# INVESTIGATION OF "PHASE I" PARCELS H, I AND C REPORT YONKERS DOWNTOWN WATERFRONT YONKERS, NEW YORK BROWNFIELDS PROGRAM

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#### 1.0 INTRODUCTION

This investigation of the Yonkers Downtown Waterfront project site in Yonkers, New York encompasses Parcels H, I and the southern portion of C of the proposed "Phase I" redevelopment and the adjacent portions of Parcel J, as shown on Figure 2, Site Plan. The work was intended to comply with the requirements of New York State Department of Environmental Conservation's Technical and Administrative Guidance Memorandum: Environmental Restoration Projects (Brownfields) Guidance Documents and the Municipal Assistance Brownfield Program Procedures Handbook. The work conducted was based on AKRF's previous assessment of the parcels, in accordance with AKRF's approved Work Plan.

The objectives of this study were to provide sufficient information to determine if the properties contain contaminated materials and allow for a conceptual remediation, if contaminated materials are found within any of the parcels. This portion of the study focused on "Phase I" Parcels H, I, southern portion of Parcel C, and portions of Parcel J adjacent to those parcels (Parcel J encompasses the proposed promenade, that will abut the western side of the parcels along the Hudson River).

# 1.1 Background

The study site has a history of industrial use going back more than 100 years. This industrial history indicated the potential for soil and groundwater contamination, as discussed in AKRF's Phase I Environmental Site Assessment Report, dated April 1997.

The entire study site (Phase I and Phase II parcels) boundaries are defined by: the Jack Frost Sugar facility to the south; the Hudson River to the west; the Habirshaw Athletic Club to the north; and the New York Central Railroad (NYCRR or Conrail) train tracks and Alexander Street to the east. Parcel H is abutted by: the Scrimshaw House condominium building to the north; New York Central Railroad (NYCRR or Conrail) train tracks to the east; Parcel I to the south; and the Hudson River to the west, as shown on Figure 2. Parcel I is abutted by: Parcel H to the north; New York Central Railroad (NYCRR or Conrail) train tracks to the east; the Jack Frost Sugar facility to the south; and the Hudson River to the west. Parcel C is abutted by the "Phase II" portion of Parcel C (currently used as a paved parking lot) to the north; the New York Central Railroad (NYCRR or Conrail) train tracks and Alexander Street to the east; the Saw Mill River outlet to the south and the Hudson River to the west.

Parcels H and I have been constructed of fill over time and have not contained buildings or other usages and comprise approximately 248,000 square feet. The two undeveloped parcels are currently covered with tall grass, concrete, solid asphalt piles and demolition debris. Parcel I is the located on the southern portion of the undeveloped land and Parcel H is located to the north. A large asphalt pile, shown in Figure 3H&I, divides the two parcels.

Parcel C was utilized as lumber and coal yard from before 1886 until some time before 1917, when it was occupied by Otis Elevator (used primarily for coal storage) and a transportation company, used primarily for storage of freight and wagons. A transportation company occupied the site in 1951 and included an auto repair shop. Otis Elevator occupied a portion the site in 1971 and used the portion for coal storage. Plaza Sand & Stone also occupied a portion of the site and erected an asphalt mixing plant. Presently, the parcel is used as a parking lot. The northern end of Parcel C is owned and occupied by the Port Authority of New York. Results from the site investigation performed on the Port Authority-owned section of Parcel C will be submitted in a separate report. The southern portion of the parcel comprises approximately 103,000 square feet.

Parcel J is the proposed promenade of the redevelopment plan, and will be located west-adjacent to all the waterfront parcels (Parcels A through I) along the Hudson River. In this report, Parcels J was not reported as a separate parcel, but was included with the adjacent Parcels H, I and C.

#### 2.0 Field Activities

# 2.1 Grid Survey

Testing grids were surveyed at each of the Phase I parcels by Munoz Engineering of New York, New York on May 19 and 23, 1998. These grids were used as a basis for the subsequent electromagnetic (EM) surveys, ground penetrating radar surveys, soil gas surveys, and the location of subsequent test pits, soil borings and monitor wells. The testing grids are shown on Figures 5C and 5H&I.

#### 2.2 Electromagnetic Survey

Electromagnetic (EM) surveys of the parcels were conducted to determine the existence of underground storage tanks and other potential subsurface features which, if existing, may be a source of contamination. The EM survey is a non-invasive remote sensing technique which measures subsurface conductivity through the use of low frequency electromagnetic induction. EM is able to identify anomalies in subsurface conductivity caused by the presence of buried metal objects, changes in soil characteristics, and under some conditions, the presence of pollutant plumes. The EM does not produce reliable results in the presence of buried construction and demolition debris (i.e. reinforced concrete), chain link fences and parked cars. EM survey results were used to locate subsequent soil borings, monitor wells and test pits.

A GEONICS EM 31 Conductivity Meter was used for this survey. This instrument measures conductivities from the ground surface to approximately 20 feet below land surface in the vertical dipole mode. The in-phase component measures relative conductance. This component is

significantly altered by highly conductive objects and is, therefore, typically more sensitive to buried metals, such as underground storage tanks and drums.

Conductivity readings were recorded continuously at 1 second intervals using an Omnidata Digital Polycorder. The data collected was processed using the Geonics EM 31 software. The plots of each transect show the anomalies in subsurface conductance detected by the instrument. The possible causes of the anomalies inferred based on knowledge of previous usage and observed site conditions.

## Parcel H

Parcel H is currently an undeveloped area covered with tall grass and construction debris, located south-adjacent to the Scrimshaw House. AKRF personnel performed an EM survey on Parcel H on April 22, 1998. The weather during the survey was sunny and approximately 75 °F. Concrete debris and asphalt piles, located on the western portion of the parcel, limited the EM survey to the area east of the concrete and gravel, as shown on Figure 5H&I. An undeveloped road was located north and west of the survey grid, beyond the gravel piles and concrete debris. A large asphalt pile was located on the southern side of the grid and is considered the boundary between Parcel H and Parcel I. The survey area was divided into 29 lines with lengths of 175, 225, 250 and 275 feet oriented in a north-south direction. Results of the EM survey are depicted on three maps included in Appendix B. The maps show the quadrature phase, the in-phase, and anomalies, which were generated from data collected from this survey.

In the map of detected anomalies, the linear anomalies (shown in green) correspond to the locations of underground utilities such as water pipes, sewer pipes and sewer line manholes. Dots (shown in red) indicate possible isolated small metallic objects such as small pipes or steel bars. These red ovals and dots could also represent buried concrete demolition debris with steel reinforcing bars. None of the anomalies had a finger print of a possible buried tank. Several isolated buried metallic objects and possible pipes were detected on the parcel. The most notable area is shown between the lines 25S and 75S, approximately 50 to 80 feet west of the 0N point. These anomalies can also be seen in the in-phase response component map. Based on the EM survey results, test pits were scheduled for this area.

## Parcel I

On May 18, 1998, AKRF personnel performed an EM survey on Parcel I, located south-adjacent to Parcel H along the Hudson River. The parcel is currently an undeveloped area. The Jack Frost Sugar Refinery is located south-adjacent to Parcel I.

The survey area was divided into 20 lines with lengths of 50, 75 and 100 feet. Survey results are included on three maps included in Appendix B, showing the quad-phase, the in-phase, and anomalies, which were generated from data collected in this survey.

In the map of detected anomalies, squares (shown in red) represent large blocks of concrete with steel reinforcing bars. Three of these squares are shown between the 20W and 50W lines, located approximately 50 to 60 feet north of the 0N line. All three of the detected anomalies are seen in the in-phase component map. The irregular shape red area located on the northwestern side of the parcel also represents large blocks of concrete with steel reinforcing bars. None of the anomalies had a finger print of a buried tank. These four areas were chosen as test pit locations based on the EM survey results.

# Parcel C

On May 23, 1998, AKRF personnel performed an EM survey on the southern portion of Parcel C, located north-adjacent to the Saw Mill River Outlet, along the Hudson River. The parcel is currently an asphalt paved commuter parking lot.

The survey area on the southern side of Parcel C was divided into 58 lines with lengths of 225, 250, 275 and 300 feet. Survey results are included on three maps included in Appendix B, showing the quad-phase, the in-phase, and anomalies, which were generated from data collected in this survey.

In the map of detected anomalies, one linear anomaly (shown in green) corresponds to the location of an underground utility, such as a water pipe or sewer pipe. Dots and lines (shown in red) indicate possible isolated small metallic objects such as small pipes, steel bars or buried metallic objects. The large yellow area, located between lines 75E and 100E, approximately 125 feet from 0N line, indicates possible significant anomalies that could be buried tanks. This yellow area could also represent buried building foundations with steel reinforcing bars. This anomaly can be seen in both the in-phase response and quad-phase component maps. None of the other anomalies had a finger print of a possible buried tank.

#### 2.3 Soil Gas Survey

The soil gas sampling program was used as a screening procedure to better delineate the areas where soil borings, monitor wells and test pits would be located. Sampling points were chosen to obtain adequate coverage of the parcels, and were also based on information obtained from the EM survey. The grid established by the surveyor was utilized in plotting the chosen soil gas sampling points. Access to the subsurface soil was gained by drilling through the top one foot of surface materials using a Geoprobe unit. Upon completion of the boring through the surface material, the sampling probe, a 2.5-foot long, 5/8-inch diameter stainless steel shaft with a hardened point and slotted intakes, was driven into an additional two to three feet of soil to obtain the soil gas sample. The collected soil gas samples were immediately analyzed for benzene, ethylbenzene, xylene, toluene, trichloroethylene (TCE), tetrachloroethylene (PCE), and trans, 1,2-dichloroethylene (DCE) with a portable gas chromatograph.

## Parcel H

On June 11, 1998, Zebra Environmental of Inwood, New York was contracted to provided Geoprobe services for the installation of sampling points on Parcel H. The weather was clear and approximately 70 °F. The Geoprobe van-mounted drill rig used hollow steel connecting rods driven into the subsurface. Once the sampling probe was driven to the desired depth, a van-mounted vacuum system was attached to the sampling probe head, and the system was purged to allow the collection and subsequent analysis of a representative sample of soil gas. Samples were retrieved in Tedlar bags and analyzed by Environmental Resource Management (ERM) of Exton, Pennsylvania using a Photovac 10S Plus GC/PID. All ERM reported soil gas results are in parts per million (ppm) and are included in Appendix C. Sampling points were installed in areas where anomalies were detected by the EM survey. Additional points were installed and sampled to provide full coverage of the parcel so that soil gas plumes, if present, could be delineated. A total of 29 attempts were made to retrieve soil gas from Parcel H; 14 soil gas samples were obtained and analyzed from Parcel H. Refusal was encountered at a depth of one to two feet on 15 attempts. One sample was retrieved from the undeveloped road located northwest of the survey grid.

Concentrations of total volatile organic compounds detected at Parcel H ranged from non-detect at 10 locations to 77.81 ppm on the western central portion of the parcel. Concentrations of trichloroethylene (TCE) were detected along the western central portion of Parcel H. Concentrations of toluene, xylene and benzene were detected in the southern central portion of the parcel. A summary of these results are included in Table 2.1. Based on these results, test pits and soil borings/monitor wells were installed in these areas. There were no apparent trends on the parcel. Sampling points, total volatile organic compound results, and contours of possible soil gas plumes are plotted on Figure 4H&I, reported in parts per million (ppm).

Table 2.1 Parcel H Soil Gas Summary Yonkers Downtown Waterfront - Parcel H1 (ppm)

Sampling Location <sup>2</sup>	Benzene	TCE	Toluene	Xylene(s)	Total VOCs
55W - 175S	0.12	0.48	0.27	ND	0.87
130W - 230S	ND	2.48	ND	ND	2.48
140W - 125S	ND	77.81	ND	ND	77.81
50W - 240S	ND	ND	ND	0.14	0.14

Notes: 1 Samples collected by AKRF, Inc. personnel on June 11, 1998 and analyzed for benzene, ethylbenzene, xylene, toluene, trichloroethylene (TCE), tetrachloroethylene (PCE), and trans, 1,2-dichloroethylene (DCE) with a portable gas chromatograph.

<sup>&</sup>lt;sup>2</sup> Locations based on the surveyed grid included in Appendix D.

ND = None detected ppm = parts per million

#### Parcel I

On September 23, 1998, Zebra Environmental provided Geoprobe services for the installation of soil gas sampling points on Parcel I. Samples were retrieved in Tedlar bags and were analyzed by Environmental Resource Management (ERM) using a Photovac 10S Plus GC/PID. The weather was clear and approximately 65°F.

A total of 16 attempts were made to retrieve soil gas from Parcel I. Refusal was encountered at depths of one to two feet on five attempts. Eleven samples were retrieved and analyzed for volatile organic compounds. Concentrations of total volatile organic compounds detected ranged from 0.29 ppm in the northeastern portion of the parcel to 11.28 ppm in the northern central section of the parcel. Toluene and acetone were detected in each of the samples analyzed. Acetone concentrations ranged from 0.22 ppm to 10.83 ppm. Toluene concentrations ranged from 0.02 ppm to 0.38 ppm. Concentrations of ethylbenzene, xylenes and trichloroethylene (TCE) were detected in the northeastern corner of the parcel.

Based on these results, test pits and soil borings/monitor wells were installed in these areas. There were no apparent trends on the parcel. Sampling points and total volatile organic compound results are plotted on Figure 4H&I, reported in parts per million (ppm).

## Parcel C

On September 22, 1998, Zebra Environmental provided Geoprobe services for the installation of soil gas sampling points on Parcel C. Samples were retrieved in Tedlar bags and were analyzed by Environmental Resource Management (ERM) using a Photovac 10S Plus GC/PID. The weather was clear and approximately 65°F. A total of 16 attempts were made to retrieve soil gas from Parcel C. A total of 15 soil gas samples were obtained and analyzed from Parcel C. Refusal was encountered at a depth of approximately two feet at one location. One sample was retrieved from the area located west of the survey grid.

Concentrations of total volatile organic compounds detected at Parcel C ranged from 0.59 ppm on the central portion of the parcel to 7.29 ppm on the southeastern section of the parcel. Concentrations of acetone and toluene were detected in each sample analyzed. Acetone concentrations ranged from 0.54 ppm to 5.77 ppm and toluene concentrations ranged from 0.03 ppm to 0.56 ppm. Based on these results, soil borings/monitor wells were installed in these areas.

Sampling points, total volatile organic compound results, and contours of possible soil gas plumes are plotted on Figure 4C, reported in parts per million (ppm).

# 2.4 Ground Penetrating Radar

A ground penetrating radar (GPR) survey was conducted by Hager-Richter Geoscience, Inc. of Salem, New Hampshire, following the EM and soil gas surveys to better delineate the anomalies detected during those surveys. A Geophysical Survey Systems Model SIR-2 state-of-the-art digital ground penetrating radar system was utilized with a 500 MHZ or 300 MHZ antenna. GPR can detect the shape of buried objects and can delineate drums and tanks. Hager-Richter's report is included as Appendix D.

# Parcel H

On May 20, 1998, a GPR survey was performed on Parcel H. The weather during the survey was sunny, clear and approximately 78 °F. The grid established by the surveyor was utilized for the GPR survey.

Based on anomalies detected in the EM survey results, three large areas, covering most of the parcel, were surveyed. Surveyed areas included: the central section of Parcel H, the northeastern portion, and the southwestern section of the parcel. No underground storage tanks were located on the parcel, however, four small unidentified buried objects were detected in the central portion of the parcel, as shown in the results from the GPR survey, located in Appendix D.

#### Parcel I

On May 21, 1998, the GPR survey was performed on Parcel I. The weather during the survey was clear and approximately 78 °F. The GPR survey was performed by Hager-Richter Geoscience, Inc. utilizing the surveyor's grid. The survey area was divided into 20 lines with lengths of 50, 75 and 100 feet. The survey results did not indicate the presence of any buried objects, underground piping or underground storage tanks. The results from the GPR survey are located in Appendix D.

## Parcel C

On May 28, and 29, 1998, the GPR survey was performed on Parcel C. The weather during the survey was overcast and approximately 65 °F. The GPR survey was performed by Hager-Richter Geoscience, Inc. utilizing the surveyor's grid on the southern portion of Parcel C, located north-adjacent to the Saw Mill River Outlet along the Hudson River.

The survey area on the southern side of Parcel C was divided into two separate grids. Based on anomalies detected during the EM survey, one survey area was established in the northeastern corner, and the other was established in the central portion of the parcel.

The survey area in the northeastern portion of the parcel was divided into 15 lines with lengths of 60 feet. An unidentified buried object and possible underground utility were detected in the survey area. No underground storage tanks were detected.

On the central portion of the parcel, the survey area was divided into 17 lines with lengths of 100 feet. According to EM survey results, this area was suspected of containing either an underground storage tank or concrete foundation reinforced with steel bars. GPR results did not indicate the presence of an underground storage tank. One large flat reflector, possibly a buried concrete foundation, was located along the 100E line. This is the same location the EM survey detected an anomaly that was believed to be a possible tank. Several other unidentified buried objects and possible underground utilities were detected, however, none of the anomalies had a finger print of a buried tank. Survey results are located in Hager-Richter's report included in Appendix D.

#### 2.5 Test Pits

Test pits were excavated in areas where anomalies were detected with the EM and/or GPR surveys and where high concentrations of volatile organic compounds were detected in the soil gas survey. Soil samples obtained from the test pits were classified individually using the modified Burmister Classification System. When weather permitted, soil samples were field-screened using the head-space technique with an Organic Vapor Meter (OVM) Model 580B photoionization detector (PID). Test pit logs detailing soil and excavation activities are provided in Appendix E and test pit locations are shown on Figures 3H&I and 5H&I. Based on PID readings and visual inspection, soil samples were selected and submitted for laboratory analysis. As requested by the NYSDEC, when monitor wells could not be installed due to surficial fill materials, groundwater samples were collected from several test pits and submitted for analysis.

A New York State Department of Health certified CLP laboratory analyzed the soil and groundwater samples for Target Compound List (TCL) volatile organic compounds and semivolatile organic compounds, total Target Analyte List metals (aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc) and polychlorinated biphenyls (PCBs). Samples were transported under chain-of-custody protocol.

# Parcel H

On June 15 and 16, 1998, six test pits were excavated on Parcel H. The weather during the excavations was cloudy and approximately 68 °F. Test pit locations are shown on Figure 3H&I and test pit logs are included in Appendix E. Rusciano, Inc. provided backhoe services for the excavations. Test pits TP-1H, TP-2H, TP-3H, and TP-7H were excavated on the survey grid established for the parcel. Test Pits TP-8H and TP-9H were excavated west of the grid, and test pit TP-10H was excavated north of the grid.

Test pits TP-1H, TP-2H and TP-3H were excavated where several anomalies were detected by the EM survey. Concrete block, metal piping and I-beams account for the detected anomalies in these areas. Test pit TP-1H was excavated on the northern portion of the grid, south of the undeveloped road. The excavation contained construction debris, metal piping, reinforced concrete and steel beams, which account for the anomalies detected in the EM Survey. Ten 20-foot long steel I-beams were removed from the excavation. Soil in the excavation consisted of brown to black sand and gravel. A soil sample collected from approximately four feet below grade was submitted for laboratory analysis. The total depth of the excavation was approximately 10 feet below grade.

Test pit TP-2H was excavated along the western central section of the parcel. Miscellaneous fill such as wood, red brick, metal pipes and concrete were encountered at shallow depths. Soil in the excavation consisted of brown to dark brown sand and silt. No sample was submitted for analysis from this test pit.

Test pit TP-3H was excavated in the central portion of the surveyor's grid. Metal piping and concrete were encountered at approximately two feet below grade. Large concrete block was observed from three to seven feet below grade. Groundwater was encountered at approximately eight feet below grade. A groundwater sample was collected from the bottom of the test pit and submitted for analysis to provide upgradient groundwater conditions on the parcel.

Test pit TP-7H was excavated in the southern end of the surveyed grid. Concrete block was encountered at approximately three feet below grade. Soil in the excavation consisted of gray to brown sand with some black ash. No sample was collected from this test pit for laboratory analysis.

Test pit TP-8H was excavated approximately 60 feet west of the surveyed grid, in the southern corner of the parcel. Cobbles and schist were observed to three feet below grade, overlaying brown sand. Soil in test pit TP-9H consisted of gray-brown sand with some mica schist. A soil sample was collected at approximately four feet below grade and submitted for analysis. Groundwater was intercepted at six feet below grade; a groundwater sample was collected and submitted for laboratory analysis. TP-9H was excavated approximately 120 feet west of TP-2H. Groundwater samples from test pits TP-8H and TP-9H were collected to provide downgradient groundwater conditions for the parcel.

Soil in test pit TP-10H, located 50 feet north of the testing grid, consisted of black sand and silt. Red brick, coal ash and plastic wire casing were encountered approximately four feet below grade. A soil sample was collected from approximately four feet below grade and submitted for laboratory analysis. Soil and groundwater samples were analyzed for Target Compound List (TCL) volatile organic compounds and semivolatile organic compounds, Target Analyte List metals and polychlorinated biphenyls (PCBs).

Sample analysis from the soil collected from test pits on Parcel H showed elevated levels of PCBs and metals. At the request of Mr. Thomas Gibbons of the New York State Department of

Environmental Conservation (NYSDEC), additional test pits were then excavated in this area, with additional soil and groundwater sample collection. Soil and groundwater samples were analyzed for Target Analyte List (TAL) metals and PCBs. Groundwater samples collected from these additional test pits were filtered in the field and analyzed for dissolved TAL metals.

On October 28, 1998, a total of eight additional test pits were excavated on Parcel H. Concentrations of PCBs had been detected in soil collected from TP-10H. To better delineate the PCB contamination, test pit TP-10AH was then excavated adjacent to test pit TP-10H. Soil in test pit TP-10AH consisted of brown to black sand. Miscellaneous fill materials including red brick, plastic wire casing and concrete block were encountered throughout the test pit. A soil sample was collected from approximately four feet below grade and submitted for laboratory analysis. Groundwater was intercepted at nine feet below grade; a groundwater sample was collected and submitted for laboratory analysis.

Test pit TP-11H was excavated adjacent to test pit TP-1H, where concentrations of PCBs had been detected. Soil consisted of brown sand and silt. Miscellaneous fill materials including metal piping, plastic wire casing, wood and concrete block were encountered at approximately three feet below grade. A 55-gallon drum containing oil was encountered at approximately four feet below grade. A sample of this fluid was collected and analyzed in the laboratory. The fingerprint analysis indicated that the drum contained No. 2 fuel oil. A soil sample was collected at approximately three feet below grade and submitted for analysis. Groundwater was intercepted at 11 feet below grade; a groundwater sample was collected and submitted for analysis. Concentrations of PCBs were detected in groundwater collected from test pit TP-3H excavated previously. To better delineate the PCBs in this area, test pit TP-12H was excavated on the southern side of TP-3H. Brown sand and miscellaneous fill materials were located throughout the test pit. A soil sample was collected at approximately four feet below grade and submitted for analysis. Groundwater was intercepted at twelve feet below grade and a sample was collected and submitted for analysis.

Test pits TP-13H, TP-14H, TP-15H, TP-16H were excavated on the northern side of the undeveloped road. Soil in test pit TP-13H consisted of brown sand and silt. Wire, red brick and rope were located from five to eight feet below grade. A soil sample was collected from approximately five feet below grade and submitted for analysis. Groundwater was intercepted at ten feet below grade; a groundwater sample was collected and submitted for analysis. Soil in test pit TP-14H consisted of brown sand, silt and gravel. Miscellaneous fill material including wire and red brick were encountered three to four feet below grade. A soil sample was collected at approximately five feet below grade and submitted for analysis. The test pit was excavated to approximately eight feet below grade; groundwater was not encountered.

Soil in test pit TP-15H consisted of brown sand and silt. Concrete block was located throughout the test pit. Groundwater was encountered at approximately nine feet below grade. Soil in test pit TP-16H consisted of brown sand and gravel with miscellaneous fill materials including red brick, metal beams and wood. Groundwater was encountered at approximately eight feet below grade. Soil

samples were collected from approximately five feet below grade from test pits TP-15H and TP-16H and submitted for laboratory analysis. Test pit TP-17H was excavated on the southern side of the parcel to provide additional coverage in this area. Soil consisted of brown sand and silt. Concrete block was encountered throughout the test pit to a depth of 8.5 feet below grade. No groundwater was intercepted during the excavation of test pit TP-17H. A soil sample was collected from approximately three feet below grade and sent for laboratory analysis.

Elevated concentrations of lead were detected in test pits TP-11H and TP-13H (see Section 3.2.1). At the request of Mr. Thomas Gibbons of the NYSDEC, on January 27, 1999, five additional test pits were excavated on Parcel H. Soil samples were analyzed for RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver).

Test pits TP-10BH was excavated in the same area as test pits TP-10H and TP-10AH. Test pit TP-10BH was excavated to a depth of nine feet, where groundwater was encountered. A soil sample was collected from approximately four feet below grade and submitted for analysis. Test pit TP-11AH was excavated in the same area as test pit TP-11H. Soil consisted of brown to black sand and gravel. Two soil samples were collected and sent for laboratory analysis: one sample from approximately three feet below grade and one sample from approximately seven feet below grade. Plastic mats were encountered from approximately seven feet below grade to the bottom of the test pit (ten feet below grade), where groundwater was intercepted.

Test pit TP-13AH was excavated in the same area as test pit TP-13H. Concrete block was encountered throughout the excavation. Soil in the excavation consisted of brown sand and silt. Soil samples were collected from approximately four feet and eight feet below grade were sent for laboratory analysis. Test pit TP-18H was excavated on the northwestern portion of the parcel. Miscellaneous fill such as concrete blocks were encountered at shallow depths. Soil in the excavation consisted of brown sand and silt. Groundwater was intercepted at approximately nine feet below grade. A soil sample was collected from approximately five feet below grade and sent for laboratory analysis. Test pit TP-19H was located on the southern side of previously excavated test pits TP-11H and TP-11AH. Soil consisted of brown sand. Miscellaneous fill materials included metal sheets and concrete block. A soil sample was collected from approximately three feet below grade and sent for laboratory analysis. Groundwater was intercepted at approximately eight feet below grade at the bottom of the excavation.

#### Parcel I

On June 15 and 16, 1998, three test pits were excavated on Parcel I. The weather during the excavations was cloudy and approximately 68 °F. Rusciano, Inc. provided backhoe services for the excavations. Test pits TP-4H, TP-5H and TP-6H (mislabeled as "H") were excavated in areas where EM anomalies were detected on Parcel I. No anomalies were detected by the GPR survey of Parcel I. Low concentrations of volatile organic compounds were detected in the soil gas survey, however, there were no apparent trends.

Test pit TP-4H was excavated on the eastern side of the parcel. Soil consisting of dark brown sand and gravel was encountered in the first three feet of the excavation. Large concrete foundation block was unearthed at approximately three feet to five feet below grade. A soil sample was collected from approximately five feet below grade and submitted for analysis. Soil consisted of ash and dark brown sand. Groundwater was intercepted at approximately eight feet below grade; a groundwater sample was collected and submitted for laboratory analysis to provide upgradient groundwater conditions for the parcel.

Soil from test pits TP-5H and TP-6H consisted of dark brown sand, silt and coal ash. Steel bars and concrete were encountered at shallow depths in both test pits. No soil samples were sent for analysis from these two test pits. Groundwater was encountered in test pit TP-5H at a depth of 8.5 feet below grade. No groundwater was intercepted in test pit TP-6H.

Envirotech Research, Inc., a New York State Department of Health certified CLP laboratory, analyzed the soil samples for TCL volatile organic compounds and semivolatile organic compounds, TAL metals and PCBs. Groundwater samples were analyzed for TCL volatile organic compounds and semivolatile organic compounds, TAL metals and PCBs. Samples were transported under proper chain-of-custody protocol.

# Parcel C

Parcel C is currently used as a commuter parking lot, therefore, no test pits were excavated.

# 2.6 Soil Borings and Monitor Wells

Proposed soil boring and monitor well locations were based on the results from the initial EM, soil gas and GPR surveys, and known history of the parcels. The borings and monitor wells on Parcels H and I were installed by Uni-Tech Drilling of Malaga, New Jersey using a hollow stem auger rig. Soil samples were not collected due to interference from reinforced concrete foundations, metal bars and other miscellaneous fill materials. The locations of the monitor wells are shown on Figure 3H&I.

The borings and monitor wells on Parcel C were installed by Enviro-Tech Drilling of West Bridgewater, Massachusetts using a hollow stem auger rig and the split spoon sampling method. The locations of the soil borings are shown on Figure 3C. Soil samples were collected from the ground surface and continuously, or in five foot intervals, to a maximum depth of approximately 14 feet below grade. Monitor wells were designated with the prefix "MW" on the figures and the boring logs included in Appendix E.

Two soil borings from each parcel were retrofitted with monitor wells using two-inch, Schedule 40, threaded, flush-joint PVC well materials, according to standard RCRA monitor well installation procedures. Locations of the monitor wells are depicted in Figure 3H&I and 3C. Monitor well

screen sections were located across the saturated/unsaturated interface and were backfilled with clean silica sand. A bentonite seal was then placed above the sand. Monitor wells on Parcels H and I were completed using locking, stick-up, steel cylinders, two feet above grade. Monitor wells on Parcel C were completed using locking, gate boxes, flush-with-grade. Following the installation of the monitor wells, a submersible pump was utilized to develop the wells. Each well was pumped approximately 20 minutes at a rate of two gallons per minute.

Soil from each boring was classified using the modified Burmister Classification System and field-screened with an Organic Vapor Meter (OVM) Model 580 B photoionization detector (PID). Although no soil was recovered with the split spoon samplers during the installation of monitor wells on Parcels H and I, PID readings were taken of the soil from the auger flights and of the ambient air around the borings during the installation. No volatile organic compounds were detected with the PID at these locations that would confirm the soil gas hits in this area. The PID readings for Parcel C are included on the boring logs in Appendix E.

In addition to the laboratory analysis of the samples collected in the field, additional analyses were included as a quality control measure, as required under New York State protocol. For the soil sampling task, additional samples analyzed included: one aqueous equipment blank (field blank) per drilling day of all stated analyses and one aqueous trip blank per cooler for volatile organic compounds. Additional water analysis collected during the groundwater sampling activities included one equipment blank per sampling day of all stated analyses and one trip blank per cooler for volatile organic compounds. One set of soil field duplicates was collected and included all stated analysis. The field duplicates were labeled "blind" to the laboratory.

## Parcel H

On July 9, 1998, two soil borings were advanced on Parcel H. Both of the borings were retrofitted with monitor wells. The weather during the installation was sunny and approximately 75°F. Monitor well MW-1H was installed in the west central portion of the parcel. The 10-foot section of well screen was installed from 9 feet to 19 feet below grade. The monitor well was installed at this location based on elevated levels of volatile organic vapors detected in the soil gas survey at this location and for the purpose of delineating downgradient groundwater quality for Parcel H. Some of the cuttings from the auger appeared to be pulverized concrete. Several cutting teeth of the auger were damaged during drilling activities. Upon completion, the boring was observed to contain a number of voids and gaps. A large amount of filter sand was necessary to fill these gaps and complete the monitor well.

Monitor well MW-2H was installed in the northeastern corner of the parcel. The 10-foot section of well screen was set from approximately 9 to 19 feet below grade. Drill cuttings observed included red brick and concrete. Soil from the drill cuttings was observed to be gray-black silt. This monitor well was installed for the purpose of delineating upgradient groundwater quality for Parcel H. Monitor well locations are shown on Figure 3H&I. No soil samples were collected during the

installation of these monitor wells due to large amounts of fill materials including concrete and brick.

## Parcel I

On July 9 and 10, 1998, two soil borings were advanced on Parcel I. Both borings were retrofitted with monitor wells. The weather during drilling was 75 °F and sunny. Monitor well MW-1I was installed in the southwestern corner of the parcel to delineate downgradient groundwater conditions. The 10-foot section of well screen was set from approximately 6 to 16 feet below grade. Soil from the drill cuttings was observed to be gray-black silt.

Monitor well MW-2I was installed to 19 feet below grade in the northeastern corner of the parcel to quantify upgradient groundwater conditions. Drill cuttings consisted of gray-black silt and gravel with no odor. No soil samples were collected during the installation of these monitor wells due to large amounts of fill materials including concrete and brick.

## Parcel C

On October 28 and 29, 1998, five soil borings were advanced on Parcel C, two of which were retrofitted with monitor wells. The weather during the installation was sunny and approximately 60°F. Boring B-1C was installed in the northeastern corner of the parcel. One soil sample was obtained from approximately five feet below grade and was submitted for laboratory analysis. Concrete was encountered from 3.5 to 4.5 feet below grade. Refusal was encountered at seven feet below grade on a possible boulder.

Monitor well MW-2C was installed approximately 20 feet west of boring B-1C. Asphalt and concrete were encountered to a depth of five feet below grade. Wet brown sand and gravel were observed at approximately six feet below grade. The PVC well screen was set from 4 to 14 feet below grade. This monitor well was installed for the purpose of delineating upgradient groundwater conditions at the parcel.

Boring B-3C was advanced in the north-central portion of the parcel. Asphalt and concrete were encountered to a depth of four feet below grade. Refusal was met at approximately 4.5 feet below grade on concrete. Soil samples could not be collected due to the concrete.

Monitor well MW-4C was installed on the western side of the parcel for the purpose of delineating downgradient groundwater conditions. Soil sample S-3 was obtained from approximately four feet below grade and was submitted for laboratory analysis. The soil consisted of dark brown sand and gravel. Groundwater was located at approximately five feet below grade. The PVC well screen was set from 3 to 11 feet below grade. The monitor well casing was cemented within a locking steel cap, flush with grade.

Borings B-5C and B-6C were advanced in the northwestern section of the parcel. Both borings hit refusal at eight feet below grade on possible boulders. One soil sample was obtained from each boring and submitted for laboratory analysis. Soil from both borings consisted of black sand and gravel and had a petroleum odor. No volatile organic compounds were detected with the PID on the soil samples collected.

Boring B-7C was advanced in the center of the property in an area where significant EM and GPR anomalies were located. Soil consisted of brown to black sand and silt with some gravel. A petroleum odor was present in the soil at approximately six feet below grade. PID readings for the soil sample S-4 were 2.3 ppm. Boring B-8C was advanced on the southeastern portion of the parcel. Soil at five feet below grade consisted of brown silt. A sample was obtained and submitted for laboratory analysis from this depth. No volatile organic compounds were detected in the field in this sample.

# 2.7 Monitor Well Sampling

On July 24, 1998, groundwater samples were collected from the four newly installed monitor wells on Parcels H and I. On November 9, 1998, groundwater samples were collected from the two newly installed monitor wells on Parcel C. Prior to sampling, depth to water measurements were taken. These measurements were used to calculate the volume of water in each well. At least three times the well volume was purged from each well prior to sampling. A new disposable bailer was used to purge each well. Groundwater purged from each well was noted to be light brown, with no odors or sheens. Samples were transferred directly from the bailer into the sample containers.

Specific conductance and pH were measured in the field following well purging. An Oakton TDS Testr and waterproof pH Testr were used for the field measurements. Prior to field testing, both instruments were field calibrated. Following each measurement, the instruments were decontaminated using a distilled water rinse. Results from the field measurements are included in Table 2.1.

Groundwater samples collected from each of the monitor wells were placed in a chilled cooler and transported to Envirotech Research Inc., New Jersey, a New York State certified CLP laboratory. Laboratory analysis included volatile organic compounds, semivolatile organic compounds, Target Analyte List metals and polychlorinated biphenyls (PCBs). In addition, turbidity was also quantified by the laboratory, included in the field results summarized in Table 2.1.

#### 2.7.1 Groundwater Field Results

Specific conductance values measured in the field ranged from 800 micromhos per centimeter ( $\mu$ mhos/cm) in monitor well MW-1H to 1630  $\mu$ mhos/cm in monitor well MW-2H. Measured pH values ranged from 6.7 standard units (s.u.) in monitor well MW-1I to 7.4 in monitor well MW-1H. There is no New York State drinking water standard for pH in groundwater, however, Federal secondary drinking water regulations stipulate pH values between 6.5 and 8.5. Specific conductance represents a measure of the relative amounts of dissolved solids in the water, which usually includes metals and/or salts. There is no drinking water standard for specific conductance, however, these values are typical for industrial areas and areas with saline groundwater. Turbidity values ranged from 450 Nephelometric Turbidity Units (NTU) in monitor well MW-2I to 1,050 NTU in monitor well MW-1H. Groundwater field results are summarized in Table 2.2.

Table 2.2
Groundwater Field Measurements Summary

Parcels H, I and C

Yonkers, New York

Monitor Well	Specific Conductance (/amhos/cm)	pH (standard units)	Turbidity (NTU)
MW-1H	800	7.4	1,050
MW-2H	1,630	7.1	460
MW-1I	1,150	6.7	875
MW-2I	860	7.2	450
MW-2C	890	7.3	NA
MW-4C	850	7.1	NA

Measurements taken on July 24, 1998, and November 9, 1998

 µmhos/cm = micromhos per centimeter

<sup>2</sup> NA - Not Analyzed

# 2.8 Surface Soil Sampling

On July 30, 1998, surface soil samples were obtained from Parcels H and I. Soil sample SS - Parcel I was collected from the southwestern corner of Parcel I and soil sample SS - Parcel H was collected from the western central portion of Parcel H. The entire surface of Parcel C is covered with asphalt, therefore, no surface soil sample was obtained. Samples from Parcel H and I were analyzed at Envirotech Research, Inc. for semivolatile organic compounds, polychlorinated biphenyls (PCBs) and pesticides, in accordance with the approved Work Plan.

# 2.9 Background Soil Sampling

Three background surface soil samples were collected from adjacent areas outside of the study site parcels, which were also used in the Site Investigation Report for Parcels E and F of the Yonkers downtown waterfront development. The locations of these samples are shown on Figure 2. The three surface soil samples were analyzed for TAL metals and polyaromatic hydrocarbons (PAHs). The samples were collected on June 18, 1998 from the following locations: sample BG-1 from the Prospect Street grassed median, just north of Buena Vista Avenue; sample BG-2 from the Main Street grassed median, between parcel E and parcel F; and BG-3 from the grassed median located adjacent to Dock Street. Results from the background sample analysis is included in the soil analytical results. Background sample locations are shown on Figure 2.

## 2.10 TCLP Analysis

Based on initial metals analytical results of test pit soil samples, two soil samples (sample TP-13AH and TP-13BH from test pits located on Parcel H) were additionally analyzed for lead using the Toxicity Characteristic Leaching Procedure (TCLP). The additional analysis was performed to determine whether soil would be considered hazardous, according to NYSDEC regulations.

## 2.11 Monitor Well Elevation Survey

On July 27, 1998, the monitor well locations and elevations for parcels H and I were surveyed by Munoz Engineering. The survey for the Parcel C locations and elevations was completed on November 14, 1998. The locations are shown on Figures 3H&I and 3C. Three elevation measurements were taken at each monitor well location: the ground beside the well; the rim of the monitor well (when closed); and the top of PVC. When measuring the depth to the water table in the monitor wells, the measurement were made to the top of PVC, at a location marked on the PVC by AKRF. These field measurements and elevation measurements, shown in Table 2.3, were used

to establish the groundwater table elevation. These measurements cannot be used to infer flow direction, as this area of the Hudson River is tidal, and measurements were not taken simultaneously.

Table 2.3
Groundwater Table Elevations<sup>1</sup>
Parcels H, I and C
Yonkers, New York

Well I.D.	PVC Elevation	Depth to Water <sup>2</sup>	Water Table E evation
MW-1H	15.70	14.53	1.17
MW-2H	13.30	12.9	0.4
MW-1I	7.44	6.36	1.08
MW-2I	10.82	9.86	0.96
MW-2C	7.46	7.0	0.46
MW-4C	5.09	5.34	-0.31

<sup>&</sup>lt;sup>1</sup> Elevations surveyed by Munoz Engineering P.C. on July 27, 1998 and November 14, 1998.

# 2.12 QA/QC for Groundwater and Soil Sampling

To assure the integrity of samples obtained at the site, measures were taken to prevent cross contamination of soil or groundwater samples. During all drilling activities, augers and split spoon samplers were hot water pressure (steam cleaned) between each location. Split spoon samplers and sampling equipment were decontaminated between each sample using alconox wash, distilled water rinse, acid rinse, followed by a final distilled water rinse and, weather permitting, allowed to air dry. Groundwater sampling of the monitor wells was performed using dedicated disposable bailers. Soil and groundwater samples were obtained directly from test pits. New latex or nitrile gloves were worn during all sampling procedures.

Under New York State protocol, additional laboratory sampling of actual samples is required as a quality control measure. In accordance with New York State protocol for soil sampling (soil borings and test pits), one aqueous equipment blank per day was analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), TAL metals and polychlorinated biphenyls (PCBs) and one aqueous trip blank per cooler was analyzed for volatile organic compounds. One set of soil duplicates were analyzed for volatile organic compounds, semivolatile organic

<sup>&</sup>lt;sup>2</sup>Depth to water measurements taken by AKRF, Inc. on July 24, 1998 and November 9, 1998.

compounds, TAL metals and PCBs. Since no equipment other than new latex or nitrile gloves was used during test pit sampling, no aqueous equipment blank was analyzed for the test pit operation.

For groundwater sampling, one aqueous equipment blank per day was analyzed for volatile organic compounds, semivolatile organic compounds, TAL metals and PCBs. In addition, one aqueous trip blank per cooler was analyzed for volatile organic compounds.

#### 3.0 SOIL AND GROUNDWATER ANALYTICAL RESULTS

#### 3.1 Field Results

Soil samples were field-screened for volatile organic compounds using a Thermo Environmental Instruments, Inc. Model 580B Organic Vapor Meter (OVM) photoionization detector (PID) and the headspace field-screening method. Additionally, the OVM was used to monitor ambient air during field work.

# Parcel H

On June 15 and 16, 1998, seven test pits were excavated on Parcel H (TP-1H, TP-2H, TP-3H and TP-7 through TP-10). PID readings ranged from 2.3 parts per million (ppm) in test pit TP-8H to 13.9 ppm in test pit TP-10H. Test pit TP-10H was located on the northeastern corner of the parcel. Sample analysis from the soil collected from test pits on Parcel H showed elevated levels of PCBs and metals. Eight additional test pits were excavated on Parcel H on October 28, 1998 (TP-10AH and TP-11H through TP-17H). No volatile organic compounds were detected by the PID during the test pits excavated in October. Elevated concentrations of lead were detected in test pits excavated on October 28, 1998. In response to the initial results and to better delineate lead concentrations in the area, on January 27, 1999, five additional test pits were excavated on Parcel H (TP-10BH, TP-11AH, TP-13AH, TP-18H and TP-19H). On July 10,1998, two soil borings (MW-1H and MW-2H) were advanced on Parcel H, each retrofitted with a monitor well. No volatile organic compounds were detected by the PID on auger tailings or ambient air around the boring holes during the boring/monitor well installations. Test pit and monitor well locations are presented in Figure 3H&I.

#### Parcel I

On June 16, 1998, three test pits were excavated on Parcel I (TP-4H, TP-5H and TP-6H). No volatile organic compounds were detected by the PID during the excavation of these test pits. On July 10, 1998, two soil borings were advanced on Parcel I (MW-1I and MW-2I), with each of the borings retrofitted with a monitor well. No volatile organic compounds were detected by the PID on auger tailings or ambient air surrounding the borings. Test pit and monitor well locations are presented in Figure 3H&I.

# Parcel C

On October 29 and 30, 1998, eight soil borings were advanced on Parcel C, with two of the borings retrofitted with monitor wells. Sample S-4 from monitor well MW-7C registered a PID reading of 2.3 ppm. No volatile organic compounds were detected by the PID on any other soil samples collected from Parcel C. Monitor well and boring locations are presented in Figure 3C.

# 3.2 Laboratory Results

This section presents the results and interpretation of laboratory chemical analyses performed on soil samples collected during the investigation of Parcels H, I and the southern portion of Parcel C of the Yonkers Downtown Waterfront Development. The discussion of laboratory results is organized by parcel.

The chemical analytical data received from the laboratory are provided in Appendix F of this report and includes analytical results and chain-of-custody documentation. Summary tables appended to this report include corrections from the Data Usability Summary Report (DUSR), which was sent under separate cover.

The soil data results are compared to the New York State Department of Environmental Conservation Soil Cleanup Objective from the Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046). The bases for these guidance values include direct human ingestion of soil and the impact to groundwater used as a drinking water source. Similarly, groundwater data are compared to Ambient Water Quality Standards and Guidance Values from the New York State Department of Environmental Conservation Division of Water Technical and Operational Guidance Series (1.1.1), developed for drinking water, even though groundwater is brackish from the tidal action of the Hudson River and is not used as a drinking water source.

Background soil samples were collected from off-site areas and analyzed to characterize the area soils. As such, it is expected that some of the on-site samples would be above the average off-site values. These background samples were also used in the Site Investigation Report of Parcels E and F. The summary tables in this report include the results of all three background samples.

#### 3.2.1 Parcel H Soil

Surface soil, subsurface soil, and groundwater samples were collected from Parcel H at the locations shown in Figure 3H&I. Analytical results are presented in Tables H-1 through H-10, and are discussed in the following sections.

A total of 18 subsurface soil samples were collected and analyzed from Parcel H. Eleven of these samples were analyzed for polychlorinated biphenyls (PCBs) and Target Analyte List

(TAL) metals. Three of the samples were also analyzed for volatile organic compounds and semivolatile organic compounds. The seven remaining samples were analyzed for RCRA metals (one of these samples was additionally analyzed for volatile organic compounds). One surface soil sample was collected from Parcel H and analyzed for semivolatile organic compounds, PCBs, pesticides, and TAL metals.

# **Volatile Organic Compounds**

Detected volatile organic compounds are summarized in Table H-1. Complete laboratory reports are included in Appendix F. Acetone, 2-Butanone, 1,1,1-trichloroethane, trichloroethene, benzene, tetrachloroethene, toluene, and xylenes were detected in the subsurface soils. None of the concentrations of these compounds exceeded the NYSDEC Soil Cleanup Objectives. No other volatile organic compounds were detected.

# Semivolatile Organic Compounds

Table H-2 includes a summary of detected semivolatile organic compounds. Benzo(a) anthracene and chrysene were detected above the NYSDEC Soil Cleanup Objectives in each of the four samples analyzed. These compounds, however, were also detected in background samples above the Cleanup Objectives. Bis(2-ethylhexyl)phthalate was detected at one location (TP-10H) at a concentration exceeding the Soil Cleanup Objective (possibly from a piece of plastic in the soil sample). Benzo(b)fluoranthene was detected above the Soil Cleanup Objective of 1,100 micrograms per kilogram ( $\mu$ g/kg) in two of the four samples analyzed (1,500  $\mu$ g/kg in TP-1H and 3,200  $\mu$ g/kg in TP-9H) and in one of the background samples (2,000  $\mu$ g/kg). Benzo(k)fluoranthene was detected in one sample, TP-9H, at a concentration of 1,300  $\mu$ g/kg, slightly above the Soil Cleanup Objective of 1,100  $\mu$ g/kg. Benzo(a)pyrene and dibenz(a,h) anthracene were detected at levels exceeding the Soil Cleanup Objectives in three of the four samples analyzed, however, these compounds were also detected in each of the three background samples at concentrations above the Cleanup Objectives. No other semivolatile organic compounds were detected above their respective NYSDEC Soil Cleanup Objectives.

#### **PCBs**

Eleven subsurface soil samples and one surface soil sample from Parcel H were analyzed for PCBs. The surface soil sample was additionally analyzed for pesticides. Detectable levels of PCBs and pesticides are summarized in Table H-3. PCBs were not detected in any of the samples analyzed in concentrations exceeding the NYSDEC Soil Cleanup Objectives. Surface soil sample SS Parcel H contained the pesticides 4,4'-DDE and 4,4'-DDT at concentrations below the NYSDEC Soil Cleanup Objectives. No other pesticides were detected in the analyzed samples.

#### Metals

#### **TAL Metals**

Table H-4 summarizes the detected TAL metals in the twelve analyzed soil samples from Parcel H. Aluminum was detected in each of the samples analyzed at concentrations comparable to background concentrations. Arsenic was detected above the Soil Cleanup Objective of 7.5 mg/kg in three of the twelve samples analyzed, ranging from 9.6 in the surface soil sample to 19.1 mg/kg in sample TP-10H. Other arsenic results were qualified by the DUSR. Barium was detected at three locations (up to a maximum of 575 mg/kg), above the Soil Cleanup Objective of 300 mg/kg. Beryllium was detected in each of the samples analyzed, however, it was also detected in the laboratory blank and was qualified by the laboratory and the DUSR, and may be attributed to laboratory error in most samples. Cadmium was detected at a concentration of 40.2 mg/kg in sample TP-12H, above the Soil Cleanup Objective of 10 mg/kg. Elevated levels of calcium and magnesium were detected throughout the parcel, and may be naturally occurring (there are no Soil Cleanup Objectives for calcium and magnesium).

Elevated levels of iron and copper were detected throughout the parcel. Test pits unearthed large quantities of piping, reinforced concrete and wiring, which may account for the elevated levels of these metals. Lead was detected above the average site specific background concentration of 142 mg/kg in at least three of the twelve samples analyzed (an additional four samples were qualified by the DUSR). Mercury was detected above the average site background of 0.62 mg/kg in three subsurface and the one surface soil samples, to a maximum of 2.1 mg/kg in sample TP-12H. Nickel and zinc were detected in excess of the Soil Cleanup Objective in eight of the twelve soil samples analyzed. Selenium was detected above the Soil Cleanup Objective of 2.0 mg/kg in two of the twelve samples analyzed at concentrations of 2.2 and 4.3 mg/kg in samples TP-12H and TP-14H, respectively. Sodium, potassium and vanadium were not detected above the Cleanup Objective in any of the twelve samples analyzed.

## **RCRA Metals**

Seven soil samples collected from Parcel H were analyzed for RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver). The results of this analysis are summarized in Table H-5. Arsenic and barium results were qualified by the DUSR and may not be present at concentrations above the Soil Cleanup Objectives. Lead was detected at concentrations ranging from 19.4 mg/kg in sample TP-18H to 12,200 mg/kg in sample TP-13BH.

Based on the elevated lead levels in the area of test pit 13H, two soil samples from test pit TP-13AH, one from four feet below grade and one from eight feet below grade, were additionally analyzed for lead using the Toxicity Characteristic Leaching Procedure (TCLP). The results of this analysis are summarized in Table H-6. Laboratory analysis yielded results of 110 mg/l and 332 mg/l, respectively, above the NYSDEC Hazardous Waste Regulatory Levels of 5.0 mg/l.

# Parcel H Soil Results Summary

No volatile organic compounds, PCBs or pesticides were detected at concentrations that would necessitate remediation. Elevated levels of semivolatile organic compounds, including benzo(a) anthracene, chrysene, bis(2-ethylhexyl)phthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene and dibenz(a,h)anthracene were detected in the central portion of the parcel that, although not considered hazardous, may require remediation. High concentrations of lead were detected in some areas, specifically in test pits TP-10H, TP-11H, TP-13H, TP-13AH and TP-13BH. Based on the results of the initial analysis, samples from test pit TP-13AH were analyzed for TCLP lead. Results indicated that these soils are considered hazardous by NYSDEC regulations and would require off-site removal. Other metals detected at elevated concentrations included arsenic, barium, cadmium, calcium, magnesium, iron, copper, mercury, selenium, nickel and zinc.

#### 3.2.2 Parcel H Groundwater

Eight groundwater samples were collected from test pits and monitor wells on Parcel H and analyzed for volatile organic compounds, semivolatile organic compounds, PCBs, and total and dissolved TAL metals. The three test pit samples from the original sampling event were not filtered in the field or in the laboratory, and as such, the results may depict concentrations of metals in fine sediment. Although care was taken to settle the samples in the field, some sediments likely remained and could explain the elevated levels of metals in the groundwater, as evident from the turbidity readings summarized in Table H-11. Samples collected from the monitor wells were analyzed for both total and dissolved metals. Samples collected from the second round of test pits (TP-10AH-GW, TP-12H-GW and TP-13H-GW) were filtered in the field and analyzed for only dissolved metals.

# **Volatile Organic Compounds**

Trichloroethene (TCE) was the only volatile organic compound detected in the groundwater samples analyzed. Concentrations of trichloroethene were above the NYSDEC Water Quality Standard of 5  $\mu$ g/l in two of the six samples analyzed from Parcel H at concentrations of 8.6 in sample TP-8H and 17 $\mu$ g/l in sample MW-1H. Concentrations of TCE were also detected during the soil gas survey, primarily in the western central portion of the parcel. No other volatile organic compounds were detected in the groundwater samples taken from Parcel H. These results are summarized in Table H-7.

## Semivolatile Organic Compounds

Six groundwater samples were analyzed for semivolatile organic compounds, as summarized in Table H-8. No semivolatile organic compounds were detected in five of the six samples analyzed. Test pit sample TP-3H contained detectable amounts of six semivolatile organic compounds above the NYSDEC Water Quality Guidance Values. The concentrations ranged from 3.6  $\mu$ g/l of benzo(k)fluoranthene to 10  $\mu$ g/l of benzo(b)fluoranthene. The Water Quality Guidance Values for these semivolatile organic compounds is 0.002  $\mu$ g/l. The groundwater sample was collected from test pit TP-3H was not filtered in the field or the laboratory. The presence of semivolatile organic compounds in the water sample is likely due to compounds adhered to the sediment contained in the sample, and is not indicative of actual groundwater quality. No other semivolatile organic compounds were detected in the other groundwater samples analyzed above Water Quality Standards or Guidance Values.

#### **PCBs**

PCBs were analyzed in nine samples from Parcel H. The results are summarized in Table H-9. PCBs were detected above the Water Quality Standard of 0.1  $\mu$ g/l in test pit TP-3H with a concentration 1.54  $\mu$ g/l (total PCBs). The groundwater sample was collected from a test pit and was not filtered. The presence of PCBs in the water sample was likely from sediment contained in the sample and is not dissolved in the groundwater. No other groundwater samples contained detectable concentrations of PCBs on Parcel H.

#### Metals

Concentrations of metals were detected in unfiltered samples above NYSDEC Water Quality Standards. Turbidity levels measured in three samples ranged from 460 NTU to 1,050 NTU. As such, concentrations of metals detected in unfiltered (total) samples may reflect the metals adhering to sediment, and may not be reflective of actual groundwater concentrations. The discussion in this report, therefore, focuses on dissolved (filtered) analysis. Results of the unfiltered samples are included in Table H-10 and in the laboratory reports in Appendix F.

A total of six samples, including a duplicate sample from monitor well MW-2H (MW-2HA), were analyzed for dissolved TAL metals. Magnesium was detected above the Water Quality Standard of 35,000  $\mu$ g/l in each of the six samples analyzed, with a maximum concentration of 209,000  $\mu$ g/l. Manganese was detected above the Water Quality Standard of 300  $\mu$ g/l in three samples (TP-13H, MW-2H and MW-2HA). The presence of magnesium and manganese may be naturally occurring from the tidal influence of the Hudson River. Elevated concentrations of sodium were detected in each sample, and are likely naturally occurring from the Hudson River, which is saline in this area. Zinc was detected in groundwater samples collected from test pits TP-10AH, TP-12H and TP-13H at concentrations ranging from 568 to 946  $\mu$ g/l, above the Water Quality Standard of 300  $\mu$ g/l. No other metals were detected above the Water Quality Standards in the dissolved metals analysis.

# Parcel H Groundwater Results Summary

Trichloroethene was detected at two locations slightly above the Water Quality Standard. Semivolatile organic compounds and PCBs were detected above Water Quality Standards at one location, TP-3H, located in the central portion of the parcel. The groundwater sample was collected from test pit TP-3H was not filtered. The presence of these compounds in the water sample was likely from sediment contained in the sample, and may not be indicative of actual groundwater quality. In addition, groundwater collected from test pits downgradient of TP-3H did not contain any semivolatile organic compounds or PCBs. Metals were detected in unfiltered (total) samples collected from test pits and monitor wells throughout the site. Although care was taken in sampling the groundwater, based on turbidity measurements, samples contained soil particles and may account for the elevated metals and PCB concentrations. Of the filtered (dissolved) analysis, only concentrations of magnesium, manganese and sodium were detected at elevated levels. These constituents may be naturally occurring from the Hudson River, which is saline and tidal in this area. Zinc was detected in groundwater collected from three test pits located along the northern and eastern sides of the parcel. The presence of zinc in the groundwater may be due to the large quantity of metal piping, beams and wiring located in these areas.

The Water Quality Standards used as a comparison for the groundwater results are based on potable sources of drinking water. Due to the tidal nature of the Hudson River and its salinity, the groundwater in this area is not potable. The Hudson River is also classified as "SB" in this area. Minor exceedances of the Water Quality Standards in the groundwater from Parcel H would not degrade the quality of the Hudson River due to the extensive dilution.

#### 3.2.3 Parcel I Soil

Surface soil and subsurface soil samples were collected from Parcel I at the locations shown on Figure 3H&I. Analytical results are presented in Tables I-1 through I-3, and are discussed in the following sections.

One surface sample and one subsurface sample were collected from Parcel I and analyzed for semivolatile organic compounds, PCBs and TAL metals. The subsurface sample was additionally analyzed for volatile organic compounds, and the surface sample was additionally analyzed for pesticides.

# **Volatile Organic Compounds**

No volatile organic compounds were detected in the soil sample analyzed from Parcel I. The complete laboratory results for Parcel I soil samples are included in Appendix F.

#### Semivolatile Organic Compounds

Table I-1 includes a summary of detected semivolatile organic compounds. Benzo(a)anthracene, was detected at concentrations of 350  $\mu$ g/kg in subsurface soil sample TP-4H and 370  $\mu$ g/kg in surface soil sample SS Parcel I, above the Soil Cleanup Objective of 224  $\mu$ g/kg. The average background concentration of benzo(a)anthracene was 543  $\mu$ g/kg, also above the Soil Cleanup Objective. Benzo(a)pyrene was detected at concentrations of 290  $\mu$ g/kg and 300  $\mu$ g/kg in the subsurface and surface soil samples, respectively, above the Soil Cleanup Objective of 61. The average background concentration of benzo(a)pyrene was 587  $\mu$ g/kg, also above the Soil Cleanup Objective. Other elevated semivolatile organic compounds were detected, however, the values were qualified by the laboratory, and may not actually be present above the respective Soil Cleanup Objectives.

#### Pesticides/PCBs

No PCBs were detected in the soil samples analyzed. Pesticides dieldrin and 4,4'-DDT were detected in the surface soil sample analyzed from Parcel I. Dieldrin was detected at a concentration of 9.5 mg/kg, above the Cleanup Objective of 0.044 mg/kg and 4,4'-DDT was detected at a concentration of 9.8 mg/kg, above the Cleanup Objective of 2.1 mg/kg. No other pesticides were detected in the samples analyzed. Table I-2 includes a summary of detected pesticides. It is not known whether pesticides were actually sprayed in this area, or whether the presence of pesticides is due to dumping of the pesticides themselves, or from affected soil brought onto Parcel I as fill.

#### Metals

One subsurface and one surface soil sample were analyzed for TAL metals, as summarized in Table I-3. Arsenic was detected in test pit TP-4H at a concentration of 14.5 mg/kg, above the Soil Cleanup Objective of 7.5 mg/kg. Iron was detected in both samples at concentrations of 22,000 mg/kg in the subsurface sample and 11,300 mg/kg in the surface sample. The average site background for iron was 13,430 mg/kg. Beryllium was detected above the Soil Cleanup Objective of 0.14 mg/kg in sample TP-4H, at a concentration of 0.59 mg/kg, comparable to the site background of 0.49 mg/kg. No other metals were detected above their respective Soil Cleanup Objectives in either of the samples analyzed.

## Parcel I Soil Results Summary

No PCBs or volatile organic compounds were detected in the soil samples analyzed. Only two semivolatile organic compounds were detected above the Soil Cleanup Objectives, but were within an order of magnitude of the Objectives and comparable to site specific background levels. Remediation of these soils is dependant on final planned usage of the area. Two pesticides were detected in the surface soil sample at concentrations above the Soil Cleanup Objectives. Removal of a limited quantity of soil in this area may be necessary. Iron was the

only metal detected in significant concentrations in the samples analyzed, but concentrations were within comparable concentrations to the site specific background concentrations.

#### 3.2.4 Parcel I Groundwater

Three groundwater samples were collected from Parcel I; one sample from a test pit (TP-4H) and two samples from monitor wells MW-1I and MW-2I. The groundwater samples were analyzed for volatile organic compounds, semivolatile organic compounds, PCBs, and total and dissolved TAL metals. The groundwater sample collected from test pit TP-4H was not filtered in the field or in the laboratory, and as such, the results may depict concentrations of metals in fine sediment. Although care was taken to settle the samples, some sediments likely remained and could explain the elevated levels of metals in the groundwater, as evident from the turbidity readings summarized in Table I-6. None of the samples analyzed for semivolatile organic compounds were filtered. Samples collected from the monitor wells were analyzed for both total and dissolved metals.

#### **Volatile Organic Compounds**

No volatile organic compounds were detected in the groundwater samples from Parcel I.

# Semivolatile Organic Compounds

Table I-4 summarizes the detected semivolatile organic compounds. The sample collected from test pit TP-4H contained detectable concentrations of benz(a)anthracene, benzo(b)fluoranthene, and benzo(a)pyrene. The results, however, were not filtered and were also qualified by the laboratory. Actual concentrations may not be in excess of the Water Quality Guidance Values.

#### **PCBs**

No PCBs were detected in the groundwater samples from Parcel I.

#### Metals

Concentrations of metals were detected in unfiltered samples above NYSDEC Water Quality Standards. Turbidity readings measured of the two monitor well samples yielded results of 450 and 875 NTU. As such, concentrations of metals detected in unfiltered (total) samples may reflect the metals adhering to sediment, and may not be reflective of actual groundwater concentrations. The discussion in this report, therefore, focuses on dissolved (filtered) analysis. Results of both the filtered and the unfiltered samples are included in Table I-5 and in the laboratory reports in Appendix F.

Magnesium, manganese, and sodium were detected above their respective Water Quality Standards in both filtered samples. These metals may be naturally occurring from the Hudson River, as the river is saline and tidal in this area. Iron was detected in one of the filtered samples at a concentration of 8,450  $\mu$ g/l, above the Water Quality Standard of 300  $\mu$ g/l. No other metals were detected above the Water Quality Standards in the filtered samples from Parcel I.

#### **Parcel I Groundwater Results Summary**

No volatile organic compounds or PCBs were detected in the samples analyzed from Parcel I. Semivolatile organic compounds were detected in the groundwater sample collected from test pit TP-4H, however, the sample was not filtered and the values were qualified by the laboratory. Concentrations, therefore, may not actually exceed Water Quality Standards. Groundwater samples collected from the monitor wells located both upgradient and downgradient of the TP-4H did not contain any detectable levels of any semivolatile organic compounds. Metals were detected in unfiltered (total) samples collected from test pits and monitor wells throughout the site. Although care was taken in sampling the groundwater, based on turbidity measurements, samples contained soil particles which may account for the elevated metals readings. Of the filtered (dissolved) analysis, only concentrations of magnesium and sodium were detected at elevated levels in both monitor well samples. These constituents may be naturally occurring from the Hudson River, which is saline and tidal in this area. Iron was additionally detected in the groundwater sample collected from MW-1I above the Water Quality Standard. Concentrations of iron detected in the groundwater samples is likely due to the large quantities of metallic objects, including piping, metal bars and building debris located throughout the parcel.

#### 3.2.5 Parcel C Soil

Subsurface soil samples were collected from Parcel C at the specific locations shown on Figure 3C. Parcel C was completely covered with asphalt pavement, therefore, no surface soil samples were collected. Analytical results are presented in Tables C-1 through C-4.

Six subsurface soil samples were collected and analyzed form Parcel C and analyzed for volatile organic compounds, semivolatile organic compounds, PCBs and TAL metals. Two samples were additionally analyzed for pesticides.

## **Volatile Organic Compounds**

Detected volatile organic compounds are summarized in Table C-1. Concentrations of volatile organic compounds detected but qualified by the laboratory an/or the DUSR include acetone, carbon disulfide, 2-butanone, trichloroethene, benzene, tetrachloroethene, toluene, ethylbenzene and xylenes. None of the concentrations of these compounds exceeded the NYSDEC Soil

Cleanup Objectives. No other volatile organic compounds were detected in the samples analyzed.

