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PHASE II SITE INVESTIGATION
PRESTOLITE PLANT
ARCADE, NEW YORK

MAY 4,92

May 4, 1992

Prepared for:

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426116372

SIMON Environmental

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APPENDICES

1.0 INTRODUCTION

Simon Hydro-Search was contracted by Motorola to conduct a Phase II site investigation at the Prestolite Plant in Arcade, New York. Prestolite, Inc. (Prestolite) currently owns and operates this manufacturing facility. A site location map is provided on Figure 1-1. A detailed site map is provided on Figure 1-2.

1.1 Background

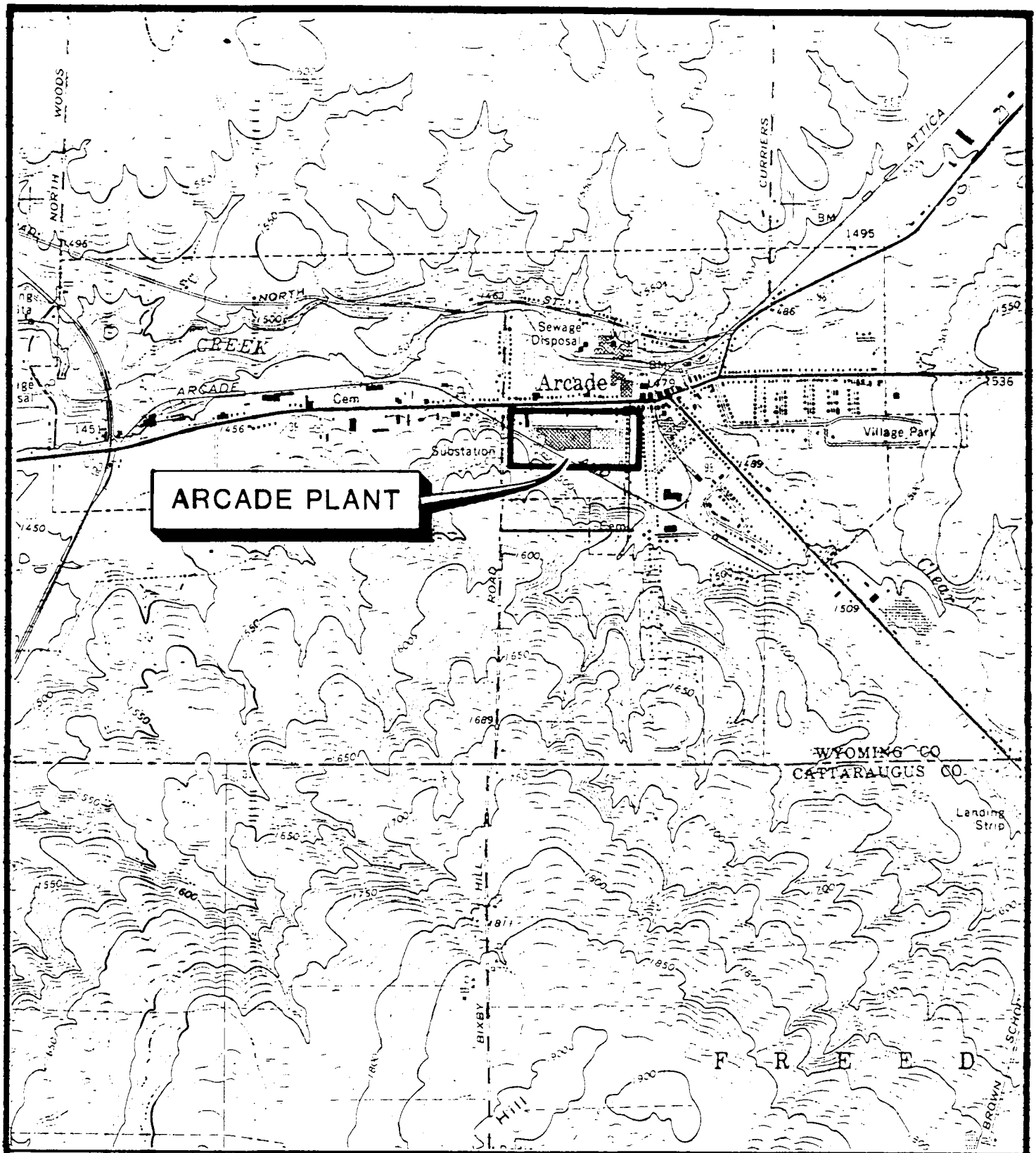
Prestolite purchased the facility from Motorola in 1988. In June/July of 1991, Prestolite performed a Phase I Site Investigation which included monitoring well installation, ground water sampling, test pit excavation/sampling and soil gas screening for total organic vapors. Results of the sampling effort showed local areas of impacted soils and ground water. The main contaminants were volatile organic compounds (VOCs) and metals. The direction of ground water flow at that time was found to be to the northwest.

Simon Hydro-Search developed a Phase II Site Investigation Work Plan in November 1991. The Work Plan was implemented in January, 1992. The investigation was designed to better define the areal and vertical extent of both soil and ground water contamination, evaluate other potentially impacted media and provide the data necessary to define and evaluate appropriate engineering options. The investigation was conducted in accordance with guidelines established by the New York State Department of Environmental Conservation (NYSDEC) for Phase II site investigations.

1.2 Objectives of the Phase II Site Investigation

The objectives of this investigation were to:

- Characterize the areal and vertical extent of ground water contamination.



SOURCE: Quadrangle Arcade, N.Y.

N

0' 1000' 2000' 4000'

SCALE: 1" = 2000'

FIGURE 1-1

SITE LOCATION MAP

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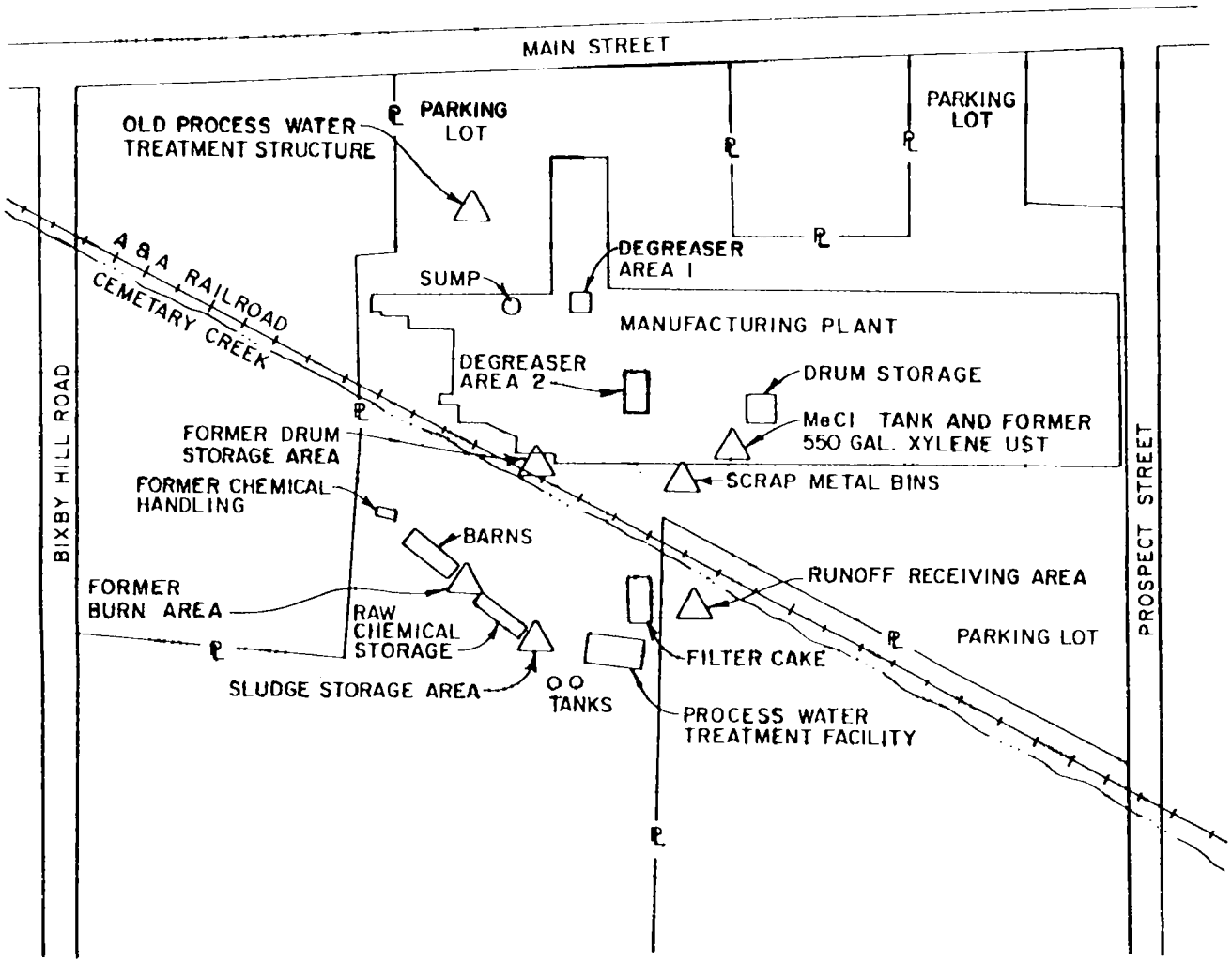
FIGURE



LEGEND

℄ PROPERTY LINE

N

0' 100' 200' 400'

SCALE

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FIGURE 1-2

ARCADE PLANT SITE MAP

- Perform a soil gas survey to evaluate potential source areas within the unsaturated zone soils.
- Determine whether site runoff and/or ground water discharge may have impacted surface water and sediment within Cemetery Creek.
- Evaluate potential contaminant source areas within specified subsurface structures.
- Identify and evaluate, along with order of magnitude cost estimates, appropriate remedial options.

This report is divided into 8 sections. Section 2.0 documents the field investigation program. A description of physical conditions, including site geology and hydrogeology is presented in Section 3.0. Analytical results for samples collected during this investigation are summarized in Section 4.0 and data interpretation is provided in Section 5.0. Section 6.0 summarizes the conclusions of the site characterization along with suspect source areas. Based on results of the site characterization, Section 7.0 identifies and evaluates appropriate remedial options. Recommendations for additional characterization and cleanup actions are provided in Section 8.0. References are included in Section 9.0.

2.0 FIELD INVESTIGATION PROGRAM

In order to fulfill project objectives, a field investigation program consisting of the following tasks were implemented:

- Task 1 - Soil Gas Survey
- Task 2 - Monitoring Well Installation/Ground Water Sampling
- Task 3 - In-Situ Permeability Testing
- Task 4 - Surface/Subsurface Soil Sampling
- Task 5 - Surface Water/Sediment Sampling
- Task 6 - Subsurface Structure Liquid/Sludge Sampling

The rationale and specific procedures that were used in the execution of each task are discussed in this section.

2.1 Soil Gas Survey

The purpose of the soil gas survey was to refine existing soil gas screening data with respect to target compounds, provide additional information on the potential areal extent of impacted soils and source areas for ground water contamination, and to provide real time field data to help finalize placement of ground water monitoring wells.

A total of 60 soil vapor samples were collected from four areas during the soil gas survey. Three of these areas were inside the active portion of the plant and the fourth area was located outside the plant in the vicinity of the chemical storage building. The rationale for each of the survey areas, specific target analytes and the number of probe/measurement locations are summarized on Table 2-1. The location of the soil gas survey areas are provided on Figure 1-2; specific sample locations and results are discussed in Section 4.0.

Soil gas samples within the manufacturing facility were collected by cutting a one-inch core through the eight to twelve-inch thick concrete foundation. Stainless steel soil gas probes were

TABLE 2-1

RATIONALE/APPROACH FOR SOIL GAS PROGRAM

Area of Investigation	Number of Probe Locations	Target Analytes	Rationale/Approach
Degreaser Area 1	10	Methylene Chloride, TCE	Degreaser Area 1 is and has been used for degreasing operations and had not been investigated during the Phase I Study. The approach for the soil gas program included the analysis of one soil gas probe located along each side of the existing unit and another set of probes 10 to 15 feet away from each location to define extent of impact.
Degreaser Area 2	16	Methylene Chloride, TCE	Degreaser Area 2 had been previously investigated and volatile organic vapors were present. Confirmatory soil gas sampling was performed at previous locations and subsequently further away to either side at 10 to 15 foot intervals to help define extent of impact.
Methylene Chloride Tank Area	4	Methylene Chloride, TCE	The methylene chloride tank area is and has been used for above ground methylene chloride storage and had not been previously investigated. The tank is situated next to a wall. The soil gas program included one soil gas probe located at each of the two corners of the tank area and additional probes spaced at 10 to 15 foot intervals away from the area to define the extent of impact.
Chemical Storage Building	30	Methylene Chloride, TCE, Xylene, Toluene, Ethylbenzene	The chemical storage building area has documented soil contamination. Soil gas readings were taken around the perimeter of the building at 20 foot intervals with subsequent additional samples collected at 10 to 15 foot intervals radially away from the area, as necessary to help define the extent of impact.

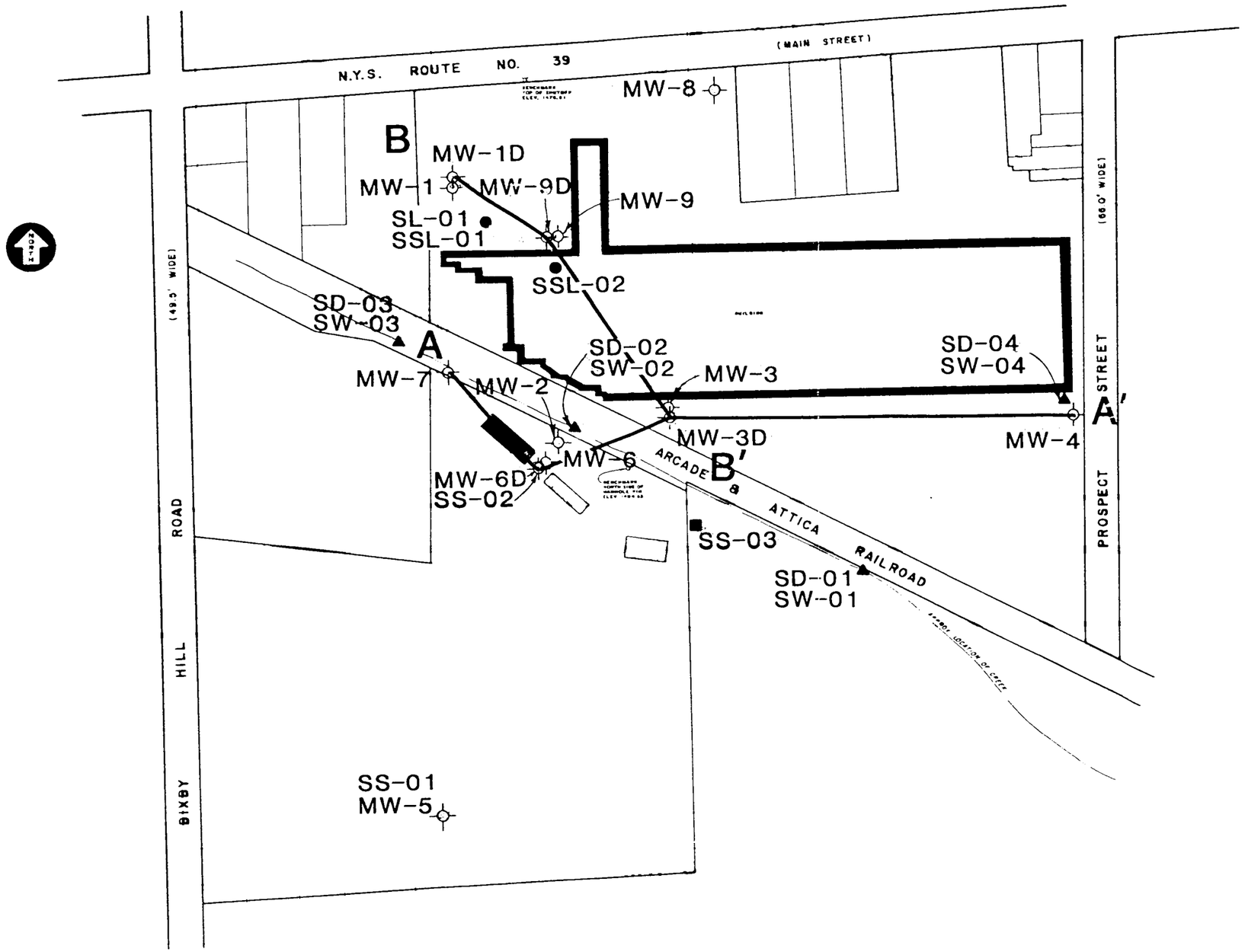
then driven approximately three to six feet below the foundation. In areas outside of the manufacturing facility, soil gas probes were driven directly to sampling depth (three to four feet below ground surface). To choose the appropriate soil gas sampling depth, stratified soil gas samples (i.e., from varying depths) were collected from the first two sample points of each soil gas survey location. The depth interval showing the highest concentrations of targeted VOCs was then chosen as the sampling depth for the remainder of the points at that soil gas survey location.

A 0.25-inch polypropylene tube was placed down the gas probe. Three times the volume of gas within the tubing was purged from the probe using a 60-cubic centimeter (cc) glass syringe. Upon completion of purging, the actual soil gas sample was collected with a 500 milliliter (ml) glass syringe. After collection, the syringe was transported to the portable laboratory/field GC for analysis.

2.2 Drilling Program/Subsurface Sampling

Four monitoring wells were installed as part of the Phase I study performed by Prestolite (wells MW-1, MW-2, MW-3 and MW-4). All four wells were constructed as water table wells. Sampling of these wells has shown the presence of dissolved VOCs. To further define the areal and vertical extent of ground water contamination and provide necessary information for evaluating potential remediation alternatives, nine additional ground water monitoring wells were installed at various locations and depths around the site. The locations of the wells are shown on Figure 2-1. Well placement rationale along with completion depths and screen lengths are summarized on Table 2-2.

Upon completion of well development, ground water samples were collected from each of the new monitoring wells. Ground water samples were additionally collected from the four existing monitoring wells and from the Arcade Municipal well located approximately 1/2 mile northeast of the plant. The samples were analyzed for VOCs, total and dissolved inorganics, cyanide, and hardness.



LEGEND

MW-5 ⊕	MONITORING WELL
SD-03 ▲ SW-03	SURFACE WATER/SEDIMENT LOCATION
SS-01 ■	SURFACE SOIL LOCATION
SL-01 ● sludge SSL-01 ● liquid	SUBSURFACE LIQUID and/or SOLID LOCATION
A ——— A'	GEOLOGIC CROSS SECTION

NEW YORK STATE PLANE COORDINATE SYSTEM
WEST ZONE - NAD 27

WELL NO.	NORTHING	EASTING
MW-1	922,940.408	541,174.328
MW-1D	922,933.740	541,178.180
MW-2	922,442.508	541,360.832
MW-3	922,496.049	541,574.746
MW-3D	922,488.208	541,574.287
MW-4	922,482.796	542,155.876
MW-5	921,738.351	541,123.327
MW-6	922,402.498	541,380.909
MW-6D	922,388.127	541,328.787
MW-7	922,383.682	541,158.871
MW-8	923,107.400	541,679.229
MW-9	922,636.686	541,364.639
MW-9D	922,634.543	541,359.900
SS-01	921,732.6	541,123.3
SS-101	922,669.0	541,234.8
SD-01	922,177.8	541,938.7
SW-01	922,177.8	541,938.7
SW-02	922,469.4	541,394.3
SD-02	922,469.4	541,394.3
SS-03	922,273.7	541,628.3
SW-03	922,643.8	541,065.9
SD-03	922,643.8	541,065.9
SW-04	922,492.3	542,339.3
SD-04	922,492.3	542,339.3

NOTE: BASIC CONFIGURATION OF OUTBOUNDS OF PREMISES COMPILED FROM THE VILLAGE OF ARCADE TAX MAP NO. 183.13.

SHAPE AND LOCATION OF BUILDINGS TAKEN FROM A DRAWING PREPARED BY TREVOR M ROGERS & ASSOCIATE, ARCHITECTS, JOB NO. 1528.

ELEVATIONS BASED ON NGVD 1929.

FIGURE 2-1

SITE MAP SHOWING SAMPLE LOCATIONS & CROSS SECTION LINES

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TABLE 2-2
PHASE II SITE INVESTIGATION
WELL PLACEMENT RATIONALE

Well Number	Completed Depth (Ft bgs)	Screen Length (Ft)	Placement Rationale
MW-1D	34	5	Deep well clustered next to existing well GW-1 to provide information on potential depth of impact and vertical hydraulic gradient. Screen length of 5 feet was used since thickness of targeted water bearing unit did not exceed 10 feet.
MW-3D	61	10	Deep well clustered next to existing well GW-3 to provide information on potential depth of impact and vertical hydraulic gradient.
MW-5	52	10	Well located directly upgradient from chemical storage building, former sludge placement locations and other waste handling activities to provide additional background water table data.
MW-6	21	10	Water table well located within the former burn area and downgradient of chemical storage building.
MW-6D	55	10	Deep well clustered next to well MW-6 to provide information on potential depth of impact and vertical hydraulic gradient.
MW-7	16	10	Water table well located downgradient of former drum handling area and along property line.
MW-8	18	10	Water table well located at property line downgradient of the southeast half of plant operations.
MW-9	20	10	Water table well located adjacent to the plant building immediately downgradient of Degreaser Area 1. The need for this well was determined based on soil gas survey results.
MW-9D	41	10	Deep well clustered next to well MW-9 to provide information on potential depth of impact and vertical hydraulic gradient. The need for this well was determined based on soil gas survey results.

bgs = below ground surface

To complete the characterization of contaminants in subsurface soils, selected samples collected during borehole drilling were analyzed for VOCs, Base/Neutral Acid Extractables (BNA), PCB/Pesticides, inorganics, cyanide, Total Organic Carbon (TOC), grain size distribution, and vertical hydraulic conductivity.

Drilling and subsurface soil sampling methods, well construction techniques and well development are discussed below.

2.2.1 Drilling and Subsurface Soil Sample Collection

Empire Soils Investigations, Inc. of Hamburg, New York was subcontracted by Simon Hydro-Search to perform drilling and subsurface sampling. All drilling equipment was decontaminated by steam cleaning prior to drilling at each site. All of the borings were advanced using 4.25-inch inside diameter, hollow-stem augers. Samples of subsurface materials were collected using a 2-foot long split spoon sampler with samples collected continuously for the first 12 feet of drilling and at 2-foot intervals for the remainder of the boring. Split spoon samples were logged in the field as they were collected and blow counts were recorded for each 6-inch sample interval. Immediately upon recovery, a photoionization detector (PID) with an 11.7 eV probe was used to field screen each soil sample for total volatile organic vapors. The middle of each sampled interval was placed into in a laboratory prepared glass jar for possible later VOC analysis. The remainder of the split spoon samples were temporarily placed in resealable plastic bags. Headspace gases in the bags were screened using the PID. In accordance with the Work Plan, a total of three subsurface soil samples were sent for chemical analysis. The samples were collected from borings for monitoring wells MW-3D, MW-5 and MW-6. The sample interval sent for chemical analysis from each of the three borings either showed the highest VOC concentrations based on field screening or if no PID detections were observed, the sample from the midpoint of the boring was selected.

Soil samples were also collected from the screened interval of each well and analyzed for grain size distribution and total organic carbon. In addition, Shelby tube samples were collected in

wells MW-9D and MW-3D from a reddish gray clay at the bottom of the borings (see Section 3.1). This material is believed to act as an effective barrier to downward vertical flow beneath the site. These samples were submitted for laboratory determination of vertical hydraulic conductivity.

At locations where clustered wells (i.e., closely spaced wells completed at different depths) were installed, only the deep borehole was logged; the shallow borehole was drilled blind to a targeted depth based on the deep borehole log. Geologic logs for the boreholes are included in Appendix A.

All drill cuttings, except those from background well MW-5 were containerized in 55-gallon drums. The drums were sealed and labeled to identify their contents (i.e., date and location from which the material was derived). The drums were then staged in an area behind the main plant building by Prestolite employees for later disposal.

2.2.2 Monitoring Well Construction

After drilling and sampling was completed, monitoring wells were installed in each of the boreholes. The monitoring wells were constructed of 2-inch I.D., Schedule 40, flush-joint threaded PVC riser with 10 feet of 0.010-inch machine slotted PVC screen (monitoring well MW-1D was installed with 5 feet of screen since the thickness of the targeted water bearing unit did not require 10 feet of screen). The annular space around the screen was backfilled with clean, well-sorted silica sand to a depth of two to three feet above the top of the screen. Two to three feet of bentonite pellets were placed immediately above the sand pack. If the bentonite seal was above the water level in the well, the bentonite was hydrated with potable water and allowed to stabilize for approximately one hour. The remainder of the annular space was backfilled with cement/bentonite grout, which was placed with a tremie pipe if the grout seal was below the water level in the well. Each of the wells, except for background well MW-5 were completed with locking caps and flush-mount casing protectors. Background well MW-5

was completed with a standard locking protective casing with three feet of stickup and a concrete runoff diversion apron.

All wells were located on a site map (Figure 2-1) and top of inner casing elevations were surveyed by McIntosh & McIntosh, P.C. of Lockport, New York (State licensed surveyors).

2.2.3 Well Development

All wells except for background well MW-5 were developed by the bail and surge method using decontaminated Teflon bailers. A minimum of five casing volumes were removed from each of the wells, and field measurements of pH, specific conductance, and temperature were monitored to document stable conditions. Well development data is included with the Well Construction Summaries provided in Appendix A. Initial bail and surge development attempts at well MW-5 showed the well to have poor recovery rates. To aid in development, the screened interval of well MW-5 was jetted with approximately 55 gallons of potable water. The well was immediately surged and bailed until the fifty five gallons added were recovered. The well was subsequently bailed dry on a daily basis until sampling. Measurements of pH, specific conductance, and temperature indicate that conditions in the well were stable at the time of sampling.

2.3 Ground Water Sampling

Ground water samples were collected from all of the new and existing monitoring wells on-site and from the Arcade Municipal well. Samples from new monitoring wells were collected upon the completion of development. Prior to sampling, a minimum of five casing volumes were removed from each new monitoring well. Purging of these wells continued until three successive measurements of pH, specific conductance and temperature showed stable conditions.

Prior to sample collection from existing monitoring wells, the depth to water and total depth of each well was determined using an electric water level indicator. Using this data, the volume

of water in the well casing was calculated and a minimum of three volumes were purged from the well using a decontaminated Teflon bailer. Purging was continued until three successive pH, specific conductance and temperature measurements showed stable conditions.

Samples from the Arcade Municipal well were collected by allowing water to run from the bypass spigot in the pump house for approximately five minutes. Three successive field measurements of pH, specific conductance and temperature were then measured to verify stable conditions. Samples were collected from the spigot directly into laboratory prepared containers.

Samples from each well were collected and containerized in a manner to minimize volatilization. Sample collection was performed in a prioritized sequence from most volatile to least volatile. Specifically, the prioritized sequence of collection was VOCs, total inorganics, dissolved inorganics, cyanide, and hardness. Dissolved inorganics were filtered in the field using a 0.45 micron filter. All samples were containerized and preserved in accordance with the Work Plan.

2.4 In-Situ Permeability Tests

Estimates of the hydraulic conductivity of the water-bearing units beneath the site were obtained by performing bail down recovery (slug) tests. Slug tests were performed on monitoring wells MW-1, MW-1D, MW-3, MW-3D, MW-6, and MW-6D. Measurements were automatically recorded using an In-Situ SE-1000 data logger with a 15 psi pressure transducer placed down the well. The following procedure was used for testing:

- Static water level in the well was determined and recorded.
- The pressure transducer was placed approximately 1 foot above the bottom of the well or to a maximum depth of approximately 30 feet below the water level in the well.
- A 3-foot, 1.6-inch O.D. bailer was slowly lowered into the well until it was fully submerged.

ppm

Cd	Ch	Pb
451	56	233

- The pressure transducer was activated and readings were monitored to check for re-establishment of static conditions prior to test initiation.

- When static water level conditions were confirmed, one full bailer of water was removed from the well simultaneously with the initiation of automatic water level recording through the data logger.

- Recovery measurements were continued until static water level conditions were re-established.

Test results were evaluated in the field to confirm proper recovery curve development. Hydraulic conductivities were calculated using the methods of Bouwer and Rice (1976) or Cooper et. al (1967). Results of the tests are presented in Section 3.2.1 and plots of the recovery curves are provided in Appendix B.

2.5 Surface Soil Sampling

In order to complete the characterization of contamination in surface soil, samples were collected from three locations and analyzed for VOCs, inorganics and cyanide. One sample was collected from the site of upgradient monitoring well MW-5. Based on available information this area has not been impacted by past site activities and will provide background soil data. A second surface soil sample was collected in the vicinity of a former burning area used for fire fighting practice near the location of monitoring wells MW-6 and MW-6D. The third surface soil sample was collected from a runoff receiving area showing evidence of stressed vegetation east of the former filter cake storage area. Surface soil sample locations are provided on Figure 2-1.

Surface soil samples were collected by first scraping snow, surface vegetation and debris from the location with a shovel. Because of the depth of snow, a tractor was used to clear the area around surface soil sample location SS03. Samples were collected with a stainless steel trowel from the four corners of a 10 foot by 10 foot square, with an additional sampling point in the center. Samples were placed into a stainless steel mixing bowl and composited. Appropriate

portions were then placed into laboratory prepared containers for the parameters except for VOCs. Sample materials for VOC analysis were obtained as grab samples from the center point at each of the sample stations.

2.6 Surface Water/Sediment Sampling

A total of four surface water/sediment samples were collected as part of the Phase II site investigation. Sample locations are shown on Figure 2-1. Three of the four locations were along Cemetery Creek: one upstream, one along the Arcade facility property and one downstream. The fourth surface water/sediment sample was collected from an open drainage ditch along the southern portion of the facility immediately upstream of the drain along Prospect Street.

Surface water samples were collected as grab samples by directly dipping laboratory prepared containers into the water. Dissolved inorganics samples were field filtered through a disposable 0.45 micron filter prior to preservation with acid.

Sediment samples were collected from the channel bottom in Cemetery Creek or the drainage ditch using a decontaminated stainless steel trowel. Samples for VOC analysis were collected as grab samples and placed directly into laboratory prepared containers. The remainder of the samples were collected as composites by placing them into stainless steel bowls and mixing thoroughly. The composited samples were then placed into laboratory prepared containers for analysis.

Each of the surface water samples were analyzed for VOCs, total and dissolved inorganics and cyanide. Sediment samples were analyzed for VOCs, PCBs/Pesticides, inorganics and cyanide.

2.7 Subsurface Structure Liquid/Sludge Sampling

Samples of subsurface structure liquids were collected from two locations at the site. Sludge was found in only one of these structures. Sample locations are provided on Figure 2-1. One of the subsurface structures is a sump inside the plant area located along the north wall (sample number SSL02). No sludge was found at this location. The other subsurface structure is an old process water treatment device consisting of a series of weirs located beneath the parking lot in the vicinity of monitoring wells MW-1 and MW-1D. Both liquid and sludge were found at this location (sample numbers SSL01 and SL01).

Liquids from the sump inside the plant were obtained by directly dipping laboratory prepared containers into the liquid. Liquids from beneath the parking lot weir structure were obtained using a decontaminated Teflon bailer lowered into the liquid while being careful not to disturb the underlying sludge. The surface of the liquid was approximately four feet below grade; total depth of the liquid was approximately four to five feet. The liquid was transferred from the bailer into laboratory prepared containers.

Sludge from the weir structure was sampled using a decontaminated six-inch Eckman dredge. The dredge was lowered to the bottom of the sump. Upon recovery, a grab sample for VOC analysis was taken from the dredge. The remainder of the sludge sample was composited in a stainless steel bowl using a decontaminated trowel. Sample materials were placed into appropriate laboratory prepared containers. Subsurface structure liquids and sludge were analyzed for VOCs, BNAs, PCBs/Pesticides, inorganics and cyanide.

3.0. PHYSICAL SITE CHARACTERIZATION

3.1 Physical Setting

The topography and surface geology of the Arcade area is largely shaped by Pleistocene glaciation. The facility is situated on the southern side of the Cattaraugus Creek valley. Cemetery Creek, which flows east to west, transects the site with the active manufacturing facility to the north of the creek and the chemical storage and filter press buildings to the south of the creek. Within the site property boundaries, unconsolidated glacial deposits overlie bedrock consisting of the Gowanda Shale Member of the Canadaway Formation. Depth to bedrock beneath the site is not known.

The overlying unconsolidated deposits are fluvioglacial (i.e., stream and overbank deposits associated with glacial ablation) in origin and are comprised of sand and gravel horizons separated by thick sequences of silts and clays. The uppermost unconsolidated unit beneath the site is primarily a sandy silt with some silty sand and gravel interlayering. A massive, dry, red clay unit was encountered in all deep borings at the site at depths ranging from 34 to 61 feet below ground surface. The bottom of the clay was not penetrated by any of the borings.

The general sequence of the unconsolidated units is as follows:

Unit 1 - Silt: Brown to gray, weathered, may locally contain sandy, clayey or gravelly lenses, moderately sorted. This unit is generally 15 feet thick across the site.

Unit 2 - Sand: Gray and brown, locally contains silt and/or gravel, moderately to poorly sorted. Thicknesses encountered at the site range from 5 to 10 feet; the unit pinches out to the south.

Unit 3 - Silt: Gray to grayish brown, may locally contain sandy or clayey horizons, well sorted, thinly laminated in places. Thicknesses encountered at the site range from 20 to 37 feet.

Unit 4 - Sand: Gray to grayish brown, some silt, locally some gravel, generally well sorted. Thicknesses encountered at the site range from 2 feet to 15 feet.

Unit 5 - Clay: Reddish gray, plastic, well sorted, massive, dry. The base of this unit was not penetrated. At least 10 feet of this unit was encountered in MW-1D.

Two geologic cross sections were developed from monitoring well boring logs. Section line locations are shown on Figure 2-1 and the cross sections are provided on Figure 3-1.

3.2 Site Hydrogeology

3.2.1 In-Situ Permeability Tests

As part of the field investigation, Simon Hydro-Search performed in-situ (slug) hydraulic conductivity tests on subsurface water bearing materials at three of the clustered well locations (MW-1 and MW-1D, MW-3 and MW-3D, and MW-6 and MW-6D). In addition, undisturbed (Shelby tube) samples were collected from the red clay of Unit 5 from borings for wells MW-3D and MW-9D for laboratory triaxial permeability tests.

Slug test data for wells MW-1, MW-3 and MW-6 were analyzed using the methods of Bouwer and Rice (1976), which assumes unconfined conditions in the test interval. Because semi-confined conditions exist in the completion intervals of the deeper wells, the methods of Cooper et. al. (1967) were used to analyze the data from wells MW-1D, MW-3D and MW-6D. Plots of the recovery data for all of the slug tests can be found in Appendix B.

Table 3-1 summarizes the results of the slug tests. Hydraulic conductivity in the three deeper wells (MW-1D, MW-3D and MW-6D) ranges from 1.6×10^{-4} to 1.5×10^{-2} centimeters per second (cm/sec) with a geometric mean of 7.4×10^{-4} cm/sec. These wells were completed in the semi-confined sands of Unit 4. Hydraulic conductivity in the water table wells (MW-1, MW-3 and MW-6) ranges from 8.8×10^{-4} to 3.3×10^{-2} cm/sec. The arithmetic mean of hydraulic conductivity in MW-1 and MW-3 is 2.7×10^{-2} cm/sec. The hydraulic conductivity in MW-6 was 8.8×10^{-4} cm/sec. Water table wells MW-1 and MW-3 were completed in the unconfined sands of Unit 2 and MW-6 was completed in the unconfined silt of Unit 3.

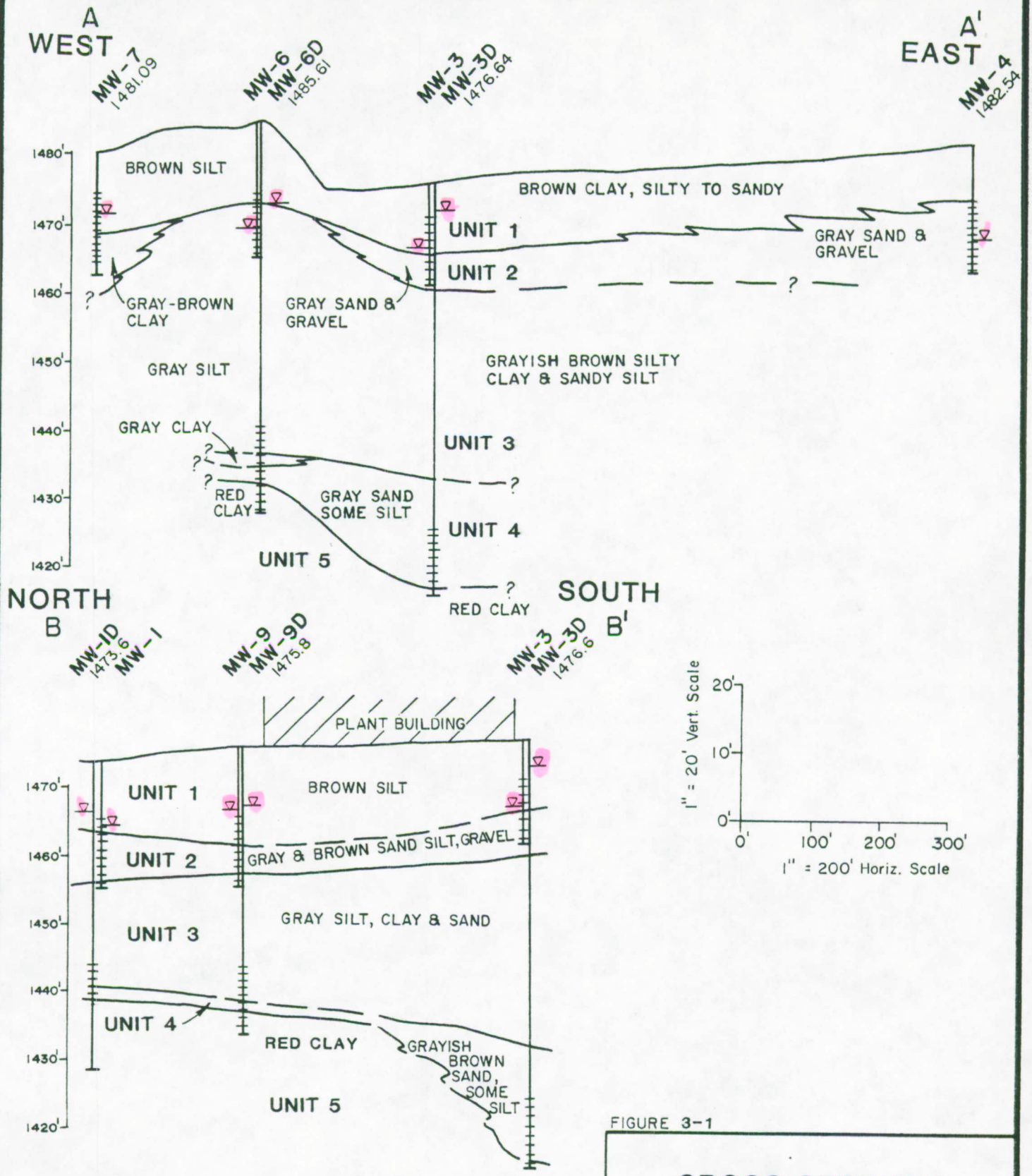

FIGURE 3-1

CROSS SECTIONS A–A' and B–B'

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TABLE 3–1

HYDRAULIC CONDUCTIVITY DATA FROM MONITORING WELL SLUG TESTS AND LABORATORY ANALYSIS

Monitoring Well (Slug Test)	Completion Interval (ft bgs)	Lithologic Unit of Completion	Material Description	Hydraulic Conductivity (cm/sec)	Method
MW-1	8 to 18	2	Sand	2.0E-02	Bouwer-Rice
MW-1D	29 to 34	4	Silt	1.6E-04	Cooper et. al.
MW-3	5 to 15	2	Sand	3.3E-02	Bouwer-Rice
MW-3D	51 to 61	4	Sand	1.5E-02	Cooper et. al.
MW-6	11 to 21	3	Sandy Silt	8.8E-04	Bouwer-Rice
MW-6D	45 to 55	4	Sand	1.7E-04	Cooper et. al.

Monitoring Well (Shelby Tube)	Sample Interval (ft bgs)	Lithologic Unit of Completion	Material Description	Hydraulic Conductivity (cm/sec)	Method
MW-3D	62 to 64	5	Clay	6E-09	EM 1110-2-1906*
MW-9D	41 to 43	5	Clay	1.6E-08	EM 1110-2-1906*

* Army Corp of Engineers Method

Undisturbed samples of the Unit 5 Clay were collected from boring at wells MW-3D and MW-9D from depths of 62 to 64 feet and 40 to 42 feet, respectively. These samples were submitted for triaxial permeability testing. Hydraulic conductivities in the samples were found to be approximately 6 x 10^{-9} cm/sec at MW-3D and 1.6 x 10^{-8} cm/sec at MW-9D. The soils laboratory report showing calculations and plots is provided in Appendix C.

3.2.2 Ground Water Recharge, Movement and Discharge

The ground water system at the site is comprised of two water bearing zones. The upper aquifer beneath the site consists of the Unit 2 sands. This is a water table aquifer (i.e., water in this system is under unconfined conditions) with its lower boundary marked by the relatively low permeability silts of Unit 3. The lower aquifer consists of the Unit 4 sands. This aquifer is semi-confined by the overlying Unit 3 silts. The lower boundary of the lower aquifer is marked by the low permeability red clay of Unit 5.

Water levels were obtained from all new and existing monitoring wells (see Table 3-2). These data were used in the construction of a water table contour map for the upper aquifer and a potentiometric surface map for the lower aquifer shown in Figures 3-2 and 3-3, respectively. Flow within the upper aquifer is in a north-northeasterly direction roughly follows site topography. In the valley, the gradient decreases and direction changes to the north-northwest, towards Cattaraugus Creek. Between background well MW-5 and monitoring well MW-6, the average gradient is approximately 0.068 ft/ft. Within the valley, the average gradient is approximately 0.011 ft/ft.

Water levels from the four wells completed in the lower aquifer (MW-1D, MW-3D, MW-6D and MW-9D) indicate flow to the north-northwest beneath the site, in the direction of Cattaraugus Creek. The average gradient in the lower aquifer is approximately 0.013 ft/ft.

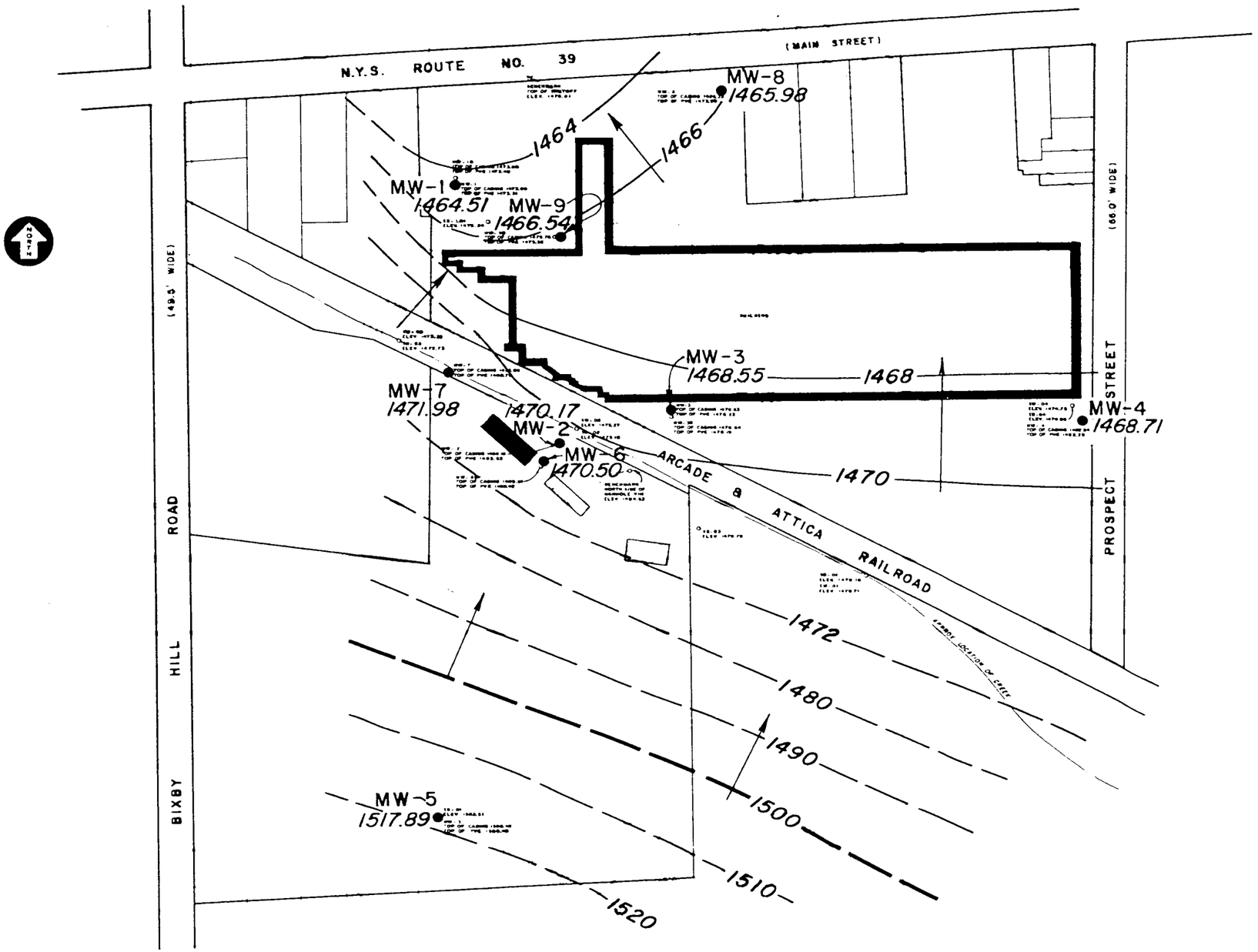
Table 3-3 presents water levels measured in the four well cluster locations (i.e., wells completed at different depths at the same location) at the site. At all four well cluster locations there is an

TABLE 3-2
PRESTOLITE PLANT, ARCADE, NEW YORK
WELL DATA

Well ID	Northing	Easting	Ground Elevation (ft; MSL)	TOC Elevation (ft; MSL)	Total Depth (ft; TOC)	Screened Interval (ft; TOC)	Water Level (ft; TOC)	Water Elevation (MSL)	
MW-1	922940.405	541174.528	1473.69	1473.31	17.86	18 to 8	8.80	1464.51	1
MW-1D	922953.740	541176.160	1473.60	1473.40	34.35	29.0 to 34.0	7.05	1466.35	1D
MW-2	922442.508	541360.832	1484.18	1483.82	20.18	20 to 5	13.65	1470.17	2
MW-3	922496.069	541574.746	1476.63	1476.23	15.35	5 to 15	7.68	1468.55	3
MW-3D	922488.208	541574.327	1476.64	1476.19	61.40	51.0 to 61.0	3.44	1472.75	3D
MW-4	922462.786	542355.876	1482.54	1482.29	18.48	18 to 8	13.58	1468.71	4
MW-5	921732.551	541123.527	1563.40	1566.40	55.00	42.0 to 52.0	48.51	1517.89	5
MW-6	922402.486	541330.509	1485.35	1484.95	20.70	11.0 to 21.0	14.45	1470.50	6
MW-6D	922398.127	541326.287	1485.61	1485.42	55.38	45.0 to 55.0	12.10	1473.32	6D
MW-7	922583.682	541156.871	1481.09	1480.78	15.63	6.0 to 16.0	8.80	1471.98	7
MW-8	923107.400	541679.229	1474.35	1473.99	18.31	9.0 to 19.0	8.01	1465.98	8
MW-9	922836.666	541364.639	1475.74	1475.37	20.00	10.5 to 20.5	8.83	1466.54	9
MW-9D	922836.543	541359.900	1475.76	1475.52	40.54	31.0 to 41.0	8.08	1467.44	9D

Note: Water levels measured 2/12/92
TOC - Top of Casing
MSL - Mean Sea Level
MW - Monitoring Well

mw's 1-9



LEGEND

1470 — EQUIPOTENTIAL CONTOUR SHOWING FLOW DIRECTION

MW-7 • 1471.90 — MONITORING WELL COMPLETED IN THE SHALLOW AQUIFER SHOWING WATER LEVEL (measured 2/12/92)

NEW YORK STATE PLANE COORDINATE SYSTEM WEST ZONE - NAD 27

WELL NO.	NORTHING	EASTING
MW-1	922,940.405	341,174.528
MW-10	923,933.740	341,176.160
MW-2	922,442.508	341,360.932
MW-3	922,496.065	341,574.746
MW-30	922,488.208	341,574.287
MW-4	922,462.766	341,333.976
MW-5	921,732.351	341,183.327
MW-6	922,402.498	341,330.309
MW-60	922,398.127	341,328.787
MW-7	922,583.682	341,154.871
MW-8	923,107.400	341,479.229
MW-9	922,838.666	341,384.639
MW-90	922,834.343	341,359.900
SB-01	921,732.6	341,183.5
SB-L01	922,869.0	341,234.8
SD-01	922,177.8	341,338.7
SW-01	922,177.8	341,338.7
SW-02	922,469.4	341,394.3
SD-02	922,469.4	341,394.3
SB-03	922,273.7	341,432.2
SW-03	922,845.8	341,065.9
SD-03	922,845.8	341,065.9
SW-04	922,492.3	342,339.3
SD-04	922,492.3	342,339.3

NOTE: BASIC CONFIGURATION OF OUTBOUNDS OF PREMISES COMPILED FROM THE VILLAGE OF ARCADE TAX MAP NO. 183.15.

SHAPE AND LOCATION OF BUILDINGS TAKEN FROM A DRAWING PREPARED BY TREVOR M ROGERS & ASSOCIATE, ARCHITECTS, JOB NO. 1528.

ELEVATIONS BASED ON NGVD 1929.

FIGURE 3-2

WATER TABLE SURFACE (SHALLOW AQUIFER)

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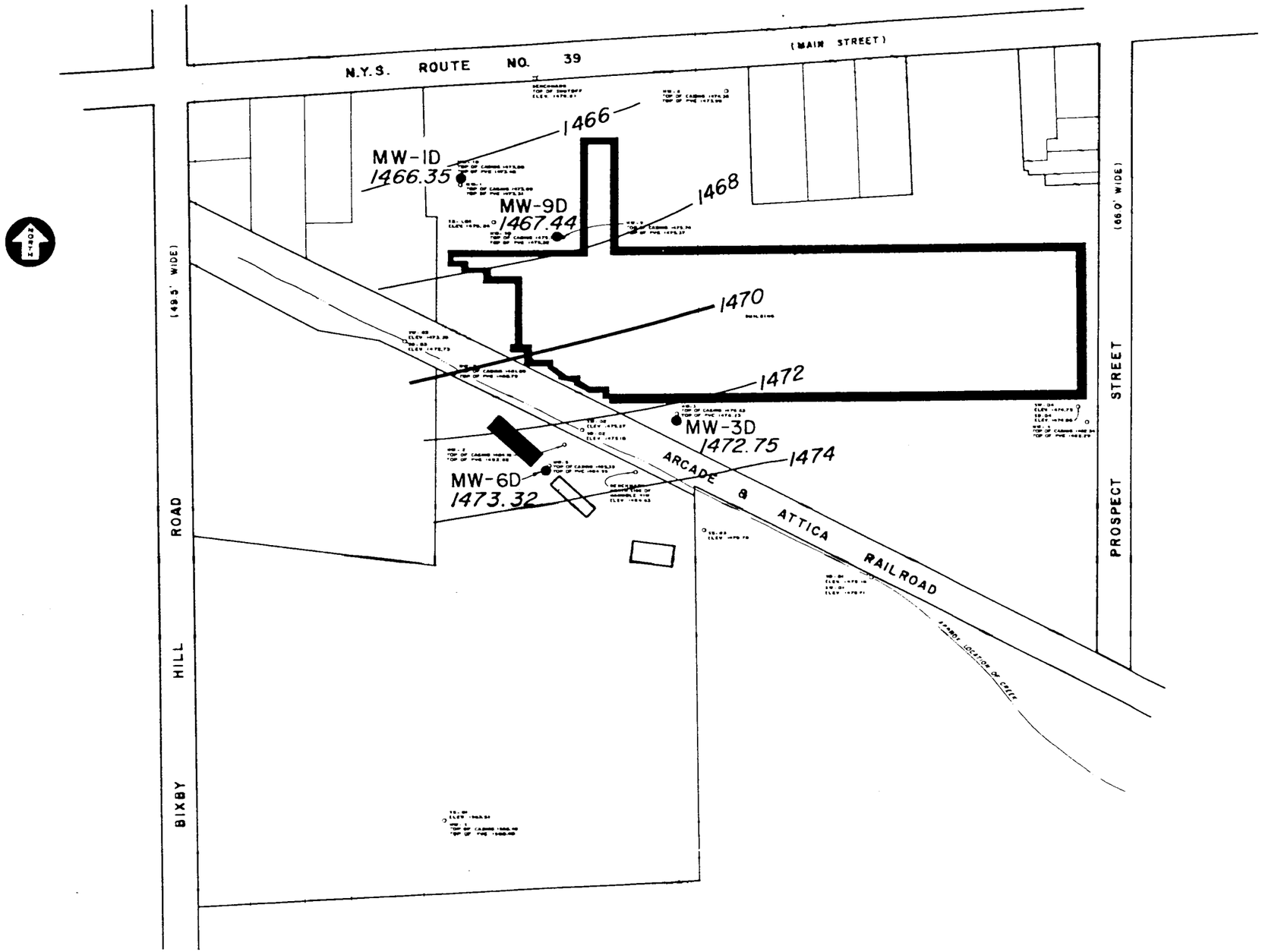
GW
Flow



LEGEND

1470 — EQUIPOTENTIAL CONTOUR SHOWING FLOW DIRECTION

MW-9D
1467.44
MONITORING WELL COMPLETED IN THE DEEP AQUIFER SHOWING WATER LEVEL (measured 2/12/92)

NEW YORK STATE PLANE COORDINATE SYSTEM
WEST ZONE - NAD 27

WELL NO.	NORTHING	EASTING
MW-1	922,840.403	541,174.328
MW-1D	922,933.790	541,176.160
MW-2	922,442.508	541,340.832
MW-3	922,496.069	541,374.748
MW-3D	922,486.208	541,374.327
MW-4	922,462.786	542,353.876
MW-5	921,732.531	541,193.527
MW-6	922,402.496	541,330.509
MW-6D	922,398.127	541,326.287
MW-7	922,383.682	541,198.871
MW-8	923,107.400	541,879.229
MW-9	922,838.686	541,369.639
MW-9D	922,836.145	541,359.900
SB-01	921,732.6	541,123.6
SB-L01	922,869.0	541,234.8
SD-01	922,177.8	541,938.7
SW-01	922,177.8	541,938.7
SW-02	922,469.4	541,394.5
SD-02	922,469.4	541,394.5
SB-03	922,273.7	541,822.5
SW-03	922,843.8	541,065.9
SD-03	922,843.8	541,065.9
SW-04	922,497.3	542,339.5
SD-04	922,498.6	542,339.9

NOTE: BASIC CONFIGURATION OF OUTBOUNDS OF PREMISES COMPILED FROM THE VILLAGE OF ARCADE TAX MAP NO. 105.15.

