inhibiting the exposure and migration of those contaminants.

4.4 HOLIDAY PARK - AREA 4

Based on discussions with City of North Tonawanda employees and a neighboring property owner, it is unlikely that dumping activities occurred in Area 4 of Holiday Park. Neither the soil nor the groundwater sample collected in Area 4 contained detectable concentrations of phenols, and no waste material was observed in the boring in Area 4. Therefore, no additional work is warranted in Area 4 of Holiday Park.

4.5 BOTANICAL GARDENS

Buried drums were not discovered during the investigation of the Botanical Gardens Site, and the concentrations of phenolic compounds that were detected in the samples were not high enough to indicate the presence of a significant amount of phenolic resins and molding compounds at the site. The concentrations of other contaminants (VOCs, SVOCs, and metals) that were detected in the surface soil, subsurface soil, and groundwater samples above the guidelines were generally not high enough to warrant further work at the site. However, because the Botanical Gardens Site is a recreational park, the potential for exposure to very high iron concentrations in the surface water exists. Additionally, the iron loadings to Tonawanda Creek, via exfiltration of groundwater in the fountain overflow channel and leachate seeps along the banks of

the creek, may be high enough to warrant further study. Therefore, additional action may be required at Botanical Gardens.

5.0 REFERENCES

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Wehran Engineering, P.C. 1985. "Phase II Investigations - Botanical Gardens."

APPENDIX A
HISTORICAL INVESTIGATION LOGS AND RESULTS

TABLE A-1

**USGS GROUNDWATER ANALYTICAL RESULTS - 1982
HOLIDAY PARK SITE**

Sample Number Matrix	NYSDEC Class GA Groundwater Standards	1 GW	2 GW	3 GW	3D GW	4 GW	5 GW	5D GW	6 GW	8 GW
Inorganic Compounds, µg/l										
Copper	200	46	11	8	9	25	7	7	110	60
Iron	300	90,000	49,000	4,700	5,200	19,000	12,000	14,000	96,000	37,000
Lead	25									
Manganese	300									
Zinc	2000									
Organic Compounds, µg/l										
Dibutyl phthalate	50					31.8		2		
Ethylbenzene	5	17								

Notes:

⁽¹⁾ Class GA Groundwater Standards from NYSDEC June 1998, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.
Shading represents concentrations that exceed the NYSDEC Class GA water quality standards.

Blank cells indicate analyte was not detected.

Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

TABLE A-2

USGS SURFACE WATER AND SEDIMENT ANALYTICAL RESULTS - 1982
HOLIDAY PARK SITE

Sample Number Analyte	NYSDEC Surface Water Quality Guideline Value ⁽¹⁾	10 SW (ug/l)	10D SW (ug/l)	NYSDEC Lowest Effect Level Sediment Criteria ⁽²⁾	7 SED (ug/kg)	7 DUP SED (ug/kg)	9 SED (ug/kg)	11 SED (ug/kg)	12 SED (ug/kg)
Inorganic Compounds									
Copper	200			16,000	6,000	6,000	8,000	5,000	14,000
Iron	300	198	205	20,000,000	2,200,000	2,300,000	3,600,000	1,800,000	370,000
Lead	50	33	36	31,000					
Manganese	300	21	24	460,000					
Zinc	NA	17	16	120,000					
Organic Compounds									
Dibutyl phthalate	50			NA					20

Notes:

- (1) Class C surface water standards from NYSDEC June 1998 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.
 (2) Sediment Criteria from NYSDEC November 1993 Technical Guidance for Screening Contaminated Sediments.

Blank cells indicate analyte was not detected.

SW = Surface Water Sample,

SED = Sediment Sample.

NA = No standard or guideline available

TABLE A-3

OCTOBER 1996 SOIL ANALYTICAL RESULTS ²
HOLIDAY PARK SITE

Parameter	NYSDEC TAGM Values ¹	18651A	18651B	18652A	18652B	18656A	18656B	18657A	18657B	18658A	18658B	18659A	18659B
Volatile Organic Compounds, µg/Kg													
Methylene Chloride	100	2 BJ	2 BJ	2 BJ	3 BJ	2 BJ	2 J	2 BJ		2 BJ	2 BJ	2 BJ	2 BJ
Acetone	200	5 BJ	6 BJ	5 BJ	21 B	6 BJ	11 BJ	8 BJ	7 BJ	4 BJ	14 B	5 BJ	6 BJ
Semi-Volatile Organic Compounds, µg/Kg													
bis(2-ethylhexyl)phthalate	50,000	58 BJ	130 BJ	240 BJ	87 BJ	110 BJ	130 BJ	110 BJ	250 BJ	260 BJ	260 BJ	920 B	250 BJ
Pentachlorophenol	1000			55 J	93 J								
Benzoic acid	2700				63 J								
Hexanedioic acid	-					140 J		200 J	140 J		110 J	150 J	
Inorganic Compounds, mg/Kg													
Aluminum	SB	6740	4170	19700	10600	10500	3450	11100	10200	10900	5430	11600	6350
Arsenic	7.5 or SB	5	5.3	5.7	6.5	6.3	6.5	3	4.1	7.3	4.2	4.6	1.3
Barium	300 or SB	45.6	25	180	93.9	51.6	41.4	93.1	61.7	70.7	38.3	80.7	55.4
Beryllium	1 or SB	0.34	0.25	0.92	0.5	0.68	0.42	0.77	0.43	0.75	0.31	0.5	0.26
Calcium	SB	37100	62300	5480	81400	4070	62500	2910	16900	3900	59700	10900	83300
Chromium	10 or SB	7.8	5.2	25.7	16.9	12.7	10.3	14.6	10.9	14.8	8.1	12.1	12.5
Cobalt	30 or SB	5.4	4.4	7.6	11.7	7.4	8.4	7.4	8.8	8.8	6.4	4.2	4.5
Copper	25 or SB	13.7	14.4	22.4	33.5	17.9	20.3	18.3	10.5	25.4	13	11	14.5
Iron	2000 or SB	13700	13000	29700	21700	23200	16900	18900	14100	29800	14200	13700	15300
Lead	30 or SB	7.9	6.1	16.7	8.7	7.8	9.4	8.6	13.9	10.5	6.6	16.7	6.4
Magnesium	SB	10800	15500	4770	16100	3380	16900	2720	5200	2990	14700	4000	14700
Manganese	SB	335	323	187	650	138	389	115	216	606	379	96.8	331
Mercury	0.1 or SB			0.11									
Nickel	13 or SB	9.5	5	19.4	15.9	17.3	14.7	15.7	9.6	18.3	7.3	10.9	5.9
Potassium	SB	700	1190	2740	2710	1700	2550	681	915	1120	1390	1230	1110
Selenium	2 or SB			2.8									
Sodium	SB	68.8	276	418	340	460	388	141	126	381	294	360	
Thallium	SB			0.8						0.79			
Vanadium	150 or SB	15.7	12.7	42.5	24.2	26.5	19.3	29.1	20.7	41.3	15.8	23	18.1
Zinc	20 or SB	40.8	37.6	96.1	64.6	49.6	57.8	58.8	48.7	62.2	41.6	52.1	51.9

Notes:

⁽¹⁾ Soil cleanup objective from NYSDEC January 24, 1994 TAGM 4046.⁽²⁾ Soil sampling was performed by Parsons Engineering Science.

Shading represents concentrations that exceeded the NYSDEC TAGM 4046 Values.

Blank cells indicate analyte was not detected.

"- " - NYSDEC TAGM 4046 Value is not available.

SB - Site Background.

J - Indicates an estimated value.

B - Analyte was found in the associated blank.

TABLE A-4

NEW YORK STATE DEPT. OF HEALTH SOIL ANALYTICAL DATA - 1992
BOTANICAL GARDENS SITE

Parameter	NYSDEC TAGM Values ⁽¹⁾	S-1	S-2	S-3	S-4
Pesticides/PCBs, mg/Kg					
4,4'-DDE	2.1	0.001		0.001	0.005
4,4'-DDD	2.9	0.001		0.001	0.004
4,4'-DDT	2.1	0.001		0.001	0.004
Aroclor 1016/1242	-	0.01		0.001	
Aroclor 1260	-				0.02
Aroclor 1254	-			0.001	
Inorganic Compounds, mg/Kg					
Arsenic	7.5 or SB	6.8	11	2.5	3.7
Mercury	0.1 or SB	0.1	0.15	0.04	
Beryllium	1 or SB				0.7
Barium	300 or SB	440	287	244	166
Cadmium	1 or SB		3.3		
Cobalt	30 or SB	6.2	3.8	4.8	6.7
Chromium	10 or SB	24.6	24.5	18	24.9
Copper	25 or SB	52.9	48.8	22.1	31.3
Iron	2000 or SB	132000	115000	38800	21100
Manganese	SB	249	255	191	411
Nickel	13 or SB	18.7	21.7	17.1	23.4
Strontium	-	136	84.7	52.2	56.3
Titanium	-	121	174	127	246
Vanadium	150 or SB	21.8	27.7	20.5	32.7
Zinc	20 or SB	387	267	93	117
Lead	30 or SB	63.3	64.2	38.1	65.3
Aluminum	SB	11700	13400	11100	17800
Calcium	SB	53200	21800	21200	31000
Potassium	SB	2620	3390	2550	4300
Magnesium	SB	6940	7320	6350	9700
Sodium	SB	281	290		219

Note: ⁽¹⁾ Soil Cleanup objective from NYSDEC January 24, 1994 TAGM 4046.

Shading represents concentrations that exceeded the NYSDEC TAGM 046 Values.

Blank cells indicate analyte was not detected.

"-" - NYSDEC TAGM 4046 Value is not available.

SB - Site Background.

J - Indicates an estimated value.

B - Analyte was found in the associated blank.

TABLE A-4 (cont'd)
NEW YORK STATE DEPT. OF ENVIRONMENTAL CONSERVATION
BOTANICAL GARDENS SITE

New York State Dept. of Health Soil Analytical Data

Parameter	NYSDEC TAGM Values ⁽¹⁾	S-1	S-2	S-3	S-4
Volatile Organic Compounds, ug/Kg					
Acetone	200	490		230	100
Methylene Chloride	100			20	11
Chloroform	300				46
Semivolatile Organic Compounds, ug/Kg					
4-Methyl Phenol	900				2 J
2,4,5-Trichlorophenol	100				8 J
Acenaphthylene	41,000				6 J
Acenaphthene	50,000			10 J	6 J
Dibenzofuran	6200			15 J	7 J
Fluorene	50,000			27 J	14 J
Pentachlorophenol	1000				39 J
Anthracene	50,000				27 J
Phenanthrene	50,000	160 J		160 J	160 J
Fluoranthene	50,000	350 J		170 J	180 J
Pyrene	50,000	200 J		95 J	100 J
Chrysene	400				14 J
Benzo(b)fluoranthene	1100				9 J
Benzo(k)fluoranthene	1100				6 J
Benzo(a)pyrene	61				8 J
Butyl benzyl phthalate	50,000				6 J
Di-n-butyl phthalate	8100				29 J
bis(2-ethylhexyl)phthalate	50,000	190 JB		320 JB	50 JB

Note: ⁽¹⁾ Soil Cleanup objective from NYSDEC January 24, 1994 TAGM 4046.
Shading represents concentrations that exceeded the NYSDEC TAGM 046 Values.
Blank cells indicate analyte was not detected.
"-" - NYSDEC TAGM 4046 Value is not available.
SB - Site Background.
J - Indicates an estimated value.
B - Analyte was found in the associated blank.

RECRA (1979)

PHASE I ANALYSIS

ANALYTICAL RESULTS
CITY OF NORTH TONAWANDAReport Date: 7/6/79
Sample Date: 6/11/79

GROUND WATER ANALYSES

SAMPLE IDENTIFICATION NUMBER	SAMPLE LOCATION	PARAMETER (UNITS OF MEASURE)	
		PHENOL (mg/l)	TOTAL HALOGENATED ORGANICS (μ g/l AS CHLORINE; LINDANE STANDARD)
4	Holiday Park	0.06	7.46
8	Turner Farm	< 0.01	0.58

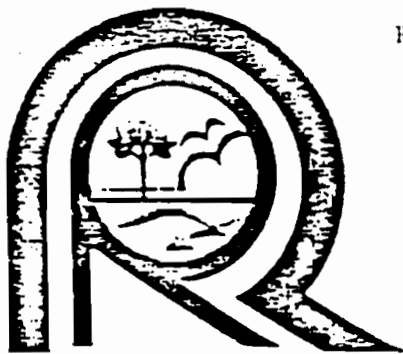
COMMENTS: All samples were collected by Recra Research, Inc. personnel and received at the laboratory on 6/11/79. Phenol analyses were performed according to Method 510 as presented in the 14th Edition of Standard Methods for the Examination of Water and Wastewater. Values reported as "less than" indicate the working detection limit for these samples. THO results are used for screening purposes only and are not designed for qualification or quantification of any specific organic compound. Results are calculated based upon the response factor of Lindane but do not imply either the presence or absence of Lindane itself. THO results do not include volatile organic constituents.

Generally the peaks found in the THO chromatograms were indicative of early eluting, low to medium molecular weight compounds. Possible compounds include substituted phenolics. Not all compounds in the chromatographs may necessarily be halogenated. Non-halogenated materials may be carried through the procedure and analyzed as halogenated compounds. Preliminary review of THO results indicate the possible presence of PCB's in the samples from the Botanical Gardens and Turner Farm. It is recommended that further analyses be undertaken to investigate the possibility of PCB's in these samples.

FOR RECRA RESEARCH, INC.

R. K. Lyle

DATE

7/6/79

RECRA RESEARCH, INC.

TOTAL CHLORINE TEST: MANAGEMENT THROUGH APPROPRIATE

111 Wales Avenue/Tonawanda, New York 14150/(716) 692-7620

HOLIDAY PARK

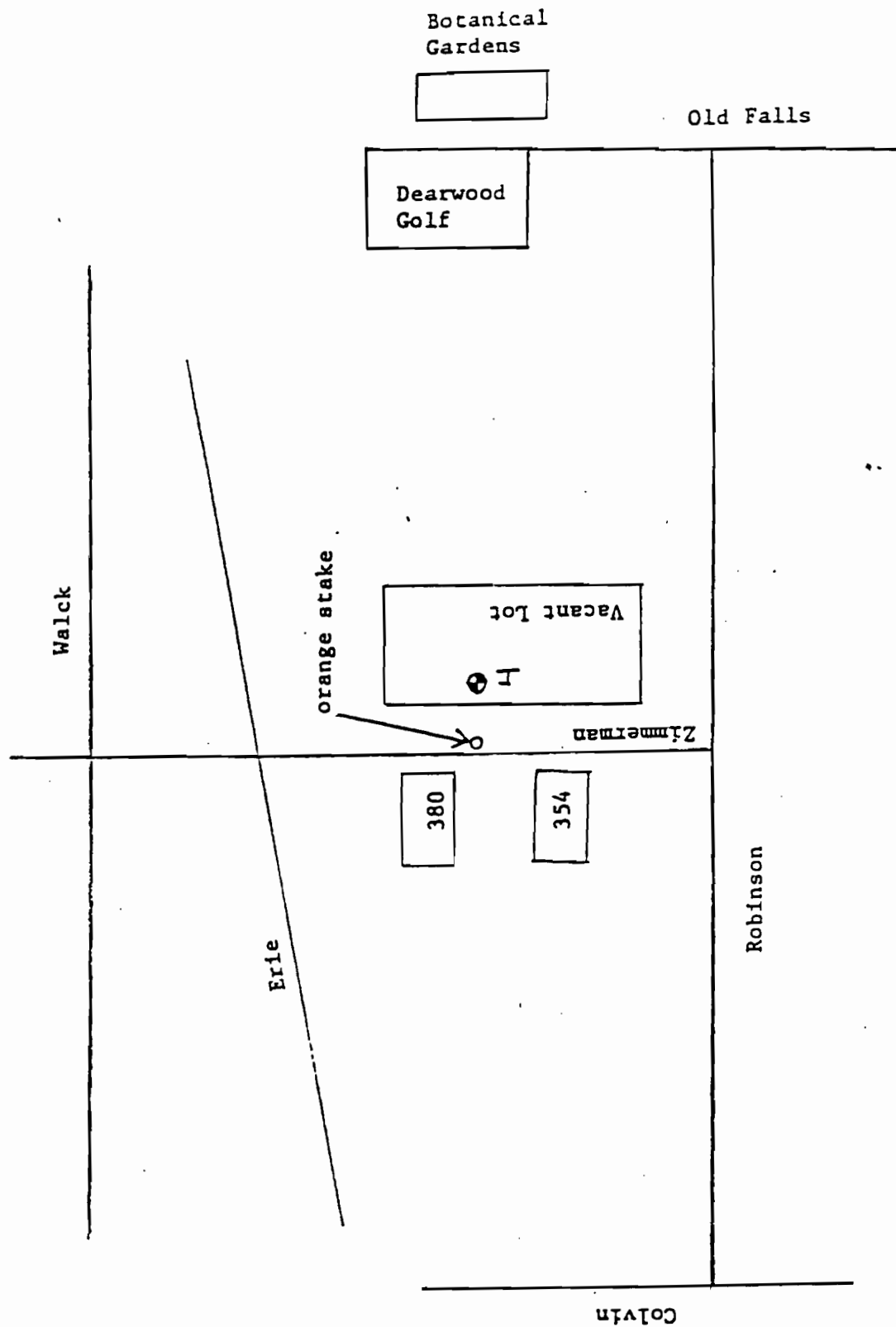


TABLE 7

CITY OF NORTH TONAWANDA
GAS CHROMATOGRAPHY/MASS SPECTROMETRY ANALYSIS
SEARCH FOR HALOGEANTED COMPOUNDS

Sample Date: 9/6/79

Report Date: 10/15/79

HOLIDAY PARK WELL #4

SCAN #	ABUNDANCE	NBS LIBRARY CHOICE	COMMENT
374	very low	1,2-dichlorobenzene	confirmed as a dichlorobenzene isomer on the basis of library fit
702	medium	2-butoxyethanol	confirmed as an oxygenated hydrocarbon
752	low	2,6,10,14-tetramethylheptadecane	confirmed as an aliphatic hydrocarbon
851	medium	pentacosane	confirmed as an aliphatic hydrocarbon
895	medium	eicosane	confirmed as an aliphatic hydrocarbon
923	low	1-bromotetradecane	unable to confirm due to co-elution, possible aliphatic hydrocarbon
982	medium	(ethenyloxy)-isooctane	unable to confirm due to co-elution
1005	low	methyl-1-tetradecenylether	unable to confirm due to co-elution
1022	medium	1,1'- 3-(2-cyclopentylethyl)-1,5-pentanediyyl biscyclopentane	unable to confirm due to co-elution
1036	low	eicosane	confirmed as an aliphatic hydrocarbon
1078	low	2,6,10,15-tetramethylheptadecane	insufficient spectral data to confirm
1108	low	10-methyleicosane	confirmed as an aliphatic hydrocarbon on the basis of library fit
1126	low	octadecane	insufficient spectral data to confirm
1185	low	hexatriacontane	confirmed as an aliphatic hydrocarbon
		8-hexylpentadecane	insufficient spectral data to confirm

FOR RECRA RESEARCH, INC.

Timothy R. Baker

DATE

10-15-79

TABLE 8

CITY OF NORTH TONAWANDA
GAS CHROMATOGRAPHY/MASS SPECTROMETRY ANALYSIS
SEARCH FOR PHENOLIC COMPOUNDS

Sample Date: 9/6/79

Report Date: 10/15/79

HOLIDAY PARK WELL #4

SCAN #	ABUNDANCE	NBS LIBRARY CHOICE	COMMENT
113	very low	4-methylcyclohexanol	unable to confirm due to low abundance
123	very low	pentadecane	confirmed as an aliphatic hydrocarbon
138	very low	2,2,4-trimethyl-4-penten-1-ol	unable to confirm due to low abundance
149	very low	2,4-dichloro-1-(chloromethyl)-benzene	unable to confirm due to low abundance
171	very low	2,6,10,14-tetramethylheptadecane	confirmed as an aliphatic hydrocarbon
195	low	1-(2-butoxyethoxy)-ethanol	confirmed as a substituted, multi-oxygenated ethanol
204	low	eicosane	confirmed as an aliphatic hydrocarbon
216	low	pentacosane	confirmed as an aliphatic hydrocarbon
228	low	pentacosane	confirmed as an aliphatic hydrocarbon
239	very high	1-(2-butoxyethoxy)-ethanol	confirmed as a substituted, multi-oxygenated ethanol
258	low	pentacosane	confirmed as an aliphatic hydrocarbon
272	low	pentacosane	confirmed as an aliphatic hydrocarbon
285	low	2,2'-oxybisdiacetateethanol	confirmed on the basis of library fit
297	low	pentacosane	confirmed as an aliphatic hydrocarbon

Continued

TABLE 8
(Continued)CITY OF NORTH TONAWANDA
GAS CHROMATOGRAPHY/MASS SPECTROMETRY ANALYSIS
SEARCH FOR PHENOLIC COMPOUNDS

Sample Date: 9/6/79

Report Date: 10/15/79

HOLIDAY PARK WELL #4

SCAN #	ABUNDANCE	NBS LIBRARY CHOICE	COMMENT
305	low	decahydro-1A,7-dimethylnaphth\1,2- β oxirene	unable to confirm due to co-elution
314	very low	2-isocyano-2,4,4-trimethyl-pentane	unable to confirm due to co-elution
322	very low	2-methylheptadecane	unable to confirm due to co-elution
335	low	heneicosane	confirmed as an aliphatic hydrocarbon
350	low	1-eicosanol	confirmed as a C ₁₆ to C ₂₆ alcohol
357	low	2,2,4,10,12,12-hexamethyl-7-(3,5,5-trimethylhexyl)-tridecane	confirmed as an aliphatic hydrocarbon
369	low	eicosane	confirmed as an aliphatic hydrocarbon
388	low	11-(1-ethylpropyl)-heneicosane	confirmed as an aliphatic hydrocarbon
402	low	octadecane	confirmed as an aliphatic hydrocarbon
421	low	1-iodotridecane	insufficient spectral data to confirm
437	low	3,5,24-trimethyltetracontane	unable to confirm due to co-elution
450	low	eicosane	confirmed as an aliphatic hydrocarbon
468	low	1,1'-(1,2-ethynediyl)-bisbenzene	unable to confirm due to co-elution

Continued

TABLE 8
(Continued)

CITY OF NORTH TONAWANDA
GAS CHROMATOGRAPHY/MASS SPECTROMETRY ANALYSIS
SEARCH FOR PHENOLIC COMPOUNDS

Sample Date: 9/6/79

Report Date: 10/15/79

HOLIDAY PARK WELL #4

SCAN #	ABUNDANCE	NBS LIBRARY CHOICE	COMMENT
481	low	octahydro-1-(2-octyldecyl)-pentalene	unable to confirm due to co-elution, possibly oxygenated
504	low	2,5-dimethyltetradecane	unable to confirm due to co-elution
544	low	acetate-(7.α.)-D:A-friedooleanan-7-ol	unable to confirm due to low abundance and co-elution
553	low	bis-(2-ethylhexyl)-ester-nonanedioic acid	insufficient spectral data to confirm
565	low	bis-(2-ethylhexyl)-ester-nonanedioic acid	insufficient spectral data for library choice, due to co-elution and low abundance
570	low	bis-(2-ethylhexyl)-ester-nonanedioic acid	insufficient spectral data for library choice, due to co-elution and low abundance
580	low	bis-(2-ethylhexyl)-ester-nonanedioic acid	insufficient spectral data for library choice, due to co-elution and low abundance
602	low	bis-(2-ethylhexyl)-ester-nonanedioic acid	insufficient spectral data for library choice, due to co-elution and low abundance
677	very low	5-ethyl-5-propylundecane	unable to confirm due to low abundance and co-elution
704	low	decahydro-8,9-dihydroxy-6,9A-dimethyl-3-azuleno[4,5-b]furan-2(3H)-one	unable to confirm due to co-elution
725	low	5-decene	unable to confirm due to co-elution
741	low	decahydro-8,9-dihydroxy-6,9A-dimethyl-3-azuleno[4,5-b]furan-2(3H)-one	unable to confirm due to co-elution
795	very low	decahydro-3A,6,6,9A-tetramethyl-(3A,1P)-naphtho[2,1-b]furan-2(1H)-one	unable to confirm due to co-elution and low abundance

FOR RECRA RESEARCH, INC.

Timothy R Baber

RECRA RESEARCH, INC.

DATE

10-15-79



EARTH DIMENSIONS, INC.

Test Borings and Logs

797 Center Street • East Aurora, New York 14052 • (716) 655-1717

WELL NO. 4

SURF. ELEV. _____

PROJECT Monitoring well installation
City of North Tonawanda

Across from G. T. Custom Bui.
LOCATION Homes, Inc., 15 ft. south of
365, 60 ft. east of Zimmerman

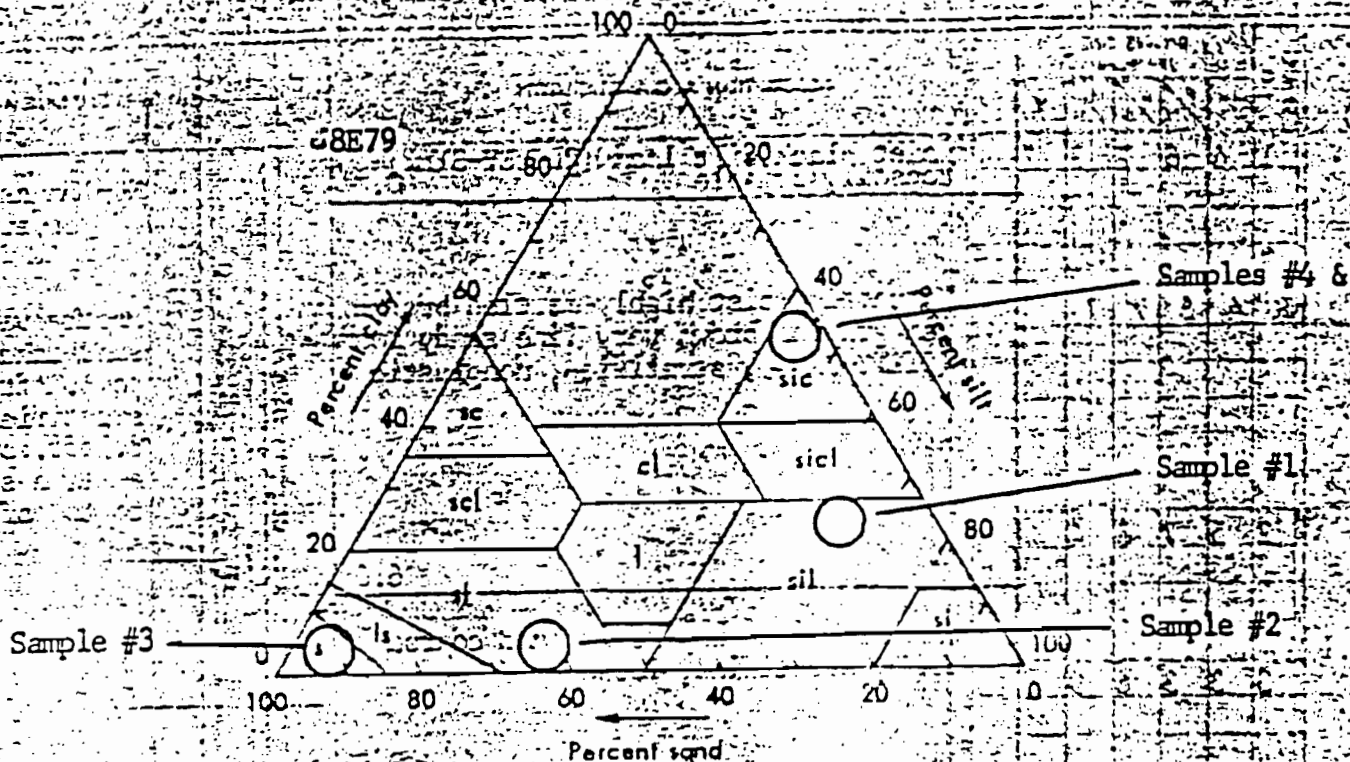
CLIENT Recra Research, Inc.

DATE STARTED 5/30/79 COMPLETED 5/30/79

DEPTH (feet)	SAMPLE NO.	BLOWS ON SAMPLER						DESCRIPTION & CLASSIFICATION	WELL	WATER TABLE & REMARKS
		4	6	12	18	24	N			
	1	4	6	7	7			Moist black silt loam (CLAYEY-SILT) topsoil, friable 0.8	2 in. carbon steel Bentonite	NR- means no re covery.
	NR	4	6	7	7			Extremely moist highly mottled brown- ish grayish brown very fine sandy loam (SILTY-SAND), stratified, nonplastic		Mostly very fin sand lake sedin to 6.0 ft. over stratified sand 8.5 ft. over cl ey lake sedimen to end of borin
	2	5	7	8	4			6.0		5.5
	3	3	3	6	9			Wet brownish gray medium and coarse SAND, stratified, loose		7.5
	4							8.5		
		2	5	6	9			Extremely moist gray SILTY-CLAY, thin- ly laminated clays, firm, sticky, plastic	Well Screen	9.5
	5							11.0	Sand pack	
								Boring completed at 11.0 feet.		Water table 4.0 below surface at completion.

N = NUMBER OF BLOWS TO DRIVE 2 " SPOON 6 " WITH 300 lb. WT. FALLING 30 " PER BLOW.

WELL #4



cl	Clay	sc	Sandy clay
sl	Silty clay	scl	Sandy clay loam
cl	Clay loam	scl	Silty clay loam
sl	Silt loam	cl	Clay loam
sl	Sandy loam	sl	Silt loam
sl	Silty loam	sl	Sandy loam
sl	Loamy sand	sl	Loamy sand

Textural triangle showing the percentages of clay (less than 0.002 mm), silt (0.002-0.05 mm), and sand (0.05-2.0 mm) in the basic soil textural classes (adapted from Soil Survey Staff, 1951)

Tonawanda Creek

Botanical
Gardens

Old Falls

Golf Cart
House

Trees

Tree

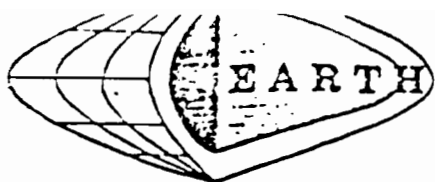
Hedge

E. Robinson

Zimmerman

Colvin

Rec



EARTH DIMENSIONS, INC.

Test Borings and Logs

797 Center Street • East Aurora, New York 14052 • (716) 655-1717

WELL NO. 8

SURF. ELEV.

8E79 PROJECT Monitoring well installation
City of North Tonawanda
CLIENT Recra Research, Inc.

LOCATION 150 ft. NW of ticket office.
Deerwood Golf Course
DATE STARTED 5/31/79 COMPLETED 5/31/79

DEPTH (feet)	SAMPLE NO.	BLOWS ON SAMPLER						DESCRIPTION & CLASSIFICATION	WELL	WATER TABLE & REMARKS
		1 6	2 12	3 18	4 24	5 30	N			
	1	3	8	4	4			Moist mixed black and brownish gray (SANDY-SILT) fill, friable 1.5	2 in. carbon steel pipe Bentonite	Fill to 1.5 ft. over stratified coarse silt and very fine sand lake sediments with some coarse sand lenses in contact to clay ey lake sedimen at 19.0 feet.
	2							Moist dark brownish gray silt loam (SANDY-SILT) topsoil very friable 2.0		
		4	6	7	7					
	3							Extremely moist highly mottled brown- ish gray very fine sand loam (SANDY- SILT) with coarse silt lenses, non- plastic		
		2	3	4	4					
5	4									
								----- clear transition to ----- 6.0		
		3	4	7	7			Extremely moist distinctly mottled brownish gray coarse silt loam (SAN- DY-SILT) with very fine sand lenses, nonplastic		
	5									
								----- clear transition to ----- 8.0		
	6	3	3	7	6			Wet distinctly mottled brownish gray very fine sandy loam (SANDY-SILT) stratified, nonplastic	2 in. carbon steel pipe sand pack	10.0
10								clear transition to ----- 10.0		
	7	2	3	3	7					
	8	3	4	7	9			Wet gray stratified coarse silt loam and very fine sandy loam (SANDY-SILT) nonplastic		
	9	1	1	3	3					
15										
	10									
		1	4	5	6					

Continued on page

dew N = NUMBER OF BLOWS TO DRIVE 2 " SPOON 6 " WITH 300 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Donald W. O'Connell, Soil Sci. list

SHEET 1 OF 2



Test Borings and Logs

WELL NO. 8 continued

SURF. ELEV. _____

8E79

PROJECT Monitoring well installed
City of North Tonawanda

LOCATION: 150 ft. NW of ticket office

CLIENT Recra Research, Inc.

DATE STARTED 5/31/79 COMPLETED 5/31/79

Boring completed at 20.0 feet.

Water table 6.5 f
below surface at
completion.

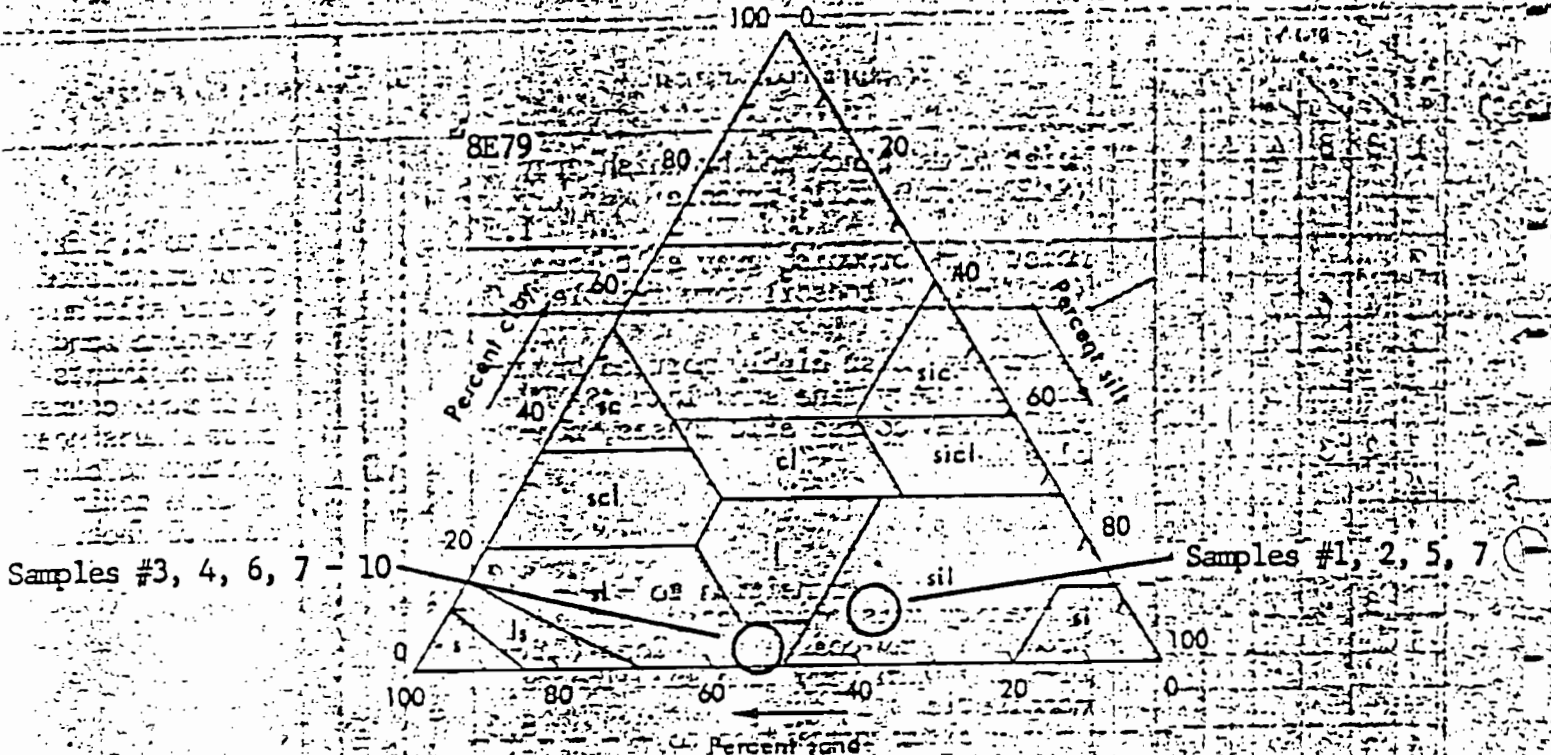
Stick up 3 ft.
above surface.

N = NUMBER OF BLOWS TO DRIVE 2 " SPOON 6 " WITH 300 lb. WT. FALLING 30 " PER BLOW.

LOGGED BY Donald W. Owens, Soil Scientist

SHEET: 2 of 2 ATTACHED

WELL #8



Samples #3, 4, 6, 7 - 10

Samples #1, 2, 5, 7

	cl	sic	sc	cl	sicl	scl	sil	sili	sl	ls
cl	Clay									
si	Silty clay	Sandy clay loam								
s	Silt	Silty clay loam								
l	Sand	Clay loam								
lo	Loam	Silt loam								
sc	Sandy clay	Sandy loam								
sic	Silty clay	Loamy sand								

Textural triangle showing the percentages of clay (less than 0.002 mm), silt (0.002-0.05 mm), and sand (0.05-2.0 mm) in the basic soil texture. (Adapted from Soil Survey Staff, 1951)

From USGS engineering study 1982-83

The geology of the area consists of glacial lacustrine clay overlying a bedrock of Camillus Shale. Six test borings were drilled on the site and their locations are shown in figure 1. The geologic description of the borings is as follows:

<u>Well No.</u>	<u>Depth (ft)</u>	<u>Description</u>
1	0 - 1.5	Dark topsoil, clay.
	1.5 - 5.0	Clay, greenish-gray.
	5.0 - 11.0	No returns; hit all kinds of debris, mattress springs, etc. Depth to water = 5.15 ft below land surface at 1500 hours. WATER SAMPLE: 9.2 - 11.2 ft.
2	0 - 0.5	Topsoil with gravel fill.
	0.5 - 1.5	Clay, olive-drab, "modeling clay."
	1.5 - 3.0	Clay, sandy, yellowish, moist.
	3.0 - 3.5	Clay, brown/yellow, saturated, sandy.
	3.5 - 4.5	Clay, sandy, dry, yellow/buff.
	4.5 - 6.0	Clay, sandy, dry.
	6.0 - 7.5	Sand, very fine, rust stained.
	7.5 - 10.0	Clay, sandy, some gravel-size cherty material, may be fill.
	10.0 - 11.5	Clay, sandy.
	11.5 - 15.2	Clay, pinkish color. Water level 7.62 ft below land surface. WATER SAMPLE: 13.2 - 15.2 ft.

<u>Well No.</u>	<u>Depth (ft)</u>	<u>Description</u>
3	0 - 4.5	Topsoil, light to dark brown.
	4.5 - 6.0	Clay, sandy, greenish gray. Hit saturation at 6.0 ft. -
	6.0 - 15.0	Clay, very sandy, gray, super saturated. Water level 7.62 ft below land surface. WATER SAMPLE: 12.4 - 14.4 ft.
4	0 - 2.0	Topsoil, dark brown to yellow tan.
	2 - 3.5	Topsoil, brown, wet at 3.5 ft.
	3.5 - 22.5	Clay, sandy, alternating brown and gray, wet. Hit hard layer at 22.5 ft. Bedrock? Camillus Shale? WATER SAMPLE: 20.5 - 22.5 ft.
6	0 - 1.5	Topsoil, black to brown.
	1.5 - 6.5	Clay, brown, wet.
	6.5 - 9.0	Same, water at 8.0 ft.
	9.0 - 11.5	Clay, pinkish, tight, "modeling clay."
	11.0 - 15.0	Same, extremely tight. Moved forward 3 ft and augered to clay.
7	0 - 1.0	Topsoil, black, organic.
	1.0 - 5.0	Clay, sandy, brown, saturated.
	5.0 - 6.5	Clay, tight, dry. SOIL SAMPLE: 3.5 ft.

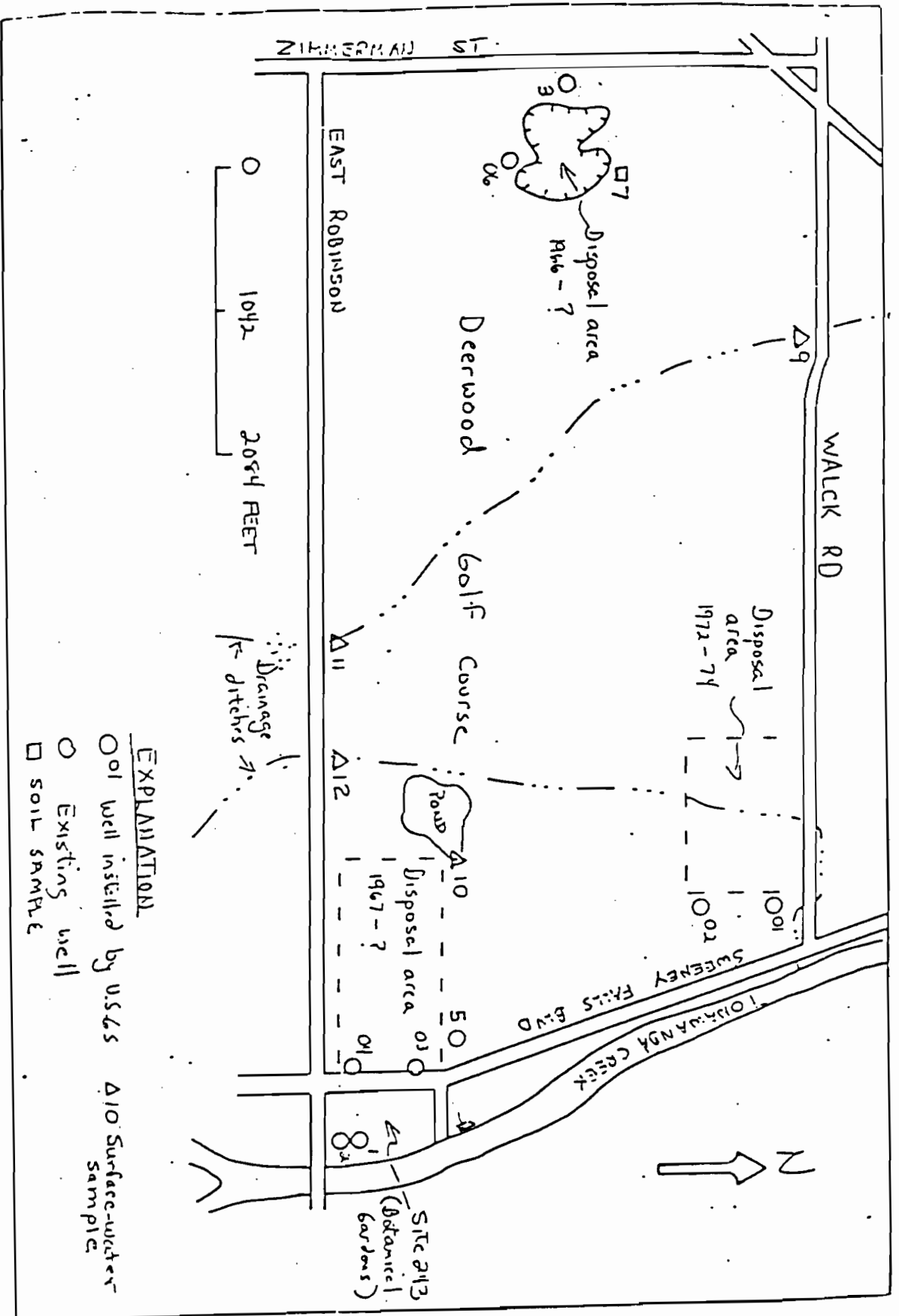


Figure 1. - Location of sampling sites on the Holiday Inn property.

Table 1.—Analyses of ground-water and substrate samples from Holiday Park,
N. Tonawanda, New York

	Sample Number			
	1	2	3	4
Date collected	062182	062182	061982	061982
Depth (ft)				
Sample Type ¹	g ^w	g ^w	g ^w	g ^w
pH	6.9	7.2	7.2	7.2
Conductivity (uMHOS)	2140	1160	760	470
Temperature (°C)	10.0	10.5	12.5	11.0
Inorganic Constituents ²				
Antimony				
Arsenic				
Cadmium				
Chromium				
Copper	46	11 ³	8;9	25
Iron	90000	49000	4700;5200	19000
Lead				
Mercury				
Nickel				
Selenium				
Zinc				
Fluoride				
Sulfide				
Cyanide				
Organic Compounds ²				
Ethyl benzene ⁶	17	-	-;-	-
1,7,7-Trimethyl- bicyclo[2.2.1]				
heptan-2-one ⁴	56	-	-;-	-
2-hexanone ⁵	<5	-	-;-	-
3-methylcyclopentanone ⁵	<5	-	-;-	-
1,3,3-Trimethyl- bicyclo[2.2.1]-				
heptan-2-one ⁵	<5	-	-;-	-
4-(1,1-Dimethylethyl)- phenol ⁵	<5	-	-;-	-

¹ Sample type: g^w=ground water, s^w=surface water, and s=substrate.

² Concentrations: ug/L for water and ug/Kg for substrate. Blank spaces indicate that no analyses were performed; dashes indicate that constituents and compounds were not found.

³ Cu(D): analysis done by direct aspiration because of high iron concentration.

⁴ Identity determined by library match; no standard available. Concentration results are semiquantitative and are based on the response factor of the internal standard.

⁵ Identity based on less than library match; identification seemed reasonable. As for footnote 4, concentration results are semiquantitative.

⁶ Volatile found in GC/MS extractions. Concentration results probably less than actual.

⁷ Low surrogate recoveries.

⁸ Estimated value less than detection limit.

Table 1 ---Analyses of ground-water and substrate samples from Holiday Park,
N. Tonawanda, New York---continued

	Sample Number			
	1	2	3	4
Organic Compounds ² (continued)				
1,3-Isobenzofurandione ⁵	<5	-	-;-	-
1-Butoxy-2-propanol ⁵	<5	-	-;-	-
2-Cyclohexen-1-one ⁴	-	-	8.0;-	-
2-Cyclohexen-1-ol ⁵	-	-	<5;-	-
4-Chloro- transcyclohexanol ⁵	-	-	<5;-	-
Dibutylphthalate	-	-	-;-	31.8

-
- ¹ Sample type: gw=ground water, sw=surface water, and s=substrate.
² Concentrations: ug/L for water and ug/Kg for substrate. Blank spaces indicate that no analyses were performed; dashes indicate that constituents and compounds were not found.
³ Cu(D): analysis done by direct aspiration because of high iron concentration.
⁴ Identity determined by library match; no standard available. Concentration results are semiquantitative and are based on the response factor of the internal standard.
⁵ Identity based on less than library match; identification seemed reasonable. As for footnote 4, concentration results are semiquantitative.
⁶ Volatile found in GC/MS extractions. Concentration results probably less than actual.
⁷ Low surrogate recoveries.
⁸ Estimated value less than detection limit.

Table 1 --Analyses of ground-water and substrate samples from Holiday Park,
N. Tonawanda, New York--continued

Sample Number

	5	6	7	8
Date collected	062182	062182	061782	062182
Depth (ft)			4.0;4.0	
Sample Type ¹	gw	gw	s	gw
pH	8.0	7.0		7.4
Conductivity (uMOS)	618	1140		1050
Temperature (°C)	9.0	11.0		11.0
Inorganic Constituents ²				
Antimony				
Arsenic				
Cadmium				
Chromium				
Copper	7;7	110 ³	6000 ³ ;6000 ³	60
Iron	12000;14000	96000	2200000;2300000	37000
Lead				
Mercury				
Nickel				
Selenium				
Zinc				
Flouride				
Sulfide				
Cyanide				
Molecular sulfur				<1
Organic Compounds ²				
2-Cyclohexan-1-one ⁵	<1;-	-	-;-	-
Ethanol, 2[2-(2-methoxyethoxy)]-acetate	<1;-	-	-;-	-
2,2-Dimethyldecane ⁵	<1;-	-	-;-	-
2-Butoxyethyl-butylphthalate ⁴	-;11.7	-	-;-	-
Dibutylphthalate	-;2.0	-	-;-	-
4-Chloro-transcyclohexanol ⁴	<1;-	13	-;-	-
1-(2-butoxyethoyl)ethanol ⁴	-	49	-;-	-

¹ Sample type: gw=ground water, sw=surface water, and s=substrate.

² Concentrations: ug/L for water and ug/Kg for substrate. Blank spaces indicate that no analyses were performed; dashes indicate that constituents and compounds were not found.

³ Cu(U): analysis done by direct aspiration because of high iron concentration.

⁴ Identity determined by library match; no standard available. Concentration results are semiquantitative and are based on the response factor of the internal standard.

⁵ Identity based on less than library match; identification seemed reasonable. As for footnote 4, concentration results are semiquantitative.

⁶ Volatile found in GC/ms extractions. Concentration results probably less than actual.

⁷ Low surrogate recoveries.

⁸ Estimated value less than detection limit.

Table 1 --Analyses of ground-water, and substrate samples from Holiday Park,
N. Tonawanda, New York--continued

	Sample Number		
	5	6	7
Organic Compounds ² (continued)			
3,3-dimethyl-2-			
butanone ⁵	-	-	1000;-
2-butanone ⁵	-	-	21000;-
2-methylheptane ⁵	-	-	2500;-
4-methyl-3-penten-			
2-one ⁴	-	-	4600;<300
acetic acid, 1-methyl			
ester ⁵	-	-	3650;-
2,6-dimethyl heptane ⁴	-	-	2850;-
2-methyl-2-propyl-1,3-			
dioxalane ⁵	-	-	710;-
2,2'-oxybispropane ⁵	-	-	4200;-
undecane ⁴	-	-	2400;-
tridecane ⁴	-	-	2200;-
2,7-dimethyl undecane ⁵	-	-	710;-
2,6-dimethyl octane ⁵	-	-	560;-
2,3,5-dimethyl decane ⁵	-	-	2208;-

- ¹ Sample type: g=ground water, s=surface water, and s=substrate.
- ² Concentrations: ug/L for water and ug/Kg for substrate. Blank spaces indicate that no analyses were performed; dashes indicate that constituents and compounds were not found.
- ³ Cu(D): analysis done by direct aspiration because of high iron concentration.
- ⁴ Identity determined by library match; no standard available. Concentration results are semiquantitative and are based on the response factor of the internal standard.
- ⁵ Identity based on less than library match; identification seemed reasonable. As for footnote 4, concentration results are semiquantitative.
- ⁶ Volatile found in GC/ms extractions. Concentration results probably less than actual.
- ⁷ Low surrogate recoveries.
- ⁸ Estimated value less than detection limit.

Table 1 --Analyses of ground-water and substrate samples from Holiday Park,
N. Tonawanda, New York--continued

	Sample Number			
	9	10	11	12
Date collected	070982	070982	070982	070982
Depth (ft)				
Sample Type	sw sediment	sw	sw sediment	sw sediment
pH		9.0		
Conductivity (uMHOS)		163		
Temperature (°C)		24.0		
Inorganic Constituents ²				
Antimony				
Arsenic				
Cadmium				
Chromium				
Copper	8000	15;16	5000	14000
Iron	3600000	370;370	1800000	370000
Lead				
Mercury				
Nickel				
Selenium				
Zinc				
Fluoride				
Sulfide				
Cyanide				
Molecular sulfur				
Organic Compounds ²				
	(Mead)	(Mead)	(Mead)	(Mead)
1,3-Dimethylbenzene ⁴		-; 29		
Cyclohexanone ⁴		-; 29		
Di-n-butylphthalate		-; 20		

- ¹ Sample type: gw=ground water, sw=surface water, and s=substrate.
 - ² Concentrations: ug/L for water and ug/Kg for substrate. Blank spaces indicate that no analyses were performed; dashes indicate that constituents and compounds were not found.
 - ³ Cu(V): analysis done by direct aspiration because of high iron concentration.
 - ⁴ Identity determined by library match; no standard available. Concentration results are semiquantitative and are based on the response factor of the internal standard.
 - ⁵ Identity based on less than library match; identification seemed reasonable. As for footnote 4, concentration results are semiquantitative. . . .
 - ⁶ Volatile found in GC/ms extractions. Concentration results probably less than actual.
 - ⁷ Low surrogate recoveries.
 - ⁸ Estimated value less than detection limit.
- (Mead): Analyses performed by Mead CompuChem, Inc., Research Triangle Park NC

Boring no.	Depth (ft)	Description
1	0 - 1.5	Dark topsoil, clay.
	1.5 - 5.0	Clay, greenish-gray.
	5.0 - 11.0	No returns; hit many kinds of debris, such as mattress springs, etc. Depth to water 5.15 ft below land surface
		WATER SAMPLE: 9.2 - 11.2 ft.
2	0 - 0.5	Topsoil with gravel fill.
	0.5 - 1.5	Clay, olive-drab, "modeling clay."
	1.5 - 3.0	Clay, sandy, yellowish, moist.
	3.0 - 3.5	Clay, brown/yellow, saturated, sandy.
	3.5 - 4.5	Clay, sandy, dry, yellow/buff.
	4.5 - 6.0	Clay, sandy, dry.
	6.0 - 7.5	Sand, very fine, rust stained.
	7.5 - 10.0	Clay, sandy, some gravel-size cherty material, may be fill.
	10.0 - 11.5	Clay, sandy.
	11.5 - 15.2	Clay, pinkish color.
		Water level 7.62 ft below land surface.
		WATER SAMPLE: 13.2 - 15.2 ft.
3	0 - 4.5	Topsoil, light to dark brown.
	4.5 - 6.0	Clay, sandy, greenish gray. Hit saturation at 6.0 ft
	6.0 - 15.0	Clay, very sandy, gray, saturated.
		Water level 7.62 ft below land surface.
		WATER SAMPLE: 12.4 - 14.4 ft.
4	0 - 2.0	Topsoil, dark brown to yellow tan.
	2 - 3.5	Topsoil, brown, wet at 3.5 ft.
	3.5 - 22.5	Clay, sandy, alternating brown and gray, wet.
		Hit hard layer at 22.5 ft. Redrock? Camillus Shale?
		WATER SAMPLE: 20.5 - 22.5 ft.
6	0 - 1.5	Topsoil, black to brown.
	1.5 - 6.5	Clay, brown, wet.
	6.5 - 9.0	Same, water at 8.0 ft.
	9.0 - 11.5	Clay, pinkish, tight, "modeling clay."
	11.0 - 15.0	Same, extremely tight. Moved rig forward 3 ft and augered to clay.
		WATER SAMPLE: 13.0 - 15.0
7	0 - 1.0	Topsoil, black, organic.
	1.0 - 5.0	Clay, sandy, brown, saturated.
	5.0 - 6.5	Clay, tight, dry.
		SOIL SAMPLE: 3.5 ft.

Chemical information.--Recra Research completed an investigation of the site in 1979. The data are available from NYSDEC in Buffalo, N.Y. In 1982, the U.S. Geological Survey collected water samples from all seven monitoring wells, one soil sample, four samples of pond water from the golf course, and three sediment samples from the moist drainage ditches. All samples were analyzed for copper, iron, and organic compounds; results are shown in table B-8. Only iron exceeded the USEPA criterion for drinking water and the New York State standard for ground water. Only two organic priority pollutants were found; their concentrations were below 50 µg/L. The samples contained 15 organic nonpriority pollutants and 10 possibly naturally occurring compounds.

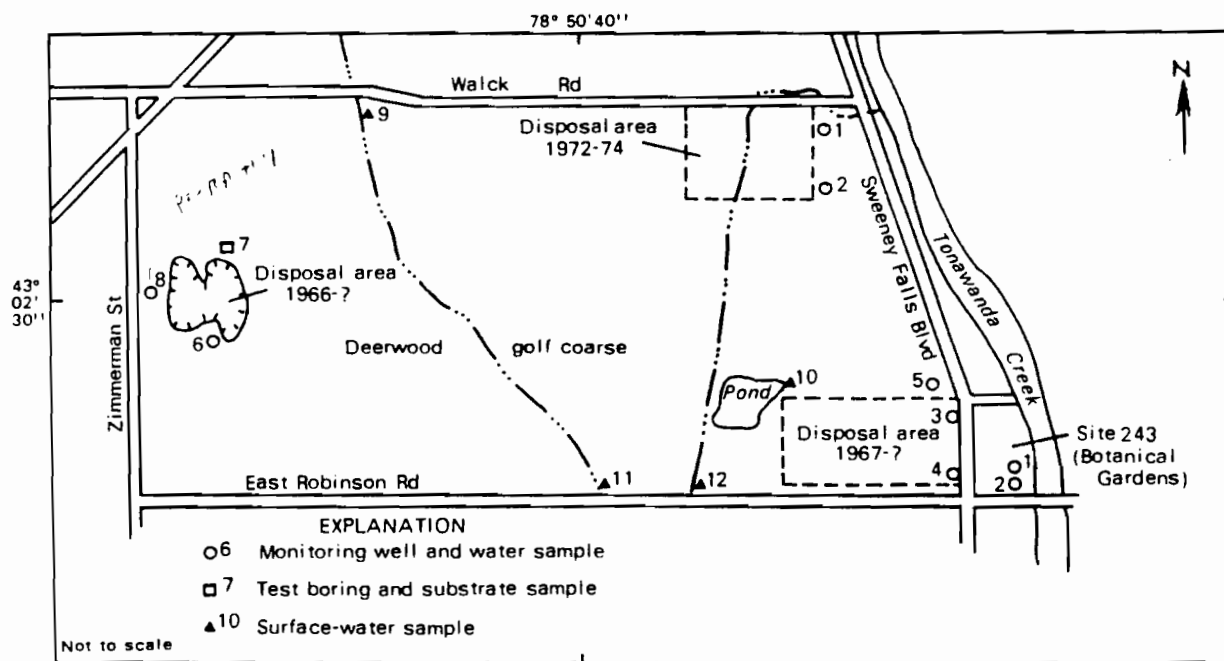
72. HOLIDAY PARK (USGS field reconnaissance)

General information and chemical-migration potential.--The Holiday Park site, in the city of North Tonawanda, was used primarily for municipal-waste disposal and by a chemical firm to dispose of 125 tons of phenolic resin, 500 tons of phenolic molding compounds, and 500 tons of mixed refuse. The materials were buried in three areas on the property and in much of the area now occupied by the golf course.

Chemical data indicate a possibility of leachate migration from two of the areas. Two samples suggest possible northward migration from the southeast disposal area, and one indicates possible migration from the westernmost area. The presence of organic compounds in one sample is attributed to sampling within the disposal area, as indicated by the drilling log, and cannot be considered evidence of contaminant migration. Additional testing would be needed to confirm migration. The potential for contaminant migration at this site is indeterminable.

Geologic information.--The area consists of glacial lacustrine clay overlying bedrock of Camillus Shale. The U.S. Geological Survey drilled six test borings on the site in 1982; the locations are shown in figure B-8. The geologic logs are on p. 195.

Hydrologic information.--Seven monitoring wells are on the site--five new wells installed by the U.S. Geological Survey in 1982 for this study and two older ones. Water levels in the wells suggest the direction of ground-water flow to be east toward Tonawanda Creek and the drainage ditches (fig. B-8). After water samples were withdrawn from these monitoring wells, recovery time often exceeded 48 hours, which indicates extremely slow ground-water movement.



Base from USGS field sketch, 1982

Figure B-8. Location of sampling holes and monitoring wells at Holiday Park, site 72, North Tonawanda.

Table B-8.--Analyses of ground-water, surface-water, and sediment samples from Holiday Park, site 72, North Tonawanda, N.Y., June 19, 1982 to July 9, 1982.

[Locations shown in fig. B-8. Concentrations are in $\mu\text{g/L}$ and $\mu\text{g/kg}$; dashes indicate that constituent or compound was not found, LT indicates it was found but below the quantifiable detection limit; blanks indicate it was not analyzed.]

	Sample number				
	Ground water				
	1	2	3	duplicate	4
pH	6.9	7.2	7.2		7.2
Specific conductance ($\mu\text{mho/cm}$)	2,140	1,160	760		470
Temperature ($^{\circ}\text{C}$)	10.0	10.5	12.5		11.0
<u>Inorganic constituents</u>					
Copper	46	² 11	8	(9)	25
Iron	90,000†	49,000	4,700†	(5,200†)	19,000†
Molecular sulfur ¹	--	--	--	(--)	--
<u>Organic compounds</u>					
Priority pollutants					
Dibutyl phthalate	--	--	--	(--)	31.8
Ethylbenzene ³	17	--	--	(--)	--
Nonpriority pollutants					
4-(1,1-Dimethylethyl)-phenol ¹	LT	--	--	(--)	--
1,3-Isobenzofurandione ¹	LT	--	--	(--)	--
4-Chloro-transcyclohexanol ¹	--	--	LT	(--)	--
3-methycyclopentanone ¹	LT	--	--	(--)	--
2-Cyclohexen-1-one ¹	--	--	8.0	(--)	--
2-Cyclohexen-1-ol ¹	--	--	LT	(--)	--
<u>Compounds potentially of natural origin</u>					
1,7,7-Trimethyl-bicyclo[2.2.1]heptan-2-one ¹	56	--	--	(--)	--
2-hexanone ¹	LT	--	--	(--)	--
1,3,3-Trimethyl-bicyclo[2.2.1]-heptan-2-one ¹	LT	--	--	(--)	--
1-Butoxy-2-propanol ¹	LT	--	--	(--)	--

Table B-8.--Analyses of ground-water, surface-water, and sediment samples from Holiday Park, site 72, North Tonawanda, N.Y., June 19, 1982 to July 9, 1982 (continued)

	Sample number		
	Ground water		
	5	(duplicate)	6
pH	8.0		7.0
Specific conductance ($\mu\text{mho/cm}$)	618		11.40
Temperature ($^{\circ}\text{C}$)	9.0		11.0
<u>Inorganic constituents</u>			
Copper	7	(7)	² 110
Iron	12,000†	(14,000†)	96,000†
Molecular sulfur	--	(--)	--
<u>Organic compounds</u>			
Priority pollutant			
Dibutyl phthalate	--	(2.0)	--
Nonpriority pollutants			
2-Cyclohexen-1-one ¹	LT	(--)	--
Ethanol, 2[2-(2-methoxyethoxy)]-acetate	LT	(--)	--
2,2-Dimethyldecane ¹	LT	(--)	--
2-Butoxyethylbutyl phthalate ¹	--	(11.7)	--
4-Chloro-transcyclohexanol ¹	LT	(--)	13
1-(2-butoxyethoxy)ethanol ¹	--	(--)	49

¹ Tentative identification based on comparison with the National Bureau of Standards (NBS) library. No external standard was available. Concentration reported is semiquantitative and is based only on an internal standard. GC/MS spectra were examined and interpreted by GC/MS analysts.

² Analysis done by direct aspiration because of high iron concentration.

³ Volatile found in GC/MS extractions. Concentration probably higher than that detected.

† Exceeds USEPA criterion for maximum permissible concentration in drinking water or New York State standard for maximum concentration in ground water.

***Analyzed at detection limit above that required by this study. No compounds detected.

Table B-8.--Analyses of ground-water, surface-water, and sediment samples from Holiday Park, site 72, North Tonawanda, N.Y., June 19, 1982 to July 9, 1982 (continued)

[Locations shown in fig. B-8. Concentrations are in $\mu\text{g/L}$ and $\mu\text{g/kg}$; dashes indicate that constituent or compound was not found, LT indicates it was found but below the quantifiable detection limit; blanks indicate it was not analyzed.]

	Sample number		
	Sediment		Ground water
	7	duplicate	8
pH			7.4
Specific conductance ($\mu\text{mho/cm}$)			1,050
Temperature ($^{\circ}\text{C}$)			11.0
<u>Inorganic constituents</u>			
Copper	6,000	(6,000)	60
Iron	2,200,000	(2,300,000)	37,000†
Molecular sulfur	--	(--)	LT
<u>Organic compounds</u>			
Nonpriority pollutants			
3,3-dimethyl-2-butanone ¹	1,000	(--)	--
2-butanone ¹	21,000	(--)	--
2-methylheptane ¹	2,300	(--)	--
acetic acid, 1-methyl ester ¹	3,650	(--)	--
2,6-dimethyl heptane ¹	2,850	(--)	--
2-methyl-2-propyl-1,3-dioxolane	710	(--)	--
2,2'-oxybispropane ¹	4,200	(--)	--
2,6-dimethyloctane ¹	560	(--)	--
<u>Compounds potentially of natural origin</u>			
undecane ¹	2,400	(--)	--
tridecane ¹	2,200	(--)	--
2,7-dimethylundecane ¹	710	(--)	--
2,3,5-Trimethyldecane ¹	2,208	(--)	--
Possible artifact			
4-methyl-3-penten-2-one ¹	4,100	(LT)	--

Table B-8.--Analyses of ground-water, surface-water, and sediment samples from Holiday Park, site 72, North Tonawanda, N.Y., June 19, 1982 to July 9, 1982 (continued)
 [Locations shown in fig. B-8. Concentrations are in $\mu\text{g/L}$ and $\mu\text{g/kg}$; dashes indicate that constituent or compound was not found, LT indicates it was found but below the quantifiable detection limit; blanks indicate it was not analyzed.]

	Sample number				
	Sedi- ment 9	Surface water		Sediment	
		10	duplicate	11	12
pH		9.0			
Specific conductance ($\mu\text{mho/cm}$)		63			
Temperature ($^{\circ}\text{C}$)		24.0			
<u>Inorganic constituents</u>					
Aluminum		--	(--)		
Antimony		--	(--)		
Arsenic		--	(--)		
Barium		--	(--)		
Beryllium		--	(--)		
Cadmium		--	(--)		
Chromium		--	(--)		
Cobalt		--	(--)		
Copper	8,000	--	(--)	5,000	14,000
Iron	3,600,000	198	(205)	1,800,000	370,000
Lead		33	(36)		
Manganese		21	(24)		
Mercury		--	(--)		
Nickel		--	(--)		
Selenium		--	(--)		
Silver		--	(--)		
Tellurium		--	(--)		
Vanadium		--	(--)		
Zinc		17	(16)		
<u>Organic compounds</u>	***			***	***
Priority pollutant					
Di-n-butyl phthalate	--	--	(20)	--	--
Nonpriority pollutants					
1,3-Dimethylbenzene	--	--	(29)	--	--
Cyclohexanone	--	--	(29)	--	--

file

NIAGARA COUNTY HEALTH DEPARTMENT

MEMORANDUM

DATE: January 18, 1984

TO: Peter Buechi

FROM: Michael Hopkins *M. Hopkins*

SUBJECT: PHASE I STATE SUPERFUND REPORT -
BOTANICAL GARDENS

I have reviewed the above report. The data contained in the report is essentially in agreement with the data available to this department. I also feel that the interpretation of data for purposes of HRS scoring is acceptable.

It is noted that the analytical data used for HRS scoring was obtained from the 1982 USGS report. Analytical data is also available from the 1979 Recra Report which appears to be more extensive. The Phase I report also states that no surface water data is available. The 1979 Recra study did analyze upstream and downstream surface water samples. The results are found on Page 18 (Table 6) of the Recra report. A copy of this page is attached.

The department's primary concern with this site is that direct contact with contaminants is possible. Portions of this site are tilled and cultivated which increases the possibility of contaminants being exposed. Surface soil testing for substances previously found in the groundwater would be desirable.

Please feel free to contact us with any questions.

MEH:cs
Attachment

cc: M. N. Vaughan

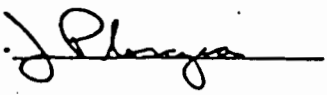
TABLE 6
ANALYTICAL RESULTS

CITY OF NORTH TONAWANDA
SURFACE WATER ANALYSES
BOTANICAL GARDENS AREA

Report Date: 9/18/79
Sample Date: 9/06/79

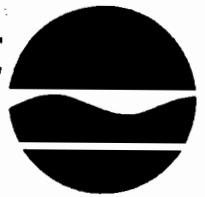
PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		UPSTREAM	DOWNSTREAM
pH	Standard Units	7.76	7.92
Conductivity	$\mu\text{mhos/cm}$	428	487
Chlorides	mg/l	22.6	29.2
Phenols	mg/l	< 0.005	< 0.005
Halogenated Organics Scan	$\mu\text{g/l}$ as Chlorine; Lindane Standard	0.78	0.59

COMMENTS: Samples were collected by Recra personnel on 9/6/79. Collected from Tonawanda Creek near Botanical Gardens upstream and downstream from Well #6. Halogenated Organics Scan results are used for screening purposes only and are not designed for qualification or quantification of any specific organic compound. Results are calculated upon the response factor of Lindane but do not imply the presence or absence of Lindane itself. Halogenated Organics Scan results do not include volatile organic constituents. Values reported as "less than" indicate the working detection limit for the particular sample/parameter. All analyses were performed according to U.S. Environmental Protection Agency methodologies.

FOR RECRA RESEARCH, INC. 

DATE 9/25/79

New York State Department of Environmental Conservation
270 Michigan Avenue, Buffalo, New York, 14203-2999



Thomas C. Jorling
Commissioner

MEMORANDUM

To: Matthew Forcucci
FROM: John W. Hyden *John W. Hyden*
SUBJECT: Botanical Gardens Site #932068 - North Tonawanda
DATE: November 19, 1992

As noted in our previous telephone conversations, leachate samples you and I collected at the above referenced site this past May are being analyzed by the Department of Health Laboratories in Albany. To date, preliminary analyses have been completed and final results are presently expected sometime in mid-December. We understand that we will be furnished a copy of these results when they become available. Please contact us if the expected complete date for these analyses is extended beyond December.

ad

cc: Mr. Joseph Sciascia
Mr. Al Wakeman

New York State Department of Environmental Conservation
270 Michigan Avenue, Buffalo, New York, 14203-2999



Thomas C. Jorling
Commissioner

Initial Progress Report
Period Reported: Through October 7, 1992

To: File
From: John W. Hyden *John W. Hyden*
Ref: Botanical Gardens, North Tonawanda
DEC Site 932068

On May 12, in response to a report of apparently contaminated leachate soaking a portion of this site, samples were obtained (see May 13 DOH Interoffice Memorandum, Forcucci to O'Conner). In a telephone call to Matt Forcucci yesterday, I he told me that the analyses of these samples had been completed, and that no hazardous substances had been observed in them. Mr. Forcucci said he would request copies of the analyses from the Albany Offices of DOH, and would forward copies of them to us whenever he received them.

cc: Mr. E.J. Sciascia ✓
Mr. Matt Forcucci

STATE OF NEW YORK - DEPARTMENT OF HEALTH
INTEROFFICE MEMORANDUM

To: Cameron O'Connor, Program Research Specialist III
From: Matt Forcucci, Program Research Specialist II
Date: May 13, 1992
Subject: Sampling at North Tonawanda Botanical Gardens (932068)

As a result of a complaint received by NYS DEC concerning discolored ponded water, sampling was undertaken at various locations within the North Tonawanda Botanical Gardens (see map), a known inactive hazardous waste site. Assistance was provided by Mr. Jack Hyden of NYS DEC Region 9.

Samples of rust-colored soil/sediment were collected at 4 locations for semi-volatile and metals analysis.

S-1 Located in the upper channel which drains the pool area of a fountain (fountain not operating), a 1 pint bottle of rust-colored sediment was collected from the channel surface. No odors were noted.

S-2 Samples for metals analysis were collected at the lower end of the same channel described in S-1. Samples included 1 750ml bottle, and 1 40ml vial of a moist, rust-colored sediment. No odors were noted.

S-3 Located south of the parking lot, a 1 quart bottle of soil was collected from a low area of rust-colored, stained grass. The discoloration was primarily on the surface of the soil. During sampling, approximately 50ml of water bubbled into the sample location. This water was included with the soil sample as part of sample collection activities. A slight manure odor was noted.

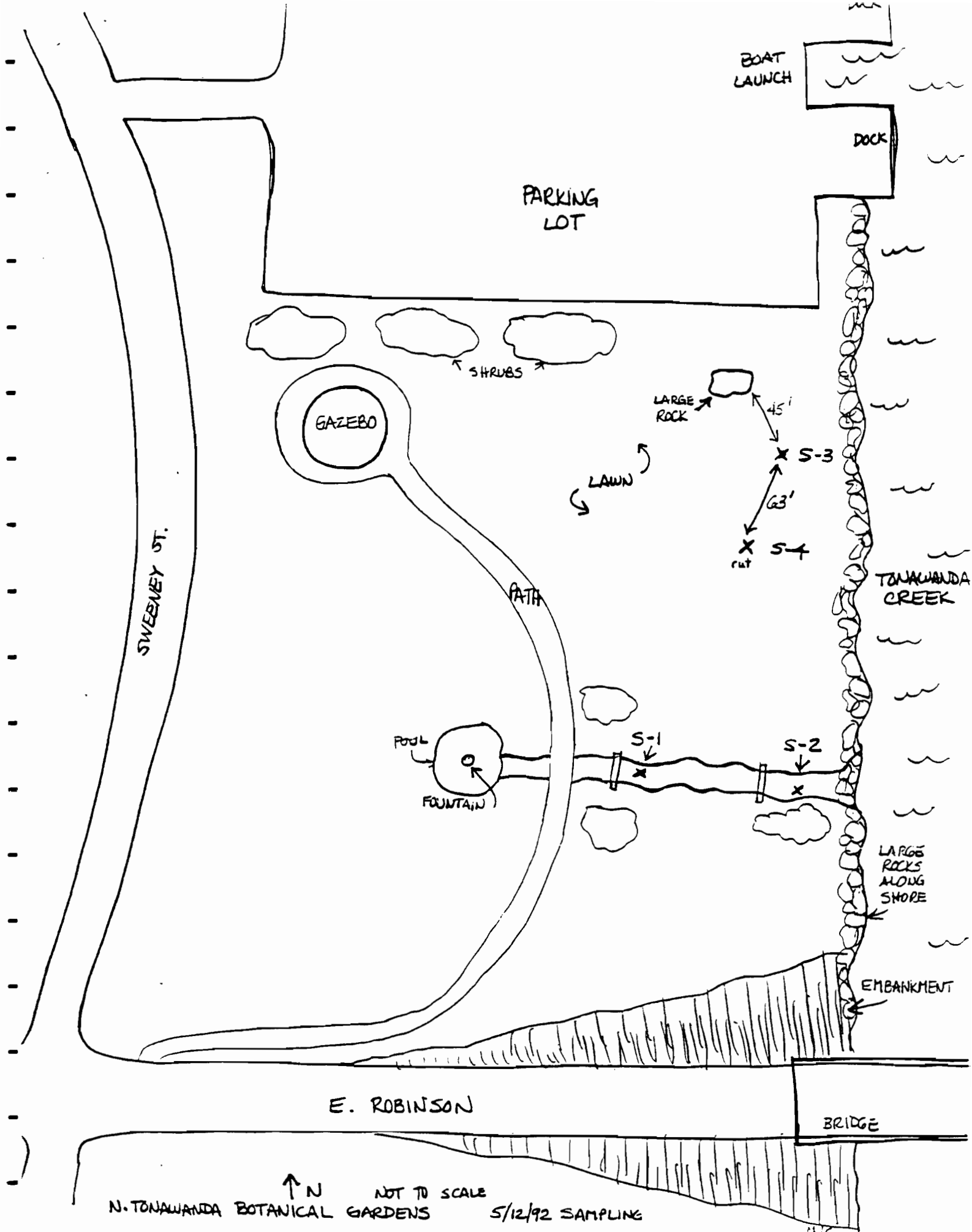
S-4 Located in a low area further south of S-3, this sample was collected at a depth of 6 inches in a deep rut which had been made by a lawn tractor. The surface soil was removed from the rut prior to sampling. A sample was collected from 0-2 inches within the rut (6-8 inches from the surface). A slight H₂S odor was noted.

All samples were shipped in the afternoon to the Wadsworth Labs for analysis.

Prior to the NYS DOH sampling, the NCHD collected samples of ponded water for bacterial analysis on May 7, 1992. Their verbal results provided on May 112, 1992 indicated the absence of E. coli bacteria, 40/100ml of total coliform, and 150/ml of total bacteria.

If there are any questions, please feel free to contact me.

cc: Dr. Smith-Blackwell
Mr. Wakeman/Mr. Mann
Mr. Sciascia/Mr. Hyden, NYS DEC Reg.9



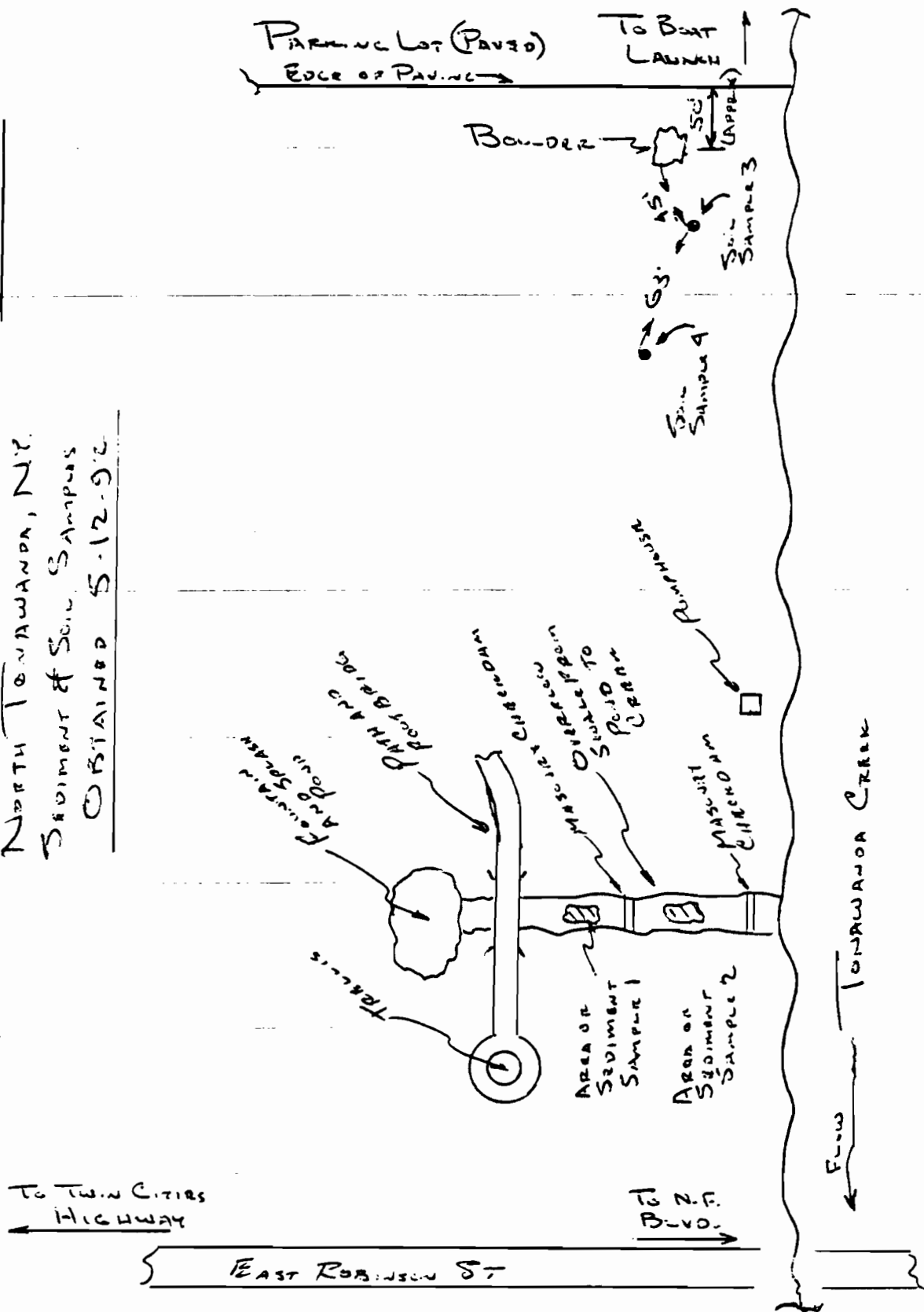
PROJECT GRID



JOB NUMBER	FILE NUMBER	SHEET NUMBER	CHECKED BY	DATE
	932062	1	JWH	5-12-92
BOTANICAL GARDENS - LOCATIONS OF FURZ SAMPLES			COMPUTED BY	DATE
			JWH	5-12-92

LAYOUT OF BOTANICAL GARDENS - S.E. QUADRANT

NORTH TONAWANDA, NY
SEDIMENT & SOIL SAMPLES
OBTAINED 5-12-92





STATE OF NEW YORK DEPARTMENT OF HEALTH

Center for Environmental Health

2 University Place

Albany, New York 12203-3399

Mark R. Chassin, M.D., M.P.P., M.P.H.

Commissioner

Paula Wilson

Executive Deputy Commissioner

OFFICE OF PUBLIC HEALTH

Sue Kelly

Executive Deputy Director

William N. Stasiuk, P.E., Ph. D.

Center Director

May 24, 1993

Mr. John Hyden
NYS Dept. of Environmental Conservation
Region 9
270 Michigan Ave.
Buffalo, NY 14203

RE: Botanical Gardens
Site ID #932068
North Tonawanda, Niagara County

Dear Mr. Hyden:

Here are the results of the samples collected at the North Tonawanda Botanical Gardens. If you have any questions, please contact me at (518) 458-6309.

Sincerely,

Dawn E. Hettrick
Assistant Sanitary Engineer
Bureau of Environmental Exposure
Investigation

jlh/93127PRO0681

Attachment

cc: Dr. A. Carlson
Mr. A. Wakeman
Dr. O. Smith-Blackwell - Western Regional Office
Mr. M. Forcucci - Western Regional Office W/att
Mr. J. Devald - Niagara County Health Department W/att.
Mr. J. Sciascia - DEC, Region 9
Mr. W. Demick/Ms. V. Woodward - DEC, GHSC W/att.