# Semivolatile Organic Compounds

Table C-2 includes a summary of detected semivolatile organic compounds. Elevated concentrations of 2-methylnaphthalene were detected in three of the soil samples analyzed from Parcel C, however, the samples were qualified by the laboratory, and the actual concentrations are not able to be determined. Sample B-7C contained concentrations of benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene and dibenz(a,h) anthracene at concentrations above the respective NYSDEC Soil Cleanup Objectives. Benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene and dibenz(a,h)anthracene were also detected in background samples above their respective Soil Cleanup Objectives. All semivolatile organic compounds detected in sample B-1C were qualified by the laboratory and/or the DUSR. The listed concentrations are approximate values and may not be present above Soil Cleanup Objectives. Samples B-5C and MW-4C contained benzo(a)pyrene at concentrations of 180  $\mu$ g/kg (qualified by the DUSR and is an estimated value) and 110  $\mu$ g/kg, respectively, above the Soil Cleanup Objective of 61  $\mu$ g/kg, also above the Soil Cleanup Objective.

The soil sample sent for laboratory analysis from boring B-7C had a PID reading in the field of 2.3 ppm. The sample, S-4 collected from six to seven feet below grade, was also noted to have a slight petroleum odor. This sample was collected from just above the measured water table during drilling of seven feet below grade. The samples above and below S-4 did not have a petroleum odor and no volatile organic compounds were detected by the PID. The presence of the semivolatile organic compounds in this sample appear to be localized and may have been transported to this location on the groundwater table, which is tidal in this area. Although the sample was above the groundwater table at the time the boring was advanced, this elevation may be at or in the groundwater table at other times. The sample collected from boring B-1C, where elevated concentrations of semivolatile organic compounds were also detected in the laboratory, was collected from five to seven feet below grade, just above refusal. The groundwater table was not intercepted due to refusal, however, groundwater was measured to be 7.5 feet below grade at monitor well MW-2C, located approximately 30 feet west of boring B-1C. Due to the tidal nature of the Hudson River, groundwater may be higher in this area at other times as well. The presence of semivolatile organic compounds in soil just above the groundwater table may not be indicative of a petroleum problem on the parcel. In addition, none of the groundwater samples analyzed for semivolatile organic compounds were filtered. Detected concentrations may represent compounds adhering to soil particles and may not represent actual groundwater conditions. No other semivolatile organic compounds were detected above their respective Cleanup Objectives.

#### Pesticides/PCBs

Six subsurface samples from Parcel I were analyzed for PCBs. No PCBs were detected in any of the samples analyzed. Two of the six samples were additionally analyzed for pesticides. Chlordane was detected in both samples at concentrations of 190  $\mu$ g/kg in sample B-6C and 210  $\mu$ g/kg in sample B-5C, below the Cleanup Objective of 540  $\mu$ g/kg. These results are summarized in Table C-3.

#### Metals

Six soil samples from Parcel C, were tested for TAL metals. The results are summarized in Table C-4. Barium was detected in sample B-7C at a concentration of 306 mg/kg, slightly above the above the Soil Cleanup Objective of 300 mg/kg. Copper was detected in four of the samples collected at concentrations up to 393 mg/kg in sample B-1C, above the Soil Cleanup Objective of 25 mg/kg. Iron was detected in five of the six samples analyzed at concentrations up to 20,300 mg/kg in sample B-5C, above the average site specific background concentration of 13,433 mg/kg. Lead was detected above the average site specific background concentration of 142 mg/kg at two locations, B-1C and B-7C, at concentrations of 468 mg/kg and 998 mg/kg, respectively. Elevated concentrations of magnesium were detected above the average site background in four of the six samples analyzed. Mercury was detected at one location, B-7C, at a concentration of 1.6 mg/kg, above the average site specific background of 0.62 mg/kg. The highest background concentration of mercury was 1.4 mg/kg. Nickel was detected above the average site background of 13.50 mg/kg in two of the six samples analyzed, up to a maximum of 16.9 mg/kg in sample B-1C. No other metals were detected above their respective Soil Cleanup Objectives in the six samples analyzed.

# Parcel C Soil Results Summary

No volatile organic compounds or pesticides were detected in concentrations that would require remediation. No PCBs were detected in the soil samples analyzed. Semivolatile organic compounds were detected primarily at two locations, B-1C and B-7C in the northeastern and central portions of the parcel, at concentrations above the NYSDEC Soil Cleanup Objectives. Reported concentrations of all compounds listed in sample B-1C, however, were qualified by the laboratory and/or the DUSR. Reported values are estimated and may not be present above Soil Cleanup Objectives. Many of these compounds were also detected in background samples above the Cleanup Objectives. Iron was detected at elevated concentrations at each location, but within the same order of magnitude and comparable to background levels. Lead was detected at two locations above the average background concentration in samples B-1C and B-7C. Other metals detected above Soil Cleanup Objectives were comparable to concentrations detected in background samples. Some soil removal may be necessary in the central and northeastern portions of the parcel dependant upon proposed development plans.

#### 3.2.6 Parcel C Groundwater

Three groundwater samples were collected from the two monitor wells installed on Parcel C. Sample MW-4AC is a duplicate sample of MW-4C. The samples were field filtered and analyzed for volatile organic compounds, semivolatile organic compounds, PCBs and dissolved TAL metals.

# **Volatile Organic Compounds**

Methylene chloride was detected in the three groundwater samples collected on Parcel C, but the values were qualified by the DUSR and may not be present above the Water Quality Standard. The sample collected from monitor well MW-4C was listed as containing cis-1,2-dichloroethene at a concentration below the Water Quality Standard. This value was also qualified by the laboratory. No other volatile organic compounds were detected in the groundwater samples collected on Parcel C. These results are summarized in Table C-5.

# **Semivolatile Organic Compounds**

Phenol was detected on Parcel C at a concentration of 2.4  $\mu$ g/l, above the Water Quality Standard of 1  $\mu$ g/l, however, this value was qualified by the laboratory and is an approximate value. Phenol may not actually be present above the Water Quality Standard. No other semivolatile organic compounds were detected above their respective Water Quality Standards. A summary of the detected levels of semivolatile organic compounds on Parcel C is included in Table C-6.

## **PCBs**

No PCBs were detected in the groundwater samples from Parcel C.

#### Metals

Samples collected from Parcel C were field filtered and analyzed for dissolved TAL metals. The results are summarized in Table C-7. Manganese and sodium were detected above the Water Quality Standards in each of the samples analyzed and magnesium was detected in two of the three samples analyzed above the Water Quality Standard. The presence of these metals may be naturally occurring from the Hudson River, which is tidal and saline in this area. Iron was detected at concentrations ranging from 333 to 3,650  $\mu$ g/l, exceeding the Water Quality Standard of 300  $\mu$ g/l in the three samples. No other metals were detected above their respective Water Quality Standards in any of the samples analyzed.

#### Parcel C Groundwater Results Summary

Methylene chloride was detected in the three groundwater samples collected on Parcel C, but the values were qualified by the DUSR and may not be present above the Water Quality Standard. Phenol was detected in the groundwater sample collected from monitor well MW-2C, however, the value was qualified by the laboratory. The reported value is approximate, and the concentration and may not actually be present above the Water Quality Standard. Iron, magnesium, manganese and sodium were detected at concentrations above the respective Water Quality Standards. Magnesium, manganese and sodium are likely naturally occurring due to the saline and tidal nature of the Hudson River. Iron in the groundwater is likely from the leaching of the iron contained in the fill materials.

# 4.0 SUMMARY AND CONCLUSIONS

Field screening activities included electromagnetic (EM), soil gas and ground penetrating radar (GPR) surveys. The results of the field screening activities are discussed in detail in Chapter 2 and were utilized in choosing subsequent test pit, soil boring and monitor well locations. Figures 4C, 5C, 4H&I and 5H&I illustrate the results of the preliminary surveys and Figures 3C and 3H&I depict the soil and groundwater sampling locations.

# 4.1 Parcel H

The electromagnetic (EM) survey of Parcel H indicated possible buried 55-gallon drums, buried metallic objects and subsurface piping. These locations were investigated further through other field screening tests including a GPR and soil gas surveys, test pit excavations and soil borings. The locations of the test pits and soil borings are presented in Figure 3H&I. The results of the soil gas survey indicated possible sources of contamination in the western central portion of the parcel. A monitor well (MW-1H) was installed in the vicinity of the elevated soil gas concentration.

A ground penetrating radar (GPR) survey was conducted to better delineate the anomalies detected during the EM survey. The results of the GPR survey indicated four small unidentified buried objects in the central portion of the parcel. Based on these findings, and in conjunction with the EM survey results, test pit locations were selected.

Twenty test pits were excavated on Parcel H at locations presented on Figure 3H&I. Based on PID readings and visual inspection, soil samples from the test pits were collected and submitted for laboratory analysis. A 55-gallon drum was excavated in test pit TP-11H in the area of the EM survey anomaly. Laboratory analysis of the liquid contained within the drum determined the contents to be No. 2 fuel oil (with no PCBs). Test pits excavated in the northern and central regions of Parcel H, particularly TP-11H, TP-2H, TP-3H, TP-11AH and TP-12H, encountered sand and gravel fill with concrete, plastic wire casing (it appeared that the copper had been stripped out of the

plastic housing), metal piping, asphalt, coal ash and steel reinforced concrete. The steel reinforced concrete and brick were likely the anomalies detected by the EM and GPR surveys.

Test pit TP-1H was excavated in the northern section of Parcel H, just south of the undeveloped road, to investigate the significant anomalies detected during the EM survey. Approximately ten twenty foot steel I-beams, eight three-inch pipes, and other miscellaneous debris including wood and concrete were encountered along the northern portion of the parcel, which would account for the anomalies detected in the EM and GPR surveys. The piping appeared to be underground storage tank lines. The pipes were excavated until the ends were located to determine whether they were connected to remaining underground storage tanks. No tanks were located; the pipes appeared to be sealed at both ends with concrete.

Based on the results of the field screening activities, two soil borings, both retrofitted with monitor wells, were advanced on the east and west periphery of Parcel H as upgradient and down gradient sampling locations. The monitor well installed on the northwestern corner of the parcel (MW-1H) was located in an area where elevated levels of volatile organic compounds were observed in the soil gas survey. Groundwater samples were collected from the two monitor wells for laboratory analysis.

Four subsurface and six groundwater samples were collected from Parcel H and analyzed for TCL volatile organic compounds. No detected soil concentrations exceeded NYSDEC Soil Cleanup Objectives. Trichloroethene was detected slightly above the NYSDEC Water Quality Standard in two groundwater samples analyzed from Parcel H.

One surface soil sample, three subsurface soil samples, and six groundwater samples collected from Parcel H were analyzed for TCL semivolatile organic compounds. Semivolatile organic compounds were detected above NYSDEC Soil Cleanup Objectives in soil samples analyzed throughout the parcel. Test pit TP-3H contained semivolatile organic compounds in excess of Water Quality Standards, however, this sample was not filtered and may not represent actual groundwater conditions. No other groundwater samples contained any detected concentrations of semivolatile organic compounds.

One surface soil sample, eleven subsurface soil samples and nine groundwater samples collected from Parcel H were analyzed for pesticides and PCBs. No detected soil concentrations exceeded NYSDEC Soil Cleanup Objectives. PCBs were detected above the NYSDEC Water Quality Standard in one groundwater sample collected from test pit TP-3H. This sample was not filtered prior to PCB analysis. Since PCBs are not very soluble, the likely cause of the PCBs detected in the groundwater sample is the presence of sediment, to which the PCBs could have adhered.

One surface soil sample and twenty-one subsurface soil samples collected from Parcel H were analyzed for TAL metals. Metals were detected above NYSDEC Soil Cleanup Objectives throughout the parcel. Five groundwater samples and one duplicate sample were analyzed for total

(unfiltered) TAL metals. Metals were detected at concentrations exceeding NYSDEC Water Quality Standards. Five groundwater samples and one duplicate sample were subsequently analyzed for dissolved (filtered) TAL metals. Magnesium, sodium, zinc and manganese were detected above the NYSDEC Water Quality Standards. Magnesium, sodium and manganese are naturally occurring elements of saline water and are likely present due to the tidal action of the Hudson River. Zinc is a naturally occurring element in sea water, but at a concentration of approximately  $10 \mu g/l$ . Zinc was detected in filtered samples at Parcel H at concentrations up to  $946 \mu g/l$  and is likely present from the galvanized metals in the fill noted throughout the site.

Two subsurface soil samples were additionally analyzed for lead using TCLP. Both of the samples were collected from different depths in test pit 13-AH, located on the northern extent of the parcel. The sample results were above the NYSDEC Hazardous Waste Regulatory Levels for toxicity characteristic and would, therefore, be considered hazardous waste. Other samples yielded total lead levels comparable to those detected in test pit TP-13H, namely test pits TP-10H and TP-11H. Although samples from these test pits were not analyzed using TCLP, based on the total lead levels, soil in these areas should also be considered hazardous.

#### 4.2 Parcel I

The results of the GPR survey did not indicated any anomalies on Parcel I. The electromagnetic (EM) survey for Parcel I indicated the presence of three large blocks. These locations were further investigated using a soil gas survey, test pits and borings/monitor wells. The locations of the test pits are presented in Figure 3H&I. The results of the soil gas survey indicated possible sources of contamination throughout the parcel, but with no discernable pattern or single source.

The results of the EM and soil gas surveys were used to determine the location of the subsurface investigations. Three test pits were excavated on Parcel I corresponding to the three major anomalies in the EM survey: one in the northwestern corner of the parcel; one in the center of the parcel; and one on the eastern central portion of the parcel. Based on visual inspection, a soil sample from test pit TP-4H was collected and submitted for laboratory analysis. Test pit excavations encountered sand and gravel fill with black ash and steel reinforced concrete, which would account for the EM anomalies. No tanks were located in the excavations on Parcel I.

Two soil borings were advanced on Parcel I, both retrofitted with monitor wells, on the northeastern and southwestern portions of the parcel to serve as upgradient and downgradient groundwater sampling locations. Groundwater samples were collected from the two monitor wells for laboratory analysis.

One subsurface soil sample and three groundwater samples (two from monitor wells and one from a test pit) collected from Parcel I were analyzed for volatile organic compounds. No volatile organic compounds were detected in the soil or groundwater collected from Parcel I.

One surface soil and one subsurface soil sample collected from Parcel I were analyzed for semivolatile organic compounds. Semivolatile organic compounds were detected at concentrations above NYSDEC Soil Cleanup Objectives. Three groundwater samples collected from Parcel I were analyzed for semivolatile organic compounds. Semivolatile organic compounds were detected in the sample collected from the test pit (TP-4H), however, the results were qualified by the laboratory and may not actually be present above NYSDEC Water Quality Guidance Values. In addition, the sample was not filtered and may not reflect actual groundwater conditions.

One surface soil sample, one subsurface soil sample and three groundwater samples collected from Parcel I were analyzed for pesticides and PCBs. The surface soil sample contained pesticides at levels exceeding NYSDEC Soil Cleanup Objectives. No other pesticides or PCBs were detected in the soil and groundwater samples.

One surface and one subsurface soil sample collected from Parcel I were analyzed for TAL metals. Metals were detected at concentrations exceeding NYSDEC Soil Cleanup Objectives. Three groundwater samples were analyzed for total (unfiltered) TAL metals. Metals were detected at concentrations exceeding NYSDEC Water Quality Standards. Two groundwater samples from the monitor wells were analyzed for dissolved (filtered) TAL metals. Iron, magnesium, manganese and sodium were detected at concentrations exceeding NYSDEC Water Quality Standards. Elevated concentrations of magnesium, manganese and sodium are likely due to the tidal nature of the Hudson River, which is saline, and naturally contains these elements. Iron was also detected in the soil samples analyzed, and is likely present in the groundwater from the leaching of the iron contained in the fill materials. Groundwater in this area is not a potable source, and an exceedance of this magnitude would not adversely affect the quality of the Hudson River.

#### 4.3 Parcel C

The electromagnetic (EM) survey for Parcel C indicated anomalies in the northwestern, southern and eastern portions of the parcel. Large anomalies were also detected in the center of the parcel. This detection in the center of the parcel had the possible fingerprint of a buried tank.

The results of the soil gas survey indicated possible sources of contamination in the north-central sections of the parcel (EM results also indicated anomalies in the north-central area of the parcel). The GPR survey was conducted in regions which showed large anomalies in the EM survey. The results indicated one anomaly in the central portion of the parcel.

The combined results of the EM survey, the GPR survey, and soil gas survey were used to determine the location of the subsurface investigation. Due to the current usage of Parcel C as a paved parking lot, no test pits were excavated on the parcel. Eight soil borings were advanced on the parcel, two of which were retrofitted with monitor wells. One boring was advanced in the central portion of Parcel C. One boring was advanced in the northeastern corner and one boring was advanced in the south-central portion of the parcel. Three borings were advanced in the northwestern corner of the

parcel. Monitor wells were installed in two borings located in the northeastern and southwestern corners of the parcel to act as upgradient and down gradient sampling locations. Several borings encountered concrete block at approximately three to four feet below grade, which may account for the EM anomalies. No underground storage tanks were located.

Six subsurface soil samples collected from Parcel C were analyzed for volatile organic compounds. No detected soil concentrations exceeded NYSDEC Soil Cleanup Objectives. Three groundwater samples collected from Parcel C were analyzed for volatile organic compounds. Methylene chloride was detected at both locations, however, the results were qualified by the DUSR. Actual concentrations may not exceed the NYSDEC Water Quality Standards.

Six subsurface soil samples and three groundwater samples collected from Parcel C were analyzed for semivolatile organic compounds. Semivolatile organic compounds were detected above Soil Cleanup Objectives in three of the soil samples. Phenol was detected in the groundwater sampled from monitor well MW-2C, however, the result was qualified by the laboratory, and may not actually be present above the Water Quality Standard. In addition, the sample was not filtered and may not be indicative of actual groundwater quality.

Six subsurface soil samples and three groundwater samples collected from Parcel C were analyzed for pesticides and PCBs. Chlordane was detected at concentrations below the Soil Cleanup objective in two of the soil samples analyzed. No other samples contained detectable concentrations of pesticides or PCBs.

Six subsurface soil samples collected from Parcel C were analyzed for TAL metals. Metals were detected at concentrations exceeding NYSDEC Soil Cleanup Objectives. Three groundwater samples were analyzed for dissolved (filtered) TAL metals. Iron, magnesium, manganese and sodium were detected at concentrations exceeding NYSDEC Water Quality Standards. Magnesium, manganese and sodium are likely naturally occurring due to the saline and tidal nature of the Hudson River. Iron was also detected in the soil samples analyzed, and is likely present in the groundwater from the leaching of the iron contained in the fill materials. Groundwater in this area is not a potable source, and an exceedance of this magnitude would not adversely affect the quality of the Hudson River.

#### 4.4 Discussion

In summary of the analytical results, elevated concentrations of semivolatile organic compounds, PCBs, pesticides and metals were detected in surface soils, subsurface soils and groundwater. Based on the known history of the area parcels, the source of the elevated compounds and metals is possible contaminated fill used to construct the parcels, spills and leaks from the industrial facilities over time (Parcel C), and likely disposal of contaminants from area facilities (likely the wire drawing mill previously located on Parcel F) onto Parcels H and I.

Parcel C was occupied by Rockwell and Thomas Lumber Yard and a portion of Lawrence Brothers Lumber Yard from some time before 1886 until 1917. In 1917, Parcel C was occupied by the Otis Elevator Corporation, which included on-site coal and sand storage. In 1951, the Plaza Sand and Stone Company was located on a portion of the parcel, which, in 1971, included an asphalt mixing plant and repair shop. By 1991, Parcel C was primarily an asphalt paved parking lot.

Parcels H and I did not exist until after 1951, after which the land was constructed from fill materials. The origin of the fill materials is not known. The two parcels have been vacant since they were constructed. Contaminants appear to have originated from off-site activities that deposited building materials and debris, petroleum products and ash fill on the parcels, which were observed in the test pits and borings.

#### 5.0 RECOMMENDATIONS

Based on the analytical results, soil removal is necessary for three areas that contain hazardous waste on Parcel H, and may be necessary as a means of remediation on other portions of Parcel H, and on Parcels C and I, depending on final usage. Capping, possibly in concert with soil removal in some areas, is also a viable means of remediation. Plans for Parcels H, I and C, according to the Draft Generic Environmental Impact Statement prepared by Allee King Rosen & Fleming, Inc. in May 1998, include residential, office and retail development and paved streets and walkways. The portion of Parcel J abutting Parcels H and I will also include a park along the Hudson River, bordering the western side of the parcels.

Proposed Parcel C plans include a building and pavement over most of the parcel. Wells Avenue will continue down to the waterfront, along the northern portion of the Phase II section of Parcel C (not included in this study). The promenade will be located along the Hudson River and will consist mainly of hardscape, possibly with some small planters. A new road, Front Street, will be constructed east-adjacent to the Promenade. Front Street will connect to Wells Avenue to the north and Dock Street to the south, which will be extended to the waterfront from its present terminus. The area between the proposed Front Street and the existing railroad tracks will contain a building and paved areas. There may be planted borders between the building and the proposed streets, which would be the only type of uncapped areas. A cap may consist of a thin low permeability surface (e.g., asphalt or concrete), a building, or a thicker surface with greater permeability (e.g., a layer of clean soil).

The final plans for Parcels H and I will include buildings, pavement, and a park along the western portion of the parcels. A new road, Riveredge Road, will encompass Parcel I and the southern portion of Parcel H. The interior area of Riveredge Road will include a building and pavement. The only landscaped areas may consist of a planted border between the road and the building. Water Grant Street will be constructed primarily where the unpaved access to the parcels is currently located, along the eastern property lines. A planted border may line either side of the street. A park will be located along the Parcel J sections along Parcels H and I. The park is proposed to be 60 feet in width at its widest portion and will contain hardscaped walkways, but primarily will consist of

landscaping. These areas that would not be capped with impermeable surfaces may require soil removal and/or placement of a layer of clean soil.

The interim plan for Parcel H and a portion of Parcel I will be a paved parking lot. The lot will be used by the residents of the Scrimshaw House, northern abutter to Parcel H, while their present lot (Parcel F) is being constructed. The utilities and roadways will be installed at the time of the interim parking lot construction.

AKRF recommends implementing a Health and Safety Plan for the removal of the hazardous materials and also for the construction of the sites, including dust monitoring during excavation and disturbance of surface soils. Gloves should be used by all workers who come in contact with the soils. In addition, petroleum contaminated soils exhibiting nuisance characteristics, as defined by the New York State Department of Environmental Conservation STARS Memo #1, Petroleum-Contaminated Soil Guidance Policy, including petroleum-type odors and contamination concentrations above 10,000 parts per billion (ppb) of an individual volatile organic compound (VOC) or semivolatile organic compound (SVOC), should be stockpiled on and covered with plastic until a disposal method is chosen. If the soil is to be disposed of off-site, additional analysis, including TCLP analysis, should be performed.

### **TABLES**

PARCEL H

# Soil Table H-1 Soil Analytical Summary - Volatile Organic Compounds Yonkers Downtown Waterfront Parcel H $(\mu g/kg)$

Compound	TP-1H'	TP-9H¹	TP-10H1	TP-11AH <sup>2</sup>	Soil Cleanup Objective <sup>3</sup>
Acetone⁴	110	57J	84Ј	9	200
2-Butanone	13Ј	3.2J	6R	ND	300
1,1,1-Trichloroethane	1.4J	2.5J	2.5J	ND	800
Trichloroethene	ND	ND	2.2	ND	700
Benzene	1.1J	ND	2.4	ND	60
Tetrachloroethene	ND	ND	6.1J	ND	1,400
Toluene	1.6J	1.8J	1.9Ј	ND	1,500
Total Xylenes	1.0J	1.0Ј	ND	ND	1,200

Notes: 'Samples collected by AKRF, Inc. personnel on June 15 and 16, 1998 and analyzed for TCL VOCs and SVOCs, and TAL metals by Envirotech Research, Inc., a New York State certified CLP laboratory.

<sup>2</sup>Sample collected by AKRF, Inc. personnel on January 27, 1999 and analyzed for TCL VOCs and RCRA metals by Severn Trent Laboratores, a New York State certified CLP laboratory.

<sup>3</sup>New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum(TAGM): Determination of Soil Cleanup objectives and Cleanup Levels (HWR-92-4046).

<sup>4</sup>Acetone was only found in the trip blank and method blank in the January 1999 sampling run.

ND = None detected above the minimum detection level (MDL)

R = Reported value is unusable and rejected due to variance from quality control limits.

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitation limit but greater than zero. The concentration given is an approximate value.

 $\mu$ g/kg = micrograms per kilogram (ppb)

#### Soil Table H-2 Soil Analytical Summary - Semivolatile Organic Compounds Yonkers Downtown Waterfront - Parcel H $^{\text{l}}$ ( $\mu g/\text{kg}$ )

Compound	ТР-1Н	ТР-9Н	TP-10H	SS Parcel H <sup>2</sup>	Soil Cleanup Objective <sup>3</sup>	BG-14	BG-24	BG-3 <sup>4</sup>
4-Methylphenol	100J	ND	ND	12J	90	NA	NA	NA
1,4-Dichlorobenzene	ND	ND	ND	11J	8,500	NA	NA	NA
Naphthalene	110J	46J	ND	47J	13,000	18J	9.7J	20J
2-Methylnaphthalene	73J	26J	ND	42J	36,400	NA	NA	NA
Acenaphthylene	120J	130J	ND	65J	41,000	27Ј	36J	78J
Acenaphthene	76J	100J	ND	74J	50,000	29J	ND	75J
Dibenzofuran	58J	61J	ND	54J	6,200	NA	NA	NA
Fluorene	84J	120J	ND	86J	50,000	28J	13J	75J
Phenanthrene	1,000	2,400	ND	780	50,000	310J	95J	1,200
Anthracene	310J	610J	ND	210J	50,000	72J	35J	200J
Carbazole	110J	110J	ND	80J	NA	NA	NA	NA
Fluoranthene	1,700	5,100	4,100J	1,200	50,000	600J	240J	2,600
Pyrene	1,700	4,800	3800J	1,200	50,000	520J	220J	2,200
Benzo(a)anthracene	860	2,400	1,800J	680	224 or MDL	290	140	1,200
Chrysene	1,100	2,500	1,800J	780	400	370J	180J	1,600
bis(2-Ethylhexyl)phthalate	330J	ND	980,000	170J	50,000	NA	NA	NA
Benzo(b)fluoranthene	1,500	3,200	ND	920	1,100	450	240	2,000
Benzo(k)fluoranthene	620	1,300	ND	330	1,100	170	83	860
Benzo(a)pyrene	910	2,500	ND	580	61 or MDL	300	160	1,300
Indeno(1,2,3-cd)pyrene	300	1,100	ND	220	3,200	180	87	580
Dibenz(a,h)anthracene	100	290J	ND	57	14 or MDL	40J	21J	140
Benzo(g,h,i)perylene	300J	980	ND	180J	50,000	200J	89J	510J

Notes:

'Samples collected by AKRF, Inc. personnel on June 15 and 16, 1998 and July 30, 1998 and analyzed for TCL VOCs and SVOCs, and TAL metals by Envirotech Research, Inc., a New York State Department of Health certified CLP laboratory. 2SS Parcel-H is the surface soil sample collected from Parcel H.

<sup>3</sup>New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046).

<sup>4</sup>BG = Background Sample

MDL = Minimum Detection Level

NA = Not Analyzed

ND = Not detected

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitation limit but greater than zero. The concentration given is an approximate value.  $\mu g/kg = micrograms per kilogram (ppb)$ 

#### Soil Table H-3 Soil Analytical Summary - Pesticides/PCBs Yonkers Downtown Waterfront - Parcel H $(\mu g/kg)$

Soil Sample <sup>1</sup>	PCBs	4,4' - DDE	4,4' - DDT	Methoxychlor
TP-1H (subsurface)	760	NA	NA	NA
TP-9H (subsurface)	ND	NA	NA	NA
TP-10H (subsurface)	2,800	NA	NA	NA
TP-10AH (subsurface)	4,760	NA	NA	NA
TP-11H (subsurface)	1,440	NA	NA	NA
TP-12H (subsurface)	280	NA	NA	NA
TP-13H (subsurface)	7,900	NA	NA	NA
TP-14H (subsurface)	ND	NA	NA	NA
TP-15H (subsurface)	ND	NA	NA	NA
TP-16H (subsurface)	840	NA	NA	NA
TP-17H (subsurface)	ND	NA	NA	NA
SS Parcel H <sup>2</sup> (surface)	160	13	46	11*
Soil Cleanup Objective <sup>2</sup>	1,000 (Surface)/ 10,000 (Subsurface)	2,100	2,100	Total pesticides < 10

Notes:

'Samples collected by AKRF, Inc. personnel on June 15 and 16, July 30, and October 28, 1998 and analyzed for TCL VOCs and SVOCs and PCBs and Pesticides and TAL metals by Envirotech Research, Inc. a New York State Department of Health certified CLP laboratory.

<sup>2</sup>New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046).

\* = Duplicate analysis is not within control limits.

ND = Not Detected

NA = Not Analyzed

 $\mu$ g/kg = micrograms per kilogram (ppb)

Soil Anarytical Summary -1 AL Metals Yonkers Downtown Waterfront - Parcel H¹ (mg/kg) 1.0.1

Notes:

Samples collected by AKRF, Inc. personnel on June 15 and 16, July 30, and October 28, 1998 and analyzed for TCL VOCs and SVOCs and TAL metals by Envirotech Research, Inc.

3S Parcel-H is the surface soil sample collected from Parcels H.

3New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046).

Be a Ball as Backesulu between instrument detection limit (IDL) and contract required detection limit (CRDL)

Je Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitation limit but greater than zero. The concentration given is an approximate value.

ND = Not Detected; mg/kg = milligrams per kilogram (ppm)

Soil Table H-5
Soil Analytical Summary - RCRA Metals
Yonkers Downtown Waterfront - Parcel H
(mg/kg)

Soil Sample <sup>1</sup>	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
TP-10B-H	32.6J	454J	3.3J	19.8J	1,430	0.53	1.8Ј	4.2J
TP-11A-H	10.1J	134J	0.19UJ	11.6Ј	1,490	0.48	0.61J	0.25J
TP-11B-H	12.1J	161J	0.20UJ	10.8J	585	0.6	1.0Ј	0.20U
TP-13A-H	17.9J	430J	4.8J	44.7J	8,100	0.53	0.58U	69.2
TP-13B-H	9.0J	129Ј	4.0J	74.2J	12,200	0.31	0.62U	11.4
TP-18H	3.1Ј	31.6J	0.18UJ	9.8J	19.4	0.094B	0.85J	0.18U
TP-19H	7.2J	109J	0.21UJ	16.5J	120	0.22	1.0Ј	0.21U
Soil Cleanup Objective <sup>2</sup>	7.5	300 or BG	10 or BG	50	BG	0.1 or BG	2 or BG	BG
BG-1 <sup>3</sup>	3.3	85.4	0.28B	16.7	243	0.31	ND	ND
BG-2³	6.2	74.0	0.13B	20.9	87.2	1.4	ND	ND
BG-3 <sup>3</sup>	3.1	62.3	0.20B	14.3	95.8	0.14	ND	ND

Notes: 'Samples collected by AKRF, Inc. personnel on January 27, 1999 and analyzed for TCL VOCs and RCRA Metals by Severn Trent Laboratories, a New York State Department of Health certified CLP laboratory.

<sup>2</sup>New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046).

<sup>3</sup>BG = Background Sample

U = Analyte was not detected at method reporting limit.

B = Analyte result between instrument detection limit (IDL) and contract required detection limit (CRDL)

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitation limit but greater than zero. The concentration given is an approximate value.

mg/kg = milligrams per kilogram (ppm)

## Soil Table H-6 Soil Analytical Summary - TCLP Lead Yonkers Downtown Waterfront - Parcel H TP-13A-H (mg/l)

Soil Sample <sup>1</sup>	Lead	
TP-13A-H (4')	110	
TP-13B-H (8')	332	
Regulatory Level <sup>2</sup>	5.0	

Notes: 'Samples collected by AKRF, Inc. personnel on January 27, 1999 and analyzed for TCLP Lead by Severn Trent Laboratory, Inc. a New York State Department of Health certified CLP laboratory.

2NYSDEC Division of Spills Management Spill Technology and Remediation Series (STARS) - Hazardous Waste Regulatory Levels for Toxicity Characteristic.

mg/l = milligrams per liter

# Groundwater Table H-7 Groundwater Analytical Summary - Volatile Organic Compounds Yonkers Downtown Waterfront Parcel H $(\mu g/l)$

Groundwater Sample <sup>1</sup>	Trichloroethene
MW-2H	ND
MW-2HA²	ND
TP-3H	ND
TP-8H	8.6
TP-9H	1.5
MW-1H	17
Water Quality Standard <sup>3</sup>	5

Notes: 'Samples collected by AKRF, Inc. personnel on June 15 and 16, and July 24, 1998 and analyzed for TCL VOCs and SVOCs, and TAL metals by Envirotech Research, Inc., a New York State certified CLP laboratory.

<sup>2</sup>Sample MW-2HA is a duplicate sample of MW-2H.

<sup>3</sup>NYSDEC division of Technical and Operational Guidance Series (TOGS) 1.1.1. - Ambient Water Quality Standards and Guidance Values.

ND = None detected above the minimum detection level (MDL)

#### Groundwater Table H-8 Groundwater Analytical Summary - Semivolatile Organic Compounds Yonkers Downtown Waterfront - Parcel H $^{\text{I}}$ ( $\mu$ g/I)

Compound	TP-3H (total)	TP-8H (total)	TP-9H (total)	MW-1H (total)	MW-2H (total)	MW-2HA <sup>2</sup> (total)	Water Quality Standard³	Water Quality Guidance Value
Naphthalene	0.3J	ND	ND	ND	ND	ND	10	10
Acenaphthylene	0.6J	ND	ND	ND	ND	ND	NS	NV
Acenaphthene	0.4J	ND	ND	ND	ND	ND	20	20
Fluorene	0.3J	ND	ND	ND	ND	ND	NS	50
Phenanthrene	4.4J	ND	ND	ND	ND	ND	NS	50
Anthracene	1.4J	ND	ND	ND	ND	ND	NS	50
Carbazole	0.6J	ND	ND	ND	ND	ND	NS	NV
Fluoranthene	14J	ND	ND	ND	ND	ND	NS	NV
Pyrene	13J	ND	ND	ND	ND	ND	NS	50
Benzo(a)anthracene	7.9	ND	ND	ND	ND	ND	NS	0.002
Chrysene	8.9J	ND	ND	ND	ND	ND =	NS	0.002
bis(2-ethylhexyl)phthalate	ND	3.8J	ND	ND	ND	ND	5	NV
Benzo(b)fluoranthene	10	ND	ND	ND	ND	ND	NS	0.002
Benzo(k)fluoranthene	3.6	ND	ND	ND	ND	ND	NS	0.002
Benzo(a)pyrene	8.1	ND	ND	ND	ND	ND	NS	0.002
Indeno(1,2,3-cd)pyrene	4.8	ND	ND	ND	ND	ND	NS	0.002
Dibenz(a,h)anthracene	1.3	ND	ND	ND	ND	ND	NS	NV
Benzo(g,h,i)perylene	5.0J	ND	ND	ND	ND	ND	NS	NV

Notes:

'Samples collected by AKRF, Inc. personnel on June 15 and 16, and July 24, 1998 and analyzed for TCL VOCs and SVOCs, and TAL metals by Envirotech Research, Inc., a New York State Department of Health certified CLP laboratory.

<sup>2</sup>Sample MW-2HA is a duplicate sample of Sample MW-2H.

<sup>3</sup>NYSDEC division of Technical and Operational Guidance Series (TOGS) 1.1.1. - Ambient Water Quality Standards and Guidance Values.

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitiation limit but greater than zero. The concentration given is an approximate value.

ND = None detected above the minimum detection level (MDL)

NS = No Standard

NV = No Value

### Groundwater Table H-9 Groundwater Analytical Summary - PCBs Yonkers Downtown Waterfront - Parcel H (µg/l)

Groundwater Sample <sup>1</sup>	PCBs
TP-3H	1.54²
ТР-8Н	ND
TP-9H	ND
TP-10AH-GW	ND
TP-12H-GW	ND
TP-13H-GW	ND
MW-1H	ND
MW-2H	ND
MW-2HA <sup>3</sup>	ND
Water Quality Standard⁴	Total PCBs < 0.09

Notes: 'Samples collected by AKRF, Inc. personnel on June 15 and 16, July 24, and October 28, 1998 and analyzed for TCL VOCs, SVOCs, PCBs and TAL metals by Envirotech Research, Inc. a New York State Department of Health certified CLP laboratory.

 $^2$  This concentration includes 1  $\mu$ g/l of Arochlor 1262 and 0.54 of Arochlor 1254 (this value is approximate, as it was detected at a concentration less than that of the specified quantitation limit).  $^3$ Sample MW-2HA is a duplicate samples of Sample MW-2H.

NYSDEC division of Technical and Operational Guidance Series (TOGS) 1.1.1. - Ambient Water Quality Standards and Guidance Values.

ND = Not Detected

# Yonkers Downtown Waterfront - Parcel H1 (µg/l) Groundwater Analytical Summary -TAL Metals Groundwater Table H-10

Metal	TP-3H (total)	TP-8H (total)	TP-9H (total)	TP-10AH-GW (dissolved)	TP-12H-GW (dissolved)	TP-13H-GW (dissolved)	MW-1H (total)	MW-1H (dissolved)	MW-2H (total)	MW-2H (dissolved)	MW-2HA <sup>2</sup> (total)	MW-2HA2 (dissolved)	Water Quality Standard
Aluminum	3,530	3,480	6,810	ND	QN	ND	45,200	ND	38,500	ND	36,700	ND	100
Arsenic	8.8	4.2	6.4	ND	ND	9.5	26.2	ND	24.9	ND	22.3	ND	25
Barium	357	58.2B	146B	563	260	747	339	76.1B	396	62.1B	363	62.0B	1,000
Beryllium	ND	0.34B	0.38B	ND	ND	ND	2.8	ND	1.8B	ND	1.8B	ND	3
Cadmium	1.7B	ND	ND	1.6B	1.3B	2.4B	ND	ND	ND	ND	ND	ND	10
Calcium	171,000	110,000	124,000	168,000	147,000	208,000	166,000	135,000	130,000	133,000	130,000	134,000	NS
Chromium	9.0B	4.2B	22.8	ND	ND	ND	121	ND	71.8	ND	8.79	ND	50
Cobalt	3.9B	2.4B	7.3B	1.5B	13.8B	7.5B	32.6B	ND	23.8B	1.4B	23.2B	QN	5
Copper	233	32.1	41.0	45.5	65.3	32.3	270	4.6B	334	ND	323	QN	200
Iron	7,000	7,950	11,600	97.1	73.0B	ND	116,000	ND	57,800	ND	55,700	QN	300
Lead	267	12.3	58.2	10.5	6.7	2.3B	386	ND	488	QN	491	QN	25
Magnesium	37,400	118,000	219,000	144,000	51,900	209,000	117,000	128,000	75,400	74,400	74,800	75,400	35,000
Manganese	200	164	245	11.8B	52.5	405	2,120	15.7	1,660	359	1,640	366	300
Mercury	2.0	ND	0.43	ND	ND	ND	0.64	ND	1.8	QN	1.8	QN	2
Nickel	15.4B	11.7B	27.6B	10.5B	13.6B	26.5B	63.9	3.3B	55.5	2.4B	114	- QN	NS
Potassium	11,200	44,000	79,200	44,800	13,700	70,900	48,100	41,500	23,300	22,600	22,900	22,300	SN
Sodium	96,000	375,000	1,790,000	1,010,000	223,000	1,700,000	806,000	896,000	386,000	412,000	371,000	384,000	20,000
Vanadium	33.8B	9.8B	20.9B	ND	8.9B	ND	126	2.3B	75.2	3.5B	73.5	4.8B	14
Zinc	833	135	116	290	568	946	9853	QN	624J	QN	6203	QN	300

'Samples collected by AKRF, Inc. personnel on June 15 and 16, July 24, and October 28, 1998 and analyzed for TCL VOCs and SVOCs and TAL metals by Envirotech Research, Inc. a New York State Department of Health certified CLP laboratory. Notes:

<sup>&</sup>lt;sup>2</sup>Sample MW-2HA is a duplicate sample of Sample MW-2H.

NYSDEC division of Technical and Operational Guidance Series (TOGS) 1.1.1. - Ambient Water Quality Standards and Guidance Values.

B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the sample.

N = The spiked recovery was not within the control limits during laboratory quality control/quality assurance practices.

ND = Not Detected NS = No Standard

 $<sup>\</sup>mu$ g/l = micrograms per liter (ppb)

#### Groundwater Table H-11 Groundwater Analytical Summary - Turbidity Yonkers Downtown Waterfront - Parcel H

Groundwater Sample <sup>1</sup>	Turbidity Level (NTU)
MW-1H	1,050
MW-2H	460
MW-2HA	625

Notes: 'Samples collected by AKRF, Inc. personnel on July 24, 1998 and analyzed for TCL VOCs and SVOCs, TAL metals and Turbidity by Envirotech Research, Inc. a New York State Department of Health certified CLP laboratory.

NTU = Nephelometric Turbidity Units



#### Soil Table I-1

#### Soil Analytical Summary - Semivolatile Organic Compounds Yonkers Downtown Waterfront - Parcel I' (µg/kg)

Compound	TP-4H (Parcel I)	SS Parcel I <sup>2</sup>	Soil Clean Up Objective <sup>3</sup>	BG-14	BG-2 <sup>4</sup>	BG-3
4-Methylphenol	10Ј	ND	90	∘ NA	NA	NA
Naphthalene	360J	-50J	13,000	18J	9.7J	20J
2-Methylnaphthalene	260J	36J	36,400	NA	NA	NA
Acenaphthylene	76J	44J	41,000	27J	36Ј	78J
Acenaphthene	57J	61J	50,000	29J	ND	75J
Dibenzofuran	67J	37Ј	6,200	NA	NA	NA
Fluorene	73J	66J	50,000	28J	13J	83J
Phenanthrene	710J	580	50,000	310J	95J	1,200
Anthracene	150J	140J	50,000	72J	35J	200J
Carbazole	44J	58J	NS	NA	NA	NA
Fluoranthene	660J	720	50,000	600J	240J	2,600
Pyrene	700J	670	50,000	520J	220J	2,200
Butylbenzylphthalate	ND	180J	50,000	NA	NA	NA
Benzo(a)anthracene	350	370	224 or MDL	290	140	1,200
Chrysene	720J	390	400	370J	180J	1,600
bis(2-Ethylhexyl)phthalate	ND	380	50,000	NA	NA	NA
Benzo(b)fluoranthene	550	440	1,100	450	240	2,000
Benzo(k)fluoranthene	230	170	1,100	170	83	860
Benzo(a)pyrene	290	300	61 or MDL	300	160	1,300
Indeno(1,2,3-cd)pyrene	120	100	3,200	180	87	580
Dibenz(a,h)anthracene	40J	30J	14 or MDL	40J	21J	140
Benzo(g,h,i)perylene	120J	96Ј	50,000	200J	89J	510J

Notes:

'Samples collected by AKRF, Inc. personnel on June 15, 1998 and July 24, 1998 and analyzed for TCL VOCs and SVOCs, and TAL metals by Envirotech Research, Inc., a New York State Department of Health certified CLP laboratory.

<sup>2</sup>SS Parcel-I is the surface soil sample collected from Parcel I.

<sup>3</sup>New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046).

4BG = Background Sample

NA = No Standard

NA = Not Analyzed

ND = Not Detected

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitiation limit but greater than zero. The concentration given is an approximate value.

MDL = Minimum Detection Level

 $\mu$ g/kg = micrograms per kilogram (ppb)

Soil Table I-2 Surface Soil Analytical Summary - Pesticides Yonkers Downtown Waterfront - Parcel I<sup>1</sup> (mg/kg)

Compound	SS-I	Soil Cleanup Objectives <sup>2</sup>
4,4' - DDT	9.8	2.1
Dieldrin	9.5	0.044

Notes: 'Sample collected by AKRF, Inc. personnel on July 24, 1998 and analyzed for TCL SVOCs and Pesticides and TAL metals by Envirotech Research, Inc. a New York State Department of Health certified CLP laboratory.

<sup>2</sup>New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046).

mg/kg = milligrams per kilogram (ppm)

### Soil Table I-3 Soil Analytical Summary -TAL Metals Yonkers Downtown Waterfront - Parcel I<sup>1</sup> (mg/kg)

Metal	TP-4H (parcel I)	SS Parcel I <sup>2</sup>	Soil Cleanup Objective <sup>3</sup>	BG-1'	BG-2*	BG-3 <sup>4</sup>
Aluminum	2,280	4,760	BG	8,450	8,970	6,020
Arsenic	14.5	1.9	7.5	3.3	6.2	3.1
Barium	111	40.1	300 or BG	85.4	74.0	62.3
Beryllium	0.59	0.13B	0.14	0.49	0.45B	0.35B
Cadmium	ND	ND	10 or BG	0.28B	0.13B	0.20B
Calcium	4,940	6,250J	BG	2,430	3,540	3,310
Chromium	7.6	14.7	50 or BG	16.7	20.9	14.3
Cobalt	2.9B	4.7B	30 or BG	ND	ND	ND
Copper	16.4	23.1	25 or BG	25.6	20.2	22.6
Iron	22,000	11,300	2,000 or BG	14,300	13,700	12,300
Lead	27.1	70.0J	BG	243	87.2	95.8
Magnesium	1,880	4,940J	BG	2,800	3,440	2,630
Manganese	102	175	BG	494	292	. 338
Mercury	0.22	0.04	0.1 or BG	0.31	1.4	0.14
Nickel	7.6B	11.4	13 or BG	13.7	15.4	11.5
Potassium	850B	1,200	4,000 or BG	573B	1,550	795B
Sodium	295B	122B	3,000 or BG	ND	ND	ND
Vanadium	21.7	21.1	150 or BG	20.8	24.3	17.0
Zinc	27.6	55.6J	20 or BG	165	68.8	107

Notes:

'Samples collected by AKRF, Inc. personnel on June 15 and July 30, 1998 and analyzed for TCL VOCs and SVOCs and TAL metals by Envirotech Research, Inc. a New York State Department of Health certified CLP laboratory.

2SS Parcel- I is the surface soil sample collected from Parcel I.

<sup>3</sup>New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046). 

<sup>4</sup>BG = Background Sample.

B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitiation limit but greater than zero. The concentration given is an approximate value. ND = Not Detected.

N =The spiked recovery was not within the control limits during laboratory quality control/quality assurance practices. mg/kg = milligrams per kilogram (ppm)

### Groundwater Table I-4 Groundwater Analytical Summary - Semivolatile Organic Compounds (unfiltered) Yonkers Downtown Waterfront - Parcel I' (µg/l)

Compound	TP-4H (Parcel I)	MW-1I	MW-2I	Water Quality Standard <sup>2</sup>	Water Quality Guidance Value <sup>2</sup>
Phenanthrene	0.5J	ND	ND	NS	50
Fluoranthene	0.5J	ND	ND	NS	NV
Pyrene	0.4Ј	ND	ND	NS	50
Benz(a)anthracene	0.6J	ND	ND	NS	0.002
Chrysene	0.3J	ND	ND	NS	0.002
Benzo(b)fluoranthene	0.3Ј	ND	ND	NS	0.002
Benzo(a)pyrene	0.2Ј	ND	ND	NS	0.002

Notes: 'Samples collected by AKRF, Inc. personnel on June 15 and 16, 1998 and July 24, 1998 and analyzed for TCL VOCs and SVOCs, and TAL metals by Envirotech Research, Inc., a New York State Department of Health certified CLP laboratory.

<sup>2</sup>NYSDEC division of Technical and Operational Guidance Series (TOGS) 1.1.1. - Ambient Water Quality Standards and Guidance Values.

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitiation limit but greater than zero. The concentration given is an approximate value.

ND = None detected above the minimum detection level (MDL)

NS = No Standard

 $\mu$ g/l = micgrograms per liter

#### Groundwater Table I-5 Groundwater Analytical Summary -TAL Metals Yonkers Downtown Waterfront - Parcel I<sup>1</sup> (µg/I)

Metal	TP-4H² (total)	MW-1I (total)	MW-1I (dissolved)	MW-2I (total)	MW-2I (dissolved)	Water Quality Standard <sup>3</sup>
Aluminum	3,330	29,500	ND	18,900	ND	100
Arsenic	12.6	96.6	ND	28.1	ND	25
Barium	156B	612	44.8B	125B	22.1B	1,000
Beryllium	0.23B	2.5	ND	1.3B	ND	3
Calcium	135,000	116,000	109,000	93,600	97,100	NS
Chromium	7.4B	83.0	ND	40.9	ND	50
Cobalt	7.1B	25.9B	1.6B	14.7B <sub>.</sub>	ND	5
Copper	21.1B	250	ND	63.7	ND	200
Iron	18,900	156,000	8,450	40,100	ND	300
Lead	49.5	377	ND	90.2	ND	, 25
Magnesium	24,600	45,100	39,500	37,400	36,500	35,000
Manganese	164	1,420	775	1,120	617	300
Mercury	0.23	5.2	ND	2.8	ND	2
Nickel	22.7B	67.2	8.4B	33.7B	ND	NS
Potassium	11,000	29,700	26,200	10,800	9,760	NS
Selenium	ND	5.7	ND	5.2	ND	10
Sodium	71,700	202,000	208,000	79,100	96,100	20,000
Vanadium	18.2B	102	7.5B	46.0B	2.8B	14
Zinc	52.3	1,290J	ND	160J	ND	300

Notes: 'Samples collected by AKRF, Inc. personnel on June 15 and 16, and July 24, 1998 and analyzed for TCL VOCs and SVOCs and TAL metals by Envirotech Research, Inc. a New York State Department of Health certified CLP laboratory.

<sup>2</sup> Sample TP-4H is from Parcel I.

ND = Not Detected

NS = No Standard

<sup>&</sup>lt;sup>3</sup>NYSDEC Division of Technical and Operational Guidance Series (TOGS) 1.1.1 - Ambient Water Quality Standards and Guidance Values.

B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the sample.

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitiation limit but greater than zero. The concentration given is an approximate value.

#### Groundwater Table I-6 Groundwater Analytical Summary - Turbidity Yonkers Downtown Waterfront - Parcel I

Groundwater Sample <sup>1</sup>	Turbidity (NTU)		
MW-1I	875		
MW-2I	450		

Notes: 'Samples collected by AKRF, Inc. personnel on July 24, 1998 and analyzed for TCL VOCs and SVOCs, TAL metals and Turbidity by Envirotech Research, Inc. a New York State Department of Health certified CLP laboratory.

NTU = Nephelometric Turbidity Units



# Soil Table C-1 Soil Analytical Summary - Volatile Organic Compounds Yonkers Downtown Waterfront Parcel C' $(\mu g/kg)$

Compound	B-1C (S-3)	B-5C (S-1)	B-6C (S-1)	B-7C (S-4)	B-8C (S-1)	MW-4C (S-3)	Soil Cleanup Objective <sup>2</sup>
Acetone	65J	21J	ND	34J	46J	60Ј	200
Carbon Disulfide	1.7Ј	1.0J	ND	ND	ND	2.2J	2,700
2-Butanone	ND	ND	ND	ND	7.4J	ND	300
Trichloroethene	ND	ND	ND	ND	ND	1.0J	700
Benzene	1.2Ј	0.9J	ND	0.6Ј	ND	ND	60
Tetrachloroethene	ND	ND	ND	ND	ND	0.8J	1,400
Toluene	1.0J	0.8Ј	ND	0.7J	0.7J	1.5J	1,500
Ethylbenzene	ND	0.5J	ND	ND	ND	0.9J	5,500
Total Xylenes	1.5J	0.8J	ND	ND	ND	6.0J	1,200

Notes: 'Samples collected by AKRF, Inc. personnel on October 29 and 30, 1998 and analyzed for TCL VOCs and SVOCs, and TAL metals by Envirotech Research, Inc., a New York State certified CLP laboratory.

<sup>2</sup>New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum(TAGM): Determination of Soil Cleanup objectives and Cleanup Levels (HWR-92-4046).

R = Reported value is unusable and rejected due to variance from quality control limits.

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitiation limit but greater than zero. The concentration given is an approximate value.

ND = None detected above the minimum detection level (MDL)  $\mu$ g/kg = micrograms per kilograms (ppb)

## Soil Table C-2 Soil Analytical Summary - Semivolatile Organic Compounds Yonkers Downtown Waterfront - Parcel C' (µg/kg)

Compound	B-1C (S-3)	B-5C (S-1)	B-6C (S-1)	B-7C (S-4)	B-8C (S-1)	MW-4C (S-3)	Soil Clean Up Objective²	BG-13	BG-2 <sup>3</sup>	BG-3 <sup>3</sup>
Phenol	14J	ND	ND	ND	ND	ND	30	NA	NA	NA
4-Methylphenol	ND	ND	ND	180J	ND	ND	900	NA	NA	NA
Napthalene	140J	ND	ND	2,200J	ND	33J	13,000	18J	9.7J	20J
2-Methylnaphthalene	280J	33Ј	ND	2,700J	ND	120J	100	N/A	N/A	N/A
Acenaphthylene	180Ј	23J	ND	400J	ND	24J	50,000	29J	ND	75J
Acenaphthene	240J	19J	310J	1,100J	ND	25J	41,000	27J	36J	78J
Dibenzofuran	140J	ND	ND	840J	ND	24J	6,200	N/A	N/A	N/A
Flourene	280J	24J	ND	1,400J	ND	30J	50,000	28J	13J	75J
Phenanthrene	2,100J	200J	100Ј	10,000	19J	220J	50,000	310J	95J	1,200
Anthracene	510J	56J	ND	2,700J	ND	47J	50,000	72J	35J	200J
Carbozole	170J	ND	ND	880J	ND	17J	NS	NA	NA	NA
Fluoranthene	2,800J	390J	130J	11,000	13J	250J	50,000	600J	240J	2,600
Pyrene	2,700J	430J	220J	10,000	10J	200J	50,000	520J	220J	2,200
Benzo(a)anthracene	1,200J	170	ND	6,100	11J	120	224 or MDL	290	140	1,200
Chrysene	1,400J	200J	ND	7,500J	ND	150J	400	370J	180J	1,600
bis(2-Ethylhexyl)phthalate	130J	340J	ND	ND	500	280J	50,000	NA	NA	NA
Benzo(b)fluoranthene	1,500J	280J	73J	6,800	ND	140	1,100	450	240	2,000
Benzo(k)fluoranthene	590J	90J	ND	2,400	ND	56	1,100	170	83	860
Benzo(a)pyrene	1,200J	180J	66J	5,300	ND	110	61 or MDL	300	160	1,300
Indeno(1,2,3-cd)pyrene	550J	75J	ND	3,100	ND	63	3,200	180	87	580
Dibenz(a,h)anthracene	130Ј	ND	ND	940	ND	24J	14 or MDL	40J	21J	140
Benzo(g,h,i)perylene	480J	84J	43J	3,200J	ND	71J	50,000	200J	89J	510J

Notes: 'Samples collected by AKRF, Inc. personnel on October 29 and 30, 1998 and analyzed for TCL VOCs and SVOCs, and TAL metals by Envirotech Research, Inc., a New York State Department of Health certified CLP laboratory.

<sup>2</sup>New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046).

<sup>3</sup>BG = Background Sample

NA = Not Analyzed

ND = Not Detected

NS = No Standard

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitiation limit but greater than zero. The concentration given is an approximate value.

 $\mu$ g/kg = micrograms per kilogram (ppb)

#### Soil Table C-3 Soil Analytical Summary - Pesticides Yonkers Downtown Waterfront - Parcel C<sup>1</sup> (µg/kg)

Compound	B-5C (S-1)	B-6C (S-1)	B-7C (S-4)	B-8C (S-1)	Soil Cleanup Objective <sup>2</sup>
Chlordane	210	190	ND	ND	540

Notes: 'Samples collected by AKRF, Inc. personnel on October 29 and 30, 1998 and analyzed for TCL VOCs and SVOCs, and Pesticides and TAL metals by Envirotech Research, Inc., a New York State Department of Health certified CLP laboratory.

<sup>2</sup>New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046).

ND = Not Detected

 $\mu$ g/kg = micrograms per kilogram (ppb)

Soil Table C-4

Soil Analytical Summary -TAL Metals

Yonkers Downtown Waterfront - Parcel C' (mg/kg)

Matel	D 10 (0 3)	D 50 /0 1)	(1 3/ 3/ 0	(13) Jo a   (13) Jr a   (13)		MW 4C (C 3)	Coil Cleanin Objectives	BC 13	BC.23	BC 23
	(5-6) 21-7	(1-0) 00-0	(I-C) 20-G	(f-C) 21-7	(10)000	(6.5) 6				
Aluminum	6,830	7,050	6,810	2,790	8,030	8,940	BG	8,450	8,970	6,020
Antimony	1.8J	ND	ND	ND	ND	ND	30 or BG	ND	ND	QN
Arsenic	6.73	1.8	1.3	6.5J	1.3	2.6J	7.5	3.3	6.2	3.1
Barium	123	38.7B	15.4B	306	36.2B	63.7	300 or BG	85.4	74.0	62.3
Beryllium	0.34B	0.23B	0.18B	0.29B	0.34B	0.33B	0.14	0.49	0.45B	0.35B
Cadmium	0.41B	ND	ND	0.72B	QN	ND	10 or BG	0.28B	0.13B	0.20B
Calcium	25,800J	78,800	40,900	4,050	1,340	5,720	BG	2,430	3,540	3,310
Chromium	23.7	10.5	5.4	15.0J	12.8	20.8	50 or BG	16.7	20.9	14.3
Cobalt	6.5B	7.3B	6.6B	5.7B	5.5B	9.2B	30 or BG	ND	QN	QN
Copper	393	28.0	39.9	9.78	15.0	44.5	25 or BG	25.6	20.2	22.6
Iron	19,800	20,300	18,800	17,400	12,500	14,700	2,000 or BG	14,300	13,700	12,300
Lead	468	74.4	11.3	866	36.7	27.7	BG	243	87.2	95.8
Magnesium	5,930J	29,100	18,400	1,780	2,870	6,310	BG	2,800	3,440	2,630
Manganese	727	285	212	111	230	296	BG	494	292	338
Mercury	0.61	0.03B	ΩN	1.6	0.05	0.11	0.1 or BG	0.31	1.4	0.14
Nickel	16.9	13.5J	8.13	15.0	13.8J	28.4J	13 or BG	13.7	15.4	11.5
Potassium	9013	7123	279B	215B	5223	1,500J	4,000 or BG	573B	1,550	795B
Selenium	1.2	QN	QN	ND	ND	ND	2 or BG	ND	ND	ND
Sodium	339J	690B	1,150	276B	425B	635B	3,000 or BG	ND	ND	ND
Vanadium	29.3	41.4	41.3	15.5	17.5	26.2	150 or BG	20.8	24.3	17.0
Zinc	253	50.33	28.4J	7513	36.13	48.6J	20 or BG	165	68.8	107

'Samples collected by AKRF, Inc. personnel on October 29 and 30, 1998 and analyzed for TCL VOCs and SVOCs and TAL metals by Envirotech Research, Inc. a New York State Department of Health certified CLP laboratory.

New York State Department of Environmental Conservation Division of Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels (HWR-94-4046).

BG = Background Sample

B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the sample.

ND = Not Detected Notes:

J= Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitiation limit but greater than zero. The concentration given is an approximate value. mg/kg = milligrams per kilogram (ppm)

## Groundwater Table C-5 Groundwater Analytical Summary - Volatile Organic Compounds Yonkers Downtown Waterfront Parcel C

raicei C (μg/l)

Groundwater Sample	Methylene Chloride <sup>2</sup>	cis-1,2-Dichloroethene
MW-2C	220Ј	ND
MW-4C	23Ј	1.1J
MW-4AC <sup>3</sup>	260Ј	ND
Water Quality Standard	5	5

Notes: 'Samples collected by AKRF, Inc. personnel on November 9, 1998 and analyzed for TCL VOCs and SVOCs, and TAL metals by Envirotech Research, Inc., a New York State certified CLP laboratory.

2Methylene Chloride is a common laboratory contaminant, however it was not detected in the trip blank or the field blank samples.

<sup>3</sup>Sample 4-AC is a duplicate to sample 4-C.

<sup>4</sup>NYSDEC division of Technical and Operational Guidance Series (TOGS) 1.1.1. - Ambient Water Quality Standards and Guidance Values.

ND = None detected above the minimum detection level (MDL).

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitation limit but greater than zero. The concentration given is an approximate value.

### Groundwater Table C-6 Groundwater Analytical Summary - Semivolatile Organic Compounds Yonkers Downtown Waterfront - Parcel C<sup>1</sup> (µg/l)

Compound	MW-2C	MW-4C	MW-4AC <sup>2</sup>	Water Quality Standard <sup>3</sup>	Water Quality Guidance Value <sup>3</sup>
Phenol	2.4J	ND	ND	1	NV
4-Methylphenol	0.4Ј	ND	ND	1	NV
bis(2-Ethylhexyl) phthalate	3.2J	ND	ND	50	NV

Notes: 'Samples collected by AKRF, Inc. personnel on November 9, 1998 and analyzed for TCL VOCs and SVOCs, and TAL metals by Envirotech Research, Inc., a New York State Department of Health certified CLP laboratory.

<sup>2</sup>Sample 4-AC is a duplicate sample to sample 4-C.

<sup>3</sup> NYSDEC division of Technical and Operational Guidance Series (TOGS) 1.1.1. - Ambient Water Quality Standards and Guidance Values.

ND = None detected above the minimum detection level (MDL).

NV = No Value.

J = Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitation limit but greater than zero. The concentration given is an approximate value.

## Groundwater Table C-7 Groundwater Analytical Summary -TAL Metals Yonkers Downtown Waterfront - Parcel C<sup>1</sup> (µg/l)

Metal	MW-2C (dissolved)	MW-4C (dissolved)	MW-4AC <sup>2</sup> (dissolved)	Water Quality Standard <sup>3</sup>
Aluminum	ND	305B	278B	100
Arsenic	ND	9.0	10.4	25
Barium	592	446	442	1,000
Calcium	187,000	267,000	261,000	NS
Cobalt	1.9B	ND	ND	5
Iron	333	3,650	3,590	300
Lead	ND	5.1B	5.3B	25
Magnesium	18,900	156,000	153,000	35,000
Manganese	3,180	4,870	4,740	300
Nickel	2.9B	ND	ND	NS
Potassium	18,800	65,500	59,200	NS
Sodium	89,800	1,330,000	1,290,000	20,000
Zinc	276	107	90.1	300

Notes: 'Samples collected by AKRF, Inc. personnel on November 9, 1998 and analyzed for TCL VOCs and SVOCs and dissolved TAL metals by Envirotech Research, Inc. a New York State Department of Health certified CLP laboratory.

<sup>2</sup>Sample 4-AC is a duplicate sample to sample 4-C.

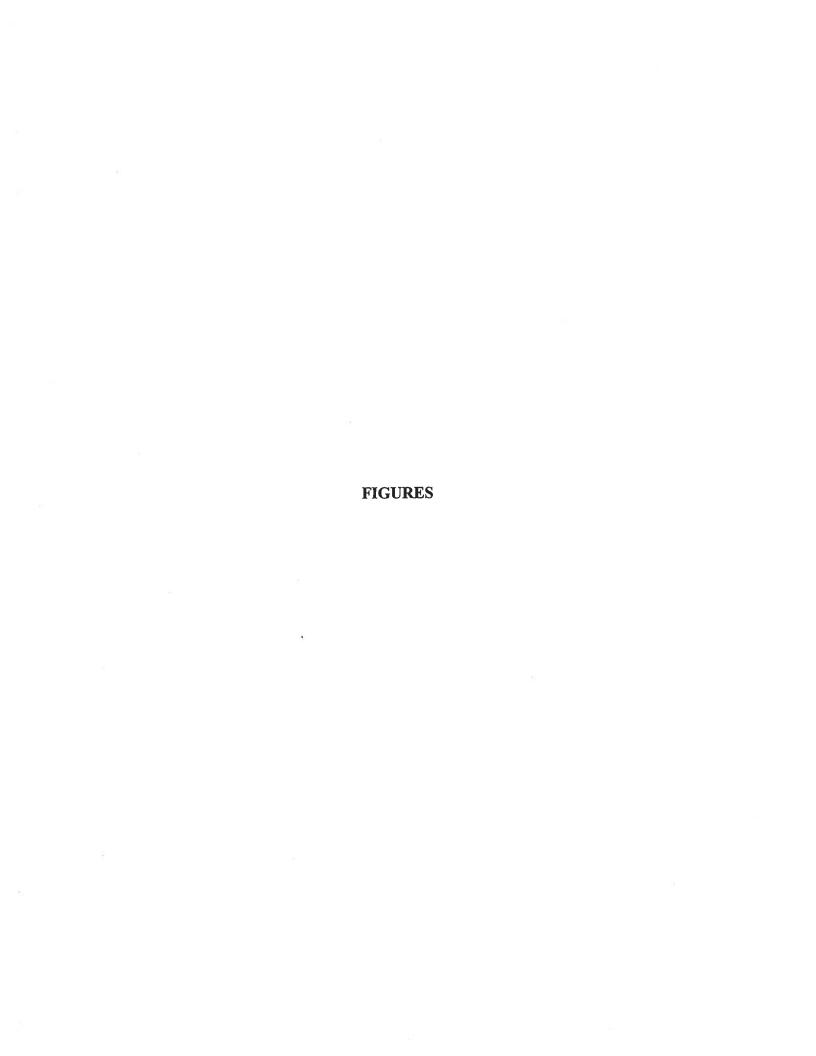
<sup>3</sup>NYSDEC division of Technical and Operational Guidance Series (TOGS) 1.1.1. - Ambient Water Quality Standards and Guidance Values.