SHAPE AND LOCATION OF BUILDINGS TAKEN FROM A DRAWING PREPARED BY TREVOR R. ROGERS & ASSOCIATE, ARCHITECTS, JOB NO. 528.

ELEVATIONS BASED ON NGVD 1929

FIGURE 3-3

POTENTIOMETRIC SURFACE (DEEP AQUIFER)

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TABLE 3-3
VERTICAL GRADIENT DATA

Well ID	Well Depth (ft)	Center of Screen	Water Level (ft, MSL)	Vertical Gradient (ft/ft)
MW-1	18	13	1464.51	+0.099
MW-1D	34	31.5	1466.35	
MW-3	15	10	1468.55	+0.091
MW-3D	61	56	1472.75	
MW-6	21	16	1470.50	+0.083
MW-6D	55	50	1473.32	
MW-9	20	10	1466.54	+0.036
MW-9D	40	35	1467.44	

Note: Positive sign indicates an upward gradient.

Water levels measured on 2/12/92.

upward vertical gradient ranging from 0.04 ft/ft to 0.10 ft/ft (averaging 0.08 ft/ft). The presence of an upward gradient at all four locations indicates that the site is within a ground water discharge zone.

4.0 DATA PRESENTATION

The analytical program for the Phase II site investigation included a soil gas survey and chemical analysis of ground water, soils, sediment, surface water and sludge. The chemical data will be presented in the following order:

- Soil gas survey;
- Ground water sampling;
- Surface and subsurface soil sampling;
- Sediment and surface water sampling; and
- Solid and liquid sludge sampling.

The laboratory methods for analysis followed those described in the approved Work Plan. A cross-reference between field locations and sample identification numbers for the analytical data summary tables is located in Appendix C.

4.1 Soil Gas Survey

As discussed in Section 2.1, a soil gas survey was performed in four separate areas, three areas inside the plant and one area outside the plant. The areas investigated inside the plant include degreaser area 1, degreaser area 2 and the methylene chloride tank area. The chemical storage building is the only area in which a soil gas survey was performed outside the plant. Soil gas survey results from each area are discussed separately below and provided in Appendix D.

4.1.1 Degreaser Area 1

The soil gas survey in degreaser area 1 consisted of 10 locations, which were sampled and analyzed for methylene chloride and TCE. The data are summarized on Table 4-1. Methylene chloride soil gas concentrations ranged from 1.1 mg/l to 95 mg/l and TCE concentrations ranged from non-detected to 16 mg/l. Figures 4-1 and 4-2 show the distribution of methylene chloride and TCE in soil gas. The isoconcentration contour map on Figure 4-1 shows a north-south trend

TABLE 4-1
SOIL GAS SURVEY RESULTS FROM INSIDE PLANT BUILDING
All values in mg/l

	Degreaser Area 1 (GP Sample Station)									
	1	2	3	4	5	6	7	8	9	10
Methylene Chloride	18	15	95	16	25	7.3	27	1.7	1.1	4.1
Trichloroethylene	3	0.72	0.44	ND	16	0.75	1.6	0.52	0.90	0.22

	Degreaser Area 2 (GP Sample Station)														
	11	12	14	15	16	17	18	19	20	21	26	27	28	29	30
Methylene Chloride	2.5	4.4	1.3	1.1	0.53	1.6	5.1	4.0	ND	0.5	ND	3.2	4.2	6.0	6.7
Trichloroethylene	2.2	3.5	0.07	2.3	0.9	0.51	0.22	0.12	0.09	0.05	0.02	0.66	0.35	0.014	0.10

	Methylene Chloride Tank Area (GP Sample Station)			
	22	23	24	25
Methylene Chloride	ND	ND	ND	ND
Trichloroethylene	BRL	BRL	BRL	BRL
Xylene	ND	ND	ND	ND

GP Gas Probe
ND Non-detected
BRL Below reporting limit

Decrease Conc.

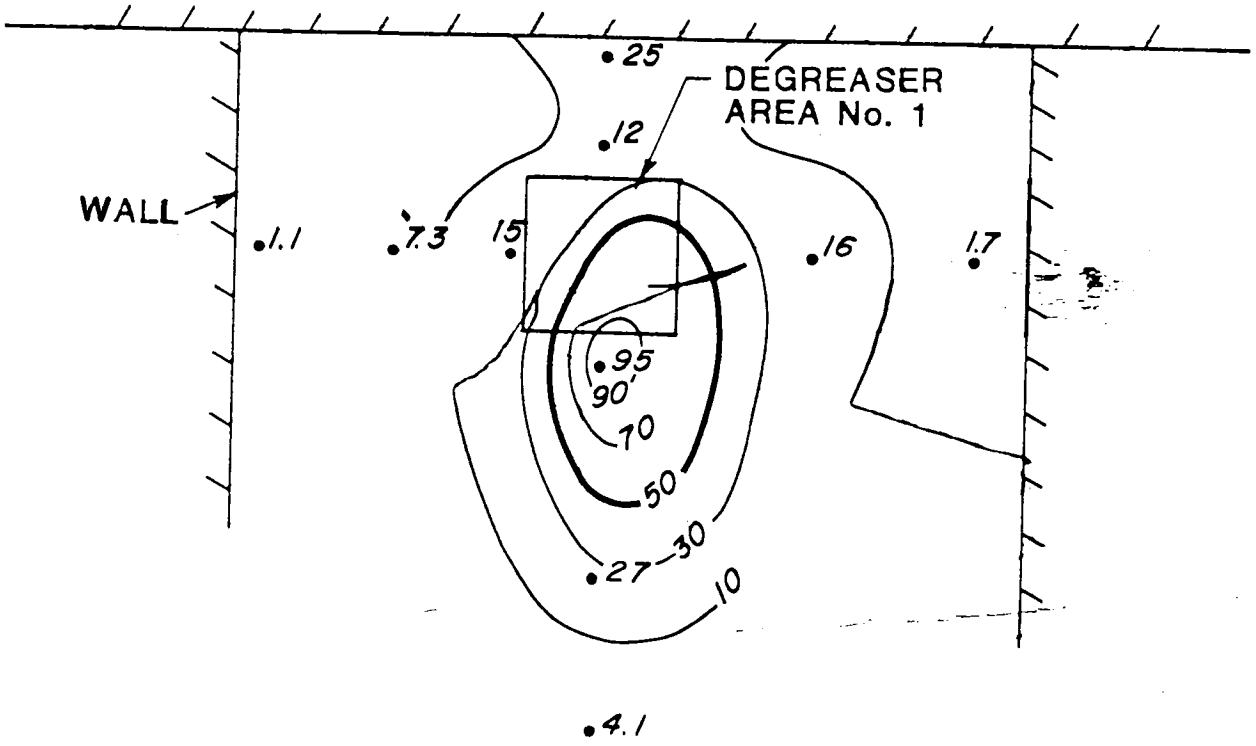

FIGURE 4-1

DEGREASER AREA No. 1

SOIL GAS ISOCONCENTRATION
METHYLENE CHLORIDE (mg/l)

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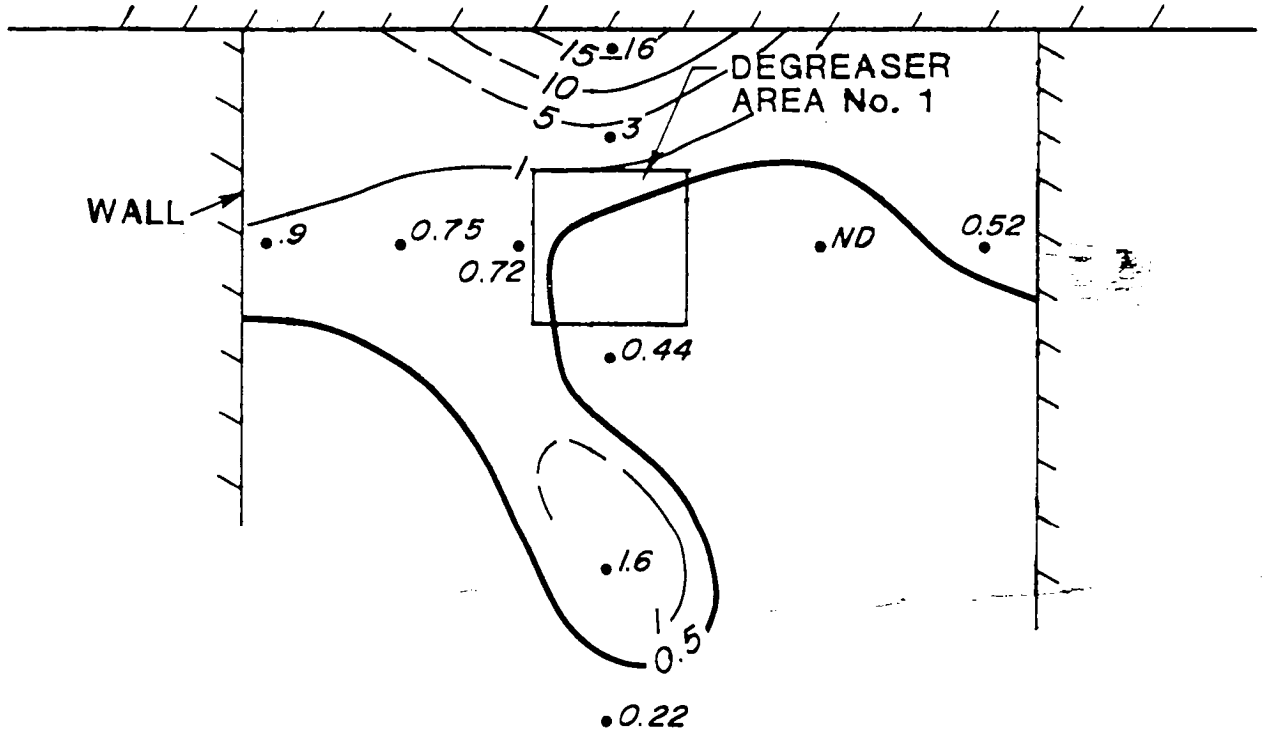

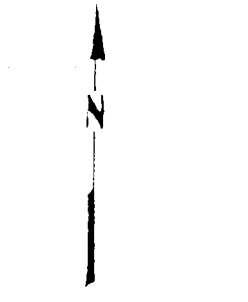

APPROXIMATE SCALE

FIGURE 4-2

DEGREASER AREA No. 1

SOIL GAS ISOCONCENTRATION

TCE (mg/ℓ)

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ND Not Detected

for the distribution of methylene chloride with the highest readings immediately south of the degreaser unit. The isoconcentration contour map for TCE (see Figure 4-2) shows increasing soil gas concentrations to the north of the degreaser unit.

4.1.2 Degreaser Area 2

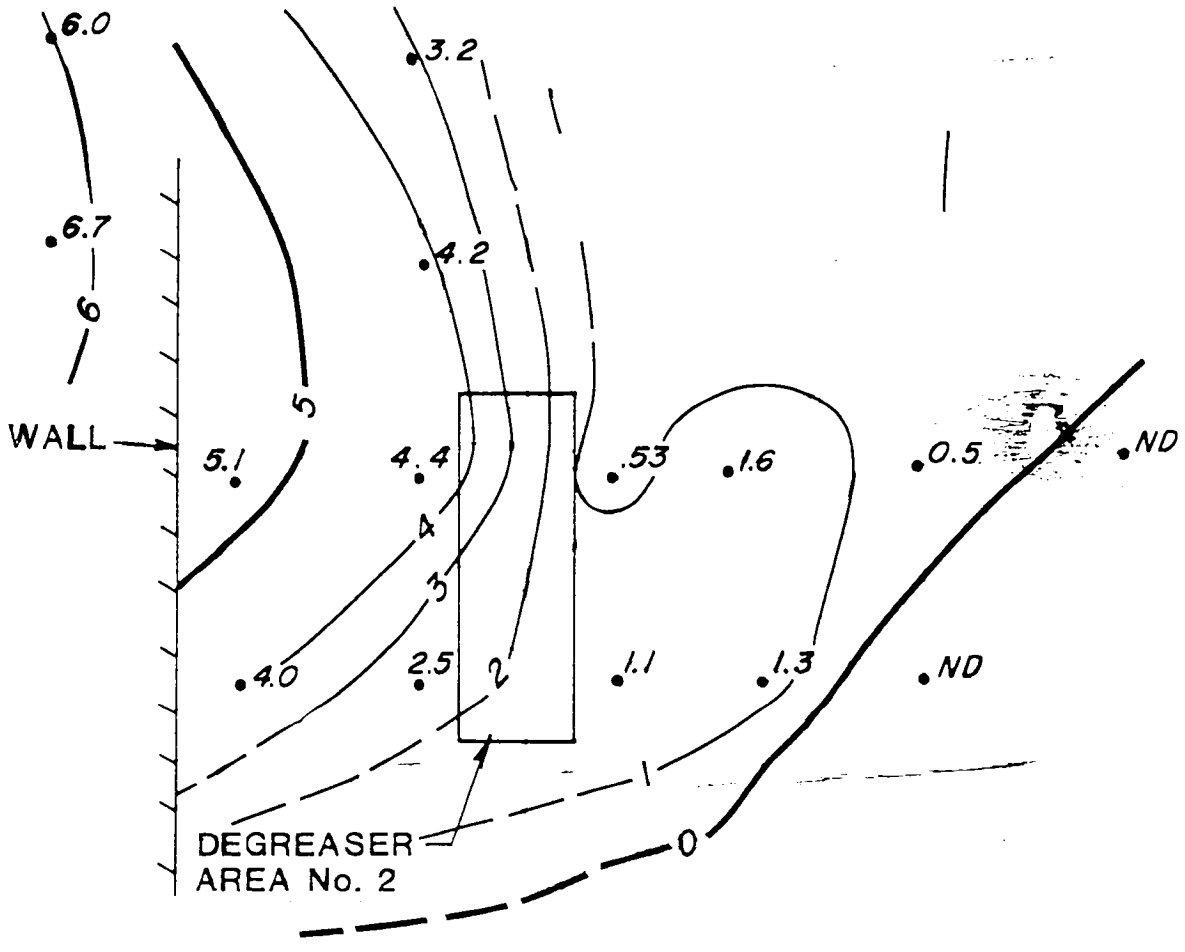
In degreaser area 2, the soil gas survey consisted of 15 sample locations which were analyzed for methylene chloride and TCE. These data are also provided on Table 4-1. Methylene chloride concentrations ranged from non-detected to 6.7 mg/l and TCE concentrations ranged from 0.014 to 2.3 mg/l. Soil gas isoconcentration contour maps for methylene chloride and TCE in the vicinity of degreaser area 2 are provided on Figures 4-3 and 4-4, respectively. The methylene chloride isoconcentration contour map (see Figure 4-3) shows increasing soil gas concentrations to the northwest of the degreaser. The TCE isoconcentration contour map (see Figure 4-4) shows the highest concentrations in the immediate vicinity of the degreaser.

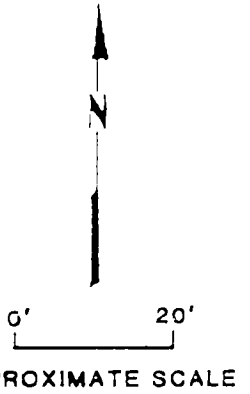
4.1.3 Methylene Chloride Tank Area

A total of four soil gas samples were collected in the vicinity of the methylene chloride tank area. The samples were analyzed for methylene chloride, TCE and xylene. These data are also included on Table 4-1. No methylene chloride or xylene were detected in any of the four soil gas samples. Only trace quantities of TCE were detected, all of which were below the reporting limit of 5 μg/l (parts per billion).

4.1.4 Chemical Storage Building Area

In the vicinity of the chemical storage building, the soil gas survey consisted of 30 sample locations which were analyzed for methylene chloride, TCE, toluene, ethylbenzene and total xylene. As shown on Table 4-2, the methylene chloride concentration ranged from non-detected to 2,800 μg/l, the TCE concentration ranged from below reporting limits of 5 μg/l to 88 μg/l and the toluene concentration ranged from non-detected to 230 μg/l. Table 4-2 also shows the





APPROXIMATE SCALE

FIGURE 4-3

DEGREASER AREA No. 2

SOIL GAS ISOCONCENTRATION METHYLENE CHLORIDE (mg/ℓ)

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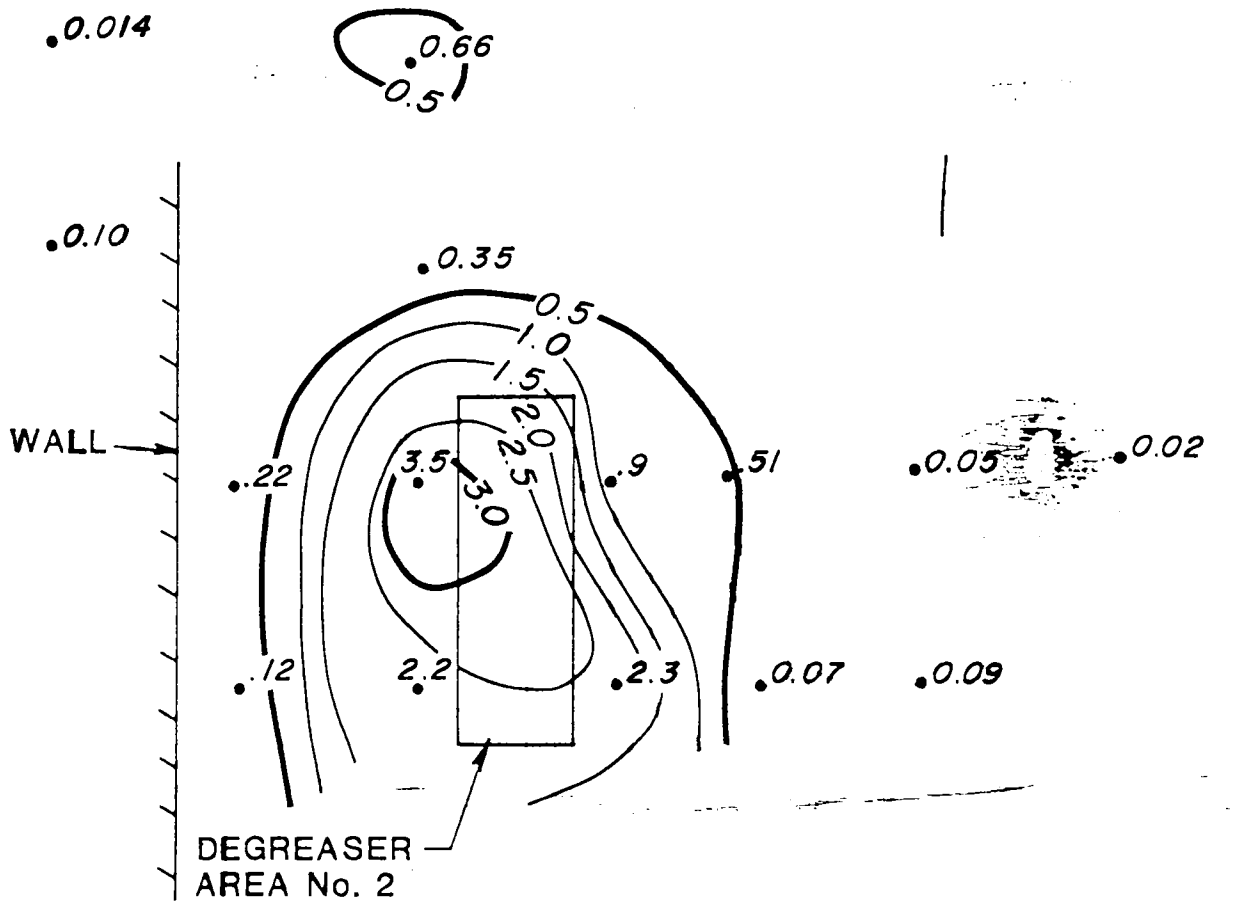
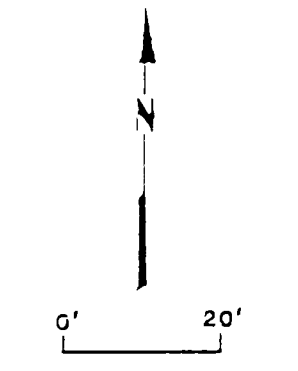
ND Not Detected





APPROXIMATE SCALE

FIGURE 4-4

DEGREASER AREA No. 2

SOIL GAS ISOCONCENTRATION

TCE (mg/ℓ)

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TABLE 4-2
SOIL GAS SURVEY RESULTS FOR AROUND THE CHEMICAL STORAGE BUILDING
All values in μg/l (parts per billion)

	Chemical Storage Building (GPO Sample Station)													
	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Methylene Chloride	BRL	BRL	28	320	530	ND	ND	2,800	64	ND	ND	ND	1,700	ND
Trichloro-ethylene	BRL	BRL	12	BRL	BRL	ND	BRL	88	17	9	BRL	BRL	BRL	BRL
Toluene	40	70	230	ND	ND	ND	BRL	190	65	50	37	ND	ND	ND
Ethyl-benzene	140	47	140	ND	ND	ND	62	60	49	44	ND	ND	ND	ND
Total Xylenes	150	150	79	ND	ND	ND	200	140	120	100	37	ND	ND	ND

	Chemical Storage Building (GPO Sample Station)														
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloro-ethylene	BRL	BRL	BRL	BRL	BRL	ND	ND	BRL	BRL	ND	BRL	BRL	BRL	BRL	ND
Toluene	ND	ND	BRL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl-benzene	38	ND	BRL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND Non-detected
BRL. Below reporting limits

concentration range for ethylbenzene to be between non-detected to 150 µg/l, and for total xylene from non-detected to 200 µg/l.

Soil gas isoconcentration contour maps for methylene chloride, TCE, toluene, ethyl benzene and xylene in the vicinity of the chemical storage building are provided on Figures 4-5 through 4-9, respectively. A review of the contour maps shows all soil gas impacts to be limited to the vicinity of the chemical storage building with the highest concentrations generally being found near the south central portions of the building. Most of the soil gas contaminant distributions have a northerly trend except for ethyl benzene which has a radial distribution.

4.2 Ground Water Sampling

As described in Section 2.2, thirteen monitoring wells and the Arcade Municipal Well, located approximately 1/2 mile northeast of the site, were sampled during this investigation. Ground water samples were analyzed for VOCs, hardness as calcium carbonate ($CaCO_3$), inorganics and cyanide. Appropriate QA/QC samples were also collected in accordance with the Work Plan. Specifically, one duplicate, one field blank and three trip blanks were analyzed. All analytical procedures were in accordance with Work Plan specifications.

4.2.1 Volatile Organic Compounds

Table 4-3 shows the analytical results for VOCs in ground water. The following VOCs were detected in one or more of the ground water samples: methylene chloride, acetone, TCE, 1,1,1-trichloroethane (1,1,1-TCA) and 1,2-DCE. No other VOCs were detected in any of the ground water or associated QA/QC samples.

TCE was detected in five monitoring wells, MW-1, MW-2, MW-3, MW-9 and MW-9D. The highest TCE concentration, 120 µg/l, was detected in monitoring well MW-1. The TCE concentration in MW-9 was 89 µg/l and the concentration in monitoring wells MW-2, MW-3 and MW-9D ranged from 3 µg/l to 22 µg/l.

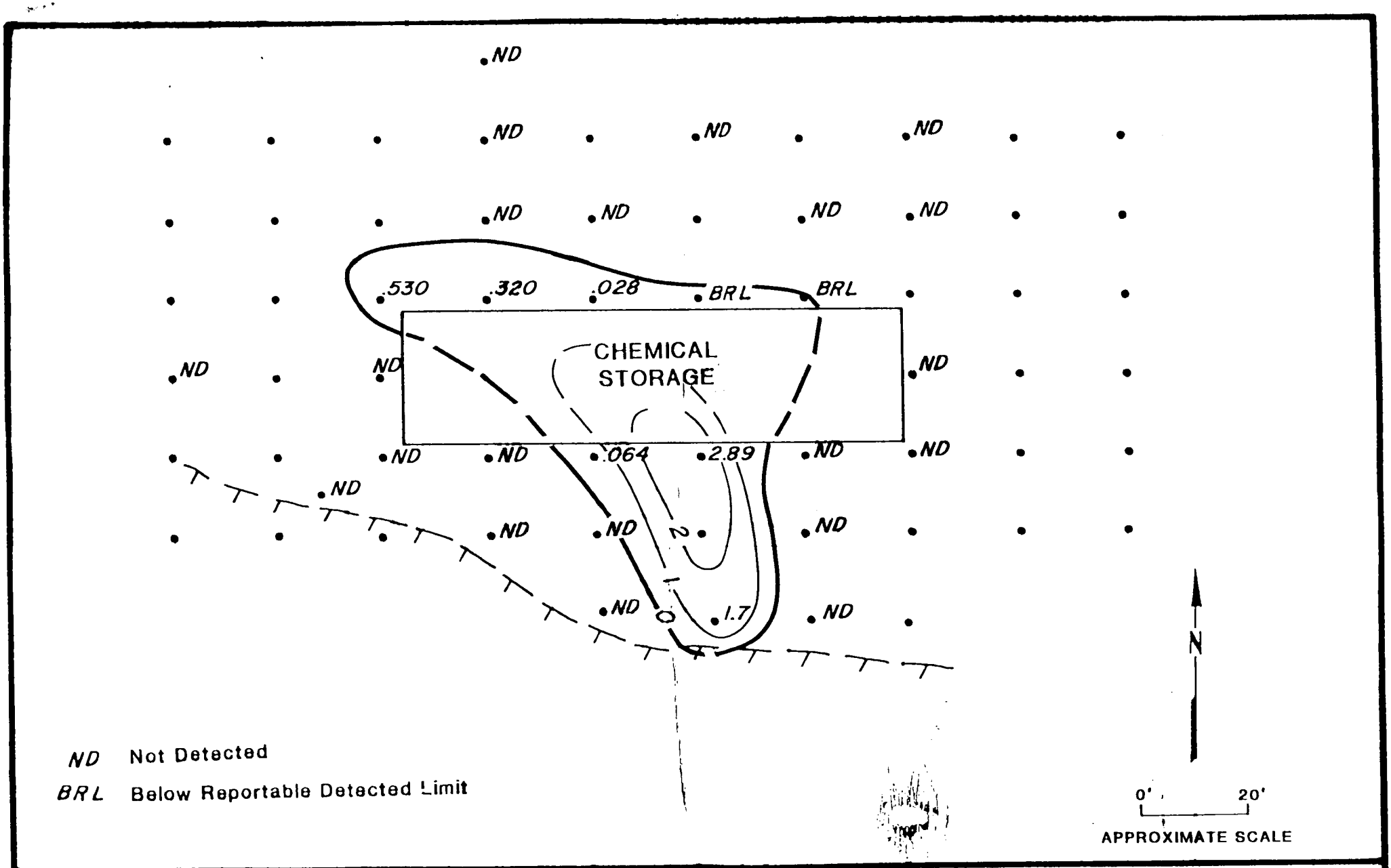

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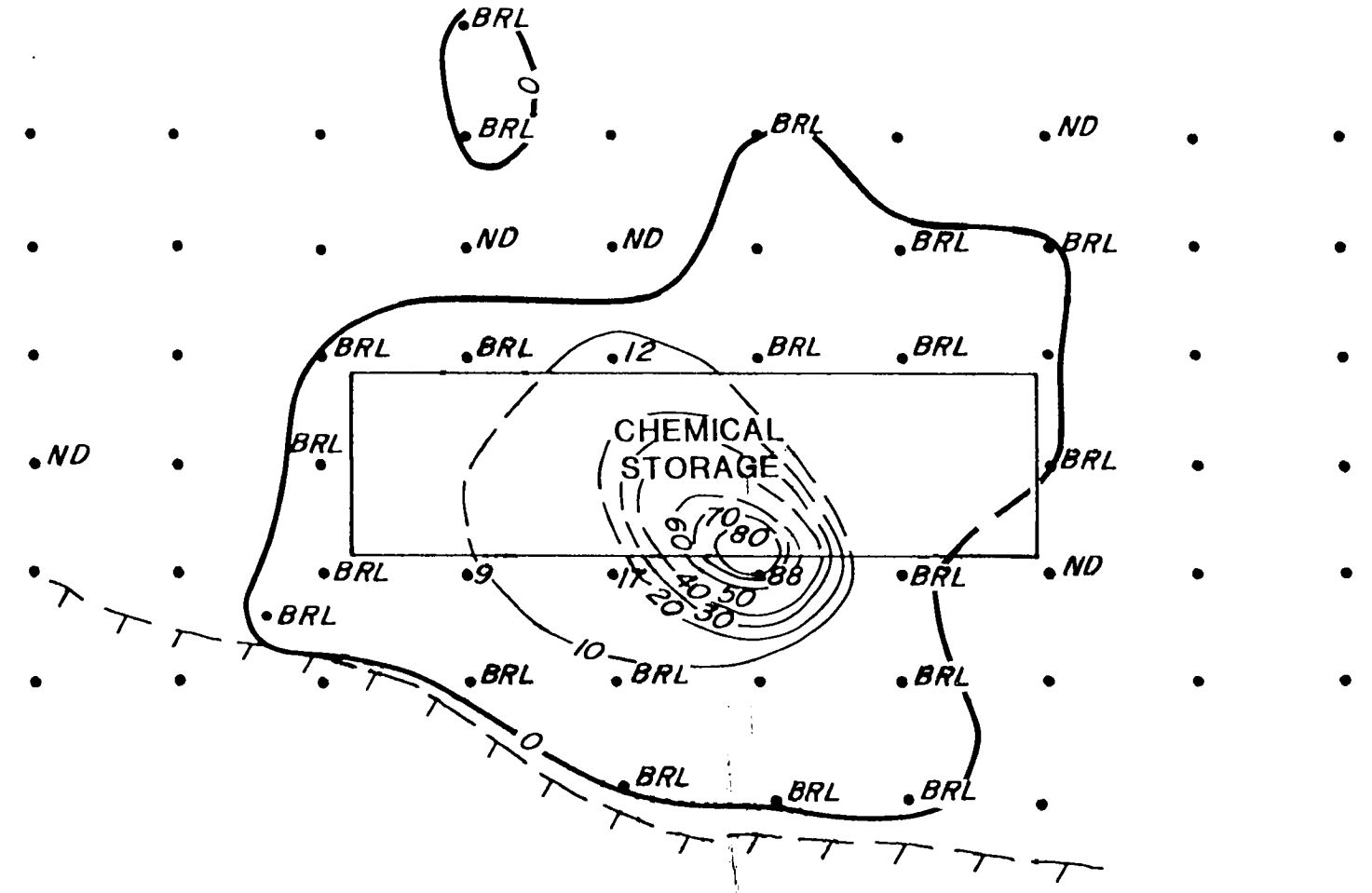
FIGURE 4-5

CHEMICAL STORAGE BUILDING

SOIL GAS ISOCONCENTRATION METHYLENE CHLORIDE (mg/ℓ)



ND Not Detected

BRL Below Reportable Detected Limit

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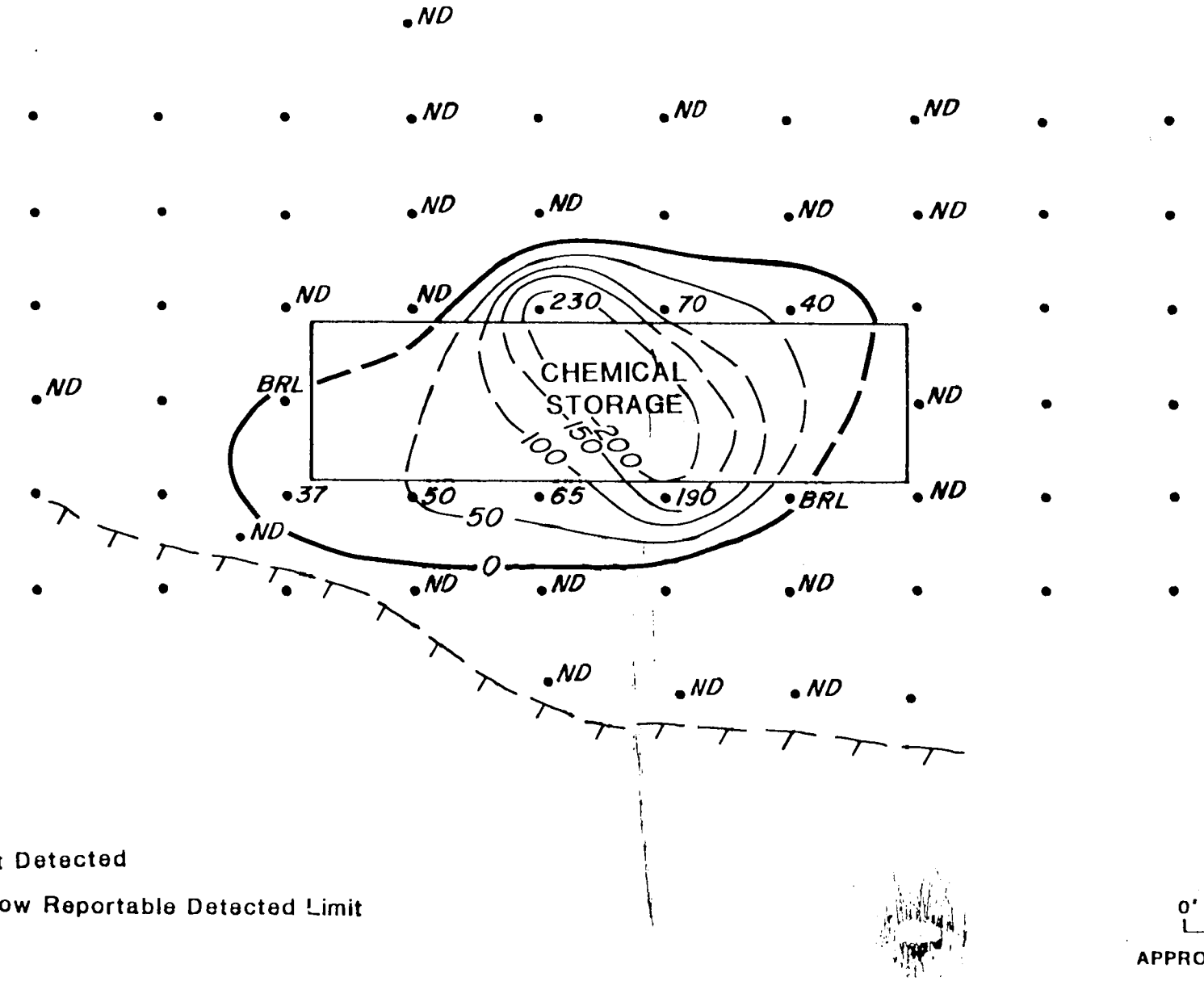
FIGURE 4-6

CHEMICAL STORAGE BUILDING

SOIL GAS ISOCONCENTRATION

TCE (ug/ℓ)



ND Not Detected

BRL Below Reportable Detected Limit

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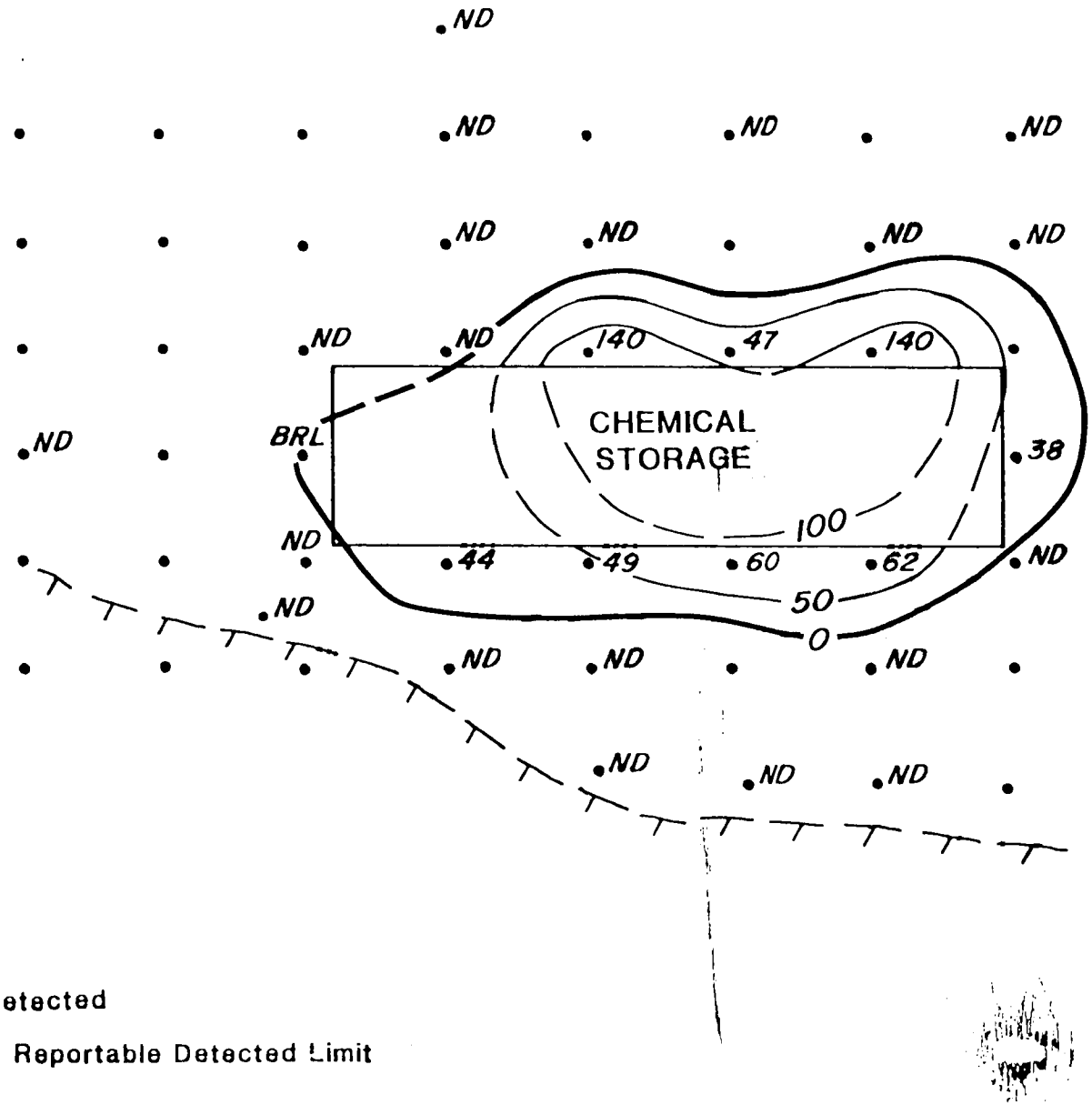
FIGURE 4-7

CHEMICAL STORAGE BUILDING

SOIL GAS ISOCONCENTRATION
TOLUENE (ug/ℓ)



ND Not Detected

BRL Below Reportable Detected Limit

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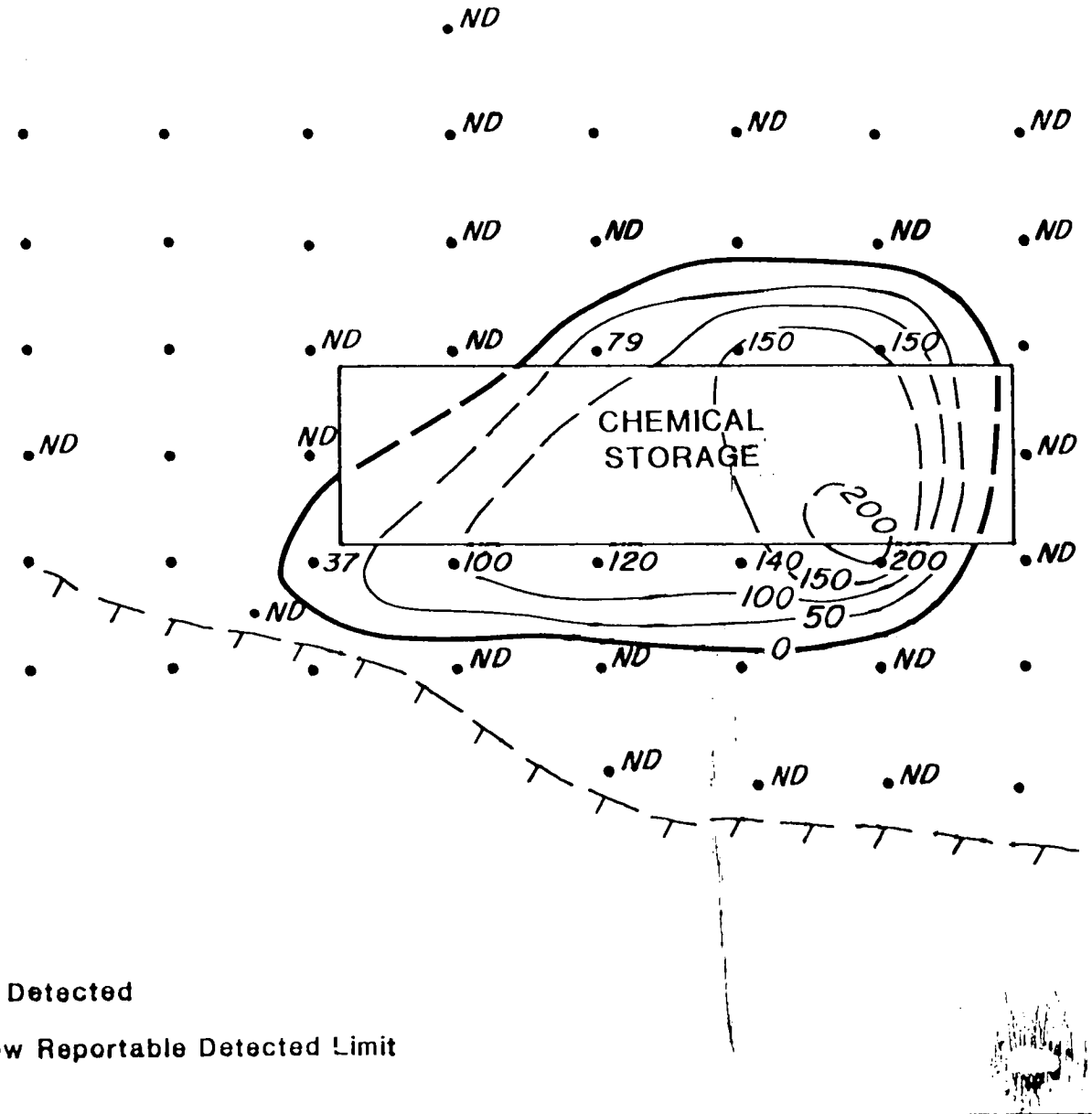
FIGURE 4-8

CHEMICAL STORAGE BUILDING

SOIL GAS ISOCONCENTRATION ETHYLBENZENE (ug/)



ND Not Detected

BRL Below Reportable Detected Limit

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FIGURE 4-9

CHEMICAL STORAGE BUILDING

SOIL GAS ISOCONCENTRATION
TOTAL XYLENE (ug/ℓ)

TABLE 4–3
ORGANIC CONCENTRATIONS IN GROUND WATER

	MONITOR WELLS												
	MW-01	MW-01D	MW-02	MW-03	MW-03D	MW-04	MW-05	MW-06	MW-06D	MW-07	MW-08	MW-09	MW-09D
Date Received	2/4	2/4	2/6	2/6	2/8	2/8	2/8	2/6	2/6	2/4	2/4	2/8	2/8
Date Analyzed	2/6	2/6	2/7	2/7	2/12	2/12	2/12	2/7	2/7	2/6	2/6	2/12	2/12
VOCs													
Methylene Chloride	ND	5 B	4 J	4 J	ND	ND	ND	3 J	4 J	3 BJ	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	10	9 J	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	120	ND	17	22	ND	ND	ND	ND	ND	ND	ND	89	3 J
1,1,1-Trichloroethane	17	ND	ND	6	ND	ND	ND	ND	ND	ND	5	14	ND
1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND

	MUNICIPAL WELLS		TRIP BLANKS			FIELD BLANK	METHOD BLANK
	M.WELL1	M.WELL1Dup	TB1	TB2	TB3	FB1	VBLK13
Date Received	2/6	2/6	2/6	2/8	2/8	2/8	—
Date Analyzed	2/7	2/7	2/7	2/12	2/12	2/12	2/6
VOCs							
Methylene Chloride	3 J	4 J	5	ND	ND	ND	4 J
Acetone	ND	ND	ND	ND	ND	ND	13
Chloroform	ND	ND	ND	ND	ND	10	ND
Vinyl Acetate	ND	ND	ND	ND	ND	8 J	ND
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND

B = The analyte is found in the blank as well as in the sample, indicating possible/probable contamination and warning the data user to take appropriate action.
D = Deep well
J = Mass spectral data indicates the presence of a compound but the result is less than the specified detection limit, but still greater than zero.
Dup = Duplicate sample
NA = The analyte was not analyzed for
ND = The analyte was analyzed for but not detected
— = Not applicable

1,1,1-TCA was only detected in four monitoring wells: MW-1, MW-3 and MW-8 and MW-9. The highest 1,1,1-TCA concentration was detected in MW-1 (17 μg/l). 1,2-DCE was detected only in monitoring well MW-9 at a concentration of 11 μg/l. The New York State ground water standards for the detected VOCs are provided on Table 4-4. The areal distribution of TCE and 1,1,1-TCA concentrations in ground water is provided on Figure 4-10.

Methylene chloride and acetone were detected in several ground water samples and in QC samples. Concentrations of methylene chloride ranged from the detection limit of 5 μg/l to 3 μg/l (below reportable detection limits). Acetone was detected in one of the method blanks and in monitoring wells MW-5 and MW-6. The acetone concentration in MW-5 was 10 μg/l and that in MW-6 was 9 μg/l. Methylene chloride and acetone are common laboratory-introduced contaminants. In accordance with U.S. EPA Functional Guidelines for Data Validation of Organic Analyses (1988), the concentration of contaminants detected in QC samples was multiplied by five to determine a relative baseline. All investigative sample data values below this baseline comparison are suspect and may not be representative of actual ground water chemistry. All acetone and methylene chloride values in this round of sampling are generally below the baseline and are therefore not considered to be representative of actual ground water chemistry.

4.2.2 Inorganics

Table 4-5 shows the concentration of the inorganics and cyanide in ground water from the monitoring wells and Arcade Municipal well. The results are separated into total and dissolved inorganic fractions. The dissolved fraction generally reflects the mobile portion of inorganics in ground water. Monitoring well MW-5 is located upgradient of the site. Analytical data from this well is representative of background concentrations.

In general, total metals concentrations in both upgradient and downgradient wells appear elevated relative to established standards (see Table 4-4). However, dissolved metal concentrations are low to non-detected.

TABLE 4-4

NEW YORK STATE WATER QUALITY STANDARDS

PARAMETER	STANDARD (μg/l)
1,2-DCE	5
1,1,1-TCA	5
TCE	5
Aluminum	--
Antimony	--
Arsenic	25
Barium	1,000
Beryllium	--
Cadmium	10
Calcium	--
Chromium	50
Cobalt	--
Copper	100
Cyanide	100
Iron	300*
Lead	25
Magnesium	--
Manganese	300*
Mercury	2
Nickel	--
Potassium	--
Selenium	10
Silver	50
Sodium	20,000
Thallium	--
Vanadium	--
Zinc	300

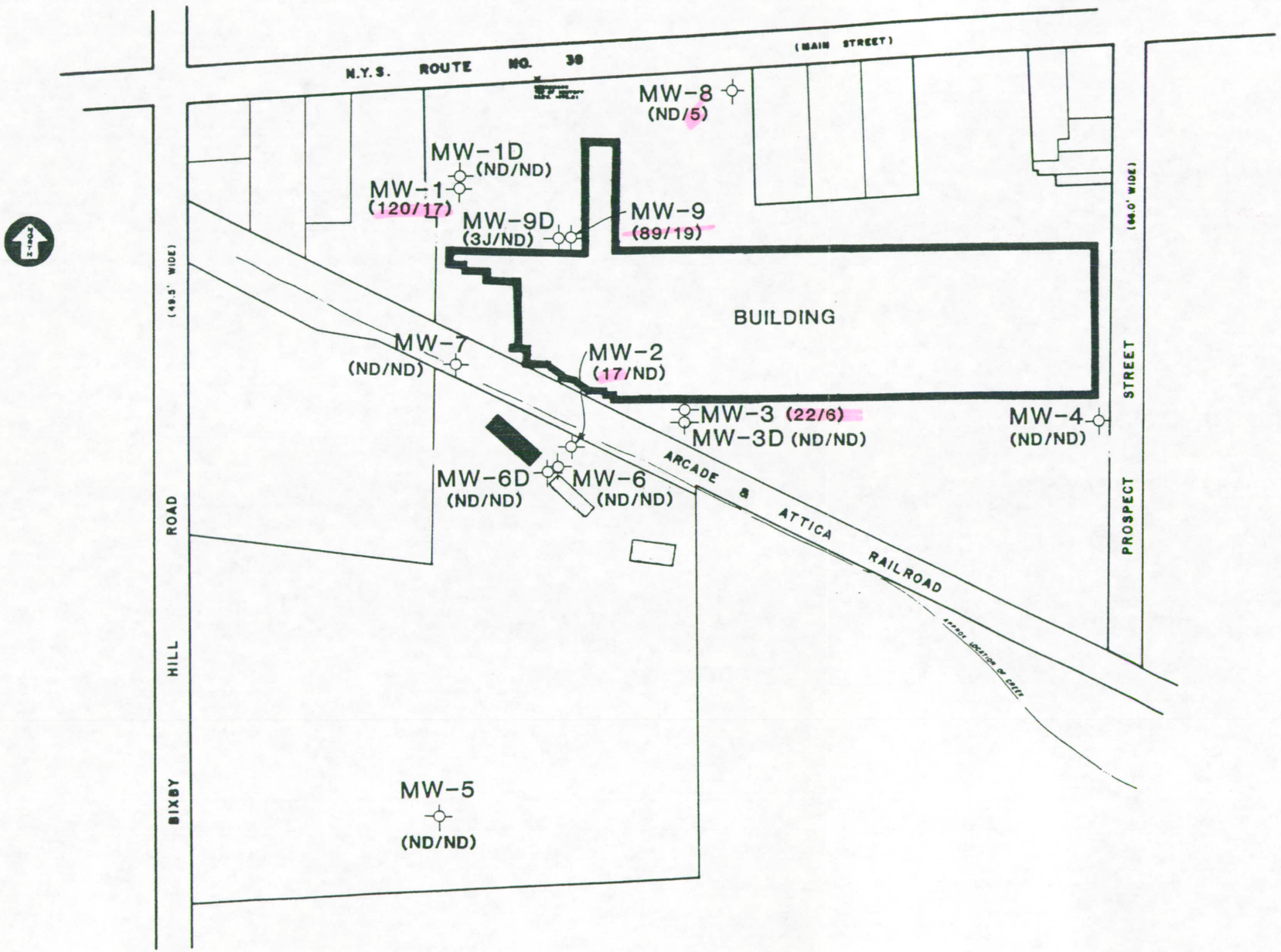
Notes:

-- Standard Not Established
* Standard for Iron and Manganese is 500 μg/l

LEGEND

MW-1 MONITORING WELL

(ND/15) TCE/1,1,1-TCA CONCENTRATIONS IN ug/ℓ



NEW YORK STATE PLANE COORDINATE SYSTEM WEST ZONE - NAD 27

WELL NO.	NORTHING	EASTING
MW-1	922,940.409	541,174.526
MW-1D	922,953.740	541,176.160
MW-2	922,442.308	541,340.832
MW-3	922,496.069	541,574.746
MW-3D	922,488.208	541,574.327
MW-4	922,462.796	542,355.876
MW-5	921,732.551	541,123.527
MW-6	922,402.486	541,330.309
MW-6D	922,398.127	541,326.287
MW-7	922,583.682	541,156.871
MW-8	923,107.400	541,679.229
MW-9	922,836.686	541,364.639
MW-9D	922,836.543	541,359.900
SB-01	921,732.6	541,123.5
SB-L01	922,869.0	541,234.8
SB-04	922,177.8	541,938.7
SW-04	922,177.8	541,938.7
SW-02	922,469.4	541,394.3
SB-02	922,469.4	541,394.3
SB-03	922,273.7	541,622.5
SW-03	922,845.8	541,065.9
SB-03	922,845.8	541,065.9
SW-04	922,492.3	542,339.3
SB-04	922,492.3	542,339.3

NOTE BASIC CONFIGURATION OF OUTBOUNDS OF PREMISES COMPILED FROM THE VILLAGE OF ARCADE TAX MAP NO. 183.13.

SHAPE AND LOCATION OF BUILDINGS TAKEN FROM A DRAWING PREPARED BY TREVOR R ROGERS & ASSOCIATE, ARCHITECTS, JOB NO. 1526.

ELEVATIONS BASED ON NGVD 1929.

FIGURE 4-10

AREAL DISTRIBUTION OF TCE & 1,1,1-TCA IN GROUND WATER

PROJECT 426116372

DATE 5/92

REVISIONS

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TABLE 4-5
INORGANIC CONCENTRATIONS IN GROUND WATER (ug/l)

	MW-01		MW-01 (deep)		MW-02		MW-03		MW-03 (deep)	
PARAMETER	**Total**	Dissolved	Total	Dissolved	**Total**	Dissolved	Total	Dissolved	Total	Dissolved
Aluminum	303000	14.2 B	85400	29.8 B	165000	U	320000	U	43700	27.4 B
Antimony	U	U	U	U	U	U	U	U	U	U
Arsenic	12.8	U	11.1	9.8 B	46.8	4.1 B	12.9	U	8.9 B	U
Barium	2850	131 B	640	79.8 B	3030	361	2920	119 B	508	95.5 B
Beryllium	15.9	U	5.5	U	11.6	U	17	U	2.2 B	U
Cadmium	6.5	U	U	U	19.5	U	U	U	U	U
Calcium	1260000	98500	138000	39300	451000	56500	1980000	122000	263000	58000
Chromium	420	4.1 B	121	U	193	U	401	U	71.1	U
Cobalt	264	U	64.4	U	148	U	272	U	35.9 B	U
Copper	1110	U	140	U	1200	U	1620	U	143	U
Cyanide	U	-	U	-	12.6	-	U	-	U	-
Iron	731000	6.1 B	139000	31.1 B	446000	169	803000	U	92700	10.9 B
Lead	568	U	71	U	657	U	464	U	39.3	U
Magnesium	389000	15600	50900	10100	202000	7100	616000	18100	56300	15900
Manganese	25400	139	2600	276	37200	1170	24500	90.7	2880	197
Mercury	1	U	U	U	0.86	U	1	U	0.37	U
Nickel	602	U	131	U	395	U	646	U	93.9	U
Potassium	37500	3580 B	20700	4610 B	18200	2410 B	33800	2770 B	9280	4190 B
Selenium	U	U	U	U	U	U	U	U	U	U
Silver	18	U	6.5 B	U	51.6	U	67.3	U	U	U
Sodium	28700	26300	45500	44900	9710	8450	14700	12600	12900	12000
Thallium	2.2 B	U	U	U	3.1 B	U	3.2 B	U	U	U
Vanadium	372	U	113	U	258	U	416	U	60	U
Zinc	3360	3.3 B	430	2.4 B	2900	U	4370	U	313	U
Hardness as CaCO3	191		568		1320		4860		740	

B = The reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).
U = The analyte was analyzed for but not detected.