PAGE 1

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921009166 SAMPLE RECEIVED: 92/11/10/11 CHARGE: 7.60
PROGRAM: 110: STATE SUPERFUND ANALYTICAL SERVICES
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE: 3103
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LATITUDE: LONGITUDE: Z DIRECTION:
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
DESCRIPTION: S-1 UPPER DISCHARGE AREA FROM FOUNTAIN POOL
REPORTING LAB: 10: LABORATORY OF INORGANIC ANALYTICAL CHEMISTRY - ALBANY
TEST PATTERN: 10-035: METALS IN SOLID MATERIAL
SAMPLE TYPE: 600: SOIL, SAND
TIME OF SAMPLING: 92/05/12 09:20 DATE PRINTED: 92/12/10

<> SAMPLE ANALYZED FOR TRACE METALS AS PER CONVERSATION
<> WITH LONNIE RAFFERTY 11/10/92. RW
<> SEE ALSO 921009037

PARAMETER	RESULT
SOLIDS, DRY	32. PERCENT
ARSENIC IN DRY SOLIDS	6.8 MCG/G
MERCURY IN DRY SOLIDS	0.10 MCG/G
SELENIUM IN DRY SOLIDS	< 0.5 MCG/G
BERYLLIUM IN DRY SOLIDS	< 0.4 MCG/G
SILVER IN DRY SOLIDS	< 4. MCG/G
BARIUM IN DRY SOLIDS	440. MCG/G
CADMIUM IN DRY SOLIDS	< 2. MCG/G
COBALT IN DRY SOLIDS	6.2 MCG/G
CHROMIUM IN DRY SOLIDS	24.6 MCG/G
COPPER IN DRY SOLIDS	52.9 MCG/G
IRON IN DRY SOLIDS	132000. MCG/G
MANGANESE IN DRY SOLIDS	249. MCG/G
NICKEL IN DRY SOLIDS	18.7 MCG/G
STRONTIUM IN DRY SOLIDS	136. MCG/G
TITANIUM IN DRY SOLIDS	121. MCG/G
VANADIUM IN DRY SOLIDS	21.8 MCG/G
ZINC IN DRY SOLIDS	387. MCG/G
MOLYBDENUM IN DRY SOLIDS	< 8. MCG/G
LEAD IN DRY SOLIDS	63.3 MCG/G
ANTIMONY IN DRY SOLIDS	< 30. MCG/G
TIN IN DRY SOLIDS	< 20. MCG/G
THALLIUM IN DRY SOLIDS	< 30. MCG/G
ALUMINUM IN DRY SOLIDS	11700. MCG/G
CALCIUM IN DRY SOLIDS	53200. MCG/G
POTASSIUM IN DRY SOLIDS	2620. MCG/G
MAGNESIUM IN DRY SOLIDS	6940. MCG/G
SODIUM IN DRY SOLIDS	281. MCG/G
DIGESTION OF SOLIDS FOR METALS	DONE

**** CONTINUED ON NEXT PAGE ****

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NY STATE DEP'T. HEALTH
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SUBMITTED BY: FORCUCCI

PAGE 2

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921009166 SAMPLE RECEIVED: 92/11/10/TT CHARGE: 7.60
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:20 DATE PRINTED: 92/12/10

-----PARAMETER-----	-----RESULT-----
DIGESTION OF SOLIDS FOR HG	DONE

***** END OF REPORT *****

PAGE 1

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921870 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
PROGRAM: 110: STATE SUPERFUND ANALYTICAL SERVICES
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE: 3103
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LATITUDE: LONGITUDE: Z DIRECTION:
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
DESCRIPTION: S-1 UPPER DISCHARGE AREA FROM FOUNTAIN POOL 1 X 1 PINT
REPORTING LAB: TOX: LAB FOR ORGANIC ANALYTICAL CHEMISTRY
TEST PATTERN: MULTI-S-1: MULTI-ANALYSIS (ORGANIC COMPOUNDS)
SAMPLE TYPE: 600: SOIL, SAND
TIME OF SAMPLING: 92/05/12 09:20 DATE PRINTED: 92/12/08

<> ***** <>
<> TENTATIVELY IDENTIFIED COMPOUNDS <>
<> CONCENTRATION IN MICROGRAM/KILOGRAM <>
<> ***** <>
<> COMPOUND NAME EST. CONC. <>
<> Benzene, 1-methyl-2-(1-methylethyl)- 800. <>

ANALYSIS: XPESTPS PESTICIDES & PCB's - SOIL/SEDIMENT (DES 312-2)
DATE REPORTED: 92/10/30 REPORT MAILED OUT

-----PARAMETER-----	-----RESULT-----
HCH, ALPHA	< 0.0008 MCG/G
HCH, BETA	< 0.0008 MCG/G
HCH, GAMMA (LINDANE)	< 0.0008 MCG/G
HCH, DELTA	< 0.0008 MCG/G
HEPTACHLOR	< 0.001 MCG/G
ALDRIN	< 0.0004 MCG/G
HEPTACHLOR EPOXIDE	< 0.001 MCG/G
ENDOSULFAN I	< 0.001 MCG/G
4,4'-DDE	0.001 MCG/G [PL]
DIELDRIN	< 0.0004 MCG/G
ENDRIN	< 0.0004 MCG/G
4,4'-DDD	0.001 MCG/G [PL]
ENDOSULFAN II	< 0.001 MCG/G
ENDRIN ALDEHYDE	< 0.0004 MCG/G
ENDOSULFAN SULFATE	< 0.001 MCG/G
4,4'-DDT	0.001 MCG/G [PL]
METHOXYCHLOR	< 0.01 MCG/G
TOXAPHENE	< 0.02 MCG/G
CHLORDANE	< 0.002 MCG/G
MIREX	< 0.001 MCG/G
PCB, AROCLOR 1221	< 0.001 MCG/G
PCB, AROCLOR 1016/1242	0.01 MCG/G
PCB, AROCLOR 1248	< 0.001 MCG/G

**** CONTINUED ON NEXT PAGE ****

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PAGE 2

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921870 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:20 DATE PRINTED: 92/12/08

PARAMETER	RESULT
PCB, AROCLOR 1254	< 0.001 MCG/G
PCB, AROCLOR 1260	< 0.001 MCG/G
PERCENT DRY SOLIDS	28 PERCENT

ANALYSIS: TCL-VOLSKG TARGET COMPOUND LIST - VOLATILES IN MCG/KG (GC/MS)
DATE REPORTED: 92/11/02 REPORT MAILED OUT

PARAMETER	RESULT
CHLOROMETHANE	< 180. MCG/KG
BROMOMETHANE	< 180. MCG/KG
VINYL CHLORIDE	< 180. MCG/KG
CHLOROETHANE	< 180. MCG/KG
METHYLENE CHLORIDE (DICHLOROMETHANE)	< 180. MCG/KG
ACETONE	490. MCG/KG
CARBON DISULFIDE	< 180. MCG/KG
1,1-DICHLOROETHENE	< 180. MCG/KG
1,1-DICHLOROETHANE	< 180. MCG/KG
CIS/TRANS-1,2-DICHLOROETHENE (TOTAL)	< 180. MCG/KG
CHLOROFORM	< 180. MCG/KG
1,2-DICHLOROETHANE	< 180. MCG/KG
2-BUTANONE (METHYL ETHYL KETONE)	< 180. MCG/KG
1,1,1-TRICHLOROETHANE	< 180. MCG/KG
CARBON TETRACHLORIDE	< 180. MCG/KG
BROMODICHLOROMETHANE	< 180. MCG/KG
1,2-DICHLOROPROPANE	< 180. MCG/KG
CIS-1,3-DICHLOROPROPENE	< 180. MCG/KG
TRICHLOROETHENE	< 180. MCG/KG
DIBROMOCHLOROMETHANE	< 180. MCG/KG
1,1,2-TRICHLOROETHANE	< 180. MCG/KG
BENZENE	< 180. MCG/KG
TRANS-1,3-DICHLOROPROPENE	< 180. MCG/KG
BROMOFORM	< 180. MCG/KG
4-METHYL-2-PENTANONE (MIBK)	< 180. MCG/KG
2-HEXANONE (METHYL BUTYL KETONE)	< 180. MCG/KG
TETRACHLOROETHENE	< 180. MCG/KG
1,1,2,2-TETRACHLOROETHANE	< 180. MCG/KG
TOLUENE	< 180. MCG/KG
CHLOROBENZENE	< 180. MCG/KG
ETHYLBENZENE	< 180. MCG/KG
STYRENE	< 180. MCG/KG
TOTAL XYLENES	< 180. MCG/KG

ANALYSIS: TCL-SV-SKG TARGET COMPOUND LIST - SEMI-VOLATILES (GC/MS)
DATE PRINTED: 92/12/08 FINAL REPORT

PARAMETER	RESULT
PHENOL	< 2300. MCG/KG
BIS(2-CHLOROETHYL) ETHER	< 2300. MCG/KG

**** CONTINUED ON NEXT PAGE ****

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RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921870 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:20 DATE PRINTED: 92/12/08

-----PARAMETER-----	-----RESULT-----
2-CHLOROPHENOL	< 2300. MCG/KG
1,3-DICHLOROBENZENE	< 2300. MCG/KG
1,4-DICHLOROBENZENE	< 2300. MCG/KG
1,2-DICHLOROBENZENE	< 2300. MCG/KG
2-METHYL PHENOL	< 2300. MCG/KG
BIS (2-CHLOROISOPROPYL) ETHER	< 2300. MCG/KG
4-METHYL PHENOL	< 2300. MCG/KG
N-NITROSODI-N-PROPYLAMINE	< 2300. MCG/KG
HEXACHLOROETHANE	< 2300. MCG/KG
NITROBENZENE	< 2300. MCG/KG
ISOPHORONE	< 2300. MCG/KG
2-NITROPHENOL	< 2300. MCG/KG
2,4-DIMETHYLPHENOL	< 2300. MCG/KG
BIS (2-CHLOROETHOXY) METHANE	< 2300. MCG/KG
2,4-DICHLOROPHENOL	< 2300. MCG/KG
1,2,4-TRICHLOROBENZENE	< 2300. MCG/KG
NAPHTHALENE	< 2300. MCG/KG
4-CHLOROANILINE	< 2300. MCG/KG
HEXACHLOROBUTADIENE (C-46)	< 2300. MCG/KG
4-CHLORO-3-METHYLPHENOL	< 2300. MCG/KG
2-METHYLNAPHTHALENE	< 2300. MCG/KG
HEXACHLOROCYCLOPENTADIENE (C-56)	< 2300. MCG/KG
2,4,6-TRICHLOROPHENOL	< 2300. MCG/KG
2,4,5-TRICHLOROPHENOL	< 5800. MCG/KG
2-CHLORONAPHTHALENE	< 2300. MCG/KG
2-NITROANILINE	< 5800. MCG/KG
DIMETHYLPHTHALATE	< 2300. MCG/KG
ACENAPHTHYLENE	< 2300. MCG/KG
2,6-DINITROTOLUENE	< 2300. MCG/KG
3-NITROANILINE	< 5800. MCG/KG
ACENAPHTHENE	< 2300. MCG/KG
2,4-DINITROPHENOL	< 5800. MCG/KG
4-NITROPHENOL	< 5800. MCG/KG
DIBENZOFURAN	< 2300. MCG/KG
2,4-DINITROTOLUENE	< 2300. MCG/KG
DIETHYLPHTHALATE	< 2300. MCG/KG
4-CHLOROPHENYL PHENYL ETHER	< 2300. MCG/KG
FLUORENE	< 2300. MCG/KG
4-NITROANILINE	< 5800. MCG/KG
2-METHYL-4,6-DINITROPHENOL	< 5800. MCG/KG
N-NITROSODIPHENYLAMINE	< 2300. MCG/KG
---> CANNOT BE SEPARATED FROM DIPHENYLAMINE	
4-BROMOPHENYL PHENYL ETHER	< 2300. MCG/KG
HEXACHLOROBENZENE	< 2300. MCG/KG
PENTACHLOROPHENOL	< 5800. MCG/KG
PHENANTHRENE	160. J MCG/KG
ANTHRACENE	< 2300. MCG/KG
CARBAZOLE	< 2300. MCG/KG

**** CONTINUED ON NEXT PAGE ****

PAGE 4

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921870 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:20 DATE PRINTED: 92/12/08

-----PARAMETER-----	-----RESULT-----
DI-N-BUTYL PHTHALATE	< 2300. MCG/KG
FLUORANTHENE	350. J MCG/KG
PYRENE	200. J MCG/KG
BUTYL BENZYL PHTHALATE	< 2300. MCG/KG
3,3'-DICHLOROBENZIDINE	< 2300. MCG/KG
BENZO (a) ANTHRACENE	< 2300. MCG/KG
CHRYSENE	< 2300. MCG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	190. JB MCG/KG
DI-N-OCTYL PHTHALATE	< 2300. MCG/KG
BENZO (b) FLUORANTHENE	< 2300. MCG/KG
BENZO (k) FLUORANTHENE	< 2300. MCG/KG
BENZO (a) PYRENE	< 2300. MCG/KG
INDENO (1,2,3-cd) PYRENE	< 2300. MCG/KG
DIBENZO (ah) ANTHRACENE	< 2300. MCG/KG
BENZO (ghi) PERYLENE	< 2300. MCG/KG

*** END OF REPORT ***

PAGE 1

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921009037 SAMPLE RECEIVED: 92/05/13/11 CHARGE: 7.60
PROGRAM: 110: STATE SUPERFUND ANALYTICAL SERVICES
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE: 1472
POLITICAL SUBDIVISION: TONAWANDA COUNTY: ERIE
LATITUDE: LONGITUDE: Z DIRECTION:
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
DESCRIPTION: S-2 LOWER DISCHARGE AREA FROM FOUNTAIN POOL 1 X 750ML,
DESCRIPTION: 1 X 250ML, 1 X 40ML
REPORTING LAB: 10: LABORATORY OF INORGANIC ANALYTICAL CHEMISTRY - ALBANY
TEST PATTERN: 10-035: METALS IN SOLID MATERIAL
SAMPLE TYPE: 600: SOIL, SAND
TIME OF SAMPLING: 92/05/12 09:30 DATE PRINTED: 92/06/23

<> CHAIN-OF-CUSTODY FORM ACCOMPANIED THIS SAMPLE. <>

-----PARAMETER-----	-----RESULT-----
SOLIDS, DRY	41. PERCENT
ARSENIC IN DRY SOLIDS	11.0 MCG/G
MERCURY IN DRY SOLIDS	0.15 MCG/G
SELENIUM IN DRY SOLIDS	< 0.5 MCG/G
BERYLLIUM IN DRY SOLIDS	< 0.4 MCG/G
SILVER IN DRY SOLIDS	< 4. MCG/G
BARIUM IN DRY SOLIDS	287. MCG/G
CADMIUM IN DRY SOLIDS	3.3 MCG/G
COBALT IN DRY SOLIDS	3.8 MCG/G
CHROMIUM IN DRY SOLIDS	24.5 MCG/G
COPPER IN DRY SOLIDS	48.8 MCG/G
IRON IN DRY SOLIDS	115000. MCG/G
MANGANESE IN DRY SOLIDS	255. MCG/G
NICKEL IN DRY SOLIDS	21.7 MCG/G
STRONTIUM IN DRY SOLIDS	84.7 MCG/G
TITANIUM IN DRY SOLIDS	174. MCG/G
VANADIUM IN DRY SOLIDS	27.7 MCG/G
ZINC IN DRY SOLIDS	267. MCG/G
MOLYBDENUM IN DRY SOLIDS	< 8. MCG/G
LEAD IN DRY SOLIDS	64.2 MCG/G
ANTIMONY IN DRY SOLIDS	< 30. MCG/G
TIN IN DRY SOLIDS	< 20. MCG/G
THALLIUM IN DRY SOLIDS	< 30. MCG/G
ALUMINUM IN DRY SOLIDS	13400. MCG/G
CALCIUM IN DRY SOLIDS	21800. MCG/G
POTASSIUM IN DRY SOLIDS	3390. MCG/G
MAGNESIUM IN DRY SOLIDS	7320. MCG/G
SODIUM IN DRY SOLIDS	290. MCG/G
DIGESTION OF SOLIDS FOR METALS	DONE
DIGESTION OF SOLIDS FOR HG	DONE

**** END OF REPORT ****

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G. ANDERS CARLSON
BUR. ENVIRONMENTAL EXPOSURE INVESTIGAT.
NY STATE DEP'T. HEALTH
11 UNIVERSITY PLACE - RM. 205
ALBANY ***INTERAGENCY MAIL***

SUBMITTED BY: FORCUCCI

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PAGE 1

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921009167 SAMPLE RECEIVED: 92/11/10/11 CHARGE: 7.60
PROGRAM: 110: STATE SUPERFUND ANALYTICAL SERVICES
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE: 3103
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LATITUDE: LONGITUDE: Z DIRECTION:
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
DESCRIPTION: S 3 SOUTH OF BOAT LAUNCH/PARKING AREA
REPORTING LAB: 10: LABORATORY OF INORGANIC ANALYTICAL CHEMISTRY - ALBANY
TEST PATTERN: 10-035: METALS IN SOLID MATERIAL
SAMPLE TYPE: 600: SOIL, SAND
TIME OF SAMPLING: 92/05/12 09:40 DATE PRINTED: 92/12/10

<> SAMPLE ANALYZED FOR TRACE AS PER CONVERSATION WITH
<> LONNIE RAFFERTY 11/10/92. RW
<> SEE ALSO 921009037

-----PARAMETER-----	-----RESULT-----
SOLIDS, DRY	52. PERCENT
ARSENIC IN DRY SOLIDS	2.5 MCG/G
MERCURY IN DRY SOLIDS	0.04 MCG/G
SELENIUM IN DRY SOLIDS	< 0.5 MCG/G
BERYLLIUM IN DRY SOLIDS	< 0.4 MCG/G
SILVER IN DRY SOLIDS	< 4. MCG/G
BARIUM IN DRY SOLIDS	244. MCG/G
CADMIUM IN DRY SOLIDS	< 2. MCG/G
COBALT IN DRY SOLIDS	4.8 MCG/G
CHROMIUM IN DRY SOLIDS	18.0 MCG/G
COPPER IN DRY SOLIDS	22.1 MCG/G
IRON IN DRY SOLIDS	38800. MCG/G
MANGANESE IN DRY SOLIDS	191. MCG/G
NICKEL IN DRY SOLIDS	17.1 MCG/G
STRONTIUM IN DRY SOLIDS	52.2 MCG/G
TITANIUM IN DRY SOLIDS	127. MCG/G
VANADIUM IN DRY SOLIDS	20.5 MCG/G
ZINC IN DRY SOLIDS	93.0 MCG/G
MOLYBDENUM IN DRY SOLIDS	< 8. MCG/G
LEAD IN DRY SOLIDS	38.1 MCG/G
ANTIMONY IN DRY SOLIDS	< 30. MCG/G
TIN IN DRY SOLIDS	< 20. MCG/G
THALLIUM IN DRY SOLIDS	< 30. MCG/G
ALUMINUM IN DRY SOLIDS	11100. MCG/G
CALCIUM IN DRY SOLIDS	21200. MCG/G
POTASSIUM IN DRY SOLIDS	2550. MCG/G
MAGNESIUM IN DRY SOLIDS	6350. MCG/G
SODIUM IN DRY SOLIDS	< 200. MCG/G
DIGESTION OF SOLIDS FOR METALS	DONE

**** CONTINUED ON NEXT PAGE ****

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RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921009167 SAMPLE RECEIVED: 92/11/10/11 CHARGE: 7.60
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:40 DATE PRINTED: 92/12/10

-----PARAMETER-----
DIGESTION OF SOLIDS FOR HG

-----RESULT-----

DONE

***** END OF REPORT *****

PAGE 1

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921871 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
PROGRAM: 110: STATE SUPERFUND ANALYTICAL SERVICES
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE: 3103
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LATITUDE: LONGITUDE: Z DIRECTION:
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
DESCRIPTION: S-3 SOUTH OF BOAT LAUNCH/PARKING AREA
REPORTING LAB: TOX: LAB FOR ORGANIC ANALYTICAL CHEMISTRY
TEST PATTERN: MULTI-S-1: MULTI-ANALYSIS (ORGANIC COMPOUNDS)
SAMPLE TYPE: 600: SOIL, SAND
TIME OF SAMPLING: 92/05/12 09:40 DATE PRINTED: 92/12/08

ANALYSIS: XPESTPS PESTICIDES & PCB'S - SOIL/SEDIMENT (DES 312-2)
DATE REPORTED: 92/10/30 REPORT MAILED OUT

-----PARAMETER-----	-----RESULT-----
HCH, ALPHA	< 0.0008 MCG/G
HCH, BETA	< 0.0008 MCG/G
HCH, GAMMA (LINDANE)	< 0.0008 MCG/G
HCH, DELTA	< 0.0008 MCG/G
HEPTACHLOR	< 0.001 MCG/G
ALDRIN	< 0.0004 MCG/G
HEPTACHLOR EPOXIDE	< 0.001 MCG/G
ENDOSULFAN I	< 0.001 MCG/G
4,4'-DDE	0.001 MCG/G
DIELDRIN	< 0.0004 MCG/G
ENDRIN	< 0.0004 MCG/G
4,4'-DDD	0.001 MCG/G
ENDOSULFAN II	< 0.001 MCG/G
ENDRIN ALDEHYDE	< 0.0004 MCG/G
ENDOSULFAN SULFATE	< 0.001 MCG/G
4,4'-DDT	0.001 MCG/G [PL]
METHOXYCHLOR	< 0.01 MCG/G
TOXAPHENE	< 0.02 MCG/G
CHLORDANE	< 0.002 MCG/G
MIREX	< 0.001 MCG/G
PCB, AROCLOR 1221	< 0.001 MCG/G
PCB, AROCLOR 1016/1242	0.001 MCG/G
PCB, AROCLOR 1248	< 0.001 MCG/G
PCB, AROCLOR 1254	0.001 MCG/G
PCB, AROCLOR 1260	< 0.001 MCG/G
PERCENT DRY SOLIDS	54. PERCENT

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RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921871 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:40 DATE PRINTED: 92/12/08

ANALYSIS: TCL-VOLSKG TARGET COMPOUND LIST - VOLATILES IN MCG/KG (GC/MS)
DATE REPORTED: 92/11/02 REPORT MAILED OUT

-----PARAMETER-----	-----RESULT-----
CHLOROMETHANE	< 93. MCG/KG
BROMOMETHANE	< 93. MCG/KG
VINYL CHLORIDE	< 93. MCG/KG
CHLOROETHANE	< 93. MCG/KG
METHYLENE CHLORIDE (DICHLOROMETHANE)	20. MCG/KG [PL]
ACETONE	230. MCG/KG
CARBON DISULFIDE	< 93. MCG/KG
1,1-DICHLOROETHENE	< 93. MCG/KG
1,1-DICHLOROETHANE	< 93. MCG/KG
CIS/TRANS-1,2-DICHLOROETHENE (TOTAL)	< 93. MCG/KG
CHLOROFORM	< 93. MCG/KG
1,2-DICHLOROETHANE	< 93. MCG/KG
2-BUTANONE (METHYL ETHYL KETONE)	< 93. MCG/KG
1,1,1-TRICHLOROETHANE	< 93. MCG/KG
CARBON TETRACHLORIDE	< 93. MCG/KG
BROMODICHLOROMETHANE	< 93. MCG/KG
1,2-DICHLOROPROPANE	< 93. MCG/KG
CIS-1,3-DICHLOROPROPENE	< 93. MCG/KG
TRICHLOROETHENE	< 93. MCG/KG
DIBROMOCHLOROMETHANE	< 93. MCG/KG
1,1,2-TRICHLOROETHANE	< 93. MCG/KG
BENZENE	< 93. MCG/KG
TRANS-1,3-DICHLOROPROPENE	< 93. MCG/KG
BROMOFORM	< 93. MCG/KG
4-METHYL-2-PENTANONE (MIBK)	< 93. MCG/KG
2-HEXANONE (METHYL BUTYL KETONE)	< 93. MCG/KG
TETRACHLOROETHENE	< 93. MCG/KG
1,1,2,2-TETRACHLOROETHANE	< 93. MCG/KG
TOLUENE	< 93. MCG/KG
CHLOROBENZENE	< 93. MCG/KG
ETHYLBENZENE	< 93. MCG/KG
STYRENE	< 93. MCG/KG
TOTAL XYLENES	< 93. MCG/KG

ANALYSIS: TCL-SV-SKG TARGET COMPOUND LIST - SEMI-VOLATILES (GC/MS)
DATE PRINTED: 92/12/08 FINAL REPORT

-----PARAMETER-----	-----RESULT-----
PHENOL	< 750. MCG/KG
BIS (2-CHLOROETHYL) ETHER	< 750. MCG/KG
2-CHLOROPHENOL	< 750. MCG/KG
1,3-DICHLOROBENZENE	< 750. MCG/KG
1,4-DICHLOROBENZENE	< 750. MCG/KG
1,2-DICHLOROBENZENE	< 750. MCG/KG
2-METHYL PHENOL	< 750. MCG/KG

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RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921871 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:40 DATE PRINTED: 92/12/08

-----PARAMETER-----	-----RESULT-----
BIS (2-CHLOROISOPROPYL) ETHER	< 750. MCG/KG
4-METHYL PHENOL	< 750. MCG/KG
N-NITROSODI-N-PROPYLAMINE	< 750. MCG/KG
HEXACHLOROETHANE	< 750. MCG/KG
NITROBENZENE	< 750. MCG/KG
ISOPHORONE	< 750. MCG/KG
2-NITROPHENOL	< 750. MCG/KG
2,4-DIMETHYLPHENOL	< 750. MCG/KG
BIS (2-CHLOROETHOXY) METHANE	< 750. MCG/KG
2,4-DICHLOROPHENOL	< 750. MCG/KG
1,2,4-TRICHLOROBENZENE	< 750. MCG/KG
NAPHTHALENE	< 750. MCG/KG
4-CHLOROANILINE	< 750. MCG/KG
HEXACHLOROBUTADIENE (C-46)	< 750. MCG/KG
4-CHLORO-3-METHYLPHENOL	< 750. MCG/KG
2-METHYLNAPHTHALENE	< 750. MCG/KG
HEXACHLOROCYCLOPENTADIENE (C-56)	< 750. MCG/KG
2,4,6-TRICHLOROPHENOL	< 750. MCG/KG
2,4,5-TRICHLOROPHENOL	< 1900. MCG/KG
2-CHLORONAPHTHALENE	< 750. MCG/KG
2-NITROANILINE	< 1900. MCG/KG
DIMETHYLPHTHALATE	< 750. MCG/KG
ACENAPHTHYLENE	< 750. MCG/KG
2,6-DINITROTOLUENE	< 750. MCG/KG
3-NITROANILINE	< 1900. MCG/KG
ACENAPHTHENE	10. J MCG/KG
2,4-DINITROPHENOL	< 1900. MCG/KG
4-NITROPHENOL	< 1900. MCG/KG
DIBENZOFURAN	15. J MCG/KG
2,4-DINITROTOLUENE	< 750. MCG/KG
DIETHYLPHTHALATE	< 750. MCG/KG
4-CHLOROPHENYL PHENYL ETHER	< 750. MCG/KG
FLUORENE	27. J MCG/KG
4-NITROANILINE	< 1900. MCG/KG
2-METHYL-4,6-DINITROPHENOL	< 1900. MCG/KG
N-NITROSODIPHENYLAMINE	< 750. MCG/KG
---> CANNOT BE SEPARATED FROM DIPHENYLAMINE	
4-BROMOPHENYL PHENYL ETHER	< 750. MCG/KG
HEXACHLOROBENZENE	< 750. MCG/KG
PENTACHLOROPHENOL	< 1900. MCG/KG
PHENANTHRENE	160. J MCG/KG
ANTHRACENE	< 750. MCG/KG
CARBAZOLE	< 750. MCG/KG
DI-N-BUTYL PHTHALATE	< 750. MCG/KG
FLUORANTHENE	170. J MCG/KG
PYRENE	95. J MCG/KG
BUTYL BENZYL PHTHALATE	< 750. MCG/KG
3,3'-DICHLOROBENZIDINE	< 750. MCG/KG

**** CONTINUED ON NEXT PAGE ****

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RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921871 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:40 DATE PRINTED: 92/12/08

-----PARAMETER-----	-----RESULT-----
BENZO (a) ANTHRACENE	< 750. MCG/KG
CHRYSENE	< 750. MCG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	320. JB. MCG/KG
DI-N-OCTYL PHTHALATE	< 750. MCG/KG
BENZO (b) FLUORANTHENE	< 750. MCG/KG
BENZO (k) FLUORANTHENE	< 750. MCG/KG
BENZO (a) PYRENE	< 750. MCG/KG
INDENO (1,2,3-cd) PYRENE	< 750. MCG/KG
DIBENZO (ah) ANTHRACENE	< 750. MCG/KG
BENZO (ghi) PERYLENE	< 750. MCG/KG

*** END OF REPORT ***

PAGE 1

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921009168 SAMPLE RECEIVED: 92/11/10/11 CHARGE: 7.60
PROGRAM: 110: STATE SUPERFUND ANALYTICAL SERVICES
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE: 3103
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LATITUDE: LONGITUDE: Z DIRECTION:
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
DESCRIPTION: S-4 SOUTH OF BOAT LAUNCH/PARKING AREA 6" B65
REPORTING LAB: 10: LABORATORY OF INORGANIC ANALYTICAL CHEMISTRY - ALBANY
TEST PATTERN: 10-035: METALS IN SOLID MATERIAL
SAMPLE TYPE: 600: SOIL, SAND
TIME OF SAMPLING: 92/05/12 09:50 DATE PRINTED: 92/12/10

<> SAMPLE ANALYZED FOR TRACE METALS AS PER CONVERSATION
<> WITH LONNIE RAFFERTY 11/10/92. RW
<> SEE ALSO 921009037

PARAMETER	RESULT
SOLIDS, DRY	83. PERCENT
ARSENIC IN DRY SOLIDS	3.7 MCG/G
MERCURY IN DRY SOLIDS	< 0.02 MCG/G
SELENIUM IN DRY SOLIDS	< 0.5 MCG/G
BERYLLIUM IN DRY SOLIDS	0.7 MCG/G
SILVER IN DRY SOLIDS	< 4. MCG/G
BARIUM IN DRY SOLIDS	166. MCG/G
CADMIUM IN DRY SOLIDS	< 2. MCG/G
COBALT IN DRY SOLIDS	6.7 MCG/G
CHROMIUM IN DRY SOLIDS	24.9 MCG/G
COPPER IN DRY SOLIDS	31.3 MCG/G
IRON IN DRY SOLIDS	21100. MCG/G
MANGANESE IN DRY SOLIDS	411. MCG/G
NICKEL IN DRY SOLIDS	23.4 MCG/G
STRONTIUM IN DRY SOLIDS	56.3 MCG/G
TITANIUM IN DRY SOLIDS	246. MCG/G
VANADIUM IN DRY SOLIDS	32.7 MCG/G
ZINC IN DRY SOLIDS	117. MCG/G
MOLYBDENUM IN DRY SOLIDS	< 8. MCG/G
LEAD IN DRY SOLIDS	65.3 MCG/G
ANTIMONY IN DRY SOLIDS	< 30. MCG/G
TIN IN DRY SOLIDS	< 20. MCG/G
THALLIUM IN DRY SOLIDS	< 30. MCG/G
ALUMINUM IN DRY SOLIDS	17800. MCG/G
CALCIUM IN DRY SOLIDS	31000. MCG/G
POTASSIUM IN DRY SOLIDS	4300. MCG/G
MAGNESIUM IN DRY SOLIDS	9700. MCG/G
SODIUM IN DRY SOLIDS	219. MCG/G
DIGESTION OF SOLIDS FOR METALS	DONE

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RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921009168 SAMPLE RECEIVED: 92/11/10/11 CHARGE: 7.60
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:50 DATE PRINTED: 92/12/10

-----PARAMETER-----	-----RESULT-----
DIGESTION OF SOLIDS FOR HG	DONE

***** END OF REPORT *****

PAGE 1

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921872 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
PROGRAM: 110: STATE SUPERFUND ANALYTICAL SERVICES
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE: 3103
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LATITUDE: LONGITUDE: Z DIRECTION:
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
DESCRIPTION: S-4 SOUTH OF BOAT LAUNCH/PARKING AREA 6" BGS
REPORTING LAB: TOX: LAB FOR ORGANIC ANALYTICAL CHEMISTRY
TEST PATTERN: MULTI-S-1: MULTI-ANALYSIS (ORGANIC COMPOUNDS)
SAMPLE TYPE: 600: SOIL, SAND
TIME OF SAMPLING: 92/05/12 09:50 DATE PRINTED: 92/12/08

ANALYSIS: XPESTPS PESTICIDES & PCB'S - SOIL/SEDIMENT (DES 312-2)
DATE REPORTED: 92/10/30 REPORT MAILED OUT

-----PARAMETER-----

-----RESULT-----

HCH, ALPHA	< 0.0008 MCG/G
HCH, BETA	< 0.0008 MCG/G
HCH, GAMMA (LINDANE)	< 0.0008 MCG/G
HCH, DELTA	< 0.0008 MCG/G
HEPTACHLOR	< 0.001 MCG/G
ALDRIN	< 0.0004 MCG/G
HEPTACHLOR EPOXIDE	< 0.001 MCG/G
ENDOSULFAN I	< 0.001 MCG/G
4,4'-DDE	0.005 MCG/G
DIELDRIN	< 0.0004 MCG/G
ENDRIN	< 0.0004 MCG/G
4,4'-DDD	0.004 MCG/G
ENDOSULFAN II	< 0.001 MCG/G
ENDRIN ALDEHYDE	< 0.0004 MCG/G
ENDOSULFAN SULFATE	< 0.001 MCG/G
4,4'-DDT	0.004 MCG/G
METHOXYCHLOR	< 0.01 MCG/G
TOXAPHENE	< 0.02 MCG/G
CHLORDANE	< 0.002 MCG/G
MIREX	< 0.001 MCG/G
PCB, AROCLOR 1221	< 0.001 MCG/G
PCB, AROCLOR 1016/1242	< 0.001 MCG/G
PCB, AROCLOR 1248	< 0.001 MCG/G
PCB, AROCLOR 1254	< 0.001 MCG/G
PCB, AROCLOR 1260	0.02 MCG/G
PERCENT DRY SOLIDS	78. PERCENT

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RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921872 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:50 DATE PRINTED: 92/12/08

ANALYSIS: TCL-VOLSKG TARGET COMPOUND LIST - VOLATILES IN MCG/KG (GC/MS)
DATE REPORTED: 92/11/02 REPORT MAILED OUT

-----PARAMETER-----	-----RESULT-----
CHLOROMETHANE	< 64. MCG/KG
BROMOMETHANE	< 64. MCG/KG
VINYL CHLORIDE	< 64. MCG/KG
CHLOROETHANE	< 64. MCG/KG
METHYLENE CHLORIDE (DICHLOROMETHANE)	11. MCG/KG [PL]
ACETONE	100. MCG/KG
CARBON DISULFIDE	< 64. MCG/KG
1,1-DICHLOROETHENE	< 64. MCG/KG
1,1-DICHLOROETHANE	< 64. MCG/KG
CIS/TRANS-1,2-DICHLOROETHENE (TOTAL)	< 64. MCG/KG
CHLOROFORM	46. MCG/KG [PL]
1,2-DICHLOROETHANE	< 64. MCG/KG
2-BUTANONE (METHYL ETHYL KETONE)	< 64. MCG/KG
1,1,1-TRICHLOROETHANE	< 64. MCG/KG
CARBON TETRACHLORIDE	< 64. MCG/KG
BROMODICHLOROMETHANE	< 64. MCG/KG
1,2-DICHLOROPROPANE	< 64. MCG/KG
CIS-1,3-DICHLOROPROPENE	< 64. MCG/KG
TRICHLOROETHENE	< 64. MCG/KG
DIBROMOCHLOROMETHANE	< 64. MCG/KG
1,1,2-TRICHLOROETHANE	< 64. MCG/KG
BENZENE	< 64. MCG/KG
TRANS-1,3-DICHLOROPROPENE	< 64. MCG/KG
BROMOFORM	< 64. MCG/KG
4-METHYL-2-PENTANONE (MIBK)	< 64. MCG/KG
2-HEXANONE (METHYL BUTYL KETONE)	< 64. MCG/KG
TETRACHLOROETHENE	< 64. MCG/KG
1,1,2,2-TETRACHLOROETHANE	< 64. MCG/KG
TOLUENE	< 64. MCG/KG
CHLOROBENZENE	< 64. MCG/KG
ETHYLBENZENE	< 64. MCG/KG
STYRENE	< 64. MCG/KG
TOTAL XYLENES	< 64. MCG/KG

ANALYSIS: TCL-SV-SKG TARGET COMPOUND LIST - SEMI-VOLATILES (GC/MS)
DATE PRINTED: 92/12/08 FINAL REPORT

-----PARAMETER-----	-----RESULT-----
PHENOL	< 480. MCG/KG
BIS (2-CHLOROETHYL) ETHER	< 480. MCG/KG
2-CHLOROPHENOL	< 480. MCG/KG
1,3-DICHLOROBENZENE	< 480. MCG/KG
1,4-DICHLOROBENZENE	< 480. MCG/KG
1,2-DICHLOROBENZENE	< 480. MCG/KG
2-METHYL PHENOL	< 480. MCG/KG

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RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921872 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:50 DATE PRINTED: 92/12/08

PARAMETER	RESULT
BIS (2-CHLOROISOPROPYL) ETHER	< 480. MCG/KG
4-METHYL PHENOL	2. J MCG/KG
N-NITROSODI-N-PROPYLAMINE	< 480. MCG/KG
HEXACHLOROETHANE	< 480. MCG/KG
NITROBENZENE	< 480. MCG/KG
ISOPHORONE	< 480. MCG/KG
2-NITROPHENOL	< 480. MCG/KG
2,4-DIMETHYLPHENOL	< 480. MCG/KG
BIS (2-CHLOROETHOXY) METHANE	< 480. MCG/KG
2,4-DICHLOROPHENOL	< 480. MCG/KG
1,2,4-TRICHLOROBENZENE	< 480. MCG/KG
NAPHTHALENE	< 480. MCG/KG
4-CHLOROANILINE	< 480. MCG/KG
HEXACHLOROBUTADIENE (C-46)	< 480. MCG/KG
4-CHLORO-3-METHYLPHENOL	< 480. MCG/KG
2-METHYLNAPHTHALENE	< 480. MCG/KG
HEXACHLOROCYCLOPENTADIENE (C-56)	< 480. MCG/KG
2,4,6-TRICHLOROPHENOL	< 480. MCG/KG
2,4,5-TRICHLOROPHENOL	8. J MCG/KG
2-CHLORONAPHTHALENE	< 480. MCG/KG
2-NITROANILINE	< 1200. MCG/KG
DIMETHYLPHTHALATE	< 480. MCG/KG
ACENAPHTHYLENE	6. J MCG/KG
2,6-DINITROTOLUENE	< 480. MCG/KG
3-NITROANILINE	< 1200. MCG/KG
ACENAPHTHENE	6. J MCG/KG
2,4-DINITROPHENOL	< 1200. MCG/KG
4-NITROPHENOL	< 1200. MCG/KG
DIBENZOFURAN	7. J MCG/KG
2,4-DINITROTOLUENE	< 480. MCG/KG
DIETHYLPHTHALATE	< 480. MCG/KG
4-CHLOROPHENYL PHENYL ETHER	< 480. MCG/KG
FLUORENE	14. J MCG/KG
4-NITROANILINE	< 1200. MCG/KG
2-METHYL-4,6-DINITROPHENOL	< 1200. MCG/KG
N-NITROSODIPHENYLAMINE	< 480. MCG/KG
---> CANNOT BE SEPARATED FROM DIPHENYLAMINE	
4-BROMOPHENYL PHENYL ETHER	< 480. MCG/KG
HEXACHLOROBENZENE	< 480. MCG/KG
PENTACHLOROPHENOL	39. J MCG/KG
PHENANTHRENE	160. J MCG/KG
ANTHRACENE	27. J MCG/KG
CARBAZOLE	< 480. MCG/KG
DI-N-BUTYL PHTHALATE	29. J MCG/KG
FLUORANTHENE	180. J MCG/KG
PYRENE	100. J MCG/KG
BUTYL BENZYL PHTHALATE	6. J MCG/KG
3,3'-DICHLOROBENZIDINE	< 480. MCG/KG

**** CONTINUED ON NEXT PAGE ****

WADSWORTH CENTER FOR LABORATORIES AND RESEARCH

PAGE 4

RESULTS OF EXAMINATION

FINAL REPORT

SAMPLE ID: 921872 SAMPLE RECEIVED: 92/05/13/ CHARGE: 28.00
POLITICAL SUBDIVISION: NO. TONAWANDA C. COUNTY: NIAGARA
LOCATION: NORTH TONAWANDA BOTANICAL GARDENS
TIME OF SAMPLING: 92/05/12 09:50 DATE PRINTED: 92/12/08

PARAMETER	RESULT
BENZO (a) ANTHRACENE	< 480. MCG/KG
CHRYSENE	14. J MCG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	50. JB MCG/KG
DI-N-OCTYL PHTHALATE	< 480. MCG/KG
BENZO (b) FLUORANTHENE	9. J MCG/KG
BENZO (k) FLUORANTHENE	6. J MCG/KG
BENZO (a) PYRENE	8. J MCG/KG
INDENO (1,2,3-cd) PYRENE	< 480. MCG/KG
DIBENZO (ah) ANTHRACENE	< 480. MCG/KG
BENZO (ghi) PERYLENE	< 480. MCG/KG

**** END OF REPORT ****

RECEIVED
MAY 26 1993
NYS DEPT OF
ENVIRONMENTAL CONSERVATION
REGION 13

APPENDIX B
REFERENCED DOCUMENTATION



INTERAGENCY TASK FORCE ON HAZARDOUS WASTES

DRAFT REPORT

ON

HAZARDOUS WASTE DISPOSAL

IN

ERIE AND NIAGARA COUNTIES, NEW YORK

March 1979

7. Silbergeld Junk Yard (14th Street, Niagara Falls)

Scrap metals from Hooker and Oldbury Electrochemical was disposed of at this site from the mid-1930s to mid-1950s. Hooker maintains that none of this scrap contained any chemical waste.

8. Miscellaneous Out-of-State Facilities

Ohio Liquid Disposal, Freemont, Ohio, has recently been used to dispose of several hundred thousand gallons of sulfuric acid, hexachlorocyclopentadiene and several million gallons of leachate from Hooker's Hyde Park landfill. Ohio Liquid Disposal transports this material to Ohio for deep well disposal. In addition, Rollins Environmental Services, Bridgeport, New Jersey, has been used occasionally to dispose of a few tons of pentac contaminated clothing.

II. North Tonawanda Plant - Durez Division

The Durez Division plant has produced a wide variety of products since 1930. The products and the years of production are listed below:

1. Penolic resin and pulverized phenolic resins (since 1930)
2. Phenolic, polyester, and diallylphthalate molding compound (since 1930)
3. Formaldehyde (since 1947)
4. Para-tertiary octyl phenol (since 1946)
5. Hexamethylenetetramine (since 1963)
6. Zinc stearate and calcium stearate wax (since 1947)
7. Phenol (1940 to 1971)
8. Recovered phenol (since 1941)
9. Polyester resin (1957 to 1975)
10. "Hetrofoam" (since 1960)

Numerous processes are used to produce these products. These processes are generally the standard unit operations and processes commonly used by the chemical process industry, including chemical reactions, oxidation, dehydration, chlorination, hydrolysis (discontinued in 1971), esterification, styrenation, mixing, rolling, grinding and screening.

The Durez Division has generated the following types of industrial waste:

1. Alkyl and diallylphthalate molding compound
2. Calcium aluminum oxide
3. Calcium phosphate
4. Caustic wastewater
5. Copper aluminum oxide
6. Epoxy resins

7. "Hetrofoam"
8. Hexamethylenetetramine
9. Off-specification or rejected product
10. Oil sludge
11. Other phenol bearing materials including liquid resins
12. Other phenol tar
13. Para-tertiary octyl phenol wash water
14. Phenol plant tars containing chlorinated benzenes
15. Phenolic molding compound
16. Phenolic resin
17. Polyester resin
18. Solvents (toluene, xylene and methanol)
19. Spent silver catalyst
20. Waste oil
21. Waxes (zinc stearate or calcium stearate)
22. Miscellaneous industrial wastes

The Durez Division has utilized the following sites for the treatment and disposal of industrial wastes:

A. Company-owned sites

Durez used 14 disposal sites on plant property between 1930 and 1973 to dispose of approximately 28,500 tons of industrial waste. In addition, rubbish (paper, cardboard, garbage) was also dumped at these sites. The types of wastes disposed of include drummed quantities of phenol tar (including a substantial amount containing chlorinated benzenes), phenol bearing material (including phenolic resins and molding compounds) and calcium aluminum oxide and calcium phosphate catalyst. These wastes were dumped without containers. A general description of the types of waste disposed of at each site follows. A specific description of each site is included in the section of this report on disposal sites.

<u>Site</u>	<u>Waste Types</u>
I	Phenol tar containing chlorinated benzenes
II	Phenol tar containing chlorinated benzenes; phenolic resins; rubbish
III	Calcium aluminum oxide and calcium phosphate
IV	Phenol tar containing chlorinated benzenes
V	Phenol bearing material
VI	Phenolic resins (liquid)
VII	Phenol bearing material (liquids and solids)
VIII	Phenol
IX	Calcium aluminum oxide and calcium phosphate
X	Phenolic bearing materials; rubbish
XI	Phenolic resins (liquid)
XII	Phenolic bearing materials; rubbish
XIII	Phenolic bearing materials; rubbish
XIV	Phenol bearing materials

4. Interflow Systems, Ltd. (Hamilton, Ontario)

Interflow was used by Durez from 1974 to 1976 for the disposal of spent caustic wastewater and para-tertiary octyl phenol wash water. D&D Disposal of St. Catherines, Ontario, hauled bulk quantities of this material to Interflow. The quantities of such wastes are not known.

5. Ohio Liquid Disposal (Freemont, Ohio)

Ohio Liquid Disposal has been used since 1977 to dispose of approximately 85 tons of spent caustic wastewater. This material is transported in bulk quantities for deep well disposal in Ohio.

6. Tricil Limited (Mississauga, Ontario)

Tricil was used in 1977 to haul bulk quantities of para-tertiary octyl phenol to its site in Ontario. However, the quantity of such material is not known.

7. Holiday Park (Old Niagara Falls Boulevard and Walck Road, North Tonawanda)

Durez used this site from 1972 to 1974 to dispose of 125 tons of solid phenolic resin and 500 tons of solid phenolic molding compounds. These wastes were transported in drums. Also, Durez hauled about 500 tons of rubbish (paper, wood, metal and cardboard) to this site for disposal.

8. Newco Waste Systems (Niagara Falls)

Since 1977, Durez has disposed of 175 tons of solid phenolic resin, 113 tons of solid phenol, alkyd and diallylphthalate molding compound and 1.5 tons of oil sludge at Newco. In addition, an unknown quantity of solvents was also transported to Newco. Durez hauled the above materials in drum quantities. Furthermore, 3,500 tons of general rubbish (paper, wood, fiber drums, cardboard and garbage) have been taken to Newco since 1977 by Durez. In 1975 and 1976, Niagara Sanitation hauled about 6,500 tons of such material to that site.

9. Niagara County Refuse District (Witmer Road, Wheatfield)

Durez hauled drummed quantities of various industrial wastes to this site from 1968 to 1975. This includes approximately 20,000 tons of solid phenolic resins, about 20,000 tons of solid phenolic molding compound, and nearly 50 tons of oil and grease drippings. In addition, approximately 40,000 tons of rubbish (paper, wood and garbage) was also disposed of at this site.

August 4, 1998

Valerie J. Woodward
Senior Engineering Geologist
Bureau of Hazardous Site Control
Division of Hazardous Waste Remediation
NY State Dept. Of Environmental Conservation
50 Wolf Road
Albany, New York 12233

Re: Holiday Park and Botanical Gardens, North Tonawanda, New York

Dear Valerie:

The purpose of this letter is to document the conversation on the morning of July 29, 1998 with you and Daniel Riker of Malcolm Pirnie, Inc. The conversation regarded filling activities at the Holiday Park and Botanical Gardens in North Tonawanda, New York. I have been a resident here for over thirty years, and I have spent a good deal of time walking through the two properties.

As I recall, the Botanical Gardens Site was originally a portion of the Tonawanda Creek. Dredge spoils were placed in the creek, creating a pool at the location of the Botanical Gardens. The pool was filled in with many types of wastes, including oil-soaked metal filings, municipal waste, and some powdered compounds from Durez.

Much of Holiday Park is located on property that was called the Turner Farm. Holiday Park includes the old golf course and the new golf course. The City of North Tonawanda has been constructing the new course for the past two years. To the best of my knowledge, dumping did not occur on any portions of the old golf course.

As I recall, some dumping occurred on the portion of Holiday Park fairly close to Walck Road. The location is just to the south of the road, north of the golf course maintenance shop, and west of the former access road to the maintenance shop. This dumping was mostly construction debris from the placement of sewer lines and similar activities throughout the city. To the best of my knowledge, Durez waste was not placed at this location near Walck Road.

At the Turner Farm, the City of North Tonawanda used a large machine to dig a trench, compress garbage, place the garbage in the trench, and cover the trench with soil. This

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Valerie J. Woodward
New York State Dept. Environmental Conservation

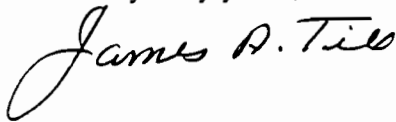
August 4, 1998
Page 2

machine was frequently stuck in the mud, and could not compress drums full of solids, such as those from Durez that were full of a powder, possibly resins. I believe that those drums were buried separately, in an area approximately halfway between the hedgerow that separates the old and new golf courses and the newly-constructed pond south to south-east of the golf course maintenance shop. I do not know how many drums were buried there. The enclosed sketch shows the approximate location at which I recall the drums are buried.

Along the hedgerow there is drainage that flows to the east and empties into the Tonawanda Creek. I believe that the outlet of this drainage is just to the north of the large white house with the large pillars in the front. There are large drain pipes visible to the southwest of the area in which I believe that the drums are buried.

If you have any questions, please contact me at your earliest convenience.

Very truly yours,

A handwritten signature in cursive script that reads "James P. Till". The signature is written in dark ink and is positioned above the typed name.

Mr. James Till

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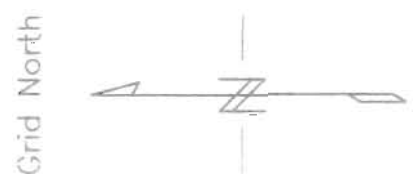
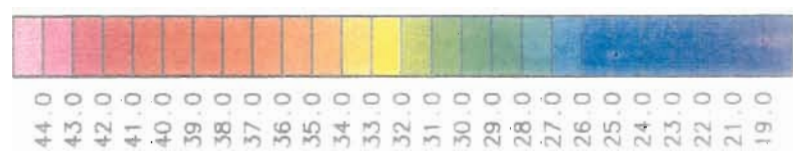
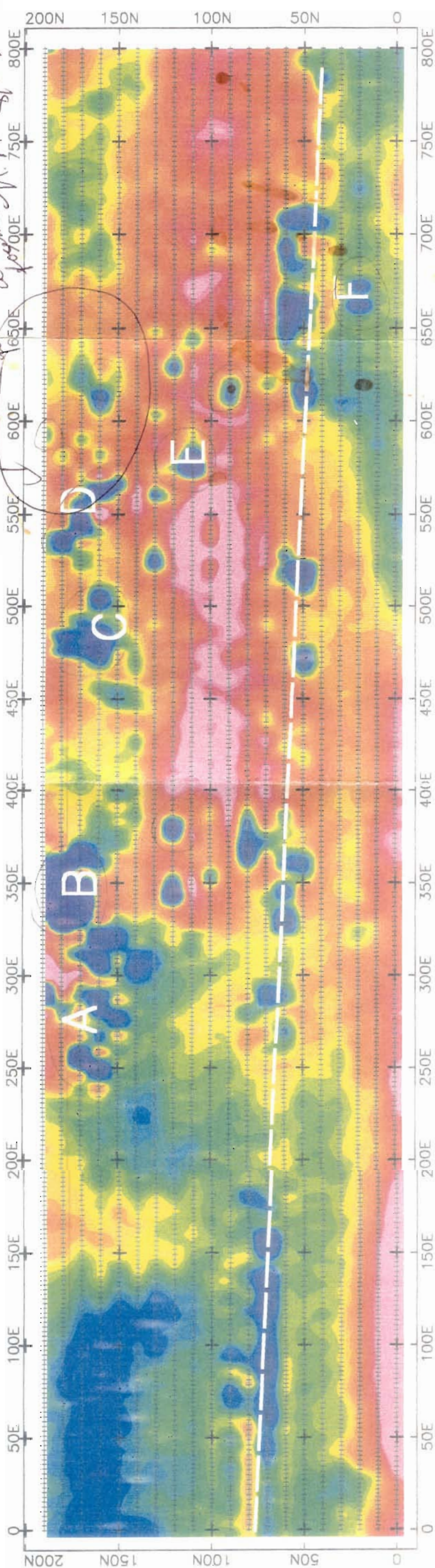


FIGURE 1	
Holiday Park Site North Tonawanda, NY	
Color Contours of EM31 Data Conductivity (mS/m) Malcolm Pirnie	
Geomatrix (716) 565-0624	

APPENDIX C
GEOPHYSICAL SURVEY REPORTS

336 Harris Hill Road, Suite 100
Williamsville, NY 14221
(716) 565-0624 • FAX (716) 565-0625



February 13, 1998
B4273

Mr. Dan Riker
Malcolm Pirnie, Inc.
40 Centre Drive
Orchard Park, NY 14127

Re: Terrain Conductivity Survey Results, Multiple PSA Sites, Botanical Garden and
Holiday Park Sites, North Tonawanda, NY

Dear Mr. Riker:

1.0 INTRODUCTION AND PURPOSE

Geomatrix Consultants is pleased to provide Malcolm Pirnie, Inc. with this report summarizing our findings of the geophysical surveys at the above noted sites. On January 21 through 26, 1998 Geomatrix Consultants performed a terrain conductivity survey at the sites.

The geophysical survey was part of a multidisciplinary study being conducted by Malcolm Pirnie, Inc.. The three areas that were surveyed are identified as follows:

- Botanical Garden Site;
- Holiday Park Site, Walck Road Area; and
- Holiday Park Site, Zimmerman Road Area.

The geophysical investigation was performed to allow further assessment of potential contaminant sources in suspected disposal areas. The geophysical data will subsequently be used by Malcolm Pirnie, Inc. to identify areas for intrusive investigations.

2.0 METHODOLOGY

A reference grid was installed by Malcolm Pirnie, Inc. personnel prior to data acquisition. The grid consisted of labeled wire reference flags located to facilitate data acquisition along survey lines spaced 25 feet apart.

A Geonics EM31 Terrain Conductivity meter was used to measure and record the quadrature component (ground conductivity) and the inphase component of the EM field along the survey lines. The quadrature component of the EM field is a measurement of the apparent ground conductivity. The inphase component of the EM field is sensitive to metallic objects. Comparison of the quadrature component of the electromagnetic field data (expressed in units of milliSiemens per meter (mS/m)) and the inphase component data (expressed in units of parts per thousand (ppt)) results in increased anomaly definition. The character of the electromagnetic response, low or high, is partially dependent on the orientation of the buried target relative to the orientation of the EM31 device during data acquisition, or the survey direction. A buried metal pipe, for example, will exhibit a high response when the trend of the pipe is parallel to the survey direction. When a survey line crosses a metal pipe or other linear conductive object that is perpendicular to survey direction, it is characterized by a negative response. Other complex buried metal anomalies are indicated by a coupling of a high (purple) and low (blue) response on the map.

All readings were taken with the instrument oriented parallel to the direction of travel, in the vertical dipole mode and with the instrument at waist height. The depth of penetration with the instrument in this configuration is approximately 12 to 15 feet. Readings were automatically stored in a solid state memory data logger during the survey. The data logger was interfaced to a portable computer and the data were transferred to a floppy disk for subsequent processing and interpretation. A total of approximately 18,200 readings of terrain conductivity and inphase data were measured and recorded.

A base station was established and was revisited at the beginning and end of each survey day to check for instrument drift and malfunction. No significant drift was observed. The instrument did malfunction due to heavy rain resulting in a short circuit and the corruption of data on six profile lines. The data in question were reacquired after the malfunction was corrected.

The terrain conductivity and inphase data were initially edited and then plotted as profile lines for interpretation. Contour maps of the data were then constructed and utilized for final interpretation. The geophysical data are presented in final form as a series of color contour maps. The color contour maps allow for a complete and rapid illustration of detected anomalies

that are associated with anomalously conductive materials, such as, wastes, fill, buried metals, utilities, and changes in soil texture and/or moisture content.

3.0 RESULTS

The geophysical conductivity data are presented as color contour maps in Figures 1, 3 and 5. The color bar on each map indicates the colors associated with respective measured values. Actual data measurement points are superimposed on the maps.

Background apparent conductivity values at the sites were observed to range from approximately 20 to 35 mS/m and are observed as shades of green on the color figures. In general, areas exhibiting apparent conductivity significantly greater or less than background conductivity values are interpreted as containing conductive fill material and/or buried metals.

The EM-31 inphase data are presented in Figures 2, 4, and 6. The inphase component of the electromagnetic field, measured by the EM-31, is most sensitive to buried metals. As is the case for the character of the conductivity response, the character of the inphase response, low or high, is partially dependent on the orientation of the buried metal(s) relative to the orientation of the EM-31 device during data acquisition, or the survey direction. Areas exhibiting an inphase response of approximately 0 ppt, shown in shades of yellow on Figures 2, 4, and 6 are likely free of buried metals within the depth of investigation of the EM-31.

3.1 Botanical Gardens

The EM-31 conductivity and inphase data for the Botanical Gardens Area is presented in Figures 1 and 2, respectively. There are numerous buried electrical wires at this site. Duplex electrical outlets were observed at the base of many trees and bushes. In addition, many of the bushes and trees had Christmas lights with associated wires on their branches. The presence of these surface metals produce anomalous conductivity and inphase responses and decrease the interpretive significance of the data in the vicinity of these features at this site. As a result, the presence of surface metals preclude interpretations concerning the presence or absence of buried metals and fill across the majority of the Botanical Gardens Site. The geophysical response from a metal at, or near, surface is larger than the response from a deeper buried metal due to the proximity of the surface metal to the geophysical instrument. Surface metals can be considered sources of geophysical noise with a response that often overpowers the response from the target at depth. Any of the anomalies at this site may be due to these surface metals and not due to sub-surface metals or waste.

Most of the Botanical Gardens Area can be characterized as anomalous as conductivity values generally are much greater or less than the background values. Background conductivities are observed in the north western and eastern portions of the study area in shades of green. Anomalous conductivity values are observed in the north, south and west along Sweeny St. indicating that background values were not encountered in the vicinity of all grid boundaries.

3.2 Holiday Park

Walck Road Area

The EM-31 conductivity and inphase data for the Walck Road Area of the Holiday Park Site is presented in Figures 3 and 4, respectively. Background conductivity values are observed over large portions of this Site. Much of the northwestern portion of this site appears to have been recently regraded as part of the golf course expansion. An area of low conductivity is observed in the south eastern portion of the study area, depicted as shades of blue on Figure 3. Although this area appears anomalous, the lack of variation in conductivity and inphase response within the region suggests the low conductivity is due to a change in soil type or saturation rather than buried waste material. This area is wooded and brush covered as compared to the rest of the area surveyed. The following anomalies and anomalous areas are identified at the Walck Road Area of the Holiday Park Site.

- A large anomalous region (Anomaly **A**) surrounds the maintenance building, but primarily north, may represent an area of buried metal or conductive fill material. Various surface metals were observed in the vicinity of the building which may account for a portion of the anomaly.
- Anomaly **B** is characterized by a conductivity high (shades of purple on Figure 3). The ground surface appears recently mounded in the region of this anomaly. This anomaly may represent an area of buried metal or conductive fill material.
- Anomaly **C** is characterized as an elongated area of high conductivity. This anomaly corresponds with a drainage swale and may be related to a change in soil type or soil moisture content or possibly to conductive, non-metallic fill material.
- Anomalies **D** and **E** are characterized by a coupling of an inphase and conductivity low and high response and are likely related to buried metals. The ground surface appears recently mounded in the region of these anomalies.
- Anomaly **F** is comprised of several areas characterized by a coupling of an inphase and conductivity low and high response and is likely related to buried metals. This anomaly is located west of an inphase anomaly associated with an overhead powerline.

Zimmerman Road Area

The EM-31 conductivity and inphase data for the Zimmerman Rd Area of the Holiday Park Site is presented in Figures 5 and 6, respectively. A linear anomaly along the west edge of this area, shown in shades of purple and blue on Figures 5 and 6, is likely related to a buried utility line. The Zimmerman Rd. Site is a predominantly wooded area with the notable exception of an area in the north east which is apparently used for the disposal of compost material and the disposal/storage of concrete debris. At the time of the geophysical survey, numerous Christmas trees were observed in large piles and a large truck dumped several loads of concrete blocks in this area. The following anomalies and anomalous areas are identified at the Zimmerman Rd. Area.

- Anomaly **G** is the area discussed above containing Christmas trees and C&D debris. This area exhibits a high conductivity response and a coupling of a high and low inphase response. This area likely contains conductive fill material with metal. A layer of C&D debris with scattered rebar would exhibit a similar response.
- Numerous buried metal anomalies are observed in the northern portion of the study area. These anomalies are characterized by a coupling of a high and low conductivity and inphase response. This anomalous region is identified as Anomaly **H**.
- Anomaly **I** is a conductivity high with no corresponding inphase response. This anomaly may be related to change in soil type, soil moisture content or possibly conductive, non-metallic fill material. The northeastern extent of this anomaly corresponds approximately with a berm primarily constructed of tree trunks and limbs.
- Anomalies **J** and **K** are characterized as conductivity and inphase lows and likely represent areas of buried metals.
- Anomaly **L** is an area containing several anomalies and is located along the southern edge of the study area. This area likely contains buried metals and conductive fill material.

4.0 LIMITATIONS

The geophysical methods used during this survey are established, indirect techniques for non-destructive subsurface reconnaissance exploration. As these instruments utilize indirect methods, they are subject to inherent limitations and ambiguities. Metallic surface features (electrical wires, scrap metal, etc.) preclude reliable non-invasive data/results beneath, and in the immediate vicinity of, the surface features. Targets such as buried drums, buried tanks, conduits, etc. are detectable only if they produce recognizable anomalies or patterns against the

Dan Riker
Malcolm Pirnie, Inc.
February 13, 1998
Page 6



background geophysical data collected. As with any remote sensing technique, the anomalies identified during a geophysical survey should be further investigated by other techniques such as historical aerial photography, test pitting and/or test boring.

5.0 CONCLUSIONS

The geophysical survey at the PSA sites in North Tonawanda, NY appears to have been successful in identifying areas of conductive fill and buried metals. The majority of the Botanical Gardens Site appears to contain fill and/or buried metals. It is likely that a significant portion of the buried metals are related to underground wiring. The major anomalous area at the Holiday Park Site - Walck Road Area, Anomaly A, surrounds the maintenance building. This area likely contains buried metals and/or conductive fill material. Several anomalous areas were identified at the Zimmerman Rd. Area. Anomalous areas G, H, and L likely contain significant amounts of buried metals.

We trust that the information presented in this report meets with your needs in order to assist you in your investigation. If you have any questions or comments please do not hesitate to contact our office.

Sincerely yours,

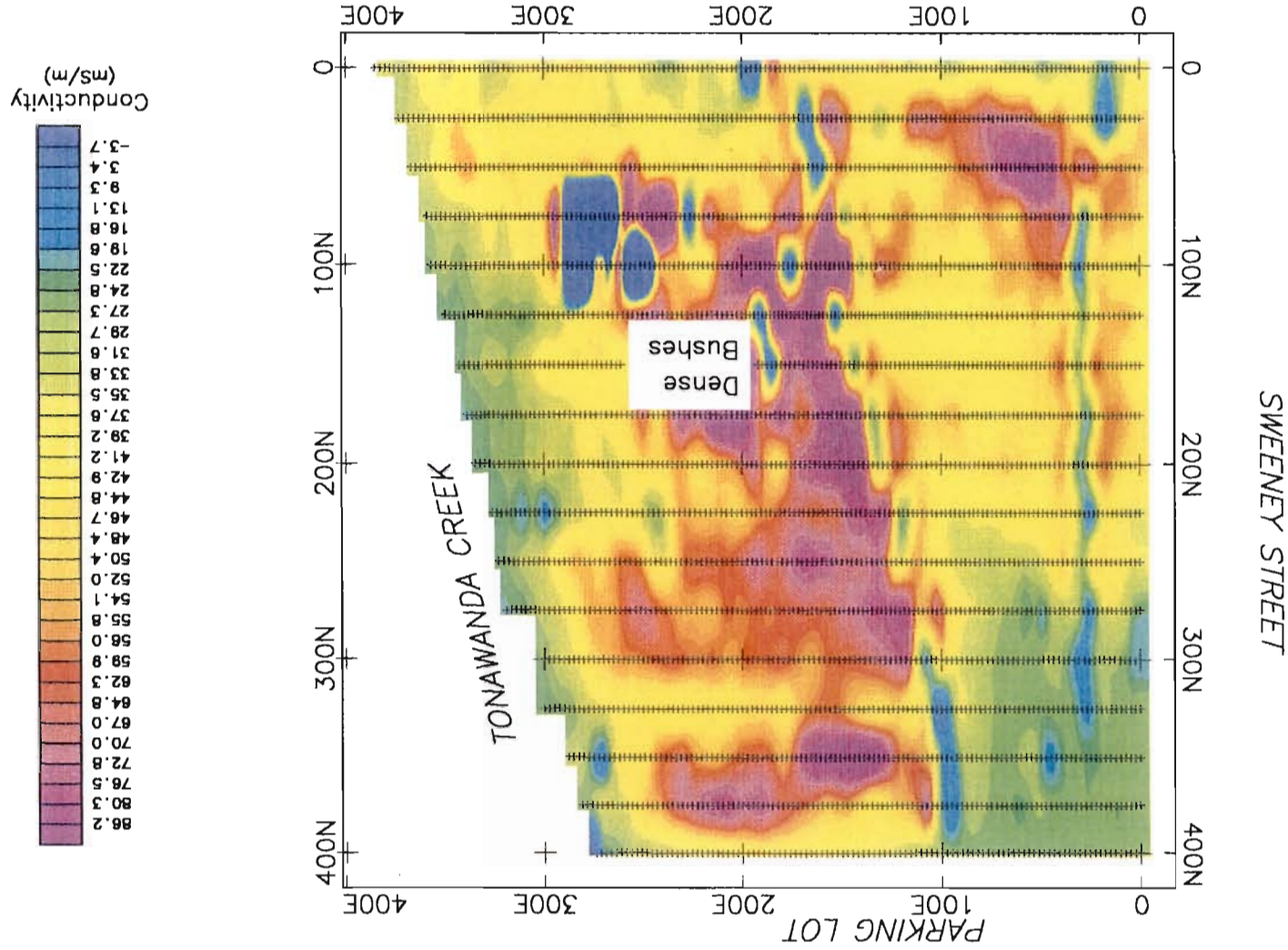
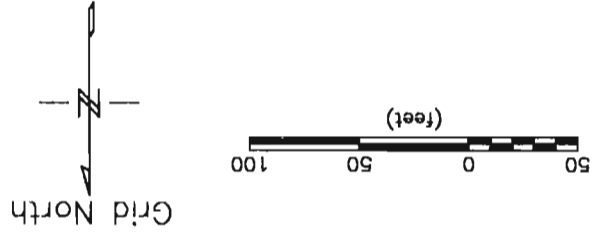
GEOMATRIX CONSULTANTS, INC.

A handwritten signature in black ink, appearing to read 'John P. Luttinger'.

John Luttinger
Project Geophysicist

clients\b4273\jl021398.terrsv

FIGURE 1	
BOTANICAL GARDEN SITE NORTH TONAWANDA, NY	
COLOR CONTOURS OF EM 31 CONDUCTIVITY DATA (ms/m) Malcolm Pirnie, Inc.	
Geomatrix Consultants, Inc.	



SWEENEY STREET

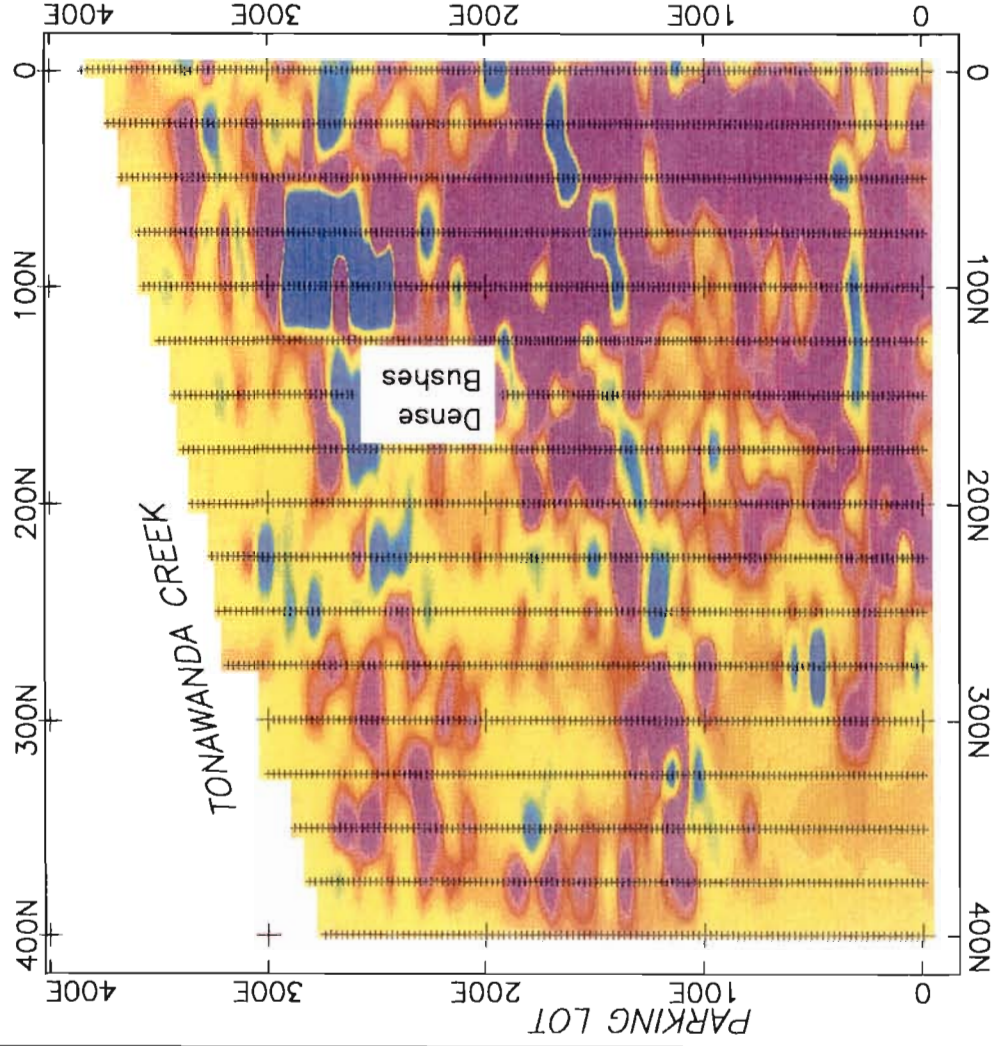
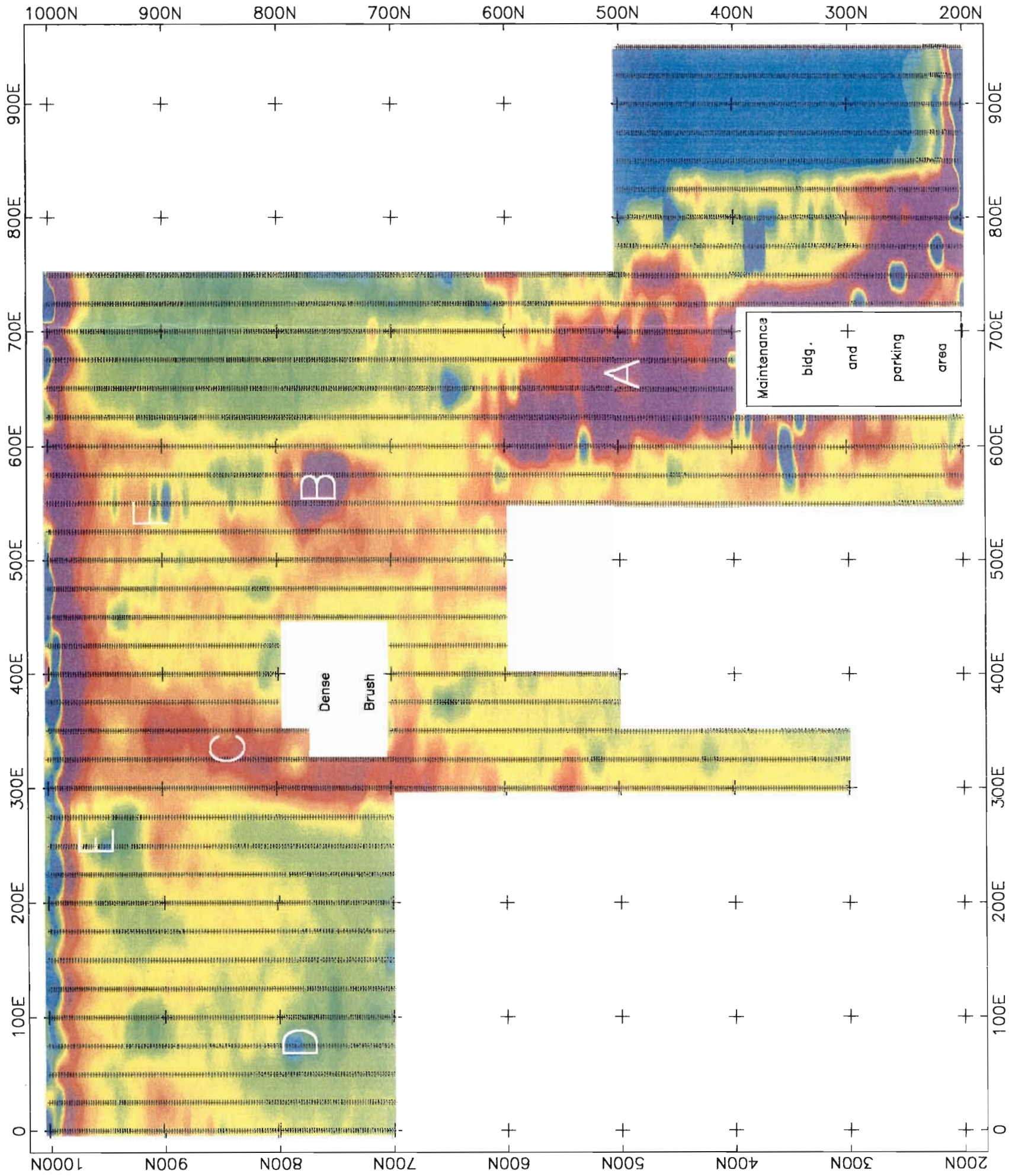


FIGURE 2

BOTANICAL GARDEN SITE
NORTH TONAWANDA, NY
COLOR CONTOURS OF EM 31
INPHASE DATA (PPT)
Malcolm Pirnie, Inc.

Geomatrix Consultants, Inc.

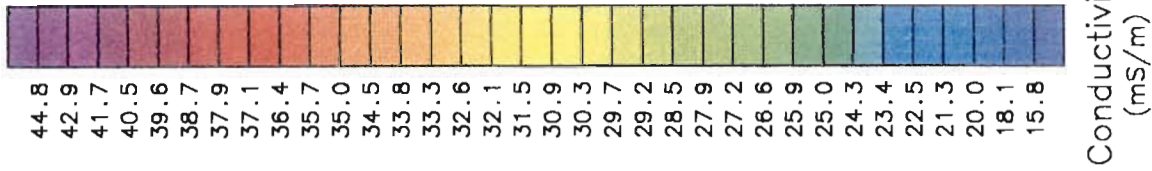
Walck Road



Legend



Geophysical Anomaly
discussed in text.



Conductivity
(mS/m)

GRID NORTH

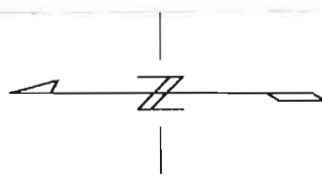


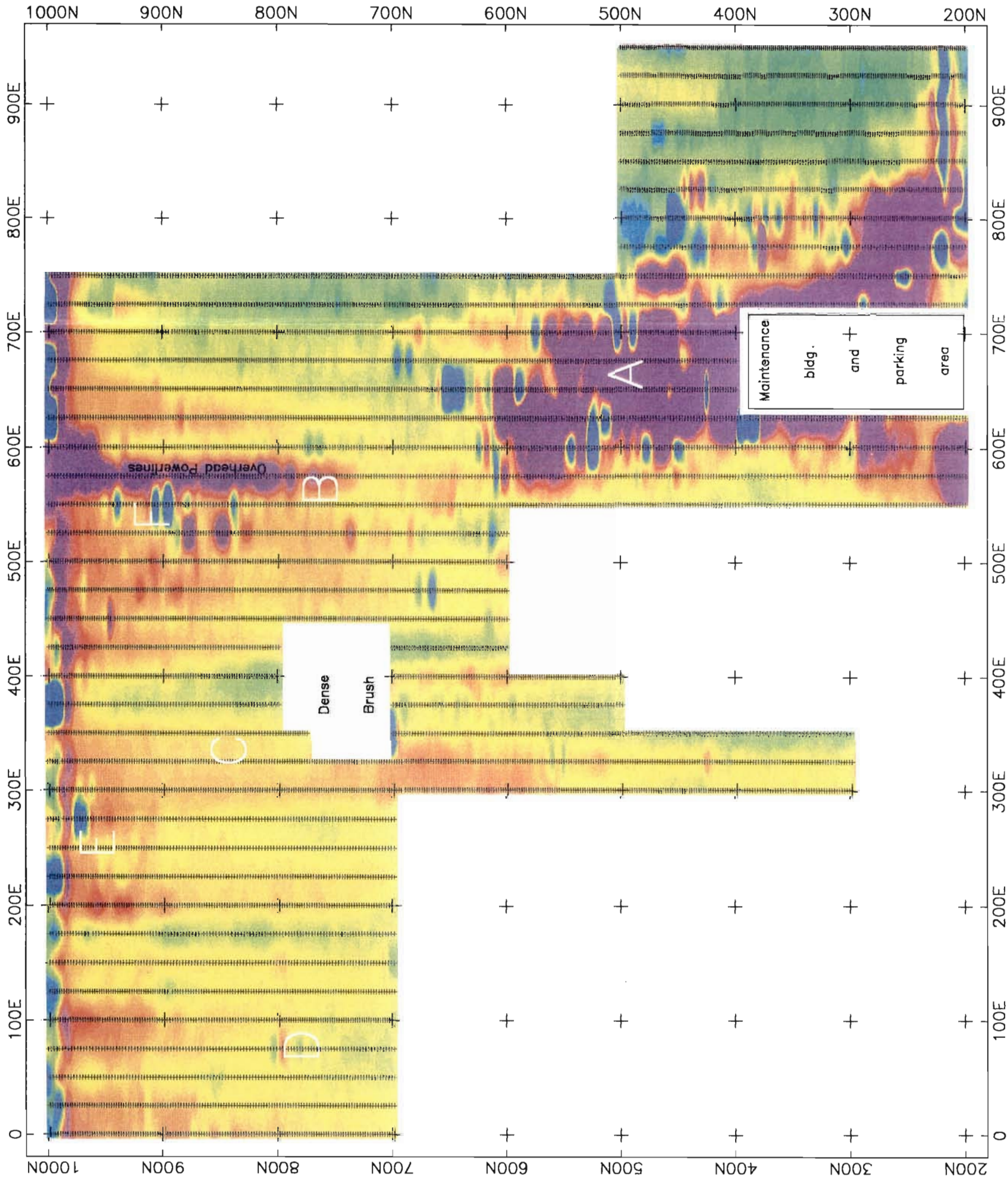
FIGURE 3

HOLIDAY PARK - WALCK RD. AREA
NORTH TONAWANDA, NY

COLOR CONTOURS OF EM 31
CONDUCTIVITY DATA (mS/m)
Malcolm Pirnie, Inc.

Geomatrix Consultants, Inc.

Walck Road

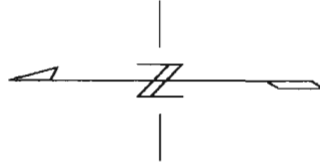


Legend



Geophysical Anomaly
discussed in text.

GRID NORTH



INPHASE RESPONSE
PPT

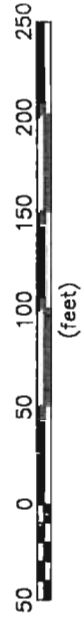


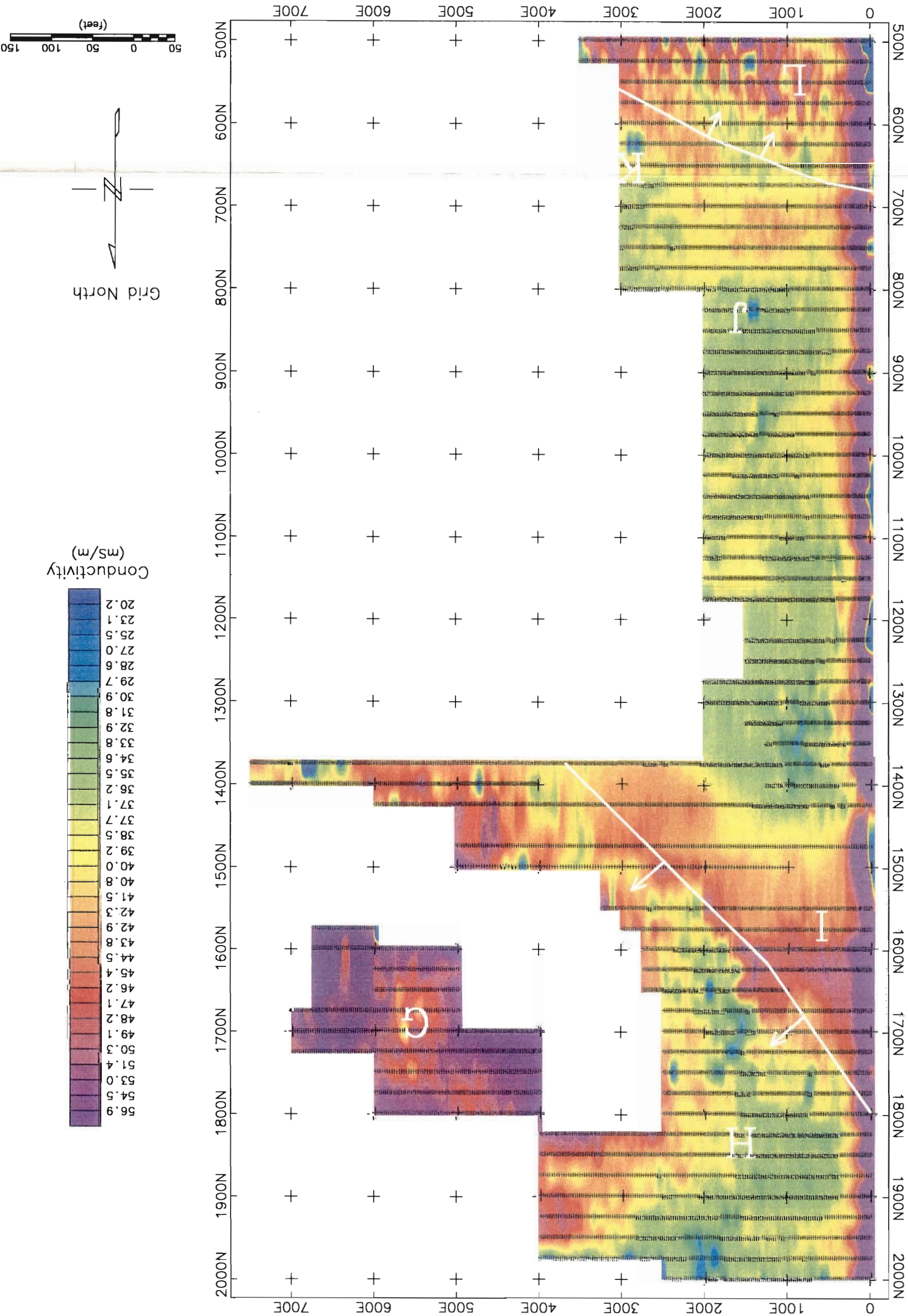
FIGURE 4

HOLIDAY PARK - WALCK RD. AREA
NORTH TONAWANDA, NY

COLOR CONTOURS OF EM 31
INPHASE DATA (PPT)
Malcolm Pirnie, Inc.

Geomatrix Consultants, Inc.

ZIMMERMAN RD



LEGEND



Anomaly discussed
in text



Arrows point in direction
of anomalous region

FIGURE 5

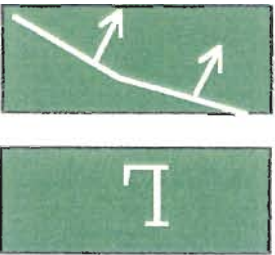
HOLIDAY PARK - ZIMMERMAN RD AREA
NORTH TONAWANDA, NY

COLOR CONTOURS OF EM 31
CONDUCTIVITY DATA (ms/m)

Malcolm Pirnie, Inc.

Geomatrix Consultants, Inc.

ZIMMERMAN RD



Anomaly discussed
in text

Arrows point in direction
of anomalous region

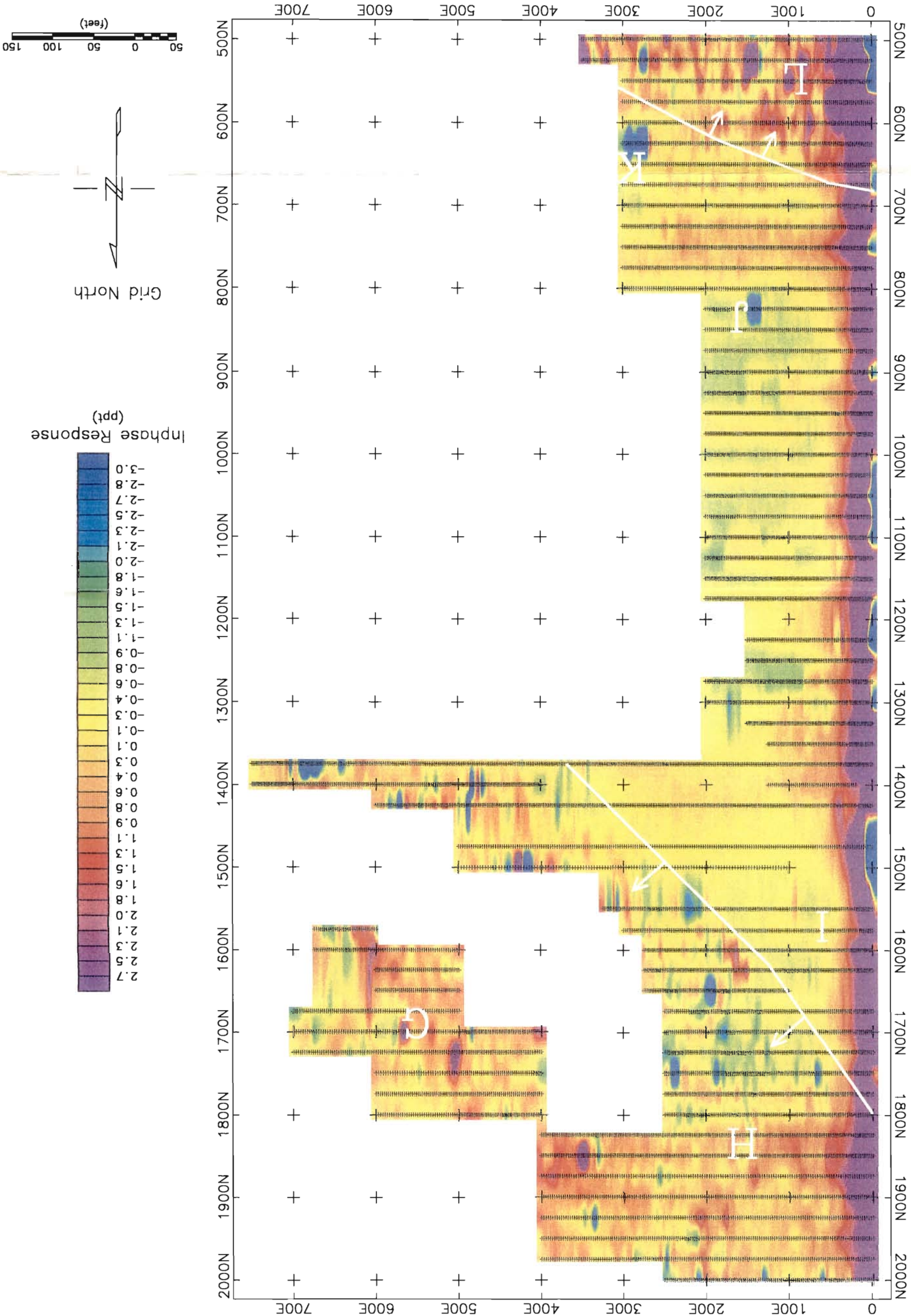
LEGEND

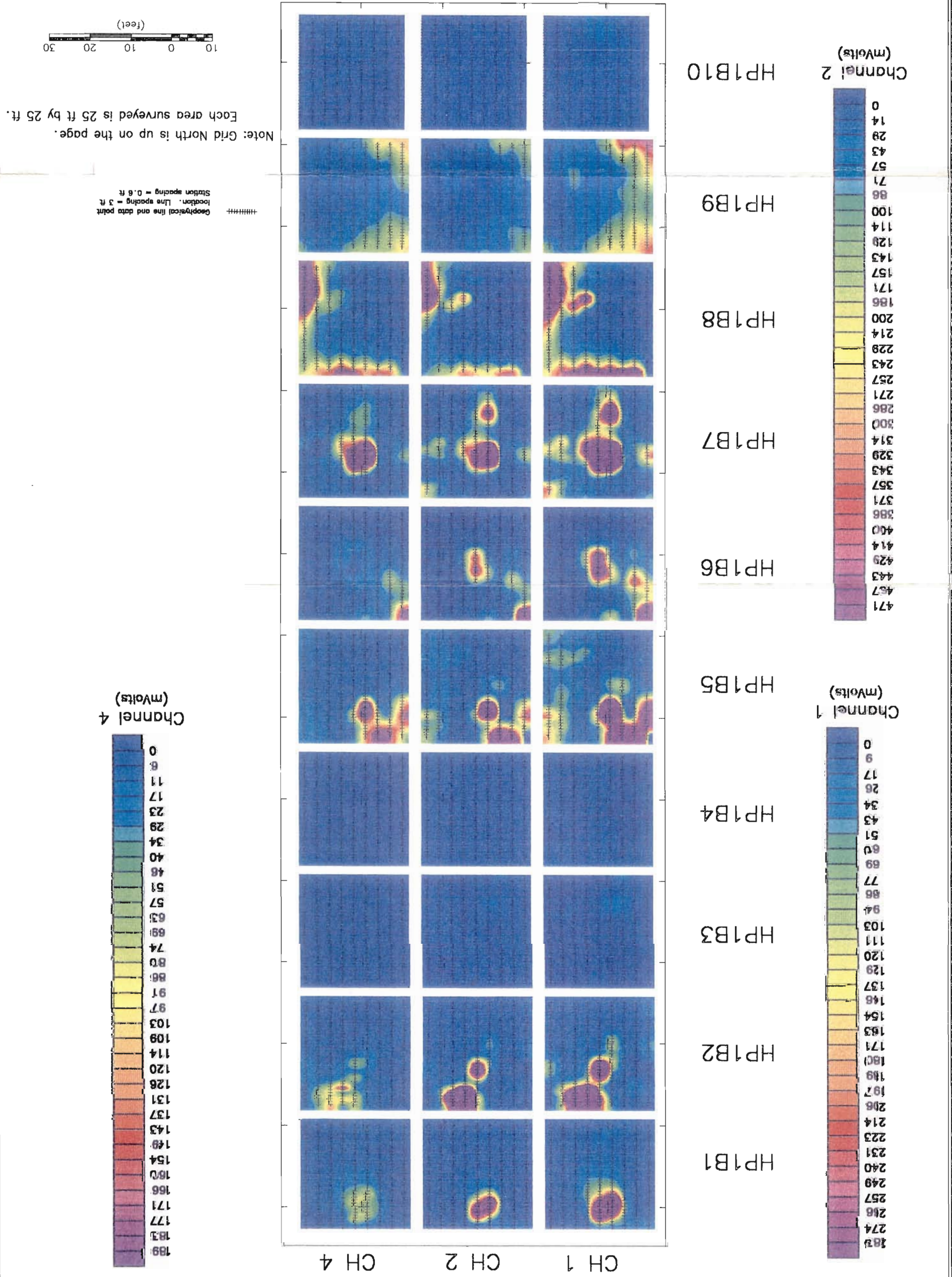
FIGURE 6

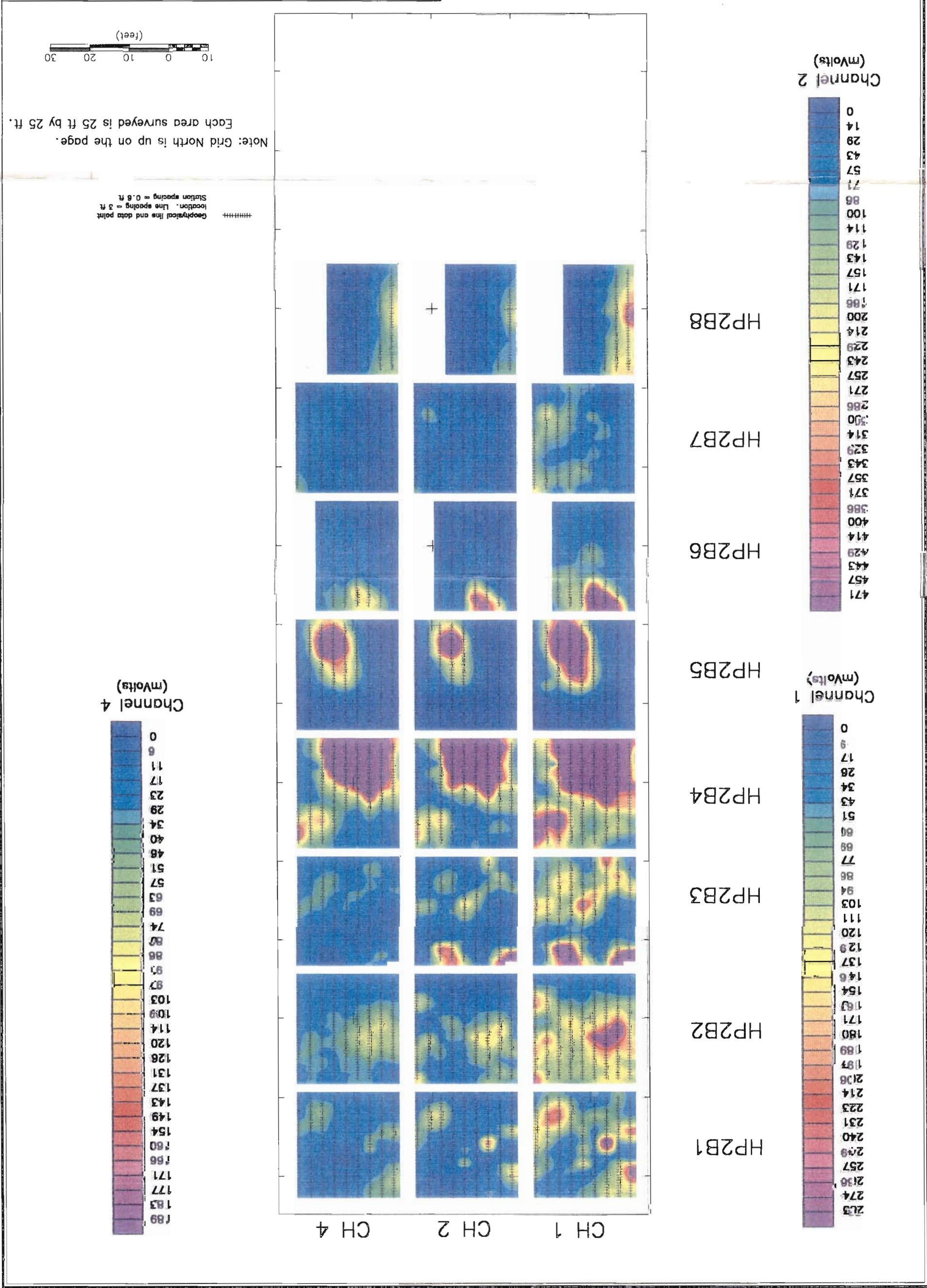
HOLIDAY PARK - ZIMMERMAN RD AREA
NORTH TONAWANDA, NY

COLOR CONTOURS OF EM 31
INPHASE DATA (PPT)

Geomatrix Consultants, Inc.