B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

ND = Not Detected

NS = No Standard

### **FIGURES**





SCALE IN FEET
0' 1000' 2000' 4000'

SCALE: 1"=2000'

SOURCE:

USGS TOPOGRAPHIC MAP - YONKERS, N.Y.-N.J. QUADRANGLE - DATED 1966, PHOTOREVISED 1979



YONKERS WATERFRONT DEVELOPMENT YONKERS, NEW YORK

SITE LOCATION MAP

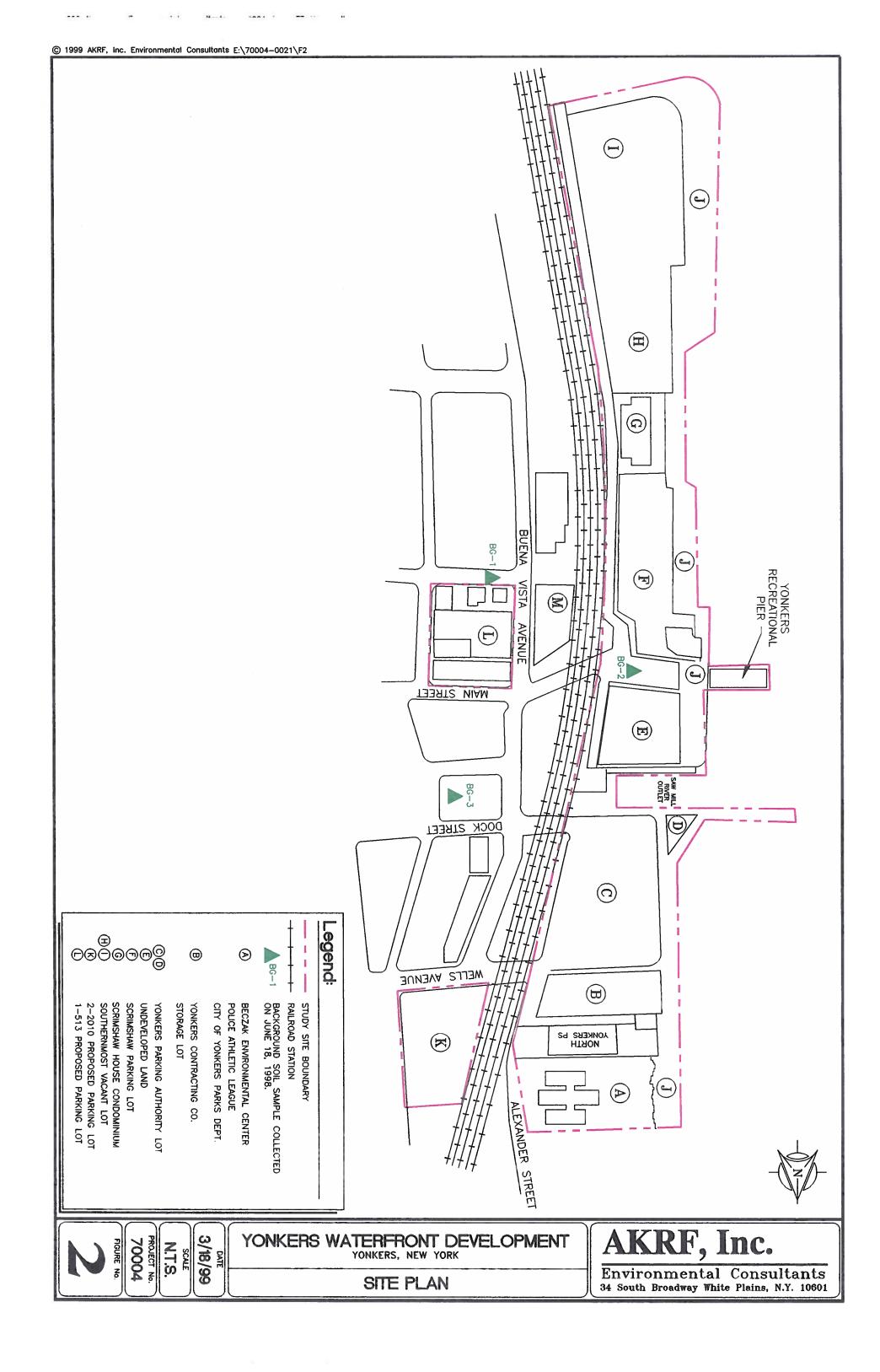
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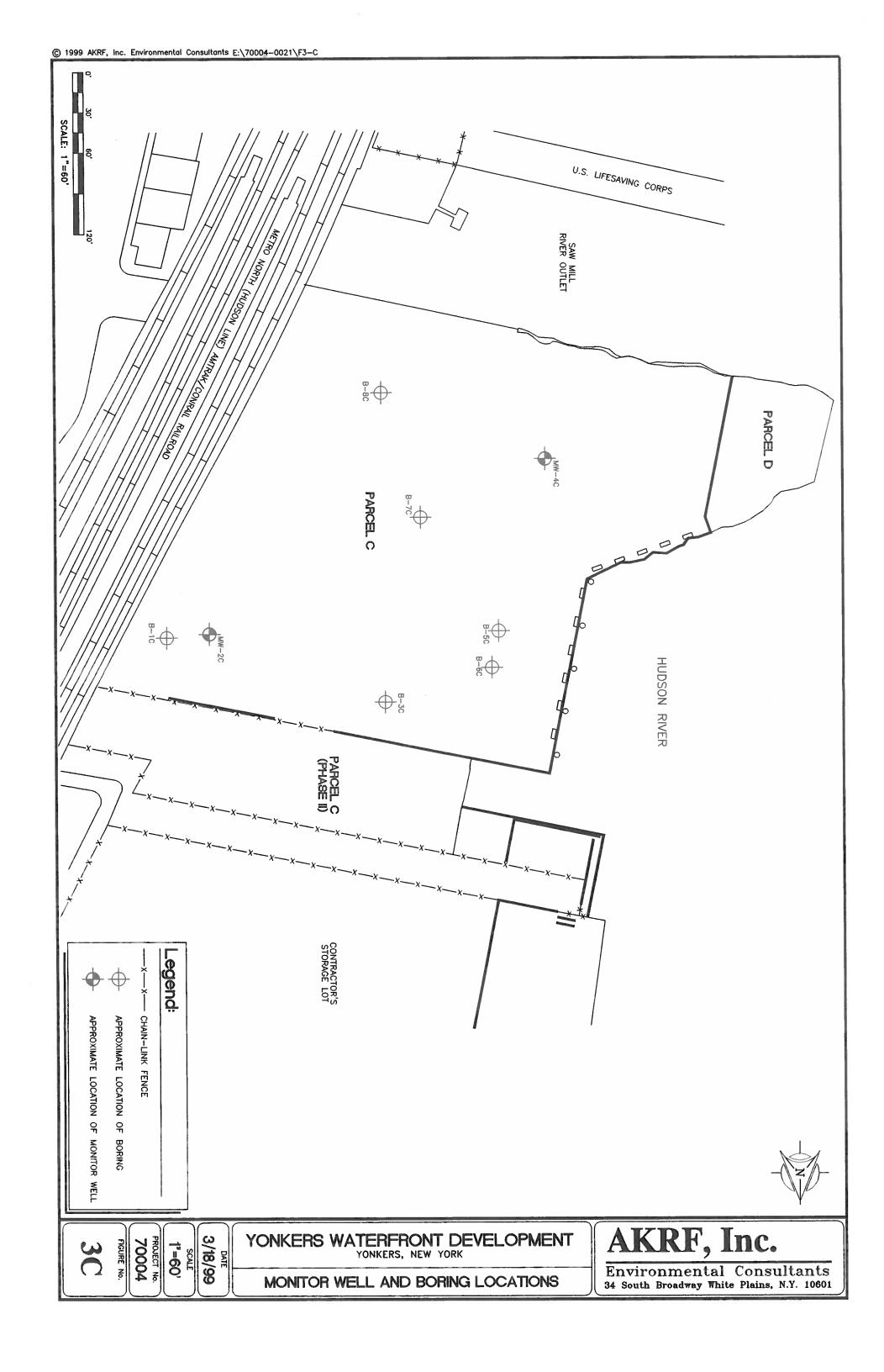
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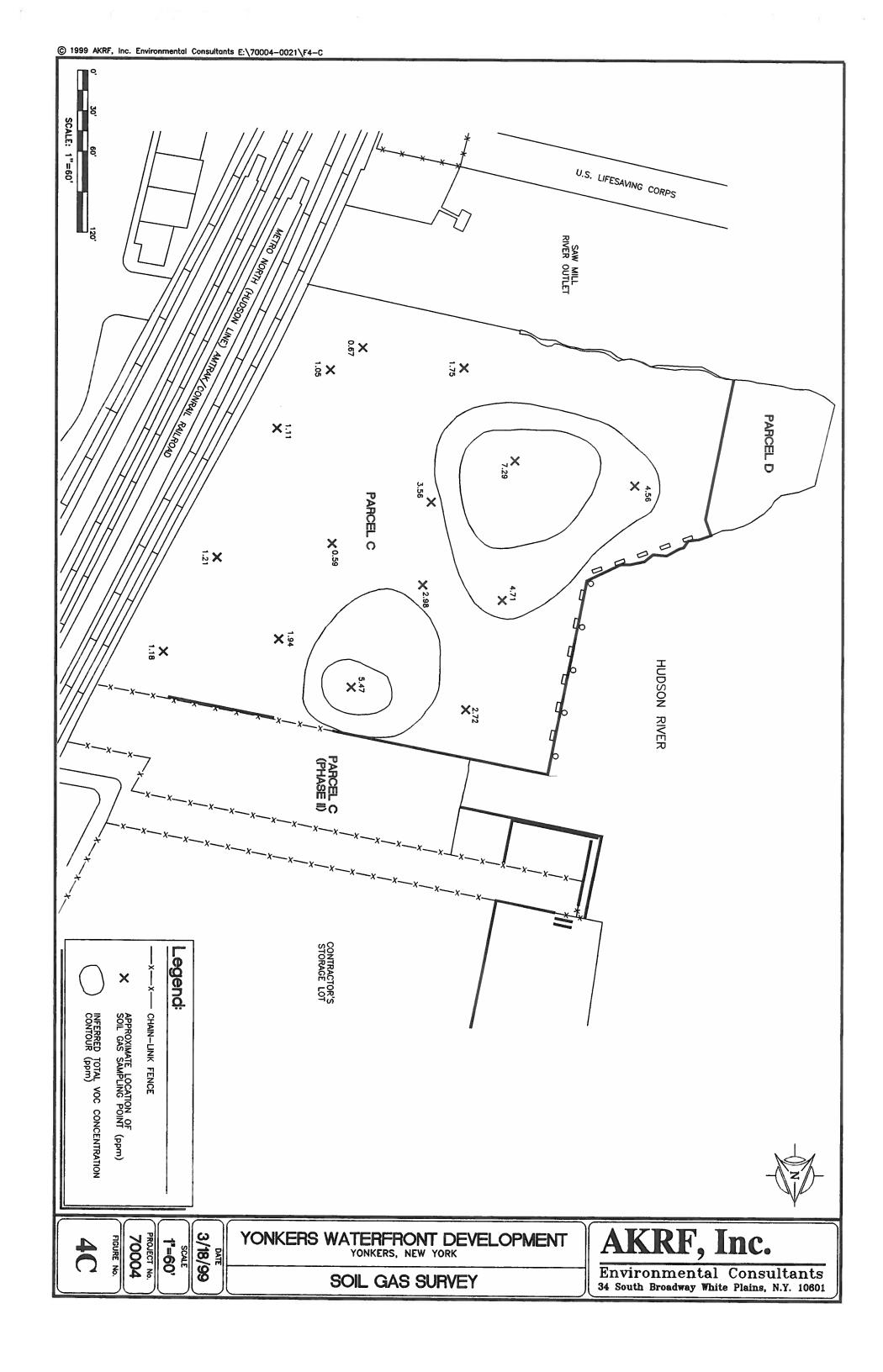
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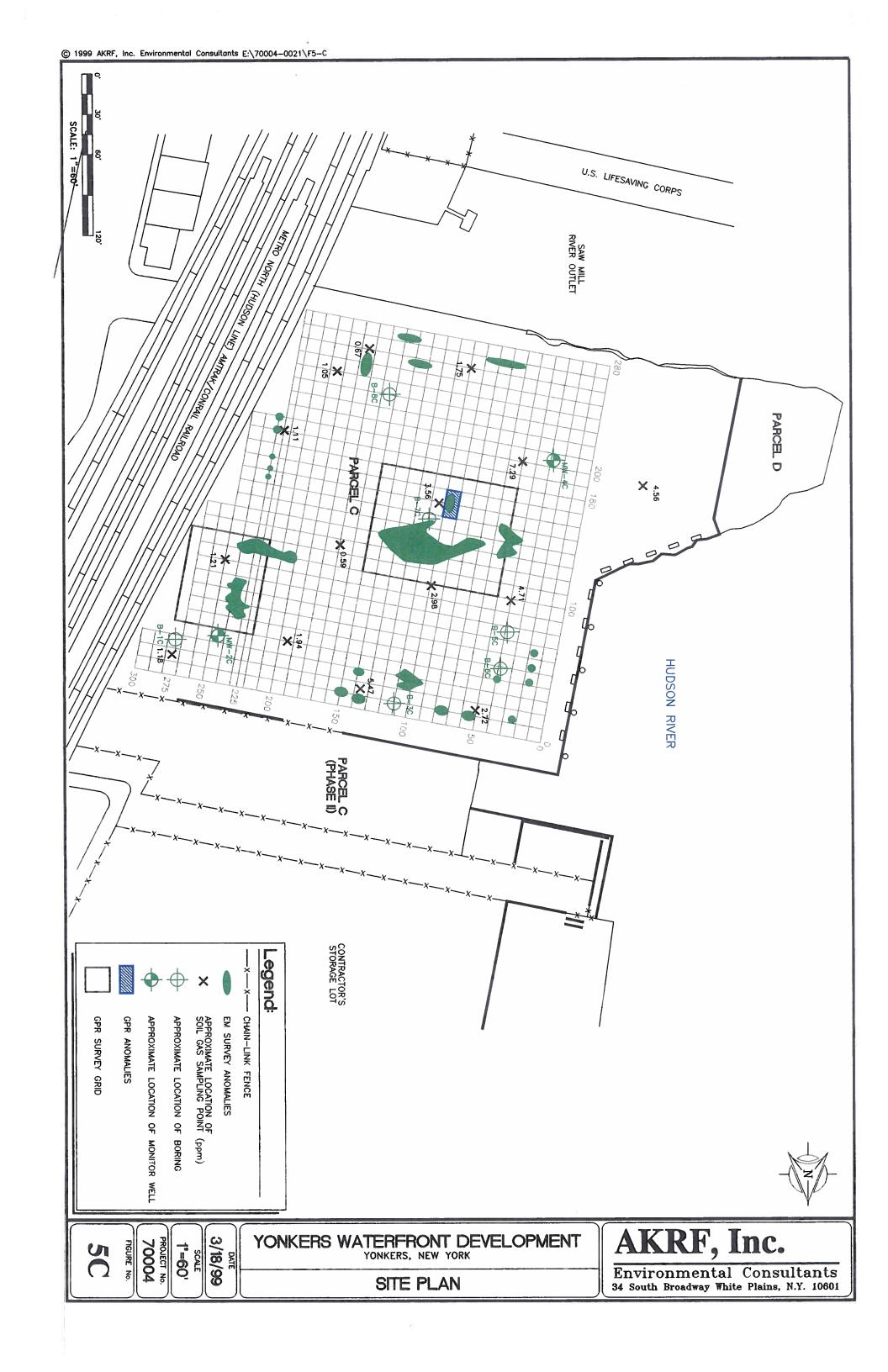
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# **APPENDIX A**

# APPENDIX A PHOTOGRAPHIC DOCUMENTATION



Monitor well MW-2H located on the northeastern corner of Parcel H.



Excavation of steel I-beams from test pit TP-1H on Parcel H.



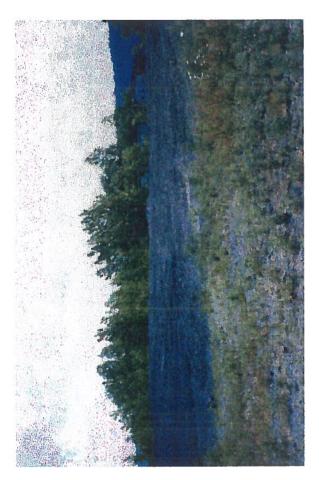
Piping excavated from test Pit TP-1H.



Plastic wire casings in fill materials excavated from test pit TP-10H.



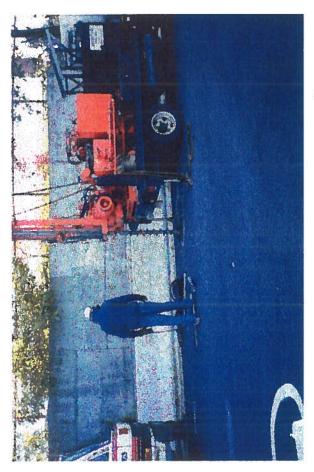
Parcel I facing south; the Jack Frost sugar refinery, southern site abutter, is located in the background.



Asphalt pile located between Parcels H and I, facing southwest.



Monitor well MW-2I located on the northeastern corner of Parcel I.



Boring B-3C located on the north central portion of Parcel C.

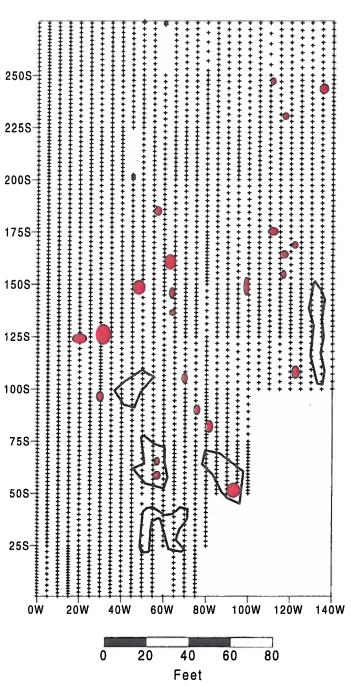
# **APPENDIX B**

# APPENDIX B ELECTROMAGNETIC SURVEY RESULTS

PARCEL H

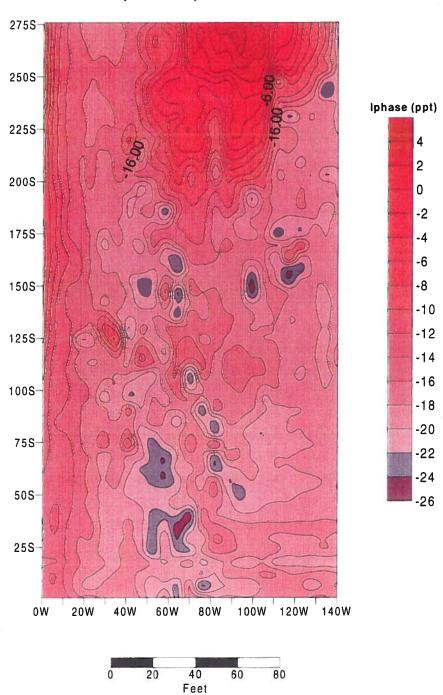
#### YONKERS WATER FRONT ELECTROMAGNETIC SURVEY

Parcel H
Map of Detected Anomalies



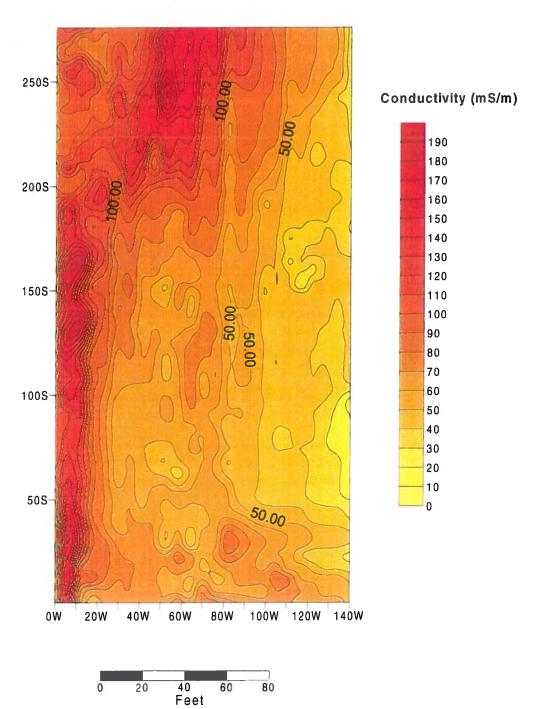
# YONKERS WATER FRONT ELECTROMAGNETIC SURVEY

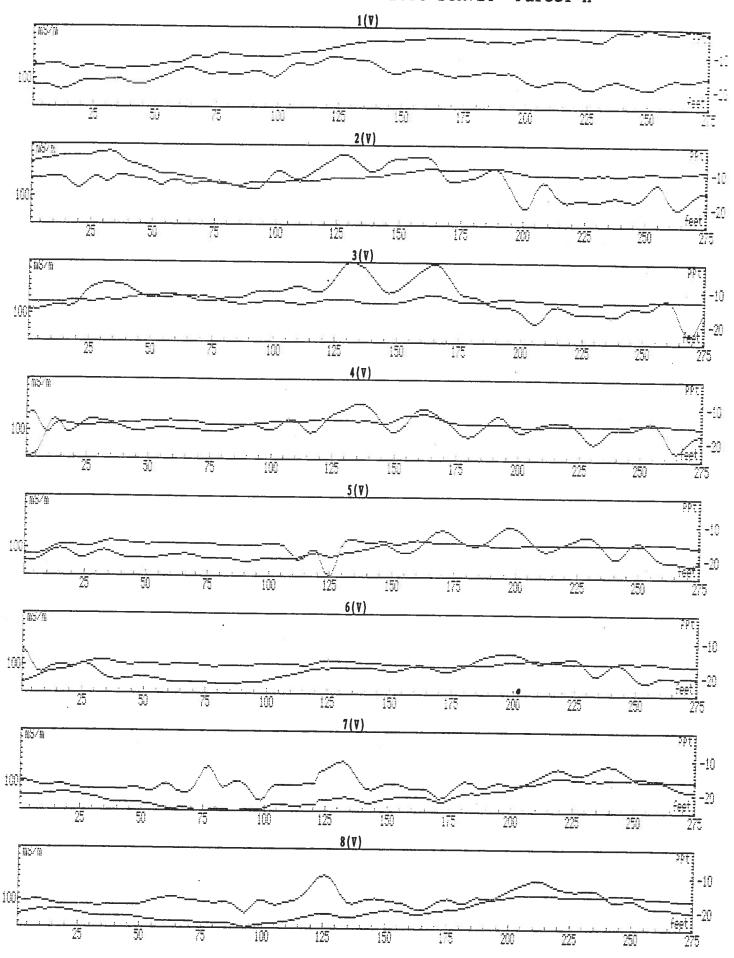
#### Parcel H Inphase Response

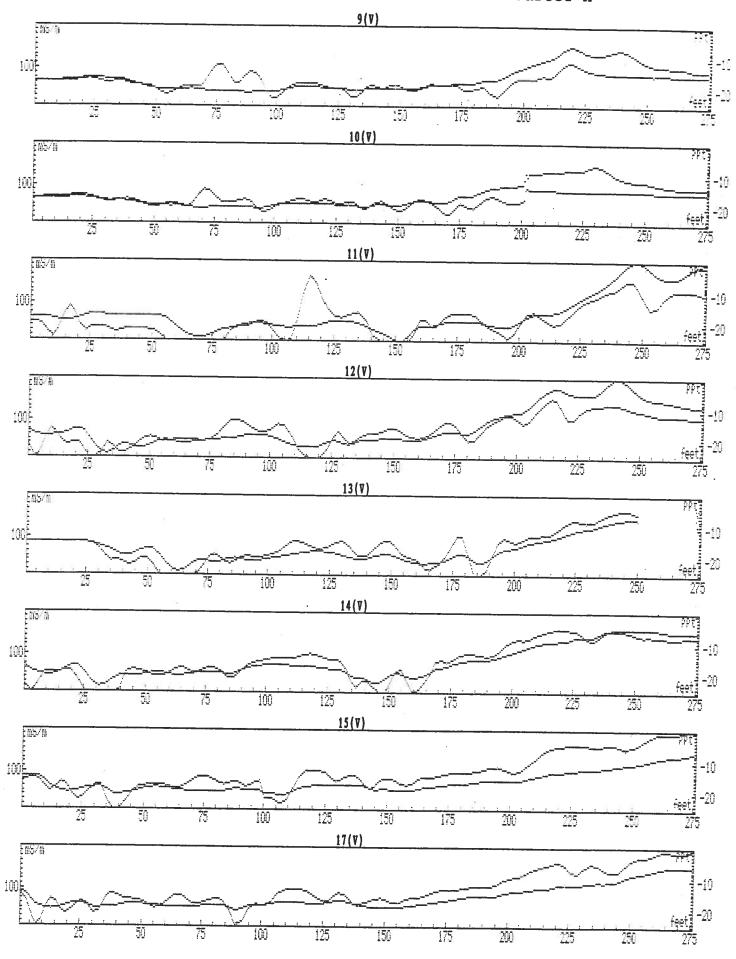


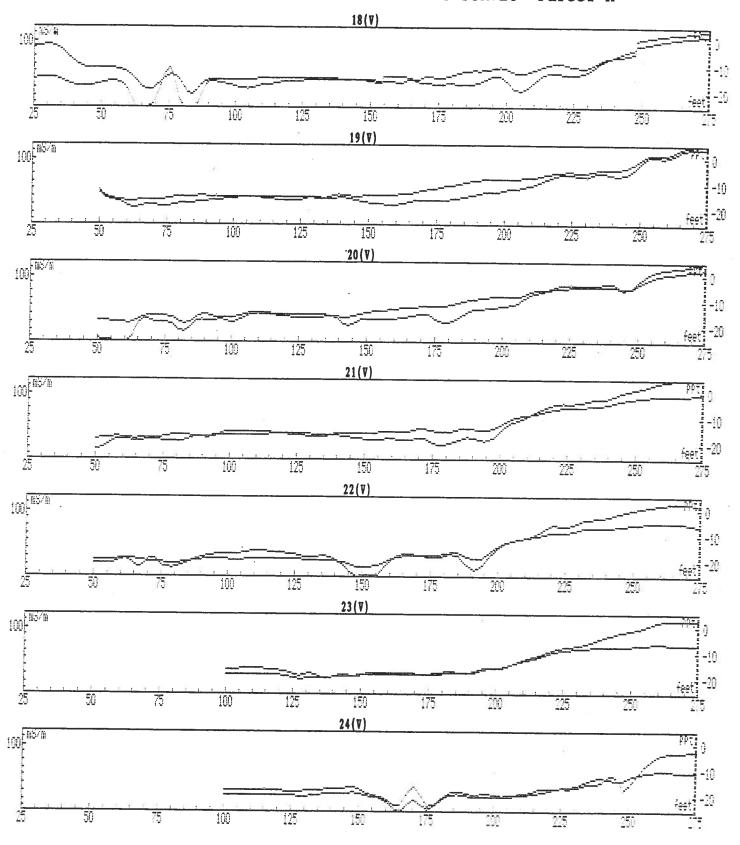
# YONKERS WATER FRONT ELECTROMAGNETIC SURVEY

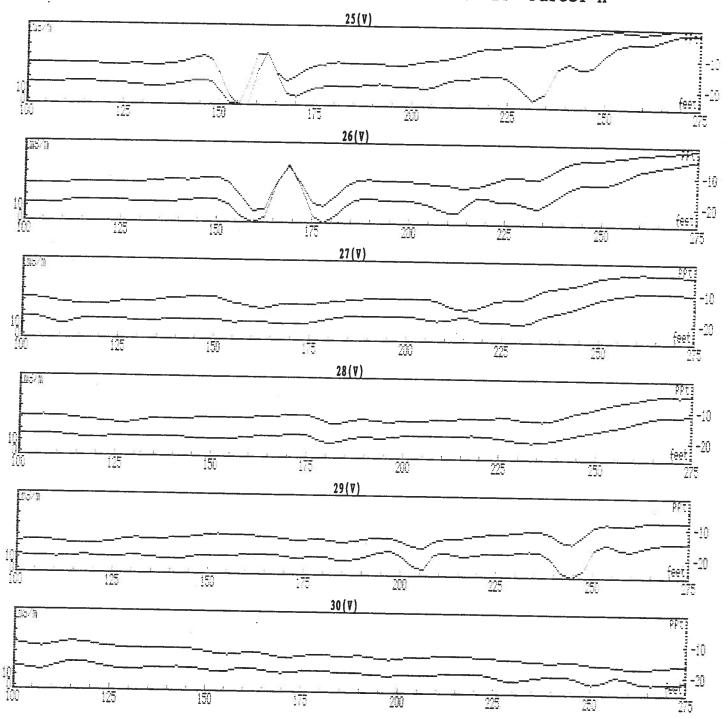
Parcel H
Quad-phase Component











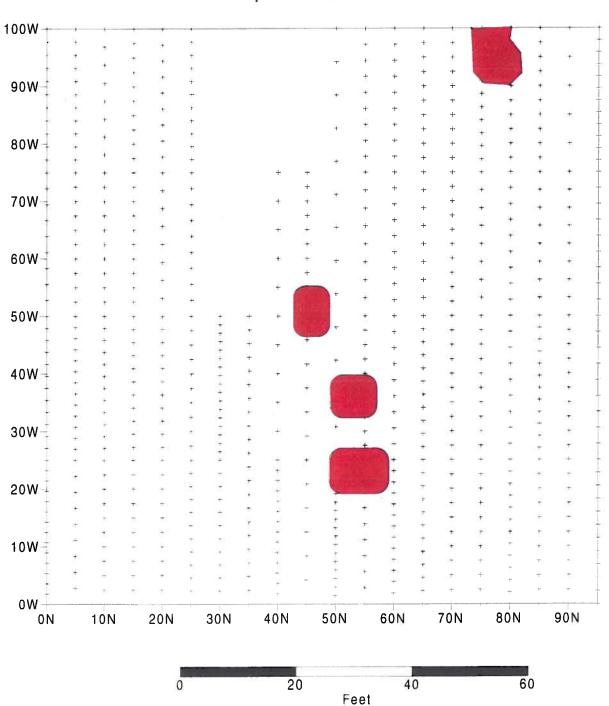
PARCELI

#### YONKERS WATER FRONT

### ELECTROMAGNETIC SURVEY

#### Parcel !

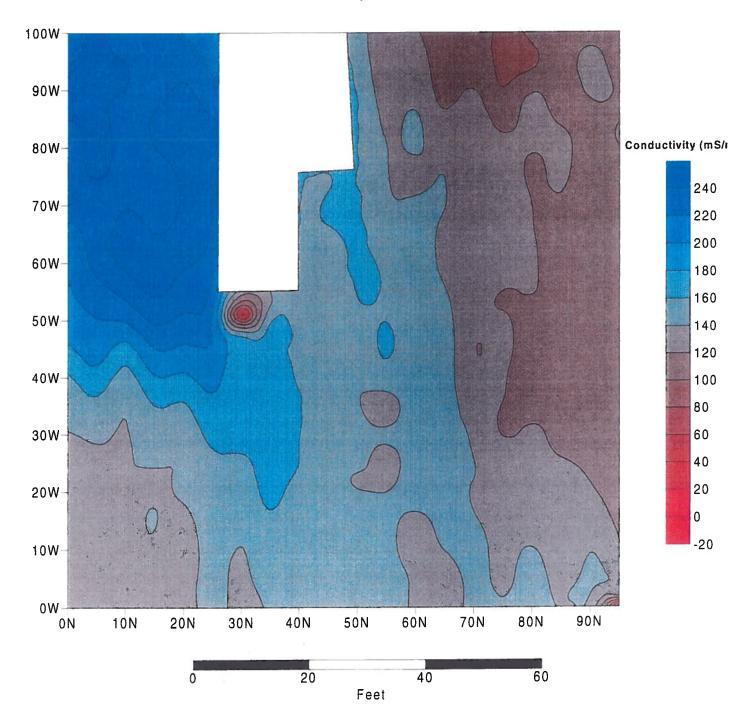
#### **Map of Detected Anomalies**



# YONKERS WATER FRONT ELECTROMAGNETIC SURVEY

Parcel I

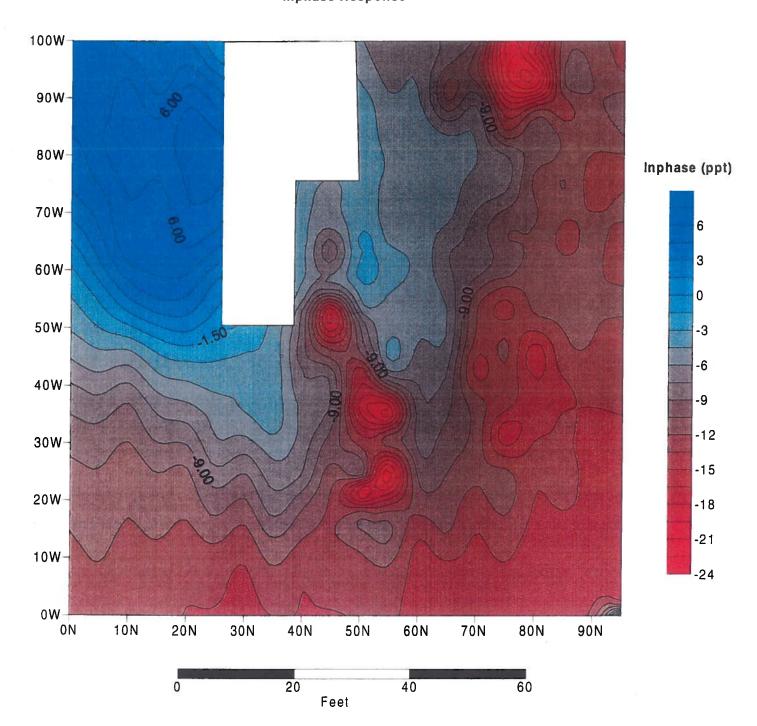
Quad-Phase Component

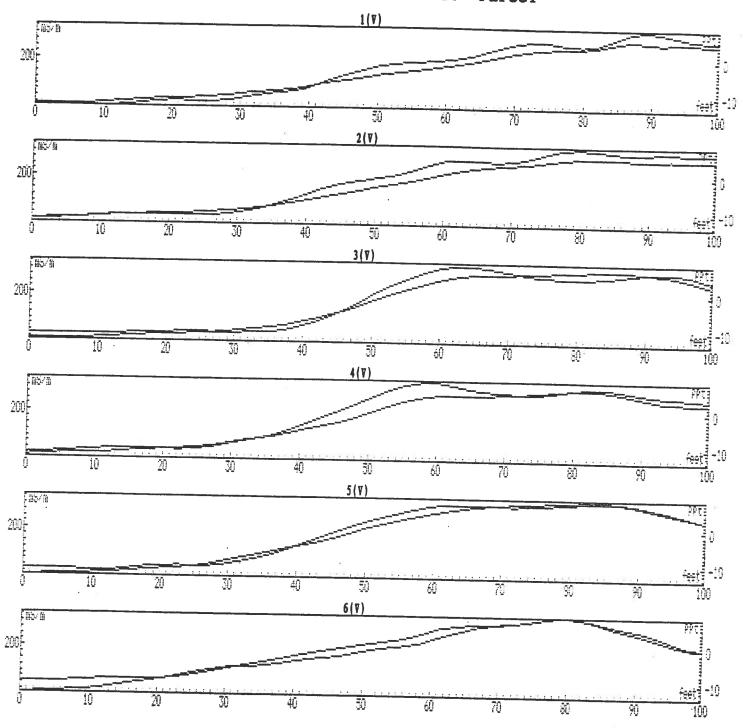


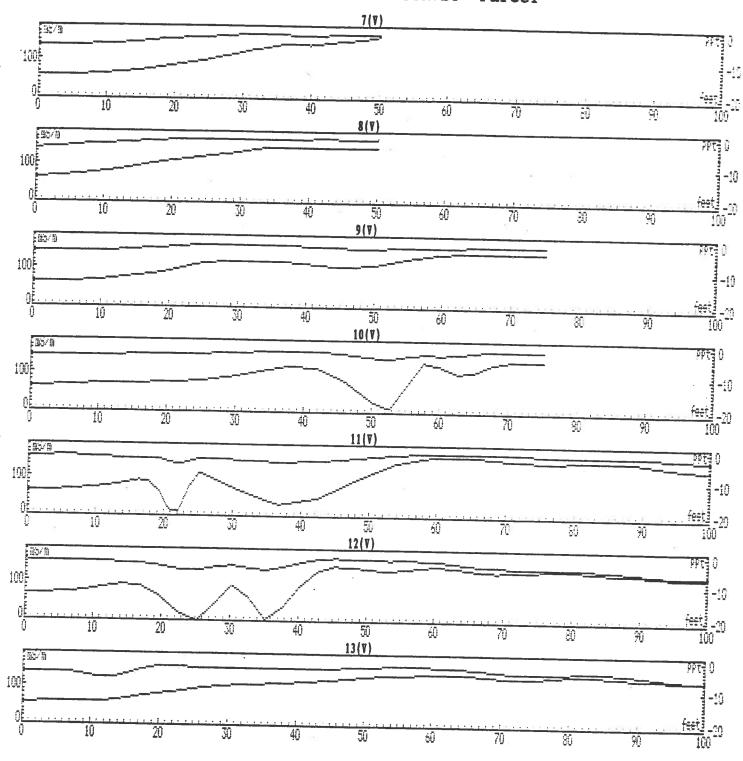
#### YONKERS WATER FRONT

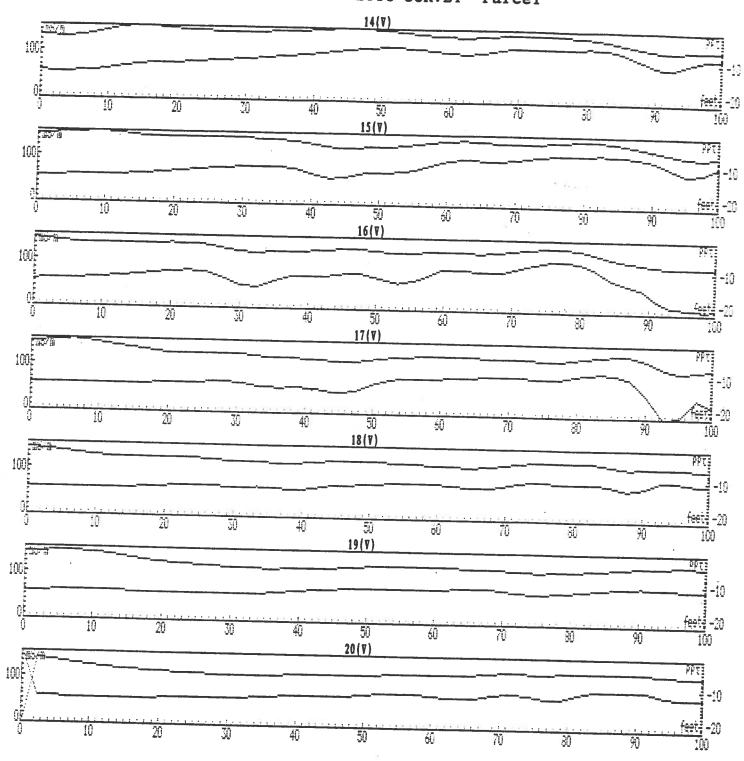
# ELECTROMAGNETIC SURVEY Parcel I

Inphase Response



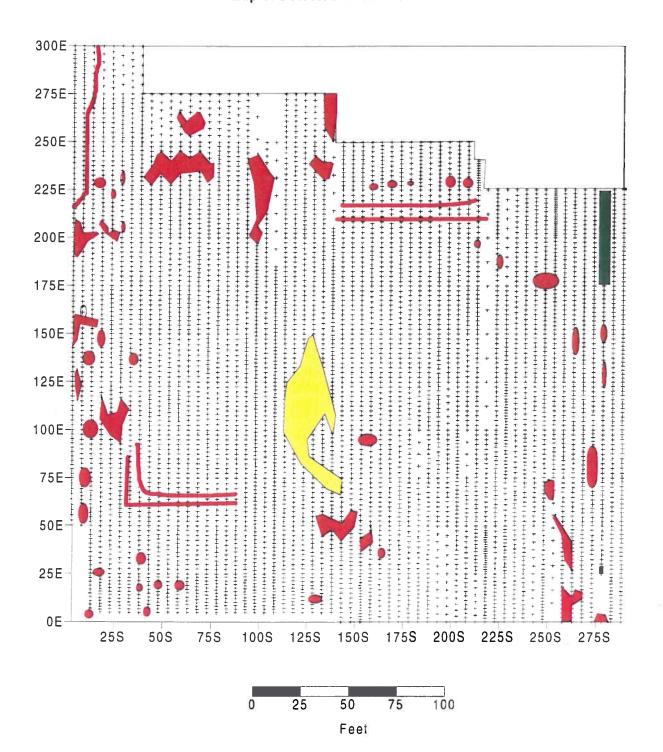


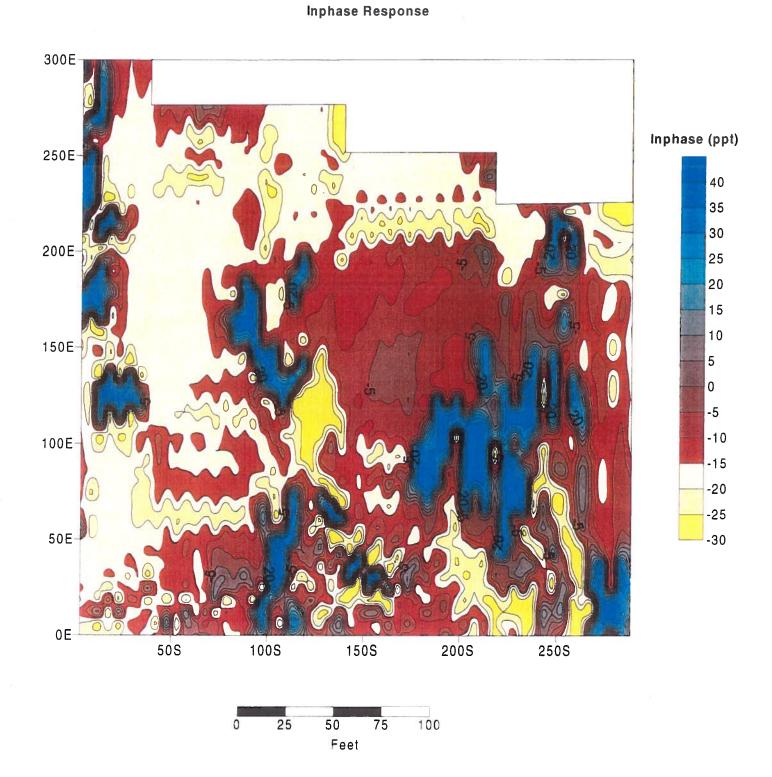




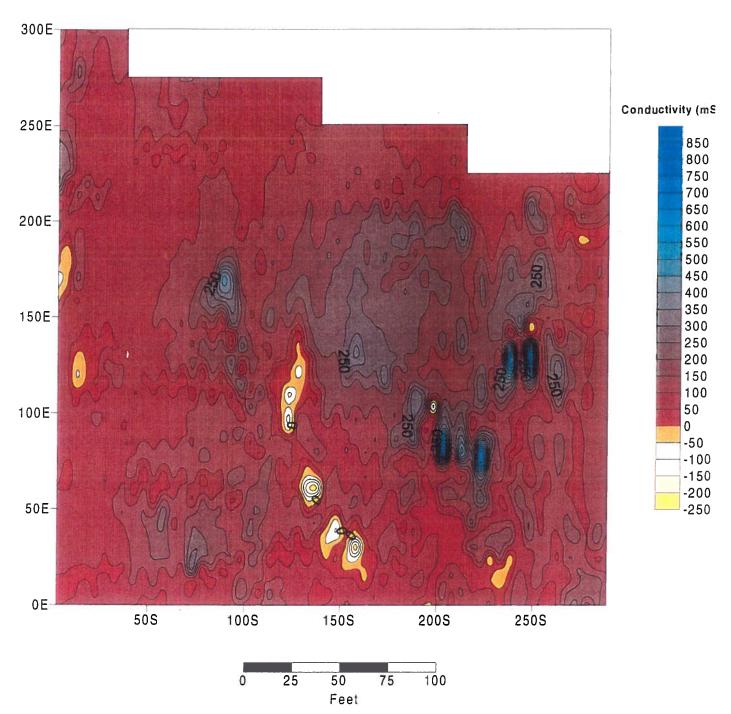
PARCEL C

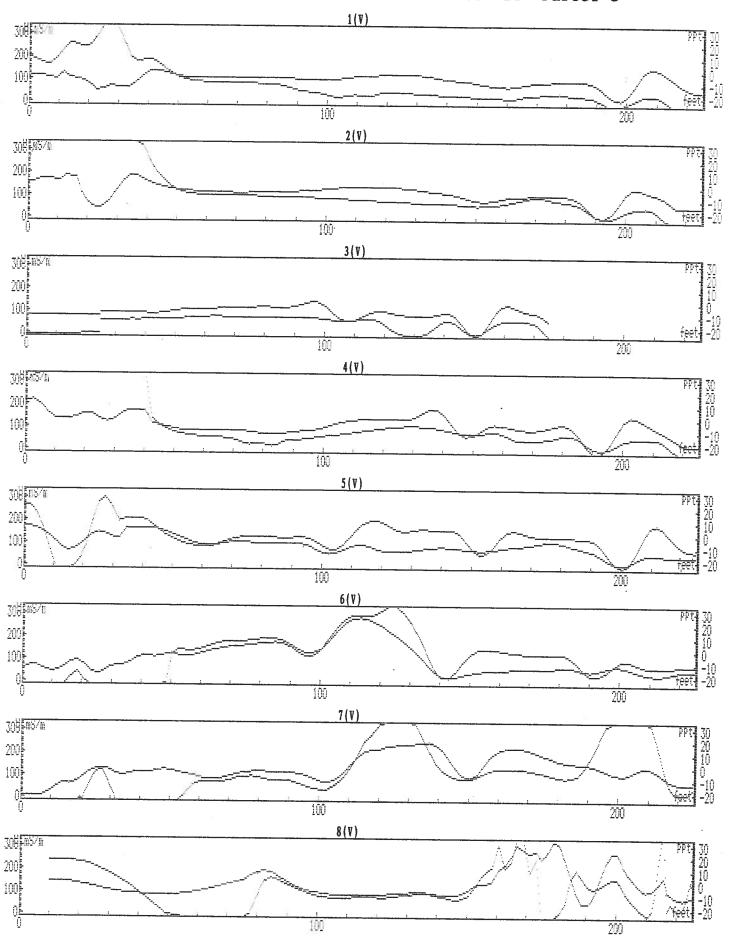
# YONKERS WATER FRONT ELECTROMAGNETIC SURVEY Parcel C Map of Detected Anomalies

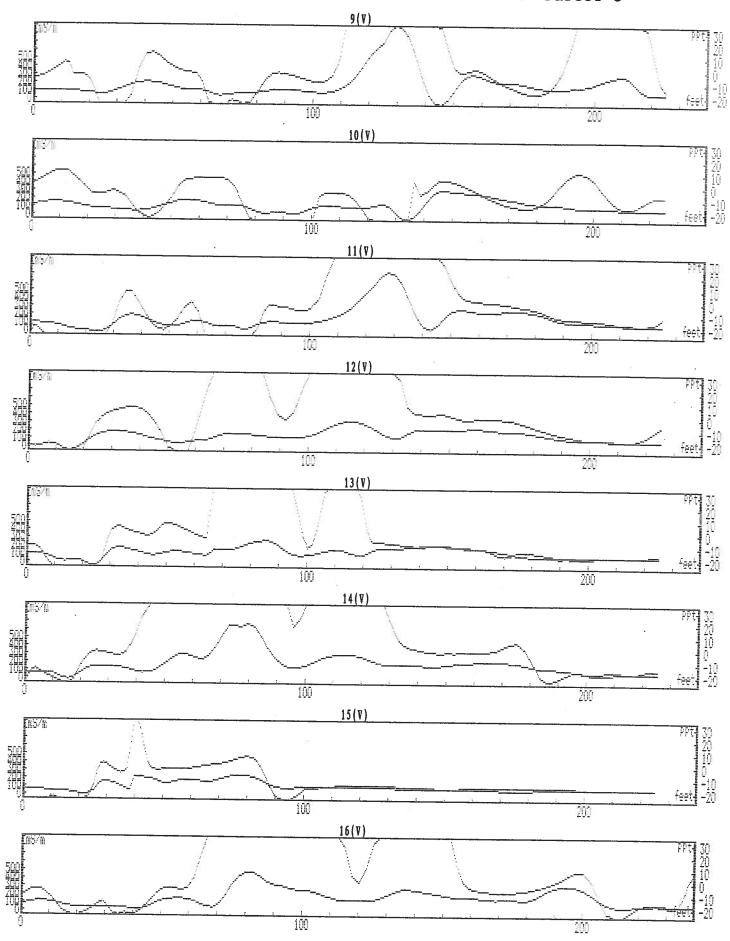


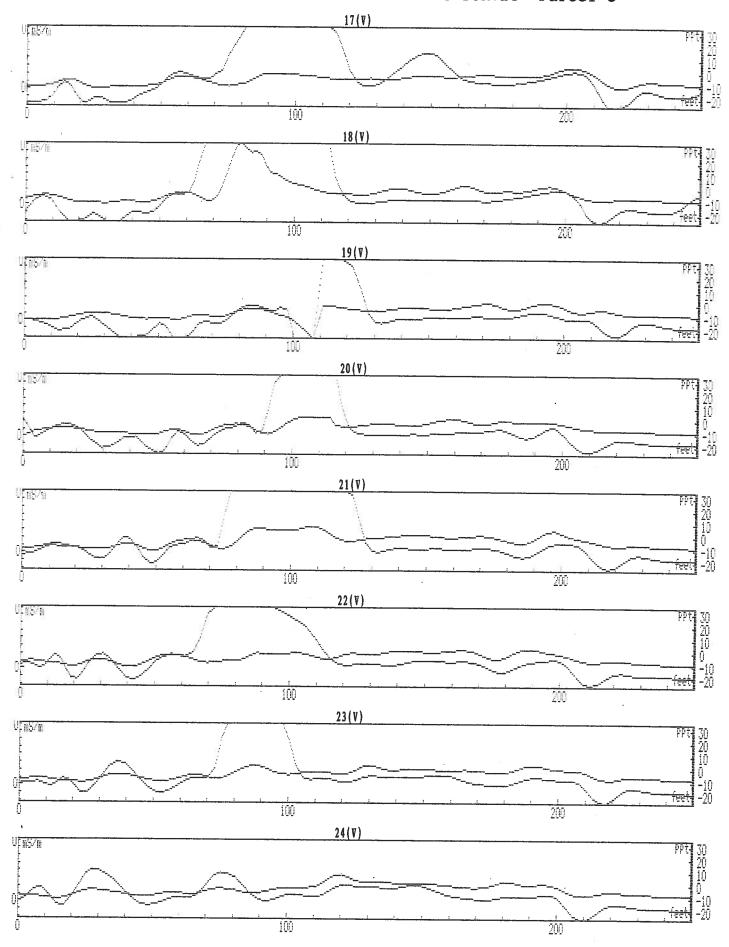


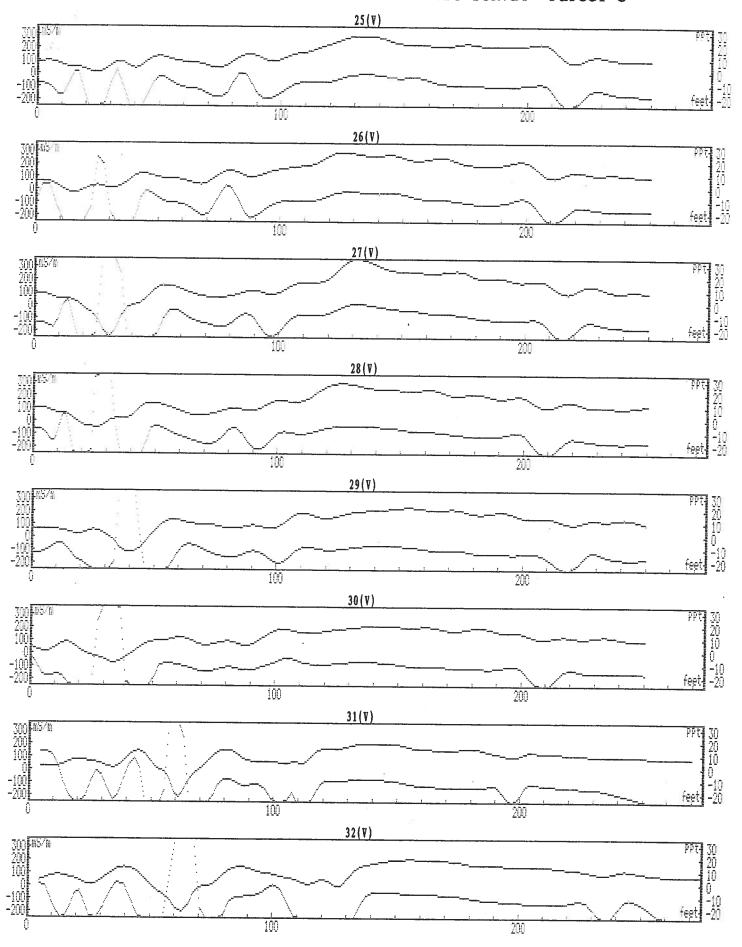
**Quad-Phase Component** 

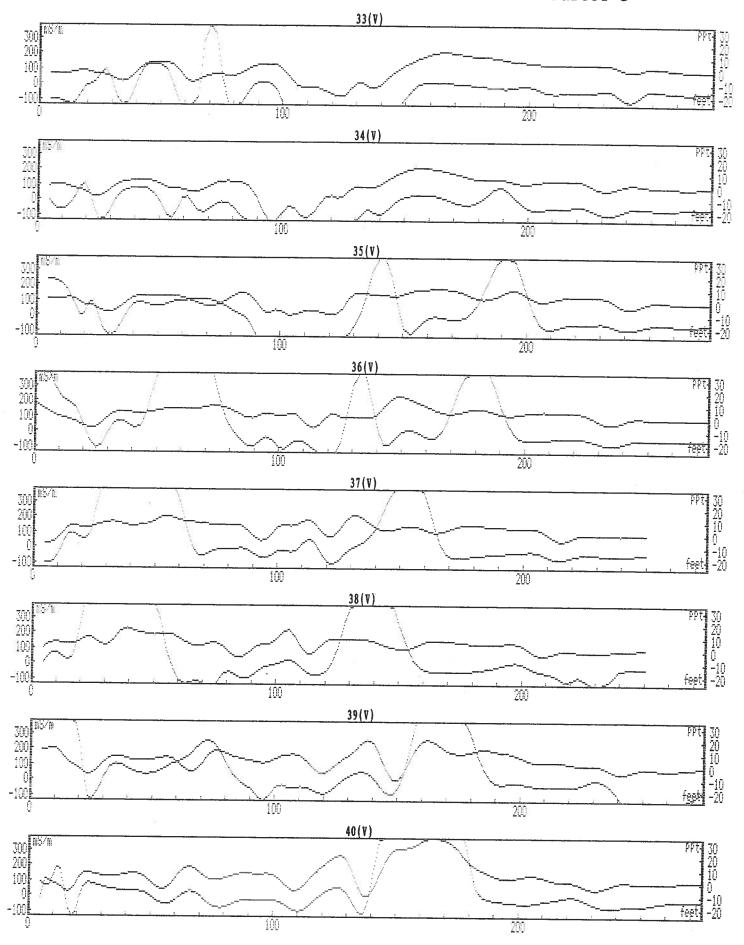


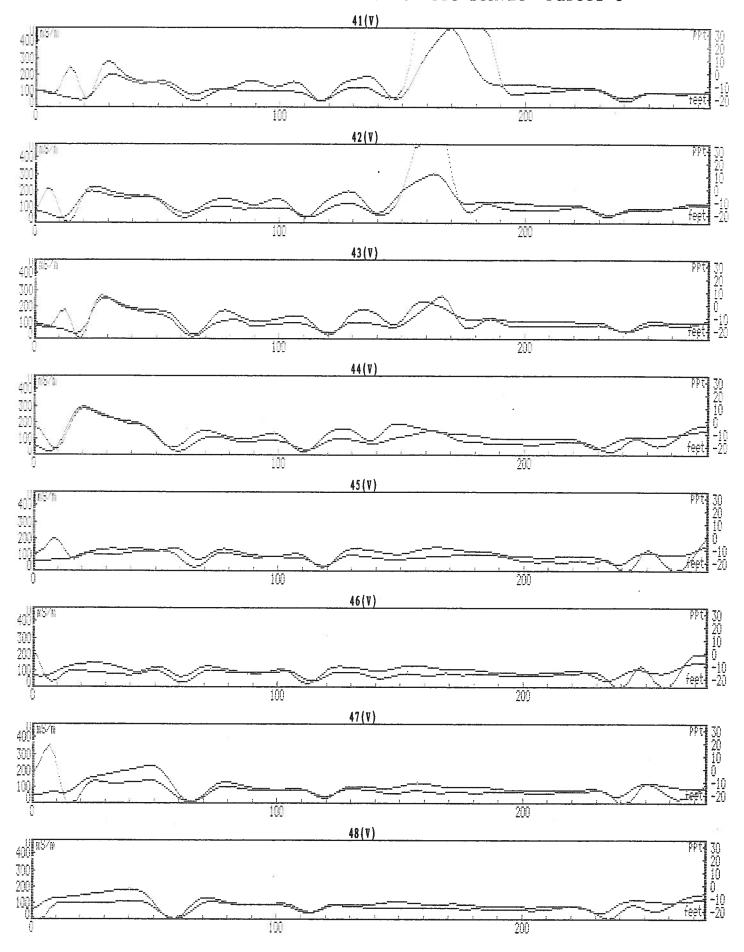


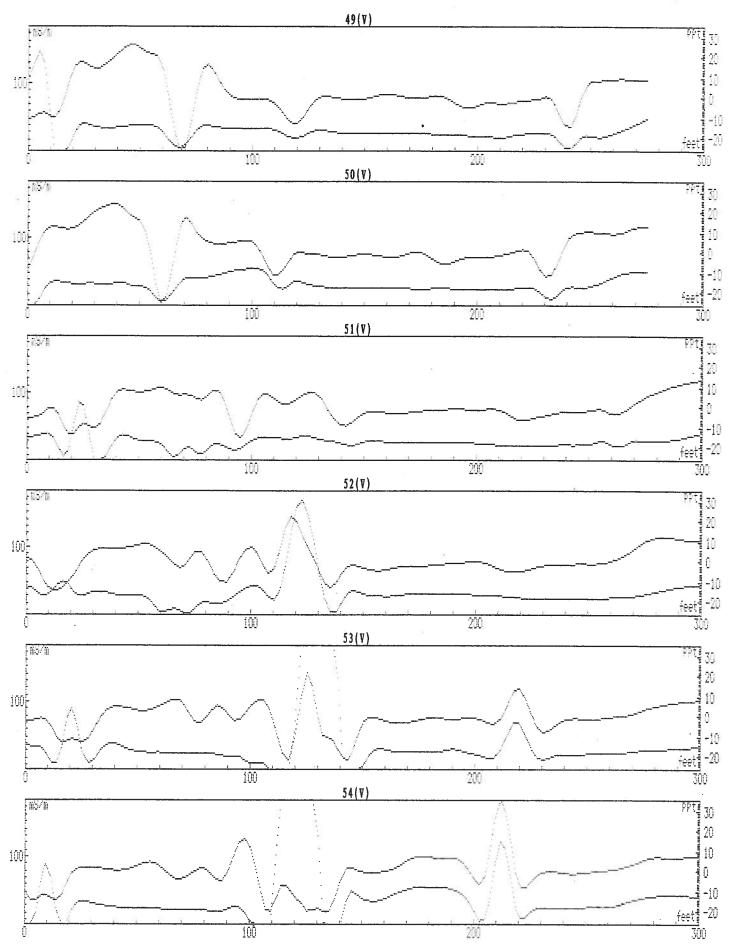


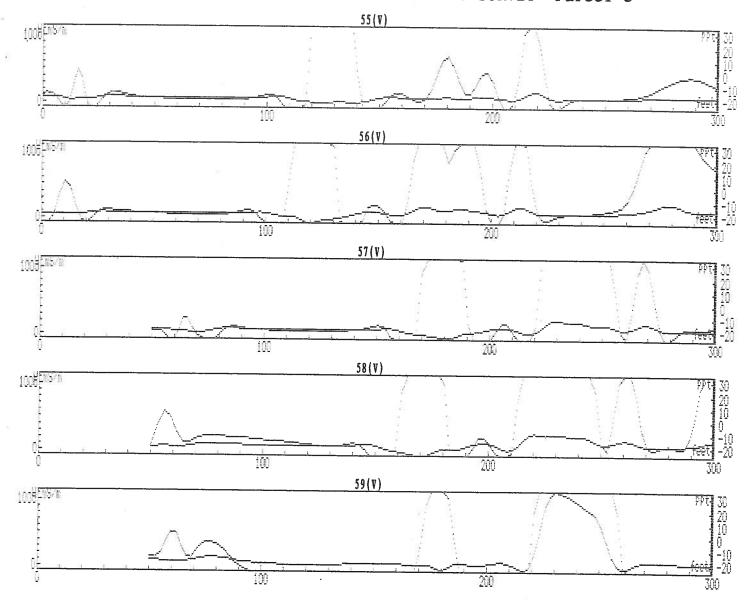












# **APPENDIX C**

# APPENDIX C SOIL GAS ANALYTICAL RESULTS

PARCEL H

Volatile Organics Results by Photovac GC/PID

Sample Identification Code: Date Collected: 30W 112S 6/11/98 Sample Injection Volume (µL): 1000 Date Analyzed: 6/11/98 **Dilution Factor:** 1 Sample Volume (L): 1 GC Operator: WKW Analysis #: 13

Target Compounds	Concentration (ppm w/v)
acetone	0
1,1-DCE	0
t-1,2-DCE	0
c-1,2-DCE	0
benzene	0
TCE	0
toluene	0
PCE	0
ethylbenzene	0
xylene(m,p)	0
xylene (o)	0
MEK	0

Sample Identification Code:	30W 150S	Date Collected:	6/11/98
Sample Injection Volume (μL):	1000	Date Analyzed:	6/11/98
Dilution Factor:	1		
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	15		******

Target Compounds	Concentration (ppm w/v)
acetone 1,1-DCE t-1,2-DCE c-1,2-DCE benzene TCE toluene PCE ethylbenzene	0 0 0 0 0 0 0
xylene(m,p) xylene (o)	0 0 0
MEK	0

### Volatile Organics Results by Photovac GC/PID

Sample Identification Code: 30W 75S Date Collected: 6/11/98 Sample Injection Volume ( $\mu L$ ): Date Analyzed: 1000 6/11/98 **Dilution Factor:** 1 Sample Volume (L): GC Operator: 1 WKW Analysis #: 11

Target Compounds	Concentration (ppm w/v)	
acetone	0	
1,1-DCE	. 0	20
t-1,2-DCE	0	
c-1,2-DCE	0	
benzene	0	
TCE	0	
toluene	0	
PCE	0	
ethylbenzene	0	
xylene(m,p)	0	
xylene (o)	0	
MEK ·	0	

Volatile Organics Results by Photovac GC/PID

Sample Identification Code: Date Collected: 55W 175S 6/11/98 Sample Injection Volume ( $\mu$ L): 1000 Date Analyzed: 6/11/98 **Dilution Factor:** 1 Sample Volume (L): GC Operator: 1 WKW Analysis #: 14

Target Compounds	Concentration (ppm w/v)	
acetone		
1,1-DCE	0	
	0	
t-1,2-DCE	0	
c-1,2-DCE	0	
benzene	0.12	
TCE	0.48	
toluene	0.27	
PCE	0	
ethylbenzene	0	
xylene(m,p)	0	
xylene (o)	0	
MEK	0	
IAICIA	0	