TABLE 4-5
INORGANIC CONCENTRATIONS IN GROUND WATER (ug/l) (continued)

	MW-04		MW-05		MW-06		MW-06 (deep)		MW-07	
PARAMETER	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Aluminum	359000	34.6 B	178000	46.2 B	28900	20.3 B	29600	U	57900	45.4 B
Antimony	U	U	U	U	U	U	U	U	U	U
Arsenic	2.3 B	U	21.7	U	13.1	2.4 B	20.8	9.8 B	9.3 B	U
Barium	42500	251	1420	109 B	359	135 B	285	120 B	533	44.5 B
Beryllium	19.1	U	10.9	U	1.5 B	U	1.5 B	U	3.8 B	U
Cadmium	33.8	U	U	U	U	U	U	U	U	U
Calcium	3020000	91500	435000	58800	88300	55000	106000	49300	101000	53300
Chromium	453	U	287	U	54.6	U	50.6	U	89.4	U
Cobalt	500	U	184	U	25.4 B	U	31.8 B	U	59.3	U
Copper	3570	U	491	U	80.4	U	79.4	U	194	U
Cyanide	U	-	U	-	U	-	U	-	12.6	-
Iron	1100000	9.4 B	447000	13.8 B	85500	U	68800	U	144000	42 B
Lead	4.5	U	163	U	33.6	U	35.3	U	81.1	U
Magnesium	930000	15500	140000	14200	27500	13000	37300	16300	35000	6700
Manganese	306000	2.3 B	8480	109	1180	130	1300	114	7320	311
Mercury	2	U	U	U	U	U	U	U	U	U
Nickel	1300	U	412	U	57.5	U	69.3	U	130	U
Potassium	28800	2220 B	33600	16000	14800	9790	27200	17400	8520	2500 B
Selenium	U	U	U	2.1 B	U	U	U	U	U	U
Silver	68.7	U	8.2 B	U	10.2	U	7.8 B	U	5.8 B	U
Sodium	41100	40000	19000	17500	10800	9270	20000	18000	16900	16200
Thallium	2.3 B	U	U	U	U	U	U	U	1.1 B	U
Vanadium	429	U	232	U	54.5	U	46.3 B	U	72.8	U
Zinc	8140	2.5 B	1210	2.5 B	187	U	191	U	767	4.2 B
Hardness as CaCO3	5270		3070		319		345		270	

B = The reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).
U = The analyte was analyzed for but not detected.

TABLE 4-5
INORGANIC CONCENTRATIONS IN GROUND WATER (ug/l) (continued)

	MW-08		MW-09		MW-09 (deep)		Municipal Well		Municipal Well Dup.		Field Blank	
PARAMETER	**Total**	Dissolved	Total	Dissolved	**Total**	**Dissolved**	Total	Dissolved	Total	Dissolved	**Total**	**Dissolved**
Aluminum	146000	22.7 B	132000	28.9 B	96800	53.4 B	U	U	U	U	21.6 B	27.4 B
Antimony	U	U	U	U	U	U	U	U	U	U	U	U
Arsenic	11.5	U	22.9	U	35.5	4 B	2.1 B	U	2.2 B	U	U	U
Barium	4640	116 B	1390	102 B	861	134 B	103 B	103 B	103 B	103 B	1.9 B	3.1 B
Beryllium	9.3	U	6	U	6.6	U	U	U	U	U	U	U
Cadmium	7.7	U	37.1	U	U	U	U	U	U	U	U	U
Calcium	1630000	84800	668000	71400	445000	59400	61900	60600	60600	61200	78.6 B	140 B
Chromium	196	5.1 B	188	U	136	U	U	U	U	U	U	U
Cobalt	158	U	128	U	102	U	U	U	U	U	U	U
Copper	859	U	623	U	271	U	U	U	U	U	U	U
Cyanide	U	-	23.2	-	U	-	U	-	U	-	U	-
Iron	354000	U	347000	29 B	218000	58 B	U	U	U	U	39.9 B	39.2 B
Lead	254	U	208	U	125	U	U	U	U	U	U	U
Magnesium	358000	16200	214000	10700	131000	15900	10400	10200	10100	10300	U	U
Manganese	30000	363	16500	755	6410	525	U	U	U	U	U	10.4 B
Mercury	0.71	U	1.1	U	0.32	U	U	U	U	U	U	U
Nickel	349	U	316	11.7 B	224	U	U	U	U	U	U	U
Potassium	17100	4240 B	18500	3070 B	16500	5140	1520 B	1990 B	1130 B	1280 B	U	U
Selenium	U	U	U	U	U	U	U	U	U	U	U	U
Silver	12.8	U	8.2 B	U	U	U	U	U	U	U	U	U
Sodium	16300	14100	11900	10100	26100	25100	12400	12300	12000	12200	49.6 B	52.6 B
Thallium	1.7 B	U	1.2 B	U	1.2 B	U	U	U	U	U	U	U
Vanadium	177	U	188	U	136	U	U	U	U	U	U	U
Zinc	2520	3.3 B	1780	6 B	682	3 B	U	U	U	U	2.5 B	4 B
Hardness as CaCO3	5880		3720		256		191		192		<5	

B = The reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

U = The analyte was analyzed for but not detected.

Comparison of the concentration of total inorganic analyses to established New York State ground water standards (see Table 4-4) shows a number of exceedances for both upgradient and downgradient monitoring wells. The only inorganics found to exceed standards in downgradient wells that do not exceed standards in the upgradient well are cadmium (at locations MW-2, MW-4 and MW-9), silver (at locations MW-1, MW-3 and MW-4) and sodium (at locations MW-1, MW-1D, MW-2, MW-4 and MW-9D). The areal distribution of total cadmium, silver and sodium concentrations in ground water is shown on Figure 4-11. It is noted, however, that there are some generally increasing trends in some total metals (e.g., chromium, copper and lead) from upgradient to downgradient.

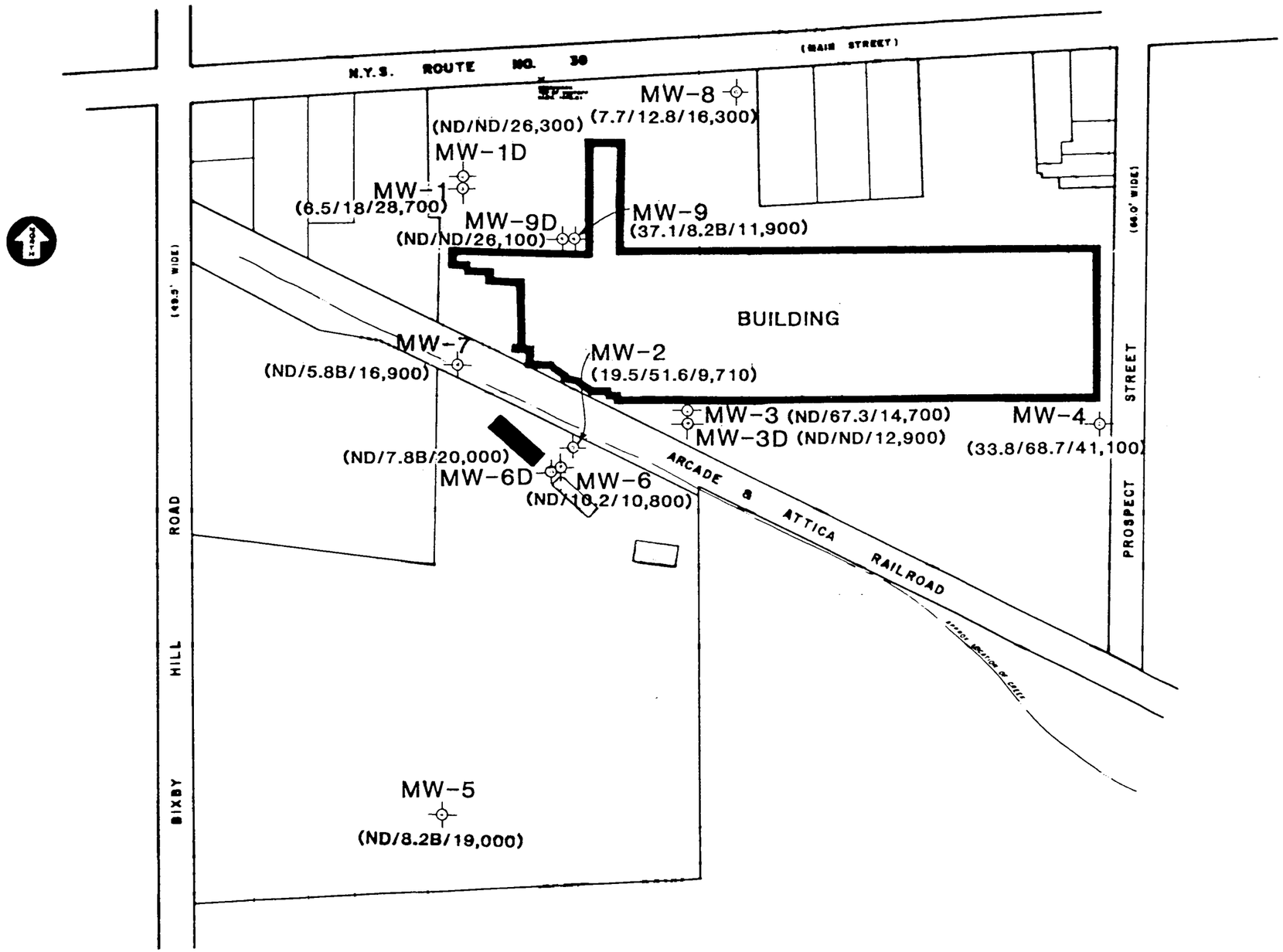
Calcium, magnesium and sodium were detected in the total and dissolved fractions in the Arcade municipal well ground water sample. Barium, arsenic and potassium were also detected but at concentrations below reportable detection limits. All values were at or below background concentrations for upgradient well MW-5. No other inorganics were detected in the Arcade municipal well.

4.3 Surface and Subsurface Soil Sampling

As discussed in Section 2.5, surface and subsurface soil sampling consisted of the collection of three surface soil samples and eight subsurface samples. Analytical results from subsurface soil sample SB01 and surface soil sample SS01 represent background concentrations. The analytical results are discussed below.

4.3.1 Volatile Organic Compounds

All surface and subsurface soil samples were analyzed for VOCs. The data are summarized on Table 4-6. No VOCs were detected in surface soil samples. Three VOCs were detected in subsurface soil samples. TCE was detected in subsurface soil samples SB03, SB04, SB05 and SB06 at concentrations of 10 µg/kg, 77 µg/kg, 2,200 µg/kg (ppb) and 20 µg/kg, respectively. Sample SB03 was collected from the boring for monitoring well MW-3D at a depth of 5 feet. Samples SB04 and SB05 were collected from a depth of 6 feet beneath the concrete foundation at



LEGEND

MW-1 MONITORING WELL

(4/150/ND) CADMIUM, SILVER and SODIUM CONCENTRATIONS IN ug/ℓ

NEW YORK STATE PLANE COORDINATE SYSTEM WEST ZONE - NAD 27

WELL NO.	NORTHING	EASTING
MW-1	982,940.408	541,170.328
MW-1D	982,933.740	541,170.160
MW-2	982,442.508	541,360.832
MW-3	982,496.069	541,374.746
MW-3D	982,468.728	541,374.327
MW-4	982,442.786	542,265.876
MW-5	981,732.351	541,123.927
MW-6	982,401.486	541,330.309
MW-6D	982,396.127	541,324.787
MW-7	982,582.682	541,139.871
MW-8	983,107.400	541,879.229
MW-9	982,838.686	541,364.639
MW-9D	982,836.343	541,359.900
38-01	981,732.8	541,123.5
38-01	982,869.0	541,234.8
38-01	982,177.8	541,938.7
MW-01	982,177.8	541,938.7
MW-02	982,469.4	541,194.5
38-02	982,469.4	541,194.5
38-03	982,275.7	541,677.5
MW-03	982,695.9	541,065.9
38-03	982,695.9	541,065.9
MW-04	982,692.3	542,336.5
38-04	982,692.3	542,339.5

NOTE: BASIC CONFIGURATION OF OUTBUILDINGS OF PREMISES COMPILED FROM THE VILLAGE OF ARCADE TAX MAP NO. 103.13.

SHAPE AND LOCATION OF BUILDINGS TAKEN FROM A DRAWING PREPARED BY TREVOR W. ROGERS & ASSOCIATE, ARCHITECTS, JOB NO. 1528.

ELEVATIONS BASED ON NGVD 1929.

FIGURE 4-11

AREAL DISTRIBUTION OF CADMIUM, SILVER & SODIUM IN GROUND WATER

PROJECT 426116372

DATE 5/92

REVISIONS

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CONSULTING HYDROLOGISTS-GEOLOGISTS
RENO DENVER MILWAUKEE IRVINE

TABLE 4-6
ORGANIC CONCENTRATIONS IN SURFACE & SUBSURFACE SOILS (ug/kg)

	SUBSURFACE SOILS				(Duplicates) #1	#1	Duplicate 2		SURFACE SOILS			TRIP BLANK	METHOD BLANK
	SB01	SB02	SB03	SB03Col	SB04	SB05	SB06	SB07	SS01	SS02	SS03	TB1	SBLK72
Date Received	1/13	2/4	2/6	2/6	1/31	2/4	2/4	2/4	2/4	2/4	2/4	2/6	—
Date Analyzed	2/4	2/6	2/10	2/10	2/4	2/7	2/6	2/6	2/6	2/6	2/6	2/7	—
VOCs													
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	NA
Trichloroethylene	ND	ND	10	ND	77	2200	20	ND	ND	ND	ND	ND	NA
Acetone	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	ND	NA
1,2-Dichloroethene	ND	ND	9	ND	36	ND	ND	ND	ND	ND	ND	ND	NA
Date Extracted	2/5	2/7	2/10	2/10	—	—	—	—	—	—	—	—	2/5
Date Analyzed	2/24	2/24	2/24	2/24	—	—	—	—	—	—	—	—	2/13
SEMIVOLATILES													
bis(2-ethylhexyl)phthalatate	280 BJX	ND	350 J	2300	NA	NA	NA	NA	NA	NA	NA	NA	180 J
Acenaphthene	ND	ND	ND	2500	NA	NA	NA	NA	NA	NA	NA	NA	ND
Naphthalene	ND	ND	ND	3500	NA	NA	NA	NA	NA	NA	NA	NA	ND
2-methyl naphTalene	ND	ND	ND	1600	NA	NA	NA	NA	NA	NA	NA	NA	ND
Dibenzofuran	ND	ND	ND	2200	NA	NA	NA	NA	NA	NA	NA	NA	ND
Fluorene	ND	ND	ND	3600	NA	NA	NA	NA	NA	NA	NA	NA	ND
Phenanthrene	ND	ND	ND	6200	NA	NA	NA	NA	NA	NA	NA	NA	ND
Anthracene	ND	ND	ND	1700	NA	NA	NA	NA	NA	NA	NA	NA	ND
Fluoranthene	ND	ND	ND	5000	NA	NA	NA	NA	NA	NA	NA	NA	ND
Pyrane	ND	ND	ND	3600	NA	NA	NA	NA	NA	NA	NA	NA	ND
Benzo(a)anthracene	ND	ND	ND	1800	NA	NA	NA	NA	NA	NA	NA	NA	ND
Chrysene	ND	ND	ND	1800	NA	NA	NA	NA	NA	NA	NA	NA	ND
Benzo(b)fluoranthene	ND	ND	ND	1500	NA	NA	NA	NA	NA	NA	NA	NA	ND
Benzo(k)fluoranthene	ND	ND	ND	1700	NA	NA	NA	NA	NA	NA	NA	NA	ND
Benzo(a)pyrene	ND	ND	ND	1300	NA	NA	NA	NA	NA	NA	NA	NA	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	650 J	NA	NA	NA	NA	NA	NA	NA	NA	ND
Benzo (g,h,i)perylene	ND	ND	ND	470 J	NA	NA	NA	NA	NA	NA	NA	NA	ND
Date Extracted	2/5	2/7	2/10	2/10	—	—	—	—	—	—	—	—	—
Date Analyzed	2/14	2/25	2/27	2/25	—	—	—	—	—	—	—	—	—
PESTICIDES/PCBS													
Endosulfan II	ND	ND	ND	16	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ND	ND	ND	180	NA	NA	NA	NA	NA	NA	NA	NA	NA

B = The analyte is found in the blank as well as in the sample, indicating possible/probable contamination and warning the data user to take appropriate action.
Col = Collocated sample.
J = Mass spectral data indicates the presence of a compound but the result is less than the specified detection limit, but still greater than zero.
X = The mass spectrum does not meet EPA CLP criteria for confirmation, but compound presence is strongly suspected.
NA = The analyte was not analyzed.
ND = The analyte was analyzed for but not detected.
-- = Not applicable.

60 conc.

degreaser area 1. Sample SB06 was collected from a depth of 6 feet from beneath the concrete foundation at degreaser area 2. Analytical results from SB04 and SB03 also indicated the presence of 1,2-DCE at 36 μg/kg and 9 μg/kg, respectively.

4.3.2 Base-Neutral/Acid Extractable Compounds and PCB/Pesticides

As discussed in the approved Work Plan, only subsurface samples SB01 through SB03 were analyzed for BNAs and PCBs/pesticides. The data are included on Table 4-6. Of the subsurface samples analyzed for BNAs and PCBs/pesticides, three samples showed detections of BNAs and one sample showed detections of PCBs/pesticides. Bis (2-ethylhexyl) phthalate was detected in samples SB01 (background), SB03 and the collocate sample for SB03. Bis(2-ethylhexyl) phthalate is a common laboratory introduced contaminant (U.S. EPA, 1988. Functional Data Validation Guidelines for Organics Analyses). No other semivolatiles or PCBs/pesticides were detected in these samples.

In addition to the phthalate detected in the collocate sample for SB03, a full suite of polyaromatic hydrocarbons (PAHs) were detected. A visual inspection of the sample jars for SB03 and the collocate for SB03(col) showed pieces of asphalt in the collocate sample. PAH's are the main organic components of asphalt.

A pesticide, Endosulfan II, at a concentration of 16 μg/kg, and a PCB, Aroclor 1254, at a concentration of 0.18 parts per million (180 μg/kg), were also detected in the collocate sample for SB03. No other pesticides or PCBs were detected in this or other soil samples.

4.3.3 Inorganics

Surface soil samples SS01 through SS03 and subsurface soil samples SB01 through SB03 were analyzed for inorganics in accordance with the approved Work Plan. The data are summarized on Table 4-7. Relative to background levels established by SB01, the only elevated inorganic parameters in the subsurface soil samples were calcium and copper in the collocate sample for

TABLE 4-7
INORGANIC CONCENTRATIONS IN SURFACE AND SUBSURFACE SOILS (mg/kg)

	SUBSURFACE SOILS				SURFACE SOILS		
PARAMETER	SB01	SB02	SB03	SB03Col	SS01	SS02	SS03
Aluminum	12800	14700	13200	10600	15600	12900	12900
Antimony	U	U	U	U	U	U	U
Arsenic	12.9	8.7	8.4	6.2	6.6	10.7	14.4
Barium	70.9	54.8	72	58	73	79.3	118
Beryllium	.68 B	.86 B	0.67 B	.58 B	.76 B	.74 B	1.1 B
Cadmium	U	U	U	5	U	475	8420
Calcium	24000	1770	30000	86700	1430	12800	3230
Chromium	16	17	14.8	12.3	18	23.7	44.3
Cobalt	13	10.6	9.9 B	5.3 B	7.0 B	11.1 B	12.8
Copper	26.2	21.3	25.4	51	12.6	75.4	224
Cyanide	U	U	U	U	U	U	26.1
Iron	28300	26400	24400	17400	22700	25700	24100
Lead	16.2	16.7	9.5	25	18.1	22.9	241
Magnesium	9000	3820	10500	7750	2440	4880	2900
Manganese	408	746	471	746	406	740	1160
Mercury	U	U	U	U	U	U	U
Nickel	26.3	23.5	21.9	15.3	11.3	25.9	46.8
Potassium	2130	1630	2510	1880	1790	1450	1440
Selenium	U	U	U	U	U	U	U
Silver	.71 B	.56 B	2.7	2.1 B	U	U	.75 B
Sodium	114 B	79.4 B	144 B	175 B	64.1 B	78.3 B	75.9 B
Thallium	U	U	.23 B	U	U	U	U
Vanadium	17.4	18.1	20.4	18.6	28.3	16.5	16
Zinc	73.9	85.9	65.3	104	79.7	310	377

B = The reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).
Col = Collocated sample.
U = The analyte was analyzed for but not detected.


Sail
Ballard

SB03. Both surface soil samples SS02 and SS03 (see Figure 2-1 for sample locations) show increased levels of inorganics compared to the concentration of inorganics in the background sample (SS01) with the highest levels being detected at SS03. Sample SS02 shows inorganics including cadmium (475 mg/kg), calcium (12,800 mg/kg), copper (75.4 mg/kg) and zinc (310 mg/kg). Sample SS03 shows concentrations of cadmium, copper, cyanide, lead and zinc at 8,420 mg/kg, 224 mg/kg, 26.1 mg/kg, 241 mg/kg and 377 mg/kg, respectively.

4.4 Sediment and Surface Water Sampling

The sediment and surface water sampling consisted of the collection of five surface water and five sediment samples. Analytical results of sediment sample SD01 and the corresponding surface water sample, SW01 represent background concentrations. A sediment collocate (QC sample for solid media, similar to a duplicate sample for liquid media) and surface water duplicate was collected at station SD03/SW03. The samples were analyzed for VOCs, PCBs/pesticides, inorganics and cyanide. Each are discussed below.

4.4.1 Volatile Organic Compounds

All surface water and sediment samples were analyzed for VOCs. The data are summarized on Table 4-8. Only xylene and acetone were detected in any of the samples. Xylene was detected in the collocate sediment sample pair (SD-03) at 10 μg/kg and 8 μg/kg. Xylene was also detected at 10 μg/l in the duplicate surface water sample (SW03Dup). Acetone, at a concentration of 8 μg/l, also was detected in surface water sample SW03Dup. Acetone was detected in the associated method blank and is a common laboratory introduced contaminant (U.S. EPA, 1988. Functional Guidelines for the Validation of Organics Analyses).

4.4.2 PCBs/Pesticides

Only the sediment samples were analyzed for PCBs/pesticides. The data are included on Table 4-8. Sample SD04 was the only sample to show detections of these organics. Specifically,

TABLE 4-8
ORGANIC CONCENTRATIONS IN SEDIMENT AND SURFACE WATER

	SEDIMENT IN ug/kg					SURFACE WATER IN ug/l					TRIP BLANKS IN ug/l		METHOD BLANKS IN ug/l	
	SD01	SD02	SD03	SD03Col	SD04	SW01	SW02	SW03	SW03Dup	SW04	TB1	TB2	VBLK35	VBLK13
Date Received	1/31	1/31	1/31	1/31	1/31	1/31	1/31	1/31	1/31	1/31	1/31	1/31	NA	NA
Date Analyzed	2/4	2/4	2/5	2/5	2/4	2/5	2/5	2/6	2/6	2/5	2/5	2/5	2/5	2/6
VOCs														
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	8 BJ	ND	ND	ND	ND	13
Xylene	ND	ND	10	8 J	ND	ND	ND	ND	10	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5 B	4 BJ	6	4 J
Date Extracted	2/5	2/5	2/5	2/5	2/5	--	--	--	--	--	--	--	--	--
Date Analyzed	2/14	2/14	2/14	2/14	2/14	--	--	--	--	--	--	--	--	--
PESTICIDES/PCBS														
Aldrin	ND	ND	ND	ND	57	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	ND	ND	ND	ND	24	NA	NA	NA	NA	NA	NA	NA	NA	NA

B = The analyte is found in the blank as well as in the sample, indicating possible/probable contamination and warning the data user to take appropriate action.
Col = Collocated sample.
Dup = Duplicate sample.
J = Mass spectral data indicates the presence of a compound but the result is less than the specified detection limit, but still greater than zero.
NA = The analyte was not analyzed.
ND = The analyte was analyzed for but not detected.
-- = Not applicable.

aldrin at 57 μg/kg and endosulfan sulfate at 24 μg/kg were detected. PCBs were not detected in any of the sediment samples.

4.4.3 Inorganics

Inorganics data for surface water and sediment samples are summarized on Table 4-9. The inorganic concentrations in sediment and surface water were compared with the results of the background sample from stations SD01 and SW01, respectively. Sediment samples SD02, SD03 and SD04 showed levels of inorganics above background concentrations. In these samples, cadmium was found to range from 11.6 to 71 mg/kg, chromium from 17.1 to 44.3 mg/kg, copper from 60.8 to 204 mg/kg and magnesium from 3,440 to 11,000 mg/kg. In addition, lead was detected at 189 mg/kg at sample location SD04. Areal distribution of the inorganics in sediment is provided on Figure 4-12.

The surface water samples did not show levels of inorganics above background concentrations.

4.5 Subsurface Structure Sampling

Two subsurface structures were identified in the Work Plan from which to obtain liquid and sludge samples. One subsurface structure was an old set of weirs beneath the parking lot and the other was a sump within the existing manufacturing building. Upon accessing the weir structure, both liquid and sludge samples were obtained (SSL01 and SL01). In addition, a collocate of the sludge was collected for QC purposes (SL01col). Upon accessing the sump within the building, it was noted that no sludge was present. Therefore, only a liquid sample was collected at this location (SSL02). A duplicate was also collected for QC purposes.

All liquid and solid samples collected from subsurface structures were analyzed for VOCs, BNAs, PCBs/pesticides, inorganics and cyanide. Each are discussed separately below.

TABLE 4-9
INORGANIC CONCENTRATIONS IN SEDIMENT AND SURFACE WATER

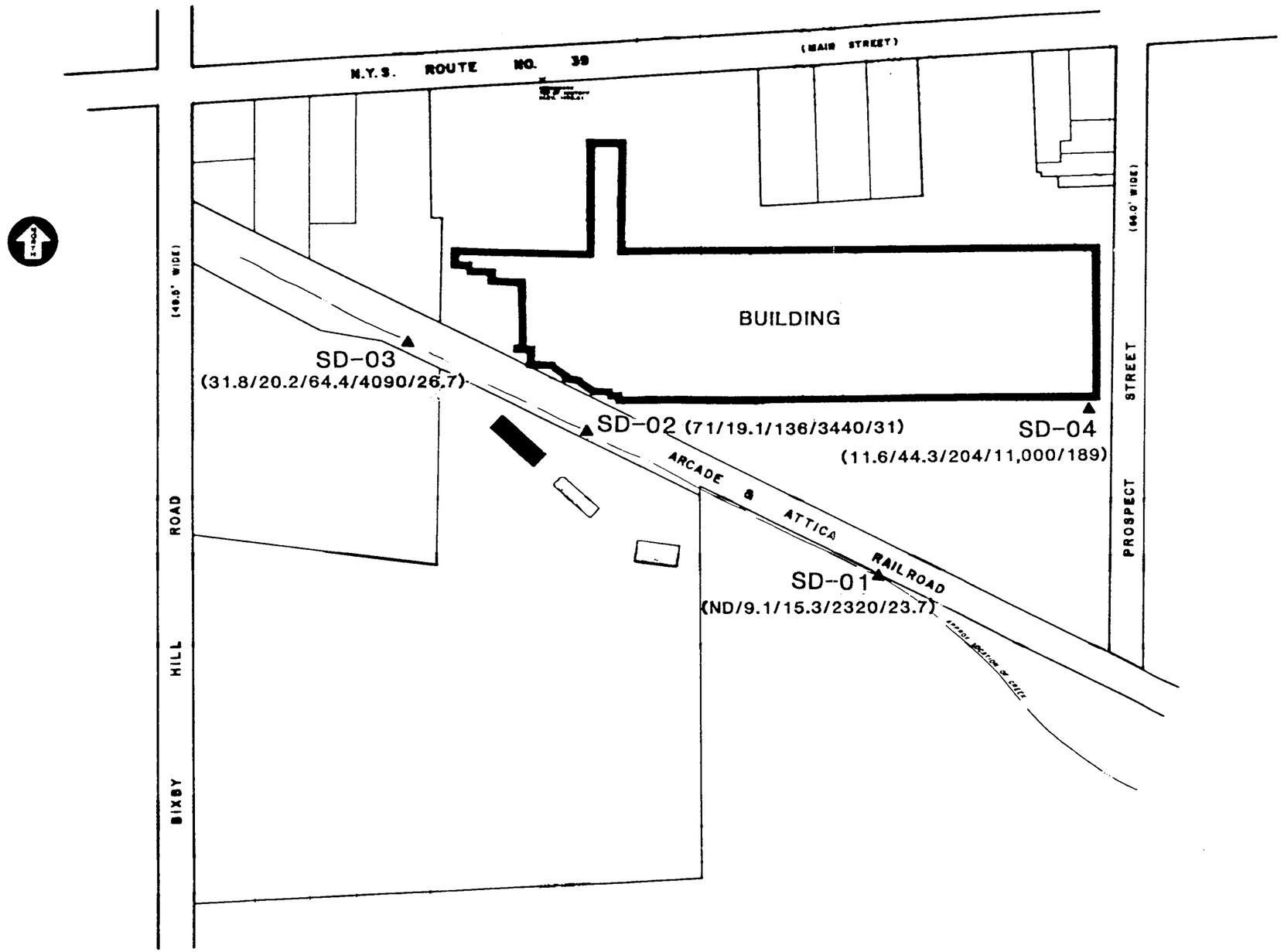
	SEDIMENT IN mg/kg					SURFACE WATER IN ug/l									
PARAMETER	SD01	SD02	SD03	SD03Col	SD04	SW01		SW02		SW03		SW03Dup		SW04	
						Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Aluminum	7610	14000	16700	14100	15200	51.9 B	25.3 B	77.2 B	26.6 B	69.2 B	U	62.6 B	19.5 B	70.6 B	25.3 B
Antimony	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Arsenic	6.4	8.3	10.8	13.4	7.4	U	U	U	U	U	U	U	U	U	U
Barium	70.2	120	157	133	146	26.5 B	26.5 B	33.7 B	31.7 B	31.0 B	30 B	31 B	30.7 B	137 B	133 B
Beryllium	.57 B	.71 B	1.1 B	.82 B	1.3 B	U	U	U	U	U	U	U	U	U	U
Cadmium	U	71	31.8	31.2	11.6	U	U	U	U	U	U	U	U	U	U
Calcium	1440	3030	4280	3760	25600	21000	20800	23700	23600	24200	22400	24000	22400	63700	62800
Chromium	9.1	19.1	20.2	17.1	44.3	U	U	U	U	U	U	U	U	U	U
Cobalt	8.0 B	11.2 B	13.6 B	13.4 B	10 B	U	U	U	U	U	U	U	U	U	U
Copper	15.3	136	64.4	60.8	204	U	U	8.9 B	7.4 B	U	U	U	U	10.4 B	6 B
Iron	23900	27600	33300	31700	27200	63.1 B	21.4 B	132	19 B	66.1 B	8.2 B	82.2 B	33 B	136	U
Lead	23.7	31	26.7	38.7	189	U	U	U	U	U	3	U	U	U	U
Magnesium	2320	3440	4090	3730	11000	4250 B	4270 B	4720 B	4670 B	4750 B	4510 B	4720 B	4520 B	10400	10100
Manganese	453	593	1180	1250	235	2.1 B	U	2.9 B	U	U	U	U	U	U	U
Mercury	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Nickel	16.8	37.9	32.2	31.5	35.5	U	U	U	U	U	U	U	U	U	U
Potassium	724 B	1500	2140	1430	2570	1030 B	1130 B	1050 B	1170 B	1250 B	1110 B	1330 B	1120 B	1430 B	1700 B
Selenium	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Silver	.98 B	1.4 B	1.2 B	1.3 B	2.5 B	3.6 B	2.3 B	2.8 B	3.9 B	2.3 B	U	3.1 B	U	3.1 B	5.7 B
Sodium	67.2 B	115 B	184 B	127 B	225 B	11100	11000	11200	11000	12300	11900	12100	11900	9940	9880
Thallium	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Vanadium	10.5 B	19.8	23.2	19.6	28.2	U	U	U	U	U	U	U	U	U	U
Zinc	172	131	186	200	612	6.8 B	3 B	4.6 B	3 B	7.6 B	5.1 B	8.0 B	5.9 B	13.1 B	4.2 B
Cyanide	U	U	U	U	U	U	-	U	-	U	-	U	-	U	-

B = The reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

Col = Collocated sample.

Dup = Duplicate sample.

U = The analyte was analyzed for but not detected.



LEGEND

SD-03 SEDIMENT SAMPLE

(ND/5/200/13/ND) CADMIUM,CHROMIUM,COPPER, MAGNESIUM and LEAD CONCENTRATIONS IN mg/kg.

NEW YORK STATE PLANE COORDINATE SYSTEM WEST ZONE - NAD 27

WELL NO.	NORTHING	EASTING
MW-1	922,940.405	541,174.538
MW-10	922,953.740	541,176.188
MW-2	922,642.508	541,380.838
MW-3	922,496.069	541,574.746
MW-3B	922,496.208	541,574.127
MW-4	922,442.706	540,389.878
MW-5	921,732.551	540,123.582
MW-6	922,602.486	540,390.309
MW-6D	922,398.127	541,328.287
MW-7	922,583.648	541,136.871
MW-8	923,107.400	541,679.259
MW-9	922,836.686	541,364.639
MW-9D	922,836.943	541,359.908
SB-01	921,732.8	540,123.5
SB-LCH	922,868.0	541,234.8
SB-04	922,177.8	540,938.7
MB-04	922,177.8	541,938.7
MB-02	922,480.8	541,194.3
MB-08	922,089.8	541,394.5
SB-03	922,873.7	540,822.5
MB-03	922,846.8	541,065.9
SB-07	922,845.8	541,065.9
SMW-04	922,492.3	542,339.5
SB-04	922,492.3	542,339.5

NOTE: BASIC CONFIGURATION OF OUTBUILDINGS OF PREMISES COMPILED FROM THE VILLAGE OF ARCADE TAX MAP NO. 103.10.

SHAPE AND LOCATION OF BUILDINGS TAKEN FROM A DRAWING PREPARED BY TREVOR W. ROGERS & ASSOCIATES, ARCHITECTS, JOB NO. 1528.

ELEVATIONS BASED ON NGVD 1929.

FIGURE 4-12

AREAL DISTRIBUTION OF CADMIUM, CHROMIUM, COPPER, MAGNESIUM & LEAD IN SEDIMENTS

PROJECT 426116372

DATE 5/92

REVISIONS

Hydro-Search, Inc.
CONSULTING HYDROLOGISTS-GEOLOGISTS
RENO DENVER MILWAUKEE IRVINE

4.5.1 Volatile Organic Compounds

VOC data for the solid and liquid subsurface structure samples are provided on Table 4-10. The sludge contained within the weir structure shows the presence of chloroform (70,000 μg/kg), methylene chloride (13,000 μg/kg) and TCE (7,100 μg/kg, estimated). The liquid fraction sample from this location shows the presence of chloroform (36 μg/l) and a trace of methylene chloride. The liquid sample from the sump inside the active manufacturing facility showed 40 μg/l of TCE and a trace of acetone and methylene chloride.

The laboratory method blank analyzed with the liquid fraction also showed a trace of methylene chloride and acetone. As mentioned previously, both of these compounds are common laboratory introduced contaminants. In accordance with U.S. EPA data validation guidelines, only values greater than five times that detected in QC samples should be considered as valid detections. Methylene chloride and acetone detected in investigative samples are less than five times the method blank concentration and are, therefore, suspect and believed to be associated with laboratory introduced contamination.

4.5.2 Base Neutral/Acid Extractable Compounds and PCBs/Pesticides

The BNAs and PCBs/pesticide data are included on Table 4-10. Both the solid and liquid fractions of the sludge sample from the weir show a variety of PAHs and bis(2-ethylhexyl) phthalate. In addition, low levels of various pesticides and PCB Aroclor 1254 up to 3.1 parts per million (3,100 μg/kg) were detected.

No BNAs or PCB/pesticides were detected in the liquid sample from the sump inside the manufacturing facility.

TABLE 4-10
ORGANIC CONCENTRATIONS IN SLUDGE

	SOLID FRACTION IN ug/kg		LIQUID FRACTION IN ug/l			METHOD BLANKS ug/kg	METHOD BLANKS ug/l
	SL01	SL01Col	SSL01	SSLO2	SSL02Dup	SBLK86	VBLK13
Date Received	2/4	2/4	2/4	2/4	2/4	—	—
Date Analyzed	2/7	2/7	2/6	2/6	2/6	—	2/6
VOCs							
Chloroform	70,000 D	84,000 D	36	ND	ND	NA	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	NA	ND
Methylene Chloride	13,000 D	12,000 D	4 BJ	5 B	6 B	NA	4 J
Trichloroethylene	6,000 DJ	7,100 DJ	ND	40	41	NA	ND
Acetone	ND	ND	ND	22 B	11 B	NA	13
Date Extracted	2/7	2/7	2/5	2/5	2/5	2/7	—
Date Analyzed	2/24	2/21	2/27	2/13	2/13	2/20	—
SEMIVOLATILES							
Acenaphthene	ND	ND	17 JX	ND	ND	ND	NA
Fluorene	ND	3,000 JX	22 X	ND	ND	ND	NA
Phenanthrene	ND	22,000 X	190 X	ND	ND	ND	NA
Fluoranthene	5900 JX	27,000 X	490 X	ND	ND	ND	NA
Pyrene	ND	16,000 X	150 X	ND	ND	ND	NA
Benzo(a)anthracene	ND	21,000 X	100 X	ND	ND	ND	NA
Chrysene	ND	ND	140 X	ND	ND	ND	NA
Bis(2-ethylhexyl) phthalate	36,000 B	67,000 B	110 X	ND	ND	400	NA
Benzo(b)fluoranthene	5,200 JXZ	23,000 XZ	280 ZX	ND	ND	ND	NA
Benzo (k) fluoranthene	Z	Z	Z	ND	ND	ND	NA
Benzo(a)pyrene	ND	9,400 X	150 X	ND	ND	ND	NA
Indeno(1,2,3-cd)pyrene	ND	7,800 X	100 X	ND	ND	ND	NA
Dibenz(a,h)anthracene	ND	ND	26 X	ND	ND	ND	NA
Benzo(g,h,i)perylene	ND	6,600 X	53 X	ND	ND	ND	NA
Date Extracted	2/7	2/7	2/6	2/6	2/6	—	—
Date Analyzed	2/25	2/25	2/27	2/27	2/27	—	—
PESTICIDES/PCBS							
Aldrin	310	250	1.2	ND	ND	NA	NA
Heptachlor Epoxide	150	ND	ND	ND	ND	NA	NA
4,4'-DDE	130	110	0.29	ND	ND	NA	NA
Endrin	ND	ND	0.14	ND	ND	NA	NA
Aroclor 1254	3100	2800	4.7	ND	ND	NA	NA

B = The analyte is found in the blank as well as in the sample, indicating possible/probable contamination and warning the data user to take appropriate action.
Col = Collocated sample.
Dup = Duplicate sample.
D = Indicates the value for the target analyte was calculated from a dilution.
J = Mass spectral data indicates the presence of a compound but the result is less than the specified detection limit, but still greater than zero.
X = The mass spectrum does not meet EPA CLP criteria for confirmation, but compound presence is strongly suspected.
Z = Benzo(b)fluoranthene and benzo(k)fluoranthene cannot be quantified due to lack of chromatographic separation. The result listed under benzo(b)fluoranthene is the total of both compounds.
NA = The analyte was not analyzed.
ND = The analyte was analyzed for but not detected.
-- = Not applicable.
SBLK = Laboratory blank run with solids fraction.
VBLK = Laboratory blank run with liquid fraction.

4.5.3 Inorganics

Inorganics data from subsurface structure samples are summarized on Table 4-11. The solid and liquid fractions of the sludge sample from the weir structure show various inorganics including cadmium (10,300 mg/kg), chromium (1,340 mg/kg), cyanide (179 mg/kg), lead (2,880 mg/kg), nickel (357 mg/kg) and zinc (31,400 mg/kg). The liquid sample from the sump inside the active manufacturing building showed lower levels of inorganics.

TABLE 4-11
INORGANIC CONCENTRATIONS IN SLUDGE

	SOLID FRACTION (mg/kg)		LIQUID FRACTION (ug/l)		
PARAMETER	SL01	SL01Col	SSL01	SSL02	SSL02Dup
Aluminum	1500	1680	26100	22.7 B	22.7 B
Antimony	U	U	U	U	U
Arsenic	U	U	9.4 B	U	U
Barium	391 B	436 B	626	124 B	127 B
Beryllium	U	U	2.2 B	U	U
Cadmium	10300	10900	17600	24	17
Calcium	60900	66100	148000	61900	63100
Chromium	1340	1480	820	U	U
Cobalt	10.5 B	U	32.8 B	U	U
Copper	335	350	1550	U	U
Cyanide	179	205	870	U	U
Iron	55400	61600	151000	55.5 B	73.1 B
Lead	2880	3000	3030	6.2	2.2 B
Magnesium	8700 B	9450 B	27900	9990	10000
Manganese	381	403	1450	U	U
Mercury	U	U	U	U	U
Nickel	357	411	564	U	U
Potassium	1310 B	U	6660	1600 B	1790 B
Selenium	U	U	U	U	U
Silver	U	U	8.6 B	U	U
Sodium	22200	25600	255000	9320	9460
Thallium	U	U	U	U	U
Vanadium	U	U	34.3 B	U	U
Zinc	31400	34500	28600	74.1	76.4

B = The reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).
Col = Collocated sample
Dup = Duplicate sample
U = The analyte was analyzed for but not detected.

SL01 - weir structure
SSL01 - " "
SSL02 - sump in Bldg.

5.0 CHEMICAL DATA INTERPRETATION

Analytical data for soil gas, ground water, surface/subsurface soils, surface water/sediment and subsurface structure liquids/solids were generated as part of the Phase II site investigation. The data are presented in Section 4. This section provides an interpretation of the analytical results with respect to project objectives and site conditions. Each set of data is discussed separately below.

5.1 Soil Gas Results

A soil gas survey was performed at three locations inside the active manufacturing building (degreaser area 1, degreaser area 2 and methylene chloride tank area) and an outdoor area surrounding the chemical storage building. The results of the soil gas survey are presented in Section 4.1 and are illustrated in the form of isoconcentration contour maps on Figures 4-1 through 4-9.

5.1.1 Interior Plant Soil Gas Results

The soil gas surveys inside the active manufacturing plant show elevated readings for TCE and methylene chloride in the immediate vicinity and down hydraulic gradient (north-northwest) of both degreasers. TCE is currently being used as the solvent in both degreasing units, and methylene chloride was the solvent used prior to TCE. Therefore, the data suggest the sources of TCE and methylene chloride in the soils beneath the plant foundation are the degreasing units. The migration route is either seepage through the concrete slab (concrete is a porous media) or via cracks in the concrete slab.

The soil gas survey beneath the plant foundation in the vicinity of the above ground methylene chloride tank showed the area to be unimpacted, indicating the tank has not contributed to soil or ground water contamination.

5.1.2 Chemical Storage Building Soil Gas Results

The soil gas survey performed around the exterior of the chemical storage building shows elevated levels of TCE, methylene chloride, toluene, xylene and ethylbenzene. In general, the primary area of impact appears to be immediately south of the building. This corresponds with an area noted during the Phase I site investigation as having elevated concentrations of VOCs. This area is therefore considered as a potential source of ground water VOC contamination. Based on the soil gas survey results, the extent of the impacted area is thought to be limited to the immediate vicinity of the chemical storage building.

5.2 Ground Water Results

5.2.1 Volatile Organic Compounds

The primary VOCs detected in ground water were low levels of TCE and 1,1,1-TCA in a number of wells. Acetone and methylene chloride were also detected in some monitoring wells and the Arcade Municipal well in trace concentrations, however, both compounds are common laboratory introduced contaminants and both were detected in various QC samples at similar concentrations. The presence of methylene chloride and acetone compounds is therefore believed to be a laboratory artifact as opposed to being representative of actual ground water chemistry.

Monitoring well locations MW-1 and MW-9 show the highest concentrations of TCE and 1,1,1-TCA. Both of these wells were screened in the upper aquifer and are downgradient of degreaser areas 1 and 2 located within the manufacturing plant. Based on soil gas results discussed in Section 5.1, both degreasers have been identified as potential sources of VOC impacts to ground water. In addition, monitoring well MW-1 is also located immediately downgradient of the subsurface weir structure which was found to have VOCs in the sludges contained within that structure (see Section 4.5.1). Monitoring wells MW-1D and MW-9D, which are located

adjacent to wells MW-1 and MW-9 but are screened in the lower aquifer, are clean except for a trace of TCE (3 μg/l) in well MW-9D.

Monitoring wells MW-2 and MW-3 also showed the presence of TCE. Both of these wells are screened within the upper aquifer and are downgradient of the chemical storage building. Based on soil gas results discussed in Section 5.1, the area in back (south) of the chemical storage building has been identified as a potential source of VOC impacts to ground water. Monitoring well MW-3D, which is located adjacent to well MW-3 but is screened in the lower aquifer, shows no impact to ground water. There is no deep well adjacent to well MW-2.

Monitoring well cluster MW-6 and MW-6D is located slightly west of the chemical storage building in an area which, based on interviews with past and present plant employees, was used as a burning area for fire fighting practice. During drilling, a small ash layer was noted, however, neither field screening and subsurface soil sampling during drilling (see Section 4.3.1, Table 4-5, sample SB02), nor soil gas survey results from this area, show the presence of VOCs. Ground water samples from both wells MW-6 and MW-6D did not show the presence of VOCs. Therefore, the former burn area is not believed to be a source of ground water impacts.

Monitoring well MW-8, which is screened in the upper aquifer, showed a trace (5 μg/l) of 1,1,1-TCA. This well is situated downgradient from the eastern half of the active plant which is, at the present time, primarily used for packaging and storage and does not include any manufacturing and/or degreasing operations. This portion of the plant, however, did include a maintenance shop and lab in the past which may have used small quantities of solvent. At this time there appears to be no defined source of the trace quantity of 1,1,1-TCA identified at well MW-8. Subsequent sampling at this location should confirm or refute the presence of this compound.

5.2.2 Inorganics

As discussed in Section 4.2.2, the New York State ground water standards for inorganics are based on "total" as opposed to "dissolved" concentrations. Both upgradient and downgradient monitoring wells showed a number of exeedances for various inorganics. The only inorganics found to exceed standards in downgradient wells that don't exceed standards in upgradient well MW-5 are cadmium, silver and sodium. In addition, there are some increasing trends in metals concentrations from upgradient to downgradient despite the upgradient location showing these compounds above standard. These metals include chromium, copper and manganese. The most commonly impacted wells are MW-1, MW-2, MW-3, MW-4 and MW-9. Monitoring wells MW-1 and MW-9 are downgradient of the active manufacturing plant; operations in the plant include metal plating. In addition, well MW-1 is immediately downgradient of a subsurface weir structure which was found to contain metals/inorganics within the sludges contained in that structure (see Section 4.5.3).

Monitoring wells MW-2 and MW-3 are downgradient of an area east of the chemical storage building where filter cake and sludge were previously stored, both of which had high metals contents. As discussed in the Phase I report, this area was remediated by excavation and off-site disposal of the materials in 1981. The total metals seen in ground water downgradient from this area may still be residual from prior to cleanup activities.

Monitoring well MW-4 also showed various inorganics above background concentrations. This well is not downgradient of either the active manufacturing plant or known areas of filter cake and/or sludge storage. The source of the inorganics at this location is not certain. The well is located adjacent to a drainage ditch along the south side of the active manufacturing plant. Sediments within that ditch were also found to contain various inorganics (see Section 4.4.3, Table 4-9, sample SD04).

Despite the total inorganics concentrations found to exceed established standards at both upgradient and downgradient monitoring locations, dissolved inorganics (i.e., the ground water

sample is filtered through a 0.45 micron filter prior to preservation and analysis) concentrations are generally low to non-detected at all locations. This suggests that most of the inorganics detected are associated with the suspended solids fraction of the sample and, therefore, are not mobile through the ground water system.

5.3 Surface/Subsurface Soil Results

5.3.1 Volatile Organic Compounds

All surface and subsurface soil samples collected for chemical analysis were analyzed for VOCs. No VOCs were detected in surface soil samples. TCE and 1,2-DCE were detected at low concentrations in subsurface soil sample SB03 which was collected from the 5-foot depth interval during drilling of the borehole for monitoring well MW-3D. The collocate sample obtained from the 7-foot depth interval at this location did not show the presence of VOCs. The presence of low levels of VOCs in soil in this area may be attributable to the scrap metal storage bins and materials handling practices. The low levels of VOCs do not suggest the unsaturated zone soils in this area to be a significant source of residual VOC contamination to ground water.

Subsurface soil samples SB04, SB05 and SB06 were all collected from areas within the soil gas survey grids inside the plant. The data verifies the presence of TCE in soils up to 2,200 μg/kg. 1,2-DCE and acetone were also detected at one location near the degreaser area 1. 1,2-DCE is a common impurity in TCE solvents as well as a degradation product of TCE. Acetone was detected in very low concentrations and is a common laboratory introduced contaminant. The acetone is believed to be a laboratory artifact and, therefore, not representative of actual site conditions.

Subsurface soil sample SB07 was collected from a location in the soil gas survey grid around the chemical storage building, in an area that based on soil gas survey results should not be impacted. No VOC detections were found in the sample verifying soil gas survey results.

5.3.2 Semi-Volatiles and PCBs/Pesticides

Only subsurface soil samples SB01 through SB03 were analyzed for BNA's and PCBs/pesticides. The only constituent detected was bis (2-ethylhexyl) phthalate, which was also identified in the laboratory method blank at similar concentrations and is a common laboratory introduced contaminant. The presence of this compound is believed to be a laboratory artifact and, therefore, not representative of site conditions.

The collocate sample for SB03, however, did show a full suite of PAHs. Visual inspection of the sample showed a few pieces of asphalt which is primarily composed of PAHs. It is therefore believed that the PAHs reflect the presence of asphalt pieces in the sample as opposed to a source associated with past or present manufacturing activities.

The collocate sample for SB03 also showed low levels of the pesticide endosulfan II and the PCB Aroclor 1254. These detections, however, are well below established action levels.

5.3.3 Inorganics

Subsurface soil samples SB01 through SB03 and surface soil samples SS01 through SS03 were analyzed for inorganics. Data for subsurface soil samples (see Section 4.3.3, Table 4-7) generally show unimpacted conditions. Surface soil samples SS02 and SS03, however, show elevated levels of various inorganics including cadmium, copper, cyanide, lead and zinc. Sample SS02 was collected prior to initiating drilling activities at monitoring well location MW-6 in an area identified as a former burn pit used to practice fire fighting. Subsurface sample SB02 was collected from the 2 to 8-foot interval during drilling at this location and, as mentioned above, did not show elevated inorganics. The inorganics impact in this area is therefore limited to near surface soils.

Surface soil sample SS03 is from an area immediately east of the existing property line near the filter cake press building. During a site visit in November 1991, vegetation in this area was

stressed. The surface soil sample showed the presence of cadmium, chromium, copper, cyanide and lead. It is believed that the metals in this area are associated with runoff from areas on-site where previous storage of filter cake and sludge had occurred. In addition, this area also receives runoff from the location of the existing blowdown from the filter cake press located at the southeast corner of the press building. There is no at-depth information regarding inorganics concentrations in this area. However, based on data from other portions of the site (see discussion in previous paragraph), it is probable that the elevated inorganics are a near-surface (within 1 foot) condition.

5.4 Surface Water and Sediment Results

5.4.1 Volatile Organic Compounds

All surface water and sediment samples were analyzed for VOCs. No VOCs were detected in either surface water or sediment except at location SW03/SD03 where xylene was detected in trace quantities in the sediment sample. Xylene was also detected at trace quantities in the duplicate of the surface water sample at this location, however, the investigative sample analysis did not detect xylene. Location SW03/SD03 is in Cemetery Creek, immediately downstream of the Prestolite property. Sample location SW02/SD02 is slightly upstream of location SW03/SD03 and did not show the presence of xylene. There is no apparent source of xylene at the plant which would enter Cemetery Creek downstream of location SW02/SD02 but upstream of location SW03/SD03. As the concentrations detected at location SW03/SD03 are essentially at or below method quantification limits, the representativeness of this detection is suspect at this time.

5.4.2 PCB/Pesticides

Only sediment samples were analyzed for PCBs/pesticides. No PCBs were detected at any of the sample locations. Sediment sample SD04 from the drainage ditch along the south side of the active plant building showed trace concentrations of two pesticides. This ditch receives

S W/SEd

runoff from grassy areas and the parking lot south of the active plant building, both of which may be a source of the pesticide compounds. Detected concentrations are below any established standards or criteria. No pesticides were detected at any of the other sampling locations.

5.4.3 Inorganics

All surface water and sediment samples were analyzed for inorganics (total and dissolved for surface water). Compared to background concentrations established in Cemetery Creek at sample location SW01/SD01, concentrations of inorganics in sediment were increased at sample locations SD02 (along the plant property) and SD03 (immediately downgradient of Prestolite property). Inorganics at these locations include cadmium, chromium and copper.

Both locations SD02 and SD03 are downstream of where the runoff receiving area to the northeast of the filter cake press building drains into Cemetery Creek. Surface soil sample SS03 from the runoff area also showed the presence of various metals (see Section 5.3.3). In addition, runoff from around the chemical storage building and former burn area enters Cemetery Creek prior to sample locations SD02 and SD03. Surface soil sampling from these areas also contained various metals (sample SS02). Drainage from the runoff receiving area and surface runoff from around the chemical storage building are probable sources of the increased inorganics in Cemetery Creek sediments.

Sediment sample SD04, collected from the drainage ditch along the south side of the active plant building, also showed levels of metals above background including cadmium, chromium, lead and copper. As mentioned previously, this ditch receives runoff from the parking lot area which may account for elevated lead levels. In addition, non-contact cooling water is discharged from the plant into the ditch at approximately 20 gallons per minute. No sample was collected of the cooling water discharge so it is not known if this could be a contributing source of metals.

5.5 Subsurface Structure Sampling Results

5.5.1 Subsurface Weir Structure

One sludge and one liquid sample were collected from the subsurface weir structure located beneath the front parking lot, immediately upgradient of monitoring well MW-1. Both the sludge and liquid samples showed the presence of various VOCs, PAHs and inorganics. In addition, some pesticides and low concentrations of the PCB Aroclor 1254 were detected. The PCB concentrations did not exceed any established action levels (i.e., the highest concentration detected was 3.1 parts per million in the sludge. Action levels are generally set at 50 parts per million).

The weir structure is not currently being used. The sludges are remanents of past manufacturing activities. The subsurface structure and associated piping have been identified as a potential conduit for VOC and metals migration to ground water at well location MW-1 (see Section 5.2).

5.5.2 Sump

A sump located inside the active manufacturing plant was accessed and sampled. The sump was determined not to contain any sediments or sludge so therefore only a liquid sample was collected. The water was found to be generally unimpacted except for VOCs. The sample showed a trace of acetone and methylene chloride, however, these were attributed to the analytical laboratory as both compounds were also detected in laboratory QC samples. The sample also showed TCE at 40 μg/l. Water entering this sump drains through troughs in the concrete floor of the plant. TCE in the water flowing through troughs in the concrete slab, originates from ongoing plant activities.

6.0 SITE CHARACTERIZATION CONCLUSIONS

Based on the data generated as part of the Phase II site investigation, the following conclusions are made:

- The ground water system beneath the site is comprised of two water bearing zones. The upper aquifer is unconfined with its lower boundary marked by a thick, low permeability silt. The lower aquifer is semi-confined by this silt; the lower boundary of the lower aquifer is marked by a very low permeability, red clay unit. A strong upward vertical gradient exists at the site.