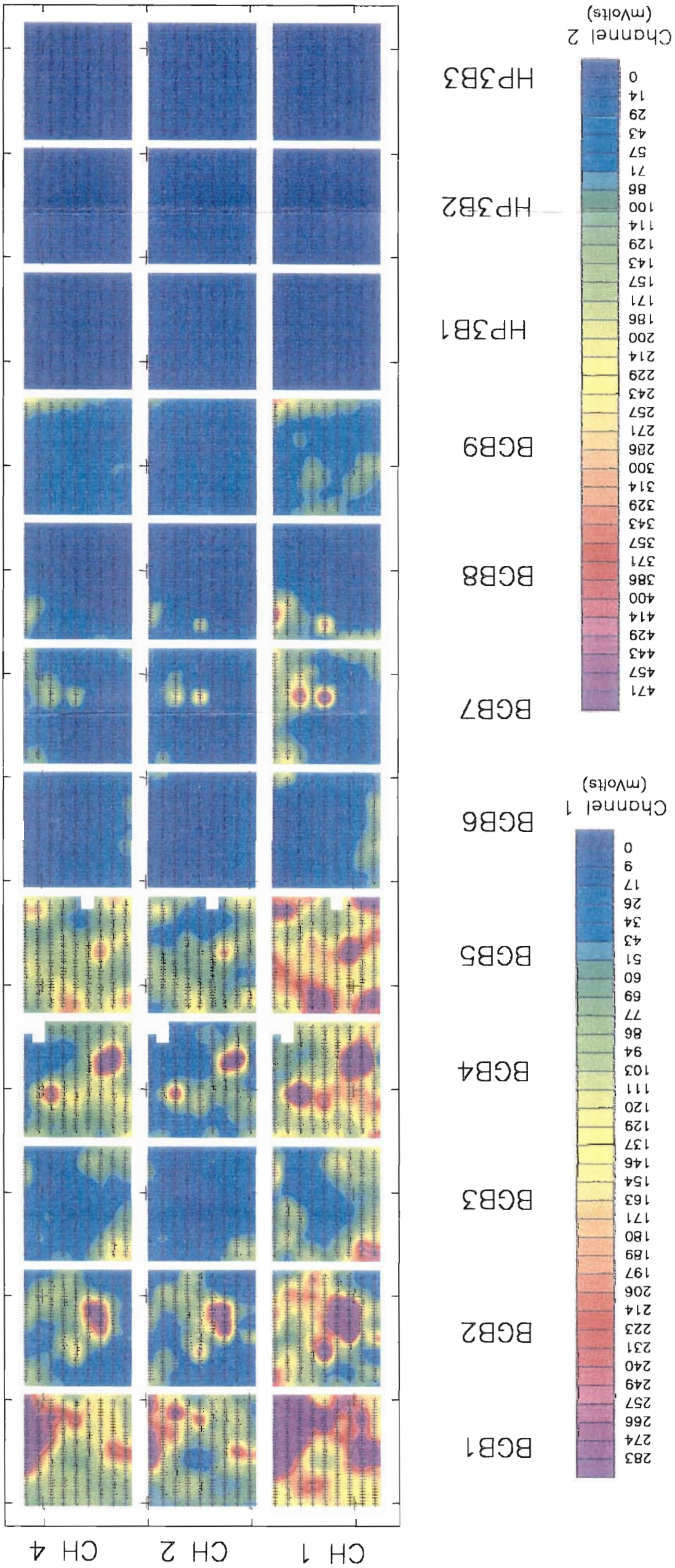
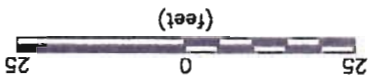


Figure 3

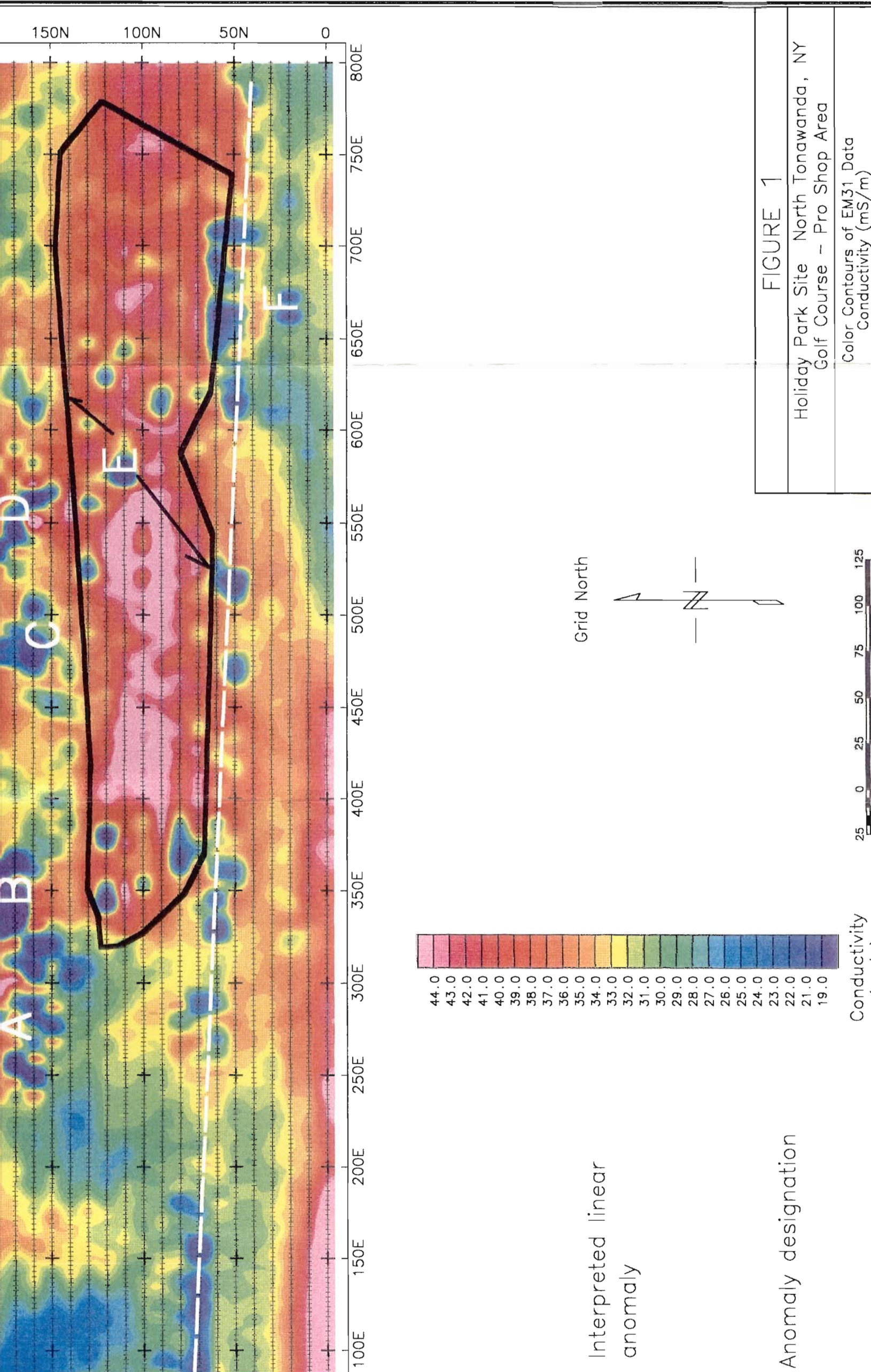
Color Contours of Geophysical Data, EM61 Device

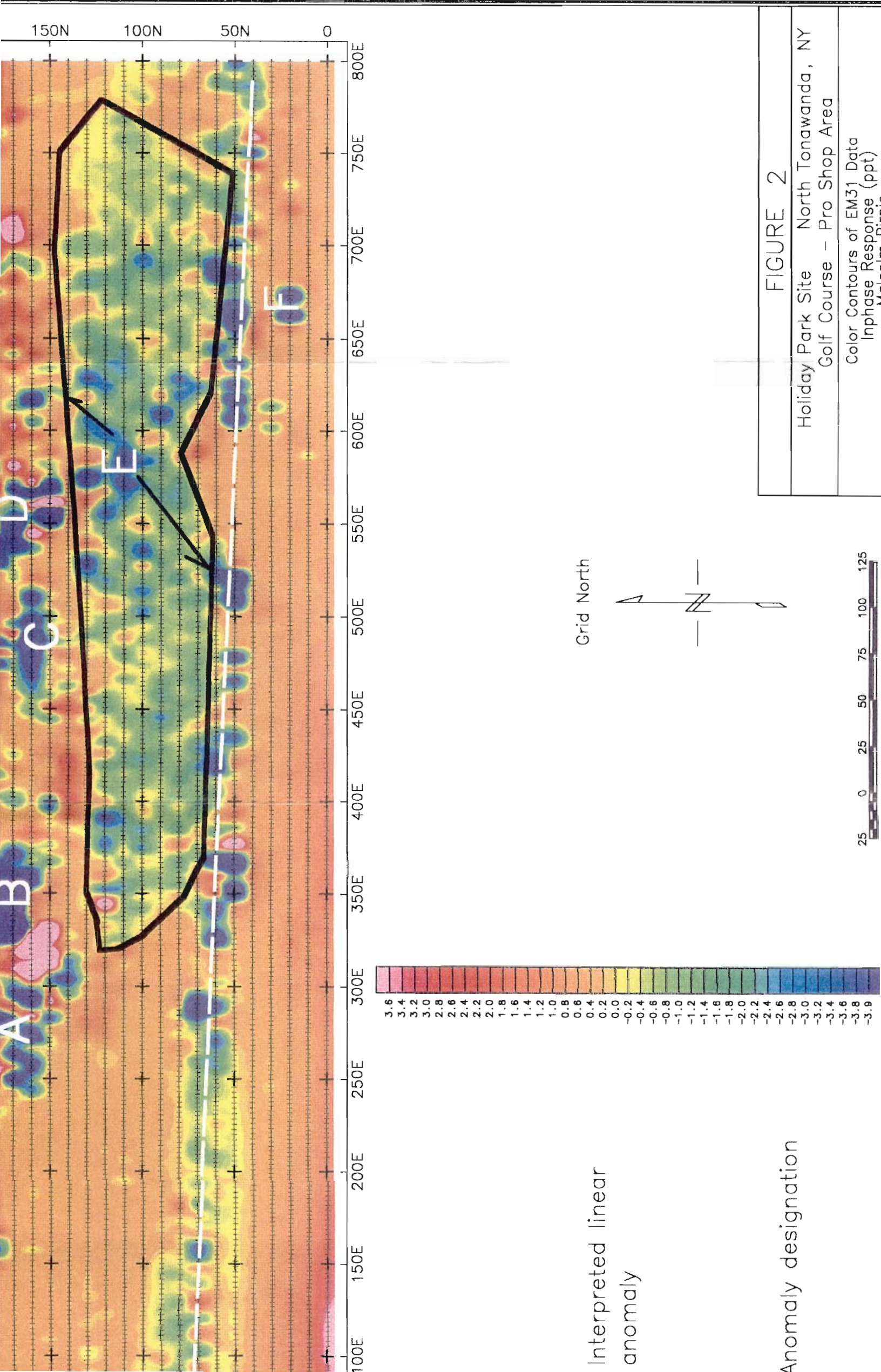
Botanical Gardens and Holiday Park - Area 3
North Tonawanda, NY
Malcolm Pirnie, Inc.

Geomatrix Consultants, Inc.



Geophysical line and data point location. Line spacing = 3 ft
Station spacing = 0.6 ft
Note: Grid North is up on the page.
Each area surveyed is 25 ft by 25 ft.





April 3, 1998
B4273

Daniel Riker
Malcolm Pirnie, Inc.
40 Centre Drive
Orchard Park, NY 14127

Re: Geophysical Survey Results, Botanical Gardens and Holiday Park, North
Tonawanda, NY

Dear Mr. Riker:

We are pleased to provide Malcolm Pirnie, Inc. with this report that discusses the results of the geophysical investigation at the above noted sites.

1.0 Background Information, Purpose and Scope

The geophysical survey was performed by Geomatrix Consultants on March 14 and 15, 1998. The equipment utilized during this investigation was the Geonics EM61 Time Domain Electromagnetic (TDEM) metal detector. Geomatrix completed a frequency domain EM survey between January 21 through 26, 1998 at the sites. The results of that investigation, presented in our report dated February 10, 1998, detailed several areas that contained conductive fill and/or buried metals. Based in part on that information, Malcolm Pirnie selected locations for further intrusive investigation. The purpose of the geophysical survey discussed in this report was to geophysically screen the boring locations for the presence of buried metals.

2.0 Methodology

2.1 Reference Grid

Each proposed boring location was marked by Malcolm Pirnie personnel prior to our arrival on-site. Geomatrix installed a 25 ft by 25 ft reference grid around each boring location. A total of 30 areas were geophysically surveyed. Upon completion of the survey in each area a labeled reference stake was installed in both the northeast and southeast corners of the grid.

2.2 Geonics EM61 High Sensitivity Metal Detection Survey

The Geonics EM61 unit is a high sensitivity, high resolution TDEM metal detector that can detect both ferrous and nonferrous metallic objects. It has an approximate investigation depth of 10 feet. The processing console is contained in a backpack worn

by the operator which is interfaced to a digital data logger. The transmitter and two receiver coils are located on a two-wheeled cart that is pulled by the operator.

The device's transmitter coil generates a pulsed primary EM field at a rate of 150 pulses per second, inducing eddy currents into the subsurface. The decay rates of these eddy currents are measured by two, 3.28 foot (1 meter) square receiver coils. By taking the measurements at a relatively long time frame after termination of the primary pulse, the response is practically independent of the survey area's terrain conductivity. That is, the decay rates of the eddy currents are much longer for metals than for normal soils.

Data are collected from the EM61's two receiver coils. One of the receiver coils is located coincident to the transmitter coil. The other receiver coil is located 1.31 feet (0.4 meters) above the transmitter coil. Data from the top receiver coil are stored on Channel 1 of a digital data logger. Data from the bottom receiver coil are stored on Channel 2 of the data logger. Channel 1 and Channel 2 data are simultaneously recorded at each station location.

Channel 1 data are a measure of the presence or absence of surface metals. Channel 2 data measure the presence of surface and buried metals. To minimize the effects from surface metals, Channel 2 data are subtracted from Channel 1 data. These data are referred to as the "differential" and are stored in Channel 4. For the Holiday Park and Botanical Gardens Sites, Channel 1, 2 and 4 data are presented. The instrument responses are recorded in units of milliVolts (mV). Data were recorded digitally by a data logger at a rate of approximately two measurements per foot along lines spaced three feet apart.

3.0 Results

The EM61 survey data for Holiday Park - Area 1 are shown in Figure 1. Area 1 includes the golf course and maintenance building areas west of Walck Road. The color bars on the map indicates the colors associated with the measured values. Areas suspected to be free of buried metals are shown as color shades of blue. The color contour map represent the actual area covered by the survey. All areas exhibiting a response greater than background likely contain buried metals. These areas are depicted in shades of green through purple on Figure 1.

The EM61 survey data for Holiday Park - Area 2 are shown in Figure 2. Area 2 includes the wooded area and the highway department material storage area north of Zimmerman Road. The geophysical survey area at boring locations HP2B6 and HP2B8 are smaller than the standard 25 ft by 25 ft. This is due to the presence of dense brush and/or large trees in these areas. The color bars on the map indicates the colors associated with the measured values. Areas suspected to be free of buried metals are shown as color shades of blue. The color contour map represent the actual area covered by the survey. All areas exhibiting a response greater than background likely contain buried metals. These areas are depicted in shades of green through purple on Figure 2.

The EM61 survey data for the Botanical Gardens and Holiday Park - Area 3 are shown in Figure 3. The Botanical Gardens Site is adjacent to Tonawanda Creek and Holiday Park - Area 3 is in the vicinity of the golf course restaurant and pro shop. The color bars on the map indicates the colors associated with the measured values. Areas suspected to be free of buried metals are shown as color shades of blue. The color contour map represent the actual area covered by the survey. All areas exhibiting a response greater than background likely contain buried metals. These areas are depicted in shades of green through purple on Figure 3.

4.0 Limitations

The geophysical methods used during this survey are established, indirect techniques for non-invasive subsurface reconnaissance exploration. As these instruments utilize indirect methods, they are subject to inherent limitations and ambiguities. Metallic surface features (automobiles, etc.) preclude reliable non-invasive data/results beneath, and in the immediate vicinity of, the surface features. Targets such as buried drums, buried tanks, conduits, etc. are detectable only if they produce recognizable anomalies or patterns against the background geophysical data collected. As with any remote sensing technique, the anomalies identified during a geophysical survey should be further investigated by other techniques such as historical aerial photography, test pitting and/or test borings, if warranted.

5.0 Conclusions

The geophysical survey at the Botanical Gardens and Holiday Park Sites appears to have been successful in delineating areas that contain buried metals. A total of 30 potential boring locations were geophysically investigated. Areas suspected to be free of buried metals are shown as color shades of blue on Figures 1 through 3.

We trust the information contained in this report is sufficient for your present needs. Please do not hesitate to contact us if you have any questions or require additional information. Thank you for inviting Geomatrix to participate in this interesting investigation.

Yours very truly,

GEOMATRIX CONSULTANTS, INC.



John Luttinger
Project Geophysicist

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August 31, 1998
B4899

Mr. Dan Riker
Malcolm Pirnie, Inc.
40 Centre Drive
Orchard Park, NY 14127

Dear Mr. Riker:

Re: Terrain Conductivity Survey Results, Pro Shop Area - Holiday Park Golf Course Site,
North Tonawanda, NY

Dear Mr. Riker:

1.0 INTRODUCTION AND PURPOSE

Geomatrix Consultants is pleased to provide Malcolm Pirnie, Inc. with this supplemental report summarizing our findings of a geophysical survey performed on August 1, 1998 at the above noted site. Geomatrix Consultants performed a terrain conductivity survey at the site.

The geophysical survey was part of a multidisciplinary study being conducted by Malcolm Pirnie, Inc. Geomatrix previously performed an electromagnetic survey at other areas of this site. The results of this previous survey were presented in our report dated February 10, 1998.

The geophysical investigation was performed to allow further assessment of potential contaminant sources in suspected disposal areas. Subsequent to our initial investigation, we understand that a local "long-time" resident alleged that drums were disposed of in an area that was not initially surveyed. The purpose of the survey was therefore to map the distribution of buried metals in that alleged disposal area.

2.0 METHODOLOGY

A reference grid was installed by Geomatrix and Malcolm Pirnie, Inc. personnel prior to data acquisition. The grid consisted of wire reference flags located to facilitate data acquisition along survey lines spaced 10 feet apart. The area surveyed has dimensions of 190 feet x 800

feet. The entire survey area appears to have been recently regraded as part of a golf course expansion project.

A Geonics EM31 Terrain Conductivity meter was used to measure and record the quadrature component (ground conductivity) and the inphase component of the EM field along the survey lines. The quadrature component of the EM field is a measurement of the apparent ground conductivity. The inphase component of the EM field is sensitive to metallic objects. Comparison of the quadrature component of the electromagnetic field data (expressed in units of milliSiemens per meter (mS/m)) and the inphase component data (expressed in units of parts per thousand (ppt)) results in increased anomaly definition. The character of the electromagnetic response, low or high, is partially dependent on the orientation of the buried target relative to the orientation of the EM31 device during data acquisition, or the survey direction. A buried metal pipe, for example, will exhibit a high response when the trend of the pipe is parallel to the survey direction. When a survey line crosses a metal pipe or other linear conductive object that is perpendicular to survey direction, it is characterized by a negative response. Other complex buried metal anomalies are indicated by a coupling of a high (purple) and low (blue) response on the map.

All readings were taken with the instrument oriented parallel to the direction of travel, in the vertical dipole mode and with the instrument at waist height. The depth of penetration with the instrument in this configuration is approximately 12 to 15 feet. Readings were automatically stored in a solid state memory data logger during the survey. The data logger was interfaced to a portable computer and the data were transferred to a floppy disk for subsequent processing and interpretation. A base station was established and was revisited at the beginning and end of the survey to check for instrument drift and malfunction. No significant drift was observed.

The terrain conductivity and inphase data were initially edited and then plotted as profile lines for interpretation. Contour maps of the data were then constructed and utilized for final interpretation. The geophysical data are presented in final form as a series of color contour maps. The color contour maps allow for a complete and rapid illustration of detected anomalies that are associated with anomalously conductive materials, such as, wastes, fill, buried metals, utilities, and changes in soil texture and/or moisture content.

3.0 RESULTS

The geophysical conductivity and inphase data are presented as color contour maps in Figure 1 and 2, respectively. The color bar on the maps indicates the colors associated with the measured values. Actual data measurement points are superimposed on the maps and are shown as closely spaced tick marks.

Background apparent conductivity values at the site were observed to range from approximately 20 to 45 mS/m and are observed as shades of blue through pink on Figure 1. In general, areas exhibiting apparent conductivity significantly greater or less than background conductivity values are interpreted as containing conductive fill material and/or buried metals.

The EM-31 inphase data are presented in Figure 2. The inphase component of the electromagnetic field, measured by the EM-31, is most sensitive to buried metals. As is the case for the character of the conductivity response, the character of the inphase response, low or high, is partially dependent on the orientation of the buried metal(s) relative to the orientation of the EM-31 device during data acquisition, or the survey direction. Areas exhibiting an inphase response of approximately 0 ppt, shown in shades of orange on Figure 2, are likely free of buried metals within the depth of investigation of the EM-31.

There is the potential for buried utilities (primarily water lines) at this site. Sprinkler heads were observed at various locations throughout the survey area.. A linear anomaly is interpreted to trend east-west across the site and is indicated on the maps with a dashed white line. This linear anomaly is likely related to a buried utility line.

All of the buried metal anomalies are best observed on the inphase data shown on Figure 2. Anomalies **A**, **B**, **C**, **D** and **F** are buried metal anomalies shown as a coupling of an inphase high (pink) and low (blue) response. Anomalous region **E** is a large region containing buried metal anomalies characterized by a subdued response. This subdued response could be related to the depth of burial of the metal or it may be the result of numerous shallow and/or small metal objects. Additional anomalies were observed in the data set however they are thought to be comparatively minor and or related to linear utilities.

4.0 LIMITATIONS

The geophysical methods used during this survey are established, indirect techniques for non-destructive subsurface reconnaissance exploration. As these instruments utilize indirect methods, they are subject to inherent limitations and ambiguities. Metallic surface features (electrical wires, scrap metal, etc.) preclude reliable non-invasive data/results beneath, and in the immediate vicinity of, the surface features. Targets such as buried drums, buried tanks, conduits, etc. are detectable only if they produce recognizable anomalies or patterns against the background geophysical data collected. As with any remote sensing technique, the anomalies identified during a geophysical survey should be further investigated by other techniques such as historical aerial photography, test pitting and/or test boring.

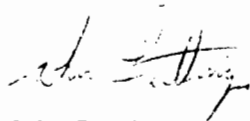
5.0 CONCLUSIONS

The geophysical survey at the Golf Course – Pro Shop Area site in North Tonawanda, NY appears to have been successful in identifying areas containing buried metals. Five anomalies and one anomalous region were identified. These are labeled A through F on the figures. Numerous buried water pipes are expected to be present and any subsequent intrusive investigation should be conducted with extra caution.

We trust that the information presented in this report meets with your needs in order to assist you in your investigation. If you have any questions or comments please do not hesitate to contact our office.

Yours very truly,

GEOMATRIX CONSULTANTS, INC.



John Luttinger
Project Geophysicist

APPENDIX D

FIELD LOGS, PHOTOGRAPHIC LOGS AND WELL CONSTRUCTION DETAILS

FIELD BOREHOLE LOG

MALCOLM
PIRNIEProject Name: HOLIDAY PARK

Surface Elev.: _____

Borehole No.: 4P1-131Project No.: 0266-325

Reference Elev.: _____

Date Started: 4/6/98Client: NYSDOTContractor: STBDate Finished: 4/6/98Location: AREA 1Logged By: DRMethod
of
Boring: 2 1/4" HSA, 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		0	6		0-6 BROWN SILTY SAND WITH CLAY AND ANGULAR GRAVEL		SL	0	
2		↓					70		
3		1	4		0-4 SAME AS ABOVE		7		
4		3					01		
5		3					5		
6		2					T		
7		2	24		0-24 GRAY TO BROWN SILTY FINE SAND, SOME TAN MOTTLING, SOME CLAY, SOME ROOTS		W		
8		3					E		
9		4					T		
10		8			0-8 SAME AS ABOVE, WITH SOME SUBANGULAR GRAVEL		W		
11		6	8				E		
12		4					T		
13		2			0-13 SAME AS ABOVE, SOME WOOD AND BLACK MOTTLING, PIPE HIT IN AREA OF WOOD		W		
14	X	2	13				E	1.2	
15	X	3					T		
16		6			0-9 ~~SAND~~ WOOD PIECES IN A MATRIX OF SILTY SAND, DARK BROWN IN COLOR		W		
17			9				E	0.7	
18							T		
19		5			0-16 GRAY TO DARK GRAY SILT FINE SAND WITH CLAY.		W		
20	B	3	16				E		
21		3					T		
22		3							
23					END OF BORING DTW = 8.0'				
24									
25									
26									
27									
28									
29									
30									

FIELD BOREHOLE LOG

MALCOLM
PIRNIE

Project Name: HOLIDAY PARK
 Project No.: 0266-325
 Client: NYSDOC
 Location: POE AREA 1

Surface Elev.: _____
 Reference Elev.: _____
 Contractor: STB
 Logged By: DR

Borehole No.: HPI-BZ
 Date Started: 4/6/98
 Date Finished: 4/6/98
 Method of Boring: 2 1/4" HSA, 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1	1	1	6		0-4 GRAY SILTY ~~SO~~ FINE SAND WITH CLAY		S		
2	2	2			4-6 BROWN SANDY SILT & CLAY WITH ROOTS, MINOR SUBROUND GRAVEL		L	0	
3	3	5 1/2	7		0-4 SAME AS ABOVE		S		
4	4				4-7 BROWN SANDY SILT, SOME COARSE SAND-SIZED WHITE PIECES, LOOKS LIKE DEGRADED CONCRETE - GRINDING NOISE WHEN DRILLED THROUGH		L	0	
5	5	5	26		0-2 1/2 WHITE AND BLACK SAND-SIZED PIECES OF LIKELY CONCRETE 2-4 BROWN RED BRICK		M	0	
6	6	9			4-20 TAN TO BROWN GRAY SANDY SILT WITH CLAY, SOME RUST NOTTLING		S		
7	7	15	16		10-16 BROWN TO RUST SILTY FINE SAND WITH CLAY, SOME GRAY NOTTLING, SOME BLACK NOTTLING		M	0	
8	8	6					0.15	0	
9	9	1	6		0-6 GRAY SILTY FINE SAND W/CLAY, SOME ~~BR~~ BROWN TO RUST NOTTLING		W		
10	10	2					E	0	
11	11	2	24		0-24 GRAY TO DARK GRAY SILTY FINE SAND WITH SOME CLAY, SLIGHT ~~SW~~ SWAMPY ODOR		T		
12	12	2					E	0	
13	13	1	24		0-24 SAME AS ABOVE		W		
14	14	2					F		
		3					T		
		3							
					END OF BORING				
					XX = SAMPLE COLLECTED				

**MALCOLM
PIRNIE**

Location: AREA 1

Page ____ of ____

FIELD BOREHOLE LOG

MALCOLM
PIRNIEProject Name: HOLWAY PARK

Surface Elev.: _____

Borehole No.: HPI- B4Project No.: 0266-325

Reference Elev.: _____

Date Started: 4/6/98Client: NYSDOCContractor: JSBDate Finished: 4/6/98Location: AREA 1Logged By: JAMethod
of
Boring: 4 1/2" HSA, 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	H ₂ O (ppm) Scan	H ₂ O (ppm) Headspace
1		19	19		0-17 BROWN SILTY FINE SAND, MINOR ANGULAR GRAVEL		1		
2		3			17-19 BROWN TO GRAY SILT & CLAY		13	0	
3		2			0-17 " BROWN TO GRAY SILT & CLAY, MINOR FINE SAND		7		
4		3	17				3		
5		6			0-4 DARK BROWN SILT & CLAY		1st	0	
6		0	24		4-24 MEDIUM BROWN SILTY FINE SAND WITH SOME CLAY.			0	
7		8			0-20 SAME AS ABOVE		W		
8		6	20				E	0	
9		9			0-18 SAME AS ABOVE		W		
10		9	18		- GRAY TN COLOR AT 8-18"		E	0	
11		2		X	0-4 SAME AS ABOVE		W		
12		3	24	X	4-24 COARSE SAND, FINE GRAVEL, SOME SILT, DARK GRAY TN COLOR		E	0	
		9					T		
		2							
					PTW = 7.2'				
					2nd SAMPLE HPI-B4				

**MALCOLM
PIRNIE**

Borehole No.: HF1-135
Date Started: 4/6/88
Date Finished: 4/6/88
Method
of
Boring: 2" SS 4 1/4" H

Page ____ of ____

**MALCOLM
PIRNIE**

Project Name: NO. 1024 DAKA

Project No.: 0266-325

Client: **NYPEC**

Location: AREA 1

Surface Elev.:

Reference Elev.:

Contractor: **578**

Logged By: **DK**

Borehole No.: **HP1-BC**

Date Started: 4/6/78

Date Finished: 4/6/78

Method
of
Boring: 2" ST, 4 1/2" N50

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
		1			0-4 Brown silty fine sand		52	0	
1		2	16		4-10 GRAY silt & clay WITH angular gravel		M	0	
		3			10-16 DARK brown TO black SANDY SILT &			06	
2		4			CLAY WITH ROOTS AND GRASS - ~~NATIVE PLANTS~~				
		10			0-5 GRAY SILTY VERY FINE SAND, some		SE		
3		5	5		clay		AN ST	0	
		4							
4		6							
		4			0-2 Brown sandy silt & clay, roots		M	0	
5		5	2				O		
		7			WOOD (PLYWOOD) STUCK IN @ SAND		'ST		
6		8							
		9			0-4 same as above		w	0	
7		10	4		LIGHT MANURE odor		E		
		11					T		
8		13							
		9			0-16 ABOLION BROWN SILTY FINE SAND w/clay		w		
9	X	8	24		16-18 MIXED BROWN AND GRAY (LAYERS OF)		E	0	
		9			BAND) SILTY FINE SAND (NATIVE + SP.) LAYER		T		
10	X	9			18-24 GRAY SILTY FINE SAND, 2 THIN SAT/CLAY				
		7			0-24 CLAY SILTY FINE SAND, some clay		w		
11		11	24				E		
		7					T	0	
12		7			END				
					END OF BORING				
					WATER DEPTH AT 7.5 BGS				
					XX SAME HPI-BG				

FIELD BOREHOLE LOG

MALCOLM
PIRNIE

Project Name: MOLIMY PARK Surface Elev.: _____ Borehole No.: HP1-B7
 Project No.: 0266-325 Reference Elev.: _____ Date Started: 4/6/98
 Client: NH50EC Contractor: STB Date Finished: 4/6/98
 Location: AREA 1 Logged By: BA Method of Boring: 2" SS 4 1/2" HSA

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		1	5		0-2 GRAY SILTY FINE SAND, SOME CLAY 2-5 BROWN (CLAYEY) SANDY SILT & CLAY, ROOTS		22	0	
2		2							
3		1	6		0-6 Medium brown SANDY SILT & CLAY SOME ROOT-COLORED MOTTLES		22	0	
4		9							
5		3			0-19 Medium brown to rust colored SILTY SAND WITH SOME CLAY - SOME ROOTS AT 10 & 19"		22	0	
6		4	14						
7		5							
8	X	8			0-24 SAND AS ABOVE, MORE RUST MOTTLES THAN 4-6' (LOOKS LIKE NON-NATURAL RUST COLORING)		22	0	
9	X	4	24						
10		5			0-19 SAND AS ABOVE, CLAY CONTENT & MOISTURE INCREASES WITH DEPTH 19-20 GRAY SILTY MEDIUM SAND, SOME CLAY		22	0	
11		3							
12		6	20						
13		7							
14		1			0-18 GRAY SILTY FINE SAND, SOME CLAY		22	0	
15		2	18						
16		1							
17		3							
18					END OF BORING				
19					XX SAMPLE				
20									
21									
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29									
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**MALCOLM
PIRNIE**

Surface Elev.:

Borehole No.: 1421-138

Project Name: HOLIDAY PARK

Reference Elev.:

Date Started: 4/6/98

Project No.: 0266-325

Contractor: *STB*

Date Finished: 4/6/88

Client: *WYSDC*

Logged By: DR

Method
of
Boring: 2" SS, 4 1/4" HSA

Location: AREA 1

Boring: 2" SS, 4 1/4" HSA

[illegible]

**MALCOLM
PIRNIE**

Surface Elev.: _____

Borehole No.: HP1-139

Project Name: HOLIDAY PARK

Reference Elev.:

Date Started: 4/6/98

Project No.: 0466-325

Contractor: STB

Date Finished:

Client: NYS DEC

Logged By: DR

Method

Location: AREA 1

of

Boring:

[illegible]

FIELD BOREHOLE LOG

MALCOLM
PIRNIEProject Name: 160 LINDY PARK

Surface Elev.: _____

Borehole No.: NPI- B10Project No.: 0266-325

Reference Elev.: _____

Date Started: 4/6/98Client: NYSD&CContractor: STBDate Finished: 4/6/98Location: AREA 1Logged By: DLMethod
of
Boring: 2" SS, 4 1/2" N20

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headpace
1			8"		DARK BROWN SANDY SILT WITH QUARTZ GRAVEL, SOME CLAY		52	0	
2									
3			4"		SAME AS ABOVE		52	0	
4									
5		3	18"		0-2" SAME AS ABOVE		52	0	
6		4			2-18" BROWN TO TAN SILTY FINE SAND, SOME CLAY				
7		4	20"		0-20" SAME AS ABOVE		52	0	
8		5							
9		5	22		0-22" SAME AS ABOVE, CLAY IN COLOR ZONES, (9-22")		52	0	
10		5							
11		1	23		CLAY 0-23" CLAY SILTY SAND WITH SOME CLAY, SAND IS FINE. GRADUAL		52	0	
12		4			INT. CLAY CONTENT INCREASES WITH DEPTH				
13		7	22		0-22" CLAY SILTY SAND WITH SOME CLAY, SILT & CLAY CONTENT INCREASES WITH DEPTH		52	0	
14	X	10							
	X	4							
					END				
					HOW WHEN PUMPING AUGERS - B.P. BELOW GAGE				
	XX				SAMPLE NPI-B10				

**MALCOLM
PIRNIE**

Project Name: HOL 1.2.9 174.2K

Project No.: 0266-325

Client: Misc

Location: Alt 1

Surface Elev.:

Reference Elev.:

Contractor: 5513

Logged By: *DEA*

Borehole No.: 1401 - B11

Date Started: 4/9/42

Date Finished: 4/4/96

Method
of
Boring: 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
		5			0-3 ~~RED-BROWN~~ SILTY SAND WITH COARSE GRAVEL		M		
1		2	3					0	
		4							
2		5							
		7			0-3 SAND AS ABOVE		M	0	
3		4	3						
		6							
4		7							
		2			0-12 DARK GRAY SILTY FINE SAND, SOME		M	0	
5		4	12		COARSE GRAVEL, BLACK STAINING, SOME		T		
		RECOVER			WATER-WEATHERED WOOD FRAGMENTS.		VM		
6					- WOOD AND CARD BOARD STUCK IN SHALE				
		6			0-1 PIECE OF WOOD		L	-	
7		5	1				R		
		4					T		
8		3							
		7			WATER IN BORING NOW LEAVING BORING		M	-	
9		5	6		WITH A GULCHING SOUND		R		
		4					T		
10		10							
		5			0-14 DARK GRAY SILTY FINE SAND, SOME BLACK		L	0	
11		5	24		STAINED WOOD, ~~BLACK~~ BROWN CLAY		R		
		6					T		
12		6			- WATER LEVEL NOW RISING IN BORING				
		2			0-10 DARK GRAY SILTY FINE TO MEDIUM		M	0	
13		5	10		SAND, SOME CLAY		R		
		5					T		
14		4							
	X	3			0-15 SAND AS ABOVE, SOME COARSE SAND		L	0	
15	X	1	24		15-24 RED-BROWN STICKY SILTY CLAY,		R		
	9	2					T		
16		2							
					XX SAMPLE OF SAND & CLAY				

**MALCOLM
PIRNIE**

Surface Elev.: _____

Borehole No.: HCI - 1313

Project Name: H-1 DAY 2224

Reference Elev.: _____

Date Started:

Project No.: E 2 6 6 - 3 2 5

Contractor:

Date Finished:

Client: _____

Logged By: _____

Method of Boring:

Location: _____

[illegible]

FIELD BOREHOLE LOG

**MALCOLM
PIRNIE**

Project Name: HOLMAT PIER

Project No.: 0266 - 325

Client: NYSDEC

Location: AREA 1

Surface Elev.: _____

Reference Elev.: _____

Contractor: STB

Logged By: DER

Borehole No.: 171-1315

Date Started: 4/8/98

Date Finished: 4/9/98

Method
of
Boring: 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		3			2-7 BROWN SANDY SILT WITH CLAY & SOME SUBROUND GRAVEL		14	0	
2		5							
3		7			0-6 BROWN SILTY FINE SAND WITH SOME CLAY, SOME RUST MOTTLING.		14	0	
4		8	6				10		
5		6					14		
6		3			0-18 SAME AS ABOVE SOME BLACK MOTTLING 14-18		14	0	
7		2	18						
8		2							
9		5			0-24 SAME AS ABOVE, GRAY IN COLOR AT BOTTOM 6"		14	0	
10		7	24						
11		9			0-24 SAME AS ABOVE - GRAY TO BROWN IN COLOR		14	0	
12		3	24						
13		3							
14	X	9			0-18 SAME AS ABOVE		14	0	
15	X	5			19-24 DARK GRAY STICKY CLAY WITH SOME SILT.				
16		7							
17		5							
18					END BORING				
19					XX SAMPLE				
20									
21									
22									
23									
24									
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26									
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**MALCOLM
PIRNIE**

Project Name: HELT BAY PARK

Project No.: 0266-325

Client:

Location: _____

Surface Elev.:

Reference Elev.:

Contractor:

Logged By: _____

Borehole No.: *HP1-B16*

Date Started:

Date Finished:

Method of Boring: _____

[illegible]

**MALCOLM
PIRNIE**

Surface Elev.: _____

Borehole No.: H#1- B16

Project Name: _____

Reference Elev.:

Date Started:

Project No.: _____

Contractor:

Date Finished:

Client: _____

Logged By: _____

Method
of
Boring: 4 1/4 HSA 2" SS

Location: _____

**Method
of
Boring:**

[illegible]

FIELD BOREHOLE LOG

MALCOLM
PIRNIE

Project Name: HOLIDAY PARK
 Project No.: 0266-325
 Client: NYDEC
 Location: AREA 2

Surface Elev.: _____
 Reference Elev.: _____
 Contractor: STB
 Logged By: DER

Borehole No.: HP2-B1
 Date Started: 4/8/98
 Date Finished: 4/8/98
 Method of Boring: 2" SS, 4 1/4 HSA

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		4	8		0-8 DARK BROWN SILTY SAND, WITH MANY B. FRAGMENTS OF RED BRICK		20	0	
2		8							
3		6	17		0-17 GRAY TO DARK GRAY SANDY SILT & CLAY SOME SUBANGULAR GRAVEL SOME BLACK MOTTLES		W F T	0	
4		5							
5		4	7		0-2 SAME AS ABOVE 2-24 BLACK STAINED WOOD WITH SOME SAND & SALT		8 9 UN	0	
6		1							
7		2	5		0-5 SAME AS ABOVE		UN	0	
8		1							
9		2	15		0-3 TAN SAND WITH SILT & GRAVEL 3-12 DARK GRAY TO DARK BROWN SANDY SILT & CLAY, SOME SUBANGULAR GRAVEL		UN W TC	0	
10		3					UN		
11		2	18		0-8 SAME AS ABOVE 8-18 MEDIUM BROWN SILTY FINE SAND WITH CLAY		W E T	0	
12		2							
13		9	24		8-24 SAME AS ABOVE, SOME ~~ABOVE~~ TAN TO JUST NOTHING		W E T	0	
14		9							
15		3			0-14 SAME AS ABOVE 14-18 MEDIUM BROWN SANDY SILT WITH CLAY, SOME TAN TO JUST NOTHING		W E T	0	
16		2							
17	X	5	24	X	0-12 ~~above~~ MED BROWN SILTY SAND w/CLAY 12-24 GRAY TO DARK GRAY CLAY WITH SILT & SOME COARSE SAND		W E T	0	
18		4							

END SPIRO

SAMPLE: XX

COLLECT WATER SAMPLE

FIELD BOREHOLE LOG

MALCOLM
PIRNIE

Project Name: HOLIDAY PARK
 Project No.: 0266-325
 Client: NYSDOC
 Location: AREA 2

Surface Elev.: _____
 Reference Elev.: _____
 Contractor: STB
 Logged By: DER

Borehole No.: H172-B2
 Date Started: 4/6/98
 Date Finished: 4/8/98
 Method of Boring: 2" 1/4" HSA, 2" SS

Depth (BCS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		5	0		0-8 BLACK SANDY ANGULAR GRAVEL, SOME CLAY		52		
2		5							
3		16	6		0-6 SAME AS ABOVE		54		
4		5/3			WOOD IN SHAPE				
5		22			0-3 FRAGMENTS OF WOOD		52		
6		50/1	3						
7		21			0-2 DARK BROWN SILT WITH ANGULAR GRAVEL		54		
8		3	2						
9		4			0-8 WOOD FRAGMENTS		40		
10		7	6				51		
11		3			0-2 WOOD FRAGMENTS		4		
12		2	15		2-9 DARK BROWN SANDY SILT, SOME CLAY		70		
13		2			9-15 MEDIUM GRAY SILT VF TO FINE SAND, SOME TAN-RUST MOTTLED		14		
14		3			0-19 SAME AS ABOVE, BROWN & TAN IN COLOR		10		
15		5	19				10		
16		11					10		
17		7			0-24 SAME AS ABOVE		10		
18		7	24				10		
19		9			0-12 SAME AS ABOVE		10		
20	X	6	24		12-13 BROWN SAND & GRAVEL, SOME SILT		10		
21		9			13-24 GRAY & DARK GRAY CLAY WITH MIN. SAND & GRAVEL		10		
22		15							

22 SAMPLE
 COLLECTED WATER AT 12' BGS

FIELD BOREHOLE LOG

MALCOLM
PIRNIE

Project Name: HOLIDAY PARK
 Project No.: 0266-325
 Client: NYSDEC
 Location: AREA 2

Surface Elev.: _____
 Reference Elev.: _____
 Contractor: SJB
 Logged By: DER

Borehole No.: HPD-B3
 Date Started: 4/6/98
 Date Finished: 4/6/98
 Method of Boring: 4 1/4" HSA 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		3			0-5 DARK GRAY SANDY SILT & CLAY, SOME SUBANGULAR GRAVEL.		W		
		5	7				E		
2		10			5-7 BLACK SILTY GRAVEL, ANGULAR		T		
		15							
3		3			0-9 DARK GRAY SANDY SILT & CLAY, SOME GRAVEL		W		
		6	14		9-12 DARK GRAY SILTY SAND & GRAVEL (SUBANGULAR)		R		
		6			12-14 DARK GRAY SANDY SILT & CLAY, SOME BLACK MOTTLED COHESIVE		T		
4		7							
		4			0-6 SAME AS ABOVE		W		
5		2	11		8-11 BROWN SILTY FINE SAND MATTY, MANY WOOD FRAGMENTS (APPEARS TO BE CUT WOOD)		R		
		2					T		
6		3							
		2			0-3 SAME AS ABOVE		W		
7		2			3-6 DARK BROWN SANDY SILT, SOME GRAVEL (ANGULAR)		E		
		1					T		
8		1							
		3			0-3 DARK BROWN SILTY SAND WITH WOOD FRAGMENTS		W		
9		6			3-21 GRAY TO MEDIUM BROWN SANDY SILT WITH CLAY, SOME TAN TO BUST MOTTLED, SOME SUBANGULAR GRAVEL		T		
		5	21				WET		
10		7							
		4			0-16 SAME AS ABOVE, SOME LENSES OF SILTY FINE TO VERY FINE SAND, SOME BLACK MOTTLED		W		
11		5	16				T		
		3					WET		
12		7							
		6			0-23 MEDIUM BROWN SILTY VF TO FINE SAND WITH CLAY		W		
13		9	24				E		
	X	17			23-24 MED BROWN SILTY MED TO COARSE SAND		T		
14	X	15							
		3			0-2 SAME AS ABOVE		W		
15		5	17		2-13 GRAY TO DARK GRAY SILTY CLAY, DENSE, COHESIVE		W		
		11			~~SOME~~ CO MINE COARSE ANGULAR SAND		T		
16		12					W		
		22			0-11 SAME AS ABOVE		W		
17		15	11				W		
		11					T		
18		12					W		

**MALCOLM
PIRNIE**

Surface Elev.: _____

Borehole No.: 172-133

Project Name: HOLIDAY PARK

Reference Elev.:

Date Started: 4/8/98

Project No.: C266 - 325

Contractor: *STB*

Date Finished: 4/8/18

Client: NY State

Logged By: DER

Method

Location: AREA 2

of
Boring: 2" SS, 4 1/4 HSA

[illegible]

FIELD BOREHOLE LOG

MALCOLM
PIRNIEProject Name: HOLIDAY PARK

Surface Elev.: _____

Borehole No.: HP2 - B4Project No.: 0266-325

Reference Elev.: _____

Date Started: 4/8/98Client: NYSDOTContractor: STBDate Finished: 4/8/98Location: AREA 2Logged By: DERMethod
of
Boring: 2" SS, 2 1/2" HSA

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
		8			0-1 BROWN SANDY SILT & CLAY		M		
1		11	5		1-5 FRAGMENTS OF CONCRETE			0	
		4							
2		3							
		3			0-6 BROWN SANDY SILT & CLAY WITH		M		
3		2	6		SOME SUBANGULAR GRAVEL			0	
		2							
4		2							
		1			0-8 BROWN TO DARK BROWN SANDY SILT &		M		
5		1	8		CLAY, SOME WOOD FRAGMENTS			0	
		1							
6		1							
		3			0-22 GRAY TO BROWN SANDY SILT WITH		M		
7		3	22		SOME CLAY, SOME TAN-RUST NOTHING		T	0	
		5					U4		
8		5							
		3			0-6 SAME AS ABOVE		W		
9		3	24		6-24 GRAY TO BROWN SILTY UP TO FINE		F	0	
		4			SAND, SOME RUST-TAN & SOME DARK		T		
10		6			NOTHING				
		5			0-14 SAME AS ABOVE		W		
11		6	24		14-24 BROWN DARK TAN TO GRAY SILTY		F	0	
		9			MEDIUM SAND WITH SOME SUBROUND		T		
12		11			GRAVEL				
		5			0-14 SAME AS ABOVE		M		
13		4	24		14-24 BROWN TO GRAY SILT & CLAY, SOME		T	0	
		7			FINE GRAVEL				
14		11							
					END BORING				
					NO SAMPLE				
					COLLECT GROUND WATER SAMPLE				
					BTW = 6.5'				

**MALCOLM
PIRNIE**

Borehole No.: H 02 - B6

Date Started: 4/8/99

Date Finished: 4/8/98

Method

Method of Boring: 2" 55,

Page ____ of ____

**MALCOLM
PIRNIE**

Surface Elev.: _____

Borehole No.: HP2-BE

Project Name: HOLLOAY PARK

Reference Elev.:

Date Started: 4/8/88

Project No.: 0266-325

Contractor: STB

Date Finished: 4/8/99

Client: NYSDOC

Logged By: DER

Method
of
Boring: 2" SS

Location: A26, 2

[illegible]

**MALCOLM
PIRNIE**

Project Name: BOTANICAL GARDENS

Project No.: 0266-325

Client: NYS DEC

Location: NORTH EAST CORNER

Surface Elev.: _____

Reference Elev.:

Contractor: SJB

Logged By: DR

Borehole No.: BG - B1

Date Started: 4/7/68

Date Finished: 4/7/68

Method of Boring: $4 \frac{1}{4}$ HSA, 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1					HAND DIG GRAY SILT & CLAY w/ SAND				
2									
3		1	3		0-3 SILTY SAND (GRAV) WITH GRAVEL, SOME SHALE FRAGMENT		W E T	0	
4		2							
5		1	3		0-3 SAME AS ABOVE		W E T	0	
6		1							
7		1	4		0-4 WOOD FRAGMENTS (2x4)		W R T	0	
8		1							
9		1	8		0-8 DARK GRAY CLAY WITH SILT & SOME SAND SOME BLACK MOTTLING, SOME AREAS OF RED BROWN-TAN CLAY MIXED IN,		W E T	0	
10		1			STICKY, COHESIVE				
11	X	5			0-5 SAME AS ABOVE, SOME ANGULAR GRAVEL		W		
12	X	4	10		7-10 RED-BROWN SILTY FINE SAND WITH CLAY		E T	0	
13		12			0-22 RED BROWN SILTY FINE SAND, NOOK ROUNDER GRAVE		W E T	0	
14		15	22						
		24							
		25							
					END BORING				
					XX SAMPLE COLLECTED				

FIELD BOREHOLE LOG

MALCOLM
PIRNIEProject Name: BOTANICAL GARDENS

Surface Elev.: _____

Borehole No.: BG-B2Project No.: 0266-325

Reference Elev.: _____

Date Started: 4/7/98Client: NYSDECContractor: STBDate Finished: 4/7/98Location: NORTH CENTRALLogged By: DERMethod
of
Boring: 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	H ₂ O (ppm) Scan	H ₂ O (ppm) Headspace
1		2	9		0-14 GRAY TO BROWN SANDY SILT & CLAY, SOME SUBROUNDED GRAVEL		~	0	
2		3	14		SAND CONTENT INCREASES 11-14		~		
3		5			0-7 SAME AS ABOVE		~		
4		3	3					0	
5	X	1			0-4 SAME AS ABOVE		W	0.5	
6	X	1	14		4-9 BLACK SILT & SAND, SOME CLAY, HAS SPHERES ON WATER, OILY APPEARANCE		E	0.6	
7		1			9-14 DARK GRAY SANDY SILT & CLAY		T		0
8		1	24		0-24 SAME AS ABOVE, SOME BROWN-RUST MOTTLING.		W		0
9		1					E		
10		2			0-26 SAME AS ABOVE		T		
11		3	24		16-24 RED-BROWN SILTY SAND WITH CLAY, SOME SUBROUNDED GRAVEL		W		0
12		10					E		
13		17					T		
14					2 x SOIL SAMPLE				
15					DTW 1.2'				
16					COLLECT WATER SAMPLE FOR				
17					FULL TCL (VOCs, SVOCs, PEST/PAHs)				
18					AND TAL METALS & CYANIDE				
19									
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FIELD BOREHOLE LOG

MALCOLM
PIRNIEProject Name: BOTANICAL GARDENS

Surface Elev.: _____

Borehole No.: BG-B3Project No.: 0266-325

Reference Elev.: _____

Date Started: 4/7/98Client: NISDECContractor: SJBDate Finished: 4/7/98Location: BLUMBA NORTHEAST CORNERLogged By: DRMethod
of
Boring: 4 1/2 HSA, 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1					HAND DIG				
2									
3	A	24	3		0-10 BROWN SILT & CLAY, SOME BLACK MOTTLING	VERY WET	W	0.5	
4			1		10-24 DARK GRAY SILT & CLAY, SOME BLACK MOTTLING				
5			1		SOME FINE SAND, WHEN TAPPED, WATER BUBBLES AT SURFACE				
6			2						
7			1		0-4 SAND AS ABOVE		W		
8			5		- WOOD FRAGMENTS IN SHADE		E		
9	B	16	4				T	0	
10			5		0-2 DARK GRAY SILTY SAND		W		
11			12		2-5 BROKEN WOOD FRAGMENTS (LOOKS LIKE PLYWOOD OR 2x4)		E	2.4	
12			6				T		
13			6		0-3 MIX OF GRAY SILTY SAND AND WOOD FRAGMENTS		W		
14			3		3-8 RED-BROWN SILT AND CLAY, SOME ROUNDED GRAVEL, MINOR FINE SAND		E	0	
15			2				T		
16			5		0-12 RED-BROWN SILTY FINE SAND		W		
17			21				E	0	
18			22				T		
19			33						
20					END BORING				
21									
22					SAMPLES - BG-B3A 133A				
23					BG-B3B 133B				
24					WATER LEVEL = AT GRADE				

FIELD BOREHOLE LOG

**MALCOLM
PIRNIE**

Project Name: BOTANICAL GARDENS
Project No.: 0266-325
Client: NISDEC
Location: CENTRAL AREA

Surface Elev.: _____
Reference Elev.: _____
Contractor: SJB
Logged By: DER

Borehole No.: B6 B4
Date Started: 4/7/98
Date Finished: 4/7/98
Method of Boring: 2 1/4" HSA, 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		2			HAND DIG				
2		7			GRAY TO DARK GRAY SANDY SILT & CLAY WITH MINOR GRAVEL				
3		1	8		0-7 BROWN TO GRAY WITH BLACK MOTTLING SANDY SILT & CLAY		M		
4		1			7-8 BROWN SILTY SAND WITH GRAVEL		VER		
5		1	5		0-4 RED-BROWN SILTY FINE SAND, SOME CLAY		W		
6		1			4-5 WOOD FRAGMENTS		F		
7		1	6		0-2 DARK GRAY SILT & CLAY, SOME GRAVEL		W		
8		2			2-3 BLACK SILTY SAND, SOME WOOD (TWIG)		E		
9		2			3-6 DARK GRAY SILT & CLAY, SOME GRAVEL, COHESIVE		T		
10		2	14		0-14 GRAY TO DARK GRAY SANDY SILT & CLAY MORE COHESIVE IN SOME AREAS		W		
11	X	4			10-6 SAME AS ABOVE, SOME WOOD FRAGMENTS, SOME WHITE ANGUEHA LEAF		W		
12		8	14		6-14 RED-BROWN SILTY SAND WITH CLAY, SOME BLACK MOTTLING		E		
		12			END OF BORING				
					XX SAMPLE COLLECTED				
					OTW = 3'				

**MALCOLM
PIRNIE**

Surface Elev.: _____

Borehole No.: B6-B5

Project Name: BOTANICAL GARDENS

Reference Elev.:

Date Started: 4/7/98

Project No.: 0266-325

Contractor: SJ3

Date Finished: 4/7/98

Client: NYSDGC

Logged By: DER

Method

Location: SOUTH CENTRAL

Method
of
Boring: 2" SS

[illegible]

**MALCOLM
PIRNIE**

Project Name: BOTANICAL GARDENS

Surface Elev.: _____

Borehole No.: B6-B6

Project No.: 0266-325

Reference Elev.:

Date Started: 4/7/98

Project No.: 0266-325

Contractor: STB

Date Finished: 4/7/62

Client: NYS DEC

Logged By: DER

Method

Location: SOUTH EAST CORNER

Boring: 2" SS

[illegible]

Page ____ of ____

**MALCOLM
PIRNIE**

Borehole No.: BG - 89

Date Started: 4/7/68

Date Finished: _____

Method
of
Boring: _____

Page 1 of 1

FIELD BOREHOLE LOG

CLIENT _____ JOB NO. _____ BOREHOLE NO. HP-4W-1
PROJECT _____ LOCATION _____ STARTED 1320 M 7/2 19 98
CONTRACTOR _____ LOGGED BY _____ FINISHED _____ M _____ 19 _____
METHOD OF SOIL BORING _____ CORE DIA. _____ ELEVATIONS: DATUM _____

SAMPLE NO.	TYPE	DEPTH	BLOWS / FT	RECOVERY %	MOISTURE T/N NO.	SAMPLE DESCRIPTION: Color, Texture Classification, Compactness/Consistency, Moisture Condition, Weathering/Fracturing, Inclusions, Odor, Etc.	NOTES: Boring, Testing and Sampling Procedures, Water Loss and Gain Drilling and Testing Equipment, Etc.
1		1	1	6	SL	0-6 TAN TO BROWN w/ GRAY & LIGHT-COLORED MOTTLED VF. SANDY SILT, MINOR CLAY	1.0
		2	2				0.0
		3	3				
2		3	4	14	SL TO M	0-14 SAME AS 1	0.0 SAMPLE COLLECTED
		4	2				
		5	3	24	M TO VM	0-24 BROWN w/ GRAY & LIGHT MOTTLED SILTY CLAY MINOR FINE GRAIN.	0.0
		6	5				
3		7	7	22	VM TO M	0-22 BROWN w/ LIGHT & GRAY MOTTLED CLAYEY SILT, some layers (w/ cm) of VF SAND	0.0
		8	2				
4		9	2	22	VM TO M	0-6 SANDY SILT	0.0
		10	2			6-22 GRAY TO DR. GRAY SILT & VF SAND, MINOR SOME CLAY, SOME LIGHT TO TAN MOTTLED	0.0
5		11	3			0-15 SAME AS 1	0.0
		12	4	15	VM TO M	0-24 SANDY SILT	0.0
6		13	3	24	VM TO M	0-24 SANDY SILT	0.0
		14	3				
7			5				

FIELD BOREHOLE LOG

CLIENT _____ JOB NO. _____ BOREHOLE NO. H2-aw-2

PROJECT _____ LOGGED BY _____ STARTED _____ M _____ 19 _____

LOCATION _____ FINISHED _____ M _____ 19 _____

CONTRACTOR _____ CORE DIA. _____ ELEVATIONS: DATUM _____

METHOD OF SOIL BORING: ROCK _____

SAMPLE NO.	TYPE	DEPTH	BLOWS N.	RECOVERY %	MOISTURE T/N NO.	SAMPLE DESCRIPTION: Color, Texture Classification, Compactness/Consistency, Moisture Condition, Weathering/Fracturing, Inclusions, Odor, Etc.	NOTES: Boring, Testing and Sampling Procedures, Water Loss and Gain, Drilling and Testing Equipment, Etc.
1		3	3	11	WET TO S ₄	0-11 BROWN SANDY SILT & CLAY, some subangular gravel	0.0
2		1	3				
		2	5				
		3	7				
		4	4			0-24 BROWN TO TAN SANDY SILTY CLAY w/ minor VF sand, compact	0.0
		5	5				
		6	3	12		28-12 BROWN TO TAN CLAYEY SILT, some VF sand	
		7	6				
3		4	4			0-60 TAN TO BROWN CLAYEY SILT, some VF sand, some clay nothin	0.0
		5	9	20			
		6	6				
		7	7				
4		6	6	22	WET	0-8 BROWN SILTY VF TO F SAND, some clay	0.0
		7	8			0-20 BROWN VF SANDY SILT, some clay	
		8	6			20-22 - CLAY TO OR CLAY VF SANDY SILT SAND CLAY	
5		9	2		WET	0-17 SAME A/A	0.0
		10	1	21		17-21 CLAY SILTY CLAYEY SAND & FINE GRAVEL, some with - known to subangular grains	
		11	5				
		12	7				
6		13	4		WET	0-15 SAME A/A	0.0
		14	5	16		15-16 CLAY DISSE SILTY CLAY, some sand & gravel	
		15	8				
		16	3				
7		17		24	WET	0-12 CLAY SILTY CLAYEY SAND & GRAVEL, minor clay	
		18				12-24 CLAY w/ BROWN TO RED MOTTLED GRAY SILTY CLAY, AFMB, continuous, silty	
		19				GRAVEL GRAVEL	

FIELD BOREHOLE LOG

CLIENT _____
 PROJECT _____
 LOCATION _____

JOB NO. _____
 LOGGED BY _____

CONTRACTOR _____
 METHOD OF SOIL BORING _____
 ROCK _____

BOREHOLE NO. HP-42-3

STARTED _____ M _____ 19 _____

FINISHED _____ M _____ 19 _____

ELEVATIONS: DATUM _____

SAMPLE NO.	TYPE	DEPTH	BLOWS / FT	RECOVERY %	MOISTURE	TIN NO.	SAMPLE DESCRIPTION: Color, Texture Classification, Compactness/Consistency, Moisture Condition, Weathering/Fracturing, Inclusions, Odor, Etc.	NOTES: Boring, Testing and Sampling Procedures, Water Loss and Gain, Drilling and Testing Equipment, Etc.
1		1	1	~	✓		0-96 DE GR ~~ST~~ SANDY SILT, CLAY	0.0
		2	2	9			6-7 FT CLAY w/ TAN MOTTLED GR & CLAY, MINOR SAND	
2		3	2		✓		0-24 GRAY w/ TAN MOTTLED CLAY, CONSIST. SL. STICKY	0.0
		4	3	24				
3		5	1	3	WET		0-3 GRAY CLAYEY SILT, SOME BLACK MOTTLED	0.0
		6	1					
4		7	1	18	WET		0-18 GRAY TO DK GRAY SILTY CLAY, SOME LAYERS OF LESS SILT, SOME BROWN TO TAN MOTTLED, STICK TO V. STICKY	0.0
		8	2					
5		9	3	24	WET		0-24 SAME A/LA - AT 21.25' TRANS TO RED-BROWN IN COLOR, SILTY STICKY "Gumbo"	0.0
		10	3					
6		11	WET	24	WET		0-21 SAME A/LA VERY STICKY, RED-BROWN and color "Gumbo"	0.0
		12	WET					
7		13	WET	24	WET		0-24 SAME A/LA SOME GRAY MOTTLED - L. DEGRADED, RESISTANT TO CENTERS OF 1-2 CM "Gumbo"	0.0
		14	WET					
8		15	WET	24	WET		0-24 SAND A/LA	0.0
		16						
		17						

**MALCOLM
PIRNIE**

Borehole No.: HP-MW-3A

Date Started:

Date Finished:

Method

Method
of
Boring:

Page ____ of ____

Sheet No. 1 of 1

3	4

1700

FIELD BOREHOLE LOG

JOB NO. _____

CLIENT _____

PROJECT _____

LOCATION _____

CONTRACTOR _____

METHOD OF SOIL BORING: _____

LOGGED BY _____

ROCK _____

CORE DIA. _____

BOREHOLE NO. BG-MW-2

STARTED _____ M _____ 19

FINISHED _____ M _____ 19

ELEVATIONS: DATUM _____

SAMPLE NO.	TYPE	DEPTH	BLOWS N.	RECOVERY %	MOISTURE T/N NO.	SAMPLE DESCRIPTION: Color, Texture Classification, Compactness/Consistency, Moisture Condition, Weathering/Fracturing, Inclusions, Odor, Etc.	NOTES: Boring, Testing and Sampling Procedures, Water Loss and Gain, Drilling and Testing Equipment, Etc.
1		1					
		2					
		3	4	3	SL	0-3 MEDIUM GRAY SANDY SILT w/ COARSE GRAVEL	0.5
		4	3		M	GRAVEL	
2		5	2		M	0-10 SAND S/L	0.0
		6	1	20		10-20 GRAY TO DARK GRAY SANDY SILT & CLAY, MINOR FINE GRAVEL	
		7	1				
		8	1		M	0-3 SAND S/L	0.5
3		9	2			0-7 BROWN TO RED SANDY SILT & CLAY, SOME COARSE GRAVEL	0.0
		10	10	8	M	7-0 BROWN FRAGMENT OF HARD SANDSTONE GRAVEL	
		11	5/4				
		12	1			0-5 BROWN TO RED SANDY SILT & CLAY, SOME COARSE GRAVEL	12.6 SAMPLE COLLECTED
4		13	24	5	M TO M		
		14	13				
		15	13			0-3 SAND S/L	0.2
		16	10	3	M		
5		17	37		M		
		18	40		M		
		19	40				
		20	40				
6		21	13	24	WET	0-12 TAN TO SILTY RED SAND w/ MINOR COARSE GRAVEL	15.0 MAXIMUM
		22	8				
		23	3			12-18 RED BROWN SILTY FINE SAND	0.0 AREA FOR MATERIAL
		24	8			18-24 TAN SILTY RED SAND w/ MINOR C. GRAVEL	

NO. _____

LOT _____

1

1

1

1

1

1

1

1

1

FIELD BOREHOLE LOG

CLIENT _____

JOB NO. _____

PROJECT _____

LOCATION _____

CONTRACTOR _____

METHOD OF SOIL BORING: _____

ROCK _____

LOGGED BY _____

CORE DIA. _____

BOREHOLE NO. BC-20-3

STARTED _____ M _____ 19 _____

FINISHED _____ M _____ 19 _____

ELEVATIONS: DATUM _____

SAMPLE NO.	TYPE	DEPTH	BLOWS N.	RECOVERY %	MOISTURE T/N NO.	SAMPLE DESCRIPTION: Color, Texture Classification, Compactness/Consistency, Moisture Condition, Weathering/Fracturing, Inclusions, Odor, Etc.	NOTES: Boring, Testing and Sampling Procedures, Water Loss and Gain, Drilling and Testing Equipment, Etc.
1		1				0-2' sandy clay	
		2				- CLAY SILTY w/ SAND, some brown to light	
		3				nothing	
		4				0-7 SAND A/A	7.1 SAND COLLECTED
2		5				0-5 SAND A/A	6.2
		6					
		7					
		8					
3		9				10-12 CLAY TO Brown SAND SILTY, some clay	5.1
		10				12-21 CLAY TO light sandy SILT and fine	4.3
		11				clay	
		12				0-3 SAND A/A (moist)	5.0
4		13				3-12 CLAY TO dk CL. LATHER SILT (w. n. to wet)	0.0
		14					
		15				0-13 SAND A/A. some clay lumps w/ some clay	0.0
		16				13-15 CLAY TO dk CLAY SILTY w/ to fine sand	
5		17					
		18				0-14 CLAY TO Brown w/ sandy SILT w/ some clay	0.0
		19					
		20				END	

FIELD BOREHOLE LOG

BOREHOLE NO. B6-4w-4

STARTED 2/2/68 M 19

FINISHED M 19

ELEVATIONS: DATUM

NOTES: Boring, Testing and Sampling Procedures, Water Loss and Gain, Drilling and Testing Equipment, Etc.

110

20

0.0 SANDY CONCRETE

0.0

0.0

0.0

0.0

0.0

SAMPLE DESCRIPTION: Color, Texture Classification, Compaction/Consistency, Moisture Condition, Weathering/Fracturing, Inclusions, Odor, Etc.

0-4 DK GR. w/ SANDY SILT & CLAY ROOTS
4-6 GRAY w/ TAN MOTTLED SILT & CLAY, & SAND
w/ SAND

0-2 SAND A/A
2-14 TAN TO BROWN w/ DK GRAY MOTTLED
CONCRETE SANDY SILT WITH MINOR w/ SAND

0-3 DK BL SILTY CLAY, compact, some FINE GRAVEL.
3-12 GRAY TO BK. GR. w/ TAN MOTTLED SILTY w/ TO
F SAND, some CLAY - SALT & PEPPER
APPEARANCE

0-20 SAME A/A

0-18 SAME A/A

0-16 SAME A/A

0-17 SAME A/A

END MOTTLED

RECOVERY %
BLOWS %
DEPTH
TYPE

SAMPLE NO.
METHOD OF BORING: ROCK

2

4

4

7

6

6

3

3

3

4

4

7

8

3

5

2

2

1

3

5

2

2

3

2

2

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2

2

Scale No. 1 of 1

Attn: Mr. J. H. ...

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: _____

PROJECT NO.: _____

STAFF: _____

DATE: _____

WELL NO.: BG-nw-1

(1) TOTAL CASING AND SCREEN LENGTH (ft.): 12.00 (4000V)(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 3.46(4) VOLUME OF WATER IN CASING (gal.): 1.5

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{\hspace{2cm}} \text{ GAL.}$$

TIME 0930 945 1000 1015 1025 1035 1045

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	4.5	9.0	13.5	18.0	22.5	27.0			
pH	6.32	6.46	6.53	6.58	6.63	6.61	6.61			
CONDUCTIVITY uS	1230	1246	1318	1404	1423	1455	1457			
TEMPERATURE	12.4	14.0	13.1	12.2	12.3	12.5	12.6			
TURBIDITY	117	>1000	>1000	>1000	>1000	251	128			
APPEARANCE	5 LITERS U. PURE. TURBID AND -RED BROWN COLOR									

COMMENTS: AFTER DEVELOPMENT, DEPTH TO BOTTOM IS 13.25'

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: _____

PROJECT NO.: _____

STAFF: _____

DATE: _____

WELL NO.: B6-mw-2

(1) TOTAL CASING AND SCREEN LENGTH (ft.): 14.0 (surf)(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 3.70(4) VOLUME OF WATER IN CASING (gal.): 1.75

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.75} \text{ GAL.}$$

1445 1455 1525 1555

$$\begin{array}{r} 10.3 \\ \times 1.7 \\ \hline 721 \\ 1030 \\ \hline 1751 \end{array}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	3.5	5.25	7.0						
pH	6.74	6.84	6.97	6.88 7.00 6.88						
CONDUCTIVITY	1118	865	88 936	946						
TEMPERATURE	19.6	15.4	17.2	14.1						
TURBIDITY	21.2	>1000	>1000	>1000						
APPEARANCE		Red M.								

COMMENTS: DRY AFTER 3.5 GAL, ALLOW TO RECOVER

1515 DTW = 8.36

DRY AFTER 5.25 GAL

DRY AFTER 7 GAL

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: _____

PROJECT NO.: _____

STAFF: _____

DATE: _____

WELL NO.: 36-mw-3

(1) TOTAL CASING AND SCREEN LENGTH (ft.): 13.12(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 4.64(4) VOLUME OF WATER IN CASING (gal.): 1.5

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.5} \text{ GAL.}$$

TIME 1320 1330 1345 1400 1418

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	4.5	9.0	13.5	16.0					
pH	6.51	6.58	6.74	6.82	6.84					
CONDUCTIVITY	1340	1334	1360	1349	1357					
TEMPERATURE	14.0	12.3	12.1	12.2	12.2					
TURBIDITY	759	>1000	>1000	621	>1000					
APPEARANCE	PR OK TMB.									

COMMENTS: AFTER 9.0 GAL, WELL ALMOST DRY, ALLOW 15 MIN TO RECOVER
1400 DRW = 6.66
1418 DRY

WELL DEVELOPMENT / PURGING LOG

13.8
5.7
8.1

PROJECT TITLE: _____

PROJECT NO.: _____

STAFF: _____

DATE: _____

WELL NO.: B6-MW4(1) TOTAL CASING AND SCREEN LENGTH (ft.): 13.8(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 5.70(4) VOLUME OF WATER IN CASING (gal.): 1.4

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.4} \text{ GAL.}$$

PARAMETERS TIME	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	5	10	15	20	25	30			
	1510	1520	1530	1535	1540	1545	1550			
pH	7.03	7.04	6.98			7.07	7.08			
CONDUCTIVITY (-S)	832	819	831	834	821	815	817			
TEMPERATURE	13.2	12.6	12.4			12.5	12.6			
TURBIDITY	22.1	200	2100	200	2100	2100	2100			
APPEARANCE	50 1	VT at 6"	VT	VT	VT	VT	VT			

COMMENTS: DRAIN TO BOTTOM. THEN PRODUCES FAIRLY WELL, AND ~3-4"
STAYS IN WELL
1045 DTW = 6.64

MALCOLM
PIRNIE

WELL DEVELOPMENT / PURGING LOG

18.44
5.14
14.3
+0.17
10.01
14.30
24.31

cht

PROJECT TITLE: _____

PROJECT NO.: _____

STAFF: _____

DATE: _____

WELL NO.: B6-USGS-1

(1) TOTAL CASING AND SCREEN LENGTH (ft.): 18.44

(2) CASING INTERNAL DIAMETER (in.): 2"

(3) WATER LEVEL BELOW TOP OF CASING (ft.): 5.14

(4) VOLUME OF WATER IN CASING (gal.): 2.4

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{ (1) - (3) \}] = \underline{2.4} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	2.5	3.0	4.8	7.2	22				
	1020	1030	1040	1115	1150	0				
pH	7.69	6.94	DRY	6.65	6.62	Y				
CONDUCTIVITY	552	905		1787	1405					
TEMPERATURE	17.8	14.5		14.1	13.6					
TURBIDITY	28.3	>100		>100	>100					
APPEARANCE	SLT	T 50 VT	Y	VT	T 70 VT					

COMMENTS: NO GREEN OR BROWN EQUIVALENT
1045 PPM - 16.96

WELL DEVELOPMENT / PURGING LOG

9.20
1.96
2.24
0.17
50.68
72.40
123.08

PROJECT TITLE: _____

PROJECT NO.: _____

STAFF: _____

DATE: 7/14/98WELL NO.: B6-US652(1) TOTAL CASING AND SCREEN LENGTH (ft.): 9.20(2) CASING INTERNAL DIAMETER (in.): 2"(3) WATER LEVEL BELOW TOP OF CASING (ft.): 1.96(4) VOLUME OF WATER IN CASING (gal.): 1.2

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.2} \text{ GAL.}$$

PARAMETERS TIME	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	1.2	1.5	2.5						
	945	1000	1010	1100						
pH	6.52	6.77	DL4	6.74						
CONDUCTIVITY uS	1048	1001		1028						
TEMPERATURE	32.1 18.5	16.4		17.0						
TURBIDITY	61.3	2.00		2.00						
APPEARANCE	5L 7.000 GAL	18.62 U.T.	↓	same						

COMMENTS:

SLIGHT ODDA, 10131024 CUBICAL, SLIGHT SCREEN POLISH
BUNDLES DRY AFTER 1.5 GAL - DTW = 9.12
REMOVE 1 GAL AT 1050

MALCOLM
PIRNIE

WELL DEVELOPMENT / PURGING LOG

16.25
8.25
8.00
0.17
5.00
8.00
1.36

PROJECT TITLE: _____

PROJECT NO.: _____

STAFF: _____

DATE: 7/17/98

WELL NO.: HP-1

- (1) TOTAL CASING AND SCREEN LENGTH (ft.): 16.25
- (2) CASING INTERNAL DIAMETER (in.): 2"
- (3) WATER LEVEL BELOW TOP OF CASING (ft.): 8.25
- (4) VOLUME OF WATER IN CASING (gal.): 1.4

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = 1.4 \text{ GAL.}$$

PARAMETERS TIME	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	5	7.0	10	15	20				
	1415	1425	1430	1435	1445	1455				
pH	7.17	7.14	7.24	7.18	7.17	7.19				
CONDUCTIVITY (uS)	963	885	898	895	899	904				
TEMPERATURE	14.1	13.7	11.5	11.2	11.2	11.4				
TURBIDITY	31.1	>100	>100	>100	>100	>100				
APPEARANCE	26 T	V. TURBID DEWH.	V. TURBID	VT	V. TURBID	VT TO T				

COMMENTS:

WELL BECAME DRY AFTER 5-7 GALLONS, BUT
RECOVERED FAIRLY QUICKLY, CONTINUED RABBITING MORE SLOWLY
UNTIL 45 20 GAL.

WELL DEVELOPMENT / PURGING LOG

15.80

4.62

11.18

+ 0.17

11.35

78.26

11.180

1.9006

PROJECT TITLE: _____

PROJECT NO.: _____

STAFF: _____

DATE: 7/13/08WELL NO.: HP-nw-2(1) TOTAL CASING AND SCREEN LENGTH (ft.): 15.8(2) CASING INTERNAL DIAMETER (in.): 2"(3) WATER LEVEL BELOW TOP OF CASING (ft.): 4.62(4) VOLUME OF WATER IN CASING (gal.): 1.9

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.9} \text{ GAL.}$$

PARAMETERS Time	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	4	8	13	17	21	25	29	33	
	1105	1115	1125	1130	1135	1140	1145	1150	1155	
pH	6.56	6.61	6.63	6.65	6.71	6.71	6.71	6.70	6.69	
CONDUCTIVITY	512	1509	1500	1478	1115	1366	1473	1375	1472	
TEMPERATURE	20.6	20.9	20.8	20.9	18.0	17.8	17.3	17.2	17.3	
TURBIDITY	78.7	2100	2100	2100	2100	2100	2100	2100	2100	
APPEARANCE	5-62 TURB	very Turbid - Brown	Brown Turbid	Brown Turbid	Brown Turbid	Brown Turbid	Brown Turbid	Brown Turbid	Brown Turbid	

COMMENTS:

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE:

PROJECT NO. :

STAFF:

DATE:

7/13/88

930

WELL NO.: *HP-20-3*

(1) TOTAL CASING AND SCREEN LENGTH (ft.):

(2) CASING INTERNAL DIAMETER (in.):

(3) WATER LEVEL BELOW TOP OF CASING (ft.):

(4) VOLUME OF WATER IN CASING (gal.):

WELL I.D.

VOL.

GAL/DAY

1"

0.04

2"

0.17

3"

0.38

4"

0.66

5"

1.04

6"

1.50

8"

2.60

$$V = 0.0408 \left[(2)^2 \times \{ (1) - (3) \} \right] = 2.1 \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	5	9	13	18	22	27	32	36	
TIME	7:30	0950	0955	1006	1010	1016	1020	1028	1030	
pH	6.80	6.64 ~~6.81~~	6.62	6.66	6.70	6.72	6.76	6.81	6.79	
CONDUCTIVITY μS	764	795	807	814	851	888	865	847	882	
TEMPERATURE	19.1	20.3 ~~20.9~~	20.3	20.4	20.7	20.7	21.7	21.8	21.7	
TURBIDITY	10.2	79.8	>100	>100	>100	>100	>100	>100	>100	
APPEARANCE	CLEAR	GRAY TURBID (VERY)	GRAY TURBID (VERY)	GRAY TURBID (VERY)	GRAY TURBID	GRAY TURBID	GRAY TURBID	GRAY TURBID	GRAY TURBID	

clearly $\rightarrow$

COMMENTS: 1105 SPHER New - 3

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WELL DEVELOPMENT / PURGING LOG

15.08
6.92
8.16
0.17
5212
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3872

PROJECT TITLE: _____

PROJECT NO.: _____

STAFF: _____

DATE: 7/13/13WELL NO.: HP-MW-4

- (1) TOTAL CASING AND SCREEN LENGTH (ft.): 15.08
- (2) CASING INTERNAL DIAMETER (in.): 2"
- (3) WATER LEVEL BELOW TOP OF CASING (ft.): 0.92
- (4) VOLUME OF WATER IN CASING (gal.): 1.4

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.4} \text{ GAL.}$$

PARAMETERS TIME	ACCUMULATED VOLUME PURGED (GALLONS)									
	0 1300	5 1315	10 1325	15 1335	20 1345	25 1350	30 1400			
pH	6.78	6.73	6.67	6.74	6.76	6.78	6.78			
CONDUCTIVITY (μS)	940	944	965	947	974	961	957			
TEMPERATURE	16.4	13.5	12.0	12.3	~~12.7~~ 12.6	12.7	12.6			
TURBIDITY	51.8	>100	>100	>100	>100	>100	>100			
APPEARANCE	SL. TURB. GRAY	VERY TURB	U.T.	U.T.	T TO U.T.	TURB.	T TO SL T			

COMMENTS: IMPROVES WELL, FLUSH BOTTOM

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO. : 0266-325STAFF: Daniel RikerDATE: July 13, 1998WELL NO.: **HP-MW-4**(1) TOTAL CASING AND SCREEN LENGTH (ft.): 15.08(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 6.92(4) VOLUME OF WATER IN CASING (gal.): 1.4

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{ (1) - (3) \}] = \underline{1.4 \text{ GAL.}}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	5	10	15	20	25	30			
Time	1300	1315	1325	1335	1345	1350	1400			
pH	6.78	6.73	6.67	6.74	6.76	6.78	6.78			
CONDUCTIVITY	940	944	965	947	974	961	957			
TEMPERATURE	16.4	13.5	12	12.3	12.6	12.7	12.6			
TURBIDITY	51.8	>100	>100	>100	>100	>100	>100			
APPEARANCE	Slightly turbid	Very turbid	Very turbid	Very turbid	Turbid to v.t.	Turbid	Slightly to turbid			

COMMENTS: Produces significant water.
No odor or sheen observed.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO. : 0266-325STAFF: Daniel RikerDATE: 7/28/98WELL NO.: **BG-MW-1**

- (1) TOTAL CASING AND SCREEN LENGTH (ft.): 13.25
- (2) CASING INTERNAL DIAMETER (in.): 2
- (3) WATER LEVEL BELOW TOP OF CASING (ft.): 4.15
- (4) VOLUME OF WATER IN CASING (gal.): 1.55

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.55} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	1.6	3.81	4.98	6.2		SAMPLE			
Time	0925	0930	0935	0940	0945		0950			
pH	6.36	6.38	6.39	6.44	6.44		6.45			
CONDUCTIVITY	1305	1398	1450	1459	1449		1352			
TEMPERATURE	17.7	18.15 16.9	15.9	15.6	15.7		16.2			
TURBIDITY	28	>100	>100	>100	>100		37			
APPEARANCE	sl turb	TURB TO VT	VT TO VT	T TO VT	T TO VT		SL T			

COMMENTS: Turb - Brown
0950 SAMPLE COLLECTED

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO.: 0266-325STAFF: Daniel RikerDATE: 7/28/98WELL NO.: **BG-MW-2**

- (1) TOTAL CASING AND SCREEN LENGTH (ft.): 15.10
- (2) CASING INTERNAL DIAMETER (in.): 2
- (3) WATER LEVEL BELOW TOP OF CASING (ft.): 5.45
- (4) VOLUME OF WATER IN CASING (gal.): 1.64

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.64} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	1.7	33.0	200		SAME				
Time	1005	1010	1015	1015 (1015)		1045				
pH	6.62	6.60	6.75			6.77				
CONDUCTIVITY	1157	1127	1130			1115				
TEMPERATURE	22.3	17.0	16.2			17.3				
TURBIDITY	12	2100	2100			28				
APPEARANCE	SL T	7 PP VT	VT	↓		SL T				

COMMENTS: 7000 - 20000

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO. : 0266-325STAFF: Daniel RikerDATE: 7/28/98WELL NO.: **BG-MW-3**(1) TOTAL CASING AND SCREEN LENGTH (ft.): 13.10(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 5.32(4) VOLUME OF WATER IN CASING (gal.): 1.3

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 \left[(2)^2 \times \{ (1) - (3) \} \right] = \underline{1.3} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	1.3	2.6	3.9		SAMPLE				
Time	1245	1250	1255	1300		1310				
pH	6.59	6.58	6.62	6.63		6.68				
CONDUCTIVITY	1248	1391	1385	1384		1336				
TEMPERATURE	22.3	16.7	16.2	16.0		16.3				
TURBIDITY	7.6	82	99	7100		89				
APPEARANCE	Cloudy	slt TPT	slt TPT	TURB		slt TPT				

COMMENTS:

total time - 13 min 10 sec, then at 3.9 gal.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO. : 0266-325STAFF: Daniel RikerDATE: 7/28/98WELL NO.: **BG-MW-4**(1) TOTAL CASING AND SCREEN LENGTH (ft.): ~~5.70~~ 13.80(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 6.10(4) VOLUME OF WATER IN CASING (gal.): 1.3

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.3} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	1.3	2.6	3.9		5.2				
Time	1400	1405	1410	1415		1420				
pH	6.86	6.84	6.83	6.83		6.85				
CONDUCTIVITY	771	822	833	839		815				
TEMPERATURE	18.4	16.3	14.3	14.3		14.5				
TURBIDITY	9.3	7100	700	7100		38				
APPEARANCE	clear	FT	FT	FT		SLT				

COMMENTS: TABS - brown

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO. : 0266-325STAFF: Daniel RikerDATE: 7/28/98WELL NO.: **BG-USGS-1**

- (1) TOTAL CASING AND SCREEN LENGTH (ft.): 19.00
- (2) CASING INTERNAL DIAMETER (in.): 2
- (3) WATER LEVEL BELOW TOP OF CASING (ft.): ~~2.4~~ 4.97
- (4) VOLUME OF WATER IN CASING (gal.): 2.4

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{2.4} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	2.4	4.8	5.0		SAME				
Time	1020	1030	1040	DRY		1045				
pH	7.02	6.67	6.68			6.61				
CONDUCTIVITY	1375	1902	1932			1943				
TEMPERATURE	16.7	14.6	13.6			15.2				
TURBIDITY	43	>100	>100			>100				
APPEARANCE	SLT W	VT W	VT	↓		BT TUS				

COMMENTS: A MANY METAL PLATES IN THE WATER
(*) SPIN A GREAT IDEA OF SAND IN THE WELL, GROUND PULLING
UP 2-3 INCHES EACH TIME FULL BOTTLE

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO.: 0266-325STAFF: Daniel RikerDATE: 7/28/98WELL NO.: **BG-USGS-2**(1) TOTAL CASING AND SCREEN LENGTH (ft.): 9.20(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 2.10(4) VOLUME OF WATER IN CASING (gal.): 1.2

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.2} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	1.2	1.5		SAVED					
Time	1220	1235	1240		1350					
pH	6.53	6.59	6.67		6.68					
CONDUCTIVITY	1032	1036			1078					
TEMPERATURE	18.2	17.7			18.4					
TURBIDITY	71	>100			81					
APPEARANCE	slt	slt VT	Y		T. #					

COMMENTS:

7544 - black
sulfur, even 000A

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO.: 0266-325STAFF: Daniel RikerDATE: 7/29/98WELL NO.: **HP-MW-1**

- (1) TOTAL CASING AND SCREEN LENGTH (ft.): 16.48
- (2) CASING INTERNAL DIAMETER (in.): 2
- (3) WATER LEVEL BELOW TOP OF CASING (ft.): 7.62
- (4) VOLUME OF WATER IN CASING (gal.): 1.2

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.2} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	1.2	2.4	3.6		SAMPLES				
Time	0905	0920	0925	0930		0930				
pH	6.49	6.86	6.89	6.90		7.03				
CONDUCTIVITY	961	962	957	956		952				
TEMPERATURE	15.2	14.9	13.8	13.6		13.9				
TURBIDITY	31	>100	>100	>100		59				
APPEARANCE	C to SLT	T.	SLT T to VT	VT		SLT				

COMMENTS:

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO.: 0266-325STAFF: Daniel RikerDATE: 7/29/98WELL NO.: **HP-MW-2**(1) TOTAL CASING AND SCREEN LENGTH (ft.): 13.70(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 6.54(4) VOLUME OF WATER IN CASING (gal.): 1.2

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.2} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	1.25	2.5	3.75		SAMPLE				
Time	10 01	10 06	10 08	10 13		11 39				
pH	6.48	6.49	6.52	6.53		6.62				
CONDUCTIVITY	1381	1456	1459	1457		1469				
TEMPERATURE	17.0	16.7	16.1	16.1		15.7				
TURBIDITY	15	7100	7100	7100		22				
APPEARANCE	CLEAR	TURBID	TURBID	TURBID		CLEAR				

COMMENTS:

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO. : 0266-325STAFF: Daniel RikerDATE: 7/29/98WELL NO.: **HP-MW-3**(1) TOTAL CASING AND SCREEN LENGTH (ft.): 14.02(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 2.62(4) VOLUME OF WATER IN CASING (gal.): 1.94

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.94} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	2.0	4.0	6.0		SAMPLE				
Time	1030	1034	1039	1045		1200				
pH	6.92	6.86	6.89	6.92		6.99				
CONDUCTIVITY	920	861	871	868		824				
TEMPERATURE	19.2	16.8	16.1	16.2		16.9				
TURBIDITY	10	62	74	7100		19				
APPEARANCE	CLEAR	CLOUDY	CLOUDY	TURBID		CO.				

COMMENTS:

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Holiday ParkPROJECT NO. : 0266-325STAFF: Daniel RikerDATE: 7/20/06WELL NO.: **HP-MW-4**(1) TOTAL CASING AND SCREEN LENGTH (ft.): 15.70(2) CASING INTERNAL DIAMETER (in.): 2(3) WATER LEVEL BELOW TOP OF CASING (ft.): 7.55(4) VOLUME OF WATER IN CASING (gal.): 1.70

WELL I.D.	VOL. GAL/FOOT
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 [(2)^2 \times \{(1) - (3)\}] = \underline{1.70} \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	0	1.3	2.6	3.9		Sample				
Time	1243	1247	1250	1252		1314				
pH	5.55	6.89	6.87	6.88		6.91				
CONDUCTIVITY	1017	1136	995	957		913				
TEMPERATURE	20.1	18.5	16.7	16.8		19.6				
TURBIDITY	1.7	2100	7100	5100		20				
APPEARANCE	Clear	Turbid	Turbid	Turbid		Clear				

COMMENTS:



7/1/90	HP/BG	2 OF 3	7/1/90	HP/BG	3 OF 3
1000	BEGIN DRILLING - HAND DIG TO 1.5 FEET		91230	RECON DRILL AT USMA ACCOUNT (OWN BY V. WOODWARD) TAKEN FROM TO DECONTAMINATED AREA FLIGHT	
1000	NOT FOR CUCU, OFF SITE (NP/BAH)				
1010	DAB MARKING OFF SITE		1315	BEGIN DRILLING BG-NW-2	
1030	BEGIN DRILLING BG-NW-1		1400	REPAIR 16" BGS, STOP DRILLING ? PLACE CASING	
1040	COLLECT SAMPLE FROM 2-4' INTERVAL			SCREEN 16-6'	
				SAND 16-85'	
1120	COMPLETE WELL TO DEPTH - BEGIN INSTALLATION			BENT COLL 5-2.5'	
				- HYDRATE CHIPS	
	SCREEN - 14' TO 4'		1500	N. FORCECC, OFF SITE	
	SAND - 14' - 3.5'			- STB DOTS NOT HAVE CEMENT TO MAKE FLUSH MOUNTS, SO COVER WITH DRUMS	
	BEST. PELLETS 3.5' - 2.5'				
	WELL CONCRETE IN THE FLUSH MOUNT LATER TODAY		1515	V. WOODWARD OFF SITE	
1200	FINISH WELL FIRST FOR CONCRETE		1530	OFF SITE	

6/16/98	HP/86	4 of 4	7/1/98	HP/86	1003
1250	TRY TO FIND WELLS ALONG ZIMMERMAN ROAD.		0800	D. LILKER ON SITE FOR FIRST DAY OF DRILLING OPERATIONS. (HOLIDAY PARK & BOTANICAL GARDEN) CLOUDY SKIES, 71-80°, NOSEA- ATE WIND.	
1310	FIND FIRST WELL AT 1125 NORTH, 35 EAST. - RUSTED CLOSED, WELL TURNS WHEN TRY TO OPEN CENTRAL CASING TURNS). - STRAIGHT, CASING. (2")			JOHN HYDEN, VALERIE WOODWARD, & BRIAN SADOWSKI (ALL MTHS) ON SITE.	
1325	FIND WELL AT 500 N/100E, - ALSO RUSTED CLOSED, DOES NOT TURN, SET AT 15-20° FROM PERPENDICULAR TO GRADE 1 OR 1.5" WELL.		0815	SPEER WITH NICK ROBERT AT GOLF COURSE - IT'S FINE TO USE WATER & POWER FROM MAINTENANCE SHOP.	
1345	ON SITE		0830	SJB ON SITE - DALE MATTHEWS & LARRY - BEGIN RECORD	
			0940	THE MAINTENANCE ON SITE - SHOW DALE LOCATION AT HP & BO - HED LIKE ALL MADE INTO PLUS MOUNTS AT BOTH SITES.	