#### Volatile Organics Results by Photovac GC/PID

Sample Identification Code: Date Collected: 50W 200S 6/11/98 Sample Injection Volume (µL): 1000 Date Analyzed: 6/11/98 **Dilution Factor:** 1 Sample Volume (L): GC Operator: 1 WKW Analysis #: 20

Target Compounds	Concentration	
	(ppm w/v)	
acetone	0	
1,1-DCE	0	
t-1,2-DCE	0	
c-1,2-DCE	. 0	
benzene	0	
TCE	0	
toluene	0	
PCE	0	
ethylbenzene	0	
xylene(m,p)	0	
xylene (o)	0	
MEK	0	

Volatile Organics Results by Photovac GC/PID

Sample Identification Code:35W 175SDate Collected:6/11/98Sample Injection Volume (μL):1000Date Analyzed:6/11/98Dilution Factor:1Sample Volume (L):1GC Operator:WKWAnalysis #:22

Target Compounds	Concentration (ppm w/v)
acetone	0
1,1-DCE	0
t-1,2-DCE	0
c-1,2-DCE	0
benzene	0
TCE	0
toluene	0
PŒ	0
ethylbenzene	0
xylene(m,p)	0
xylene (o)	0
MEK	0

### Volatile Organics Results by Photovac GC/PID

Sample Identification Code: 130W 230S Date Collected: 6/11/98 Sample Injection Volume (µL): 1000 Date Analyzed: 6/11/98 **Dilution Factor:** 1 Sample Volume (L): 1 GC Operator: WKW Analysis #: 24

Target Compounds	Concentration (ppm w/v)
acetone	0
1,1-DCE	0
t-1,2-DCE	0
c-1,2-DCE	n
benzene	0
TCE	2.48
toluene	0
PŒ	0
ethylbenzene	0
xylene(m,p)	0
xylene (o)	0
MEK	0

### Volatile Organics Results by Photovac GC/PID

Sample Identification Code: 30W 275S Date Collected: 6/11/98 Sample Injection Volume (µL): Date Analyzed: 1000 6/11/98 Dilution Factor: 1 Sample Volume (L): 1 GC Operator: WKW Analysis #: 29

Target Compounds	Concentration (ppm w/v)
acetone	0
1,1-DCE	0
t-1,2-DCE	0
c-1,2-DCE	0
benzene	0
TCE	0
toluene	0
PŒ	n
ethylbenzene	0
xylene(m,p)	0
xylene (o)	0
MEK	0

### Volatile Organics Results by Photovac GC/PID

Sample Identification Code: 15W 220S Date Collected: 6/11/98 Sample Injection Volume (µL): 1000 Date Analyzed: 6/11/98 **Dilution Factor:** 1 Sample Volume (L): 1 GC Operator: WKW Analysis #: 28

Target Compounds	Concentration (ppm w/v)	
acetone	0	
1,1-DCE	0	
t-1,2-DCE	0	
c-1,2-DCE	0	
benzene	0	
TCE	0	
toluene	Ŏ	
PŒ	0	
ethylbenzene	0	
xylene(m,p)	0	
xylene (o)	0	
MEK .	0	
· · · · · · · · · · · · · · · · · · ·	0	

### Volatile Organics Results by Photovac GC/PID

Sample Identification Code: 140W 125S Date Collected: 6/11/98
Sample Injection Volume (μL): 250 Date Analyzed: 6/11/98
Dilution Factor: 1
Sample Volume (L): 1 GC Operator: WKW
Analysis #: 33

Target Compounds	Concentration (ppm w/v)	
acetone	0	
1,1-DCE	0	
t-1,2-DCE	0	
c-1,2-DCE	0	
benzene	0	
TCE	77.81	
toluene	0	
PCE	0	
ethylbenzene	0	
xylene(m,p)	0	
xylene (o)	0	
MEK	0	

Volatile Organics Results by Photovac GC/PID

Sample Identification Code: Date Collected: 50W 240S 6/11/98 Sample Injection Volume (µL): 1000 Date Analyzed: 6/11/98 **Dilution Factor:** 1 Sample Volume (L): 1 GC Operator: WKW Analysis #: 30

Target Compounds	Concentration
	(ppm w/v)
acetone	0
1,1-DCE	0
t-1,2-DCE	0
c-1,2-DCE	. 0
benzene	0
TCE	0
toluene	0
PŒ	0
ethylbenzene	0
xylene(m,p)	0.14
xylene (o)	0
MEK	0

Volatile Organics Results by Photovac GC/PID

Sample Identification Code: Date Collected: 15W 31S 6/11/98 Sample Injection Volume (µL): 1000 Date Analyzed: 6/11/98 **Dilution Factor:** 1 Sample Volume (L): 1 GC Operator: WKW Analysis #: 34

Target Compounds	Concentration (ppm w/v)		
acetone		0	
1,1-DCE	2	0	
1-1,2-DCE		0	
c-1,2-DCE		0	
benzene		0	
TCE		0	
toluene.		0	
PCE		0	
ethylbenzene		0	
xylene(m,p)		0	
xylene (o)		0	
MEK		0	

Sample Identification Code:	60W 10S	Date Collected:	6/11/98
Sample Injection Volume (μL):	1000	Date Analyzed:	6/11/98
Dilution Factor:	1		ē
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	35	-	

Target Compounds	Concentration (ppm w/v)
acetone	0
1,1-DCE	0
t-1,2-DCE	0
c-1,2-DCE	0
benzene	0
TCE	0
toluene	0
PCE	0
ethylbenzene	0
xylene(m,p)	0
xylene (o)	0
MEK	0

### Volatile Organics Results by Photovac GC/PID

Sample Identification Code: Date Collected: Α 6/11/98 Sample Injection Volume (µL): 1000 Date Analyzed: 6/11/98 **Dilution Factor:** 1 Sample Volume (L): GC Operator: 1 WKW Analysis #: 36

Target Compounds	Concentration (ppm w/v)		
acetone	0		
1,1-DCE	0		
t-1,2-DCE	0		
c-1,2-DCE	0		
benzene	0		
TCE	0		
toluene	0		
PCE	0		
ethylbenzene	0		
xylene(m,p)	0		
xylene (o)	0		
MEK	0		

### Volatile Organics Results by Photovac GC/PID

Sample Identification Code: 100W 160S Date Collected: 6/11/98 Sample Injection Volume (µL): Date Analyzed: 1000 6/11/98 **Dilution Factor:** 1 Sample Volume (L): 1 **GC Operator:** WKW Analysis #: 17

Target Compounds	Concentration (ppm w/v)		
acetone	0		
1,1-DCE	0		
t-1,2-DCE	0		
c-1,2-DCE	0		
benzene	0		
TCE	0		
toluene	0		
PCE	0		
ethylbenzene	0		
xylene(m,p)	0		
xylene (o)	0		
MEK .	0		

**PARCEL I** 

#### Parcel I

Sample Identification Code:	I 01	Date Collected:	9/23/98
Sample Injection Volume (µL):	250	Date Analyzed:	9/23/98
Dilution Factor:	1	•	
Sample Volume (L):	1	GC Operator:	wkw
Analysis #:	24		******

Target Compounds	Concentration (ppm w/v)
acetone	0.67
1,1-DCE	0.10,
t-1,2-DCE	0.05
c-1,2-DCE	0.00
benzene	0.00
TCE	0.04
toluene	0.03
PCE	0.03
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.00
MEK	0.00

#### Parcel I

Sample Identification Code:	1 02	Date Collected:	9/23/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/23/98
Dilution Factor:	1		
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	25	-	

Target Compounds	Concentration (ppm w/v)
acetone	2.20
1,1-DCE	0.00
t-1,2-DCE	0.00
c-1,2-DCE	0.00
benzene	0.03
TCE	0.00
toluene	0.04
PCE	0.00
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.00
MEK	0.00

Parcel I

Sample Identification Code:	I 03	Date Collected:	9/23/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/23/98
Dilution Factor:	1		
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	26	•	

Target Compounds	Concentration (ppm w/v)		
acetone		1.11	
1,1-DCE		0.00	
t-1,2-DCE	•	0.29	
c-1,2-DCE		0.00	
benzene		0.05	
TCE		0.00	
toluene		0.03	
PCE		0.00	
ethylbenzene		0.00	
xylene(m,p)		0.00	
xylene (o)		0.00	
MEK		0.00	

Parcel I

Sample Identification Code:	1 04	Date Collected:	9/23/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/23/98
Dilution Factor:	1		
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	27	•	

Target Compounds	Concentration (ppm w/v)
acetone	1.77
1,1-DCE	0.00
t-1,2-DCE	0.34
c-1,2-DCE	0.00
benzene	0.07
TCE	0.03
toluene	0.11
PCE	0.00
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.00
MEK	0.00

#### Parcel I

Sample Identification Code:	1 05	Date Collected:	9/23/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/23/98
Dilution Factor:	1		
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	28	•	

Target Compounds	Concentration
	(ppm w/v)
acetone	1.20
1,1-DCE	0.01
t-1,2-DCE	0.00
c-1,2-DCE	0.00
benzene	0.02
TCE	0.00
toluene	0.38
PCE	0.00
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.00
MEK	0.00

Parcel I

Sample Identification Code:	106	<b>Date Collected:</b>	9/23/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/23/98
Dilution Factor:	1	·	
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	29	•	

Target Compounds	Concentration (ppm w/v)		
acetone	10.83		
1,1-DCE	0.16		
t-1,2-DCE	0.09		
c-1,2-DCE	0.00		
benzene	0.03		
TCE	0.03		
toluene	0.03		
PCE	0.07		
ethylbenzene	0.00		
xylene(m,p)	0.00		
xylene (o)	0.04		
MEK	0.00		

Parcel I

Sample Identification Code:	1 07	Date Collected:	9/23/98
Sample Injection Volume (µL):	250	Date Analyzed:	9/23/98
Dilution Factor:	1		
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	30	•	

Target Compounds	Concentration
is .	(ppm w/v)
acetone	6.37
1,1-DCE	0.01
t-1,2-DCE	0.01
c-1,2-DCE	0.09
benzene	0.02
TCE	0.06
toluene	0.11
PCE	0.00
ethylbenzene	0.31
xylene(m,p)	0.00
xylene (o)	0.30
MEK	0.00

#### Parcel I

Sample Identification Code:	1 08	Date Collected:	9/23/98
Sample Injection Volume (µL):	250	Date Analyzed:	9/23/98
Dilution Factor:	1	•	
Sample Volume (L):	1 19	GC Operator:	wĸw
Analysis #:	31		

Target Compounds	Concentration (ppm w/v)		
acetone	1.83		
1,1-DCE	0.00		
t-1,2-DCE	0.00		
c-1,2-DCE	0.24		
benzene	0.01		
TCE	0.00		
toluene	0.03		
PCE	0.00		
ethylbenzene	0.00		
xylene(m,p)	0.00		
xylene (o)	0.00		
MEK	0.00		

#### Parcel I

Sample Identification Code:	1 09	Date Collected:	9/23/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/23/98
Dilution Factor:	1	•	-,
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	32		******

Target Compounds	Concentration (ppm w/v)
acetone	1.45
1,1-DCE	0.21
t-1,2-DCE	
c-1,2-DCE	0.00
benzene	0.11
TCE	0.09
toluene	0.06
PCE	0.06
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.00
MEK	0.00

Parcel I

Sample Identification Code:	l 10	<b>Date Collected:</b>	9/23/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/23/98
Dilution Factor:	1		
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	33	•	

Target Compounds	Concentration (ppm w/v)	
	V	
acetone	1.58	
1,1-DCE	0.00	
t-1,2-DCE	0.02	
c-1,2-DCE	0.00	
benzene	0.01	
TCE	0.00	
toluene	0.02	
PCE	0.00	
ethylbenzene	0.00	
xylene(m,p)	0.00	
xylene (o)	0.00	
MEK	0.00	

#### Parcel I

Sample Identification Code:	l 11	Date Collected:	9/23/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/23/98
Dilution Factor:	1	9	
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	34		******

Target Compounds	Concentration (ppm w/v)
acetone	0.22
1,1-DCE	0.00
t-1,2-DCE	0.00
c-1,2-DCE	0.00
benzene	0.00
TCE	0.04
toluene	0.03
PCE	0.00
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.00
MEK	0.00

PARCEL C

Parcel C

Volatile Organics Results by Photovac GC/PID

Sample Identification Code: C 275E 15S **Date Collected:** 9/24/98 Sample Injection Volume (µL): 250 Date Analyzed: 9/24/98 **Dilution Factor:** 1 Sample Volume (L): **GC Operator:** 1 WKW Analysis #: 6

Target Compounds Concentration (ppm w/v)

acetone		1.05
1,1-DCE	10%)	0.00
t-1,2-DCE		0.00
c-1,2-DCE		0.00
benzene		0.01
TCE		0.03
toluene		0.09
PCE		0.00
ethylbenzene		0.00
xylene(m,p)		0.00
xylene (o)		0.00
MEK		0.00

Parcel C
Volatile Organics Results
by Photovac GC/PID

Sample Identification Code: C 250E 90S **Date Collected:** 9/24/98 Sample Injection Volume (µL): 250 Date Analyzed: 9/24/98 **Dilution Factor:** 1 Sample Volume (L): **GC Operator:** 1 WKW Analysis #: 7

Target Compounds	Concentration (ppm w/v)	
acetone	1.13	
1,1-DCE	0.00	
t-1,2-DCE	0.00	
c-1,2-DCE	0.00	
benzene	0.00	
TCE	0.03	
toluene	0.05	
PCE	0.00	
ethylbenzene	0.00	
xylene(m,p)	0.00	
xylene (o)	0.00	
MEK	0.00	

Parcel C
Volatile Organics Results
by Photovac GC/PID

0.00

0.00

Sample Identification Code: C 225E 190S **Date Collected:** 9/24/98 Sample Injection Volume (µL): 250 Date Analyzed: 9/24/98 **Dilution Factor:** 1 Sample Volume (L): **GC Operator:** 1 WKW Analysis #: 8

Target Compounds	Concentration
	(ppm w/v)
acetone	0.97
1,1-DCE	0.00
t-1,2-DCE	0.00
c-1,2-DCE	0.00
benzene	0.01
TCE	0.04
toluene	0.09
PCE	0.00
ethylbenzene	0.00
xylene(m,p)	0.00

xylene (o)

MEK

Sample Identification Code:	C 175E 260S	<b>Date Collected:</b>	9/24/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/24/98
Dilution Factor:	1		
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	9	-	

Target Compounds	Concentration (ppm w/v)	
acetone	0.62	
1,1-DCE	0.00	
t-1,2-DCE	0.00	
c-1,2-DCE	0.00	
benzene	0.00	
TCE	0.02	
toluene	0.03	
PCE	0.00	
ethylbenzene	0.00	
xylene(m,p)	0.00	
xylene (o)	0.00	
MEK	0.00	

Parcel C

Volatile Organics Results by Photovac GC/PID

Sample Identification Code: C 195E 240S **Date Collected:** 9/24/98 Sample Injection Volume (µL): Date Analyzed: 250 9/24/98 **Dilution Factor:** 1 Sample Volume (L): **GC Operator:** 1 WKW Analysis #: 11

Target Compounds	Concentration (ppm w/v)		
acetone	1.01		
1,1-DCE	0.00		
t-1,2-DCE	0.01		
c-1,2-DCE	0.00		
benzene	0.00		
TCE	0.00		
toluene	0.03		
PCE	0.00		
ethylbenzene	0.00		
xylene(m,p)	0.00		
xylene (o)	0.00		
MEK	0.00		

Parcel C

Sample Identification Code:	C 170E 115S	Date Collected:	9/24/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/24/98
Dilution Factor:	1		
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	12	•	

Target Compounds	Concentration (ppm w/v)		
	8		
acetone	0.54		
1,1-DCE	0.00		
t-1,2-DCE	0.00		
c-1,2-DCE	0.00		
benzene	0.00		
TCE	0.02		
toluene	0.03		
PCE	0.00		
ethylbenzene	0.00		
xylene(m,p)	0.00		
xylene (o)	0.00		
MEK	0.00		

Parcel C
Volatile Organics Results
by Photovac GC/PID

Sample Identification Code: C 195E 40S **Date Collected:** 9/24/98 Sample Injection Volume (µL): Date Analyzed: 250 9/24/98 **Dilution Factor:** 1 Sample Volume (L): **GC** Operator: 1 WKW Analysis #: 13

Target Compounds	Concentration (ppm w/v)	
acetone	1.80	
1,1-DCE	0.00	
t-1,2-DCE	0.00	
c-1,2-DCE	0.00	
benzene	0.00	
TCE	0.03	
toluene	0.07	
PCE	0.00	
ethylbenzene	0.00	
xylene(m,p)	0.00	
xylene (o)	0.04	
MEK	0.00	

Sample Identification Code:	C 135E 15S	<b>Date Collected:</b>	9/24/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/24/98
Dilution Factor:	1	•	
Sample Volume (L):	1	GC Operator:	wĸw
Analysis #:	14	•	

Target Compounds	Concentration (ppm w/v)		
acetone	4.24		
1,1-DCE	0.00		
t-1,2-DCE	0.00		
c-1,2-DCE	0.06		
benzene	0.09		
TCE	0.25		
toluene	0.56		
PCE	0.00		
ethylbenzene	0.12		
xylene(m,p)	0.00		
xylene (o)	0.15		
MEK	0.00		

Sample Identification Code:	C 100E 100S	<b>Date Collected:</b>	9/24/98
Sample Injection Volume (µL):	250	Date Analyzed:	9/24/98
Dilution Factor:	1	•	
Sample Volume (L):	1	GC Operator:	wkw
Analysis #:	15	•	

Target Compounds	Concentration (ppm w/v)
acetone	2.85
1,1-DCE	0.00
t-1,2-DCE	0.00
c-1,2-DCE	0.00
benzene	0.00
TCE	0.03
toluene	0.05
PCE	0.00
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.05
MEK	0.00

Sample Identification Code:	C 105E 160S	Date Collected:	9/24/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/24/98
Dilution Factor:	1	•	
Sample Volume (L):	1	GC Operator:	wĸw
Analysis #:	16		******

Target Compounds	Concentration (ppm w/v)	
acetone	3.43	
1,1-DCE	0.00	
t-1,2-DCE	0.00	
c-1,2-DCE	0.00	
benzene	0.00	
TCE	0.02	
toluene	0.04	
PCE	0.00	
ethylbenzene	0.00	
xylene(m,p)	0.00	
xylene (o)	0.07	
MEK	0.00	

Sample Identification Code:	C 100E 260S	<b>Date Collected:</b>	9/24/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/24/98
Dilution Factor:	1	•	
Sample Volume (L):	" 1	GC Operator:	WKW
Analysis #:	17	•	

Target Compounds	Concentration (ppm w/v)
acetone	1.72
1,1-DCE	0.00
t-1,2-DCE	
c-1,2-DCE	0.00
benzene	0.00
TCE	0.00
toluene	0.03
PCE	0.00
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.00
MEK	0.00

Parcel C

Sample Identification Code:	C 50E 200S	<b>Date Collected:</b>	9/24/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/24/98
Dilution Factor:	1		
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	18	•	

Target Compounds	Concentration (ppm w/v)
acetone	5.77
1,1-DCE	0.00
t-1,2-DCE	0.00
c-1,2-DCE	0.00
benzene	0.02
TCE	0.04
toluene	0.17
PCE	0.00
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.20
MEK	1.09

Parcel C
Volatile Organics Results
by Photovac GC/PID

Sample Identification Code: C 50E 15S **Date Collected:** 9/24/98 Sample Injection Volume (µL): Date Analyzed: 250 9/24/98 **Dilution Factor:** 1 Sample Volume (L): **GC** Operator: 1 WKW Analysis #: 19

Target Compounds	Concentration (ppm w/v)
acetone	2.08
1,1-DCE	0.01
t-1,2-DCE	0.00
c-1,2-DCE	0.00
benzene	0.02
TCE	0.00
toluene	0.06
PCE	0.00
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.00
MEK	0.55

Sample Identification Code:	C 40E 100S	<b>Date Collected:</b>	9/24/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/24/98
Dilution Factor:	1	•	
Sample Volume (L):	1	GC Operator:	wkw
Analysis #:	20	•	

Target Compounds	Concentration (ppm w/v)
acetone	2.91
1,1-DCE	0.01
t-1,2-DCE	0.00
c-1,2-DCE	0.15
benzene	0.13
TCE	0.00
toluene	0.10
PCE	0.00
ethylbenzene	0.13
xylene(m,p)	0.00
xylene (o)	0.07
MEK	1.21

Sample Identification Code:	C 40E 100S	<b>Date Collected:</b>	9/24/98
Sample Injection Volume (µL):	250	Date Analyzed:	9/24/98
Dilution Factor:	1	•	
Sample Volume (L):	1	GC Operator:	WKW
Analysis #:	20		

Target Compounds	Concentration (ppm w/v)
acetone	2.10
1,1-DCE	0.00
t-1,2-DCE	0.00
c-1,2-DCE	0.15
benzene	0.13
TCE	0.00
toluene	0.10
PCE	0.00
ethylbenzene	0.13
xylene(m,p)	0.00
xylene (o)	0.07
MEK	1.21

Sample Identification Code:	C 01	Date Collected:	9/24/98
Sample Injection Volume ( $\mu$ L):	250	Date Analyzed:	9/24/98
Dilution Factor:	1	•	
Sample Volume (L):	1	GC Operator:	wĸw
Analysis #:	21		

Target Compounds	Concentration
-	(ppm w/v)
acetone	4.48
1,1-DCE	0.00
t-1,2-DCE	0.00
c-1,2-DCE	0.00
benzene	0.01
TCE	0.00
toluene	0.05
PCE	0.00
ethylbenzene	0.00
xylene(m,p)	0.00
xylene (o)	0.00
MEK	0.02

## **APPENDIX D**

## APPENDIX D GROUND PENETRATING RADAR REPORT

#### GROUND PENETRATING RADAR SURVEY YONKERS DOWNTOWN WATERFRONT YONKERS, NEW YORK

#### Prepared for:

AKRF, Inc. 34 South Broadway White Plains, NY 10601

#### Prepared by:

Hager-Richter Geoscience, Inc. 8 Industrial Way - D10 Salem, New Hampshire 03079

File 98D22 June, 1998

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# HAGER-RICHTER GEOSCIENCE, INC.

CONSULTANTS IN GEOLOGY & GEOPHYSICS 8 INDUSTRIAL WAY - D10 SALEM, NEW HAMPSHIRE 03079 TELEPHONE (603) 893-9944 FAX (603) 893-8313

June 19, 1998 File 98D22

Michelle Lapin, P.E. Vice President AKRF, Inc. 34 South Broadway White Plains, NY 10601

RE: GPR Survey

Yonkers Downtown Waterfront

Yonkers, New York

Dear Ms. Lapin:

In this letter, we report the results of a ground penetrating radar (GPR) survey conducted by Hager-Richter Geoscience, Inc. at various locations at the Yonkers Downtown Waterfront site in Yonkers, New York for AKRF, Inc. (AKRF) in May and June 1998. The scope of the project and areas of interest were specified by AKRF. The geophysical survey is part of an environmental investigation by AKRF of the waterfront site funded by the New York State Department of Environmental Conservation.

#### Introduction

The Yonkers Downtown Waterfront site consists of several parcels of land located on the Hudson River near the Yonkers Recreational Pier. Figure 1 shows the general location of the site, and Figure 2 is a site sketch plan showing the individual parcels. Several of the parcels are paved parking lots, and some are vacant. According to information provided by AKRF, the site has a long history of commercial/industrial use, and structures of various sorts formerly occupied parcels currently vacant or used for parking.

#### **Objectives**

The objectives of the geophysical survey were to detect subsurface metal objects such as USTs, and drums at selected locations in several areas of interest specified by AKRF.

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#### **Areas of Interest**

AKRF identified Parcels C, E, F, H, and I as the parcels of interest for this project and further specified areas of interest for the GPR survey within each parcel. Parcel C is an active commuter parking lot located near the train station and could only be accessed at night when the number of vehicles was minimal. Parcel E is landscaped and currently used as a sculpture garden known as Pierpoint Park. Parcel F is the parking area for the adjacent Scrimshaw House Condominium. Parcels H and I are vacant lots that contain visible construction debris fill.

AKRF conducted an electromagnetic induction terrain conductivity survey using a Geonics EM31 at each of the parcels of interest to detect areas of subsurface metal. The results of the EM31 survey were used by AKRF to focus the areas of interest for the GPR survey in the vicinity of EM anomalies indicative of subsurface metal at each parcel. All GPR survey locations were tied to the same grid established by AKRF for the EM31 survey.

#### The Survey

Jeffrey Reid, P.G. and Howard Quin, Ph.D. of Hager-Richter conducted the field operations. Hager-Richter personnel were on site on May 19-21, May 27-29, and June 7, 1998. The project was coordinated with Ms. Michelle Lapin, P.E. of AKRF, who specified the areas of interest and visited the site on the first two days of survey. Mr. Kevin Reilly of AKRF was on site during the GPR survey except on June 7. Mr. Reilly assisted with re-establishing the AKRF grids to which all GPR survey locations were referenced, and with the GPR field operations.

The GPR survey was conducted using a Geophysical Survey Systems SIR-2 fully digital GPR system with a 500 MHz antenna and a 50 nsec time window. A survey wheel attached to the antenna was used to record data at equal intervals.

#### Limitations of the Method

There are limitations of the GPR technique as used to detect and/or locate targets such as those of the objectives of this survey: (1) surface conditions, (2) electrical conductivity of the ground, (3) contrast of the electrical properties of the target and the surrounding soil, and (4) spacing of the traverses. Of these restrictions, only the last is controllable by us.

The condition of the ground surface can affect the quality of the GPR data and the depth of penetration of the GPR signal. Sites covered with snow piles, high grass, bushes, landscape structures, debris, obstacles, soil mounds, etc. limit the survey access and the coupling of the GPR antenna with the ground. In many cases, the GPR signal will not penetrate below concrete pavement, especially inside buildings, and a target may not be detectable. The GPR method also commonly does not provide useful data under canopies found at some facilities.

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The electrical conductivity of the ground determines the attenuation of the GPR signals, and thereby limits the maximum depth of exploration. For example, the GPR signal does not penetrate clay-rich soils, and targets buried in clay might not be detected.

A definite contrast in the electrical conductivities of the surrounding ground and the target material is required to obtain a reflection of the GPR signal. If the contrast is too small then the reflection may be too weak to recognize, possibly due to deeply corroded metal in the target, the target can be missed.

Spacing of the traverses is limited by access at many sites, but where flexibility of traverse spacing is possible, the spacing is adjusted to the size of the target.

#### Results

Figures 3 - 6 are plans of the areas of interest showing the locations of GPR traverses and interpretation of the data. The GPR traverses were oriented in two mutually perpendicular directions in the accessible portions of the specified areas of interest. The traverses were spaced no more than 10 feet apart.

GPR signal penetration at the Yonkers Downtown Waterfront site was fair. The GPR records for most locations contain reflections for at least 30 nsec, indicating a depth of exploration of about 4 feet, using a handbook time to depth conversion for the travel time of the GPR signal of 7 nsec/foot for typical unsaturated soil and sandy fill. The GPR data indicate that all the GPR survey areas are underlain by fill, as one might expect in a long established waterfront commercial/industrial area.

GPR reflections initially interpreted as possibly due to USTs were detected in the GPR data only for Parcel F, and their locations were reported to AKRF as part of preliminary GPR survey results. However, according to information provided by AKRF, test excavations at those locations showed that USTs were not present. GPR reflections typical of USTs were not detected elsewhere, and we conclude that no UST with (a) electrical properties sufficiently contrasting with the surrounding soils to produce GPR reflections or (b) a capacity of 500 gallons or greater was detected in the accessible portions of the specified areas of interest within the effective depth of penetration of the GPR signal (approximately 4 feet).

Flat reflections are present in the GPR records for a few locations as noted in the figures. The flat reflections are judged not likely to be caused by USTs because the data in the cross direction do not support such an interpretation, and we infer that the flat reflectors might be construction debris.

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Reflections typical of subsurface utilities are present in the GPR records for several locations, and the locations of possible utilities are noted on Figures 3-6. Because the GPR records for the Yonkers Downtown Waterfront site are generally characterized by the chaotic reflections typical of fill, the reflections from other utilities might be obscured. Thus, there may be additional utilities in the GPR survey area.

Scattered unidentified objects were detected on the basis of the GPR records. Their locations are noted on the figures. Whether any of the objects is a drum cannot be determined on the basis of the GPR data alone.

The results of the GPR survey in the specified area of interest for each parcel may be summarized as follows:

- Parcel C No UST was detected. Several unidentified buried objects, a flat reflector inferred not to be a UST, and segments of possible subsurface utilities were detected.
- Parcel E No UST was detected. In addition, several unidentified buried objects, a flat reflector inferred not to be a UST, and segments of possible subsurface utilities were detected.
- Parcel F No UST was detected. Several unidentified buried objects and segments of possible subsurface utilities were detected.
- Parcel H No UST was detected. Several unidentified buried objects were detected. Area of GPR survey entirely underlain by construction debris fill.
- Parcel I No UST was detected. Several unidentified buried objects and segments of possible subsurface utilities were detected.

#### Limitations

This letter report was prepared for the exclusive use of AKRF, Inc. and the New York State Department of Environmental Conservation (Client). No other party shall be entitled to rely on this Report or any information, documents, records, data, interpretations, advice or opinions given to Client by Hager-Richter Geoscience, Inc. (H-R) in the performance of its work. The Report relates solely to the specific project for which H-R has been retained and shall not be used or relied upon by Client or any third party for any variation or extension of this project, any other project or any other purpose without the express written permission of H-R. Any unpermitted use by Client or any third party shall be at Client's or such third party's own risk and without any liability to H-R.

HAGER-RICHTER GEOSCIENCE, INC.

GPR Survey
Yonkers Downtown Waterfront
Yonkers, New York
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H-R has used reasonable care, skill, competence and judgment in the performance of its services for this project consistent with professional standards for those providing similar services at the same time, in the same locale, and under like circumstances. Unless otherwise stated, the work performed by H-R should be understood to be exploratory and interpretational in character and any results, findings or recommendations contained in this Report or resulting from the work proposed may include decisions which are judgmental in nature and not necessarily based solely on pure science or engineering. It should be noted that our conclusions might be modified if subsurface conditions were better delineated with additional subsurface exploration including, but not limited to, test pits, soil borings with collection of soil and water samples, and laboratory testing.

The detection of subsurface utilities and/or other subsurface objects was not an objective of this survey, and the survey was not designed to detect such. However, some utilities and/or other subsurface objects were detected and their locations are provided as a courtesy. Other utilities and/or other buried objects may be present and the Client or any third party shall not rely on this report for information on such.

Except as expressly provided in this limitations section, H-R makes no other representation or warranty of any kind whatsoever, oral or written, expressed or implied; and all implied warranties of merchantability and fitness for a particular purpose, are hereby disclaimed.

If you have any questions or comments on this letter report, please contact us at your convenience. It has been a pleasure to work with AKRF on this project. We look forward to working with you again in the future.

Sincerely yours,

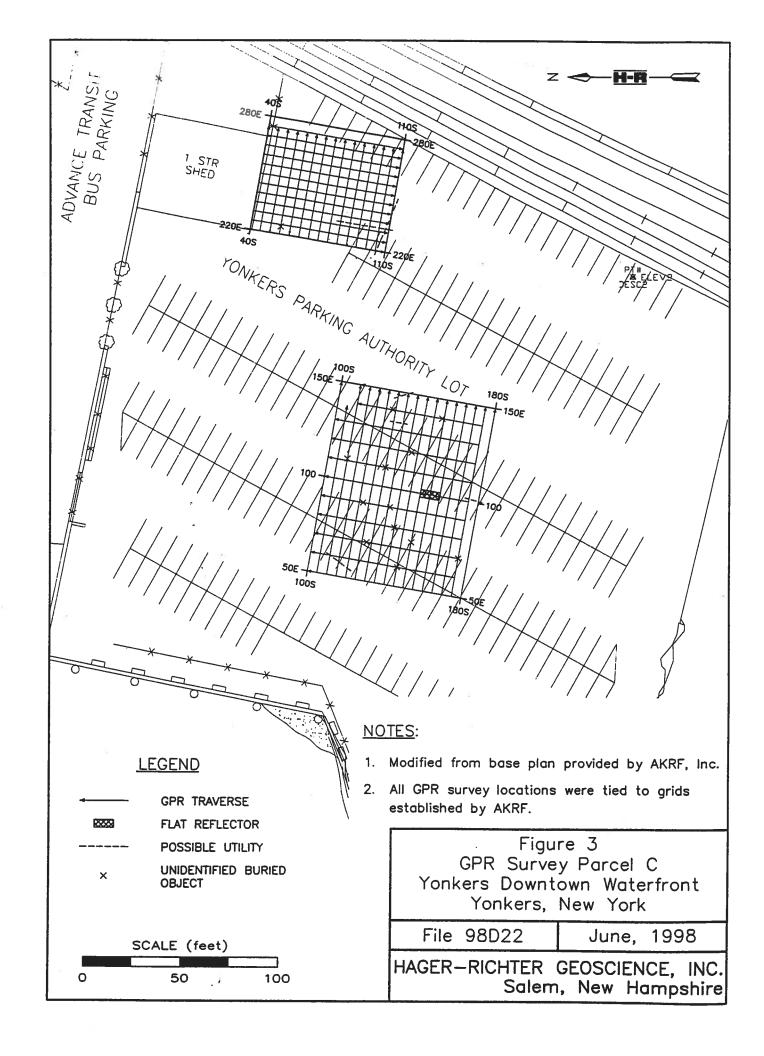
Dorth Richland

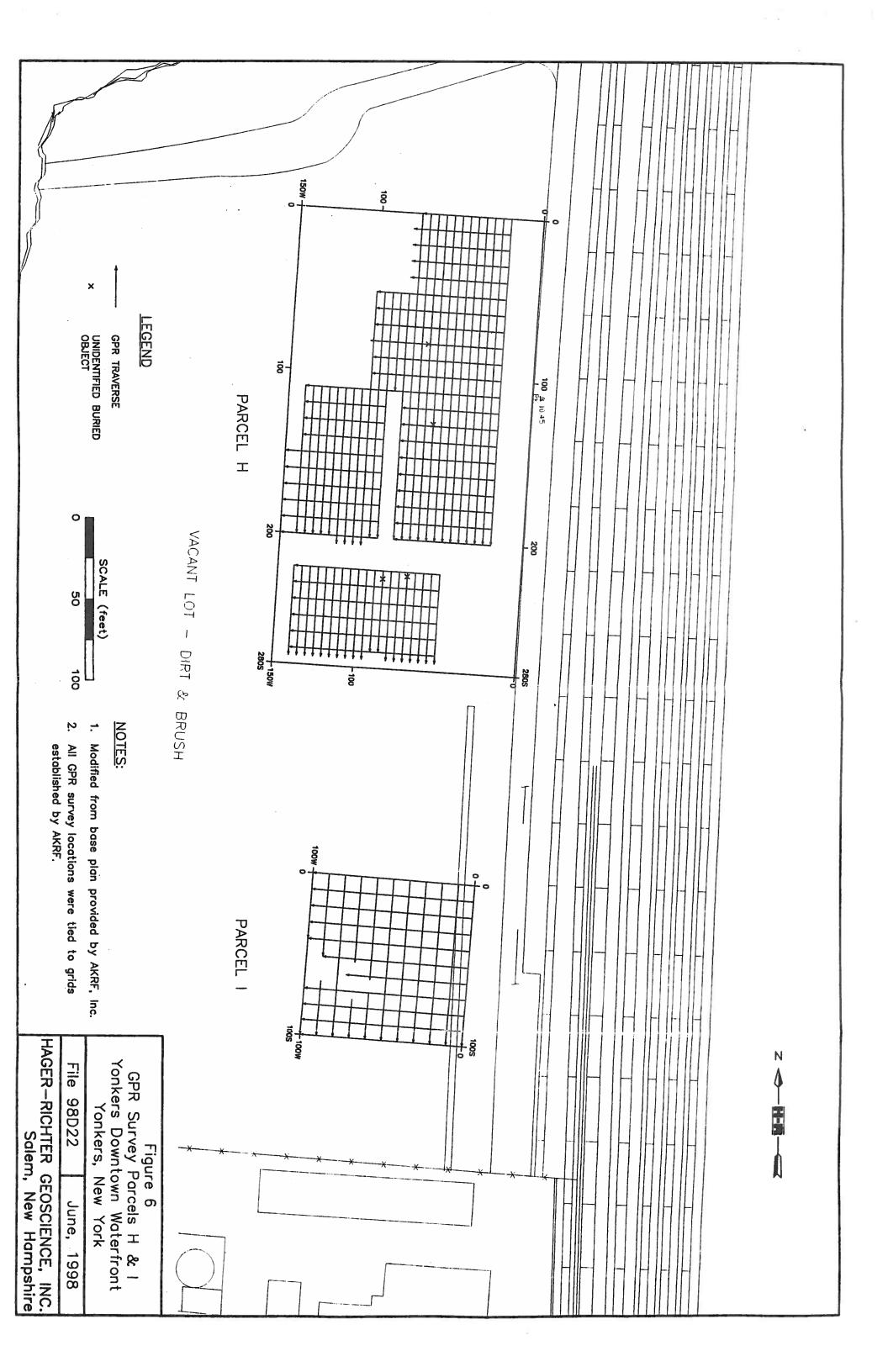
HAGER-RICHTER GEOSCIENCE, INC.

Dorothy Richter

President

Attachments: Figures 1-6





## **APPENDIX E**

## APPENDIX E SOIL BORING LOGS / TEST PIT LOGS

PARCEL H

AKRF, INC
Environmental Consultants
34 South Broadway
White Plains, New York 10601
e (914) 949-7338 Fax (914) 949-7559

#### Log of Well MW-1H Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

Job Number: 70004

Phone (914) 949-7336 Fax (91	10601		TONKE	ers, New York	Job Number:	70004
Driller: Envirotech Drilling, Inc			City	of Yonkers	GS Elevation:	
Drill Method: 4-1/4" Hollow St				Drilling	Date	Time
Sample Method: Split Spoon	em Auger		•	Started	7/10/98	0900
Borehole Diameter: 8 in.	Madand			Finished	7/10/98	1230
	Water Leve	14 bel	ow grade	Logged By: K. Reilly	Checked I	By: M. Lapin
Sample No. Recovery (in.) Blow Counts	PID Depth (feet)	Graphic Log		Materials Descriptio	on	Well Completion Locking Protective Casing ±2' above grade
	2	0000000	Drilled th below gr	nrough SAND and GRAVEL ade.	from O to 3'	Cap Concrete Seal Concrete Con
   	5- 6- 7-	\$00000 \$0000 \$0000	Drilled th grade.	rough CONCRETE from 3'	to 5' below	Cap Concrete Seal Concrete Sea
	8- 9- 10-	000000000000000000000000000000000000000	grade.	ough red BRICK from 7' to		Bentonite Pellet Seal  2" dia. Sch.40 Blank PVC
	11- 12- 13- 14- 15- 16- 17-		Drilled throand voids	ough miscellaneous FILL m to 19' below grade.		2" dia. — Sch.40 Slotted PVC (0.010") — Sand — Pack Filter
	18- 19- 20-	0 0 0 0 0 0 0 0 0	End of bori No samples	ing at 19 feet below grade collected.		Filter -

AKRF, INC
Environmental Consultants
34 South Broadway
White Plains, New York 10601
Phone (914) 949-7336 Fax (914) 949-7559

#### Log of Well MW-2H Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

Job Number: 70004

GS Elevation:

Driller: Envirotech Drilling, Inc.DrillingDateTimeDrill Method: 4-1/4" Hollow Stem AugerStarted7/10/981300Sample Method: Split SpoonFinished7/10/981500

Drilled through SAND and GRAVEL (FILL) from 0 to 4' below grade.	1500
Materials Description  Well Cor  Well Cor  Octoor  Oct	pin
Drilled through SAND and GRAVEL (FILL) from 0 to 4' below grade.	Dimpletion  Locking  Protective Casing ±2' above
7 - 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	grade Cap Concrete Seal  Natural Backfill  Bentonite Pellet Seal 2" dia Sch.40 Blank PVC Blank PVC  Co.010") Sand ack iitter  ap

			TEST PIT FIE	LD LOG					
AKRF, INC. 34 SOUTH BROADW WHITE PLAINS, NEW	AY V YORK 10601	DESCRIPTION LOCATION	Yonkers Downtown Waterfr Yonkers, New York	ont FILE No. DATE	TP - 1H 70004 6-15-98				
AKRF PERSONNEL VEATHER	Mohamed Ahmed 60 F Cloudy	OPERATOR Ton	Komatsu	MODEL PC200LC REACH 20'			GROUND ELEV. TIME STARTED	10 0900	o' +/-
ЕРТН	=	SOIL DESC	CRIPTION		Đ	CAVATION EFFORT	BOULDER COUNT QUANTITY CLASS	PID	REM
Light brown, fi	ne to coarse SAND and G	RAVEL, some Silt (	TOPSOIL)						
			beams,Steel Pipes,Concret	te, and Rubber ), trace S	sit.	M	-	ND	
-2'						D		ND	
3' Dark brown SA	AND, COBBLES and misc	ellaneous FILL (Woo	od, Concrete, and Steel Pipe	es), trace Silt (FILL).		D	-	ND	
	ND and CONCRETE, son			, ,		D		13.9	
-5'						М	-	ND ND	1
-6'						М		ND	
-7' Dark brown SA	ND and CONCRETE, som	ne Gravel, trace Silt	(FILL)			м	-	ND	
8'						м	-	ND	
9'						м	-	ND	
0'					=				2
			End of test pit approximately 10 f	eet below grade.					
1'									
2'									
3'						}			
4'									
ARKS:									
ioil sample collected fi Froundwater intercept	rom approximately 4 feet b ed at approximately 9 feet	pelow grade for labora below grade.	atory analysis.						
TEST PIT PLAN 50°	LEGEND:		PROPORTIONS USED	EXCA	VATION		GROUNDW	ATER	
	BOULDER ( CLASSIFICATION 6"-18"	DESIGNATION	TRACE 0-10%		ORT	FI	.APSED	TEK	
	ı 0°+18"	A	LITTLE 10-20%		ERATE	100			

<u> </u>			TEST PIT FIELD LOC	3				
AKRF, I 34 SOU WHITE	INC. JTH BROADWAY PLAINS, NEW YORK 10601	DESCRIPTION LOCATION	PROJECT  Yonkers Downtown Waterfront Yonkers, New York	TEST PIT No. FILE No. DATE	TP - 2H 70004 6-15-98			
AKRF P WEATH	PERSONNEL Mohamed Ahmed HER 60 F Cloudy	CONTRACTOR OPERATOR TO MAKE	Komatsu MODE	EL PC200LC H 20'		GROUND ELEV. TIME STARTED	11.5' 1220	
DEPTH		SOIL DESC	RIPTION		EXCAVATION EFFORT	BOULDER COUNT QUANTITY CLASS	PID	REMA No.
0	Grey, fine to coarse SAND and GRAVE	L, some Silt (TOP	SOIL).					
- 1	Dark brown SAND, GRAVEL and misce			d Wood ), trace Sil	м	-	ND	
2'					м	-	ND	
3'	Brown SAND and CONCRETE, trace Si	it (FILL).			D	-	ND	
4'					D	•	ND	
5'	Dark brown SAND and CONCRETE, sor	ne Gravel, trace S	ilt (FILL).		М	-	ND	
6'					м	-	ND	
7'	Dark brown SAND and CONCRETE, son	ne Gravel, trace Si	it (FILL).		М	-	ND	
8'					М	-	ND	
-9'					М	-	ND	1
10'			End of test pit approximately 9 feet below	grade.				20
11'			u .					
12'				5		25		
13'								
14'				7/2				
								*
MARKS: No grou	ndwater intercepted. No soil sample se	nt for analysis.	ij.	(4)				
TEST	T PIT PLAN LEGEND:			Ŋ				
5' A NOI	20' BOULDER C CLASSIFICATION 6"-18"	COUNT  DESIGNATION  A  B  C	PROPORTIONS USED  TRACE 0-10% LITTLE 10-20% SOME 20-35%	EXCAVATION  EFFORT  EEASY  MMODER  DDIFFICE	ELA PATE TIM	GROUNDA APSED IE TO ADING (HRS.)	WATER 0	

			TES	T PIT FIELD LO	G				
AKRF, INC. 34 SOUTH BROADW WHITE PLAINS, NEW	AY YORK 10601	DESCRIPTION LOCATION	PROJECT Yonkers Downto Yonkers, New	own Waterfront York	TEST PIT No. FILE No. DATE	TP - 3H 70004 6-15-98			
AKRF PERSONNEL I WEATHER	Mohamed Ahmed 60 F Cloudy	CONTRACTOR OPERATOR TO MAKE	CAVATION EQUIP Rusciano Excavony Rusciano Komatsu	ating MODI	EL PC200LC CH 20'		GROUND ELEV. TIME STARTED	11'+/- 1400	<del></del>
DEPTH		SOIL DESC	CRIPTION			EXCAVATION EFFORT			REMAR
						EFFOR	QUANTITY CLASS	PID	No.
1	ne to coarse SAND and G AND, GRAVEL and misce			ght post and Cor	ncrete), trace Silt.	M	-	ND	
2'					*	D	•	ND	1,2
3' Dark brown SA	ND and CONCRETE, so	me Gravel, trace S	Silt (FILL).			D	-	ND	
4'						М	•	ND	
—5'—						М	-	ND	
6'						м	•	ND	
-7- Dark brown SAN	ND, some Gravel, trace Si	ilt (FILL).	¥)			М	•	ND	
8'				190		М	-	ND	3
-9'						1			
.10'			End of test pit appro	oximately 9 feet below	grade.				<u>-</u>
11'									
12'									
13'									
14'									
MARKS:									
Massive concrete block No soil sample sent for	is held together with steel analysis. Id at approximately 8,0 fee			e obtained and s	ent for analysis.				
TEST PIT PLAN 25'	LEGEND: BOULDER C	COLINT	PROPORTIO	NS USED	EXCAVATION	IN I	GROUND	VATER	
5' A NORTH	CLASSIFICATION 6"-18" 18"-36"	DESIGNATION A	TRACE LITTLE	10-20%	<u>EFFORT</u> EEASY MMODER		APSED SE TO	0	
VOLUME = 208 Cu Yd	18"-36" 36" AND LARGER	B	SOME 2	20-35%	DDIFFICU		ADING (HRS.)	U	- 1

<del></del>				TEST PIT FIELD L	og				
	INC. JTH BROADWAY PLAINS, NEW YO	RK 10501	LOCATION	PROJECT  onkers Downtown Waterfront  Yonkers, New York	TEST PIT No	TP - 7H 70004 6-16-98			
AKRF F WEATH	PERSONNEL Moh HER 60 Clo	F	CONTRACTOR R	omatsu MO	DEL PC200LC ACH 20'		GROUND ELEV. TIME STARTED	10.5' 0900	+/-
DEPTH			SOIL DESCRI	IPTION		EXCAVATION		T	REMARK
0						EFFORT	QUANTITY CLASS	PID	No.
	Light grey, fine to	coarse SAND and GR	AVEL, some Silt (To	OPSOIL).				<del> </del>	<del> </del>
1'	Gray SAND and bi	ack ASH , trace Silt (F	TLL).			М	<u>-</u>	ND	
2*						М	-	ND	
3'	Light brown SAND	and CONCRETE, sor	me black Ash, trace	Silt (FILL).		D	-	ND	
4'						М		ND	0.11
5'						М	-	ND	
6'					Ÿ	M	-	ND	
7	Brown SAND, som	e Gravel, trace Silt (F	ILL).			М	-	ND	
8'		43				м	-	ND	
				End of test pit approximately 8 feet be	slow grade.				1
9'									
10'									
-11'									
-12'									
13'									
-14'									
EMARKS:									
	l or around								
- 140 80[	i or groundwater sa	mples were collected	tor laboratory analys	sis.					
	OT DIT DI ANI	1.505115							
15'	ST PIT PLAN 30°	LEGEND:  BOULDER ( CLASSIFICATION  5" 19"	DESIGNATION	PROPORTIONS USED  TRACE 0-10%	EXCAVA EFFOI EEAS	RI Y	GROUNE ELAPSED	WATER	
	ORTH	6"-18" 18"-36"	A B	LITTLE 10-20% SOME 20-35%	MMOD DDIFFI	ERATE	TIME TO READING (HRS.)	0	l

			TEST PIT FIELD LOG PROJECT	1				
	NC. ITH BROADWAY PLAINS, NEW YORK 10601	DESCRIPTION LOCATION	Yonkers Downtown Waterfront Yonkers, New York	TEST PIT No. FILE No. DATE	TP - 8H 70004 6-16-98			
AKRF P WEATH	ERSONNEL Mohamed Ahmed IER 60 F Cloudy	CONTRACTOR OPERATOR To		L PC200LC		GROUND ELEV. TIME STARTED	8' +/- 1045	
DEPTH		SOIL DESC	CRIPTION		EXCAVATION EFFORT	BOULDER COUNT QUANTITY CLASS	PID	R
0	Light gray, fine to coarse SAND and (	nt gray, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL).						
1'	Brown SAND and SILT some Boulder			м		ND		
2'				M	5A	ND		
21	0000			м	_	ND	+	
3'	COBBLES, some brown Sand little m	ica schist (FILL).						$\vdash$
4'					М	-	ND	
5'	Brown SAND and SILT (FILL).				М	-	ND	
6'	DIGHT GARD and SILT (TILL).				м	-	ND	
_7_	2 20				м	-	ND	
8'					м		ND	
			End of test pit approximately 8 feet below	+		<u>.</u>		
9'								
10'			190			40		
-11'								
-12'							İ	
-13'		1						
-14'	*		•					
EMARKS:							1	
- No soil	sample collected for analysis. Iwater intercepted at approximately 6 f	eet below grade; gro	undwater sample obtained and sen	it for analysis.				
		ER COUNT	PROPORTIONS USED	EXCAVA EFFOI		GROUND	WATER	
	CLASSIFICATION 6"-18" 18"-36"	DESIGNATION A B	TRACE 0-10% LITTLE 10-20% SOME 20-35%	EEAST	/ E	LAPSED IME TO	o	
VOLUM	E = 118 Cu Yd 36" AND LARGER	c	20-33%	DDIFFI	CULI R	EADING (HRS.)		

				TEST PIT FIE	ELDIOG					
AKRF, 34 SOI WHITE	, INC. DUTH BROADWAY E PLAINS, NEW YOR	PRK 10601	DESCRIPTION LOCATION	PROJECT  Yonkers Downtown Wate Yonkers, New York		TEST PIT No. FILE No. DATE	TP - 9H 70004 6-16-98			
AKRF WEAT		named Ahmed 10 F Cloudy	CONTRACTOR OPERATOR To	CAVATION EQUIPMENT Rusciano Excavating ony Rusciano Komatsu	MODEL REACH	PC200LC		GROUND ELEV. TIME STARTED	7' +/- 1245	,
DEPTH	н		SOIL DESCI	RIPTION			EXCAVATION EFFORT	N BOULDER COUNT QUANTITY CLASS	PID	REMAR
0	I ight gray, fine to (	coarse SAND and GF	'SAVEL come Silt '	~~~~~				CONTINUE CON	File	No.
1'		cobbles, little Silt, litt					м	-	ND	
2'				,			м	-	ND	
3'	25						D	8 A	ND	
		mica schist, little Silt,	f little cobbles (Fil.)	•			M	4A	ND	
5'		Inter services remaining	, little connice (*)	).			м	2A	ND	1
6'							м	4A	ND	-
	Gray brown SAND a	and COBBLES, little	Silt (FILL)				м		ND	2
8'		me comment man	om (rice).				м		ND	
9'							м	-	ND	
				End of test pit approximately 9	eet below (	arade.		<del></del>		<del></del>
10'	1				11000					l
11'						a				
12'	į									
13'	i		390							Į
14'			2.							ı
								i		
REMARKS:		4 for the body and								
- Groun	dwater was intercept	ted at approximately	and submitted for ar	analysis. e; a sample was collected a	and subm	itted for analysis				
ŢĒ	EST PIT PLAN L	LEGEND:		PROPORTIONS USED	2	EXCAVA	TION	GROUND	OWATER	
15'		BOULDER CLASSIFICATION 6"-18"	R COUNT DESIGNATION A	TRACE 0-10% LITTLE 10-20%		EFFOR EEASY MMODE	RT Y	ELAPSED		
VOLU	NORTH JME = 75 Cu Yd	18"-36" 36" AND LARGER	B C	SOME 20-35%		DDIFFIC		TIME TO READING (HRS.)	0	

			TEST PIT FIELD	LOG				
	INC. JTH BROADWAY PLAINS, NEW YORK 10601	DESCRIPTION LOCATION	ROJECT Yonkers Downtown Waterfro Yonkers, New York	TEST PIT No	o. TP - 10H 70004 6-16-98			
AKRF F WEATH	PERSONNEL Mohamed Ahr HER 60 F Cloudy	med CONTRACTOR   OPERATOR Ton	Komatsu N	IODEL PC200LC EACH 20'		GROUND ELEV. TIME STARTED	10.5' 1400	+/-
DEPTH		SOIL DESCR	RIPTION		EXCAVATION EFFORT	BOULDER COUNT QUANTITY CLASS	T	REMARK
0					EFFORT	GUANTITY CLASS	PID	No
		ND and GRAVEL, some Silt (T	OPSOIL).		M		100	<del> </del>
1' i	Black SAND and SILT (FILL	).			<u> </u>		ND	
2'					м	3 A	ND	
3'					М	-	3.0	
4'	Black SAND and SILT, some	miscelianeous FILL (Red Brick	r, Black Ash, and Plastic Wire	<b>9</b> \$).	М	-	ND	1
5'					<b>M</b>		ND	
6'					м		ND	
7'	Black SAND and SILT (FILL)				м	3 A	ND	
8'					М	-	ND	
			End of test pit approximately 8 fe	et helmu amde				
9'				er solon grade.				
-10'								
					84			
-11'								
-12'								
-13'								
-14'							ŀ	
MARKS:			······					
EMARKS: - Soil sai	mple collected from approxim	nately four feet below grade and	submitted for analysis.		20			
TES I	ST PIT PLAN LEGEND:	POUR DEP COUNT	PROPORTIONS USED	EXCA	VATION	GROUNE	WATER	
25'	CLASSIF	BOULDER COUNT  TICATION DESIGNATION	TRACE 0-10%	<u>EFF</u>	ORT EASY	ELAPSED		
A NO	ORTH 18".	-	LITTLE 10-20% SOME 20-35%		ODERATE T	TME TO READING (HRS.)	0	
VOLUM	E = 185 Cu Yd 36" AND	LARGER C						

				TEST PIT F	IEI D LOC					
	NC. TH BROADWAY PLAINS, NEW YO	RK 10601	DESCRIPTION LOCATION	PROJECT  Yonkers Downtown Wayonkers, New York		TEST PIT No. FILE No. DATE	TP-10AH 70004 10-28-98			
AKRF P WEATH	ERSONNEL Kevil IER 65 Overd	F	CONTRACTOR OPERATOR Ton	NATION EQUIPMENT Rusciano Excavating ny Rusciano Kornatsu		PC200LC		GROUND ELEV. TIME STARTED	10.5' +/- 0845	
DEPTH			SOIL DESCR	RIPTION			EXCAVATION	BOULDER COUNT QUANTITY CLASS		REMARK
0				-		<del>-</del>	Erroki	GOANTITY CLASS	PID	No.
		CDAVEL and minutes					м	. )	ND	
	Dark blown SAND	, GRAVEL and Miscell	aneous FILL (Red	Brick and Concrete Blo	ick), trace S	ilt.				
2'							М	•	ND	
3'	Red BRICK, some	black Sand, little Grav	ei (FILL).				М	-	ND	
-4'	Brown to black SAI	ND, some Gravel, som	e Plastic Wiring (F	FILL).			М	-	ND	1
5'							M	-	ND	
6'	Brown to black SAN	ND and GRAVEL, some	e Silt (FILL).				M	-	ND	
7'		,	· · · · · · · · · · · · · · · · · · ·				M	21	ND	
8'							М	-	ND	
10							M	-	ND	
9'	****			End of test pit approximatel	v 9 feet below o	rade	-			2
10'					,	, 444		5.	2	50
11'								/25		
12'										
-13'										
14'									,	
						(3)				
EMARKS: - Soil sai - Ground	mple collected from iwater intercepted s	approximately 4 feet l approximately 9 feet be	below grade for lab low grade. Ground	poratory analysis. dwater sample collecte	d and field f	iltered for laborat	ory analysis.			
TES	ST PIT PLAN 9'	LEGEND: BOULDER O	COLINT	PROPORTIONS US	ED	EXCAVAT		GROUN	DWATER	
12'		CLASSIFICATION 6"-18"	DESIGNATION A	TRACE 0-10% LITTLE 10-20%		EFFOR EEASY	· E	ELAPSED		
A NO	ORTH	18"-36"	B	SOME 20-35%		MMODE DDIFFIC		'IME TO READING (HRS.)	0	