- Ground water in the upper aquifer has been locally impacted by VOCs and inorganics associated with manufacturing activities. The primary VOC contaminants are dissolved phase TCE and 1,1,1-TCA. Inorganic contaminants include total cadmium, chromium, lead, manganese and silver. Dissolved phase metals are generally non-detected, therefore the metals are not mobile in the ground water system.

- The lower aquifer has not been impacted by site activities. The semi-confining silts of Unit 3 and the presence of an upward hydraulic gradient generally preclude the downward migration of contaminants.

- The low concentrations of VOCs in ground water indicate that the contamination is strictly dissolved phase (i.e., no free-phase product within the ground water system).

- Soils below the plant foundation in the vicinity of degreaser areas 1 and 2 are impacted by chlorinated hydrocarbons (TCE and methylene chloride) associated with manufacturing activities.

- Soils immediately behind the chemical storage building have been impacted with VOCs (chlorinated hydrocarbons and aromatics) associated with manufacturing activities.

- Surface soils in the vicinity of the chemical storage building and runoff receiving area are impacted by various inorganics including cadmium, chromium, copper and lead. These metals are associated with manufacturing activities.

- Sediments in Cemetery Creek show the presence of inorganics including cadmium, chromium and nickel. These metals are associated with manufacturing activities.

- Sediment in the drainage ditch on the south side of the active manufacturing building shows the presence of inorganics above background concentrations including cadmium, chromium, copper and lead. These metals are associated with manufacturing activities.

With respect to source areas for the above noted impacts, the following source areas have been identified:

Ground Water Impact Sources

- Degreasers areas 1 and 2 and the impacted unsaturated zone soils beneath the foundation under the degreasers.
- Subsurface weir structure and associated piping beneath the front parking lot.
- Unsaturated zone soils beneath and behind the chemical storage building.

Soil Impact Sources

- Surface Soils.
  - Former filter cake and sludge handling/storage areas.
  - Runoff from former filter cake storage areas and from the active filter press blowdown area.
- Subsurface soils.
  - Degreaser areas 1 and 2.

Sediment Impact Sources

- Drainage from the runoff receiving area and runoff from former filter cake storage areas.
- Runoff from the parking lot and grassy areas into the drainage ditch and possibly discharge of non-contact cooling water from the active manufacturing building.

7.0 CLEANUP OPTIONS

7.1 Cleanup Objectives

Cleanup options at the Arcade plant site will focus on the remediation of source areas and continued monitoring of ground water since it has been shown that, for the most part, ground water contamination is attributable to several source areas. If periodic ground water monitoring does not show contaminant reductions, additional cleanup options will be considered.

7.2 Nature and Extent of Contamination

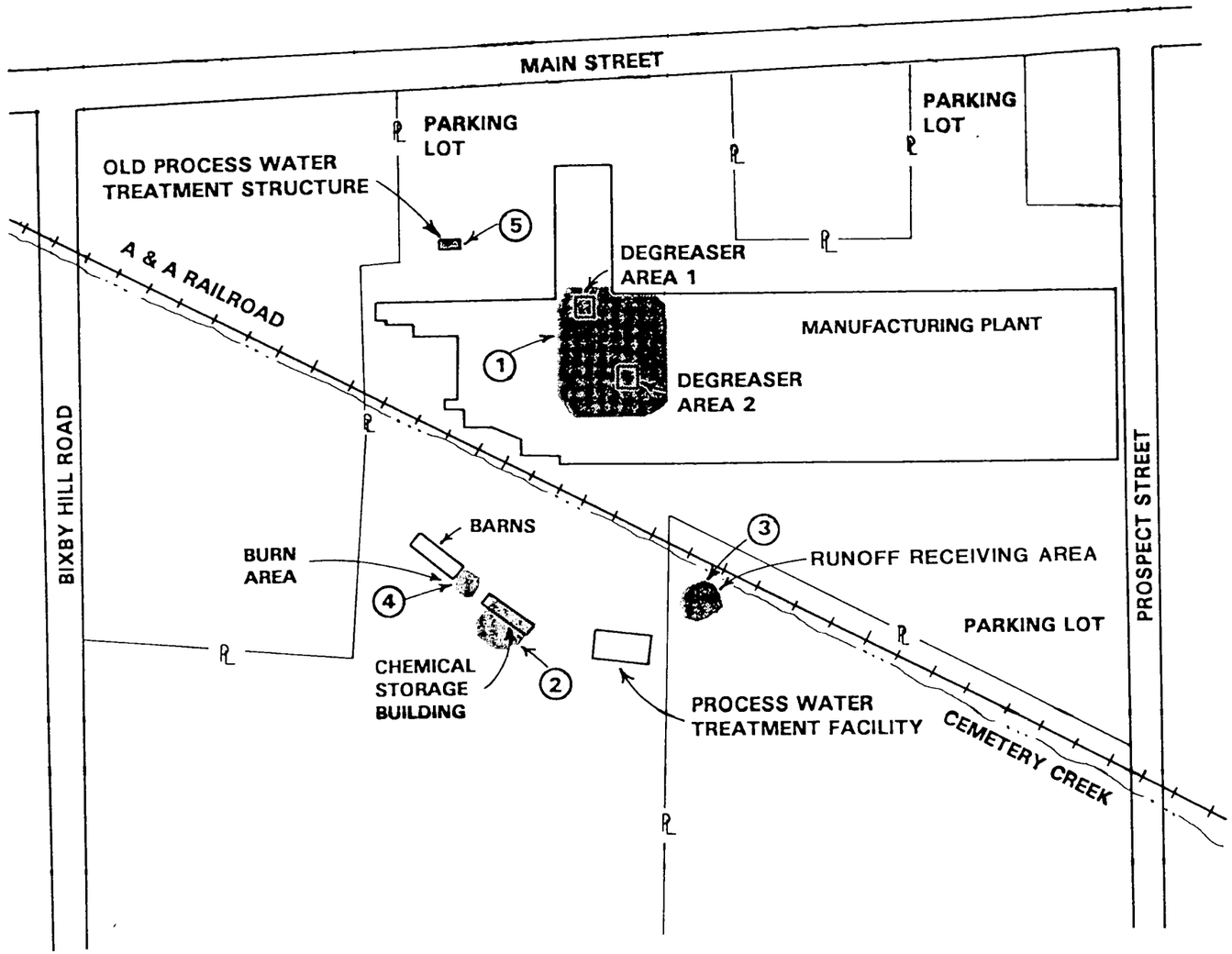
Five source areas have been identified at the Arcade plant site. These source areas are shown on Figure 7-1 and are discussed below. Table 7-1 provides a summary of each source area including the contaminants of concern, the surficial area of contamination, the estimated depth of contamination, and the estimated volume of contaminated soils.

7.2.1 Degreaser Areas 1 and 2

Two degreasing units used as part of ongoing manufacturing operations are located within the plant area as shown on Figure 7-1. Soil gas survey data and results of subsurface soil sampling from beneath the building foundation in the vicinity of the degreasing units shows the presence of halogenated hydrocarbons (primarily TCE and methylene chloride) in unsaturated soils. Concentration ranges are discussed in Sections 4.1.1, 4.1.2 and 4.3. The source of the halogenated hydrocarbons is believed to be the degreasing units. Accessibility to the underlying impacted soils is impeded by the 8-inch concrete foundation of the plant floor.

7.2.2 Chemical Storage Building Area

The Chemical Storage Building Area is shown on Figure 7-1. The unsaturated zone soils around and immediately behind the Chemical Storage Building Area have been impacted by VOCs



LEGEND

- PL PROPERTY LINE
- (1) DEGREASER AREAS 1 AND 2
- (2) CHEMICAL STORAGE BUILDING AREA
- (3) RUNOFF RECEIVING AREA
- (4) BURN AREA
- (5) SUBSURFACE WEIR STRUCTURE

N

0' 100' 200' 400'

SCALE

FIGURE 7-1

SOURCE AREA LOCATION MAP

PROJECT 426116372

DATE 4/92

REVISIONS

Hydro-Search, Inc.
CONSULTING HYDROLOGISTS-GEOLOGISTS
RENO DENVER MILWAUKEE IRVINE

TABLE 7-1

SOURCE AREA DATA

Source Area	VOCs of Concern	Metals of Concern	Approximate Surface Area (ft^2)	Estimated Depth (ft^2)	Approximate Volume Impacted (cubic yds)
Degreaser Areas 1 and 2	Halogenated Hydrocarbons	NA	43,500	6	10,000
Chemical Storage Building Area	Halogenated Hydrocarbons Aromatics	NA	6,600	5	1,200
Runoff Receiving Area	NA	Cd, Cu, Pb, Zn, Cn, Cr	4,400	1	165
Former Burn Area	NA	Cd, Cu, Pb, Zn, Cn, Cr	1,400	2	100
Subsurface Weir Structure (Sludge)	Halogenated Hydrocarbons	Cd, Cr, Cu, Cn, Pb, Mn, Zn	350	3	40
Subsurface Weir Structure (Water)	Halogenated Hydrocarbons	Cd, Cr, Cu, Cn, Pb, Mn, Zn	350	5	13,000 gallons

Cd = Cadmium
Cr = Chromium
Cu = Copper
Cn = Cyanide
Pb = Lead
Mn = Manganese
Zn = Zinc
NA = Not Applicable

Impacted areas.

including both halogenated hydrocarbons (TCE and methylene chloride) and aromatics (ethylbenzene, xylene and toluene). Concentration ranges are provided in Section 4.1.4. The source of the VOCs is believed to be associated with material handling practices in this area. Accessibility to the impacted soils is unobstructed, with the exception of a small volume of soil located beneath the building.

7.2.3 Runoff Receiving Area

An off-site area receiving site runoff is identified on Figure 7-1 (Runoff Receiving Area). Surface soil sampling data from this area show the presence of cadmium, copper, lead, chromium, cyanide and zinc. Concentration ranges of these metals and cyanide are provided in Section 4.3.3. The depth of impact is not known. However, based on data from other areas, it is suspected at this time that this is primarily a surficial impact extending no more than 1 foot deep (see discussion in Section 5.3.3). The source of these metals is believed to be runoff from areas of the site where filter cake and sludge were formerly stored. In addition, this area receives runoff from a portion of the site where the active filter press blow-down discharges. Access to this area is physically unobstructed, however, this area is off plant property and access will need to be obtained from the property owner.

7.2.4 Former Burn Area

An area immediately west of the chemical storage building (see Figure 7-1) was used in the past as a burn pit for fire fighting practice. Surface soil sampling in this area shows the presence of metals including cadmium, chromium, lead and zinc. Concentration ranges are provided in Section 4.3.3. Subsurface soil sampling within this area shows the depth of impact to be less than 5 feet. At this time it is assumed that the depth of impact is approximately 2 feet. The source of these metals is believed to be associated with material handling practices in this area. Accessibility to the soils in this area is unobstructed, however, there is a sewer line that transects the center of the area from north to south.

7.2.5 Subsurface Weir Structure

An old water treatment weir structure is present below the front parking lot (see Figure 7-1). The weir is no longer in use. Inspection of the structure found that it contains approximately 5 feet of water and 3 feet of sludge. The water and sludge were found to contain various VOCs, PAHs, PCBs/pesticides and inorganics. The variety and concentrations of compounds are discussed in Section 4.5. The weir structure is estimated to be 35 feet long and 10 feet wide. The source of the sludge is associated with former plant activities. Access to the weir structure is unobstructed, however, a series of heavy metal plates must be removed from the top of the structure.

7.3 Cleanup Options for VOCs

Cleanup of VOC contamination in soil can be achieved by several proven technologies. VOCs are readily removed or treated because of their high volatility and amenability to degradation. VOC cleanup options for soil include the following technologies:

- Incineration
- Low Temperature Thermal Desorption
- Air Stripping/Soil Aeration
- Biodegradation
- Off-Site Disposal

Of the five technologies, only air stripping/soil aeration and off-site disposal are considered feasible options. Incineration is highly effective at VOC destruction, however, given the low volumes of impacted, accessible soil (only 1,200 cubic yards of soil are considered accessible; soils beneath the foundation at degreaser areas 1 and 2 are not considered accessible) it would not be cost-effective when compared to the other options.

Low temperature thermal desorption is an alternative thermal treatment that effectively reduces VOC contamination in soils. It is advantageous over incineration in that it involves less

permitting to implement and is less costly. The primary disadvantage when compared to incineration is that it does not necessarily destroy the VOCs since it operates at much lower temperatures (i.e., the VOCs are stripped from the soil and subsequently treated in the gaseous phase). Compared to air stripping/soil aeration and off-site disposal, however, low temperature thermal desorption is not cost-effective.

Biodegradation has been successfully demonstrated at several sites for the degradation of VOCs. It is generally the most cost-effective technology available for the treatment of VOCs. The primary drawback of biodegradation at the Arcade plant site is the potential for degradation of TCE (the primary contaminant) to vinyl chloride, a more toxic contaminant. Once present, vinyl chloride is extremely difficult to treat. For this reason biodegradation is not considered a feasible option.

Detailed descriptions of air stripping/soil aeration and off-site disposal are provided in the following subsections.

7.3.1 Air Stripping/Soil Aeration

Air Stripping/Soil Aeration is a process that provides for mass transfer of volatile organic contaminants from a soil matrix to a more easily treatable vapor stream. The process is most often implemented in-place (in-situ) and is commonly referred to as soil vapor extraction (SVE). SVE has been successfully used to cleanup soils contaminated with various VOCs including low molecular weight hydrocarbons, solvents and halogenated compounds (i.e., those compounds with a Henry's Law Constant greater than 0.01). SVE systems consist of either air extraction wells or air extraction wells coupled with air injection wells.

SVE could be used at Degreasers 1 and 2, and at the Chemical Building Storage Area where VOCs are the primary contaminants. Because the subsurface soils are primarily silts with permeabilities estimated to be 10^{-4} to 10^{-6} cm/sec, the SVE system would incorporate air injection and air extraction wells to enhance air flow. Air injection wells would most likely be

placed at the outer edges of the contaminated area and air extraction wells would most likely be placed toward the center of the source area. For the source area below and around the degreasers, this would require the installation of extraction wells within the building. The air injection wells would be located around the perimeter of the building. At the chemical storage area, it is anticipated that air injection and air extraction wells would be placed on the south side of the building and that no wells within the building would be required.

Air injection wells would be connected to air blowers that force air into the surrounding soil. The air extraction wells would either be connected to the suction side of the air blowers or vacuum pumps, thereby inducing flow from the injection wells to the extraction wells. If VOCs in the extracted vapor require treatment, the vapors would be treated by conventional methods such as air/water separation, carbon adsorption, or incineration.

Effectiveness

SVE is capable of VOC removal efficiencies of over 99 percent under most conditions. The effectiveness is dependent upon several factors including the volatility of organic contaminants at ambient temperatures, the depth to ground water, and the permeability of the soil. Conditions at the Arcade plant site are not considered ideal for SVE, primarily because of the shallow depth to ground water (approximately 8 to 10 feet below ground surface) and the presence of low permeability silts. Regardless, SVE has successfully been demonstrated at similar sites but at the expense of additional wells and increased air flow requirements. To further enhance SVE at the chemical storage area, it may be necessary to cap the surface with asphalt or clay to avoid vacuum loss to the surficial soils. This may be necessary because the impacted area is assumed to be confined to the upper 5 feet. Vacuum loss at the process building is not a concern because the concrete foundation will function as a cap.

Implementability

SVE systems can easily be designed and implemented from scratch, or packaged systems with some modifications can be leased or purchased. Several vendors market the technology and several of them have patented systems. With sufficient data, most SVE systems can proceed

from design to full scale operation, without having to conduct bench or pilot-scale demonstrations. For the Arcade plant site, a pilot-scale system that could be readily converted to a full-scale system would be recommended given the silty soils, shallow depth of contamination and shallow depth to ground water. Cleanup time can range from a few weeks to several years, but is anticipated to be on the order of 2 to 3 years for the degreaser areas because of the low permeability soils and inaccessibility of soil beneath the building, and 1 to 2 years for the chemical storage building area because of the low permeability soils.

7.3.2 Off-site Disposal

This cleanup option involves the excavation, transport and off-site disposal of contaminated soil in a permitted, Subtitle C disposal facility. Once at the disposal facility, the contaminated soil may be treated via incineration, aeration or stabilization if necessary to meet disposal standards. Off-site disposal has traditionally been the most often selected cleanup option because it can be implemented rapidly and provides the waste generator with a fairly high level of confidence with respect to long-term waste containment. Recent court cases, however, have shown that this confidence level is on the decline and have reinforced the fact that the waste generator will always be liable for the waste.

Several disposal facilities are permitted to accept contaminated soils and sludges from the Arcade Plant site. Two of the closer disposal facilities contacted are:

- Northeast Environmental Services, Inc.
  Conastata, New York
- Frontier Chemical Waste Process, Inc.
  Niagara Falls, New York

Northeast Environmental Services, Inc. has an approved Part B Permit. Frontier Chemical Waste Process, Inc. has submitted a Part B Permit application and is operating under Interim Status. Frontier Chemical Waste Process, Inc. is the nearest facility (approximately 50 miles

from the Arcade plant site) and Northeast Environmental Services, Inc., is approximately 150 miles from the site.

This option could be used for the following source areas:

- Chemical Storage Building Area
- Runoff Receiving Area
- Burn Area
- Subsurface Weir Structure

This option is not considered feasible for the degreaser 1 and 2 source area since the majority of impacted soil is located under the active process building. It should be noted that there are no VOCs of concern at the Runoff Receiving Area and Burn Area (i.e., only inorganic contaminants are present), but that these two areas have been included in this discussion to avoid redundancy in Section 7.4. Also, it should be noted that the subsurface weir structure contains both VOCs and inorganic contaminants.

Effectiveness

Off-site disposal is highly effective at eliminating the above listed source areas at the Arcade plant site. This cleanup option transfers the risks associated with the contaminated soil and sludge from the site to the disposal facility and subsequently lowers the risk through containment. Because of the inorganic constituents present in the soil and sludge, disposal would be preceded by stabilization in most instances to further reduce the mobility of these contaminants. During the stabilization process, many of the VOCs are likely to volatilize or become entrained in the stabilized soil. Stabilization would involve either chemical, physical, or chemical and physical bonding of the VOCs and inorganics. Thus the risks associated with the contaminants of concern would be further reduced. It should be noted that most of the VOCs in the soil will be volatilized during implementation as the excavated soil is exposed to the ambient air and undergoes aeration via excavation, loading, transport and unloading procedures. Some volatilization will occur with the sludge, however, not to the degree anticipated for the soil.

Implementability

Implementation of this cleanup option can be achieved rapidly and easily using conventional excavation equipment. Excavation near buildings and other structures may require additional measures such as shoring or bracing. Sludge from the subsurface weir structure would be removed using vacuum trucks. Soil would be hauled to the disposal facility in plastic-lined dump trucks, end-dump tractor trailers or belly-dump tractor trailers. Sludge would be hauled to the disposal facility in tanker trucks.

Excavated soil areas would be backfilled with clean fill from an approved, off-site source. The backfill would be compacted to a minimum of 90 percent Standard Proctor density. The concrete weir structure would be steam cleaned and backfilled with sand or cement, depending on in-place closure requirements. Disturbed areas would be resurfaced with appropriate cover material.

7.4 Cleanup Options for Inorganic Contaminants

Cadmium, chromium, copper, lead, manganese, zinc and cyanide are the inorganic contaminants of concern in the soil at the Arcade plant site. Several options exist for inorganics, however, the presence of cyanide limits the range of potentially feasible options which include:

- Stabilization/Immobilization
- Evaporation/Dewatering
- Capping
- Off-site Disposal

Only stabilization/immobilization, hereafter referred to as stabilization, and off-site disposal will be considered for the Arcade plant site. Evaporation/Dewatering is a process in which the soils are mixed with an aqueous medium to either precipitate or extract the inorganic constituents. Compared to stabilization and off-site disposal, this option is very labor and equipment intensive and not cost-effective. Capping is not considered feasible since the area is susceptible to flooding and sufficient control of contaminant migration cannot be obtained.

7.4.1 Stabilization

This cleanup option involves the mixing of contaminated soil with stabilizing agents such as lime, fly ash, kiln dust, cement, silicates or proprietary compounds to physically and/or chemically bond the inorganics within the stabilized matrix. The stabilized matrix may be a solid or loose mass. Stabilization is the most frequently applied option for inorganic treatment because it is cost-effective and readily implemented.

Stabilization can be performed aboveground or in-situ. Aboveground applications involve excavation and soil mixing in portable batch plants. In-situ applications can involve the use of specialized mixing equipment similar in shape and function to that of a kitchen mixer, but on a much larger scale. The mixing paddles or blades are designed with injection ports so the stabilizing agent(s) can be pressure injected into the soil. Another in-situ application involves mixing the soil and stabilization agent(s) with a backhoe or other heavy equipment without actually removing it from the ground. Based on present regulations, aboveground applications require disposal of the stabilized mass into an approved Subtitle C or D cell. For this reason, aboveground stabilization is not recommended. If ultimate disposition in a Subtitle C or D facility is required, it is more cost-effective to ship the soil to the disposal facility for stabilization.

Stabilization could be used for the Runoff Receiving Area and the Burn Area. In these areas, soil contamination is assumed to be limited to the upper 1 to 2 feet (estimated volume of 265 cubic yards). For this shallow depth, stabilization using conventional construction equipment is the most feasible implementation method.

Effectiveness

Stabilization is a highly effective and proven technology for the treatment of inorganic-contaminated soils and has been shown to be successful for many organic compounds. Most landfills are equipped with stabilization facilities since this technology has been shown to meet the requirements for land disposal (i.e., TCLP standards).

The effectiveness of stabilization is dependent upon several factors including the desired stabilization efficiency, thoroughness of the mixing process and environmental impacts to the stabilized mass. Assuming the desired stabilization efficiency would correspond to TCLP standards, stabilization of the soils at the Runoff Receiving Area and the Burn Area would be effective. Because of the silty nature of the soil, additional time would be required to assure thorough mixing of the soil and the success of stabilization. Long-term effectiveness of this cleanup option would be dependent on the impacts from the environment. In time, there would be a potential for environmental impacts such as precipitation and flooding to break chemical and physical bonds, allowing the inorganics to become mobile. This would be particularly true for the Runoff Receiving Area which is regularly inundated with surface water runoff. Technology could be designed to minimize this potential, however, the costs will increase substantially. An alternative would be to cap the stabilized areas with a low permeability cover such as asphalt or clay and re-route drainage around the stabilized areas.

Implementability

Implementation of this technology is straightforward and rapid. Stabilization of the soils in the Runoff Receiving Area and Burn Area could be accomplished within 1 to 2 weeks. Equipment and materials are generally readily available. Proprietary stabilization agents, however, may require some time to obtain.

A treatability study would be conducted to determine the type(s) of stabilization agents necessary and the quantities. Stabilization would result in a volume increase of typically 5 to 50 percent.

Stabilization of the Runoff Receiving Area would require approval from the property owner since this area is off of plant property.

7.4.2 Off-site Disposal

Off-site disposal is presented in Section 7.3.2.

8.0 RECOMMENDATIONS

8.1 Additional Site Characterization

Based on the results of the Phase II site investigation and evaluation of cleanup options, the following recommendations are forwarded:

- Perform additional surface and subsurface soil sampling in the runoff receiving area to more accurately define the areal and vertical extent of metals impacts. Analyze the samples for total metals and disposal parameters. This data will help finalize removal cost estimates.

- Perform additional surface soil sampling in the former burn area to more accurately define the areal extent of metals impact. Analyze the samples for total metals and disposal parameters. This data will help finalize removal cost estimates.

- Resample surface water and sediment at sample location SW03/SD03 within Cemetery Creek to confirm or refute the presence of trace concentrations of xylene.

- Sample the non-contact cooling water being discharged into the drainage ditch south of the plant building. Analyze the water for metals. This data will be used to determine whether the discharge may be a source of the metals detected in the sediments.

- Install an additional ground water monitoring well in the upper aquifer, at the property boundary downgradient of existing well location MW-1.

- Perform a second round of ground water sampling to develop a baseline water quality data base to allow subsequent evaluation of source removal/cleanup effectiveness. Analyze the samples for VOCs.

8.2 Site Cleanup

The recommended approach to addressing the impacted soil, sediment and ground water media is through source removal/control with subsequent monitoring. Specifically, the following items are recommended:

- Clean out the subsurface weir structure by pumping out the liquid, removing the sludge, cleaning the base and sidewalls and closing the structure by filling with cement. The removed liquid and sludge should be treated and disposed at an approved facility.

- Install secondary containment beneath the degreasing units. If possible, consider switching from TCE in the degreasers to a less toxic solvent.

- Install a soil vapor extraction system beneath the concrete floor in the active portion of the plant in the vicinity of degreasers 1 and 2.

- Scrape off the impacted soils from the runoff receiving area and the former burn area. Dispose of the soils at an approved landfill facility.

- Monitor ground water on a semi-annual basis for VOCs to evaluate the effectiveness of the VOC source removal/control activities.

9.0 REFERENCES

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Simon Hydro-Search, 1991. Work Plan for a Phase II Site Investigation at the Prestolite Arcade Plant, Arcade, New York, Job No. 426116332.

IT Corporation, 1991. Phase I Site Investigation Report. Prestolite Arcade Plant, Arcade, New York.

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APPENDIX A

BOREHOLE LOGS AND WELL CONSTRUCTION SUMMARIES

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous
0 - 12 feet

BORING NO. MW-1D

SHEET 1 OF 2

WATER LEVEL	14.2		
TIME	1500		
DATE	1/27		
CASING DEPTH	18'		

DRILLING START: TIME 1330, DATE 1/27/92
DRILLING FINISH: TIME 1830, DATE 1/29/92

DATUM: msl ELEVATION: 1473.60

DRILL RIG: Acker AD-2

SURFACE CONDITIONS: Asphalt parking lot, dry, flat.

ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL					TEST RESULTS PID (ppm) BZ DH R
2	100/.3 (15%)	ML	Yellowish-Brown (10YR 5/6) Silt, some sand and some gravel	SS		0 0 0
4	7, 4 4, 7 (35%)	SP	Yellowish-Brown (10YR 5/6) Sand, some silt, poorly sorted with some gravel.	SS		3 0 0
6	6, 7 12, 14 (35%)	SP-SM	Yellowish-Brown (10YR 7/8) Sand, some silt, little clay, poorly sorted, moist.	SS		0 0 0
8	6, 4 4, 7 (25%)	ML	Brown (10YR 5/6) Silt, some clay, little gravel, poorly sorted, moist.	SS		0 0 0
10	5, 4 3, 3 NR		Water observed on SS.	SS		0 1 0
12	6, 13 10, 12 (15%)	SP	Dark Gray (5Y 4/1) Sand, some clay, poorly sorted, wet.	SS		0 0 0
14			No sample.			
16	5, 9 12, 19 (40%)	SP	Yellowish-Brown (10YR 4/1) Sand, some clay, poorly sorted, wet.	SS		0 0 0
18			No sample.			
20	11, 34 24, 15 (55%)	ML	Light Gray (5Y 6/1) Silt, some clay with trace gravel and some sand, poorly sorted, very moist.	SS		0 0 0
22			No sample.			
	7, 15 18, 24 (15%)	ML	Gray (5Y 6/7) Silt, some clay, some sand, trace gravel, poorly sorted, wet.	SS		0 0 0

'BZ = breathing Zone, DH = Downhole, R = Sample

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous
0 - 12 feet

BORING NO. MW-1D

SHEET 2 OF 2

		DRILLING START	DRILLING FINISH
WATER LEVEL	14.2		
TIME	1500	TIME 1330	TIME 1830
DATE	1/27	DATE 1/27/92	DATE 1/29/92
CASING DEPTH	18'		

DATUM: msl ELEVATION: 1473.60

DRILL RIG: Acker AD-2

SURFACE CONDITIONS: Asphalt parking lot, dry, flat.

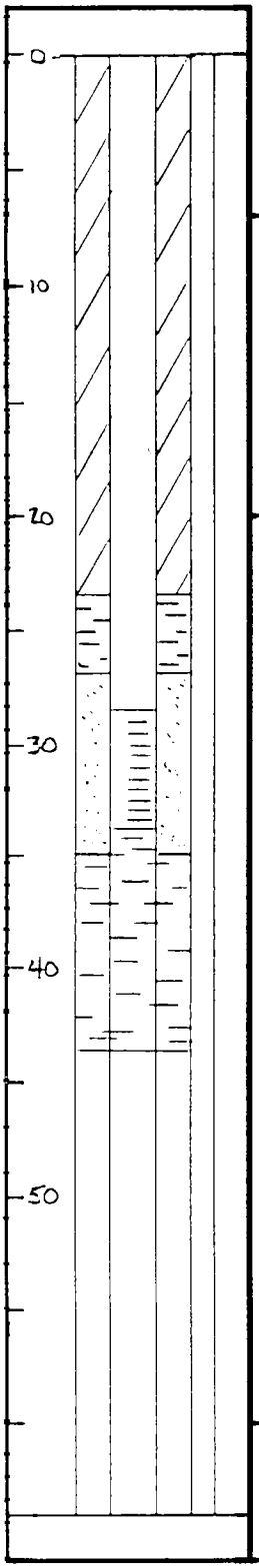
ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL			TEST RESULTS PID (ppm)
24			No sample.	
26	17, 24 26, 33 (70%)	ML	Gray (5Y 6/1) Silt, some clay, trace sand and gravel, poorly sorted, wet. SS	0 0 0
28			No sample.	
30	6, 18 50/.4' (86%)	ML	Gray (5Y 4/1) Silt, some clay with some poorly sorted sand and trace gravel, wet. SS	0 0 0
32			No sample.	
34	8, 18 33, 29 (75%)	CL	Reddish-Gray (10R 5/1) Clay, some silt, medium plastic, dry. SS	0 0 0
36			No sample.	
38	8, 14 25, 42 (85%)	CL	Reddish-Gray (10R 5/1) Clay, some silt, stiff, medium plastic, moist. SS	0 0 0
40			No sample.	
42	9, 16 28, 42 (95%)	CL	Reddish-Gray (10R 5/1) Clay, some silt, stiff, medium, plastic, moist. SS	0 0 0
44			EOB 44 ft	

[1]BZ = breathing Zone, DH = Downhole, R = Sample

MONITOR WELL CONSTRUCTION SUMMARY



Well No. MW-1D

Boring No. X-Ref: MW-1D

Survey Coords: 922,953.740

541,176.160

Elevation Ground Level 1473.60

Top of Casing 1473.40

Drilling Summary:

Total Depth: 44.0 feet
Borehole Diameter: 7 inches
Casing Stick-up Height: 0
Driller: Empire Soils, Inc.
Hamburg, NY
Rig: Acker II

Bit(s): 4.25" Hollow Stem Auger

Protective Casing: Flush Mount

Well Design & Specifications

Basic: Geologic Log X Geophysical Log ___
Casing String(s): C = Casing S = Screen

Depth	String(s)	Elevation
0.0 - 29.0	C1	1473.40 - 1444.4
29.0 - 34.0	S1	1444.4 - 1439.4
___ - ___	___	___ - ___
___ - ___	___	___ - ___
___ - ___	___	___ - ___

Casing: C1: 2" Sch 40 FJT PVC

Casing: C2:

Screen: S1: 2" Sch 40 FJT PVC with 0.010 inch slot

Filter Pack: Sand 35.0 feet to 27.0 feet

Grout Seal: Portland Type I - bentonite grout 24.0 feet to surface

Bentonite Seal: Bentonite pellets 27.0 feet to 24 feet

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	1/27		1/28	0955
	1/28	0800	1/28	1800
	1/19	0800	1/29	1630
Casing:				
	1/29	1435	1/29	1500
Filter Placement:	1/30	0810	1/30	0840
Cementing:	1/30	0900	1/30	1000
Development:	2/02	0900	2/02	1110
3' Bentonite:	1/30	0840	1/30	0900

Well Development:

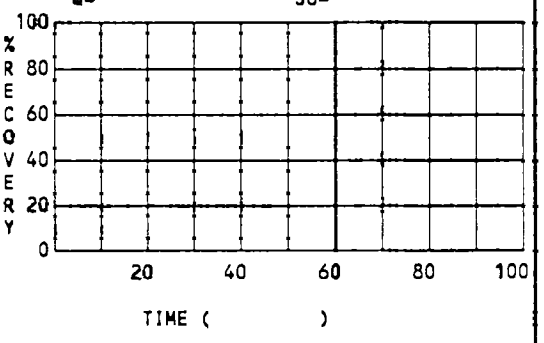
Bailed 25 gallons (5.6 casing volumes)
1/31, TD = 34.35 feet, WL = 7.55 feet.

Stabilization Test Data:

Time	pH	Spec. Cond.	Temp (C)
1058	7.30	320	11.8
1105	7.31	320	11.8
1110	7.41	320	11.8

Recovery Data:

Q= So=



Comments: Slug tested 2/6/92

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous
0 to 12 feet

BORING NO. MW-30

SHEET 1 OF 3

WATER LEVEL	2.90	3.25	3.4	
TIME	1356	1015	1530	
DATE	2/06	2/09	2/12	
CASING DEPTH	61.4	---	---	

DRILLING START: TIME 0830, DATE 2/03/92
DRILLING FINISH: TIME 0915, DATE 2/04/92

DATUM: msl ELEVATION: 1476.64

DRILL RIG: Acker II

ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

SURFACE CONDITIONS: Low area of asphalt - paved drive near metal recycling bins, some oily staining on asphalt.

	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL			TEST RESULTS PID (ppm) BZ DH R
2	23, 82 79, 43 (80%)	SP	Asphalt = 4 inches thick, Yellowish-Brown (10YR 5/4) over fill composed of sand and gravel, some clay, poorly sorted, subangular, dry.	SS	0 0 0
4	12, 62 100/6" (20%)	SP	Same as above, no asphalt.	SS	0 0 0
6	0, 9 100/4" (30%)	CL	Yellowish-Brown (10YR 5/4) Clay, some sand with some gravel. Poorly sorted, subangular, Clay is plastic, moist.	SS	0 0 0
8	10 50/.6 44, 40 (20%)	SC	Dark Yellowish-Brown (10YR 4/6) Clay, some sand and gravel, poorly sorted and subangular, moist.	SS	0 0 2
10	25, 33 29, 36 (35%)	SC	Same as above, moist.	SS	0 5 0
12					
14	8, 12 18, 31 (30%)	GP	Olive Brown (2.5Y 4/4) Sand and gravel, sand is well sorted, gravel is poorly sorted and subangular. Trace clay, wet.	SS	0 0 0
16			Gravels and cobbles with some thin layers of clay. (No sample collected)		
18	17, 20 20, 22 (55%)	ML	Grayish-Brown (10YR 5/2) Silt, some clay with trace well rounded, poorly sorted gravel, clay is stiff and brittle, wet.	SS	0 0 0
20	19, 20 12, 17 (15%)	ML	Same as above, wet.	SS	0 0 0
22					

[1]BZ = breathing Zone, DH = Downhole, R = Sample

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous
0 to 12 feet

BORING NO. MW-3D

SHEET 2 OF 3

WATER LEVEL	2.90	3.25	3.4
TIME	1356	1015	1530
DATE	2/06	2/09	2/12
CASING DEPTH	61.4	--	--

DRILLING START: TIME 0830, DATE 2/03/92
DRILLING FINISH: TIME 0915, DATE 2/04/92

DATUM: msl ELEVATION: 1476.64

DRILL RIG: Acker II

SURFACE CONDITIONS: Low area of asphalt - paved drive near metal recycling bins, some, oily staining on asphalt.

ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL					TEST RESULTS PID (ppm) BZ DH R
24	8, 12 15, 18 (65%)	ML	Dark Grayish Brown (2.5Y 4/2) Silt, some clay, wet.	SS		0 0 0
26						
28	8, 15 20, 38 (35%)	ML	Same as above, wet.	SS		0
30						
32	22, 22 24, 100/.1' (70%)	ML	Same as above, wet.	SS		0 0 0
34						
36	30, 25 29, 31 (85%)	ML	Same as above, very moist.	SS		0 0 0
38						
40	19, 20 25, 24 (75%)	ML	Dark Grayish-Brown (2.5Y 4/2) Silt, some sand, grading to course subrounded gravel, wet.	SS		
42						
44	27, 37 35, 48 (55%)	SM	Dark Grayish-Brown (2.5Y 4/2) Sand, some silt, poorly sorted gravel, wet.			
46				SS		0 0 0

[1]BZ = breathing Zone, DH = Downhole, R = Sample

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous
0 to 12 feet

BORING NO. MW-30

SHEET 3 OF 3

WATER LEVEL	2.90	3.25	3.4
TIME	1356	1015	1530
DATE	2/06	2/09	2.12
CASING DEPTH	61.4	--	--

DRILLING START: TIME 0830, DATE 2/03/92
DRILLING FINISH: TIME 0915, DATE 2/03/92

DATUM: msl ELEVATION: 1476.64

DRILL RIG: Acker II

SURFACE CONDITIONS: Low area of asphalt - paved drive near metal recycling bins, some oily staining on asphalt.

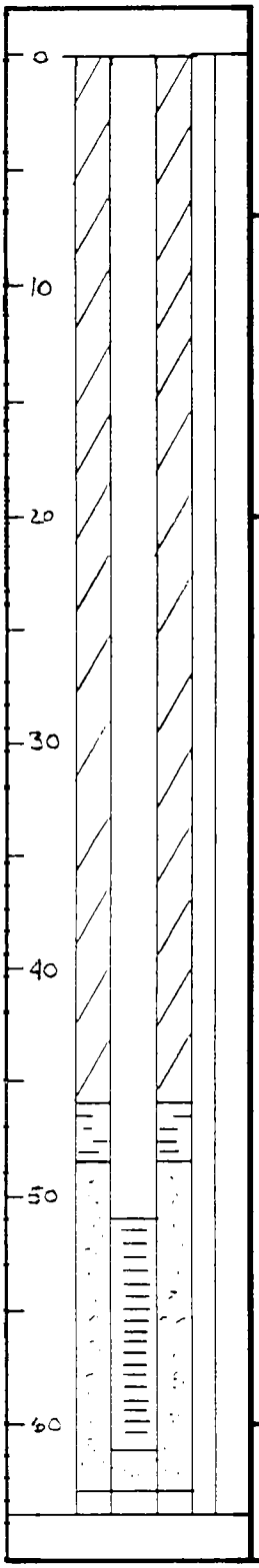
ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

			SAMPLE NUMBER AND DESCRIPTION OF MATERIAL				TEST RESULTS PID (ppm) BZ DH R
48	45, 38 47, 43 (75%)	SM	Same as above, wet.	SS			0 0 0
50							
52	100/ 0.52' (100%)	SM	Same as above, moist.	SS			0 0 0
54							
56	48, 59 58, 51 (30%)	SM	Grayish-Brown (2.5Y 4/2) Sand, some silt with poorly sorted, well rounded gravel, wet. Some of the gravel is Reddish-Brown.	SS			0 0
58							
60	7, 12 18, 26 (65%)	CL	Dark Reddish-Gray (5YR 4/2) Clay, some silt, plastic, moist.	SS			0
62			EOB = 62 ft				
64							

[1]BZ = breathing Zone, DH = Downhole, R = Sample

MONITOR WELL CONSTRUCTION SUMMARY



Well No. MW-3D

Boring No. X-Ref: MW-3D

Survey Coords: 922,488.208 Elevation Ground Level 1476.64

541,574.327 Top of Casing 1476.19

Drilling Summary:

Total Depth: 62.0 feet
Borehole Diameter: 6 inches
Casing Stick-up Height:
Driller: Empire Soils, Inc.
Hamburg, NY
Rig: Acker II

Bit(s): Hollow Stem Auger

Protective Casing: Flush Mount

Well Design & Specifications

Basic: Geologic Log X Geophysical Log ___
Casing String(s): C = Casing S = Screen

Depth	String(s)	Elevation
0.0 - 51.0	C1	1476.19 - 1425.2
51.0 - 61.0	S1	1425.2 - 1415.2
___ - ___	___	___ - ___
___ - ___	___	___ - ___
___ - ___	___	___ - ___

Casing: C1: 2" Sch 40 FJT PVC

Casing: C2:

Screen: S1: 2" Sch 40 FJT PVC, 0.010-inch slot

Filter Pack: 10x20 mesh silica sand
62.0 to 49.0 feet

Grout Seal: Portland Type I - bentonite grout 46.0 feet to surface

Bentonite Seal: Bentonite pellets
49.0 feet to 46.0 feet

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	2/03	0830	2/04	0915
Casing:				
Screen & Riser	2/04	0935	2/04	0940
Filter Placement:	2/04	1530	2/05	1630
Cementing:	2/05	0930	2/05	0955
Development:	2/06	1356	2/06	1630
Shelby Tube:	2/04	0915	2/04	0930
Bentonite:	2/05	0900	2/05	0915

Well Development:

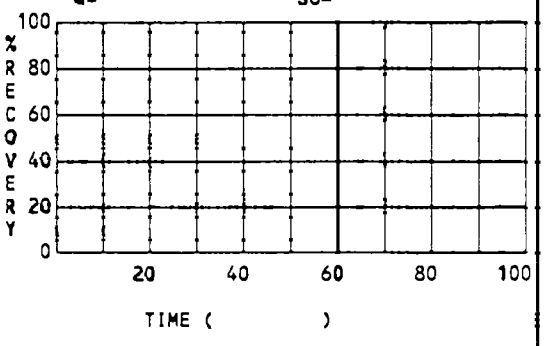
Bailed 60 gallons (6.2 casing volumes)

Stabilization Test Data:

Time	pH	Spec. Cond.	Temp (C)
	8.21	280	10.3
	8.28	280	10.1
	8.59	280	10.1

Recovery Data:

Q= So=



Comments: Slug test conducted 2/6/92

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous to 12 feet

BORING NO. MW-5

SHEET 1 OF 3

		DRILLING START	DRILLING FINISH
WATER LEVEL	43.2		
TIME	0915	TIME 1100	TIME 1030
DATE	1130	DATE 1/29/92	DATE 1/30/92
CASING DEPTH	44.0		

DATUM: msl ELEVATION: 1563.4

DRILL RIG: CME 55

SURFACE CONDITIONS: Hilltop overlooking plant; snow cover on ground.

ANGLE: Vertical BEARING --- SAMPLE HAMMER TORQUE FT.-LBS

			SAMPLE NUMBER AND DESCRIPTION OF MATERIAL				TEST RESULTS PID (ppm) BZ DH R
2	1, 2 4, 4 (50%)	ML-CL	Yellow Brown Silt and Clay, some sand, soft, wet, frozen.	SS			0 0 0
4	4, 5 6, 6 (63%)	ML-CL	As above, little gravel to 3/4", moist.	SS			0 0 0
6	6, 8 6, 5 (58%)	ML-CL	As above, some gravel (angular) to 2/4", stiff, moist.	SS			0 0 0
8	3, 6 7, 8 (79%)	ML	Brown Silt, little sand, little gravel to 3/4"; angular; silt is soft, poorly to moderately sorted, wet.	SS			0 0 0
10	9, 19 24, 29 (92%)	ML	Gray, 8-9 feet - As above, moist. 9-10 feet - Silt, 1/8" thick laminae, fissile, damp.	SS			0 0 0
12	20, 17 19, 19 (58%)	ML	Gray Silt, some sand, little gravel to 7/8", angular subrounded, moderately sorted; parts along horizontal beds, non-plastic, stiff to v. stiff, damp.	SS			0 0 0
14			No sample.				
16	23, 31 27, 30 (38%)	ML	Gray Silt (till), parts along horizontal bedding planes, some sand and gravel clasts, moderately sorted, damp to dry.	SS			0 0 0
18			No sample.				
20	13, 21 26, 31 (88%)	ML	Gray Silt, some parting along horizontal bedding planes, very stiff, some gravel and sand, dry to damp.	SS			0 0 0
22			No sample.				
	8, 15 15, 22 (92%)	ML	Gray Silt, some gravel to 1", poured to subangular, little to some sand, coarse to very fine, moderately sorted, stiff, non-plastic, damp.	SS			0 0 0

[1]BZ = Breathing Zone, DH = Downhole, R = Sample

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous to 12 feet

BORING NO. MW-5

SHEET 2 OF 3

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING START	DRILLING FINISH
TIME	TIME
DATE	DATE

DATUM: msl ELEVATION: 1563.4

DRILL RIG:

SURFACE CONDITIONS: Hilltop overlooking plant; snow cover on ground.

ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

			SAMPLE NUMBER AND DESCRIPTION OF MATERIAL				TEST RESULTS PID (ppm)
24			No sample.				
26	19, 22 25, 38 (42%)	ML	As above.	SS			0 0 0
28			No sample.				
30	15, 27 36, 55 (88%)	ML	Gray Silt, some gravel to 1" round to angular, little to some sand, coarse to very fine, moderately to poorly sorted, very stiff, non-plastic, dry to damp.	SS			0 0 0
32			No sample.				
34	36, 60 (92%)	ML-SP	As above, friable, some sand, dry.	SS			0 0 0
36			No sample.				
38	46, 50/0.4 (100%)	ML	As above, damp.	SS			0 0 0
40			No sample, very hard drilling.				
42	17, 28 37, 43 (100%)	ML	Brownish-Gray Silt, sand and gravel, poorly sorted, very stiff, non-plastic, damp.	SS			0 0 0
44			No sample.				
46	37, 50/3.5 NR		No recovery, sampler blocked by rock-fragments, some moisture on sampler.	SS			0 0 0

[1]BZ = Breathing Zone, DH = Downhole, R = Sample

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous to 12 feet

BORING NO. MW-5

SHEET 3 OF 3

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING START: TIME / DATE

DRILLING FINISH: TIME / DATE

DATUM: msl ELEVATION: 1563.4

DRILL RIG:

ANGLE: Vertical BEARING ---

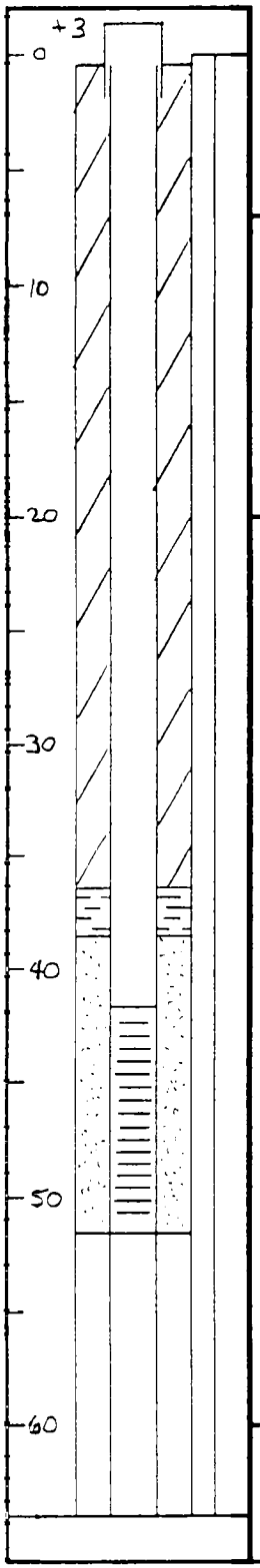
SAMPLE HAMMER TORQUE FT.-LBS

SURFACE CONDITIONS: Hilltop overlooking plant; snow cover on ground.

			SAMPLE NUMBER AND DESCRIPTION OF MATERIAL				TEST RESULTS PID (ppm)
48			No sample.				
50	19, 22 27, 30 (100%)	ML	Brownish-Gray Silt, some sand, some gravel, poorly sorted, non-plastic, stiff, wet.	SS			0 0 0
52			52.0 feet - EOB.				

[1]BZ = Breathing Zone, DH = Downhole, R = Sample

MONITOR WELL CONSTRUCTION SUMMARY



Well No. MW-5

Boring No. X-Ref: MW-5

Survey Coords: 921,732.551
541,123.527

Elevation Ground Level 1563.4

Top of Casing 1566.40

Drilling Summary:

Total Depth: 52.0 feet
Borehole Diameter: 7 inches
Casing Stick-up Height: 3.0 feet
Driller: Empire Soils, Inc.

Rig: CME 55

Bit(s): 4.25" Hollow Stem Auger

Protective Casing: 3.5 feet, lockable, steel

Well Design & Specifications

Basic: Geologic Log X Geophysical Log ___
Casing String(s): C = Casing S = Screen

Depth	String(s)	Elevation
+3.0 - 42.0	C1	1566.40 - 1524.4
42.0 - 52.0	S1	1524.4 - 1514.4
___ - ___	___	___ - ___
___ - ___	___	___ - ___
___ - ___	___	___ - ___

Casing: C1: 2" Sch 40 FJT PVC

Casing: C2:

Screen: S1: 2" Sch 40 FJT PVC, 0.010-inch slot

Filter Pack: 10x20 mesh silica sand 38.8 to 52.0 feet

Grout Seal: Portland Type I - bentonite grout, surface to 36.9 feet

Bentonite Seal: Bentonite pellets 38.8 to 36.9 feet, hydrated with 10 gal. potable water

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	1/29	1100	1/29	1630
	1/30	0915	1/30	1030
Casing:	1/30	1030	1/30	1110
Filter Placement:	1/30	1110	1/30	1155
Cementing:	1/30	1330	1/30	1430
Development:	1/31	1700	2/07	0900

Well Development:

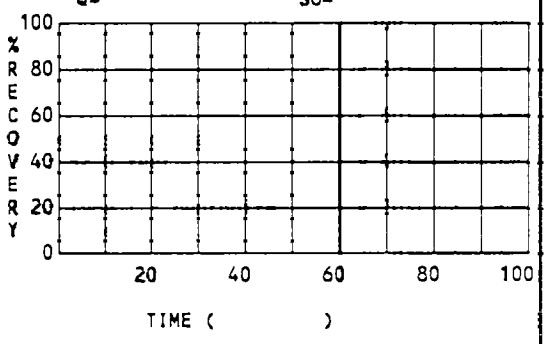
55 gallons added to well, surged and bailed daily 1/31 to 2/7.

Stabilization Test Data:

Time	pH	Spec. Cond.	Temp (C)
1936	6.8	420	7.0
0900	6.8	435	7.3
0920	6.8	445	7.2

Recovery Data:

Q= So=



Comments:

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous to 12 feet

BORING NO. MW-6D

SHEET 1 of 3

WATER LEVEL	11.82			DRILLING START TIME	DRILLING FINISH TIME
TIME	1345			0800	1515
DATE	214			DATE 1/31/92	DATE 1/31/92
CASING DEPTH	55.38				

DATUM: msl ELEVATION: 1485.35

DRILL RIG:

ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

SURFACE CONDITIONS: Flat dirt area, snow covered, devoid of vegetation.

			SAMPLE NUMBER AND DESCRIPTION OF MATERIAL				TEST RESULTS PID (ppm) BZ DH R
	5, 11 12, 11 (80%)	ML	Brown Silt, some sand and gravel, moist.	SS			0 0 0
2	6, 6 3, 3 (50%)	ML	Reddish-Brown Silt, some sand and gravel, soft, some iron stains, moist to wet.	SS			0 0 0
4	6, 12 12, 11 (25%)	ML	Brown Silt, some sand, some dark layers (ash) not oily, soft, moist, little gravel.	SS			0 0 0
6	8, 10 10, 12 (60%)	ML	Brown silt, some sand and gravel, m. stiff, damp to moist, no stains.	SS			0 0 0
8	4, 6 7, 10 (65%)	ML	As above.	SS			0 0 0
10	33, 36 26, 13 (40%)	ML	Brown Silt, some sand and gravel, soft to m. stiff, dry to damp.	SS			0 0 0
12			No sample.				
14	20, 10 11, 11 (40%)	ML	Gray Silt, little sand and gravel, m. stiff, wet.	SS			0 0 0
16			No sample.				
18	15, 12 16, 13 (70%)	ML	Gray Silt as above, wet. Top 6" of spoon is sand, gravel and silt, p. to unsorted.	SS			0 0 0
20			No sample.				
22	7, 11 10, 13 (75%)	ML	Gray Silt, soft to m. stiff, sl. plastic, wet.	SS			0 0 0

[1]BZ = breathing Zone, DH = Downhole, R = Sample

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous to 12 feet

BORING NO. MW-6D

SHEET 2 OF 3

WATER LEVEL	11.82
TIME	1345
DATE	214
CASING DEPTH	55.38

DRILLING

START	FINISH
TIME 0800	TIME 1515
DATE 1/31/92	DATE 1/31/92

DATUM: msl ELEVATION: 1485.35

DRILL RIG:

ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

SURFACE CONDITIONS: Flat dirt area, snow covered, devoid of vegetation.

			SAMPLE NUMBER AND DESCRIPTION OF MATERIAL				TEST RESULTS PID (ppm) BZ DH R
24			No Sample.				
26	7, 8 10, 13 (90%)	ML	Gray, Silt, soft, moist to damp, homogeneous.	SS			
28			No sample.				
30	6, 17 19, 24 (90%)	ML	As above, damp to dry, parts along horizontal bedding.	SS			
32			No sample.				
34	50/4" NR		No recovery.				
36	16, 22 23, 24 (100%)	ML	Gray Silt, soft, homogeneous, damp, parts along bedding.	SS			
38			No sample.				
40	13, 21 33, 40 (90%)	ML	As above.	SS			
42							
44	5, 18 23, 28 (68%)	ML	Gray Silt, some interbedded gravel (6" thick bed), soft parts along bedding, moist.	SS			
46			No sample.				

[1]BZ = breathing Zone, DH = Downhole, R = Sample

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous to 12 feet

BORING NO. MW-6D

SHEET 3 OF 3

					DRILLING START	DRILLING FINISH
WATER LEVEL	11.82				TIME 0800	TIME 1515
TIME	1345				DATE 1/31/92	DATE 1/31/92
DATE	214					
CASING DEPTH	55.38					

DATUM: msl ELEVATION: 1485.35

DRILL RIG:

ANGLE: Vertical BEARING ---

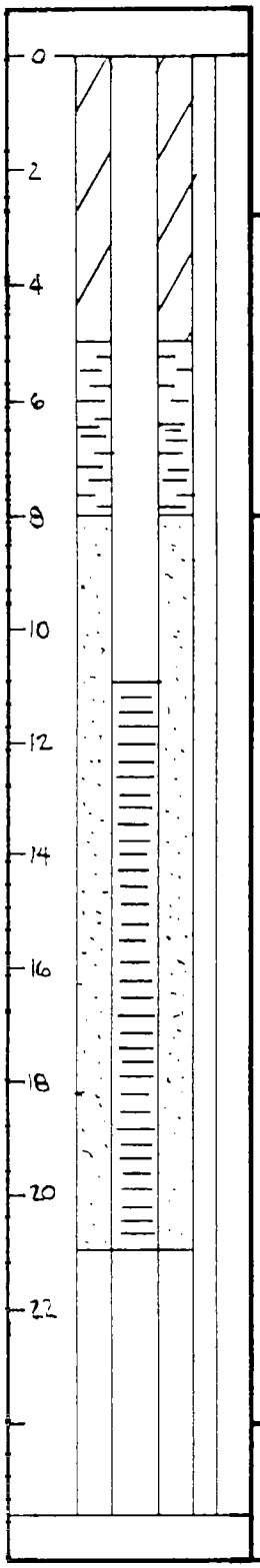
SAMPLE HAMMER TORQUE FT.-LBS

SURFACE CONDITIONS: Flat dirt area, snow covered, devoid of vegetation.