6/16/98 HP/BC 304

TURNS ROAD EASIER THAN
THE FIRST (ENTIRE CAR & CASINO)
AND THE MAP IS ROUTED
TO THE NATAL RISE
- ONLY WAY TO OPEN
WELL IS TO CUT OFF
THE TOPS.

1150 SPEAK w/NICK ROSEAR (HP)
WE MAY PUT IN WELLS -
HE THINKS ITS FINE AT LOW
AS THERE ARE TYPE IN AREA
THAT DON'T BUTTERFLY w/ GOLF
COURSE.

- HE'D LIKE IT DONE BEFORE
THEY SELL (LATE JULY), IF POSSIBLE.
- E. INFORMATION THAT THERE WILL
BE FURTHER WORK DUE TO LOW
LEVELS OF PHOSPHATE THAT WE
FOUND.

1210 SPOKE WITH PAUL WYKOS (DE)
TOLD HIM SAME AS ABOVE
- FOUND LOW LEVELS OF
COPPER, LIKELY DO MORE WORK.

6/16/98 HP/BC 304

DON W. SAID ITS FINE TO
LOOK AT WELLS, AND ETO
BE NICE IF WE COULD REMOVE
TRAPS OR MAKE FLUSH MOUNTS.

1220 TRY TO OPEN FIRST WELL AT
AG. (NORTHWARD-MOIST W/ 2
IN A DESIRABLE
NORTH-SOUTH LINE IN
CENTER OF GARDENS). (2")

- WELL DOES NOT OPEN
(ROOTS CLOSED), BUT THE
RIG IS STAGNANT AND
THE WELL DOES NOT TURN
WHEN TRY OPENING.
- THE CONCRETE COLLAR
IS STILL SOMEWHAT IMPACT
1235 TRY WELL 2 (SOUTHWARD-
MOIST). (2")

- ALSO REQUESTED SHOT, AND
SENT AT A 45° ANGLE
TO THE GROUND.

4/23/80

B&R

2 OF 2

6/16/88

H/P/86

10F4

THE AREA OF THE LEANING
HAS BLACK STAINING AND THERE
IS A CRACK PETROLEUM OIL
- MAY BE AREA PREVIOUSLY
DISCUSSED BY MORGAN CO. WASTE
DEPT.

FINISH SAMPLING, COMPLETE
COCS, PACE COOKERS FOR
SHIPPING.

THERE ARE NO ASTS OR
EVIDENCE OF JETS AT THE
SITE (THE LAMPING PORTAL)
OTHER THAN 1 USE USED AS A
BEEH STAND AND ANOTHER USED
AS A BEAM OR A SKOSON CONTROL
FOR POND ON WESTERN SIDE OF
SITE.

THERE ARE ASTS IN THE CRACK
AREA OF THE PROPERTY, BUT NONE
APPEAR TO BE IN USE PRESENTLY

1215

OPPOSITE

1100 D. RIVER ON SITE FOR EVALU-
ATION OF WELLS AT HOLIDAY
PARK AND BOTANICAL GARDENS
TO ASSESS UTILITY.

- BEGIN AT BOTANICAL GARDENS.
- DAN WYSEK NOT AROUND
CLOUDY SKIES, MID 70s, WIND,
MODERATE HUMID.

- FIRST WELL AT HOLIDAY
PARK NEAR THE RESTAURANT. (1")
- WALL IS BENT 10-15° (1.5")
FROM PERPENDICULAR TO THE
GROUND

- WELLS ATTEMPTING TO REMOVE
CAP, THE RIVER ALSO MOVE
(TOWARD 1/4 TURN). THE NEAR
CAP IS RUSTED TO THE
NEAR RIVER, AND CANNOT
BE REMOVED.

1130 THE WELL (1" OR 1.5")
RESTAURANT - FIRST WELL

4/9/98	HP/BC	4 OF 4	4/23/98	BTR	1 OF 2
BOWEN B-16 WAS COMPLETED TO SAMPLE INTERVIEW w/ ANFAM HITS (WASTE STREAM RESULTS) AND TO COLLECT GROUNDWATER FROM THAT AREA FOR TEL (FULL) AND THE ARTALS			1930	D. RIVER	ONLY FOR THE SAMPLING OF SURFACE WATER (WASTEWATER & GROUNDWATER) AT THE BRIDGE & RAFFLE SITE
VALERIE & I DECIDE OTHER SAMPLING LOCATIONS:				CLEAR DRAINAGE, SDJ. SELECT AREAS	
1) ILL SWAMP AREA THAT HP1-SS1 WAS COLLECTED FOR FULL TEL AND TEL.				SET UP AT SW-2, DOWNSTREAM LOCATION	
2) POND NEXT TO ABOVE LOCATION FOR PHASEOL ANALYSIS			1045	TEMS COLLECT SW-2 FOR UPLS, SWOL, PESTICIDES, NORMS, CW	
3) FILL PILES AREA 2 (HP) FOR FULL TEL & TEL			1100	COLLECT SW-1 FOR UPLS/PAH LOCATION	
1450 VALERIE OFFSITE				SET UP FOR LITHATE LOCATIONS	
I LABEL BOTTLES, COLLECT ABOVE SAMPLES			1215	COLLECT SAMPLE RUN AREA ON NE SIDE OF LANDFILL + 100' TO SOUTH OF ACCESS ROAD, 40' EAST OF CURVET WHERE SW-3 SAMPLED	
1) HP1-SS1A					
2) HP1-SW1					
3) HP2-SS1 + MS/MSO					
1500 OFFSITE					

4/9/98

48/86

2 of 21

SPRINKLER WITH VALVE ABOUT
300 YDS LOCATIONS - WITH DO
AT LEAST ONE IN AREA
THE NEIGHBORHOOD MAY CONTAIN
DRAINS, AND THERE WILL BE
CONCRETE TO 10' NORTH, EAST
AND WEST OF HP-81 BECAUSE
IT CONTAINS ATTACHED PIPES
WHEN AVALANCHES

0350

move to April - Bill
Finnish, target April - 312

COULDET	FULL	TEL	SANAE
Plan	D/L	FOR	→ VUL
BELONGS	THAT	WOULD	BE A.R.E
USEFUL	THAT	A	SANAE S.O.L
SAMPLE	FROM	AN	HECA REPORT
SEE	ADVISED.		

0011

CALL TO PAUL SENDAL - 287
THANKS A LOT! ORDER UNDER 5000
1402 \$ 28.00 for
8 THE FOLLOWING 5000, BUT I
WILL SEND 3402 just

4/3/59

28/84

3054

per set. will I have enough wire
only 4-02 - 465 TENTS ENDS
145 340.

NIOBARA MOKHANE I, PLACED
NEW PILES FOR ELECTRIC
LINES. NEAR LAGO TMSV
ENCOUNTERED AN OPOA, WHE
WENT OVER WITH PLO $\approx$ 25 PPM.
SHE COLLECTED A SAMPLE.

558 TABL LUNEN 3/7/68

VAL AND I DEAL w/ NIND.
1115 JOHN HYDEN AVENUE (DEC), HAS VAL GO TO
RESONANCE DELIVERANCE

4/8/98	HP/66	3 OF 3	4/9/98	HP/66	1 OF 4
THERE IS SOME ZONE STAINING IN A FEW OF POOLS ABOVE BORINGS B-6 AND B-5. WE COLLECTED A SOIL SAMPLE FOR PHENOLS FROM THE A SOIL PILE THAT SHE SAID LOOKED AT THOUGH IT HAD SOME ASH OR CINDER MATERIAL. - THE PILE IS MADE OF A DEBRIS AROUND A SMALL DEPRESSION (2' TALL, 15' DIAMETER) DEBRIS LEAVE ARE IN BACK AREA OFFSITE.			0730	D. RINGE OFFSITE FOR DAY 4 OF SOIL BORING PROGRAM SJB OFFSITE, WILL BE PREPARED FOR HP2-B7 WHILE I WAIT FOR WATER STREAM TO PICK UP THE SAMPLES. VALARIE WOODWARD (OBC) AND STATE CLOUDY SKIES, 110-40'S, NEGATIVE BREEZE. WE WILL COMPLETE THE REMAINING BORINGS ALONG ZIMMERMAN ROAD, THEN RETURN TO AREA 1 (\$ MAINTENANCE SAND)	
			0750	WASTE STREAM OFFSITE	
			0805	BELN HP2-B7	
			0830	MATT FOR GUCCI, (NYSOP) OFFSITE	
			0845	FINISH B7, ROAD BACK TO MAINTENANCE SUD FOR ABCAN	

4/8/68	HP/BG	1 of 3	4/8/68	HP/BG	2 of 3
0730	DRIKER onsite FOR DAY 3 OF BORING PROGR.				COMPLETE BORING, TAKE WATER SAMPLE FOR ANALYSIS (HP2-B1W)
	STB onsite		1110	BEGIN	HP2-B2.
	M10 40', SLIGHT RAIN, CLOUDY SKIES. RAIN LIGHTLY.		1130	JUST SOME RAIN OVER, NOT SOME TYPE OF OBSTRUCTION.	
0735	WASTE STREAM onsite FOR SAMPLE PICKUP.		1215	FINISH	HP2-B2, TAKE CATCH DAILIES DECIDING THE AREAS
0815	MOBILE TO AREA 2, BIRMINGHAM RD. VISIT WOODWARD (NITRO) onsite		1330	RESUME	DAILIES - HP2-B4 FINISH BORING, COLLECT. WATER SAMPLE HP2-B4W
0830	BEGIN HP2-B3. FINISH BORING AT 20. SOMEONE FROM CITY CAME OUT TO OPEN A PATH TO BORING LOCATION. 1 1/2 1400 FILLED IN PREVIOUSLY THE AREA AROUND ENTRANCE TO RECYCLING AREA.				MOVE TO SOUTH END OF BIRMINGHAM ROAD - (AREA 2) COMPLETE B-6, B-5 (COLLECT GROUNDWATER SAMPLE HP-B5W), AND B-8.
			1430	MATT FORCECE	ON SITE
	MOVE TO HOME HP2-B1		1600	MATT LEAVES	

4/7/98 4 OF 5

BEGUN ~~B6~~ B6-B5

1315

1400

1430

1500

1555

1630

1645

1700

WENT TO AG-B6
WAT FORECAST ONSITE
B6-B7

B6-B9 - SINCE B-7 AND
B9 SHOWED LITTLE IF
ANY FINE MATERIAL, AND
NO BECAUSE PRO-NEAR-
MENTS, VARIOUS PERIODS TO
NOT COMPLETE B6-B8.

BEGUN ~ B6-B2

WAT IN ONLY TASTES -
COLLECT FOR POTENTIAL ANALYSIS.

- COLLECT B6-B2 IN GROUND
WATER SAMPLE FOR TEL
VOCs, SUOCS, PEST PCBs AND
TAL-NEARLY + CYANIDE

WAT, SJB OFFSITE

* COLLECT B6-SUB FLOW
AREA OF FOUNTAIN

FOUNTAIN IS NOT WORKING,

4/7/98 HP/B6 5 OF 5

BUT WATER IS DISCHARGING
TO THE CANAL FROM THIS
AREA, WHICH HAS HEAVY IRON
STAINING.

- MARK LOCATIONS B6, B7, B8, B9
1735 OFFSITE

4/7/98

HP/B6

2 of 5

CONSTRUCTION OF A POND IN COURSE
EXPANSION AREA.

VAL INDICATED W/ MAY NOT
HAVE TO SAMPLE IN THAT AREA
THEN.

NICK THEN FOR US ABOUT 10:00
EAST ROSSVIEW ROAD TO FIRST OPEN
AREA LEADING TO GOLF COURSE (WATER)
TO JOHN HYPER'S HOUSE). NICK SAID
THEREAS USED TO BE A WOOD YARD,
BUT IT APPEARS TO HAVE BEEN
REMOVED.

GO TO BOT. GARDENS - BEGIN TO
SET UP RIG.

- DAN WHITE ON SITE. DISCOVERS
BORING LOCATIONS. WELL HAVE ONE
TO 2', THEN BEGIN BORING.

- VAL SAID TO CALL HER IF
THERE'S ANY DAMAGE, AND CALL
THE CARD OF IT.

0900 BEGIN PUMPING FLYWOOD
OUT TO B6-B1.

4/7/98

HP/B6

3 of 5

VAL OFFSITE FOR POND CLOS

0935 BEGIN DRAINING AT B6-B3

B6-B5 - HYPER #1 - PREVIOUS
B6-B5 - HYPER #1 - COLLECTED
FROM POOL OF WATER ADJACENT TO
BOLDS B6-B1 (APPROX 3, 4)

SS COLLECTED FROM AREA
IN EASTERN PART OF CENTRAL
AREA NEAR DEISE BURNES, AREA
I HAD SEEN STAINING & STAIN
ON WATER SURFACE ON 4/3/98

1020 FINISH B6-B3, GO TO B6-B1

1115 FINISH B6-B1, WALK TO B4

1200 TAKE LUNCH.

1230 RESUME - UTILIZE TO B5
(WILL RETURN FOR B2 AT 2:00)
SPOKE WITH EMPLOYER OF BOT. GARD.
BORING 6-9 ARE IN AREA
NOT SERVICED BY WATER OR ELECTRIC

4/6/98

1650

HP/86

FINISH HP1-B1,
PACK EQUIPMENT

VALERIE DRESSING

TAKE 2 PICTURES OF STAMINOS

AREA NEXT TO BRIDGE B-B

- STAMINOS (IRON) LEADS FROM

GROUND SURFACE NEAR 340

TELEPHONE POLE FROM ROAD &

INTO NEARBY POND

COLLECT SAMPLE FOR

24-HR TEST FOR PHENOLS

HP1-551

PID SHOWS NOTHING IN

THIS AREA

OFFSITE

1715

3 OF 3

4/7/98

WP/86

1045

0730 D.RIVER SWITS FOR DAY 2
OF SOIL SAMING PROGRAM
AT HOLIBAY PARK AND BOT-
ANICAL GARDENS.

SJB & VAL WOODWARD (MYSARE)
ALREADY SWITE

SJB BEGINS DECONTAMINATE
THE AREAS.

CLEAR SKIES, HIGH 30s, SLIGHT
BREEZE. FORECAST TENDS TO RISE TO
60.

MEET WITH NICK ROBERT -
SHOWS VAL & I 2 OLD MOUNTAIN
WELLS NEAR THE CLUBHOUSE.
HE SAYS THAT ~~NEAR~~ THE LATER
TRENCHING MACHINE VAL TROUBLED
FILLED IN THIS AREA ONLY
WORKED IN THE PHOTOCHE AREA.
- ~~SEE~~ JOHN HYDEN & I SAMPLED
FROM THAT AREA DURING THE

4/6/68	HP/66	1 OF 3	4/6/68	HP/66	2 OF 3
0830	D. R. MEER ON SITE (WEDNESDAY PM) FOR DAY 1 OF INITIAL PHASE OF SOIL DRAINAGE PROGRAM.		1205	FINISH B-7, TANKS WITH DRAINAGE WILL BEAT AND AROUND RIG.	
	SUB SERVICES ALREADY ON SITE - DOLE MATHNIES I'NAT MATHNIES		1230	MATT FARUCCI, FROM NYMAN ODDITE	
	NOT A CAR-550X (ATV) RIG - BEGIN DRAINING AT GOLF COURSE MAINTENANCE AREA.		1300	AFTER SECONDING RIG BEGIN AT HP1-B-6	
	CLEAR SKIES, LOW 40s, MODERATE BREEZE.		1340	MOVE TO HP1-B-4	
	BEGIN DRINKING HP1-B10 USE AEROSOL HAMMER FOR DRIVING SPINDS		1400	MOVE TO B-5	
0935	VALVE WORKING ON SITE COMPLETE BORING, MOVE TO B-9		1455	MOVE TO B-3	
1005	COMPLETE BORING, MOVE TO B-8		1530	FINISH WITH THE BORING B-3. GO TO MAINTENANCE SHOP FOR DECON - IT'S LATER, SO WILL DECON THE 2 1/2" AUGERS WITH ALCOHOL & WATER.	
1015	COMPLETE BORING, MOVE TO B-8		1615	MOVE TO B-1	
1055	ADLIN B-7				

3/20/98	HR/86	10F1	4/3/98	B5A	1 OF 1
1300	D. RIVER OUTSIDE TO TOWN SJB DRILLING LOCATIONS TO ENSURE PROPER RIG CHOICE. (HP-BG)		1130	D. RIVER OUTSIDE (BEENEE & ROAD)	
	CLOUDY SKIES, MODERATE WIND, LOW 40's.			PARTLY CLOUDY, HIGH 40's, SILENT WIND.	
	ONSITE MARK BANDS FROM SJB SERVICES - LANE BOT. GARDEN - NEAR BG-B-7 - RUN SURFACE WATER, RED STAINING AND SIGNIFICANT SLEED ON WATER. POORLY APPEARANCE ALSO.			MARK LOCATIONS	
	- WILL USE PLYWOOD IN TOWN AREA BOULDER CUB HOUSE - MAY NOT NEED TO USE PLYWOOD FOR THESE 3 BORDERS.			1145 MR. BEENEE INSITE - TELL HIM WHAT'S GOING ON.	
	- SHOW OTHER AREAS - MARK SP. C MAY BEING & COLD POSSIBLE TO REE THREE SO MUCH MORE OCCUR. PROBABLY HAVE AROUND AREA NEAR MAINTENANCE SHOP. CAN USE WATER & ELECTRIC FROM THE SHED.			1220 MR. BEENEE OFFSITE	
	- AT ATU BIG PROBABLY BEST.			DEPTH TO WATER MEASUREMENTS PZ-1 18.64 PZ-3 14.52 PZ-8 16.98	
				1300 FINISH MARKING LOCATIONS OPPOSITE	
1430	OPPOSITE				

8/13/98	HP/65	4 OF 4	3/14/97	HP/66	1.62
MAKING WHITE DISPOSED MACHINES W/IN TIGHTED ONLY NEAR MAINTENANCE SHOP, NOT AS VUL TRUCKS.			0700	D. A. AREA FOR INITIATION OF EN-61 GEOGRAPHICAL SURVEY.	
- 1400 SNOW NE LOCATIONS NEAR CUBHOUSE WHERE WE STAYED LOOK, MAY HAVE MAPS.				CLOUDY SKIES, HEAVY SNOW, STRONG WIND, 20+.	
- 1400 WE TO LATE STOP WINTER AT WEHAR TO DISCUSS OFFSITE 33000 ! TELL HIM WHAT, WHERE, ! WHEN WE ARE DRILLING.				JOHN LUBINSKA AND ASSISTANT DAN ORRIS.	
1345	OFFSITE			SET UP AT AREA NEAR GOLF COURSE MAINTENANCE SHOP (VPI- BIO).	
				I SHOW TWO OTHER LOCATIONS IN AREA 1, THEN I ~~WENT~~ GO OFFSITE TO GET EQUIPMENT FOR JMW.	
				- START LOCATING BUILDINGS AT BOTANICAL GARDENS, NEAR CUBHOUSE, SHOW OLD LOCATIONS ALONG DUNDAS (AREA 2), CUBHOUSE (AREA 1), AND BUTTER GARDENS.	
			1045	OFFSITE.	

3/13/98	HP/BC	2 of 4	3/13/98	HP/BC	3 of 4
SURVEY ARE A LARGE METAL PIPE AND A LARGE METAL SHEET METAL ROOFING.	THE BOTANICAL GARDENS - VALERIE SAID THAT VACCUM PLANT WAS TOLD DURING THE SITE WALKOVER THAT THE E.M.-31 SURVEY WAS TO EXTEND TO THE ROBINSON RD BRIDGE, WHICH MAY HAVE BEEN BUILT ON FILL INVALUABLE DRUMS. THE INVESTIGATION WAS NOT, SO WE WILL RE-PLACE 3 BORINGS THERE TO CHECK AREA.	I WILL LOCATE THE OTHER BORINGS LATER.	VAL ASKED ME TO SPEAK WITH HIM TO ASK THOSE QUESTIONS.	1145 DEPART FOR LUNCH, VAL LEAVES FOR ALBANY	1230 MEET ROBERT BUSH IN AREA ALONG EMMERTON ROAD TO DISCUSS CLAIMS TO OCCUR TO ALLOW ACCESS FOR A DANCE RIB. HE WILL ALSO DO SOME MINOR CLEANING NEAR GOLD COBBLE MAINTENANCE SHOP.
AREA 3 AT HOLMAN PARK - NEAR CLUBHOUSE - VAL & I WALKED TO THE AREA, SAW WHAT IS POSSIBLY A NO. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772,					

2/10/78	HP/BG	(f)	HP/BG	1 084
1545	HOLIDAY PARK / BOTANICAL GARDENS D. LILKER, J. LUTWIDGE (GEOMATICS CONSULTANTS) ON SITE FOR TOPOGRAPHIC SURVEY IN AREAS NOTED TO BE ANOMALOUS & DURING THE E-M-31 GEO PHYSICAL SURVEY.		0830 D. LILKER ON SITE FOR MEETING WITH VALERIE WOODWARD TO LOCATE BORNES FOR GEO PHYSICAL SURVEY - 3 AREAS AT HOLIDAY PARK - SOUTHEAST PORTION OF BOTANICAL GARDENS.	
	CLOUDY SKIES, LOW WIND, LIGHT RAIN, SLIGHT BREEZE.		CLOUDY SKIES, 20s, STRONG WIND.	
	EXAMINE BOT. GARDENS - LIME TREES LIKELY ELECTRIC LINES.		DISCUSS LOCATIONS AT GOLF COURSE MAINTENANCE SHOP SELECT 4 NAKED LOCATIONS: HP1-B1 THROUGH HP1-B10.	
	HOLIDAY PARK - GOLF COURSE AREA - ELECTRIC OR PHONE WIRE AT NE CORNER. 8- BOX PRESENT. - NOT MUCH SURFACE NOTED 250' NORTH OF MAINTENANCE SHOP.		ROAD TO ZIMMERMAN ROAD MARK OUT LOCATIONS HP2-B1 THROUGH HP2-B6 IN AREA OF SURVEY, AND HP2-B7 AND B8 IN AREA JUST SOUTH OF SURVEY (GEO PHYSICAL) TO ENHANCE ADEQUATE COVERAGE.	
1630	HP- ZIMMERMAN - VERY FINE AREA AREA OF DECKING AREA. PAVELY OPEN NEAR SOUTH END. OFF SITE.		- LOCATIONS J AND K FROM E-M-31	

1/21/98	HP	2 OF 3	1/21/98	HP	3 OF 3
0945	R. DUBOIS ON SITE. FINISH AT GOLF COURSE, MOVE TO AREA ALONG BARRIER ROAD.		LOCATIONS:		
			LIN 1650N, 1450N, 1525N 1400N (125 TO 400'E), 1200N ! 1700 OFFSITE.		
1030	J. LUTTINGER AT 650M WATERX ON SITE FOR ADDITIONAL OF EM-31 GEOLOGICAL SURVEY. STARTS AT BOTANICAL GARDENS.		WE DISCOVERED TWO MONITORING WELLS - ONE AT ROAD AT APPAR LINE 1125 NORTH, AND THE OTHER AT APPROXIMATELY 900/100.		
	CREATE GRID MAP FOR GEOGRAPHY		1630 AS WE PREPARE GRID WITHIN FILL AREA, TOWN LUTTINGER JOINS US. WE FINISH GRID AND I MAKE A MAP SHOWING THE A LINES AND LINE DISTANCES IN THE SURVEY.		
	CREATE A GRID WITHIN AREA OF FILL THAT IS SAFE TO WALK (TOWN IS STILL USING AREA TO PLACE LEAVES, BRUSH, LOGS, AND CHAINSAW TRAILS). THE GRID STOP AT LOCATIONS THAT CANNOT BE WALKED OVER.				
	DUE TO A LACK OF CLEARING BECAUSE OF DITCHES OR TOO MUCH SULFATE WATER, ~~WE~~ WE DID NOT CREATE SOLVED LINES AT THE FOLLOWING		1700 OFFSITE		

1/20/98

HP

2 of 2

1/21/98

HP

10F3

Along Zimmerman Road

- 500N TO 2000N, 0E.

START MAKING LINES, PERPENDICULAR TO ZIMMERMAN ROAD, AT 500N, 0E.

EXTEND LINES AS FAR AS CLEARING COULD GO, ONCE WE REACH 200 TO 350' FROM ROAD, THERE'S A GREAT DEAL OF WATER (UP TO 6-8" DEEP). ROGER AUSA COULD NOT CLEAR IN WATER AREAS

- THESE ARE NO VISIBLE FIRE LINES (NOT 1000-200 FEET EAST OF ZIMMERMAN), SO THE SWATER LINE WOULD MISS ANY DISPOSED AREAS.

- ALSO, IT'S UNLIKELY THAT SIGNIFICANT, IF ANY, DISPOSAL OCCURRED IN AREAS THAT CAN NOW 6-8 INCHES OF WATER.

- FILL AREAS ARE VERY PROXIMATED.

DID NOT FINISH TODAY, SO WILL RETURN TOMORROW. OFFSITE.

0000 D. AINER ONSITE FOR DAY 3 OF GEOPHYS SURVEY CAID (EM-31) PREPARATION.

CLOUDY SKIES, LOW 20's, SUNNY TO MODERATE BREEZE.

THE AREA THAT THE PREPARATION OF THE CAIDS IS TAKING SO LONG IS THAT ADGER AUSA COULDN'T ACCESS A NUMBER OF AREAS DUE TO SIGNIFICANT SURFACE WATER AND/OR TARTS THAT WERE TOO LARGE TO BE CUT WITH SOMETHING OTHER THAN A CHAIN SAW. HIS TRACTOR COULDN'T FIT BETWEEN THE ~~AREAS~~ LARGER TREES.

START AT AREA NEAR THE GOLF COURSE MAINTENANCE SHOP.
- CREATE FIGURE WITH CAID BOUNDARIES FOR GEOGRAPHY.
- AUGMENT EXISTING CAID.

1630

11/19/98	HP/86	2 OF 2	HP	1 OF 2
1130	FURNISH GRID AT BOT. GRAD. MOVE TO AREA NEAR THE GOLF COURSE MAINTENANCE SHOP.		0800	D. RIVER, R. DUBISE OUTSIDE FOR CONTINUED GRID RECONSTRUCTION.
	START GRID AT NORTH WEST CORNER OF AREA, MOVE SOUTH TO GOLF COURSE, THEN MOVE EAST			CLOUDY SKIES, HIGH 20's, SLIGHT BREEZE.
	THE PATR IN THE AREA CLEARED BY ROCKS OWN RESERVE SOME TRIMMING, IN SPARSE AREAS.			BEGIN AT AREA NEAR MAINTENANCE SHOP FOR GOLF COURSE.
	DID NOT FINISH, BUT SHOULD FINISH GRID AREA GOLF COURSE TERMINAL IN A couple of HOURS.			GRID EXTENDS SOUTH FROM WALKER ROAD TO THE ORIGINAL GOLF COURSE IN THE WESTERN PART, - TO THE RECENTLY CONSTRUCTED PLOTS IN THE WEST-CENTRAL PART, - TO THE BUILDING IN THE EAST-CENTRAL PART, AND - TO THE 950' SOUTH OF WALKER ROAD IN THE EASTERN PART.
1645	OFFSITE		1030	MOVE TO AREA ALONG BINNERMAN ROAD. REPLACE FLAGS AND NUMBER ALL FLAGS ON THE NORTH-SOUTH LINE $\frac{1}{2}$ - 2

10/20/77

HP

2 OF 2

1/19/58

HP/66

1 OF 2

CUT TO THE DITCH.

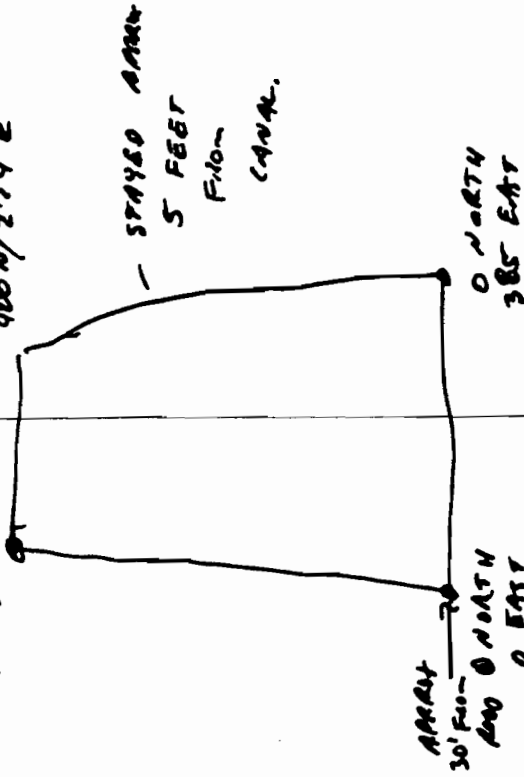
ROGER CAN THEN USE
THOSE TO ORIENT HIMSELF.

OPPO D. RIVER, RICK DAVIS ON-SITE
FOR PREPARATION OF GEOLOGICAL
SURVEY GRID.

1400 OFFSITE

CLOUDY SKIES, HIGH 20'S, APPROX
2-4-6 INCHES OF SNOW
ON GROUND, SLIGHT DEBRIS.

BEGIN AT BOTANICAL GARDENS
4000, 0E 4000/2774 E



9/14/68

HP

10F1

950 D. RIVER ON SITE FOR SITE VISIT WITH COMPANION FOR CLEARING OF UNDER FOR GOLFERS. JUNE AT MOUNTAIN PASS

1000 MODERN (MARSHALL HIGGARD) BOONMA BRAS. ~~THE~~ JUNE

~~BOONMA~~

- WILLY BOONMA

CRIPPER

5400 AREA AT MOUNTAIN PASS SNOW. 80 TO 1000' DEEP - 15 TO 1700' LONG

I ALSO FOR DOOTER BY POWER, WITH ENTIRE TO BE COATED. I ALSO ALSO FROM TO RESCUE EQUIPMENT TO BE USED, AND IF COPIES OF EQUIPMENT, CAN VARY MULTIPLE AND

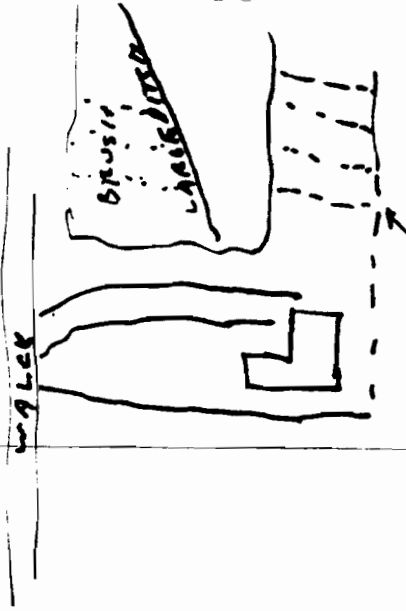
1030 OFFSITE.

10/30/67

HP

10F2

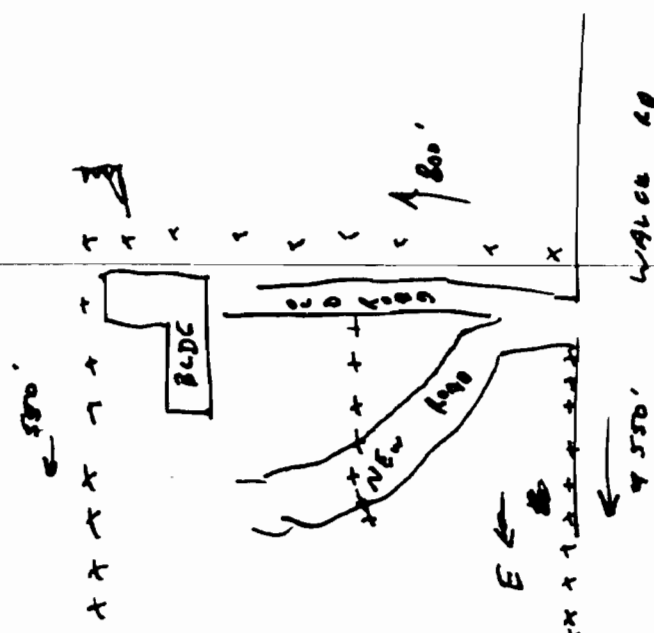
0945 D. RIVER, LI SECKER OUTSIDE AT HOLMAN PARK TO RE FLAG LOCATIONS ON SOUTH SIDE OF BRUSHY NEAR MAINTENANCE SAOP



FLAGGED AREA

ROCKY BUSHY COULD NOT CONTINUE CLEARING LINES FROM WHICH ROAD DUE TO PRESENCE OF LARGE PITCH - WE MARKED LINES FROM BACK (SOUTH) THAT SHOULD LEAD TO PATHS PREVIOUSLY

9/8/89	HP	3 OF 3	9/9/89	HP	1 OF 1
1500	BEGIN USING EQUIPMENT TO CLEAR AREA		1025	D. RIVER ON SITE TO SHOW POLE BUS OF BUSIN TOLSON AREA TO CLEAR	
1530	WORK APPARENT THAT WE CANNOT CLEAR MUCH USING ONLY 2 PERSONS & SMALL EQUIPMENT			- RATE OF \$95/HOUR. HE THINKS FIRST SECTION NEAR MAINT. BUDG WILL TAKE ONE DAY (8 HRS) AT SO.	
	RETURN TO OFFICE TO SET UP CONTRACTOR FOR BUSH CLEARING			SECOND AREA MAP OF RIVER OPEN, BUT HAS LARGER TREE (ALONG BIRMINGHAM ROAD).	
	OFFSITE			2 7040 H.M. SO GET AREA TO HIM WHEN WE DECIDE TO GO AHEAD WITH THE WORK.	
			1115	OFFSITE	

9/3/97	HP	1 OF 3	9/8/97	HP	2 OF 3
0855	HOLLYWOOD PARK		NEAR MAINTENANCE BUILDING (TO EAST OF ACCESS ROAD)		
	TOWN MEETING & DAN RIVER				
	ON SITE TO LAYOUT CEMENT SURVEY				
	GRIDS & CLEAR BRUSH FROM LINES.				
0900	JAN CURTISER ON SITE TO ADVISE				
	GUIDANCE IN LINE CLEARING.				
	GRID MARKING				
	- SAW THE LOCATIONS WHEN				
	BE DONE.				
	SAID THAT A WOOD-EMERSON W/LOW				
	BLADE WOULD WORK BETTER THAN				
	CUTTER SAWS. THINKS WE CAN PROBABLY				
	GET IT ALL DONE IN A WEEK OR 2.				
1015	TOWN OFFICE				
	GO TO STEPHENS TOWNSHIP ON				
	MINERAL FALLS BLVD. - TOWN WILL				
	HAVE CONVEY AT 1.				
1115	BELOW LAKE AT LINES				
			SET UP LINE AND WATER ROAD, OLD MAINTENANCE ROAD, AND BEHIND MAINT. BLDG., ALSO HAVE SIGN LINE IN MIDDLE TO HOLD SET LINE. 13.0 THON GETS EQUIPMENT FOR CLEARING WHILE I CONTINUE WITH GRN		

5 OF 5
 SPOKE W/ SCOTT WITTER, WHO SAID
 THAT THE ROAD WILL BE CLEARED
 WITHIN THE NEXT 2-3 DAYS.
 I TOLD HIM THAT I'LL SUBMIT
 SAMPLES TODAY, AND HE
 INDICATED THAT HE'LL GO THRU
 JOHN H. FOR RESULTS AND
 RECOMMENDATIONS FOR
 AN IMPROVEMENT IN THAT AREA.

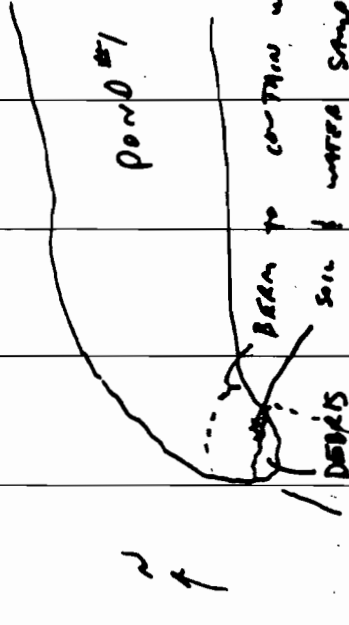
OFFSITE

8/4/87 BJA 10 FEB 84
 1000 D. RIVER ON-SITE (OFFSHORE)
 HARTFORD)
 STB - ART ROSKIE
 WHITE ANDY
 RIG-CHIEFS ON FLEETMA NODWELL
 SPEAK W/ MR. REEDER - TELL
 HIM PLANS FOR DALLAS
 - HE GIVES WATER FOR
 RECON
 - DECON (STEAM-CLEAN) RIG
 1010 VABEHE WOODWARD (N85DEC)
 ON-SITE
 705, PARTLY CLOUDY, SLIGHT BREEZE
 SET UP ON AUG-10
 - VAL ARMED FOR NATURE
 CONSERVATION
 - 5815 - 5810-1 (0-2')
 - 2 (2.4')
 30W10

3 of 5

HP

7/21/97



CAN SEE DEBRIS

EXTENDING THIS WAY

SW NOT DECOMPOSED HERE, SO
WASTE IS LIKELY LINGERED
IN EXTENSIVE.

I SUGGESTED A TEST PIT IN
SEE IF THERE'S ANY INDUSTRIAL
WASTE, BUT DON'T WANT TO DO
IT BEFORE CONTEST.

- THEY REQUESTED (SCOTT &
JOHN STUBB) - A SAMPLE, IF THAT'S
WHAT WE PLANNED, TAKEN FROM
WATER AND/OR SOIL. JOHN HYDEN
AGREED IT WAS A GOOD IDEA.

7/21/97

HP

4 DAS

SCOTT WOULD LIKE IT TO BE
ANALYZED FOR 1 WEEK THAT, JOHN H.
SAID THAT'S WHAT WE'LL DO, BUT
LATER SAID TO BE ALONE THAT
VALERIE MUST ONLY READ THE FIRST
(HE GAVE HIS RECOMMENDATION & ARE-
LAUGHED ORAY).

SPoke with RAY FISHER - FARMER,

WHO WAS OUT HERE WHEN THE
WASTE - SAID WATER RAN FOR
~20 MINUTES AND ~~WAS~~ THEY
BUILT A BEER BEER TO CONTAIN
WATER. WATER HAD INSIDE,
AND THERE WAS AN OOR,
NOT CHEMICAL OR METABOLISM,
MAYBE DECOMPOSITION, BUT NOT
SUAVE.

HE SAID TEST PITS OR THEREWAS
WOULD BE FINE, BUT WANTS TO
TAKE MATERIAL OPPOSITE WHEN
PULL IT UP, AS EITHER HAD
OR NON-HAD.

7/31/97	HP	1 OF 5	7/31/97	HP	2 OF 5
0745	D. RIVER ONSITE (HOLIDAY PARK) FOR INSPECTION OF WASTE DISCHARGE IN SOUTHEASTERN POND EXCAVATION				- WATER MAY HAVE BEEN ENTERED A REFRIGERATOR THAT WAS LYING ON ITS BACK THAT ~~WAS~~ WAS TORN APART AS EXCAVATED.
0750	JAN HYDRA (N130E) ALSO WASTE CLEAR LINES, DOJ, SUGAR BEET LEFT WITH JAN SILVER (PACED) REC) & SCOT WINTER FARM WAGON				THIS AREA UNCOVERED IS ABOUT 5' WIDE (FARM FACE OF EXCAVATION) AND IS 10' x 15' ALONG EXCAVATION FACE HOWEVER, THE WEIGHT OF EARTH MOVING EQUIPMENT MADE WORKING - ~~THE~~ - ~~THE~~ COMPRESSED SOIL SURFACE TO SOUTH OF EXCAVATION, REVEALING COPPER TUBING & SOME WOOD (CUT PIECES RATHER THAN STICKS) UP TO 40' SOUTH OF EXCAVATION FACE.
	THE FIRST WARE OF AND GOES TO "JESSE TALK" BECAUSE WATER LINE RUNS THERE - CAN'T EXCAVATE				THE CONTRACTORS DO NEED TO EXCAVATE MORE AREA TO SOUTH (ALMOST TO 40'), BUT THEY DON'T WANT TO DO IT THIS WEEK & LEAVE A LARGE PILE OF WASTE FOR WEEKEND (WITH THE PITCHING CONTEST MAY CLOSE TO EXCAVATION)
	GO OVER TO POND / RED (LEAVES - WATER IS STAINED HAS BEEN, MUCH WASTE)				

3 OF 4

HP/86

7/24/87

ON NW PORTION OF THIS AREA WILL BE MOVED TO FORM BEAMS, BUT WE WILL NOT DIG ANYWHERE ELSE.

THERE WILL BE NO TREE CLEARING, OTHER THAN FOR ROAD

- I ASKED IF THEY'D BE ABLE TO CUT PATAS. HE SAID THAT THEY'RE PRETTY BUSY AS IT IS, BUT I COULD ASK MR. BELL

JOHN & I WALK AROUND A BIT, TAKE A LOOK AT POND #1 - IT HAS TWO AREAS WITH BLACK STAINING, AND IS FULL OF ROOTS & STICKS.

- JOHN SAID PROBABLY COMING AREAS THAT WERE SWAMPY

with

1500

JOHN CLEARS

I RETURN TO POND TO TAKE PIP MEASUREMENTS

7/24/87

HP/86

4 OF 4

JOHN WANTS ME TO WRITE A MEMO TO VAL & CC HIM TO DESCRIBE WHAT WE SAW.

BLACK STAINING IN SIDEWALL
PID 10754 M2



NEST OF SOIL IS WHAT TO USED
AROUND SANDY SILET.

1545 OFFSITE

7/24/97

HP/86

1054

7/24/97

2054

HP/86

1300 D. RIEDEL ON SITE FOR INSPECTION OF EXCAVATION & CLEARING AT ~~INTERSECTION~~ HOLMAN PARK.

- WALK AROUND WEST OF ROAD TO MAINTENANCE SHOP, NOTICED CLEARING OF DENSE BUSH - WHICH CLOSELY MATCHES REMAINS CHANGES TO GOLF COURSE (THE AREA OF BUSH ~~WAS~~ REMAINING SEEN TO BE LIKE THOSE OF PLANS).

- THE EXCAVATION THAT IS OCCURRING IS SOUTH OF THE MAINTENANCE SHOP, NOT NORTH SW AREA WE'VE CONCERNED WITH.

- SPOKE BRIEFLY WITH FELTON ALON UNDESGRADING SD CONTRACTOR - MARGERY THE FOREMAN - SAID THEY WANT GET TO AREA NORTH OF MOUNT. BLOC, WEST OF ACROSS ROAD FOR APPROX 2 WEEKS OR SO. - DID NOT GET A ANSW.

JOHN HYDER AT NYE'S ON SITE - NYE WAS IF SCOTT WITTEN FROM JENNER WILL BE ON SITE

RAY FISHER - BIRCH CREEK - FOREMAN
- SPOKE WITH HIM - ~~SAID~~ (ALAN)
- TOLD SAID THAT HEI DUNLOVE (EXCAVATING) POND #1 FIRST (SOUTH OF MOUNT BLOS), TO A DEPTH OF 4-5 FEET.

HE SAID THAT POND #2 WILL BE NEXT (START SURVEY NEXT WEEK) - ROAD #1 WILL BE FINISHED WHEN WE ARE 4/4 (END OF WEEK) - PROBABLY

- HE SAID ROAD WILL BE CONSTRUCTED, BUT NOT SURE WHEN THEY'D CLEAR IT (AFTER GET AUTOMOBILE FROM CITY).

- MAY BE NEXT WEEK. THEY WILL NOT

EXCAVATE ANYTHING OTHER THAN PONDS. THE SON FILLS

7/2/89	HP/86	10P6	7/2/89	HP/86	20P6
0705	D. RIVER ON SITE FOR CONTINUED WELL INSTALLATION (OBTAIN) AS HOLIDAY PARK/D. THERMAL OPERATIONS.	08V6	DTW - 1.03 DTB - 9.71		
	SFB. NISDEC (V. WORKING) ON SITE	0950	BAL AS MUCH AS POSSIBLE DTW = 3.44		
	SFT UP ON BC-NW-3		ALLOW TO RECOVER TO DETERMINE IF WELLS CAN BE SAMPLED		
	CLEAR STRIPS, LOW DOGS, SILENT AREAS.				
0730	BELOW DRILLING BC-NW-3		DRILLING BEGINS TO CREATE FLUSH MOUNTS FOR BC-NW-1 THROUGH 3.		
0815	FINISH DRILLING NW-5 AT 14'				
	DEBEGN ASSESSMENT OF ON SITE WELLS	09	CHECK USES WELLS - DTW #1 10.79 #2 3.12		
WELL 1	DTW - 6.16 TOTAL DEPTH 23.47 - NORTHWARD MOST WELL				
0825	SDIC WELL USES - 1 (3 BARRELS) DTW - 10.82	0935	DRILLING FINISH FLUSH MOUNTS, TO GO TO GOAL COURSE WELL - BC-NW-4 - VAL GOES TO CONDUCT SURFACE SOIL SAMPLES.		
0840	OPEN UP WELLS - WELL - 2 - SOUTHWARD MOST OF THE 2				

7/2/68	HP/BC	3 OFC	7/2/68	HP/BC	Y OFC
0955	BEGIN DRIVING NW-4 AT EDGE OF GOLF COURSE.	BG-4	1130	TAKE LUNCH DRILLES WILL BECON AUGERS AFTER LUNCH I START AT MAINTENANCE SHOP AREA	
	BG NW-3 WELL CONSTRUCTION DETAILS: SCREEN: 10-SLOT 14-4' SAND 0 NOISE 14-3. BENT CHIPS 3-1.5		1210	SPEAK WITH RAY FISHER AT BIRCH GROVE - 2 OR 2:30 WOULD BE A GOOD TIME - CALL TO D. MARSHAL WITH THAT MESSAGE. - LEFT MESSAGE.	
1030	FINISH DRIVING BG-NW-4 BEGIN SETTING WELL SCREEN 14-4 SAND 14-3 BENT CHIPS 3-2		1220	SPEAK W/ THE GENOVESE TO DISCUSS MAKING INTO THE FIVE HOLES THE USES WELLS.	
1100	COLLECT EQUIPMENT BEHIND (EB-7-2) FROM THE WATER VIDEO FOR DECON OF SPURNS - COLLECT FROM TANK ON RIG.		1300	SPEAK WITH VALERIE REGARDING THE PLAN FOR FRIDAY & MONDAY - WE WILL FINISH THE WELLS TOMORROW, NOTING THE LOCATIONS & DEPTHS AT WHICH WELL NEED TO SAMPLE NEXT WEEK (WE CANNOT SEND SAMPLES COLLECTED TOMORROW TO THE LAB FOR DELIVERY W/IN 40 HOURS (ASP-REQUIRED) SO WELL NEED TO SAMPLE THOSE LOCATIONS AT A LATER	
1120	USGS WELLS - OTHER #1 10.71 #2 2.51				

7/2/88	HP/AC	5 OFC	7/2/88	HP/BC	6 OFC
TIME.) SAMPLES RATHER RIC.	WE WILL NEXT THAN USING A DRILL	COLLECT THE WEEK BY HAND, USING A DRILL	1500	BEGIN ~~DRILLING~~ DRILLING AT HP-NW-4.	
- ALSO CONVERSION OF WELLS AT BOTANICAL FLYNN MOUNTAIN. STB WILL DO THAT WORK ONE DAY NEXT WEEK.	WHERE HAS TWO(3) EXISTING CARBONS TO DO THAT ONE DAY NEXT WEEK.	WHERE HAS TWO(3) EXISTING CARBONS TO DO THAT ONE DAY NEXT WEEK.	1600	FINISH DRILLING AT HP-NW-4 - SAMPLE COLLECTED FROM 2-4 FEET, HOWEVER, A BETTER SAMPLE FOR ANALYSIS WOULD BE THE 4-6' INTERVAL (DOES TO THE POINT THAT THE 2-4' INTERVAL IS LIKELY JUST SOIL REMOVED DURING SOIL CORE CONSTRUCTION ACTIVITIES) THEREFORE, PROBE SPONSOR TO 6' NEXT TO WELL FOR SOIL SAMPLE COLLECTION.	
1320	BEGIN DRILLING HP-NW-1				
1330	MATT FORJECI, ON SITE (WYOMING)				
1400	FINISH DRILLING HP-NW-1 - SET WELL AT 14' SCREEN - 14-4' SAND - 14-3' BENT CHIPS 3-2'	HP-NW-1 WELL AT 14' - 14-4' - 14-3' BENT CHIPS 3-2'			
1415	MEET WITH RAY FISHER (BARN GROVE), SLOT WITHIN (WENDELL), DALE MADAM (CITY), TO DECIDE ON A LOCATION FOR HP-NW-4	RAY FISHER (BARN GROVE), SLOT WITHIN (WENDELL), DALE MADAM (CITY), TO DECIDE ON A LOCATION FOR HP-NW-4			
			1610	FINISH DRILLING AT HP-NW-4 - CANNOT FINISH TODAY, NOT ENOUGH TIME TO FINISH DRILLING OFF SITE.	

7/3/98	HP/36	1054	7/3/98	HP/36	2054
0720	D. RIVER DRILLING ACTIVITIES (DAY 3)	FOR CONTINUING ARRAY 3	0815	COMPLETE THE DRILLING OF HP-NW-2, BEGIN INSTALLATION	
	PARTLY CLOUDY SKIES, HIGH 70's, NO BREEZE.		0820	SPEAK WITH WOODWARD - DECIDE TO SQUARE NETS WHERE AT 2 TO 4' INTERVAL.	
	SJB (PALE & LARRY) ON SITE, U. WOODWARD (N110E) ON SITE.			WELL COMPLETION PERMITS SCREEN 14-4 SAND 14-3 BOX CHIPS 3-2	
0730	COMPLETING HP-NW-4. INSTALLATION.				
0745	MATT FORCICK, (N450PH) ON SITE		0820	BRIAN SAWOWSKI (N150E) ON SITE	
	FINISH THE WELL INSTALLATION - LARRY GOES TO DECON RIG.		0830	CREATE FLUSH MOUNT	
	- PALE COMPLETES FLUSH MOUNT OF HP-NW-4.		0835	VAL & BRIAN OFF SITE.	
0830	FINISH DECONING, SET UP ON HP-NW-2		1015	MOVE TO HP-NW-3	
0830	CAVIGATE P.D.		1035	BEGIN DRILLING WITH HP-NW-3	
0845	BEGIN DRILLING HP-NW-2		1130	AFTER REACHING TO 20', AND GETTING "Gumbo" CLAY, PERC	

7/3/98	HP/BG	3 of 4	7/3/98	HP/BG	4 of 4
LE AND OF LOCATION	MOVE ~ 50 SOUTH HP-NW-3		1415	ON BOTTOM OF SAND WELL ~ 8" LONG) PVC - SCREEN AT 4-14' SAND PACK - 13-3' CUTS - 3-1' (CLAY (WATER) AT 14-12' ^{13-14'})	
1205	BEGIN ADDING NEW HP-NW-3A		1420	BEGIN CONSTRUCTING FLUSH MOUNT. AT HP-NW-3. - ALSO WILL COMPLETE TUB STICKUP AT HP-NW-1 AND TUB RE FLUSH MOUNT AT BG-NW-4.	
1220	FIND SILT AT 8', SO WILL PLACE WELL		1430	WATT F. OFFSITE	
1225	TAKING LUNCH		1445	O. RIGER GOES TO BG TO LABEL CUTTINGS DRAIN, AND TO FLAG THE 3 USES WHEN TUBS BEEN CUT.	
1255	RESUME DRILLING HP-NW-3A (WILL CAP THE HP-NW-3 FROM NOW ON)			WITH ONLY THE COMPLETION OF FLUSH MOUNTS & STICKUP REMAINING, STB CAN BE UNREMOVED. OFFSITE.	
1330	COMPLETE DRILLING - "Gumbo CLAY" AT BOTTOM IS INTERFERENCE THE AXES BEFORE WE CAN PLACE THE SCREEN AND THE ADD SAND PACK		1515		
1400	DECIDE THAT SINCE THE GUMBO CLAY WILL YIELD LITTLE WATER, WE CAN PUSH PVC INTO THE CLAY, THEN PLACE SAND. (TUBS ALSO A PVC SUMP)				

17/8/78	HA/BC	1 OF 3	7/8/88 HP/86 BG-nw-1	2 OF 3
0840	D. RIVER ON SITE FOR WELL DEVELOPMENT	ACTIVITY	1100	FINISH DEVELOPING BG-nw-1, TAKE THE FULL 5-GALON BUCKETS TO BE DUMPED IN THE PLOTS AT PUMP STORAGE AREA (BEHIND THE GREENHOUSE).
	PICK UP DRUMS (EMPTY) STORED AT HOLIDAY PARK, THEN GO TO BOTANICAL GARDENS, SPEAK WITH DAN WHO'S ABOUT THE SCHEDULE.		- DTB = 13.25 AFTER DEVELOPMENT 1100	SJB OFFSITE
0920	SG-nw-1 DTW = 3.46 DTB = ~12.0 (SOFT ON BOTTOM)		1130	AFTER PUMPING 5-GALON PANS, GO TO HOLIDAY PARK NEAR THE MAINTENANCE SHED - DECON HAND AUGER & SAW FOR SAMPLE COLLECTION.
0920	5JB (DRALE & MATT NATHAN) ON SITE FOR CONSTRUCTION OF FLOW MOUND AT THE TWO USED WELLS.		1150	COLLECT HP-nw-2 FROM 2 TO 4 FEET BELOW GRADE DECON HAND AUGER
	NOTE BG-nw-1 IS MISSING A LOCK		1220	COLLECT HP-nw-3 FROM 2 TO 4 FEET BELOW GRADE
0930	AFROM	SAVING (DEVELOPING)		

7/15/58	HP/BC	3 of 3	7/13/58	HP/BC	1 of 2
1300	BC-nw-3 DTW = 4.04 DTB = 13.12 NOTE: BC-nw-3 IS MISSING A LOG		0915	DICKER & D. COMBARD ONDR (HP/BC) FOR WELL DEVELOPMENT	
	AFTER COMPLETING BC-nw-3, DUMP 5-GAL PAIL INTO DRUM & MOVE TO BC-nw-2			SPEAK WITH JOHNSON AT GOAL CONCRETE MAINTENANCE SHOP ABOUT ~~THE~~ LOCATION TO SET WATER DUMPS.	
1400	FINISH DEVELOPING BC-nw-2, PACK SAMPLES FOR SHIMMONT, CREATE CHAIN OF CUSTODY			BOJ, PARTLY CLOUDY, NO WIND BREEZE. CALIBRATE 14 METER SET UP ON HP-nw-3	
1415	OPPOSITE		0930	BEGIN DEVELOPING USING BAILERS.	
			1030	FINISH HP-nw-3, DUMP 5-GAL PAIL INTO DRUM - FIRST DRAIN BEGINS TO LEAK, USE SECOND PAIL	
			1100	BEGIN DEVELOPING HP-nw-2	
			1215	DUMP 5 GALLON PAIL INTO DRUM	

TIME	DATE	LOCATION	ACTIVITY	REMARKS
1300	7/13/58	HA/66	BEGIN DEVELOPMENT	HP-20-4
1400			FINISH DEVELOPMENT	HP-20-4
1510			BEGIN DRAINAGE	B6-20-4
			A NEIGHBOR STOPS - JAMES TILK (695-2416) HAS LIVER TUMOR FOR 37 YEARS, AND WOULD WELCOME ANY QUESTIONS.	
1600			COMPLETE NW-4, PUMP WATER AT BOTANICAL GARDENS.	
1615			OFFSITE	
7/14/58	86	1 OF 2		
0900			D. R. LEE ON SITE (BOTANICAL GARDENS) FOR DEVELOPMENT OF TWO USGS WELLS.	
			PARTLY CLOUDY SKIES, 80°, SUNNY AFTER.	
			NOISELAPERS - NORTH USGS WELL = B6-USGS-1	
			SOUTH USGS WELL = B6-USGS-2	
0945			BEGIN DEVELOPMENT OF B6-USGS-2 USING A GRINDER.	
			- CALIBRATE WATER QUANTITY METER.	
			- NOTE JAMES & CHEMICAL ON IN B6-USGS-2	
			- WHEN PUMPING DAY, ALLOW TO RECOVER	
1020			BEGIN DRAINAGE B6-20-4	

7/14/68	86	2042	9/28/68	HP/66	10F3
1040	uses-1 ALSO ALONG TO RECOVER.	DAY,	0830	D. FINEA, D. LONGACRO ON SITE FOR SAMPLING OF NON-TOXIC WELLS	
1215	AFTER WATER IN PACIA EQUIPMENT	DEVELOPMENT, DUMP		TELL BOTANICAL GARDENS EMPLOYEE THAT WELLS ON SITE.	
1300	OFF SITE			CLEAR SKIES, 70°, SILENT BARRAGE	
			0900	SET UP ^{ON} ~~LABORATORY~~ ^{BE-NW-1} EQUIPMENT WATER QUALITY INSTRUMENTS.	
				BEGUN PURCHASING BE-NW-1 WITH A DEDICATED BATTERY.	
			0950	COLLECT SAMPLE <u>BE-NW-1</u> FOR TLL VOS, SUCCS, APT/PCOS, THE NETS & CYANIDE.	
			1005	BEGIN SAMPLING <u>BE-NW-2</u>	
			1015	WELL BALES DAY.	
			1045	COLLECT SAMPLE <u>BE-NW-2</u>	

7/28/98 HP/BC PAGE 2 OF 3 7/28/98 HP/BC PAGE 3 OF 3

1245 BEGIN PURSING B6-NW-3

1310 COLLECT B6-NW-3

1400 BEGIN PURSING B6-NW-4

1420 COLLECT SAMPLE B6-NW-4

A NICHOLSON (JAMES TILL) MEETS US AT THE WELL B6-NW-4 - TELLS US THAT HE KNOWS WHERE THE DRUGS WERE DISPOSED OF AT THE MILITARY DORE SITE. HE IS WILLING TO DISCUSS THE TRAIL INFORMATION WITH THE TOP OF AGENCY

FOLOWING DR NISOC
- JAMES TILL
1416 EAST ROBINSON RD.
MORTON TOWNSEND, NY.
716-685-2486

PURSUING:

1020 BEGIN PURSING B6-USGS-1 (NORTHEASTERN WELL)

1040 PURSUING DRY
1110 COLLECT B6-USGS-1

1220 PURSUING ~~USGS~~ B6-USGS-2 (SOUTHERN WELL)

1240 PURSUING DRY

1350 COLLECT B6-USGS-2

-POOR CONTENTS ~~SEE~~ (WATER)
FROM PURSUING EACH WELL INTO DRUGS BEHIND THE BOTANICAL GARDENS GREENHOUSE.

- THERE ARE 2.5 DRUGS FULL AT BOTANICAL GARDENS.

PACK SAMPLES AFTER COMPLETE SAMPLING

1555 OFFSITE

7/29/98	HP/86	1 OF 3	7/29/98	HP/86	2 OF 3
0855	D. RIKER & D. LONGARDO FOR DAY 2 OF GROUNDWATER - HOLIDAY PARK REMANUE.	ONSITE SAMPLING WELLS	0950	VALEAIE WOODWARD TO DISCUSS HISTORICAL DATA PHOTOGRAPHS WITH ONE NEIGHBOR, MR. JAMES TILL.	
	PARTLY CLOUDY, MODERATE BREEZE 70°.			VALEAIE & D. RIKER GO TO MR. TILL'S HOUSE WHILE D. LONGARDO CONTINUES WITH SAMPLING PROGRAM.	
0845	CALLUATE WATER QUALITY EQUIPMENT TILL GOLF COURSE PERMITS THAT WELL BE SAMPLED TODAY.		1001	BEGIN PURSING HP-MW-2.	
			1013	END PURSING	
0900	SET UP ON HP-MW-1 BEGIN PURSING WITH A DEDICATED BAILEY.		1030	BEGIN PURSING HP-MW-3	
			1045	END PURSING	
0930	COMPLETE PURSING		1130	BEGIN SAMPLING HP-MW-2	
0950	COLLECT SAMPLE HP-MW-1 FOR TEL WFS, SWCS, PEST/PECS TA METALS & CYANIDE		1145	D. RIKER RETURNS w/ VALEAIE WOODWARD - VALEAIE OFFSITE	
			1200	COLLECT SAMPLE HP-MW-3	

7/29/98	HP/BC	3 OF 3	8/6/98	HP	1 OF 1
1230	BELOW PULPERS HP-NW-4		1515	D. RIVER ON SITE FOR MEETING WITH JOHN LUTINGER OF GEOMATEX TO SHOW WITH ADDITIONAL AREA OF INVESTIGATION AT HOLLYAY PARK	
1250	END PULPERS			- AREA SOUTH OF NANT-EMANCE SWP, SOUTH OF NEW POND IN WHICH REAGENTS & DEBS WAS SAMPLED WITH JOHN MYERS.	
1315	COLLECT SAMPLE FROM HP-NW-4				
1445	PACK COOLERS FOR SHIPMENT TO MITEKIN, PARK EQUIPMENT OFFSITE				
			1530	J. LUTINGER ON SITE.	
				- GO TO AREA IN QUESTION, SET UP LARSA GRID TOWN ANTICLINAL, 800' IN E-W DIRECTION, 200' IN S-W " "	
				JOHN WILL COMPLETE SURVEY ON 8/7/98 AFTERNOON.	
			1630	OFFSITE	

8/10/98	HP	1 OF 1	8/24/98	HP	1 OF 1
0800	P. RIVER MEASUREMENT TO BE DONE TO ESTIMATE THE ACTIVITIES.	WHITE OF GRASS AS TO BE DONE TO RECREATE THE TEST AT ACTIVITIES.	0900	D. RIVER, D. LOMBARD FOR RECREATION OF SURVEY CAMP REESTABLISH CAMP, THEN LOCATE 11 POINTS IDENTIFIED IN SURVEY.	D. RIVER, D. LOMBARD ON SITE FOR RECREATION OF SURVEY CAMP
	CLOUDY SKIES, HIGH HUMIDITY, SURF DROPPED, LOW BOJ.			80° PARTLY CLOUDY, EXTREMELY WINDY, HUND.	
	WAVE BUT HAD, USE CAMP PAPER.		1000	DALE MARSHAL ON SITE DISCUSS CAMP, & SAMPLING CONTING.	
1800	OFF SITE		1310	OFF SITE	

8/25/98	HP	1 of 2	8/25/98	HP	2 of 2
0800	D. RIFE ON SITE PIT OPERATIONS. ONSITE: VALERIE WOODWARD (NYSDC) DAN MARSHALL, NICE BRADY (CITY OF NY) THREE REPRESENTATIVES OF ENVIRONMENTAL SERVICES GROUP. (ESG)	FOR TEST	COMPLETE TEST D, F, AND J.	PITS A, B, C,	
0815	BACCHUS ARRIVES - JCB 214 (AUGER-DRIVE 4 WHEEL DRIVE)		DAN & NICK WOULD LIKE ESG TO USE TUBA LABORATORIES TO DO THE ABANDONING ON THE TEST PITS.		
0830	MOBILIZE TO TEST PIT A.		1230 ALL TEST PITS COMPLETED ALL PARTIES OFFSITE		
0855	Began TEST PIT ACTIVITIES TEST PIT LOGS ON SEPARATE SHEET.				
0915	PAUL SUTER (ESG) ONSITE				
1040	P. SUTER OFFSITE. CONTINUED WITH TEST PITS.				

11/2/98	B&R	1 OF 1	11/5/98	MP/BC	1 OF 2
0930	D. BINKERMAN, D. COMARCO FOR WELL DEVELOPMENT		1145	D. BINKERMAN SUBSIDIARY LOCATIONS FOR SURVEY ! DAWN ALARM.	
	ON POPLA ALSO ON SITE FOR WELL SURVEILLANCE.			DAVE AROUND SITE, SUBSIDIARY CLIMB AT WORK	
	40', CLOUDY SKY, MODERATE WIND			HIGH 40', CLOUDY SKY, LIGHT RAIN	
1515	BEG. DEVELOPING NW-1 → NW-5		1230	MEET WITH NICK BAKER. HE SAID THAT 373' FINE FOR SURVEY TO COME OUT. HE ALSO SAID THAT THE 2 WATER LINES WERE DUMPED OUT AFTER BEING THAT WATER WAS CLEAN. THE DRAIN WAS SUBSEQUENTLY REMOVED FROM THE SITE BY AN UNKNOWN PARTY. HE ALSO SAID THAT HE COULD USE A GET RID OF THE 5 LINES AT 36, IF DAN WISKO WOULDN'T TAKE THEM.	
	SUBSIDIARY SITE ON SITE, THE R. BINKERMAN: D. COMARCO OFFSITE		1300	MEET WITH DAVE SUBSIDIARY - SHOW LOCATIONS. SUBSIDIARY SITE	

11/19/98 11/19/98 B.R. 1000

THAT IT WILL TAKE A COUPLE OF
 DAYS TO DO SURVEYING SINCE ANY
 STAKES THEY PUT IN HAVE BEEN
 REMOVED. THEY HAD USED FEW
 STAKES PREVIOUSLY BECAUSE THEY
 WERE TESTING GPS, WHICH THEY WERE
 NOT USING THIS TIME.

1400 AFTER WITH DAN WYMAN (136)
 HE SAID THAT THE DRAIN CAN
 BE EMPTYED ON SITE AND HEIL
 DEAL WITH THE DRAIN. HE SAID
 THAT LEAVING THE SOIL WHERE
 THE DRAINS ARE IS FINE, AND HEIL
 HAVE MS GUY'S TAKE CARE OF IT.
 JUST LEAVE IT BEHIND THE FENCE

1430 BEGON TO EMPTY 3 WATER 1/2 SOIL
 DRAIN

1515 OFF SITE.

0945 D. RIKER, S. DICKINSON
 OFF SITE FOR SAMPLING OF
 5 MONITORING WELLS.

BEGIN WITH WATER LEVEL
 ROWS.

NW-1 5.10
 NW-2 4.50
 NW-3 6.35
 NW-4 5.15
 NW-5 10.55
 PZ-1 20.14-21.11
 PZ-3 16.70
 PZ-8 20.14 #

HI 40'S CLOUDY SKIES, SOME NOODLE WIND

WHEN OPENING PZ-8, STRONG PETROLIUM
 OIL ENQUIRY FROM WELL.
 - PZ-8 HAS BEEN OIL-SATURATED OVER
 PLACE A BALANCE DOWN THE WELL
 - NO PROBLEM IN WATER, BUT OUTSIDE
 OF BALANCE MUCH OIL OBSERVED AT



D-1 Holiday Park – Area 2. Facing southeast. Drilling rig at boring location HP2-B1. Location within recycling area. April 8, 1998.



D-2 Holiday Park - Area 2. Facing east. Drilling rig at boring location HP2-B3. Recycling area to the right. April 8, 1998.



D-3 Holiday Park – Area 1. Facing North. Sample location HP-SS-1/HP-SS-1A. Area of surface soil staining from exfiltrating water. April 6, 1998.



D-4 Holiday Park – Area 3. Test pit A in golf course expansion area (additional investigation). August 25, 1998.



D-5 Holiday Park – Area 3. Test pit B in golf course expansion area (additional investigation).
August 25, 1998.



D-6 Holiday Park – Area 3. Test pit C in golf course expansion area (additional investigation).
August 25, 1998.



**D-7 Holiday Park – Area 3. Test pit D in golf course expansion area (additional investigation).
August 25, 1998.**



**D-8 Holiday Park – Area 3. Test pit F in golf course expansion area (additional investigation).
August 25, 1998.**



D-9 Botanical Gardens. Facing east. Location of surface water sample BG-NYSDEC-SW1. Note iron staining. April 7, 1998.



D-10 Botanical Gardens. Facing west. Valerie Woodward (NYSDEC) collecting surface water sample BG-NYSDEC-SW1. Note iron staining. April 7, 1998.



D-11 Botanical Gardens. Facing west. Location of surface soil sample BG-DEC-SS1. Note iron staining. April 7, 1998.



D-12 Botanical Gardens. Facing east. Exfiltrating groundwater flowing in water fountain overflow channel. Note iron staining. April 7, 1998.



D-13 Botanical Gardens. Facing south. Exfiltrating groundwater flowing in water fountain overflow channel. Note iron staining. April 7, 1998.



D-14 Botanical Gardens. Facing east. Exfiltrating groundwater flowing in water fountain overflow channel into Tonawanda Creek. Note iron staining. April 7, 1998.

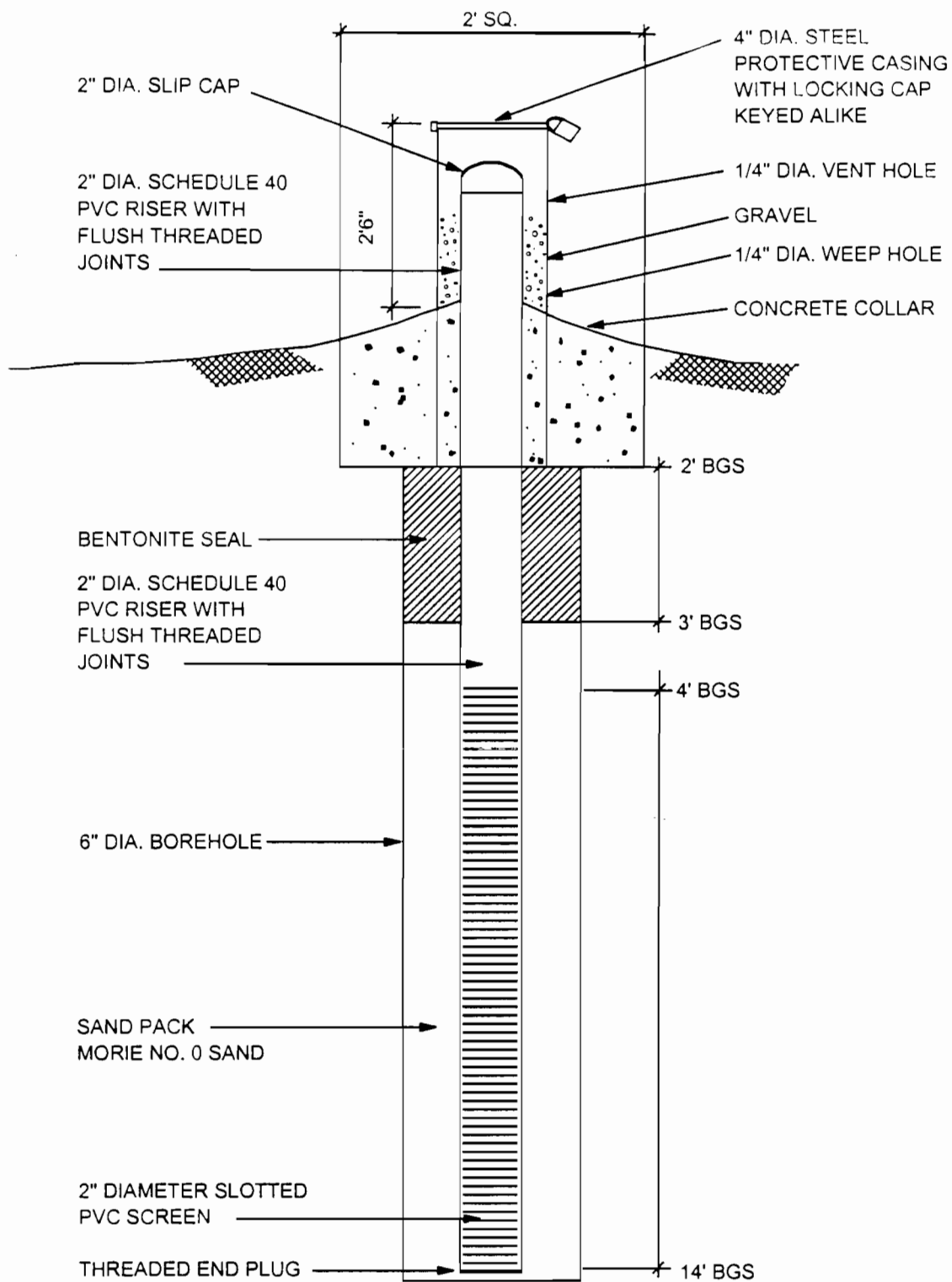


FIGURE D-1
OVERBURDEN GROUNDWATER
MONITORING WELL DETAIL
HP-MW-1
HOLIDAY PARK

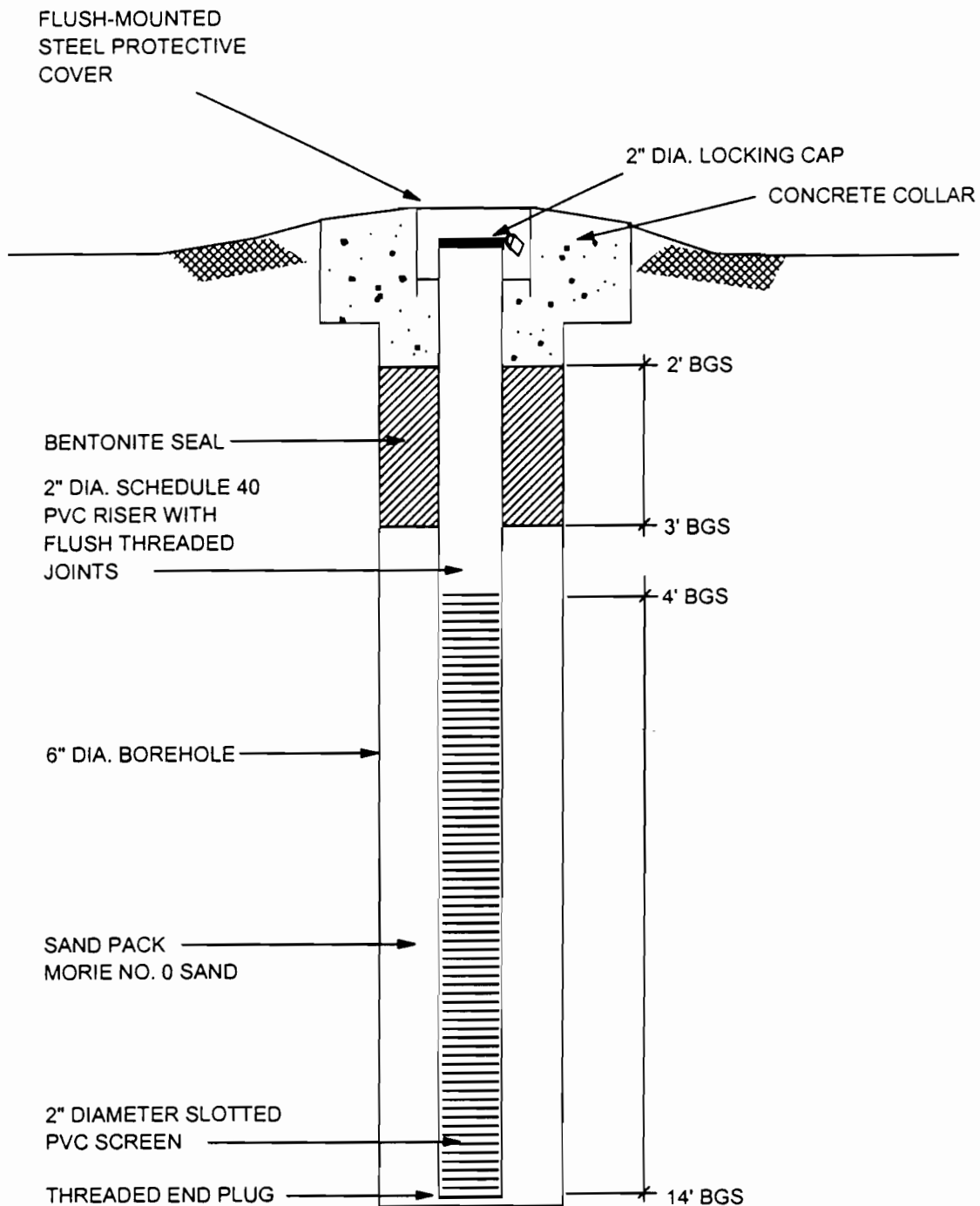


FIGURE D-2
OVERBURDEN GROUNDWATER
MONITORING WELL DETAIL
HP-MW-2, HP-MW-4, & BG-MW-4
BOTANICAL GARDENS/HOLIDAY PARK

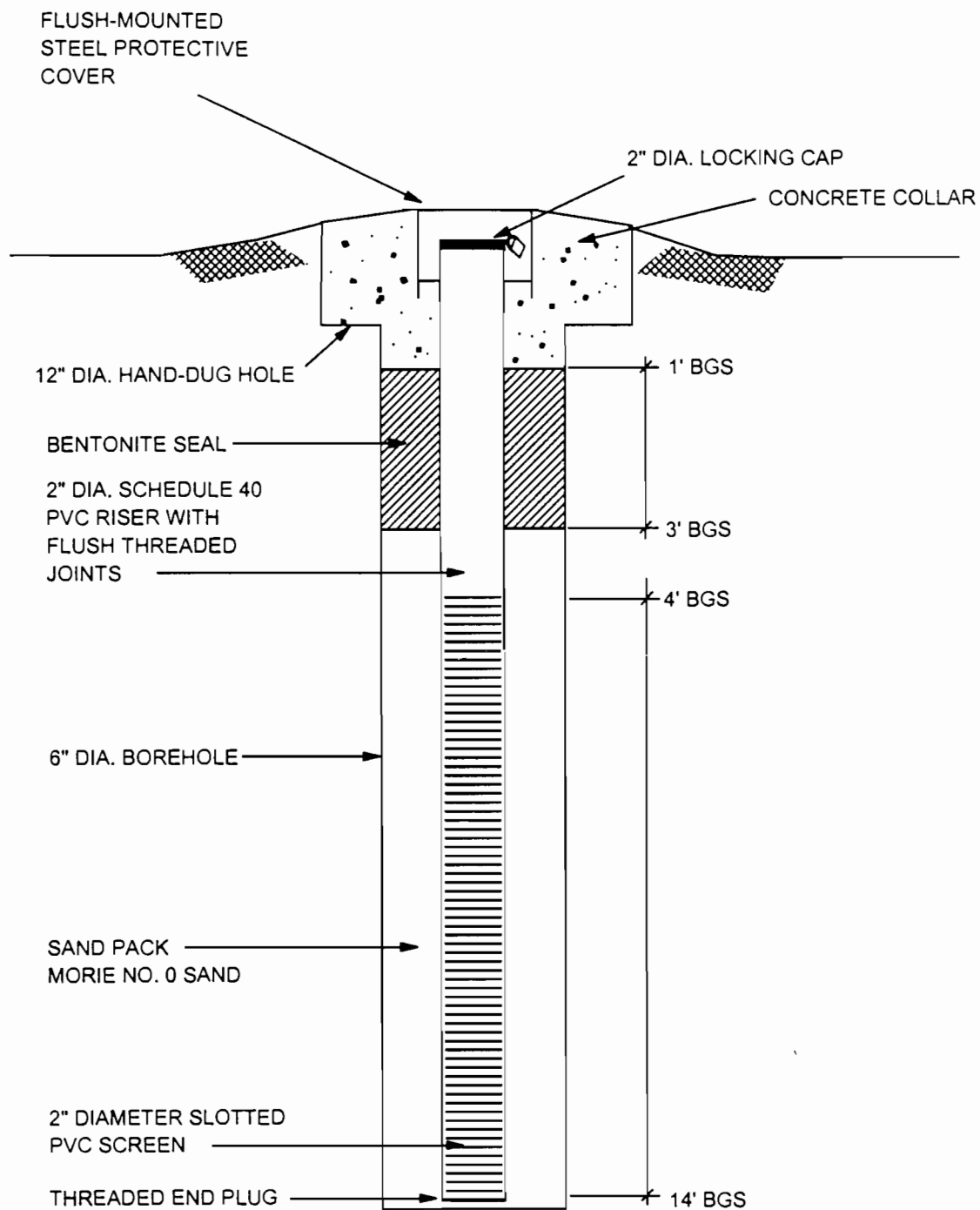


FIGURE D-3
OVERBURDEN GROUNDWATER
MONITORING WELL DETAIL
HP-MW-3
HOLIDAY PARK

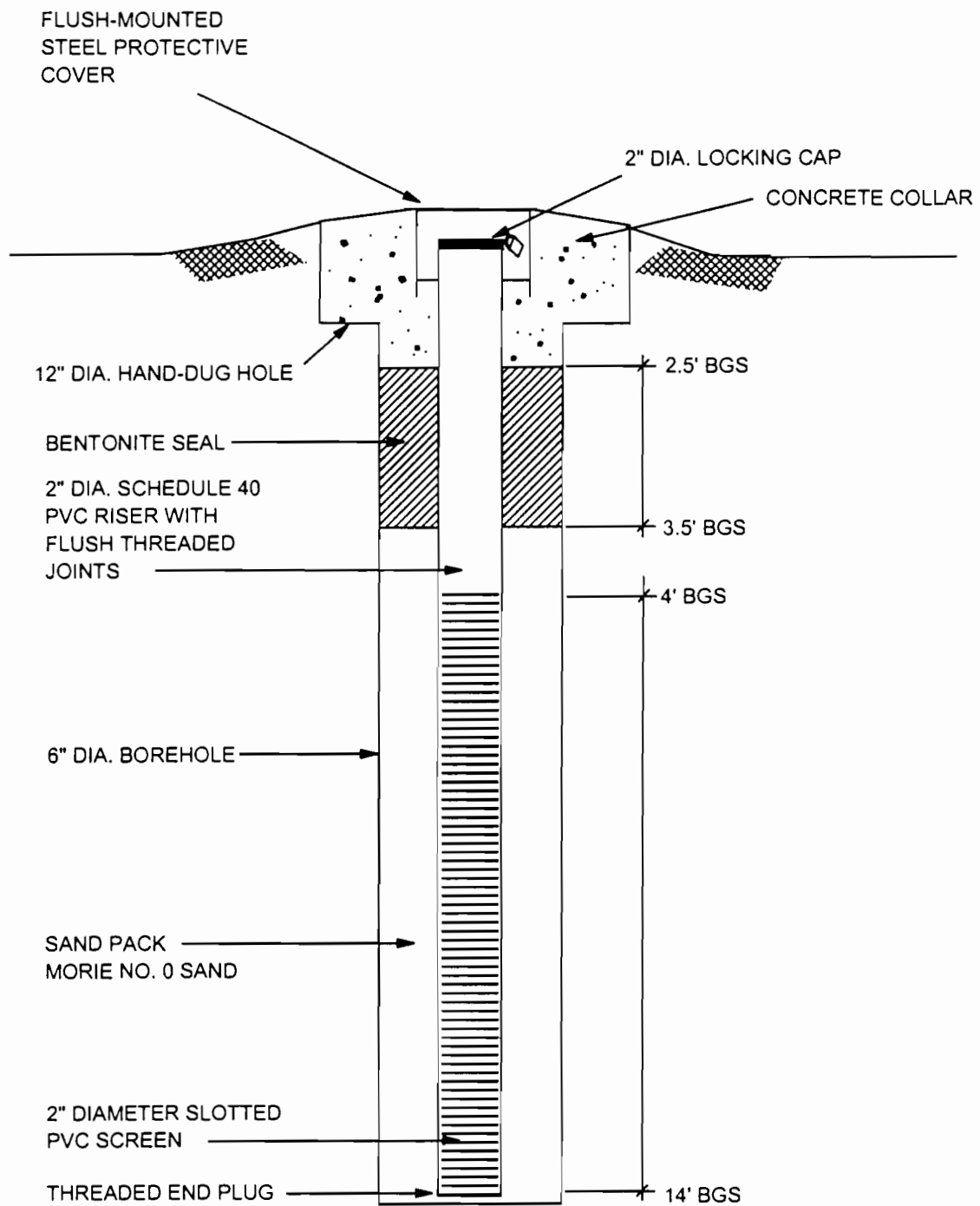


FIGURE D-4
OVERBURDEN GROUNDWATER
MONITORING WELL DETAIL
BG-MW-1
BOTANICAL GARDENS

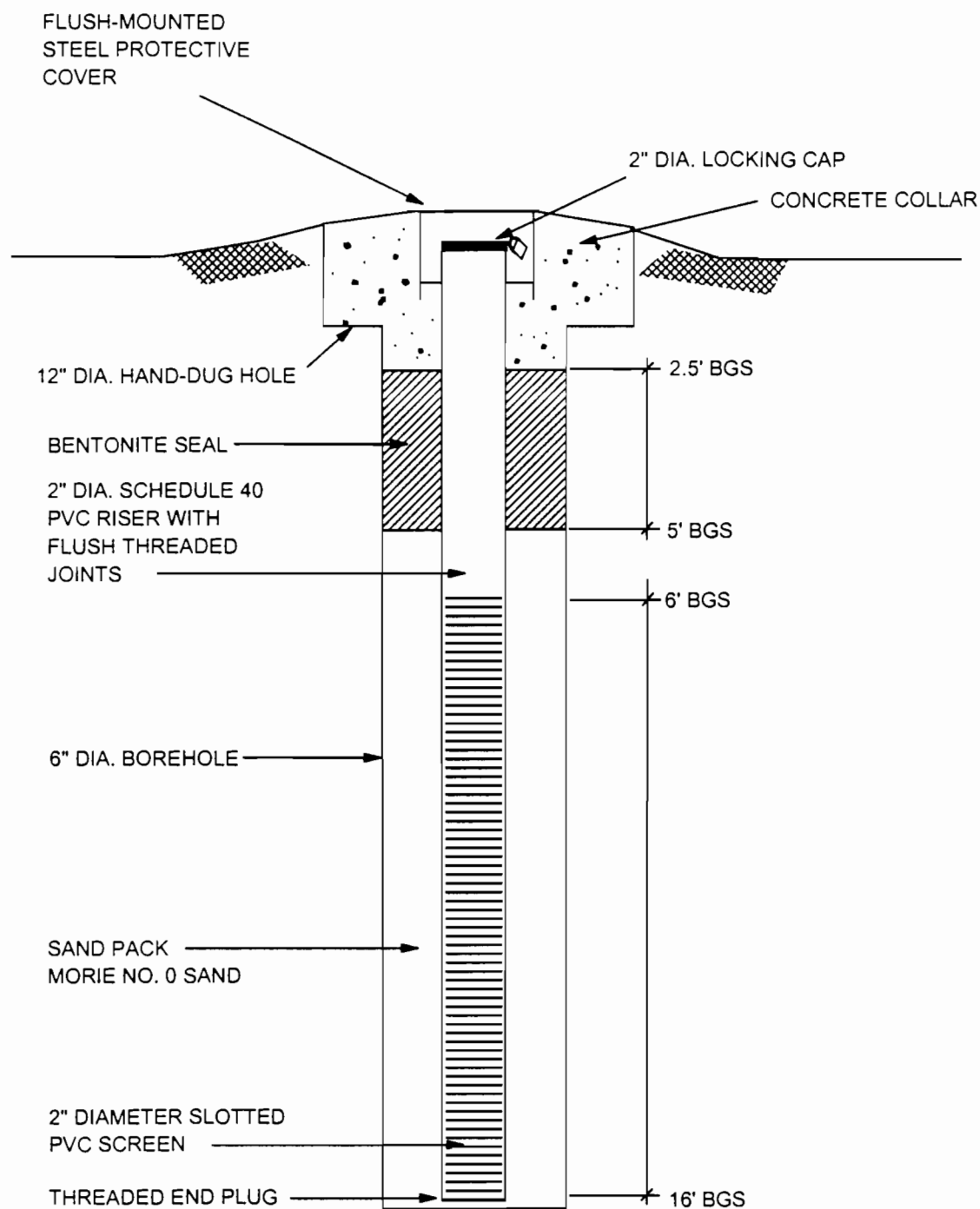


FIGURE D-5
OVERBURDEN GROUNDWATER
MONITORING WELL DETAIL
BG-MW-2
BOTANICAL GARDENS

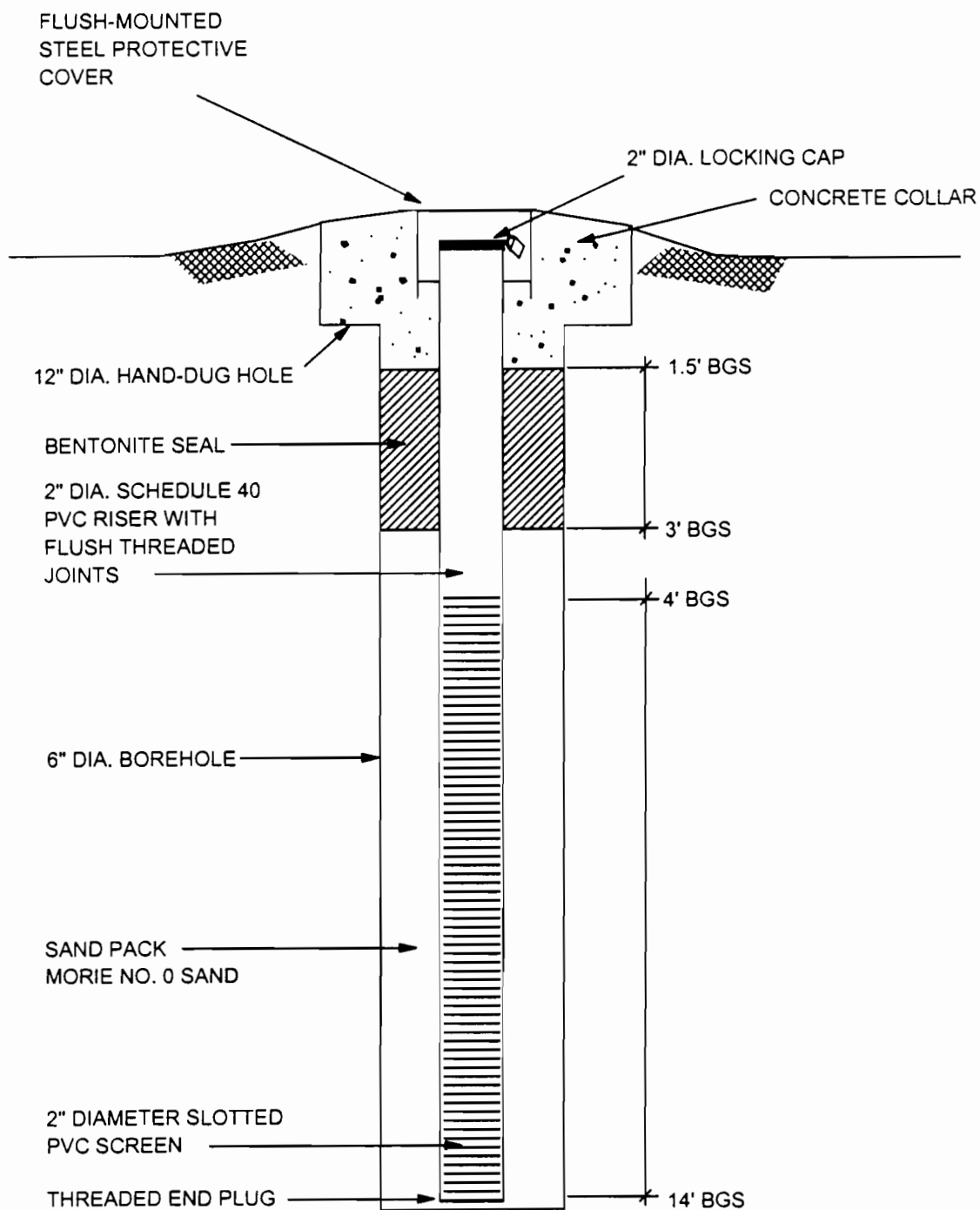


FIGURE D-6
OVERBURDEN GROUNDWATER
MONITORING WELL DETAIL
BG-MW-3
BOTANICAL GARDENS

APPENDIX E

DATA USABILITY REPORTS AND CHAIN OF CUSTODY RECORDS

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August 28, 1998

Mr. Daniel E. Riker
Malcolm Pirnie, Inc.
40 Centre Drive
P.O. Box 1938
Buffalo, New York 14219-0138

RE: Data Usability Summary Report (DUSR)
Holiday Park Project
Mitekem Corporation
SDG Nos. P-1 and E0499
Analyses for Volatile Organics, Base/Neutral and Acid Extractable Organics, Pesticides and
PCB's and Inorganics

Dear Mr. Riker:

Data Usability Summary Report (DUSR) technical services were performed by ChemWorld Environmental, Inc. for the Holiday Park project for the sampling events of July 31, 1997 through April 9, 1998. The analytical data from Sample Delivery Group (SDG) Nos. noted above were reviewed (screened) for Volatiles, Base/Neutral and Acid Extractable compounds, Pesticides / PCB's and Inorganics. The data screening consisted of a review of the Quality Control (QC) Summary Forms and a brief review of various chromatograms and quantitation reports. The QC Forms were reviewed to determine whether any data required qualification based upon QC deviations noted on the Forms. The associated Analytical Data Summary Sheets are included as Attachment A. These summary sheets include data qualifiers as described within this letter report.