ACRE   NC   24 SOUTH BROADWAY   25 CRIPTION   Yonkers Downtown Waterfront   1/27-99	ADWAY NEW YORK 10801  DESCRIPTION Tonkers, New York  NEW YORK 10801  DESCRIPTION Tonkers, New York  DESCRIPTION Tonkers, New York  TEST PTI No. TP-10BH FILE No. 70004 DATE 1-27-99  GROUND ELEV. 10.5' +/- 10845  GROUN	PROJECT PROJEC	REF. INC.  DESCRIPTION Yenkers Downstown Waterfront OUTH BROADWAY OFFICE PLANS, NEW YORK 10801  DESCRIPTION Yenkers Downstown Waterfront OUTH BROADWAY OFFICE PLANS, NEW YORK 10801  EXCAVATION EQUIPMENT CONTRACTOR Ruscians DEFACTOR Ruscians MODEL PCZOUCC REACH 20'  EXCAVATION BOULDER COUNT TIME STARTED BOULDER COUNT TIME STARTED BOULDER COUNT TIME STARTED BOULDER COUNT TIME STARTED DATA DEFORM BOULDER COUNT REFORT QUANTITY CLASS PID  II Dark brown SAND, GRAVEL and misscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M
DESCRIPTION   Vonkers, New York   DESCRIPTION   Vonkers, New York   DATE   127-89	ADMAY   NEW YORK 10801   DESCRIPTION   Yonkers, New York   DATE   1-27-99	DESCRIPTION Yonkers Downtown Waterfront PILE No. 70004 1-27-99  EXCAVATION EQUIPMENT CONTRACTOR Rusciano Excavating OPERATOR Tony Rusciano MAKE Kevin Relily ATHER 45 F Sunny  THE SOIL DESCRIPTION SOIL PC200LC REACH 20'  THE SOIL DESCRIPTION SOIL PC200LC REACH 20'  THE SOIL DESCRIPTION SOIL DESC	SOUTH BROADWAY ITTE PLANS, NEW YORK 10801  DESCRIPTION Yonkers Downtown Waterfront   FILE No. 70004   1-27-99  EXCANATION EQUIPMENT   CONTRACTOR Youndard Excavating   OFFERSONNEL Kewin Relity   ASP   CONTRACTOR Youndard Excavating   OFFERSONNEL Kewin Relity   OFFE
NHITE PLAINS, NEW YORK 10801  LOCATION Yorkers, New York  DATE 1-27-99  EXCAVATIONE CUIPMENT CONTRACTOR Ruciane Excavating OPERATOR Tony Rusciano MAKE Komalau  MODEL PC200LC REACH 20  SCIL DESCRIPTION  SCIL DESCRIPTION  SCIL DESCRIPTION  SCIL DESCRIPTION  Dark brown fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M	NEW YORK 10801   LOCATION   Yonkers, New York   DATE   1-27-99	EXCAVATION   EXC	### PLAINS, NEW YORK 10801  LOCATION Vonkers, New York DATE 1-27-99  EXCANATION EQUIPMENT CONTRACTOR Runciano Excavaling OPERATOR Tony Rusciano MARCE Komatau MCE REACH 20'  SOIL DESCRIPTION SOIL DESCRIPTION BEFORT QUANTITY CLASS PD CENTRACTOR Runciano Excavaling OPERATOR Tony Rusciano MARCE Komatau MCE PC200LC  ##################################
EXCAVATION EQUIPMENT CONTRACTOR Rusciano Exavating OPERATOR TONY Rusciano MAKE Koriatsu MODEL PC200LC  SUMMY  SUMMY  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  CEFFORT QUANTITY CLASS PID  Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M  ND  M  ND  Red BRICK, some black SAND and GRAVEL, some Silt (FILL).  Red BRICK, some black Sand, little Gravel (FILL).  M  CHOCK SAND AND M  ND  Red BRICK, some black Sand, little Gravel (FILL).  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade  In the standard of the standar	EXCAVATION EQUIPMENT   CONTRACTOR Rusciano Excavating OPERATOR Tony Rusciano Excavating OPERATOR Tony Rusciano MAKE Kometsu MODEL PC200LC REACH 20"   SOIL DESCRIPTION   SOIL DESCRIPT	EXCAVATION EQUIPMENT CONTRACTOR Rusciano Excavating OPERATOR Tony Rusciano MAKE  Sunny  SOIL DESCRIPTION  SOIL DESCRIPTION  Light brown, fine to coatse SAND and GRAVEL, some Silt (TOPSOIL) Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M  ND  Brown to black SAND and GRAVEL, some Silt (FILL).  Red BRICK, some black Sand, little Gravel (FILL).  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade	REPERSONNEL Kervin Reilly 45 F CONTRACTOR Rusciano Exavating OPERATOR Tory Rusciano Exavating MAME Komateu MODEL PC200LC REACH 20'  PTH SOIL DESCRIPTION XCAVATION BOULDER COUNT SPORT DUANTITY CLASS PID REACH 20'  Light brown, fine to coarse SAND and GRAVEL, some Sitt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Sitt.  M - ND  W - ND  Brown to black SAND and GRAVEL, some Sitt (FILL).  M - ND  Red BRICK, some black Sand, little Gravel (FILL).  End of test pit approximately 8 feet below grade  End of test pit approximately 8 feet below grade
CONTRACTOR Rusciano Excavating OPERATOR TON Rusciano MAKE Komatsu MODEL PC200LC REACH 20'  SURINY  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  Light brown, fine to coatres SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous Fill. (Red Brick and Concrete Block), trace Silt.  M	CONTRACTOR Rusciano Excavating OPERATOR Tony Rusciano MAKE	F PERSONNEL Kevin Reility ATHER 45 F Sunny  CONTRACTOR Rusciano MODEL PC200LC REACH 20'  THE SOIL DESCRIPTION  SOIL DESCRIPTION  CONTRACTOR Rusciano MODEL PC200LC REACH 20'  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  CONTRACTOR Rusciano MODEL PC200LC REACH 20'  XCAVATION BOULDER COUNT EFFORT CUANTITY CLASS PID  AND  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M ND  M ND  Brown to black SAND and GRAVEL, some Silt (FILL).  Red BRICK, some black Sand, little Gravel (FILL).  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade	RF PERSONNEL Kevin Reilly 45 F Sunny  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  CONTRACTOR Rusciance Examples MAKE Kornalisu MODEL PC200LC  REACH 20'  SOIL DESCRIPTION  SEPORT GUANTITY CLASS PID REACH 20'  SOIL DESCRIPTION  SEPORT GUANTITY CLASS PID REACH 20'  SOIL DESCRIPTION  SEPORT GUANTITY CLASS PID REACH 20'  ND  Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  M  ND  M  ND  M  ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M  ND  Red BRICK, some black Sand, little Gravel (FILL).  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade
CONTRACTOR Rusciano Excavating OPERATOR TON Rusciano MAKE Komatsu MODEL PC200LC REACH 20'  SURINY  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  Light brown, fine to coatres SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous Fill. (Red Brick and Concrete Block), trace Silt.  M	CONTRACTOR Rusciano Excavating OPERATOR Tony Rusciano MAKE	F PERSONNEL Kevin Reility ATHER 45 F Sunny  CONTRACTOR Rusciano MODEL PC200LC REACH 20'  THE SOIL DESCRIPTION  SOIL DESCRIPTION  CONTRACTOR Rusciano MODEL PC200LC REACH 20'  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  CONTRACTOR Rusciano MODEL PC200LC REACH 20'  XCAVATION BOULDER COUNT EFFORT CUANTITY CLASS PID  AND  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M ND  M ND  Brown to black SAND and GRAVEL, some Silt (FILL).  Red BRICK, some black Sand, little Gravel (FILL).  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade	RF PERSONNEL Kevin Reilly 45 F Sunny  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  CONTRACTOR Rusciance Examples MAKE Kornalisu MODEL PC200LC  REACH 20'  SOIL DESCRIPTION  SEPORT GUANTITY CLASS PID REACH 20'  SOIL DESCRIPTION  SEPORT GUANTITY CLASS PID REACH 20'  SOIL DESCRIPTION  SEPORT GUANTITY CLASS PID REACH 20'  ND  Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  M  ND  M  ND  M  ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M  ND  Red BRICK, some black Sand, little Gravel (FILL).  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade
AKKEP FERSONNEL Kevin Relily WEATHER 45 F Sunny  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  DEPTH  SOIL DESCRIPTION  SEFORT  QUANTITY CLASS  PID  AND  Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M  ND  M  M	NEL Kevin Reilly 45 F Sunny  SOIL DESCRIPTION  SOUND, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Down SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M  ND  M  ND  M  ND  CK, some black Sand, little Gravel (FILL).  M  ND  ND	FPERSONNEL Kevin Reilly A15 F Sunny MAKE Komatsu MODEL PC200LC REACH 20'  THE SUNNY SOIL DESCRIPTION SOIL DESCRIPTION SOULDER COUNT EFFORT QUANTITY CLASS PID RESPONSE AND AND GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND	ATHER SUMPLY MAKE Kewin Relity Summy  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  SOIL DESCRIPTION  CEPPORT  OUAMITTY CLASS PID  REPORT  M  NO  Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous Fill. (Red Brick and Concrete Block), trace Silt.  M  NO  Brown to black SAND and GRAVEL, some Silt (Fill.).  Red BRICK, some black Sand, little Gravel (Fill.).  Fig.  Red BRICK, some black Sand, little Gravel (Fill.).  End of test pit approximately 9 feet below grade  Find of test pit approximately 9 feet below grade  Find of test pit approximately 9 feet below grade
MAKE   Normalisa   MODEL   P2200LC   REACH   20"	MAKE   Komatsu   MODEL   PCZODLC   REACH   20'	MAKE   Kornalsu   MODEL   PCZODLC   REACH   20"	ASPER 49 No.
DEPTH SOIL DESCRIPTION	SOIL DESCRIPTION  SOIL DESCRIPTION  SOUND, fine to coatse SAND and GRAVEL, some Silt (TOPSOIL)  Down SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M  ND  M  ND  District SAND and GRAVEL, some Silt (FILL).  M  ND  CK, some black Sand, little Gravel (FILL).  REM  QUANTITY CLASS  PID  RM  ND  M  ND  ND	TH SOIL DESCRIPTION XCAVATION BOULDER COUNT EFFORT QUANTITY CLASS PID RE FEORT QUANTITY CLASS PID RE FEORT QUANTITY CLASS PID REFORT QUANTITY CLASS	PTH SOIL DESCRIPTION CEFORT QUANTITY CLASS PID Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M ND  Red BRICK, some black Sand, little Gravel (FILL).  M ND  End of test pit approximately 9 feet below grade
DEPTH SOIL DESCRIPTION FFORT QUANTITY CLASS PID  Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M ND  M N	SOIL DESCRIPTION  EFFORT QUANTITY CLASS PID N  DOWN, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  DOWN SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  D black SAND and GRAVEL, some Silt (FILL).  M - ND  CK, some black Sand, little Gravel (FILL).  M - ND	TH SOIL DESCRIPTION EFFORT QUANTITY CLASS PID  Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  M - ND  Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade	PTH SOIL DESCRIPTION SFFORT QUANTITY CLASS PID LIGHT brown, fine to coates SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  Red BRICK, some black Sand, little Gravel (FILL).  M - ND  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade
DEPTH SOIL DESCRIPTION FFORT QUANTITY CLASS PID  Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M ND  M N	SOIL DESCRIPTION  EFFORT QUANTITY CLASS PID N  DOWN, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  DOWN SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  D black SAND and GRAVEL, some Silt (FILL).  M - ND  CK, some black Sand, little Gravel (FILL).  M - ND	TH SOIL DESCRIPTION EFFORT QUANTITY CLASS PID  Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  M - ND  Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade	PTH SOIL DESCRIPTION SFFORT QUANTITY CLASS PID LIGHT brown, fine to coates SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  Red BRICK, some black Sand, little Gravel (FILL).  M - ND  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade
	own, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)         M         -         ND           own SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.         M         -         ND           M         -         ND         M         -         ND           Deback SAND and GRAVEL, some Silt (FILL).         M         -         ND         M           M         -         ND         M         -         ND           CK, some black Sand, little Gravel (FILL).         M         -         ND           M         -         ND         M         -         ND           M         -         ND         M         -         ND	Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FilL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  Brown to black SAND and GRAVEL, some Silt (FilL).  M - ND  M - ND  Red BRICK, some black Sand, little Gravel (FilL).  M - ND  M - ND  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade	Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  W - ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  M - ND  The Red BRICK, some black Sand, little Gravel (FILL).  End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade
Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  —2'- —3'- —4'- Brown to black SAND and GRAVEL, some Silt (FiLL).  —6'- —6'- —8 —8 —8 —1'- —8 —1'- —1'- —1'- —1'- —1'- —1'- —1'- —1	Dwn SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.         M         -         ND           CK, some black Sand, little Gravel (FILL).         M         -         ND           M         -         ND           M         -         ND	Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade	Light brown, fine to coarse SAND and GRAVEL, some Silt (TOPSOIL)  Dark brown SAND, GRAVEL and miscellaneous Fil.L (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  M - ND  Brown to black SAND and GRAVEL, some Silt (Fil.L).  M - ND  M - ND  Frequency of the style approximately 9 feet below grade  End of test pit approximately 9 feet below grade
	Dwn SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.         M         -         ND           CK, some black Sand, little Gravel (FILL).         M         -         ND           M         -         ND           M         -         ND	Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M ND  M ND  M ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M ND  M ND  Red BRICK, some black Sand, little Gravel (FILL).  M ND  M ND  M ND  M ND  M ND  M ND  End of test pit approximately 9 feet below grade	The Dark brown SAND, GRAVEL and miscellaneous Fill. (Rad Brick and Concrete Block), trace Silt.    M
	Dwn SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.         M         -         ND           CK, some black Sand, little Gravel (FILL).         M         -         ND           M         -         ND           M         -         ND	Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M ND  M ND  M ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M ND  M ND  Red BRICK, some black Sand, little Gravel (FILL).  M ND  M ND  M ND  M ND  M ND  M ND  End of test pit approximately 9 feet below grade	The Dark brown SAND, GRAVEL and miscellaneous Fill. (Rad Brick and Concrete Block), trace Silt.    M
Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M - ND  M - ND  M - ND  Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  End of test pit approximately 9 feet below grade  Brown to black Sand, little Gravel (Fill).	Department of the property of	Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete βlock), trace Silt.  M - ND	Dark brown SAND, GRAVEL and miscellaneous FILL (Red Brick and Concrete Block), trace Silt.  M ND  Fig. 64  Brown to black SAND and GRAVEL, some Silt (FILL).  M ND  M ND  M ND  M ND  M ND  M ND  Fig. 64  Fig. 65  End of test pit approximately 9 feet below grade
	M - ND  M - ND  M - ND  CK, some black Sand, little Gravel (FILL).  M - ND	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  End of test pit approximately 9 feet below grade	Brown to black SAND and GRAVEL, some Sitt (FILL).  M - ND
	M - ND  De black SAND and GRAVEL, some Silt (FILL).  M - ND  M - ND  CK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  M - ND	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  End of test pit approximately 9 feet below grade	Brown to black SAND and GRAVEL, some Sitt (FILL).  M - ND
	De black SAND and GRAVEL, some Silt (FILL).  M - ND  M - ND  CK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  M - ND	M	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  End of test pit approximately 9 feet below grade
### Brown to black SAND and GRAVEL, some Silt (FILL).  ### - ND	De black SAND and GRAVEL, some Silt (FILL).  M - ND  M - ND  CK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  M - ND	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND
### Brown to black SAND and GRAVEL, some Silt (FILL).  ### - ND  #### - ND  #### - ND  #### - ND  #### - ND  ###################################	De black SAND and GRAVEL, some Silt (FILL).  M - ND  M - ND  CK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND
Brown to black SAND and GRAVEL, some Sitt (FILL).  M ND  M N	CK, some black Sand, little Gravel (FILL).  M - ND	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  End of test pit approximately 9 feet below grade	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  Fig. Brown to black Sand, little Gravel (FILL).  M - ND  M - ND  End of test pit approximately 9 feet below grade
Brown to black SAND and GRAVEL, some Sitt (FILL).  M - ND	CK, some black Sand, little Gravel (FILL).  M - ND	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  End of test pit approximately 9 feet below grade	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  Fig. Brown to black Sand, little Gravel (FILL).  M - ND  M - ND  End of test pit approximately 9 feet below grade
Brown to black SAND and GRAVEL, some Sitt (FILL).  M ND  M N	CK, some black Sand, little Gravel (FILL).  M - ND	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  End of test pit approximately 9 feet below grade	Brown to black SAND and GRAVEL, some Silt (FILL).  M - ND  Fig. Brown to black Sand, little Gravel (FILL).  M - ND  M - ND  End of test pit approximately 9 feet below grade
-6' Red BRICK, some black Sand, little Gravel (FILL).  M - ND  End of test pit approximately 9 feet below grade	M - ND	M - ND  Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade	Red BRICK, some black Sand, little Gravel (FILL).  M - ND  End of test pit approximately 9 feet below grade
-6' Red BRICK, some black Sand, little Gravel (FILL).  M - ND  End of test pit approximately 9 feet below grade	CK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND	Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade	Red BRICK, some black Sand, little Gravel (FILL).  M - ND  End of test pit approximately 9 feet below grade
-6' Red BRICK, some black Sand, little Gravel (FILL).  M - ND  End of test pit approximately 9 feet below grade  11'  12'	CK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND	Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade	Fire Red BRICK, some black Sand, little Gravel (FILL).  M - ND  End of fest pit approximately 9 feet below grade
Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade  11'  12'	CK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND	Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade	Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade
Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade	CK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND	Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade	Red BRICK, some black Sand, little Gravel (FILL).  M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade
M	M - ND  M - ND  M - ND	M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade	M - ND  M - ND  M - ND  End of test pit approximately 9 feet below grade  '  '  '  '  '
8' 8' 9' End of test pit approximately 9 feet below grade 0' 1' 2'	M - ND  M - ND	M - ND  M - ND  End of test pit approximately 9 feet below grade	M - ND  End of test pit approximately 9 feet below grade  P
8' 8' 9' End of test pit epproximately 9 feet below grade	M - ND  M - ND	M - ND  M - ND  End of test pit approximately 9 feet below grade	M - ND  End of test pit approximately 9 feet below grade  P
9' End of test pit approximately 9 feet below grade  1' 2'	M - ND	End of test pit approximately 9 feet below grade	End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade
9' End of test pit approximately 9 feet below grade  1' 2'	M - ND	End of test pit approximately 9 feet below grade	End of test pit approximately 9 feet below grade  End of test pit approximately 9 feet below grade
9' End of test pit approximately 9 feet below grade  10' 11'		End of test pit approximately 9 feet below grade	End of test pit approximately 9 feet below grade  Find of test pit approximately 9 feet below grade  Find of test pit approximately 9 feet below grade
End of test pit approximately 9 feet below grade  11'  12'		End of test pit approximately 9 feet below grade	End of test pit approximately 9 feet below grade  3'  '      End of test pit approximately 9 feet below grade
End of test pit approximately 9 feet below grade  10'  11'		End of test pit approximately 9 feet below grade	End of test pit approximately 9 feet below grade  3'  '      End of test pit approximately 9 feet below grade
10'	End of test pit approximately 9 feet below grade	End of test pit approximately 9 feet below grade	
11'			
2'			
2'			? 
2'		_	? 
2'			? 
3			·
3'			·
3'1			·
a'[			
· · · · · · · · · · · · · · · · · · ·			
			RKS:
-14'			rks:
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<del>-</del>			
			RKS:

				TEST PIT FIELD LO	G						
	NC. TH BROADWAY PLAINS, NEW YOR	RK 10601		PROJECT  Yonkers Downtown Waterfro  Yonkers, New York	ont	TEST PIT No. FILE No. DATE	TP-11H 70004 10-28-98				
AKRF PI WEATH			CONTRACTOR I	AVATION EQUIPMENT Rusciano Excavating y Rusciano ornatsu	MODEL REACH	PC200LC 20'	- · · · · ·		GROUND TIME STA		10.5' +/- 0915
DEPTH			SOIL DESCI	RIPTION				/ATIO	ULDER COU ANTITY CLA	ì	REMARK
0								OIC?	ANTITULA	PID	No.
	Light brown, fine to	coarse SAND and GRA	WEL, some Silt (TO	OPSOIL)		El.					
1'	Brown SAND and S	SILT, some Gravel (FILL	).				. N	n 		ND	
<u>2'</u>							M	1	-	ND	
3'	Brown SAND and n	niscellaneous FILL (Wo	od, Metal Piping, a	nd Plastic Wiring).			N	1	-	ND	1
4'	Brown to black SAN	ND some Gravel, some F	Plastic Wiring (FILL	.). One 55-Gallon Drum, so	me No. 2	! fuel oil.	м		-	ND	2
5'							M		-	ND	
6'			(*				м		-	ND	
7'	Brown to black SAN	ID and SILT, miscellane	ous FILL (Concrete	Block, Metal Piping), little i	black Ash	ı <b>.</b>	м		-	ND	
8'					100		М			ND	
9'							М		-	ND	
10'							м			ND	
11'							М		-	ND	3
12'		E	ind of test pit approxim	nately 11.5 feet below grade							
13'											
-14'											
- Product	from the 55-Gallon	approximately four feet l Drum sampled for labo oproximately 11.5 feet b	ratory analysis	oratory analysis. dwater sample collected an	d field filt	ered for laborato	ry analysis.				
TES	ST PIT PLAN 10'	LEGEND:		PROPORTIONS USED		EXCAVA	ΠΟΝ	_	GRO	UNDWATE	R
30'	10	BOULDER C CLASSIFICATION	COUNT DESIGNATION	TRACE 0-10%		EFFOR	RT.	F	LAPSED		<del>-</del> -
A NO	ORTH ME = 128Cu Yd	6"-18" 18"-36" 36" AND LARGER	A B C	LITTLE 10-20% SOME 20-35%			DERATE	ļ n	ME TO EADING (HRS	0	
VOLUN	ME = 128Cu Yd	36" AND LARGER	C	<u></u>				-	(,	,	

			TEST PIT FIEL	LOG				
	INC. JTH BROADWAY PLAINS, NEW YORK 10601	DESCRIPTION LOCATION	PROJECT Yonkers Downtown Water Yonkers, New York	TEST PIT N	o. TP-11AH 70004 1-27-99			
AKRF I WEATI	PERSONNEL Kevin Reilly HER 45 F Sunny	CONTRACTOR I	NATION EQUIPMENT Rusciano Excavating ny Rusciano Komatsu	MODEL PC200LC REACH 20'		GROUND ELEV. TIME STARTED	10.5' +/- 1000	
DEPTH	1	SOIL DESCR	RIPTION		XCAVATIO EFFORT	BOULDER COUNT QUANTITY CLASS	PID	REMARI No.
0							1	140
1'	Light brown, fine to coarse SAND an Brown SAND and SILT, some Grave		TOPSOIL)	······	м	-		
•	Stown SAME and SILT, Some Grave	( (					ND	
2'					M	-	ND	ļ
3'	Brown to black SAND, some Gravel,	miscellaneous FILL (Me	etal Piping and Concrete E	ilock).	М	-	ND	1
4'					м	-	ND	
5'					м			
6'					м	-	ND ND	
					M		ND	
7'	Brown to black SAND and Plastic MA	TS (FILL).					ND	2
8'					М	•	ND	
9'					м	-	ND ND	
10'			6		м	•	, and	
			End of test pit approximately 10	Teet below grade			ND	3
-11'								
-12'								
-13'								
-14'							. "	
EMARKS:		<del></del>						
- Soil sa - Soil sa	ample collected from approximately 3 f ample collected from approximately 7 f dwater intercepted approximately 10 fe	eet helow grade for lab	aratani anahela	t.				
TE I	EST PIT PLAN LEGEND:	DER COUNT	PROPORTIONS USED	EXCAV		GROUN	DWATER	
15'	CLASSIFICATION 6"-18"	DESIGNATION A	TRACE 0-10% LITTLE 10-20%	EE	ASY	ELAPSED TIME TO	0	
A	NORTH 18"-36"	В	SOME 20-35%					

			TEAT DIT FIE	10100					
AKRF, I 34 SOU WHITE	INC. ITH BROADWAY PLAINS, NEW YORK 10601	DESCRIPTION LOCATION	TEST PIT FIELD PROJECT Yonkers Downtown Water Yonkers, New York	rfront	TEST PIT No. FILE No. DATE	TP-12H 70004 10-28-98			
AKRF P WEATH	PERSONNEL Kevin Reilly HER 65 F Overcast	CONTRACTOR OPERATOR To	AVATION EQUIPMENT Rusciano Excavating ny Rusciano Komatsu	MODEL REACH	PC200LC 20'		GROUND ELEV. TIME STARTED	10' <del>+/</del> - 1100	
DEPTH		SOIL DESCI	PIPTION			EXCAVATION			REMARK
0		GOIL DLOOR	W HON			EFFORT	QUANTITY CLASS	PID	No.
	Light brown, fine to coarse SAND and G	RAVEL, some Silt	(TOPSOIL)		П			<del> </del>	
1'	Brown SAND and GRAVEL, some Silt (I	FILL).				М	-	ND	
2'						м	-	ND	
3'						М	-	ND	
4'	Brown SAND and miscellaneous FILL (E	Brick, Asphalt, Meta	I, and Concrete), some As	sh.		<b>M</b>	* <u>-</u>	ND	1
5'						М	-	ND	
6'						М	-	ND	
7		50				<sup>7</sup> M	;∓	ND	
8'	Brown to black SAND and GRAVEL, som	ne Silt (FILL).				M	-	ND	-
9'						М	-	ND	
10'						М	-	ND	
11'						М	•	ND	
12'						М	-	ND	
		End of test pit approxima	tely 12 feet below grade					•	2
13'									
-14'						]	-		
							1		
EMARKS:									
- Soil sa	mple collected from approximately 4 feet dwater intercepted approximately 12 feet	below grade for lai below grade. Grou	boratory analysis. Indwater sample collected	l and field (	littered for labor	ratory analysis.			42
ŢE	ST PIT PLAN LEGEND:		PROPORTIONS USED	· T	EXCAVA*	TION T	CROLINE	NAMES	
20°	10' BOULDER CLASSIFICATION 6'-18'	COUNT DESIGNATION A	TRACE 0-10% LITTLE 10-20%		EFFOR	<u>τ</u>	GROUNI ELAPSED		
	ORTH 18"-36" IME = 89 Cu Yd 36" AND LARGER	B C	SOME 20-35%		MMOD DDIFFI		TIME TO READING (HRS.)	0	

			TEST PIT FIE	LDLOG					
AKRF, I 34 SOU WHITE	NC. TH BROADWAY PLAINS, NEW YORK 10601	DESCRIPTION LOCATION	PROJECT Yonkers Downtown Wate Yonkers, New York		TEST PIT No. FILE No. DATE	TP-13H 70004 10-28-98			<u></u>
AKRF P WEATH	ERSONNEL Kevin Reilly IER 65 F Overcast	CONTRACTOR I	VATION EQUIPMENT Rusciano Excavating ny Rusciano Komatsu	MODEL REACH	. PC200LC		GROUND ELEV. TIME STARTED	10.5' +/- 1030	
DEPTH	× × × × × × × × × × × × × × × × × × ×	SOIL DESCR	RIPTION			EXCAVATION EFFORT	BOULDER COUNT QUANTITY CLASS	PID	REMARK
0							GOANTH CDASS	FID	No.
1'	Light brown, fine to coarse SAND and C Light brown SAND and CONCRETE BL					м	· ·	ND	
2'		,	5			M	-	ND	
3'						м		ND	
						M	_	ND	
4'   5'	Person CAND and CILT aris all					M	-	ND	
	Brown SAND and SILT, miscellaneous	FILL (Red Brick, Pla	stic Wiring, Rope).			M	•	ND	1,2
6'									
7'						M	•	ND	
8'	Brown SAND and SILT, some Concrete	Block, some Red Br	i			М	•	ND	
9'						M	•	ND	_ 3
10'						м		ND	
		End of test pit approxima	itely 10 feet below grade						
11'	9								
12'	3								
-13'									
-14'			e e						
EMARKS:			<del></del>				L		
- Bottle (	mple collected from approximately five f of "Pro-Tek Cleaning Solvent" present in twater intercepted approximately 9 feet i	excavation		and field	filtered for labora	ntory analysis.			
ŢE:	ST PIT PLAN LEGEND:	COUNT	PROPORTIONS USE	Ω	EXCAVA		GROUN	DWATER	
18'	CLASSIFICATION 6"-18"	DESIGNATION A	TRACE 0-10% LITTLE 10-20%		EFFOR EEASY MMOD	r   E	LAPSED IME TO	0	
	ORTH 18"-36"  IME = 60 Cu Yd 36" AND LARGER	B	SOME 20-35%	- 1	D-DIFFI		EADING (HRS.)	-	

				TEST PIT FIE	DIOG					
	INC. JTH BROADWAY PLAINS, NEW YO		DESCRIPTION LOCATION	PROJECT  Yonkers Downtown Wate  Yonkers, New York		TEST PIT No. FILE No. DATE	TP-13AH 70004 1-27-99			
AKRF F	-	rin Reilly 5 F Sunny	CONTRACTOR OPERATOR To	AVATION EQUIPMENT Rusciano Excavating ny Rusciano Komatsu	MODEL REACH	PC200LC 20'		GROUND ELEV. TIME STARTED	10.5° +/- 1130	
DEPTH			SOIL DESCI	RIPTION			EXCAVATION EFFORT			REMARK
0					<del></del>	· · · · · · · · · · · · · · · · · · ·	EFFOR	QUANTITY CLASS	PID	No.
	1	to coarse SAND and G							v .	
1'	Light brown SAN	D, SILT and CONCRET	E BLOCK, little Si	it (FILL).	•	8	М	•	ND	
2'							м	-	ND	
—3'—	İ						М	-	ND	
4'							М	- 1	ND	
5'	Plastic WIRING a	лd brown SAND, some	Silt (FILL).				М		ND	1
6'	<b>a</b>						М	-	ND	
7							M		ND	
8'	Brown SAND and	SILT, some Concrete B	llock (FILL).	•			М		ND	2
8,							м	-	ND	
10'							м		ND	3
		E	End of test pit approxima	italy 10 feet below grade.						3
11'										
-12'	*									
13'								3		
-14'						*		22		
EMARKS;	······································									*
- 5011 Sa	imple collected froi	m approximately 5 feet   m approximately 8 feet   approximately 10 feet b	helmw arada for Iol	poratory analysis. poratory analysis. coundwater sample collect	ed.				zi.	7
ŢE	ST PIT PLAN	LEGEND:		PROPORTIONS USED	1	EXCAVAT	ION I	GROUNI	WATER	
15'	15'	BOULDER C CLASSIFICATION	DESIGNATION	TRACE 0-10%		EFFOR E-EASY	Ι	ELAPSED	THE COLUMN	
A M	ORTH	6"-18"	A	LITTLE 10-20%		M-MODE	RATE	FLAPSED TIME TO	0	
	IME = 91 Cu Yd	18"-36" 36" AND LARGER	B C	SOME 20-35%		DDIFFIC		READING (HRS.)		- 1

			TEST PIT FIELD LC	G					
	NC. TH BROADWAY PLAINS, NEW YORK 10601		PROJECT /onkers Downtown Waterfi Yonkers, New York		TEST PIT No. FILE No. DATE	TP-14H 70004 10-28-98			
AKRF PI WEATH	ERSONNEL Kevin Reilly ER 65 F Overcast	CONTRACTOR R	AVATION EQUIPMENT Rusciano Excavating y Rusciano omatsu	MODEL REACH	PC200LC 20'		GROUND TIME STA		10.5' <del>1/</del> - 1245
DEPTH		SOIL DESCR	RIPTION			XCAVATIO EFFORT			REMARI
0						·	ANTITULA	PID	No.
! !	Brown, fine to coarse SAND and GRAVEL	, some Silt (TOPSO	iL)	16				-	
1'	Brown SAND and SILT (FILL).				95	M	i	ND	
2'	-					М	•	ND	
-3'	Brown SAND and black ASH, some Grave	l, miscellanous Fill (	Plastic Wires, Rope).			м		ND	
4'	Brown SAND and SILT, some Gravel, misc	celianeous Fill (red a	and yellow Brick, Wood).			м		ND	1
5'						м	8.	ND	
6'	Red BRICK, some Sand, trace Silt (FILL).		18			М	h. •	ND	
-7-			*			М		ND	
8'		End of tost air annual	nately 8 feet below grade			М	-	ND	2
9'		End of test pit approxim	ately o feet below grade						
						<del></del>			
10'									
11'	43								
12'									
13'						8			
14'									
	·								
REMARKS:   - Soil sar ! - No grou	mple collected from approximately 4 feet be	low grade for labora	itory analysis.						L
•									
TES	ST PIT PLAN LEGEND: 10' BOULDER	COUNT	PROPORTIONS USE	2	EXCAVA		GR	OUNDWAT	<u>≡</u> R
20'	CLASSIFICATION 6"-18"	DESIGNATION A	TRACE 0-10% LITTLE 10-20%		<u>EFFO</u>	ISY	ELAPSED	•	
AN	ORTH 18"-36" ME = 60 Cu Yd 36" AND LARGER	B	SOME 20-35%	1	MMC DDIF	DERATE	TIME TO READING (HR:	0	

			TEST PIT F	ELD LOG				· · · · · · · · ·	
AKRF, II 34 SOU WHITE	NC. TH BROADWAY PLAINS, NEW YORK 10601	DESCRIPTION LOCATION	PROJECT  Yonkers Downtown Wa  Yonkers, New York	-	TEST PIT No. FILE No. DATE	TP-15H 70004 10-28-98			
AKRF P WEATH	ERSONNEL Kevin Reilly ER 65 F Overcast	CONTRACTOR OPERATOR To	AVATION EQUIPMENT Rusciano Excavating ny Rusciano Komatsu	MODEL REACH	PC200LC 20'		GROUND ELEV. TIME STARTED	9.5° +/- 1330	
DEPTH		SOIL DESC	RIPTION			EXCAVATION	BOULDER COUNT QUANTITY CLASS	PID	REMARK
0	Brown, fine to coarse SAND and GRAVE						again topass	FID	No.
1'	Light brown SAND and SILT some Grave					м		ND	
2'						м_		ND	
3'						M		ND	
4°						м		ND	
5'	Light grey brown SAND and SILT little G	ravel, Concrete Bl	ock (FILL).			M		ND	1
6'						М		ND	
7			22			М		ND	
8'						м	120	ND	
9'						M		ND	2
-10'				· · · · ·		M		ND	
-11'		End of test pit approxim	nately 10 feet below grade						
-12'									
-13'								İ	
-14'									
EMARKS:		•					*6		
- Soil sa	mple collected from approximately 5 feet dwater encountered at approximately 9 fe	below grade for la et below grade, no	aboratory analysis. o groundwater sample co	bliected.					
TE	ST PIT PLAN LEGEND: 10' BOULDER	COUNT	PROPORTIONS US	ED	EXCAVA		GROUN	OWATER	
	CLASSIFICATION 6"-18" ORTH 18"-36"	DESIGNATION A B	TRACE 0-10% LITTLE 10-20% SOME 20-35%		EFFO EEAS MMOD DDIFF	Y DERATE	ELAPSED TIME TO READING (HRS.)	0	
VOLU	ME = 74 Cu Yd 36" AND LARGER	С							

				TEST PIT	FIELD LOG					
AKRF, II 34 SOU WHITE	NC. TH BROADWAY PLAINS, NEW YO	DRK 10601	DESCRIPTION LOCATION	PROJECT  Yonkers Downtown Wayonkers, New York	-	TEST PIT No. FILE No. DATE	TP-16H 70004 10-28-98			
AKRF P WEATH		rin Reilly 5 F vercast	CONTRACTOR OPERATOR To	AVATION EQUIPMENT Rusciano Excavating ony Rusciano Komatsu		PC200LC 20'		GROUND ELEV. TIME STARTED	10.5' <del>1/-</del> 1400	
DEPTH			SOIL DESC	CRIPTION			EXCAVATION EFFORT	BOULDER COUNT QUANTITY CLASS	PID	REMAR No.
0	Brown, fine to co	arse SAND and GRAVE	EL, some Silt (TO	PSOIL)						
		GRAVEL, some Silt, C							ND	
2'									ND	
3'	Brown SAND and	GRAVEL, some Silt, m	niscellanous Fill (1	Wood, Red Brick, Metal	Beams).		м			
4'				•	•		M		ND ND	
5'	Brown SAND and	GRAVEL, some Silt, m	assive Concrete l	Block (FiLL).			м		ND	1
6'							м		ND ND	'
7'							м		ND ND	
8'							M			_
-			End of tost sit sessed	metals B.E. da ad but					ND	2
9'		•	210 or test pit approxim	mately 8.5 feet below grade						
10'				Q.						
11'										
-12'										
-13'										
-14'									*	
EMARKS:						21				
- Soil saı	mple collected fro lwater encountere	m approximately 5 feet l d at approximately 8.5 f	below grade for la eet below grade;	aboratory analysis. no groundwater sample	collected.					
TES	ST PIT PLAN 15'	LEGEND: BOULDER C	COUNT	PROPORTIONS US	SED	EXCAVA		GROUN	DWATER	
15'		CLASSIFICATION 6"-18"	DESIGNATION A	TRACE 0-10% LITTLE 10-209		EFFOR EEASY MMODI	Y E	LAPSED IME TO	0	
A NO		18"-36"	В	SOME 20-359		D-DIFFI	1.	EADING (HRS.)	U	

				TEST PIT FIE	LDLOG					
	NC. ITH BROADWAY PLAINS, NEW YO	RK 10601	DESCRIPTION LOCATION	ROJECT Yonkers Downtown Wate Yonkers, New York		TEST PIT No. FILE No. DATE	TP-17H 70004 10-28-98			
AKRF P WEATH		n Reilly F ercast	CONTRACTOR OPERATOR Ton	NATION EQUIPMENT Rusciano Excavating ny Rusciano Komatsu	MODEL REACH	PC200LC 20'		GROUND ELEV. TIME STARTED	11' <del>1/-</del> 1430	
DEPTH			SOIL DESCR	RIPTION		······································	EXCAVATIO			REMARK
0			SOIL DESCR	AIF HON			EFFORT	QUANTITY CLASS	PID	No.
	Brown SAND and	GRAVEL, some Silt (T	OPSOIL)	***						
1'	Gray brown SAND	and SILT, some Conc	rete Block (FILL).				M		ND.	
2'							M		ND	
3'	Gray brown SAND	and CONCRETE BLO	OCK (FILL).				м		ND	1
4'							м_		ND	
5'							М		ND	
6'	Gray brown SAND	and CONCRETE BLO	CK (FILL).				М		ND	
7'							M		ND	
8'							М		ND	2
9'			End of test pit approxin	nately 8.5 feet below grade						
g										
10'										
11'							III			1968
12'										
13'										
-14'										
						12				
EMARKS: - Soil sa - No gro	mple collected from undwater encounte	n approximately 3 feet l red; no groundwater so	pelow grade for lab ample collected.	oratory analysis.		s			<u> </u>	
ŢĒ	ST PIT PLAN	LEGEND:		PROPORTIONS USE	D T	EXCAVA	ATION	GROUN	DWATER	
20'	10'	BOULDER ( CLASSIFICATION	COUNT DESIGNATION	TRACE 0-10%		EFFC EEA	RT			- 1
AN	ORTH JME = 63Cu Yd	6"-18" 18"-36" 36" AND LARGER	A B C	LITTLE 10-20% SOME 20-35%	9)		DERATE	ELAPSED TIME TO READING (HRS.)	0	
			<u>-</u> -					L		

			TEST PIT FIELD LOG					
AKRF, II 34 SOU WHITE	INC. ITH BROADWAY PLAINS, NEW YORK 10601	DESCRIPTION LOCATION	PROJECT Yonkers Downtown Waterfront Yonkers, New York	TEST PIT No. FILE No. DATE	TP-18H 70004 1-27-99			
AKRF P WEATH	PERSONNEL Kevin Reilly HER 45 F Sunny	CONTRACTOR OPERATOR To		PC200LC		GROUND ELEV. TIME STARTED	8.5' +/- 1230	
DEPTH	1	SOIL DESC	RIPTION		EXCAVATION EFFORT	BOULDER COUNT QUANTITY CLASS	PID	REMAR No.
0	Brown, fine to coarse SAND and GRA	VEL, some Silt (TOF	PSOIL)			1		
	Massive CONCRETE BLOCK. Offset		191		D		ND	
2'	Gray brown SAND and SILT, little Gra	vel, Concrete Block (	FILL).		M		ND	
3'							ND	
-4'					м			
5'	Brown SAND and SILT, some Gravel,	Concrete Block (FILL	).		M		ND_	
6'					M		ND ND	1
_7					M		ND	
8'	c.						ND ND	
9'					M		ND	
-10'		End of test pit approxima	ately 9 feet below grade		M		ND	2
-11'	2							
12'								
13'				*				
14'			*					
MARKS: Soil san Ground	nple collected from approximately 5 fe water encountered at approximately 9	et below.grade for lat feet below grade, no	poratory analysis. groundwater sample collected.			<u>l</u>		
TES	T PIT PLAN LEGEND:		PROPORTIONS USED	EXCAVAT	ION	GROUND	OWATER	
20' A NO	CLASSIFICATION 6"-18"	R COUNT DESIGNATION A	TRACE 0-10% LITTLE 10-20%	EFFOR EEASY MMODE	I RATE TIM	APSED IE TO	0	
VOLUN	ME = 66 Cu Yd 36" AND LARGER	B C	SOME 20-35%	DDIFFIC		ADING (HRS.)		

	NC. TH BROADWAY PLAINS, NEW YORK 10601	DESCRIPTION LOCATION	PROJECT  Yonkers Downtown Waterfront Yonkers, New York	TEST PIT No. FILE No. DATE	TP - 19H 70004 1-27-99		3.	
AKRF PE WEATHI	ERSONNEL Mohamed Ahmed ER 45 F Sunny	CONTRACTOR OPERATOR To		L PC200LC		GROUND ELEV. TIME STARTED	10,3° 1400	
DEPTH		SOIL DESC	RIPTION		EXCAVATION EFFORT	BOULDER COUNT QUANTITY CLASS	PID	
0	Light brown, fine to coarse SAND an	d GRAVEL, some Silt	(TOPSOIL).					
1'	Dark brown SAND, GRAVEL and mi			t.	м	• 8	ND	ı
2'					D	-	ND	1
3'	Dark brown SAND and CONCRETE,	some Gravel, trace S	ilt (FILL).		D	-	ND	1
4'					М	-	ND	1
5'					M	•	ND	†
6'					M	-	ND	T
7'	Dark brown SAND, some Gravel, trac	e Silt (FILL).			М	-	ND	Ť
8'					м	-	ND	T
9'					м		ND	T
10'			End of test plt approximately 9 feet below	grade.				T
								ł
11'								
12'								
13'								
14'								
REMARKS:								L
1 - Soil san 2 - Ground	nple collected from approximately 3.f water intercepted at approximately 8.f	eet below grade for lat O feet below grade, no	poratory analysis. groundwater sample collected.					
TES	ST PIT PLAN  15'  LEGEND: BOULD CLASSIFICATION	ER COUNT	PROPORTIONS USED	EXCAVA EFFO	RI	GROUNE	WATER	
	6"-18" ORTH 18"-36"	DESIGNATION A B	TRACE 0-10% LITTLE 10-20%	EEAS MMOD		LAPSED IME TO	0	

# 3

PARCELI

AKRF, INC Environmental Consultants 34 South Broadway

# Log of Well MW-1I Yonkers Downtown Waterfront

Sheet 1 of 1

Sand Pack Filter

Сар

	44 South	h Arnadu	121/			I OUNCES DO	wntown waterfront							
White	Plains,	h Broadw New Yor	k 10601			Yonke	rs, New York	Job	Job Number: 70004					
Phone (914)				7559		City	of Yonkers	GS E	Elevation:					
<b>Driller:</b> Envir				-	9		Drilling	Da	te	Time				
Orill Method	: 4-1/4"	Hollow S	Stem Aug	er		2	Started	7/10	/98	1530				
Sample Metl	hod: Spli	it Spoon					Finished	7/10	/98	1730				
lorehole Dia	ameter:	8 in.	Wate	r Level	6.4	below grade	Logged By: K. Reilly	C	Checked B	y: M. Lapin				
Sample No.	Recovery (in.)	Blow Counts	PID	Depth (feet)	Ğ		Materials Descriptio	on .		Well Completion Locking Protective Casing ±2 above grade				
				1- 2- 3- 4- 5- 6- 7- 8- 9-	00000000000000000000000000000000000000	Drilled th 0 to 6.5'	rough SAND and GRAVEL below grade.	(FILL) from	<b>3</b>	Cap Concrete Seal O Natural Backfill Bentonite Pellet Seal 2" dia. Sch.40 Blank PVC Siotted PVC (0.010")				

End of boring at 15 feet below grade.

No samples collected.

10-

11.

12

13-

14

15-

16

17-

18-

19

20

#### Log of Well MW-2I Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

**Job Number:** 70004

GS Elevation:

Driller: Envirotech Drilling, Inc.

Drilling

Date

Time

Drill Method: 4-1/4" Hollow Stem Auger

Started

7/11/98

0700

Sample Method: Split Spoon

Finished

7/11/98

1000

Borehole Diameter: 8 in.

Water Level: 10 ' below grade | Logged By: K. Reilly

Borenole Diameter: 8 in.	Water Level:	10 below gr	ade Logged By: K. Reilly	Checked B	v: M. Lapin
Sample No. Recovery (in.)	PID Depth (feet)	Graphic Log	Materials Description		Well Completion  Locking  Casing ±2' above
	9-1	00000000000000000000000000000000000000	illed through SAND and GRAVEL (FILL) from the following of the second of		Bentonite Pellet Seal  2" dia. Sch.40 Blank PVC  2" dia. Sch.40 Slotted PVC (0.010")

				TEST PIT F	IELD LOG		· · · · · · · · · · · · · · · · · · ·			
AKRF, 34 SOL WHITE	INC. JTH BROADWAY PLAINS, NEW YO	DRK 10601	DESCRIPTION LOCATION	PROJECT  Yonkers Downtown Wa  Yonkers, New York	iterfront	TEST PIT No. FILE No. DATE	TP - 4H 70004 6-15-98			
AKRF F WEATH		named Ahmed ) F budy	CONTRACTOR OPERATOR Tor	AVATION EQUIPMENT Rusciano Excavating ny Rusciano Komatsu		PC200LC 20°		GROUND ELEV. TIME STARTED	8.5° 1530	 +/-
DEPTH		ů.	SOIL DESCR	RIPTION			EXCAVATION EFFORT			REMAR
0							EFFORT	QUANTITY CLASS	PID	No. 1
		rse SAND and GRAVE		PSOIL).		<del></del>	м		ND	
1'	Dark brown SANL	), and GRAVEL, trace S	Silt (FILL).			+		103		<del> </del>
2'							M	-	ND	
3'	CONCRETE BLO	CK FOUNDATION and	SAND, little Grave	el, trace Silt (FILL).			D		ND	
4'							М	-	ND	
5'	Dark brown SAND	and black ASH, some	Gravel, trace Silt(	(FILL).			M	•	ND	2
6'	Valloudhroum SAN	Dani CRAVEL Access	Maria comis a s				М	-	ND	
7'	Tellow/blown SAIN	D and GRAVEL, trace S	SIIT (FILL).				м		ND	
8'				¥			М	-	ND	
				End of test pit approximately	y 8 feet below (	yrade.				3
9'										
-10'										
-11'										
-12'										
13'										
14'								Ya	1	
MARKS:	· · · · · · · · · · · · · · · · · · ·		<del></del>							
Soil sa	t located on Parcel mple collected fror lwater intercepted	n approximately 5 feet I	pelow grade for lat below grade; sam	poratory analysis. ple collected and sent f	or analysis.					
TES	ST PIT PLAN 15'	LEGEND: BOULDER C	OUNT	PROPORTIONS US	ED	EXCAVA		GROUND	WATER	
10'		CLASSIFICATION 6"-18"	DESIGNATION A	TRACE 0-10% LITTLE 10-20%		EFFOR EEASY MMODE	E	LAPSED IME TO	0	
A NO	ORTH ME≃ 44 CuYd	18"-36" 36" AND LARGER	B C	SOME 20-35%		DDIFFIC		EADING (HRS.)	-	ļ

			TEST PIT FIE	LDLOG					
AKRF, I 34 SOU WHITE	INC. ITH BROADWAY PLAINS, NEW YORK 10601	DESCRIPTION LOCATION	PROJECT  Yonkers Downtown Wate Yonkers, New York	erfront F	TEST PIT No. FILE No. DATE	TP - 5H 70004 6-15-98			
AKRF P WEATH	PERSONNEL Mohamed Ahmed HER 60 F Cloudy	CONTRACTOR OPERATOR To	AVATION EQUIPMENT Rusciano Excavating my Rusciano Komatsu	MODEL REACH	PC200LC 20'		GROUND ELEV. TIME STARTED	8' 1 1630	H-
DEPTH		SOIL DESC	RIPTION			EXCAVATION EFFORT	BOULDER COUNT QUANTITY CLASS	PID	REMARK No.
0	Gray, fine to coarse SAND and GRAVEL	some Silt (TOP	SOIL)						1
; I	Dark brown SAND and SILT, some misc					м		ND	
2'						M	-	ND	
3'	Brown SAND and SILT, some Coal Ash	(FILL).				М	-	ND	
4'						М	-	ND	
5'	Dark brown SAND and SILT, trace Grave	el (FILL).				M		ND	
6'						M	-	ND	
7			u u			м	-	ND	
8'		-				M	-	ND	
9'						M	-	ND	2
			End of test pit approximately 9	feat below gra	ide,				
10'									
11'									
12'									ı
13'							ω.		
14'									
							·		
- Test pi - Ground	it located on Parcel I (Mislabled H). dwater intercepted at approximately 8.5 fe	eet below grade; n	o soil or groundwater sam	nples sent fo	or analysis.				
	ST PIT PLAN LEGEND: 10' BOULDER (	COUNT	PROPORTIONS USE	2	EXCAVA EFFOR		GROUNI	OWATER	
15'	CLASSIFICATION 6"-18"	DESIGNATION	TRACE 0-10%		EEAS		ELAPSED		1

			TEST PIT FIELD LO	ng .	· · · · · · · · · · · · · · · · · · ·			
AKRF, INC. 34 SOUTH BROAD WHITE PLAINS, NI	DWAY EW YORK 10601	DESCRIPTION LOCATION	PROJECT  Yonkers Downtown Waterfront Yonkers, New York	TEST PIT No. FILE No. DATE	TP - 6H 70004 6-15-98			
AKRF PERSONNEI WEATHER	L Mohamed Ahmed 60 F Cloudy	OPERATOR To	Komatsu MOD	EL PC200LC CH 20'		GROUND ELEV. TIME STARTED	8.5' 1720	+/-
DEPTH		SOIL DESC	RIPTION		EXCAVATION EFFORT	BOULDER COUNT QUANTITY CLASS		REMAR
Grev fine to	o coarse SAND and GRAV	/El			27707	GUANTITY CLASS	PID	No.
			SOIL). el bars and large Concrete blocks	s), trace Silt.	м	-	ND	
2'					D	-	ND	
3' Brown SAN	D, and CONCRETE, trace	Silt (FILL).			м		ND	
-4'					М	-	ND	-
5' Dark brown	SAND and CONCRETE, s	ome Gravel, trace Si	it (FILL).		М	-	ND	
6'		,			м	-	ND	
7'					м	-	ND	
8'					M		ND	2
			End of test pit approximately 8 feet belo	w grade.				
-9'								
10'								
11'								
12'								
13'								
14'	()							
							ļ	
ARKS: Test pit located on l No groundwater inte	Parcel I (Mislabled H). ercepted; no soil sent for a	nalysis.			ii			<u> </u>
TEST PIT PLAN	LEGEND:		PROPORTIONS USED					
5'	CLASSIFICATION 6"-18"	R COUNT DESIGNATION A	TRACE 0-10% LITTLE 10-20%	EXCAVATI EFFORY EEASY	E.	<u>GROUND</u> APSED		
A NORTH VOLUME = 133 Cu Yo	18"-36"	В С	SOME 20-35%	MMODE		ME TO EADING (HRS.)	0	

PARCEL C

## Log of Boring B-1C Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

Job Number: 70004

Briller: E	nvirotech	Drilling					or runkers	GS	Elevati	on:			
				<del></del>			Drilling	D	ate	T		Time	
	lethod: Sp		Stem Au	ger			Started	10/2	29/98			1435	
	Diameter						Finished	10/2	29/98			1445	
DOI CITOIR			Wate	er Level:	Not Er	countered	Logged By: K. Reilly		Checke	d By:	M. La	apin	
Sample No.	Recovery (in.)	Blow Counts	PIO	Depth (feet)	Graphic Log		Materials Descriptio	'n		Moisture			
				1_		8" ASPHA	ALT PAVEMENT						
S-1	17"	43 60 40 41	ND	2-	000000000000000000000000000000000000000	Very den	se, brown/gray SAND and	GRAVEL.		Dry			-
S-2	2"	100/6"	ND	3-1; c	0.0	Very dens	se, black SAND and fine G	RAVEL.		Dry			-
				4-		Drilled thro	ough Concrete from 3.5 to de.	4.5 feet					-
S-3*	4"	9 9 30 30	ND	5-0 -0 6-0	0.00000	Dense, bro Schist.	wn SAND and fine GRAVE	L, some		Dry			
		·		7 8 - 10 - 11 - 12 - 13 - 13 - 13 - 13 - 13 - 13			7 feet below grade. ent for laboratory analysi. Detected	5.					

# Log of Well MW-2C Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

Phone (914) 949-7	, NEW TORK	14) 0 40		01110	rs, New York	OOD HUIL	<b>ber:</b> 70004
Phone (914) 949-7				City	of Yonkers	GS Eleva	etion:
Oriller: Envirotech					Drilling	Date	Time
Orill Method: 4-1/4		em Auger		· · · · · · · · · · · · · · · · · · ·	Started	10/29/98	
Sample Method: Sp		<del></del>			Finished	10/29/98	
Borehole Diameter	8 in.	Water Level	7.5 '	below grade	Logged By: K. Reilly	Chec	ked By: M. Lapin
Sample No.	Blow Counts	PID Depth (feet)	Graphic Log		Materials Description		Well Completion  Locking  Protectivi  Casing  flush with
		1- 2- 3- 4- 5- 6- 10- 11- 12- 13- 14- 15- 16-	00000000000000000000000000000000000000	SAND and Drilled thr below gra  Brown to be auger fligh	plack SAND and GRAVEL rests.  D and SILT noted on aug	4 feet  noted on  er flights.	Grade Cap Concrete Seal Natural Backfill Bentonite Pellet Seal  2" dia. Sch. 40 Blank PVC  (0.010") Sand Pack Filter  Cap  Cap

## Log of Boring B-3C Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

Job Number: 70004

Drillore Environment		7040 7336			- y	of fonkers	GS	Elevati	on:		
Driller: Envirotech						Drilling	0	ate		Tim	ie
Drill Method: 4-1/4		M Auger				Started	10/	30/98		070	00
Sample Method: Sp		1	<u> </u>			Finished	10/3	30/98		083	10
Borehole Diameter:	8 in.	Water Lo	evel: No	t Encountere	eđ	Logged By: K. Reilly		Checke	d By: M.	Lapin	
Sample No.	Blow Counts	PID	(feet)	Graphic Log		Materials Descriptio	n				
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Drilled grade. <i>Refusa</i>	thre	ough Concrete to 4.5 fee  4.5 feet below grade.  collected.	t below				

# Log of Well MW-4C Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

Phone (	914) 949-7	7336	. (014) 044			0:1	13, INEM TOLK		MOINDEL.	
	nvirotech			9-7559		City	of Yonkers	GS E	levation:	
							Drilling	Dat	e	Time
	iod: 4-1/- lethod: S			uger ————			Started	10/30	/98	0845
	Diameter						Finished	10/30,	/98	1045
DOI CITOR	T	r: 8 in.	Wa	ter Level:	5.5	below grade	Logged By: K. Reilly	CI	hecked B	y: M. Lapin
Sample No.	Recovery (in.)	Blow Counts	PID	Depth (feet)	Graphic Log	25	Materials Description	on		Well Completion  Locking  Protective Casing flush with grade
S-1	2"	50 50 50 40	ND	1-	0 00 00 00 00	6" ASPHA	SE GRAVEL.			Cap Concrete Seal
S-2	0	100/6"	ND	3-	00000	No recove	ery – Drilled through GRA	VEL.		
S-3*	13"	15 12 12 18	ND	5-6	0,00000000	Medium de little Silt.	nse, dark brown SAND an	d GRAVEL,		Peltonite Pellet Seal 2" dia. Sch.40 Blank PVC
S-4	7"	65 42 32 28	ND	7-		Very dense SILT, little	e, light to dark brown SAN fine Gravel.	ND and	1 1:33-	• P. 24   LU.UIU
S-5	9"	40 38 52 19	ND	9-		Very dense Sand.	, black SILT, trace fine (	Gravel,		Sand Pack Filter  -
	÷			11			ng at 11 feet below grade. nt for laboratory analysis Detected			Cap

## Log of Boring B-5C Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

Job Number: 70004

GS Elevation:

Jr	riller: Fr	virotech	Drilling	Inc					GS Elevat	ion:					
	Driller: Envirotech Drilling, Inc.  Drill Method: 4-1/4" Hollow Stem Auger							Drilling	Date			Tim	е		
	Sample Method: Split Spoon							Started	10/30/98			1100	100		
_		Diamete:						Finished	10/30/98			1200	)		
F	OI CITOIC		1. 6 111.	wat	er Level:	5 be	elow grade	Logged By: K. Reilly	Checke	ed By	/: M. L	apin			
-	Sample No.	Recovery (in.)	Blow Counts	PID	Depth (feet)	Graphic Log		Materials Description	on	Moisture	Water Table				
-					1- 2-		24" ASPH	HALT PAVEMENT	л				-		
	S-1*	4"	20 32 33 25	ND	1	0,00000	Very dens	se, black SAND and fine (	GRAVEL.	Dry			-		
-	S-2	14"	13 12 7 12	ND	5 5	0 0 0 0 0		rown SAND and fine GRAV	<u>.</u> .	Dry Wet	Ť		-		
-	S-3	11"	14 14 24 50	ND	7-1:0 0.	000000000		ack SAND and GRAVEL. Brown GRAVEL.	,	Yet		3			
-	Q		ji e		9-10-11-12-13-		*Sample se	leum odor poted on the							

### Log of Boring B-6C Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

Phone	inite Plair (914) 949-	1s, New Y 7336 Fa:	ork 10601 x (914) 949	1-7550		Yonke	ers, New York	Jo	b Number:	70004		
	nviroteci			7338		City	of Yonkers	GS	Elevation:			
			Stem Au	IGOr			Drilling		ate		Tim	e
	Method: S						Started	10/3	30/98		1200	)
	Diamete			er I ovok	<i>E '</i> b		Finished	10/3	30/98		1300	)
		T	Mat	er Level:	5 D6	elow grade	Logged By: K. Reilly		Checked E	<b>3y:</b> M. I	apin	
Sample No.	Recovery (in.)	Blow Counts	PID	Depth (feet)	Graphic Log		Materials Description	n	Moietire	Water Table		
*				1- 2-		24" ASPH	IALT PAVEMENT					
				3- 4-		Drilled thr grade.	ough Concrete from 2' to	4' below				-
S-1*	18"	24 8 7 12	ND	7	0000		rown SAND and GRAVEL,	some Silt.	Dry	Ţ		-
S-2	2"	60 100/6"	ND	6-	0000		e black SAND and fine GR	AVEL.	Wet			
			,	7 - 8 - 9 - 10 - 11 - 12 - 13 - 13 - 13 - 13 - 13 - 13	, , , , , , , , , , , , , , , , , , ,		7 feet below grade. ent for laboratory analysis Detected	s.				

### Log of Boring B-7C Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

Job Number: 70004

GS Elevation:

Driller: Envirotech Drilling, Inc.DrillingDateTimeDrill Method: 4-1/4" Hollow Stem AugerStarted10/30/981300Sample Method: Split SpoonFinished10/30/981400

Borehol	e Diamete	re Q in					Finished	10/	30/98			1400	
	·		Wat	er Level:	7 be	elow grade	Logged By: K. Reilly		Checke	d By	: M. L	apin	
S alone S	Recovery (in.)	Blow Counts	PIO	. Depth (feet)	Graphic Log		Materials Description	on ·		Moisture	Water Table		
-				- 1-		12" ASPH	ALT PAVEMENT						
S-1	2"	60 52 52 58	ND	1 40	0,00,00,00	Very dens	se, brown to black coarse /EL.	e SAND and	1	Dry			-
S-2	10"	65 65 50 50	ND	4-		Very dens Gravel.	e, black SAND and SILT,	some fine	ı	Dry			-
S-3	12"	50 100	ND	5 6		Very densi some fine (	e, brown to black SAND a Gravel.	nd SILT,		ry			-
S-4*	12"	38 100	2.3	7-		Dense, blac petroleum c	ck SAND and SILT. (Slig odor noted.)	ht	D	ry ,			
S-5	18"	22 32 34 37	ND	8-		Very dense	e, brown SILT, trace fine (	Gravel.	We	-	-		-
				9-10- 11- 12- 13-		*Sample sel	leum odor noted on the	· <b>.</b>					

## Log of Boring B-8C Yonkers Downtown Waterfront Yonkers, New York City of Yonkers

Sheet 1 of 1

	nviroteci		(914) 946	7 7 2 2 8		City	of Yonkers	GS	Elevati	on:			
	hod: 4-1/						Drilling		ate			Tim	е
	Method: S			uger			Started	10/	30/98			141	5
	Diamete						Finished	10/	30/98			1530	0
		1. 0 111.	Wat	ter Leve	1: 7 b	elow grade	Logged By: K. Reilly		Checke	d By	: M. L	apin.	
Sample No.	Recovery (in.)	Blow Counts	PID	Depth (feet)	Graphic Log	*	Materials Descriptio	on s		Moisture	Water Table		
					_	12" ASPH	ALT PAVEMENT						
		22		3- 3- 5-	00000000000000000000000000000000000000	below gra	rough coarse GRAVEL from de.						
S-1*	24"	31 20 32 6	ND	6- 7-		Very dense	e brown SILT, trace Sand	l <b>.</b>		lry .	¥.		
S-2	18"	10 10 14	ND	8- 9-		medium den	se, brown SILT, trace Sa	nd.	W	et			-
				10-			ng at 9 feet below grade. nt for laboratory analsis. Detected	9					

## **APPENDIX F**

## OF THE SITE INVESTIGATION REPORT OF "PHASE I" PARCELS H, I AND C YONKERS DOWNTOWN WATERFRONT YONKERS, NEW YORK BROWNFIELDS PROGRAM

Prepared for:
Mr. James Surdoval
Waterfront Development Director
City of Yonkers
40 Broadway
Yonkers, New York 10701

and

Mr. Thomas Gibbons
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Prepared by:
AKRF, Inc.
34 South Broadway
White Plains, New York 10601

PARCEL H

Client ID: TP-1H

Site: Yonkers Waterfront

Lab Sample No: 66029 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98

Date Analyzed: 06/24/98 GC Column: DB624 Instrument ID: VOAMS5.i

Lab File ID: e2308.d

Matrix: SOIL Level: LOW

Sample Weight: 5.2 g Purge Volume: 5.0 ml

% Moisture: 15

## VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene	Units: ug/kg (Dry Weight)  ND ND ND ND ND ND ND ND ND ND ND ND ND	Limit Units: ug/kg  5.6 5.6 5.6 5.6 5.6 5.6 5.6 5.6 5.6 5.
Ethylbenzene Styrene Xylene (Total)	ND ND 1.0J	5.6 4.5 5.6
	4.00	5.6

Client ID: TP-1H

Site: Yonkers Waterfront

Lab Sample No: 66029 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98 Date Analyzed: 06/24/98

GC Column: DB624

Instrument ID: VOAMS5.i Lab File ID: e2308.d Matrix: SOIL Level: LOW

Sample Weight: 5.2 g Purge Volume: 5.0 ml

% Moisture: 14.6

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME			<del>                                     </del>
1   Improve 31	RT	EST. CONC. ug/kg	Q
1. Unknown Alkane	1	==========	====
2. Decane	13.73	14	
3. C11H24 Alkane	14.43	49	
J. CIIn24 Alkane	14.73	36	
4. Coeluting Alkanes	15.13		
5. Undecane	15.60	31	
6. Decahydronaphthalene isomer	15.68	21	
/ · ULKNOWN Siloxane		14	
8. Unknown	15.93	31	
9. Unknown Alkane	18.16	19	
10. C15H28 Aromatic	18.55	19 [	
11.	20.25	27	
11			
12.			
13. 14.			
14. 15.			
15. 16.			
17. 18.			
18. 19.			
19. 20.			
20. 21.			
21.			
22			
22			
24. 25.			
25.		100	
25			
27.		-	
27. 28.		-	
28		-	
29. 30.	-		
30			
1			

TOTAL ESTIMATED CONCENTRATION 261

Client ID: TP-1H

Site: Yonkers Waterfront

Lab Sample No: 66029 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98

Date Extracted: 06/17/98 Date Analyzed: 06/24/98 GC Column: DB-5

Instrument ID: BNAMS4.i Lab File ID: u2665.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

% Moisture: 15

### SEMI-VOLATILE ORGANICS - GC/MS METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND 100 J ND ND ND ND ND ND ND ND ND ND ND ND ND	780 780 780 780 780 780 780 780 780 1600 1600

Client ID: TP-IH

Site: Yonkers Waterfront

Lab Sample No: 66029 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98
Date Extracted: 06/17/98
Date Extracted: 06/24/98
GC Column: DB-5
Instrument ID: BNAMS4.i

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml Dilution Factor: 1.0

Lab File ID: u2665.d

% Moisture: 15

## SEMI-VOLATILE ORGANICS - GC/MS METHOD 8270C

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units:</u> ug/kg
bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene 4-Chloronaphthalene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Dibenzofuran 2,4-Dinitrotoluene Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene	Uny Weight)  ND  ND  ND  ND  ND  ND  ND  ND  ND  N	
Phenanthrene Anthracene	ND 1000 310 J	39 780 780

Client ID: TP-IH

Site: Yonkers Waterfront

Lab Sample No: 66029

Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98 Date Extracted: 06/17/98

Date Analyzed: 06/24/98

GC Column: DB-5

Instrument ID: BNAMS4.i Lab File ID: u2665.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

% Moisture: 15

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	110 J ND 1700 1700 1700 ND ND 860 1100 330 J ND 1500 620 910 300 100 300 J	780 780 780 780 780 1600 39 780 780 780 39 39 39 39

Client ID: TP-1H

Site: Yonkers Waterfront

Lab Sample No: 66029 Lab Job No: E651

Date Sampled: 06/15/98
Date Received: 06/15/98
Date Extracted: 06/17/98
Date Analyzed: 06/24/98

Matrix: SOIL Level: LOW

GC Column: DB-5

Sample Weight: 30.0 g

Instrument ID: BNAMS4.i

Extract Final Volume: 2.0 ml

Lab File ID: u2665.d

Dilution Factor: 1.0 % Moisture: 14.6

### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME  1. Unknown 2. Palmitic acid 3. Unknown Alkane 4. Unknown Organic Acid	RT ====== 21.27 21.42 22.12	1000	Q ====
5. Stearic acid 6. Unknown 7. Unknown 8. Unknown 9. Unknown 10. Unknown 11. Unknown 12. Unknown 13. Unknown 14. Unknown 15. Unknown	22.60 22.72 22.99 23.54 23.80 24.02 24.13 24.65 25.24 25.55 26.16	2400 1000 870 900 1100 820 740 840 1000 1100 800	
16. Unknown 17. C20H12 PAH 18. Unknown 19. Unknown 20. Unknown 21. 22. 23.	26.29 27.53 28.16 28.58 31.80 32.05	1000 4200 1900 2300 1700 1800	
24			

TOTAL ESTIMATED CONCENTRATION

28570

Client ID: TP-1H

Site: Yonkers Waterfront

Lab Sample ID: 66029 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98

Date Extracted: 06/16/98

Date Analyzed: 06/18/98 GC Front Column: DB-5 GC Rear Column: DB-608

Instrument ID: PESTGC5.i Front File ID: pf008319.d Rear File ID: pr008319.d Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume: 10.0 ml

Dilution Factor: 1.0

% Moisture: 15

## ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>	
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND 420 340 ND	78 78 78 78 78 78 78 78 78	R R R R R R R R

Client ID: TP-1H

Site: Yonkers Waterfront

Lab Sample No: 66029

Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98

Matrix: SOLID Level: LOW

% Moisture: 14.6

# METALS ANALYSIS

	Analytical			
	Result	Instrument		
	Units: mg/kg	Detection		
<u>Analyte</u>	(Dry Weight)	Limit	0	
		DIMIL	<u>Oual</u>	<u>M</u>
Aluminum	7860	13.6		_
Antimony	ND	1.1	NT.	P
Arsenic	14.1	0.89	N *	P
Barium	99.2	0.33	^	P
Beryllium	0.40	0.047	Б	P
Cadmium	0.25	0.047	B B	P
Calcium	13300	9.9	В	P
Chromium	19.4	0.23		P
Cobalt	7.8	0.28	В	P
Copper	187	0.82	В	P
Iron	25900	9.7		P
Lead	266	0.59		P
Magnesium	5000	9.4		P
Manganese	314	0.26		P P
Mercury	1.1	0.020		
Nickel	23.1	0.49		CA
Potassium	1600	70.3		P
Selenium	ND	1.1		P
Silver	ND	0.33		P P P P P P
Sodium	173	99.8	В	Þ
Thallium	ND	1.1	ь	, P
Vanadium	25.5	0.44		, P
Zinc	187	1.1		
				P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: TP-3H

Site: Yonkers Waterfront

Lab Sample No: 66031 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98 Date Analyzed: 06/22/98

Matrix: WATER Level: LOW

GC Column: DB624

Purge Volume: 5.0 ml Dilution Factor: 1.0

Instrument ID: VOAMS3.i

Lab File ID: c0157.d

## VOLATILE ORGANICS - GC/MS METHOD 8260

Parameter	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene Xylene (Total)		5.0 5.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6

Client ID: TP-3H

Site: Yonkers Waterfront

Lab Sample No: 66031

Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98

Date Analyzed: 06/22/98 GC Column: DB624

Instrument ID: VOAMS3.i

Lab File ID: c0157.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1. Unknown Siloxane 2. Unknown Siloxane 3	16.80 18.73	7.6 5.4	
6			
10			
15			
19. 20.			
23. 24.			
7. 8. 9.			
30.			