			SAMPLE NUMBER AND DESCRIPTION OF MATERIAL				TEST RESULTS PID (ppm) BZ DH R
48	10, 15 18, 18 (65%)	CL	48-49 as above. 49-50 Gray Clay, stiff, non-plastic, moist.	SS			
50	10, 18 22, 21 (100%)	SW	50-51 Gray Clay, grading downward to silty clay. 51-52 Gray fine sand, some silt, wet, loose.	SS			
52			No sample.				
54	6, 11 18, 26 (100%)	CL	Grayish Red (10YR 5/1) Clay, stiff, damp, massive.	SS			
56			Shelby Tube driven, no recovery.				
58							

BZ = breathing Zone, DH = Downhole, R = Sample

MONITOR WELL CONSTRUCTION SUMMARY



Well No. MW-6

Boring No. X-Ref: MW-60

Survey Coords: 922,402,486
541,330,509

Elevation Ground Level 1485.35

Top of Casing 1484.95

Drilling Summary:
Total Depth: 21.0 feet
Borehole Diameter: 7 inches
Casing Stick-up Height: 0
Driller: Empire Soils, Inc.

Rig: CME 55

Bit(s): Hollow Stem Auger

Protective Casing: Flush mount

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	2/03	1300	2/03	1430
Casing:	2/03	1430	2/03	1440
Filter Placement:	2/03	1440	2/03	1600
Cementing:	2/03	1600	2/03	1630
Development:	2/04	1000	2/04	1130

Well Design & Specifications

Basic: Geologic Log X Geophysical Log ___
Casing String(s): C = Casing S = Screen

Depth	String(s)	Elevation
0.0 - 11.0	C1	1484.95 - 1474.0
11.0 - 21.0	S1	1474.0 - 1464.0
___ - ___	___	___ - ___
___ - ___	___	___ - ___
___ - ___	___	___ - ___

Casing: C1: 2" Sch 40 FJT PVC

Casing: C2:

Screen: S1: 2" Sch 40 FJT PVC, 0.010-inch slot

Filter Pack: 10x20 mesh silica sand, 8.0 to 21.0 feet

Grout Seal: Portland Type I - bentonite grout, surface to 5.0 feet

Bentonite Seal: Bentonite pellets 5.0 to 8.0 feet

Well Development:

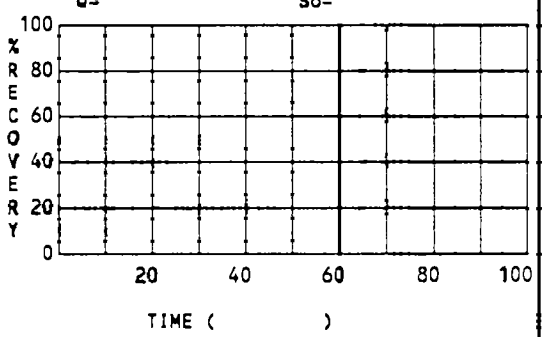
5 gallons bailed (5.5 casing volumes)

Stabilization Test Data:

Time	pH	Spec. Cond.	Temp (C)
1030	7.0	365	7.5
1050	7.0	370	9.1
1110	7.0	365	7.5

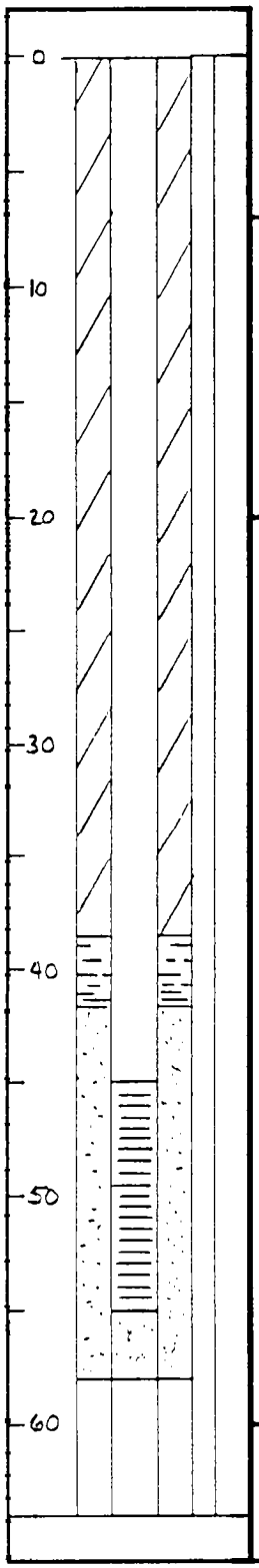
Recovery Data:

Q= So=



Comments: Slug test conducted 2/6/92

MONITOR WELL CONSTRUCTION SUMMARY



Well No. MW-60

Boring No. X-Ref: MW-60

Survey Coords: _____ Elevation Ground Level 1485.69

Top of Casing 1485.42

Drilling Summary:
Total Depth: 58.0 feet
Borehole Diameter: 7" to 56, 2" to 58
Casing Stick-up Height: _____
Driller: Empire Soils, Inc.
Hamburg, NY
Rig: CME 55

Bit(s): Hollow Stem Auger

Protective Casing: Flush Mount

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	1/31	0800	1/31	1515
Casing:	2/03	0830	2/03	0900
Filter Placement:	2/03	0900	2/03	0940
Cementing:	2/03	1030	2/03	1200
Development:	2/05	1345	2/05	1445
Bentonite:	2/03	0940	2/03	1030

Well Design & Specifications

Basic: Geologic Log X Geophysical Log ___
Casing String(s): C = Casing S = Screen

Depth	String(s)	Elevation
0.0 - 46.0	C1	1485.42 - 1439.4
45.0 - 55.0	S1	1439.4 - 1429.4
___ - ___	___	___ - ___
___ - ___	___	___ - ___
___ - ___	___	___ - ___

Casing: C1: 2" Sch 40 FJT PVC

Casing: C2: _____

Screen: S1: 2" Sch 40 FJT PVC with 0.010 inch slot

Filter Pack: #1 silica sand (10x20), some fines 58 feet to 42 feet

Grout Seal: _____

Bentonite Seal: Bentonite pellets 42.0 feet to 39.0 feet

Well Development:

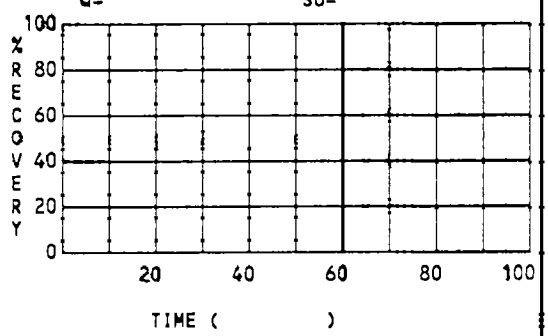
Bailed 38 gallons (5.3 casing volumes)

Stabilization Test Data:

Time	pH	Spec. Cond.	Temp (C)
1045	6.79	290	8.8
1050	6.85	285	8.4
1100	7.02	290	8.6

Recovery Data:

Q= So=



Comments: Slug test conducted 2/6/92.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: SS, cont to 12 feet

BORING NO. MW-7

SHEET 1 OF 1

			DRILLING START	DRILLING FINISH
WATER LEVEL	10.0			
TIME	1100	1530	TIME 1030	TIME 1310
DATE	01/31	02/02	DATE 1/31/92	DATE 1/31/92
CASING DEPTH	5.03	5.03		

DATUM: msl ELEVATION: 1481.09

DRILL RIG: Acker II

SURFACE CONDITIONS: Fill area sloping towards creek

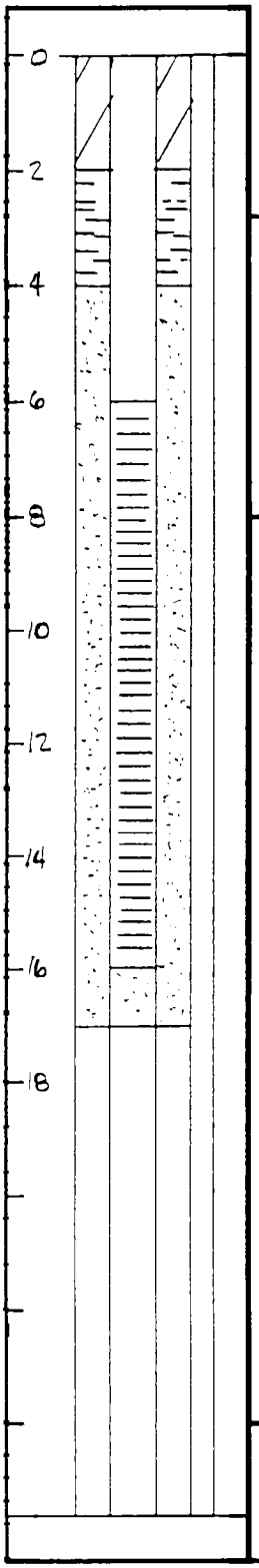
ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL					TEST RESULTS PID (ppm) BZ[1] DH R
2	8, 57 44, 23 (10%)	GP	Fill, gravel with some sand, poorly sorted, Gray (5YR 6/1), dry.	SS		0 0 0
4	14, 14 12, 7 (20%)	CL	Brown (10YR 5/5) Silt, some clay with subangular sand and gravel, slightly moist.	SS		0 0 0
6	6, 12 6, 8 NR		No sample recovered.	SS		0 0 0
8	9, 7 10, 13 NR		No sample recovered.	SS		0 0 0
10	4, 9 14, 21 (20%)	CL	Brown (10YR 5/3) Silt, some clay with subangular, poorly sorted sand and gravel, wet.	SS		0 0 0
12	14, 7 6, 7 (20%)	CL	As above.	SS		0 0 0
14	3, 4 20, 19 (15%)	CL	Brown (10YR 5/3) Clay, plastic, soft, wet.	SS		0 0 0
16						
18	35, 43 45, 64 (95%)	CL	Gray (5YR 4/1) Clay, stiff, plastic, dry at 18 ft.	SS		0 0 0
20			EOB = 17.0 ft.			
22						

[1]BZ = Breathing Zone, DH = Downhole, R = Sample

MONITOR WELL CONSTRUCTION SUMMARY



Well No. MW-7

Boring No. X-Ref: MW-7

Survey Coords: 922,583.682
541,156.871

Elevation Ground Level 1481.09
Top of Casing 1480.78

Drilling Summary:
Total Depth: 17.0 feet
Borehole Diameter: 7 inches
Casing Stick-up Height: 0
Driller: Empire Soils, Inc.
Hamburg, NY
Rig: Acker II
Bit(s): 4.25" Hollow Stem Auger
Protective Casing: Flush Mount

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	1/30	1130	1/31	1310
Casing:	1/31	1310	1/31	1330
Filter Placement:	1/31	1330	1/31	1400
Cementing:	1/31	1430	1/31	1500
Development:	2/02	1350	2/02	1430
Bentonite:	1/31	1400	1/31	1430

Well Design & Specifications

Basic: Geologic Log X Geophysical Log ___
Casing String(s): C = Casing S = Screen

Depth	String(s)	Elevation
0.0 - 6.0	C1	1480.78 - 1474.8
6.0 - 16.0	S1	1474.8 - 1464.8
___ - ___	___	___ - ___
___ - ___	___	___ - ___
___ - ___	___	___ - ___

Casing: C1: 2" Sch 40 FJT PVC
Casing: C2:
Screen: S1: 2" Sch 40 FJT PVC with 0.010 inch slot
Filter Pack: Clean sand to 4.0 feet
Grout Seal: Bentonite Grout 2 feet to surface
Bentonite Seal: Bentonite pellets 4.0 feet to 2.0 feet

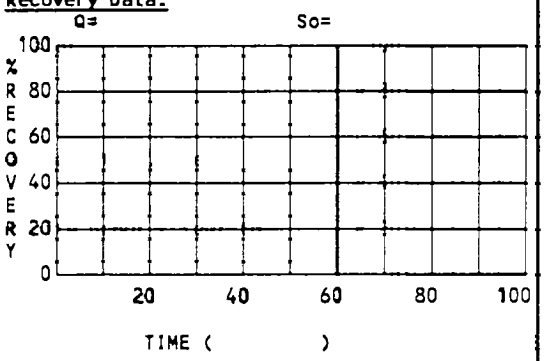
Well Development:

Bailed 10 gallons, (7.6 casing volumes)

Stabilization Test Data:

Time	pH	Spec. Cond.	Temp (C)
1430	6.82	250	4.8
1440	6.35	235	4.5
1450	6.41	225	4.8

Recovery Data:

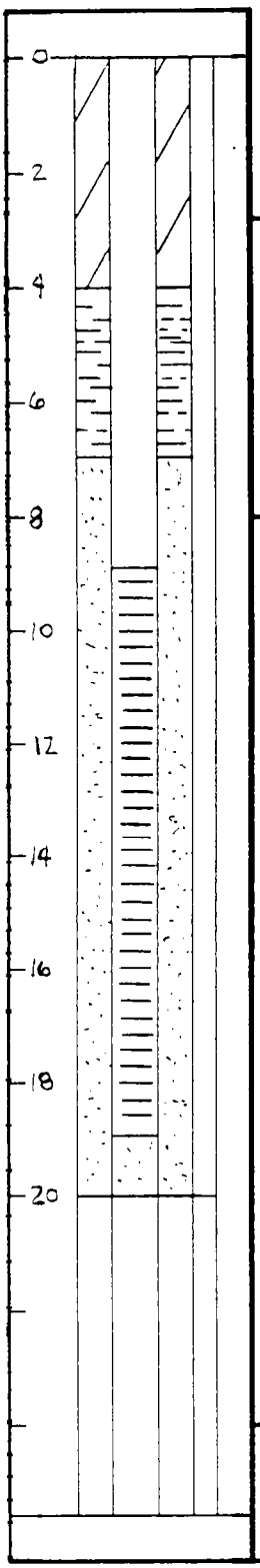


Comments:

MONITOR WELL CONSTRUCTION SUMMARY

Well No. MW-8

Boring No. X-Ref: MW-8



Survey Coords: 923,107.400

541,679.229

Elevation Ground Level 1474.35

Top of Casing 1473.99

Drilling Summary:

Total Depth: 20.0 feet
Borehole Diameter: 7 inches
Casing Stick-up Height: 0
Driller: Empire Soils, Inc.
Hamburg, NY
Rig: Acker II

Bit(s): 4.25" Hollow Stem Auger

Protective Casing: Flush Mount

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	1/30	1230	1/30	1430
Casing:	1/30	1430	1/30	1500
Filter Placement:	1/30	1500	1/30	1630
Cementing:	1/31	0800	1/31	0900
Development:	2/02	1200	2/02	1300
Bentonite:	2/01			

Well Design & Specifications

Basic: Geologic Log X Geophysical Log ___
Casing String(s): C = Casing S = Screen

Depth	String(s)	Elevation
0.0 - 9.0	C1	1473.99 - 1365.0
9.0 - 19.0	S1	1365.0 - 1355.0
___ - ___	___	___ - ___
___ - ___	___	___ - ___
___ - ___	___	___ - ___

Casing: C1: 2" Sch 40 FJT PVC

Casing: C2:

Screen: S1: 2" Sch 40 FJT PVC with 0.010 inch slot

Filter Pack: Clean silica sand 20 feet to 7 feet

Grout Seal: 4.0 feet to 0.0 feet Portland

Bentonite Seal: Bentonite pellets 7.0 feet to 4.0 feet

Well Development:

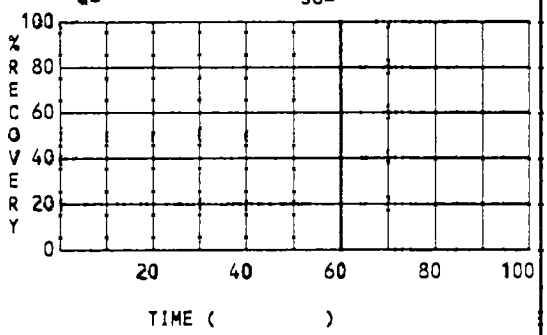
Bailed 10 gallons (5.8 casing volumes).

Stabilization Test Data:

Time	pH	Spec. Cond.	Temp (C)
1230	7.23	400	3.8
1240	7.18	400	10.4
1250	7.24	400	9.1

Recovery Data:

Q= So=



Comments: 2/1/92 Water Level = 7.75 ft. TOC.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous to 12 feet

BORING NO. MW-9D

SHEET 1 OF 2

WATER LEVEL		DRILLING START	DRILLING FINISH
TIME		TIME 0940	TIME
DATE		DATE 2/04/92	DATE
CASING DEPTH			

DATUM: msl ELEVATION: 1475.76

DRILL RIG: Track CME55

SURFACE CONDITIONS: Paved parking lot, flat.

ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

			SAMPLE NUMBER AND DESCRIPTION OF MATERIAL				TEST RESULTS PID (ppm) BZ[1] DH R
	15, 100/4" (100%)	ML	Asphalt, Soil immediately below asphalt is dark brown, silty sand, oily, light brown silt, sand & gravel, loose, dry.	SS			0 0 0
2	(60%)	ML	Black Silt, some clay, stiff, dry. Silty clay, Olive Gray (5YR 5/2) stiff.	SS			0 0 0
4	9, 7 10, 15 (15%)	ML	Brown (7.5YR 5/2) Silt, some clay, stiff, moist.	SS			0 0 1.5
6	(60%)	ML	Same as above with subangular, poorly sorted sand and gravel, moist.	SS			0 0 0
8	6, 8 11, 19 (30%)	ML	Same as above with subangular, poorly sorted sand and gravel, very moist.	SS			0 0 0
10	6, 6 9, 7 (15%)	SM	Dark Brown (7.5YR 3/2) Silt, some sand, poorly sorted with large subangular gravel, wet.	SS			0 0 0
12							
14	18, 20 19, 25 (30%)	ML	Light Brownish-Gray (10YR 6/2) Silt, some clay, little sand, poorly sorted, subangular gravel, wet.	SS			0 0 0
16							
18	6, 5 8, 13 (70%)	CL	Gray Silt, some clay, wet.	SS			0 0 0
20							
22	8, 9 9, 19 NR			SS			0 0 0

[1]BZ = Breathing Zone, DH = Downhole, R = Sample

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous to 12 feet

BORING NO. MW-9D

SHEET 2 OF 2

	DRILLING START	DRILLING FINISH
WATER LEVEL TIME		
TIME	0940	
DATE		
DATE	2/04/92	

DATUM: msl ELEVATION: 1475.76

CASING DEPTH

DRILL RIG: Track CME55

SURFACE CONDITIONS: Paved parking lot, flat.

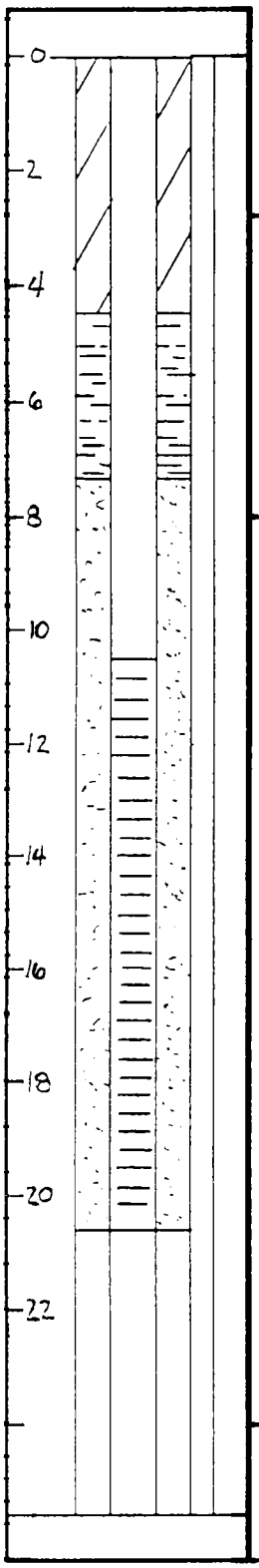
ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL			TEST RESULTS PID (ppm) BZ[1] DH R
24				
26	7, 10 11, 13 (60%)	CL	Dark Gray (10YR 4/1) Silt, some clay, trace sand and gravel, very moist.	SS	0 0 0
28				
30	16, 18 20, 32 (50%)	CL	Same as above, moist.	SS	0 0 0
32				
34	3, 7 17,43 (65%)	CL	Same as above, moist.	SS	0 0 0
36				
38	11, 19 44, 45 (60%)	CL	Reddish-Gray (10YR 5/2) Clay, some silt, moist.		0 0 0
40			EOB = 41.0 ft.	
42				

[1]BZ = Breathing Zone, DH = Downhole, R = Sample

MONITOR WELL CONSTRUCTION SUMMARY



Well No. MW-9

Boring No. X-Ref: MW-9D

Survey Coords: 922,836.666

541,364.639

Elevation Ground Level 1475.74

Top of Casing 1475.37

Drilling Summary:

Total Depth: 20.5 feet
Borehole Diameter: 7 inches
Casing Stick-up Height: 0
Driller: Empire Soils, Inc.
Hamburg, NY
Rig: Acker II
Bit(s): 4.25" Hollow Stem Auger
Protective Casing: Flush Mount

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	2/05	1400	2/05	1430
Casing:	2/05	1500	2/05	1505
Filter Placement:	2/05	1505	2/05	1530
Cementing:	2/05	1600	2/05	1630
Development:	2/06	1600	2/06	1654

Well Design & Specifications

Basic: Geologic Log X Geophysical Log ___
Casing String(s): C = Casing S = Screen

Depth	String(s)	Elevation
0.0 - 10.5	C1	1475.37 - 1464.9
10.5 - 20.5	S1	1464.9 - 1454.9
___ - ___	___	___ - ___
___ - ___	___	___ - ___
___ - ___	___	___ - ___

Casing: C1: 2" Sch 40 FJT PVC

Casing: C2:

Screen: S1: 2" Sch 40 FJT PVC with 0.010 inch slot

Filter Pack: Clean silica sand, 20.5 feet to 7.5 feet

Grout Seal: Portland Type I - bentonite grout, 4.5 feet to surface

Bentonite Seal: Bentonite pellets 7.5 feet to 4.5 feet

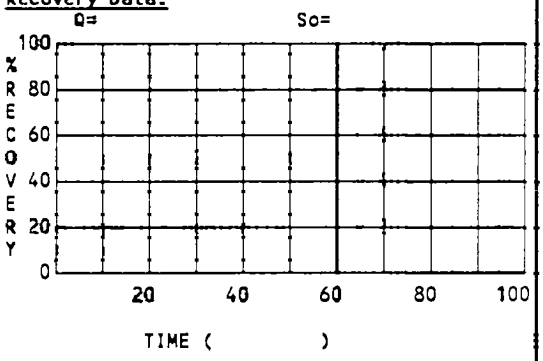
Well Development:

Bailed 10 gallons (5.4 casing volumes)

Stabilization Test Data:

Time	pH	Spec. Cond.	Temp (C)
1650	7.67	340	13.1
1700	7.51	320	14.5
1710	7.80	330	15.7

Recovery Data:

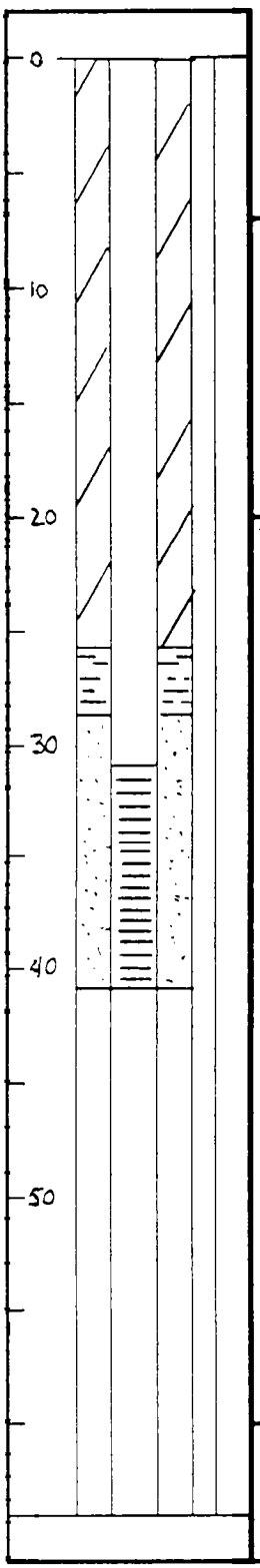


Comments:

MONITOR WELL CONSTRUCTION SUMMARY

Well No. MW-9D

Boring No. X-Ref: MW-9D



Survey Coords: 922,836,543

541,359,900

Elevation Ground Level 1475.76

Top of Casing 1475.52

Drilling Summary:

Total Depth: 41.0 feet
Borehole Diameter: 7 inches
Casing Stick-up Height: 0
Driller: Empire Soils, Inc.
Hamburg, NY
Rig: Acker II

Bit(s): 4.25" Hollow Stem Auger

Protective Casing: Flush Mount

Well Design & Specifications

Basic: Geologic Log X Geophysical Log ___
Casing String(s): C = Casing S = Screen

Depth	String(s)	Elevation
0.0 - 31.0	C1	1475.52 - 1444.5
31.0 - 41.0	S1	1444.5 - 1434.5
___ - ___	___	___ - ___
___ - ___	___	___ - ___
___ - ___	___	___ - ___

Casing: C1: 2" Sch 40 FJT PVC

Casing: C2:

Screen: S1: 2" Sch 40 FJT PVC with 0.010 inch slot

Filter Pack: Clean silica sand, 41.0 feet to 29 feet

Grout Seal: Portland Type I - bentonite grout, 29 feet to surface

Bentonite Seal: Bentonite pellets 29.0 feet to 26.0 feet

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	2/06	1120	2/06	1330
Casing:	2/06	1330	2/06	1400
Filter Placement:	2/06	1400	2/06	1500
Cementing:	2/06	1500	2/02	1530
Development:	2/08	0800	2/08	1130

Well Development:

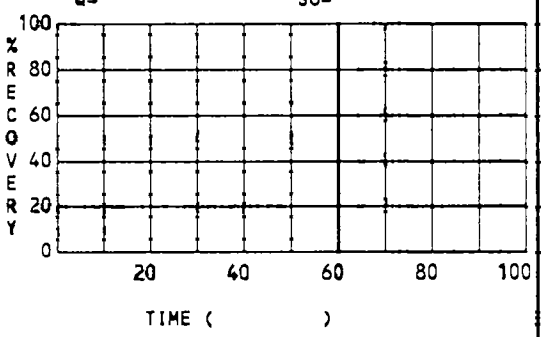
Bailed 25 gallons (5.0 casing volumes)

Stabilization Test Data:

Time	pH	Spec. Cond.	Temp (C)
1110	6.98	350	14.7
1120	6.94	350	12.7
1130	6.89	370	12.8

Recovery Data:

Q= So=



Comments:

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Prestolite Plant
Arcade, NY

DRILLING METHOD: Hollow Stem Auger

SAMPLE METHOD: Split Spoon, continuous to 12 feet

BORING NO. MW-8

SHEET 1 OF 1

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING

START	FINISH
TIME 1230	TIME
DATE	DATE

DATUM: msl ELEVATION: 1474.35

DRILL RIG: Acker II

SURFACE CONDITIONS: Flat grassy lawn, snow covered.

ANGLE: Vertical BEARING ---

SAMPLE HAMMER TORQUE FT.-LBS

	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL					TEST RESULTS PID (ppm) BZ[1] DH R
2	8, 8 13, 15 (20%)	ML	Yellowish-Brown (10YR 5/6) Silt, some clay, moderately sorted, with trace sand, moist.	SS		0 0 0
	9, 8 9, 7 (45%)	ML	Yellowish-Brown (10YR 5/6) Silt, some clay, moderately sorted, with trace gravel, moist.	SS		0 0 0
4	6, 6 6, 7 (30%)	ML	Yellowish-Brown (10YR 5/6) Silt, some clay with trace gravel. Trace amounts of carbon, dry.	SS		0 0 0
6	9, 10 16,50/3 (35%)	ML	Yellowish-Brown (10YR 5/6) Silt, some clay with some poorly sorted gravel, dry.	SS		0 0 0
8	67, 46 52, 21 (25%)	CL	Olive (5Y 4/4) Clay, some sand with some poorly sorted gravel, dry.	SS		0 0 0
10			Cuttings becoming moist, no sample collected.			
12	22, 15 14, 21 (60%)	CL	Yellowish-Brown (10YR 5/8) Clay, some sand with poorly sorted subrounded gravel, wet.	SS		0 0 0
14			Coarse gravels repeated by driller, no sample.			
16	134, 31 18, 26 (70%)	SP-SC	Yellowish-Brown (10YR 5/4) Sand and gravel, some clay, wet.	SS		
18	(15%)	ML	Yellowish-Brown (10YR 5/4) Sand, some clay, well sorted, subrounded, wet.	SS		
20			EOB = 20'			
22						

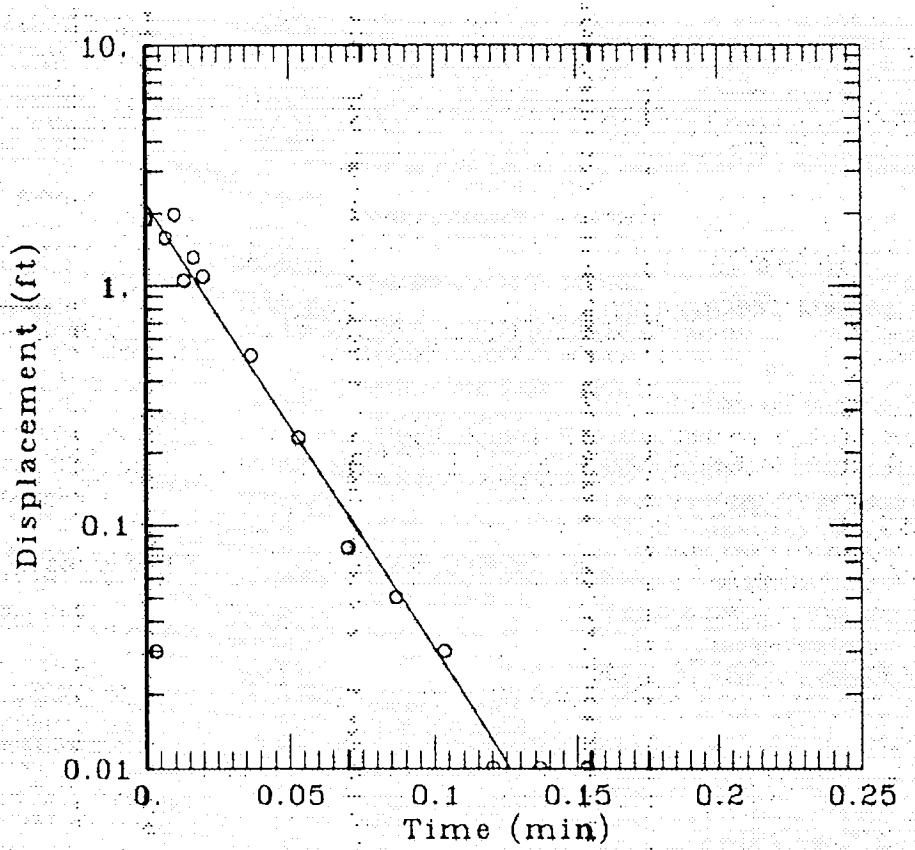
[1]BZ = breathing Zone, DH = Downhole, R = Sample

APPENDIX B

SLUG TEST RESULTS

SIMON HYDRO-SEARCH	Client: MOTOROLA
Project No.: 426116372	Location: PRESTOLITE PLANT, ARCADE, NY

MW-1 SLUG OUT TEST



DATA SET:
m1.dat
02/21/92

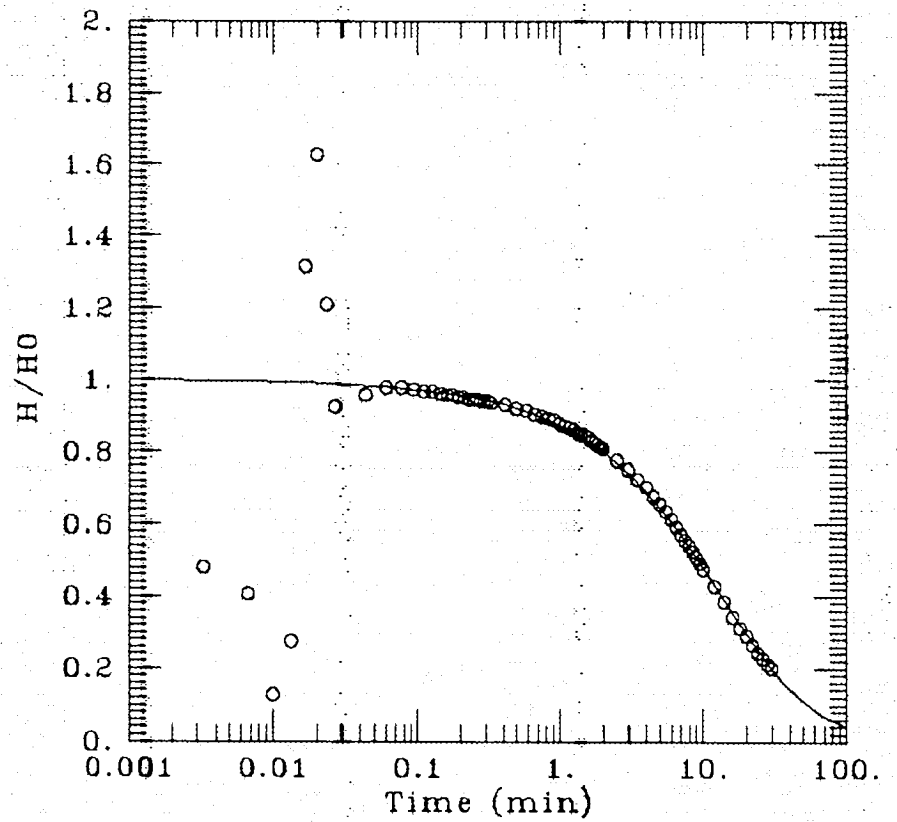
AQUIFER TYPE:
Unconfined
SOLUTION METHOD:
Bouwer-Rice
TEST DATE:
FEBRUARY, 1992

ESTIMATED PARAMETERS:
K = 0.03874 ft/min
y0 = 2.187 ft

TEST DATA:
H0 = 1.893 ft
rc = 0.0833 ft
rw = 0.2917 ft
L = 10. ft
b = 9.06 ft
H = 9.06 ft

SIMON HYDRO-SEARCH	Client: MOTOROLA
Project No.: 426116372	Location: PRESTOLITE PLANT, ARCADE, NY

MW-1D SLUG OUT TEST



DATA SET:
m1d.dat
03/13/92

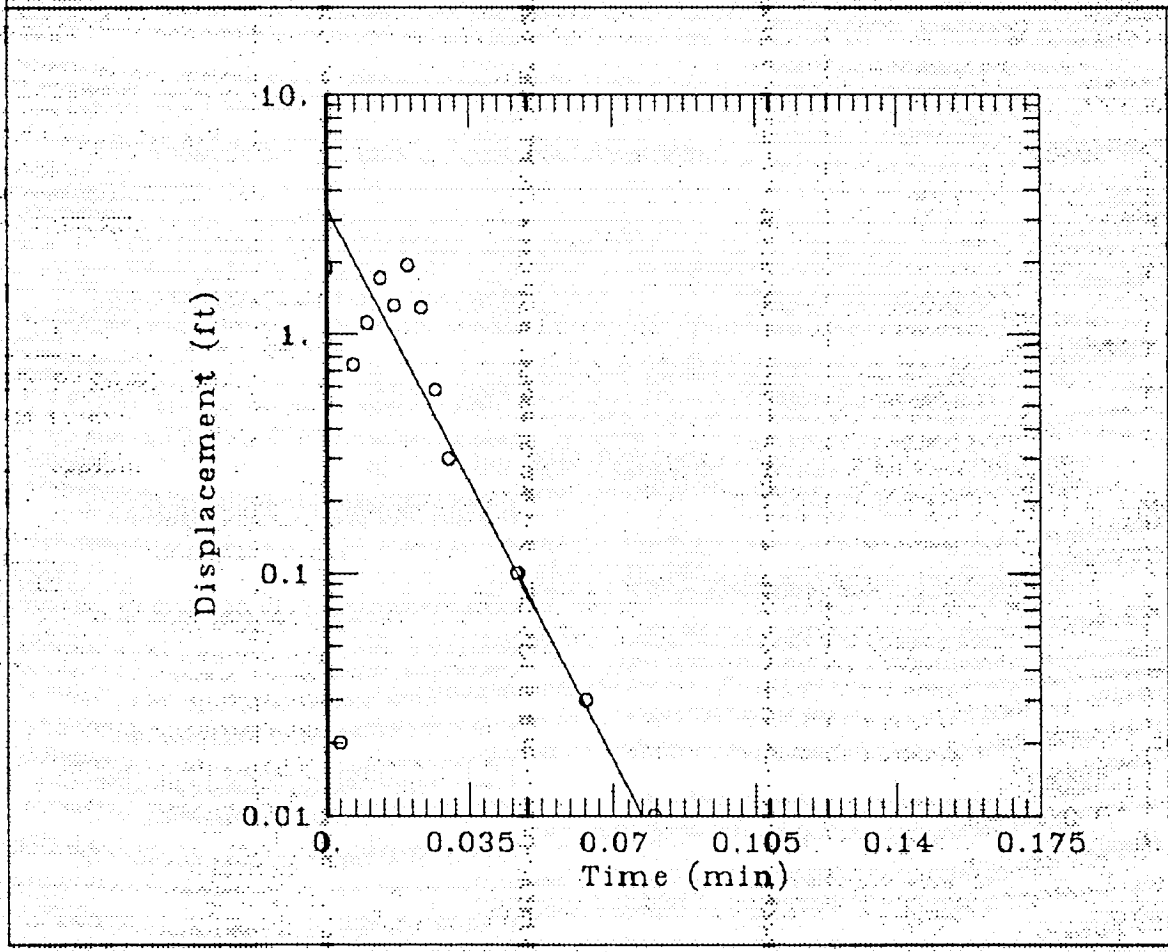
AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
FEBRUARY, 1992

ESTIMATED PARAMETERS:
T = 0.0006487 ft^2/min
S = 0.0007696

TEST DATA:
H0 = 1.893 ft
rc = 0.0833 ft
rw = 0.2917 ft

SIMON HYDRO-SEARCH	Client: MOTOROLA
Project No : 426116372	Location: PRESTOLITE PLANT, ARCADE, NY

MW-3 SLUG OUT TEST



DATA SET:
m3.dat
02/21/92

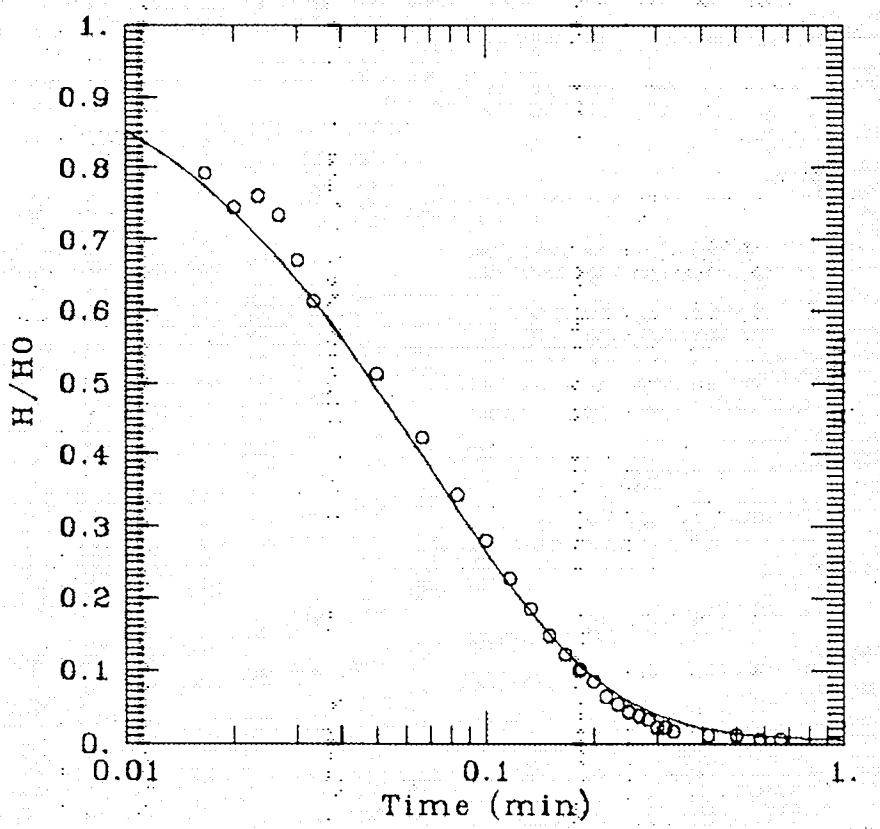
AQUIFER TYPE:
Unconfined
SOLUTION METHOD:
Bouwer-Rice
TEST DATE:
FEBRUARY, 1992

ESTIMATED PARAMETERS:
K = 0.06509 ft/min
y0 = 9.375 ft

TEST DATA:
H0 = 1.893 ft
rc = 0.0833 ft
rw = 0.2917 ft
L = 10. ft
b = 7.32 ft
H = 7.32 ft

SIMON HYDRO-SEARCH	Client: MOTOROLA
Project No.: 426116372	Location: PRESTOLITE PLANT, ARCADE, NY

MW-3D SLUG OUT TEST



DATA SET:
m3d.dat
03/13/92

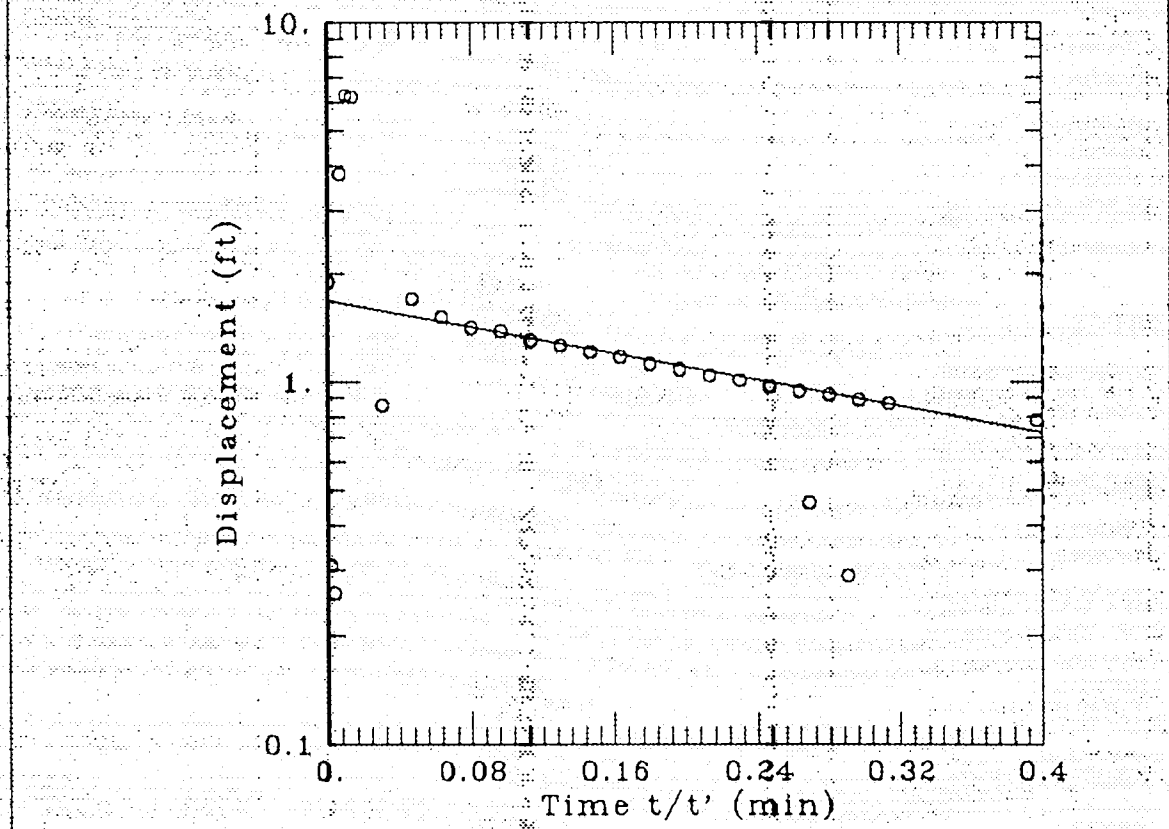
AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
FEBRUARY, 1992

ESTIMATED PARAMETERS:
T = 0.4268 ft^2/min
S = 1.E-08

TEST DATA:
H0 = 1.893 ft
rc = 0.0833 ft
rw = 0.2917 ft

SIMON HYDRO-SEARCH	Client: MOTOROLA
Project No. : 426116372	Location: PRESTOLITE PLANT, ARCADE, NY

MW-6 SLUG OUT TEST



DATA SET:
m6.dat
02/21/92

AQUIFER TYPE:
Unconfined

SOLUTION METHOD:
Bouwer-Rice

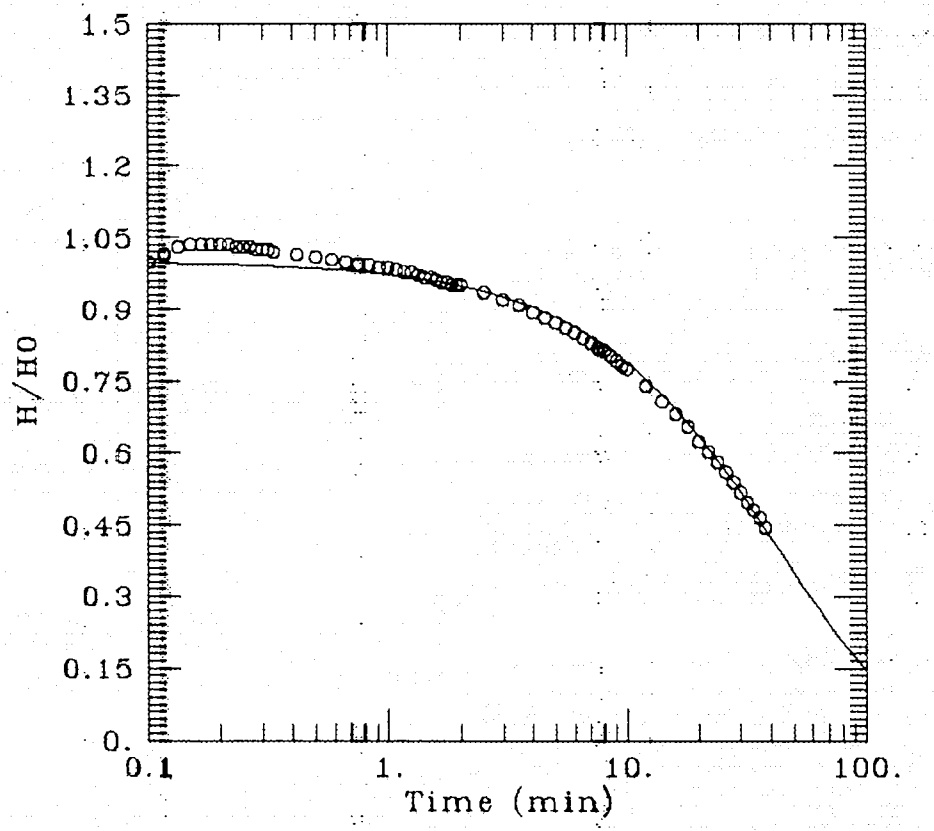
TEST DATE:
FEBRUARY, 1992

ESTIMATED PARAMETERS:
K = 0.001736 ft/min
y0 = 1.682 ft

TEST DATA:
H0 = 1.883 ft
rc = 0.0833 ft
rw = 0.2917 ft
L = 10. ft
b = 6.25 ft
H = 6.25 ft

SIMON HYDRO-SEARCH	Client: MOTOROLA
Project No.: 426116372	Location: PRESTOLITE PLANT, ARCADE, N

MW-6D SLUG OUT TEST



DATA SET:
m6d.dat
03/13/92

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
FEBRUARY, 1992

ESTIMATED PARAMETERS:
T = 0.0006545 ft^2/min
S = 1.E-08

TEST DATA:
H0 = 1.893 ft
rc = 0.0833 ft
rw = 0.2917 ft

APPENDIX C

SOILS LABORATORY REPORT

EMPIRE
SOILS INVESTIGATIONS INC. S-5167 SOUTH PARK AVENUE • HAMBURG, NY 14075-1503 • 716/649-8110 FAX 716/649-8051

March 6, 1992

Hydro - Search, Incorporated
350 Indiana Street
Suite 300
Golden, Colorado 80401
TEL (303) 279-7982
FAX (303) 279-7988

Attention: Mr. Richard Gnat

Reference: Laboratory Testing
Arcade, New York Site

Dear Sir:

Please find attached the final laboratory results for samples collected at the above referenced project. All tests have been summarized for your convenience with detailed information provided by the respective laboratory data report.

If you should have any questions regarding the data as presented please contact our office at any time.

Respectfully Submitted,
EMPIRE SOILS INVESTIGATIONS INC.,

Charles C. Keipper
Manager of Testing Services

cck.

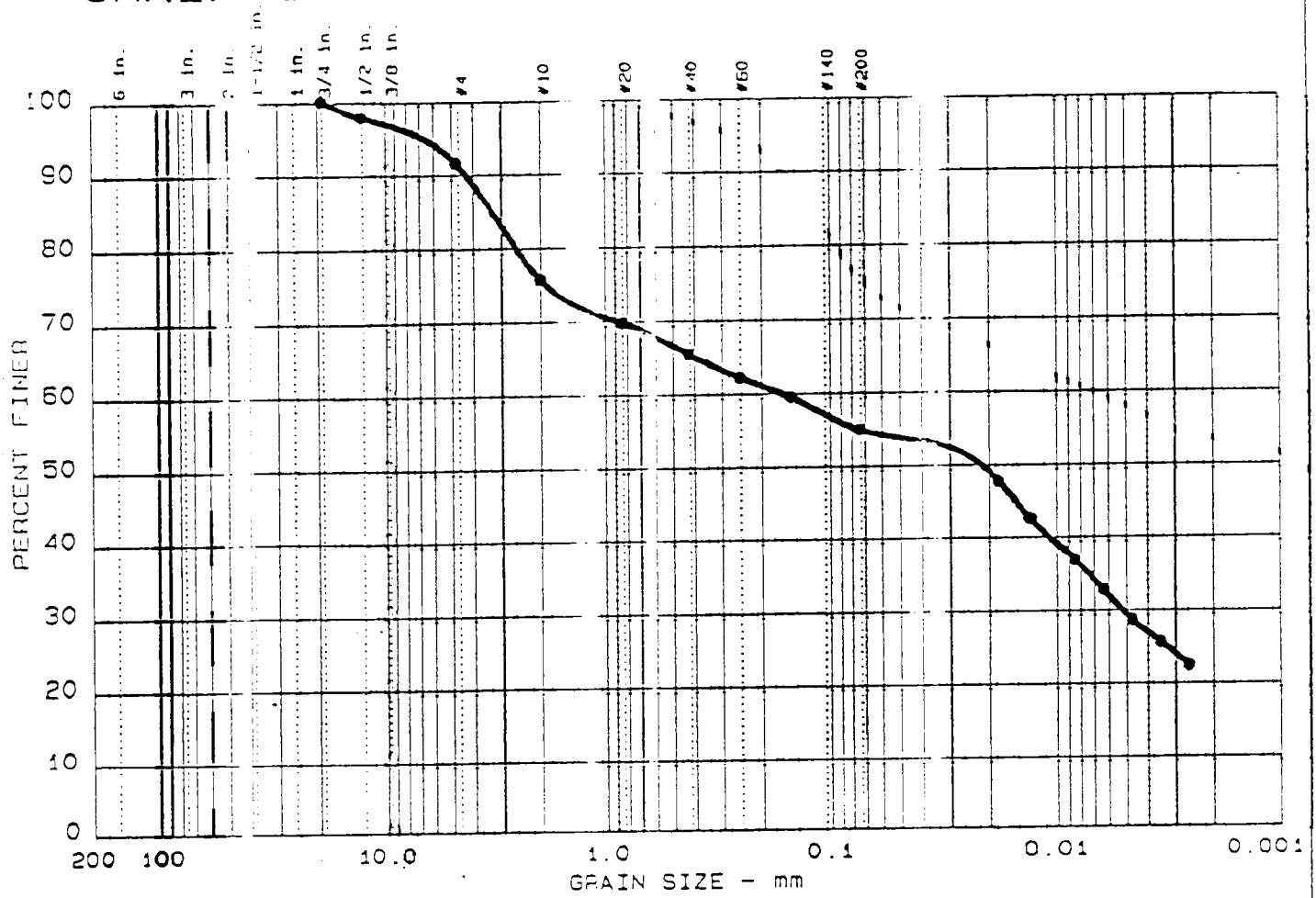
SIMON HYDRO-SEARCH, INC.