The DUSR review items include the following, as method appropriate:

- Holding Times from Verified Time of Sample Receipt (VTSR)
- Surrogate Recovery
- GC/MS Instrument Performance Check
- Initial and Continuing Calibration
- Matrix Spike / Matrix Spike Duplicates (MS/MSD)
- Matrix Spike Blanks (MSB)
- Internal Standards
- Method and Field Blanks
- Tentatively Identified Compounds (TICs)
- CRDL Standards for AA and ICP
- Laboratory Duplicate Samples
- Laboratory Control Samples (LCS)
- ICP Interference Check
- ICP Serial Dilutions
- Field Duplicates

The QC Summary Forms included various deviations based upon acceptable limits for quality control. The following should be noted regarding qualification of the data set for the review items above.



Volatiles (SDG No P-1)

Continuing Calibration: Chloromethane and vinyl chloride Percent Difference (%D) exceeded 25% for the continuing calibration on 8/7/97 at 12:07. The associated non-detectable results for these compounds were qualified as 'UJ', estimated. Additional qualification in regard to calibration was not required.

Blanks: Volatile Organics were detected in the method and holding blanks, as detailed below.

Sample ID

VBLK2P	Acetone	3 ug/Kg	(x10)
VBLK2R	Acetone	2 ug/L	(x10)
VHBLK01	Acetone	4 ug/L	(x10)
	Chloromethane	1 ug/L	(x5)

The associated samples including the holding blank noted above were qualified as 'U', not detected, at the Contract Required Quantitation Limit (CRQL), for acetone where the respective sample result was less than the method blank limit and reported at less than the CRQL. Sample results were reported as 'U', not detected, where the sample result was detected over the CRQL but less than the blank limit. Chloromethane was not detected in the samples, therefore, qualification was not required for this compound.

Semi-Volatiles (SDG No. P-1)

Continuing Calibration: The percent difference (%D) was found to exceed the limit of 25% for the compound 2,2'-oxybis (1-chloropropane) on 8/7/97 at 09:24. The associated sample results were qualified as 'UJ', estimated, for the non-detectable results, for the compound. Positive results were not detected for the compound.

Blanks: Semi-volatile Organics were detected in the method blanks, as detailed below.

Sample ID

SBLK01	bis(2-ethylhexyl phthalate)	0.8 ug/L	(x10)

Sample P-1(Aq) was qualified as 'U', not detected, at the CRQL, for bis(2-ethylhexyl) phthalate due to the compound's presence at less than the CRQL and less than the blank limit.

TIC's: Copies of the Sample Data Summary Sheets are included in Attachment B, with the appropriate qualifiers. TIC results which were found to be less than five times the associated method blank results were qualified as 'R', unusable.

Volatiles (SDG No. E0499)

Blanks: Volatile Organics were detected in the method and holding blanks, as detailed below.

Sample ID

VBLK2X	Acetone	3 ug/Kg	(x10)	
VBLK2Y	Acetone	5 ug/L	(x10)	continued...

VBLK2Z	Acetone	6 ug/L	(x10)
VHBLK2Z	Acetone	4 ug/L	(x10)

The associated samples including the holding blank noted above were qualified as 'U', not detected, at the CRQL for acetone, where the respective sample result was less than the method blank limit and reported at less than the CRQL. Sample results were reported as 'U', not detected, where the sample result was detected over the CRQL but less than the blank limit.

Semi-Volatiles (SDG No. E0499)

Holding Times: Samples HP1-B12-RE, HP1-SS1A-RE and HP1-SS1ARE-RE exceeded the acceptable holding time of 10 days for extraction. However, the three extraction dates did not exceed 14 days past the extraction holding time. These three samples were qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results.

Surrogate Recovery: Low surrogate recovery was generated for all eight surrogate compounds for sample HP1-B12. The recoveries were all generated at less than 10%, therefore, the non-detectable results for the sample were qualified as 'R', unusable. The sample was re-analyzed with acceptable results. In addition, sample HP1-SS1A generated surrogate recovery for the two acid phenol surrogates at less than 10%. This sample was qualified as 'R', unusable, for the non-detectable results for the acid phenol compounds, only. This sample was also re-analyzed with acceptable results.

Continuing Calibration: The %D was found to exceed the limit of 25% for several compounds for four of the continuing calibrations. The associated sample results were qualified as 'UJ', estimated, for the non-detectable results, for the affected compounds. Positive results were not detected for these compounds.

Internal Standards: Samples HP-SS1A-RE and HP1-SS1ARE-RE generated low reported area counts for perylene-d12. The samples were qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results, for the compounds associated with the perylene-d12 internal standard.

Blanks: Semi-volatile Organics were detected in the method blanks, as detailed below.

Sample ID

SBLK03	bis(2-ethylhexyl phthalate)	2 ug/L	(x10)
SBLK01	bis(2-ethylhexyl phthalate)	50 ug/Kg	(x10)

The associated samples were qualified as 'U', not detected, at the CRQL, for bis(2-ethylhexyl) phthalate where the respective sample result was less than the method blank limit and was reported at less than the CRQL. Sample results which exceed the respective method blank limit do not require qualification.

TIC's: Copies of the Sample Data Summary Sheets are included in Attachment B, with the appropriate qualifiers. TIC results which were found to be less than five times the associated method blank results were qualified as 'R', unusable.

Pesticides / PCB's (SDG No. E0499)

Sample Quantitation: The percent difference for the results from the two GC columns exceeded the 25% limit for HP1-SS1A for endrin aldehyde. The sample was qualified as 'JN', presumptively present at an approximated quantity for the compound.

Inorganics (SDG No. E0499)

CRDL Standard: The following standards were found to generate recovery outside of the acceptable limit of 80-120%.

Analyte

Mercury	56.7% / 76.7%
Silver	44.4% / 37.8%

The positive results for silver and mercury were qualified as 'J', estimated.

Matrix Spike Recovery: Spike recovery was found to be outside the 75-125% limit for the following compounds.

HP2SS1 (mg/Kg)

Antimony	38.4%
Arsenic	65.9%
Cadmium	163.8%

The soil samples associated with the spike recovery above were qualified as 'J', estimated, for the inorganics noted. In addition, the non-detectable results for antimony and arsenic were qualified as 'UJ', estimated, due to low spike recovery.

ICP Serial Dilution: The following compounds were found to exceed the 10% difference limit for the ICP Serial Dilution Sample.

HP1B16W (ug/L)

Aluminum	11.7% D
Barium	18.3%
Beryllium	17.9%
Chromium	18.7%
Cobalt	30.3%
Lead	51.7%
Manganese	109.9%
Selenium	100%
Vanadium	21.6%
Zinc	29.0%

The associated sample results were qualified as 'J', estimated, where the result exceeded ten times the Instrument Detection Limit.

Additional Information

Field duplicates were not collected for the two sampling events.

Please contact me by telephone at 301-294-6144, should you require additional information or clarification regarding this Letter Report.

Sincerely,



Andrea P. Schuessler, CHMM
ChemWorld Environmental, Inc.

c: MP-9801 file

ORGANIC DATA QUALIFIERS

- U -** Indicates that the compound was analyzed for, but not detected at or above the Contract Required Quantitation Limit (CRQL), or the compound is not detected due to qualification through the method or field blank.
- J -** The associated numerical value is an estimated quantity.
- JN -** Tentatively identified with approximated concentrations (Volatile and Semi-Volatile Organics). Presumptively present at an approximated quantity (Pesticides/PCBs).
- UJ -** The compound was analyzed for, but not detected. The sample quantitation limit is an estimated quantity due to variance from quality control limits.
- C -** Applies to Pesticide results where the identification has been confirmed by GC/MS.
- E -** Reported value is estimated due to quantitation above the calibration range.
- D -** Reported result taken from diluted sample analysis.
- A -** Aldol condensation product.
- R -** Reported value is unusable and rejected due to variance from quality control limits.
- NA -** Not Analyzed.

INORGANIC DATA QUALIFIERS

- U -** Indicates analyte not detected at or above the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.
- B -** Indicates analyte result is between Instrument Detection Limit (IDL) and CRDL.
- J -** The reported value is estimated due to variance from quality control limits.
- UJ -** The element was analyzed for, but not detected. The sample quantitation limit is an estimate due to variance from quality control limits.
- E -** Reported value is estimated because of the presence of interference.
- R -** Reported value is unusable and rejected due to variance from quality control limits.
- NA -** Not analyzed.

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ATTACHMENT A

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1A
VOLATILE ORGANICS ANALYSIS DAT.

EPA SAMPLE NO.

P-1 (AQ)

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1 (AQ)

Matrix: (soil/water) WATER

Lab Sample ID: D1197-01

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2A9526

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: not dec. _____

Date Analyzed: 08/08/97

GC Column: DB-624 ID: 0.25 (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	8	UB
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

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FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

P-1 (SL)

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ)

Matrix: (soil/water) SOIL

Lab Sample ID: D1197-02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2A9508

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: not dec. 23

Date Analyzed: 08/07/97

GC Column: DB-624 ID: 0.25 (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	8UJ
74-83-9-----	Bromomethane	13	U
75-01-4-----	Vinyl Chloride	13	8UJ
75-00-3-----	Chloroethane	13	U
75-09-2-----	Methylene Chloride	13	U
67-64-1-----	Acetone	16	8U
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

1A
VOLATILE ORGANICS ANALYSIS 1

EPA SAMPLE NO.

VBLK2P

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ

Matrix: (soil/water) SOIL

Lab Sample ID: V2B0807A

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2A9506

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 08/07/97

GC Column: DB-624 ID: 0.25 (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	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	3	J
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

1A
VOLATILE ORGANICS ANALYSIS DATA

EPA SAMPLE NO.

VBLK2R

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ)

Matrix: (soil/water) WATER

Lab Sample ID: V2B0808A

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2A9524

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 08/08/97

GC Column: DB-624 ID: 0.25 (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	2	J
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

1A
VOLATILE ORGANICS ANALYSIS DATA

EPA SAMPLE NO.

VHBLK01

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ

Matrix: (soil/water) WATER

Lab Sample ID: V2B0808B

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2A9527

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: not dec. _____

Date Analyzed: 08/08/97

GC Column: DB-624 ID: 0.25 (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	1	J
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	4	JB
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

10 U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-B2W

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-01

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4802

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: not dec. _____

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (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	4	JB
75-15-0-----	Carbon Disulfide	2	J
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

10U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-SW1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-02

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4803

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: not dec. _____

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (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	7	J
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	6	BJ
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)	8	J
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	4	J
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

10 U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-B12

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-04

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2B4788

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: not dec. 24

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(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	10	J
67-64-1	Acetone	9	JB
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	8	J
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

13U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-B16

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-05

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2B4789

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: not dec. 19

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		
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	21	<u>U</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	11	J
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	36	
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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-B16W

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-03

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4812

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: not dec. _____

Date Analyzed: 04/19/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 5.0

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	50	U
74-83-9-----	Bromomethane	50	U
75-01-4-----	Vinyl Chloride	50	U
75-00-3-----	Chloroethane	50	U
75-09-2-----	Methylene Chloride	50	U
67-64-1-----	Acetone	57	U
75-15-0-----	Carbon Disulfide	50	U
75-35-4-----	1,1-Dichloroethene	50	U
75-34-3-----	1,1-Dichloroethane	50	U
540-59-0-----	1,2-Dichloroethene (Total)	50	U
67-66-3-----	Chloroform	50	U
107-06-2-----	1,2-Dichloroethane	50	U
78-93-3-----	2-Butanone	30	J
71-55-6-----	1,1,1-Trichloroethane	50	U
56-23-5-----	Carbon Tetrachloride	50	U
75-27-4-----	Bromodichloromethane	50	U
78-87-5-----	1,2-Dichloropropane	50	U
10061-01-5-----	cis-1,3-Dichloropropene	50	U
79-01-6-----	Trichloroethene	50	U
124-48-1-----	Dibromochloromethane	50	U
79-00-5-----	1,1,2-Trichloroethane	50	U
71-43-2-----	Benzene	50	U
10061-02-6-----	trans-1,3-Dichloropropene	50	U
75-25-2-----	Bromoform	50	U
108-10-1-----	4-Methyl-2-Pentanone	50	U
591-78-6-----	2-Hexanone	50	U
127-18-4-----	Tetrachloroethene	50	U
79-34-5-----	1,1,2,2-Tetrachloroethane	50	U
108-88-3-----	Toluene	440	
108-90-7-----	Chlorobenzene	50	U
100-41-4-----	Ethylbenzene	50	U
100-42-5-----	Styrene	50	U
1330-20-7-----	Xylene (Total)	50	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-SS1A

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-06

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2B4790

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: not dec. 31

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO.

COMPOUND

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	10	JB
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

14U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP2-SS1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-07

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2B4791

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: not dec. 28

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (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	3	JB
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	2	J
108-90-7-----	Chlorobenzene	14	U
100-41-4-----	Ethylbenzene	14	U
100-42-5-----	Styrene	14	U
1330-20-7-----	Xylene (Total)	14	U

14U

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FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBK2X

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: V2B0418A

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2B4786

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	3	J
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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2Y

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: V2B0418B

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4800

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (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	5	J
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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBK2Z

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: V2B0419A

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4808

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 04/19/98

GC Column: DB-624 ID: 0.25 (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	6	J
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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHBLK2Z

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: V2B0419B

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4813

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: not dec. _____

Date Analyzed: 04/19/98

GC Column: DB-624 ID: 0.25 (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	4	JB
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

1B
SEMIVOLATILE ORGANICS ANALYS

EPA SAMPLE NO.

P-1 (AQ)

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1 (AQ)

Matrix: (soil/water) WATER

Lab Sample ID: D1197-01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S1A0785

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/05/97

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/07/97

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	
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	
111-91-1-----	bis(-2-Chloroethoxy)methane	10 U	
87-68-3-----	Hexachlorobutadiene	10 U	
59-50-7-----	4-Chloro-3-Methylphenol	10 U	
91-57-6-----	2-Methylnaphthalene	10 U	
77-47-4-----	Hexachlorocyclopentadiene	10 U	
88-06-2-----	2,4,6-Trichlorophenol	10 U	
95-95-4-----	2,4,5-Trichlorophenol	25 U	
91-58-7-----	2-Chloronaphthalene	10 U	
88-74-4-----	2-Nitroaniline	25 U	
131-11-3-----	Dimethylphthalate	10 U	
208-96-8-----	Acenaphthylene	10 U	
606-20-2-----	2,6-Dinitrotoluene	10 U	
99-09-2-----	3-Nitroaniline	25 U	
83-32-9-----	Acenaphthene	10 U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P-1 (AQ)

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1 (AQ)

Matrix: (soil/water) WATER

Lab Sample ID: D1197-01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S1A0785

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/05/97

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

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

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	5	J
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	JB
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b) fluoranthene	10	U
207-08-9-----	Benzo(k) fluoranthene	10	U
50-32-8-----	Benzo(a) pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd) pyrene	10	U
53-70-3-----	Dibenzo(a,h) anthracene	10	U
191-24-2-----	Benzo(g,h,i) perylene	10	U

10 U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

P-1 (SL)

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: P-1(AQ)

Matrix: (soil/water) SOIL Lab Sample ID: D1197-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0788

Level: (low/med) LOW Date Received: 08/01/97

% Moisture: 22 decanted: (Y/N) N Date Extracted: 08/05/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/KG
108-95-2	Phenol	430	U
111-44-4	bis(-2-Chloroethyl) Ether	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
95-50-1	1,2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-di-n-propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
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
111-91-1	bis(-2-Chloroethoxy)methane	430	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-Methylphenol	430	U
91-57-6	2-Methylnaphthalene	430	U
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	430	U
208-96-8	Acenaphthylene	430	U
606-20-2	2,6-Dinitrotoluene	430	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	430	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P-1 (SL)

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1 (AQ)

Matrix: (soil/water) SOIL

Lab Sample ID: D1197-02

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A0788

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: 22 decanted: (Y/N) N

Date Extracted: 08/05/97

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

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	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
534-52-1-----	4,6-Dinitro-2-methylphenol	1100	U
86-30-6-----	N-nitrosodiphenylamine (1)	430	U
101-55-3-----	4-Bromophenyl-phenylether	430	U
118-74-1-----	Hexachlorobenzene	430	U
87-86-5-----	Pentachlorophenol	1100	U
85-01-8-----	Phenanthrene	430	U
120-12-7-----	Anthracene	430	U
86-74-8-----	Carbazole	430	U
84-74-2-----	Di-n-butylphthalate	430	U
206-44-0-----	Fluoranthene	430	U
129-00-0-----	Pyrene	430	U
85-68-7-----	Butylbenzylphthalate	430	U
91-94-1-----	3,3'-Dichlorobenzidine	430	U
56-55-3-----	Benzo(a)anthracene	430	U
218-01-9-----	Chrysene	430	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	430	U
117-84-0-----	Di-n-octylphthalate	430	U
205-99-2-----	Benzo(b)fluoranthene	430	U
207-08-9-----	Benzo(k)fluoranthene	430	U
50-32-8-----	Benzo(a)pyrene	430	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	430	U
53-70-3-----	Dibenzo(a,h)anthracene	430	U
191-24-2-----	Benzo(g,h,i)perylene	430	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

SBLK01

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: P-1(AQ)

Matrix: (soil/water) WATER Lab Sample ID: S0805-B3

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S1A0781

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 08/05/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/07/97

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	
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	
111-91-1	bis(-2-Chloroethoxy)methane	10 U	
87-68-3	Hexachlorobutadiene	10 U	
59-50-7	4-Chloro-3-Methylphenol	10 U	
91-57-6	2-Methylnaphthalene	10 U	
77-47-4	Hexachlorocyclopentadiene	10 U	
88-06-2	2,4,6-Trichlorophenol	10 U	
95-95-4	2,4,5-Trichlorophenol	25 U	
91-58-7	2-Chloronaphthalene	10 U	
88-74-4	2-Nitroaniline	25 U	
131-11-3	Dimethylphthalate	10 U	
208-96-8	Acenaphthylene	10 U	
606-20-2	2,6-Dinitrotoluene	10 U	
99-09-2	3-Nitroaniline	25 U	
83-32-9	Acenaphthene	10 U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ)

Matrix: (soil/water) WATER

Lab Sample ID: S0805-B3

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S1A0781

Level: (low/med) LOW

Date Received: _____

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/05/97

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/07/97

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	0.8	J
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo (b) fluoranthene	10	U
207-08-9-----	Benzo (k) fluoranthene	10	U
50-32-8-----	Benzo (a) pyrene	10	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10	U
53-70-3-----	Dibenzo (a,h) anthracene	10	U
191-24-2-----	Benzo (g,h,i) perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DAT.

EPA SAMPLE NO.

SBLK02

Lab Name: MITKEM CORPORATION Contract: _____

Lab Code: MITKEM Case No.: _____ SAS No.: _____ SDG No.: P-1(AQ)

Matrix: (soil/water) SOIL Lab Sample ID: S0805-B1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0791

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 08/05/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(-2-Chloroethyl) Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
111-91-1	bis(-2-Chloroethoxy)methane	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK02

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ)

Matrix: (soil/water) SOIL

Lab Sample ID: S0805-B1

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: SLA0791

Level: (low/med) LOW

Date Received: _____

% Moisture: 0 decanted: (Y/N) N

Date Extracted: 08/05/97

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

51-28-5-----	2,4-Dinitrophenol	830	U
100-02-7-----	4-Nitrophenol	830	U
132-64-9-----	Dibenzofuran	330	U
121-14-2-----	2,4-Dinitrotoluene	330	U
84-66-2-----	Diethylphthalate	330	U
7005-72-3-----	4-Chlorophenyl-phenylether	330	U
86-73-7-----	Fluorene	330	U
100-01-6-----	4-Nitroaniline	830	U
534-52-1-----	4,6-Dinitro-2-methylphenol	830	U
86-30-6-----	N-nitrosodiphenylamine (1)	330	U
101-55-3-----	4-Bromophenyl-phenylether	330	U
118-74-1-----	Hexachlorobenzene	330	U
87-86-5-----	Pentachlorophenol	830	U
85-01-8-----	Phenanthrene	330	U
120-12-7-----	Anthracene	330	U
86-74-8-----	Carbazole	330	U
84-74-2-----	Di-n-butylphthalate	330	U
206-44-0-----	Fluoranthene	330	U
129-00-0-----	Pyrene	330	U
85-68-7-----	Butylbenzylphthalate	330	U
91-94-1-----	3,3'-Dichlorobenzidine	330	U
56-55-3-----	Benzo(a)anthracene	330	U
218-01-9-----	Chrysene	330	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	330	U
117-84-0-----	Di-n-octylphthalate	330	U
205-99-2-----	Benzo(b)fluoranthene	330	U
207-08-9-----	Benzo(k)fluoranthene	330	U
50-32-8-----	Benzo(a)pyrene	330	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	330	U
53-70-3-----	Dibenzo(a,h)anthracene	330	U
191-24-2-----	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-B2W

Lab Name: MITKEM CORPORATION Contract: _____

Lab Code: MITKEM Case No.: _____ SAS No.: _____ SDG No.: E0499

Matrix: (soil/water) WATER Lab Sample ID: E0499-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S2A3144

Level: (low/med) LOW Date Received: 04/09/98

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/30/98

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	
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	
111-91-1	bis(-2-Chloroethoxy)methane	10 U	
87-68-3	Hexachlorobutadiene	10 U	
59-50-7	4-Chloro-3-Methylphenol	10 U	
91-57-6	2-Methylnaphthalene	10 U	
77-47-4	Hexachlorocyclopentadiene	10 U	
88-06-2	2,4,6-Trichlorophenol	10 U	
95-95-4	2,4,5-Trichlorophenol	25 U	
91-58-7	2-Chloronaphthalene	10 U	
88-74-4	2-Nitroaniline	25 U	
131-11-3	Dimethylphthalate	10 U	
208-96-8	Acenaphthylene	10 U	
606-20-2	2,6-Dinitrotoluene	10 U	
99-09-2	3-Nitroaniline	25 U	
83-32-9	Acenaphthene	10 U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-B2W

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3144

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 04/30/98

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	27	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

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1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

BG-SW1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-02

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3145

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 04/30/98

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	1	J
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
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
111-91-1	bis(-2-Chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-SW1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-02

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3145

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 04/30/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

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

CAS NO.

COMPOUND

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	84	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo (b) fluoranthene	10	U
207-08-9-----	Benzo (k) fluoranthene	10	U
50-32-8-----	Benzo (a) pyrene	10	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10	U
53-70-3-----	Dibenzo (a,h) anthracene	10	U
191-24-2-----	Benzo (g,h,i) perylene	10	U

(1) - Cannot be separated from Diphenylamine

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1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

BG-SW1DL

Lab Name: MITKEM CORPORATION

Cor

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-02DL

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3161

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 05/04/98

Injection Volume: 2.0(uL)

Dilution Factor: 2.0

GPC Cleanup: (Y/N) N

pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

108-95-2-----	Phenol	20	U
111-44-4-----	bis(-2-Chloroethyl) Ether	20	U
95-57-8-----	2-Chlorophenol	20	U
541-73-1-----	1,3-Dichlorobenzene	20	U
106-46-7-----	1,4-Dichlorobenzene	20	U
95-50-1-----	1,2-Dichlorobenzene	20	U
95-48-7-----	2-Methylphenol	20	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	20	U
106-44-5-----	4-Methylphenol	20	U
621-64-7-----	N-Nitroso-di-n-propylamine	20	U
67-72-1-----	Hexachloroethane	20	U
98-95-3-----	Nitrobenzene	20	U
78-59-1-----	Isophorone	20	U
88-75-5-----	2-Nitrophenol	20	U
105-67-9-----	2,4-Dimethyphenol	20	U
120-83-2-----	2,4-Dichlorophenol	20	U
120-82-1-----	1,2,4-Trichlorobenzene	20	U
91-20-3-----	Naphthalene	20	U
106-47-8-----	4-Chloroaniline	20	U
111-91-1-----	bis(-2-Chloroethoxy)methane	20	U
87-68-3-----	Hexachlorobutadiene	20	U
59-50-7-----	4-Chloro-3-Methylphenol	20	U
91-57-6-----	2-Methylnaphthalene	20	U
77-47-4-----	Hexachlorocyclopentadiene	20	U
88-06-2-----	2,4,6-Trichlorophenol	20	U
95-95-4-----	2,4,5-Trichlorophenol	50	U
91-58-7-----	2-Chloronaphthalene	20	U
88-74-4-----	2-Nitroaniline	50	U
131-11-3-----	Dimethylphthalate	20	U
208-96-8-----	Acenaphthylene	20	U
606-20-2-----	2,6-Dinitrotoluene	20	U
99-09-2-----	3-Nitroaniline	50	U
83-32-9-----	Acenaphthene	20	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-SW1DL

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-02DL

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3161

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL)

Dilution Factor: 2.0

GPC Cleanup: (Y/N) N

pH: _____

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

Q

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

(1) - Cannot be separated from Diphenylamine

409

1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

HP1-B12

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499

Matrix: (soil/water) SOIL Lab Sample ID: E0499-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3150

Level: (low/med) LOW Date Received: 04/11/98

% Moisture: 18 decanted: (Y/N) N Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/30/98

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	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
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
111-91-1	bis(-2-Chloroethoxy)methane	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
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	Dimethylphthalate	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
		439	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-B12

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499
Matrix: (soil/water) SOIL Lab Sample ID: E0499-04
Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3150
Level: (low/med) LOW Date Received: 04/11/98
% Moisture: 18 decanted: (Y/N) N Date Extracted: 04/14/98
Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/30/98
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	1000	U	R
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	
534-52-1	4,6-Dinitro-2-methylphenol	1000	U	
86-30-6	N-nitrosodiphenylamine (1)	410	U	
101-55-3	4-Bromophenyl-phenylether	410	U	
118-74-1	Hexachlorobenzene	410	U	
87-86-5	Pentachlorophenol	1000	U	
85-01-8	Phenanthrene	410	U	
120-12-7	Anthracene	410	U	
86-74-8	Carbazole	410	U	
84-74-2	Di-n-butylphthalate	410	U	
206-44-0	Fluoranthene	410	U	
129-00-0	Pyrene	410	U	
85-68-7	Butylbenzylphthalate	410	U	
91-94-1	3,3'-Dichlorobenzidine	410	U	
56-55-3	Benzo(a)anthracene	410	U	
218-01-9	Chrysene	410	U	
117-81-7	bis(2-Ethylhexyl)phthalate	410	U	
117-84-0	Di-n-octylphthalate	410	U	
205-99-2	Benzo(b)fluoranthene	410	U	
207-08-9	Benzo(k)fluoranthene	410	U	
50-32-8	Benzo(a)pyrene	410	U	
193-39-5	Indeno(1,2,3-cd)pyrene	410	U	
53-70-3	Dibenzo(a,h)anthracene	410	U	
191-24-2	Benzo(g,h,i)perylene	410	U	

(1) - Cannot be separated from Diphenylamine

440

1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

HP1-B12RE

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-04RE

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2738

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 18 decanted: (Y/N) N

Date Extracted: 05/04/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/07/98

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	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
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
111-91-1	bis(-2-Chloroethoxy)methane	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
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	Dimethylphthalate	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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-B12RE

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-04RE

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2738

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 18 decanted: (Y/N) N

Date Extracted: 05/04/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/07/98

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	1000	U
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
534-52-1-----	4,6-Dinitro-2-methylphenol	1000	U
86-30-6-----	N-nitrosodiphenylamine (1)	410	U
101-55-3-----	4-Bromophenyl-phenylether	410	U
118-74-1-----	Hexachlorobenzene	410	U
87-86-5-----	Pentachlorophenol	1000	U
85-01-8-----	Phenanthrene	410	U
120-12-7-----	Anthracene	410	U
86-74-8-----	Carbazole	410	U
84-74-2-----	Di-n-butylphthalate	410	U
206-44-0-----	Fluoranthene	410	U
129-00-0-----	Pyrene	410	U
85-68-7-----	Butylbenzylphthalate	410	U
91-94-1-----	3,3'-Dichlorobenzidine	410	U
56-55-3-----	Benzo (a) anthracene	410	U
218-01-9-----	Chrysene	410	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	67	U
117-84-0-----	Di-n-octylphthalate	410	U
205-99-2-----	Benzo (b) fluoranthene	410	U
207-08-9-----	Benzo (k) fluoranthene	410	U
50-32-8-----	Benzo (a) pyrene	410	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	410	U
53-70-3-----	Dibenzo (a,h) anthracene	410	U
191-24-2-----	Benzo (g,h,i) perylene	410	U

(1) - Cannot be separated from Diphenylamine

447

1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

HP1-B16

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499

Matrix: (soil/water) SOIL Lab Sample ID: E0499-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3151

Level: (low/med) LOW Date Received: 04/11/98

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/30/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	430	U
111-44-4	bis(-2-Chloroethyl) Ether	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
95-50-1	1,2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430	U
106-44-5	4-Methylphenol	220	J
621-64-7	N-Nitroso-di-n-propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	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
111-91-1	bis(-2-Chloroethoxy)methane	430	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-Methylphenol	430	U
91-57-6	2-Methylnaphthalene	430	U
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	430	U
208-96-8	Acenaphthylene	62	J
606-20-2	2,6-Dinitrotoluene	430	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	430	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-B16

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-05

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3151

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 22 decanted: (Y/N) N

Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 04/30/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

CONCENTRATION UNITS:
CAS NO. COMPOUND (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	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
534-52-1-----	4,6-Dinitro-2-methylphenol	1100	U
86-30-6-----	N-nitrosodiphenylamine (1)	430	U
101-55-3-----	4-Bromophenyl-phenylether	430	U
118-74-1-----	Hexachlorobenzene	430	U
87-86-5-----	Pentachlorophenol	1100	U
85-01-8-----	Phenanthrene	430	U
120-12-7-----	Anthracene	430	U
86-74-8-----	Carbazole	430	U
84-74-2-----	Di-n-butylphthalate	430	U
206-44-0-----	Fluoranthene	46	J
129-00-0-----	Pyrene	58	J
85-68-7-----	Butylbenzylphthalate	430	U
91-94-1-----	3,3'-Dichlorobenzidine	430	U
56-55-3-----	Benzo(a)anthracene	430	U
218-01-9-----	Chrysene	50	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	160	J
117-84-0-----	Di-n-octylphthalate	430	U
205-99-2-----	Benzo(b)fluoranthene	160	J
207-08-9-----	Benzo(k)fluoranthene	70	J
50-32-8-----	Benzo(a)pyrene	150	J
193-39-5-----	Indeno(1,2,3-cd)pyrene	110	J
53-70-3-----	Dibenzo(a,h)anthracene	430	U
191-24-2-----	Benzo(g,h,i)perylene	120	J

(1) - Cannot be separated from Diphenylamine

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1B
SEMIVOLATILE ORGANICS ANALYSIS DI

EPA SAMPLE NO.

HP1-B16W

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499

Matrix: (soil/water) WATER Lab Sample ID: E0499-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S2A3146

Level: (low/med) LOW Date Received: 04/11/98

% Moisture: decanted: (Y/N) Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/30/98

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	28	
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	450	E
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
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
111-91-1	bis(-2-Chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-B16W

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-03

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3146

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 04/30/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

CONCENTRATION UNITS:
CAS NO. COMPOUND (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	16	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo (b) fluoranthene	10	U
207-08-9-----	Benzo (k) fluoranthene	10	U
50-32-8-----	Benzo (a) pyrene	10	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10	U
53-70-3-----	Dibenzo (a,h) anthracene	10	U
191-24-2-----	Benzo (g,h,i) perylene	10	U

(1) - Cannot be separated from Diphenylamine

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1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

HP1-B16WDL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499

Matrix: (soil/water) WATER Lab Sample ID: E0499-03DL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S2A3162

Level: (low/med) LOW Date Received: 04/11/98

% Moisture: decanted: (Y/N) Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	30	DJ
111-44-4	bis(-2-Chloroethyl) Ether	100	U
95-57-8	2-Chlorophenol	100	U
541-73-1	1,3-Dichlorobenzene	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-50-1	1,2-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
108-60-1	2,2'-oxybis(1-Chloropropane)	100	U
106-44-5	4-Methylphenol	470	D
621-64-7	N-Nitroso-di-n-propylamine	100	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
78-59-1	Isophorone	100	U
88-75-5	2-Nitrophenol	100	U
105-67-9	2,4-Dimethylphenol	100	U
120-83-2	2,4-Dichlorophenol	100	U
120-82-1	1,2,4-Trichlorobenzene	100	U
91-20-3	Naphthalene	100	U
106-47-8	4-Chloroaniline	100	U
111-91-1	bis(-2-Chloroethoxy)methane	100	U
87-68-3	Hexachlorobutadiene	100	U
59-50-7	4-Chloro-3-Methylphenol	100	U
91-57-6	2-Methylnaphthalene	100	U
77-47-4	Hexachlorocyclopentadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
91-58-7	2-Chloronaphthalene	100	U
88-74-4	2-Nitroaniline	250	U
131-11-3	Dimethylphthalate	100	U
208-96-8	Acenaphthylene	100	U
606-20-2	2,6-Dinitrotoluene	100	U
99-09-2	3-Nitroaniline	250	U
83-32-9	Acenaphthene	100	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-B16WDL

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-03DL

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3162

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL)

Dilution Factor: 10.0

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

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

CAS NO.	COMPOUND	Q
51-28-5-----	2,4-Dinitrophenol	250 U
100-02-7-----	4-Nitrophenol	250 U
132-64-9-----	Dibenzofuran	100 U
121-14-2-----	2,4-Dinitrotoluene	100 U
84-66-2-----	Diethylphthalate	100 U
7005-72-3-----	4-Chlorophenyl-phenylether	100 U
86-73-7-----	Fluorene	100 U
100-01-6-----	4-Nitroaniline	250 U
534-52-1-----	4,6-Dinitro-2-methylphenol	250 U
86-30-6-----	N-nitrosodiphenylamine (1)	100 U
101-55-3-----	4-Bromophenyl-phenylether	100 U
118-74-1-----	Hexachlorobenzene	100 U
87-86-5-----	Pentachlorophenol	250 U
85-01-8-----	Phenanthrene	100 U
120-12-7-----	Anthracene	100 U
86-74-8-----	Carbazole	100 U
84-74-2-----	Di-n-butylphthalate	100 U
206-44-0-----	Fluoranthene	100 U
129-00-0-----	Pyrene	100 U
85-68-7-----	Butylbenzylphthalate	100 U
91-94-1-----	3,3'-Dichlorobenzidine	100 U
56-55-3-----	Benzo(a)anthracene	100 U
218-01-9-----	Chrysene	100 U
117-81-7-----	bis(2-Ethylhexyl)phthalate	100 U
117-84-0-----	Di-n-octylphthalate	100 U
205-99-2-----	Benzo(b)fluoranthene	100 U
207-08-9-----	Benzo(k)fluoranthene	100 U
50-32-8-----	Benzo(a)pyrene	100 U
193-39-5-----	Indeno(1,2,3-cd)pyrene	100 U
53-70-3-----	Dibenzo(a,h)anthracene	100 U
191-24-2-----	Benzo(g,h,i)perylene	100 U

(1) - Cannot be separated from Diphenylamine

549

1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

HP1-SS1A

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499

Matrix: (soil/water) SOIL Lab Sample ID: E0499-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3163

Level: (low/med) LOW Date Received: 04/11/98

% Moisture: 26 decanted: (Y/N) N Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	450	~~U~~ R
111-44-4	bis(-2-Chloroethyl) Ether	450	U
95-57-8	2-Chlorophenol	450	~~U~~ R
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~~ R
108-60-1	2,2'-oxybis(1-Chloropropane)	450	U
106-44-5	4-Methylphenol	450	~~U~~ R
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~~ R
105-67-9	2,4-Dimethylphenol	450	~~U~~ R
120-83-2	2,4-Dichlorophenol	450	~~U~~ R
120-82-1	1,2,4-Trichlorobenzene	450	U
91-20-3	Naphthalene	450	U
106-47-8	4-Chloroaniline	450	~~U~~ UJ
111-91-1	bis(-2-Chloroethoxy)methane	450	U
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-Methylphenol	450	~~U~~ R
91-57-6	2-Methylnaphthalene	450	U
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	~~U~~ R
95-95-4	2,4,5-Trichlorophenol	1100	~~U~~ R
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	450	U
		500	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-SS1A

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-06

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3163

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 26 decanted: (Y/N) N

Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	1100	UR
100-02-7-----	4-Nitrophenol	1100	UR
132-64-9-----	Dibenzofuran	450	U
121-14-2-----	2,4-Dinitrotoluene	450	U
84-66-2-----	Diethylphthalate	450	U
7005-72-3-----	4-Chlorophenyl-phenylether	450	U
86-73-7-----	Fluorene	450	U
100-01-6-----	4-Nitroaniline	1100	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1100	UR
86-30-6-----	N-nitrosodiphenylamine (1)	450	U
101-55-3-----	4-Bromophenyl-phenylether	450	U
118-74-1-----	Hexachlorobenzene	450	U
87-86-5-----	Pentachlorophenol	1100	UR
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	93	J
129-00-0-----	Pyrene	80	J
85-68-7-----	Butylbenzylphthalate	450	U
91-94-1-----	3,3'-Dichlorobenzidine	450	U
56-55-3-----	Benzo (a) anthracene	49	J
218-01-9-----	Chrysene	64	J
117-81-7-----	bis (2-Ethylhexyl) phthalate	450	U
117-84-0-----	Di-n-octylphthalate	450	U
205-99-2-----	Benzo (b) fluoranthene	120	J
207-08-9-----	Benzo (k) fluoranthene	47	J
50-32-8-----	Benzo (a) pyrene	66	J
193-39-5-----	Indeno (1,2,3-cd) pyrene	450	U
53-70-3-----	Dibenzo (a,h) anthracene	450	U
191-24-2-----	Benzo (g,h,i) perylene	450	U

(1) - Cannot be separated from Diphenylamine

567

1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

HP1-SS1ARE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499

Matrix: (soil/water) SOIL Lab Sample ID: E0499-06RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A2737

Level: (low/med) LOW Date Received: 04/11/98

% Moisture: 26 decanted: (Y/N) N Date Extracted: 05/05/98

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/07/98

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

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
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
111-91-1-----	bis(-2-Chloroethoxy)methane	450	U
87-68-3-----	Hexachlorobutadiene	450	U
59-50-7-----	4-Chloro-3-Methylphenol	450	U
91-57-6-----	2-Methylnaphthalene	450	U
77-47-4-----	Hexachlorocyclopentadiene	450	U
88-06-2-----	2,4,6-Trichlorophenol	450	U
95-95-4-----	2,4,5-Trichlorophenol	1100	U
91-58-7-----	2-Chloronaphthalene	450	U
88-74-4-----	2-Nitroaniline	1100	U
131-11-3-----	Dimethylphthalate	450	U
208-96-8-----	Acenaphthylene	450	U
606-20-2-----	2,6-Dinitrotoluene	450	U
99-09-2-----	3-Nitroaniline	1100	U
83-32-9-----	Acenaphthene	450	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-SS1ARE

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-06RE

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2737

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 26 decanted: (Y/N) N

Date Extracted: 05/05/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/07/98

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	UJ
100-02-7-----	4-Nitrophenol	1100	U	UJ
132-64-9-----	Dibenzofuran	450	U	UJ
121-14-2-----	2,4-Dinitrotoluene	450	U	UJ
84-66-2-----	Diethylphthalate	450	U	UJ
7005-72-3-----	4-Chlorophenyl-phenylether	450	U	UJ
86-73-7-----	Fluorene	450	U	UJ
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)	450	U	UJ
101-55-3-----	4-Bromophenyl-phenylether	450	U	UJ
118-74-1-----	Hexachlorobenzene	450	U	UJ
87-86-5-----	Pentachlorophenol	1100	U	UJ
85-01-8-----	Phenanthrene	78	J	UJ
120-12-7-----	Anthracene	450	U	UJ
86-74-8-----	Carbazole	450	U	UJ
84-74-2-----	Di-n-butylphthalate	450	U	UJ
206-44-0-----	Fluoranthene	160	J	UJ
129-00-0-----	Pyrene	180	J	UJ
85-68-7-----	Butylbenzylphthalate	450	U	UJ
91-94-1-----	3,3'-Dichlorobenzidine	450	U	UJ
56-55-3-----	Benzo (a) anthracene	96	J	UJ
218-01-9-----	Chrysene	130	J	UJ
117-81-7-----	bis(2-Ethylhexyl)phthalate	450	U	UJ
117-84-0-----	Di-n-octylphthalate	450	U	UJ
205-99-2-----	Benzo (b) fluoranthene	220	J	UJ
207-08-9-----	Benzo (k) fluoranthene	85	J	UJ
50-32-8-----	Benzo (a) pyrene	140	J	UJ
193-39-5-----	Indeno (1,2,3-cd) pyrene	450	U	UJ
53-70-3-----	Dibenzo (a,h) anthracene	450	U	UJ
191-24-2-----	Benzo (g,h,i) perylene	450	U	UJ

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANAL

EPA SAMPLE NO.

HP1-SSLARERE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499

Matrix: (soil/water) SOIL Lab Sample ID: E0499-06RERE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A2750

Level: (low/med) LOW Date Received: 04/11/98

% Moisture: 26 decanted: (Y/N) N Date Extracted: 05/05/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/08/98

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
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
111-91-1	bis(-2-Chloroethoxy)methane	450	U
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-Methylphenol	450	U
91-57-6	2-Methylnaphthalene	450	U
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	450	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP1-SS1ARERE

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-06RERE

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2750

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 26 decanted: (Y/N) N

Date Extracted: 05/05/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/08/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

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

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	1100	uJ
100-02-7-----	4-Nitrophenol	1100	uJ
132-64-9-----	Dibenzofuran	450	uJ
121-14-2-----	2,4-Dinitrotoluene	450	uJ
84-66-2-----	Diethylphthalate	450	uJ
7005-72-3-----	4-Chlorophenyl-phenylether	450	uJ
86-73-7-----	Fluorene	450	uJ
100-01-6-----	4-Nitroaniline	1100	uJ
534-52-1-----	4,6-Dinitro-2-methylphenol	1100	uJ
86-30-6-----	N-nitrosodiphenylamine (1)	450	uJ
101-55-3-----	4-Bromophenyl-phenylether	450	uJ
118-74-1-----	Hexachlorobenzene	450	uJ
87-86-5-----	Pentachlorophenol	1100	uJ
85-01-8-----	Phenanthrene	71	J
120-12-7-----	Anthracene	450	uJ
86-74-8-----	Carbazole	450	uJ
84-74-2-----	Di-n-butylphthalate	450	uJ
206-44-0-----	Fluoranthene	150	J
129-00-0-----	Pyrene	170	J
85-68-7-----	Butylbenzylphthalate	450	uJ
91-94-1-----	3,3'-Dichlorobenzidine	450	uJ
56-55-3-----	Benzo(a)anthracene	110	J
218-01-9-----	Chrysene	120	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	450	uJ
117-84-0-----	Di-n-octylphthalate	450	uJ
205-99-2-----	Benzo(b)fluoranthene	210	J
207-08-9-----	Benzo(k)fluoranthene	100	J
50-32-8-----	Benzo(a)pyrene	140	J
193-39-5-----	Indeno(1,2,3-cd)pyrene	69	J
53-70-3-----	Dibenzo(a,h)anthracene	450	uJ
191-24-2-----	Benzo(g,h,i)perylene	450	uJ

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS E

EPA SAMPLE NO.

HP2-SS1

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499

Matrix: (soil/water) SOIL Lab Sample ID: E0499-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3147

Level: (low/med) LOW Date Received: 04/11/98

% Moisture: 27 decanted: (Y/N) N Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/30/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	460	U
111-44-4	bis(-2-Chloroethyl) Ether	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	460	U
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitroso-di-n-propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethyphenol	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	U
111-91-1	bis(-2-Chloroethoxy)methane	460	U
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-Methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	460	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP2-SS1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-07

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3147

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 27 decanted: (Y/N) N

Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 04/30/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

51-28-5-----	2,4-Dinitrophenol	1100	U
100-02-7-----	4-Nitrophenol	1100	U
132-64-9-----	Dibenzofuran	460	U
121-14-2-----	2,4-Dinitrotoluene	460	U
84-66-2-----	Diethylphthalate	460	U
7005-72-3-----	4-Chlorophenyl-phenylether	460	U
86-73-7-----	Fluorene	460	U
100-01-6-----	4-Nitroaniline	1100	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1100	U
86-30-6-----	N-nitrosodiphenylamine (1)	460	U
101-55-3-----	4-Bromophenyl-phenylether	460	U
118-74-1-----	Hexachlorobenzene	460	U
87-86-5-----	Pentachlorophenol	1100	U
85-01-8-----	Phenanthrene	460	U
120-12-7-----	Anthracene	460	U
86-74-8-----	Carbazole	460	U
84-74-2-----	Di-n-butylphthalate	460	U
206-44-0-----	Fluoranthene	68	J
129-00-0-----	Pyrene	62	J
85-68-7-----	Butylbenzylphthalate	460	U
91-94-1-----	3,3'-Dichlorobenzidine	460	U
56-55-3-----	Benzo(a)anthracene	460	U
218-01-9-----	Chrysene	48	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	74	J
117-84-0-----	Di-n-octylphthalate	460	U
205-99-2-----	Benzo(b)fluoranthene	59	J
207-08-9-----	Benzo(k)fluoranthene	460	U
50-32-8-----	Benzo(a)pyrene	69	J
193-39-5-----	Indeno(1,2,3-cd)pyrene	460	U
53-70-3-----	Dibenzo(a,h)anthracene	460	U
191-24-2-----	Benzo(g,h,i)perylene	460	U

(1) - Cannot be separated from Diphenylamine

678

1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

SBLK01

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: S0414-B2

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3155

Level: (low/med) LOW

Date Received: _____

% Moisture: 0 decanted: (Y/N) N

Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-95-2-----	Phenol	330	U
111-44-4-----	bis(-2-Chloroethyl) Ether	330	U
95-57-8-----	2-Chlorophenol	330	U
541-73-1-----	1,3-Dichlorobenzene	330	U
106-46-7-----	1,4-Dichlorobenzene	330	U
95-50-1-----	1,2-Dichlorobenzene	330	U
95-48-7-----	2-Methylphenol	330	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5-----	4-Methylphenol	330	U
621-64-7-----	N-Nitroso-di-n-propylamine	330	U
67-72-1-----	Hexachloroethane	330	U
98-95-3-----	Nitrobenzene	330	U
78-59-1-----	Isophorone	330	U
88-75-5-----	2-Nitrophenol	330	U
105-67-9-----	2,4-Dimethylphenol	330	U
120-83-2-----	2,4-Dichlorophenol	330	U
120-82-1-----	1,2,4-Trichlorobenzene	330	U
91-20-3-----	Naphthalene	330	U
106-47-8-----	4-Chloroaniline	330	U
111-91-1-----	bis(-2-Chloroethoxy)methane	330	U
87-68-3-----	Hexachlorobutadiene	330	U
59-50-7-----	4-Chloro-3-Methylphenol	330	U
91-57-6-----	2-Methylnaphthalene	330	U
77-47-4-----	Hexachlorocyclopentadiene	330	U
88-06-2-----	2,4,6-Trichlorophenol	330	U
95-95-4-----	2,4,5-Trichlorophenol	830	U
91-58-7-----	2-Chloronaphthalene	330	U
88-74-4-----	2-Nitroaniline	830	U
131-11-3-----	Dimethylphthalate	330	U
208-96-8-----	Acenaphthylene	330	U
606-20-2-----	2,6-Dinitrotoluene	330	U
99-09-2-----	3-Nitroaniline	830	U
83-32-9-----	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: S0414-B2

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3155

Level: (low/med) LOW

Date Received: _____

% Moisture: 0 decanted: (Y/N) N

Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/04/98

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/KG	Q

51-28-5-----	2,4-Dinitrophenol	830	U
100-02-7-----	4-Nitrophenol	830	U
132-64-9-----	Dibenzofuran	330	U
121-14-2-----	2,4-Dinitrotoluene	330	U
84-66-2-----	Diethylphthalate	330	U
7005-72-3-----	4-Chlorophenyl-phenylether	330	U
86-73-7-----	Fluorene	330	U
100-01-6-----	4-Nitroaniline	830	U
534-52-1-----	4,6-Dinitro-2-methylphenol	830	U
86-30-6-----	N-nitrosodiphenylamine (1)	330	U
101-55-3-----	4-Bromophenyl-phenylether	330	U
118-74-1-----	Hexachlorobenzene	330	U
87-86-5-----	Pentachlorophenol	830	U
85-01-8-----	Phenanthrene	330	U
120-12-7-----	Anthracene	330	U
86-74-8-----	Carbazole	330	U
84-74-2-----	Di-n-butylphthalate	330	U
206-44-0-----	Fluoranthene	330	U
129-00-0-----	Pyrene	330	U
85-68-7-----	Butylbenzylphthalate	330	U
91-94-1-----	3,3'-Dichlorobenzidine	330	U
56-55-3-----	Benzo(a)anthracene	330	U
218-01-9-----	Chrysene	330	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	50	J
117-84-0-----	Di-n-octylphthalate	330	U
205-99-2-----	Benzo(b)fluoranthene	330	U
207-08-9-----	Benzo(k)fluoranthene	330	U
50-32-8-----	Benzo(a)pyrene	330	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	330	U
53-70-3-----	Dibenzo(a,h)anthracene	330	U
191-24-2-----	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS :

EPA SAMPLE NO.

SBLK02

Lab Name: MITKEM CORPORATION Contract: _____

Lab Code: MITKEM Case No.: _____ SAS No.: _____ SDG No.: E0499

Matrix: (soil/water) SOIL Lab Sample ID: S0416-B1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3157

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 04/16/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(-2-Chloroethyl) Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethyphenol	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
111-91-1	bis(-2-Chloroethoxy)methane	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK02

Lab Name: MITKEM CORPORATION Contract: _____

Lab Code: MITKEM Case No.: _____ SAS No.: _____ SDG No.: E0499

Matrix: (soil/water) SOIL Lab Sample ID: S0416-B1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3157

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 04/16/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	830 U	
100-02-7-----	4-Nitrophenol	830 U	
132-64-9-----	Dibenzofuran	330 U	
121-14-2-----	2,4-Dinitrotoluene	330 U	
84-66-2-----	Diethylphthalate	330 U	
7005-72-3-----	4-Chlorophenyl-phenylether	330 U	
86-73-7-----	Fluorene	330 U	
100-01-6-----	4-Nitroaniline	830 U	
534-52-1-----	4,6-Dinitro-2-methylphenol	830 U	
86-30-6-----	N-nitrosodiphenylamine (1)	330 U	
101-55-3-----	4-Bromophenyl-phenylether	330 U	
118-74-1-----	Hexachlorobenzene	330 U	
87-86-5-----	Pentachlorophenol	830 U	
85-01-8-----	Phenanthrene	330 U	
120-12-7-----	Anthracene	330 U	
86-74-8-----	Carbazole	330 U	
84-74-2-----	Di-n-butylphthalate	330 U	
206-44-0-----	Fluoranthene	330 U	
129-00-0-----	Pyrene	330 U	
85-68-7-----	Butylbenzylphthalate	330 U	
91-94-1-----	3,3'-Dichlorobenzidine	330 U	
56-55-3-----	Benzo(a)anthracene	330 U	
218-01-9-----	Chrysene	330 U	
117-81-7-----	bis(2-Ethylhexyl)phthalate	330 U	
117-84-0-----	Di-n-octylphthalate	330 U	
205-99-2-----	Benzo(b)fluoranthene	330 U	
207-08-9-----	Benzo(k)fluoranthene	330 U	
50-32-8-----	Benzo(a)pyrene	330 U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	330 U	
53-70-3-----	Dibenzo(a,h)anthracene	330 U	
191-24-2-----	Benzo(g,h,i)perylene	330 U	

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANAL

EPA SAMPLE NO.

SBLK03

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: S0414-B1

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3141

Level: (low/med) LOW

Date Received: _____

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 04/30/98

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-Dimethyphenol	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
111-91-1-----	bis(-2-Chloroethoxy) methane	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-Methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK03

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: S0414-B1

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3141

Level: (low/med) LOW

Date Received: _____

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 04/30/98

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-octylphthalate	10 U	
205-99-2-----	Benzo(b)fluoranthene	10 U	
207-08-9-----	Benzo(k)fluoranthene	10 U	
50-32-8-----	Benzo(a)pyrene	10 U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	10 U	
53-70-3-----	Dibenzo(a,h)anthracene	10 U	
191-24-2-----	Benzo(g,h,i)perylene	10 U	

(1) - Cannot be separated from Diphenylamine

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1B
SEMIVOLATILE ORGANICS ANALYSIS DA

EPA SAMPLE NO.

SBLK04

Lab Name: MITKEM CORPORATION Contract: _____

Lab Code: MITKEM Case No.: _____ SAS No.: _____ SDG No.: E0499

Matrix: (soil/water) SOIL Lab Sample ID: S0504-B2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A2736

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 05/04/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/07/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(-2-Chloroethyl) Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
111-91-1	bis(-2-Chloroethoxy)methane	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK04

Lab Name: MITKEM CORPORATION Contract: _____

Lab Code: MITKEM Case No.: _____ SAS No.: _____ SDG No.: E0499

Matrix: (soil/water) SOIL Lab Sample ID: S0504-B2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A2736

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 05/04/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 05/07/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	830 U	
100-02-7-----	4-Nitrophenol	830 U	
132-64-9-----	Dibenzofuran	330 U	
121-14-2-----	2,4-Dinitrotoluene	330 U	
84-66-2-----	Diethylphthalate	330 U	
7005-72-3-----	4-Chlorophenyl-phenylether	330 U	
86-73-7-----	Fluorene	330 U	
100-01-6-----	4-Nitroaniline	830 U	
534-52-1-----	4,6-Dinitro-2-methylphenol	830 U	
86-30-6-----	N-nitrosodiphenylamine (1)	330 U	
101-55-3-----	4-Bromophenyl-phenylether	330 U	
118-74-1-----	Hexachlorobenzene	330 U	
87-86-5-----	Pentachlorophenol	830 U	UJ
85-01-8-----	Phenanthrene	330 U	
120-12-7-----	Anthracene	330 U	
86-74-8-----	Carbazole	330 U	
84-74-2-----	Di-n-butylphthalate	330 U	
206-44-0-----	Fluoranthene	330 U	
129-00-0-----	Pyrene	330 U	
85-68-7-----	Butylbenzylphthalate	330 U	
91-94-1-----	3,3'-Dichlorobenzidine	330 U	UJ
56-55-3-----	Benzo(a)anthracene	330 U	
218-01-9-----	Chrysene	330 U	
117-81-7-----	bis(2-Ethylhexyl)phthalate	330 U	
117-84-0-----	Di-n-octylphthalate	330 U	
205-99-2-----	Benzo(b)fluoranthene	330 U	
207-08-9-----	Benzo(k)fluoranthene	330 U	
50-32-8-----	Benzo(a)pyrene	330 U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	330 U	
53-70-3-----	Dibenzo(a,h)anthracene	330 U	
191-24-2-----	Benzo(g,h,i)perylene	330 U	

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS

EPA SAMPLE NO.

SBLK05

Lab Name: MITKEM CORPORATION

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: S0505-B5

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2735

Level: (low/med) LOW

Date Received: _____

% Moisture: 0 decanted: (Y/N) N

Date Extracted: 05/05/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/07/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

108-95-2-----	Phenol	330	U
111-44-4-----	bis(-2-Chloroethyl) Ether	330	U
95-57-8-----	2-Chlorophenol	330	U
541-73-1-----	1,3-Dichlorobenzene	330	U
106-46-7-----	1,4-Dichlorobenzene	330	U
95-50-1-----	1,2-Dichlorobenzene	330	U
95-48-7-----	2-Methylphenol	330	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5-----	4-Methylphenol	330	U
621-64-7-----	N-Nitroso-di-n-propylamine	330	U
67-72-1-----	Hexachloroethane	330	U
98-95-3-----	Nitrobenzene	330	U
78-59-1-----	Isophorone	330	U
88-75-5-----	2-Nitrophenol	330	U
105-67-9-----	2,4-Dimethylphenol	330	U
120-83-2-----	2,4-Dichlorophenol	330	U
120-82-1-----	1,2,4-Trichlorobenzene	330	U
91-20-3-----	Naphthalene	330	U
106-47-8-----	4-Chloroaniline	330	U
111-91-1-----	bis(-2-Chloroethoxy)methane	330	U
87-68-3-----	Hexachlorobutadiene	330	U
59-50-7-----	4-Chloro-3-Methylphenol	330	U
91-57-6-----	2-Methylnaphthalene	330	U
77-47-4-----	Hexachlorocyclopentadiene	330	U
88-06-2-----	2,4,6-Trichlorophenol	330	U
95-95-4-----	2,4,5-Trichlorophenol	830	U
91-58-7-----	2-Chloronaphthalene	330	U
88-74-4-----	2-Nitroaniline	830	U
131-11-3-----	Dimethylphthalate	330	U
208-96-8-----	Acenaphthylene	330	U
606-20-2-----	2,6-Dinitrotoluene	330	U
99-09-2-----	3-Nitroaniline	830	U
83-32-9-----	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK05

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: S0505-B5

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2735

Level: (low/med) LOW

Date Received: _____

% Moisture: 0 decanted: (Y/N) N

Date Extracted: 05/05/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/07/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	830	U
100-02-7-----	4-Nitrophenol	830	U
132-64-9-----	Dibenzofuran	330	U
121-14-2-----	2,4-Dinitrotoluene	330	U
84-66-2-----	Diethylphthalate	330	U
7005-72-3-----	4-Chlorophenyl-phenylether	330	U
86-73-7-----	Fluorene	330	U
100-01-6-----	4-Nitroaniline	830	U
534-52-1-----	4,6-Dinitro-2-methylphenol	830	U
86-30-6-----	N-nitrosodiphenylamine (1)	330	U
101-55-3-----	4-Bromophenyl-phenylether	330	U
118-74-1-----	Hexachlorobenzene	330	U
87-86-5-----	Pentachlorophenol	830	U
85-01-8-----	Phenanthrene	330	U
120-12-7-----	Anthracene	330	U
86-74-8-----	Carbazole	330	U
84-74-2-----	Di-n-butylphthalate	330	U
206-44-0-----	Fluoranthene	330	U
129-00-0-----	Pyrene	330	U
85-68-7-----	Butylbenzylphthalate	330	U
91-94-1-----	3,3'-Dichlorobenzidine	330	U
56-55-3-----	Benzo (a) anthracene	330	U
218-01-9-----	Chrysene	330	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	330	U
117-84-0-----	Di-n-octylphthalate	330	U
205-99-2-----	Benzo (b) fluoranthene	330	U
207-08-9-----	Benzo (k) fluoranthene	330	U
50-32-8-----	Benzo (a) pyrene	330	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	330	U
53-70-3-----	Dibenzo (a,h) anthracene	330	U
191-24-2-----	Benzo (g,h,i) perylene	330	U

(1) - Cannot be separated from Diphenylamine

837

1D
PESTICIDE ORGANICS ANALYSIS DA

EPA SAMPLE NO.

BG-B2W

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499

Matrix: (soil/water) WATER Lab Sample ID: E0499-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2A5378F

% Moisture: _____ decanted: (Y/N) _____ Date Received: 04/09/98

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 04/14/98

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/07/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

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

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
1114-16-5-----	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

909

1D
PESTICIDE ORGANICS ANAL

EPA SAMPLE NO.

BG-SW1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-02

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A5379F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 04/09/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 04/14/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 05/07/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

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

Sulfur Cleanup: (Y/N) Y

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
1114-16-5-----	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

913

1D
PESTICIDE ORGANICS ANALYSIS Df.

EPA SAMPLE NO.

HP1-B16W

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499

Matrix: (soil/water) WATER Lab Sample ID: E0499-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2A5380F

% Moisture: _____ decanted: (Y/N) _____ Date Received: 04/11/98

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 04/14/98

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/07/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

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
1114-16-5	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

917

1D
PESTICIDE ORGANICS ANALYSIS

EPA SAMPLE NO.

HP1-B12

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-04

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: E2A5381F

% Moisture: 18 decanted: (Y/N) N

Date Received: 04/11/98

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 04/14/98

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/07/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.8

Sulfur Cleanup: (Y/N) Y

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	2.1	U
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	4.0	U
72-55-9-----	4,4'-DDE	4.0	U
72-20-8-----	Endrin	4.0	U
33213-65-9-----	Endosulfan II	4.0	U
72-54-8-----	4,4'-DDD	4.0	U
1031-07-8-----	Endosulfan sulfate	4.0	U
50-29-3-----	4,4'-DDT	4.0	U
72-43-5-----	Methoxychlor	21	U
53494-70-5-----	Endrin ketone	4.0	U
7421-36-3-----	Endrin aldehyde	4.0	U
5103-71-9-----	alpha-Chlordane	2.1	U
5103-74-2-----	gamma-Chlordane	2.1	U
8001-35-2-----	Toxaphene	210	U
12674-11-2-----	Aroclor-1016	40	U
11104-28-2-----	Aroclor-1221	82	U
1114-16-5-----	Aroclor-1232	40	U
53469-21-9-----	Aroclor-1242	40	U
12672-29-6-----	Aroclor-1248	40	U
11097-69-1-----	Aroclor-1254	40	U
11096-82-5-----	Aroclor-1260	40	U

921

1D
PESTICIDE ORGANICS ANALYSIS DAT.

EPA SAMPLE NO.

HP1-B16

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-05

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: E2A5382F

% Moisture: 22 decanted: (Y/N) N

Date Received: 04/11/98

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 04/14/98

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/07/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.6

Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

319-84-6-----alpha-BHC	2.2	U
319-85-7-----beta-BHC	2.2	U
319-86-8-----delta-BHC	2.2	U
58-89-9-----gamma-BHC (Lindane)	2.2	U
76-44-8-----Heptachlor	2.2	U
309-00-2-----Aldrin	2.2	U
1024-57-3-----Heptachlor epoxide	2.2	U
959-98-8-----Endosulfan I	2.2	U
60-57-1-----Dieldrin	4.2	U
72-55-9-----4,4'-DDE	4.2	U
72-20-8-----Endrin	4.2	U
33213-65-9-----Endosulfan II	4.2	U
72-54-8-----4,4'-DDD	4.2	U
1031-07-8-----Endosulfan sulfate	4.2	U
50-29-3-----4,4'-DDT	4.2	U
72-43-5-----Methoxychlor	22	U
53494-70-5-----Endrin ketone	4.2	U
7421-36-3-----Endrin aldehyde	4.2	U
5103-71-9-----alpha-Chlordane	2.2	U
5103-74-2-----gamma-Chlordane	2.2	U
8001-35-2-----Toxaphene	220	U
12674-11-2-----Aroclor-1016	42	U
11104-28-2-----Aroclor-1221	86	U
1114-16-5-----Aroclor-1232	42	U
53469-21-9-----Aroclor-1242	42	U
12672-29-6-----Aroclor-1248	42	U
11097-69-1-----Aroclor-1254	42	U
11096-82-5-----Aroclor-1260	42	U

925

HP1-SS1A

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-06

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: E2A5383F

% Moisture: 26 decanted: (Y/N) N

Date Received: 04/11/98

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 04/14/98

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/07/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.0

Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

319-84-6	alpha-BHC	2.3	U
319-85-7	beta-BHC	2.3	U
319-86-8	delta-BHC	2.3	U
58-89-9	gamma-BHC (Lindane)	2.3	U
76-44-8	Heptachlor	2.3	U
309-00-2	Aldrin	2.3	U
1024-57-3	Heptachlor epoxide	2.3	U
959-98-8	Endosulfan I	2.3	U
60-57-1	Dieldrin	4.4	U
72-55-9	4,4'-DDE	4.4	U
72-20-8	Endrin	4.4	U
33213-65-9	Endosulfan II	4.4	U
72-54-8	4,4'-DDD	4.4	U
1031-07-8	Endosulfan sulfate	4.4	U
50-29-3	4,4'-DDT	4.4	U
72-43-5	Methoxychlor	23	U
53494-70-5	Endrin ketone	4.4	U
7421-36-3	Endrin aldehyde	5.0	JN
5103-71-9	alpha-Chlordane	2.3	U
5103-74-2	gamma-Chlordane	2.3	U
8001-35-2	Toxaphene	230	U
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	90	U
1114-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	44	U
11096-82-5	Aroclor-1260	110	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP2-SS1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-07

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: E2A5384F

% Moisture: 27 decanted: (Y/N) N

Date Received: 04/11/98

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 04/14/98

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/07/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

Sulfur Cleanup: (Y/N) Y

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
1114-16-5	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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1D
PESTICIDE ORGANICS ANALYSIS

EPA SAMPLE NO.

PBLK04

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: P0414-B2

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A5374F

% Moisture: _____ decanted: (Y/N) _____

Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 04/14/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 05/07/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

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

Sulfur Cleanup: (Y/N) Y

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
1114-16-5-----	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

1041

1D
PESTICIDE ORGANICS ANALYSIS DATA SH:

EPA SAMPLE NO.

PBLK05

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E0499
Matrix: (soil/water) SOIL Lab Sample ID: P0414-B3
Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2A5376F
% Moisture: 0 decanted: (Y/N) N Date Received: _____
Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/14/98
Concentrated Extract Volume: 5000(uL) Date Analyzed: 05/07/98
Injection Volume: 1.0(uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: _____ Sulfur Cleanup: (Y/N) Y

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.7	U
319-85-7-----	beta-BHC	1.7	U
319-86-8-----	delta-BHC	1.7	U
58-89-9-----	gamma-BHC (Lindane)	1.7	U
76-44-8-----	Heptachlor	1.7	U
309-00-2-----	Aldrin	1.7	U
1024-57-3-----	Heptachlor epoxide	1.7	U
959-98-8-----	Endosulfan I	1.7	U
60-57-1-----	Dieldrin	3.3	U
72-55-9-----	4,4'-DDE	3.3	U
72-20-8-----	Endrin	3.3	U
33213-65-9-----	Endosulfan II	3.3	U
72-54-8-----	4,4'-DDD	3.3	U
1031-07-8-----	Endosulfan sulfate	3.3	U
50-29-3-----	4,4'-DDT	3.3	U
72-43-5-----	Methoxychlor	17	U
53494-70-5-----	Endrin ketone	3.3	U
7421-36-3-----	Endrin aldehyde	3.3	U
5103-71-9-----	alpha-Chlordane	1.7	U
5103-74-2-----	gamma-Chlordane	1.7	U
8001-35-2-----	Toxaphene	170	U
12674-11-2-----	Aroclor-1016	33	U
11104-28-2-----	Aroclor-1221	67	U
1114-16-5-----	Aroclor-1232	33	U
53469-21-9-----	Aroclor-1242	33	U
12672-29-6-----	Aroclor-1248	33	U
11097-69-1-----	Aroclor-1254	33	U
11096-82-5-----	Aroclor-1260	33	U

1045

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HP1B16W

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E0499

Matrix (soil/water): WATER

Lab Sample ID: E0499-03

Level (low/med): LOW

Date Received: 04/11/98

% 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	444000	J	E	P
7440-36-0	Antimony	22.5 6.3	B	N	P
7440-38-2	Arsenic	444 53.0		N	P
7440-39-3	Barium	2120		E	P
7440-41-7	Beryllium	19.8			P
7440-43-9	Cadmium	7.1 5.4		N	P
7440-70-2	Calcium	3440000			P
7440-47-3	Chromium	717		E	P
7440-48-4	Cobalt	409		E	P
7440-50-8	Copper	1620			P
7439-89-6	Iron	1190000			P
7439-92-1	Lead	826		E	P
7439-95-4	Magnesium	865000			P
7439-96-5	Manganese	13700		E	P
7439-97-6	Mercury	0.29		*	CV
7440-02-0	Nickel	999		E	P
7440-09-7	Potassium	111000			P
7782-49-2	Selenium	55.4			P
7440-22-4	Silver	5.4			P
7440-23-5	Sodium	13300			P
7440-28-0	Thallium	41.3			P
7440-62-2	Vanadium	855		E	P
7440-66-6	Zinc	3360		E	P
	Cyanide	0.50		*	C

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

016

INORGANIC ANALYSES DATA SHEET

HP1SS1A

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E0499

Matrix (soil/water): SOIL

Lab Sample ID: E0499-06

Level (low/med): MED

Date Received: 04/11/98

% Solids: 74.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7380		E	P
7440-36-0	Antimony	0.61		N	P
7440-38-2	Arsenic	3.3	J	N	P
7440-39-3	Barium	137		E	P
7440-41-7	Beryllium	0.63	B		P
7440-43-9	Cadmium	0.25	U	N	P
7440-70-2	Calcium	49500			P
7440-47-3	Chromium	7.9		E	P
7440-48-4	Cobalt	4.2	B	E	P
7440-50-8	Copper	11.6			P
7439-89-6	Iron	31800			P
7439-92-1	Lead	10.4		E	P
7439-95-4	Magnesium	10900			P
7439-96-5	Manganese	349		E	P
7439-97-6	Mercury	0.12	U	*	CV
7440-02-0	Nickel	15.4		E	P
7440-09-7	Potassium	1540			P
7782-49-2	Selenium	1.2	U		P
7440-22-4	Silver	0.50	U		P
7440-23-5	Sodium	142	B		P
7440-28-0	Thallium	0.74	U		P
7440-62-2	Vanadium	14.1		E	P
7440-66-6	Zinc	82.8		E	P
	Cyanide	3.4	B	*	C

Color Before: BROWN

Clarity Before:

Texture: MED

Color After: YELLOW

Clarity After: CLEAR

Artifacts:

Comments:

017

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HP2-SS1

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E0499

Matrix (soil/water): SOIL Lab Sample ID: E0499-07

Level (low/med): MED Date Received: 04/11/98

% Solids: 73.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9360	-	E	P
7440-36-0	Antimony	0.52	U	U	P
7440-38-2	Arsenic	5.1	J	N	P
7440-39-3	Barium	95.9	-	E	P
7440-41-7	Beryllium	0.55	B	-	P
7440-43-9	Cadmium	0.65	J	N	P
7440-70-2	Calcium	5820	-	-	P
7440-47-3	Chromium	11.8	-	E	P
7440-48-4	Cobalt	3.9	B	E	P
7440-50-8	Copper	17.9	-	-	P
7439-89-6	Iron	11200	-	-	P
7439-92-1	Lead	44.5	-	E	P
7439-95-4	Magnesium	1740	-	-	P
7439-96-5	Manganese	116	-	E	P
7439-97-6	Mercury	0.16	J	*	CV
7440-02-0	Nickel	17.0	-	E	P
7440-09-7	Potassium	1540	-	-	P
7782-49-2	Selenium	1.3	U	-	P
7440-22-4	Silver	0.52	U	-	P
7440-23-5	Sodium	53.4	B	-	P
7440-28-0	Thallium	0.78	U	-	P
7440-62-2	Vanadium	18.3	-	E	P
7440-66-6	Zinc	81.8	-	E	P
	Cyanide	2.3	B	*	C

Color Before: BLACK Clarity Before: Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

018

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BG-B2W

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E0499

Matrix (soil/water): WATER

Lab Sample ID: E0499-01

Level (low/med): LOW

Date Received: 04/09/98

% 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	40100	J	E	P
7440-36-0	Antimony	2.2	B	N	P
7440-38-2	Arsenic	18.1	J	N	P
7440-39-3	Barium	481	J	E	P
7440-41-7	Beryllium	1.8	B	N	P
7440-43-9	Cadmium	2.9	B	N	P
7440-70-2	Calcium	136000	J	E	P
7440-47-3	Chromium	83.8	J	E	P
7440-48-4	Cobalt	31.4	B	E	P
7440-50-8	Copper	111	J	E	P
7439-89-6	Iron	104000	J	E	P
7439-92-1	Lead	251	J	E	P
7439-95-4	Magnesium	33400	J	E	P
7439-96-5	Manganese	1310	J	E	P
7439-97-6	Mercury	0.59	J	*	CV
7440-02-0	Nickel	76.8	J	E	P
7440-09-7	Potassium	18000	J	E	P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	7.6	B		P
7440-23-5	Sodium	17400	J	E	P
7440-28-0	Thallium	4.3	B		P
7440-62-2	Vanadium	78.9	J	B	P
7440-66-6	Zinc	598	J	B	P
	Cyanide	3.7	B	*	C

Color Before: GRAY

Clarity Before: CLOUDY

Texture:

Color After: YELLOW

Clarity After: CLOUDY

Artifacts:

Comments:

012

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BG-SW1

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E0499

Matrix (soil/water): WATER

Lab Sample ID: E0499-02

Level (low/med): LOW

Date Received: 04/09/98

% 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	10.0	U	E	P
7440-36-0	Antimony	2.3	B	N	P
7440-38-2	Arsenic	2.0	U	N	P
7440-39-3	Barium	272	J	E	P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.0	U	N	P
7440-70-2	Calcium	120000			P
7440-47-3	Chromium	0.60	U	E	P
7440-48-4	Cobalt	0.86	B	E	P
7440-50-8	Copper	1.0	U		P
7439-89-6	Iron	37600			P
7439-92-1	Lead	2.0	U	E	P
7439-95-4	Magnesium	18000			P
7439-96-5	Manganese	339	J	E	P
7439-97-6	Mercury	0.27	U	*	CV
7440-02-0	Nickel	1.0	U	E	P
7440-09-7	Potassium	4000	U		P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	3.9	B		P
7440-23-5	Sodium	16300			P
7440-28-0	Thallium	3.0	U		P
7440-62-2	Vanadium	3.0	U	E	P
7440-66-6	Zinc	6.0	B	E	P
	Cyanide	2.8	B	*	C

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: YELLOW

Clarity After: CLEAR

Artifacts:

Comments:

013

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HP1-B12

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E0499

Matrix (soil/water): SOIL Lab Sample ID: E0499-04

Level (low/med): MED Date Received: 04/11/98

% Solids: 82.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5830		E	P
7440-36-0	Antimony	0.97	J	N	P
7440-38-2	Arsenic	4.5	J	N	P
7440-39-3	Barium	45.8		E	P
7440-41-7	Beryllium	0.27	B		P
7440-43-9	Cadmium	0.23	U	N	P
7440-70-2	Calcium	55200			P
7440-47-3	Chromium	10.0		E	P
7440-48-4	Cobalt	7.3	B	E	P
7440-50-8	Copper	15.8			P
7439-89-6	Iron	14800			P
7439-92-1	Lead	0.46	U	E	P
7439-95-4	Magnesium	17300			P
7439-96-5	Manganese	399		E	P
7439-97-6	Mercury	0.12	U	*	CV
7440-02-0	Nickel	15.4		E	P
7440-09-7	Potassium	959	B		P
7782-49-2	Selenium	1.1	U		P
7440-22-4	Silver	0.46	U		P
7440-23-5	Sodium	45.6	U		P
7440-28-0	Thallium	0.68	U		P
7440-62-2	Vanadium	15.0		E	P
7440-66-6	Zinc	52.4		E	P
	Cyanide	0.23	B	*	C

Color Before: BROWN Clarity Before: Texture: CLAY

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

014

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HP1-B16

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E0499

Matrix (soil/water): SOIL Lab Sample ID: E0499-05

Level (low/med): MED Date Received: 04/11/98

% Solids: 78.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2440	-	E	P
7440-36-0	Antimony	0.49	B	E	P
7440-38-2	Arsenic	2.5	B	E	P
7440-39-3	Barium	10.9	B	E	P
7440-41-7	Beryllium	0.12	U	-	P
7440-43-9	Cadmium	0.25	U	E	P
7440-70-2	Calcium	49000	-	-	P
7440-47-3	Chromium	4.7	-	E	P
7440-48-4	Cobalt	3.2	B	E	P
7440-50-8	Copper	7.0	-	-	P
7439-89-6	Iron	6920	-	-	P
7439-92-1	Lead	0.49	U	E	P
7439-95-4	Magnesium	11400	-	-	P
7439-96-5	Manganese	248	-	E	P
7439-97-6	Mercury	0.10	U	*	CV
7440-02-0	Nickel	6.8	B	E	P
7440-09-7	Potassium	986	U	-	P
7782-49-2	Selenium	1.2	U	-	P
7440-22-4	Silver	0.49	U	-	P
7440-23-5	Sodium	49.3	U	-	P
7440-28-0	Thallium	0.74	U	-	P
7440-62-2	Vanadium	8.4	B	E	P
7440-66-6	Zinc	29.0	-	E	P
	Cyanide	0.31	B	*	C

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

015

ATTACHMENT B

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

P-1 (AQ)

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1 (AQ)

Matrix: (soil/water) WATER

Lab Sample ID: D1197-01

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2A9526

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: not dec. _____

Date Analyzed: 08/08/97

GC Column: DB-624 ID: 0.25 (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
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
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9.				
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29.				
30.				

023

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

P-1 (SL)

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ)

Matrix: (soil/water) SOIL

Lab Sample ID: D1197-02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2A9508

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: not dec. 23

Date Analyzed: 08/07/97

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.58	7	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBK2P

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ)

Matrix: (soil/water) SOIL

Lab Sample ID: V2B0807A

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2A9506

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 08/07/97

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBK2R

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ)

Matrix: (soil/water) WATER

Lab Sample ID: V2B0808A

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2A9524

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 08/08/97

GC Column: DB-624 ID: 0.25 (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
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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23.				
24.				
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27.				
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29.				
30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ

Matrix: (soil/water) WATER

Lab Sample ID: V2B0808B

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2A9527

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: not dec. _____

Date Analyzed: 08/08/97

GC Column: DB-624 ID: 0.25 (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	1.64	5	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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14.				
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28.				
29.				
30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-B2W

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-01

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4802

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: not dec. _____

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	C9H10 ISOMER	14.34	6	J
2.	C10H12 ISOMER	15.83	6	J
3.				
4.				
5.				
6.				
7.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-SW1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-02

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4803

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: not dec. _____

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (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.	C9H10 ISOMER	14.34	6	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-B12

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-04

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2B4788

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: not dec. 24

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-B16

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-05

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2B4789

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: not dec. 19

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (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. 75-18-3	DIMETHYL SULFIDE	4.24	8	NJ
2.				
3.				
4.				
5.				
6.				
7.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-B16W

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-03

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4812

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: not dec. _____

Date Analyzed: 04/19/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 5.0

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
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-SS1A

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-06

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2B4790

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: not dec. 31

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP2-SS1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-07

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2B4791

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: not dec. 28

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (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. 75-18-3	DIMETHYL SULFIDE	4.22	10	NJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBK2X

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: V2B0418A

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V2B4786

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBK2Y

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: V2B0418B

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4800

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 04/18/98

GC Column: DB-624 ID: 0.25 (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	5.58	4	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBK2Z

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: V2B0419A

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4808

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 04/19/98

GC Column: DB-624 ID: 0.25 (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
1.				
2.				
3.				
4.				
5.				
6.				
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9.				
10.				
11.				
12.				
13.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK2Z

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: V2B0419B

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B4813

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: not dec. _____

Date Analyzed: 04/19/98

GC Column: DB-624 ID: 0.25 (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
1.				
2.				
3.				
4.				
5.				
6.				
7.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

P-1 (AQ)

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ)

Matrix: (soil/water) WATER

Lab Sample ID: D1197-01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S1A0785

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/05/97

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/07/97

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. 101-84-8	DIPHENYL ETHER	13.87	7	NJ
2. 115-96-8	TRI(2-CHLOROETHYL) PHOSPHATE	17.37	6	NJ
3.				
4.				
5.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

P-1 (SL)

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1 (AQ)

Matrix: (soil/water) SOIL

Lab Sample ID: D1197-02

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A0788

Level: (low/med) LOW

Date Received: 08/01/97

% Moisture: 22 decanted: (Y/N) N

Date Extracted: 08/05/97

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 141-79-7	3-PENTEN-2-ONE, 4-METHYL-	5.41	39000	NJ
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	6.10	16000	NJ
3.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK01

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ)

Matrix: (soil/water) WATER

Lab Sample ID: S0805-B3

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S1A0781

Level: (low/med) LOW

Date Received: _____

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/05/97

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/07/97

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
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK02

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: P-1(AQ)

Matrix: (soil/water) SOIL

Lab Sample ID: S0805-B1

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A0791

Level: (low/med) LOW

Date Received: _____

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/05/97

Concentrated Extract Volume: 500(uL)

Date Analyzed: 08/07/97

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 5.0

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

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 141-79-7	3-PENTEN-2-ONE, 4-METHYL-	5.40	28000	NJ
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	6.09	11000	NJ
3.				
4.				
5.				
6.				
7.				
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9.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-B2W

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3144

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 04/30/98

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.	INDAN, METHYL, ISOMER	10.65	4	J
2. 501-52-0	BENZENEPROPANOIC ACID	12.81	8	NJ
3. 934-34-9	2(3H)-BENZOTHAZOLONE	16.63	11	NJ
4.	UNKNOWN	17.35	4	J
5.	UNKNOWN	18.13	20	J
6. 17861-18-6	PHENOL, 3-(2-PHENYLETHENYL)-	20.00	8	NJ
7.				
8.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-SW1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-02

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3145

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 04/30/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 30

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	TRIMETHYL, HEPTATRIENE, ISOM	8.35	16	J
2.	BENZENE, C4-ALKYL ISOMER	8.86	66	J
3.	1,4-CYCLOHEXADIENE, METHYL,M	9.34	90	J
4.	CYCLOHEXENE, METHYL-METHYLET	9.74	110	J
5.	1H-CYCLOPROPA[A]NAPHTHALENE,	14.72	36	J
6.	UNKNOWN CYCLOALKANE	14.79	13	J
7.	C15H24 ISOMER	15.02	25	J
8.	UNKNOWN	15.15	19	J
9.	UNKNOWN	15.20	11	J
10.	UNKNOWN ORGANIC ACID	15.29	29	J
11. 544-63-8	TETRADECANOIC ACID	17.20	15	NJ
12. 57-10-3	HEXADECANOIC ACID	18.97	20	NJ
13. 109-29-5	OXACYCLOHEPTADECAN-2-ONE	19.03	14	NJ
14.	UNKNOWN	20.38	12	J
15. 112-80-1	OLEIC ACID	20.43	15	NJ
16.	UNKNOWN	21.70	18	J
17.	UNKNOWN	21.77	59	J
18.	UNKNOWN	21.91	49	J
19.	UNKNOWN	22.00	88	J
20.	UNKNOWN	22.06	50	J
21.	UNKNOWN	22.11	45	J
22.	UNKNOWN	22.24	13	J
23.	UNKNOWN	22.29	25	J
24.	UNKNOWN	22.35	18	J
25.	UNKNOWN	22.47	25	J
26. 5155-70-4	1-PHENANTHRENECARBOXYLIC ACI	22.72	38	NJ
27.	UNKNOWN	23.03	32	J
28. 18733-57-8	UNKNOWN SILANE	25.39	95	NJ
29.	UNKNOWN	28.12	50	J
30.	UNKNOWN ALKANE	28.88	25	J

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-SW1DL

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-02DL

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3161

Level: (low/med) LOW

Date Received: 04/09/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL)

Dilution Factor: 2.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 22

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	BENZENE, C4-ALKYL ISOMER	8.80	52	JD
2. 138-86-3	LIMONENE	8.87	19	NJD
3.	UNKNOWN CYCLOALKANE	9.27	61	JD
4.	UNKNOWN	12.58	20	JD
5.	UNKNOWN	14.75	7	JD
6. 483-76-1	NAPHTHALENE, 1,2,3,5,6,8A-HE	14.96	13	NJD
7.	UNKNOWN	15.10	7	JD
8. 143-07-7	DODECANOIC ACID	15.20	21	NJD
9. 544-63-8	TETRADECANOIC ACID	17.13	16	NJD
10. 57-10-3	HEXADECANOIC ACID	18.90	16	NJD
11. 109-29-5	OXACYCLOHEPTADECAN-2-ONE	18.98	14	NJD
12. 24035-50-5	1-PHENANTHRENECARBOXALDEHYDE	21.59	10	NJD
13.	UNKNOWN	21.63	11	JD
14.	UNKNOWN	21.69	40	JD
15.	BENZENE, C5-ALKYL ISOMER	21.82	35	JD
16.	UNKNOWN	21.94	32	JD
17.	UNKNOWN	22.64	18	JD
18.	UNKNOWN	22.94	12	JD
19.	UNKNOWN SILANE	25.34	100	JD
20.	UNKNOWN	28.01	65	JD
21.	UNKNOWN	28.54	11	JD
22.	UNKNOWN ALKANE	28.78	27	JD
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-B12

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-04

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3150

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 18 decanted: (Y/N) N

Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 04/30/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.8

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-B12RE

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-04RE

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2738

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 18 decanted: (Y/N) N

Date Extracted: 05/04/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/07/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

Number TICs found: 34

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-MET	6.08	2200	ANJB
2.	UNKNOWN	7.72	410	J
3.	UNKNOWN	8.37	270	J
4.	UNKNOWN	14.37	120	J
5.	UNKNOWN ALKANE	14.80	200	J
6.	UNKNOWN ALKANE	15.83	270	J
7.	UNKNOWN ALKANE	16.28	260	J
8.	UNKNOWN ALKANE	16.81	800	J
9.	UNKNOWN ALKANE	17.20	140	J
10.	UNKNOWN ALKANE	17.73	420	J
11.	UNKNOWN ALKANE	17.80	240	J
12.	UNKNOWN	18.11	110	J
13.	UNKNOWN ALKANE	18.62	460	J
14.	UNKNOWN	18.94	110	J
15.	UNKNOWN CYCLOALKANE	19.32	150	J
16.	UNKNOWN ALKANE	19.45	420	J
17.	UNKNOWN ALKANE	19.76	120	J
18.	UNKNOWN ALKANE	20.25	410	J
19.	UNKNOWN ALKANE	21.01	310	J
20.	UNKNOWN ALKANE	21.75	260	J
21.	UNKNOWN ALKANE	22.00	640	J
22.	UNKNOWN ALKANE	22.45	890	J
23.	UNKNOWN ALKANE	23.12	410	J
24.	UNKNOWN	23.65	170	J
25.	UNKNOWN ALKANE	23.78	820	J
26.	UNKNOWN	24.30	180	J
27.	UNKNOWN ALKANE	24.41	260	J
28.	UNKNOWN ALKANE	24.59	740	J
29.	UNKNOWN AMIDE	24.96	3200	J
30.	UNKNOWN ALKANE	25.63	1700	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-B12RE

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-04RE

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2738

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 18 decanted: (Y/N) N

Date Extracted: 05/04/98

Concentrated Extract Volume: 500(uL)

Date Analyzed: 05/07/98

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.8

Number TICs found: 34

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKANE	26.33	1400	J
2.	UNKNOWN ALKANE	27.13	1100	J
3.	UNKNOWN ALKANE	28.05	650	J
4.	UNKNOWN ALKANE	29.13	570	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-B16

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-05

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3151

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 22 decanted: (Y/N) N

Date Extracted: 04/14/98

Concentrated Extract Volume: 500(uL)

Date Analyzed: 04/30/98

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

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

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

Number TICs found: 16

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	5.96	2700	ANJ
2.	UNKNOWN	7.55	950	J
3.	UNKNOWN	8.20	1200	J
4.	UNKNOWN	12.80	210	J
5.	UNKNOWN ALKANE	16.56	400	J
6.	UNKNOWN ALKANE	16.64	180	J
7.	UNKNOWN	17.56	100	J
8. 57-10-3	HEXADECANOIC ACID	18.94	110	NJ
9.	UNKNOWN ALKANE	20.09	150	J
10.	UNKNOWN ALKANE	21.60	88	J
11.	UNKNOWN AMIDE	22.11	600	J
12.	UNKNOWN ALKANE	22.98	86	J
13.	UNKNOWN ALKANE	24.26	86	J
14.	UNKNOWN AMIDE	24.84	2200	J
15.	UNKNOWN ALKANE	25.49	390	J
16.	UNKNOWN ALKANE	26.93	210	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-B16W

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-03

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3146

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 04/30/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

Number TICs found: 9

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 98-89-5	CYCLOHEXANECARBOXYLIC ACID	10.59	150	NJ
2. 65-85-0	BENZOIC ACID	11.01	48	NJ
3.	UNKNOWN	11.91	64	J
4.	BENZENEACETIC ACID, METHYL,	12.41	18	J
5. 501-52-0	BENZENEPROPANOIC ACID	12.95	42	NJ
6.	UNKNOWN	15.62	58	J
7.	UNKNOWN	16.98	18	J
8.	UNKNOWN	17.32	13	J
9.	UNKNOWN	18.91	12	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-B16WDL

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: E0499-03DL

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3162

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.41	29	JD
2.	UNKNOWN	7.52	250	JD
3. 98-89-5	CYCLOHEXANECARBOXYLIC ACID	10.12	130	NJD
4. 100-52-7	BENZALDEHYDE	10.59	43	NJD
5. 103-82-2	BENZENEACETIC ACID	11.63	48	NJD
6. 100-52-7	BENZOIC ACID	12.72	43	NJD
7.	UNKNOWN	15.35	27	JD
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-SS1ARE

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-06RE

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2737

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 26 decanted: (Y/N) N

Date Extracted: 05/05/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/07/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

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

Number TICs found: 29

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 141-79-7	3-PENTEN-2-ONE, 4-METHYL-	5.37	140	ANJ
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	6.09	2700	ANJB
3.	UNKNOWN	7.53	530	J
4.	UNKNOWN	7.72	1200	J
5.	UNKNOWN	8.38	940	J
6.	UNKNOWN	9.43	100	J
7.	UNKNOWN	12.98	180	J
8. 544-63-8	TETRADECANOIC ACID	17.34	480	NJ
9. 2091-29-4	9-HEXADECENOIC ACID	19.01	3100	NJ
10. 57-10-3	HEXADECANOIC ACID	19.14	930	NJ
11.	UNKNOWN	19.21	140	J
12.	UNKNOWN	19.84	200	J
13.	UNKNOWN	20.56	110	J
14.	UNKNOWN ALKANE	21.75	92	J
15.	UNKNOWN	21.88	1100	J
16.	UNKNOWN ALKANE	23.12	170	J
17.	UNKNOWN ALKANE	23.77	160	J
18.	UNKNOWN	24.02	130	J
19.	UNKNOWN ALKANE	24.41	760	J
20.	UNKNOWN ALKANE	25.01	650	J
21.	UNKNOWN	25.14	1100	J
22.	UNKNOWN ALKANE	25.64	1000	J
23.	UNKNOWN	25.73	490	J
24.	UNKNOWN PAH	25.96	460	J
25.	UNKNOWN ALKANE	27.13	780	J
26.	UNKNOWN	27.50	1500	J
27.	UNKNOWN	28.29	630	J
28.	UNKNOWN	29.70	290	J
29.	UNKNOWN	29.82	230	J
30.				