TOTAL ESTIMATED CONCENTRATION 13

Client ID: TP-3H

Site: Yonkers Waterfront

Lab Sample No: 66031

Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98

Date Extracted: 06/16/98 Date Analyzed: 06/24/98

GC Column: DB-5 Instrument ID: BNAMS5.i

Lab File ID: q5265.d

Matrix: WATER Level: LOW

Sample Volume: 950 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	21 21 21 21 21 21 21 21 21 42 42 42 42

Client ID: TP-3H

Site: Yonkers Waterfront

Lab Sample No: 66031

Lab Job No: E651

Date Sampled: 06/15/98

Date Received: 06/15/98 Date Extracted: 06/16/98

Date Analyzed: 06/24/98

GC Column: DB-5 Instrument ID: BNAMS5.i Lab File ID: q5265.d

Matrix: WATER Level: LOW

Sample Volume: 950 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Dibenzofuran 2,4-Dinitrotoluene Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	1.0 21 21 21 1.0 1.0 1.0 21 21 21 21 21 21 21 21 21 21

Client ID: TP-3H Site: Yonkers Waterfront

Lab Sample No: 66031 Lab Job No: E651

Date Sampled: 06/15/98
Date Received: 06/15/98
Date Extracted: 06/16/98
Date Analyzed: 06/24/98

Matrix: WATER Level: LOW

Level: LOW Sample Volu

Sample Volume: 950 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

GC Column: DB-5

Instrument ID: BNAMS5.i Lab File ID: q5265.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	0.6J ND 14 J 13 J ND ND 7.9 8.9J ND ND 10 3.6 8.1 4.8 1.3 5.0J	21 21 21 21 42 1.0 21 21 21 1.0 1.0 1.0
V.		— <del>—</del>

Client ID: TP-3H

Site: Yonkers Waterfront

Lab Sample No: 66031

Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98 Date Extracted: 06/16/98

Date Analyzed: 06/24/98

GC Column: DB-5

Instrument ID: BNAMS5.i Lab File ID: q5265.d

Matrix: WATER Level: LOW

Sample Volume: 950 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
2. NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND	=======		=====
4.			-
6. 7.			
8. 9. 10			
12.			
14. 15.			
17.			
19. 20.			
22.			
24			
27.			
28. 29. 30.			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: TP-3H

Site: Yonkers Waterfront

Lab Sample ID: 66031 Lab Job No: E651

Date Sampled: 06/15/98
Date Received: 06/15/98

Date Extracted: 06/18/98 Date Analyzed: 06/19/98 GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i Matrix: WATER
Sample Volume: 990 ml

Extract Final Volume: 5.0

Dilution Factor: 1.0 Front File ID: of002061.d Rear File ID: or002061.d

### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results <u>Units: ug/l</u>	Method Detecti Limit <u>Units: ug/l</u>	Quant.
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND 0.54 ND 1.0	0.50 0.50 0.50 0.50 0.50 0.50 0.50	R R R R R R R R R R

Client ID: TP-3H

Site: Yonkers Waterfront

Lab Sample No: 66031

Lab Job No: E651

Date Sampled: 06/15/98
Date Received: 06/15/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: uq/l</u>	Instrument Detection <u>Limit</u>	_	<u>Qual</u>	<u>v</u>
Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc	3530 ND 8.8 357 ND 1.7 171000 9.0 3.9 233 7000 267 37400 200 2.0 15.4 11200 6.2 ND 96000 ND 33.8 833	58.2 4.6 3.8 1.4 0.20 0.40 42.2 1.0 1.2 3.5 41.5 2.5 40.3 1.1 0.10 2.1 300 4.8 1.4 426 4.8 1.9 4.5	B B B	999999999999999999	
				P	

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 66033 Lab Job No: E651

Date Sampled: 06/08/98 Date Received: 06/15/98 Date Analyzed: 06/22/98 GC Column: DB624

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

Instrument ID: VOAMS3.i Lab File ID: c0148.d

## VOLATILE ORGANICS - GC/MS METHOD 8260

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	Units: ug/l  ND  ND  ND  ND  ND  ND  ND  ND  ND  N	
Xylene (Total)	ND	5.0 5.0

Client ID: Trip\_Blank
Site: Yonkers Waterfront

Lab Sample No: 66033 Lab Job No: E651

Date Sampled: 06/08/98 Date Received: 06/15/98 Date Analyzed: 06/22/98

Matrix: WATER Level: LOW

GC Column: DB624

Purge Volume: 5.0 ml Dilution Factor: 1.0

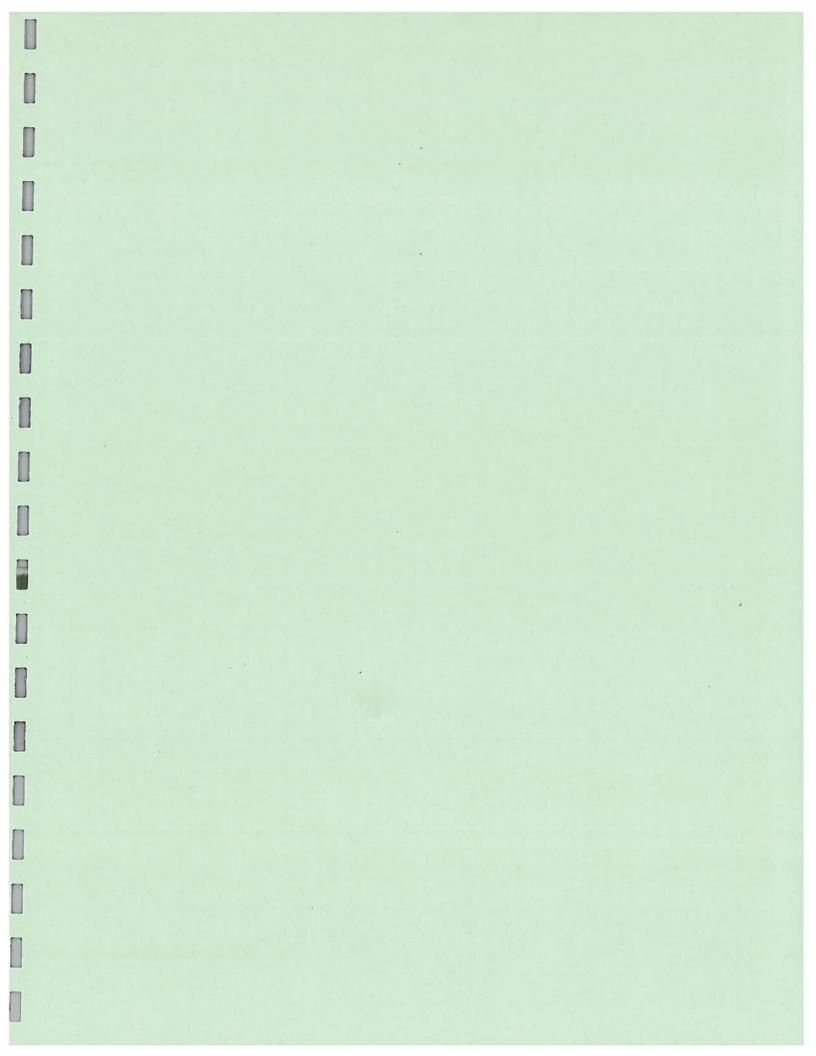
Instrument ID: VOAMS3.i Lab File ID: c0148.d

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
2.	16.77		
4.			
5			
9.			
10			
14.			
16.			
18.			
21.			
23			
25. 26.			
28.			
29. 30.			
	[		

TOTAL ESTIMATED CONCENTRATION 8.4

PAGE LOF LAB USE ONLY E65 802144 Project No: 66029 66030 66032 Job No: Numbers 6000 Sample 6003 Water Metals Filtered (Yes/No)? EMSTEDIE Other:  $\overline{\mathcal{E}}$ ANALYSIS REQUESTED (ENTER'X" BELOW TO INDICATE REQ Laboratory Certifications: New Jersey (12543), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132), Petropie NY: Company Сотрапу Company CHAIN OF CUSTODY / ANALYSIS REQUEST Company 5 Regulatory Program: CLD State (Location of site): NJ: Site/Project Identification Received by X Received by Received by Received b 2/2 6 15 38 16:20 1) UNSTECTE H 1615. 18 1800 13 REILL Samplers Name ( Printed ) Analysis Turnaround Time 8/15/43 11700 No. of. Cont. Water: Date / Time Soil Date / Time Date / Time Rush Charges Authorized For: 2-15-98 dsa, Whread Time | Matrix | WAREA WATER 3 70004 10.5 A.V. KEVIN Standard | 2 Week Preservation Used: (1=1CB, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH 1 Week Other 6-15-18 330 6-15-98 7 115 98 86-8-9 Date 10001 914-949-119 7 = Other AKRF ENVIROTECH RESEARCH INC. Сотрапу ER dompany Company 양 Сотрапу Edison, New Jersey 08817 Phone: (732) 549-3900 Fax: (732) 549-3679 Address 34 South Broadway アユ Sample Identification State Fax Name (for report and invoice) MICHELEPIN 6 = Other TRIP BLANK Special Instructions PKRF Inc. 777 New Durham Road 1) Kevin Reputy 914-949-7336 burt K Pains THAH TP34 H# 01 TPIM Relinquished by Refinquished by Relinquished by Relinquished by Sompany



Site: Yonkers Waterfront

Lab Sample No: 66208 Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98
Date Analyzed: 06/18/98
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c0062.d

Matrix: WATER

Level: LOW
Purge Volume: 5.0 ml Dilution Factor: 1.0

#### **VOLATILE ORGANICS - GC/MS** METHOD 8260

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane	ND	= -
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	5.0
Acetone	ND	3.0
Carbon Disulfide	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND ND	2.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	2.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0 2.0
Bromodichloromethane	ND	
1,2-Dichloropropane	ND	1.0
Cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	1.5	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0
Xylene (Total)	ND	5.0
		3.0

Client ID: TP-9H-Aq Site: Yonkers Waterfront

Lab Sample No: 66208 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Analyzed: 06/18/98
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c0062.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND			
3. 4.			
6.			
8			
10.			2
12.			
14.			
16.			
18.			
19. 20. 21.			
23.			
25.			
27.			
29.			
30			

TOTAL ESTIMATED CONCENTRATION

0.0

Client ID: TP-9H-Aq Site: Yonkers Waterfront

Lab Sample No: 66208 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Extracted: 06/17/98
Date Analyzed: 06/25/98
GC Column: DB-5
Instrument ID: BNAMS6.i

Lab File ID: m1062.d

Matrix: WATER Level: LOW

Sample Volume: 920 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Parameter	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND	11 11 11 11 11 11 11 11 27 27 27 27

Site: Yonkers Waterfront

Lab Sample No: 66208

Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Extracted: 06/17/98

Date Analyzed: 06/25/98 GC Column: DB-5 Instrument ID: BNAMS6.i Lab File ID: m1062.d

Matrix: WATER Level: LOW

Sample Volume: 920 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis(2-Chloroethyl)ether	ND	11
1,3-Dichlorobenzene	ND	11
1,4-Dichlorobenzene	ND	11
1,2-Dichlorobenzene	ND	11
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	11
Hexachloroethane	ND	11
Nitrobenzene	ND	11
Isophorone	ND	11
bis(2-Chloroethoxy)methane	· ND	11
1,2,4-Trichlorobenzene	ND	11
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	11
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	27
Dimethylphthalate	ND	— -
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	11
3-Nitroaniline	ND	11 27
Acenaphthene	ND	
Dibenzofuran	ND	11 11
2,4-Dinitrotoluene	ND	<del></del>
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND ND	11
4-Nitroaniline	ND	11
N-Nitrosodiphenylamine	ND	27
4-Bromophenyl-phenylether	ND ND	11
Hexachlorobenzene	ND ND	11
Phenanthrene		11
Anthracene	ND	11
	ND	11

Client ID: TP-9H-Aq Site: Yonkers Waterfront

Lab Sample No: 66208 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98 Date Extracted: 06/17/98

Date Analyzed: 06/25/98 GC Column: DB-5 Instrument ID: BNAMS6.i Lab File ID: m1062.d

Matrix: WATER

Level: LOW
Sample Volume: 920 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result Units: ug/l	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND ND ND ND ND ND ND ND ND ND ND ND	11 11 11 11 22 11 11 11 11 11 11

Site: Yonkers Waterfront

Lab Sample No: 66208 Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98 Date Extracted: 06/17/98 Date Analyzed: 06/25/98

Matrix: WATER Level: LOW

GC Column: DB-5 Instrument ID: BNAMS6.i Lab File ID: m1062.d

Sample Volume: 920 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
1NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND 2			
4. 5. 6.			
7			
9.		6	
11.			
13.			
15.			
16. 17. 18.			
	<u> </u>		
20.			
22.			
24.			
25. 26. 27.			
28.		2.	
29. 30.			

TOTAL ESTIMATED CONCENTRATION

0.0

Site: Yonkers Waterfront

Date Sampled: 06/16/98 Date Received: 06/16/98 Date Extracted: 06/18/98 Date Analyzed: 06/19/98 GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i Lab Sample ID: 66208 Lab Job No: E684

Matrix: WATER

Sample Volume: 860 ml Extract Final Volume:

Dilution Factor: Front File ID: of002059.d Rear File ID: or002059.d

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

		Method Detecti	ion
<u>Parameter</u>	Analytical Results <u>Units: uq/l</u>	Limit <u>Units: uq</u> /l	Quant.
-	9-12-05 - 49/1	Unites: ud/i	Column
Aroclor-1016	ND	0.58	R
Aroclor-1221	ND	0.58	R
Aroclor-1232 Aroclor-1242	ND	0.58	R
Aroclor-1242 Aroclor-1248	ND	0.58	R
Aroclor-1254	ND	0.58	R
Aroclor-1260	ND	0.58	R
Aroclor-1262	ND ND	0.58	R
Aroclor-1268	ND	0.58	R
	ND	0.58	R

Client ID: TP-9H-Aq Site: Yonkers Waterfront Lab Sample No: 66208 Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98

Matrix: WATER Level: LOW

#### METALS ANALYSIS

Analytical	Instrument	15.	
	Detection		
Units: ug/l	<u>Limit</u>	<u>Oual</u>	<u>M</u>
6810	58.2		P
ND ·	4.6		P
6.4	3.8		P
146	1.4	В	P
0.38	0.20	В	P
ND	0.40		P
124000	42.2		<b>6666666666666666666666666666666666666</b>
22.8	1.0		P
7.3	1.2	В	P
41.0	3.5		P
11600	41.5		P
58.2	2.5		P
219000	40.3		P
245	1.1		P
0.43	0.10		CV
27.6	2.1	В	
79200	300		₽
ND	4.8		P
ND	1.4		P
1790000	4260		P
ND	4.8		P
20.9	1.9	В	9999999
116	4.5		P
	Result Units: ug/l  6810 ND 6.4 146 0.38 ND 124000 22.8 7.3 41.0 11600 58.2 219000 245 0.43 27.6 79200 ND ND 1790000 ND 1790000 ND 20.9	Result Units: ug/l Limit  6810 58.2 ND 4.6 6.4 3.8 146 1.4 0.38 0.20 ND 0.40 124000 42.2 22.8 1.0 7.3 1.2 41.0 3.5 11600 41.5 58.2 2.5 219000 40.3 245 1.1 0.43 0.10 27.6 2.1 79200 300 ND 4.8 ND 1.4 1790000 4260 ND 4.8 1.9	Result Units: ug/l Limit Oual  6810 58.2 ND 4.6 6.4 3.8 146 1.4 B 0.38 0.20 B ND 0.40 124000 42.2 22.8 1.0 7.3 1.2 B 41.0 3.5 11600 41.5 58.2 2.5 219000 40.3 245 1.1 0.43 0.10 27.6 2.1 B 79200 300 ND 4.8 ND 1.4 1790000 42.60 ND 4.8 ND 1.4 1790000 42.8 20.9 1.9 B

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: TP-8H-Aq Site: Yonkers Waterfront

Lab Sample No: 66209 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Analyzed: 06/17/98
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c0036.d

Matrix: WATER Level: LOW
Purge Volume: 5.0 ml

Dilution Factor: 1.0

### VOLATILE ORGANICS - GC/MS METHOD 8260

<u>Parameter</u>	Analytical Result Units: ug/l	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethene trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene Xylene (Total)		5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
	ND	5.0

Site: Yonkers Waterfront

Lab Sample No: 66209 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Analyzed: 06/17/98
GC Column: DB624
Instrument ID: VOAMS3.i

Lab File ID: c0036.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

		<del></del>	
COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND			=====
3.			
3. 4. 5			
5. 6. 7			
· · · · · · · · · · · · · · · · · · ·			
9.			
11. 12.			<b> </b>
15.			
16. 17.			
; ±0.			
19. 20.			
23.			
26.			
29.			
30			

TOTAL ESTIMATED CONCENTRATION

0.0

Site: Yonkers Waterfront

Lab Sample No: 66209 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Extracted: 06/17/98
Date Analyzed: 06/25/98
GC Column: DB-5

Instrument ID: BNAMS6.i Lab File ID: m1063.d

Matrix: WATER Level: LOW

Sample Volume: 970 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>		uantitation Limit uits: ug/l
Phenol	ND		10
2-Chlorophenol	ND		10
2-Methylphenol	ND		10
4-Methylphenol	ND		10
2-Nitrophenol	ND		10
2,4-Dimethylphenol	ND		10
2,4-Dichlorophenol	ND		10
4-Chloro-3-methylphenol	ND		10
2,4,6-Trichlorophenol	ND		10
2,4,5-Trichlorophenol	ND		10
2,4-Dinitrophenol	ND		26
4-Nitrophenol	ND		26
4,6-Dinitro-2-methylphenol	ND	4	26
Pentachlorophenol	ND		26

Client ID: TP-8H-Aq Site: Yonkers Waterfront

Lab Sample No: 66209 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Extracted: 06/17/98
Date Analyzed: 06/25/98
GC Column: DB-5
Instrument ID: BNAMS6.i

Matrix: WATER Level: LOW

Sample Volume: 970 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Lab File ID: m1063.d

<u>Parameter</u>	Analytical Result Units: ug/l	Quantitation Limit <u>Units: ug/l</u>
parameter  bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene	Units: ug/l  ND ND ND ND ND ND ND ND ND ND ND ND ND	10 10 10 10 10 10 10 10 10 10 10 10 10 1
Anthracene	ND ND	10 10

Site: Yonkers Waterfront

Lab Sample No: 66209 Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98 Date Extracted: 06/17/98

Matrix: WATER Level: LOW

Sample Volume: 970 ml

Extract Final Volume: 2.0 ml Dilution Factor: 1.0

Date Analyzed: 06/25/98 GC Column: DB-5 Instrument ID: BNAMS6.i Lab File ID: m1063.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a) anthracene Chrysene bis(2-Ethylhexyl) phthalate Di-n-octylphthalate Benzo(b) fluoranthene Benzo(k) fluoranthene Benzo(a) pyrene Indeno(1,2,3-cd) pyrene Dibenz(a,h) anthracene Benzo(g,h,i) perylene	ND ND ND ND ND ND 3.8J ND ND ND ND ND ND ND	10 10 10 10 10 21 10 10 10 10 10

Site: Yonkers Waterfront

Lab Sample No: 66209 Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98

Date Extracted: 06/16/98
Date Extracted: 06/17/98
Date Analyzed: 06/25/98
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m1063.d

Matrix: WATER Level: LOW

Sample Volume: 970 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME			Т
	RT	EST. CONC.	Q
	=======	ug/l	1
1. NO SEMI-VOLATILE ORGANIC COMPOUNDS ROUND	=	=======================================	=====
<b>4.</b>		-	·
			·
4			
5. 6.			
6. 7. 8.			
			- 1
9			
10.			
11.		2	
12.			
13.			
15. 16.			
16. 17.			
17. 18.			
19.			
20			
21			
22			
24			
26. 27.			
27			
28			
29			

TOTAL	ESTIMATED	CONCENTRATION	0.0

Site: Yonkers Waterfront

Lab Sample ID: 66209 Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98

Date Extracted: 06/18/98
Date Analyzed: 06/19/98
GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i

Matrix: WATER

Sample Volume: 960 ml Extract Final Volume:

Dilution Factor: 1.0 Front File ID: of002060.d Rear File ID: or002060.d

### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

	2002.41 2 2 2	Method Detecti	on.
<u>Parameter</u>	Analytical Results	Limit	Quant.
	<u>Units: ug/l</u>	<u>Units: ug/l</u>	Column
Aroclor-1016	ND	0 50	_
Aroclor-1221		0.52	R
Aroclor-1232	ND	0.52	R
Aroclor-1242	ND	0.52	R
	ND	0.52	R
Aroclor-1248	ND		
Aroclor-1254		0.52	R
Aroclor-1260	ND	0.52	R
Aroclor-1262	ND	0.52	R
	ND	0.52	R
Aroclor-1268	ND	0.52	
		0.52	R

Site: Yonkers Waterfront

Lab Sample No: 66209 Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98

Matrix: WATER Level: LOW

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection Limit	_	Dual	M
Aluminum	3480	58.2			P
Antimony	ND	4.6			P
Arsenic	4.2	3.8			P
Barium	58.2	1.4	В		P
Beryllium	0.34	0.20	В		P P P
Cadmium	ND	0.40	_		P
Calcium	110000	42.2			P
Chromium	4.2	1.0	В		P
Cobalt	2.4	1.2	В		P
Copper	32.1	3.5	_		P P P P P P
Iron	7950	41.5			P
Lead	12.3	2.5			Þ
Magnesium	118000	40.3			P
Manganese	164	1.1			P
Mercury	ND	0.10			CV
Nickel	· 11.7	. 2.1	В		
Potassium	44000	300		**	P
Selenium	ND	4.8			P
Silver	ND	1.4			P
Sodium	375000	852			P
Thallium	ND	4.8			
Vanadium	9.8	1.9	В		P
Zinc	135	4.5	_		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Site: Yonkers Waterfront

Lab Sample No: 66210 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Analyzed: 06/24/98

GC Column: DB624 Instrument ID: VOAMS5.i Lab File ID: e2310.d

Matrix: SOIL Level: LOW

Sample Weight: 5.0 g Purge Volume: 5.0 ml

% Moisture: 12

### VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	ND ND ND 3.4JB 57 ND ND ND ND ND ND ND ND ND ND ND ND ND	5.7 5.7 5.7 5.7 5.7 5.7 5.7 5.7 5.7 2.3 5.7 5.7 2.3 5.7 2.3 1.1 5.7 4.6 5.7 5.7 4.6
Xylene (Total)	ND 1.0J	5.7 5.7

Site: Yonkers Waterfront

Lab Sample No: 66210 Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98
Date Analyzed: 06/24/98
GC Column: DB624
Instrument ID: VOAMS5.i

Lab File ID: e2310.d

Matrix: SOIL Level: LOW

Sample Weight: 5.0 g Purge Volume: 5.0 ml % Moisture: 11.9

### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

	T		
COMPOUND NAME	RT	EST. CONC.	Q
1. Hexanal	======		
2.	12.01	·   23	
2		- 13	
3. 4.			
4. 5.			
		2	
9			
10			
11. 12.		<del></del>	ļ
12.			
13.			- 10
, —— · .		l —————	
16.			
17. 18.			
18.			
18. 19.			
19. 20.			
20.			
21.			
22			
23. 24.			
24. 25.			
25			
26.			
27.			
28.			
28			
30			

Site: Yonkers Waterfront

Lab Sample No: 66210 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Extracted: 06/18/98
Date Analyzed: 06/26/98
GC Column: DB-5
Instrument ID: BNAMS6.i

Lab File ID: m1070.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 5.0 ml

Dilution Factor: 1.0

% Moisture: 12

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4-Oinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND	940 940 940 940 940 940 940 940 940 2300 2300 2300

Site: Yonkers Waterfront

Lab Sample No: 66210 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Extracted: 06/18/98 Date Analyzed: 06/26/98

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

GC Column: DB-5 Instrument ID: BNAMS6.i Lab File ID: m1070.d

Extract Final Volume: 5.0 ml Dilution Factor: 1.0

% Moisture: 12

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether	ND ND ND ND ND ND ND ND ND ND ND ND ND N	Units: ug/kg 940 940 940 940 940 940 940 940 940 940
Hexachlorobenzene Phenanthrene Anthracene	ND 2400 610 J	940 940 940

Site: Yonkers Waterfront

Lab Sample No: 66210 Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98
Date Extracted: 06/18/98
Date Analyzed: 06/26/98
GC Column: DB-5

Matrix: SOIL Level: LOW

Instrument ID: BNAMS6.i

Lab File ID: m1070.d

Sample Weight: 30.0 g Extract Final Volume: 5.0 ml Dilution Factor: 1.0

% Moisture: 12

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	110 J ND 5100 4800 ND ND 2400 2500 ND ND 3200 1300 2500 1100 290 J 980	940 940 940 940 940 1900 940 940 940 940 940 940 940 940

Site: Yonkers Waterfront

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Extracted: 06/18/98

Date Analyzed: 06/26/98 GC Column: DB-5 Instrument ID: BNAMS6.i Lab File ID: m1070.d

Lab Sample No: 66210 Lab Job No: E684

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 5.0 ml

Dilution Factor: 1.0 % Moisture: 11.9

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Unknown 2. C18H12 PAH 3. C20H12 PAH 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21.	24.25 25.37 28.80	ug/kg ===================================	_
21. 22. 23. 24. 25. 26. 27. 28. 29. 30.			

TOTAL ESTIMATED CONCENTRATION

4500

Site: Yonkers Waterfront

Lab Sample ID: 66210 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Extracted: 06/18/98
Date Analyzed: 06/19/98
GC Front Column: DB-5
GC Rear Column: DB-608 Instrument ID: PESTGC7.i Front File ID: of002070.d Rear File ID: or002070.d

Matrix: SOIL Level: LOW

Sample Weight: 15 g Extract Final Volume:

10.0 ml

Dilution Factor: 1.0

% Moisture: 12

### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>	Column
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND	76	R
	ND	76	R
	ND	76	R
	ND	76	R
	ND	76	R
	ND	76	R
	ND	76	R
	ND	76	R

Site: Yonkers Waterfront

Lab Sample No: 66210

Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98

Matrix: SOLID Level: LOW

% Moisture: 11.9

### METALS ANALYSIS

	Analytical			
	Result	Instrument		
	Units: mg/kg	Detection		
<u>Analyte</u>	(Dry Weight)	Limit	_Oual	3.6
			<u> </u>	<u>M</u>
Aluminum	8180	13.2		P
Antimony	ND	1.0	N	P
Arsenic	3.2	0.86	*	P
Barium	93.9	0.32		P
Beryllium	0.34	0.045	В	P
Cadmium	ND .	0.091	Ð	
Calcium	21500	9.6		P
Chromium	31.2	0.23		ב
Cobalt	5.8	0.27	В	ם ד
Copper	28.8	0.79	Ь	P
Iron	14800	9.4		D
Lead	81.3	0.57		P
Magnesium	6210	9.1		9999999
Manganese	259	0.25		ב
Mercury	0.86	0.019		ĊV
Nickel	22.6	0.48		P
Potassium	2580	68.2		D P
Selenium	ND	1.1		Ð
Silver	ND	0.32		D E
Sodium	220	96.7	В	D D
Thallium	ND	1.1	~	P P P P P
Vanadium	26.8	0.43		P P
Zinc	102	1.0		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Site: Yonkers Waterfront

Lab Sample No: 66211 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Analyzed: 06/24/98
GC Column: DB624
Instrument ID: VOAMS5.i
Lab File ID: e2317.d

Matrix: SOIL Level: LOW

Sample Weight: 5.0 g Purge Volume: 5.0 ml

% Moisture: 16

### VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethene trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene	ND ND ND ND 11 B 84 ND ND ND ND ND ND ND ND ND ND ND ND ND	Units: ug/kg 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0
Styrene Xylene (Total)	ND ND ND	4.8 6.0 6.0

Site: Yonkers Waterfront

Date Sampled: 06/16/98 Date Received: 06/16/98 Date Analyzed: 06/24/98 GC Column: DB624 Instrument ID: VOAMS5.i

Lab File ID: e2317.d

Lab Sample No: 66211

Lab Job No: E684

Matrix: SOIL Level: LOW

Sample Weight: 5.0 g Purge Volume: 5.0 ml

% Moisture: 16.3

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
		ug/kg	Į.
1. Coeluting Unknowns	=======		=====
1. Coefficing Unknowns	17.15	320	
2. Coeluting Aromatics	17.69		
3. C13H22 Aromatic	18.05	1 520	
4. Coeluting Aromatics		270	
5. Coeluting Unknowns	18.26	320	
6. Unknown	19.12	370	
6. Unknown	19.26	240	
7. Coeluting Unknowns	19.43		
8. Coeluting Aromatics		360	
9 Cooluting Incomplies	20.26	500	8
7. Coeluting Unknowns 8. Coeluting Aromatics 9. Coeluting Aromatics	20.70	230	
IU. CISH28 Aromatic	20.81	450	
11.	20.01	450	
12.			<b> </b>
12.			
13			
14			
15. 16.			
16.			
16. 17.			
17			
19. 20.			
20			
21			
21.			
22			
24.			
25.			
28.			
29. 30.			
30.			
			<del></del> -1

TOTAL ESTIMATED CONCENTRATION

3380

Site: Yonkers Waterfront

Lab Sample No: 66211 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Extracted: 06/18/98
Date Analyzed: 06/26/98
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m1069.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 200.0

% Moisture: 16

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	80000 80000 80000 80000 80000 80000 80000 80000 190000 190000 190000

Client ID: TP-10H-S Site: Yonkers Waterfront

Lab Sample No: 66211 Lab Job No: E684

Date Sampled: 06/16/98 Date Received: 06/16/98 Date Extracted: 06/18/98

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Date Analyzed: 06/26/98 GC Column: DB-5 Instrument ID: BNAMS6.i

Extract Final Volume: 2.0 ml Dilution Factor: 200.0

Lab File ID: m1069.d

% Moisture: 16

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene		80000 80000 80000 80000 80000 80000 80000 80000 80000 80000 80000 80000 190000 80000 80000 80000 80000 80000 80000 80000 80000 80000 80000 80000 80000 80000 80000 80000
	<del></del>	55556

Site: Yonkers Waterfront

Lab Sample No: 66211 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Extracted: 06/18/98 Date Analyzed: 06/26/98

Matrix: SOIL Level: LOW

GC Column: DB-5 Instrument ID: BNAMS6.i

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Lab File ID: m1069.d

Dilution Factor: 200.0

% Moisture: 16

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND 4100 J 3800 J ND ND 1800 J 1800 J 980000 ND ND ND ND ND ND	80000 80000 80000 80000 160000 80000 80000 80000 80000 80000 80000 80000 80000

Site: Yonkers Waterfront

Date Sampled: 06/16/98 Date Received: 06/16/98
Date Extracted: 06/18/98
Date Analyzed: 06/26/98
GC Column: DB-5
Instrument ID: BNAMS6.i

Lab File ID: m1069.d

Lab Sample No: 66211 Lab Job No: E684

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 200.0

% Moisture: 16.3

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND 2.			=====
4.			
6.			
8.			
10.			
13.			
15.			
17.			
19	2		
20			
24.			
26.			
27. 28. 29.		3	
30.			

TOTAL ESTIMATED CONCENTRATION 0.0

Site: Yonkers Waterfront

Lab Sample ID: 66211 Lab Job No: E684

Date Sampled: 06/16/98
Date Received: 06/16/98

Date Extracted: 06/18/98 Date Analyzed: 06/24/98

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i Front File ID: of002158.d Rear File ID: or002158.d Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume: 10.0 ml

Dilution Factor: 2.0

% Moisture: 16

### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND 2800 ND ND ND	160 R 160 R 160 R 160 R 160 R 160 R 160 R 160 R

Site: Yonkers Waterfront

Lab Sample No: 66211 Lab Job No: E684

Date Sampled: 06/16/98 06/16/98 Date Received:

Matrix: SOLID Level: LOW

% Moisture: 16.3

### METALS ANALYSIS

Analyte	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Oual	<u>M</u>
Aluminum	4100	13.9		D
Antimony	8.4	1.1	N	P P
Arsenic	19.1	0.91	*	P
Barium	426	0.33		P
Beryllium Cadmium	0.33	0.048	В	P
Calcium	4.3	0.096		P
Chromium	25600	10.1		P
Cobalt	30.8	0.24		P
Copper	11.6	0.29	В	P
Iron	6890 21700	4.2		P
Lead	5400	9.9		P
Magnesium	8540	3.0		P
Manganese	299	9.6		P
Mercury	0.38	0.26		P
Nickel	51.0	0.020		CV
Potassium	874	0.50 71.8	5	P
Selenium	ND	1.7	В	P
Silver	31.9	0.33		P
Sodium	421	102	В	P
Thallium	ND	1.1	Б	P
Vanadium	18.9	0.45		P P
Zinc	3930	5.4		Þ

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

TIV VINCO I ECH KESEARCH IN 777 New Durham Road Edison, New Jersey 08817 Phone: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

LAB USE ONLY Job No: PAGE ! OF Project No: 86308 11 295 6208 Numbers 66210 Sample Other. ANALYSIS REQUESTED (BITER Y BEOW TO INDICATE REQUEST) NY: X OUKERS WATERFROM State (Location of site) NJ: Site/Project Identification Regulatory Program: 2672 KENIN REILLY Samplers Name ( Printed ) Analysis Turnsround Time Water No. of. Soll: Cont. 14 Rush Charges Authorized For: M 70004 MAN Matrix Veren Sol XIL Standard | 2 Woork 1 Week Preservation Used  $\{4: (CE) 2 = HCI, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH\}$ Other Time 120-P.O.# -16-99 12 YO -16-50 1230 -16-99 12pm 10-16-96 Date \_, 7 = Other\_ 10901 Fax 914 949 7559 움 Sy SOUTH BREADWAY Sample Identification ¥ Name (for report and invoice) MICHELLE LARIN TP 10H HO JY TP SIT MKRF, INC TP 9H 414 949 -7336 Witne Rimus Company Address

Special Instructions			,	Water Metals Elitered (Xee/No)2	
Relinquished by	Company	Date / Time	Received by ///	Company	
1 Krum, Rouch	ALRE INC	6-16-38/5% 11	A STAN	EN Washing	
Relinquishauf	Company	Date / Time	Received by	Company	
2 Charles	BATHORE CA	6-16-71/730	Barren 6-16/21/30 21 Porna _ Q = 5001 Contact	でかり、いれて、日	
Reilinquishedby	Company	Date / Time	Received by	Company	
િ		-	3)		
Relinquished by	Company	Date / Time	Received by	Company	
(4)			4)		
Laboratory Certifications: New Jersey (12543), New	9y (12543), New York (11	452), Pennsylvania (	<ul> <li>York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).</li> </ul>	lode Island (132).	



Client ID: MW-2H

Site: Yonkers Waterfront

Lab Sample No: 73501

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Analyzed: 07/28/98 GC Column: DB624

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

Instrument ID: VOAMS4.i Lab File ID: d6189.d

### VOLATILE ORGANICS - GC/MS METHOD 8260

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene		5.00 5.00 5.00 5.00 5.00 6.00
Xylene (Total)	ND ND	4.0 5.0 5.0

Client ID: MW-2H

Site: Yonkers Waterfront

Lab Sample No: 73501

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Analyzed: 07/28/98

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

GC Column: DB624 Instrument ID: VOAMS4.i Lab File ID: d6189.d

### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND 3			===
4. 5.			
7.			
10.			
12			
15			
18.			
20			B
23.			
26			
27			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-2H

Site: Yonkers Waterfront

Lab Sample No: 73501

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Date Extracted: 07/26/98 Date Analyzed: 07/27/98

GC Column: DB-5 Instrument ID: BNAMS2.i Lab File ID: s6290.d

Matrix: WATER Level: LOW

Sample Volume: 730 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	14 14 14 14 14 14 14 14 14 14 55 55
		23

Client ID: MW-2H Lab Sample No: 73501 Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 07/24/98 Matrix: WATER Date Received: 07/24/98 Level: LOW Date Extracted: 07/26/98 Date Analyzed: 07/27/98

Sample Volume: 730 ml Extract Final Volume: 2.0 ml GC Column: DB-5

Dilution Factor: 1.0 Instrument ID: BNAMS2.i

Lab File ID: s6290.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit Units: ug/l
bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine	Units: ug/1  ND ND ND ND ND ND ND ND ND ND ND ND ND	Limit Units: ug/l  1.4 14 14 14 14 14 1.4 1.4 1.4 1.4 14 14 14 14 2.7 14 14 14 27 14 14 27
4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene	ND ND ND ND ND	14 14 1.4 1.4 14

Client ID: MW-2H Lab Sample No: 73501 Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Extracted: 07/26/98

Date Analyzed: 07/27/98 GC Column: DB-5

Instrument ID: BNAMS2.i Lab File ID: s6290.d

Matrix: WATER Level: LOW

Sample Volume: 730 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result Units: ug/l	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	14 14 14 14 14 27 1.4 14 14 1.4 1.4 1.4 1.4

Client ID: MW-2H

Site: Yonkers Waterfront

Lab Sample No: 73501

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Extracted: 07/26/98 Date Analyzed: 07/27/98

GC Column: DB-5 Instrument ID: BNAMS2.i Lab File ID: s6290.d

Matrix: WATER Level: LOW

Sample Volume: 730 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
2. 3			
56.			
7. 8. 9. 10.			
11. 12. 13.			201
15. 16.			
18			
21.			
24. 25. 26.			
27. 28. 29.			
30			

TOTAL ESTIMATED CONCENTRATION

0.0

Client ID: MW-2H

Site: Yonkers Waterfront

Lab Sample ID: 73501

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Date Extracted: 07/26/98
Date Analyzed: 07/27/98
GC Front Column: DB-5

GC Rear Column: DB-608 Instrument ID: PESTGC5.i Matrix: WATER

Sample Volume: 780 ml

Extract Final Volume: 5.0 ml

Dilution Factor: 1.0 Front File ID: pf009062.d Rear File ID: pr009062.d

### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results <u>Units: ug/wipe</u>	Quantitation Limit <u>Units: ug/wipe</u> <u>Col</u> umn
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.64 R 0.64 R 0.64 R 0.64 R 0.64 R 0.64 R 0.64 R 0.64 R

Client ID: MW-2HA1

Site: Yonkers Waterfront

Lab Sample ID: 73501A1 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Date Extracted: 07/26/98 Date Analyzed: 07/28/98

GC Front Column: DB-1701 GC Rear Column: DB-608 Instrument ID: PESTGC5.i Matrix: WATER

Sample Volume: 780 ml

Extract Final Volume: 5.0 ml

Dilution Factor: 1.0 Front File ID: pf009089.d Rear File ID: pr009089.d

### ORGANOCHLORINE PCBs - GC/ECD METHOD 8081A

<u>Parameter</u>

Halowax-1014

Analytical Results <u>Units: ug/wipe</u>

2.9

Quantitation Limit

Units: ug/wipe Column

0.64

R

Client ID: MW-2H

Site: Yonkers Waterfront

Lab Sample No: 73501 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Matrix: WATER Level: LOW

### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection Limit	_Oual	_ <u>M</u>
Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc	38500 ND 24.9 396 1.8 ND 130000 71.8 23.8 334 57800 488 75400 1660 1.8 55.5 23300 ND ND ND 386000 ND 75.2 624	58.2 4.6 3.8 1.4 0.20 0.40 42.2 1.0 1.2 3.5 41.5 2.5 40.3 1.1 0.10 2.1 300 4.8 1.4 2130 4.8 1.9	N B B N	
	Q23	4.5		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: MW-2HA

Site: Yonkers Waterfront

Lab Sample No: 73502

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98
Date Analyzed: 07/28/98

GC Column: DB624
Instrument ID: VOAMS4.i
Lab File ID: d6190.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

### VOLATILE ORGANICS - GC/MS METHOD 8260

_			
1	<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit Units: v=/2
Ç	Chloromethane	s	<u>Units: ug/l</u>
	Bromomethane	ND	5.0
	Vinyl Chloride	ND	5.0
1	Chloroethane	ND	5.0
	Methylene Chloride	ND	5.0
13	Acetone	ND	3.0
E.	Carbon Disulfide	ND	5.0
III.	1,1-Dichloroethene	ND	5.0
	1,1-Dichloroethane	ND	2.0
7	trans-1,2-Dichloroethene	ND	5.0
)	CIS-1,2-Dichloroethene	ND	5.0
	CILOFOTORM	ND	5.0
i i	1,2-Dichloroethane	ND	5.0
Ĭ.	2-Butanone	ND ND	2.0
y	1,1,1-Trichloroethane	ND ND	5.0
	Carbon Tetrachloride	ND ND	5.0
	Bromodichloromethane	ND	2.0
	1,2-Dichloropane	ND	1.0
	cis-1,3-Dichloropropene Trichloroethene	ND	1.0
ř	Dibromochloromethane	ND	5.0
	1,1,2-Trichloroethane	ND	1.0
	Benzene	ND	5.0
	trans-1,3-Dichloropropene	ND	3.0
	Bromoform	ND	1.0
	4-Methyl-2-Pentanone	ND	5.0
	2-nexanone	ND	4.0
	Tetrachloroethene	ND	5.0
	1,1,2,2-Tetrachloroethana	ND	5.0 1.0
	rordene	ND	1.0
	Chlorobenzene	ND	5.0
	Ethylbenzene	ND	5.0
- i	Styrene	ND	4.0
	Xylene (Total)	ND	5.0
		ND	5.0
			<del>-</del>

Client ID: MW-2HA

Site: Yonkers Waterfront

Lab Sample No: 73502

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Date Analyzed: 07/28/98

GC Column: DB624

Instrument ID: VOAMS4.i Lab File ID: d6190.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME  1. NO VOLATILE ORGANIC COMPOUNDS	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND 3			=====
5.			
6. 7. 8			
10			
13. 14.			
15			
19.			3
21			
3			
7.			
88			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-2HA

Site: Yonkers Waterfront

Lab Sample No: 73502 Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98

Date Extracted: 07/26/98

Date Analyzed: 07/27/98 GC Column: DB-5 Instrument ID: BNAMS2.i Lab File ID: s6291.d

Matrix: WATER Level: LOW

Sample Volume: 740 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u> Phenol	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND	14 14 14 14 14 14 14 14 14 54 54 54

Client ID: MW-2HA Site: Yonkers Waterfront Lab Sample No: 73502 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Matrix: WATER Level: LOW Date Extracted: 07/26/98

Date Analyzed: 07/27/98

GC Column: DB-5 Instrument ID: BNAMS2.i

Lab File ID: s6291.d

Sample Volume: 740 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Parameter	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis(2-Chloroethyl)ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis(2-chloroisezene	ND ND ND ND	1.4 14 14 14
bis(2-chloroisopropyl)ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone	ND ND ND ND	14 1.4 1.4
bis(2-Chloroethoxy)methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline	ND ND ND ND	1.4 14 14 1.4
Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene	ND ND ND ND	14 14 2.7 14
2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene	ND ND ND ND	14 14 27 14
2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran	ND ND ND ND	14 2.7 27 14
2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene	ND ND ND ND ND	14 2.7 14 14
4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene	ND ND ND	14 27 14 14
Phenanthrene Anthracene	ND ND ND	1.4 14 14

Client ID: MW-2HA

Site: Yonkers Waterfront

Lab Sample No: 73502

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Extracted: 07/26/98 Date Analyzed: 07/27/98

GC Column: DB-5 Instrument ID: BNAMS2.i Lab File ID: s6291.d

Matrix: WATER Level: LOW

Sample Volume: 740 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	14 14 14 14 27 1.4 14 14 1.4 1.4 1.4 1.4

Client ID: MW-2HA

Site: Yonkers Waterfront

Lab Sample No: 73502 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Extracted: 07/26/98 Date Analyzed: 07/27/98

Matrix: WATER Level: LOW

GC Column: DB-5

Sample Volume: 740 ml Extract Final Volume: 2.0 ml

Instrument ID: BNAMS2.i Lab File ID: s6291.d

Dilution Factor: 1.0

### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
1NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND 2.	======		= =====
4.		-	
5			
9.			
11.			
14.			
16. 17.			
18. 19. 20.			
21			
24.			
26.			
29.			
30			

TOTAL	ESTIMATED	CONCENTRATION	0.0
			 0.0

Client ID: MW-2HA

Site: Yonkers Waterfront

Lab Sample ID: 73502 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Date Extracted: 07/26/98 Date Analyzed: 07/27/98

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC5.i Matrix: WATER

Sample Volume: 750 ml

Extract Final Volume: 5.0 ml

Dilution Factor: 1.0 Front File ID: pf009063.d Rear File ID: pr009063.d

### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

Parameter	Analytical Results <u>Units: ug/wipe</u>	Quantitation Limit <u>Units: ug/wipe</u> <u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.67 R 0.67 R 0.67 R 0.67 R 0.67 R 0.67 R 0.67 R 0.67 R

Client ID: MW-2HAA1

Site: Yonkers Waterfront

Date Sampled: 07/24/98 Date Received: 07/24/98

Date Extracted: 07/26/98 Date Analyzed: 07/28/98 GC Front Column: DB-1701 GC Rear Column: DB-608 Instrument ID: PESTGC5.i

Lab Sample ID: 73502A1

Lab Job No: F821

Matrix: WATER

Sample Volume: 750 ml Extract Final Volume:

5.0 ml

Dilution Factor: 1.0 Front File ID: pf009090.d Rear File ID: pr009090.d

ORGANOCHLORINE PCBs - GC/ECD METHOD 8081A

<u>Parameter</u>

Halowax-1014

Analytical Results Units: ug/wipe

3.3

Quantitation Limit

0.67

Units: ug/wipe Column

R

Client ID: MW-2HA

Site: Yonkers Waterfront

Lab Sample No: 73502

Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98

Matrix: WATER Level: LOW

### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection Limit	<u> </u>	. <u>M</u>
Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc	36700 ND 22.3 363 1.8 ND 130000 67.8 23.2 323 55700 491 74800 1640 1.8 114 22900 ND ND ND 371000 ND 73.5 620	58.2 4.6 3.8 1.4 0.20 0.40 42.2 1.0 1.2 3.5 41.5 12.5 40.3 1.1 0.10 2.1 300 4.8 1.4 2130 4.8 1.9	N B N N	
	920	4.5		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98 Date Analyzed: 07/28/98

Matrix: WATER Level: LOW

GC Column: DB624 Instrument ID: VOAMS2.i

Purge Volume: 5.0 ml Dilution Factor: 1.0

Lab File ID: b7133.d

### VOLATILE ORGANICS - GC/MS METHOD 8260

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene	Analytical Result Units: ug/l  ND ND ND ND ND ND ND ND ND ND ND ND ND	Limit Units: ug/l 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
Ethylbenzene Styrene Xylene (Total)	ND ND ND	5.0 4.0 5.0 5.0

Client ID: Field\_Blank Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Analyzed: 07/28/98 GC Column: DB624 Instrument ID: VOAMS2.i

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

Lab File ID: b7133.d

### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
2		=======================================	====
4			
7. 8.			
9. 10. 11.			7
12. 13. 14.			
15.			
18			
21			8
24			
26			
28. 29. 30.			

TOTAL ESTIMATED CONCENTRATION

Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Extracted: 07/26/98 Date Analyzed: 07/27/98

Matrix: WATER Level: LOW

Sample Volume: 610 ml Extract Final Volume: 2.0 ml

GC Column: DB-5

Dilution Factor: 1.0

Instrument ID: BNAMS2.i Lab File ID: s6292.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND	16 16 16 16 16 16 16 16 16 66 66

Client ID: Field\_Blank Lab Sample No: 73503 Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 07/24/98 Matrix: WATER Date Received: 07/24/98 Level: LOW Date Extracted: 07/26/98

Sample Volume: 610 ml Date Analyzed: 07/27/98 GC Column: DB-5 Extract Final Volume: 2.0 ml

Dilution Factor: 1.0 Instrument ID: BNAMS2.i

Lab File ID: s6292.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis(2-Chloroethyl)ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis(2-chloroisopropyl)ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis(2-Chloroethoxy)methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene		1.6 16 16 16 16 1.6 1.6 1.6 1.6 16 3.3 16 16 3.3 16 16 3.3 16 16 3.3 16 16 3.3 16 16 3.3 16 16 16 3.3
		<del>-</del>

Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Extracted: 07/26/98 Date Analyzed: 07/27/98

Matrix: WATER Level: LOW

Sample Volume: 610 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

GC Column: DB-5 Instrument ID: BNAMS2.i Lab File ID: s6292.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	16 16 16 16 16 33 1.6 16 16 1.6 1.6 1.6

Client ID: Field\_Blank Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Extracted: 07/26/98 Date Analyzed: 07/27/98

Matrix: WATER Level: LOW

Sample Volume: 610 ml

GC Column: DB-5 Instrument ID: BNAMS2.i

Extract Final Volume: 2.0 ml

Lab File ID: s6292.d

Dilution Factor: 1.0

# SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Ç
2. COMPOUNDS FOUN			===
4.		(40)	
6.	_		
	-		
9.	-		
1.			
3.			
5.	-		
7.	-		
8.	-		
0.			
2.			
1.			
7.			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: Field\_Blank Site: Yonkers Waterfront

Lab Sample ID: 73503 Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98
Date Extracted: 07/26/98
Date Analyzed: 07/27/98

Matrix: WATER
Sample Volume: 670 ml
Extract Final Volume: 5.0 ml

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC5.i Dilution Factor: 1.0 Front File ID: pf009064.d Rear File ID: pr009064.d

# ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results <u>Units: ug/wipe</u>	Quantitation Limit <u>Units: ug/wipe</u> <u>Colum</u> n
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.75 R 0.75 R 0.75 R 0.75 R 0.75 R 0.75 R 0.75 R 0.75 R

Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	Qual	_ <u>M</u>
Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium	ND ND ND ND ND ND ND ND ND ND ND ND ND N	58.2 4.6 3.8 1.4 0.20 0.40 42.2 1.0 1.2 3.5 41.5 2.5 40.3 1.1 0.10 2.1 300 4.8 1.4 426 4.8 1.9	N N N	999999999999 9999999999999
Zinc	8.2	4.5	В	P P

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 73504 Lab Job No: F821

Date Sampled: 07/21/98
Date Received: 07/24/98
Date Analyzed: 07/28/98
GC Column: DB624
Instrument ID: VOAMS2.i

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

Lab File ID: b7134.d

# VOLATILE ORGANICS - GC/MS METHOD 8260

<u>Parameter</u> Chloromethane	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene Xylene (Total)		Units: ug/l 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
	ND	5.0

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 73504 Lab Job No: F821

Date Sampled: 07/21/98 Date Received: 07/24/98 Date Analyzed: 07/28/98

Matrix: WATER Level: LOW

GC Column: DB624

Purge Volume: 5.0 ml Dilution Factor: 1.0

Instrument ID: VOAMS2.i Lab File ID: b7134.d

# VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND 2 3 4.			=====
5. 6.			
7			
11. 12.			
14			
17			
20			
23			
25. 26. 27.			
28			

TOTAL ESTIMATED	COMO = = = = = = = = = = = = = = = = = =	
TOTAL ESTIMATED	CONCENTRATION	0.0

Client ID: MW-1H

Site: Yonkers Waterfront

Lab Sample No: 73507

Lab Job No: F821

Date Sampled: 07/24/98

Date Received: 07/24/98 Date Analyzed: 07/28/98

GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b7137.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

# VOLATILE ORGANICS - GC/MS METHOD 8260

Parameter	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene		5.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6
Xylene (Total)	ND	5.0 5.0

Client ID: MW-1H

Site: Yonkers Waterfront

Lab Sample No: 73507

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Date Analyzed: 07/28/98

GC Column: DB624

Instrument ID: VOAMS2.i
Lab File ID: b7137.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

# VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND 2.		1107/7	
9			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-1H

Site: Yonkers Waterfront

Lab Sample No: 73507

Lab Job No: F821

Date Sampled: 07/24/98

Date Received: 07/24/98 Date Extracted: 07/26/98

Date Analyzed: 07/27/98 GC Column: DB-5

Instrument ID: BNAMS2.i Lab File ID: s6295.d

Matrix: WATER Level: LOW

Sample Volume: 840 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	12 12 12 12 12 12 12 12 12 12 12
2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND	48 48 48 48

Client ID: MW-IH
Site: Yonkers Waterfront

Lab Sample No: 73507 Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98
Date Extracted: 07/26/98

Level: LOW
Sample Volume: 840 ml

Matrix: WATER

Date Analyzed: 07/27/98

Extract Final Volume: 2.0 ml

GC Column: DB-5

Dilution Factor: 1.0

Instrument ID: BNAMS2.i Lab File ID: s6295.d

bis(2-Chloroethyl)ether	ND ND ND	1.2
1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis(2-chloroisopropyl)ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis(2-Chloroethoxy)methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline		12 12 12 1.2 1.2 1.2 12 12 12 12 12 12 12 12 12 12 12 12 12
N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene	ND ND ND ND ND	12 12 1.2 1.2 12

Client ID: MW-IH Lab Sample No: 73507 Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 07/24/98 Matrix: WATER Date Received: 07/24/98 Level: LOW Date Extracted: 07/26/98

Sample Volume: 840 ml Date Analyzed: 07/27/98 GC Column: DB-5 Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Instrument ID: BNAMS2.i Lab File ID: s6295.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole	ND	12
Di-n-butylphthalate	ND	12
Fluoranthene	ND	12
Pyrene	ND	12
Butylbenzylphthalate	ND	12
3,3'-Dichlorobenzidine	ND	24
Benzo(a)anthracene	ND	1.2
Chrysene	ND	12
bis(2-Ethylhexyl)phthalate	ND	12
Di-n-octylphthalate	ND	12
Benzo(b)fluoranthene	ND	1.2
Benzo(k)fluoranthene	ND	1.2
Benzo(a)pyrene	ND	1.2
Indeno(1,2,3-cd)pyrene	ND	1.2
Dibenz(a,h)anthracene	ND	1.2
Benzo(g,h,i)perylene	ND	12

Client ID: MW-1H

Site: Yonkers Waterfront

Lab Sample No: 73507 Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98
Date Extracted: 07/26/98

Date Extracted: 07/26/98 Date Analyzed: 07/27/98

GC Column: DB-5

Instrument ID: BNAMS2.i Lab File ID: s6295.d Matrix: WATER Level: LOW

Sample Volume: 840 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
1NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND 2.			
3			
7. 8.			
10.			
13.			
16. 17.			
19.			
22			
25. 26.	W.		
28			
30			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-1H

Site: Yonkers Waterfront

Lab Sample ID: 73507

Lab Job No: F821

Date Sampled: 07/24/98

Date Received: 07/24/98

Date Extracted: 07/26/98 Date Analyzed: 07/27/98 GC Front Column: DB-5

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC5.i Matrix: WATER

Sample Volume: 760 ml

Extract Final Volume: 5.0 ml

Dilution Factor: 1.0 Front File ID: pf009067.d Rear File ID: pr009067.d

# ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

Parameter	Analytical Results <u>Units: ug/wipe</u>	Quantitation Limit <u>Units: ug/wipe</u>	Column
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.66 0.66 0.66 0.66 0.66 0.66	R R R R R R R

Client ID: MW-1H

Site: Yonkers Waterfront

Lab Sample No: 73507

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection Limit	<u>Oual</u>	<u>M</u>
Aluminum Antimony Arsenic Barium Beryllium Cadmium	45200 ND 26.2 339 2.8 ND	58.2 4.6 3.8 1.4 0.20	N	P P P P
Calcium Chromium Cobalt Copper Iron Lead	166000 121 32.6 270 116000 386	0.40 42.2 1.0 1.2 3.5 41.5	В	P P P P P P P
Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc	117000 2120 0.64 63.9 48100 ND ND 806000 ND 126 985	40.3 1.1 0.10 2.1 300 4.8 1.4 2130 4.8 1.9 4.5	N N	PPCPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP

Site: Yonkers Waterfront

Lab Job No: F821

Date Sampled: 7/24/98
Date Received: 7/24/98

Matrix: WATER

Date Analyzed: 7/25/98

QA Batch: 1038

# TURBIDITY

Envirotech Sample #	Client ID	Dilution <u>Factor</u>	Analytical Result <u>Units: NTU</u>
73501	MW-2H	20	460
73502	MW-2HA	25	625
73505	MW-2I	25	450
73506	MW-1I	25	875
73507	MW-1H	50	1050

Quantitation Limit for Turbidity is 0.5 NTU for an undiluted sample.

Client ID: MW-2H-Dis
Site: Yonkers Waterfront

Lab Sample No: 73508

Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	Oual	<u>M</u>
Aluminum	ND	58.2		P
Antimony	ND	4.6	N	P
Arsenic	ND	3.8		P
Barium	62.1 <sup>.</sup>	1.4	В	P P P
Beryllium	ND	0.20		P
Cadmium	ND	0.40		P
Calcium	133000	42.2		P P
Chromium	ND	1.0		P
Cobalt	1.4	1.2	В	P
Copper	ND	3.5		P P P P P
Iron	ND	41.5		P
Lead	ND	2.5		P
Magnesium	74400	40.3		P
Manganese	359	1.1	N	P
Mercury	ND	0.10	N	CV
Nickel	2.4	2.1	В	₽
Potassium	22600	300		P
Selenium	ND	4.8		P
Silver	ND	1.4		P
Sodium	412000	2130		P P P P P
Thallium	ND	4.8		P
Vanadium	3.5	1.9	В	
Zinc	26.7	4.5	В	P

Client ID: MW-2HA-Dis
Site: Yonkers Waterfront

Lab Sample No: 73509

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection Limit	<u> Qual</u>	<u>M</u>
Aluminum	ND	58.2		P
Antimony	ND	4.6	N	P
Arsenic	ND	3.8		P
Barium	62.0	1.4	В	P
Beryllium	ND	0.20		P P P
Cadmium	ND	0.40		P
Calcium	134000	42.2		P
Chromium	ND	1.0		P P P
Cobalt	ND	1.2		P
Copper	ND	3.5		P
Iron	ND	41.5		P P P
Lead	ND	2.5		P
Magnesium	75400	40.3		P
Manganese	366	1.1	N	P
Mercury	ND	0.10	N	CV
Nickel	ND	2.1		P
Potassium	22300	300		· P
Selenium	ND	4.8		P P
Silver	ND	1.4		P
Sodium	384000	2130		P P
Thallium	ND	4.8		P
Vanadium	4.8	1.9	В	P
Zinc	29.1	4.5	В	P

Client ID: Field Blank-Dis
Site: Yonkers Waterfront

Lab Sample No: 73510

Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	<u> Oual</u>	<u>M</u>
Aluminum	ND	58.2		P
Antimony	ND	4.6	N	P
Arsenic	ND	3.8		P
Barium	ND	1.4		P
Beryllium	ND	0.20		P
Cadmium	ND	0.40		P P
Calcium	ND	42.2		P
Chromium	ND	1.0		P
Cobalt	ND	1.2		P P
Copper	ND	3.5		P
Iron	ND	41.5		P
Lead	ND	2.5		P
Magnesium	ND	40.3		P
Manganese	ND	1.1	N	P
Mercury	ND	0.10	N	CV
Nickel	ND	2.1		P
Potassium	, 388	300	В	P
Selenium	ND	4.8		P
Silver	ND	1.4		P
Sodium	ND	426		P
Thallium	ND	4.8		P
Vanadium	ND	1.9		P
Zinc	8.7	4.5	В	P

Client ID: MW-1H-Dis

Site: Yonkers Waterfront

Lab Sample No: 73513

Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	<u> Oual</u>	<u>M</u>
Aluminum	ND	58.2		P
Antimony	ND	4.6	N	P
Arsenic	ND	3.8		P
Barium	76.1	1.4	В	P
Beryllium	ND	0.20	4	P
Cadmium	ND	0.40		P
Calcium	135000	42.2		P
Chromium	ND	1.0		P
Cobalt	ND	1.2		P
Copper	4.6	3.5	В	P
Iron	ND	41.5	2	P
Lead	ND	2.5		P
Magnesium	128000	40.3		P
Manganese	15.7	1.1	N	P
Mercury	ND	0.10	N	CV
Nickel	3.3	2.1	В	P
Potassium	41500	300	Z	P
Selenium	ND	4.8		P
Silver	ND	1.4		P
Sodium	896000	2130		P
Thallium	ND	4.8		P
Vanadium	2.3	1.9	В	Þ
Zinc	12.2	4.5	В	Þ

PAGE

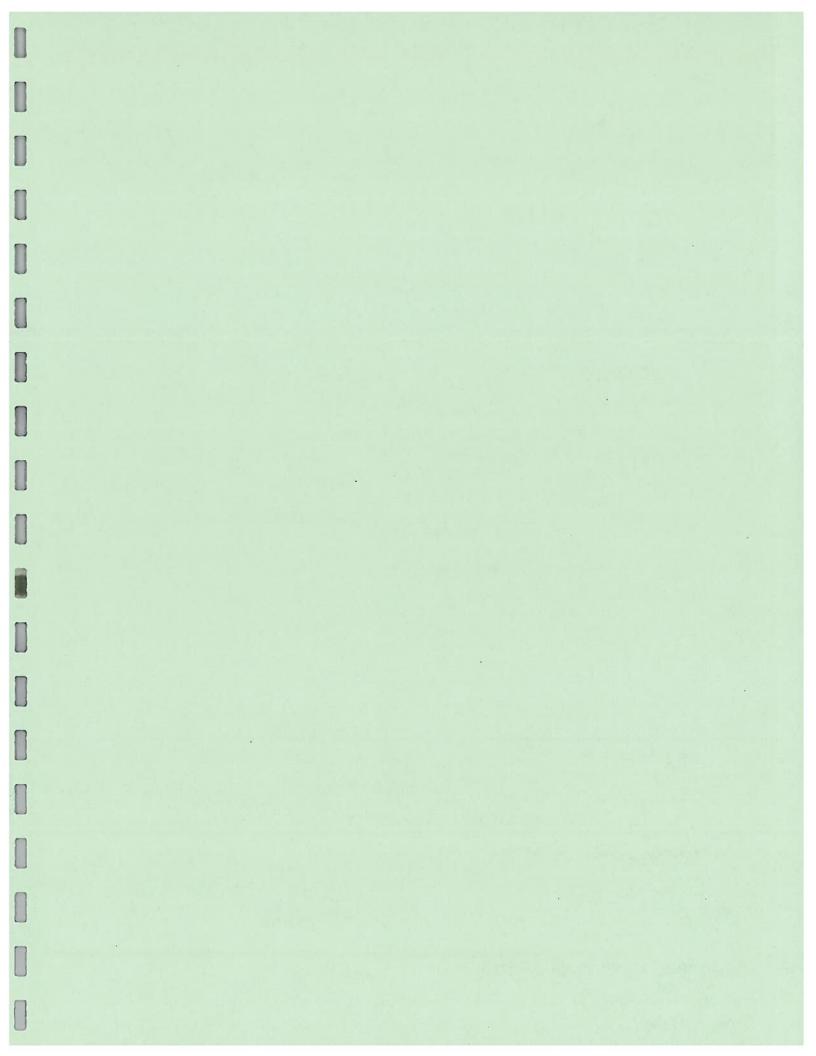
# ENVIROTECH RESEARCH INC.

777 New Durham Road Edison, New Jersey 08817 Phone: (732) 549-3900 Fax: (732) 549-3679

**CHAIN OF CUSTODY / ANALYSIS REQUEST** 

756 735 7351 7351 LAB USE ONLY Johns: 73504 73506 Project No: 73507 73502 73505 73909 Numbers Sample 2350 Other: ONKERS WATERFRONT ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE RED State (Location of site): NJ: Site/Project Identification Regulatory Program: X × X × X KEVIN REILLY Samplers Name ( Printed ) Water: **Analysis Turnaround Time** SYMUE Soil: Matrix | Cont. 70007 Rush Charges Authorized For. WATEL MATER 11:15 allegan 1.150 WATER 11:15- WATER PARK udrez Other Preservation Used: 1 = ICE, 2 = HCI, 3 = H2SO4, 4 = HNO3, 5 = NaOH Standard 2 Weck Time I fim 1 Week 7-24 7.24 7-24 Date 7-24 . 7 = Other 10901 15-54 - 676(A16) Address South Broad WAY FB-H) FIAND BIANK AKRE, INC. Sample Identification Break MICHELLE LAPAN State XX MW-2HA MW - 2 H Name (for report and invoice) 6 = Other ME . 1 914)944.7336 MW Z E Company

Special Instructions Dis	DISSOLVED METALS TO BE LAS FILTERED	We to BE		Water Metals Filtered (Yes/No)?
Relinquished by	Company	Date / Time Re		Сотралу
11 Nei- P. Ralle	AKKF. INC. 7-24-881/13:011	7-24-881/83011	1. Fland	Edvino Lew
Relinduished by	Company	Date / Time Ro	Received by	Сотрапу
2) Lhosh W	ENVINOTEC/ 7/24/98 1820 218 Fran P.W.	1/24/98 1820 21		FNIPORE
Relinquished M	Company	Date / Time Ro		Company
3)		[6]		
Relinquished by	Company	Date / Time R	Received by	Company
4)		1 4		
Laboratory Certifications: New Jersey (12543	<b> </b> →	452), Pennsylvania (6	New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132)	node Island (132).