LABORATORY TESTING SUMMARY
ARCADE, NEW YORK SITE

MARCH 1992

		Mechanical Analysis					
Sample ID	Depth (ft)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Organic Content (%)	Permeability (cm/sec)
MW-1D	28-30	8.4	36.7	25.6	29.3	1.6	
MW-3D	56-58	36.6	41.5	15.0	6.9	0.6	
MW-3D	62-64	--	--	--	--	--	5.71×10^{-9} 6.35×10^{-9}
MW-5	50-52	19.2	36.8	25.8	18.2	1.0	
MW-6	10-12	21.5	25.4	34.0	19.1	0.7	
MW-6D	48-50	2.5	28.6	47.2	21.7	1.1	
MW-7	8-10	28.6	34.5	19.9	17.0	0.9	
MW-8	12-14	45.2	40.5	10.1	4.2	0.5	
MW-9	15-17	66.1	25.9	5.7	2.3	0.5	
MW-9D	41-43	--	--	--	--	--	1.58×10^{-8} 1.59×10^{-8}

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 1	0.0	8.4	36.7	25.6	29.3

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			3.27	0.16	0.02	0.005				

MATERIAL DESCRIPTION	USCS	AASHTO
● BROWN SAND, Some Clay & Silt, trace gravel		

Project No.: BC-32-002
Project: MOTOROLA ARCADE, N.Y.
● Location: MW-10 / 28'- 30'

Date: FEBRUARY 25, 1992

GRAIN SIZE DISTRIBUTION TEST REPORT

EMPIRE SOILS INVESTIGATIONS, INC

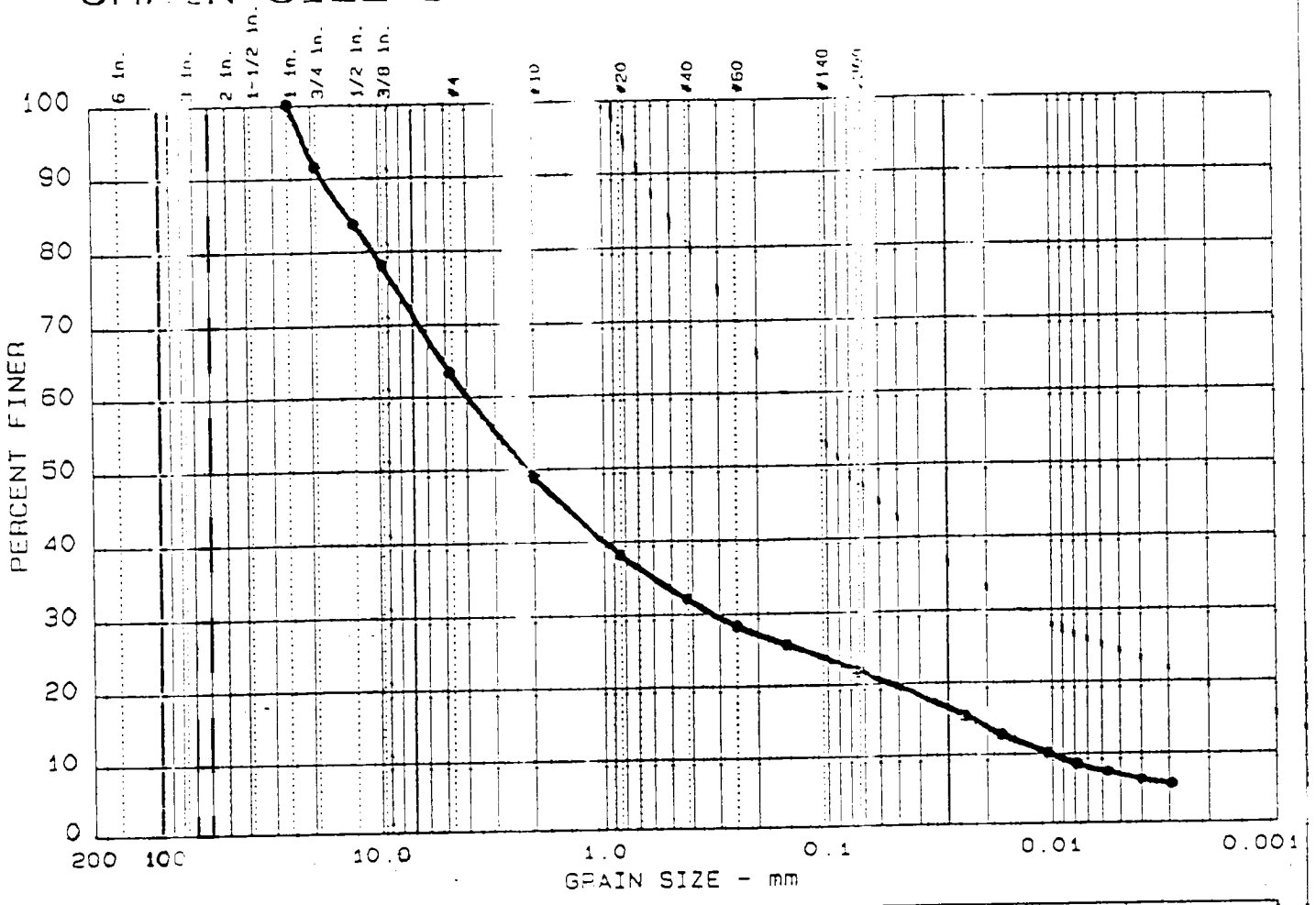
Remarks:

ORGANIC CONTENT: 1.6%

LAB NO. 1161.001

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	2	0.0	36.6	41.5	15.0	6.9

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			13.49	3.98	2.14	0.324	0.0234	0.0101	2.60	393.6

MATERIAL DESCRIPTION	USCS	AASHTO
● BROWN SAND AND GRAVEL, Little Silt, trace clay		

Project No.: BD-92-002
Project: MOTOROLA ARCADE, N.Y.
● Location: MW-3D / 56'- 58'

Date: FEBRUARY 25, 1992

Remarks:

ORGANIC CONTENT: 0.6%

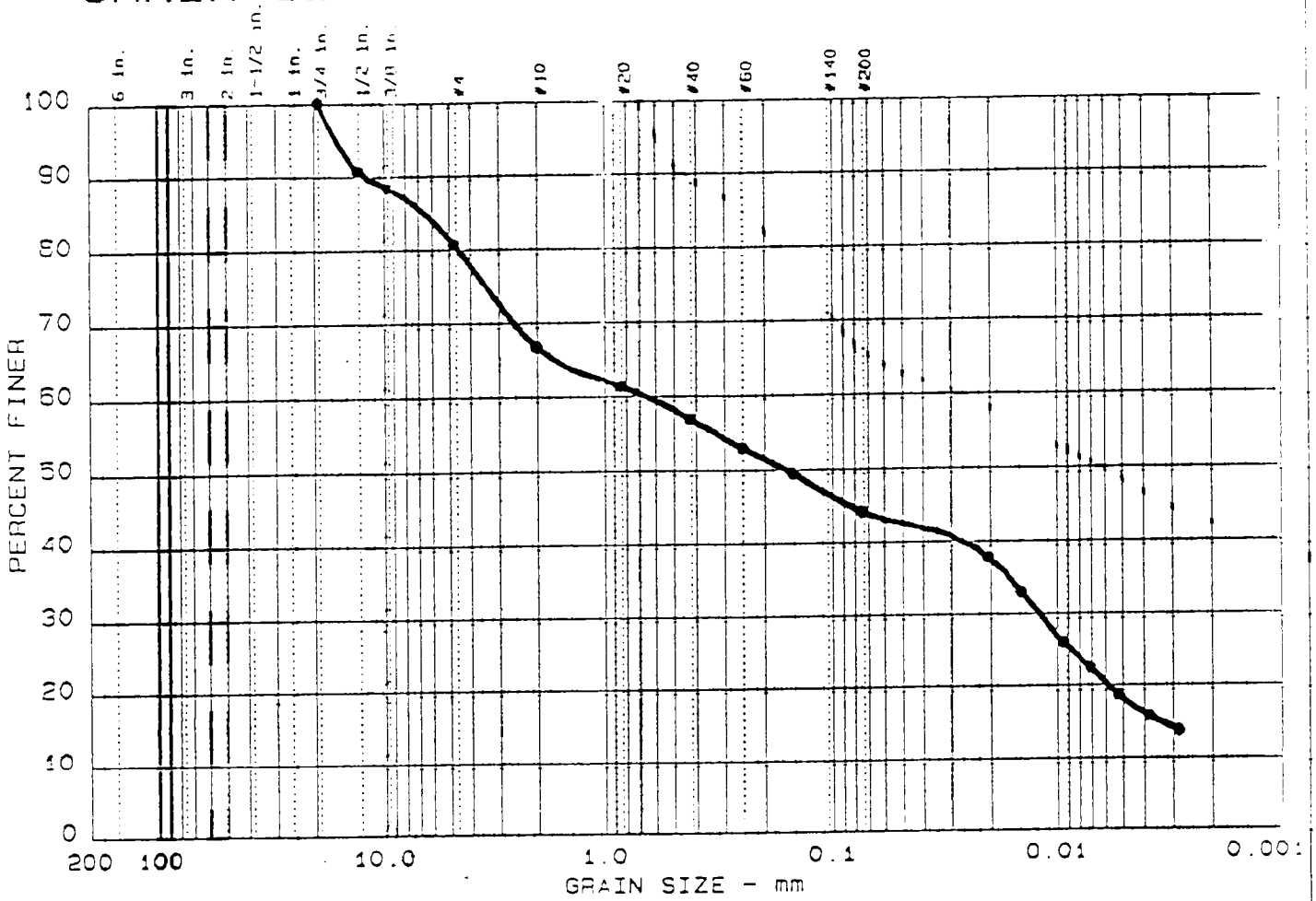
LAB NO. 1161.002

GRAIN SIZE DISTRIBUTION TEST REPORT

EMPIRE SOILS INVESTIGATIONS, INC

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	3	0.0	19.2	36.8	25.8	18.2

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			6.46	0.65	0.16	0.012	0.0033			

MATERIAL DESCRIPTION	USCS	AASHTO
● BROWN SAND, Some Silt, Little Gravel & Clay		

Project No.: BD-92-002
Project: MOTOROLA ARCADE, N.Y.
● Location: MW-5 / 50'- 52'

Date: FEBRUARY 25, 1992

Remarks:

ORGANIC CONTENT: 1.0%

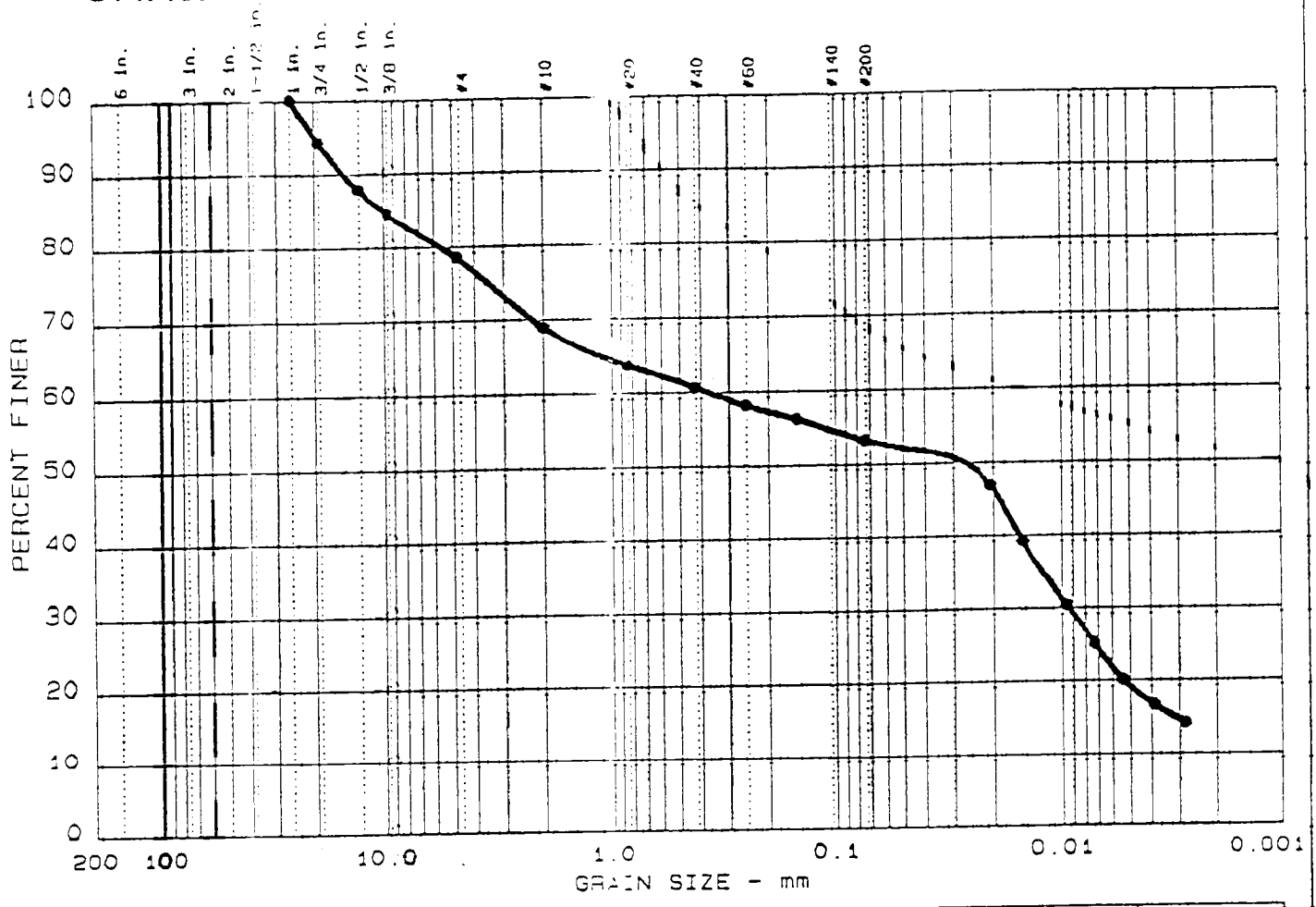
LAB NO. 1161.003

GRAIN SIZE DISTRIBUTION TEST REPORT

EMPIRE SOILS INVESTIGATIONS, INC

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	4	0.0	21.5	25.4	34.0	19.1

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			9.89	0.37	0.03	0.009	0.0031			

MATERIAL DESCRIPTION	USCS	AASHTO
● BROWN SILT, Some Sand & Gravel, Little Clay		

Project No.: BC-92-002
Project: MOTOROLA ARCADE, N.Y.
● Location: MW-6

Date: FEBRUARY 25, 1992

Remarks:

ORGANIC CONTENT: 0.7%

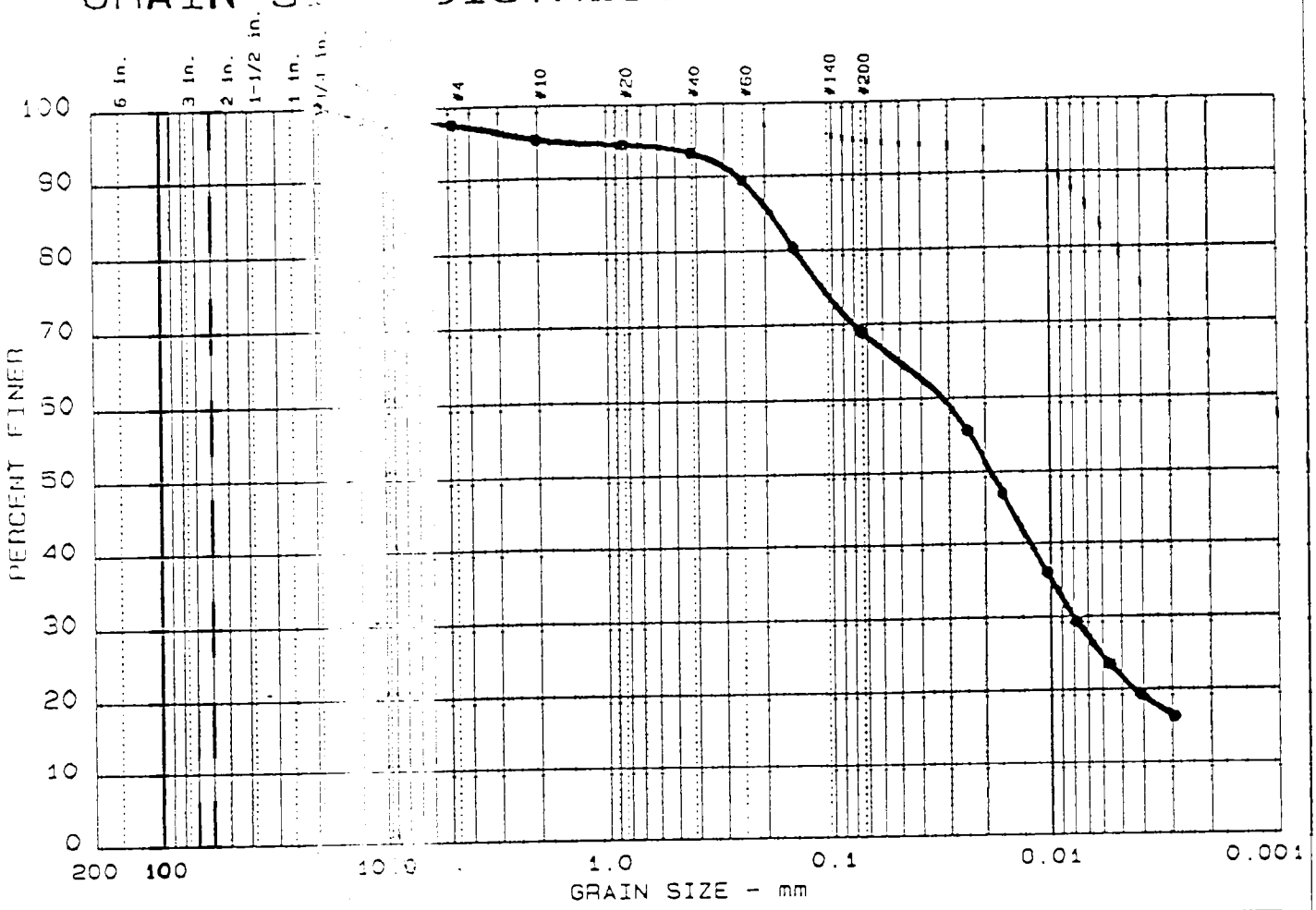
LAB NO. 1161.004

GRAIN SIZE DISTRIBUTION TEST REPORT

EMPIRE SOILS INVESTIGATIONS, INC

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 5	0.0	2.5	28.6	47.2	21.7

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
◆			0.16		0.02	0.008				

MATERIAL DESCRIPTION	USCS	AASHTO
● GREY SILT, Some Sand & Clay, trace gravel		

Project No.: BO-92-003
Project: MOTOROLA ARCADE, N.Y.
● Location: MW-5D

Date: FEBRUARY 25, 1992

Remarks:

ORGANIC CONTENT: 1.1%

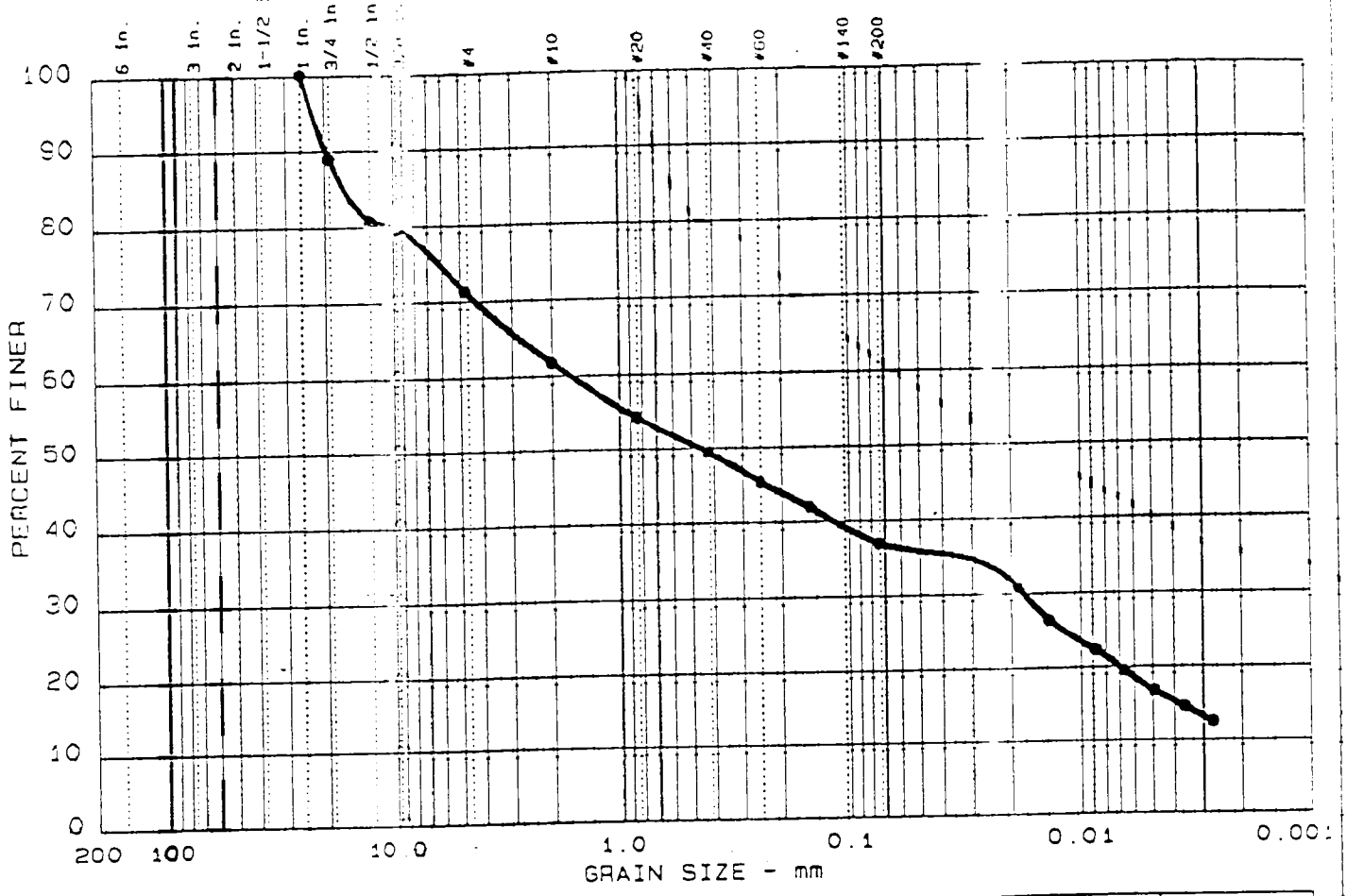
LAB NO. 1161.005

GRAIN SIZE DISTRIBUTION TEST REPORT

EMPIRE SOILS INVESTIGATIONS, INC

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 6	0.0	28.6	34.5	19.9	17.0

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
●			16.41	1.64	0.46	0.017	0.0038			

MATERIAL DESCRIPTION	USCS	AASHTO
● BROWN SAND, Some Gravel, Little Silt & Clay		

Project No.: BD-92-002
Project: MOTOROLA ARCADE, N.Y.
● Location: MW-7

Date: FEBRUARY 25, 1992

Remarks:

ORGANIC CONTENT: 0.9%

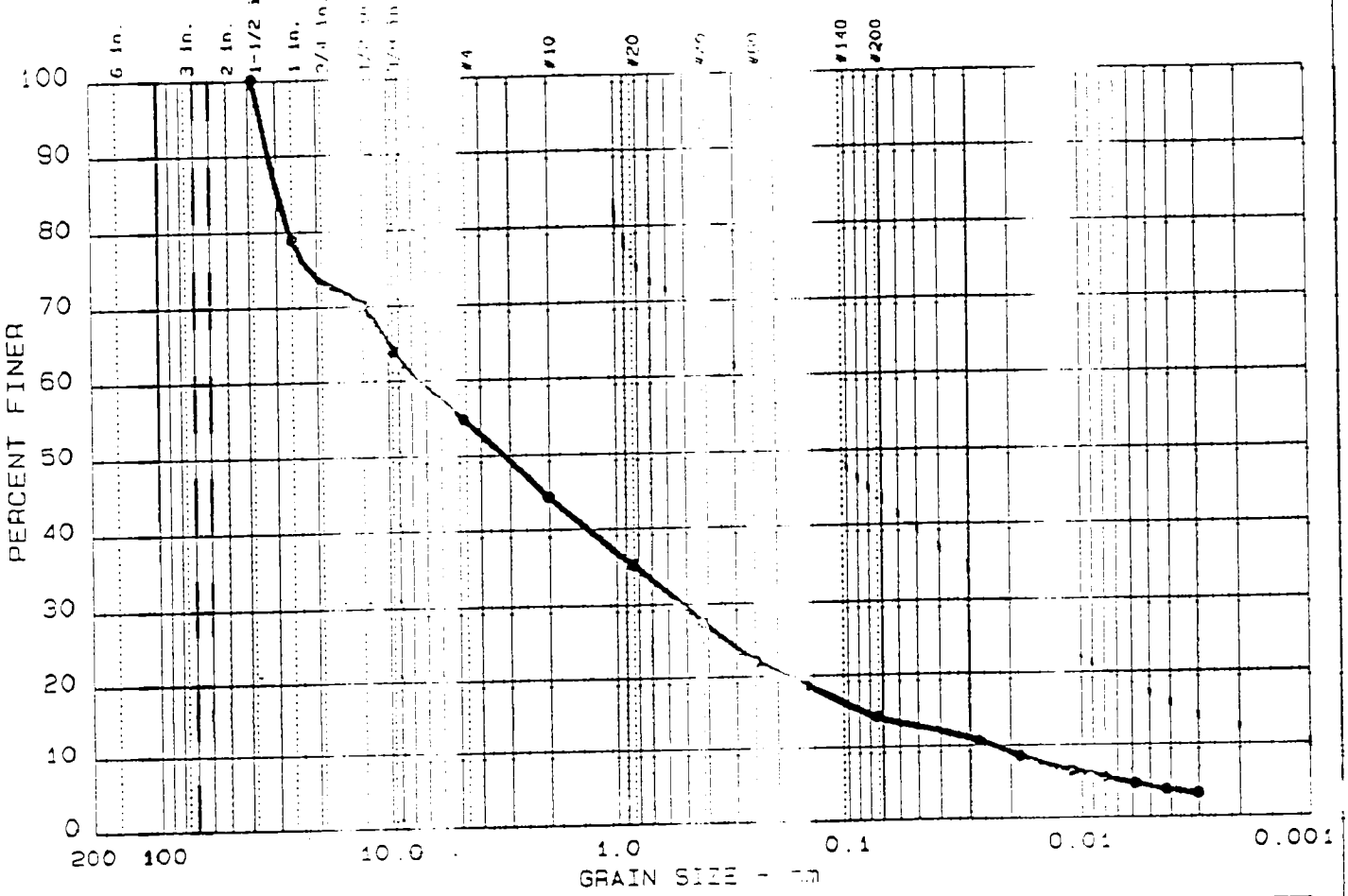
LAB NO. 1161.006

GRAIN SIZE DISTRIBUTION TEST REPORT

EMPIRE SOILS INVESTIGATIONS, INC

Figure No. 1

GRAIN SI[illegible]ISTRIBU[illegible] TEST R[illegible]ORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 7	0.0	45.2	40.5	10.1	4.2

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			29.28	[illegible].52	3.14	0.527	0.0835	0.0233	1.58	323.6

MATERIAL DESCRIPTION	USCS	AASHTO
● BROWN GRAVEL AND SAND, [illegible]ittle Silt, trace clay		

Project No.: BD-92-002
Project: MOTOROLA ARCADE, N.Y.
● Location: MW-8

Date: FEBRUARY 25, 1992

Remarks:

ORGANIC CONTENT: 0.5%

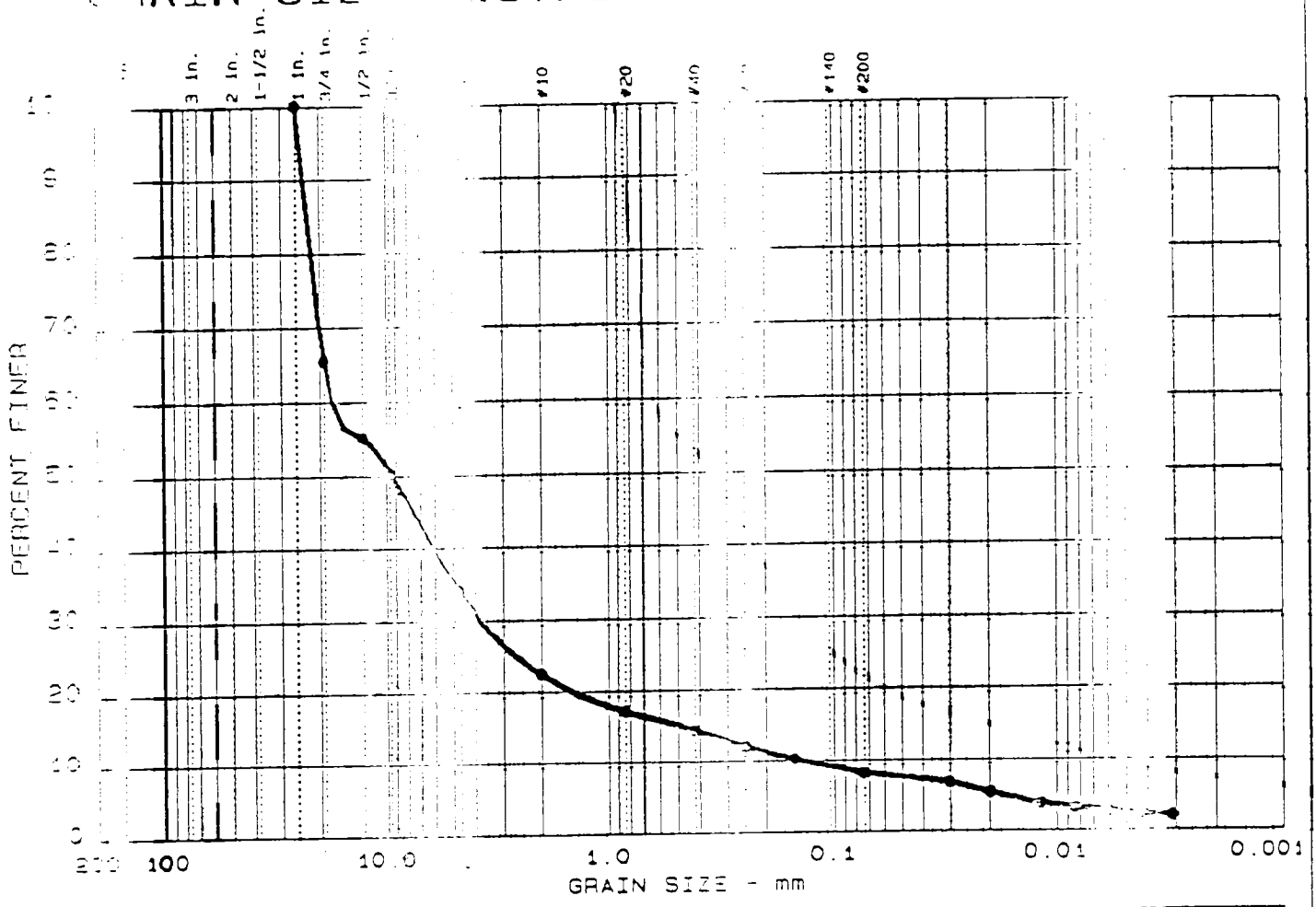
LAB NO. 1181.007

GRAIN SIZE DISTRIBUTION TEST REPORT

EMPIRE SOILS INVESTIGATIONS, INC

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST REPORT



Test No	+3"	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	66.1	25.9	5.7	2.3

Test No	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			22.78	17.40	9.34	3.808	0.4683	0.1320	6.31	131.8

Test No	MATERIAL DESCRIPTION	USCS	AASHTO
●	SANDY GRAVEL, Some Sand, trace silt & clay		

Project No.: BD-92-002
Project: MOTOROLA ARCADE, N.Y.
● Location: MW-9 / 15'- 17'

Date: FEBRUARY 25, 1992

GRAIN SIZE DISTRIBUTION TEST REPORT

EMPIRE SOILS INVESTIGATIONS, INC

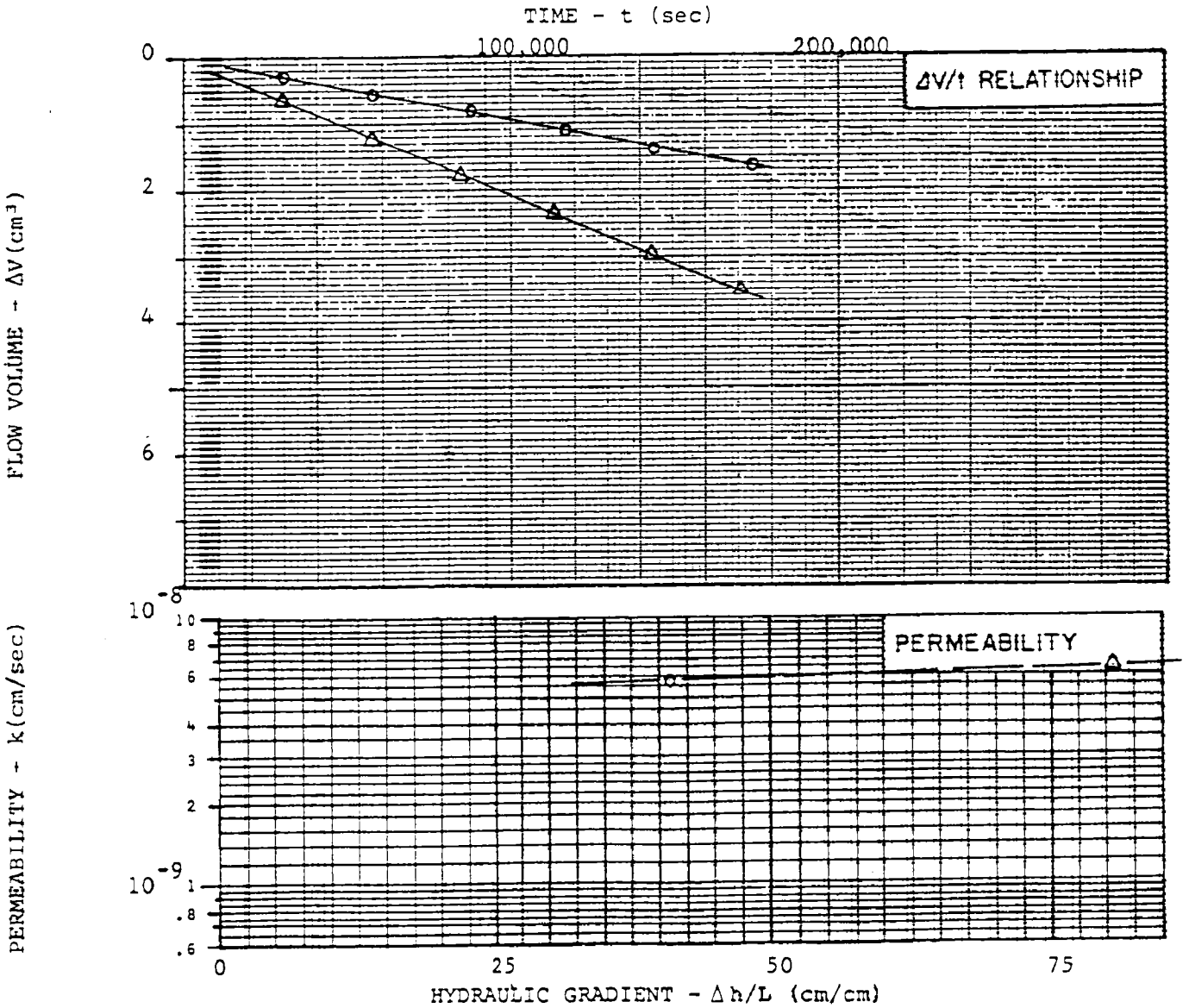
Remarks:

ORGANIC CONTENT 0.5%

LAB NO. 1161 [illegible]

Figure No. 1

TEST DATA:			SAMPLE DATA:	
Specimen Height (cm):	9.18		Sample Identification:	LAB NO. 1161.002
Specimen Diameter (cm):	7.14		BORING MW-3D, 56.0' - 58.0'	
Dry Unit Weight (pcf):	97.7		Visual Description:	Brown CLAY,
Moisture Content Before Test (%):	27.4		little silt	
Moisture Content After Test (%):	28.9		Remarks:	THIN WALL TUBE SAMPLE
Cell Confining Pressure (psi):	95.0			
Test Pressure (psi):	85.1	90.1	Maximum Dry Density	
Back Pressure (psi):	80.1	79.9	(ASTM D ____) (pcf):	
Differential Head (psi):	5.0	10.2	Optimum Moisture Content (%):	
Flow Rate ($\Delta V/t$) (cm^3/sec)	O 9.41×10^{-6}	Δ 2.06×10^{-5}	Percent Compaction:	
Permeability (cm/sec):	O 5.71×10^{-9}	Δ 6.35×10^{-9}	Permeameter Type:	FLEXIBLE WALL



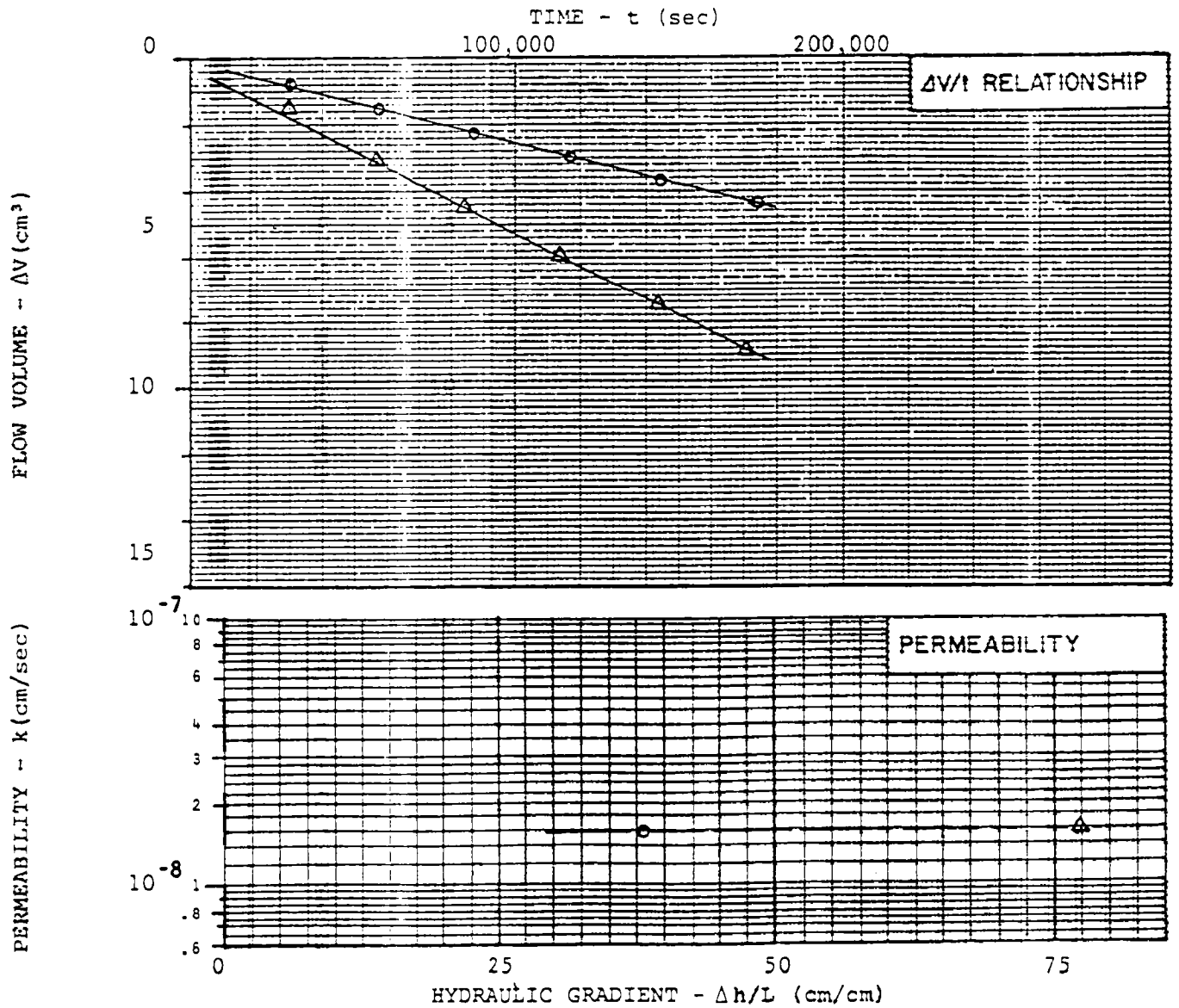
EMPIRE SOILS INVESTIGATIONS INC

PERMEABILITY TEST REPORT

MOTOROLA
ARCADE, NEW YORK

DR BY: JFC	CK'D. JFC	DATE: FEB, 1992	PROJ.NO. BD-92-002

TEST DATA:			SAMPLE DATA:	
Specimen Height (cm):		9.13	Sample Identification:	LAB N . 1161.008
Specimen Diameter (cm):		7.21	BORING MW-9, 15.0' - 17.0'	
Dry Unit Weight (pcf):		112.3	Visual Description:	Brown CLAY & SILT
Moisture Content Before Test (%):		20.3		
Moisture Content After Test (%):		19.7	Remarks:	THIN WALL TUBE SAMPLE
Cell Confining Pressure (psi):		95.0		
Test Pressure (psi):	8-.8	90.0	Maximum Dry Density	
Back Pressure (psi):	8(.2	80.1	(ASTM D) (pcf):	
Differential Head (psi):	4.6	9.9	Optimum Moisture Content (%):	
Flow Rate ($\Delta V/t$) (cm^3/sec)	O 2.47×10^{-5}	Δ 5.03×10^{-5}	Percent Compaction:	
Permeability (cm/sec):	O 1.58×10^{-8}	Δ 1.59×10^{-8}	Permeameter Type:	FLEXIBLE WALL



EMPIRE SOILS INVESTIGATIONS INC.

PERMEABILITY TEST REPORT

MOTOROLA
ARCADE, NEW YORK

DR BY: JFC	CK'D. JFC	DATE: FEB, 1992	PROJ. NO. BD-92-002

APPENDIX D

CHEMICAL DATA

TABLE A.1

MOTOROLA - ARCADE

SAMPLING LOCATIONS AND CORRESPONDING SAMPLE NUMBER ASSIGNMENT

GROUND WATER SAMPLES

Sample Number	Sample Location
APGW01	MW-01
APGW02	MW-01D
APGW03	MW-02
APGW04	MW-03
APGW05	MW-06
APGW06	MW-09
APGW07	MW-07
APGW08	MW-08
APGW09	MW-06D
APGW10	MW-04
APGW11	Municipal Well
APGW11MS/MSD	Municipal Well (MS/MSD)
APGW12	Municipal Well Duplicate
APGW13	Field Blank
APGW13-A	MW-9D
APGW14	MW-05
APGW15	MW-03D

Sample Locations

SUBSURFACE SOILS

Sample Number	Sample Location
APSBO1	MW-05, 23 ft BGS (grab); 22 to 28 ft. BGS (comp)
APSB02	MW-06D, 5 ft BGS (grab); 2 to 8 ft. BGS (comp)
APSB03	MW-03D, 5 ft BGS (grab); 2 to 8 ft. BGS (comp)
APSB03MS/MSD	MW-03D, 7 ft BGS (grab); 16 to 24 ft. BGS (comp)
APSB04	Degreaser Area 1, GEO, VOA only
APSB05	Degreaser Area 1, GEO, VOA only
APSB06	Degreaser Area 2, GEO, VOA only
APSB07	Chem. Storage Bldg, GEO No. 30, VOA only
APSB08	MW-3D, 3 ft. BGS (grab); 8 to 14 ft. BGS (comp)

TABLE A.1 (cont)

SEDIMENT

Sample Number	Sample Location
APSD01	Station 1
APSD02	Station 2
APSD03	Station 3
APSD04	Station 4
APSD04MS/MSD	Sediment MS/MSD
APSD05	Collocate of Station 3

SUBSURFACE STRUCTURE SOLIDS

Sample Number	Sample Location
APSL01	Parking Lot
APSL02	Parking Lot (Duplicate)
APSL03MS/MSD	Parking Lot (MS/MSD)

SURFACE SOILS

Sample Number	Sample Location
APSS01	MW-05
APSS02	MW-06
APSS03	Filter Storage Area

SUBSURFACE STRUCTURE LIQUIDS

Sample Number	Sample Location
APSSL01	Parking Lot
APSSL01MS/MSD	Parking Lot (MS/MSD)
APSSL02	Sump Inside Plant
APSSL03	Sump Inside Plant (Duplicate)

SURFACE WATER

Sample Number	Sample Location
APSW01	Station 1
APSW02	Station 2
APSW03	Station 3
APSW04	Station 4
APSW04MS/MSD	Surface Water MS/MSD
APSW05	Duplicate of Station 3

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW01

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71320

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5419

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. ____ Date Analyzed: 02/06/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	17	
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	120	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW01

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71333_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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	303000			P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	12.8		+N	F
7440-39-3	Barium	2850			P
7440-41-7	Beryllium	15.9			P
7440-43-9	Cadmium	6.5			P
7440-70-2	Calcium	1260000			P
7440-47-3	Chromium	420			P
7440-48-4	Cobalt	264			P
7440-50-8	Copper	1110			P
7439-89-6	Iron	731000			P
7439-92-1	Lead	568			F
7439-95-4	Magnesium	389000			P
7439-96-5	Manganese	25400			P
7439-97-6	Mercury	1.0		N	CV
7440-02-0	Nickel	602			P
7440-09-7	Potassium	37500			P
7782-49-2	Selenium	20.0	U	N	F
7440-22-4	Silver	18.0			P
7440-23-5	Sodium	28700			P
7440-28-0	Thallium	2.2	B	W	F
7440-62-2	Vanadium	372			P
7440-66-6	Zinc	3360			P
	Cyanide	10.0	U	*	AS

Color Before: BROWN Clarity Before: OPAQUE Texture: _____

Color After: YELLOW Clarity After: CLEAR_ Artifacts: _____

Comments:

THE_CN_ALIQUOT_LAB_NUMBER_IS_71356._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW01F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71340_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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	14.2	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	131	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	98500			P
7440-47-3	Chromium	4.1	B		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	6.1	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	15600			P
7439-96-5	Manganese	139			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	3580	B		P
7782-49-2	Selenium	2.0	U	WN	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	26300			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	3.3	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW02
MWID

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71317

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5416

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. ____ Date Analyzed: 02/06/92

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

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	5	B
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW02

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71330_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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	85400			P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	11.1		N	F
7440-39-3	Barium	640			P
7440-41-7	Beryllium	5.5			P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	138000			P
7440-47-3	Chromium	121			P
7440-48-4	Cobalt	64.4			P
7440-50-8	Copper	140			P
7439-89-6	Iron	139000			P
7439-92-1	Lead	71.0			F
7439-95-4	Magnesium	50900			P
7439-96-5	Manganese	2600			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	131			P
7440-09-7	Potassium	20700			P
7782-49-2	Selenium	20.0	U	N	F
7440-22-4	Silver	6.5	B		P
7440-23-5	Sodium	45500			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	113			P
7440-66-6	Zinc	430			P
	Cyanide	10.0	U	*	AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

THE_CN_ALIQUOT_LAB_NUMBER_IS_71353._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW02F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71337_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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	29.8	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	9.8	B	N	F
7440-39-3	Barium	79.8	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	39300			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	31.1	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	10100			P
7439-96-5	Manganese	276			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	4610	B		P
7782-49-2	Selenium	2.0	U	N	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	44900			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	2.4	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW03

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6185 SAS No.: _____ SDG No.: 12

Matrix: (soil/water) WATER Lab Sample ID: 71469

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5461

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. ____ Date Analyzed: 02/07/92

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

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	4	J
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	17	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW03

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71478_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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	165000			P
7440-36-0	Antimony	47.0	U		P
7440-38-2	Arsenic	46.8			F
7440-39-3	Barium	3030			P
7440-41-7	Beryllium	11.6			P
7440-43-9	Cadmium	19.5			P
7440-70-2	Calcium	451000			P
7440-47-3	Chromium	193			P
7440-48-4	Cobalt	148			P
7440-50-8	Copper	1200			P
7439-89-6	Iron	446000			P
7439-92-1	Lead	657			F
7439-95-4	Magnesium	202000			P
7439-96-5	Manganese	37200			P
7439-97-6	Mercury	0.86			CV
7440-02-0	Nickel	395			P
7440-09-7	Potassium	18200			P
7782-49-2	Selenium	20.0	U		F
7440-22-4	Silver	51.6			P
7440-23-5	Sodium	9710			P
7440-28-0	Thallium	3.1	B	W	F
7440-62-2	Vanadium	258			P
7440-66-6	Zinc	2900			P
	Cyanide	12.6			AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

CN_ALIQUOT_LAB_SAMPLE_ID_IS_71492._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW03F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71484_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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_	18.0	U		P
7440-36-0	Antimony_	47.0	U		P
7440-38-2	Arsenic__	4.1	B		F
7440-39-3	Barium___	361			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__	56500			P
7440-47-3	Chromium_	6.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___	2.0	U		P
7439-89-6	Iron_____	169			P
7439-92-1	Lead_____	2.0	U		F
7439-95-4	Magnesium	7100			P
7439-96-5	Manganese	1170			P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	12.0	U		P
7440-09-7	Potassium	2410	B		P
7782-49-2	Selenium_	2.0	U		F
7440-22-4	Silver___	4.0	U		P
7440-23-5	Sodium___	8450			P
7440-28-0	Thallium_	1.0	U		F
7440-62-2	Vanadium_	7.0	U		P
7440-66-6	Zinc_____	1.0	U		P
_____	Cyanide__	_____			NR
_____	_____	_____			

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW04
MW03

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6185 SAS No.: _____ SDG No.: 12

Matrix: (soil/water) WATER Lab Sample ID: 71468

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5460

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. ____ Date Analyzed: 02/07/92

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

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	4	J
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	6	
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	22	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW04

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71477_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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	320000			P
7440-36-0	Antimony	47.0	U		P
7440-38-2	Arsenic	12.9			F
7440-39-3	Barium	2920			P
7440-41-7	Beryllium	17.0			P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1980000			P
7440-47-3	Chromium	401			P
7440-48-4	Cobalt	272			P
7440-50-8	Copper	1620			P
7439-89-6	Iron	803000			P
7439-92-1	Lead	464			F
7439-95-4	Magnesium	616000			P
7439-96-5	Manganese	24500			P
7439-97-6	Mercury	1.0			CV
7440-02-0	Nickel	646			P
7440-09-7	Potassium	33800			P
7782-49-2	Selenium	20.0	U		F
7440-22-4	Silver	67.3			P
7440-23-5	Sodium	14700			P
7440-28-0	Thallium	3.2	B		F
7440-62-2	Vanadium	416			P
7440-66-6	Zinc	4370			P
	Cyanide	10.0	U		AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

CN_ALIQUOT_LAB_SAMPLE_ID_IS_71491._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW04F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71483_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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	18.0	U		P
7440-36-0	Antimony	47.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	119	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	122000			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	42.0	U		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	18100			P
7439-96-5	Manganese	90.7			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	12.0	U		P
7440-09-7	Potassium	2770	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	4.0	U		P
7440-23-5	Sodium	12600			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	7.0	U		P
7440-66-6	Zinc	1.0	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW05
MW06

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6185 SAS No.: _____ SDG No.: 12

Matrix: (soil/water) WATER Lab Sample ID: 71466

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5458

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. ____ Date Analyzed: 02/07/92

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

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	3	J
67-64-1	Acetone	9	J
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW05

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71475_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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	28900			P
7440-36-0	Antimony	47.0	U		P
7440-38-2	Arsenic	13.1			F
7440-39-3	Barium	359			P
7440-41-7	Beryllium	1.5	B		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	88300			P
7440-47-3	Chromium	54.6			P
7440-48-4	Cobalt	25.4	B		P
7440-50-8	Copper	80.4			P
7439-89-6	Iron	85500			P
7439-92-1	Lead	33.6			F
7439-95-4	Magnesium	27500			P
7439-96-5	Manganese	1180			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	57.5			P
7440-09-7	Potassium	14800			P
7782-49-2	Selenium	10.0	U		F
7440-22-4	Silver	10.2			P
7440-23-5	Sodium	10800			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	54.5			P
7440-66-6	Zinc	187			P
	Cyanide	10.0	U		AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

CN_ALIQUOT_LAB_SAMPLE_ID_IS_71489._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW05F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71481_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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_	20.3	B		P_
7440-36-0	Antimony_	47.0	U		P_
7440-38-2	Arsenic__	2.4	B		F_
7440-39-3	Barium___	135	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	55000			P_
7440-47-3	Chromium_	6.0	U		P_
7440-48-4	Cobalt___	5.0	U		P_
7440-50-8	Copper___	2.0	U		P_
7439-89-6	Iron____	42.0	U		P_
7439-92-1	Lead____	2.0	U		F_
7439-95-4	Magnesium	13000			P_
7439-96-5	Manganese	130			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	12.0	U		P_
7440-09-7	Potassium	9790			P_
7782-49-2	Selenium_	2.0	U		F_
7440-22-4	Silver___	4.0	U		P_
7440-23-5	Sodium___	9270			P_
7440-28-0	Thallium_	1.0	U		F_
7440-62-2	Vanadium_	7.0	U		P_
7440-66-6	Zinc____	1.0	U		P_
_____	Cyanide__	_____	_		NR
_____	_____	_____	_		__

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW06
MW09

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6200 SAS No.: _____ SDG No.: 13

Matrix: (soil/water) WATER Lab Sample ID: 71606A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Y2941

Level: (low/med) LOW Date Received: 02/08/92

% Moisture: not dec. ____ Date Analyzed: 02/12/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	11	
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	89	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

06

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71612_____

Level (low/med): LOW__ Date Received: 02/08/92

% 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	132000			P
7440-36-0	Antimony	17.0	U	N	P
7440-38-2	Arsenic	22.9		N	F
7440-39-3	Barium	1390			P
7440-41-7	Beryllium	6.0			P
7440-43-9	Cadmium	37.1			P
7440-70-2	Calcium	668000			P
7440-47-3	Chromium	188		N	P
7440-48-4	Cobalt	128			P
7440-50-8	Copper	623		N	P
7439-89-6	Iron	347000			P
7439-92-1	Lead	208			F
7439-95-4	Magnesium	214000			P
7439-96-5	Manganese	16500			P
7439-97-6	Mercury	1.1			CV
7440-02-0	Nickel	316			P
7440-09-7	Potassium	18500			P
7782-49-2	Selenium	20.0	U	N	F
7440-22-4	Silver	8.2	B		P
7440-23-5	Sodium	11900			P
7440-28-0	Thallium	1.2	B	W	F
7440-62-2	Vanadium	188			P
7440-66-6	Zinc	1780		N	P
	Cyanide	23.2			AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

CYANIDE_LAB_SAMPLE_ID_NUMBER_IS_71622._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

06F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71617_____

Level (low/med): LOW__ Date Received: 02/08/92

% 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	28.9	B		P
7440-36-0	Antimony	17.0	U	N	P
7440-38-2	Arsenic	2.0	U	WN	F
7440-39-3	Barium	102	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	71400			P
7440-47-3	Chromium	4.0	U	N	P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U	N	P
7439-89-6	Iron	29.0	B		P
7439-92-1	Lead	2.0	U	W	F
7439-95-4	Magnesium	10700			P
7439-96-5	Manganese	755			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	11.7	B		P
7440-09-7	Potassium	3070	B		P
7782-49-2	Selenium	2.0	U	WN	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	10100			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	6.0	B	N	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW07
MWJC7

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71318

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5417

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. ____ Date Analyzed: 02/06/92

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

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	3	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW07

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71331_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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	57900			P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	9.3	B	N	F
7440-39-3	Barium	533			P
7440-41-7	Beryllium	3.8	B		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	101000			P
7440-47-3	Chromium	89.4			P
7440-48-4	Cobalt	59.3			P
7440-50-8	Copper	194			P
7439-89-6	Iron	144000			P
7439-92-1	Lead	81.1			F
7439-95-4	Magnesium	35000			P
7439-96-5	Manganese	7320			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	130			P
7440-09-7	Potassium	8520			P
7782-49-2	Selenium	20.0	U	N	F
7440-22-4	Silver	5.8	B		P
7440-23-5	Sodium	16900			P
7440-28-0	Thallium	1.1	B		F
7440-62-2	Vanadium	72.8			P
7440-66-6	Zinc	767			P
	Cyanide	12.6		*	AS

Color Before: BROWN Clarity Before: OPAQUE Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

TH_CN_ALIQUOT_LAB_NUMBER_IS_71354._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW07F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71338_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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	45.4	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	44.5	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	53300			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	42.0	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	6700			P
7439-96-5	Manganese	311			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2500	B		P
7782-49-2	Selenium	2.0	U	N	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	16200			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	4.2	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW08
MW05

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71319

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5418

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. ____ Date Analyzed: 02/06/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW08