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP1-SS1ARERE

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-06RERE

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2750

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 26 decanted: (Y/N) N

Date Extracted: 05/05/98

Concentrated Extract Volume: 500(uL)

Date Analyzed: 05/08/98

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.0

Number TICs found: 26

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 141-79-7	3-PENTEN-2-ONE, 4-METHYL-	5.27	110	NJ
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	5.99	2800	NJ
3.	UNKNOWN	7.62	1100	J
4.	UNKNOWN	8.27	910	J
5.	UNKNOWN	8.61	98	J
6.	UNKNOWN	12.86	160	J
7. 544-63-8	TETRADECANOIC ACID	17.22	610	NJ
8. 112-80-1	OLEIC ACID	18.90	3900	NJ
9. 57-10-3	HEXADECANOIC ACID	19.02	1000	NJ
10.	UNKNOWN	19.08	92	J
11.	UNKNOWN	19.73	190	J
12.	UNKNOWN	19.77	250	J
13.	UNKNOWN	20.44	150	J
14.	UNKNOWN ALKANE	21.63	150	J
15.	UNKNOWN CYCLOALKANE	21.77	1400	J
16.	UNKNOWN ALKANE	22.33	120	J
17.	UNKNOWN	22.57	140	J
18.	UNKNOWN ALKANE	23.01	200	J
19.	UNKNOWN ALKANE	24.29	570	J
20.	UNKNOWN ALKANE	24.89	530	J
21.	UNKNOWN	25.02	750	J
22.	UNKNOWN ALKANE	25.51	1300	J
23.	UNKNOWN ALKANE	26.97	620	J
24.	UNKNOWN	27.31	1300	J
25.	UNKNOWN	28.06	700	J
26.	UNKNOWN	29.44	310	J
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP2-SS1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: E0499-07

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3147

Level: (low/med) LOW

Date Received: 04/11/98

% Moisture: 27 decanted: (Y/N) N

Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 04/30/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.6

Number TICs found: 12

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-MET	5.94	3400	NOT
2.	UNKNOWN	6.26	220	J
3.	UNKNOWN	7.55	1200	J
4.	UNKNOWN	8.20	1000	J
5.	UNKNOWN AMIDE	22.11	550	J
6.	UNKNOWN SILANE	23.37	130	J
7.	UNKNOWN ALKANE	24.26	160	J
8.	UNKNOWN ALCOHOL	24.69	200	J
9.	UNKNOWN AMIDE	24.84	1500	J
10.	UNKNOWN ALKANE	25.48	250	J
11.	UNKNOWN ALKANE	26.93	350	J
12.	UNKNOWN	31.46	160	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK01

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: S0414-B2

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3155

Level: (low/med) LOW

Date Received: _____

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/04/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 3

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-MET	5.85	2100	ANJ
2.	UNKNOWN	8.10	170	J
3.	UNKNOWN	10.34	170	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK02

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: S0416-B1

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3157

Level: (low/med) LOW

Date Received: _____

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/16/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/04/98

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	5.88	2700	ANJ
2.	UNKNOWN	7.49	500	J
3.	UNKNOWN	8.11	160	J
4.	UNKNOWN	10.34	160	J
5.	UNKNOWN	12.01	120	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK03

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) WATER

Lab Sample ID: S0414-B1

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3141

Level: (low/med) LOW

Date Received: _____

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 04/14/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 04/30/98

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
=====	=====	=====	=====	=====
1.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK04

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: S0504-B2

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2736

Level: (low/med) LOW

Date Received: _____

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 05/04/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/07/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

Number TICs found: 1

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-MET	6.07	1700	ANJ
2.				
3.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK05

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E0499

Matrix: (soil/water) SOIL

Lab Sample ID: S0505-B5

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S1A2735

Level: (low/med) LOW

Date Received: _____

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 05/05/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 05/07/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: _____

Number TICs found: 1

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-MET	6.08	1800	ANJ
2.				
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January 13, 1999

Mr. Daniel E. Riker
Malcolm Pirnie, Inc.
40 Centre Drive
P.O. Box 1938
Buffalo, New York 14219-0138

RE: Data Usability Summary Report (DUSR)
Holiday Park Project
Mitekem Corporation
SDG Nos. E1065 / E1092
Analyses for Volatile Organics, Base/Neutral and Acid Extractable Organics, Pesticides/PCBs
and Inorganics

Dear Mr. Riker:

Data Usability Summary Report (DUSR) technical services were performed by ChemWorld Environmental, Inc. for the Holiday Park Project for the sampling event of July 1-8, 1998. The analytical data from the Sample Delivery Group (SDG) Nos. referenced above was reviewed (screened) for the parameters noted. The data screening consisted of a review of the Quality Control (QC) Summary Forms and a brief review of various chromatograms and quantitation reports. The QC Forms were reviewed to determine whether any data required qualification based upon QC deviations noted on the Forms. The associated Analytical Data Result Forms are included as Attachment A. These Forms include data qualifiers as described within this letter report.

The DUSR review items include the following, as method appropriate:

- Holding Times from Verified Time of Sample Receipt (VTSR)
- Surrogate Recovery
- GC/MS Instrument Performance Check
- Initial and Continuing Calibration
- Matrix Spike / Matrix Spike Duplicates (MS/MSD)
- Matrix Spike Blanks (MSB)
- Internal Standards
- Method and Field Blanks
- Tentatively Identified Compounds (TICs)
- CRDL Standards for ICP
- Laboratory Duplicate Samples
- Laboratory Control Samples (LCS)
- ICP Interference Check
- ICP Serial Dilutions
- Field Duplicates (None collected)

The QC Summary Forms included various deviations based upon the acceptable limits for quality control. The following should be noted regarding qualification of the data set for the review items above.



SDG No. E1065, Volatiles

Holding Times: Sample BG-MW-4 exceeded the holding time from Verified Time of Sample Receipt by 1 day and EB-7-2 exceeded the holding time by 2 days. The volatile sample results were qualified as 'J', estimated, for the positive results, and 'UJ', estimated, for the non-detectable results for these two samples.

Continuing Calibration: The percent difference (%D) was found to exceed the limit of 25% for one of the continuing calibrations for acetone, 2-Butanone and 2-Hexanone. The associated sample results were qualified as 'J', estimated, for the positive results, and 'UJ', estimated, for the non-detectable results, for the compounds noted.

Method Blanks: The following volatile organics were detected in the method blanks.

Sample ID

VBLK5Q	Methylene Chloride	1 ug/Kg
VBLK5R	Methylene Chloride	1 ug/Kg
	Acetone	3 ug/Kg
VBLK5S	Acetone	4 ug/L
VHBLK5S	Methylene Chloride	1 ug/L
	Acetone	9 ug/L
	Trichloroethene	2 ug/L
	Xylene (Total)	2 ug/L

Limits of ten times the highest respective methylene chloride and acetone blank results and five times the trichloroethene and xylene results were used for review and qualification of the associated samples.

Sample results that were found to exceed the blank limit did not require qualification. Sample results that were found to be less than the blank limit and less than the Contract Required Quantitation Limit (CRQL) were qualified as 'U', not detected, at the CRQL. Sample results found to be less than the blank limit and greater than the CRQL were qualified as 'U', not detected.

Field Blank: The following volatile organics were detected in the equipment blank.

Sample ID

EB-7-2	Chloroform	9 ug/L
	Bromodichloromethane	4 ug/L
	Toluene	2 ug/L

These compounds were not detected in the project samples, therefore, qualification was not required.

TICs: Copies of the Form I summary sheets for TICs are included in Attachment B.

SDG No. E1065, Semi-Volatiles

Continuing Calibrations: The %D was found to exceed the limit of 25% for five of the compounds from two of the continuing calibrations. These compounds included: 2,4-Dinitrophenol; 4,6-Dinitro-2-methyl phenol; 2,2'-Oxybis(1-chloropropane); 2,4-Dimethylphenol and 3,3'-Dichlorobenzidine. The associated sample results were qualified as 'UJ', estimated, for the non-detectable results, for the affected compounds. Positive results were not detected for the compounds affected.

TICs: Copies of the Form I summary sheets for TICs are included in Attachment B. Sample results were qualified as 'R', unusable, for 4-hydroxy-4-methyl-2-pentanone where the sample result was found to be less than five times the method blank result.

SDG No. E1065, Pesticides and PCBs

Calibration / Linearity: The compound 4,4'-DDT was found to slightly exceed the 20% limit for percent relative standard deviation (%RSD). The associated soil samples were qualified as 'UJ', estimated, for the non-detectable results for this compound. Positive results were not detected for 4,4'-DDT.

SDG No. E1065, Inorganics

Matrix Spike and Laboratory Duplicate Samples: A site-specific matrix spike and laboratory duplicate sample should have been analyzed with the SDG.

Equipment Blank: Sample EB-7-2 was collected as the equipment blank and analyzed for inorganics. The following inorganics were detected in the equipment blank:

<u>EB-7-2</u>	<u>ug/L</u>
Aluminum	1550
Antimony	3.3
Barium	49.7
Cadmium	3.1
Calcium	30600
Chromium	2.9
Cobalt	1.6
Copper	22.1
Iron	7980
Lead	20.8
Magnesium	9020
Manganese	549
Nickel	3.1
Silver	4.4
Sodium	6300
Vanadium	4.8
Zinc	145
Cyanide	6.9

The equipment blank results above were not used to qualify the samples, due to the fact that the blank appears to have an excessive number of inorganic compounds detected and the levels seem a bit higher than usually detected in an equipment blank. However, this blank is reported with the samples so that a comparison can be made.

CRDL Standard: Sample results within the affected range were qualified as 'J', estimated, for manganese, silver and zinc, due to the associated CRDL Standard recovery out of the 80-120% limit.

ICP Serial Dilution: The Inorganics lead, manganese and zinc were found to exceed the 10% limit for difference for the project samples. The associated sample results that exceeded ten times the Instrument Detection Limit (IDL) were qualified as 'J', estimated, for the Inorganics noted.

Please contact me by telephone at 301-294-6144, should you require additional information or clarification regarding this Letter Report.

Sincerely,

A handwritten signature in cursive script, reading "Andrea P. Schuessler".

Andrea P. Schuessler, CHMM
ChemWorld Environmental, Inc.

c: MP-9802 file

ORGANIC DATA QUALIFIERS

- U - Indicates that the compound was analyzed for, but not detected at or above the Contract Required Quantitation Limit (CRQL), or the compound is not detected due to qualification through the method or field blank.
- J - The associated numerical value is an estimated quantity.
- JN - Tentatively identified with approximated concentrations (Volatile and Semi-Volatile Organics). Presumptively present at an approximated quantity (Pesticides/PCBs).
- UJ - The compound was analyzed for, but not detected. The sample quantitation limit is an estimated quantity due to variance from quality control limits.
- C - Applies to Pesticide results where the identification has been confirmed by GC/MS.
- E - Reported value is estimated due to quantitation above the calibration range.
- D - Reported result taken from diluted sample analysis.
- A - Aldol condensation product.
- R - Reported value is unusable and rejected due to variance from quality control limits.
- NA - Not Analyzed.

INORGANIC DATA QUALIFIERS

- U - Indicates analyte not detected at or above the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.
- B - Indicates analyte result is between Instrument Detection Limit (IDL) and CRDL.
- J - The reported value is estimated due to variance from quality control limits.
- UJ - The element was analyzed for, but not detected. The sample quantitation limit is an estimate due to variance from quality control limits.
- E - Reported value is estimated because of the presence of interference.
- R - Reported value is unusable and rejected due to variance from quality control limits.
- NA - Not analyzed.

ATTACHMENT A

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-03

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5628

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 18

Date Analyzed: 07/13/98

GC Column: DB-624 ID: 0.25 (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	11	J ~~B~~
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	1	J
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)	3	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-4

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-04

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5648

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 16

Date Analyzed: 07/14/98

GC Column: DB-624 ID: 0.25 (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	uJ
74-83-9-----	Bromomethane	12	uJ
75-01-4-----	Vinyl Chloride	12	uJ
75-00-3-----	Chloroethane	12	uJ
75-09-2-----	Methylene Chloride	2	JB
67-64-1-----	Acetone	7	JB
75-15-0-----	Carbon Disulfide	12	uJ
75-35-4-----	1,1-Dichloroethene	12	uJ
75-34-3-----	1,1-Dichloroethane	12	uJ
540-59-0-----	1,2-Dichloroethene (Total)	12	uJ
67-66-3-----	Chloroform	12	uJ
107-06-2-----	1,2-Dichloroethane	12	uJ
78-93-3-----	2-Butanone	12	uJ
71-55-6-----	1,1,1-Trichloroethane	12	uJ
56-23-5-----	Carbon Tetrachloride	12	uJ
75-27-4-----	Bromodichloromethane	12	uJ
78-87-5-----	1,2-Dichloropropane	12	uJ
10061-01-5-----	cis-1,3-Dichloropropene	12	uJ
79-01-6-----	Trichloroethene	12	uJ
124-48-1-----	Dibromochloromethane	12	uJ
79-00-5-----	1,1,2-Trichloroethane	12	uJ
71-43-2-----	Benzene	12	uJ
10061-02-6-----	trans-1,3-Dichloropropene	12	uJ
75-25-2-----	Bromoform	12	uJ
108-10-1-----	4-Methyl-2-Pentanone	12	uJ
591-78-6-----	2-Hexanone	12	uJ
127-18-4-----	Tetrachloroethene	12	uJ
79-34-5-----	1,1,2,2-Tetrachloroethane	12	uJ
108-88-3-----	Toluene	12	uJ
108-90-7-----	Chlorobenzene	12	uJ
100-41-4-----	Ethylbenzene	12	uJ
100-42-5-----	Styrene	12	uJ
1330-20-7-----	Xylene (Total)	12	uJ

12 u
12 u

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5624

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 22

Date Analyzed: 07/13/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

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

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	7	JB
67-64-1	Acetone	110	J
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	25	J
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	2	J
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (Total)	2	J

13 U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5625

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 15

Date Analyzed: 07/13/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(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	7	JB	(12 U)
67-64-1-----	Acetone	11	J	(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	UJ
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	UJ
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	

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB-7-2

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) WATER

Lab Sample ID: E1065-05

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V5A5664

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. _____

Date Analyzed: 07/15/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

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

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

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-06

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5630

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 16

Date Analyzed: 07/13/98

GC Column: DB-624 ID: 0.25 (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	7	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

124

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1092-01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5644

Level: (low/med) LOW

Date Received: 07/09/98

% Moisture: not dec. 10

Date Analyzed: 07/14/98

GC Column: DB-624 ID: 0.25 (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	1	JB
67-64-1-----	Acetone	8	JB
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

11U
11U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-3

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1092-02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5646

Level: (low/med) LOW

Date Received: 07/09/98

% Moisture: not dec. 23

Date Analyzed: 07/14/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
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	2	JB	13u
67-64-1	Acetone	10	JB	13u
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	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-07

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5631

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 24

Date Analyzed: 07/13/98

GC Column: DB-624 ID: 0.25 (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	16	~~U~~
67-64-1-----	Acetone	33	~~U~~
75-15-0-----	Carbon Disulfide	13	U
75-35-4-----	1,1-Dichloroethene	13	U
75-34-3-----	1,1-Dichloroethane	13	U
540-59-0-----	1,2-Dichloroethene (Total)	13	U
67-66-3-----	Chloroform	13	U
107-06-2-----	1,2-Dichloroethane	13	U
78-93-3-----	2-Butanone	13	~~U~~ ~~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~~ ~~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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-01

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3796

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 29 Δ decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/20/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.3 Δ 7.5

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/KG

Q

108-95-2-----	Phenol	470	U
111-44-4-----	bis(-2-Chloroethyl) Ether	470	U
95-57-8-----	2-Chlorophenol	470	U
541-73-1-----	1,3-Dichlorobenzene	470	U
106-46-7-----	1,4-Dichlorobenzene	470	U
95-50-1-----	1,2-Dichlorobenzene	470	U
95-48-7-----	2-Methylphenol	470	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	470	U
106-44-5-----	4-Methylphenol	470	U
621-64-7-----	N-Nitroso-di-n-propylamine	470	U
67-72-1-----	Hexachloroethane	470	U
98-95-3-----	Nitrobenzene	470	U
78-59-1-----	Isophorone	470	U
88-75-5-----	2-Nitrophenol	470	U
105-67-9-----	2,4-Dimethylphenol	470	U
120-83-2-----	2,4-Dichlorophenol	470	U
120-82-1-----	1,2,4-Trichlorobenzene	470	U
91-20-3-----	Naphthalene	470	U
106-47-8-----	4-Chloroaniline	470	U
111-91-1-----	bis(-2-Chloroethoxy) methane	470	U
87-68-3-----	Hexachlorobutadiene	470	U
59-50-7-----	4-Chloro-3-Methylphenol	470	U
91-57-6-----	2-Methylnaphthalene	470	U
77-47-4-----	Hexachlorocyclopentadiene	470	U
88-06-2-----	2,4,6-Trichlorophenol	470	U
95-95-4-----	2,4,5-Trichlorophenol	1200	U
91-58-7-----	2-Chloronaphthalene	470	U
88-74-4-----	2-Nitroaniline	1200	U
131-11-3-----	Dimethylphthalate	470	U
208-96-8-----	Acenaphthylene	470	U
606-20-2-----	2,6-Dinitrotoluene	470	U
99-09-2-----	3-Nitroaniline	1200	U
83-32-9-----	Acenaphthene	470	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-01

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3796

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 29

decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/20/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.3

21073432

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	470	U
121-14-2-----	2,4-Dinitrotoluene	470	U
84-66-2-----	Diethylphthalate	470	U
7005-72-3-----	4-Chlorophenyl-phenylether	470	U
86-73-7-----	Fluorene	470	U
100-01-6-----	4-Nitroaniline	1200	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1200	U
86-30-6-----	N-nitrosodiphenylamine (1)	470	U
101-55-3-----	4-Bromophenyl-phenylether	470	U
118-74-1-----	Hexachlorobenzene	470	U
87-86-5-----	Pentachlorophenol	1200	U
85-01-8-----	Phenanthrene	470	U
120-12-7-----	Anthracene	470	U
86-74-8-----	Carbazole	470	U
84-74-2-----	Di-n-butylphthalate	470	U
206-44-0-----	Fluoranthene	470	U
129-00-0-----	Pyrene	470	U
85-68-7-----	Butylbenzylphthalate	470	U
91-94-1-----	3,3'-Dichlorobenzidine	470	U
56-55-3-----	Benzo (a) anthracene	470	U
218-01-9-----	Chrysene	470	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	470	U
117-84-0-----	Di-n-octylphthalate	470	U
205-99-2-----	Benzo (b) fluoranthene	470	U
207-08-9-----	Benzo (k) fluoranthene	470	U
50-32-8-----	Benzo (a) pyrene	470	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	470	U
53-70-3-----	Dibenzo (a,h) anthracene	470	U
191-24-2-----	Benzo (g,h,i) perylene	470	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065
Matrix: (soil/water) SOIL Lab Sample ID: E1065-02
Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3797
Level: (low/med) LOW Date Received: 07/03/98
% Moisture: 10 decanted: (Y/N) N Date Extracted: 07/09/98
Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/20/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 8.2 *g. 7/20/98*

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
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
111-91-1-----	bis(-2-Chloroethoxy) methane	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	920	U
91-58-7-----	2-Chloronaphthalene	370	U
88-74-4-----	2-Nitroaniline	920	U
131-11-3-----	Dimethylphthalate	370	U
208-96-8-----	Acenaphthylene	370	U
606-20-2-----	2,6-Dinitrotoluene	370	U
99-09-2-----	3-Nitroaniline	920	U
83-32-9-----	Acenaphthene	370	U

FORM I SV-1

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065
Matrix: (soil/water) SOIL Lab Sample ID: E1065-02
Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3797
Level: (low/med) LOW Date Received: 07/03/98
% Moisture: 10 decanted: (Y/N) N Date Extracted: 07/09/98
Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/20/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 8.2

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	920	U
100-02-7-----	4-Nitrophenol	920	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	920	U
534-52-1-----	4,6-Dinitro-2-methylphenol	920	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	920	U
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	44	J
129-00-0-----	Pyrene	40	J
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	4800	E
117-84-0-----	Di-n-octylphthalate	370	U
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-----	Dibenzo(a,h)anthracene	370	U
191-24-2-----	Benzo(g,h,i)perylene	370	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-2DL

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-02DL

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3878

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 10 decanted: (Y/N) N

Date Extracted: 07/06/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/23/98

Injection Volume: 2.0 (uL)

Dilution Factor: 3.0

GPC Cleanup: (Y/N) Y

pH: 8.2 *8.2 x 2*

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

CAS NO.	COMPOUND	Q
108-95-2	Phenol	1100 U
111-44-4	bis(-2-Chloroethyl) Ether	1100 U
95-57-8	2-Chlorophenol	1100 U
541-73-1	1,3-Dichlorobenzene	1100 U
106-46-7	1,4-Dichlorobenzene	1100 U
95-50-1	1,2-Dichlorobenzene	1100 U
95-48-7	2-Methylphenol	1100 U
108-60-1	2,2'-oxybis(1-Chloropropane)	1100 U
106-44-5	4-Methylphenol	1100 U
621-64-7	N-Nitroso-di-n-propylamine	1100 U
67-72-1	Hexachloroethane	1100 U
98-95-3	Nitrobenzene	1100 U
78-59-1	Isophorone	1100 U
88-75-5	2-Nitrophenol	1100 U
105-67-9	2,4-Dimethylphenol	1100 U
120-83-2	2,4-Dichlorophenol	1100 U
120-82-1	1,2,4-Trichlorobenzene	1100 U
91-20-3	Naphthalene	1100 U
106-47-8	4-Chloroaniline	1100 U
111-91-1	bis(-2-Chloroethoxy)methane	1100 U
87-68-3	Hexachlorobutadiene	1100 U
59-50-7	4-Chloro-3-Methylphenol	1100 U
91-57-6	2-Methylnaphthalene	1100 U
77-47-4	Hexachlorocyclopentadiene	1100 U
88-06-2	2,4,6-Trichlorophenol	1100 U
95-95-4	2,4,5-Trichlorophenol	2800 U
91-58-7	2-Chloronaphthalene	1100 U
88-74-4	2-Nitroaniline	2800 U
131-11-3	Dimethylphthalate	1100 U
208-96-8	Acenaphthylene	1100 U
606-20-2	2,6-Dinitrotoluene	1100 U
99-09-2	3-Nitroaniline	2800 U
83-32-9	Acenaphthene	1100 U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-2DL

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-02DL

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3878

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 10

decanted: (Y/N) N

Date Extracted: 07/06/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/23/98

Injection Volume: 2.0 (uL)

Dilution Factor: 3.0

GPC Cleanup: (Y/N) Y

pH: 8.2

07-31-98

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO.

COMPOUND

51-28-5-----	2,4-Dinitrophenol	2800	U
100-02-7-----	4-Nitrophenol	2800	U
132-64-9-----	Dibenzofuran	1100	U
121-14-2-----	2,4-Dinitrotoluene	1100	U
84-66-2-----	Diethylphthalate	1100	U
7005-72-3-----	4-Chlorophenyl-phenylether	1100	U
86-73-7-----	Fluorene	1100	U
100-01-6-----	4-Nitroaniline	2800	U
534-52-1-----	4,6-Dinitro-2-methylphenol	2800	U
86-30-6-----	N-nitrosodiphenylamine (1)	1100	U
101-55-3-----	4-Bromophenyl-phenylether	1100	U
118-74-1-----	Hexachlorobenzene	1100	U
87-86-5-----	Pentachlorophenol	2800	U
85-01-8-----	Phenanthrene	1100	U
120-12-7-----	Anthracene	1100	U
86-74-8-----	Carbazole	1100	U
84-74-2-----	Di-n-butylphthalate	1100	U
206-44-0-----	Fluoranthene	1100	U
129-00-0-----	Pyrene	1100	U
85-68-7-----	Butylbenzylphthalate	1100	U
91-94-1-----	3,3'-Dichlorobenzidine	1100	U
56-55-3-----	Benzo (a) anthracene	1100	U
218-01-9-----	Chrysene	1100	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	3800	D
117-84-0-----	Di-n-octylphthalate	1100	U
205-99-2-----	Benzo (b) fluoranthene	1100	U
207-08-9-----	Benzo (k) fluoranthene	1100	U
50-32-8-----	Benzo (a) pyrene	1100	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	1100	U
53-70-3-----	Dibenzo (a,h) anthracene	1100	U
191-24-2-----	Benzo (g,h,i) perylene	1100	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-03

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3798

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 16 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/20/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.0 *8.75*

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	400	U
111-44-4-----	bis(-2-Chloroethyl) Ether	400	U
95-57-8-----	2-Chlorophenol	400	U
541-73-1-----	1,3-Dichlorobenzene	400	U
106-46-7-----	1,4-Dichlorobenzene	400	U
95-50-1-----	1,2-Dichlorobenzene	400	U
95-48-7-----	2-Methylphenol	400	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5-----	4-Methylphenol	400	U
621-64-7-----	N-Nitroso-di-n-propylamine	400	U
67-72-1-----	Hexachloroethane	400	U
98-95-3-----	Nitrobenzene	400	U
78-59-1-----	Isophorone	400	U
88-75-5-----	2-Nitrophenol	400	U
105-67-9-----	2,4-Dimethylphenol	400	U
120-83-2-----	2,4-Dichlorophenol	400	U
120-82-1-----	1,2,4-Trichlorobenzene	400	U
91-20-3-----	Naphthalene	400	U
106-47-8-----	4-Chloroaniline	400	U
111-91-1-----	bis(-2-Chloroethoxy) methane	400	U
87-68-3-----	Hexachlorobutadiene	400	U
59-50-7-----	4-Chloro-3-Methylphenol	400	U
91-57-6-----	2-Methylnaphthalene	400	U
77-47-4-----	Hexachlorocyclopentadiene	400	U
88-06-2-----	2,4,6-Trichlorophenol	400	U
95-95-4-----	2,4,5-Trichlorophenol	990	U
91-58-7-----	2-Chloronaphthalene	400	U
88-74-4-----	2-Nitroaniline	990	U
131-11-3-----	Dimethylphthalate	400	U
208-96-8-----	Acenaphthylene	400	U
606-20-2-----	2,6-Dinitrotoluene	400	U
99-09-2-----	3-Nitroaniline	990	U
83-32-9-----	Acenaphthene	400	U

FORM I SV-1

413

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-03

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3798

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 16 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/20/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.08 7.5

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

51-28-5-----	2,4-Dinitrophenol	990	U
100-02-7-----	4-Nitrophenol	990	U
132-64-9-----	Dibenzofuran	400	U
121-14-2-----	2,4-Dinitrotoluene	400	U
84-66-2-----	Diethylphthalate	400	U
7005-72-3-----	4-Chlorophenyl-phenylether	400	U
86-73-7-----	Fluorene	400	U
100-01-6-----	4-Nitroaniline	990	U
534-52-1-----	4,6-Dinitro-2-methylphenol	990	U
86-30-6-----	N-nitrosodiphenylamine (1)	400	U
101-55-3-----	4-Bromophenyl-phenylether	400	U
118-74-1-----	Hexachlorobenzene	400	U
87-86-5-----	Pentachlorophenol	990	U
85-01-8-----	Phenanthrene	400	U
120-12-7-----	Anthracene	400	U
86-74-8-----	Carbazole	400	U
84-74-2-----	Di-n-butylphthalate	400	U
206-44-0-----	Fluoranthene	400	U
129-00-0-----	Pyrene	400	U
85-68-7-----	Butylbenzylphthalate	400	U
91-94-1-----	3,3'-Dichlorobenzidine	400	U
56-55-3-----	Benzo (a) anthracene	400	U
218-01-9-----	Chrysene	400	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	200	J
117-84-0-----	Di-n-octylphthalate	400	U
205-99-2-----	Benzo (b) fluoranthene	400	U
207-08-9-----	Benzo (k) fluoranthene	400	U
50-32-8-----	Benzo (a) pyrene	400	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	400	U
53-70-3-----	Dibenzo (a,h) anthracene	400	U
191-24-2-----	Benzo (g,h,i) perylene	400	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-4

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065
Matrix: (soil/water) SOIL Lab Sample ID: E1065-04
Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3958
Level: (low/med) LOW Date Received: 07/03/98
% Moisture: 18 decanted: (Y/N) N Date Extracted: 07/09/98
Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/29/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.8

07317

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

CAS NO.	COMPOUND	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-Dimethyphenol	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
111-91-1	bis(-2-Chloroethoxy)methane	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
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	Dimethylphthalate	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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-4

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065
Matrix: (soil/water) SOIL Lab Sample ID: E1065-04
Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3958
Level: (low/med) LOW Date Received: 07/03/98
% Moisture: 18 decanted: (Y/N) N Date Extracted: 07/09/98
Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/29/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.9

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

CAS NO.	COMPOUND	Q
51-28-5-----	2,4-Dinitrophenol	1000 U
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
534-52-1-----	4,6-Dinitro-2-methylphenol	1000 U
86-30-6-----	N-nitrosodiphenylamine (1)	410 U
101-55-3-----	4-Bromophenyl-phenylether	410 U
118-74-1-----	Hexachlorobenzene	410 U
87-86-5-----	Pentachlorophenol	1000 U
85-01-8-----	Phenanthrene	410 U
120-12-7-----	Anthracene	410 U
86-74-8-----	Carbazole	410 U
84-74-2-----	Di-n-butylphthalate	410 U
206-44-0-----	Fluoranthene	410 U
129-00-0-----	Pyrene	410 U
85-68-7-----	Butylbenzylphthalate	410 U
91-94-1-----	3,3'-Dichlorobenzidine	410 U
56-55-3-----	Benzo(a)anthracene	410 U
218-01-9-----	Chrysene	410 U
117-81-7-----	bis(2-Ethylhexyl)phthalate	86 J
117-84-0-----	Di-n-octylphthalate	410 U
205-99-2-----	Benzo(b)fluoranthene	410 U
207-08-9-----	Benzo(k)fluoranthene	410 U
50-32-8-----	Benzo(a)pyrene	410 U
193-39-5-----	Indeno(1,2,3-cd)pyrene	410 U
53-70-3-----	Dibenzo(a,h)anthracene	410 U
191-24-2-----	Benzo(g,h,i)perylene	410 U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB-7-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) WATER

Lab Sample ID: E1065-05

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A3957

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/06/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: 7.9 *4.3-5.7*

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

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	1	J
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 <i>UJ</i>
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-Dimethyphenol	10	U <i>UJ</i>
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
111-91-1-----	bis(-2-Chloroethoxy)methane	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-Methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB-7-2

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065
Matrix: (soil/water) WATER Lab Sample ID: E1065-05
Sample wt/vol: 1000 (g/mL) ML Lab File ID: S2A3957
Level: (low/med) LOW Date Received: 07/03/98
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 07/06/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/29/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.9 *8/6/98*

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	6 J	
117-84-0-----	Di-n-octylphthalate	10 U	
205-99-2-----	Benzo (b) fluoranthene	10 U	
207-08-9-----	Benzo (k) fluoranthene	10 U	
50-32-8-----	Benzo (a) pyrene	10 U	
193-39-5-----	Indeno (1,2,3-cd) pyrene	10 U	
53-70-3-----	Dibenzo (a,h) anthracene	10 U	
191-24-2-----	Benzo (g,h,i) perylene	10 U	

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-06

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3959

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 16 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.7

8/7/98

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	400	U
111-44-4-----	bis(-2-Chloroethyl) Ether	400	U
95-57-8-----	2-Chlorophenol	400	U
541-73-1-----	1,3-Dichlorobenzene	400	U
106-46-7-----	1,4-Dichlorobenzene	400	U
95-50-1-----	1,2-Dichlorobenzene	400	U
95-48-7-----	2-Methylphenol	400	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5-----	4-Methylphenol	400	U
621-64-7-----	N-Nitroso-di-n-propylamine	400	U
67-72-1-----	Hexachloroethane	400	U
98-95-3-----	Nitrobenzene	400	U
78-59-1-----	Isophorone	400	U
88-75-5-----	2-Nitrophenol	400	U
105-67-9-----	2,4-Dimethylphenol	400	U
120-83-2-----	2,4-Dichlorophenol	400	U
120-82-1-----	1,2,4-Trichlorobenzene	400	U
91-20-3-----	Naphthalene	400	U
106-47-8-----	4-Chloroaniline	400	U
111-91-1-----	bis(-2-Chloroethoxy) methane	400	U
87-68-3-----	Hexachlorobutadiene	400	U
59-50-7-----	4-Chloro-3-Methylphenol	400	U
91-57-6-----	2-Methylnaphthalene	400	U
77-47-4-----	Hexachlorocyclopentadiene	400	U
88-06-2-----	2,4,6-Trichlorophenol	400	U
95-95-4-----	2,4,5-Trichlorophenol	990	U
91-58-7-----	2-Chloronaphthalene	400	U
88-74-4-----	2-Nitroaniline	990	U
131-11-3-----	Dimethylphthalate	400	U
208-96-8-----	Acenaphthylene	400	U
606-20-2-----	2,6-Dinitrotoluene	400	U
99-09-2-----	3-Nitroaniline	990	U
83-32-9-----	Acenaphthene	400	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-06

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3959

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 16 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.7 *2/1/98*

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

51-28-5-----	2,4-Dinitrophenol	990	U
100-02-7-----	4-Nitrophenol	990	U
132-64-9-----	Dibenzofuran	400	U
121-14-2-----	2,4-Dinitrotoluene	400	U
84-66-2-----	Diethylphthalate	400	U
7005-72-3-----	4-Chlorophenyl-phenylether	400	U
86-73-7-----	Fluorene	400	U
100-01-6-----	4-Nitroaniline	990	U
534-52-1-----	4,6-Dinitro-2-methylphenol	990	U
86-30-6-----	N-nitrosodiphenylamine (1)	400	U
101-55-3-----	4-Bromophenyl-phenylether	400	U
118-74-1-----	Hexachlorobenzene	400	U
87-86-5-----	Pentachlorophenol	990	U
85-01-8-----	Phenanthrene	400	U
120-12-7-----	Anthracene	400	U
86-74-8-----	Carbazole	400	U
84-74-2-----	Di-n-butylphthalate	400	U
206-44-0-----	Fluoranthene	400	U
129-00-0-----	Pyrene	400	U
85-68-7-----	Butylbenzylphthalate	400	U
91-94-1-----	3,3'-Dichlorobenzidine	400	U
56-55-3-----	Benzo(a)anthracene	400	U
218-01-9-----	Chrysene	400	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	49	J
117-84-0-----	Di-n-octylphthalate	400	U
205-99-2-----	Benzo(b)fluoranthene	400	U
207-08-9-----	Benzo(k)fluoranthene	400	U
50-32-8-----	Benzo(a)pyrene	400	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	400	U
53-70-3-----	Dibenzo(a,h)anthracene	400	U
191-24-2-----	Benzo(g,h,i)perylene	400	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1092-01

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3961

Level: (low/med) LOW

Date Received: 07/09/98

% Moisture: 14 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.2

Johnson

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

CAS NO.

COMPOUND

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-Dimethyphenol	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
111-91-1-----	bis(-2-Chloroethoxy)methane	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	970	U
91-58-7-----	2-Chloronaphthalene	390	U
88-74-4-----	2-Nitroaniline	970	U
131-11-3-----	Dimethylphthalate	390	U
208-96-8-----	Acenaphthylene	390	U
606-20-2-----	2,6-Dinitrotoluene	390	U
99-09-2-----	3-Nitroaniline	970	U
83-32-9-----	Acenaphthene	390	U

FORM I SV-1

501

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065
Matrix: (soil/water) SOIL Lab Sample ID: E1092-01
Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3961
Level: (low/med) LOW Date Received: 07/09/98
% Moisture: 14 decanted: (Y/N) N Date Extracted: 07/09/98
Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/29/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.3

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

CAS NO.	COMPOUND	Q
51-28-5-----	2,4-Dinitrophenol	970 U
100-02-7-----	4-Nitrophenol	970 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	970 U
534-52-1-----	4,6-Dinitro-2-methylphenol	970 U
86-30-6-----	N-nitrosodiphenylamine (1)	390 U
101-55-3-----	4-Bromophenyl-phenylether	390 U
118-74-1-----	Hexachlorobenzene	390 U
87-86-5-----	Pentachlorophenol	970 U
85-01-8-----	Phenanthrene	390 U
120-12-7-----	Anthracene	390 U
86-74-8-----	Carbazole	390 U
84-74-2-----	Di-n-butylphthalate	390 U
206-44-0-----	Fluoranthene	390 U
129-00-0-----	Pyrene	390 U
85-68-7-----	Butylbenzylphthalate	390 U
91-94-1-----	3,3'-Dichlorobenzidine	390 U
56-55-3-----	Benzo(a)anthracene	390 U
218-01-9-----	Chrysene	390 U
117-81-7-----	bis(2-Ethylhexyl)phthalate	54 J
117-84-0-----	Di-n-octylphthalate	390 U
205-99-2-----	Benzo(b)fluoranthene	390 U
207-08-9-----	Benzo(k)fluoranthene	390 U
50-32-8-----	Benzo(a)pyrene	390 U
193-39-5-----	Indeno(1,2,3-cd)pyrene	390 U
53-70-3-----	Dibenzo(a,h)anthracene	390 U
191-24-2-----	Benzo(g,h,i)perylene	390 U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-3

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065
Matrix: (soil/water) SOIL Lab Sample ID: E1092-02
Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3962
Level: (low/med) LOW Date Received: 07/09/98
% Moisture: 24 decanted: (Y/N) N Date Extracted: 07/09/98
Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/29/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.8

40742
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	Q
108-95-2	Phenol	440 U
111-44-4	bis(-2-Chloroethyl) Ether	440 U
95-57-8	2-Chlorophenol	440 U
541-73-1	1,3-Dichlorobenzene	440 U
106-46-7	1,4-Dichlorobenzene	440 U
95-50-1	1,2-Dichlorobenzene	440 U
95-48-7	2-Methylphenol	440 U
108-60-1	2,2'-oxybis(1-Chloropropane)	440 ~~U~~ <i>UJ</i>
106-44-5	4-Methylphenol	440 U
621-64-7	N-Nitroso-di-n-propylamine	440 U
67-72-1	Hexachloroethane	440 U
98-95-3	Nitrobenzene	440 U
78-59-1	Isophorone	440 U
88-75-5	2-Nitrophenol	440 U
105-67-9	2,4-Dimethyphenol	440 ~~U~~ <i>UJ</i>
120-83-2	2,4-Dichlorophenol	440 U
120-82-1	1,2,4-Trichlorobenzene	440 U
91-20-3	Naphthalene	440 U
106-47-8	4-Chloroaniline	440 U
111-91-1	bis(-2-Chloroethoxy) methane	440 U
87-68-3	Hexachlorobutadiene	440 U
59-50-7	4-Chloro-3-Methylphenol	440 U
91-57-6	2-Methylnaphthalene	440 U
77-47-4	Hexachlorocyclopentadiene	440 U
88-06-2	2,4,6-Trichlorophenol	440 U
95-95-4	2,4,5-Trichlorophenol	1100 U
91-58-7	2-Chloronaphthalene	440 U
88-74-4	2-Nitroaniline	1100 U
131-11-3	Dimethylphthalate	440 U
208-96-8	Acenaphthylene	440 U
606-20-2	2,6-Dinitrotoluene	440 U
99-09-2	3-Nitroaniline	1100 U
83-32-9	Acenaphthene	440 U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-3

Lab Name: MITKEM CORPORATION Contract: _____

Lab Code: MITKEM Case No.: _____ SAS No.: _____ SDG No.: E1065

Matrix: (soil/water) SOIL Lab Sample ID: E1092-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2A3962

Level: (low/med) LOW Date Received: 07/09/98

% Moisture: 24 decanted: (Y/N) N Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8 *673696*

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

CAS NO. COMPOUND Q

51-28-5-----	2,4-Dinitrophenol	1100	U
100-02-7-----	4-Nitrophenol	1100	U
132-64-9-----	Dibenzofuran	440	U
121-14-2-----	2,4-Dinitrotoluene	440	U
84-66-2-----	Diethylphthalate	440	U
7005-72-3-----	4-Chlorophenyl-phenylether	440	U
86-73-7-----	Fluorene	440	U
100-01-6-----	4-Nitroaniline	1100	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1100	U
86-30-6-----	N-nitrosodiphenylamine (1)	440	U
101-55-3-----	4-Bromophenyl-phenylether	440	U
118-74-1-----	Hexachlorobenzene	440	U
87-86-5-----	Pentachlorophenol	1100	U
85-01-8-----	Phenanthrene	170	J
120-12-7-----	Anthracene	440	U
86-74-8-----	Carbazole	440	U
84-74-2-----	Di-n-butylphthalate	440	U
206-44-0-----	Fluoranthene	190	J
129-00-0-----	Pyrene	210	J
85-68-7-----	Butylbenzylphthalate	440	U
91-94-1-----	3,3'-Dichlorobenzidine	440	U
56-55-3-----	Benzo(a)anthracene	110	J
218-01-9-----	Chrysene	140	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	100	J
117-84-0-----	Di-n-octylphthalate	440	U
205-99-2-----	Benzo(b)fluoranthene	170	J
207-08-9-----	Benzo(k)fluoranthene	54	J
50-32-8-----	Benzo(a)pyrene	94	J
193-39-5-----	Indeno(1,2,3-cd)pyrene	74	J
53-70-3-----	Dibenzo(a,h)anthracene	440	U
191-24-2-----	Benzo(g,h,i)perylene	70	J

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-07

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3960

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 19

decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.1 *green*

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

CAS NO.	COMPOUND	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-Dimethyphenol	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
111-91-1-----	bis(-2-Chloroethoxy)methane	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
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-----	Dimethylphthalate	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

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-07

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3960

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 19 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.5 *7.5*

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

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	1000	U
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
534-52-1-----	4,6-Dinitro-2-methylphenol	1000	U
86-30-6-----	N-nitrosodiphenylamine (1)	410	U
101-55-3-----	4-Bromophenyl-phenylether	410	U
118-74-1-----	Hexachlorobenzene	410	U
87-86-5-----	Pentachlorophenol	1000	U
85-01-8-----	Phenanthrene	410	U
120-12-7-----	Anthracene	410	U
86-74-8-----	Carbazole	410	U
84-74-2-----	Di-n-butylphthalate	410	U
206-44-0-----	Fluoranthene	410	U
129-00-0-----	Pyrene	410	U
85-68-7-----	Butylbenzylphthalate	410	U
91-94-1-----	3,3'-Dichlorobenzidine	410	U
56-55-3-----	Benzo (a) anthracene	410	U
218-01-9-----	Chrysene	410	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	47	J
117-84-0-----	Di-n-octylphthalate	410	U
205-99-2-----	Benzo (b) fluoranthene	410	U
207-08-9-----	Benzo (k) fluoranthene	410	U
50-32-8-----	Benzo (a) pyrene	410	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	410	U
53-70-3-----	Dibenzo (a, h) anthracene	410	U
191-24-2-----	Benzo (g, h, i) perylene	410	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

572

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-01

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: E2A6271F

% Moisture: 29 [^] decanted: (Y/N) N

Date Received: 07/03/98

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/09/98

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 07/21/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

319-84-6-----	alpha-BHC	2.4	U
319-85-7-----	beta-BHC	2.4	U
319-86-8-----	delta-BHC	2.4	U
58-89-9-----	gamma-BHC (Lindane)	2.4	U
76-44-8-----	Heptachlor	2.4	U
309-00-2-----	Aldrin	2.4	U
1024-57-3-----	Heptachlor epoxide	2.4	U
959-98-8-----	Endosulfan I	2.4	U
60-57-1-----	Dieldrin	4.6	U
72-55-9-----	4,4'-DDE	4.6	U
72-20-8-----	Endrin	4.6	U
33213-65-9-----	Endosulfan II	4.6	U
72-54-8-----	4,4'-DDD	4.6	U
1031-07-8-----	Endosulfan sulfate	4.6	U
50-29-3-----	4,4'-DDT	4.6	U
72-43-5-----	Methoxychlor	24	U
53494-70-5-----	Endrin ketone	4.6	U
7421-36-3-----	Endrin aldehyde	4.6	U
5103-71-9-----	alpha-Chlordane	2.4	U
5103-74-2-----	gamma-Chlordane	2.4	U
8001-35-2-----	Toxaphene	240	U
12674-11-2-----	Aroclor-1016	46	U
11104-28-2-----	Aroclor-1221	94	U
1114-16-5-----	Aroclor-1232	46	U
53469-21-9-----	Aroclor-1242	46	U
12672-29-6-----	Aroclor-1248	46	U
11097-69-1-----	Aroclor-1254	46	U
11096-82-5-----	Aroclor-1260	46	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-02

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: E2A6272F

% Moisture: 10 decanted: (Y/N) N

Date Received: 07/03/98

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/09/98

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 07/21/98

Injection Volume: 1.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.2

Sulfur Cleanup: (Y/N) Y

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	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	74	U
1114-16-5-----	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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065
Matrix: (soil/water) SOIL Lab Sample ID: E1065-03
Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2A6273F
% Moisture: 16 decanted: (Y/N) N Date Received: 07/03/98
Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/09/98
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 07/21/98
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 8.0 Sulfur Cleanup: (Y/N) Y

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	3.9 U	
72-55-9	4,4'-DDE	3.9 U	
72-20-8	Endrin	3.9 U	
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	20 U	
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	2.0 U	
8001-35-2	Toxaphene	200 U	
12674-11-2	Aroclor-1016	39 U	
11104-28-2	Aroclor-1221	80 U	
1114-16-5	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	

1D
--PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-4

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065
Matrix: (soil/water) SOIL Lab Sample ID: E1065-04
Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2A6274F
% Moisture: 18 decanted: (Y/N) N Date Received: 07/03/98
Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/09/98
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 07/21/98
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) Y

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	2.1	U
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	4.0	U
72-55-9	4,4'-DDE	4.0	U
72-20-8	Endrin	4.0	U
33213-65-9	Endosulfan II	4.0	U
72-54-8	4,4'-DDD	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
50-29-3	4,4'-DDT	4.0	U
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	4.0	U
7421-36-3	Endrin aldehyde	4.0	U
5103-71-9	alpha-Chlordane	2.1	U
5103-74-2	gamma-Chlordane	2.1	U
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	82	U
1114-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB-7-2

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) WATER

Lab Sample ID: E1065-05

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6216F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/03/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/07/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 07/16/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: 7.9

Sulfur Cleanup: (Y/N) Y

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
1114-16-5-----	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.

HP-MW-1

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065

Matrix: (soil/water) SOIL Lab Sample ID: E1065-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2A6275F

% Moisture: 16 decanted: (Y/N) N Date Received: 07/03/98

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/09/98

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 07/21/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

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

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	3.9 U	
72-55-9	4,4'-DDE	3.9 U	
72-20-8	Endrin	3.9 U	
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	20 U	
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	2.0 U	
8001-35-2	Toxaphene	200 U	
12674-11-2	Aroclor-1016	39 U	
11104-28-2	Aroclor-1221	80 U	
1114-16-5	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	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065
Matrix: (soil/water) SOIL Lab Sample ID: E1065-07
Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2A6276F
% Moisture: 19 decanted: (Y/N) N Date Received: 07/03/98
Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/09/98
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 07/21/98
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) Y

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	2.1	U
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	4.1	U
72-55-9-----	4,4'-DDE	4.1	U
72-20-8-----	Endrin	4.1	U
33213-65-9-----	Endosulfan II	4.1	U
72-54-8-----	4,4'-DDD	4.1	U
1031-07-8-----	Endosulfan sulfate	4.1	U
50-29-3-----	4,4'-DDT	4.1	U
72-43-5-----	Methoxychlor	21	U
53494-70-5-----	Endrin ketone	4.1	U
7421-36-3-----	Endrin aldehyde	4.1	U
5103-71-9-----	alpha-Chlordane	2.1	U
5103-74-2-----	gamma-Chlordane	2.1	U
8001-35-2-----	Toxaphene	210	U
12674-11-2-----	Aroclor-1016	41	U
11104-28-2-----	Aroclor-1221	83	U
1114-16-5-----	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	41	U

1D
PESTICIDE ORGANICS ANALYSIS-DATA SHEET

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065

Matrix: (soil/water) SOIL Lab Sample ID: E1092-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2A6277F

% Moisture: 14 decanted: (Y/N) N Date Received: 07/09/98

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/09/98

Concentrated Extract Volume: 5000(uL) Date Analyzed: 07/21/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) Y

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	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	78	U
1114-16-5	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
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065

Matrix: (soil/water) SOIL Lab Sample ID: E1092-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2A6278F

% Moisture: 24 decanted: (Y/N) N Date Received: 07/09/98

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/09/98

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 07/21/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.3	U
72-55-9	4,4'-DDE	4.3	U
72-20-8	Endrin	4.3	U
33213-65-9	Endosulfan II	4.3	U
72-54-8	4,4'-DDD	4.3	U
1031-07-8	Endosulfan sulfate	4.3	U
50-29-3	4,4'-DDT	4.3	U
72-43-5	Methoxychlor	22	U
53494-70-5	Endrin ketone	4.3	U
7421-36-3	Endrin aldehyde	4.3	U
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	2.2	U
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	88	U
1114-16-5	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

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BG-MW-1

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E1065

Matrix (soil/water): SOIL Lab Sample ID: E1065-01

Level (low/med): MED Date Received: 07/03/98

Solids: 81.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7710	U		P
7440-36-0	Antimony	0.40	U		P
7440-38-2	Arsenic	2.7	U		P
7440-39-3	Barium	61.2	U		P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	0.58	B		P
7440-70-2	Calcium	8350	U		P
7440-47-3	Chromium	13.7	U		P
7440-48-4	Cobalt	6.4	B		P
7440-50-8	Copper	18.9	U		P
7439-89-6	Iron	17200	U		P
7439-92-1	Lead	33.2	U		P
7439-95-4	Magnesium	6190	U		P
7439-96-5	Manganese	331	U		P
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	796	U		P
7782-49-2	Selenium	1.00	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	180	B		P
7440-28-0	Thallium	0.60	U		P
7440-62-2	Vanadium	16.0	U		P
7440-66-6	Zinc	83.5	U		P
	Cyanide	1.7	B		C

Color Before: BROWN Clarity Before: Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BG-MW-2

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E1065

Matrix (soil/water): SOIL Lab Sample ID: E1065-02

Level (low/med): MED Date Received: 07/03/98

Solids: 92.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4620	-		P
7440-36-0	Antimony	0.38	U		P
7440-38-2	Arsenic	2.7	-		P
7440-39-3	Barium	56.2	-		P
7440-41-7	Beryllium	0.26	B		P
7440-43-9	Cadmium	0.67	B		P
7440-70-2	Calcium	48500	-		P
7440-47-3	Chromium	9.3	-		P
7440-48-4	Cobalt	4.1	B		P
7440-50-8	Copper	17.3	-		P
7439-89-6	Iron	11000	-		P
7439-92-1	Lead	0.38	U		P
7439-95-4	Magnesium	14300	-		P
7439-96-5	Manganese	435	U	J	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	10.4	-		P
7440-09-7	Potassium	770	U		P
7782-49-2	Selenium	0.96	U		P
7440-22-4	Silver	1.7	B	J	P
7440-23-5	Sodium	212	B		P
7440-28-0	Thallium	0.58	U		P
7440-62-2	Vanadium	10.2	-		P
7440-66-6	Zinc	59.6	U		P
	Cyanide	1.3	B		C

Color Before: BROWN Clarity Before: Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BG-MW-3

Lab Name: MITKEM Contract: _____

Lab Code: 11522 Case No.: _____ SAS No.: _____ SDG No.: E1065

Matrix (soil/water): SOIL Lab Sample ID: E1065-03

Level (low/med): MED Date Received: 07/03/98

Solids: 80.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15200			P
7440-36-0	Antimony	0.70	B		P
7440-38-2	Arsenic	5.5			P
7440-39-3	Barium	137			P
7440-41-7	Beryllium	0.92	B		P
7440-43-9	Cadmium	1.0	B		P
7440-70-2	Calcium	5930			P
7440-47-3	Chromium	26.7			P
7440-48-4	Cobalt	21.6			P
7440-50-8	Copper	25.2			P
7439-89-6	Iron	33900			P
7439-92-1	Lead	29.9	J		P
7439-95-4	Magnesium	6230			P
7439-96-5	Manganese	570	J		P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	36.5			P
7440-09-7	Potassium	962	U		P
7782-49-2	Selenium	1.4			P
7440-22-4	Silver	0.51	B	J	P
7440-23-5	Sodium	210	B		P
7440-28-0	Thallium	0.72	U		P
7440-62-2	Vanadium	30.2			P
7440-66-6	Zinc	128	J		P
	Cyanide	2.0	B		C

Color Before: BROWN Clarity Before: _____ Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BG-MW-4

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E1065

Matrix (soil/water): SOIL Lab Sample ID: E1065-04

Level (low/med): MED Date Received: 07/03/98

Solids: 91.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3790			P
7440-36-0	Antimony	0.56	B		P
7440-38-2	Arsenic	2.8			P
7440-39-3	Barium	30.2	B		P
7440-41-7	Beryllium	0.26	B		P
7440-43-9	Cadmium	0.68	B		P
7440-70-2	Calcium	2320			P
7440-47-3	Chromium	6.8			P
7440-48-4	Cobalt	7.1	B		P
7440-50-8	Copper	11.9			P
7439-89-6	Iron	8310			P
7439-92-1	Lead	8.2			P
7439-95-4	Magnesium	1840			P
7439-96-5	Manganese	574	J	J	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	17.3			P
7440-09-7	Potassium	733	U		P
7782-49-2	Selenium	0.92	U		P
7440-22-4	Silver	0.78	J	J	P
7440-23-5	Sodium	90.2	B		P
7440-28-0	Thallium	0.55	U		P
7440-62-2	Vanadium	9.3			P
7440-66-6	Zinc	36.6			P
	Cyanide	1.2	B		C

Color Before: BROWN Clarity Before: Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

EB-7-2

Lab Name: MITKEM Contract: _____

Lab Code: 11522 Case No.: _____ SAS No.: _____ SDG No.: E1065_

Matrix (soil/water): WATER

Lab Sample ID: E1065-05

Level (low/med): LOW

Date Received: 07/03/98

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	1550	J	E	P
7440-36-0	Antimony	3.3	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	49.7	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	3.1	B		P
7440-70-2	Calcium	30600			P
7440-47-3	Chromium	2.9	B		P
7440-48-4	Cobalt	1.6	B		P
7440-50-8	Copper	22.1	B		P
7439-89-6	Iron	7980			P
7439-92-1	Lead	20.8	J		P
7439-95-4	Magnesium	9020			P
7439-96-5	Manganese	549			P
7439-97-6	Mercury	0.26	U		CV
7440-02-0	Nickel	3.1	B		P
7440-09-7	Potassium	4000	U		P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	4.4	J		P
7440-23-5	Sodium	6300			P
7440-28-0	Thallium	3.0	U		P
7440-62-2	Vanadium	4.8	B		P
7440-66-6	Zinc	145	J		P
	Cyanide	6.9	B		C

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HP-MW-1

Lab Name: MITKEM _____ Contract: _____

Lab Code: 11522_ Case No.: _____ SAS No.: _____ SDG No.: E1065_

Matrix (soil/water): SOIL_ Lab Sample ID: E1065-06

Level (low/med): MED_ Date Received: 07/03/98

Solids: _90.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3510	-		P
7440-36-0	Antimony	0.47	B		P
7440-38-2	Arsenic	0.73	B		P
7440-39-3	Barium	23.8	B		P
7440-41-7	Beryllium	0.24	B		P
7440-43-9	Cadmium	0.53	B		P
7440-70-2	Calcium	63800	-		P
7440-47-3	Chromium	6.7	-		P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	8.9	-		P
7439-89-6	Iron	9370	-		P
7439-92-1	Lead	0.35	U		P
7439-95-4	Magnesium	12500	-		P
7439-96-5	Manganese	310	J		P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	9.5	-		P
7440-09-7	Potassium	700	U		P
7782-49-2	Selenium	0.87	U		P
7440-22-4	Silver	0.43	J		P
7440-23-5	Sodium	187	B		P
7440-28-0	Thallium	0.52	U		P
7440-62-2	Vanadium	10.7	-		P
7440-66-6	Zinc	34.5	J		P
	Cyanide	2.9	B		C

Color Before: BROWN_ Clarity Before: _____ Texture: MED_

Color After: YELLOW_ Clarity After: CLEAR_ Artifacts: _____

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HP-MW-2

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E1065

Matrix (soil/water): SOIL Lab Sample ID: E1092-01

Level (low/med): MED Date Received: 07/09/98

Solids: 95.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9560			P
7440-36-0	Antimony	0.40	U		P
7440-38-2	Arsenic	2.8			P
7440-39-3	Barium	83.0			P
7440-41-7	Beryllium	0.47	B		P
7440-43-9	Cadmium	0.34	B		P
7440-70-2	Calcium	2550			P
7440-47-3	Chromium	12.8			P
7440-48-4	Cobalt	2.7	B		P
7440-50-8	Copper	5.3			P
7439-89-6	Iron	13800			P
7439-92-1	Lead	15.9			P
7439-95-4	Magnesium	2010			P
7439-96-5	Manganese	48.8	J	E	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	12.3			P
7440-09-7	Potassium	810	U		P
7782-49-2	Selenium	1.0	U		P
7440-22-4	Silver	0.40	U		P
7440-23-5	Sodium	99.2	B		P
7440-28-0	Thallium	1.5	B		P
7440-62-2	Vanadium	19.9			P
7440-66-6	Zinc	33.6	J		P
	Cyanide	64.2			C

Color Before: BROWN Clarity Before: Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HP-MW-3

Lab Name: MITKEM Contract:

ab Code: 11522 Case No.: SAS No.: SDG No.: E1065

Matrix (soil/water): SOIL

Lab Sample ID: E1092-02

Level (low/med): MED

Date Received: 07/09/98

Solids: 81.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14300			P
7440-36-0	Antimony	0.72	B		P
7440-38-2	Arsenic	4.1			P
7440-39-3	Barium	142			P
7440-41-7	Beryllium	0.65	B		P
7440-43-9	Cadmium	1.0	B		P
7440-70-2	Calcium	3920			P
7440-47-3	Chromium	42.5			P
7440-48-4	Cobalt	5.3	B		P
7440-50-8	Copper	20.5			P
7439-89-6	Iron	22700			P
7439-92-1	Lead	26.5	J		P
7439-95-4	Magnesium	3610			P
7439-96-5	Manganese	130	J		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	32.5			P
7440-09-7	Potassium	914	U		P
7782-49-2	Selenium	1.1	U		P
7440-22-4	Silver	0.46	U		P
7440-23-5	Sodium	126	B		P
7440-28-0	Thallium	1.7	B		P
7440-62-2	Vanadium	22.6			P
7440-66-6	Zinc	152	J		P
	Cyanide	1.3	B		C

Color Before: BROWN Clarity Before: Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HP-MW-4

Lab Name: MITKEM Contract: _____

Lab Code: 11522 Case No.: _____ SAS No.: _____ SDG No.: E1065_

Matrix (soil/water): SOIL_ Lab Sample ID: E1065-07

Level (low/med): MED_ Date Received: 07/03/98

Solids: 84.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3720	-		P
7440-36-0	Antimony	0.49	B		P
7440-38-2	Arsenic	1.7	-		P
7440-39-3	Barium	24.8	B		P
7440-41-7	Beryllium	0.37	B		P
7440-43-9	Cadmium	0.40	B		P
7440-70-2	Calcium	1430	-		P
7440-47-3	Chromium	6.5	-		P
7440-48-4	Cobalt	3.1	B		P
7440-50-8	Copper	9.1	-		P
7439-89-6	Iron	7670	-		P
7439-92-1	Lead	7.3	-		P
7439-95-4	Magnesium	1090	-		P
7439-96-5	Manganese	42.6	J		P
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	9.7	-		P
7440-09-7	Potassium	635	U		P
7782-49-2	Selenium	0.79	U		P
7440-22-4	Silver	0.32	U		P
7440-23-5	Sodium	174	B		P
7440-28-0	Thallium	0.95	B		P
7440-62-2	Vanadium	9.5	-		P
7440-66-6	Zinc	27.4	J		P
	Cyanide	3.0	B		C

Color Before: BROWN Clarity Before: _____ Texture: MED_

Color After: YELLOW Clarity After: CLEAR_ Artifacts: _____

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-03

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5628

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 18

Date Analyzed: 07/13/98

GC Column: DB-624 ID: 0.25 (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
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-4

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-04

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5648

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 16

Date Analyzed: 07/14/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5624

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 22

Date Analyzed: 07/13/98

GC Column: DB-624 ID: 0.25 (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
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5625

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 15

Date Analyzed: 07/13/98

GC Column: DB-624 ID: 0.25 (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
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-7-2

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) WATER

Lab Sample ID: E1065-05

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V5A5664

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. _____

Date Analyzed: 07/15/98

GC Column: DB-624 ID: 0.25 (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
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-06

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5630

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 16

Date Analyzed: 07/13/98

GC Column: DB-624 ID: 0.25 (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
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1092-01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5644

Level: (low/med) LOW

Date Received: 07/09/98

% Moisture: not dec. 10

Date Analyzed: 07/14/98

GC Column: DB-624 ID: 0.25 (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
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-3

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1092-02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5646

Level: (low/med) LOW

Date Received: 07/09/98

% Moisture: not dec. 23

Date Analyzed: 07/14/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-07

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: V5A5631

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: not dec. 24

Date Analyzed: 07/13/98

GC Column: DB-624 ID: 0.25 (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
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-01

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3796

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 29 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/20/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.3 *at 25°C*

CONCENTRATION UNITS:

Number TICs found: 15

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.24	120	J
2.	UNKNOWN	3.32	150	J
3.	UNKNOWN	4.72	200	J
4.	UNKNOWN	4.92	450	J
5.	UNKNOWN	5.33	130	J
6.	UNKNOWN	5.43	450	J
7.	UNKNOWN	5.64	110	J
8. 123-42-2	2-PENTANONE, 4-HYDROXY-4-METH	5.73	6200	J <i>R</i>
9.	UNKNOWN HYDROCARBON	6.00	220	J
10.	UNKNOWN HYDROCARBON	6.12	300	J
11.	UNKNOWN	7.39	760	J
12.	UNKNOWN	8.05	190	J
13.	UNKNOWN HYDROCARBON	25.38	220	J
14.	UNKNOWN	26.40	280	J
15.	UNKNOWN HYDROCARBON	26.81	600	J
16.				
17.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. _____

BG-MW-2

Lab Name: MITKEM CORPORATION

Contract: _____

Lab Code: MITKEM

Case No.: _____

SAS No.: _____

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-02

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3797

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 10 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/20/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.2

8.2-5.45

Number TICs found: 19

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.23	320	J ~~B~~
2.	UNKNOWN	4.31	330	J
3.	UNKNOWN	4.72	160	J ~~B~~
4.	UNKNOWN	4.80	110	J ~~B~~
5.	UNKNOWN	4.93	1800	J ~~B~~
6.	UNKNOWN	5.01	160	J ~~B~~
7.	UNKNOWN HYDROCARBON	5.34	170	J ~~B~~
8.	UNKNOWN	5.43	2000	J
9.	UNKNOWN HYDROCARBON	5.54	96	J ~~B~~
10.	UNKNOWN	5.65	220	J
11. 123-42-2	2-PENTANONE, 4-HYDROXY-4-METH	5.74	5000	J ~~B~~ <i>R</i>
12.	UNKNOWN	5.85	250	J ~~B~~
13.	UNKNOWN	6.01	430	J ~~B~~
14.	UNKNOWN HYDROCARBON	6.11	600	J
15.	UNKNOWN	6.84	120	J
16.	UNKNOWN	6.88	89	J
17.	UNKNOWN	7.39	860	J ~~B~~
18.	UNKNOWN HYDROCARBON	16.54	140	J
19.	UNKNOWN	26.81	520	J
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FORM I SV-TIC

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-2DL

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-02DL

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3878

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 10 decanted: (Y/N) N

Date Extracted: 07/06/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/23/98

Injection Volume: 2.0 (uL)

Dilution Factor: 3.0

GPC Cleanup: (Y/N) Y

pH: 9.2

8.727

Number TICs found: 13

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.20	220	JD
2.	UNKNOWN	3.91	540	JD
3.	UNKNOWN	4.40	250	JD
4.	UNKNOWN	4.53	1000	JD
5.	UNKNOWN	5.03	1100	JD
6. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	5.31	5800	JD
7.	UNKNOWN	5.44	240	JD
8.	UNKNOWN HYDROCARBON	5.60	290	JD
9.	UNKNOWN HYDROCARBON	5.71	420	JD
10.	UNKNOWN	6.98	950	JD
11.	UNKNOWN	7.65	580	JD
12.	UNKNOWN HYDROCARBON	24.92	480	JD
13.	UNKNOWN HYDROCARBON	26.18	1100	JD
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FORM I SV-TIC

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-03

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3798

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 16 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/20/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.0 *8.0 7.3*

Number TICs found: 19

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.33	150	JB
2.	UNKNOWN	3.59	92	JB
3.	UNKNOWN	4.72	210	JB
4.	UNKNOWN	4.93	470	JB
5.	UNKNOWN	5.02	180	JB
6.	UNKNOWN	5.08	83	J
7.	UNKNOWN HYDROCARBON	5.20	110	JB
8.	UNKNOWN HYDROCARBON	5.31	87	J
9.	UNKNOWN	5.43	480	J
10.	UNKNOWN HYDROCARBON	5.55	140	JB
11.	UNKNOWN	5.64	260	J
12. 123-42-2	2-PENTANONE, 4-HYDROXY-4-METH	5.73	3600	JB <i>R</i>
13.	UNKNOWN	5.79	84	JB
14.	UNKNOWN	5.89	160	JB
15.	UNKNOWN HYDROCARBON	6.01	560	JB
16.	UNKNOWN HYDROCARBON	6.12	790	J
17.	UNKNOWN	7.21	550	JB
18.	UNKNOWN	7.39	290	JB
19.	UNKNOWN	8.05	130	J
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FORM I SV-TIC

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 -- SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-04

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3958

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 18 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.8

CONCENTRATION UNITS:

Number TICs found: 12

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.65	190	JB
2.	UNKNOWN	4.06	230	J
3.	UNKNOWN	4.68	120	JB
4.	UNKNOWN	4.95	120	JB
5. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	5.03	3400	AJ
6.	UNKNOWN HYDROCARBON	5.31	260	J
7.	UNKNOWN HYDROCARBON	5.42	370	JB
8.	UNKNOWN	6.69	610	J
9.	UNKNOWN	7.36	140	JB
10.	UNKNOWN	9.54	130	J
11.	UNKNOWN HYDROCARBON	23.39	96	J
12.	UNKNOWN HYDROCARBON	24.59	130	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-7-2

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1065

Matrix: (soil/water) WATER Lab Sample ID: E1065-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S2A3957

Level: (low/med) LOW Date Received: 07/03/98

% Moisture: decanted: (Y/N) Date Extracted: 07/06/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.9 *7.5*

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

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.83	6	J
2.	UNKNOWN	18.56	2	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-06

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3959

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 16 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.7

8.7

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.11	210	J
2.	UNKNOWN	4.25	92	J
3.	UNKNOWN	4.32	87	J
4.	UNKNOWN	4.52	100	J
5.	UNKNOWN HYDROCARBON	4.72	88	J
6.	UNKNOWN	4.85	80	J
7.	UNKNOWN HYDROCARBON	4.95	170	J
8. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	5.03	4200	J
9.	UNKNOWN HYDROCARBON	5.31	360	J
10.	UNKNOWN HYDROCARBON	5.41	520	J
11.	UNKNOWN	6.69	560	J
12.	UNKNOWN HYDROCARBON	7.36	220	J
13.	UNKNOWN	7.71	91	J
14.	UNKNOWN	19.89	97	J
15.	UNKNOWN	21.33	80	J
16.	UNKNOWN HYDROCARBON	23.39	120	J
17.	UNKNOWN	24.58	180	J
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FORM I SV-TIC

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1092-01

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3961

Level: (low/med) LOW

Date Received: 07/09/98

% Moisture: 14 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.8

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/Kg

Number TICs found: 20

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.15	280	J
2.	UNKNOWN	3.64	110	J
3.	UNKNOWN	4.11	200	J
4.	UNKNOWN	4.32	100	J
5.	UNKNOWN	4.65	110	J
6. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	5.02	2800	NE
7.	UNKNOWN HYDROCARBON	5.31	160	J
8.	UNKNOWN HYDROCARBON	5.42	220	J
9.	UNKNOWN	6.69	450	J
10.	UNKNOWN	7.36	130	J
11.	UNKNOWN HYDROCARBON	15.71	130	J
12.	UNKNOWN HYDROCARBON	22.11	91	J
13.	UNKNOWN HYDROCARBON	23.39	140	J
14.	UNKNOWN HYDROCARBON	24.58	250	J
15.	UNKNOWN	25.36	640	J
16.	UNKNOWN	26.21	250	J
17.	UNKNOWN	27.31	170	J
18.	UNKNOWN	28.04	870	J
19.	UNKNOWN	30.34	120	J
20.	UNKNOWN	30.58	600	J
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FORM I SV-TIC

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1092-02

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3962

Level: (low/med) LOW

Date Received: 07/09/98

% Moisture: 24 decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.8 *8.74*

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.64	500	J
2.	UNKNOWN	4.11	280	J
3.	UNKNOWN	4.25	2700	J
4.	UNKNOWN	4.76	2700	J
5. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	5.03	3700	~~NE~~ <i>R</i>
6.	UNKNOWN HYDROCARBON	5.31	320	J
7.	UNKNOWN HYDROCARBON	5.41	400	J
8.	UNKNOWN	6.69	960	J
9.	UNKNOWN	7.36	730	J
10.	UNKNOWN	11.91	230	J
11.	UNKNOWN PAH	20.46	330	J
12.	UNKNOWN HYDROCARBON	20.73	320	J
13.	UNKNOWN HYDROCARBON	21.43	320	J
14.	UNKNOWN HYDROCARBON	23.39	430	J
15.	UNKNOWN HYDROCARBON	24.58	940	J
16.	UNKNOWN HYDROCARBON	25.77	1200	J
17.	UNKNOWN	27.84	2400	J
18.	UNKNOWN	28.36	660	J
19.	UNKNOWN	28.59	970	J
20.	UNKNOWN	28.94	1100	J
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FORM I SV-TIC

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1065

Matrix: (soil/water) SOIL

Lab Sample ID: E1065-07

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S2A3960

Level: (low/med) LOW

Date Received: 07/03/98

% Moisture: 19

decanted: (Y/N) N

Date Extracted: 07/09/98

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/29/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.9 *5732*

CONCENTRATION UNITS:

Number TICs found: 17

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.12	210	J
2.	UNKNOWN	4.25	150	J
3.	UNKNOWN	4.32	99	J
4.	UNKNOWN HYDROCARBON	4.51	88	J
5.	UNKNOWN	4.76	130	JB
6.	UNKNOWN	4.95	150	JB
7. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	5.03	4700	~~AJ~~ R
8.	UNKNOWN	5.20	100	J
9.	UNKNOWN HYDROCARBON	5.31	360	J
10.	UNKNOWN HYDROCARBON	5.41	500	JB
11.	UNKNOWN	6.50	170	J
12.	UNKNOWN	6.69	450	J
13.	UNKNOWN	7.36	200	JB
14.	UNKNOWN	14.34	120	J
15. 71-62-3	SULFUR	19.41	130	NJ
16.	UNKNOWN	28.03	200	J
17.	UNKNOWN	29.81	280	J
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January 20, 1999

Mr. Daniel E. Riker
Malcolm Pirnie, Inc.
40 Centre Drive
P.O. Box 1938
Buffalo, New York 14219-0138

RE: Data Usability Summary Report (DUSR)
Botanical Gardens and Holiday Park Projects
Mitekem Corporation
SDG No. E1191
Analyses for Volatile Organics, Base/Neutral and Acid Extractable Organics, Pesticides/PCBs
and Inorganics

Dear Mr. Riker:

Data Usability Summary Report (DUSR) technical services were performed by ChemWorld Environmental, Inc. for the Botanical Gardens and Holiday Park Projects for the sampling event of July 28-29, 1998. The analytical data from the Sample Delivery Group (SDG) No. referenced above was reviewed (screened) for the parameters noted. The data screening consisted of a review of the Quality Control (QC) Summary Forms and a brief review of various chromatograms and quantitation reports. The QC Forms were reviewed to determine whether any data required qualification based upon QC deviations noted on the Forms. The associated Analytical Data Result Forms are included as Attachment A. These Forms include data qualifiers as described within this letter report.

The DUSR review items include the following, as method appropriate:

- Holding Times from Verified Time of Sample Receipt (VTSR)
- Surrogate Recovery
- GC/MS Instrument Performance Check
- Initial and Continuing Calibration
- Matrix Spike / Matrix Spike Duplicates (MS/MSD)
- Matrix Spike Blanks (MSB)
- Internal Standards
- Method and Field Blanks
- Tentatively Identified Compounds (TICs)
- CRDL Standards for ICP
- Laboratory Duplicate Samples
- Laboratory Control Samples (LCS)
- ICP Interference Check
- ICP Serial Dilutions
- Field Duplicates (None collected)

The QC Summary Forms included various deviations based upon the acceptable limits for quality control. The following should be noted regarding qualification of the data set for the review items above.



SDG No. E1191, Volatiles

Continuing Calibration: The percent difference (%D) was found to exceed the limit of 25% for three of the continuing calibrations for methylene chloride. The associated sample results were qualified as 'UJ', estimated, for the non-detectable results, for methylene chloride. Positive results were not detected for the compound.

Method Blanks: The following volatile organics were detected in the method blanks.

Sample ID

VBLK2B	Methylene Chloride	12 ug/L
	Acetone	3 ug/L

Limits of ten times the methylene chloride and acetone blank results above were used for review and qualification of the associated samples. Sample results that were found to be less than the blank limit and less than the Contract Required Quantitation Limit (CRQL) were qualified as 'U', not detected, at the CRQL.

Field Blank: The following volatile organic compound was detected in the trip blank collected on 7/28/98.

Sample ID

TB-0728	Carbon Disulfide	1 ug/L

This compound was not detected in the project samples, therefore, qualification was not required.

TICs: Copies of the Form I summary sheets for TICs are included in Attachment B. TIC sample results for 2-methyl naphthalene were qualified as 'R', unusable, due to the fact that this compound is on the Semi-volatile compound list.

SDG No. E1191, Semi-Volatiles

Continuing Calibrations: The %D was found to exceed the limit of 25% for 2,4-Dinitrophenol from the continuing calibration on 8/12/98 at 16:00. The associated sample results were qualified as 'UJ', estimated, for the non-detectable results, for this compound. Positive results were not detected for 2,4-Dinitrophenol.

Method Blanks: The following Semi-volatile compound was detected in the method blanks.

Sample ID

SBLK02	bis(2-ethylhexyl) phthalate	2 ug/L

A limit of ten times the blank result above was used for review and qualification of the associated samples. Sample results for bis(2-ethylhexyl) phthalate that were found to be less than the blank limit and less than the Contract Required Quantitation Limit (CRQL) were qualified as 'U', not detected, at the CRQL. Sample results that were found to be less than the blank limit but reported over the CRQL were qualified as 'U', not detected.

TICs: Copies of the Form I summary sheets for TICs are included in Attachment B. Sample results were qualified as 'R', unusable, for N,N-Dimethyl Formamide where the sample result was found to be less than five times the method blank result. In addition, TIC sample results for 2-methyl naphthalene were qualified as 'R', unusable, due to the fact that this compound is on the Semi-volatile compound list.

SDG No. E1191, Pesticides and PCBs

Surrogate Recovery: Three of the four surrogate recoveries for BG-MW-1 were found to be out of specification generating low surrogate recovery for DCB and high recovery for TCX. Sample BG-MW-1 was qualified as 'UJ', estimated, for the non-detectable results. Positive results were not detected for pesticides and PCB's for the sample.

Percent Difference For Two GC Columns: The percent difference was found to exceed the 25% limit for sample BG-MW-3 for 4,4'-DDT at 27.9%. The sample was qualified as 'J', estimated, for 4,4'-DDT.

SDG No. E1191, Inorganics

Matrix Spike Recovery: High matrix spike recovery was generated for aluminum, cadmium, chromium, copper and zinc for the spike sample HP-MW4. Samples HP-MW1 through HP-MW4 were qualified as 'J', estimated, for the positive results, only, due to recovery at greater than 125%.

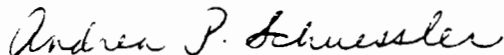
CRDL Standard: Sample results within the affected range were qualified as 'J', estimated, for mercury, lead, silver, thallium and zinc, due to the fact that the associated CRDL Standard recovery was generated out of the 80-120% limit.

Laboratory Duplicate Sample: Poor precision was generated for the HP-MW4 laboratory duplicate sample for aluminum, iron and zinc. Samples HP-MW1 through HP-MW4 were qualified as 'J', estimated, for the positive results for the inorganics noted.

ICP Serial Dilution: The Inorganics aluminum, barium, sodium and zinc were found to exceed the 10% limit for difference for sample HP-MW4. The associated sample results that exceed ten times the Instrument Detection Limit (IDL) were qualified as 'J', estimated, for the Inorganics noted.

Please contact me by telephone at 301-294-6144, should you require additional information or clarification regarding this Letter Report.

Sincerely,



Andrea P. Schuessler, CHMM
ChemWorld Environmental, Inc.

c: MP-9802-2 file

ORGANIC DATA QUALIFIERS

- U - Indicates that the compound was analyzed for, but not detected at or above the Contract Required Quantitation Limit (CRQL), or the compound is not detected due to qualification through the method or field blank.
- J - The associated numerical value is an estimated quantity.
- JN - Tentatively identified with approximated concentrations (Volatile and Semi-Volatile Organics). Presumptively present at an approximated quantity (Pesticides/PCBs).
- UJ - The compound was analyzed for, but not detected. The sample quantitation limit is an estimated quantity due to variance from quality control limits.
- C - Applies to Pesticide results where the identification has been confirmed by GC/MS.
- E - Reported value is estimated due to quantitation above the calibration range.
- D - Reported result taken from diluted sample analysis.
- A - Aldol condensation product.
- R - Reported value is unusable and rejected due to variance from quality control limits.
- NA - Not Analyzed.

INORGANIC DATA QUALIFIERS

- U - Indicates analyte not detected at or above the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.**
- B - Indicates analyte result is between Instrument Detection Limit (IDL) and CRDL.**
- J - The reported value is estimated due to variance from quality control limits.**
- UJ - The element was analyzed for, but not detected. The sample quantitation limit is an estimate due to variance from quality control limits.**
- E - Reported value is estimated because of the presence of interference.**
- R - Reported value is unusable and rejected due to variance from quality control limits.**
- NA - Not analyzed.**

ATTACHMENT A

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-01

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6794

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND	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	3 J
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	5 J
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	2 J
100-41-4	Ethylbenzene	10 U
100-42-5	Styrene	10 U
1330-20-7	Xylene (Total)	10 U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-02

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6795

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

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

CAS NO.