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71332_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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	146000			P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	11.5		N	F
7440-39-3	Barium	4640			P
7440-41-7	Beryllium	9.3			P
7440-43-9	Cadmium	7.7			P
7440-70-2	Calcium	1630000			P
7440-47-3	Chromium	196			P
7440-48-4	Cobalt	158			P
7440-50-8	Copper	859			P
7439-89-6	Iron	354000			P
7439-92-1	Lead	254			F
7439-95-4	Magnesium	358000			P
7439-96-5	Manganese	30000			P
7439-97-6	Mercury	0.71		N	CV
7440-02-0	Nickel	349			P
7440-09-7	Potassium	17100			P
7782-49-2	Selenium	20.0	U	N	F
7440-22-4	Silver	12.8			P
7440-23-5	Sodium	16300			P
7440-28-0	Thallium	1.7	B	W	F
7440-62-2	Vanadium	177			P
7440-66-6	Zinc	2520			P
	Cyanide	10.0	U	*	AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:
THE_CN_ALIQUOT_LAB_NUMBER_IS_71355._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW08F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71339_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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_	22.7	B		P
7440-36-0	Antimony_	17.0	U		P
7440-38-2	Arsenic__	2.0	U	N	F
7440-39-3	Barium___	116	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__	84800			P
7440-47-3	Chromium_	5.1	B		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___	5.0	U		P
7439-89-6	Iron_____	6.0	U		P
7439-92-1	Lead_____	2.0	U		F
7439-95-4	Magnesium	16200			P
7439-96-5	Manganese	363			P
7439-97-6	Mercury__	0.20	U	N	CV
7440-02-0	Nickel___	8.0	U		P
7440-09-7	Potassium	4240	B		P
7782-49-2	Selenium_	2.0	U	WN	F
7440-22-4	Silver___	2.0	U		P
7440-23-5	Sodium___	14100			P
7440-28-0	Thallium_	1.0	U		F
7440-62-2	Vanadium_	3.0	U		P
7440-66-6	Zinc_____	3.3	B		P
_____	Cyanide__	_____			NR
_____	_____	_____			

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW09
MW062

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6185 SAS No.: _____ SDG No.: 12

Matrix: (soil/water) WATER Lab Sample ID: 71467

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5459

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. ____ Date Analyzed: 02/07/92

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

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	4	J
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW09

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71476_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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	29600			P
7440-36-0	Antimony	47.0	U		P
7440-38-2	Arsenic	20.8			F
7440-39-3	Barium	285			P
7440-41-7	Beryllium	1.5	B		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	106000			P
7440-47-3	Chromium	50.6			P
7440-48-4	Cobalt	31.8	B		P
7440-50-8	Copper	79.4			P
7439-89-6	Iron	68800			P
7439-92-1	Lead	35.3			F
7439-95-4	Magnesium	37300			P
7439-96-5	Manganese	1300			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	69.3			P
7440-09-7	Potassium	27200			P
7782-49-2	Selenium	10.0	U		F
7440-22-4	Silver	7.8	B		P
7440-23-5	Sodium	20000			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	46.3	B		P
7440-66-6	Zinc	191			P
	Cyanide	10.0	U		AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

CN_ALIQUOT_LAB_SAMPLE_ID_IS_71490._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW09F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71482_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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_	18.0	U		P
7440-36-0	Antimony_	47.0	U		P
7440-38-2	Arsenic__	9.8	B		F
7440-39-3	Barium___	120	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__	49300			P
7440-47-3	Chromium_	6.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___	2.0	U		P
7439-89-6	Iron_____	42.0	U		P
7439-92-1	Lead_____	2.0	U		F
7439-95-4	Magnesium	16300			P
7439-96-5	Manganese	114			P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	12.0	U		P
7440-09-7	Potassium	17400			P
7782-49-2	Selenium_	2.0	U		F
7440-22-4	Silver___	4.0	U		P
7440-23-5	Sodium___	18000			P
7440-28-0	Thallium_	1.0	U		F
7440-62-2	Vanadium_	7.0	U		P
7440-66-6	Zinc_____	1.0	U		P
_____	Cyanide__	_____			NR
_____	_____	_____			__

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW10
N.J.04

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6200 SAS No.: _____ SDG No.: 13

Matrix: (soil/water) WATER Lab Sample ID: 71610A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Y2961

Level: (low/med) LOW Date Received: 02/08/92

% Moisture: not dec. ____ Date Analyzed: 02/12/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

10

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71616_____

Level (low/med): LOW__ Date Received: 02/08/92

% 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	359000			P
7440-36-0	Antimony	17.0	U	N	P
7440-38-2	Arsenic	2.3	B	N	F
7440-39-3	Barium	42500			P
7440-41-7	Beryllium	19.1			P
7440-43-9	Cadmium	33.8			P
7440-70-2	Calcium	3020000			P
7440-47-3	Chromium	453		N	P
7440-48-4	Cobalt	500			P
7440-50-8	Copper	3570		N	P
7439-89-6	Iron	1100000			P
7439-92-1	Lead	4.5			F
7439-95-4	Magnesium	930000			P
7439-96-5	Manganese	306000			P
7439-97-6	Mercury	2.0			CV
7440-02-0	Nickel	1300			P
7440-09-7	Potassium	28800			P
7782-49-2	Selenium	20.0	U	N	F
7440-22-4	Silver	68.7			P
7440-23-5	Sodium	41100			P
7440-28-0	Thallium	2.3	B	W	F
7440-62-2	Vanadium	429			P
7440-66-6	Zinc	8140		N	P
	Cyanide	10.0	U		AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

CYANIDE_LAB_SAMPLE_ID_NUMBER_IS_71626._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

10F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71621_____

Level (low/med): LOW__ Date Received: 02/08/92

% 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	34.6	B		P
7440-36-0	Antimony	17.0	U	N	P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	251			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	91500			P
7440-47-3	Chromium	4.0	U	N	P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U	N	P
7439-89-6	Iron	9.4	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	15500			P
7439-96-5	Manganese	2.3	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2220	B		P
7782-49-2	Selenium	2.0	U	N	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	40000			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	2.5	B	N	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW11
Monitoring Well

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6185 SAS No.: _____ SDG No.: 12

Matrix: (soil/water) WATER Lab Sample ID: 71465

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5457

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. ____ Date Analyzed: 02/07/92

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

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	3	J
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW11

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71474_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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_	18.0	U		P
7440-36-0	Antimony_	47.0	U		P
7440-38-2	Arsenic__	2.1	B		F
7440-39-3	Barium___	103	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__	61900			P
7440-47-3	Chromium_	6.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___	2.0	U		P
7439-89-6	Iron_____	42.0	U		P
7439-92-1	Lead_____	2.0	U		F
7439-95-4	Magnesium	10400			P
7439-96-5	Manganese	3.0	U		P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	12.0	U		P
7440-09-7	Potassium	1520	B		P
7782-49-2	Selenium_	2.0	U		F
7440-22-4	Silver___	4.0	U		P
7440-23-5	Sodium___	12400			P
7440-28-0	Thallium_	1.0	U		F
7440-62-2	Vanadium_	7.0	U		P
7440-66-6	Zinc_____	1.0	U		P
_____	Cyanide__	10.0	U		AS
_____	_____	_____	_	_____	__

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

CN_ALIQUOT_LAB_SAMPLE_ID_IS_71488._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW11F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71480_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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_	18.0	U		P
7440-36-0	Antimony_	47.0	U		P
7440-38-2	Arsenic__	2.0	U	W	F
7440-39-3	Barium___	103	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__	60600			P
7440-47-3	Chromium_	6.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___	2.0	U		P
7439-89-6	Iron_____	42.0	U		P
7439-92-1	Lead_____	4.0	U	W	F
7439-95-4	Magnesium	10200			P
7439-96-5	Manganese	3.0	U		P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	12.0	U		P
7440-09-7	Potassium	1990	B		P
7782-49-2	Selenium_	2.0	U		F
7440-22-4	Silver___	4.0	U		P
7440-23-5	Sodium___	12300			P
7440-28-0	Thallium_	1.0	U		F
7440-62-2	Vanadium_	7.0	U		P
7440-66-6	Zinc_____	1.0	U		P
_____	Cyanide__				NR
_____	_____				

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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FORM I - IN

7/88

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW12 Mw-6a Well Duplicate

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6185 SAS No.: _____ SDG No.: 12

Matrix: (soil/water) WATER Lab Sample ID: 71464

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5456

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. ____ Date Analyzed: 02/07/92

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

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	4	J
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW12

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71473_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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	18.0	U		P
7440-36-0	Antimony	47.0	U		P
7440-38-2	Arsenic	2.2	B		F
7440-39-3	Barium	103	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	60600			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	42.0	U		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	10100			P
7439-96-5	Manganese	3.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	12.0	U		P
7440-09-7	Potassium	1130	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	4.0	U		P
7440-23-5	Sodium	12000			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	7.0	U		P
7440-66-6	Zinc	1.0	U		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

CN_ALIQUOT_LAB_SAMPLE_ID_IS_71487._____

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW12F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): WATER Lab Sample ID: 71479_____

Level (low/med): LOW__ Date Received: 02/06/92

% 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_	18.0	U		P
7440-36-0	Antimony_	47.0	U		P
7440-38-2	Arsenic__	2.0	U	W	F
7440-39-3	Barium___	103	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__	61200			P
7440-47-3	Chromium_	6.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___	2.0	U		P
7439-89-6	Iron_____	42.0	U		P
7439-92-1	Lead_____	2.0	U		F
7439-95-4	Magnesium	10300			P
7439-96-5	Manganese	3.0	U		P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	12.0	U		P
7440-09-7	Potassium	1280	B		P
7782-49-2	Selenium_	2.0	U		F
7440-22-4	Silver___	4.0	U		P
7440-23-5	Sodium___	12200			P
7440-28-0	Thallium_	1.0	U		F
7440-62-2	Vanadium_	7.0	U		P
7440-66-6	Zinc_____	1.0	U		P
_____	Cyanide__	_____	_		NR
_____	_____	_____	_		__

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW13

Field Blank

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6200 SAS No.: _____ SDG No.: 13

Matrix: (soil/water) WATER Lab Sample ID: 71607A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Y2944

Level: (low/med) LOW Date Received: 02/08/92

% Moisture: not dec. ____ Date Analyzed: 02/12/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	10	
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	8	J
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

13

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71613_____

Level (low/med): LOW__ Date Received: 02/08/92

% 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_	21.6	B		P_
7440-36-0	Antimony_	17.0	U	N	P_
7440-38-2	Arsenic__	2.0	U	N	F_
7440-39-3	Barium___	1.9	B		P_
7440-41-7	Beryllium	2.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	78.6	B		P_
7440-47-3	Chromium_	4.0	U	N	P_
7440-48-4	Cobalt___	5.0	U		P_
7440-50-8	Copper___	5.0	U	N	P_
7439-89-6	Iron_____	39.9	B		P_
7439-92-1	Lead_____	2.0	U	W	F_
7439-95-4	Magnesium	1.0	U		P_
7439-96-5	Manganese	2.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	8.0	U		P_
7440-09-7	Potassium	483	U		P_
7782-49-2	Selenium_	2.0	U	N	F_
7440-22-4	Silver___	2.0	U		P_
7440-23-5	Sodium___	49.6	B		P_
7440-28-0	Thallium_	1.0	U		F_
7440-62-2	Vanadium_	3.0	U		P_
7440-66-6	Zinc_____	2.5	B	N	P_
_____	Cyanide__	10.0	U		AS
_____	_____	_____	_	_____	__

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

CYANIDE_LAB_SAMPLE_ID_NUMBER_IS_71623._____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

13F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71618_____

Level (low/med): LOW__ Date Received: 02/08/92

% 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	27.4	B		P
7440-36-0	Antimony	17.0	U	N	P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	3.1	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	140	B		P
7440-47-3	Chromium	4.0	U	N	P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U	N	P
7439-89-6	Iron	39.2	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	1.0	U		P
7439-96-5	Manganese	10.4	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	483	U		P
7782-49-2	Selenium	2.0	U	WN	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	52.6	B		P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	4.0	B	N	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW13A
MBJ-09D

1 Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6200 SAS No.: _____ SDG No.: 13

Matrix: (soil/water) WATER Lab Sample ID: 71652

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Y2963

Level: (low/med) LOW Date Received: 02/08/92

% Moisture: not dec. ____ Date Analyzed: 02/12/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	3	J
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

13A

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71651_____

Level (low/med): LOW__ Date Received: 02/11/92

% 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	96800			P
7440-36-0	Antimony	17.0	U	N	P
7440-38-2	Arsenic	35.5		N	F
7440-39-3	Barium	861			P
7440-41-7	Beryllium	6.6			P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	445000			P
7440-47-3	Chromium	136		N	P
7440-48-4	Cobalt	102			P
7440-50-8	Copper	271		N	P
7439-89-6	Iron	218000			P
7439-92-1	Lead	125			F
7439-95-4	Magnesium	131000			P
7439-96-5	Manganese	6410			P
7439-97-6	Mercury	0.32			CV
7440-02-0	Nickel	224			P
7440-09-7	Potassium	16500			P
7782-49-2	Selenium	20.0	U	N	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	26100			P
7440-28-0	Thallium	1.2	B		F
7440-62-2	Vanadium	136			P
7440-66-6	Zinc	682		N	P
	Cyanide				NR

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

THE_ENTIRE_FIELD_NUMBER_IS_AP-GW13-A._____

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

13AF

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71650_____

Level (low/med): LOW__ Date Received: 02/11/92

% 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	53.4	B		P
7440-36-0	Antimony	17.0	U	N	P
7440-38-2	Arsenic	4.0	B	N	F
7440-39-3	Barium	134	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	59400			P
7440-47-3	Chromium	4.0	U	N	P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U	N	P
7439-89-6	Iron	58.0	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	15900			P
7439-96-5	Manganese	525			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	5140			P
7782-49-2	Selenium	2.0	U	N	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	25100			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	3.0	B	N	P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

CYANIDE_LAB_SAMPLE_ID_NUMBER_IS_71648._____

THE_ENTIRE_FIELD_NUMBER_IS_AP-GW13-AF._____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW14

Name: VERSAR INC. Contract:

Lab Code: VERSAR Case No.: 6200 SAS No.: SDG No.: 13

Matrix: (soil/water) WATER Lab Sample ID: 71609A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Y2946

Level: (low/med) LOW Date Received: 02/08/92

% Moisture: not dec. Date Analyzed: 02/12/92

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

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	5	U
67-64-1	Acetone	10	
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

14

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71615_____

Level (low/med): LOW__ Date Received: 02/08/92

% 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	178000			P
7440-36-0	Antimony	17.0	U	N	P
7440-38-2	Arsenic	21.7		N	F
7440-39-3	Barium	1420			P
7440-41-7	Beryllium	10.9			P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	435000			P
7440-47-3	Chromium	287		N	P
7440-48-4	Cobalt	184			P
7440-50-8	Copper	491		N	P
7439-89-6	Iron	447000			P
7439-92-1	Lead	163			F
7439-95-4	Magnesium	140000			P
7439-96-5	Manganese	8480			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	412			P
7440-09-7	Potassium	33600			P
7782-49-2	Selenium	20.0	U	N	F
7440-22-4	Silver	8.2	B		P
7440-23-5	Sodium	19000			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	232			P
7440-66-6	Zinc	1210		N	P
	Cyanide	10.0	U		AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

CYANIDE_LAB_SAMPLE_ID_NUMBER_IS_71625._____

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U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

14F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71620_____

Level (low/med): LOW__ Date Received: 02/08/92

% 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_	46.2	B		P_
7440-36-0	Antimony_	17.0	U	N	P_
7440-38-2	Arsenic__	2.0	U	N	F_
7440-39-3	Barium___	109	B		P_
7440-41-7	Beryllium	2.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	58800			P_
7440-47-3	Chromium_	4.0	U	N	P_
7440-48-4	Cobalt___	5.0	U		P_
7440-50-8	Copper___	5.0	U	N	P_
7439-89-6	Iron____	13.8	B		P_
7439-92-1	Lead____	2.0	U	W	F_
7439-95-4	Magnesium	14200			P_
7439-96-5	Manganese	109			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	8.0	U		P_
7440-09-7	Potassium	16000			P_
7782-49-2	Selenium_	2.1	B	WN	F_
7440-22-4	Silver___	2.0	U		P_
7440-23-5	Sodium___	17500			P_
7440-28-0	Thallium_	1.0	U	W	F_
7440-62-2	Vanadium_	3.0	U		P_
7440-66-6	Zinc____	2.5	B	N	P_
_____	Cyanide__	_____	_	_____	NR
_____	_____	_____	_	_____	__

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APGW15
MBJ-023

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6200 SAS No.: _____ SDG No.: 13

Matrix: (soil/water) WATER Lab Sample ID: 71608A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Y2945

Level: (low/med) LOW Date Received: 02/08/92

% Moisture: not dec. ____ Date Analyzed: 02/12/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

15 MW-02D

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71614_____

Level (low/med): LOW__ Date Received: 02/08/92

% 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	43700			P
7440-36-0	Antimony	17.0	U	N	P
7440-38-2	Arsenic	8.9	B	N	F
7440-39-3	Barium	508			P
7440-41-7	Beryllium	2.2	B		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	263000			P
7440-47-3	Chromium	71.1		N	P
7440-48-4	Cobalt	35.9	B		P
7440-50-8	Copper	143		N	P
7439-89-6	Iron	92700			P
7439-92-1	Lead	39.3			F
7439-95-4	Magnesium	56300			P
7439-96-5	Manganese	2880			P
7439-97-6	Mercury	0.37			CV
7440-02-0	Nickel	93.9			P
7440-09-7	Potassium	9280			P
7782-49-2	Selenium	20.0	U	N	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	12900			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	60.0			P
7440-66-6	Zinc	313		N	P
	Cyanide	10.0	U		AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

CYANIDE_LAB_SAMPLE_ID_NUMBER_IS_71624._____

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

15F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: 06____

Matrix (soil/water): WATER Lab Sample ID: 71619_____

Level (low/med): LOW__ Date Received: 02/08/92

% 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_	27.4	B		P
7440-36-0	Antimony_	17.0	U	N	P
7440-38-2	Arsenic__	2.0	U	N	F
7440-39-3	Barium___	95.5	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__	58000			P
7440-47-3	Chromium_	4.0	U	N	P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___	5.0	U	N	P
7439-89-6	Iron____	10.9	B		P
7439-92-1	Lead____	2.0	U		F
7439-95-4	Magnesium	15900			P
7439-96-5	Manganese	197			P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	8.0	U		P
7440-09-7	Potassium	4190	B		P
7782-49-2	Selenium_	2.0	U	WN	F
7440-22-4	Silver___	2.0	U		P
7440-23-5	Sodium___	12000			P
7440-28-0	Thallium_	1.0	U	W	F
7440-62-2	Vanadium_	3.0	U		P
7440-66-6	Zinc____	2.0	U	N	P
_____	Cyanide__	_____			NR
_____	_____	_____			

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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Versar Laboratories inc.

ANALYSIS REPORT
General Inorganic Chemistry Section

DATE: 02-MAR-92 PAGE: 1
CODE / CONTROL #: HYDROSEA / 6172
CLIENT / SITE: HYDROSEARCH / NEW YORK
PROJECT / BATCH: 420.98.0 / 11

Lab#	Field #	HARDNESS as CaCO3 (mg/L)	
71360	APGW02	568.	MW-01D
71361	APGW07	270.	MW-07
71362	APGW08	5,880.	MW-08
71363	APGW01	4,810.	MW-01

C Thomsen
Laboratory Manager

Versar Laboratories INC.

ANALYSIS REPORT
General Inorganic Chemistry Section

DATE: 03-MAR-92
CODE / CONTROL #: HYDROSEA / 6200
CLIENT / SITE: HYDROSEARCH / NEW YORK
PROJECT / BATCH: 420.98.0 / 13

Lab#	Field #	HARDNESS as CaCO3 (mg/L)	
71627	APGW06	3,720.	MW-09
71628	APGW13	< 5.0	Field Blank
71629	APGW15	740.	MW-03D
71630	APGW14	3,070.	MW-05
71631	APGW10	5,270.	MW-04

O. Turnbull
Laboratory Manager

Versar Laboratories INC.

ANALYSIS REPORT
General Inorganic Chemistry Section

DATE: 03-MAR-92 PAGE: 1
CODE / CONTROL #: HYDROSEA / 6202
CLIENT / SITE: HYDROSEARCH / NEW YORK
PROJECT / BATCH: 420.98.0 / 14

Lab#	Field #	HARDNESS as CaCO3 (mg/L)		
71649	AP-GW13-A	256.	MW-9D	

L Thomson
Laboratory Manager

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB01
MW-05 DEEP

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) SOIL Lab Sample ID: 71207A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2824

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. 9 Date Analyzed: 02/04/92

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

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	5	U
67-64-1	Acetone	11	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB01

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) SOIL Lab Sample ID: 71229

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Z3078

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. 11 dec. ____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/24/92

GPC Cleanup: (Y/N) N pH: 8.30 Dilution Factor: 1.00

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
100-51-6	Benzyl alcohol	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	bis(2-Chloroisopropyl)ether	370	U
106-44-5	3- & 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
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB01

Lab Name: VERSAR, INC. Contract: _____

Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71212

Sample wt/vol: 30.08 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: ~~02/04/92~~ 1/31/92 2/21/92

% Moisture: not dec. 9.30 dec. _____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/04/92 14

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: ~~1.0~~

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	4.4	U
319-85-7	beta-BHC	4.4	U
319-86-8	delta-BHC	4.4	U
58-89-9	gamma-BHC (Lindane)	4.4	U
76-44-8	Heptachlor	4.4	U
309-00-2	Aldrin	4.4	U
1024-57-3	Heptachlor Epoxide	4.4	U
959-98-8	Endosulfan I	4.4	U
60-57-1	Dieldrin	8.8	U
72-55-9	4,4'-DDE	8.8	U
72-20-8	Endrin	8.8	U
33213-65-9	Endosulfan II	8.8	U
72-54-8	4,4'-DDD	8.8	U
1031-07-8	Endosulfan Sulfate	8.8	U
50-29-3	4,4'-DDT	8.8	U
72-43-5	Methoxychlor	44	U
53494-70-5	Endrin Ketone	8.8	U
5103-71-9	alpha-Chlordane	44	U
5103-74-2	gamma-Chlordane	44	U
8001-35-2	Toxaphene	88	U
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	88	U
11096-82-5	Aroclor-1260	88	U

2/18/92

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSB01

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): SOIL_ Lab Sample ID: 71218_____

Level (low/med): LOW__ Date Received: 01/31/92

% Solids: _90.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12800		*	P
7440-36-0	Antimony	3.1	U	N	P
7440-38-2	Arsenic	12.9			F
7440-39-3	Barium	70.9			P
7440-41-7	Beryllium	0.68	B		P
7440-43-9	Cadmium	0.91	U	N*	P
7440-70-2	Calcium	24000		*	P
7440-47-3	Chromium	16.0		*	P
7440-48-4	Cobalt	13.0			P
7440-50-8	Copper	26.2		N*	P
7439-89-6	Iron	28300		*	P
7439-92-1	Lead	16.2			F
7439-95-4	Magnesium	9000		*	P
7439-96-5	Manganese	408		*	P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	26.3			P
7440-09-7	Potassium	2130			P
7782-49-2	Selenium	0.40	U	W	F
7440-22-4	Silver	0.71	B		P
7440-23-5	Sodium	114	B		P
7440-28-0	Thallium	0.20	U		F
7440-62-2	Vanadium	17.4			P
7440-66-6	Zinc	73.9		N*	P
	Cyanide	0.55	U		AS

spike not in control J value

duplicate not in control

furnace

Color Before: GRAY_____ Clarity Before: _____ Texture: FINE__

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB02
MW-06D

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71313A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V2868

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 13 Date Analyzed: 02/06/92

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

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	6	U
67-64-1	Acetone	11	U
75-15-0	Carbon disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon tetrachloride	6	U
108-05-4	Vinyl acetate	11	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total xylenes	6	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB02

Name: VERSAR INC. Contract:

Lab Code: VERSAR Case No.: 6172 SAS No.: SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71343

Sample wt/vol: 30.1 (g/mL) G Lab File ID: T3417

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 14 dec. Date Extracted: 02/07/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/24/92

GPC Cleanup: (Y/N) N pH: 7.75 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
100-51-6	Benzyl alcohol	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	bis(2-Chloroisopropyl)ether	380	U
106-44-5	3- & 4- Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
65-85-0	Benzoic Acid	1900	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	1900	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethylphthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB02

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71343

Sample wt/vol: 30.1 (g/mL) G Lab File ID: T3417

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 14 dec. ____ Date Extracted: 02/07/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/24/92

GPC Cleanup: (Y/N) N pH: 7.75 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	760	U
56-55-3	Benzo(a)anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	380	U
207-08-9	Benzo(k)fluoranthene	380	U
50-32-8	Benzo(a)pyrene	380	U
193-39-5	Indeno(1,2,3-cd)pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)perylene	380	U

(1) - Cannot be separated from Diphenylamine

100158

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB02

Lab Name: VERSAR, INC. Contract: _____

Lab Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71349

Sample wt/vol: 30 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 13 dec. _____ Date Extracted: 02/07/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/25/92

GPC Cleanup: (Y/N) Y pH: 7.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) (UG/KG)	Q
319-84-6	alpha-BHC	4.6	U
319-85-7	beta-BHC	4.6	U
319-86-8	delta-BHC	4.6	U
58-89-9	gamma-BHC (Lindane)	4.6	U
76-44-8	Heptachlor	4.6	U
309-00-2	Aldrin	4.6	U
1024-57-3	Heptachlor Epoxide	4.6	U
959-98-8	Endosulfan I	4.6	U
60-57-1	Dieldrin	9.2	U
72-55-9	4,4'-DDE	9.2	U
72-20-8	Endrin	9.2	U
33213-65-9	Endosulfan II	9.2	U
72-54-8	4,4'-DDD	9.2	U
1031-07-8	Endosulfan Sulfate	9.2	U
50-29-3	4,4'-DDT	9.2	U
72-43-5	Methoxychlor	46	U
53494-70-5	Endrin Ketone	9.2	U
5103-71-9	alpha-Chlordane	46	U
5103-74-2	gamma-Chlordane	46	U
8001-35-2	Toxaphene	92	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	92	U
11096-82-5	Aroclor-1260	92	U

2/25/92

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB02

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): SOIL_ Lab Sample ID: 71328_____

Level (low/med): LOW__ Date Received: 02/04/92

% Solids: _86.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14700			P
7440-36-0	Antimony	3.3	U		P
7440-38-2	Arsenic	8.7			F
7440-39-3	Barium	54.8			P
7440-41-7	Beryllium	0.86	B		P
7440-43-9	Cadmium	0.98	U		P
7440-70-2	Calcium	1770		*	P
7440-47-3	Chromium	17.0			P
7440-48-4	Cobalt	10.6			P
7440-50-8	Copper	21.3			P
7439-89-6	Iron	26400			P
7439-92-1	Lead	16.7			F
7439-95-4	Magnesium	3820			P
7439-96-5	Manganese	746			P
7439-97-6	Mercury	0.12	U	N	CV
7440-02-0	Nickel	23.5			P
7440-09-7	Potassium	1630			P
7782-49-2	Selenium	0.39	U	W	F
7440-22-4	Silver	0.56	B		P
7440-23-5	Sodium	79.4	B		P
7440-28-0	Thallium	0.20	U		F
7440-62-2	Vanadium	18.1			P
7440-66-6	Zinc	85.9			P
	Cyanide	0.58	U	N	AS

Color Before: BLACK____ Clarity Before: _____ Texture: FINE__

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB03

Name: VERSAR INC. Contract:

Lab Code: VERSAR Case No.: 6185 SAS No.: SDG No.: 12

Matrix: (soil/water) SOIL Lab Sample ID: 71471A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2917

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. 10 Date Analyzed: 02/10/92

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

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	6	U
67-64-1	Acetone	11	U
75-15-0	Carbon disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	9	
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon tetrachloride	6	U
108-05-4	Vinyl acetate	11	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	10	
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total xylenes	6	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB03

Name: VERSAR INC. Contract:

Lab Code: VERSAR Case No.: 6185 SAS No.: SDG No.: 12

Matrix: (soil/water) SOIL Lab Sample ID: 71494

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Z3138

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. 10 dec. Date Extracted: 02/10/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/28/92

GPC Cleanup: (Y/N) Y pH: 9.97 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	730	U
111-44-4	bis(2-Chloroethyl)ether	730	U
95-57-8	2-Chlorophenol	730	U
541-73-1	1,3-Dichlorobenzene	730	U
106-46-7	1,4-Dichlorobenzene	730	U
100-51-6	Benzyl alcohol	730	U
95-50-1	1,2-Dichlorobenzene	730	U
95-48-7	2-Methylphenol	730	U
108-60-1	bis(2-Chloroisopropyl)ether	730	U
106-44-5	3- & 4- Methylphenol	730	U
621-64-7	N-Nitroso-di-n-propylamine	730	U
67-72-1	Hexachloroethane	730	U
98-95-3	Nitrobenzene	730	U
78-59-1	Isophorone	730	U
88-75-5	2-Nitrophenol	730	U
105-67-9	2,4-Dimethylphenol	730	U
65-85-0	Benzoic Acid	3600	U
111-91-1	bis(2-Chloroethoxy)methane	730	U
120-83-2	2,4-Dichlorophenol	730	U
120-82-1	1,2,4-Trichlorobenzene	730	U
91-20-3	Naphthalene	730	U
106-47-8	4-Chloroaniline	730	U
87-68-3	Hexachlorobutadiene	730	U
59-50-7	4-Chloro-3-methylphenol	730	U
91-57-6	2-Methylnaphthalene	730	U
77-47-4	Hexachlorocyclopentadiene	730	U
88-06-2	2,4,6-Trichlorophenol	730	U
95-95-4	2,4,5-Trichlorophenol	3600	U
91-58-7	2-Chloronaphthalene	730	U
88-74-4	2-Nitroaniline	3600	U
131-11-3	Dimethylphthalate	730	U
208-96-8	Acenaphthylene	730	U
606-20-2	2,6-Dinitrotoluene	730	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB03

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6185 SAS No.: _____ SDG No.: 12

Matrix: (soil/water) SOIL Lab Sample ID: 71494

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Z3138

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. 10 dec. ____ Date Extracted: 02/10/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/28/92

GPC Cleanup: (Y/N) Y pH: 9.97 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3600	U
83-32-9	Acenaphthene	730	U
51-28-5	2,4-Dinitrophenol	3600	U
100-02-7	4-Nitrophenol	3600	U
132-64-9	Dibenzofuran	730	U
121-14-2	2,4-Dinitrotoluene	730	U
84-66-2	Diethylphthalate	730	U
7005-72-3	4-Chlorophenyl-phenylether	730	U
86-73-7	Fluorene	730	U
100-01-6	4-Nitroaniline	3600	U
534-52-1	4,6-Dinitro-2-methylphenol	3600	U
86-30-6	N-nitrosodiphenylamine (1)	730	U
101-55-3	4-Bromophenyl-phenylether	730	U
118-74-1	Hexachlorobenzene	730	U
87-86-5	Pentachlorophenol	3600	U
85-01-8	Phenanthrene	730	U
120-12-7	Anthracene	730	U
84-74-2	Di-n-butylphthalate	730	U
206-44-0	Fluoranthene	730	U
129-00-0	Pyrene	730	U
85-68-7	Butylbenzylphthalate	730	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)anthracene	730	U
218-01-9	Chrysene	730	U
117-81-7	bis(2-Ethylhexyl)phthalate	350	J
117-84-0	Di-n-octyl phthalate	730	U
205-99-2	Benzo(b)fluoranthene	730	U
207-08-9	Benzo(k)fluoranthene	730	U
50-32-8	Benzo(a)pyrene	730	U
193-39-5	Indeno(1,2,3-cd)pyrene	730	U
53-70-3	Dibenz(a,h)anthracene	730	U
191-24-2	Benzo(g,h,i)perylene	730	U

(1) - Cannot be separated from Diphenylamine

100017

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB03

Lab Name: VERSAR, INC. Contract: _____

Lab Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71496

Sample wt/vol: 30 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. 15 dec. _____ Date Extracted: 02/10/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/27/92

GPC Cleanup: (Y/N) Y pH: 9.97 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) (UG/KG)	Q
319-84-6	alpha-BHC	4.7	U
319-85-7	beta-BHC	4.7	U
319-86-8	delta-BHC	4.7	U
58-89-9	gamma-BHC (Lindane)	4.7	U
76-44-8	Heptachlor	4.7	U
309-00-2	Aldrin	4.7	U
1024-57-3	Heptachlor Epoxide	4.7	U
959-98-8	Endosulfan I	4.7	U
60-57-1	Dieldrin	9.4	U
72-55-9	4,4'-DDE	9.4	U
72-20-8	Endrin	9.4	U
33213-65-9	Endosulfan II	9.4	U
72-54-8	4,4'-DDD	9.4	U
1031-07-8	Endosulfan Sulfate	9.4	U
50-29-3	4,4'-DDT	9.4	U
72-43-5	Methoxychlor	47	U
53494-70-5	Endrin Ketone	9.4	U
5103-71-9	alpha-Chlordane	47	U
5103-74-2	gamma-Chlordane	47	U
8001-35-2	Toxaphene	94	U
12674-11-2	Aroclor-1016	47	U
11104-28-2	Aroclor-1221	47	U
11141-16-5	Aroclor-1232	47	U
53469-21-9	Aroclor-1242	47	U
12672-29-6	Aroclor-1248	47	U
11097-69-1	Aroclor-1254	94	U
11096-82-5	Aroclor-1260	94	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB03

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): SOIL_ Lab Sample ID: 71486_____

Level (low/med): LOW__ Date Received: 02/06/92

% Solids: _87.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13200			P
7440-36-0	Antimony	10.3	U	N	P
7440-38-2	Arsenic	8.4			F
7440-39-3	Barium	72.0		E	P
7440-41-7	Beryllium	0.67	B		P
7440-43-9	Cadmium	1.1	U	N	P
7440-70-2	Calcium	30000			P
7440-47-3	Chromium	14.8		*	P
7440-48-4	Cobalt	9.9	B		P
7440-50-8	Copper	25.4		EN	P
7439-89-6	Iron	24400		E	P
7439-92-1	Lead	9.5			F
7439-95-4	Magnesium	10500			P
7439-96-5	Manganese	471		E	P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	21.9			P
7440-09-7	Potassium	2510			P
7782-49-2	Selenium	0.44	U	N	F
7440-22-4	Silver	2.7			P
7440-23-5	Sodium	144	B		P
7440-28-0	Thallium	0.23	B		F
7440-62-2	Vanadium	20.4			P
7440-66-6	Zinc	65.3		EN*	P
	Cyanide	0.57	U	N*	AS

Color Before: GREY_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

_____

_____

_____

_____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB04

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) SOIL Lab Sample ID: 71228A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V2825

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. 9 Date Analyzed: 02/04/92

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

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	5	U
67-64-1	Acetone	15	
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	36	
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	77	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

100042

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB05DL

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71314DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: S5451

Level: (low/med) MED Date Received: 02/04/92

% Moisture: not dec. 8 Date Analyzed: 02/07/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1400	U
74-83-9	Bromomethane	1400	U
75-01-4	Vinyl chloride	1400	U
75-00-3	Chloroethane	1400	U
75-09-2	Methylene chloride	680	U
67-64-1	Acetone	1400	U
75-15-0	Carbon disulfide	680	U
75-35-4	1,1-Dichloroethene	680	U
75-34-3	1,1-Dichloroethane	680	U
540-59-0	1,2-Dichloroethene (total)	680	U
67-66-3	Chloroform	680	U
107-06-2	1,2-Dichloroethane	680	U
78-93-3	2-Butanone	1400	U
71-55-6	1,1,1-Trichloroethane	680	U
56-23-5	Carbon tetrachloride	680	U
108-05-4	Vinyl acetate	1400	U
75-27-4	Bromodichloromethane	680	U
78-87-5	1,2-Dichloropropane	680	U
10061-01-5	cis-1,3-Dichloropropene	680	U
79-01-6	Trichloroethene	2200	D
124-48-1	Dibromochloromethane	680	U
79-00-5	1,1,2-Trichloroethane	680	U
71-43-2	Benzene	680	U
10061-02-6	Trans-1,3-dichloropropene	680	U
75-25-2	Bromoform	680	U
108-10-1	4-Methyl-2-pentanone	1400	U
591-78-6	2-Hexanone	1400	U
127-18-4	Tetrachloroethene	680	U
79-34-5	1,1,2,2-Tetrachloroethane	680	U
108-88-3	Toluene	680	U
108-90-7	Chlorobenzene	680	U
100-41-4	Ethylbenzene	680	U
100-42-5	Styrene	680	U
1330-20-7	Total xylenes	680	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB06

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71315A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V2870

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 7 Date Analyzed: 02/06/92

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

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	5	U
67-64-1	Acetone	11	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	20	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB07

Chem Tech Disc

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71316A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2871

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 23 Date Analyzed: 02/06/92

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene chloride	6	U
67-64-1	Acetone	13	U
75-15-0	Carbon disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon tetrachloride	6	U
108-05-4	Vinyl acetate	13	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total xylenes	6	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB08
MW-03D 3'

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6185 SAS No.: _____ SDG No.: 12

Matrix: (soil/water) SOIL Lab Sample ID: 71470A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2914

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. 10 Date Analyzed: 02/10/92

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

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	6	U
67-64-1	Acetone	11	U
75-15-0	Carbon disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon tetrachloride	6	U
108-05-4	Vinyl acetate	11	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total xylenes	6	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB08

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6185 SAS No.: _____ SDG No.: 12

Matrix: (soil/water) SOIL Lab Sample ID: 71493

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T3421

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. 10 dec. ____ Date Extracted: 02/10/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/24/92

GPC Cleanup: (Y/N) Y pH: 10.61 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	730	U
111-44-4	bis(2-Chloroethyl)ether	730	U
95-57-8	2-Chlorophenol	730	U
541-73-1	1,3-Dichlorobenzene	730	U
106-46-7	1,4-Dichlorobenzene	730	U
100-51-6	Benzyl alcohol	730	U
95-50-1	1,2-Dichlorobenzene	730	U
95-48-7	2-Methylphenol	730	U
108-60-1	bis(2-Chloroisopropyl)ether	730	U
106-44-5	3- & 4- Methylphenol	730	U
621-64-7	N-Nitroso-di-n-propylamine	730	U
67-72-1	Hexachloroethane	730	U
98-95-3	Nitrobenzene	730	U
78-59-1	Isophorone	730	U
88-75-5	2-Nitrophenol	730	U
105-67-9	2,4-Dimethylphenol	730	U
65-85-0	Benzoic Acid	3600	U
111-91-1	bis(2-Chloroethoxy)methane	730	U
120-83-2	2,4-Dichlorophenol	730	U
120-82-1	1,2,4-Trichlorobenzene	730	U
91-20-3	Naphthalene	3500	
106-47-8	4-Chloroaniline	730	U
87-68-3	Hexachlorobutadiene	730	U
59-50-7	4-Chloro-3-methylphenol	730	U
91-57-6	2-Methylnaphthalene	1600	
77-47-4	Hexachlorocyclopentadiene	730	U
88-06-2	2,4,6-Trichlorophenol	730	U
95-95-4	2,4,5-Trichlorophenol	3600	U
91-58-7	2-Chloronaphthalene	730	U
88-74-4	2-Nitroaniline	3600	U
131-11-3	Dimethylphthalate	730	U
208-96-8	Acenaphthylene	730	U
606-20-2	2,6-Dinitrotoluene	730	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB08

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6185 SAS No.: _____ SDG No.: 12

Matrix: (soil/water) SOIL Lab Sample ID: 71493

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T3421

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. 10 dec. ____ Date Extracted: 02/10/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/24/92

GPC Cleanup: (Y/N) Y pH: 10.61 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3600	U
83-32-9	Acenaphthene	2500	
51-28-5	2,4-Dinitrophenol	3600	U
100-02-7	4-Nitrophenol	3600	U
132-64-9	Dibenzofuran	2200	
121-14-2	2,4-Dinitrotoluene	730	U
84-66-2	Diethylphthalate	730	U
7005-72-3	4-Chlorophenyl-phenylether	730	U
86-73-7	Fluorene	3600	
100-01-6	4-Nitroaniline	3600	U
534-52-1	4,6-Dinitro-2-methylphenol	3600	U
86-30-6	N-nitrosodiphenylamine (1)	730	U
101-55-3	4-Bromophenyl-phenylether	730	U
118-74-1	Hexachlorobenzene	730	U
87-86-5	Pentachlorophenol	3600	U
85-01-8	Phenanthrene	6200	
120-12-7	Anthracene	1700	
84-74-2	Di-n-butylphthalate	730	U
206-44-0	Fluoranthene	5000	
129-00-0	Pyrene	3600	
85-68-7	Butylbenzylphthalate	730	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)anthracene	1800	
218-01-9	Chrysene	1800	
117-81-7	bis(2-Ethylhexyl)phthalate	2300	
117-84-0	Di-n-octyl phthalate	730	U
205-99-2	Benzo(b)fluoranthene	1500	
207-08-9	Benzo(k)fluoranthene	1700	
50-32-8	Benzo(a)pyrene	1300	
193-39-5	Indeno(1,2,3-cd)pyrene	650	J
53-70-3	Dibenz(a,h)anthracene	730	U
191-24-2	Benzo(g,h,i)perylene	470	J

(1) - Cannot be separated from Diphenylamine

100082

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSB08

Lab Name: VERSAR, INC. Contract: _____

Lab Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71495

Sample wt/vol: 30 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. ___ dec. _____ Date Extracted: 02/10/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/25/92

GPC Cleanup: (Y/N) Y pH: 10.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) (UG/KG)	Q	
319-84-6	alpha-BHC	4.5	U	
319-85-7	beta-BHC	4.5	U	
319-86-8	delta-BHC	4.5	U	
58-89-9	gamma-BHC (Lindane)	4.5	U	
76-44-8	Heptachlor	4.5	U	
309-00-2	Aldrin	4.5 ~~18~~	U	DSB 3/3/92
1024-57-3	Heptachlor Epoxide	4.5	U	
959-98-8	Endosulfan I	4.5	U	
60-57-1	Dieldrin	9.0	U	
72-55-9	4,4'-DDE	9.0	U	
72-20-8	Endrin	9.0	U	
33213-65-9	Endosulfan II	16		
72-54-8	4,4'-DDD	9.0	U	
1031-07-8	Endosulfan Sulfate	9.0	U	
50-29-3	4,4'-DDT	9.0	U	
72-43-5	Methoxychlor	45	U	
53494-70-5	Endrin Ketone	9.0	U	
5103-71-9	alpha-Chlordane	45	U	
5103-74-2	gamma-Chlordane	45	U	
8001-35-2	Toxaphene	90	U	
12674-11-2	Aroclor-1016	45	U	
11104-28-2	Aroclor-1221	45	U	
11141-16-5	Aroclor-1232	45	U	
53469-21-9	Aroclor-1242	45	U	
12672-29-6	Aroclor-1248	45	U	
11097-69-1	Aroclor-1254	180		
11096-82-5	Aroclor-1260	90	U	

2/28/92

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB08

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW03__

Matrix (soil/water): SOIL_ Lab Sample ID: 71485_____

Level (low/med): LOW__ Date Received: 02/06/92

% Solids: _90.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10600			P
7440-36-0	Antimony	10.2	U	N	P
7440-38-2	Arsenic	6.2			F
7440-39-3	Barium	58.0		E	P
7440-41-7	Beryllium	0.58	B		P
7440-43-9	Cadmium	5.0		N	P
7440-70-2	Calcium	86700			P
7440-47-3	Chromium	12.3		*	P
7440-48-4	Cobalt	5.3	B		P
7440-50-8	Copper	51.0		EN	P
7439-89-6	Iron	17400		E	P
7439-92-1	Lead	25.0			F
7439-95-4	Magnesium	7750			P
7439-96-5	Manganese	746		E	P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	15.3			P
7440-09-7	Potassium	1880			P
7782-49-2	Selenium	0.43	U	N	F
7440-22-4	Silver	2.1	B		P
7440-23-5	Sodium	175	B		P
7440-28-0	Thallium	0.22	U		F
7440-62-2	Vanadium	18.6			P
7440-66-6	Zinc	104		EN*	P
	Cyanide	0.54	U	N*	AS

Color Before: GREY_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: YES___

Comments:

ARTIFACTS:_ROCKS_____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSD01

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) SOIL Lab Sample ID: 71202A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2817

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. 33 Date Analyzed: 02/04/92

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

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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSD01

Lab Name: VERSAR, INC. Contract: _____

Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71208

Sample wt/vol: 30.02 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: ~~02/04/92~~ 1/31/92 2/1/92

% Moisture: not dec. 42.70 dec. _____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/14/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	7.0	U
319-85-7	beta-BHC	7.0	U
319-86-8	delta-BHC	7.0	U
58-89-9	gamma-BHC (Lindane)	7.0	U
76-44-8	Heptachlor	7.0	U
309-00-2	Aldrin	7.0	U
1024-57-3	Heptachlor Epoxide	7.0	U
959-98-8	Endosulfan I	7.0	U
60-57-1	Dieldrin	14	U
72-55-9	4,4'-DDE	14	U
72-20-8	Endrin	14	U
33213-65-9	Endosulfan II	14	U
72-54-8	4,4'-DDD	14	U
1031-07-8	Endosulfan Sulfate	14	U
50-29-3	4,4'-DDT	14	U
72-43-5	Methoxychlor	70	U
53494-70-5	Endrin Ketone	14	U
5103-71-9	alpha-Chlordane	70	U
5103-74-2	gamma-Chlordane	70	U
8001-35-2	Toxaphene	140	U
12674-11-2	Aroclor-1016	70	U
11104-28-2	Aroclor-1221	70	U
11141-16-5	Aroclor-1232	70	U
53469-21-9	Aroclor-1242	70	U
12672-29-6	Aroclor-1248	70	U
11097-69-1	Aroclor-1254	140	U
11096-82-5	Aroclor-1260	140	U

2/18/92

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSD01

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): SOIL_ Lab Sample ID: 71213_____

Level (low/med): LOW__ Date Received: 01/31/92

% Solids: _66.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7610		*	P
7440-36-0	Antimony	3.9	U	N	P
7440-38-2	Arsenic	6.4			F
7440-39-3	Barium	70.2			P
7440-41-7	Beryllium	0.57	B		P
7440-43-9	Cadmium	1.1	U	N*	P
7440-70-2	Calcium	1440		*	P
7440-47-3	Chromium	9.1		*	P
7440-48-4	Cobalt	8.0	B		P
7440-50-8	Copper	15.3		N*	P
7439-89-6	Iron	23900		*	P
7439-92-1	Lead	23.7			F
7439-95-4	Magnesium	2320		*	P
7439-96-5	Manganese	453		*	P
7439-97-6	Mercury	0.14	U		CV
7440-02-0	Nickel	16.8			P
7440-09-7	Potassium	724	B		P
7782-49-2	Selenium	0.52	U	W	F
7440-22-4	Silver	0.98	B		P
7440-23-5	Sodium	67.2	B		P
7440-28-0	Thallium	0.26	U		F
7440-62-2	Vanadium	10.5	B		P
7440-66-6	Zinc	172		N*	P
	Cyanide	0.75	U		AS

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: YES___

Comments:

ARTIFACTS_=_STICKS,_GRASS,_AND_STONES

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSD02

Name: VERSAR INC. Contract:

Lab Code: VERSAR Case No.: 6158 SAS No.: SDG No.: 10

Matrix: (soil/water) SOIL Lab Sample ID: 71204A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2821

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. 43 Date Analyzed: 02/04/92

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

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

100080

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSD02

Lab Name: VERSAR, INC. Contract: _____

Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71210

Sample wt/vol: 30.00 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: ~~02/04/92~~ 1/31/92 CEB 1/24/92

% Moisture: not dec. 44.60 dec. _____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/14/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	7.2	U
319-85-7	beta-BHC	7.2	U
319-86-8	delta-BHC	7.2	U
58-89-9	gamma-BHC (Lindane)	7.2	U
76-44-8	Heptachlor	7.2	U
309-00-2	Aldrin	7.2	U
1024-57-3	Heptachlor Epoxide	7.2	U
959-98-8	Endosulfan I	7.2	U
60-57-1	Dieldrin	14	U
72-55-9	4,4'-DDE	14	U
72-20-8	Endrin	14	U
33213-65-9	Endosulfan II	14	U
72-54-8	4,4'-DDD	14	U
1031-07-8	Endosulfan Sulfate	14	U
50-29-3	4,4'-DDT	14	U
72-43-5	Methoxychlor	72	U
53494-70-5	Endrin Ketone	14	U
5103-71-9	alpha-Chlordane	72	U
5103-74-2	gamma-Chlordane	72	U
8001-35-2	Toxaphene	150	U
12674-11-2	Aroclor-1016	72	U
11104-28-2	Aroclor-1221	72	U
11141-16-5	Aroclor-1232	72	U
53469-21-9	Aroclor-1242	72	U
12672-29-6	Aroclor-1248	72	U
11097-69-1	Aroclor-1254	150	U
11096-82-5	Aroclor-1260	150	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSD02

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): SOIL_ Lab Sample ID: 71215_____

Level (low/med): LOW__ Date Received: 01/31/92

% Solids: _57.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14000		*	P
7440-36-0	Antimony	4.9	U	N	P
7440-38-2	Arsenic	8.3			F
7440-39-3	Barium	120			P
7440-41-7	Beryllium	0.71	B		P
7440-43-9	Cadmium	71.0		N*	P
7440-70-2	Calcium	3030		*	P
7440-47-3	Chromium	19.1		*	P
7440-48-4	Cobalt	11.2	B		P
7440-50-8	Copper	136		N*	P
7439-89-6	Iron	27600		*	P
7439-92-1	Lead	31.0			F
7439-95-4	Magnesium	3440		*	P
7439-96-5	Manganese	593		*	P
7439-97-6	Mercury	0.17	U		CV
7440-02-0	Nickel	37.9			P
7440-09-7	Potassium	1500			P
7782-49-2	Selenium	0.56	U	W	F
7440-22-4	Silver	1.4	B		P
7440-23-5	Sodium	115	B		P
7440-28-0	Thallium	0.28	U		F
7440-62-2	Vanadium	19.8			P
7440-66-6	Zinc	131		N*	P
	Cyanide	0.86	U		AS

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: YES___

Comments:

ARTIFACTS_=_ROOTS,_GRASS,_AND_STONES_____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSD03

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) SOIL Lab Sample ID: 71205A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2842

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. 46 Date Analyzed: 02/05/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	19	U
74-83-9	Bromomethane	19	U
75-01-4	Vinyl chloride	19	U
75-00-3	Chloroethane	19	U
75-09-2	Methylene chloride	9	U
67-64-1	Acetone	19	U
75-15-0	Carbon disulfide	9	U
75-35-4	1,1-Dichloroethene	9	U
75-34-3	1,1-Dichloroethane	9	U
540-59-0	1,2-Dichloroethene (total)	9	U
67-66-3	Chloroform	9	U
107-06-2	1,2-Dichloroethane	9	U
78-93-3	2-Butanone	19	U
71-55-6	1,1,1-Trichloroethane	9	U
56-23-5	Carbon tetrachloride	9	U
108-05-4	Vinyl acetate	19	U
75-27-4	Bromodichloromethane	9	U
78-87-5	1,2-Dichloropropane	9	U
10061-01-5	cis-1,3-Dichloropropene	9	U
79-01-6	Trichloroethene	9	U
124-48-1	Dibromochloromethane	9	U
79-00-5	1,1,2-Trichloroethane	9	U
71-43-2	Benzene	9	U
10061-02-6	Trans-1,3-dichloropropene	9	U
75-25-2	Bromoform	9	U
108-10-1	4-Methyl-2-pentanone	19	U
591-78-6	2-Hexanone	19	U
127-18-4	Tetrachloroethene	9	U
79-34-5	1,1,2,2-Tetrachloroethane	9	U
108-88-3	Toluene	9	U
108-90-7	Chlorobenzene	9	U
100-41-4	Ethylbenzene	9	U
100-42-5	Styrene	9	U
1330-20-7	Total xylenes	10	

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSD03

Lab Name: VERSAR, INC. Contract: _____

Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71211

Sample wt/vol: 30.14 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: ~~02/04/92~~ 1/31/92 2/7/92

% Moisture: not dec. 40.80 dec. _____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/14/92

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	6.7	U
319-85-7	beta-BHC	6.7	U
319-86-8	delta-BHC	6.7	U
58-89-9	gamma-BHC (Lindane)	6.7	U
76-44-8	Heptachlor	6.7	U
309-00-2	Aldrin	6.7	U
1024-57-3	Heptachlor Epoxide	6.7	U
959-98-8	Endosulfan I	6.7	U
60-57-1	Dieldrin	13	U
72-55-9	4,4'-DDE	13	U
72-20-8	Endrin	13	U
33213-65-9	Endosulfan II	13	U
72-54-8	4,4'-DDD	13	U
1031-07-8	Endosulfan Sulfate	13	U
50-29-3	4,4'-DDT	13	U
72-43-5	Methoxychlor	67	U
53494-70-5	Endrin Ketone	13	U
5103-71-9	alpha-Chlordane	67	U
5103-74-2	gamma-Chlordane	67	U
8001-35-2	Toxaphene	140	U
12674-11-2	Aroclor-1016	67	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	67	U
53469-21-9	Aroclor-1242	67	U
12672-29-6	Aroclor-1248	67	U
11097-69-1	Aroclor-1254	140	U
11096-82-5	Aroclor-1260	140	U

KO 2/18/92

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSD03

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): SOIL_ Lab Sample ID: 71216_____

Level (low/med): LOW__ Date Received: 01/31/92

% Solids: _53.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16700		*	P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	10.8			F
7440-39-3	Barium	157			P
7440-41-7	Beryllium	1.1	B		P
7440-43-9	Cadmium	31.8		N*	P
7440-70-2	Calcium	4280		*	P
7440-47-3	Chromium	20.2		*	P
7440-48-4	Cobalt	13.6	B		P
7440-50-8	Copper	64.4		N*	P
7439-89-6	Iron	33300		*	P
7439-92-1	Lead	26.7			F
7439-95-4	Magnesium	4090		*	P
7439-96-5	Manganese	1180		*	P
7439-97-6	Mercury	0.17	U		CV
7440-02-0	Nickel	32.2			P
7440-09-7	Potassium	2140			P
7782-49-2	Selenium	0.60	U	W	F
7440-22-4	Silver	1.2	B		P
7440-23-5	Sodium	184	B		P
7440-28-0	Thallium	0.30	U		F
7440-62-2	Vanadium	23.2			P
7440-66-6	Zinc	186		N*	P
	Cyanide	0.93	U		AS

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: YES___

Comments:
ARTIFACTS_=_ROOTS,_GRASS,_AND_STONES

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSD04

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) SOIL Lab Sample ID: 71203A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2818

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. 64 Date Analyzed: 02/04/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	28	U
74-83-9	Bromomethane	28	U
75-01-4	Vinyl chloride	28	U
75-00-3	Chloroethane	28	U
75-09-2	Methylene chloride	14	U
67-64-1	Acetone	28	U
75-15-0	Carbon disulfide	14	U
75-35-4	1,1-Dichloroethene	14	U
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene (total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	28	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon tetrachloride	14	U
108-05-4	Vinyl acetate	28	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	28	U
591-78-6	2-Hexanone	28	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	Total xylenes	14	U

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSD04

Lab Name: VERSAR, INC. Contract: _____

Lab Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71209

Sample wt/vol: 30.04 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: ~~02/04/92~~ 1/31/92 2/01/92

% Moisture: not dec. 64.90 dec. _____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/14/92

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	11	U
319-85-7	beta-BHC	11	U
319-86-8	delta-BHC	11	U
58-89-9	gamma-BHC (Lindane)	11	U
76-44-8	Heptachlor	11	U
309-00-2	Aldrin	57	
1024-57-3	Heptachlor Epoxide	11	U
959-98-8	Endosulfan I	11	U
60-57-1	Dieldrin	23	U
72-55-9	4,4'-DDE	23	U
72-20-8	Endrin	23	U
33213-65-9	Endosulfan II	23	U
72-54-8	4,4'-DDD	23	U
1031-07-8	Endosulfan Sulfate	24	
50-29-3	4,4'-DDT	23	U
72-43-5	Methoxychlor	110	U
53494-70-5	Endrin Ketone	23	U
5103-71-9	alpha-Chlordane	110	U
5103-74-2	gamma-Chlordane	110	U
8001-35-2	Toxaphene	230	U
12674-11-2	Aroclor-1016	110	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	110	U
53469-21-9	Aroclor-1242	110	U
12672-29-6	Aroclor-1248	110	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSD04

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): SOIL_ Lab Sample ID: 71214_____

Level (low/med): LOW__ Date Received: 01/31/92

% Solids: _36.1

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	7.5	U	N	P
7440-38-2	Arsenic	7.4			F
7440-39-3	Barium	146			P
7440-41-7	Beryllium	1.3	B		P
7440-43-9	Cadmium	11.6		N*	P
7440-70-2	Calcium	25600		*	P
7440-47-3	Chromium	44.3		*	P
7440-48-4	Cobalt	10	B		P
7440-50-8	Copper	204		N*	P
7439-89-6	Iron	27200		*	P
7439-92-1	Lead	189			F
7439-95-4	Magnesium	11000		*	P
7439-96-5	Manganese	235		*	P
7439-97-6	Mercury	0.26	U		CV
7440-02-0	Nickel	35.5			P
7440-09-7	Potassium	2570			P
7782-49-2	Selenium	0.97	U		F
7440-22-4	Silver	2.5	B		P
7440-23-5	Sodium	225	B		P
7440-28-0	Thallium	0.49	U		F
7440-62-2	Vanadium	28.2			P
7440-66-6	Zinc	612		N*	P
	Cyanide	1.4	U		AS

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: YES___

Comments:

ARTIFACTS_=_STICKS,_GRASS,_AND_STONES

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSD05

Name: VERSAR INC. Contract:

Lab Code: VERSAR Case No.: 6158 SAS No.: SDG No.: 10

Matrix: (soil/water) SOIL Lab Sample ID: 71206A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2843

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. 42 Date Analyzed: 02/05/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene chloride	9	U
67-64-1	Acetone	17	U
75-15-0	Carbon disulfide	9	U
75-35-4	1,1-Dichloroethene	9	U
75-34-3	1,1-Dichloroethane	9	U
540-59-0	1,2-Dichloroethene (total)	9	U
67-66-3	Chloroform	9	U
107-06-2	1,2-Dichloroethane	9	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	9	U
56-23-5	Carbon tetrachloride	9	U
108-05-4	Vinyl acetate	17	U
75-27-4	Bromodichloromethane	9	U
78-87-5	1,2-Dichloropropane	9	U
10061-01-5	cis-1,3-Dichloropropene	9	U
79-01-6	Trichloroethene	9	U
124-48-1	Dibromochloromethane	9	U
79-00-5	1,1,2-Trichloroethane	9	U
71-43-2	Benzene	9	U
10061-02-6	Trans-1,3-dichloropropene	9	U
75-25-2	Bromoform	9	U
108-10-1	4-Methyl-2-pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	9	U
79-34-5	1,1,2,2-Tetrachloroethane	9	U
108-88-3	Toluene	9	U
108-90-7	Chlorobenzene	9	U
100-41-4	Ethylbenzene	9	U
100-42-5	Styrene	9	U
1330-20-7	Total xylenes	8	J

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSD05

Lab Name: VERSAR, INC. Contract: _____

Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71217

Sample wt/vol: 30.05 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: ~~02/04/92~~ 1/31/92 CCB 2/21/92

% Moisture: not dec. 42.10 dec. _____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/14/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	6.9	U
319-85-7	beta-BHC	6.9	U
319-86-8	delta-BHC	6.9	U
58-89-9	gamma-BHC (Lindane)	6.9	U
76-44-8	Heptachlor	6.9	U
309-00-2	Aldrin	6.9	U
1024-57-3	Heptachlor Epoxide	6.9	U
959-98-8	Endosulfan I	6.9	U
60-57-1	Dieldrin	14	U
72-55-9	4,4'-DDE	14	U
72-20-8	Endrin	14	U
33213-65-9	Endosulfan II	14	U
72-54-8	4,4'-DDD	14	U
1031-07-8	Endosulfan Sulfate	14	U
50-29-3	4,4'-DDT	14	U
72-43-5	Methoxychlor	69	U
53494-70-5	Endrin Ketone	14	U
5103-71-9	alpha-Chlordane	69	U
5103-74-2	gamma-Chlordane	69	U
8001-35-2	Toxaphene	140	U
12674-11-2	Aroclor-1016	69	U
11104-28-2	Aroclor-1221	69	U
11141-16-5	Aroclor-1232	69	U
53469-21-9	Aroclor-1242	69	U
12672-29-6	Aroclor-1248	69	U
11097-69-1	Aroclor-1254	140	U
11096-82-5	Aroclor-1260	140	U

KO 2/18/92

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSD05

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): SOIL_ Lab Sample ID: 71217_____

Level (low/med): LOW__ Date Received: 01/31/92

% Solids: _57.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14100		*	P
7440-36-0	Antimony	4.8	U	N	P
7440-38-2	Arsenic	13.4			F
7440-39-3	Barium	133			P
7440-41-7	Beryllium	0.82	B		P
7440-43-9	Cadmium	31.2		N*	P
7440-70-2	Calcium	3760		*	P
7440-47-3	Chromium	17.1		*	P
7440-48-4	Cobalt	13.4	B		P
7440-50-8	Copper	60.8		N*	P
7439-89-6	Iron	31700		*	P
7439-92-1	Lead	38.7			F
7439-95-4	Magnesium	3730		*	P
7439-96-5	Manganese	1250		*	P
7439-97-6	Mercury	0.17	U		CV
7440-02-0	Nickel	31.5			P
7440-09-7	Potassium	1430			P
7782-49-2	Selenium	0.64	U		F
7440-22-4	Silver	1.3	B		P
7440-23-5	Sodium	127	B		P
7440-28-0	Thallium	0.32	U		F
7440-62-2	Vanadium	19.6			P
7440-66-6	Zinc	200		N*	P
	Cyanide	0.86	U		AS

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: YES___

Comments:

ARTIFACTS_=_STICKS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSL01DL

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71309DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: S5449

Level: (low/med) MED Date Received: 02/04/92

% Moisture: not dec. 91 Date Analyzed: 02/07/92

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	14000	U
74-83-9	Bromomethane	14000	U
75-01-4	Vinyl chloride	14000	U
75-00-3	Chloroethane	14000	U
75-09-2	Methylene chloride	13000	D
67-64-1	Acetone	14000	U
75-15-0	Carbon disulfide	6900	U
75-35-4	1,1-Dichloroethene	6900	U
75-34-3	1,1-Dichloroethane	6900	U
540-59-0	1,2-Dichloroethene (total)	6900	U
67-66-3	Chloroform	70000	D
107-06-2	1,2-Dichloroethane	6900	U
78-93-3	2-Butanone	14000	U
71-55-6	1,1,1-Trichloroethane	6900	U
56-23-5	Carbon tetrachloride	6900	U
108-05-4	Vinyl acetate	14000	U
75-27-4	Bromodichloromethane	6900	U
78-87-5	1,2-Dichloropropane	6900	U
10061-01-5	cis-1,3-Dichloropropene	6900	U
79-01-6	Trichloroethene	6000	DJ
124-48-1	Dibromochloromethane	6900	U
79-00-5	1,1,2-Trichloroethane	6900	U
71-43-2	Benzene	6900	U
10061-02-6	Trans-1,3-dichloropropene	6900	U
75-25-2	Bromoform	6900	U
108-10-1	4-Methyl-2-pentanone	14000	U
591-78-6	2-Hexanone	14000	U
127-18-4	Tetrachloroethene	6900	U
79-34-5	1,1,2,2-Tetrachloroethane	6900	U
108-88-3	Toluene	6900	U
108-90-7	Chlorobenzene	6900	U
100-41-4	Ethylbenzene	6900	U
100-42-5	Styrene	6900	U
1330-20-7	Total xylenes	6900	U

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

APSL01

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71341

Sample wt/vol: 30.2 (g/mL) G Lab File ID: T3415

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 91 dec. ____ Date Extracted: 02/07/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/24/92

GPC Cleanup: (Y/N) N pH: 7.48 Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	18000	U
111-44-4	bis(2-Chloroethyl)ether	18000	U
95-57-8	2-Chlorophenol	18000	U
541-73-1	1,3-Dichlorobenzene	18000	U
106-46-7	1,4-Dichlorobenzene	18000	U
100-51-6	Benzyl alcohol	18000	U
95-50-1	1,2-Dichlorobenzene	18000	U
95-48-7	2-Methylphenol	18000	U
108-60-1	bis(2-Chloroisopropyl)ether	18000	U
106-44-5	3- & 4- Methylphenol	18000	U
621-64-7	N-Nitroso-di-n-propylamine	18000	U
67-72-1	Hexachloroethane	18000	U
98-95-3	Nitrobenzene	18000	U
78-59-1	Isophorone	18000	U
88-75-5	2-Nitrophenol	18000	U
105-67-9	2,4-Dimethylphenol	18000	U
65-85-0	Benzoic Acid	88000	U
111-91-1	bis(2-Chloroethoxy)methane	18000	U
120-83-2	2,4-Dichlorophenol	18000	U
120-82-1	1,2,4-Trichlorobenzene	18000	U
91-20-3	Naphthalene	18000	U
106-47-8	4-Chloroaniline	18000	U
87-68-3	Hexachlorobutadiene	18000	U
59-50-7	4-Chloro-3-methylphenol	18000	U
91-57-6	2-Methylnaphthalene	18000	U
77-47-4	Hexachlorocyclopentadiene	18000	U
88-06-2	2,4,6-Trichlorophenol	18000	U
95-95-4	2,4,5-Trichlorophenol	88000	U
91-58-7	2-Chloronaphthalene	18000	U
88-74-4	2-Nitroaniline	88000	U
131-11-3	Dimethylphthalate	18000	U
208-96-8	Acenaphthylene	18000	U
606-20-2	2,6-Dinitrotoluene	18000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSL01

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71341

Sample wt/vol: 30.2 (g/mL) G Lab File ID: T3415

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 91 dec. ____ Date Extracted: 02/07/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/24/92

GPC Cleanup: (Y/N) N pH: 7.48 Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	88000	U
83-32-9	Acenaphthene	18000	U
51-28-5	2,4-Dinitrophenol	88000	U
100-02-7	4-Nitrophenol	88000	U
132-64-9	Dibenzofuran	18000	U
121-14-2	2,4-Dinitrotoluene	18000	U
84-66-2	Diethylphthalate	18000	U
7005-72-3	4-Chlorophenyl-phenylether	18000	U
86-73-7	Fluorene	18000	U
100-01-6	4-Nitroaniline	88000	U
534-52-1	4,6-Dinitro-2-methylphenol	88000	U
86-30-6	N-nitrosodiphenylamine (1)	18000	U
101-55-3	4-Bromophenyl-phenylether	18000	U
118-74-1	Hexachlorobenzene	18000	U
87-86-5	Pentachlorophenol	88000	U
85-01-8	Phenanthrene	18000	U
120-12-7	Anthracene	18000	U
84-74-2	Di-n-butylphthalate	18000	U
206-44-0	Fluoranthene	5900	JX
129-00-0	Pyrene	18000	U
85-68-7	Butylbenzylphthalate	18000	U
91-94-1	3,3'-Dichlorobenzidine	36000	U
56-55-3	Benzo(a)anthracene	18000	U
218-01-9	Chrysene	18000	U
117-81-7	bis(2-Ethylhexyl)phthalate	36000	B
117-84-0	Di-n-octyl phthalate	18000	U
205-99-2	Benzo(b)fluoranthene } total		Z
207-08-9	Benzo(k)fluoranthene } total	5200	JXZ
50-32-8	Benzo(a)pyrene	18000	U
193-39-5	Indeno(1,2,3-cd)pyrene	18000	U
53-70-3	Dibenz(a,h)anthracene	18000	U
191-24-2	Benzo(g,h,i)perylene	18000	U

(1) - Cannot be separated from Diphenylamine

2/3 3/3/92

100219

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSL01

Lab Name: VERSAR, INC. Contract: _____

Lab Code: VERSAR Case No.: HYRDOSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71347

Sample wt/vol: 30 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 90 dec. _____ Date Extracted: 02/07/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/25/92

GPC Cleanup: (Y/N) Y pH: 7.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) (UG/KG)	Q
319-84-6	alpha-BHC	41	U
319-85-7	beta-BHC	41	U
319-86-8	delta-BHC	41	U
58-89-9	gamma-BHC (Lindane)	41	U
76-44-8	Heptachlor	41	U
309-00-2	Aldrin	310	
1024-57-3	Heptachlor Epoxide	150	
959-98-8	Endosulfan I	41	U
60-57-1	Dieldrin	82	U
72-55-9	4,4'-DDE	130	
72-20-8	Endrin	82	U
33213-65-9	Endosulfan II	82	U
72-54-8	4,4'-DDD	82	U
1031-07-8	Endosulfan Sulfate	82	U
50-29-3	4,4'-DDT	82	U
72-43-5	Methoxychlor	410	U
53494-70-5	Endrin Ketone	82	U
5103-71-9	alpha-Chlordane	410	U
5103-74-2	gamma-Chlordane	410	U
8001-35-2	Toxaphene	820	U
12674-11-2	Aroclor-1016	410	U
11104-28-2	Aroclor-1221	410	U
11141-16-5	Aroclor-1232	410	U
53469-21-9	Aroclor-1242	410	U
12672-29-6	Aroclor-1248	410	U
11097-69-1	Aroclor-1254	3100	
11096-82-5	Aroclor-1260	820	U

2/28/92

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SL01

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): SOIL_ Lab Sample ID: 71324_____

Level (low/med): LOW__ Date Received: 02/04/92

% Solids: __9.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1500			P
7440-36-0	Antimony	35.2	U		P
7440-38-2	Arsenic	4.0	U		F
7440-39-3	Barium	391	B		P
7440-41-7	Beryllium	4.1	U		P
7440-43-9	Cadmium	10300			P
7440-70-2	Calcium	60900		*	P
7440-47-3	Chromium	1340			P
7440-48-4	Cobalt	10.5	B		P
7440-50-8	Copper	335			P
7439-89-6	Iron	55400			P
7439-92-1	Lead	2880			F
7439-95-4	Magnesium	8700	B		P
7439-96-5	Manganese	381			P
7439-97-6	Mercury	1.1	U	N	CV
7440-02-0	Nickel	357			P
7440-09-7	Potassium	1310	B		P
7782-49-2	Selenium	4.0	U	W	F
7440-22-4	Silver	4.1	U		P
7440-23-5	Sodium	22200			P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	6.2	U		P
7440-66-6	Zinc	31400			P
	Cyanide	179		N	AS

Color Before: BLACK____ Clarity Before: _____ Texture: FINE__

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSL02DL

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71310DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: S5450

Level: (low/med) MED Date Received: 02/04/92

% Moisture: not dec. 92 Date Analyzed: 02/07/92

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

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

CAS NO.	COMPOUND		
74-87-3	Chloromethane	16000	U
74-83-9	Bromomethane	16000	U
75-01-4	Vinyl chloride	16000	U
75-00-3	Chloroethane	16000	U
75-09-2	Methylene chloride	12000	D
67-64-1	Acetone	16000	U
75-15-0	Carbon disulfide	7800	U
75-35-4	1,1-Dichloroethene	7800	U
75-34-3	1,1-Dichloroethane	7800	U
540-59-0	1,2-Dichloroethene (total)	7800	U
67-66-3	Chloroform	84000	D
107-06-2	1,2-Dichloroethane	7800	U
78-93-3	2-Butanone	16000	U
71-55-6	1,1,1-Trichloroethane	7800	U
56-23-5	Carbon tetrachloride	7800	U
108-05-4	Vinyl acetate	16000	U
75-27-4	Bromodichloromethane	7800	U
78-87-5	1,2-Dichloropropane	7800	U
10061-01-5	cis-1,3-Dichloropropene	7800	U
79-01-6	Trichloroethene	7100	DJ
124-48-1	Dibromochloromethane	7800	U
79-00-5	1,1,2-Trichloroethane	7800	U
71-43-2	Benzene	7800	U
10061-02-6	Trans-1,3-dichloropropene	7800	U
75-25-2	Bromoform	7800	U
108-10-1	4-Methyl-2-pentanone	16000	U
591-78-6	2-Hexanone	16000	U
127-18-4	Tetrachloroethene	7800	U
79-34-5	1,1,2,2-Tetrachloroethane	7800	U
108-88-3	Toluene	7800	U
108-90-7	Chlorobenzene	7800	U
100-41-4	Ethylbenzene	7800	U
100-42-5	Styrene	7800	U
1330-20-7	Total xylenes	7800	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSL02

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71342

Sample wt/vol: 30.2 (g/mL) G Lab File ID: T2398

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 89 dec. ____ Date Extracted: 02/07/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/21/92

GPC Cleanup: (Y/N) N pH: 7.82 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	6000	U
111-44-4	bis(2-Chloroethyl)ether	6000	U
95-57-8	2-Chlorophenol	6000	U
541-73-1	1,3-Dichlorobenzene	6000	U
106-46-7	1,4-Dichlorobenzene	6000	U
100-51-6	Benzyl alcohol	6000	U
95-50-1	1,2-Dichlorobenzene	6000	U
95-48-7	2-Methylphenol	6000	U
108-60-1	bis(2-Chloroisopropyl)ether	6000	U
106-44-5	3- & 4- Methylphenol	6000	U
621-64-7	N-Nitroso-di-n-propylamine	6000	U
67-72-1	Hexachloroethane	6000	U
98-95-3	Nitrobenzene	6000	U
78-59-1	Isophorone	6000	U
88-75-5	2-Nitrophenol	6000	U
105-67-9	2,4-Dimethylphenol	6000	U
65-85-0	Benzoic Acid	29000	U
111-91-1	bis(2-Chloroethoxy)methane	6000	U
120-83-2	2,4-Dichlorophenol	6000	U
120-82-1	1,2,4-Trichlorobenzene	6000	U
91-20-3	Naphthalene	6000	U
106-47-8	4-Chloroaniline	6000	U
87-68-3	Hexachlorobutadiene	6000	U
59-50-7	4-Chloro-3-methylphenol	6000	U
91-57-6	2-Methylnaphthalene	6000	U
77-47-4	Hexachlorocyclopentadiene	6000	U
88-06-2	2,4,6-Trichlorophenol	6000	U
95-95-4	2,4,5-Trichlorophenol	29000	U
91-58-7	2-Chloronaphthalene	6000	U
88-74-4	2-Nitroaniline	29000	U
131-11-3	Dimethylphthalate	6000	U
208-96-8	Acenaphthylene	6000	U
606-20-2	2,6-Dinitrotoluene	6000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSL02

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71342

Sample wt/vol: 30.2 (g/mL) G Lab File ID: T2398

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 89 dec. ____ Date Extracted: 02/07/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/21/92

GPC Cleanup: (Y/N) N pH: 7.82 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	29000	U
83-32-9	Acenaphthene	6000	U
51-28-5	2,4-Dinitrophenol	29000	U
100-02-7	4-Nitrophenol	29000	U
132-64-9	Dibenzofuran	6000	U
121-14-2	2,4-Dinitrotoluene	6000	U
84-66-2	Diethylphthalate	6000	U
7005-72-3	4-Chlorophenyl-phenylether	6000	U
86-73-7	Fluorene	3000	JX
100-01-6	4-Nitroaniline	29000	U
534-52-1	4,6-Dinitro-2-methylphenol	29000	U
86-30-6	N-nitrosodiphenylamine (1)	6000	U
101-55-3	4-Bromophenyl-phenylether	6000	U
118-74-1	Hexachlorobenzene	6000	U
87-86-5	Pentachlorophenol	29000	U
85-01-8	Phenanthrene	22000	X
120-12-7	Anthracene	6000	U
84-74-2	Di-n-butylphthalate	6000	U
206-44-0	Fluoranthene	27000	X
129-00-0	Pyrene	16000	X
85-68-7	Butylbenzylphthalate	6000	U
91-94-1	3,3'-Dichlorobenzidine	12000	U
56-55-3	Benzo(a)anthracene	21000	X
218-01-9	Chrysene	6000	U
117-81-7	bis(2-Ethylhexyl)phthalate	67000	B
117-84-0	Di-n-octyl phthalate	6000	U
205-99-2	Benzo(b)fluoranthene	23000	XZ
207-08-9	Benzo(k)fluoranthene		Z
50-32-8	Benzo(a)pyrene	9400	X
193-39-5	Indeno(1,2,3-cd)pyrene	7800	X
53-70-3	Dibenz(a,h)anthracene	6000	U
191-24-2	Benzo(g,h,i)perylene	6600	X

(1) - Cannot be separated from Diphenylamine

3/3/93

100288

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSL02

Lab Name: VERSAR, INC. Contract: _____

Lab Code: VERSAR Case No.: HYRDOSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 71348

Sample wt/vol: 30 (g/ml) G Lab File ID: ___

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 90 dec. _____ Date Extracted: 02/07/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/25/92

GPC Cleanup: (Y/N) Y pH: 7.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) (UG/KG)	Q
319-84-6	alpha-BHC	40	U
319-85-7	beta-BHC	40	U
319-86-8	delta-BHC	40	U
58-89-9	gamma-BHC (Lindane)	40	U
76-44-8	Heptachlor	40	U
309-00-2	Aldrin	250	
1024-57-3	Heptachlor Epoxide	40	U
959-98-8	Endosulfan I	40	U
60-57-1	Dieldrin	79	U
72-55-9	4,4'-DDE	110	
72-20-8	Endrin	79	U
33213-65-9	Endosulfan II	79	U
72-54-8	4,4'-DDD	79	U
1031-07-8	Endosulfan Sulfate	79	U
50-29-3	4,4'-DDT	79	U
72-43-5	Methoxychlor	400	U
53494-70-5	Endrin Ketone	79	U
5103-71-9	alpha-Chlordane	400	U
5103-74-2	gamma-Chlordane	400	U
8001-35-2	Toxaphene	790	U
12674-11-2	Aroclor-1016	400	U
11104-28-2	Aroclor-1221	400	U
11141-16-5	Aroclor-1232	400	U
53469-21-9	Aroclor-1242	400	U
12672-29-6	Aroclor-1248	400	U
11097-69-1	Aroclor-1254	2800	
11096-82-5	Aroclor-1260	790	U

JDL 2/25/92

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SL02

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): SOIL_ Lab Sample ID: 71325_____

Level (low/med): LOW__ Date Received: 02/04/92

% Solids: __7.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1680			P
7440-36-0	Antimony	39.6	U		P
7440-38-2	Arsenic	4.9	U		F
7440-39-3	Barium	436	B		P
7440-41-7	Beryllium	4.7	U		P
7440-43-9	Cadmium	10900			P
7440-70-2	Calcium	66100		*	P
7440-47-3	Chromium	1480			P
7440-48-4	Cobalt	11.7	U		P
7440-50-8	Copper	350			P
7439-89-6	Iron	61600			P
7439-92-1	Lead	3000			F
7439-95-4	Magnesium	9450	B		P
7439-96-5	Manganese	403			P
7439-97-6	Mercury	1.3	U	N	CV
7440-02-0	Nickel	411			P
7440-09-7	Potassium	1130	U		P
7782-49-2	Selenium	4.9	U	W	F
7440-22-4	Silver	4.7	U		P
7440-23-5	Sodium	25600			P
7440-28-0	Thallium	2.4	U	W	F
7440-62-2	Vanadium	7.0	U		P
7440-66-6	Zinc	34500			P
	Cyanide	205		N	AS

Color Before: BLACK____ Clarity Before: _____ Texture: FINE__

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSS01

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71311A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2866

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 31 Date Analyzed: 02/06/92

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

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	7	U
67-64-1	Acetone	14	U
75-15-0	Carbon disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon tetrachloride	7	U
108-05-4	Vinyl acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total xylenes	7	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SS01

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): SOIL_ Lab Sample ID: 71326_____

Level (low/med): LOW__ Date Received: 02/04/92

% Solids: _68.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15600			P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	6.6			F
7440-39-3	Barium	73.0			P
7440-41-7	Beryllium	0.76	B		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	1430		*	P
7440-47-3	Chromium	18.0			P
7440-48-4	Cobalt	7.0	B		P
7440-50-8	Copper	12.6			P
7439-89-6	Iron	22700			P
7439-92-1	Lead	18.1			F
7439-95-4	Magnesium	2440			P
7439-96-5	Manganese	406			P
7439-97-6	Mercury	0.15	U	N	CV
7440-02-0	Nickel	11.3			P
7440-09-7	Potassium	1790			P
7782-49-2	Selenium	0.51	U	W	F
7440-22-4	Silver	0.55	U		P
7440-23-5	Sodium	64.1	B		P
7440-28-0	Thallium	0.25	U		F
7440-62-2	Vanadium	28.3			P
7440-66-6	Zinc	79.7			P
	Cyanide	0.71	U	N	AS

Color Before: BLACK____ Clarity Before: _____ Texture: FINE__

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSS02

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71312A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2867

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 14 Date Analyzed: 02/06/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene chloride	6	U
67-64-1	Acetone	12	U
75-15-0	Carbon disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon tetrachloride	6	U
108-05-4	Vinyl acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total xylenes	6	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SS02

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): SOIL_ Lab Sample ID: 71327_____

Level (low/med): LOW__ Date Received: 02/04/92

% Solids: _80.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12900			P
7440-36-0	Antimony	3.8	U		P
7440-38-2	Arsenic	10.7			F
7440-39-3	Barium	79.3			P
7440-41-7	Beryllium	0.74	B		P
7440-43-9	Cadmium	475			P
7440-70-2	Calcium	12800		*	P
7440-47-3	Chromium	23.7			P
7440-48-4	Cobalt	11.1	B		P
7440-50-8	Copper	75.4			P
7439-89-6	Iron	25700			P
7439-92-1	Lead	22.9			F
7439-95-4	Magnesium	4880			P
7439-96-5	Manganese	740			P
7439-97-6	Mercury	0.12	U	N	CV
7440-02-0	Nickel	25.9			P
7440-09-7	Potassium	1450			P
7782-49-2	Selenium	0.43	U	W	F
7440-22-4	Silver	0.45	U		P
7440-23-5	Sodium	78.3	B		P
7440-28-0	Thallium	0.21	U		F
7440-62-2	Vanadium	16.5			P
7440-66-6	Zinc	310			P
	Cyanide	0.62	U	N	AS

Color Before: BLACK____ Clarity Before: _____ Texture: FINE__

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSS03

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 71364A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V2872

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 33 Date Analyzed: 02/06/92

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene chloride	7	U
67-64-1	Acetone	15	U
75-15-0	Carbon disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon tetrachloride	7	U
108-05-4	Vinyl acetate	15	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total xylenes	7	U

100177

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SS03

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): SOIL_ Lab Sample ID: 71329_____

Level (low/med): LOW__ Date Received: 02/04/92

% Solids: _67.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12900			P
7440-36-0	Antimony	4.3	U		P
7440-38-2	Arsenic	14.4			F
7440-39-3	Barium	118			P
7440-41-7	Beryllium	1.1	B		P
7440-43-9	Cadmium	8420			P
7440-70-2	Calcium	3230		*	P
7440-47-3	Chromium	44.3			P
7440-48-4	Cobalt	12.8			P
7440-50-8	Copper	224			P
7439-89-6	Iron	24100			P
7439-92-1	Lead	241			F
7439-95-4	Magnesium	2900			P
7439-96-5	Manganese	1160			P
7439-97-6	Mercury	0.14	U	N	CV
7440-02-0	Nickel	46.8			P
7440-09-7	Potassium	1440			P
7782-49-2	Selenium	0.55	U	W	F
7440-22-4	Silver	0.75	B		P
7440-23-5	Sodium	75.9	B		P
7440-28-0	Thallium	0.28	U	W	F
7440-62-2	Vanadium	16.0			P
7440-66-6	Zinc	377			P
	Cyanide	26.1		N	AS

Color Before: BLACK____ Clarity Before: _____ Texture: FINE__

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL01

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71321

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5422

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. ____ Date Analyzed: 02/06/92

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

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	4	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	36	
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL01

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71344

Sample wt/vol: 940 (g/mL) ML Lab File ID: Z3122

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 02/26/92

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	21	U
111-44-4	bis(2-Chloroethyl)ether	21	U
95-57-8	2-Chlorophenol	21	U
541-73-1	1,3-Dichlorobenzene	21	U
106-46-7	1,4-Dichlorobenzene	21	U
100-51-6	Benzyl alcohol	21	U
95-50-1	1,2-Dichlorobenzene	21	U
95-48-7	2-Methylphenol	21	U
108-60-1	bis(2-Chloroisopropyl)ether	21	U
106-44-5	3- & 4- Methylphenol	21	U
621-64-7	N-Nitroso-di-n-propylamine	21	U
67-72-1	Hexachloroethane	21	U
98-95-3	Nitrobenzene	21	U
78-59-1	Isophorone	21	U
88-75-5	2-Nitrophenol	21	U
105-67-9	2,4-Dimethylphenol	21	U
65-85-0	Benzoic Acid	110	U
111-91-1	bis(2-Chloroethoxy)methane	21	U
120-83-2	2,4-Dichlorophenol	21	U
120-82-1	1,2,4-Trichlorobenzene	21	U
91-20-3	Naphthalene	21	U
106-47-8	4-Chloroaniline	21	U
87-68-3	Hexachlorobutadiene	21	U
59-50-7	4-Chloro-3-methylphenol	21	U
91-57-6	2-Methylnaphthalene	21	U
77-47-4	Hexachlorocyclopentadiene	21	U
88-06-2	2,4,6-Trichlorophenol	21	U
95-95-4	2,4,5-Trichlorophenol	110	U
91-58-7	2-Chloronaphthalene	21	U
88-74-4	2-Nitroaniline	110	U
131-11-3	Dimethylphthalate	21	U
208-96-8	Acenaphthylene	21	U
606-20-2	2,6-Dinitrotoluene	21	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL01

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71344

Sample wt/vol: 940 (g/mL) ML Lab File ID: Z3122

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. _____ dec. _____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 02/26/92

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	110	U
83-32-9	Acenaphthene	17	JX
51-28-5	2,4-Dinitrophenol	110	U
100-02-7	4-Nitrophenol	110	U
132-64-9	Dibenzofuran	21	U
121-14-2	2,4-Dinitrotoluene	21	U
84-66-2	Diethylphthalate	21	U
7005-72-3	4-Chlorophenyl-phenylether	21	U
86-73-7	Fluorene	22	X
100-01-6	4-Nitroaniline	110	U
534-52-1	4,6-Dinitro-2-methylphenol	110	U
86-30-6	N-nitrosodiphenylamine (1)	21	U
101-55-3	4-Bromophenyl-phenylether	21	U
118-74-1	Hexachlorobenzene	21	U
87-86-5	Pentachlorophenol	110	U
85-01-8	Phenanthrene	180	X
120-12-7	Anthracene	21	U
84-74-2	Di-n-butylphthalate	21	U
206-44-0	Fluoranthene	490	X
129-00-0	Pyrene	130	X
85-68-7	Butylbenzylphthalate	21	U
91-94-1	3,3'-Dichlorobenzidine	43	U
56-55-3	Benzo(a)anthracene	93	X
218-01-9	Chrysene	140	X
117-81-7	bis(2-Ethylhexyl)phthalate	110	X
117-84-0	Di-n-octyl phthalate	21	U
205-99-2	Benzo(b)fluoranthene	170	X
207-08-9	Benzo(k)fluoranthene	130	X
50-32-8	Benzo(a)pyrene	160	X
193-39-5	Indeno(1,2,3-cd)pyrene	110	X
53-70-3	Dibenz(a,h)anthracene	40	X
191-24-2	Benzo(g,h,i)perylene	55	X

(1) - Cannot be separated from Diphenylamine

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL01

Lab Name: VERSAR, INC. Contract: _____

Lab Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 71350

Sample wt/vol: 1020 (g/ml) ML Lab File ID: ___

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 0.00 dec. _____ Date Extracted: 02/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 02/27/92

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) (UG/L)	Q
319-84-6	alpha-BHC	0.049	U
319-85-7	beta-BHC	0.049	U
319-86-8	delta-BHC	0.049	U
58-89-9	gamma-BHC (Lindane)	0.049	U
76-44-8	Heptachlor	0.049	U
309-00-2	Aldrin	1.2	
1024-57-3	Heptachlor Epoxide	0.049	U
959-98-8	Endosulfan I	0.049	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.29	
72-20-8	Endrin	0.14	
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	0.49	U
53494-70-5	Endrin Ketone	0.10	U
5103-71-9	alpha-Chlordane	0.49	U
5103-74-2	gamma-Chlordane	0.49	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.49	U
11104-28-2	Aroclor-1221	0.49	U
11141-16-5	Aroclor-1232	0.49	U
53469-21-9	Aroclor-1242	0.49	U
12672-29-6	Aroclor-1248	0.49	U
11097-69-1	Aroclor-1254	4.7	
11096-82-5	Aroclor-1260	1.0	U

ppt slope

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SSL01

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71334_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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	26100			P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	9.4	B	N	F
7440-39-3	Barium	626			P
7440-41-7	Beryllium	2.2	B		P
7440-43-9	Cadmium	17600			P
7440-70-2	Calcium	148000			P
7440-47-3	Chromium	820			P
7440-48-4	Cobalt	32.8	B		P
7440-50-8	Copper	1550			P
7439-89-6	Iron	151000			P
7439-92-1	Lead	3030			F
7439-95-4	Magnesium	27900			P
7439-96-5	Manganese	1450			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	564			P
7440-09-7	Potassium	6660			P
7782-49-2	Selenium	20.0	U	N	F
7440-22-4	Silver	8.6	B		P
7440-23-5	Sodium	255000			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	34.3	B		P
7440-66-6	Zinc	28600			P
	Cyanide	870		*	AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

THE_CN_ALIQUOT_LAB_NUMBER_IS_71357._____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL02

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71322

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5420

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. _____ Date Analyzed: 02/06/92

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

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	5	B
67-64-1	Acetone	22	B
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	40	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL02

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71345

Sample wt/vol: 1030 (g/mL) ML Lab File ID: Z3016

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 02/13/92

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

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
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	3- & 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
65-85-0	Benzoic Acid	49	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	49	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	49	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL02

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71345

Sample wt/vol: 1030 (g/mL) ML Lab File ID: Z3016

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 02/13/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	49	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	49	U
100-02-7	4-Nitrophenol	49	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	49	U
534-52-1	4,6-Dinitro-2-methylphenol	49	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	49	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	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	19	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL02

Lab Name: VERSAR, INC. Contract: _____

Lab Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 71351

Sample wt/vol: 1050 (g/ml) ML Lab File ID: ___

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 0.00 dec. _____ Date Extracted: 02/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 02/27/92

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
309-00-2	Aldrin	0.048	U
1024-57-3	Heptachlor Epoxide	0.048	U
959-98-8	Endosulfan I	0.048	U
60-57-1	Dieldrin	0.095	U
72-55-9	4,4'-DDE	0.095	U
72-20-8	Endrin	0.095	U
33213-65-9	Endosulfan II	0.095	U
72-54-8	4,4'-DDD	0.095	U
1031-07-8	Endosulfan Sulfate	0.095	U
50-29-3	4,4'-DDT	0.095	U
72-43-5	Methoxychlor	0.48	U
53494-70-5	Endrin Ketone	0.10	U
5103-71-9	alpha-Chlordane	0.48	U
5103-74-2	gamma-Chlordane	0.48	U
8001-35-2	Toxaphene	0.95	U
12674-11-2	Aroclor-1016	0.48	U
11104-28-2	Aroclor-1221	0.48	U
11141-16-5	Aroclor-1232	0.48	U
53469-21-9	Aroclor-1242	0.48	U
12672-29-6	Aroclor-1248	0.48	U
11097-69-1	Aroclor-1254	0.95	U
11096-82-5	Aroclor-1260	0.95	U

2/28/92

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SSL02

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71335_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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	22.7	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	124	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	24.0			P
7440-70-2	Calcium	61900			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	55.5	B		P
7439-92-1	Lead	6.2		S	F
7439-95-4	Magnesium	9990			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	1600	B		P
7782-49-2	Selenium	2.0	U	N	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	9320			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	74.1			P
	Cyanide	10.0	U	*	AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

THE_CN_ALIQUOT_LAB_NUMBER_IS_71358._____

_____

_____

_____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL03

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71323

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5421

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. ____ Date Analyzed: 02/06/92

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

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	6	B
67-64-1	Acetone	11	B
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	41	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

APSSL03

Name: VERSAR INC. Contract:

Lab Code: VERSAR Case No.: 6172 SAS No.: SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71346

Sample wt/vol: 980 (g/mL) ML Lab File ID: Z3015

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. dec. Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 02/13/92

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

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
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	3- & 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
65-85-0	Benzoic Acid	51	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	51	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	51	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL03

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6172 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) WATER Lab Sample ID: 71346

Sample wt/vol: 980 (g/mL) ML Lab File ID: Z3015

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 02/05/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 02/13/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	51	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	51	U
100-02-7	4-Nitrophenol	51	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	51	U
534-52-1	4,6-Dinitro-2-methylphenol	51	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	51	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	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	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSSL03

Lab Name: VERSAR, INC. Contract: _____

Lab Code: VERSAR Case No.: HYDROSEA SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 71352

Sample wt/vol: 1050 (g/ml) ML Lab File ID: ___

Level: (low/med) LOW Date Received: 02/04/92

% Moisture: not dec. 0.00 dec. _____ Date Extracted: 02/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 02/27/92

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) (UG/L)	Q
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
309-00-2	Aldrin	0.048	U
1024-57-3	Heptachlor Epoxide	0.048	U
959-98-8	Endosulfan I	0.048	U
60-57-1	Dieldrin	0.095	U
72-55-9	4,4'-DDE	0.095	U
72-20-8	Endrin	0.095	U
33213-65-9	Endosulfan II	0.095	U
72-54-8	4,4'-DDD	0.095	U
1031-07-8	Endosulfan Sulfate	0.095	U
50-29-3	4,4'-DDT	0.095	U
72-43-5	Methoxychlor	0.48	U
53494-70-5	Endrin Ketone	0.10	U
5103-71-9	alpha-Chlordane	0.48	U
5103-74-2	gamma-Chlordane	0.48	U
8001-35-2	Toxaphene	0.95	U
12674-11-2	Aroclor-1016	0.48	U
11104-28-2	Aroclor-1221	0.48	U
11141-16-5	Aroclor-1232	0.48	U
53469-21-9	Aroclor-1242	0.48	U
12672-29-6	Aroclor-1248	0.48	U
11097-69-1	Aroclor-1254	0.95	U
11096-82-5	Aroclor-1260	0.95	U

2/25/92

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SSL03

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: _____ SAS No.: _____ SDG No.: GW01__

Matrix (soil/water): WATER Lab Sample ID: 71336_____

Level (low/med): LOW__ Date Received: 02/04/92

% 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	22.7	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	127	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	17.0			P
7440-70-2	Calcium	63100			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	73.1	B		P
7439-92-1	Lead	2.2	B		F
7439-95-4	Magnesium	10000			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	1790	B		P
7782-49-2	Selenium	2.0	U	WN	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	9460			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	76.4			P
	Cyanide	10.0	U	*	AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

THE_CN_ALIQUOT_LAB_NUMBER_IS_71359._____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSW01

1 Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) WATER Lab Sample ID: 71180

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: V2639

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. ____ Date Analyzed: 02/05/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSW01

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): WATER Lab Sample ID: 71192_____

Level (low/med): LOW__ Date Received: 01/31/92

% 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	51.9	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	26.5	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	21000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	63.1	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	4250	B		P
7439-96-5	Manganese	2.1	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	1030	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.6	B		P
7440-23-5	Sodium	11100			P
7440-28-0	Thallium	5.0	U	WN	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	6.8	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

THE_CN_ALIQUOT_LAB_NUMBER_IS_71187._____

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSW01F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): WATER Lab Sample ID: 71197_____

Level (low/med): LOW__ Date Received: 01/31/92

% 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	25.3	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	26.5	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	20800			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	21.4	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	4270	B		P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	1130	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	2.3	B		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	1.0	U	WN	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	3.0	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSW02

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) WATER Lab Sample ID: 71182

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: V2641

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. ____ Date Analyzed: 02/05/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSW02

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): WATER Lab Sample ID: 71194_____

Level (low/med): LOW__ Date Received: 01/31/92

% 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	77.2	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	33.7	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	23700			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	8.9	B		P
7439-89-6	Iron	132			P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	4720	B		P
7439-96-5	Manganese	2.9	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	1050	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	2.8	B		P
7440-23-5	Sodium	11200			P
7440-28-0	Thallium	1.0	U	WN	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	4.6	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

THE_CN_ALIQUOT_LAB_NUMBER_IS_71189._____

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSW02F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): WATER Lab Sample ID: 71199_____

Level (low/med): LOW__ Date Received: 01/31/92

% 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_	26.6	B		P
7440-36-0	Antimony_	17.0	U		P
7440-38-2	Arsenic__	2.0	U	W	F
7440-39-3	Barium___	31.7	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__	23600			P
7440-47-3	Chromium_	4.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___	7.4	B		P
7439-89-6	Iron_____	19.0	B		P
7439-92-1	Lead_____	2.0	U		F
7439-95-4	Magnesium	4670	B		P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	8.0	U		P
7440-09-7	Potassium	1170	B		P
7782-49-2	Selenium_	2.0	U		F
7440-22-4	Silver___	3.9	B		P
7440-23-5	Sodium___	11000			P
7440-28-0	Thallium_	1.0	U	WN	F
7440-62-2	Vanadium_	3.0	U		P
7440-66-6	Zinc_____	3.0	B		P
_____	Cyanide__	_____	_		NR
_____	_____	_____	_		__

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSW03

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) WATER Lab Sample ID: 71183

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: V2665

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. ____ Date Analyzed: 02/06/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSW03

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): WATER Lab Sample ID: 71195_____

Level (low/med): LOW__ Date Received: 01/31/92

% 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	69.2	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	31.0	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	24200			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	66.1	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	4750	B		P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	1250	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	2.3	B		P
7440-23-5	Sodium	12300			P
7440-28-0	Thallium	1.0	U	WN	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	7.6	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

THE_CN_ALIQUOT_LAB_NUMBER_IS_71190._____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSW03F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): WATER Lab Sample ID: 71200_____

Level (low/med): LOW__ Date Received: 01/31/92

% 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_	13.0	U		P_
7440-36-0	Antimony_	17.0	U		P_
7440-38-2	Arsenic__	2.0	U	W	F_
7440-39-3	Barium___	30.0	B		P_
7440-41-7	Beryllium	2.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	22400			P_
7440-47-3	Chromium_	4.0	U		P_
7440-48-4	Cobalt___	5.0	U		P_
7440-50-8	Copper___	5.0	U		P_
7439-89-6	Iron____	8.2	B		P_
7439-92-1	Lead____	3.0			F_
7439-95-4	Magnesium	4510	B		P_
7439-96-5	Manganese	2.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	8.0	U		P_
7440-09-7	Potassium	1110	B		P_
7782-49-2	Selenium_	2.0	U		F_
7440-22-4	Silver___	2.0	U		P_
7440-23-5	Sodium___	11900			P_
7440-28-0	Thallium_	1.0	U	WN	F_
7440-62-2	Vanadium_	3.0	U		P_
7440-66-6	Zinc____	5.1	B		P_
_____	Cyanide__				NR
_____	_____				

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSW04

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) WATER Lab Sample ID: 71181

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: V2640

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. ____ Date Analyzed: 02/05/92

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

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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSW04

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): WATER Lab Sample ID: 71193_____

Level (low/med): LOW__ Date Received: 01/31/92

% 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	70.6	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	137	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	63700			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	10.4	B		P
7439-89-6	Iron	136			P
7439-92-1	Lead	2.0	U	W	F
7439-95-4	Magnesium	10400			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	1430	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.1	B		P
7440-23-5	Sodium	9940			P
7440-28-0	Thallium	1.0	U	N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	13.1	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

THE_CN_ALIQUOT_LAB_NUMBER_IS_71188._____

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSW04F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): WATER Lab Sample ID: 71198_____

Level (low/med): LOW__ Date Received: 01/31/92

% 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	25.3	B		P
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.0	U	W	F
7440-39-3	Barium	133	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	62800			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	6.0	B		P
7439-89-6	Iron	6.0	U		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	10100			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	1700	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	5.7	B		P
7440-23-5	Sodium	9880			P
7440-28-0	Thallium	1.0	U	WN	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	4.2	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FULL_FIELD_NO._=_APSW04F

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APSW05

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 6158 SAS No.: _____ SDG No.: 10

Matrix: (soil/water) WATER Lab Sample ID: 71184

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: S5426

Level: (low/med) LOW Date Received: 01/31/92

% Moisture: not dec. _____ Date Analyzed: 02/06/92

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

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	5	U
67-64-1	Acetone	8	BJ
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	10	

EB 2/26/92

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSW05

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): WATER Lab Sample ID: 71196_____

Level (low/med): LOW__ Date Received: 01/31/92

% 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_	62.6	B		P
7440-36-0	Antimony_	17.0	U		P
7440-38-2	Arsenic__	2.0	U		F
7440-39-3	Barium___	31.0	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__	24000			P
7440-47-3	Chromium_	4.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___	5.0	U		P
7439-89-6	Iron_____	82.2	B		P
7439-92-1	Lead_____	2.0	U		F
7439-95-4	Magnesium	4720	B		P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	8.0	U		P
7440-09-7	Potassium	1330	B		P
7782-49-2	Selenium_	2.0	U		F
7440-22-4	Silver___	3.1	B		P
7440-23-5	Sodium___	12100			P
7440-28-0	Thallium_	1.0	U	WN	F
7440-62-2	Vanadium_	3.0	U		P
7440-66-6	Zinc_____	8.0	B		P
_____	Cyanide__	10.0	U		AS
_____	_____	_____			

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
THE_CN_ALIQUOT_LAB_NUMBER_IS_71191._____

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7/88

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

APSW05F

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: 6158_ SAS No.: _____ SDG No.: APSW01

Matrix (soil/water): WATER Lab Sample ID: 71201_____

Level (low/med): LOW__ Date Received: 01/31/92

% 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_	19.5	B		P_
7440-36-0	Antimony_	17.0	U		P_
7440-38-2	Arsenic__	2.0	U	W	F_
7440-39-3	Barium___	30.7	B		P_
7440-41-7	Beryllium	2.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	22400			P_
7440-47-3	Chromium_	4.0	U		P_
7440-48-4	Cobalt___	5.0	U		P_
7440-50-8	Copper___	5.0	U		P_
7439-89-6	Iron_____	33.0	B		P_
7439-92-1	Lead_____	2.0	U		F_
7439-95-4	Magnesium	4520	B		P_
7439-96-5	Manganese	2.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	8.0	U		P_
7440-09-7	Potassium	1120	B		P_
7782-49-2	Selenium_	2.0	U		F_
7440-22-4	Silver___	2.0	U		P_
7440-23-5	Sodium___	11900			P_
7440-28-0	Thallium_	1.0	U	WN	F_
7440-62-2	Vanadium_	3.0	U		P_
7440-66-6	Zinc_____	5.9	B		P_
_____	Cyanide__				NR
_____	_____				

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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APPENDIX E

SOIL GAS SURVEY DATA

GEO
CORPORATION

February 7,1992

Hydro-Search
350 Indiana St., Suite 300
Golden, CO 80401
Attn: Rich Gnat

Mr. Gnat:

Enclosed are the analytical results for the project analyzed on the Prestolite site in Arcade, New York. There were 67 vapor samples collected all of which were analyzed.

The on-site instrumentation was calibrated for Methylene Chloride, TCE, Toluene, Ethylbenzene, P,M, and O Xylene. The initial four point calibration standards were run at concentrations of 50 , 100 , 500, and 1000 ug/L. Daily continuing calibration verifications were run and were, in every instance, within reasonable deviation from the original four point calibration.

Modified USEPA methods 8010 and 8020 provided the general guidelines for the vapor analysis. TCE, toluene, ethylbenzene, and xylene values were quantitated from the PID, and Methylene Chloride was quantitated from the ECD detector. The exceptions to this were TCE values from samples GP 6-1, GP 27-1, GP 28-1, GPO 9-1, GPO, 10-1, GPO 11-1, GPO 31-1, GPO 32-1, and GPO 33-1 which were quantitated using the ECD. Ethylbenzene in sample GPO 2-1 was quantitated using peak height, whereas all other reported values were quantitated using the area under the curve technique. The Reporting Limit for all compounds was determined to be 5 ug/L.

The concentrations of analytes which were tentatively identified as Below the Reporting Limit (BRL) are denoted by BRL (5).

If there are any questions concerning the data or the analysis, please feel free to call.

Cordially,

Will Whiton

Will Whiton
Geochemist
GEO Environmental
(303) 279-4655

Procedures Report for Soil Vapor Analysis

INSTRUMENTS: One SRI 8610 GC, equipped with both PID and ECD detectors, another SRI 8610 GC equipped with PID detector. PID only equipped GC used for additional blank checks.
Both GC's had oven temperature ramping capability.
Two DB 624 columns were used (one in each GC).

SAMPLE
INJECTION: Five hundred microliter samples were drawn from vapor probe and 500 uL of surrogate vapors were then injected into the down hole sampling apparatus through a "T" fitting. Another 50 uL of down hole vapor content was drawn into the sampling syringe as the last 200 uL of surrogate vapors were being injected. This sample was then injected directly onto the column of the gas chromatograph. A 500 uL SGE syringe was used. All samples were analyzed within four minutes of collection time. Occasional discrepancies between run times and collection times were due to differences between the GC data system clock and watch times used for sampling time notation.

ANALYSIS: Oven temperatures: 38 degrees to 100 degrees C temperature ramping on both GC's.

CALIBRATION:
The on-site instrumentation was calibrated for Methylene Chloride, TCE, Toluene, Ethylbenzene, P,M, and O Xylene. The initial four point calibration standards were run at concentrations of 50 , 100 , 500, and 1000 ug/L (weight to volume Helium gas. Daily continuing calibration verifications were run and were, in every instance, within reasonable deviation from the original four point calibration.

BLANKS: Before commencing sampling each day, a retract-a-tip to GC blank was analyzed to check for possible contamination of tubing, sampling septa/fitting, and syringe. When deemed necessary, UPC grade Helium was purged through probe as the retract-a-tip was closed and parafilm sealed. The sampling/septa fitting was installed immediately and equilibration was allowed to take place. A 500 uL sample was then taken with the syringe and injected into a GC. In most instances atmospheric air was used as the retract-a-tip to GC blank testing vapor.

SURROGATE COMPOUNDS: BFB and F3 Toluene

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 1-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	12,000	ug/L
Trichloroethylene	420	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 1-2 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	18,000	ug/L
Trichloroethylene	3,000	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 2-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	5,100	ug/L
Trichloroethylene	500	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 2-2 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	15,000	ug/L
Trichloroethylene	720	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 3-1 100 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	95,000	ug/L
Trichloroethylene	440	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 4-1 100 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	16,000	ug/L
Trichloroethylene	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 5-1 250 uL Soil Vapor

Analyte	Concentration
Methylene Chloride	25,000 ug/L
Trichloroethylene	16,000 ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 6-1 200 uL Soil Vapor

Analyte	Concentration
Methylene Chloride	7,300 ug/L
Trichloroethylene	750 ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 7-1 100 uL Soil Vapor

Analyte	Concentration
Methylene Chloride	27,000 ug/L
Trichloroethylene	1,600 ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 8-1 250 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	1,700	ug/L
Trichloroethylene	520	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 9-1 200 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	1,100	ug/L
Trichloroethylene	900	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 10-1 250 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	4,100	ug/L
Trichloroethylene	220	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 11-1 200 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	BRL (5)	ug/L
Trichloroethylene	BRL (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: 11-2 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	2,500	ug/L
Trichloroethylene	2,200	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 12-1 250 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	90	ug/L
Trichloroethylene	150	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 30, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 12-2 200 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	4,400	ug/L
Trichloroethylene	3,500	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 14-1 200 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	1,300	ug/L
Trichloroethylene	70	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 15-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	1,100	ug/L
Trichloroethylene	2,300	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 16-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	530	ug/L
Trichloroethylene	900	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 17-1 250 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	1,600	ug/L
Trichloroethylene	510	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 18-1 250 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	5,100	ug/L
Trichloroethylene	220	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 19-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	4,000	ug/L
Trichloroethylene	120	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 20-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	90	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 21-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	500	ug/L
Trichloroethylene	50	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GP 22-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene WMW 2-5-92	BRL ~~ND~~ (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 3, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: 23-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GP 24-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GP 25-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL ~~ND~~ (5)	ug/L
Total Xylenes	ND (5)	ug/L

WMW 2-5-92

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 26-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	20	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 3, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 27-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	3,200	ug/L
Trichloroethylene	660	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 3, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 28-1

Analyte	Concentration	
Methylene Chloride	4,200	ug/L
Trichloroethylene	350	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 3, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 29-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	6,000	ug/L
Trichloroethylene	14	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 3, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GP 30-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	6,700	ug/L
Trichloroethylene	100	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 2-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	BRL (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	40	ug/L
Ethylbenzene	140	ug/L
Total Xylenes	150	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 3-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	BRL (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	70	ug/L
Ethylbenzene	47	ug/L
Total Xylenes	150	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: January 31, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 4-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	28	ug/L
Trichloroethylene	12	ug/L
Toluene	230	ug/L
Ethylbenzene	140	ug/L
Total Xylenes	79	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 5-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	320	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 5-2 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	ND (5)	ug/L
Toluene	BRL (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 6-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	530	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 6-2 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 7-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	ND (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 8-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	BRL (5)	ug/L
Ethylbenzene	62	ug/L
Total Xylenes	200	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 9-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	2,800	ug/L
Trichloroethylene	88	ug/L
Toluene	190	ug/L
Ethylbenzene	60	ug/L
Total Xylenes	140	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 10-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	64	ug/L
Trichloroethylene	17	ug/L
Toluene	65	ug/L
Ethylbenzene	49	ug/L
Total Xylenes	120	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 11-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	9	ug/L
Toluene	50	ug/L
Ethylbenzene	44	ug/L
Total Xylenes	100	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 12-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	37	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	37	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 13-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 14-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	1,700	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 15-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 16-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	38	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 17-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 18-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	BRL (5)	ug/L
Ethylbenzene	BRL (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 19-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 20-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 21-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	ND (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 1, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 22-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	ND (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 2, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 23-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 2, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 24-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 2, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 25-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	ND (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 2, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 26-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 2, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 27-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 2, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 28-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 2, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 29-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	BRL (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 2, 1992
Analysis: Modified SW-846 Method 8010/8020
Location: Prestolite, Arcade, New York
Sample Number: GPO 30-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	ND (5)	ug/L
Trichloroethylene	ND (5)	ug/L
Toluene	ND (5)	ug/L
Ethylbenzene	ND (5)	ug/L
Total Xylenes	ND (5)	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 3, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GPO 31-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	21	ug/L
Trichloroethylene	6.6	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 3, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GPO 32-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	1800	ug/L
Trichloroethylene	49	ug/L

Client: Hydro Search
Chromatographer: WMW
Collection/Analysis Date: February 3, 1992
Analysis: Modified SW-846 Method 8010
Location: Prestolite, Arcade, New York
Sample Number: GPO 33-1 500 uL Soil Vapor

Analyte	Concentration	
Methylene Chloride	92	ug/L
Trichloroethylene	45	ug/L