COMPOUND

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	6	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

10U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-03

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6796

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (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	UJ
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

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-04

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6797

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (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

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-USGS-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-05

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6798

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (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	4	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

10U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-USGS-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-06

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6814

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/02/98

GC Column: DB-624 ID: 0.25 (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	4 J	104
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	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-08

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6781

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB-624 ID: 0.25 (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	2	JB 10 U
67-64-1-----	Acetone	3	JB 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

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-09

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6782

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB-624 ID: 0.25 (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	2 JB	10 U
67-64-1	Acetone	2 JB	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	

FORM I VOA

214

VOLATILE ORGANICS ANALYSIS DATA SHEET

HP-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-10

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6783

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB-624 ID: 0.25 (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	2	JB
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

10U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-11

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6784

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB-624 ID: 0.25 (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	2 JB	10u
67-64-1	Acetone	2 JB	10u
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)	1 J	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB-0728

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-07

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6800

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (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	3	J
75-15-0-----	Carbon Disulfide	1	J
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
10U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB-0729

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-12

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6787

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB-624 ID: 0.25 (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	2 JB	10u
67-64-1	Acetone	2 JB	10u
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	

FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1191
Matrix: (soil/water) WATER Lab Sample ID: E1191-01
Sample wt/vol: 1000 (g/mL) ML Lab File ID: S2A4187
Level: (low/med) LOW Date Received: 07/29/98
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 07/30/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/12/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: _____

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

CAS NO. COMPOUND 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
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
111-91-1	bis(2-Chloroethoxy) methane	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	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4187

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

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

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	10	UJ
100-02-7-----	4-Nitrophenol	10	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	10	U
534-52-1-----	4,6-Dinitro-2-methylphenol	10	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	10	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-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

342

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1191
Matrix: (soil/water) WATER Lab Sample ID: E1191-02
Sample wt/vol: 1000 (g/mL) ML Lab File ID: S2A4188
Level: (low/med) LOW Date Received: 07/29/98
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 07/30/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/12/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: _____

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

CAS NO.	COMPOUND	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
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
111-91-1	bis(2-Chloroethoxy) methane	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	10 U
91-58-7	2-Chloronaphthalene	10 U
88-74-4	2-Nitroaniline	10 U
131-11-3	Dimethylphthalate	10 U
208-96-8	Acenaphthylene	10 U
606-20-2	2,6-Dinitrotoluene	10 U
99-09-2	3-Nitroaniline	10 U
83-32-9	Acenaphthene	10 U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-02

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4188

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

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	10	U
100-02-7-----	4-Nitrophenol	10	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	10	U
534-52-1-----	4,6-Dinitro-2-methylphenol	10	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	10	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-octylphthalate	10	U
205-99-2-----	Benzo (b) fluoranthene	10	U
207-08-9-----	Benzo (k) fluoranthene	10	U
50-32-8-----	Benzo (a) pyrene	10	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10	U
53-70-3-----	Dibenzo (a, h) anthracene	10	U
191-24-2-----	Benzo (g, h, i) perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORPORATION Contract:
 Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1191
 Matrix: (soil/water) WATER Lab Sample ID: E1191-03
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: S2A4189
 Level: (low/med) LOW Date Received: 07/29/98
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 07/30/98
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/12/98
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

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

CAS NO.	COMPOUND	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
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
111-91-1	bis(2-Chloroethoxy) methane	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	10 U
91-58-7	2-Chloronaphthalene	10 U
88-74-4	2-Nitroaniline	10 U
131-11-3	Dimethylphthalate	10 U
208-96-8	Acenaphthylene	10 U
606-20-2	2,6-Dinitrotoluene	10 U
99-09-2	3-Nitroaniline	10 U
83-32-9	Acenaphthene	10 U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-03

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4189

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

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	10	U
100-02-7-----	4-Nitrophenol	10	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	10	U
534-52-1-----	4,6-Dinitro-2-methylphenol	10	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	10	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-octylphthalate	10	U
205-99-2-----	Benzo (b) fluoranthene	10	U
207-08-9-----	Benzo (k) fluoranthene	10	U
50-32-8-----	Benzo (a) pyrene	10	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10	U
53-70-3-----	Dibenzo (a,h) anthracene	10	U
191-24-2-----	Benzo (g,h,i) perylene	10	U

(1) - Cannot be separated from Diphenylamine

~~SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET~~

BG-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-04

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4190

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

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
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	2	J
87-68-3-----	Hexachlorobutadiene	10	U
111-91-1-----	bis(2-Chloroethoxy) methane	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	10	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	10	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	10	U
83-32-9-----	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-04

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4190

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

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	10	U
100-02-7-----	4-Nitrophenol	10	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	10	U
534-52-1-----	4,6-Dinitro-2-methylphenol	10	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	10	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	19	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo (b) fluoranthene	10	U
207-08-9-----	Benzo (k) fluoranthene	10	U
50-32-8-----	Benzo (a) pyrene	10	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10	U
53-70-3-----	Dibenzo (a,h) anthracene	10	U
191-24-2-----	Benzo (g,h,i) perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-USGS-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-05

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4191

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

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	
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	
111-91-1	bis(2-Chloroethoxy) methane	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	10 U	
91-58-7	2-Chloronaphthalene	10 U	
88-74-4	2-Nitroaniline	10 U	
131-11-3	Dimethylphthalate	10 U	
208-96-8	Acenaphthylene	10 U	
606-20-2	2,6-Dinitrotoluene	10 U	
99-09-2	3-Nitroaniline	10 U	
83-32-9	Acenaphthene	10 U	

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-USGS-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-05

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4191

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

51-28-5-----	2,4-Dinitrophenol	10 U	10 U
100-02-7-----	4-Nitrophenol	10 U	10 U
132-64-9-----	Dibenzofuran	10 U	10 U
121-14-2-----	2,4-Dinitrotoluene	10 U	10 U
84-66-2-----	Diethylphthalate	10 U	10 U
7005-72-3-----	4-Chlorophenyl-phenylether	10 U	10 U
86-73-7-----	Fluorene	10 U	10 U
100-01-6-----	4-Nitroaniline	10 U	10 U
534-52-1-----	4,6-Dinitro-2-methylphenol	10 U	10 U
86-30-6-----	N-Nitrosodiphenylamine (1)	10 U	10 U
101-55-3-----	4-Bromophenyl-phenylether	10 U	10 U
118-74-1-----	Hexachlorobenzene	10 U	10 U
87-86-5-----	Pentachlorophenol	10 U	10 U
85-01-8-----	Phenanthrene	10 U	10 U
120-12-7-----	Anthracene	10 U	10 U
86-74-8-----	Carbazole	10 U	10 U
84-74-2-----	Di-n-butylphthalate	10 U	10 U
206-44-0-----	Fluoranthene	10 U	10 U
129-00-0-----	Pyrene	10 U	10 U
85-68-7-----	Butylbenzylphthalate	10 U	10 U
91-94-1-----	3,3'-Dichlorobenzidine	10 U	10 U
56-55-3-----	Benzo (a) anthracene	10 U	10 U
218-01-9-----	Chrysene	10 U	10 U
117-81-7-----	bis(2-Ethylhexyl)phthalate	7 U	10 U
117-84-0-----	Di-n-octylphthalate	10 U	10 U
205-99-2-----	Benzo (b) fluoranthene	10 U	10 U
207-08-9-----	Benzo (k) fluoranthene	10 U	10 U
50-32-8-----	Benzo (a) pyrene	10 U	10 U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10 U	10 U
53-70-3-----	Dibenzo (a,h) anthracene	10 U	10 U
191-24-2-----	Benzo (g,h,i) perylene	10 U	10 U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-USGS-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-06

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4192

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

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
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
111-91-1-----	bis(2-Chloroethoxy) methane	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	10	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	10	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	10	U
83-32-9-----	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-USGS-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-06

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4192

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

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	10 U	U
100-02-7-----	4-Nitrophenol	10 U	U
132-64-9-----	Dibenzofuran	10 U	U
121-14-2-----	2,4-Dinitrotoluene	10 U	U
84-66-2-----	Diethylphthalate	10 U	U
7005-72-3-----	4-Chlorophenyl-phenylether	10 U	U
86-73-7-----	Fluorene	10 U	U
100-01-6-----	4-Nitroaniline	10 U	U
534-52-1-----	4,6-Dinitro-2-methylphenol	10 U	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10 U	U
101-55-3-----	4-Bromophenyl-phenylether	10 U	U
118-74-1-----	Hexachlorobenzene	10 U	U
87-86-5-----	Pentachlorophenol	10 U	U
85-01-8-----	Phenanthrene	10 U	U
120-12-7-----	Anthracene	10 U	U
86-74-8-----	Carbazole	10 U	U
84-74-2-----	Di-n-butylphthalate	10 U	U
206-44-0-----	Fluoranthene	10 U	U
129-00-0-----	Pyrene	10 U	U
85-68-7-----	Butylbenzylphthalate	10 U	U
91-94-1-----	3,3'-Dichlorobenzidine	10 U	U
56-55-3-----	Benzo (a) anthracene	10 U	U
218-01-9-----	Chrysene	10 U	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	4 U	U
117-84-0-----	Di-n-octylphthalate	10 U	U
205-99-2-----	Benzo (b) fluoranthene	10 U	U
207-08-9-----	Benzo (k) fluoranthene	10 U	U
50-32-8-----	Benzo (a) pyrene	10 U	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10 U	U
53-70-3-----	Dibenzo (a, h) anthracene	10 U	U
191-24-2-----	Benzo (g, h, i) perylene	10 U	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-1

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1191
Matrix: (soil/water) WATER Lab Sample ID: E1191-08
Sample wt/vol: 950.0 (g/mL) ML Lab File ID: S2A4193
Level: (low/med) LOW Date Received: 07/30/98
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 08/03/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/12/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:
CAS NO. COMPOUND (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-Dimethyphenol	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
111-91-1-----	bis(2-Chloroethoxy) methane	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	10	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	10	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	10	U
83-32-9-----	Acenaphthene	10	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-08

Sample wt/vol: 950.0 (g/mL) ML

Lab File ID: S2A4193

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

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

CAS NO.	COMPOUND	Q
51-28-5-----	2,4-Dinitrophenol	10 ~~U~~ UJ
100-02-7-----	4-Nitrophenol	10 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	10 U
534-52-1-----	4,6-Dinitro-2-methylphenol	10 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	10 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-octylphthalate	10 U
205-99-2-----	Benzo (b) fluoranthene	10 U
207-08-9-----	Benzo (k) fluoranthene	10 U
50-32-8-----	Benzo (a) pyrene	10 U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10 U
53-70-3-----	Dibenzo (a,h) anthracene	10 U
191-24-2-----	Benzo (g,h,i) perylene	10 U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

41.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1191
Matrix: (soil/water) WATER Lab Sample ID: E1191-09
Sample wt/vol: 980.0 (g/mL) ML Lab File ID: S2A4194
Level: (low/med) LOW Date Received: 07/30/98
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 08/03/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/13/98
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: _____

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
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
111-91-1-----bis(2-Chloroethoxy) methane	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	10	U
91-58-7-----2-Chloronaphthalene	10	U
88-74-4-----2-Nitroaniline	10	U
131-11-3-----Dimethylphthalate	10	U
208-96-8-----Acenaphthylene	10	U
606-20-2-----2,6-Dinitrotoluene	10	U
99-09-2-----3-Nitroaniline	10	U
83-32-9-----Acenaphthene	10	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1191
Matrix: (soil/water) WATER Lab Sample ID: E1191-09
Sample wt/vol: 980.0 (g/mL) ML Lab File ID: S2A4194
Level: (low/med) LOW Date Received: 07/30/98
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 08/03/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/13/98
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	10	U
100-02-7-----	4-Nitrophenol	10	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	10	U
534-52-1-----	4,6-Dinitro-2-methylphenol	10	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	10	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-octylphthalate	10	U
205-99-2-----	Benzo (b) fluoranthene	10	U
207-08-9-----	Benzo (k) fluoranthene	10	U
50-32-8-----	Benzo (a) pyrene	10	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10	U
53-70-3-----	Dibenzo (a,h) anthracene	10	U
191-24-2-----	Benzo (g,h,i) perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-3

Lab Name: MITKEM CORPORATION Contract:
Lab Code: MITKEM Case No.: SAS No.: SDG No.: E1191
Matrix: (soil/water) WATER Lab Sample ID: E1191-10
Sample wt/vol: 935.0 (g/mL) ML Lab File ID: S2A4195
Level: (low/med) LOW Date Received: 07/30/98
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 08/03/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/13/98
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	11	U
111-44-4	bis(2-Chloroethyl) Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
111-91-1	bis(2-Chloroethoxy) methane	11	U
59-50-7	4-Chloro-3-Methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-3

Lab Name: MITKEM CORPORATION Contract: _____

Lab Code: MITKEM Case No.: _____ SAS No.: _____ SDG No.: E1191

Matrix: (soil/water) WATER Lab Sample ID: E1191-10

Sample wt/vol: 935.0 (g/mL) ML Lab File ID: S2A4195

Level: (low/med) LOW Date Received: 07/30/98

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/13/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO. COMPOUND Q

51-28-5-----	2,4-Dinitrophenol	11	~~U~~ <u>UJ</u>
100-02-7-----	4-Nitrophenol	11	U
132-64-9-----	Dibenzofuran	11	U
121-14-2-----	2,4-Dinitrotoluene	11	U
84-66-2-----	Diethylphthalate	11	U
7005-72-3-----	4-Chlorophenyl-phenylether	11	U
86-73-7-----	Fluorene	11	U
100-01-6-----	4-Nitroaniline	11	U
534-52-1-----	4,6-Dinitro-2-methylphenol	11	U
86-30-6-----	N-Nitrosodiphenylamine (1)	11	U
101-55-3-----	4-Bromophenyl-phenylether	11	U
118-74-1-----	Hexachlorobenzene	11	U
87-86-5-----	Pentachlorophenol	11	U
85-01-8-----	Phenanthrene	11	U
120-12-7-----	Anthracene	11	U
86-74-8-----	Carbazole	11	U
84-74-2-----	Di-n-butylphthalate	11	U
206-44-0-----	Fluoranthene	11	U
129-00-0-----	Pyrene	11	U
85-68-7-----	Butylbenzylphthalate	11	U
91-94-1-----	3,3'-Dichlorobenzidine	11	U
56-55-3-----	Benzo(a)anthracene	11	U
218-01-9-----	Chrysene	11	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	11	U
117-84-0-----	Di-n-octylphthalate	11	U
205-99-2-----	Benzo(b)fluoranthene	11	U
207-08-9-----	Benzo(k)fluoranthene	11	U
50-32-8-----	Benzo(a)pyrene	11	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	11	U
53-70-3-----	Dibenzo(a,h)anthracene	11	U
191-24-2-----	Benzo(g,h,i)perylene	11	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORPORATION Contract: _____

Lab Code: MITKEM Case No.: _____ SAS No.: _____ SDG No.: E1191

Matrix: (soil/water) WATER Lab Sample ID: E1191-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S2A4197

Level: (low/med) LOW Date Received: 07/30/98

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/13/98

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	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
120-83-2	2,4-Dichlorophenol	10 U
120-82-1	1,2,4-Trichlorobenzene	10 U
91-20-3	Naphthalene	1 J
106-47-8	4-Chloroaniline	10 U
87-68-3	Hexachlorobutadiene	10 U
111-91-1	bis(2-Chloroethoxy) methane	10 U
59-50-7	4-Chloro-3-Methylphenol	10 U
91-57-6	2-Methylnaphthalene	3 J
77-47-4	Hexachlorocyclopentadiene	10 U
88-06-2	2,4,6-Trichlorophenol	10 U
95-95-4	2,4,5-Trichlorophenol	10 U
91-58-7	2-Chloronaphthalene	10 U
88-74-4	2-Nitroaniline	10 U
131-11-3	Dimethylphthalate	10 U
208-96-8	Acenaphthylene	10 U
606-20-2	2,6-Dinitrotoluene	10 U
99-09-2	3-Nitroaniline	10 U
83-32-9	Acenaphthene	10 U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-11

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4197

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/13/98

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	10	U
100-02-7-----	4-Nitrophenol	10	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	10	U
534-52-1-----	4,6-Dinitro-2-methylphenol	10	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	10	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-octylphthalate	10	U
205-99-2-----	Benzo (b) fluoranthene	10	U
207-08-9-----	Benzo (k) fluoranthene	10	U
50-32-8-----	Benzo (a) pyrene	10	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	10	U
53-70-3-----	Dibenzo (a,h) anthracene	10	U
191-24-2-----	Benzo (g,h,i) perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

401

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6569F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/29/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/30/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 08/04/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

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

Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

319-84-6-----	alpha-BHC	0.050	# uJ
319-85-7-----	beta-BHC	0.050	# uJ
319-86-8-----	delta-BHC	0.050	# uJ
58-89-9-----	gamma-BHC (Lindane)	0.050	# uJ
76-44-8-----	Heptachlor	0.050	# uJ
309-00-2-----	Aldrin	0.050	# uJ
1024-57-3-----	Heptachlor epoxide	0.050	# uJ
959-98-8-----	Endosulfan I	0.050	# uJ
60-57-1-----	Dieldrin	0.10	# uJ
72-55-9-----	4,4'-DDE	0.10	# uJ
72-20-8-----	Endrin	0.10	# uJ
33213-65-9-----	Endosulfan II	0.10	# uJ
72-54-8-----	4,4'-DDD	0.10	# uJ
1031-07-8-----	Endosulfan sulfate	0.10	# uJ
50-29-3-----	4,4'-DDT	0.10	# uJ
72-43-5-----	Methoxychlor	0.50	# uJ
53494-70-5-----	Endrin ketone	0.10	# uJ
7421-36-3-----	Endrin aldehyde	0.10	# uJ
5103-71-9-----	alpha-Chlordane	0.050	# uJ
5103-74-2-----	gamma-Chlordane	0.050	# uJ
8001-35-2-----	Toxaphene	5.0	# uJ
12674-11-2-----	Aroclor-1016	1.0	# uJ
11104-28-2-----	Aroclor-1221	2.0	# uJ
1114-16-5-----	Aroclor-1232	1.0	# uJ
53469-21-9-----	Aroclor-1242	1.0	# uJ
12672-29-6-----	Aroclor-1248	1.0	# uJ
11097-69-1-----	Aroclor-1254	1.0	# uJ
11096-82-5-----	Aroclor-1260	1.0	# uJ

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-02

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6570F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/29/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/30/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 08/04/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) Y

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
1114-16-5-----	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.

BG-MW-3

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-03

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6571F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/29/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/30/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 08/04/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) Y

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	0.23	P J
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
1114-16-5	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.

BG-MW-4

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-04

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6572F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/29/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/30/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 08/04/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) Y

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

CAS NO.

COMPOUND

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
1114-16-5-----	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.

BG-USGS-1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-05

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6573F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/29/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/30/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 08/04/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

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

Sulfur Cleanup: (Y/N) Y

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

CAS NO.

COMPOUND

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
1114-16-5-----	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

FORM I PEST

OLM03.0

602

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-USGS-2

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-06

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6574F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/29/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/30/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 08/04/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) Y

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
1114-16-5-----	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.

HP-MW-1

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-08

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6575F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/30/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/30/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 08/04/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) Y

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

CAS NO.

COMPOUND

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
1114-16-5-----	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.

HP-MW-2

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-09

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6576F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/30/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/30/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 08/04/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) Y

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(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
1114-16-5-----	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.

HP-MW-3

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-10

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6577F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/30/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/30/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 08/04/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

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

Sulfur Cleanup: (Y/N) Y

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
1114-16-5-----	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.

HP-MW-4

Lab Name: MITKEM CORP.

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-11

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: E2A6578F

% Moisture: _____ decanted: (Y/N) _____

Date Received: 07/30/98

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 07/30/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 08/04/98

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) Y

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
1114-16-5-----	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

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BGMW1

Lab Name: MITKEM

Contract: _____

Lab Code: 11522

Case No.: _____

SAS No.: _____

SDG No.: E1191

Matrix (soil/water): WATER

Lab Sample ID: E1191-01

Level (low/med): LOW

Date Received: 07/29/98

% 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	1680	-	EN	P
7440-36-0	Antimony	4.3	B		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	480		E	P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.2	B	N	P
7440-70-2	Calcium	160000			P
7440-47-3	Chromium	4.5	B	N	P
7440-48-4	Cobalt	0.50	B		P
7440-50-8	Copper	5.2	B	N	P
7439-89-6	Iron	40500			P
7439-92-1	Lead	2.1	U		P
7439-95-4	Magnesium	44700			P
7439-96-5	Manganese	871			P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	3.2	B		P
7440-09-7	Potassium	14000			P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	2.9	J		P
7440-23-5	Sodium	24300		E	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	7.9	B		P
7440-66-6	Zinc	46.9	J	N	P
	Cyanide	0.90	B		C

Color Before: YELLOW

Clarity Before: CLOUDY

Texture: _____

Color After: YELLOW

Clarity After: CLOUDY

Artifacts: _____

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BGMW2

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E1191

Matrix (soil/water): WATER

Lab Sample ID: E1191-02

Level (low/med): LOW

Date Received: 07/29/98

% 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	3810	-	~~BN~~	P
7440-36-0	Antimony	4.7	B		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	398		~~B~~	P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.66	B	~~N~~	P
7440-70-2	Calcium	159000			P
7440-47-3	Chromium	6.6	B	~~N~~	P
7440-48-4	Cobalt	2.8	B		P
7440-50-8	Copper	6.5	B	~~N~~	P
7439-89-6	Iron	20600		~~N~~	P
7439-92-1	Lead	4.7	J		P
7439-95-4	Magnesium	43900			P
7439-96-5	Manganese	576			P
7439-97-6	Mercury	0.14	U		CV
7440-02-0	Nickel	5.6	B		P
7440-09-7	Potassium	13900			P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.9	~~J~~	J	P
7440-23-5	Sodium	27400		~~B~~	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	8.3	B		P
7440-66-6	Zinc	26.9	J	~~N~~	P
	Cyanide	0.50	B		C

Color Before: YELLOW

Clarity Before: CLOUDY

Texture:

Color After: YELLOW

Clarity After: CLOUDY

Artifacts:

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BGMW3

Lab Name: MITKEM Contract: _____

Lab Code: 11522 Case No.: _____ SAS No.: _____ SDG No.: E1191_

Matrix (soil/water): WATER

Lab Sample ID: E1191-03

Level (low/med): LOW

Date Received: 07/29/98

% 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	1370	-	EN*	P
7440-36-0	Antimony	3.6	B		P
7440-38-2	Arsenic	5.3	B		P
7440-39-3	Barium	72.9	B	E	P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.66	B	N	P
7440-70-2	Calcium	203000	-		P
7440-47-3	Chromium	2.4	B	N	P
7440-48-4	Cobalt	2.0	B		P
7440-50-8	Copper	2.0	B	N	P
7439-89-6	Iron	11600	-		P
7439-92-1	Lead	7.8	J		P
7439-95-4	Magnesium	59700	-		P
7439-96-5	Manganese	418	-		P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	4.7	B		P
7440-09-7	Potassium	965	B		P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.2	J		P
7440-23-5	Sodium	34800	-	E	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	5.6	B		P
7440-66-6	Zinc	40.9	J	N*	P
	Cyanide	0.50	U		C

Color Before: CLEAR

Clarity Before: CLEAR

Texture: _____

Color After: COLORLESS

Clarity After: CLEAR

Artifacts: _____

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BGMW4

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E1191

Matrix (soil/water): WATER

Lab Sample ID: E1191-04

Level (low/med): LOW

Date Received: 07/29/98

% 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	6800	-	~~BN~~	P
7440-36-0	Antimony	3.1	B		P
7440-38-2	Arsenic	5.9	B		P
7440-39-3	Barium	220		~~B~~	P
7440-41-7	Beryllium	0.50	B		P
7440-43-9	Cadmium	1.5	B	~~N~~	P
7440-70-2	Calcium	174000			P
7440-47-3	Chromium	9.8	B	~~N~~	P
7440-48-4	Cobalt	7.5	B		P
7440-50-8	Copper	32.8		~~N~~	P
7439-89-6	Iron	24600		~~*~~	P
7439-92-1	Lead	22.1			P
7439-95-4	Magnesium	52300			P
7439-96-5	Manganese	582			P
7439-97-6	Mercury	0.14	U		CV
7440-02-0	Nickel	17.7	B		P
7440-09-7	Potassium	2690	B		P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.5	~~B~~	J	P
7440-23-5	Sodium	5700		~~E~~	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	15.9	B		P
7440-66-6	Zinc	129		~~N~~	P
	Cyanide	0.50	U		C

Color Before: TAN

Clarity Before: CLOUDY

Texture:

Color After: TAN

Clarity After: CLOUDY

Artifacts:

Comments:

NYSDEC ASP

1

NYSDEC SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

BGUSGS1

Lab Name: MITKEM Contract: _____

Lab Code: 11522 Case No.: _____ SAS No.: _____ SDG No.: E1191

Matrix (soil/water): WATER

Lab Sample ID: E1191-05

Level (low/med): LOW

Date Received: 07/29/98

% 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	5720	-	~~EN~~	P
7440-36-0	Antimony	2.5	U		P
7440-38-2	Arsenic	9.2	B		P
7440-39-3	Barium	468		~~B~~	P
7440-41-7	Beryllium	1.4	B		P
7440-43-9	Cadmium	2.4	B	~~N~~	P
7440-70-2	Calcium	45.0	U		P
7440-47-3	Chromium	59.6		~~N~~	P
7440-48-4	Cobalt	3.8	B		P
7440-50-8	Copper	2.0	U	~~N~~	P
7439-89-6	Iron	82000	-	~~N~~	P
7439-92-1	Lead	143	-		P
7439-95-4	Magnesium	208000	-		P
7439-96-5	Manganese	6870	-		P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	24.6	B		P
7440-09-7	Potassium	5570			P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	5.3	~~B~~	J	P
7440-23-5	Sodium	57700		~~B~~	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	106	-		P
7440-66-6	Zinc	200		~~N~~	P
	Cyanide	0.50	U		C

Color Before: COLORLESS

Clarity Before: CLOUDY

Texture: _____

Color After: YELLOW

Clarity After: CLEAR

Artifacts: _____

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

BGUSGS2

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E1191

Matrix (soil/water): WATER

Lab Sample ID: E1191-06

Level (low/med): LOW

Date Received: 07/29/98

% 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	2340	-	EN*	P
7440-36-0	Antimony	3.1	B		P
7440-38-2	Arsenic	8.8	B		P
7440-39-3	Barium	179	B	E	P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	2.1	B	N	P
7440-70-2	Calcium	120000	-		P
7440-47-3	Chromium	13.2	-	N	P
7440-48-4	Cobalt	1.4	B		P
7440-50-8	Copper	12.5	B	N	P
7439-89-6	Iron	49400	-	*	P
7439-92-1	Lead	2.1	U		P
7439-95-4	Magnesium	30700	-		P
7439-96-5	Manganese	1330	-		P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	12.7	B		P
7440-09-7	Potassium	2050	B		P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.6	B	J	P
7440-23-5	Sodium	13400	-	E	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	6.6	B		P
7440-66-6	Zinc	52.9	B	N*	P
	Cyanide	0.50	U		C

Color Before: TAN

Clarity Before: CLOUDY

Texture:

Color After: YELLOW

Clarity After: CLEAR

Artifacts:

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HPMW1

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E1191

Matrix (soil/water): WATER

Lab Sample ID: E1191-08

Level (low/med): LOW

Date Received: 07/30/98

% 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	1580	J	EN*	P
7440-36-0	Antimony	4.3	B		P
7440-38-2	Arsenic	3.1	B		P
7440-39-3	Barium	92.15	J	B	P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.68	J	EN*	P
7440-70-2	Calcium	144000			P
7440-47-3	Chromium	2.4	J	N	P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	4.6	J	N	P
7439-89-6	Iron	8560	J		P
7439-92-1	Lead	13.3			P
7439-95-4	Magnesium	50100			P
7439-96-5	Manganese	454			P
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	4.3	B		P
7440-09-7	Potassium	1100	B		P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.2	B	J	P
7440-23-5	Sodium	9350	J	B	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	4.6	B		P
7440-66-6	Zinc	29.7	J	N*	P
	Cyanide	1.1	B		C

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HPMW2

Lab Name: MITKEM

Contract: _____

Lab Code: 11522

Case No.: _____

SAS No.: _____

SDG No.: E1191

Matrix (soil/water): WATER

Lab Sample ID: E1191-09

Level (low/med): LOW

Date Received: 07/30/98

% 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	483	J	EN*	P
7440-36-0	Antimony	5.8	B		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	121	J	E	P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.54	J	N	P
7440-70-2	Calcium	170000			P
7440-47-3	Chromium	0.48	J	N	P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	2.0	U	N	P
7439-89-6	Iron	7650	J	*	P
7439-92-1	Lead	2.1	U		P
7439-95-4	Magnesium	56900			P
7439-96-5	Manganese	198			P
7439-97-6	Mercury	0.16	B	J	CV
7440-02-0	Nickel	0.40	U		P
7440-09-7	Potassium	1560	B		P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	26000	J	E	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	1.5	B		P
7440-66-6	Zinc	9.9	J	N*	P
	Cyanide	0.80	B		C

Color Before: COLORLESS

Clarity Before: CLEAR

Texture: _____

Color After: COLORLESS

Clarity After: CLEAR

Artifacts: _____

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HPMW3

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: E1191

Matrix (soil/water): WATER

Lab Sample ID: E1191-10

Level (low/med): LOW

Date Received: 07/30/98

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	235	J	EN	P
7440-36-0	Antimony	5.7	B		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	77.4	J	E	P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.63	J	N	P
7440-70-2	Calcium	102000			P
7440-47-3	Chromium	0.40	U	N	P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	2.0	U	N	P
7439-89-6	Iron	2620	J	*	P
7439-92-1	Lead	2.1	U		P
7439-95-4	Magnesium	27800			P
7439-96-5	Manganese	208			P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	0.40	U		P
7440-09-7	Potassium	737	B		P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	7300	J	E	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	1.0	U		P
7440-66-6	Zinc	3.5	J	N	P
	Cyanide	1.5	B		C

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

HPMW4

Lab Name: MITKEM

Contract: _____

Lab Code: 11522

Case No.: _____

SAS No.: _____

SDG No.: E1191

Matrix (soil/water): WATER

Lab Sample ID: E1191-11

Level (low/med): LOW

Date Received: 07/30/98

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	1350	J	EN*	P
7440-36-0	Antimony	5.4	B		P
7440-38-2	Arsenic	4.6	B		P
7440-39-3	Barium	117	B		P
7440-41-7	Beryllium	0.36	B		P
7440-43-9	Cadmium	1.4	J		P
7440-70-2	Calcium	271000			P
7440-47-3	Chromium	2.3	B		P
7440-48-4	Cobalt	2.8	B		P
7440-50-8	Copper	11.9	J		P
7439-89-6	Iron	13000	J		P
7439-92-1	Lead	7.4	J		P
7439-95-4	Magnesium	53600			P
7439-96-5	Manganese	1010			P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	2.0	B		P
7440-09-7	Potassium	1340	B		P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	23500	J		P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	9.5	B		P
7440-66-6	Zinc	36.6	J		P
	Cyanide	1.0	B		C

Color Before: TAN

Clarity Before: CLOUDY

Texture: _____

Color After: COLORLESS

Clarity After: CLEAR

Artifacts: _____

Comments:

ATTACHMENT B

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-01

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6794

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (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
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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22.				
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27.				
28.				
29.				
30.				

FORM I VOA-TIC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-02

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6795

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (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
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
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22.				
23.				
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25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-03

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6796

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (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. 71-23-8	1-PROPANOL	5.71	8	NJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
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22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-04

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6797

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (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
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
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23.				
24.				
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26.				
27.				
28.				
29.				
30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-USGS-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-05

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6798

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (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
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
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21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-USGS-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-06

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6814

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/02/98

GC Column: DB-624 ID: 0.25 (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	5.72	6	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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27.				
28.				
29.				
30.				

FORM I VOA-TIC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-08

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6781

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB-624 ID: 0.25 (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
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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21.				
22.				
23.				
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27.				
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29.				
30.				

FORM I VOA-TIC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-09

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6782

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB-624 ID: 0.25 (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
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-10

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6783

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB-624 ID: 0.25 (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
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-11

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6784

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB-624 ID: 0.25 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKYL BENZENE	13.82	6	J
2.	UNKNOWN	15.15	5	J
3.	UNKNOWN ALKYL BENZENE	16.00	5	J
4. 91-57-6	NAPHTHALENE, 2-METHYL-	17.89	7	NJ
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FORM I VOA-TIC

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TB-0728

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-07

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6800

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

GC Column: DB-624 ID: 0.25 (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
1.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TB-0729

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-12

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V2B6787

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB-624 ID: 0.25 (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
1.				
2.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. _____

BG-MW-1

Lab Name: MITKEM CORPORATION

Contract: _____

Lab Code: MITKEM

Case No.: _____

SAS No.: _____

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4187

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-91-1	1,4-DIOXANE	2.62	24	NJ
2.	UNKNOWN	3.35	3	J
3. 68-12-2	FORMAMIDE, N,N-DIMETHYL-	3.68	8	NJB
4. 15176-21-3	1,4-DIOXANE, 2,5-DIMETHYL-	4.08	23	NJ
5. 15176-21-3	1,4-DIOXANE, 2,5-DIMETHYL-	4.51	5	NJ
6.	UNKNOWN	5.36	4	J
7.	UNKNOWN	5.82	5	J
8.	UNKNOWN	8.95	2	J
9. 65-85-0	BENZOIC ACID	9.33	2	NJ
10.	UNKNOWN	9.36	4	J
11.	UNKNOWN	9.91	3	J
12.	UNKNOWN	9.94	6	J
13.	UNKNOWN	10.82	2	J
14.	UNKNOWN	11.45	3	J
15.	UNKNOWN	11.63	3	J
16.	UNKNOWN	12.22	4	J
17.	UNKNOWN	12.93	11	J
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-02

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4188

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

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. 68-12-2	FORMAMIDE, N,N-DIMETHYL-	3.68	7	NOT
2.	UNKNOWN	9.36	3	J
3.				
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FORM I SV-TIC

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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-03

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4189

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 68-12-2	FORMAMIDE, N,N-DIMETHYL-	3.69	7	BNJ
2.	UNKNOWN	13.85	4	J
3. 10544-50-0	SULFUR, MOL. (S8)	18.90	57	NJ
4.				
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FORM I SV-TIC

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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-04

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4190

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/L

Number TICs found: 1

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 68-12-2	FORMAMIDE, N,N-DIMETHYL-	3.72	4	NJB
2.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-USGS-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-05

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4191

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 68-12-2	FORMAMIDE, N,N-DIMETHYL-	3.69	6	NJB
2. 10544-50-0	SULFUR, MOL. (S8)	18.91	140	NJ
3.	UNKNOWN	20.62	3	J
4.	UNKNOWN	22.49	4	J
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FORM I SV-TIC

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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-USGS-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-06

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4192

Level: (low/med) LOW

Date Received: 07/29/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 07/30/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

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. 68-12-2	FORMAMIDE, N,N-DIMETHYL-	3.69	7	BNJ
2.	UNKNOWN	4.31	3	J
3. 65-85-0	BENZOIC ACID	9.32	4	NJ
4.	UNKNOWN	13.86	6	J
5.	UNKNOWN PAH	15.20	3	J
6. 10544-50-0	SULFUR, MOL. (S8)	18.94	440	NJ
7.				
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FORM I SV-TIC

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-1

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-08

Sample wt/vol: 950.0 (g/mL) ML

Lab File ID: S2A4193

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/12/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 12

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 68-12-2	FORMAMIDE, N,N-DIMETHYL-	3.71	6	BNJ
2.	UNKNOWN ALKANE	9.91	3	J
3.	UNKNOWN ALKANE	11.14	4	J
4.	UNKNOWN ALKANE	12.29	5	J
5.	UNKNOWN ALKANE	12.95	2	J
6.	UNKNOWN ALKANE	14.39	5	J
7.	UNKNOWN	15.36	8	J
8.	UNKNOWN ALKANE	16.28	5	J
9.	UNKNOWN ALKANE	17.17	4	J
10.	UNKNOWN ALKANE	18.00	4	J
11.	UNKNOWN ALKANE	18.80	3	J
12.	UNKNOWN ALKANE	19.56	3	J
13.				
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FORM I SV-TIC

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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-2

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-09

Sample wt/vol: 980.0 (g/mL) ML

Lab File ID: S2A4194

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/13/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

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

Number TICs found: 1

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 68-12-2	FORMAMIDE, N,N-DIMETHYL-	3.71	4	BNJ
2.				
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FORM I SV-TIC

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-3

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-10

Sample wt/vol: 935.0 (g/mL) ML

Lab File ID: S2A4195

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/13/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/L

Number TICs found: 1

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 68-12-2	FORMAMIDE, N,N-DIMETHYL-	3.71	5	NJ
2.				
3.				
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FORM I SV-TIC

404

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

HP-MW-4

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: E1191

Matrix: (soil/water) WATER

Lab Sample ID: E1191-11

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S2A4197

Level: (low/med) LOW

Date Received: 07/30/98

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/13/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 18

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 68-12-2	FORMAMIDE, N,N-DIMETHYL-	3.71	4	BJ
2.	UNKNOWN AROMATIC HYDROCARBON	7.14	3	J
3.	UNKNOWN AROMATIC HYDROCARBON	9.36	4	J
4.	UNKNOWN PAH	9.54	2	J
5.	UNKNOWN ALKANE	9.91	2	J
6.	UNKNOWN ALKANE	11.14	4	J
7. 91-57-6	NAPHTHALENE, 2-METHYL-	11.47	4	NJ
8.	UNKNOWN ALKANE	12.29	4	J
9.	UNKNOWN PAH	12.53	2	J
10.	UNKNOWN PAH	12.69	3	J
11.	UNKNOWN ALKANE	12.94	3	J
12.	UNKNOWN ALKANE	14.39	5	J
13.	UNKNOWN	15.36	11	J
14.	UNKNOWN ALKANE	16.28	5	J
15.	UNKNOWN ALKANE	17.16	4	J
16.	UNKNOWN ALKANE	18.00	3	J
17.	UNKNOWN ALKANE	18.79	3	J
18.	UNKNOWN	18.89	3	J
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FORM I SV-TIC

WASTE STREAM TECHNOLOGY, INC.

302 Grote Street
Buffalo, NY 14207
(716) 876-5290

Analytical Data Report

Report Date : 04/13/98
Group Number : 9801-460

Prepared For :
Mr. Dan Riker
Malcolm Pirnie, Inc.
40 Centre Drive
Orchard Park, NY 14127

Site : Holiday Park

Field and Laboratory Information

Client Id	WST Lab #	Matrix	Date Sampled	Date Received	Time
HP2-B1	WS41401	Soil	04/08/98	04/09/98	0830
HP2-B2	WS41402	Soil	04/08/98	04/09/98	0830
HP2-B3	WS41403	Soil	04/08/98	04/09/98	0830
HP2-B4	WS41404	Soil	04/08/98	04/09/98	0830
HP2-B5	WS41405	Soil	04/08/98	04/09/98	0830
HP2-B6	WS41406	Soil	04/08/98	04/09/98	0830
HP2-B8	WS41407	Soil	04/08/98	04/09/98	0830
HP2-B1W	WS41408	Aqueous	04/08/98	04/09/98	0830
HP2-B4W	WS41409	Aqueous	04/08/98	04/09/98	0830
HP2-B5W	WS41410	Aqueous	04/08/98	04/09/98	0830

Sample Status Upon Receipt : No irregularities.

Analytical Parameters

8270 Acid Fraction Phenols

Analytical Services**Number of Samples**

10

Turnaround Time

1 Business Day

Report Released By : Daniel W. Vollmer
Daniel Vollmer, Laboratory QA/QC Officer

ENVIRONMENTAL LABORATORY ACCREDITATION CERTIFICATION NUMBERS

NYSDOH ELAP #11179 NJDEPE #73977 CDHS ELAP #2189

**WASTE STREAM
TECHNOLOGY**

METHODOLOGIES

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (18th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

ORGANIC DATA QUALIFIERS

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets identification criteria, but the result is less than the sample quantitation limit but greater than zero.
- 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 the sample.
- E - This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L - Matrix spike recovery is less than the expected lower limit of analytical performance.
- # - Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ - Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) - Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits (QC Limits) are indicated in the detection limit column.

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/08/98
Date Received: 04/09/98

Group Number: 9801-460
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41401 HP2-B1 04/09/98 04/10/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	61	
Phenol-d6 (%)	24-113	71	
2,4,6-Tribromophenol (%)	19-122	78	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/08/98
Date Received: 04/09/98

Group Number: 9801-460
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41402 HP2-B2 04/09/98 04/10/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	58	
Phenol-d6 (%)	24-113	67	
2,4,6-Tribromophenol (%)	19-122	77	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/08/98
Date Received: 04/09/98

Group Number: 9801-460
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41403 HP2-B3 04/09/98 04/10/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	56	
Phenol-d6 (%)	24-113	63	
2,4,6-Tribromophenol (%)	19-122	75	

Dilution Factor **1**

Waste Stream Technology, Inc.

Acid Fraction Phenols by GC/MS

SW-846 8270C

Site: HOLIDAY PARK

Date Sampled: 04/08/98

Date Received: 04/09/98

Group Number: 9801-460

Report Units: ug/kg

Matrix: Soil

		Lab ID Number	WS41404
		Client ID	HP2-B4
		Date Extracted	04/09/98
		Date Analyzed	04/10/98
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	58	
Phenol-d6 (%)	24-113	70	
2,4,6-Tribromophenol (%)	19-122	79	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/08/98
Date Received: 04/09/98

Group Number: 9801-460
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41405 HP2-B5 04/09/98 04/10/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	63	
Phenol-d6 (%)	24-113	71	
2,4,6-Tribromophenol (%)	19-122	80	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/08/98
Date Received: 04/09/98

Group Number: 9801-460
Report Units: ug/kg
Matrix: Soil

		Lab ID Number Client ID Date Extracted Date Analyzed	WS41406 HP2-B6 04/09/98 04/10/98
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	70	
Phenol-d6 (%)	24-113	80	
2,4,6-Tribromophenol (%)	19-122	80	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/08/98
Date Received: 04/09/98

Group Number: 9801-460
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41407 HP2-B8 04/09/98 04/10/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	61	
Phenol-d6 (%)	24-113	72	
2,4,6-Tribromophenol (%)	19-122	77	

Dilution Factor **1**

Waste Stream Technology, Inc.
 Acid Fraction Phenols by GC/MS
 SW-846 8270C

Site: HOLIDAY PARK
 Date Sampled: 04/08/98
 Date Received: 04/09/98

Group Number: 9801-460
 Report Units: ug/L
 Matrix: Aqueous

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41408 HP2-B1W 04/09/98 04/09/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	20	20	U
2-chlorophenol	20	20	U
2-methylphenol	20	20	U
3 & 4-methylphenol	20	20	U
2-nitrophenol	20	20	U
2,4-dimethylphenol	20	20	U
2,4-dichlorophenol	20	20	U
4-chloro-3-methylphenol	40	40	U
2,4,6-trichlorophenol	20	20	U
2,4,5-trichlorophenol	20	20	U
2,4-dinitrophenol	100	100	U
4-nitrophenol	100	100	U
4,6-dinitro-2-methylphenol	100	100	U
pentachlorophenol	100	100	U
2-Fluorophenol (%)	21-100	54	
Phenol-d6 (%)	10-94	45	
2,4,6-Tribromophenol (%)	10-123	85	

Dilution Factor **2**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/08/98
Date Received: 04/09/98

Group Number: 9801-460
Report Units: ug/L
Matrix: Aqueous

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41409 HP2-B4W 04/09/98 04/10/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	15	15	U
2-chlorophenol	15	15	U
2-methylphenol	15	15	U
3 & 4-methylphenol	15	15	U
2-nitrophenol	15	15	U
2,4-dimethylphenol	15	15	U
2,4-dichlorophenol	15	15	U
4-chloro-3-methylphenol	31	31	U
2,4,6-trichlorophenol	15	15	U
2,4,5-trichlorophenol	15	15	U
2,4-dinitrophenol	77	77	U
4-nitrophenol	77	77	U
4,6-dinitro-2-methylphenol	77	77	U
pentachlorophenol	77	77	U
2-Fluorophenol (%)	21-100	40	
Phenol-d6 (%)	10-94	32	
2,4,6-Tribromophenol (%)	10-123	71	

Dilution Factor **1.5**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/08/98
Date Received: 04/09/98

Group Number: 9801-460
Report Units: ug/L
Matrix: Aqueous

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41410 HP2-B5W 04/09/98 04/10/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	13	13	U
2-chlorophenol	13	13	U
2-methylphenol	13	13	U
3 & 4-methylphenol	13	13	U
2-nitrophenol	13	13	U
2,4-dimethylphenol	13	13	U
2,4-dichlorophenol	13	13	U
4-chloro-3-methylphenol	27	27	U
2,4,6-trichlorophenol	13	13	U
2,4,5-trichlorophenol	13	13	U
2,4-dinitrophenol	66	66	U
4-nitrophenol	66	66	U
4,6-dinitro-2-methylphenol	66	66	U
pentachlorophenol	66	66	U
2-Fluorophenol (%)	21-100	45	
Phenol-d6 (%)	10-94	34	
2,4,6-Tribromophenol (%)	10-123	73	

Dilution Factor **1.3**

Waste Stream Technology, Inc.
 Phenols by GC/MS Method Blank
 SW-846 8270C

Site: HOLIDAY PARK
 Date Sampled: NA
 Date Received: NA

Group Number: 9801-460
 Report Units: PPB

	Lab ID Number Client ID Date Extracted Date Analyzed	MB040998 (Soil) NA 04/09/98 04/09/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	77	
Phenol-d6 (%)	24-113	84	
2,4,6-Tribromophenol (%)	19-122	92	

Dilution Factor 1
 MB denotes Method Blank
 NA denotes Not Applicable

Waste Stream Technology, Inc.
Phenols by GC/MS Method Blank
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: NA
Date Received: NA

Group Number: 9801-460
Report Units: PPB

		Lab ID Number Client ID Date Extracted Date Analyzed	MB040998 (Aqueous) NA 04/09/98 04/09/98
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	10	10	U
2-chlorophenol	10	10	U
2-methylphenol	10	10	U
3 & 4-methylphenol	10	10	U
2-nitrophenol	10	10	U
2,4-dimethylphenol	10	10	U
2,4-dichlorophenol	10	10	U
4-chloro-3-methylphenol	20	20	U
2,4,6-trichlorophenol	10	10	U
2,4,5-trichlorophenol	10	10	U
2,4-dinitrophenol	50	50	U
4-nitrophenol	50	50	U
4,6-dinitro-2-methylphenol	50	50	U
pentachlorophenol	50	50	U
2-Fluorophenol (%)	21-100	43	
Phenol-d6 (%)	10-94	28	
2,4,6-Tribromophenol (%)	10-123	79	

Dilution Factor **1**
MB denotes Method Blank
NA denotes Not Applicable

9801-2160

DUE DATE _____

WASTE STREAM TECHNOLOGY, INC.

302 Grote Street
Buffalo, NY 14207
(716) 876-5290

Analytical Data Report

Report Date : 04/09/98
Group Number : 9801-447

Prepared For :
Mr. Dan Riker
Malcolm Pirnie, Inc.
40 Centre Drive
Orchard Park, NY 14127

Site : Botanical Gardens

Field and Laboratory Information

Client Id	WST Lab #	Matrix	Date Sampled	Date Received	Time
BG-B1	WS41341	Soil	4/7/98	4/8/98	0845
BG-B2	WS41342	Soil	4/7/98	4/8/98	0845
BG-B3A	WS41343	Soil	4/7/98	4/8/98	0845
BG-B3B	WS41344	Soil	4/7/98	4/8/98	0845
BG-B4	WS41345	Soil	4/7/98	4/8/98	0845
BG-B5	WS41346	Soil	4/7/98	4/8/98	0845
BG-B6	WS41347	Soil	4/7/98	4/8/98	0845
BG-B7	WS41348	Soil	4/7/98	4/8/98	0845
BG-B9	WS41349	Soil	4/7/98	4/8/98	0845

Sample Status Upon Receipt : No irregularities.

Analytical Services

Analytical Parameters
Acid Fraction Phenols by 8270

Number of Samples
9

Turnaround Time
1 Business Day

Report Released By :



Daniel Vollmer, Laboratory QA/QC Officer

ENVIRONMENTAL LABORATORY ACCREDITATION CERTIFICATION NUMBERS

NYSDOH ELAP #11179 NJDEPE #73977 CDHS ELAP #2189

**WASTE STREAM
TECHNOLOGY**

METHODOLOGIES

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Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (18th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

U.S. Environmental Protection Agency, Federal Register, 40 CFR Part 268, Appendix I, November 1986.

ORGANIC DATA QUALIFIERS

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets identification criteria, but the result is less than the sample quantitation limit but greater than zero.
- 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 the sample.
- E - This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L - Matrix spike recovery is less than the expected lower limit of analytical performance.
- # - Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ - Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) - Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits (QC Limits) are indicated in the detection limit column.

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: BOTANICAL GARDENS
Date Sampled: 04/07/98
Date Received: 04/08/98

Group Number: 9801-447
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41341 BG-B1 04/08/98 04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	68	
Phenol-d6 (%)	24-113	84	
2,4,6-Tribromophenol (%)	19-122	86	

Dilution Factor 1

Waste Stream Technology, Inc.

Acid Fraction Phenols by GC/MS

SW-846 8270C

Site: BOTANICAL GARDENS

Date Sampled: 04/07/98

Date Received: 04/08/98

Group Number: 9801-447

Report Units: ug/kg

Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41342 BG-B2 04/08/98 04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	75	
Phenol-d6 (%)	24-113	92	
2,4,6-Tribromophenol (%)	19-122	103	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: BOTANICAL GARDENS
 Date Sampled: 04/07/98
 Date Received: 04/08/98

Group Number: 9801-447
 Report Units: ug/kg
 Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41343 BG-B3A 04/08/98 04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	69	
Phenol-d6 (%)	24-113	89	
2,4,6-Tribromophenol (%)	19-122	89	

Dilution Factor **1**

Waste Stream Technology, Inc.

Acid Fraction Phenols by GC/MS

SW-846 8270C

Site: BOTANICAL GARDENS

Date Sampled: 04/07/98

Date Received: 04/08/98

Group Number: 9801-447

Report Units: ug/kg

Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41344 BG-B3B 04/08/98 04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	64	
Phenol-d6 (%)	24-113	81	
2,4,6-Tribromophenol (%)	19-122	89	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: BOTANICAL GARDENS
Date Sampled: 04/07/98
Date Received: 04/08/98

Group Number: 9801-447
Report Units: ug/kg
Matrix: Soil

		Lab ID Number Client ID Date Extracted Date Analyzed	WS41345 BG-B4 04/08/98 04/08/98
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	64	
Phenol-d6 (%)	24-113	74	
2,4,6-Tribromophenol (%)	19-122	83	

Dilution Factor **1**

Waste Stream Technology, Inc.

Acid Fraction Phenols by GC/MS

SW-846 8270C

Site: BOTANICAL GARDENS

Date Sampled: 04/07/98

Date Received: 04/08/98

Group Number: 9801-447

Report Units: ug/kg

Matrix: Soil

	Lab ID Number	WS41346	
	Client ID	BG-B5	
	Date Extracted	04/08/98	
	Date Analyzed	04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	66	
Phenol-d6 (%)	24-113	81	
2,4,6-Tribromophenol (%)	19-122	86	

Dilution Factor 1

Waste Stream Technology, Inc.

Acid Fraction Phenols by GC/MS

SW-846 8270C

Site: BOTANICAL GARDENS

Date Sampled: 04/07/98

Date Received: 04/08/98

Group Number: 9801-447

Report Units: ug/kg

Matrix: Soil

	Lab ID Number	WS41347	
	Client ID	BG-B6	
	Date Extracted	04/08/98	
	Date Analyzed	04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	61	
Phenol-d6 (%)	24-113	77	
2,4,6-Tribromophenol (%)	19-122	93	

Dilution Factor 1

Waste Stream Technology, Inc.

Acid Fraction Phenols by GC/MS

SW-846 8270C

Site: BOTANICAL GARDENS

Date Sampled: 04/07/98

Date Received: 04/08/98

Group Number: 9801-447

Report Units: ug/kg

Matrix: Soil

	Lab ID Number	WS41348	
	Client ID	BG-B7	
	Date Extracted	04/08/98	
	Date Analyzed	04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	63	
Phenol-d6 (%)	24-113	75	
2,4,6-Tribromophenol (%)	19-122	92	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: BOTANICAL GARDENS
Date Sampled: 04/07/98
Date Received: 04/08/98

Group Number: 9801-447
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41349 BG-B9 04/08/98 04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	61	
Phenol-d6 (%)	24-113	72	
2,4,6-Tribromophenol (%)	19-122	109	

Dilution Factor **1**

Waste Stream Technology, Inc.

Phenols by GC/MS Method Blank

SW-846 8270C

Site: BOTANICAL GARDENS

Date Sampled: NA

Date Received: NA

Group Number: 9801-447

Report Units: PPB

	Lab ID Number	MB040898	
	Client ID	NA	
	Date Extracted	04/08/98	
	Date Analyzed	04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	66	
Phenol-d6 (%)	24-113	75	
2,4,6-Tribromophenol (%)	19-122	93	

Dilution Factor 1

MB denotes Method Blank

NA denotes Not Applicable

WASTE STREAM TECHNOLOGY, INC.

302 Grote Street
Buffalo, NY 14207
(716) 876-5290

Analytical Data Report

Report Date : 04/24/98
Group Number : 9801-468

Prepared For :
Mr. Dan Riker
Malcolm Pirnie, Inc.
40 Centre Drive
Orchard Park, NY 14127

Site : Holiday Park

Field and Laboratory Information

Client Id	WST Lab #	Matrix	Date Sampled	Date Received	Time
HP2-SW1	WS41451	Aqueous	04/09/98	04/10/98	0830
HP1-SW1	WS41452	Aqueous	04/09/98	04/10/98	0830
HP1-B11W	WS41453	Aqueous	04/09/98	04/10/98	0830
HP1-B13	WS41454	Soil	04/09/98	04/10/98	0830
HP1-B14	WS41455	Soil	04/09/98	04/10/98	0830
HP1-B15	WS41456	Soil	04/09/98	04/10/98	0830
HP1-B11	WS41457	Soil	04/09/98	04/10/98	0830
HP2-B7	WS41458	Soil	04/09/98	04/10/98	0830

Sample Status Upon Receipt : No irregularities.

Analytical Services

Analytical Parameters
8270 Acid Fraction Phenols

Number of Samples
8

Turnaround Time
Standard

Report Released By : Daniel W. Vollmer
Daniel Vollmer, Laboratory QA/QC Officer

ENVIRONMENTAL LABORATORY ACCREDITATION CERTIFICATION NUMBERS

NYSDOH ELAP #11179 NJDEPE #73977 CDHS ELAP #2189



METHODOLOGIES

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (18th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

ORGANIC DATA QUALIFIERS

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets identification criteria, but the result is less than the sample quantitation limit but greater than zero.
- 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 the sample.
- E - This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L - Matrix spike recovery is less than the expected lower limit of analytical performance.
- # - Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ - Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) - Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits (QC Limits) are indicated in the detection limit column.

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/09/98
Date Received: 04/10/98

Group Number: 9801-468
Report Units: ug/L
Matrix: Aqueous

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41451 HP2-SW1 04/15/98 04/21/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	10	10	U
2-chlorophenol	10	10	U
2-methylphenol	10	10	U
3 & 4-methylphenol	10	10	U
2-nitrophenol	10	10	U
2,4-dimethylphenol	10	10	U
2,4-dichlorophenol	10	10	U
4-chloro-3-methylphenol	20	20	U
2,4,6-trichlorophenol	10	10	U
2,4,5-trichlorophenol	10	10	U
2,4-dinitrophenol	50	50	U
4-nitrophenol	50	50	U
4,6-dinitro-2-methylphenol	50	50	U
pentachlorophenol	50	50	U
2-Fluorophenol (%)	21-100	36	
Phenol-d6 (%)	10-94	26	
2,4,6-Tribromophenol (%)	10-123	103	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/09/98
Date Received: 04/10/98

Group Number: 9801-468
Report Units: ug/L
Matrix: Aqueous

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41452 HP1-SW1 04/15/98 04/21/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	10	10	U
2-chlorophenol	10	10	U
2-methylphenol	10	10	U
3 & 4-methylphenol	10	10	U
2-nitrophenol	10	10	U
2,4-dimethylphenol	10	10	U
2,4-dichlorophenol	10	10	U
4-chloro-3-methylphenol	20	20	U
2,4,6-trichlorophenol	10	10	U
2,4,5-trichlorophenol	10	10	U
2,4-dinitrophenol	50	50	U
4-nitrophenol	50	50	U
4,6-dinitro-2-methylphenol	50	50	U
pentachlorophenol	50	50	U
2-Fluorophenol (%)	21-100	24	
Phenol-d6 (%)	10-94	18	
2,4,6-Tribromophenol (%)	10-123	59	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/09/98
Date Received: 04/10/98

Group Number: 9801-468
Report Units: ug/L
Matrix: Aqueous

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41453 HP1-B11W 04/15/98 04/21/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	10	10	U
2-chlorophenol	10	10	U
2-methylphenol	10	4	J
3 & 4-methylphenol	10	6	J
2-nitrophenol	10	10	U
2,4-dimethylphenol	10	9	J
2,4-dichlorophenol	10	10	U
4-chloro-3-methylphenol	20	20	U
2,4,6-trichlorophenol	10	10	U
2,4,5-trichlorophenol	10	10	U
2,4-dinitrophenol	50	50	U
4-nitrophenol	50	50	U
4,6-dinitro-2-methylphenol	50	50	U
pentachlorophenol	50	50	U
2-Fluorophenol (%)	21-100	29	
Phenol-d6 (%)	10-94	22	
2,4,6-Tribromophenol (%)	10-123	78	

Dilution Factor **1**

Waste Stream Technology, Inc.
Phenols by GC/MS Aqueous Method Blank
SW-846 8270C

Site: HOLIDAY PARK
 Date Sampled: NA
 Date Received: NA

Group Number: 9801-468
 Report Units: PPB

	Lab ID Number Client ID Date Extracted Date Analyzed	MB041598 NA 04/15/98 04/21/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	10	10	U
2-chlorophenol	10	10	U
2-methylphenol	10	10	U
3 & 4-methylphenol	10	10	U
2-nitrophenol	10	10	U
2,4-dimethylphenol	10	10	U
2,4-dichlorophenol	10	10	U
4-chloro-3-methylphenol	20	20	U
2,4,6-trichlorophenol	10	10	U
2,4,5-trichlorophenol	10	10	U
2,4-dinitrophenol	50	50	U
4-nitrophenol	50	50	U
4,6-dinitro-2-methylphenol	50	50	U
pentachlorophenol	50	50	U
2-Fluorophenol (%)	21-100	92	
Phenol-d6 (%)	10-94	101	
2,4,6-Tribromophenol (%)	10-123	125	#

Dilution Factor 1
 MB denotes Method Blank
 NA denotes Not Applicable

Waste Stream Technology, Inc.
 Acid Fraction Phenols by GC/MS
 SW-846 8270C

Site: HOLIDAY PARK
 Date Sampled: 04/09/98
 Date Received: 04/10/98

Group Number: 9801-468
 Report Units: ug/kg
 Matrix: Soil

		Lab ID Number Client ID Date Extracted Date Analyzed	WS41454 HP1-B13 04/17/98 04/20/98
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	81	
Phenol-d6 (%)	24-113	92	
2,4,6-Tribromophenol (%)	19-122	120	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/09/98
Date Received: 04/10/98

Group Number: 9801-468
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41455 HP1-B14 04/17/98 04/20/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	83	
Phenol-d6 (%)	24-113	96	
2,4,6-Tribromophenol (%)	19-122	118	

Dilution Factor **1**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/09/98
Date Received: 04/10/98

Group Number: 9801-468
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41456 HP1-B15 04/17/98 04/20/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	91	
Phenol-d6 (%)	24-113	104	
2,4,6-Tribromophenol (%)	19-122	128	#

Dilution Factor **1**

Waste Stream Technology, Inc.

Acid Fraction Phenols by GC/MS

SW-846 8270C

Site: HOLIDAY PARK

Date Sampled: 04/09/98

Date Received: 04/10/98

Group Number: 9801-468

Report Units: ug/kg

Matrix: Soil

	Lab ID Number	WS41457	
	Client ID	HP1-B11	
	Date Extracted	04/17/98	
	Date Analyzed	04/20/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	84	
Phenol-d6 (%)	24-113	98	
2,4,6-Tribromophenol (%)	19-122	122	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/09/98
Date Received: 04/10/98

Group Number: 9801-468
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41458 HP2-B7 04/17/98 04/20/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	76	
Phenol-d6 (%)	24-113	87	
2,4,6-Tribromophenol (%)	19-122	116	

Dilution Factor 1

Waste Stream Technology, Inc.
Phenols by GC/MS Soil Method Blank
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: NA
Date Received: NA

Group Number: 9801-468
Report Units: PPB

	Lab ID Number Client ID Date Extracted Date Analyzed	MB041798 NA 04/17/98 04/20/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	77	
Phenol-d6 (%)	24-113	88	
2,4,6-Tribromophenol (%)	19-122	118	

Dilution Factor **1**
MB denotes Method Blank
NA denotes Not Applicable

CHAIN OF CUSTODY RECORD

PROJECT NO: 0266-325				SITE NAME: HSC, 10000 Park			
SAMPLERS (SIGNATURE): [Signature]							
SAMPLE NO.	DATE	TIME	COMP	GRAB	MATRIX	SAMPLE LOCATION	SIZE & NO. OF CON-TAINERS
	4/9/04			X	AA	HP2-SW1	1
						HP1-SW1	
						HD1-B1/W	
					So	HP1-B13	
						HP1-B14	
						HP1-B15	
						HP1-B11	
						HP2-B17	
RELINQUISHED BY (SIGNATURE) [Signature] DATE/TIME 4-10-04 (0800) RECEIVED BY (SIGNATURE) [Signature]							
RELINQUISHED BY (SIGNATURE) DATE/TIME RECEIVED BY (SIGNATURE)							
SPECIAL INSTRUCTIONS:							
TURNAROUND TIME 576000000							

WASTE STREAM TECHNOLOGY, INC.

302 Grote Street
Buffalo, NY 14207
(716) 876-5290

Analytical Data Report

Report Date : 04/08/98
Group Number : 9801-441

Prepared For :
Mr. Dan Riker
Malcolm Pirnie, Inc.
40 Centre Drive
Orchard Park, NY 14127

Site : Holiday Park

Field and Laboratory Information

Client Id	WST Lab #	Matrix	Date Sampled	Date Received	Time
HP1-B1	WS41284	Soil	04/06/98	04/07/98	0800
HP1-B2	WS41285	Soil	04/06/98	04/07/98	0800
HP1-B3	WS41286	Soil	04/06/98	04/07/98	0800
HP1-B4	WS41287	Soil	04/06/98	04/07/98	0800
HP1-B5	WS41288	Soil	04/06/98	04/07/98	0800
HP1-B6	WS41289	Soil	04/06/98	04/07/98	0800
HP1-B7	WS41290	Soil	04/06/98	04/07/98	0800
HP1-B8	WS41291	Soil	04/06/98	04/07/98	0800
HP1-B9	WS41292	Soil	04/06/98	04/07/98	0800
HP1-B10	WS41293	Soil	04/06/98	04/07/98	0800
HP1-SS1	WS41294	Soil	04/06/98	04/07/98	0800

Sample Status Upon Receipt : No irregularities.

Analytical Parameters

8270 Acid Fraction Phenols

Analytical Services

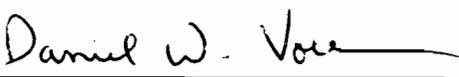
Number of Samples

11

Turnaround Time

1 Business Day

Report Released By :



Daniel Vollmer, Laboratory QA/QC Officer

ENVIRONMENTAL LABORATORY ACCREDITATION CERTIFICATION NUMBERS

NYSDOH ELAP #11179 NJDEPE #73977 CDHS ELAP #2189

WASTE STREAM
TECHNOLOGY

METHODOLOGIES

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (18th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

U.S. Environmental Protection Agency, Federal Register, 40 CFR Part 268, Appendix I, November 1986.

ORGANIC DATA QUALIFIERS

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets identification criteria, but the result is less than the sample quantitation limit but greater than zero.
- 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 the sample.
- E - This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L - Matrix spike recovery is less than the expected lower limit of analytical performance.
- # - Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ - Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) - Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits (QC Limits) are indicated in the detection limit column.

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41284 HP1-B1 04/07/98 04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	117	J
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	2940	
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	73	
Phenol-d6 (%)	24-113	88	
2,4,6-Tribromophenol (%)	19-122	96	

Dilution Factor **1**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41285 HP1-B2 04/07/98 04/07/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	73	
Phenol-d6 (%)	24-113	82	
2,4,6-Tribromophenol (%)	19-122	96	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41286 HP1-B3 04/07/98 04/07/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	71	
Phenol-d6 (%)	24-113	80	
2,4,6-Tribromophenol (%)	19-122	97	

Dilution Factor **1**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41287 HP1-B4 04/07/98 04/07/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	65	
Phenol-d6 (%)	24-113	72	
2,4,6-Tribromophenol (%)	19-122	96	

Dilution Factor **1**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41288 HP1-B5 04/07/98 04/07/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	72	
Phenol-d6 (%)	24-113	79	
2,4,6-Tribromophenol (%)	19-122	93	

Dilution Factor **1**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41289 HP1-B6 04/07/98 04/07/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	73	
Phenol-d6 (%)	24-113	79	
2,4,6-Tribromophenol (%)	19-122	93	

Dilution Factor **1**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41290 HP1-B7 04/07/98 04/07/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	70	
Phenol-d6 (%)	24-113	76	
2,4,6-Tribromophenol (%)	19-122	95	

Dilution Factor **1**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41291 HP1-B8 04/07/98 04/07/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	73	
Phenol-d6 (%)	24-113	80	
2,4,6-Tribromophenol (%)	19-122	93	

Dilution Factor 1

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41292 HP1-B9 04/07/98 04/07/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	71	
Phenol-d6 (%)	24-113	77	
2,4,6-Tribromophenol (%)	19-122	89	

Dilution Factor **1**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41293 HP1-B10 04/07/98 04/07/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	72	
Phenol-d6 (%)	24-113	80	
2,4,6-Tribromophenol (%)	19-122	92	

Dilution Factor **1**

Waste Stream Technology, Inc.
Acid Fraction Phenols by GC/MS
SW-846 8270C

Site: HOLIDAY PARK
Date Sampled: 04/06/98
Date Received: 04/07/98

Group Number: 9801-441
Report Units: ug/kg
Matrix: Soil

	Lab ID Number Client ID Date Extracted Date Analyzed	WS41294 HP1-SS1 04/07/98 04/08/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	71	
Phenol-d6 (%)	24-113	81	
2,4,6-Tribromophenol (%)	19-122	90	

Dilution Factor **1**

Waste Stream Technology, Inc.
 Phenols by GC/MS Method Blank
 SW-846 8270C

Site: HOLIDAY PARK
 Date Sampled: NA
 Date Received: NA

Group Number: 9801-441
 Report Units: PPB

	Lab ID Number Client ID Date Extracted Date Analyzed	MB040798 NA 04/07/98 04/07/98	
Compound	Detection Limit/ QC Limits (%)	Result	Q
phenol	330	330	U
2-chlorophenol	330	330	U
2-methylphenol	330	330	U
3 & 4-methylphenol	330	330	U
2-nitrophenol	330	330	U
2,4-dimethylphenol	330	330	U
2,4-dichlorophenol	330	330	U
4-chloro-3-methylphenol	660	660	U
2,4,6-trichlorophenol	330	330	U
2,4,5-trichlorophenol	330	330	U
2,4-dinitrophenol	1650	1650	U
4-nitrophenol	1650	1650	U
4,6-dinitro-2-methylphenol	1650	1650	U
pentachlorophenol	1650	1650	U
2-Fluorophenol (%)	25-121	73	
Phenol-d6 (%)	24-113	83	
2,4,6-Tribromophenol (%)	19-122	99	

Dilution Factor 1
 MB denotes Method Blank
 NA denotes Not Applicable

1171-1886

LA E: RIVERA S: # C: P: DU: E

NYSDEC DATA
BOTANICAL GARDENS

X
Holiday Park
Solomon G. L.

Organics Data Qualifiers

U - Compound not detected

J - Compound quantitation less than the sample quantitation limit but greater than zero, also used to qualify tentatively identified compounds (TICs). In both cases these are estimated values

B - Compound found in the extraction prep blank

E - Estimated value, concentration exceeds the instrument calibration range

D - Diluted sample

Inorganics Data Qualifiers

C (concentration) qualifier -

B - value less than the CRDL, but greater than or equal to the instrument detection limit (IDL)

U - Analyte not detected

Q qualifier -

E - estimated value due to interference

M - Duplicate injection precision not met

N - Spiked sample recovery not within control limits

S - Method of standard additions (MSA)

W - Post-digestion spike out of control (Furnace AA), sample absorbance is less than 50% of spike absorbance

" * " - Duplicate analysis out of control limits

" + " - Correlation coefficient for the MSA is less than 0.995

M (Method) qualifier -

P - ICP

A - Flame AA

F - Furnace AA

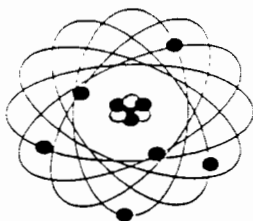
PM - ICP, microwave digestion

AM - Flame AA, microwave digestion

FM - Furnace AA, microwave digestion

CV - Manual Cold Vapor

NR - Not requested



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

INORGANIC ANALYSIS DATA SHEET

FIELD SAMPLE ID:

Site Name: BOTANICAL GARDENS

BG-SW(NYSDEC)#

Site Code: 932068

SDG: 100-01

Lab Sample ID: 998-100-02

Date Received: 4/10/98

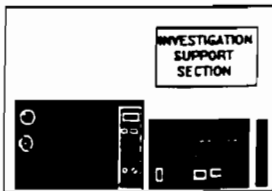
Matrix: SW

Sample Size: 0.048 liters

CONCENTRATION : ug/L

CAS NO.	ANALYTE		C	Q	M
7429-90-5	Aluminum	720			PM
7440-36-0	Antimony	10	U	W	FM
7440-38-2	Arsenic	5.2	U	W	FM
7440-39-3	Barium	490			PM
7440-41-7	Beryllium	5.2	U		PM
7440-43-9	Cadmium	3.1	U	W	FM
7440-70-2	Calcium	160000			PM
7440-47-3	Chromium	16	U		PM
7440-48-4	Cobalt	21	U		PM
7440-50-8	Copper	30			PM
7439-89-6	Iron	76000			PM
7439-92-1	Lead	12			FM
7439-95-4	Magnesium	27000			PM
7439-96-5	Manganese	680			PM
7439-97-6	Mercury	0.20	U		PM
7440-02-0	Nickel	42	U		PM
7440-09-7	Potassium	5600			PM
7482-49-2	Selenium	5.2	U	W	FM
7440-22-4	Silver	10	U		PM
7440-23-5	Sodium	35000			PM
7440-28-0	Thallium	5.2	U		FM
7440-62-2	Vanadium	42	U		PM
7440-66-6	Zinc	70			PM

Comments: Noticable sediment in sample bottle, filtered after digestion



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

BG-SW#1

Site Name: BOTANICAL GARDENS

Site Code: 932068 Date Collected: 4/7/98

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-100-02

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: 9803C71A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: not dec.

Date Analyzed: 04/14/98

GC Column: ID: (mm)

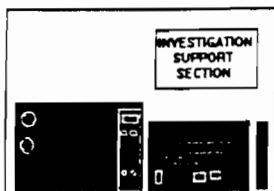
Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-71-8	Dichlorodifluoromethane		5	U
74-87-3	Chloromethane		5	U
75-01-4	Vinyl Chloride		5	U
74-83-9	Bromomethane		5	U
75-00-3	Chloroethane		5	U
75-69-4	Trichlorofluoromethane		5	U
75-35-4	1,1-Dichloroethene		5	U
75-15-0	Carbon Disulfide		5	U
67-64-1	Acetone		5	U
75-09-2	Methylene Chloride		5	U
540-59-0	trans 1,2-Dichloroethene		5	U
75-34-4	1,1-Dichloroethane		5	U
108-05-4	Vinyl acetate		5	U
540-59-0	cis 1,2-Dichloroethene		5	U
78-93-3	2-Butanone		5	U
67-66-3	Chloroform		5	U
71-55-6	1,1,1-Trichloroethane		5	U
56-23-5	Carbontetrachloride		5	U
71-43-2	Benzene		5	U
107-06-2	1,2-Dichloroethane		5	U
79-01-6	Trichloroethene		5	U
78-87-5	1,2-Dichloropropane		5	U
75-27-4	Bromodichloromethane		5	U
10061-01-5	cis-1,3-Dichloropropene		5	U
108-10-1	4-Methyl-2-pentanone		5	U
108-88-3	Toluene		5	U
10061-02-6	trans-1,3-Dichloropropene		5	U
79-00-5	1,1,2-Trichloroethane		5	U
127-18-4	Tetrachloroethene		5	U



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

BG-SW#1

Site Name: BOTANICAL GARDENS

Site Code: 932068

Date Collected: 4/7/98

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-100-02

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: 9803C71A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: not dec.

Date Analyzed: 04/14/98

GC Column: ID: (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
591-78-6	2-Hexanone		5	U
124-48-1	Dibromochloromethane		5	U
108-90-7	Chlorobenzene		5	U
100-41-4	Ethylbenzene		5	U
1330-20-7	m,p-Xylenes		5	U
1330-20-7	o-Xylene		5	U
100-42-5	Styrene		5	U
75-25-2	Bromoform		5	U
79-34-5	1,1,2,2-Tetrachloroethane		5	U
95-49-8	2-Chlorotoluene		5	U
106-43-4	4-Chlorotoluene		5	U
541-73-1	1,3-Dichlorobenzene		5	U
106-46-7	1,4-Dichlorobenzene		5	U
95-50-1	1,2-Dichlorobenzene		5	U
120-82-1	1,2,4-Trichlorobenzene		5	U
87-61-6	1,2,3-Trichlorobenzene		5	U

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD SAMPLE ID:

BG-SW#1

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-100-02

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: 9803C71A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: not dec.

Date Analyzed: 04/14/98

GC Column: ID: (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 1

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-18-3	Dimethyl sulfide	7.77	19	JN



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

BG-SW(NYSDEC)#1

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-100-02

Sample wt/vol: 1000 (g/ml) ML

Lab File ID: 9802F72A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
111-44-4	bis(2-Chloroethyl)ether		10	U
108-95-2	Phenol		15	
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
100-51-6	Benzyl alcohol		10	U
108-60-1	2,2'-Oxybis(1-chloropropane)		10	U
95-48-7	2-Methylphenol		10	U
67-72-1	Hexachloroethane		10	U
621-64-7	N-Nitroso-di-n-propylamine		10	U
106-44-5	4-Methylphenol		97	
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		10	U
91-58-7	2-Chloronaphthalene		10	U
88-74-4	2-Nitroaniline		20	U



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

BG-SW(NYSDEC)#1

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-100-02

Sample wt/vol: 1000 (g/ml) ML

Lab File ID: 9802F72A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

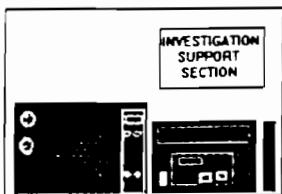
Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
208-96-8	Acenaphthylene		10	U
131-11-3	Dimethylphthalate		10	U
606-20-2	2,6-Dinitrotoluene		10	U
83-32-9	Acenaphthene		10	U
99-09-2	3-Nitroaniline		20	U
51-28-5	2,4-Dinitrophenol		20	U
132-64-9	Dibenzofuran		10	U
121-14-2	2,4-Dinitrotoluene		10	U
100-02-7	4-Nitrophenol		20	U
86-73-7	Fluorene		10	U
7005-72-3	4-Chlorophenyl-phenylether		10	U
84-66-2	Diethylphthalate		10	U
100-01-6	4-Nitroaniline		20	U
534-52-1	4,6-Dinitro-2-methylphenol		20	U
86-30-6	n-Nitrosodiphenylamine		10	U
101-55-3	4-Bromophenyl-phenylether		10	U
319-84-6	Alpha - BHC		10	U
118-74-1	Hexachlorobenzene		10	U
319-85-7	Beta - BHC		10	U
58-89-9	Gamma - BHC		10	U
319-86-8	Delta - BHC		10	U
87-86-5	Pentachlorophenol		20	U
85-01-8	Phenanthrene		10	U
120-12-7	Anthracene		10	U
86-74-8	Carbazole		10	U
76-44-8	Heptachlor		10	U
84-74-2	Di-n-butylphthalate		10	U
309-00-2	Aldrin		10	U
1024-57-3	Heptachlor Epoxide		10	U



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

BG-SW(NYSDEC)#1

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-100-02

Sample wt/vol: 1000 (g/ml) ML

Lab File ID: 9802F72A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
206-44-0	Fluoranthene		10	U
129-00-0	Pyrene		10	U
959-98-8	Endosulfan I		10	U
72-55-9	4,4' DDE		10	U
60-57-1	Dieldrin		10	U
72-20-8	Endrin		10	U
33213-65-9	Endosulfan II		10	U
72-54-8	4,4' - DDD		10	U
7421-36-3	Endrin Aldehyde		10	U
85-68-7	Butylbenzylphthalate		10	U
1031-07-5	Endosulfan Sulfate		10	U
50-29-3	4,4' - DDT		10	U
53494-70-5	Endrin Ketone		10	U
91-94-1	3,3'-Dichlorobenzidine		10	U
56-55-3	Benzo[a]anthracene		10	U
218-01-9	Chrysene		10	U
72-43-5	Methoxychlor		10	U
117-81-7	bis(2-Ethylhexyl)phthalate		10	U
117-84-0	Di-n-octylphthalate		10	U
205-99-2	Benzo[b]fluoranthene		10	U
207-08-9	Benzo[k]fluoranthene		10	U
50-32-8	Benzo[a]pyrene		10	U
193-39-5	Indeno[1,2,3-cd]pyrene		10	U
53-70-3	Dibenz[a,h]anthracene		10	U
191-24-2	Benzo[g,h,i]perylene		10	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Sample Field ID:

G-SW(NYSDEC)#

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-100-02

Sample wt/vol: 1000 (g/ml) ML

Lab File ID: 9802F72A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: decanted: (Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

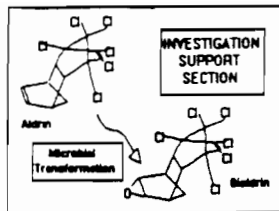
GPC Cleanup: (Y/N) N pH: 7.5

CONCENTRATION UNITS:

Number TICs found: 21

(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000503-74-2	Butanoic acid, 3-methyl-	4.71	53	JN
2. 000116-53-0	Butanoic acid, 2-methyl-	4.98	42	JN
3. 000109-52-4	Pentanoic acid	5.79	34	JN
4. 000065-85-0	Benzoic Acid	13.09	11	JN
5. 000124-07-2	Octanoic Acid	13.29	94	JN
6. 000103-82-2	Benzeneacetic acid	14.75	62	JN
7. 000112-05-0	Nonanoic acid	15.14	100	JN
8. 000120-72-9	Indole	15.56	17	JN
9. 000501-52-0	Benzenepropanoic acid	16.32	110	JN
10. 000334-48-5	Decanoic acid	16.76	15	JN
11. 000112-37-8	Undecanoic acid	18.34	17	JN
12. 000059-48-3	2H-Indol-2-one, 1,3-dihydro-	18.53	9	JN
13. 000120-40-1	Dodecanamide, N,N-bis(2-hydrox	19.84	22	JN
14. 000638-53-9	Tridecanoic acid	21.26	9	JN
15. 000544-63-8	Tetradecanoic acid	22.62	15	JN
16. 000057-10-3	Hexadecanoic acid	25.16	7	JN
17. 021964-48-7	1,12-Tridecadiene	26.37	29	JN
18.	unknown	26.46	17	J
19.	unknown	29.31	21	J
20.	unknown	29.48	18	J
21.	unknown	32.18	12	J



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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PESTICIDE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

BG-SW(DEC)#1

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-102-02

Sample wt/vol: 250 (g/ml) ML

Lab File ID: 98GAF320.D

% Moisture: decanted: (Y/N) N

Date Received: 04/10/98

Extraction: (SepF/Cont/Sonc) SPE

Date Extracted: 04/16/98

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/05/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
319-84-6	alpha-BHC		0.10	U
58-89-9	gamma-BHC		0.10	U
76-44-8	Heptachlor		0.10	U
309-00-2	Aldrin		0.10	U
319-85-7	beta-BHC		0.10	U
319-86-8	delta-BHC		0.10	U
1024-57-3	Heptachlor Epoxide		0.10	U
959-98-8	Endosulfan I		0.10	U
5103-74-2	gamma-Chlordane		0.10	U
5103-71-9	alpha-Chlordane		0.10	U
72-55-9	4,4'-DDE		0.20	U
60-57-1	Dieldrin		0.20	U
72-20-8	Endrin		0.20	U
33213-65-9	Endosulfan II		0.20	U
72-54-8	4,4'-DDD		0.20	U
50-29-3	4,4'-DDT		0.20	U
7421-36-3	Endrin Aldehyde		0.20	U
1031-07-8	Endosulfan Sulfate		0.20	U
72-43-5	Methoxychlor		1.0	U
53494-70-5	Endrin Ketone		0.20	U
12674-11-2	Aroclor-1016		1.0	U
11104-28-2	Aroclor-1221		1.0	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
8001-35-2	Toxaphene		5.0	U



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LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

BG-SS(NYSDEC)#1

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-03

Sample wt/vol: 13.77 (g/ml) G

Lab File ID: 9802F77A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 52.5 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 2000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether		1500	U
108-95-2	Phenol		1500	U
95-57-8	2-Chlorophenol		1500	U
541-73-1	1,3-Dichlorobenzene		1500	U
106-46-7	1,4-Dichlorobenzene		1500	U
95-50-1	1,2-Dichlorobenzene		1500	U
100-51-6	Benzyl alcohol		1500	U
108-60-1	2,2'-Oxybis(1-chloropropane)		1500	U
95-48-7	2-Methylphenol		1500	U
67-72-1	Hexachloroethane		1500	U
621-64-7	N-Nitroso-di-n-propylamine		1500	U
106-44-5	4-Methylphenol		1500	U
98-95-3	Nitrobenzene		1500	U
78-59-1	Isophorone		1500	U
88-75-5	2-Nitrophenol		1500	U
105-67-9	2,4-Dimethylphenol		1500	U
111-91-1	bis(2-Chloroethoxy)methane		1500	U
120-83-2	2,4-Dichlorophenol		1500	U
120-82-1	1,2,4-Trichlorobenzene		1500	U
91-20-3	Naphthalene		1500	U
106-47-8	4-Chloroaniline		1500	U
87-68-3	Hexachlorobutadiene		1500	U
59-50-7	4-Chloro-3-methylphenol		1500	U
91-57-6	2-Methylnaphthalene		1500	U
77-47-4	Hexachlorocyclopentadiene		1500	U
88-06-2	2,4,6-Trichlorophenol		1500	U
95-95-4	2,4,5-Trichlorophenol		1500	U
91-58-7	2-Chloronaphthalene		1500	U
88-74-4	2-Nitroaniline		3100	U



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

BG-SS(NYSDEC)#1

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-03

Sample wt/vol: 13.77 (g/ml) G

Lab File ID: 9802F77A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 52.5 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 2000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
208-96-8	Acenaphthylene	1500	U	
131-11-3	Dimethylphthalate	1500	U	
606-20-2	2,6-Dinitrotoluene	1500	U	
83-32-9	Acenaphthene	1500	U	
99-09-2	3-Nitroaniline	3100	U	
51-28-5	2,4-Dinitrophenol	3100	U	
132-64-9	Dibenzofuran	1500	U	
121-14-2	2,4-Dinitrotoluene	1500	U	
100-02-7	4-Nitrophenol	3100	U	
86-73-7	Fluorene	1500	U	
7005-72-3	4-Chlorophenyl-phenylether	1500	U	
84-66-2	Diethylphthalate	1500	U	
100-01-6	4-Nitroaniline	3100	U	
534-52-1	4,6-Dinitro-2-methylphenol	3100	U	
86-30-6	n-Nitrosodiphenylamine	1500	U	
101-55-3	4-Bromophenyl-phenylether	1500	U	
319-84-6	Alpha - BHC	1500	U	
118-74-1	Hexachlorobenzene	1500	U	
319-85-7	Beta - BHC	1500	U	
58-89-9	Gamma - BHC	1500	U	
319-86-8	Delta - BHC	1500	U	
87-86-5	Pentachlorophenol	3100	U	
85-01-8	Phenanthrene	1500	U	
120-12-7	Anthracene	1500	U	
86-74-8	Carbazole	1500	U	
76-44-8	Heptachlor	1500	U	
84-74-2	Di-n-butylphthalate	1200	JB	
309-00-2	Aldrin	1500	U	
1024-57-3	Heptachlor Epoxide	1500	U	



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

BG-SS(NYSDEC)#1

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-03

Sample wt/vol: 13.77 (g/ml) G

Lab File ID: 9802F77A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 52.5 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 2000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
206-44-0	Fluoranthene		430	J
129-00-0	Pyrene		360	J
959-98-8	Endosulfan I		1500	U
72-55-9	4,4' DDE		1500	U
60-57-1	Dieldrin		1500	U
72-20-8	Endrin		1500	U
33213-65-9	Endosulfan II		1500	U
72-54-8	4,4' - DDD		1500	U
7421-36-3	Endrin Aldehyde		1500	U
85-68-7	Butylbenzylphthalate		1500	U
1031-07-5	Endosulfan Sulfate		1500	U
50-29-3	4,4' - DDT		1500	U
53494-70-5	Endrin Ketone		1500	U
91-94-1	3,3'-Dichlorobenzidine		1500	U
56-55-3	Benzo[a]anthracene		1500	U
218-01-9	Chrysene		1500	U
72-43-5	Methoxychlor		1500	U
117-81-7	bis(2-Ethylhexyl)phthalate		920	J
117-84-0	Di-n-octylphthalate		1500	U
205-99-2	Benzo[b]fluoranthene		1500	U
207-08-9	Benzo[k]fluoranthene		1500	U
50-32-8	Benzo[a]pyrene		1500	U
193-39-5	Indeno[1,2,3-cd]pyrene		1500	U
53-70-3	Dibenz[a,h]anthracene		1500	U
191-24-2	Benzo[g,h,i]perylene		1500	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Sample Field ID:

BG-SS(NYSDEC)#1

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-03

Sample wt/vol: 13.77 (g/ml) G

Lab File ID: 9802F77A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 52.5 decanted: (Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 2000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CONCENTRATION UNITS:

Number TICs found: 10

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000123-42-2	2-Pentanone, 4-hydroxy-4-methyl	4.66	47000	JN
2.	unknown	6.76	1200	J
3. 000111-46-6	Ethanol, 2,2'-oxybis-	8.14	2500	JN
4. 074381-40-1	Propanoic acid, 2-methyl-, 1-(1,1-	20.45	880	JN
5.	unknown	34.63	610	J
6. 004651-51-8	Ergost-5-en-3-ol, (3.beta.)-	37.48	2500	JN
7.	unknown	37.73	1000	J
8. 000083-47-6	.gamma.-Sitosterol	38.18	5900	JN
9.	unknown	38.26	620	J
10.	unknown	39.25	1500	J



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FIELD SAMPLE ID

BG-SS(NYSDEC)#2

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-04

Sample wt/vol: 13.34 (g/ml) G

Lab File ID: 9802F78A.D

Level: (low/med) LOW

Date Received:

% Moisture: 56.7 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 2000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether	1700	U	
108-95-2	Phenol	1700	U	
95-57-8	2-Chlorophenol	1700	U	
541-73-1	1,3-Dichlorobenzene	1700	U	
106-46-7	1,4-Dichlorobenzene	1700	U	
95-50-1	1,2-Dichlorobenzene	1700	U	
100-51-6	Benzyl alcohol	1700	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	1700	U	
95-48-7	2-Methylphenol	1700	U	
67-72-1	Hexachloroethane	1700	U	
621-64-7	N-Nitroso-di-n-propylamine	1700	U	
106-44-5	4-Methylphenol	1700	U	
98-95-3	Nitrobenzene	1700	U	
78-59-1	Isophorone	1700	U	
88-75-5	2-Nitrophenol	1700	U	
105-67-9	2,4-Dimethylphenol	1700	U	
111-91-1	bis(2-Chloroethoxy)methane	1700	U	
120-83-2	2,4-Dichlorophenol	1700	U	
120-82-1	1,2,4-Trichlorobenzene	1700	U	
91-20-3	Naphthalene	640	J	
106-47-8	4-Chloroaniline	1700	U	
87-68-3	Hexachlorobutadiene	1700	U	
59-50-7	4-Chloro-3-methylphenol	1700	U	
91-57-6	2-Methylnaphthalene	1700	U	
77-47-4	Hexachlorocyclopentadiene	1700	U	
88-06-2	2,4,6-Trichlorophenol	1700	U	
95-95-4	2,4,5-Trichlorophenol	1700	U	
91-58-7	2-Chloronaphthalene	1700	U	
88-74-4	2-Nitroaniline	3500	U	



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FIELD SAMPLE ID

BG-SS(NYSDEC)#2

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-04

Sample wt/vol: 13.34 (g/ml) G

Lab File ID: 9802F78A.D

Level: (low/med) LOW

Date Received:

% Moisture: 56.7 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 2000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
208-96-8	Acenaphthylene	1700	U	
131-11-3	Dimethylphthalate	1700	U	
606-20-2	2,6-Dinitrotoluene	1700	U	
83-32-9	Acenaphthene	1700	U	
99-09-2	3-Nitroaniline	3500	U	
51-28-5	2,4-Dinitrophenol	3500	U	
132-64-9	Dibenzofuran	1700	U	
121-14-2	2,4-Dinitrotoluene	1700	U	
100-02-7	4-Nitrophenol	3500	U	
86-73-7	Fluorene	1700	U	
7005-72-3	4-Chlorophenyl-phenylether	1700	U	
84-66-2	Diethylphthalate	1700	U	
100-01-6	4-Nitroaniline	3500	U	
534-52-1	4,6-Dinitro-2-methylphenol	3500	U	
86-30-6	n-Nitrosodiphenylamine	1700	U	
101-55-3	4-Bromophenyl-phenylether	1700	U	
319-84-6	Alpha - BHC	1700	U	
118-74-1	Hexachlorobenzene	1700	U	
319-85-7	Beta - BHC	1700	U	
58-89-9	Gamma - BHC	1700	U	
319-86-8	Delta - BHC	1700	U	
87-86-5	Pentachlorophenol	3500	U	
85-01-8	Phenanthrene	1700	U	
120-12-7	Anthracene	1700	U	
86-74-8	Carbazole	1700	U	
76-44-8	Heptachlor	1700	U	
84-74-2	Di-n-butylphthalate	470	JB	
309-00-2	Aldrin	1700	U	
1024-57-3	Heptachlor Epoxide	1700	U	



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FIELD SAMPLE ID

BG-SS(NYSDEC)#2

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-04

Sample wt/vol: 13.34 (g/ml) G

Lab File ID: 9802F78A.D

Level: (low/med) LOW

Date Received:

% Moisture: 56.7 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 2000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
206-44-0	Fluoranthene	1700	U	
129-00-0	Pyrene	1700	U	
959-98-8	Endosulfan I	1700	U	
72-55-9	4,4' DDE	1700	U	
60-57-1	Dieldrin	1700	U	
72-20-8	Endrin	1700	U	
33213-65-9	Endosulfan II	1700	U	
72-54-8	4,4' - DDD	1700	U	
7421-36-3	Endrin Aldehyde	1700	U	
85-68-7	Butylbenzylphthalate	1700	U	
1031-07-5	Endosulfan Sulfate	1700	U	
50-29-3	4,4' - DDT	1700	U	
53494-70-5	Endrin Ketone	1700	U	
91-94-1	3,3'-Dichlorobenzidine	1700	U	
56-55-3	Benzo[a]anthracene	1700	U	
218-01-9	Chrysene	1700	U	
72-43-5	Methoxychlor	1700	U	
117-81-7	bis(2-Ethylhexyl)phthalate	360	J	
117-84-0	Di-n-octylphthalate	1700	U	
205-99-2	Benzo[b]fluoranthene	1700	U	
207-08-9	Benzo[k]fluoranthene	1700	U	
50-32-8	Benzo[a]pyrene	1700	U	
193-39-5	Indeno[1,2,3-cd]pyrene	1700	U	
53-70-3	Dibenz[a,h]anthracene	1700	U	
191-24-2	Benzo[g,h,i]perylene	1700	U	

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Sample Field ID:

BG-SS(NYSDEC)#2

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-04

Sample wt/vol: 13.34 (g/ml) G

Lab File ID: 9802F78A.D

Level: (low/med) LOW

Date Received: _____

% Moisture: 56.7 decanted: (Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 2000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

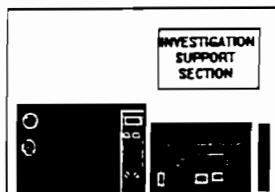
GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

Number TICs found: 5

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000111-46-6	Ethanol, 2,2'-oxybis-	8.14	4500	JN
2. 007098-21-7	Tritetracontane	34.62	690	JN
3.	unknown hydrocarbon	36.30	1600	J
4.	unknown hydrocarbon	38.18	1300	J
5.	unknown	39.28	710	J



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FIELD SAMPLE ID

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Site Name: BOTANICAL GARDENS

Site Code: 932068

Date Collected: 4/2/98

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-100-07

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: 9803C72A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: not dec.

Date Analyzed: 04/14/98

GC Column: ID: (mm)

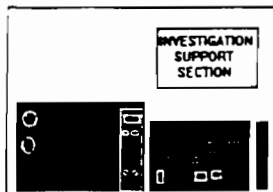
Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-71-8	Dichlorodifluoromethane		5	U
74-87-3	Chloromethane		5	U
75-01-4	Vinyl Chloride		5	U
74-83-9	Bromomethane		5	U
75-00-3	Chloroethane		5	U
75-69-4	Trichlorofluoromethane		5	U
75-35-4	1,1-Dichloroethene		5	U
75-15-0	Carbon Disulfide		5	U
67-64-1	Acetone		5	U
75-09-2	Methylene Chloride		1	J
540-59-0	trans 1,2-Dichloroethene		5	U
75-34-4	1,1-Dichloroethane		5	U
108-05-4	Vinyl acetate		5	U
540-59-0	cis 1,2-Dichloroethene		5	U
78-93-3	2-Butanone		5	U
67-66-3	Chloroform		5	U
71-55-6	1,1,1-Trichloroethane		5	U
56-23-5	Carbontetrachloride		5	U
71-43-2	Benzene		5	U
107-06-2	1,2-Dichloroethane		5	U
79-01-6	Trichloroethene		5	U
78-87-5	1,2-Dichloropropane		5	U
75-27-4	Bromodichloromethane		5	U
10061-01-5	cis-1,3-Dichloropropene		5	U
108-10-1	4-Methyl-2-pentanone		5	U
108-88-3	Toluene		5	U
10061-02-6	trans-1,3-Dichloropropene		5	U
79-00-5	1,1,2-Trichloroethane		5	U
127-18-4	Tetrachloroethene		5	U



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LABORATORY ANALYTICAL REPORT

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FIELD SAMPLE ID

TRIP BLANK

Site Name: BOTANICAL GARDENS

Site Code: 932068

Date Collected: 4/2/98

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-100-07

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: 9803C72A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: not dec. _____

Date Analyzed: 04/14/98

GC Column: _____ ID: _____ (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
591-78-6	2-Hexanone		5	U
124-48-1	Dibromochloromethane		5	U
108-90-7	Chlorobenzene		5	U
100-41-4	Ethylbenzene		5	U
1330-20-7	m,p-Xylenes		5	U
1330-20-7	o-Xylene		5	U
100-42-5	Styrene		5	U
75-25-2	Bromoform		5	U
79-34-5	1,1,2,2-Tetrachloroethane		5	U
95-49-8	2-Chlorotoluene		5	U
106-43-4	4-Chlorotoluene		5	U
541-73-1	1,3-Dichlorobenzene		5	U
106-46-7	1,4-Dichlorobenzene		5	U
95-50-1	1,2-Dichlorobenzene		5	U
120-82-1	1,2,4-Trichlorobenzene		5	U
87-61-6	1,2,3-Trichlorobenzene		5	U

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD SAMPLE ID:

TRIP BLANK

Site Name: BOTANICAL GARDENS

Site Code: 932068

SDG No.: 100-01

Matrix: (soil/water) WATER

Lab Sample ID: 998-100-07

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: 9803C72A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: not dec.

Date Analyzed: 04/14/98

GC Column: ID: (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 0

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

NYSDEC DATA
HOLIDAY PARK

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

HP1-NM-SB#1

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-06

Sample wt/vol: 12.89 (g/ml) G

Lab File ID: 9802F80A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 17.3 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether		940	U
108-95-2	Phenol		940	U
95-57-8	2-Chlorophenol		940	U
541-73-1	1,3-Dichlorobenzene		940	U
106-46-7	1,4-Dichlorobenzene		940	U
95-50-1	1,2-Dichlorobenzene		940	U
100-51-6	Benzyl alcohol		940	U
108-60-1	2,2'-Oxybis(1-chloropropane)		940	U
95-48-7	2-Methylphenol		940	U
67-72-1	Hexachloroethane		940	U
621-64-7	N-Nitroso-di-n-propylamine		940	U
106-44-5	4-Methylphenol		940	U
98-95-3	Nitrobenzene		940	U
78-59-1	Isophorone		940	U
88-75-5	2-Nitrophenol		940	U
105-67-9	2,4-Dimethylphenol		940	U
111-91-1	bis(2-Chloroethoxy)methane		940	U
120-83-2	2,4-Dichlorophenol		940	U
120-82-1	1,2,4-Trichlorobenzene		940	U
91-20-3	Naphthalene		940	U
106-47-8	4-Chloroaniline		940	U
87-68-3	Hexachlorobutadiene		940	U
59-50-7	4-Chloro-3-methylphenol		940	U
91-57-6	2-Methylnaphthalene		940	U
77-47-4	Hexachlorocyclopentadiene		940	U
88-06-2	2,4,6-Trichlorophenol		940	U
95-95-4	2,4,5-Trichlorophenol		940	U
91-58-7	2-Chloronaphthalene		940	U
88-74-4	2-Nitroaniline		1900	U



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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

HP1-NM-SB#1

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-06

Sample wt/vol: 12.89 (g/ml) G

Lab File ID: 9802F80A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 17.3 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
208-96-8	Acenaphthylene		940	U
131-11-3	Dimethylphthalate		940	U
606-20-2	2,6-Dinitrotoluene		940	U
83-32-9	Acenaphthene		940	U
99-09-2	3-Nitroaniline		1900	U
51-28-5	2,4-Dinitrophenol		1900	U
132-64-9	Dibenzofuran		940	U
121-14-2	2,4-Dinitrotoluene		940	U
100-02-7	4-Nitrophenol		1900	U
86-73-7	Fluorene		940	U
7005-72-3	4-Chlorophenyl-phenylether		940	U
84-66-2	Diethylphthalate		940	U
100-01-6	4-Nitroaniline		1900	U
534-52-1	4,6-Dinitro-2-methylphenol		1900	U
86-30-6	n-Nitrosodiphenylamine		940	U
101-55-3	4-Bromophenyl-phenylether		940	U
319-84-6	Alpha - BHC		940	U
118-74-1	Hexachlorobenzene		940	U
319-85-7	Beta - BHC		940	U
58-89-9	Gamma - BHC		940	U
319-86-8	Delta - BHC		940	U
87-86-5	Pentachlorophenol		1900	U
85-01-8	Phenanthrene		940	U
120-12-7	Anthracene		940	U
86-74-8	Carbazole		940	U
76-44-8	Heptachlor		940	U
84-74-2	Di-n-butylphthalate		940	U
309-00-2	Aldrin		940	U
1024-57-3	Heptachlor Epoxide		940	U



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DIVISION OF ENVIRONMENTAL REMEDIATION

LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

HP1-NM-SB#1

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-06

Sample wt/vol: 12.89 (g/ml) G

Lab File ID: 9802F80A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 17.3 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
206-44-0	Fluoranthene	940	U	
129-00-0	Pyrene	940	U	
959-98-8	Endosulfan I	940	U	
72-55-9	4,4' DDE	940	U	
60-57-1	Dieldrin	940	U	
72-20-8	Endrin	940	U	
33213-65-9	Endosulfan II	940	U	
72-54-8	4,4' - DDD	940	U	
7421-36-3	Endrin Aldehyde	940	U	
85-68-7	Butylbenzylphthalate	940	U	
1031-07-5	Endosulfan Sulfate	940	U	
50-29-3	4,4' - DDT	940	U	
53494-70-5	Endrin Ketone	940	U	
91-94-1	3,3'-Dichlorobenzidine	940	U	
56-55-3	Benzo[a]anthracene	940	U	
218-01-9	Chrysene	940	U	
72-43-5	Methoxychlor	940	U	
117-81-7	bis(2-Ethylhexyl)phthalate	940	U	
117-84-0	Di-n-octylphthalate	940	U	
205-99-2	Benzo[b]fluoranthene	940	U	
207-08-9	Benzo[k]fluoranthene	940	U	
50-32-8	Benzo[a]pyrene	940	U	
193-39-5	Indeno[1,2,3-cd]pyrene	940	U	
53-70-3	Dibenz[a,h]anthracene	940	U	
191-24-2	Benzo[g,h,i]perylene	940	U	

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Sample Field ID:

HP1-NM-SB#1

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-06

Sample wt/vol: 12.89 (g/ml) G

Lab File ID: 9802F80A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 17.3 decanted: (Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 1

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000111-46-6	Ethanol, 2,2'-oxybis-	8.14	2500	JN



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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

HP#1-B10

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-01

Sample wt/vol: 12.73 (g/ml) G

Lab File ID: 9802F74A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 17.4 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

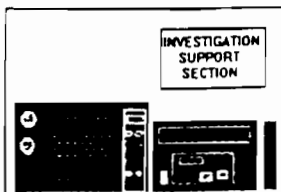
Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether		950	U
108-95-2	Phenol		950	U
95-57-8	2-Chlorophenol		950	U
541-73-1	1,3-Dichlorobenzene		950	U
106-46-7	1,4-Dichlorobenzene		950	U
95-50-1	1,2-Dichlorobenzene		950	U
100-51-6	Benzyl alcohol		950	U
108-60-1	2,2'-Oxybis(1-chloropropane)		950	U
95-48-7	2-Methylphenol		950	U
67-72-1	Hexachloroethane		950	U
621-64-7	N-Nitroso-di-n-propylamine		950	U
106-44-5	4-Methylphenol		950	U
98-95-3	Nitrobenzene		950	U
78-59-1	Isophorone		950	U
88-75-5	2-Nitrophenol		950	U
105-67-9	2,4-Dimethylphenol		950	U
111-91-1	bis(2-Chloroethoxy)methane		950	U
120-83-2	2,4-Dichlorophenol		950	U
120-82-1	1,2,4-Trichlorobenzene		950	U
91-20-3	Naphthalene		950	U
106-47-8	4-Chloroaniline		950	U
87-68-3	Hexachlorobutadiene		950	U
59-50-7	4-Chloro-3-methylphenol		950	U
91-57-6	2-Methylnaphthalene		950	U
77-47-4	Hexachlorocyclopentadiene		950	U
88-06-2	2,4,6-Trichlorophenol		950	U
95-95-4	2,4,5-Trichlorophenol		950	U
91-58-7	2-Chloronaphthalene		950	U
88-74-4	2-Nitroaniline		1900	U



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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

HP#1-B10

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-01

Sample wt/vol: 12.73 (g/ml) G

Lab File ID: 9802F74A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 17.4 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
208-96-8	Acenaphthylene	950	U	
131-11-3	Dimethylphthalate	950	U	
606-20-2	2,6-Dinitrotoluene	950	U	
83-32-9	Acenaphthene	950	U	
99-09-2	3-Nitroaniline	1900	U	
51-28-5	2,4-Dinitrophenol	1900	U	
132-64-9	Dibenzofuran	950	U	
121-14-2	2,4-Dinitrotoluene	950	U	
100-02-7	4-Nitrophenol	1900	U	
86-73-7	Fluorene	950	U	
7005-72-3	4-Chlorophenyl-phenylether	950	U	
84-66-2	Diethylphthalate	950	U	
100-01-6	4-Nitroaniline	1900	U	
534-52-1	4,6-Dinitro-2-methylphenol	1900	U	
86-30-6	n-Nitrosodiphenylamine	950	U	
101-55-3	4-Bromophenyl-phenylether	950	U	
319-84-6	Alpha - BHC	950	U	
118-74-1	Hexachlorobenzene	950	U	
319-85-7	Beta - BHC	950	U	
58-89-9	Gamma - BHC	950	U	
319-86-8	Delta - BHC	950	U	
87-86-5	Pentachlorophenol	1900	U	
85-01-8	Phenanthrene	950	U	
120-12-7	Anthracene	950	U	
86-74-8	Carbazole	950	U	
76-44-8	Heptachlor	950	U	
84-74-2	Di-n-butylphthalate	1500	B	
309-00-2	Aldrin	950	U	
1024-57-3	Heptachlor Epoxide	950	U	



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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

HP#1-B10

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-01

Sample wt/vol: 12.73 (g/ml) G

Lab File ID: 9802F74A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 17.4 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
206-44-0	Fluoranthene	950	U	
129-00-0	Pyrene	950	U	
959-98-8	Endosulfan I	950	U	
72-55-9	4,4' DDE	950	U	
60-57-1	Dieldrin	950	U	
72-20-8	Endrin	950	U	
33213-65-9	Endosulfan II	950	U	
72-54-8	4,4' - DDD	950	U	
7421-36-3	Endrin Aldehyde	950	U	
85-68-7	Butylbenzylphthalate	950	U	
1031-07-5	Endosulfan Sulfate	950	U	
50-29-3	4,4' - DDT	950	U	
53494-70-5	Endrin Ketone	950	U	
91-94-1	3,3'-Dichlorobenzidine	950	U	
56-55-3	Benzo[a]anthracene	950	U	
218-01-9	Chrysene	950	U	
72-43-5	Methoxychlor	950	U	
117-81-7	bis(2-Ethylhexyl)phthalate	950	U	
117-84-0	Di-n-octylphthalate	950	U	
205-99-2	Benzo[b]fluoranthene	950	U	
207-08-9	Benzo[k]fluoranthene	950	U	
50-32-8	Benzo[a]pyrene	950	U	
193-39-5	Indeno[1,2,3-cd]pyrene	950	U	
53-70-3	Dibenz[a,h]anthracene	950	U	
191-24-2	Benzo[g,h,i]perylene	950	U	

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Sample Field ID:

HP#1-B10

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-01

Sample wt/vol: 12.73 (g/ml) G

Lab File ID: 9802F74A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 17.4 decanted: (Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 4

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000079-34-5	~~Ethane, 1,1,2,2-tetrachloro-~~	~~6.64~~	~~240~~	~~JN~~
2. 000111-46-6	Ethanol, 2,2'-oxybis-	8.14	1400	JN
3.	unknown hydrocarbon	20.46	970	J
4. 010544-50-0	Sulfur, mol. (S8)	26.32	1300	JN



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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

HP2-SS#1

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-05

Sample wt/vol: 12.17 (g/ml) G

Lab File ID: 9802F79A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 23.8 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether		1100	U
108-95-2	Phenol		1100	U
95-57-8	2-Chlorophenol		1100	U
541-73-1	1,3-Dichlorobenzene		1100	U
106-46-7	1,4-Dichlorobenzene		1100	U
95-50-1	1,2-Dichlorobenzene		1100	U
100-51-6	Benzyl alcohol		1100	U
108-60-1	2,2'-Oxybis(1-chloropropane)		1100	U
95-48-7	2-Methylphenol		1100	U
67-72-1	Hexachloroethane		1100	U
621-64-7	N-Nitroso-di-n-propylamine		1100	U
106-44-5	4-Methylphenol		1100	U
98-95-3	Nitrobenzene		1100	U
78-59-1	Isophorone		1100	U
88-75-5	2-Nitrophenol		1100	U
105-67-9	2,4-Dimethylphenol		1100	U
111-91-1	bis(2-Chloroethoxy)methane		1100	U
120-83-2	2,4-Dichlorophenol		1100	U
120-82-1	1,2,4-Trichlorobenzene		1100	U
91-20-3	Naphthalene		1100	U
106-47-8	4-Chloroaniline		1100	U
87-68-3	Hexachlorobutadiene		1100	U
59-50-7	4-Chloro-3-methylphenol		1100	U
91-57-6	2-Methylnaphthalene		1100	U
77-47-4	Hexachlorocyclopentadiene		1100	U
88-06-2	2,4,6-Trichlorophenol		1100	U
95-95-4	2,4,5-Trichlorophenol		1100	U
91-58-7	2-Chloronaphthalene		1100	U
88-74-4	2-Nitroaniline		2200	U



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DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

HP2-SS#1

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-05

Sample wt/vol: 12.17 (g/ml) G

Lab File ID: 9802F79A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 23.8 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

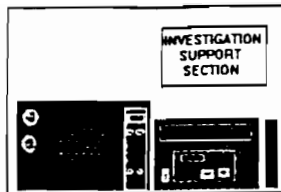
Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
208-96-8	Acenaphthylene	1100	U	
131-11-3	Dimethylphthalate	1100	U	
606-20-2	2,6-Dinitrotoluene	1100	U	
83-32-9	Acenaphthene	1100	U	
99-09-2	3-Nitroaniline	2200	U	
51-28-5	2,4-Dinitrophenol	2200	U	
132-64-9	Dibenzofuran	1100	U	
121-14-2	2,4-Dinitrotoluene	1100	U	
100-02-7	4-Nitrophenol	2200	U	
86-73-7	Fluorene	1100	U	
7005-72-3	4-Chlorophenyl-phenylether	1100	U	
84-66-2	Diethylphthalate	1100	U	
100-01-6	4-Nitroaniline	2200	U	
534-52-1	4,6-Dinitro-2-methylphenol	2200	U	
86-30-6	n-Nitrosodiphenylamine	1100	U	
101-55-3	4-Bromophenyl-phenylether	1100	U	
319-84-6	Alpha - BHC	1100	U	
118-74-1	Hexachlorobenzene	1100	U	
319-85-7	Beta - BHC	1100	U	
58-89-9	Gamma - BHC	1100	U	
319-86-8	Delta - BHC	1100	U	
87-86-5	Pentachlorophenol	2200	U	
85-01-8	Phenanthrene	1100	U	
120-12-7	Anthracene	1100	U	
86-74-8	Carbazole	1100	U	
76-44-8	Heptachlor	1100	U	
84-74-2	Di-n-butylphthalate	750	JB	
309-00-2	Aldrin	1100	U	
1024-57-3	Heptachlor Epoxide	1100	U	



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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID

HP2-SS#1

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-05

Sample wt/vol: 12.17 (g/ml) G

Lab File ID: 9802F79A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 23.8 decanted:(Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
206-44-0	Fluoranthene		1100	U
129-00-0	Pyrene		1100	U
959-98-8	Endosulfan I		1100	U
72-55-9	4,4' DDE		1100	U
60-57-1	Dieldrin		1100	U
72-20-8	Endrin		1100	U
33213-65-9	Endosulfan II		1100	U
72-54-8	4,4' - DDD		1100	U
7421-36-3	Endrin Aldehyde		1100	U
85-68-7	Butylbenzylphthalate		1100	U
1031-07-5	Endosulfan Sulfate		1100	U
50-29-3	4,4' - DDT		1100	U
53494-70-5	Endrin Ketone		1100	U
91-94-1	3,3'-Dichlorobenzidine		1100	U
56-55-3	Benzo[a]anthracene		1100	U
218-01-9	Chrysene		1100	U
72-43-5	Methoxychlor		1100	U
117-81-7	bis(2-Ethylhexyl)phthalate		1100	U
117-84-0	Di-n-octylphthalate		1100	U
205-99-2	Benzo[b]fluoranthene		1100	U
207-08-9	Benzo[k]fluoranthene		1100	U
50-32-8	Benzo[a]pyrene		1100	U
193-39-5	Indeno[1,2,3-cd]pyrene		1100	U
53-70-3	Dibenz[a,h]anthracene		1100	U
191-24-2	Benzo[g,h,i]perylene		1100	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Sample Field ID:

HP2-SS#1

Site Name: HOLIDAY PARK

Site Code: 932033

SDG No.: 100-02

Matrix: (soil/water) SOIL

Lab Sample ID: 998-100-05

Sample wt/vol: 12.17 (g/ml) G

Lab File ID: 9802F79A.D

Level: (low/med) LOW

Date Received: 04/10/98

% Moisture: 23.8 decanted: (Y/N) N

Date Extracted: 04/17/98

Concentrated Extract Volume: 4000 (uL)

Date Analyzed: 04/22/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 1

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000111-46-6	Ethanol, 2,2'-oxybis-	8.14	2100	JN

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INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

18651B

Lab Name: RECRA_LABNET_INC. _____ Contract: C003783 _____

Lab Code: RECNY_ Case No.: SH098 SAS No.: _____ SDG No.: 0701_

Matrix (soil/water): SOIL_ Lab Sample ID: AD808905

Level (low/med): LOW_ Date Received: 07/02/98

% Solids: _81.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16000	-	*	P
7440-36-0	Antimony	1.4	U	N	P
7440-38-2	Arsenic	5.0	-	-	P
7440-39-3	Barium	123	-	-	P
7440-41-7	Beryllium	0.52	B	-	P
7440-43-9	Cadmium	8.7	-	*	P
7440-70-2	Calcium	11300	-	*	P
7440-47-3	Chromium	17.9	-	*	P
7440-48-4	Cobalt	5.0	B	-	P
7440-50-8	Copper	100	-	N*	P
7439-89-6	Iron	14800	-	*	P
7439-92-1	Lead	52.4	-	*	P
7439-95-4	Magnesium	3810	-	*	P
7439-96-5	Manganese	177	-	N*	P
7439-97-6	Mercury	0.12	U	-	CV
7440-02-0	Nickel	32.4	-	N*	P
7440-09-7	Potassium	1850	-	-	P
7782-49-2	Selenium	1.2	U	-	P
7440-22-4	Silver	0.40	U	N	P
7440-23-5	Sodium	1150	B	-	P
7440-28-0	Thallium	1.4	U	-	P
7440-62-2	Vanadium	27.0	-	-	P
7440-66-6	Zinc	105	-	N*	P
	Cyanide		-	-	NR

Color Before: BLACK_ Clarity Before: _____ Texture: FINE_

Color After: YELLOW_ Clarity After: CLEAR_ Artifacts: _____

Comments:

LAB_SAMPLE_ID: A8263301-CGA01093

NYSDEC ASP

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

18652B

Lab Name: RECRA_LABNET_INC. _____ Contract: C003783 _____

Lab Code: RECNY_ Case No.: SH098 SAS No.: _____ SDG No.: 0701_

Matrix (soil/water): SOIL_ Lab Sample ID: AD808906

Level (low/med): LOW_ Date Received: 07/02/98

% Solids: 54.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4330	-	*	P
7440-36-0	Antimony	2.0	U	N	P
7440-38-2	Arsenic	1.3	U		P
7440-39-3	Barium	51.6	B		P
7440-41-7	Beryllium	0.36	U		P
7440-43-9	Cadmium	4.8	-	*	P
7440-70-2	Calcium	17500	-	*	P
7440-47-3	Chromium	8.0	-	*	P
7440-48-4	Cobalt	3.7	B		P
7440-50-8	Copper	173	-	N*	P
7439-89-6	Iron	6440	-	*	P
7439-92-1	Lead	30.4	-	*	P
7439-95-4	Magnesium	2980	-	*	P
7439-96-5	Manganese	92.8	-	N*	P
7439-97-6	Mercury	0.33	-		CV
7440-02-0	Nickel	328	-	N*	P
7440-09-7	Potassium	797	B		P
7782-49-2	Selenium	1.8	U		P
7440-22-4	Silver	0.58	U	N	P
7440-23-5	Sodium	1210	B		P
7440-28-0	Thallium	2.1	U		P
7440-62-2	Vanadium	9.5	B		P
7440-66-6	Zinc	221	-	N*	P
	Cyanide		-		NR

Color Before: BROWN_ Clarity Before: _____ Texture: FINE_

Color After: YELLOW_ Clarity After: CLEAR_ Artifacts: _____

Comments:

LAB SAMPLE ID: A8263302-CGA01093

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

18652BF

Lab Name: RECRA_LABNET_INC. _____ Contract: C003783 _____

Lab Code: RECNY_ Case No.: SH098 SAS No.: _____ SDG No.: 0701_

Matrix (soil/water): SOIL_ Lab Sample ID: AD808907/FD

Level (low/med): LOW_ Date Received: 07/02/99

% Solids: 54.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8220		*	P
7440-36-0	Antimony	2.5	B	N	P
7440-38-2	Arsenic	3.9			P
7440-39-3	Barium	112			P
7440-41-7	Beryllium	0.37	U		P
7440-43-9	Cadmium	9.8		*	P
7440-70-2	Calcium	37300		*	P
7440-47-3	Chromium	16.4		*	P
7440-48-4	Cobalt	7.2	B		P
7440-50-8	Copper	934		N*	P
7439-89-6	Iron	13300		*	P
7439-92-1	Lead	140		*	P
7439-95-4	Magnesium	5900		*	P
7439-96-5	Manganese	196		N*	P
7439-97-6	Mercury	0.31			CV
7440-02-0	Nickel	649		N*	P
7440-09-7	Potassium	1290	B		P
7782-49-2	Selenium	1.8	U		P
7440-22-4	Silver	1.0	B	N	P
7440-23-5	Sodium	1760	B		P
7440-28-0	Thallium	2.1	U		P
7440-62-2	Vanadium	18.2	B		P
7440-66-6	Zinc	448		N*	P
	Cyanide				NR

Color Before: BROWN_ Clarity Before: _____ Texture: FINE_

Color After: YELLOW_ Clarity After: CLEAR_ Artifacts: _____

Comments:

LAB_SAMPLE_ID: A8263302FD-CGA01093

CLIENT_SAMPLE_ID: 18652B_DUPLICATE

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

18653B

Lab Name: RECRA_LABNET_INC._____ Contract: C003783_____

Lab Code: RECNY_ Case No.: SH098 SAS No.: _____ SDG No.: 0701_____

Matrix (soil/water): SOIL_ Lab Sample ID: AD808910

Level (low/med): LOW_ Date Received: 07/02/98

% Solids: _68.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18100	-	*	P
7440-36-0	Antimony	1.6	U	N	P
7440-38-2	Arsenic	5.7	-		P
7440-39-3	Barium	140	-		P
7440-41-7	Beryllium	0.92	B		P
7440-43-9	Cadmium	9.3	-	*	P
7440-70-2	Calcium	11300	-	*	P
7440-47-3	Chromium	20.8	-	*	P
7440-48-4	Cobalt	5.4	B		P
7440-50-8	Copper	52.8	-	N*	P
7439-89-6	Iron	14300	-	*	P
7439-92-1	Lead	50.9	-	*	P
7439-95-4	Magnesium	2720	-	*	P
7439-96-5	Manganese	361	-	N*	P
7439-97-6	Mercury	0.15	U		CV
7440-02-0	Nickel	33.6	-	N*	P
7440-09-7	Potassium	1620	-		P
7782-49-2	Selenium	1.8	-		P
7440-22-4	Silver	0.46	U	N	P
7440-23-5	Sodium	1490	-		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	30.3	-		P
7440-66-6	Zinc	137	-	N*	P
	Cyanide		-		NR

Color Before: BROWN_ Clarity Before: _____ Texture: FINE_

Color After: YELLOW_ Clarity After: CLEAR_ Artifacts: _____

Comments:

LAB_SAMPLE_ID: A8263303-CGA01093

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

18654B

Lab Name: RECRA_LABNET_INC. _____ Contract: C003783 _____

Lab Code: RECNY_ Case No.: SH098 SAS No.: _____ SDG No.: 0701_

Matrix (soil/water): SOIL_ Lab Sample ID: AD808911

Level (low/med): LOW_ Date Received: 07/02/98

% Solids: 72.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14800	-	*	P
7440-36-0	Antimony	1.5	U	N	P
7440-38-2	Arsenic	4.5	-	-	P
7440-39-3	Barium	105	-	-	P
7440-41-7	Beryllium	0.61	B	-	P
7440-43-9	Cadmium	9.9	-	*	P
7440-70-2	Calcium	17100	-	*	P
7440-47-3	Chromium	18.5	-	*	P
7440-48-4	Cobalt	6.0	B	-	P
7440-50-8	Copper	61.3	-	N*	P
7439-89-6	Iron	17200	-	*	P
7439-92-1	Lead	28.0	-	*	P
7439-95-4	Magnesium	5790	-	*	P
7439-96-5	Manganese	263	-	N*	P
7439-97-6	Mercury	0.13	U	-	CV
7440-02-0	Nickel	22.0	-	N*	P
7440-09-7	Potassium	1610	-	-	P
7782-49-2	Selenium	1.4	U	-	P
7440-22-4	Silver	0.43	U	N	P
7440-23-5	Sodium	1100	B	-	P
7440-28-0	Thallium	1.6	U	-	P
7440-62-2	Vanadium	27.1	-	-	P
7440-66-6	Zinc	89.4	-	N*	P
	Cyanide		-	-	NR

Color Before: BROWN_ Clarity Before: _____ Texture: FINE_

Color After: YELLOW_ Clarity After: CLEAR_ Artifacts: _____

Comments:

LAB_SAMPLE_ID: A8263304-CGA01093

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

18655B

Lab Name: RECRA_LABNET_INC. _____ Contract: C003783 _____

Lab Code: RECNY_ Case No.: SH098 SAS No.: _____ SDG No.: 0701_

Matrix (soil/water): SOIL_ Lab Sample ID: AD808912

Level (low/med): LOW_ Date Received: 07/02/98

% Solids: _90.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20600	-	*	P
7440-36-0	Antimony	1.2	U	N	P
7440-38-2	Arsenic	5.6	-	-	P
7440-39-3	Barium	1290	-	-	P
7440-41-7	Beryllium	2.4	-	-	P
7440-43-9	Cadmium	5.9	-	*	P
7440-70-2	Calcium	110000	-	*	P
7440-47-3	Chromium	3.7	-	*	P
7440-48-4	Cobalt	4.0	B	-	P
7440-50-8	Copper	20.8	-	N*	P
7439-89-6	Iron	9820	-	*	P
7439-92-1	Lead	79.2	-	*	P
7439-95-4	Magnesium	10800	-	*	P
7439-96-5	Manganese	15200	-	N*	P
7439-97-6	Mercury	0.11	U	-	CV
7440-02-0	Nickel	11.3	-	N*	P
7440-09-7	Potassium	1640	-	-	P
7782-49-2	Selenium	6.9	-	-	P
7440-22-4	Silver	0.34	U	N	P
7440-23-5	Sodium	895	B	-	P
7440-28-0	Thallium	1.2	U	-	P
7440-62-2	Vanadium	14.6	-	-	P
7440-66-6	Zinc	108	-	N*	P
	Cyanide		-	-	NR

Color Before: BROWN_ Clarity Before: _____ Texture: FINE_

Color After: YELLOW_ Clarity After: CLEAR_ Artifacts: _____

Comments:

LAE_SAMPLE_ID: A8263305-CGA01093

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

18656B

Lab Name: RECRA_LABNET_INC. Contract: C003783

Lab Code: RECNY Case No.: SH098 SAS No.: SDG No.: 0701

Matrix (soil/water): WATER

Lab Sample ID: AD808859

Level (low/med): LOW

Date Received: 07/02/98

% 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				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	8.3	B	N	P
7440-39-3	Barium	1890		N	P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	2.7	B	N	P
7440-70-2	Calcium				NR
7440-47-3	Chromium	3.5	B	N	P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	29.3		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	5.0	U	N	P
7440-22-4	Silver	1.6	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

LAB SAMPLE ID: A8263306-SGA00016

TCLP EXTRACT

METHOD 8240 - TCLP VOLATILES
ANALYSIS DATA SHEET

000011

Client No.

18656B

Lab Name: Recra LabNet

Contract: C003783

Lab Code: RECNY

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263306

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: H7875.RR

Level: (low/med) LOW

Date Samp/Recv: 07/02/98 07/02/98

% Moisture: not dec. 100.0

Heated Purge: N

Date Analyzed: 07/10/98

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 10.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

UG/L

Q

71-43-2-----	Benzene	100	U
78-93-3-----	2-Butanone	100	U
56-23-5-----	Carbon Tetrachloride	100	U
108-90-7-----	Chlorobenzene	100	U
67-66-3-----	Chloroform	100	U
107-06-2-----	1,2-Dichloroethane	100	U
75-35-4-----	1,1-Dichloroethene	100	U
127-18-4-----	Tetrachloroethene	100	U
79-01-6-----	Trichloroethene	100	U
75-01-4-----	Vinyl chloride	100	U

METHOD 8270 - TCLP BASE NEUTRAL/ACID EXTRACTABLES
ANALYSIS DATA SHEET

000013
Client No.

18656B

Lab Name: Recra LabNet

Contract: C003783

Lab Code: RECNY

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263306

Sample wt/vol: 250.00 (g/mL) ML

Lab File ID: X34469.MSQ

Level: (low/med) LOW

Date Samp/Recv: 07/02/98 07/02/98

% Moisture: 100.0 decanted: (Y/N) N

Date Extracted: 07/08/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/03/98

Injection Volume: 2.00 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 5.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

106-46-7-----	1,4-Dichlorobenzene	40	U
121-14-2-----	2,4-Dinitrotoluene	40	U
118-74-1-----	Hexachlorobenzene	40	U
87-68-3-----	Hexachlorobutadiene	40	U
67-72-1-----	Hexachloroethane	40	U
108-39-4-----	3-Methylphenol	40	U
95-48-7-----	2-Methylphenol	40	U
106-44-5-----	4-Methylphenol	40	U
98-95-3-----	Nitrobenzene	40	U
87-86-5-----	Pentachlorophenol	100	U
110-86-1-----	Pyridine	400	U
95-95-4-----	2,4,5-Trichlorophenol	100	U
88-06-2-----	2,4,6-Trichlorophenol	40	U

METHOD 8270 - TCLP BASE NEUTRAL/ACID EXTRACTABLES 00001:
ANALYSIS DATA SHEET

Client No

18656BRE

Lab Name: Recra LabNet

Contract: C003783

Lab Code: RECNY

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263306RE

Sample wt/vol: 70.00 (g/mL) ML

Lab File ID: X34570.MSQ

Level: (low/med) LOW

Date Samp/Recv: 07/02/98 07/02/98

% Moisture: 100.0 decanted: (Y/N) N

Date Extracted: 08/07/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/14/98

Injection Volume: 2.00 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 5.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
106-46-7-----	1,4-Dichlorobenzene		140	U
121-14-2-----	2,4-Dinitrotoluene		140	U
118-74-1-----	Hexachlorobenzene		140	U
87-68-3-----	Hexachlorobutadiene		140	U
67-72-1-----	Hexachloroethane		140	U
108-39-4-----	3-Methylphenol		140	U
95-48-7-----	2-Methylphenol		140	U
106-44-5-----	4-Methylphenol		140	U
98-95-3-----	Nitrobenzene		140	U
87-86-5-----	Pentachlorophenol		360	U
110-86-1-----	Pyridine		1400	U
95-95-4-----	2,4,5-Trichlorophenol		360	U
88-06-2-----	2,4,6-Trichlorophenol		140	U

METHOD 8080 - TCLP PESTICIDES
ANALYSIS DATA SHEET

000017

Client No.

18656B

Lab Name: Recra LabNet

Contract: C003783

Lab Code: RECNY

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263306

Sample wt/vol: 250.00 (g/mL) ML

Lab File ID: RA45102.TX0

% Moisture: 100.0 decanted: (Y/N) N

Date Samp/Recv: 07/02/98 07/02/98

Extraction: (SepF/Cont/Sonc/Soxh): SEPF

Date Extracted: 07/08/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 07/16/98

Injection Volume: 1.00 (uL)

Dilution Factor: 20.00

GPC Cleanup: (Y/N) N pH: 5.00

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
58-89-9-----	gamma-BHC (Lindane)		2.0	U
57-74-9-----	Chlordane		24	U
72-20-8-----	Endrin		2.0	U
76-44-8-----	Heptachlor		2.0	U
1024-57-3-----	Heptachlor epoxide		2.0	U
72-43-5-----	Methoxychlor		2.0	U
8001-35-2-----	Toxaphene		5.2	U

METHOD 8150 - TCLP HERBICIDES
ANALYSIS DATA SHEET

000013
Client No

18656B

Lab Name: Recra LabNet Contract: C003783
Lab Code: RECNY Case No.: SH098 SAS No.: _____ SDG No.: 0701
Matrix: (soil/water) SOIL Lab Sample ID: A8263306
Sample wt/vol: 250.00 (g/mL) ML Lab File ID: MB23102.TX0
% Moisture: 100.0 decanted: (Y/N) N Date Samp/Recv: 07/02/98 07/02/98
Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 07/10/98
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/98
Injection Volume: 1.00 (uL) Dilution Factor: 1.00
GPC Cleanup: (Y/N) N pH: 5.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
94-75-7-----	2,4-D		10	U
93-72-1-----	2,4,5-TP (Silvex)		2.0	U

1
INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

18657B

Lab Name: RECRA_LABNET_INC. Contract: C003783

Lab Code: RECNY Case No.: SH098 SAS No.: SDG No.: 0701

Matrix (soil/water): WATER

Lab Sample ID: AD808861

Level (low/med): LOW

Date Received: 07/02/98

% 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				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.3	B	N	P
7440-39-3	Barium	952		N	P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.6	B	N	P
7440-70-2	Calcium				NR
7440-47-3	Chromium	1.8	U	N	P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	6.2		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	2.0	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	5.0	U	N	P
7440-22-4	Silver	1.6	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

LAB_SAMPLE_ID: A8263307-SGA00016

TCLP_EXTRACT

METHOD 8240 - TCLP VOLATILES
ANALYSIS DATA SHEET

000012
Client No.

18657B

Lab Name: Recra LabNet

Contract: C003783

Lab Code: RECNY

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263307

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: H7876.RR

Level: (low/med) LOW

Date Samp/Recv: 07/02/98 07/02/98

% Moisture: not dec. 100.0

Heated Purge: N

Date Analyzed: 07/10/98

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 10.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
71-43-2-----	Benzene	100	U
78-93-3-----	2-Butanone	100	U
56-23-5-----	Carbon Tetrachloride	100	U
108-90-7-----	Chlorobenzene	100	U
67-66-3-----	Chloroform	100	U
107-06-2-----	1,2-Dichloroethane	100	U
75-35-4-----	1,1-Dichloroethene	100	U
127-18-4-----	Tetrachloroethene	100	U
79-01-6-----	Trichloroethene	100	U
75-01-4-----	Vinyl chloride	100	U

000015

Client No.

18657B

Lab Name: Recra LabNet

Contract: C003783

Lab Code: RECNY

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263307

Sample wt/vol: 250.00 (g/mL) ML

Lab File ID: X34470.MSQ

Level: (low/med) LOW

Date Samp/Recv: 07/02/98 07/02/98

% Moisture: 100.0 decanted: (Y/N) N

Date Extracted: 07/08/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/03/98

Injection Volume: 2.00 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 5.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

106-46-7-----	1,4-Dichlorobenzene	3	J
121-14-2-----	2,4-Dinitrotoluene	40	U
118-74-1-----	Hexachlorobenzene	40	U
87-68-3-----	Hexachlorobutadiene	40	U
67-72-1-----	Hexachloroethane	40	U
108-39-4-----	3-Methylphenol	40	U
95-48-7-----	2-Methylphenol	40	U
106-44-5-----	4-Methylphenol	40	U
98-95-3-----	Nitrobenzene	40	U
87-86-5-----	Pentachlorophenol	100	U
110-86-1-----	Pyridine	400	U
95-95-4-----	2,4,5-Trichlorophenol	100	U
88-06-2-----	2,4,6-Trichlorophenol	40	U

000018

Client No

18657BRE

Lab Name: Recra LabNet

Contract: C003783

Lab Code: RECN

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263307RE

Sample wt/vol: 250.00 (g/mL) ML

Lab File ID: X34571.MSQ

Level: (low/med) LOW

Date Samp/Recv: 07/02/98 07/02/98

% Moisture: 100.0 decanted: (Y/N) N

Date Extracted: 08/07/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/14/98

Injection Volume: 2.00 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 4.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
106-46-7-----	1,4-Dichlorobenzene	40	U	
121-14-2-----	2,4-Dinitrotoluene	40	U	
118-74-1-----	Hexachlorobenzene	40	U	
87-68-3-----	Hexachlorobutadiene	40	U	
67-72-1-----	Hexachloroethane	40	U	
108-39-4-----	3-Methylphenol	40	U	
95-48-7-----	2-Methylphenol	40	U	
106-44-5-----	4-Methylphenol	40	U	
98-95-3-----	Nitrobenzene	40	U	
87-86-5-----	Pentachlorophenol	100	U	
110-86-1-----	Pyridine	400	U	
95-95-4-----	2,4,5-Trichlorophenol	100	U	
88-06-2-----	2,4,6-Trichlorophenol	40	U	

METHOD 8080 - TCLP PESTICIDES
ANALYSIS DATA SHEET

000013

Client No.

18657B

Lab Name: Recra LabNet

Contract: C003783

Lab Code: RECNY

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263307

Sample wt/vol: 250.00 (g/mL) ML

Lab File ID: RA45103.TX0

% Moisture: 100.0 decanted: (Y/N) N

Date Samp/Recv: 07/02/98 07/02/98

Extraction: (SepF/Cont/Sonc/Soxh): SEPF

Date Extracted: 07/08/98

Concentrated Extract Volume: 10000(uL)

Date Analyzed: 07/16/98

Injection Volume: 1.00(uL)

Dilution Factor: 20.00

GPC Cleanup: (Y/N) N pH: 5.00

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
58-89-9-----	gamma-BHC (Lindane)		2.0	U
57-74-9-----	Chlordane		24	U
72-20-8-----	Endrin		2.0	U
76-44-8-----	Heptachlor		2.0	U
1024-57-3-----	Heptachlor epoxide		2.0	U
72-43-5-----	Methoxychlor		2.0	U
8001-35-2-----	Toxaphene		5.2	U

METHOD 8150 - TCLP HERBICIDES
ANALYSIS DATA SHEET

000000
Client No.

18657B

Lab Name: Recra LabNet

Contract: C003783

Lab Code: RECNY

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263307

Sample wt/vol: 250.00 (g/mL) ML

Lab File ID: MB23101.TX0

% Moisture: 100.0 decanted: (Y/N) N

Date Samp/Recv: 07/02/98 07/02/98

Extraction: (SepF/Cont/Sonc/Soxh): SEPF

Date Extracted: 07/10/98

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 07/15/98

Injection Volume: 1.00 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 5.00

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

UG/L

Q

94-75-7-----2,4-D

10

U

93-72-1-----2,4,5-TP (Silvex)

2.0

U

SBLK25

Lab Name: Recra LabNetContract: C003783Lab Code: RECNYCase No.: SH098

SAS No.: _____

SDG No.: 0701Matrix: (soil/water) SOILLab Sample ID: A8B0512103Sample wt/vol: 1000.0 (g/mL) MLLab File ID: X34473.MSQLevel: (low/med) LOW

Date Samp/Recv: _____

% Moisture: _____ decanted: (Y/N) NDate Extracted: 07/08/98Concentrated Extract Volume: 1000 (uL)Date Analyzed: 08/03/98Injection Volume: 2.00 (uL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
106-46-7-----	1,4-Dichlorobenzene		10	U
121-14-2-----	2,4-Dinitrotoluene		10	U
118-74-1-----	Hexachlorobenzene		10	U
87-68-3-----	Hexachlorobutadiene		10	U
67-72-1-----	Hexachloroethane		10	U
108-39-4-----	3-Methylphenol		10	U
95-48-7-----	2-Methylphenol		10	U
106-44-5-----	4-Methylphenol		10	U
98-95-3-----	Nitrobenzene		10	U
87-86-5-----	Pentachlorophenol		25	U
110-86-1-----	Pyridine		100	U
95-95-4-----	2,4,5-Trichlorophenol		25	U
88-06-2-----	2,4,6-Trichlorophenol		10	U

METHOD 8240 - TCLP VOLATILES
ANALYSIS DATA SHEET

000044

Client No.

VBLK25

Lab Name: Recra LabNet

Contract: C003783

Lab Code: RECNY

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263309

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: H7871.RR

Level: (low/med) LOW

Date Samp/Recv: _____

% Moisture: not dec. _____ Heated Purge: N

Date Analyzed: 07/10/98

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

71-43-2-----	Benzene	10	U
78-93-3-----	2-Butanone	10	U
56-23-5-----	Carbon Tetrachloride	10	U
108-90-7-----	Chlorobenzene	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
75-35-4-----	1,1-Dichloroethene	10	U
127-18-4-----	Tetrachloroethene	10	U
79-01-6-----	Trichloroethene	10	U
75-01-4-----	Vinyl chloride	10	U

METHOD 8240 - TCLP VOLATILES
ANALYSIS DATA SHEET

000126

Client No.

Lab Name: Recra LabNet

Contract: C003783

Extractor Blank

Lab Code: RECNY

Case No.: SH098

SAS No.: _____

SDG No.: 0701

Matrix: (soil/water) SOIL

Lab Sample ID: A8263311

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: H7874.RR

Level: (low/med) LOW

Date Samp/Recv: _____

% Moisture: not dec. 100.0

Heated Purge: N

Date Analyzed: 07/10/98

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 10.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

UG/L

Q

71-43-2-----Benzene

100

U

78-93-3-----2-Butanone

100

U

56-23-5-----Carbon Tetrachloride

100

U

108-90-7-----Chlorobenzene

100

U

67-66-3-----Chloroform

100

U

107-06-2-----1,2-Dichloroethane

100

U

75-35-4-----1,1-Dichloroethene

100

U

127-18-4-----Tetrachloroethene

100

U

79-01-6-----Trichloroethene

100

U

75-01-4-----Vinyl chloride

100

U

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS
NEW YORK STATE LABORATORY #11369

LABORATORY REPORT - TCLP 8270 FULL

Cust **NYSDEC - ALBANY**
Address **50 WOLF RD RM. 208**
ALBANY, NY 12233
Attn: **VALERIE WOODWARD**Phone 518-457-9538
FAXPO Number: **DIRECT BILL**
Project Number **SITE# 932033**
Project Cust: **DERRWODD COUNTY CLUB**
Project Site: **N. TONAWANDA, NY**
Date FAXED:
Lab Director 

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Results in bold type; Detection Limits in small print
Detection Limits* = Water=ug/ml ppm
*See Individual LimitResults shown are: **A/B/N COMPOUNDS**
Extraction Method: **EPA 3510 Liquid/Liquid**
Analysis Method: **EPA 8270 GC/MS**Sample ID (LAB)
Sample ID#1(CUST)
Sample ID#2(CUST)
Matrix
Sampled By
Date Sampled
Date Received
Date Analyzed
Date Reported

20209
#1306 SOIL SAMPLE
SITE A
SOIL
GARY RICCI
08/25/98 08:45
08/27/98 04:00
09/02/98
09/03/98

Phenol
Bis(2-chloroethyl) ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
Pyridine
Bis(2-Chloroisopropyl) ether
N-Nitrosodi-n-propylamine
Hexachloroethane
2-Methylphenol
3,4-Methylphenol
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
Hexachlorobutadiene
4-Chloro-3-methylphenol
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
E=Exceeds calibration range

Results	Det Limit*	Results	Det Limit*
< DL(U)	0.010	2-Chloronaphthalene	< DL(U) 0.010
< DL(U)	0.010	Dimethyl phthalate	< DL(U) 0.010
< DL(U)	0.010	Acenaphthylene	< DL(U) 0.010
< DL(U)	0.010	2,6-Dinitrotoluene	< DL(U) 0.010
< DL(U)	0.010	Acenaphthene	< DL(U) 0.010
< DL(U)	0.010	2,4-Dinitrophenol	< DL(U) 0.010
< DL(U)	0.010	Dibenzofuran	< DL(U) 0.010
< DL(U)	0.010	2,4-Dinitrotoluene	< DL(U) 0.010
< DL(U)	0.010	4-Nitrophenol	< DL(U) 0.010
< DL(U)	0.010	Diethyl phthalate	< DL(U) 0.010
< DL(U)	0.010	Fluorene	< DL(U) 0.010
< DL(U)	0.010	4-Chlorophenyl phenyl ether	< DL(U) 0.010
< DL(U)	0.010	2,3,4,6-Tetrachlorophenol	< DL(U) 0.010
< DL(U)	0.010	4,6-Dinitro-2-methylphenol	< DL(U) 0.010
< DL(U)	0.010	N-Nitrosodiphenylamine	< DL(U) 0.010
< DL(U)	0.010	4-Bromophenyl phenyl ether	< DL(U) 0.010
< DL(U)	0.010	Hexachlorobenzene	< DL(U) 0.010
< DL(U)	0.010	Pentachlorophenol	< DL(U) 0.010
< DL(U)	0.010	Phenanthrene	< DL(U) 0.010
< DL(U)	0.010	Anthracene	< DL(U) 0.010
< DL(U)	0.010	Di-n-butyl phthalate	< DL(U) 0.010
< DL(U)	0.020	Fluoranthene	< DL(U) 0.010
< DL(U)	0.010	Benzidine	< DL(U) 0.010
< DL(U)	0.010	Pyrene	< DL(U) 0.010
< DL(U)	0.010	Butyl benzyl phthalate	< DL(U) 0.010
< DL(U)	0.010	Benzo(a)anthracene	< DL(U) 0.010
< DL(U)	0.010	3,3'-Dichlorobenzidine	< DL(U) 0.010
< DL(U)	0.010	Chrysene	< DL(U) 0.010
< DL(U)	0.010	Bis(2-ethylhexyl)phthalate	< DL(U) 0.040
< DL(U)	0.010	Di-n-octyl phthalate	< DL(U) 0.010
< DL(U)	0.010	Benzo(b)fluoranthene	< DL(U) 0.010
< DL(U)	0.010	Benzo(k)fluoranthene	< DL(U) 0.010
< DL(U)	0.010	Benzo(a)pyrene	< DL(U) 0.010
< DL(U)	0.010	Indeno(1,2,3-c,d)pyrene	< DL(U) 0.010
< DL(U)	0.010	Dibenz(a,h)anthracene	< DL(U) 0.010
< DL(U)	0.010	Benzo(g,h,i)perylene	< DL(U) 0.010

RESULTS WHEN YOU WANT THEM

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS
NEW YORK STATE LABORATORY #11369

LABORATORY REPORT - TCLP 8270 FULL

Cust: NYSDEC - ALBANY
Address 50 WOLF RD RM. 208
ALBANY, NY 12233
Attn: VALERIE WOODWARDPhone 518-457-9538
FAXPO Number: DIRECT BILL
Project Number SITE# 932033
Project Cust: DERRWODD COUNTY CLUB
Project Site: N. TONAWANDA, NY
Date FAXED:
Lab Director

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Results in bold type; Detection Limits in small print
Detection Limits* = Water=ug/ml ppm
*See Individual LimitResults shown are: A/B/N COMPOUNDS
Extraction Method: EPA 3510 Liquid/Liquid
Analysis Method: EPA 8270 GC/MSSample ID (LAB)
Sample ID#1(CUST)
Sample ID#2(CUST)
Matrix
Sampled By
Date Sampled
Date Received
Date Analyzed
Date Reported20210
#1407 SOIL SAMPLE
SITE B
SOIL
GARY RICCI
08/25/98 08:45
08/27/98 04:00
09/02/98
09/03/98Phenol
Bis(2-chloroethyl) ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
Pyridine
Bis(2-Chloroisopropyl) ether
N-Nitrosodi-n-propylamine
Hexachloroethane
2-Methylphenol
3,4-Methylphenol
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
Hexachlorobutadiene
4-Chloro-3-methylphenol
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
E=Exceeds calibration range

Results	Det Limit*	Diethyl phthalate	Results	Det Limit*
< DL(U)	0.010	Fluorene	< DL(U)	0.010
< DL(U)	0.010	4-Chlorophenyl phenyl ether	< DL(U)	0.010
< DL(U)	0.010	2,3,4,6-Tetrachlorophenol	< DL(U)	0.010
< DL(U)	0.010	4,6-Dinitro-2-methylphenol	< DL(U)	0.010
< DL(U)	0.010	N-Nitrosodiphenylamine	< DL(U)	0.010
< DL(U)	0.010	4-Bromophenyl phenyl ether	< DL(U)	0.010
< DL(U)	0.010	Hexachlorobenzene	< DL(U)	0.010
< DL(U)	0.010	Pentachlorophenol	< DL(U)	0.010
< DL(U)	0.010	Phenanthrene	< DL(U)	0.010
< DL(U)	0.010	Anthracene	< DL(U)	0.010
< DL(U)	0.010	Di-n-butyl phthalate	< DL(U)	0.010
< DL(U)	0.020	Fluoranthene	< DL(U)	0.010
< DL(U)	0.010	Benzidine	< DL(U)	0.010
< DL(U)	0.010	Pyrene	< DL(U)	0.010
< DL(U)	0.010	Butyl benzyl phthalate	< DL(U)	0.010
< DL(U)	0.010	Benzo(a)anthracene	< DL(U)	0.010
< DL(U)	0.010	3,3'-Dichlorobenzidine	< DL(U)	0.010
< DL(U)	0.010	Chrysene	< DL(U)	0.010
< DL(U)	0.010	Bis(2-ethylhexyl)phthalate	< DL(U)	0.040
< DL(U)	0.010	Di-n-octyl phthalate	< DL(U)	0.010
< DL(U)	0.010	Benzo(b)fluoranthene	< DL(U)	0.010
< DL(U)	0.010	Benzo(k)fluoranthene	< DL(U)	0.010
< DL(U)	0.010	Benzo(a)pyrene	< DL(U)	0.010
< DL(U)	0.010	Indeno(1,2,3-c,d)pyrene	< DL(U)	0.010
< DL(U)	0.010	Dibenz(a,h)anthracene	< DL(U)	0.010
< DL(U)	0.010	Benzo(g,h,i)perylene	< DL(U)	0.010

RESULTS WHEN YOU WANT THEM

PO Box 40 5611 Water Street Middlesex NY 14507

Tel: (716) 554-5347

Tel: (800) THE LABS

Tel: (800) 843-5227

FAX: (716) 554-4114

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS

NEW YORK STATE LABORATORY #11369

LABORATORY REPORT - TCLP 8270 FULL

Cust NYSDEC - ALBANY
Address 50 WOLF RD RM. 208
ALBANY, NY 12233
Attn: VALERIE WOODWARD

Phone 518-457-9538
FAX

PO Number: **DIRECT BILL**
Project Number: **SITE# 932033**
Project Cust: **DERRWODD COUNTY CLUB**
Project Site: **N. TONAWANDA, NY**
Date FAXED:
Lab Director

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Results in bold type: Detection Limits in small print
Detection Limits* = Water=ug/ml ppm
*See Individual Limit

Results shown are:	A/B/N COMPOUNDS
Extraction Method:	EPA 3510 Liquid/Liquid
Analysis Method:	EPA 8270 GC/MS

Sample ID (LAB)
Sample ID#1(CUST)
Sample ID#2(CUST)
Matrix
Sampled By
Date Sampled
Date Received
Date Analyzed
Date Reported

20211	
#1408 SOIL SAMPLE	
SITE C	
SOIL	
GARY RICCI	
08/25/98	08:45
08/27/98	04:00
09/03/98	
09:03/98	

2-Chloronaphthalene	< DL(U)	0.010
Dimethyl phthalate	< DL(U)	0.010
Acenaphthylene	< DL(U)	0.010
2,6-Dinitrotoluene	< DL(U)	0.010
Acenaphthene	< DL(U)	0.010
2,4-Dinitrophenol	< DL(U)	0.010
Dibenzofuran	< DL(U)	0.010
2,4-Dinitrotoluene	< DL(U)	0.010
4-Nitrophenol	< DL(U)	0.010
Diethyl phthalate	< DL(U)	0.010
Fluorene	< DL(U)	0.010
4-Chlorophenyl phenyl ether	< DL(U)	0.010
2,3,4,6-Tetrachlorophenol	< DL(U)	0.010
4,6-Dinitro-2-methylphenol	< DL(U)	0.010
N-Nitrosodiphenylamine	< DL(U)	0.010
4-Bromophenyl phenyl ether	< DL(U)	0.010
Hexachlorobenzene	< DL(U)	0.010
Pentachlorophenol	< DL(U)	0.010
Phenanthrene	< DL(U)	0.010
Anthracene	< DL(U)	0.010
Di-n-butyl phthalate	< DL(U)	0.010
Fluoranthene	< DL(U)	0.010
Benzidine	< DL(U)	0.010
Pyrene	< DL(U)	0.010
Butyl benzyl phthalate	< DL(U)	0.010
Benzo(a)anthracene	< DL(U)	0.010
3,3'-Dichlorobenzidine	< DL(U)	0.010
Chrysene	< DL(U)	0.010
Bis(2-ethylhexyl)phthalate	< DL(U)	0.040
Di-n-octyl phthalate	< DL(U)	0.010
Benzo(b)fluoranthene	< DL(U)	0.010
Benzo(k)fluoranthene	< DL(U)	0.010
Benzo(a)pyrene	< DL(U)	0.010
Indeno(1,2,3-c,d)pyrene	< DL(U)	0.010
Dibenz(a,h)anthracene	< DL(U)	0.010
Benzo(g,h,i)perylene	< DL(U)	0.010

Phenol
Bis(2-chloroethyl) ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
Pyridine
Bis(2-Chloroisopropyl) ether
N-Nitrosodi-n-propylamine
Hexachloroethane
2-Methylphenol
3,4-Methylphenol
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
Hexachlorobutadiene
4-Chloro-3-methylphenol
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
E=Exceeds calibration range

[illegible]

RESULTS WHEN YOU WANT THEM

PO Box 40 5611 Water Street Middlesex NY 14507

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS
NEW YORK STATE LABORATORY #11369

Cust **NYSDEC - ALBANY**
Address **50 WOLF RD RM. 208**
ALBANY, NY 12233
Attn: **VALERIE WOODWARD**

Phone **518-457-9538**
FAX

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Sample ID (LAB)	20212
Sample ID#1(CUST)	#1409 SOIL SAMPLE
Sample ID#2(CUST)	SITE D
Matrix	SOIL
Sampled By	GARY RICCI
Date Sampled	08/25/98 08:45
Date Received	08/27/98 04:00
Date Analyzed	09/03/98
Date Reported	09/03/98

Phenol
Bis(2-chloroethyl) ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
Pyridine
Bis(2-Chloroisopropyl) ether
N-Nitrosodi-n-propylamine
Hexachloroethane
2-Methylphenol
3,4-Methylphenol
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
Hexachlorobutadiene
4-Chloro-3-methylphenol
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
E=Exceeds calibration range

RESULTS WHEN YOU WANT THEM

PO Box 40 5611 Water Street Middlesex NY 14507

Tel: (716) 554-5347

Tel: (800) THE LABS

Tel: (800) 843-5227

FAX: (716) 554-4114

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS

NEW YORK STATE LABORATORY #11369

LABORATORY REPORT - TCLP 8270 FULL

Cust NYSDEC - ALBANY
Address 50 WOLF RD RM. 208
ALBANY, NY 12233
Attn: VALERIE WOODWARD
Phone 518-457-9538
FAX

PO Number: **DIRECT BILL**
Project Number **SITE# 932033**
Project Cust: **DERRWODD COUNTY CLUB**
Project Site: **N. TONAWANDA, NY**
Date FAXED:
Lab Director

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Results in bold type; Detection Limits in small print
Detection Limits* = Water=ug/nl ppm
*See Individual Limit

Results shown are:	A/B/N COMPOUNDS
Extraction Method:	EPA 3510 Liquid/Liquid
Analysis Method:	EPA 8270 GC/MS

Sample ID (LAB)
Sample ID#1(CUST)
Sample ID#2(CUST)
Matrix
Sampled By
Date Sampled
Date Received
Date Analyzed
Date Reported

20213	
#1410 SOIL SAMPLE	
SITE F	
SOIL	
GARY RICCI	
03/25/98	08:45
03/27/98	04:00
09/03/98	
09/03/98	

Results Det Limit

Phenol
Bis(2-chloroethyl) ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
Pyridine
Bis(2-Chloroisopropyl) ether
N-Nitrosodi-n-propylamine
Hexachloroethane
2-Methylphenol
3,4-Methylphenol
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
Hexachlorobutadiene
4-Chloro-3-methylphenol
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
E=Exceeds calibration range

< DL(U)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(C)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(U)	0.020
< DL(U)	0.010
< DL(C)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(C)	0.010
< DL(C)	0.010
< DL(C)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(U)	0.010
< DL(C)	0.010
< DL(U)	0.010

2-Chloronaphthalene
Dimethyl phthalate
Acenaphthylene
2,6-Dinitrotoluene
Acenaphthene
2,4-Dinitrophenol
Dibenzofuran
2,4-Dinitrotoluene
4-Nitrophenol
Diethyl phthalate
Fluorene
4-Chlorophenyl phenyl ether
2,3,4,6-Tetrachlorophenol
4,6-Dinitro-2-methylphenol
N-Nitrosodiphenylamine
4-Bromophenyl phenyl ether
Hexachlorobenzene
Pentachlorophenol
Phenanthrene
Anthracene
Di-n-butyl phthalate
Fluoranthene
Benzidine
Pyrene
Butyl benzyl phthalate
Benzo(a)anthracene
3,3'-Dichlorobenzidine
Chrysene
Bis(2-ethylhexyl)phthalate
Di-n-octyl phthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-c,d)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene

[illegible]

RESULTS WHEN YOU WANT THEM



MAN - COPY

NY 14507

6-554-4114

WORKORDER

SPECIALIZING IN ENVIRONMENTAL SOILS TESTS

NY = 11369 NJ = 73744 CA = 2055 SC = 91011

5th Day 9/3

CUSTOMER: NYS DEC - ALBANY
 ADDRESS: 50 WOLF RD RM 208
 CITY: ALBANY
 STATE/ZIP: NY 12233
 PHONE: 518-457-7538
 FAX: _____
 CONTACT: Valerie Woodward

PO NUMBER: Direct Bill
 PROJECT NO: Site # 932033
 PROJECT CUST: Deerwood County Club
 PROJECT SITE: N. Tonawanda NY
 SEND RESULTS: ☐ FAX ☐ EXPR MAIL
 PHONE RESULTS: ☐ YES ☐ NO

SAMPLE DEMOGRAPHICS AND TESTS REQUIRED

8020 BTEX - MTBE
 8021 - MTBE
 503.1
 TPH GASOLINE
 TPH DIESEL
 8240
 8260 (Stars)
 8260
 8 RCRA METALS (DIRECT)

8270 (Stars)
 625
 PCB'S
 602
 624
 TON
 LEAD ONLY

FULL TCLP
 TCLP LESS HERBS & PESTS
 TCLP VOLATILES
 TCLP SEMI-VOLATILES
 8 RCRA METALS (TCLP)
 HERBICIDES
 PESTICIDES
 REACTIVITY
 CORROSIVITY
 FLASH POINT

LIST ANALYSIS REQUIRED

(DIESEL)
 (GAS OR OIL)
 SUSPECT: _____

SPECIAL INSTRUCTIONS: FAX COPY TO
ENVIRON S&W. GRP. ATTN GARY RICCI

DATE TIME SAMPLE DESCRIPTION / LOCATION / MATRIX

8/25/98	7:45AM	#1406	Soil Sample Site A
8/25/98	9:10AM	#1407	Soil Sample Site B
8/25/98	9:45AM	#1408	Soil Sample Site C
8/25/98	10:30AM	#1409	Soil Sample Site D
8/25/98	11:00AM	#1410	Soil Sample Site F

TCLP Semi-Volatiles

CHAIN OF CUSTODY RECORD

of SAMPLES 5 # of CONTAINERS 5
 SAMPLED BY: GARY RICCI
 SIGNATURE: [Signature]
 NAME: _____
 DATED: 8/25/98 TIME: 4:00
 HOW SENT: ☒ EXP MAIL ☐ HAND CARRY
 SIGNATURE 2: _____
 NAME 2: _____
 DATED 2: _____ TIME: _____
 HOW SENT 2: ☐ EXP MAIL ☐ HAND CARRY

SAMPLES RECEIVED BY: [Signature]
 SIGNATURE: [Signature]
 NAME: _____
 DATE: 8/25/98 TIME: 4:00
 HOW RECD: ☐ EXP MAIL ☐ HAND CARRY
 FREIGHT IN: S
 LOGGED IN: [Signature] TIME: 4:00
 SAMPLE COND: 5.5 SAMPLE TEMP: 5.5
 LAB NOTES: _____

White-Lab, Yellow-
 Customer, Hard-Lab

RESULTS WHEN YOU WANT THEM

expw20doc

TOTAL 8.00

**MITKEM
CORPORATION**

May 11, 1998

Malcolm Pirnie, Inc.
40 Centre Drive
Orchard Park, NY 14127
Attn: Mr. Daniel Riker

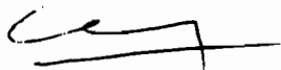
RE: Client Project #: 0266-325, Holiday Park
Lab Project #: E0499

Dear Mr. Riker:

Enclosed please find the data report of the required analyses for the samples associated with the above referenced project. If you have any questions regarding this report, please call me.

We appreciate your business.

Sincerely,



Kin S. Chiu
Technical Director

Analytical Data Package for Malcolm Pirnie, Inc.

Client Project ID: Holiday Park

Client Project No.: 0266-325

Mitkem Project ID: E0499

May 11, 1998

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to Malcolm Pirnie's Holiday Park Project. Under this deliverable, three aqueous and four soil samples were received on April 9 and 11, 1998.

The following samples are submitted in this data package:

<u>Client ID</u>	<u>Lab ID</u>	<u>Analysis</u>
BG-B2W	E0499-01	M,C,V,S,P
BG-SW1	E0499-02	M,C,V,S,P
HP1-B16W	E0499-03	M,C,V,S,P
HP1-B12	E0499-04	M,C,V,S,P
HP1-B16	E0499-05	M,C,V,S,P
HP1-SS1A	E0499-06	M,C,V,S,P
HP2-SS1	E0499-07	M,C,V,S,P
HP2-SS1MS	E0499-07MS	M,C,V,S,P
HP2-SS1MSD	E0499-07MSD	V,S,P
HP2-SS1DUP	E0499-07D	M,C

M = TAL Metals

C = Cyanide

V = Volatiles

S = Semivolatiles

P = Pesticides/PCB

The analysis were performed per ASP protocols (ASP 1995 SOW) and presented per ASP requirement for category A. The following observations were made for the analysis:

A. Cyanide analysis:

No unusual observation was made for the analysis.

B. Metal analysis:

No unusual observation was made for the analysis.

C. Volatile analysis:

Sample HP1-B16W was analyzed at dilution (5x) due to the high concentration of toluene in the sample. No other unusual observation was made for the analysis.

D. Semivolatile analysis:

Samples HP1-B12 and HP1-SS1A exhibited low surrogate recovery. The two soil samples were re-extracted out of the holding time. The recoveries were in compliance in the re-extracted samples.

The 6th internal standard area count for sample HP1-SS1ARE was out of the QC limit.

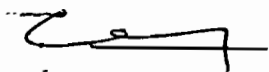
The sample extract was re-analyzed (HP1-SS1ARERE) with similar results.

The recovery of 4-nitrophenol was high in both of the aqueous lab control samples (SBLK03LCS and SBLK04LCS).

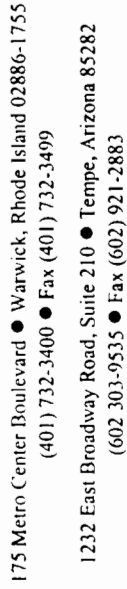
E. Pesticides/PCB analysis:

The recovery of heptachlor was out of the advisory limit in one of the duplicate matrix spikes. No other unusual observation was made for the analysis.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

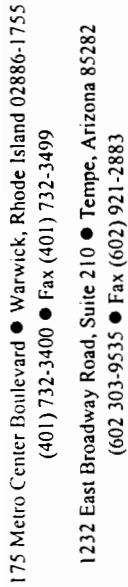


Kin S. Chiu, 5/11/98
Technical Director



Page / of /

WHITE: LABORATORY COPY
YELLOW: REPORT COPY
PINK: CLIENT'S COPY

Page 1 of 1

LABC **RYC** **YEL** **REFC** **COPY** **CL:** **COP:**

MITKEM CORPORATION

Lab Project #: **E0499** **R1**

Client Name: **Malcolm Pirnie, Inc.**

Client Proj #: **0266-325**

Client PO #: **NA**

Project Name: **Holiday Park**

Date Due: **5/4/98**

Total Price: \$ **-**

Project Mgr: **PAS**

Salesman: **PAS**

Del Req'd: **ASP Category B (2 copies) Form 1's in Excel**

Completed?: **YES**

Logged In By: MAN

Reviewed By: PAS

Date: 4-14-98 Time: 1500

Lab ID	Client ID	Matrix	Analysis	Price	Sampled	Received	TPH	IR	BNA	Herb	P/P	Wet	Met	V-GC	V-MS	Sub
-01	BG-B2W	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW		4/7/98	4/9/98			1		1					
-02	BG-SW1	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW		4/7/98	4/9/98					1					
-03	HP1-B16W	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW		4/9/98	4/11/98					1					
-04	HP1-B12	SL	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW		4/9/98	4/11/98					1					

006

MITKEM CORPORATION

Lab ID	Client ID	Matrix	Analysis	Price	Sampled	Received	TPH	IR	BNA	Herb	P/P	Wet	Met	Y-GC	Y-MS	Sub
<u>ORIGINAL REPORT GOES TO:</u>																
Malcolm Pirnie, Inc.																
40 Centre Drive																
Buffalo, NY 14219																
<u>INVOICE GOES TO:</u>																
Same																
<u>ADDITIONAL REPORT GOES TO:</u>																
None																

008

MITKEM CORPORATION

Sample Condition Form

Page ___ of ___

Received By: <u>AB</u>		Reviewed By: _____		Date: <u>4/9/98</u>		MITKEM Project: <u>ED499</u>	
Client Project: <u>-</u>		Client: <u>Malcolm Pirnie</u>					
Condition:	Sample ID		Preservation (pH)				Comments/Remarks/ Corrective Action*
	Lab	Client	HNO ₃	H ₂ SO ₄	HCl	NaOH	
1) Custody Seal(s)	Present/Absent <u>(Present)</u> Coolers/Bottles Intact/Broken	-01 BB-B2W					
		-02 BB-SW1					
2) Custody Seal Number(s)	<u>N/A</u>						
3) Chain-of-Custody	Present/Absent <u>(Present)</u>						
4) Cooler Temperature	<u>3°C</u>						
Coolant Condition							
5) Airbill(s)	Present/Absent <u>(Present)</u>						
Airbill Number(s)	<u>FedEx</u> <u>800195869753</u>						
6) Sample Bottles	Intact <u>(Intact)</u> Broken Leaking						
7) Date Received	<u>4/9/98</u>						
8) Time Received	<u>1000</u>						
9) Project Due Date							<u>009</u>

* See Sample Condition Notification/Corrective Action Form yes / (no)

August 20, 1998

Malcolm Pirnie, Inc.
40 Centre Drive
Orchard Park, NY 14127
Attn: Mr. Daniel Riker

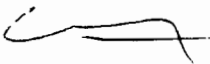
RE: Client Project #: 0266-325, Botanical Gardens
Lab Project #: E1191

Dear Mr. Riker:

Enclosed please find the data report of the required analyses for the samples associated with the above referenced project. If you have any questions regarding this report, please call me.

We appreciate your business.

Sincerely,



Kin S. Chiu
Technical Director

SAMPLE PREPARATION AND ANALYSIS SUMMARY

SEMIVOLATILE (BNA) ANALYSES

[illegible]

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOLATILE (VOA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
E1191-01	AG	7/28/98	7/29/98		8/1/98
-02					
-03					
-04					
-05					
-06					8/2/98
-07					8/1/98
-08		7/29/98	7/30/98		7/31/98
-09					
-10					
-11					
-11 MS					
-11 MSD					
-12					

SAMPLE PREPARATION AND ANALYSIS SUMMARY
PESTICIDE/PCB
ANALYSES

[illegible]

SAMPLE PREPARATION AND ANALYSIS SUMMARY

SEMIVOLATILE (BNA)

ANALYSES

[illegible]

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

Laboratory Sample ID	Matrix	Metals Requested	Date Rec'd at Lab	Date Analyzed
E1191-01	AG	ASPMET / ASPCN	7/28/98	8/5/98
-02				
-03				
-04				
-05				
-06			↓	
-08			7/29/98	
-09				
-10				
-11				
-11 MS				
-11 MSD	↓	↓	↓	↓

Analytical Data Package for Malcolm Pirnie, Inc.

Client Project ID: Botanical Gardens

Client Project No.: 0266-325

Mitkem Project ID: E1191

August 20, 1998

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to Malcolm Pirnie's Botanical Gardens Project. Under this deliverable, twelve aqueous samples were received on July 29 and 30, 1998.

The following samples are submitted in this data package:

<u>Client ID</u>	<u>Lab ID</u>	<u>Analysis</u>
BG-MW-1	E1191-01	V,S,P,M,C
BG-MW-2	E1191-02	V,S,P,M,C
BG-MW-3	E1191-03	V,S,P,M,C
BG-MW-4	E1191-04	V,S,P,M,C
BG-USGS-1	E1191-05	V,S,P,M,C
BG-USGS-2	E1191-06	V,S,P,M,C
TB-0728	E1191-07	V
HP-MW-1	E1191-08	V,S,P,M,C
HP-MW-2	E1191-09	V,S,P,M,C
HP-MW-3	E1191-10	V,S,P,M,C
HP-MW-4	E1191-11	V,S,P,M,C
HP-MW-4MS	E1191-11MS	V,S,P,M,C
HP-MW-4MSD	E1191-11MSD	V,S,P
HP-MW-4DUP	E1191-11D	M,C
TB-0729	E1191-12	V

V = Volatiles

S = Semivolatiles

P = Pesticides/PCB

M = Metals

C = Total cyanide

The analyses were performed and reported per ASP SOW (95 revision) for category B deliverable.

The following observation and/or deviations are observed for the following analyses:

1. Volatile analysis:

A. Surrogate recovery:

All surrogate recovery met the QC limits with the exception that BFB was recovered out of the limit in HP-MW-4MSD. The analysis was not repeated as the recoveries were all within the limits in the associated sample and matrix spike.

B Lab control spike/duplicate matrix spikes:

All spike recovery met the QC limits for the lab control sample. Duplicate matrix spikes were performed on HP-MW-4. Spike recoveries met the advisory QC limits other than trichloroethene and benzene.

C. Sample Analysis

No unusual observation was made for the analyses.

2. Semivolatile analysis:

3.

A. Surrogate recovery:

All surrogate recovery met the QC limits.

B Lab control spike/duplicate matrix spikes:

All spike recovery met the QC limits for the lab control samples with the following exceptions:

SBLK01LCS: high recovery for 4-nitrophenol, 2,4-dinitrotoluene and pentachlorophenol

SBLK02LCS: low recovery for 1,4-dichlorobenzene and 1,2,4-trichlorobenzene

Duplicate matrix spikes were performed on HP-MW-4. Spike recoveries met the advisory QC limits other than high recoveries for 4-nitrophenol, 2,4-dinitrotoluene and pentachlorophenol.

C. Sample Analysis:

No unusual observation was made for the analyses.

4. Pesticides/PCB analysis:

A. Surrogate recovery:

All surrogate recovery met the advisory QC limits with the exception that TCMX was recovered out of the limits for both GC columns for BG-MW-2, BG-USGS-1 and HP-MW-1. TCMX was recovered out of the limits for one of the GC columns for BG-MW-1.

B Lab control spike/duplicate matrix spikes:

All spike recovery met the QC limits for the lab control sample. Duplicate matrix spikes were performed on HP-MW-4. Spike recoveries met the advisory QC limits.

C. Sample Analysis

No unusual observation was made for the analyses.

5. Metals and Cyanide analysis:

Due to software limitations, the Client IDs are truncated by deleting the hyphens.

A. Lab control spike:

Spike recoveries met the QC limits.

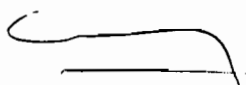
B. Sample spike and duplicate:

Sample spike and duplicate were performed on HPMW4D. Spike recovery and RPD met the QC limits.

C. Sample Analysis

No unusual observation was made for the analyses.

Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.



Kin S. Chiu, 8/20/98
Technical Director



175 Metro Center Boulevard
Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499
email: mitkem@worldnet.att.net

CHAIN-OF-CUSTODY RECORD

REPORT TO						INVOICE TO			
COMPANY		NAME		PHONE	LAB PROJECT #	COMPANY		PHONE	LAB PROJECT #
NAME		ADDRESS		FAX	TURNAROUND TIME	NAME		FAX	TURNAROUND TIME
CITY/ST/ZIP		CITY/ST/ZIP				ADDRESS			
CLIENT PROJECT NAME		CLIENT PROJECT #		CLIENT P.O.#		REQUESTED ANALYSES		COMMENTS	
BETACALON CEMENTS		0266 345				ASD 500 SUGS (95-1) ASD 500 SUGS (95-2) THAN METALS (95-3) Cyanide			
BG MW-1	7/12/98 950	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	2
BG MW-2	1 1045		X	X				8	2
BG MW-3	1 1310		X	X				8	2
BG MW-4	1 1420		X	X				8	2
BG 500 SUGS-1	1 1100		X	X				8	2
BG 500 SUGS-2	1 1350		X	X				8	2
TIB - 0728			X	X				2	2
RELINQUISHED BY: [Signature]		DATE/TIME: 7/12/98 1600		ACCEPTED BY: [Signature]		DATE/TIME: 7/12/98 0930		ADDITIONAL REMARKS	
2		1				1		500/400/600	
3		1				1			



175 Metro Center Boulevard
Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499
email: mitkem@worldnet.att.net

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

REPORT TO					INVOICE TO				
COMPANY			PHONE		COMPANY		PHONE		
NAME			FAX		NAME		FAX		
ADDRESS			CITY/STATE/ZIP		ADDRESS		CITY/STATE/ZIP		
CLIENT PROJECT NAME:			CLIENT PROJECT #:		CLIENT P.O. #:		REQUESTED ANALYSES		
SAMPLE IDENTIFICATION			DATE/TIME SAMPLED		LAB ID		COMMENTS		
COMPOSITE			GRAB		WATER		SOIL		
OTHER			LAB ID		# OF CONTAINERS		DATE/TIME		
RELINQUISHED BY			DATE/TIME		ACCEPTED BY		ADDITIONAL REMARKS		
TSF#			DATE/TIME		DATE/TIME		COOLER TEMP		
1			7/29/98		7/29/98 1600		7/30/98 0130		
2			1		1		1		
3			1		1		1		
4			1		1		1		
5			1		1		1		
6			1		1		1		
7			1		1		1		
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97			1		1		1		
98			1		1		1		
99			1		1		1		
100			1		1		1		

MITKEM CORPORATION

Sample Condition Form

Page 22

Received By: <u>AB</u>	Reviewed By: <u>JH</u>	Date: <u>7/30/98</u>	MITKEM Project: <u>E1191</u>				
Client Project: <u>Holiday Park</u>		Client: <u>Malcolm Pirnie</u>					
Condition:	Sample ID	Preservation (pH)				Comments/Remarks/ Corrective Action*	
	Lab	Client	HNO ₃	H ₂ SO ₄	HCl		NaOH
	08	HP-MW-1	<2			>12	
1) Custody Seal(s)	09	↓ -2	↓			↓	
☒ Present/ ☐ Absent	10	↓ -3	↓			↓	
☒ Coolers/Bottles	11	↓ -4	↓			↓	
☐ Intact/ ☐ Broken	12	TB-0729					
2) Custody Seal Number(s)							
3) Chain-of-Custody							
☒ Present/ ☐ Absent							
4) Cooler Temperature							
Coolant Condition							
5) Airbill(s)							
☒ Present/ ☐ Absent							
Airbill Number(s)							
6) Sample Bottles							
☒ Intact							
☐ Broken							
☐ Leaking							
7) Date Received							
8) Time Received							
9) Project Due Date							

* See Sample Condition Notification/Corrective Action Form yes ☒ no

006

MITKEM CORPORATION

Lab Project #: **E1191**

Client Name: **Malcolm Pirnie, Inc.**

Client Proj #: **0266-325**

Client PO #: **NA**

Project Name: **Botanical Gardens**

Date Due: **8/20/98**

Total Price: **\$ -**

Project Mgr: **PAS**

Salesman: **PAS**

Del Req'd: **ASP Category B (2 copies) Form I's in Excel**

Completed?: **YES**

Logged In By: NAH

Reviewed By: _____

Date: _____

Time: _____

Lab ID	Client ID	Matrix	Analysis	Price	Sampled	Received	TPH	IR	BNA	Herb	P/P	Wet	Met	V-GC	V-MS	Sub
-01	BG-MW-1	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW		7/28/98	7/29/98			1		1		1			1
-02	BG-MW-2	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW		7/28/98	7/29/98					1		1			1
-03	BG-MW-3	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW		7/28/98	7/29/98			1		1		1			1
-04	BG-MW-4	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW		7/28/98	7/29/98			1		1		1			1

MITKEM CORPORATION

Lab ID	Client ID	Matrix	Analysis ASPMETW (TAL) ASPCNW	Price	Sampled	Received	TPH	IR	BNA	Herb	P/P	Wet	Met	V-GC	V-MS	Sub
-05	BG-USGS-1	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW	7/28/98	7/29/98				1		1	1	1			
-06	BG-USGS-2	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW	7/28/98	7/29/98				1		1	1	1			
-07	TB-0728	AQ	ASPVOAW													1
-08	HP-MW-1	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW	7/29/98	7/30/98				1		1	1	1			
-09	HP-MW-2	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW	7/29/98	7/30/98				1		1	1	1			
-10	HP-MW-3	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW	7/29/98	7/30/98				1		1	1	1			
-11	HP-MW-4	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW	7/29/98	7/30/98				1		1	1	1			
-12	HP-MW-5	AQ	ASPPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW	7/29/98	7/30/98				1		1	1	1			

MITKEM CORPORATION

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Price</u>	<u>Sampled</u>	<u>Received</u>	<u>TPH</u>	<u>IR</u>	<u>BNA</u>	<u>Herb</u>	<u>P/P</u>	<u>Wet</u>	<u>Met</u>	<u>V-GC</u>	<u>V-MS</u>	<u>Sub</u>
-11 MS	HP-MW-4 MS	AQ	ASPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW	7/29/98	7/30/98				1				1		1	
-11 MSD	HP-MW-4 MSD	AQ	ASPESTPW (Pest/PCB) ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW	7/29/98	7/30/98							1	1			
-12	TB-0729	AQ	ASPSVOAW ASPVOAW ASPMETW (TAL) ASPCNW	7/29/98	7/30/98				1			1	1			

NOTES: R1: Samples -08 thru -12 received; case closed; client ID correction on sample -12.

ORIGINAL REPORT GOES TO:

Malcolm Pirnie, Inc.
40 Centre Drive
Buffalo, NY 14219

Attn: Daniel Riker
Phone: 716-667-6652
Fax: 716-667-0279

INVOICE GOES TO:

Same

ADDITIONAL REPORT GOES TO:

None

MITKEM CORPORATION

Sample Condition Form

Page 1 of 1

Received By: <u>AB</u>		Reviewed By: <u>BFO</u>		Date: <u>7/28/98</u>		MITKEM Project: <u>Σ 1191</u>	
Client Project: <u>Botanical Gardens</u>				Client: <u>Malc. Pirnie</u>			

Condition:		Sample ID		Preservation (pH)				Comments/Remarks/ Corrective Action*
		Lab	Client	HNO ₃	H ₂ SO ₄	HCl	NaOH	
1) Custody Seal(s)	Present/Absent	01	B6-AW-1	2			72	
	Coolers/Bottles	02	↓ -2	↓			↓	
	Intact/Broken	03	↓ -3	↓			↓	
		04	↓ -4	↓			↓	
		05	B6-US60-1	7			↓	added HNO ₃ until pH 4.5
2) Custody Seal Number(s)	<u>N/A</u>	06	↓ -2	2			↓	
		07	TS					
3) Chain-of-Custody	Present/Absent							
4) Cooler Temperature	<u>5.4, 6.6</u>							
Coolant Condition								
5) Airbill(s)	Present/Absent							
Airbill Number(s)	<u>Ex 12x</u> <u>800195869786</u>							
6) Sample Bottles	Intact							
	Broken							
	Leaking							
7) Date Received	<u>7/28/98</u>							
8) Time Received	<u>0930</u>							
9) Project Due Date								

* See Sample Condition Notification/Corrective Action Form yes (no)

July 31, 1998

Malcolm Pirnie, Inc.
40 Centre Drive
Orchard Park, NY 14127
Attn: Mr. Daniel Riker

RE: Client Project #: 0266-325, Holiday Park
Lab Project #: E1065 and E1092

Dear Mr. Riker:

Enclosed please find the data report of the required analyses for the samples associated with the above referenced project. If you have any questions regarding this report, please call me.

We appreciate your business.

Sincerely,



Edward A. Lawler
Laboratory Operations Manager

Analytical Data Package for Malcolm Pirnie, Inc.

Client Project No.: 0266-325, Holiday park

Mitkem Project ID: E1065 & E1092

July 31, 1998



SDG Narrative

This data report includes the analysis results for one (1) aqueous and six (6) soil samples that were received on July 3, 1998 and for two (2) soil samples that were received on July 9, 1998 from Malcolm Pirnie, Inc. Analyses were performed per specification in the Chain of Custody form.

The analysis results are reported in CLP format.

Samples are identified as follows:

<u>Client ID</u>	<u>Lab ID</u>	<u>Analysis</u>
BG-MW-1	E1065-01	P, V, SV, M
BG-MW-2	E1065-02	P, V, SV, M
BG-MW-3	E1065-03	P, V, SV, M
BG-MW-4	E1065-04	P, V, SV, M
EB-7-2	E1065-05	P, V, SV, M
HP-MW-1	E1065-05	P, V, SV, M
HP-MW-2	E1092-01	P, V, SV, M
HP-MW-3	E1092-02	P, V, SV, M
HP-MW-4	E1065-07	P, V, SV, M

P = Pesticide/PCBs

V = Volatile organic

S = Semivolatile organic

M = Metals

The following observations and/or deviations were noted for these analyses:

A. Metals:

No unusual occurrences were noted during metals analysis.

B. Volatile Organics:

No unusual occurrences were noted during volatile organics analysis.

C. Semivolatile Organics:

Sample BG-MW-2 required dilution; both the original and diluted analysis are included in the report. The recovery of 4-nitrophenol in the soil LCS, at 92%, was above the normal QC limit. This was judged to not significantly effect the results. There were no other unusual occurrences noted during semivolatile organics analysis.

D. Pesticide/PCBs:

An emulsion was noted during the pesticide extraction for the aqueous sample EB-7-2. This did not effect the instrumental analysis. No other unusual occurrences were noted during pesticide/PCB analysis.

Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or his designee, as verified by the following signature:



Edward A. Lawler, 7/31/98
Laboratory Operations Manager

**ASP Analyses
For
Malcolm Pirnie, Inc.**

Malcolm Pirnie Project# 0266-325

(Holiday Park)

Mitkem Project: # D1197

August 12, 1997

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to Malcolm Pirnie's Holiday Park Project. Under this assignment, one aqueous and one soil samples were received on August 1, 1997.

This data package contained the volatile and semivolatile organic analyses.

The following samples are submitted in this data package:

<u>Client ID</u>	<u>Lab ID</u>	<u>Analysis</u>
P-1 (AQ)	D1197-01	V, S
P-1 (SL)	D1197-02	V, S

V = Volatile organic analysis

S = Semivolatile organic analysis

The analyses were performed according to '95 ASP protocols.

The instruments used for the analyses are as follows:

	<u>Volatile Analysis</u>
V2	Hewlett Packard Model 5972 GC/MSD with a 30 m x 0.25 mm id DB-624 capillary column
	<u>Semivolatile Analysis</u>
S1	Hewlett Packard Model 5972 GC/MSD with a 30 m x 0.25 mm id DB-5MS capillary column

The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed.

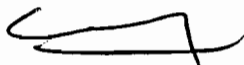
2. Semivolatile Organic Analysis:

None

3. Volatile Analysis:

None

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.



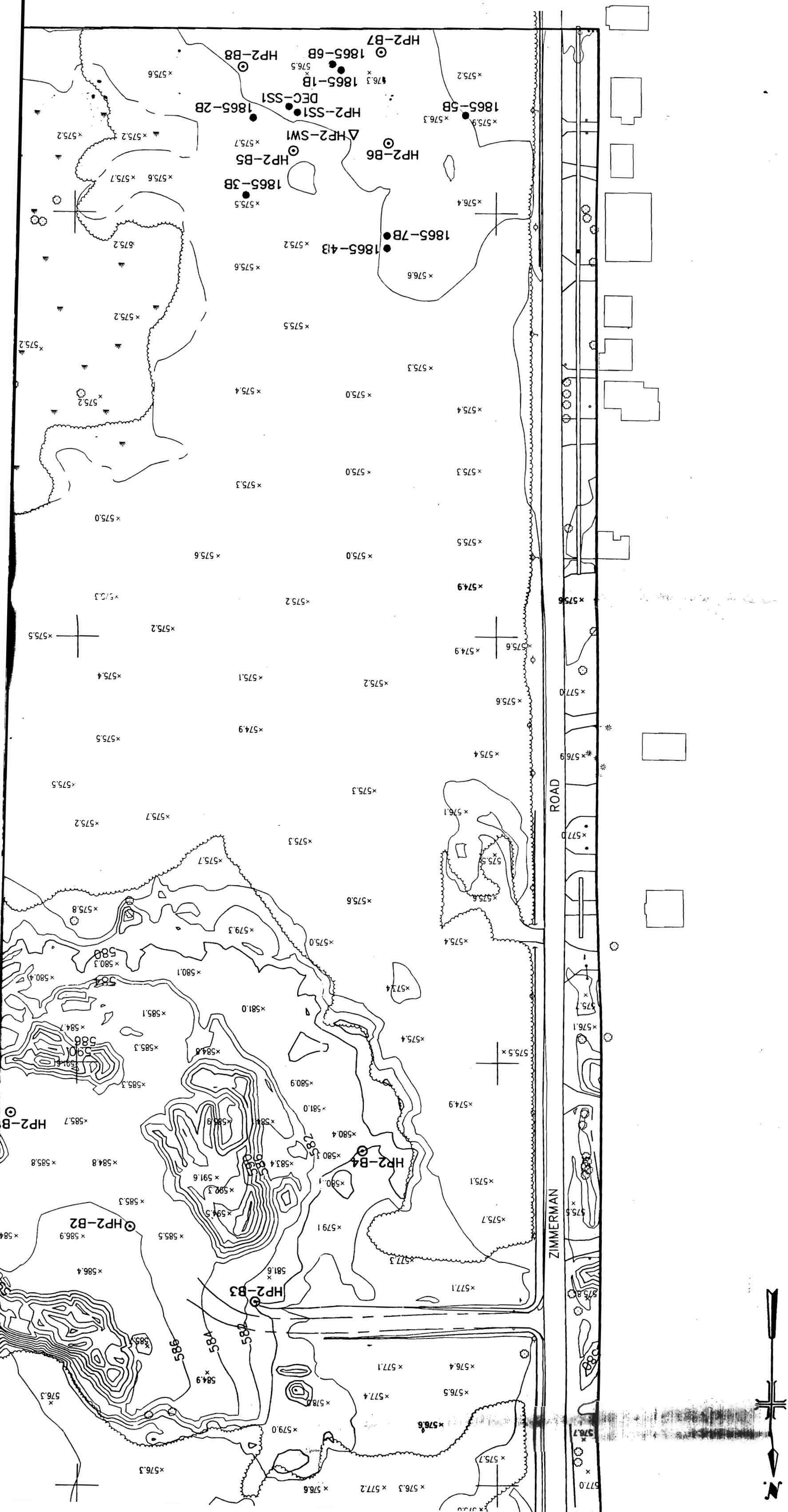
Kin S. Chiu, 8/11/97
Laboratory Manager

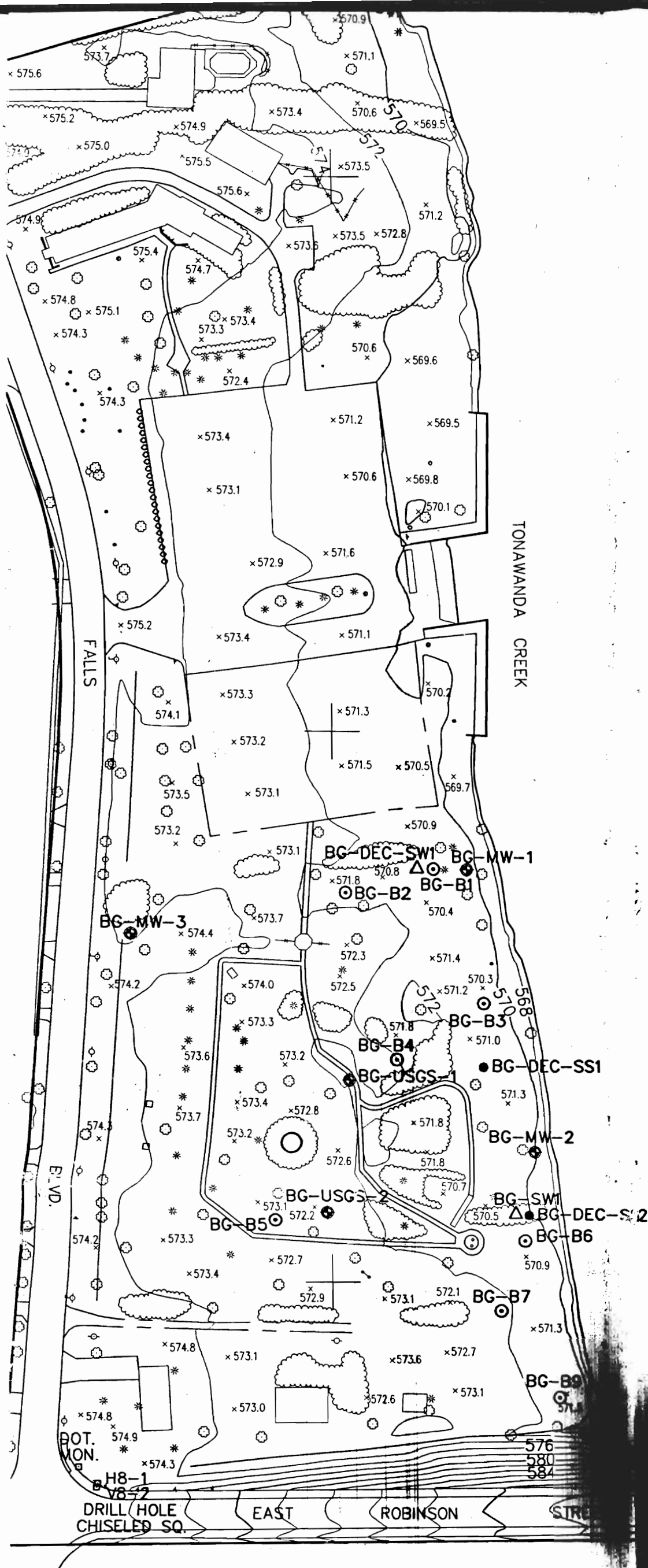
SAMPLE PREPARATION AND ANALYSIS SUMMARY SEMIVOLATILE (BNA) ANALYSES

[illegible]

CHAIN OF CUSTODY RECORD

Distribution	Original accompanies shipment, copy to coordinator field files
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BOTANICAL GARDENS SITE

WELL LOCATION TABLE		
WELL DESIGNATION	NORTHING	E
BG-USGS-2	1106563.59	108
BG-USGS-1	1106686.22	108
BG-MW-2	1106622.27	108
BG-MW-1	1106876.49	108
BG-MW-3	1106816.80	108
BG-MW-4	1106734.53	108