Client ID: SS Parcel-H Site: Yonkers Waterfront

Lab Sample No: 74841 Lab Job No: F961

Date Sampled: 07/30/98 Date Received: 07/30/98 Date Extracted: 08/03/98 Date Analyzed: 08/04/98

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

GC Column: DB-5 Instrument ID: BNAMS5.i Lab File ID: q5994.d

Dilution Factor: 1.0

% Moisture: 2

<u>Parameter</u>	malytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol	ND ND ND 12 J ND ND ND ND ND ND ND ND ND ND ND ND ND	340 340 340 340 340 340 340 340 340 340
2,4-Dinitrophenol 4-Nitrophenol	ND ND	1400 1400
4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND	1400 1400 1400

Client ID: SS\_Parcel-H Site: Yonkers Waterfront

Lab Sample No: 74841 Lab Job No: F961

Date Sampled: 07/30/98
Date Received: 07/30/98

Date Extracted: 08/03/98 Date Analyzed: 08/04/98

GC Column: DB-5 Instrument ID: BNAMS5.i Lab File ID: q5994.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

% Moisture: 2

	Analytical Results Units: ug/kg	Quantitation Limit
<u>Parameter</u>	(Dry Weight)	<u>Units: ug/kg</u>
bis(2-Chloroethyl)ether	ND	34
1,3-Dichlorobenzene	ND	340
1,4-Dichlorobenzene	11 J	340
1,2-Dichlorobenzene	ND	340
bis(2-chloroisopropyl)ether	ND	340
N-Nitroso-di-n-propylamine	ND	34
Hexachloroethane	ND	34
Nitrobenzene	ND	34
Isophorone	ND	340
bis(2-Chloroethoxy)methane	ND	340
1,2,4-Trichlorobenzene	ND	34
Naphthalene	47 J	340
4-Chloroaniline	ND	340
Hexachlorobutadiene	ND	68
2-Methylnaphthalene	42_J	340
Hexachlorocyclopentadiene	ND	340
2-Chloronaphthalene 2-Nitroaniline	ND	340
	ND	680
Dimethylphthalate Acenaphthylene	ND_	340
2,6-Dinitrotoluene	65_J	340
3-Nitroaniline	ND	68
Acenaphthene	ND_	680
Dibenzofuran	74 J	340
2,4-Dinitrotoluene	54_J	340
Diethylphthalate	ND	68
4-Chlorophenyl-phenylether	ND	340
Fluorene	ND	340
4-Nitroaniline	∂ 86_J	340
N-Nitrosodiphenylamine	ND	680
4-Bromophenyl-phenylether	ND	340
Hexachlorobenzene	ND	340
Phenanthrene	ND	34
Anthracene	780	340
	210 J	340

Client ID: SS\_Parcel-H Site: Yonkers Waterfront Lab Sample No: 74841

Lab Job No: F961

Date Sampled: 07/30/98 Matrix: SOIL Date Received: 07/30/98 Level: LOW

Date Extracted: 08/03/98 Sample Weight: 30.0 g

Date Analyzed: 08/04/98 Extract Final Volume: 2.0 ml GC Column: DB-5 Dilution Factor: 1.0

Instrument ID: BNAMS5.i % Moisture: 2 Lab File ID: q5994.d

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	80 J ND 1200 1200 ND ND 680 780 170 J ND 920 330 580 220	340 340 340 340 340 340 340 340 340 340
Dibenz(a,h)anthracene Benzo(g,h,i)perylene	57 180 J	34 340

Client ID: SS\_Parcel-H Site: Yonkers Waterfront

Lab Sample No: 74841 Lab Job No: F961

Date Sampled: 07/30/98 Date Received: 07/30/98 Date Extracted: 08/03/98 Date Analyzed: 08/04/98 GC Column: DB-5 Instrument ID: BNAMS5.i

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

Lab File ID: q5994.d

Dilution Factor: 1.0 % Moisture: 2.1

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
<ol> <li>C17H100 Ketone/Unknown</li> <li>Unknown</li> <li>Unknown Alkane</li> <li>Unknown</li> <li>Unknown</li> <li>Unknown Alkane</li> </ol>	24.16 25.32 26.00 26.33 26.81	560 360 600	
6. Unknown 7. C20H12 PAH 8. Unknown 9. Unknown Alkane	26.86 27.18 28.28 28.93	830 1400 560 320 920	
10. Unknown 11. Unknown Alkane/Unknown 12. 13. 14.	29.05	310 490	
16. 17. 18.			
20. 21. 22.			
23. 24. 25. 26. 27.			
28. 29. 30.			

TOTAL ESTIMATED CONCENTRATION 6700

Client ID: SS Parcel-H Site: Yonkers Waterfront

Lab Sample ID: 74841 Lab Job No: F961

Date Sampled: 07/30/98 Date Received: 07/30/98 Date Analyzed: 08/05/98

Level: LOW Sample Weight:

Matrix: SOIL

Date Extracted: 08/03/98 GC Front Column: DB-1701

15 g Extract Final Volume: 10.0 ml

GC Rear Column: DB-608 Instrument ID: PESTGC4.i Front File ID: wf014466.d Rear File ID: wr014466.d

Dilution Factor: 1.0 % Moisture:

# ORGANOCHLORINE PESTICIDES - GC/ECD METHOD 8081A

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u> <u>Column</u>
Aldrin alpha-BHC beta-BHC delta-BHC gamma-BHC (Lindane) Chlordane 4,4'-DDD 4,4'-DDE 4,4'-DDT Dieldrin Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde Endrin ketone Heptachlor Heptachlor epoxide	ND ND ND ND ND ND ND ND ND ND ND ND ND N	6.8 R 6.8 R
Methoxychlor Toxaphene	11 P* ND	6.8 R 130 R

Client ID: SS\_Parcel-H Site: Yonkers Waterfront Lab Sample ID: 74841 Lab Job No: F961

Date Sampled: 07/30/98 Date Received: 07/30/98 Date Extracted: 08/03/98

Level: LOW Sample Weight: 15 g

Date Analyzed: 08/07/98 GC Front Column: DB-1701 GC Rear Column: DB-608 Instrument ID: PESTGC4.i
Front File ID: wf014533.d

Rear File ID: wr014533.d

Extract Final Volume: 10.0 ml Dilution Factor: 1.0

% Moisture: 2

Matrix: SOIL

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg <u>(Dry Weight)</u>	Quantitation Limit <u>Units: ug/kg</u> <u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND 160 ND	68 R 68 R 68 R 68 R 68 R 68 R 68 F 68 R

Client ID: SS Parcel-H Site: Yonkers Waterfront Lab Sample No: 74841

Lab Job No: F961

Date Sampled: 07/30/98
Date Received: 07/30/98

Matrix: SOLID Level: LOW

% Moisture: 2.1

# METALS ANALYSIS

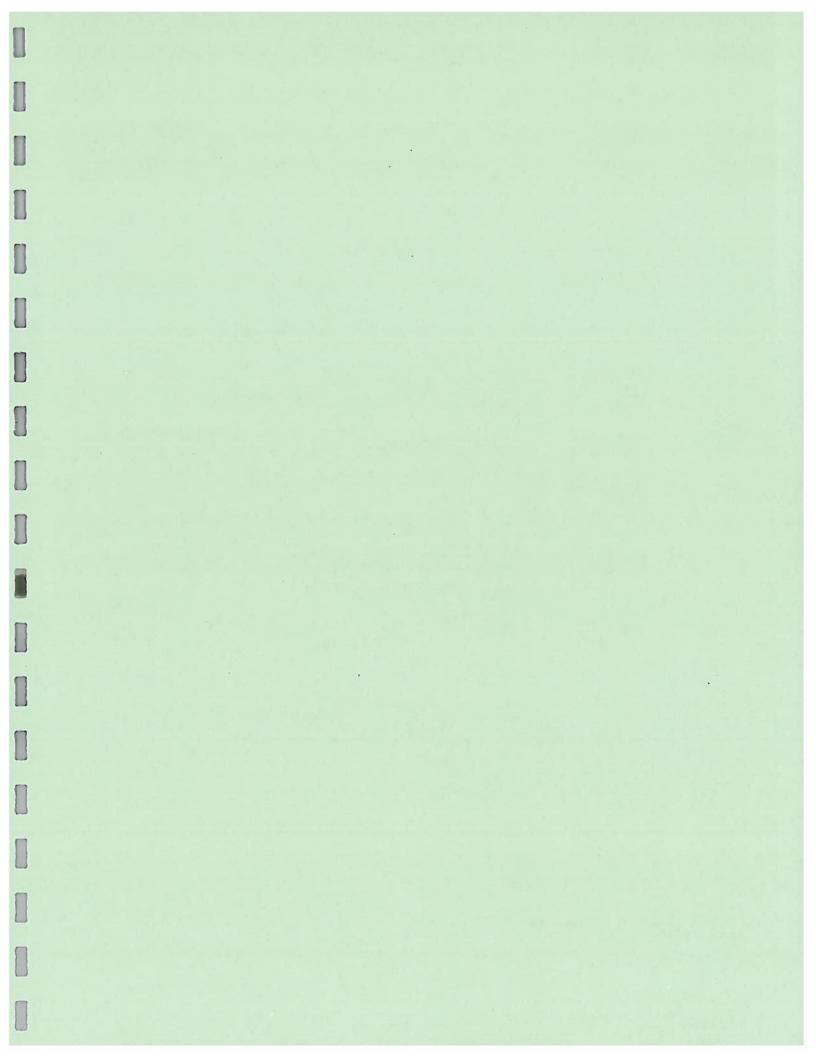
	Analytical Result Units: mg/kg	Instrument Detection		
<u>Analyte</u>	(Dry Weight)	<u>Limit</u>	<u>Oual</u>	<u>M</u>
Aluminum	12500	11.9		P
Antimony	ND	0.94	N	P
Arsenic	9.6	0.78		P
Barium	80.5	0.29		P P
Beryllium	0.54	0.041		P
Cadmium	ND	0.082		P P P P P P P P
Calcium	4440	8.6	N	P
Chromium	19.4	0.20		P
Cobalt	5.9	0.25	В	P
Copper	37.7	0.72		P
Iron	17000	8.5		P
Lead	135	0.51	N	P
Magnesium	3450	8.2	N	P
Manganese	435	0.22		
Mercury	1.5	0.017		CV
Nickel	14.1	0.43		P
Potassium	818	61.3	В	P
Selenium	ND	0.98		P
Silver	ND	0.29		P P P P P
Sodium	893	87.0	В	P
Thallium	ND	0.98		P
Vanadium	31.4	0.39		
Zinc	106	0.92	N	P

777 New Durham Road Edison, New Jersey 08817 Phone: (732) 549-3679

# **CHAIN OF CUSTODY / ANALYSIS REQUEST**

LAB USE ONLY PAGE OF のかめたさ Project No: 1281 1997 Numbers Job No: Sample NY: 🔼 Other: CONICORS WATERE RON7 ANALYSIS REQUESTED (ENTER 'X' BELOW TO INDICATE REQ State (Location of site): NJ: Site/Project Identification Regulatory Program: X × विञ्च X × Ċ, OV 3 × Ŋ LEVIN PETIL Samplers Name ( Printed ) Analysis Turnaround Timn No. of. Water: Pacor Cont. Soil: Rush Charges Authorized For Matrix 7-301/24/5/51/2 1 Week 1 = ICE / 2 = HCI,  $3 = H_2SO_4$ ,  $4 = HNO_3$ , 5 = NaOHSlandard 2 Week Other 4.0.15 Time P.O.# 1 30 % Date )090) (94) 949 7557 7 = Other Zip I PARCEL Pirace 12C. S MICHELLE LUBIN Sample Identification S. Brenowity State Name (for report and invoice) 6 = Other 50.1 5010 (git) 949: 7336 AKUL Little PININS Preservation Used WILLIACE Surence 34 Company Address

Special Instructions			W	Water Metals Filtered (Yes/No)?
Relinquished by	Сотрапу	Date / Time	Received by // / /	Сотрапу
11/16- 0 Nowle,	MARE INC.	7.30 38 10 AM	20E JAK 11:30 98 10 mm 1) They for which	FK
Relinquished by	Company	Date / Time		Company
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Relinquished by	Company	Date / Time		Сотралу
3)		-	3)	
Relinquished by	Company	Date / Time	Received by	Company
4)			4)	
Laboratory Certifications: New Jersey (12543	_	452), Pennsylvania	, New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).	thode Island (132).



Client ID: Field Blank Site: Yonkers Waterfront Lab Sample ID: 92903 Lab Job No: I594

Matrix: WATER

Date Sampled: 10/28/98 Date Received: 10/28/98

Sample Volume: 520 ml

Date Extracted: 11/04/98 Date Analyzed: 11/06/98 GC Front Column: DB-5 GC Rear Column: DB-608

Instrument ID: PESTGC3.i

Extract Final Volume: 5.0 ml

Dilution Factor: Front File ID: zf035126.d Rear File ID: zr035126.d

# ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

		Method Detection	on
Parameter	Analytical Results <u>Units: ug/l</u>	Limit <u>Units: ug/l</u>	Quant. <u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.96 0.96 0.96 0.96 0.96 0.96 0.96	R R R R R R R R

Client ID: Field Blank
Site: Yonkers Waterfront

Lab Sample No: 92903 Lab Job No: I594

Date Sampled: 10/28/98
Date Received: 10/28/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	<u> Oual</u>	<u>M</u>
Aluminum	ND	84.1		P
Antimony	ND	4.4		P
Arsenic	ND	2.8		P
Barium	ND	1.4		P
Beryllium	ND	0.20		P
Cadmium	ND	0.40		P
Calcium	ND	82.0		P P P
Chromium	ND	1.1		P
Cobalt	ND	1.3		P
Copper	ND	2.9		P P P P P
Iron	ND	47.5		P
Lead	ND	2.0		P
Magnesium	ND	69.7		P
Manganese	ND	0.90		P
Mercury	ND	0.10		CV
Nickel	ND	2.1		P
Potassium	ND	245	N	P
Selenium	ND	4.2		P P
Silver	ND	1.4		P
Sodium	ND	483		P
Thallium	ND	4.5		P P
Vanadium	ND	2.6		P
Zinc	12.4	3.9	В	P

Client ID: TP-10AH

Site: Yonkers Waterfront

Lab Sample ID: 92904 Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Date Extracted: 10/31/98 Date Analyzed: 11/04/98

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i Front File ID: of005428.d Rear File ID: or005428.d

Matrix: SOIL Level: LOW

Sample Weight: 15 g

10.0 ml

Extract Final Volume: Dilution Factor: 2.0

% Moisture: 13

# ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg <u>(Dry Weight)</u>	Quantitation Limit <u>Units: ug/kg Column</u>
Aroclor-1016	ND	150 R
Aroclor-1221	ND	150 R
Aroclor-1232	ND	150 R
Aroclor-1242	ND	150 R
Aroclor-1248	ND	150 R
Aroclor-1254	2800	150 F
Aroclor-1260	1600	150 R
Aroclor-1262	ND	150 R
Aroclor-1268	360	150 F

Client ID: TP-10AH

Site: Yonkers Waterfront

Lab Sample No: 92904

Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Matrix: SOLID Level: LOW

% Moisture: 13.2

# METALS ANALYSIS

	Analytical Result Units: mg/kg	Instrument Detection		
<u>Analyte</u>	(Dry Weight)	<u>Limit</u>	<u>Oual</u>	<u>M</u>
Aluminum	5990	19.4		P
Antimony	5.0	1.0	N	P
Arsenic	12.8	0.65	N	P
Barium	278	0.32	N	P
Beryllium	0.39	0.046	BN	P
Cadmium	2.1	0.092	N	P
Calcium	15900	18.9	N*	P
Chromium	27.2	0.25	N	P
Cobalt	6.5	0.30	BN	P
Copper	2980	0.67	N*	P
Iron	23500	10.9		P
Lead	2820	0.46	N	P
Magnesium	5330	16.1	N*	P
Manganese	281	0.21	N	P
Mercury	0.35	0.019		CV
Nickel	29.3	0.48	N	P
Potassium	2180	56.5	*	P
Selenium	ND	0.97	N	P
Silver	7.0	0.32	N	P
Sodium	150	111	В	P
Thallium	ND	1.0	N	P
Vanadium	22.6	0.60	N*	P
Zinc	1530	0.90		P

Client ID: TP-11H

Site: Yonkers Waterfront

Lab Sample ID: 92905

Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Date Extracted: 10/31/98
Date Analyzed: 11/03/98

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i Front File ID: of005402.d Rear File ID: or005402.d Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume:
Dilution Factor: 1.0

10.0 ml

% Moisture: 31

# ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>	<u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262	ND ND ND ND 700 740 ND	98 98 98 98 98 98 98	R R R R F R R
Aroclor-1268	ND	98	R

Client ID: TP-11H

Site: Yonkers Waterfront

Lab Sample No: 92905

Lab Job No: I594

Date Sampled: 10/28/98
Date Received: 10/28/98

Matrix: SOLID Level: LOW

% Moisture: 31.3

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	<u>Oual</u>	<u>M</u>
Aluminum	4890	24.5		P
Antimony	12.8	1.3	N	P
Arsenic	5.5	0.82	N	P
Barium	40.8	0.41	BN	P
Beryllium	0.28	0.058	BN	P P P
Cadmium	0.39	0.12	BN	P
Calcium	5080	23.9	N*	P
Chromium	17.8	0.32	N	P P
Cobalt	6.8	0.38	BN	P
Copper	2660	0.84	N*	P
Iron	14300	13.8		P P
Lead	15100	5.8	N	P
Magnesium	5140	20.3	N*	P P
Manganese	237	0.26	N	
Mercury	0.10	0.024		CV
Nickel	21.3	0.61	N	P
Potassium	797	71.4	B*	P
Selenium	ND	1.2	N	P
Silver	3.6	0.41	N	P P
Sodium	529	141	В	P
Thallium Vanadium	ND	1.3	N	P P
Vanadium Zinc	16.4	0.76	N*	P
ZIIC	911	1.1		P

Client ID: TP-12H

Site: Yonkers Waterfront

Lab Sample ID: 92906

Lab Job No: I594

Date Sampled: 10/28/98

Date Received: 10/28/98 Date Extracted: 10/31/98 Date Analyzed: 11/03/98

GC Front Column: DB-5

GC Rear Column: DB-608 Instrument ID: PESTGC7.i Front File ID: of005403.d Rear File ID: or005403.d

Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume: 10.0 ml

Dilution Factor:

% Moisture: 13

<u>Parameter</u>	Analytical Results Units: ug/kg <u>(Dry Weight)</u>	Quantitation Limit <u>Units: ug/kg</u>	Column
Aroclor-1016	ND	77	R
Aroclor-1221	ND	77	R
Aroclor-1232	ND	77	R
Aroclor-1242	ND	77	R
Aroclor-1248	ND	77	R R
Aroclor-1254	ND	7 7 77	
Aroclor-1260	280 ND	77	R
Aroclor-1262	— <del></del> -	• •	R
Aroclor-1268	ND	77	R
MIOCIOI - 1200	ND	77	R

Client ID: TP-12H

Site: Yonkers Waterfront

Lab Sample No: 92906

Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Matrix: SOLID Level: LOW

% Moisture: 13.2

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Oual	<u>M</u>
Aluminum	6690	19.4	191	P
Antimony	6.5	1.5	N	P
Arsenic	32.3	0.97	N	P
Barium	433	0.32	N	P
Beryllium	0.40	0.046	BN	P
Cadmium	40.2	0.14	N	P
Calcium	19600	18.9	N*	P
Chromium	20.3	0.25	N	P
Cobalt	8.9	0.30	BN	P
Copper	429	1.0	N*	P
Iron	46200	10.9		P
Lead	453	0.69	N	P
Magnesium	6430	16.1	N*	P P
Manganese	435	0.21	N	P
Mercury	2.1	0.038		CV
Nickel	33.4 .	0.48	N	P
Potassium	1370	56.5	*	P
Selenium	2.2	1.5	N	P P
Silver	ND	0.32	N	P
Sodium	334	111	В	P
Thallium	ND	1.6	N	₽
Vanadium	78.5	0.60	N*	P
Zinc	3600	0.90		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: TP-13H

Site: Yonkers Waterfront

Lab Sample ID: 92907

Lab Job No: I594

Date Sampled: 10/28/98

Date Received: 10/28/98
Date Extracted: 10/31/98

Date Analyzed: 11/04/98 GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i

Instrument ID: PESTGC7.i Front File ID: of005427.d Rear File ID: or005427.d Matrix: SOIL Level: LOW

Sample Weight: 15 g

10.0 ml

Extract Final Volume:

Dilution Factor: 5.0

% Moisture: 20

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u> <u>Column</u>
Aroclor-1016	ND	420 R
Aroclor-1221	ND	
Aroclor-1232	ND	
Aroclor-1242		420 R
	ND	420 R
Aroclor-1248	ND	420 R
Aroclor-1254	5200	420 F
Aroclor-1260	2700	
Aroclor-1262		
	ND	420 R
Aroclor-1268	ND	420 R

Client ID: TP-13H

Site: Yonkers Waterfront

Lab Sample No: 92907

Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Matrix: SOLID Level: LOW

% Moisture: 19.6

#### METALS ANALYSIS

	Analytical Result	Instrument		
<u>Analyte</u>	Units: mg/kg (Dry Weight)	Detection Limit	_Oual	<u>M</u>
	14-17-11-11-11-11-11-11-11-11-11-11-11-11-	2221120	Quar	11
Aluminum	6700	20.9		P
Antimony	35.2	1.6	N	P
Arsenic	31.8	1.0	N	P
Barium	575	0.35	N	P
Beryllium	0.44	0.050	BN	P
Cadmium	9.1	0.15	N	P P P
Calcium	19000	20.4	N*	P
Chromium	63.3	0.27	N	P
Cobalt	12.4	0.32	N	P
Copper	12900	7.2	N*	P P P P P
Iron	63700	11.8		P
Lead	19200	5.0	N	P
Magnesium	4890	17.3	N*	P
Manganese	675	0.22	N	
Mercury	0.41	0.021		CV
Nickel	61.1	0.52	N	P
Potassium	1030	61.0	B*	P P P
Selenium	1.9	1.6	N	P
Silver	41.8	0.35	N	
Sodium	537	120	В	P P P
Thallium	ND	1.7	N	P
Vanadium	26.9	0.65	N*	
Zinc	10500	9.7		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: TP-14H

Site: Yonkers Waterfront

Lab Sample ID: 92908

Lab Job No: I594

Date Sampled: 10/28/98

Date Received: 10/28/98
Date Extracted: 10/31/98
Date Analyzed: 11/04/98

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i

Front File ID: of005425.d Rear File ID: or005425.d Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume: 10.0 ml

Dilution Factor: 1.0

% Moisture: 16

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>	<u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	80 80 80 80 80 80 80	R R R R R R R R R

Client ID: TP-14H

Site: Yonkers Waterfront

Lab Sample No: 92908

Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Matrix: SOLID Level: LOW

% Moisture: 16.5

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	<u> Oual</u>	<u>M</u>
Aluminum Antimony Arsenic Barium Beryllium Cadmium	1390 1.9 37.8 125 0.38 ND	20.1 1.1 0.67 0.34 0.048	BN N N BN	P P P P P
Calcium Chromium Cobalt Copper Iron	1940 10.8 6.1 31.3 39500	0.096 19.6 0.26 0.31 0.69 11.4	N N* N BN N*	P P P P P P
Lead Magnesium Manganese Mercury Nickel	49.6 132 25.9 0.08 9.6	0.48 16.7 0.22 0.020	N BN* N	P CV
Potassium Selenium Silver Sodium Thallium Vanadium	738 4.3 ND ND ND ND 26.5	0.50 58.7 1.0 0.34 116 1.1 0.62	BN B* N N N N	P P P P P
Zinc	21.1	0.93		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: TP-15H

Site: Yonkers Waterfront

Lab Sample ID: 92909

Lab Job No: I594

Date Sampled: 10/28/98

Date Received: 10/28/98
Date Extracted: 10/31/98

Date Analyzed: 11/04/98 GC Front Column: DB-5 GC Rear Column: DB-608

Instrument ID: PESTGC7.i Front File ID: of005406.d Rear File ID: or005406.d Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume: 10.0 ml

Dilution Factor: 1.0

% Moisture: 5

<u>Parameter</u>	Analytical Results Units: ug/kg <u>(Dry Weight)</u>	Quantitation Limit <u>Units: ug/kg</u>	<u>Column</u>
Aroclor-1016	ND	70	R
Aroclor-1221	ND	70	R
Aroclor-1232	ND	70	R
Aroclor-1242	ND	70	R
Aroclor-1248	ND	70	R
Aroclor-1254	ND	70	R
Aroclor-1260	ND	70	R
Aroclor-1262	ND	70	R
Aroclor-1268	ND	70	R

Client ID: TP-15H

Site: Yonkers Waterfront

Lab Sample No: 92909

Lab Job No: 1594

Date Sampled: 10/28/98 Date Received: 10/28/98

Matrix: SOLID Level: LOW

% Moisture: 4.8

#### METALS ANALYSIS

	Analytical			
	Result	Instrument	194	
	Units: mg/kg	Detection		
<u>Analyte</u>	(Dry Weight)	Limit_	<u>Oual</u>	<u>M</u>
Aluminum	3290	17.7	*	P
Antimony	ND .	0.92	N	P
Arsenic	ND	0.59	N	
Barium	12.4	0.29	BN	P P
Beryllium	0.39	0.042	BN	P
Cadmium	ND	0.084	N	P P
Calcium	2460	17.2	N*	P
Chromium	3.9	0.23	N	P
Cobalt	1.6	0.27	BN	P P
Copper	10.9	0.61	N*	P
Iron	10400	10.0		P
Lead	7.6	0.42	N	P
Magnesium	1160	14.6	N*	P
Manganese	180	0.19	N	P
Mercury	0.04	0.018		CV
Nickel	3.2	0.44	BN	P
Potassium	1880	51.5	*	P
Selenium	ND	0.88	N	P P
Silver	ND	0.29	N	P
Sodium	ND	101		P
Thallium	ND	0.95	N	P P P
Vanadium	7.5	0.55	N*	P
Zinc	79.4	0.82		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: TP-16H

Site: Yonkers Waterfront

Lab Sample ID: 92910

Lab Job No: I594

Date Sampled: 10/28/98

Date Received: 10/28/98
Date Extracted: 10/31/98
Date Analyzed: 11/04/98

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i Front File ID: of005407.d Rear File ID: or005407.d Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume:

10.0 ml

Dilution Factor: 1.0

% Moisture: 9

<u>Parameter</u>	Analytical Results Units: ug/kg <u>(Dry Weight)</u>	Quantitation Limit <u>Units: ug/kg</u> <u>Column</u>
Aroclor-1016	ND ND	73 R
Aroclor-1221	ND	73 R
Aroclor-1232	ND	73 R
Aroclor-1242	ND	
Aroclor-1248	ND	
Aroclor-1254	ND	
Aroclor-1260	840	73 R
Aroclor-1262		73 R
Aroclor-1268	ND	73 R
	ND	73 R

Client ID: TP-16H

Site: Yonkers Waterfront

Lab Sample No: 92910

Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Matrix: SOLID Level: LOW

% Moisture: 8.8

#### METALS ANALYSIS

	Analytical			
	Result	Instrument		
	Units: mg/kg	Detection		
<u>Analyte</u>	(Dry Weight)	<u>Limit</u>	<u> Oual</u>	<u>M</u>
Aluminum	8070	18.4		P
Antimony	ND	0.96	N	P
Arsenic	2.6	0.61	N	P
Barium	111	0.31	N	
Beryllium	0.42	0.044	BN	P
Cadmium	ND	0.088	N	P P P P P P P P P
Calcium	9760	18.0	N*	P
Chromium	20.7	0.24	N	P
Cobalt	5.8	0.29	BN	P
Copper	156	0.64	N*	P
Iron	17000	10.4		P
Lead	285	0.44	N	P
Magnesium	4650	15.3	N*	P
Manganese	221	0.20	N	P
Mercury	1.2	0.018		CV
Nickel	17.1	0.46	N	
Potassium	3360	53.8	*	P P P P P
Selenium	ND	0.92	N	P
Silver	ND	0.31	N	P
Sodium	148	106	В	P
Thallium	ND	0.99	N	₽
Vanadium	23.8	0.57	N*	P
Zinc	213	0.86		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: TP-17H

Site: Yonkers Waterfront

Lab Sample ID: 92911

Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Date Extracted: 10/31/98 Date Analyzed: 11/04/98

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i Front File ID: of005426.d Rear File ID: or005426.d

Matrix: SOIL Level: LOW

Sample Weight: 15 g

10.0 ml

Extract Final Volume: Dilution Factor: 1.0

% Moisture: 9

<u>Parameter</u>	Analytical Results Units: ug/kg <u>(Dry Weight)</u>	Quantitation Limit <u>Units: ug/kg</u>	<u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	74 74 74 74 74 74 74 74	R R R R R R R

Client ID: TP-17H

Site: Yonkers Waterfront

Lab Sample No: 92911 Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Matrix: SOLID Level: LOW

% Moisture: 9.4

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	<u> Oual</u>	<u>M</u>
Aluminum	3490	18.6		E .
Antimony	ND	0.97	N	P
Arsenic	1.4	0.62	N	P
Barium	17.9	0.82	BN	D.
Beryllium	0.49	0.044	N	P P P
Cadmium	ND	0.088	N	ם ד
Calcium	2400	18.1	N*	P P P
Chromium	7.3	0.24	N	ם ד
Cobalt	1.9	0.29	BN	P
Copper	16.0	0.64	N*	P
Iron	9480	10.5	14	P
Lead	18.1	0.44	N	D
Magnesium	1600	15.4	N*	P P
Manganese	154	0.20	N	P
Mercury	1.3	0.018	••	CV
Nickel	5.3	0.46	BN	P
Potassium	1770	54.1	*	P
Selenium	ND	0.93	N	P
Silver	ND	0.31	N	P
Sodium	ND	107		P
Thallium	ND	0.99	N	P
Vanadium	7.7	0.57	N*	P
Zinc	82.1	0.86		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: TP-10AH-GW Site: Yonkers Waterfront

Lab Sample ID: 92912 Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Date Extracted: 11/04/98
Date Analyzed: 11/06/98
GC Front Column: DB-5
GC Rear Column: DB-608

Instrument ID: PESTGC3.i

Matrix: WATER
Sample Volume: 400 ml

Extract Final Volume: 2.5 ml

Dilution Factor: 1.0 Front File ID: zf035127.d Rear File ID: zr035127.d

<u>Parameter</u>	Analytical Results <u>Units: ug/l</u>	Method Detection Limit Quant. <u>Units: ug/l</u> <u>Col</u> umn
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.62 R 0.62 R 0.62 R 0.62 R 0.62 R 0.62 R 0.62 R 0.62 R 0.62 R

Client ID: TP-10AH-GW Site: Yonkers Waterfront

Lab Sample No: 92912 Lab Job No: I594

10/28/98 Date Sampled: Date Received: 10/28/98

Matrix: WATER Level: LOW

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	-	Qual	<u>M</u>
Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc	ND ND 563 ND 1.6 168000 ND 1.5 45.5 97.1 10.5 144000 11.8 ND 10.5 44800 ND ND ND ND ND	84.1 4.4 2.8 1.4 0.20 0.40 82.0 1.1 1.3 2.9 47.5 2.0 69.7 0.90 0.10 2.1 245 4.2 1.4 2413 4.5 2.6 3.9	B B B B		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: TP-12H-GW Site: Yonkers Waterfront

Lab Sample ID: 92913 Lab Job No: 1594

Date Sampled: 10/28/98
Date Received: 10/28/98
Date Extracted: 11/04/98
Date Analyzed: 11/06/98

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC3.i Matrix: WATER

960 ml

Sample Volume: 960 ml Extract Final Volume: 5.0 ml

Dilution Factor:

Front File ID: zf035128.d Rear File ID: zr035128.d

<u>Parameter</u>	Analytical Results <u>Units: ug/l</u>	Method Detection Limit Quant. <u>Units: ug/l</u> <u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R

Client ID: TP-12H-GW Lab Sample No: 92913 Site: Yonkers Waterfront Lab Job No: I594

Date Sampled: 10/28/98 Matrix: WATER Date Received: 10/28/98 Level: LOW

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	<u>M</u>
Aluminum	ND	84.1		P
Antimony	ND	4.4		P
Arsenic	ND	2.8		P
Barium	260	1.4		P
Beryllium	ND	0.20		P
Cadmium	1.3	0.40	В	P P P P P P
Calcium	147000	82.0		P
Chromium	ND	1.1		P
Cobalt	13.8	1.3	В	P
Copper	65.3	2.9		P
Iron	73.0	47.5	В	P P P
Lead	6.7	2.0		₽
Magnesium	51900	69.7		P
Manganese	52.5	0.90		P
Mercury	ND	0.10		CV
Nickel	13.6	2.1	В	P
Potassium	· 13700	245	N	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	223000	483		P P P P
Thallium	ND	4.5		P
·Vanadium	8.9	2.6	В	
Zinc	568	3.9		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: TP-13H-GW Site: Yonkers Waterfront

Lab Sample ID: 92914 Lab Job No: I594

Matrix: WATER

Date Sampled: 10/28/98
Date Received: 10/28/98
Date Extracted: 11/04/98

Sample Volume: 970 ml Extract Final Volume:

Date Analyzed: 11/06/98 GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC3.i

Extract Final Volume: 5.0 ml Dilution Factor: 1.0 Front File ID: zf035129.d Rear File ID: zr035129.d

<u>Parameter</u>	Analytical Results <u>Units: ug/l</u>	Method Detection Limit Quan <u>Units: ug/l</u> <u>Colum</u>	
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R	

Client ID: TP-13H-GW Site: Yonkers Waterfront Lab Sample No: 92914

Lab Job No: 1594

Date Sampled: 10/28/98 Date Received: 10/28/98 Matrix: WATER Level: LOW

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	<u> </u>	<u>M</u>
Aluminum	ND	84.1		<sub>2</sub> P
Antimony	11.0	4.4		P
Arsenic	9.5	2.8		P P P P P P P P P P
Barium	747	1.4		P
Beryllium	ND	0.20		P
Cadmium	2.4	0.40	В	P
Calcium	208000	82.0		P
Chromium	ND	1.1		P
Cobalt	7.5	1.3	В	P
Copper	32.3	2.9		P
Iron	ND	47.5		P
Lead	2.3	2.0	В	P
Magnesium	209000	697		P
Manganese	405	0.90		P
Mercury	ND	0.10		CV
Nickel	26.5	2.1	В	P
Potassium	70900	245	N	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	1700000	4827		P P P P P
Thallium	ND	4.5		P
Vanadium	ND	2.6		P
Zinc	946	3.9		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Site: YONKERS WATERFRONT

Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98

Date Extracted: 11/02/98

Matrix: ORGANIC

Date Analyzed: 11/03/98

GC/FID FINGERPRINT

Envirotech Sample #

Client ID

Product I.D.

92915

TP-11H-Drum

Most closely resembles a #2 Fuel oil.

Client ID: TP-11H-Drum Site: Yonkers Waterfront

Lab Sample ID: 92915 Lab Job No: I594

Date Sampled: 10/28/98 Date Received: 10/28/98 Date Extracted: 10/29/98

Matrix: OIL Level: HIGH

Date Analyzed: 10/30/98

Sample Weight: 1 g Extract Final Volume: 10.0 ml

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC7.i Front File ID: of005338.d Rear File ID: or005338.d

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Results <u>Units: ug/kg</u>	Quantitation Limit Units: ug/kg	<u>Column</u>
Aroclor-1016	ND	1000	R
Aroclor-1221	nD	1000	R
Aroclor-1232	ND	1000	R
Aroclor-1242	ND	1000	R
Aroclor-1248	ND	1000	R
Aroclor-1254	ND	1000	R
Aroclor-1260	ND	1000	R
Aroclor-1262	ND	1000	R
Aroclor-1268	ND	1000	R

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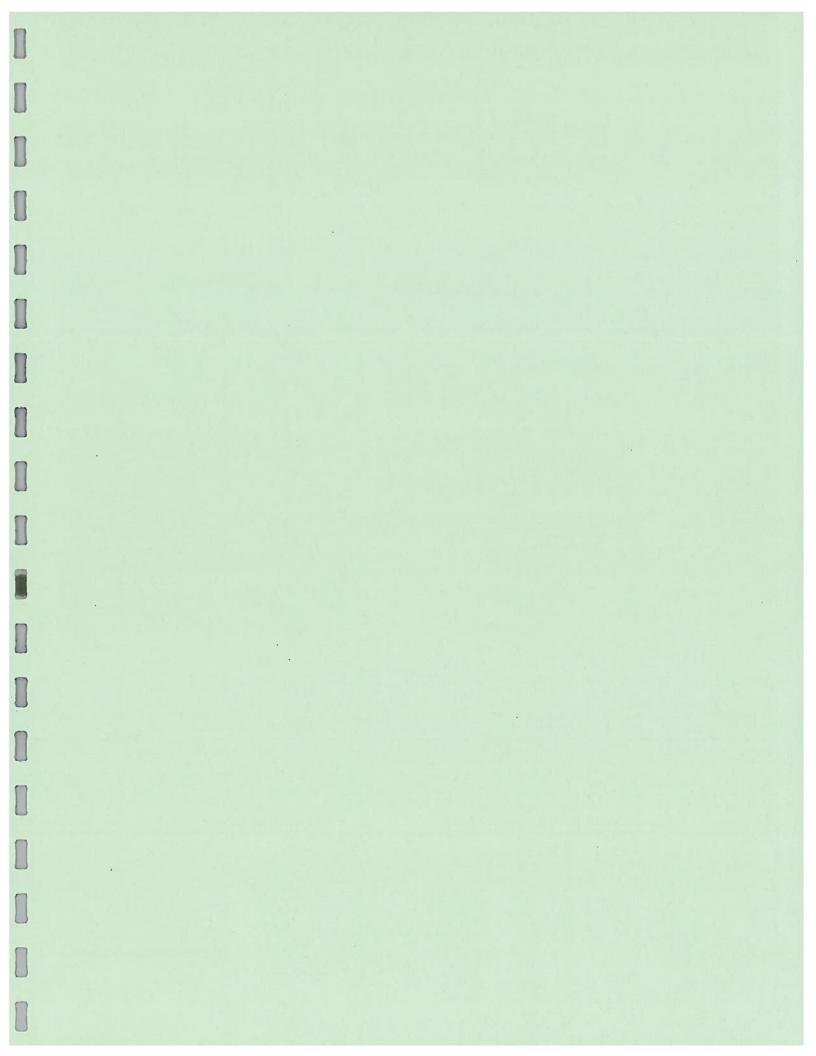
CHAIN OF CUSTODY

No. 62701

PM NON-CONFORMANCE 10-28-81 1530 1700 Date/Time Volume: Temp: 0-28-98 3 initials: " DESCRIPTION For Lab Use Only 1. -28-781 11648 12668 11668 92.304 92.306 92.306 र/५८/०/ 2/669 Custody Seal #(s) 23.21 93.51 2220 Cooler Temp.(s) 2780 Holding Time: # of Coolers: Preserved: \_\_ Container: Date Due: \_ Logged By: Quote No. op No. **Broken:** Other: Custody Seal # (s) A B ΗД FIELD BOOK: 1000/ (IS) ANALYSIS REQUIRED HITE PINNS, NY LAPIN LAPIN Signature 40000 אוניפת הפוואר הנופנילבו ל Par K X #Od Bill To A ZLO ALTORS **(E**) ST4 Mencal **(2)** Oг UOZH TACOBSON-FINNE RECH **Date** UTime Witx Proj. Type: NJPDES, NPDES, ISRA/CLP, CERCLA, RCRA, Reporting Type: NI Reg Format, NJ Reduced Format, CLP Level II, Level I (Data Sum), Other 70004 130 pm 1500 4000 930pm 10-28 1020an 10-26 1220 al 10-28 2 45am 10-28 2 15pm VOLD Am 10-18 3550 10-28 1220an COMMENTS: (Please include hazards on site.) 0-28 1050A - GROWND WATER SAMPIES WERE Rench Print Name and Company R PRICHARD 0-28 0-28 10-28 87-01 10-28 UST, ACO, MOA, OTHER CLP, BW846, EPA 600 DW, OTHER PAKERS OTHER KEVIN Kerusta TAT: 1wk 2wk 3wk, HKRE CONK Received By: Relinquished By: <u>が</u>王 Client ID (10 CHAR) Project Name/no.: -R -16 H Relinquished By: Client Contact: Received By:\_\_ Received By: \_\_ STL Contact: Sampled By:\_ ġ Protocol: Client: **T** <u>@</u> (3) <u>©</u> <u>6</u> (E) (2)

Copies: White and yellow copies should accompany samples to STL. The pink copy should be retained by the client.) See reverse for directions.

Mtx = Matrix of Sample. (AI=Air, & Aqueous, LE=Leachate, ML=Misc Liquid, MS=Misc Solids, OIL, SE=Sediment, SL=Sludge, & Solids



#### TABLE VO-1.0 7099-0172A AKRF-WHITE PLAINS TCL VOLATILE ORGANICS

All values are ug/Kg dry weight basis.

Client Sample I.D.  Lab Sample I.D.  Method Blank I.D.  Quant. Factor	Method Blank VBLKKH VBLKKH 1.00	TP-11A-H 990172A-02 VBLKKH 1.23	383	Quant. Limits with no
Chloromethane Eromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide Vinyl Acetate 1,1-Dichloroethene 1,2-Dichloroethene (total) Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropane 2-Bitaloroethene 2-Dichloropropane 3-1,3-Dichloropropene 3-1,3-Dichloropropene 3-1,2-Trichloroethane 3-1,2-Trichloroethane 3-1,2-Trichloroethane 3-1,2-Trichloropropene 3-1,2-Trichloroethane 3-1,2-Trichloroethane 3-1,2-Tetrachloroethane 4-Hexanone 4-Hexanone 6-Hexanone	מממממממממממממממממממממ	מממממממממממממממממממממממממממממ		Dilution 10 10 10 10 10 10 10 10 10 10 10 10 10
ate Received ate Extracted ate Analyzed	N/A 02/02/99	01/28/99 N/A 02/02/99		5.0

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor

Quant. Factor = a numerical value which takes into account any

variation in sample weight/volume, % moisture and

sample dilution.

#### TABLE VO-2.0 7099-0172A

## AKRF-WHITE PLAINS VOLATILE TENTATIVELY IDENTIFIED COMPOUNDS

Related Method Blank: VBLKKH

Lab Sample Id: VBLKKH Client Sample Id: Method Blank

CAS# Compound RT · Conc., uq/Kq

NONE DETECTED

Lab Sample Id: 990172A-02 Client Sample Id: TP-11A-H

CAS#	Compound	_RT	Estimated Conc., ug/Kg
9. p	UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN	22.91 24.89 23.06 27.74 24.39 22.48 23.17 23.87 28.51 23.98	280J 270J 240J 220J 190J 160J 150J 140J 130J

#### TABLE AS-1.0 7099-0172A AKRF-WHITE PLAINS RCRA METALS

All values are mg/Kg dry weight basis.

	- 1			
Client Sample I.D.	TP-10B-H	TP-11A-H	TP-11B-H	TP-13A-H
Lab Sample I.D.	990172A-01	990172A-02	990172A-03	990172A-04
Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	32.6 454. 3.3N 19.8N 1430 0.53 1.8 4.2	10.1 134. 0.19UN 11.6N 1490 0.48 0.61B 0.25B	12.1 161. 0.20UN 10.8N 585. 0.60 1.0 0.20U	17.9 430. 4.8N 44.7N 8100 0.53 0.58U 69.2

#### TABLE AS-1.1 7099-0172A AKRF-WHITE PLAINS RCRA METALS

All values are mg/Kg dry weight basis.

Client Sample I.D.	TP-18-H	TP-19-H	TP-13B-H	
Lab Sample I.D.	.990172A-05	990172A-06	990172A-07	
Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	3.1 31.6B 0.18UN 9.8N 19.4 0.094B 0.85B 0.18U	7.2 109. 0.21UN 16.5N 120. 0.22 1.0B	9.0 129. 4.0N 74.2N 12200 0.31 0.62U 11.4	

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Severn Trent Laboratories Whippany NJ 07981 628 Route 10

Tel: (973) 428-8181 Fax: (973) 428-5222

CHAIN OF CUSTODY

No. 62711

Date/Time on krowr detected e lab snould be <u>s</u> Seal# Custody FIELD BOOK:  $\mu$ 1144 ANALYSIS REQUIRED PO# Bill To <u>=</u> 0 н UOZH H.Y. Proj. Type: NJPDES, NPDES, ISRA, CLP, CERCLA, RCRA, Project Name/no.: YONK: 115 WATORFRONT NJ Reg Format, NJ Reduced Format, CLP, Level II, Level I (Data Sum), Print Name and Company COMMENTS: (Please include hazards on site.) CLP, SW846, EPA 600 TAT: 1wk, but, 3wk, OTHER Kill Other Client ID (10 CHAR) Reporting Type: Client Contact: Relinquished By: STL Contact: Sampled By Received By: Received By: Protocol: 1) || Client:

(Copies: White and yellow copies should accompany samples to STL. The pink copy should be retained by the client.) See reverse for directions.

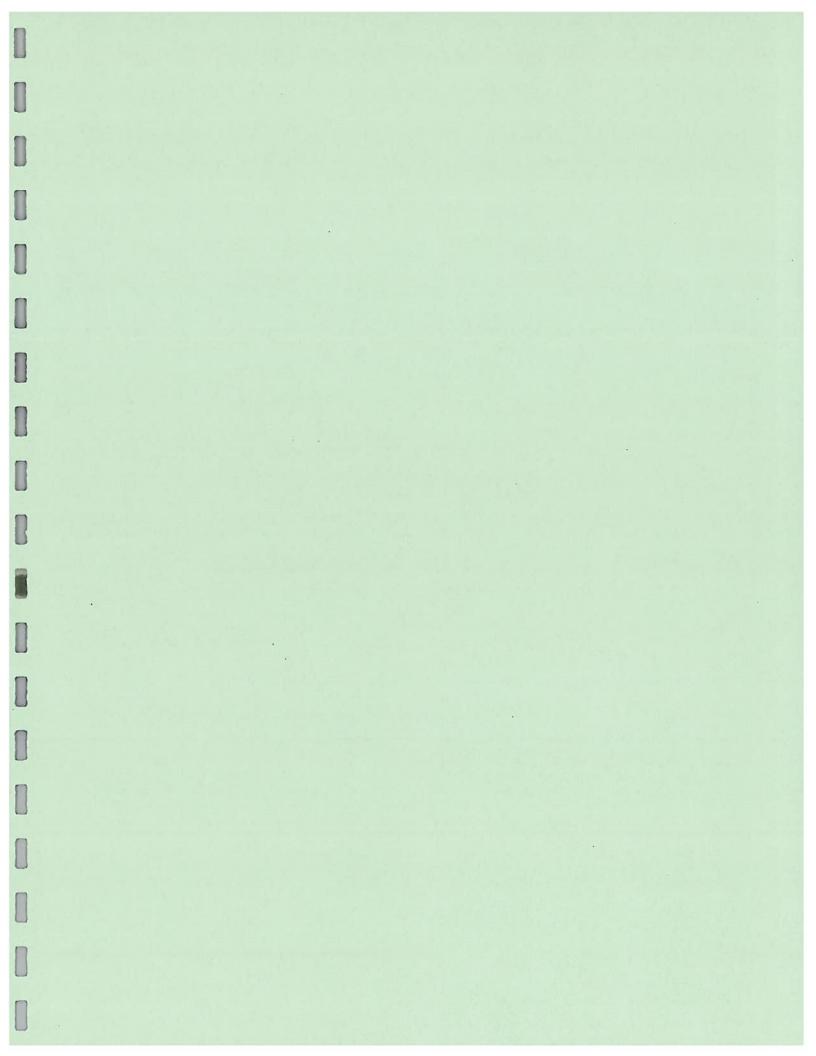
Mtx = Matrix of Sample. (Al=Air, AQ=Aqueous, LE=Leachate, ML=Misc Liquid, MS=Misc Solids, OIL, SE=Sediment, SL=Sludge, SO=Soil)

Relinquished By:

(2)

<u>(4)</u>

Received By: \_\_



#### 7099-0351A AKRF-WHITE PLAINS

#### Case Narrative

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for all samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
TCLP-PREP	1311	1

#### References:

1. Test Methods for the Evaluation of Solid Waste, SW846, 3rd edition, 1986.

Metals - TCLP metals were determined using a JA61 simultaneous ICAP following guidance provided in SW846 according to the following Methods: ICAP-3010/6010.

The tabular results do not indicate the TCLP leachate matrix, but accurately reflect the matrix as "aqueous".

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

# TABLE AS-1.0 7099-0351A AKRF-WHITE PLAINS MISCELLANEOUS ATOMIC SPECTROSCOPY

All values are ug/L.

Client Sample I.D.	TP-13A-H	TP-13B-H	61	
Lab Sample I.D.	990351A-01	990351A-02		
Lead	110000	332000		

#### 7099-0351A AKRF-WHITE PLAINS SAMPLE SUMMARY

CLIENT ID	LAB ID	MATRIX	DATE COLLECTED	DATE RECEIVED
TP-13A-H	990351A-01	SOIL	01/27/99	02/18/99
TP-13B-H	990351A-02	SOIL	01/27/99	02/18/99

PARCEL I

Client ID: TP-4H Soil Site: Yonkers Waterfront

Lab Sample No: 66030 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98
Date Received: 06/15/98
Date Analyzed: 06/24/98
GC Column: DB624
Instrument ID: VOAMS5.i
Lab File ID: e2309.d

Matrix: SOIL Level: LOW

Sample Weight: 5.0 g Purge Volume: 5.0 ml

% Moisture: 20

#### VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene		
Ethylbenzene Styrene Xylene (Total)	ND ND 1.6J	5.0 6.2 6.2

Client ID: TP-4H Soil Site: Yonkers Waterfront

Lab Sample No: 66030 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98 Date Analyzed: 06/24/98

Matrix: SOIL Level: LOW

Sample Weight: 5.0 g Purge Volume: 5.0 ml % Moisture: 19.9

GC Column: DB624 Instrument ID: VOAMS5.i Lab File ID: e2309.d

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME   RT   EST. CONC. ug/kg	ug/kg winknown Siloxane  11.57  9.4
1. Unknown Siloxane 2. Unknown 3. Ethylmethylbenzene isomer 4. Unknown Siloxane 5. Unknown 6. Unknown Siloxane 7. 8. 9. 10. 11. 12. 13.	nknown Siloxane 11.57 9.4
2. Unknown 3. Ethylmethylbenzene isomer 4. Unknown Siloxane 5. Unknown 6. Unknown Siloxane 7. 8. 9. 10. 11. 12. 13.	7.4
3. Ethylmethylbenzene isomer 4. Unknown Siloxane 5. Unknown 6. Unknown Siloxane 7. 8. 9. 10. 11. 12. 13.	1 14.461 201
4. Unknown Siloxane 5. Unknown 6. Unknown Siloxane 7. 8. 9. 10. 11. 12. 13.	+ heel mak heel he as no as a state of the same of the
5. Unknown 6. Unknown Siloxane 7. 8. 9. 10. 11. 12. 13.	
6. Unknown Siloxane 7. 8. 9. 10. 11. 12. 13.	
7. 8. 9. 10. 11. 12. 13.	nlen or = 0.1 com = 0.0
9. 10. 11. 12. 13.	
9. 10. 11. 12. 13.	
10. 11. 12. 13.	1 1
11. 12. 13.	
12.	
13.	
1 14	
18	
19.	
1	1 1
30	

TOTAL ESTIMATED CONCENTRATION 91

Client ID: TP-4H\_Soil Site: Yonkers Waterfront

Lab Sample No: 66030 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98 Date Extracted: 06/17/98

Matrix: SOIL Level: LOW

Date Analyzed: 06/24/98 GC Column: DB-5 Instrument ID: BNAMS4.i

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Lab File ID: u2666.d

% Moisture: 20

#### SEMI-VOLATILE ORGANICS - GC/MS METHOD 8270C

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND 10 J ND ND ND ND ND ND ND ND ND ND ND ND ND	830 830 830 830 830 830 830 830 830 1700 1700

Client ID: TP-4H Soil Lab Sample No: 66030 Site: Yonkers Waterfront

Lab Job No: E651

Date Sampled: 06/15/98 Matrix: SOIL Date Received: 06/15/98 Level: LOW

Date Extracted: 06/17/98

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml Date Analyzed: 06/24/98

GC Column: DB-5
Instrument ID: BNAMS4.i
Lab File ID: u2666.d Dilution Factor: 1.0

% Moisture: 20

#### SEMI-VOLATILE ORGANICS - GC/MS METHOD 8270C

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine	ND ND ND ND ND ND ND ND ND ND ND ND ND N	42 830 830 830 830 830 42 42 42 830 830 830 830 830 830 830 830 830 830
4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene	ND ND 710 J	830 42 830
Anthracene	150 J	830

Client ID: TP-4H Soil Site: Yonkers Waterfront Lab Sample No: 66030

Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98

Level: LOW Sample Weight: 30.0 g

Date Extracted: 06/17/98 Date Analyzed: 06/24/98

Extract Final Volume: 2.0 ml

GC Column: DB-5
Instrument ID: BNAMS4.i

Dilution Factor: 1.0

Lab File ID: u2666.d

% Moisture: 20

Matrix: SOIL

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Carbazole	44_J	830
Di-n-butylphthalate	ND	830
Fluoranthene	660 J	830
Pyrene	700 J	830
Butylbenzylphthalate	ND	830
3,3'-Dichlorobenzidine	ND	1700
Benzo(a)anthracene	350	42
Chrysene	720 Ј	830
bis(2-Ethylhexyl)phthalate	ND	830
Di-n-octylphthalate	ND ND	830
Benzo(b) fluoranthene	550	42
Benzo(k)fluoranthene	230	42
Benzo(a)pyrene	290	42
Indeno(1,2,3-cd)pyrene	120	42
Dibenz(a,h)anthracene	40 J	42
Benzo(g,h,i)perylene	120 J	830

Client ID: TP-4H Soil Site: Yonkers Waterfront

Lab Sample No: 66030 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98 Date Extracted: 06/17/98 Date Analyzed: 06/24/98

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

GC Column: DB-5 Instrument ID: BNAMS4.i

Extract Final Volume: 2.0 ml

Lab File ID: u2666.d

Dilution Factor: 1.0 % Moisture: 19.9

# SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

	<del></del>		
COMPOUND NAME	RT	EST. CONC. ug/kg	Q
	======	==========	=====
1. C11H24 Alkane	14.00	660	
2. C12H26 Alkane	15.12		
3. Unknown Alkane	15.25	530	
4. C14H30 Alkane	15.85	720	
5. C13H28 Alkane	16.13	920	
6. C14H30 Alkane	17.07		
7. Unknown Alkane	17.60	1100	
8. C15H32 Alkane		970	
9. C16H34 Alkane	17.95	870	
10. C17H36 Alkane	18.77	640	
11. Unknown	19.56	520	
	19.58	770	12
12. Unknown	21.41	900	
13. C20H42 Alkane	21.68	550	
14. Unknown	21.86	480	
15. C16H14 PAH	22.29	560	
16. Unknown Alkane	23.52	540	
17. Unknown Amide	23.94	1300	
18. Unknown Alkane	24.63	740	
19. C19H14 PAH	25.72	630	
20. Unknown Alkane	25.90		
21.	45.90	570	
21			
MW •			
		i	
30			
		i	

TOTAL ESTIMATED CONCENTRATION

14680

Client ID: TP-4H\_Soil
Site: Yonkers Waterfront

Lab Sample ID: 66030 Lab Job No: E651

Date Sampled: 06/15/98
Date Received: 06/15/98
Date Extracted: 06/16/98

Level: LOW
Sample Weight:

Date Extracted: 06/16/98
Date Analyzed: 06/18/98
GC Front Column: DB-5

Sample Weight: 15 g
Extract Final Volume: 10.0 ml

GC Rear Column: DB-608 Instrument ID: PESTGC5.i Front File ID: pf008320.d Rear File ID: pr008320.d Dilution Factor: 1.0

% Moisture: 20

Matrix: SOIL

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>	<u>Column</u>
Aroclor-1016	ND	84	R
Aroclor-1221	ND	84	R
Aroclor-1232	ND	84	R
Aroclor-1242	ND	84	R
Aroclor-1248	ND	84	R
Aroclor-1254	ND	84	R
Aroclor-1260	ND	84	R
Aroclor-1262	ND	84	R
Aroclor-1268	ND	84	R

Client ID: TP-4H Soil
Site: Yonkers Waterfront

Lab Sample No: 66030

Lab Job No: E651

Date Sampled: 06/15/98
Date Received: 06/15/98

Matrix: SOLID Level: LOW

% Moisture: 19.9

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection <u>Limit</u>	_Oual_	<u>M</u>
Aluminum	2280	14.5		P
Antimony	ND .	1.1	N	P
Arsenic	14.5	0.95	*	P
Barium	111	0.35		P
Beryllium	0.59	0.050		P P P
Cadmium	ND	0.100		P
Calcium	4940	10.5		P
Chromium	7.6	0.25		P P P P P P
Cobalt	2.9	0.30	В	P
Copper	16.4	0.87		P
Iron	22000	10.4		P
Lead	27.1	0.62		P
Magnesium	1880	10.1		P
Manganese	102	0.27		P
Mercury	0.22	0.021		CV
Nickel	7.6	0.52	В	
Potassium	850	75.0	В	P
Selenium	ND	1.8		P
Silver	ND	0.35		P
Sodium	295	106	В	P
Thallium	ND	1.2		P P P P P P
Vanadium	21.7	0.47		P
Zinc	27.6	1.1		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: TP-4H Water Lab Sample No: 66032 Site: Yonkers Waterfront Lab Job No: E651

Date Sampled: 06/15/98
Date Received: 06/15/98
Date Analyzed: 06/22/98
GC Column: DB624 Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

Instrument ID: VOAMS3.i Lab File ID: c0156.d

# VOLATILE ORGANICS - GC/MS METHOD 8260

Parameter	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride Bromodichloromethane	ND	2.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	1.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	3.0
trans-1,3-Dichloropropene	ND ND	1.0
Bromoform	ND	5.0
4-Methyl-2-Pentanone	_ <del></del>	4.0
2-Hexanone	ND ND	5.0
Tetrachloroethene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	1.0 5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0
Xylene (Total)	ND	5.0

Client ID: TP-4H Water Site: Yonkers Waterfront Lab Sample No: 66032 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98 Matrix: WATER

Level: LOW
Purge Volume: 5.0 ml Dilution Factor: 1.0

Date Analyzed: 06/22/98 GC Column: DB624 Instrument ID: VOAMS3.i Lab File ID: c0156.d

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1. Unknown Siloxane 2. Unknown Silanol 3. Unknown Siloxane	6.75 8.18 16.79	20 12 10	
4. 5. 6. 7.			
8. 9. 10. 11.			
12. 13. 14. 15. 16.			
18. 19. 20.			
22. 23. 24.			
26. 27. 28.	00		
29			

TOTAL ESTIMATED CONCENTRATION

42

Client ID: TP-4H Water Site: Yonkers Waterfront Lab Sample No: 66032 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98 Date Extracted: 06/16/98

Matrix: WATER Level: LOW

Date Analyzed: 06/24/98 GC Column: DB-5 Instrument ID: BNAMS5.i

Sample Volume: 960 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Lab File ID: q5266.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol	ND	21
2-Chlorophenol	ND	21
2-Methylphenol	ND	21
4-Methylphenol	ND	21
2-Nitrophenol	ND	21
2,4-Dimethylphenol	ND	21
2,4-Dichlorophenol	ND	21
4-Chloro-3-methylphenol	ND	21
2,4,6-Trichlorophenol	ND	21
2,4,5-Trichlorophenol	ND	21
2,4-Dinitrophenol	ND	42
4-Nitrophenol	ND	42
4,6-Dinitro-2-methylphenol	ND	42
Pentachlorophenol	ND	42

Client ID: TP-4H Water Lab Sample No: 66032 Site: Yonkers Waterfront Lab Job No: E651

Date Sampled: 06/15/98 Matrix: WATER Date Received: 06/15/98 Level: LOW

Date Extracted: 06/16/98 Sample Volume: 960 ml

Extract Final Volume: 2.0 ml Date Analyzed: 06/24/98

GC Column: DB-5 Dilution Factor: 1.0

Instrument ID: BNAMS5.i Lab File ID: q5266.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis(2-Chloroethyl)ether	ND	1.0
1,3-Dichlorobenzene	ND	21
1,4-Dichlorobenzene	ND	21
1,2-Dichlorobenzene	ND	21
bis(2-chloroisopropyl)ether	ND	21
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	21
bis(2-Chloroethoxy)methane	ND	21
1,2,4-Trichlorobenzene	ND	1.0
Naphthalene	ND	21
4-Chloroaniline	ND	21
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	21
Hexachlorocyclopentadiene	ND	21
2-Chloronaphthalene	ND	21
2-Nitroaniline	ND	21
Dimethylphthalate	ND	21
Acenaphthylene 2,6-Dinitrotoluene	ND	21
3-Nitroaniline	ND	2.1
Acenaphthene	ND .	21
Dibenzofuran	ND	21
2,4-Dinitrotoluene	ND	21
Diethylphthalate	ND ND	2.1
4-Chlorophenyl-phenylether	ND ND	21 21
Fluorene	ND ND	21
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	21
4-Bromophenyl-phenylether	ND ND	21
Hexachlorobenzene	ND	1.0
Phenanthrene	0.5J	21
Anthracene	ND	21

Client ID: TP-4H Water Lab Sample No: 66032 Site: Yonkers Waterfront Lab Job No: E651

Date Sampled: 06/15/98 Matrix: WATER Date Received: 06/15/98 Level: LOW

Date Extracted: 06/16/98 Date Analyzed: 06/24/98 GC Column: DB-5

Instrument ID: BNAMS5.i Lab File ID: q5266.d

Sample Volume: 960 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Parameter	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole	ND	21
Di-n-butylphthalate	ND	21
Fluoranthene	0.5J	21
Pyrene	0.4J	21
Butylbenzylphthalate	ND	21
3,3'-Dichlorobenzidine	ND	42
Benzo(a)anthracene	0.6J	1.0
Chrysene	0.3J	21
bis(2-Ethylhexyl)phthalate	ND	21
Di-n-octylphthalate	ND	21
Benzo(b)fluoranthene	0.3J	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	0.2J	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	21

Client ID: TP-4H Water Site: Yonkers Waterfront Lab Sample No: 66032 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98 Date Extracted: 06/16/98 Date Analyzed: 06/24/98 GC Column: DB-5 Instrument ID: BNAMS5.i

Matrix: WATER Level: LOW

Sample Volume: 960 ml Extract Final Volume: 2.0 ml

Lab File ID: q5266.d

Dilution Factor: 1.0

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

	1		
COMPOUND NAME	RT	EST. CONC.	Q
1. NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			====
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2J.			
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20.			
30			
	l	li	

TOTAL ESTIMATED CONCENTRATION

0.0

Client ID: TP-4H Water Site: Yonkers Waterfront

Lab Sample ID: 66032 Lab Job No: E651

Matrix: WATER

Date Sampled: 06/15/98 Date Received: 06/15/98 Date Extracted: 06/18/98 Date Analyzed: 06/19/98

Sample Volume: 960 ml Extract Final Volume:

GC Front Column: DB-5 GC Rear Column: DB-608

5.0 ml Dilution Factor: 1.0

Instrument ID: PESTGC7.i

Front File ID: of002062.d Rear File ID: or002062.d

# ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results <u>Units: ug/l</u>	Method Detection Limit Quant <u>Units: ug/l</u> <u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R 0.52 R

Client ID: TP-4H Water Site: Yonkers Waterfront

Lab Sample No: 66032 Lab Job No: E651

Date Sampled: 06/15/98 Date Received: 06/15/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	Oual_	<u>M</u>
Aluminum	3330	58.2		P
Antimony	ND	4.6		P
Arsenic	12.6	3.8		
Barium	156	1.4	В	P
Beryllium	0.23	0.20	В	P
Cadmium	ND	0.40		P
Calcium	135000	42.2		P
Chromium	7.4	1.0	В	P P P P P
Cobalt	7.1	1.2	В	
Copper	21.1	3.5	В	P P P P
Iron	18900	41.5		P
Lead	49.5	2.5		P
Magnesium	24600	40.3		P
Manganese	164	1.1		P
Mercury	0.23	0.10		CV
Nickel	22.7	2.1	В	
Potassium	11000	300		P P P
Selenium	ND	4.8		P
Silver	ND	1.4		P
Sodium	71700	426		P
Thallium	ND	4.8		P
Vanadium	18.2	1.9	В	P
Zinc	52.3	4.5		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 66033 Lab Job No: E651

Date Sampled: 06/08/98 Date Received: 06/15/98

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

Date Analyzed: 06/22/98 GC Column: DB624 Instrument ID: VOAMS3.i Lab File ID: c0148.d

#### **VOLATILE ORGANICS - GC/MS** METHOD 8260

<u>Parameter</u>	Analytical Result Units: ug/l	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene	Units: ug/l  ND  ND  ND  ND  1.2J  ND  ND  ND  ND  ND  ND  ND  ND  ND  N	Units: ug/l  5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.
1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	ND ND ND ND ND	1.0 5.0 5.0 4.0 5.0
Xylene (Total)	ND	5.0

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 66033 Lab Job No: E651

Date Sampled: 06/08/98 Date Received: 06/15/98 Date Analyzed: 06/22/98

Matrix: WATER Level: LOW

GC Column: DB624

Purge Volume: 5.0 ml Dilution Factor: 1.0

Instrument ID: VOAMS3.i Lab File ID: c0148.d

# VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

	<del></del>	1	
COMPOUND NAME	RT	EST. CONC.	_
1. Unknown Siloxane	16.77	8.4	
2			
3. 4.			
<b>3</b> •			
• •			
8			
10.			
and and any of			
14.			
19.			
24.			
<del></del>			
28. 29.			
30.	<del></del>		

TOTAL ESTIMATED CONCENTRATION 8.4

Edison, New Jersey 08817 Phone: (732) 549-3900 Fax: (732) 549-3679 777 New Durham Road

# CHAIN OF CUSTODY / ANALYSIS REQUEST

PAGE OF

LAB USE ONLY E65 Project No: 66029 66030 66032 Sample Numbers Job No: 6090 6003 Other: 3 ANALYSIS REQUESTED (ENTER X' BELOW TO INDICATE REQ Γ. XN Regulatory Program: C 1.0 Produce A Sile/Project Identification State (Location of site): NJ: į. 50 × X Х X تاورج <u>ו</u>כר Reill Samplers Name ( Printed ) **Analysis Turnaround Time** No. of. Cont. Water: Soii: Rush Charges Authorized For: 4 3 2-15-99 20, Witted 5 WATER WAREA Matrix ヹゑ 7117 7000 KEVIN Standard X Preservation Used: (1=1CB, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH 1 Week 2 Week Other Time 3 15-15-18 | 23C. P.O. # 6-15-98 3m . W. 98. 86-8-9 Date 10io 1 7 = Other 914-949-7589 Ζib Address 34 South Broadway T Z Sample Identification Fax 6 = Other \_\_\_ Name ( for report and invoice ) MICHELLEPIN TRIP BLANK PKRF Inc. 914-949-1336 Link Hains TPYH TP34 H# 01 TPIM Company

Company Date / Time Received by イムドア・ハン	Special Instructions				Water Metals Filtered (Yes Not)
Company Compan	Relinquished by	Сотрапу		Received by 'A // /	Company
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		dompany	Date / Time	Received by	Company
	4)	- 1	1	1)	
	Laboratory Certifications: New Jers		452), Pennsylvania (6	38-522), Connecticut (PH-0200),	Rhode Island (132).



Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98
Date Analyzed: 07/28/98
GC Column: DB624
Instrument ID: VOAMS2.i

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

Lab File ID: b7133.d

# VOLATILE ORGANICS - GC/MS METHOD 8260

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Stylene Vilene (Texas)		5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
Xylene (Total)	ND	5.0

Client ID: Field\_Blank Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Analyzed: 07/28/98 GC Column: DB624

Matrix: WATER Level: LOW

Instrument ID: VOAMS2.i Lab File ID: b7133.d Purge Volume: 5.0 ml Dilution Factor: 1.0

# VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			=====
2		6	
5			
7. 8. 9.			
10.			
12.			
			25.
15.			
17.			
18.			
20.			
22.			
24.			
26.			
27.			
29.			
30			

TOTAL	ESTIMATED	CONCENTRATION	0.0

Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Extracted: 07/26/98

Matrix: WATER Level: LOW

Date Analyzed: 07/27/98

Sample Volume: 610 ml

GC Column: DB-5

Extract Final Volume: 2.0 ml Dilution Factor: 1.0

Instrument ID: BNAMS2.i Lab File ID: s6292.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	16 16 16 16 16 16 16 16 66 66

Client ID: Field\_Blank
Site: Yonkers Waterfront

Lab Sample No: 73503
Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98
Date Extracted: 07/26/98
Date Analyzed: 07/27/98

Matrix: WATER
Level: LOW
Sample Volume: 610 ml
Extract Final Volume:

GC Column: DB-5
Instrument ID: BNAMS2.i

Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

Lab File ID: 86292.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units:</u> ug/l
bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene 2-Methylnaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene		Units: ug/l  1.6 16 16 16 1.6 1.6 1.6 1.6 16 16 3.3 16 16 3.3 16 16 3.3 16 16 3.3 16 16 16 16 16 16 16 16 16 16 16 16 16

Client ID: Field Blank Lab Sample No: 73503 Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 07/24/98 Matrix: WATER Date Received: 07/24/98 Date Extracted: 07/26/98 Level: LOW

Sample Volume: 610 ml Date Analyzed: 07/27/98 GC Column: DB-5 Instrument ID: BNAMS2.i Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Lab File ID: s6292.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	16 16 16 16 16 33 1.6 16 1.6 1.6 1.6 1.6

Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Extracted: 07/26/98

Matrix: WATER Level: LOW

Date Analyzed: 07/27/98

Sample Volume: 610 ml

GC Column: DB-5 Instrument ID: BNAMS2.i

Lab File ID: s6292.d

Extract Final Volume: 2.0 ml Dilution Factor: 1.0

# SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

			·
COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND	=======	========	=====
2			
5			
6. 7. 8.			
••			
9. 10.			
12.			
14.			
15. 16.			
<del></del>			
18. 19.		-	
21.			
23.			
24. 25. 26.			
28.			
29. 30.			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: Field\_Blank
Site: Yonkers Waterfront

Lab Sample ID: 73503 Lab Job No: F821

Matrix: WATER

Date Sampled: 07/24/98
Date Received: 07/24/98
Date Extracted: 07/26/98
Date Analyzed: 07/27/98

Sample Volume: 670 ml Extract Final Volume: 5.0 ml

Date Analyzed: 07/27/98 GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC5.i

Dilution Factor: 1.0 Front File ID: pf009064.d Rear File ID: pr009064.d

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results <u>Units: ug/wipe</u>	Quantitation Limit <u>Units: ug/wipe</u> <u>Column</u>
Aroclor-1016	ND	0.75 R
Aroclor-1221	ND	0.75 R
Aroclor-1232	ND	0.75 R
Aroclor-1242	ND	0.75 R
Aroclor-1248	ND	0.75 R
Aroclor-1254	ND	0.75 R
Aroclor-1260	ND	0.75 R
Aroclor-1262	ND	0.75 R
Aroclor-1268	ND	0.75 R

Client ID: Field Blank
Site: Yonkers Waterfront

Lab Sample No: 73503 Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection Limit	_Oual_	<u>M</u>
Aluminum	ND	58.2		P
Antimony	ND	4.6	N	° P
Arsenic	ND	3.8		P
Barium	ND	1.4		P P
Beryllium	ND	0.20		P
Cadmium	ND	0.40		P P
Calcium	ND	42.2		P
Chromium	ND	1.0		P
Cobalt	ND	1.2		P
Copper	ND	3.5		P
Iron	ND	41.5		P P
Lead	ND	2.5		P
Magnesium	ND	40.3		P
Manganese	ND ND	1.1	N	P
Mercury	. ND	0.10	N	CV
Nickel	ND	2.1		P
Potassium	ND	300		P P P
Selenium	ND	4.8		P
Silver	ND	1.4		P
Sodium	ND	426		P
Thallium	ND	4.8		P
Vanadium	ND	1.9		P
Zinc	8.2	4.5	В	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 73504 Lab Job No: F821

Date Sampled: 07/21/98
Date Received: 07/24/98
Date Analyzed: 07/28/98
GC Column: DB624

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

Instrument ID: VOAMS2.i

Lab File ID: b7134.d

# **VOLATILE ORGANICS - GC/MS** METHOD 8260

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene (Tabal)	ND	5 . 0
Xylene (Total)	ND	5.0

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 73504 Lab Job No: F821

Date Sampled: 07/21/98 Date Received: 07/24/98 Date Analyzed: 07/28/98

Matrix: WATER Level: LOW

GC Column: DB624

Purge Volume: 5.0 ml Dilution Factor: 1.0

Instrument ID: VOAMS2.i Lab File ID: b7134.d

# VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND_	=======	ug/l ========	=====
3			
5.			
7.			
8. 9. 10.			
12.			
14.			
16.			
17. 18. 19. 20.			
21.			
23.			
25. 26.			
28.			
29. 30.			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-2I Lab Sample No: 73505 Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 07/24/98 Matrix: WATER Date Received: 07/24/98
Date Received: 07/24/98
Date Analyzed: 07/28/98
GC Column: DB624
Instrument ID: VOAMS2.i Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

Lab File ID: b7135.d

# VOLATILE ORGANICS - GC/MS METHOD 8260

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene	Units: ug/l  ND ND ND ND ND ND ND ND ND ND ND ND ND	
Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene Xylene (Total)	ND ND ND ND ND ND ND ND ND ND ND ND ND N	1.0 5.0 3.0 1.0 5.0 4.0 5.0 1.0 5.0 4.0 5.0 5.0

Client ID: MW-2I

Site: Yonkers Waterfront

Lab Sample No: 73505 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Analyzed: 07/28/98 GC Column: DB624

Instrument ID: VOAMS2.i Lab File ID: b7135.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

# VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND			
3. 4. 5. 6.			
7. 8. 9.			
11. 12.			
14. 15.			
17. 18.			
19. 20. 21. 22.			
24. 25.			
27. 28.	2		
29. 30.			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-2I

Site: Yonkers Waterfront

Lab Sample No: 73505 Lab Job No: F821

Date Sampled: 07/24/98

Date Received: 07/24/98 Date Extracted: 07/24/98
Date Extracted: 07/26/98
Date Analyzed: 07/27/98
GC Column: DB-5
Instrument ID: BNAMS2.i

Lab File ID: s6293.d

Matrix: WATER Level: LOW

Sample Volume: 830 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	12 12 12 12 12 12 12 12 12 12 48 48 48

Client ID: MW-21 Lab Sample No: 73505

Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 07/24/98 Matrix: WATER Date Received: 07/24/98 Level: LOW

Date Extracted: 07/26/98 Sample Volume: 830 ml Date Analyzed: 07/27/98

GC Column: DB-5

Instrument ID: BNAMS2.i Lab File ID: s6293.d

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis(2-Chloroethyl)ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis(2-chloroisopropyl)ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis(2-Chloroethoxy)methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether		1.2 12 12 12 1.2 1.2 1.2 1.2 1.2 12 12 12 12 12 12 12 12 12 12 12 12 12
Hexachlorobenzene Phenanthrene Anthracene	ND ND ND	1.2 12 12

Client ID: MW-21 Lab Sample No: 73505

Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 07/24/98 Matrix: WATER Date Received: 07/24/98 Date Extracted: 07/26/98 Level: LOW

Sample Volume: 830 ml Extract Final Volume: 2.0 ml

Date Analyzed: 07/27/98

GC Column: DB-5 Instrument ID: BNAMS2.i Dilution Factor: 1.0

Lab File ID: s6293.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole	ND	12
Di-n-butylphthalate	ND	12
Fluoranthene	ND	12
Pyrene	ND	12
Butylbenzylphthalate	ND	12
3,3'-Dichlorobenzidine	ND	24
Benzo(a)anthracene	ND	1.2
Chrysene	ND	12
bis(2-Ethylhexyl)phthalate	ND	12
Di-n-octylphthalate	ND ND	12
Benzo(b) fluoranthene	ND ND	
Benzo(k) fluoranthene		1.2
Benzo(a) pyrene	ND	1.2
Indeno(1,2,3-cd)pyrene	ND	1.2
Dibone (n. h) and have a see	ND	1.2
Dibenz (a, h) anthracene	ND	1.2
Benzo(g,h,i)perylene	ND	12

Client ID: MW-2I

Site: Yonkers Waterfront

Lab Sample No: 73505 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Extracted: 07/26/98

Date Analyzed: 07/27/98

GC Column: DB-5 Instrument ID: BNAMS2.i Lab File ID: s6293.d

Matrix: WATER Level: LOW

Sample Volume: 830 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

		<u> </u>	1
COMPOUND NAME	RT	EST. CONC.	Q
1. Unknown Amide 2	23.63	20	
4.			
5			
7. 8. 9.			
11.			
12. 13. 14. 15.			
16.			
18.			
20.			
23.			
25.			
27. 28.			
30			

TOTAL ESTIMATED CONCENTRATION 20

Client ID: MW-2I

Site: Yonkers Waterfront

Lab Sample ID: 73505 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Date Extracted: 07/26/98 Date Analyzed: 07/27/98 GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC5.i

Matrix: WATER

Sample Volume: 800 ml

Extract Final Volume: 5.0 ml

Dilution Factor: 1.0

Front File ID: pf009065.d Rear File ID: pr009065.d

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results <u>Units: ug/wipe</u>	Quantitation Limit <u>Units: ug/wipe</u> <u>Column</u>
Aroclor-1016	ND	0.62 R
Aroclor-1221	ND	0.62 R
Aroclor-1232	ND	0.62 R
Aroclor-1242	ND	0.62 R
Aroclor-1248	ND	0.62 R
Aroclor-1254	ND	0.62 R
Aroclor-1260	ND	0.62 R
Aroclor-1262	ND	0.62 R
Aroclor-1268	ND	0.62 R

Client ID: MW-2I

Site: Yonkers Waterfront

Lab Sample No: 73505

Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection Limit	<u> Oual</u>	<u>M</u>
Aluminum	18900	58.2		P
Antimony	ND	4.6	N	P
Arsenic	28.1	3.8		P
Barium	125	1.4	В	P
Beryllium	1.3	0.20	В	P
Cadmium	ND	0.40		P
Calcium	93600	42.2		P
Chromium	40.9	1.0		P
Cobalt	14.7	1.2	В	P
Copper	63.7	3.5		P
Iron	40100	41.5		P
Lead	90.2	2.5		P
Magnesium	37400	40.3		P
Manganese	1120	1.1	N	P
Mercury	2.8	0.10	N	CV
Nickel	33.7	2.1	В	P
Potassium	10800	300		P
Selenium	5.2	4.8		P
Silver	ND	1.4		P
Sodium	79100	426		P
Thallium	ND	4.8		P
Vanadium	46.0	1.9	В	P
Zinc	160	4.5		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: MW-1I

Site: Yonkers Waterfront

Lab Sample No: 73506 Lab Job No: F821

Matrix: WATER Level: LOW Purge Volume: 5.0 ml

Date Sampled: 07/24/98
Date Received: 07/24/98
Date Analyzed: 07/28/98
GC Column: DB624 Instrument ID: VOAMS2.i Lab File ID: b7136.d

Dilution Factor: 1.0

# VOLATILE ORGANICS - GC/MS METHOD 8260

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethene trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 2-Hexanone Tetrachloroethene 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene Xylene (Total)		5.000000000000000000000000000000000000
_ (	ND	5.0

Client ID: MW-1I

Site: Yonkers Waterfront

Lab Sample No: 73506

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98 Date Analyzed: 07/28/98

GC Column: DB624
Instrument ID: VOAMS2.i Lab File ID: b7136.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND			
3. 4. 5. 6.			
8. 9.			
11. 12.			
14. 15.			9794
17. 18.			
20.			
23			
25. 26. 27. 28.			
30.			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-1I

Site: Yonkers Waterfront

Lab Sample No: 73506 Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98

Date Extracted: 07/26/98 Date Analyzed: 07/27/98 GC Column: DB-5

Instrument ID: BNAMS2.i Lab File ID: s6294.d

Matrix: WATER Level: LOW

Sample Volume: 790 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol	ND	13
2-Chlorophenol	ND	13
2-Methylphenol	ND	13
4-Methylphenol	ND	13
2-Nitrophenol	ND	13
2,4-Dimethylphenol	ND	13
2,4-Dichlorophenol	ND	13
4-Chloro-3-methylphenol	ND	13
2,4,6-Trichlorophenol	ND	13
2,4,5-Trichlorophenol	ND	13
2,4-Dinitrophenol	ND	51
4-Nitrophenol	ND	51
4,6-Dinitro-2-methylphenol	ND	51
Pentachlorophenol	ND	51

Client ID: MW-II Lab Sample No: 73506 Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 07/24/98 Matrix: WATER Date Received: 07/24/98 Level: LOW

Date Extracted: 07/24/98
Date Extracted: 07/26/98
Date Analyzed: 07/27/98
GC Column: DB-5
Instrument ID: BNAMS2.i Sample Volume: 790 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Lab File ID: s6294.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis(2-Chloroethyl)ether	ND	
1,3-Dichlorobenzene	ND	, 1.3
1,4-Dichlorobenzene	ND	13
1,2-Dichlorobenzene	ND	13
bis (2-chloroisopropyl) ether	ND	13
N-Nitroso-di-n-propylamine	ND ND	13
Hexachloroethane	ND ND	1.3
Nitrobenzene	ND ND	1.3
Isophorone	ND ND	1.3 13
bis(2-Chloroethoxy)methane	ND	13
1,2,4-Trichlorobenzene	ND	1.3
Naphthalene	ND	13
4-Chloroaniline	ND	13
Hexachlorobutadiene	ND	2.5
2-Methylnaphthalene	ND	13
Hexachlorocyclopentadiene	ND	13
2-Chloronaphthalene	ND	13
2-Nitroaniline	ND	25
Dimethylphthalate	ND	13
Acenaphthylene	ND	13
2,6-Dinitrotoluene	ND	2.5
3-Nitroaniline	ND	25
Acenaphthene	ND	13
Dibenzofuran	ND	13
2,4-Dinitrotoluene	ND	2.5
Diethylphthalate	ND	13
4-Chlorophenyl-phenylether	ND	13
Fluorene	ND	13
4-Nitroaniline	ND	25
N-Nitrosodiphenylamine	ND	13
4-Bromophenyl-phenylether	ND	13
Hexachlorobenzene	ND	1.3
Phenanthrene	ND	13
Anthracene	ND	13

Client ID: MW-11 Lab Sample No: 73506 Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98 Date Extracted: 07/26/98

Date Analyzed: 07/27/98

GC Column: DB-5
Instrument ID: BNAMS2.i Lab File ID: s6294.d

Matrix: WATER Level: LOW

Sample Volume: 790 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate	ND ND	13
Fluoranthene	ND	13 13
Pyrene Butylbenzylphthalate	ND ND	13 13
3,3'-Dichlorobenzidine Benzo(a)anthracene	nd ND	25 1.3
Chrysene bis(2-Ethylhexyl)phthalate	ND ND	13 13
Di-n-octylphthalate Benzo(b)fluoranthene	ND	13
Benzo(k)fluoranthene	ND ND	1.3 1.3
Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	ND ND	1.3 1.3
Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND	1.3 13

Client ID: MW-1I

Site: Yonkers Waterfront

Lab Sample No: 73506

Lab Job No: F821

Date Sampled: 07/24/98
Date Received: 07/24/98
Date Extracted: 07/26/98

Date Analyzed: 07/27/98

GC Column: DB-5

Instrument ID: BNAMS2.i
Lab File ID: s6294.d

Matrix: WATER Level: LOW

Sample Volume: 790 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
1NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND 2			
4			
8. 9. 10. 11.			
12. 13. 14. 15.			
16. 17. 18. 19.			
21. 22. 23.			
25			
28. 29. 30.			

TOTAL ESTIMATED CONCENTRATION

0.0

Client ID: MW-1I

Site: Yonkers Waterfront

Lab Sample ID: 73506 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Date Extracted: 07/26/98 Date Analyzed: 07/27/98

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC5.i Matrix: WATER

Sample Volume: 750 ml

Extract Final Volume: 5.0 ml

Dilution Factor: 1.0

Front File ID: pf009066.d Rear File ID: pr009066.d

### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results <u>Units: ug/wipe</u>	Quantitation Limit Units: ug/wipe (	<u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND ND ND ND ND	0.67 0.67 0.67 0.67 0.67 0.67 0.67	R R R R R R R R R

Client ID: MW-1I

Site: Yonkers Waterfront

Lab Sample No: 73506 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Matrix: WATER Level: LOW

### METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	<u>M</u>
Aluminum	29500	58.2		<b>P</b>
Antimony	ND	4.6	N	P
Arsenic	96.6	3.8		P P
Barium	612	1.4		P
Beryllium	2.5	0.20		P
Cadmium	ND	0.40		P
Calcium	116000	42.2		P
Chromium	83.0	1.0		P
Cobalt	25.9	1.2	В	P
Copper	250	3.5		P
Iron	156000	41.5		P
Lead	377	2.5		P
Magnesium	45100	40.3		P P P P P P
Manganese	1420	1.1	N	P
Mercury	5.2	0.10	N	CV
Nickel	67.2	2.1		P
Potassium	29700	300		P
Selenium	5.7	4.8		P P P
Silver	ND	1.4		P
Sodium	202000	426		P
Thallium	ND	4.8		P
Vanadium	102	1.9		P
Zinc	1290	4.5		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Site: Yonkers Waterfront Lab Job No: F821

Date Sampled: 7/24/98
Date Received: 7/24/98

Matrix: WATER

Date Analyzed: 7/25/98

QA Batch: 1038

### TURBIDITY

Envirotech Sample #	Client ID	Dilution <u>Factor</u>	Analytical Result <u>Units: NTU</u>
73501	MW-2H	20	460
73502	MW-2HA	25	625
73505	MW-2I	25	450
73506	MW-1I	25	875
73507	MW-1H	50	1050

Quantitation Limit for Turbidity is 0.5 NTU for an undiluted sample.

Client ID: Field Blank-Dis
Site: Yonkers Waterfront

Lab Sample No: 73510 Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Matrix: WATER Level: LOW

### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	Qual	<u>M</u>
Aluminum	ND	58.2		P
Antimony	ND	4.6	N	P
Arsenic	ND	3.8		
Barium	ND ·	1.4		P P P
Beryllium	ND	0.20		P
Cadmium	ND	0.40		P
Calcium	ND	42.2		P
Chromium	ND	1.0		P P P P P P
Cobalt	ND	1.2		P
Copper	ND	3.5		P
Iron	ND	41.5		P
Lead	ND	2.5		P
Magnesium	ND	40.3		P
Manganese	ND	1.1	N	P
Mercury	ND	0.10	N	CV
Nickel	ND	2.1		P
Potassium	388	300	В	P
Selenium	ND	4.8		P
Silver	ND	1.4		P P P
Sodium	ND	426		P
Thallium	ND	4.8		P
Vanadium	ND	1.9		P
Zinc	8.7	4.5	В	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: MW-2I-Dis

Site: Yonkers Waterfront

Lab Sample No: 73511

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Matrix: WATER Level: LOW

### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection Limit	<u> Oual</u>	<u>м</u>
Aluminum	ND	58.2		P
Antimony	ND	4.6	N	P
Arsenic	ND	3.8		
Barium	22.1	1.4	В	P P P
Beryllium	ND	0.20		P
Cadmium	ND	0.40		P
Calcium	97100	42.2		P
Chromium	ND	1.0		P P P
Cobalt	ND	1.2		P
Copper	ND	3.5		P
Iron	ND	41.5		P
Lead	ND	2.5		P
Magnesium	36500	40.3		P P P
Manganese	617	1.1	N	P
Mercury	ND	0.10	N	CV
Nickel	ND	2.1		P
Potassium	9760	300		P
Selenium	ND	4.8		
Silver	ND	1.4		P P P
Sodium	96100	426		P
Thallium	ND	4.8		P
Vanadium	2.8	1.9	В	P
Zinc	12.5	4.5	В	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: MW-1I-Dis Site: Yonkers Waterfront

Lab Sample No: 73512

Lab Job No: F821

Date Sampled: 07/24/98 Date Received: 07/24/98

Matrix: WATER Level: LOW

### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	Oual	<u>M</u>
Aluminum Antimony	ND ND	58.2		P
Arsenic	ND ND	4.6	N	P
Barium		3.8	_	P
Beryllium	44.8	1.4	В	P
Cadmium	ND	0.20		P P P P P
Calcium	ND	0.40		P
Chromium	109000	42.2		P
Cobalt	ND	1.0		
	1.6	1.2	В	P P P P
Copper Iron	ND	3.5		P
	8450	41.5		P
Lead	ND	2.5		P
Magnesium	39500	40.3		P
Manganese	775	1.1	N	P
Mercury	ND	0.10	N	CV
Nickel	8.4	2.1	В	P
Potassium	. 26200	300		P :
Selenium	ND	4.8		P
Silver	ND	1.4		P
Sodium	208000	426		P
Thallium	ND	4.8		P
Vanadium	7.5	1.9	В	P
Zinc	7.9	4.5	В	P
				_

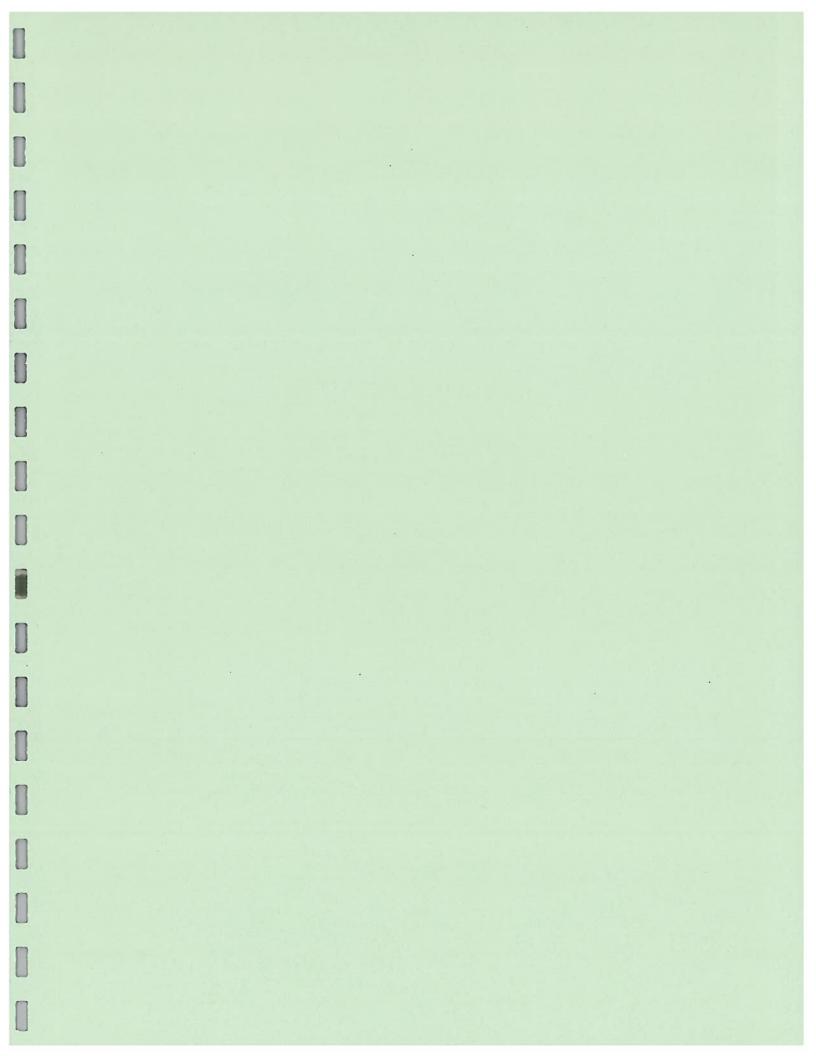
Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Edison, New Jersey 08817 Phone: (732) 549-3900 Fax: (732) 549-3679 777 New Durham Road

CHAIN OF CUSTODY / ANALYSIS REQUEST

756 735 7351 735 7351 7351 LAB USE ONLY Job No: 73505 73505 73526 73507 Project No: 73904 Numbers Sample 350 055t PAGE NY: V Other: ONKERS WATERFRONT ANALYSIS REQUESTED (ENTER"X" BELOW TO INDICATE REQ State (Location of site): NJ: Site/Project Identification Regulatory Program: × X × X X × X X X X X S ON S. of. Samplers Name ( Printed ) KEVIN REILLY Analysis Turnaround Time Water: Soil: Cont. ٩ ૭ Rush Charges Authorized For. 70007 MATER Matrix WATER 11:15 Mesence 11:15 Varge ( ) Salverere **PARK** where Omer Standard Preservation Used: 1 = ICE, 2 = HCI, 3 = H2SO4, 4 = HNO3, 5 = NaOH 2 Weck 1 Week 10m 407 Time P.O. # 777 ガスな 7-24 7-24 7.24 Date 7-24 7 = Other 15-56- 676(416) Address South BROADWAY FB-H) FIRD BIRNK AKRE, INC. Sample Identification State MICHELLE LAPIN BURNE MW-2HA MW - 2H Name ( for report and invoice ) 6 = Other \* 1 - 8 M WHITE PINING 914)944-7336 MW Jru. ME. Company

Special Instructions DISSOIL	Coluen men	EN METALS TO BE LAB ENTERED.	Water Metals Filtered (Yes/No)?
Relinquished by	Company	Date / Time Received by //	Company
11 Kain P. Ralle	AKRE INC. 7-24-881/53011	2.24.501 (53.211) A The John	- F dV: 20 John
Relinduished by	Сотрапу	Date / Time Received by	Company
2) this	ENVINOTECH	Vino TECH /24/98 1820 218 Pose Person	Frilleyde
Relinquished by	Company	Date / Time Received by	Сотрапу
3)		1 3)	
Relinquished by	Company	Date / Time Received by	Company
4)		(4)	
Laboratory Certifications: New Jersey (125	ey (12543), New York (11	43), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).	Rhode Island (132).



Client ID: SS\_Parcel-I Site: Yonkers Waterfront Lab Sample No: 74840 Lab Job No: F961

Date Sampled: 07/30/98 Date Received: 07/30/98 Date Extracted: 07/30/98
Date Extracted: 08/03/98
Date Analyzed: 08/04/98
GC Column: DB-5
Instrument ID: BNAMS5.i

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Lab File ID: q5993.d

% Moisture: 1

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND	340 340 340 340 340 340 340 340 340 1300 130

Client ID: SS Parcel-I Lab Sample No: 74840 Site: Yonkers Waterfront Lab Job No: F961

Date Sampled: 07/30/98 Matrix: SOIL Date Received: 07/30/98 Level: LOW

Date Extracted: 07/30/98
Date Extracted: 08/03/98
Date Analyzed: 08/04/98
GC Column: DB-5
Instrument ID: BNAMS5.i Sample Weight: 30.0 g

Lab File ID: q5993.d

Extract Final Volume: 2.0 ml Dilution Factor: 1.0 % Moisture: 1

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
bis(2-Chloroethyl)ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis(2-chloroisopropyl)ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis(2-Chloroethoxy)methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline	ND ND ND ND ND ND ND ND ND ND	
N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene	ND ND ND 580 140 J	340 340 34 340
	140 0	340

Client ID: SS Parcel-I Site: Yonkers Waterfront

Lab Sample No: 74840 Lab Job No: F961

Date Sampled: 07/30/98 Date Received: 07/30/98 Date Extracted: 08/03/98 Date Analyzed: 08/04/98 GC Column: DB-5

Instrument ID: BNAMS5.i Lab File ID: q5993.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

% Moisture: 1

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Carbazole	58 J	340
Di-n-butylphthalate	ND	340
Fluoranthene	720	340
Pyrene	670	340
Butylbenzylphthalate	180 J	340
3,3'-Dichlorobenzidine	ND	670
Benzo(a)anthracene	370	34
Chrysene	390	340
bis(2-Ethylhexyl)phthalate	380	340
Di-n-octylphthalate	ND	340
Benzo(b)fluoranthene	440	34
Benzo(k)fluoranthene	170	34
Benzo(a)pyrene	300	34
Indeno(1,2,3-cd)pyrene	100	34
Dibenz(a,h)anthracene	30 J	
Benzo(g,h,i)perylene	96 J	34
- (5,,,,,,,,,, -	<i>9</i> 6 U	340

Client ID: SS Parcel-I Site: Yonkers Waterfront

Lab Sample No: 74840 Lab Job No: F961

Date Sampled: 07/30/98 Date Received: 07/30/98 Date Extracted: 08/03/98 Date Analyzed: 08/04/98

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

GC Column: DB-5 Instrument ID: BNAMS5.i

Dilution Factor: 1.0

Lab File ID: q5993.d

% Moisture: 0.8

### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

		<u> </u>	
COMPOUND NAME	RT	EST. CONC. ug/kg	_
1. C20H12 PAH		1	
2. Unknown	27.17		
	29.15	320	l
• •	_		
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44.	-		
23.	-		
24	-		
25.	-		
25. 26.	-		
26. 27.	-[		
27. 28.	-		
	-		
29. 30.	_		
JV	_		
	_		

TOTAL ESTIMATED CONCENTRATION 760

Client ID: SS Parcel-I Site: Yonkers Waterfront

Lab Sample ID: 74840 Lab Job No: F961

Date Sampled: 07/30/98 Date Received: 07/30/98 Date Extracted: 08/03/98 Date Analyzed: 08/05/98

Level: LOW

GC Front Column: DB-1701 GC Rear Column: DB-608

Sample Weight: 15 Extract Final Volume: 15 g 10.0 ml Dilution Factor: 1.0

Instrument ID: PESTGC4.i Front File ID: wf014467.d Rear File ID: wr014467.d

% Moisture:

Matrix: SOIL

### ORGANOCHLORINE PESTICIDES - GC/ECD METHOD 8081A

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg Column</u>
Aldrin alpha-BHC beta-BHC delta-BHC gamma-BHC (Lindane) Chlordane 4,4'-DDD 4,4'-DDE 4,4'-DDT Dieldrin Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde Endrin ketone Heptachlor Heptachlor epoxide Methoxychlor	ND ND ND ND ND ND ND ND ND ND ND ND ND N	RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR
Toxaphene	ND ND	6.8 R 130 R

Client ID: SS\_Parcel-I
Site: Yonkers Waterfront

Lab Sample ID: 74840 Lab Job No: F961

Date Sampled: 07/30/98
Date Received: 07/30/98
Date Extracted: 08/03/98
Date Analyzed: 08/06/98

Level: LOW
Sample Weight: 15 g

Date Extracted: 08/03/98
Date Analyzed: 08/06/98
GC Front Column: DB-1701
GC Rear Column: DB-608
Instrument ID: PESTGC4 i

Extract Final Volume: 10.0 ml

Instrument ID: PESTGC4.i Front File ID: wf014532.d Rear File ID: wr014532.d Dilution Factor: 1.0 % Moisture: 1

Matrix: SOIL

# ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>	<u>Column</u>
Aroclor-1016	ND	68	R
Aroclor-1221	ND	68	R
Aroclor-1232	ND	68	R
Aroclor-1242	ND	68	R
Aroclor-1248	ND	68	R
Aroclor-1254	ND	68	R
Aroclor-1260	ND	68	R
Aroclor-1262	ND	68	R
Aroclor-1268	ND	68	R

Client ID: SS Parcel-I Site: Yonkers Waterfront

Lab Sample No: 74840

Lab Job No: F961

Date Sampled: 07/30/98
Date Received: 07/30/98

Matrix: SOLID Level: LOW

% Moisture: 0.8

### METALS ANALYSIS

<u>Analvte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	_ Qual	<u>M</u>
Aluminum	4760	11.7		D
Antimony	ND	0.93	N	P
Arsenic	1.9	0.77	14	P
Barium	40.1	0.28		P P
Beryllium	0.13	0.040	В	P
Cadmium	ND	0.081	Ъ	D
Calcium	6250	8.5	N	D
Chromium	14.7	0.20	14	P P P P P
Cobalt	4.7	0.24	В	D
Copper	23.1	0.71	_	Ð
Iron	11300	8.4		D
Lead	70.0	0.50	N	Þ
Magnesium	4940	8.1	N	P P
Manganese	175	0.22		P
Mercury	0.04	0.017		ĈV
Nickel	11.4	0.42		
Potassium	1200	60.5		P
Selenium	ND	0.97		P
Silver	ND	0.28		P P P
Sodium	122	85.9	В	P
Thallium	ND	0.97		P
Vanadium	21.1	0.38		P P
Zinc	55.6	0.91	N	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

777 New Durham Road Edison, New Jersey 08817 Phone: (732) 549-3900 Fax: (732) 549-3679

# CHAIN OF CUSTODY / ANALYSIS REQUEST

LAB USE ONLY A, つかめたさ Project No: 128 Sample Numbers 1867 PAGE ( Job No: NY: C Other: YONICORS WATORE RONT ANALYSIS REQUESTED (ENTER \*X\* BELOW TO INDICATE REQ State (Location of site): NJ: Site/Project Identification Regulatory Program: 义 त्र उत X × 171137 NW137 Samplers Name ( Printed ) **Analysis Turnaround Timn** No. of. Water: Cont. Soil: 14 6 つっつい Rush Charges Authonzed For Matrix 10 S S 11 1 week Preservation Used t = ICE 2 = HCt, 3 = H<sub>2</sub>SO<sub>4</sub>, 4 = HNO<sub>3</sub>, 5 = NaOHSlandard 2 Week Olher T. Time P.O. # 2 30 % 7-30 Date )000) 1552 - 646 (115) \_\_, 7 = Other Zip I Prace PARCEL 1 NC . MICHELLE LUBIN S Sample Identification 34 S. Bronowny Name ( for report and invoice ) 6 = Other Sore AKUR (Ait) 949. 7336 WHITE PININS \* 12 m - 14 C E Surience Company Address

Special Instructions				Water Metals Fillered (Yes/No.)2
Relinquished by	Company	Date / Time	Received by // /	Company
When o Roller	MARE INC	7.30 98 10 mg	of uchus	T.
Relinquished by	Company	Date / Time		Company
2) / les then	CKI	7-31/48 11:20	1-11/15/16/16 21 6 2 1 Control Facilies 1506	F61/100 1506
Relinquished by	Company	Date / Time	Received by	Сотрапу
3)		_	3)	
Relinquished by	Company	Date / Time	Received by	Сотрапу
4)	- 1		4)	
Laboratory Certifications: New Jersey (12543)		452), Pennsylvania	New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).	hode Island (132).

PARCEL C

Client ID: Field Blank Site: Yonkers Waterfront Lab Sample No: 93192 Lab Job No: I638

Date Sampled: 10/29/98
Date Received: 10/29/98
Date Analyzed: 11/02/98

Matrix: WATER Level: LOW

GC Column: DB624 Instrument ID: VOAMS3.i

Purge Volume: 5.0 ml Dilution Factor: 1.0

Lab File ID: c2532.d

### VOLATILE ORGANICS - GC/MS METHOD 8260B

Parameter	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane 8enzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene Xylene (Total)		5.0 5.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6

Client ID: Field Blank Site: Yonkers Waterfront Lab Sample No: 93192 Lab Job No: I638

Date Sampled: 10/29/98 Date Received: 10/29/98
Date Analyzed: 11/02/98
GC Column: DB624
Instrument ID: VOAMS3.i Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

Lab File ID: c2532.d

### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	_
1. Unknown Siloxane			
	16.8		
z. omanown bitokane	18.83	8.1	В
3. 4			l
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J •			
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TOTAL	ESTIMATED	CONCENTRATION	5.1

Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 93192 Lab Job No: I638

Date Sampled: 10/29/98
Date Received: 10/29/98
Date Extracted: 11/02/98
Date Analyzed: 11/03/98
GC Column: DB-5
Instrument ID: BNAMS6.i

Level: LOW

Matrix: WATER

Sample Volume: 880 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Lab File ID: m3123.d

<u>Parameter</u>	Analytical Result Units: ug/l	Quantitation Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol	ND ND ND ND ND ND ND ND ND ND ND	11 11 11 11 11 11 11 11 11 11 45 45
Pentachlorophenol	ND	45

Client ID: Field\_Blank Lab Sample No: 93192 Lab Job No: I638 Site: Yonkers Waterfront

Date Sampled: 10/29/98 Matrix: WATER Date Received: 10/29/98 Level: LOW

Date Extracted: 11/02/98
Date Analyzed: 11/03/98
GC Column: DB-5
Instrument ID: BNAMS6.i Sample Volume: 880 ml Extract Final Volume: 2.0 ml

Lab File ID: m3123.d

### SEMI-VOLATILE ORGANICS - GC/MS METHOD 8270C

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis(2-Chloroethyl)ether	ND	a a
1,3-Dichlorobenzene	ND	1.1
1,4-Dichlorobenzene	ND	11
1,2-Dichlorobenzene	ND ND	11 11
bis (2-chloroisopropyl) ether	ND	
N-Nitroso-di-n-propylamine	ND	11
Hexachloroethane	ND	1.1 1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	. ND	11
1,2,4-Trichlorobenzene	ND	1.1
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND ND	2.3
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	23
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.3
3-Nitroaniline	ND	23
Acenaphthene	ND	11
Dibenzofuran	ND	11
2,4-Dinitrotoluene	ND	2.3
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	23
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11

Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 93192 Lab Job No: 1638

Date Sampled: 10/29/98
Date Received: 10/29/98
Date Extracted: 11/02/98

Matrix: WATER Level: LOW

Date Analyzed: 11/03/98 GC Column: DB-5

Sample Volume: 880 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Instrument ID: BNAMS6.i Lab File ID: m3123.d

Carbazole       ND       11         Di-n-butylphthalate       ND       11         Fluoranthene       ND       11         Pyrene       ND       11         Butylbenzylphthalate       ND       11         Butylbenzylphthalate       ND       11         Benzo(a) anthracene       ND       1.1         Chrysene       ND       11         bis(2-Ethylhexyl)phthalate       ND       11         Benzo(b)fluoranthene       ND       11         Benzo(b)fluoranthene       ND       1.1         Benzo(a)pyrene       ND       1.1         Indeno(1,2,3-cd)pyrene       ND       1.1         Dibenz(a,h)anthracene       ND       1.1         Benzo(g,h,i)perylene       ND       1.1	<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
	Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	ND ND ND ND ND ND ND ND ND ND ND	11 11 11 11 23 1.1 11 11 11 1.1 1.1 1.1

Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 93192 Lab Job No: I638

Date Sampled: 10/29/98 Date Received: 10/29/98 Date Extracted: 11/02/98 Date Analyzed: 11/03/98 GC Column: DB-5

Matrix: WATER

Level: LOW
Sample Volume: 880 ml
Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Instrument ID: BNAMS6.i Lab File ID: m3123.d

### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2			
5.			
8.			
10.			
12.			
15.			
17.			
19. 20. 21.			
22.			
24.			
26			
29.			
30			59

			1
TOTAL	ESTIMATED	CONCENTRATION	0.0

Client ID: Field\_Blank
Site: Yonkers Waterfront

Lab Sample ID: 93192 Lab Job No: I638

Matrix: WATER

Date Sampled: 10/29/98
Date Received: 10/29/98
Date Extracted: 11/04/98
Date Analyzed: 11/06/98

Sample Volume: 850 ml Extract Final Volume: 5.0 ml

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC3.i Dilution Factor: 1.0
Front File ID: zf035130.d
Rear File ID: zr035130.d

# ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

		Method Detecti	lon
<u>Parameter</u>	Analytical Results <u>Units: ug</u> /l	Limit <u>Units: uq/l</u>	Quant.
Aroclor-1016	<u>0.1105. ug/1</u>	9	
Aroclor-1221 Aroclor-1232	ND	0.59 0.59	R R
Aroclor-1242	ND ND	0.59 0.59	R R
Aroclor-1248 Aroclor-1254	ND ND	0.59 0.59	R R
Aroclor-1260 Aroclor-1262	ND ND	0.59 0.59	R R
Aroclor-1268	ND	0.59	R R

Client ID: Field Blank
Site: Yonkers Waterfront

Lab Sample No: 93192

Lab Job No: I638

Date Sampled: 10/29/98 Date Received: 10/29/98

Matrix: WATER Level: LOW

### METALS ANALYSIS

Analurko	Analytical Result	Instrument Detection		
<u>Analyte</u>	<u>Units: uq/l</u>	<u>Limit</u>	<u> Oual</u>	<u>M</u>
Aluminum	ND	84.1		P
Antimony	ND	4.4	N	P
Arsenic	ND	2.8		P
Barium	ND	1.4		P
Beryllium	ND	0.20		P P P
Cadmium	ND	0.40		P
Calcium	ND	82.0	*	P
Chromium	ND	1.1		P
Cobalt	ND	1.3		P
Copper	ND	2.9	*	P
Iron	96.8	47.5	В	P
Lead	ND	2.0	*	P
Magnesium	ND	69.7	N*	P P
Manganese	2.3	0.90	В	P
Mercury	ND	0.10		CV
Nickel	ND	2.1		P
Potassium	ND	245		P P P
Selenium	ND	4.2		P
Silver	ND	1.4		
Sodium	ND	483		P
Thallium	ND	4.5		P
Vanadium	ND	2.6		P
Zinc	ND	3.9	*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 93197 Lab Job No: I638

Date Sampled: 10/29/98 Date Received: 10/29/98 Date Analyzed: 11/02/98

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

GC Column: DB624 Instrument ID: VOAMS3.i Lab File ID: c2533.d

### VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene Styrene	ND	4.0
	ND	5.0
Xylene (Total)	ND	5.0

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 93197 Lab Job No: I638

Date Sampled: 10/29/98
Date Received: 10/29/98
Date Analyzed: 11/02/98

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

GC Column: DB624 Instrument ID: VOAMS3.i Lab File ID: c2533.d

### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	_
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			===
2			
5	-		
7.			
8. 9. 0.			
1. 2.			
4.			
6.			
8.			411
0.			
2.			
4.			
6.			
8.			
9			
			-

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: B-1C\_S-3

Site: Yonkers  $\overline{W}$ aterfront

Lab Sample No: 93198 Lab Job No: I638

Date Sampled: 10/29/98

Date Received: 10/29/98
Date Analyzed: 11/09/98
GC Column: DB624
Instrument ID: VOAMS1.i

Lab File ID: a6976.d

Matrix: SOIL Level: LOW

Sample Weight: 6.2 g Purge Volume: 5.0 ml

% Moisture: 12

### **VOLATILE ORGANICS - GC/MS** METHOD 8260B

	Analytical Results	Quantitation
<u>Parameter</u>	Units: ug/kg (Dry Weight)	Limit <u>Units: uq/kq</u>
Chloromethane	ND	
Bromomethane	ND ND	4.6
Vinyl Chloride	ND ND	4.6
Chloroethane	ND ND	4.6
Methylene Chloride	2.2JB	4.6 2.8
Acetone	2.20B 65	4.6
Carbon Disulfide	1.7J	4.6
1,1-Dichloroethene	ND	1.8
1,1-Dichloroethane	ND	4.6
trans-1,2-Dichloroethene	ND	4.6
cis-1,2-Dichloroethene	ND	4.6
Chloroform	ND	4.6
1,2-Dichloroethane	ND	1.8
2-Butanone	ND	4.6
1,1,1-Trichloroethane	ND	4.6
Carbon Tetrachloride	ND	1.8
Bromodichloromethane	ND	0.9
1,2-Dichloropropane	ND	0.9
cis-1,3-Dichloropropene	ND	4.6
Trichloroethene	ND	0.9
Dibromochloromethane	ND	4.6
1,1,2-Trichloroethane	ND .	2.8
Benzene	1.2	0.9
trans-1,3-Dichloropropene	ND	4.6
Bromoform	ND	3.7
4-Methyl-2-Pentanone	ND	4.6
2-Hexanone	ND	4.6
Tetrachloroethene	ND	0.9
1,1,2,2-Tetrachloroethane	ND	0.9
Toluene	1.0J	4.6
Chlorobenzene	ND	4.6
Ethylbenzene	ND	3.7
Styrene	ND	4.6
Xylene (Total)	1.5J	4.6

Client ID: B-1C\_S-3

Site: Yonkers Waterfront

Lab Sample No: 93198 Lab Job No: I638

Date Sampled: 10/29/98
Date Received: 10/29/98
Date Analyzed: 11/09/98

Matrix: SOIL Level: LOW

GC Column: DB624

Sample Weight: 6.2 g Purge Volume: 5.0 ml % Moisture: 12.0

Instrument ID: VOAMS1.i Lab File ID: a6976.d

> VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
	=======	=========	
1. Decahydronaphthalene isomer	17.15	25	
2. 2,3-dihydro-methyl-1H-Indene isomer		25	
3. Tetramethylbenzene isomer	17.60	24	
4. Unknown Alkane	17.84	21	
4. Unknown Alkane	18.31	19	
5. C10H12 Aromatic	18.49	25	
6. 2,3-dihydro-dimethyl-1H-Indene isomer	18.83	24	
7. 2,3-dihydro-dimethyl-1H-Indene isomer	]		
8. Tetrahydromethylnaphthalene isomer	19.02	32	
O. Hetrahydromethylliaphthalene isomer	19.41	21	
9. Tetranydrometnylnaphthalene isomer	19.54	20	
9. Tetrahydromethylnaphthalene isomer 10. Tetrahydromethylnaphthalene isomer	20.03	26	
<u> </u>		20	!
12.			
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			<del></del>
17.			
17.			
20.			
23			
24.			
24			
20.			
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29			
30			

TOTAL ESTIMATED CONCENTRATION 237

Client ID: B-1C\_S-3RE

Lab Sample No: 93198RE Lab Job No: 1638

Site: Yonkers Waterfront

Date Sampled: 10/29/98 Date Received: 10/29/98 Date Extracted: 11/13/98
Date Analyzed: 11/16/98
GC Column: DB-5
Instrument ID: BNAMS5.i Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 1.0 % Moisture: 12

Lab File ID: q8204.d

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol	14 J ND ND ND ND	380 380 380 380 380
2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol	ND ND ND ND	380 380 380 380
2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND	380 1500 1500 1500 1500

Client ID: B-1C\_S-3RE

Site: Yonkers Waterfront

Lab Sample No: 93198RE

Lab Job No: 1638

Date Sampled: 10/29/98 Date Received: 10/29/98

Date Extracted: 11/13/98

Date Analyzed: 11/16/98 GC Column: DB-5 Instrument ID: BNAMS5.i Lab File ID: q8204.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

% Moisture: 12

	Analytical Results	Quantitation
<b>D</b>	Units: ug/kg	Limit
<u>Parameter</u>	(Dry Weight)	<u>Units: ug/kg</u>
hig/2 Chlomosthellathon	<b>3777</b>	
bis (2-Chloroethyl) ether	ND	38
1,3-Dichlorobenzene	ND	380
1,4-Dichlorobenzene	ND	380
1,2-Dichlorobenzene	ND	380
bis(2-chloroisopropyl)ether	ND	380
N-Nitroso-di-n-propylamine	ND	38
Hexachloroethane	ND	38
Nitrobenzene	ND	38
Isophorone	ND	380
bis(2-Chloroethoxy)methane	ND	380
1,2,4-Trichlorobenzene	ND	38
Naphthalene	140 J	380
4-Chloroaniline	ND	380
Hexachlorobutadiene	ND	76
2-Methylnaphthalene	280 Ј	380
Hexachlorocyclopentadiene	ND	380
2-Chloronaphthalene	ND	380
2-Nitroaniline	ND	760
Dimethylphthalate	ND	380
Acenaphthylene	180 J	. 380
2,6-Dinitrotoluene	ND	76
3-Nitroaniline	ND	760
Acenaphthene	240 J	380
Dibenzofuran	140 J	380
2,4-Dinitrotoluene	ND	76
Diethylphthalate	ND	380
4-Chlorophenyl-phenylether	ND	380
Fluorene	280 J	380
4-Nitroaniline	ND	760
N-Nitrosodiphenylamine	ND	380
4-Bromophenyl-phenylether	ND	380
Hexachlorobenzene	ND	38
Phenanthrene	2100	380
Anthracene	510	380

Client ID: B-1C S-3RE

Site: Yonkers Waterfront

Lab Sample No: 93198RE

Lab Job No: 1638

Date Sampled: 10/29/98 Date Received: 10/29/98

Date Extracted: 11/13/98
Date Analyzed: 11/16/98
GC Column: DB-5
Instrument ID: BNAMS5.i Lab File ID: q8204.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

% Moisture: 12

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Carbazole	170 J	380
Di-n-butylphthalate	ND	380
Fluoranthene	2800	380
Pyrene	2700	380
Butylbenzylphthalate	ND	380
3,3'-Dichlorobenzidine	ND	760
Benzo(a)anthracene	1200	38
Chrysene	1400	380
bis(2-Ethylhexyl)phthalate	130 Ј	380
Di-n-octylphthalate	ND	380
Benzo(b) fluoranthene	1500	38
Benzo(k) fluoranthene	590	38
Benzo(a) pyrene	1200	38
Indeno(1,2,3-cd)pyrene	550	38
Dibenz(a,h)anthracene	130	38
Benzo(g,h,i)perylene	480	380

Client ID: B-1C\_S-3RE

Site: Yonkers Waterfront

Date Sampled: 10/29/98
Date Received: 10/29/98

Date Extracted: 11/13/98
Date Analyzed: 11/16/98

GC Column: DB-5

Instrument ID: BNAMS5.i Lab File ID: q8204.d Lab Sample No: 93198RE

Lab Job No: I638

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0 % Moisture: 12.0

SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS

METHOD 8270C

	T		
COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Unknown	15.20	1400	====
2. Unknown Alkane	15.38		<del></del>
3. Unknown Alkane	15.99	1600	
4. Unknown Alkane	16.99	1200	
5. Unknown Alkane	17.22	1000	
6. Dimethylnaphthalene isomer	17.65	770	
7. Unknown Alkane	17.75	2600	·
8. Unknown	18.08	690	
<ol><li>Ethylmethylnaphthalene isomer</li></ol>	18.39	670	
10. Trimethylnaphthalene isomer	18.63	800	
11. Trimethylnaphthalene isomer	18.75	680	
12. Trimethylnaphthalene isomer	18.90	770	
13. Unknown Alkane	19.75	3800	
14. Unknown Alkane//Unknown	20.04	860	
15. Unknown Alkane/Unknown 16. Unknown	20.10	1000	
17. Unknown Alkane	20.29 20.52	1300 2200	
18. C15H12 PAH	21.59	750	
19. C15H12 FAR 19. C15H10/C15H12 PAHs	21.73	750 850	
20. C20H12 PAH	28.53	1200	
	20.55	1200	
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23. 24. 25			i
25	l		
20.			
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20			
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30			

TOTAL ESTIMATED CONCENTRATION 25440

Client ID: B-1C S-3

Site: Yonkers Waterfront

Lab Sample ID: 93198 Lab Job No: I638

Date Sampled: 10/29/98

Date Received: 10/29/98
Date Extracted: 11/02/98

Date Analyzed: 11/07/98 GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC5.i Front File ID: pf011703.d Rear File ID: pr011703.d Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume: 10.0 ml

Dilution Factor: 1.0

% Moisture: 12

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg <u>(Dry Weight)</u>	Quantitation Limit <u>Units: ug/kg Column</u>
Aroclor-1016	ND	.76 R
Aroclor-1221	, ND	76 R
Aroclor-1232	ND	76 R
Aroclor-1242	ND	76 R
Aroclor-1248	ND	76 R
Aroclor-1254	ND	76 R
Aroclor-1260	ND	76 R
Aroclor-1262	ND	76 R
Aroclor-1268	. <b>N</b> D	76 R

Client ID: B-1C S-3

Site: Yonkers Waterfront

Lab Sample No: 93198

Lab Job No: 1638

Date Sampled: 10/29/98 Date Received: 10/29/98

Matrix: SOLID Level: LOW

% Moisture: 12.0

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Qual	<u>M</u>
Aluminum	6830	19.1		P
Antimony	1.8	1.0	BN	P
Arsenic	6.7	0.64		P
Barium	123	0.32		P
Beryllium	0.34	0.045	В	P
Cadmium	0.41	0.091	В	P P P P P P P P P P
Calcium	25800	18.6	*	P
Chromium	23.7	0.25		P
Cobalt	6.5	0.30	В	P
Copper	393	0.66	*	P
Iron	19800	10.8		P
Lead	468	0.45	*	P
Magnesium	5930	15.8	N*	P
Manganese	227	0.20		
Mercury	0.61	0.019		CV
Nickel	16.9	0.48		P
Potassium	901	55.7	В	P
Selenium	1.2	0.95		P
Silver	, ND	0.32		P P P P P
Sodium	339	110	В	P
Thallium	ND	1.0		P
Vanadium	29.3	0.59		P
Zinc	253	0.89	*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Project Name/no.:

(O)

Client:

Client Contact:

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STL Contact:

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Protocol:

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Job 1638

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PM:NON-CONFORMANCE Der Client- Hethods and 7 Volume to Initials: . : : **DESCRIPTION** - : Temp: Hote ( For Lab Use Only e sh Holding Time: Cooler Temp.(s) = Custody Seal #(s) # of Coolers: Container: Preserved: SW RUG Job No. Date Due: Logged By: Broken: Other: ्र<sup>कृ</sup>त्व १ HAE 上口 16 1060 FIELD BOOK: WHITE PLAINS, NEW YORK ANALYSIS REQUIRED 76 931 126 PACE A 4 931 94 93 197 931 28 131 34 SOUTH BRUNDWAY 71007 S 76LAW X X 9 70004 MICHELLE 580d AKRE X X X X × 5 20 N S X X X X 8 Bill To 5 201 Х X **(** (2) О н COZHAHZHKS न्द्रव 80 4 Proj. Type: NJPDES, NPDES, ISRA, CLB CERCLA, RCRA, જ OWERS WATERFRONT Reporting Type: NI Reg Format, NJ Reduced Format, (CLP) Level II, Level I (Data Sum), (I)Time 0-29-98 11 AM 12.0m 3pm 8 400 0-29 10 15m KEVIN REILLY (10) Date 10-29 10-29 10-29 10-0 10-01 UST, ACO, MOA, OTHER CLP, SW846, EPA 600 DW, OTHER TAT: 1wk, (wk) 3wk, OTHER

Other

Client ID (10 CHAR)

<u></u>

87B

(	Print Name and Company	. Signature	Custody Seal # (s)	Date/Time
( <del>(</del>	(I) Sampled By: Karl Relief	, kex & nouth		10-29-78 330pm
	Received By: STLL TACOBSON-ENVIROTECH	State Home		10-29-58/154
	Relinquished By: 576 JACORSON	The state of the s		St 511 25-5001
	Received By: 15 OO	HOWAHIT COLL ING		JAB 1861 67/01
	Relinguished By:	TAMBOI FOUR		
	Received By:			
	Mtx = Matrix of Sample. (AI=Air, AQ-Aqueous, LE=Leachate, ML=Misc Liquid, MS=Misc Solids, OIL, SE=Sediment, SL=Sludge, SQ=Soil)	ite, ML=Misc Liquid, MS=Misc Solids, OIL, SE=	Sediment, SL=Sludge, & Soil)	

8

Copies: White and yellow copies should accompany samples to STL. The pink copy should be retained by the client.) See reverse for directions.

COMMENTS: (Please include hazards on site.)

(2)



Client ID: Field\_Blank Lab Sample No: 93682 Site: Yonkers Waterfront Lab Job No: I685

Date Sampled: 10/30/98 Matrix: WATER Date Received: 10/30/98 Level: LOW

Date Analyzed: 11/09/98 Purge Volume: 5.0 ml GC Column: DB624 Dilution Factor: 1.0

Instrument ID: VOAMS4.i Lab File ID: d8382.d

#### VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
1,1-Dichloroethene	ND .	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND .	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0
Xylene (Total)	ND	5.0

Client ID: Field\_Blank Site: Yonkers Waterfront

Lab Sample No: 93682 Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Analyzed: 11/09/98 Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

GC Column: DB624
Instrument ID: VOAMS4.i
Lab File ID: d8382.d

#### **VOLATILE ORGANICS - GC/MS** TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND	=======		
2			
4. 5. 6.			
8.			
9. 10. 11.			
13.			
14. 15. 16.			
18.			
19. 20. 21.			
23.			
25. 26.			
28.			
29. 30.			
			·

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: Field Blank Site: Yonkers Waterfront Lab Sample No: 93682

Lab Job No: 1685

Matrix: WATER Level: LOW

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Extracted: 11/02/98 Date Analyzed: 11/11/98

Sample Volume: 880 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

GC Column: DB-5
Instrument ID: BNAMS2.i Lab File ID: s8759.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol	ND	* 11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	45
4-Nitrophenol	ND	45
4,6-Dinitro-2-methylphenol	ND	45
Pentachlorophenol	ND	45

Client ID: Field\_Blank Lab Sample No: 93682

Site: Yonkers Waterfront Lab Job No: I685

Date Sampled: 10/30/98 Matrix: WATER
Date Received: 10/30/98 Level: LOW

Date Extracted: 11/02/98 Sample Volume: 880 ml

Date Analyzed: 11/11/98 Extract Final Volume: 2.0 ml

GC Column: DB-5 Dilution Factor: 1.0 Instrument ID: BNAMS2.i

Lab File ID: s8759.d

	Analytical Result	Quantitation Limit
<u>Parameter</u>	<u>Units: ug/l</u>	Units: uq/l
bis(2-Chloroethyl)ether	ND	1.1
1,3-Dichlorobenzene	ND	11
1,4-Dichlorobenzene	ND	11
1,2-Dichlorobenzene	ND	11
bis(2-chloroisopropyl)ether	ND ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	· ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
1,2,4-Trichlorobenzene	ND	1.1
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.3
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	23
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.3
3-Nitroaniline	ND	23
Acenaphthene	ND	11
Dibenzofuran	ND	11
2,4-Dinitrotoluene	ND	2.3
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	23
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
	MD	11

Lab File ID: s8759.d

Client ID: Field\_Blank Lab Sample No: 93682

Site: Yonkers Waterfront Lab Job No: 1685

Date Sampled: 10/30/98 Matrix: WATER Date Received: 10/30/98 Level: LOW

Date Extracted: 11/02/98
Date Analyzed: 11/11/98
GC Column: DB-5
Instrument ID: BNAMS2.i

Sample Volume: 880 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	23
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11

Client ID: Field Blank Site: Yonkers Waterfront Lab Sample No: 93682 Lab Job No: I685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Extracted: 11/02/98 Date Analyzed: 11/11/98

Matrix: WATER Level: LOW

Sample Volume: 880 ml

GC Column: DB-5 Instrument ID: BNAMS2.i

Extract Final Volume: 2.0 ml

Lab File ID: s8759.d

Dilution Factor: 1.0

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
1NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND 2			
4. 5.			
6. 7. 8. 9.			
11.			
13. 14. 15. 16.			
18.			
21.			
23. 24. 25. 26.			
28. 29.			
30			

TOTAL ESTIMATED CONCENTRATION

0.0

Client ID: Field\_Blank Site: Yonkers Waterfront Lab Sample ID: 93682 Lab Job No: I685

Date Sampled: 10/30/98
Date Received: 10/30/98

Matrix: WATER Sample Volume: 450 ml

Date Received: 10/30/98
Date Extracted: 11/04/98
Date Analyzed: 11/06/98
GC Front Column: DB-5

Extract Final Volume: 2.5 ml

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC3.i Dilution Factor: 1.0 Front File ID: zf035131.d Rear File ID: zr035131.d

## ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

		Method Detection
	Analytical Results	Limit Quant.
<u>Parameter</u>	<u>Units: ug/l</u>	<u>Units: ug/l Column</u>
Aroclor-1016	ND	0.56 R
Aroclor-1221	ND	0.56 R
Aroclor-1232	ND	0.56 R
Aroclor-1242	ND	0.56 R
Aroclor-1248	ND	0.56 R
Aroclor-1254	ND	0.56 R
Aroclor-1260	ND	0.56 R
Aroclor-1262	ND	0.56 R
Aroclor-1268	ND .	0.56 R

Client ID: Field Blank
Site: Yonkers Waterfront

Lab Sample No: 93682

Lab Job No: I685

Date Sampled: 10/30/98
Date Received: 10/30/98

Matrix: WATER Level: LOW

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection Limit	<u> Oual</u>	<u>M</u>
Aluminum	ND	84.1		P
Antimony	ND	4.4	N	P
Arsenic	ND	2.8		
Barium	ND	1.4		P
Beryllium	ND	0.20		P P P
Cadmium	ND	0.40		P
Calcium	146	82.0	В	P P P
Chromium	ND	1.1	*	P
Cobalt	ND	1.3		
Copper	ND	2.9		P P P
Iron	112	47.5	В	P
Lead	ND	2.0		P
Magnesium	ND	69.7		P
Manganese	1.7	0.90	В	P
Mercury	ND	0.10		ĊV
Nickel	ND	2.1		P
Potassium	ND	245		
Selenium	ND	4.2		P
Silver	ND	1.4		P P P
Sodium	ND	483		P
Thallium	· ND	4.5		P
Vanadium	ND	2.6		P
Zinc	ND	3.9	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

ENVIROTECH RESEARCH, INC.
Client ID: Trip Blank
Site: Yonkers Waterfront

Lab Sample No: 93683

Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Analyzed: 11/09/98 Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

GC Column: DB624
Instrument ID: VOAMS4.i
Lab File ID: d8383.d

#### VOLATILE ORGANICS - GC/MS METHOD 8260B

Davameter	Analytical Result	Limit
<u>Parameter</u>	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	<b>N</b> D	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
1,1-Dichloroethene	<b>N</b> D	2.0
1,1-Dichloroethane	. ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0
Xylene (Total)	ND	5.0

Quantitation

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 93683 Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Analyzed: 11/09/98

Matrix: WATER

Level: LOW
Purge Volume: 5.0 ml Dilution Factor: 1.0

GC Column: DB624 Instrument ID: VOAMS4.i Lab File ID: d8383.d

#### **VOLATILE ORGANICS - GC/MS** TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND	======	=========	=====
2			
4. 5.			
• ·			
7. 8.			
10			
12			
14.			
15. 16.			
<del></del>			
18. 19.			
21.			
23.			
25.			
27.			
30.			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-4C S-3 Lab Sample No: 93684 Site: Yonkers Waterfront Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Matrix: SOIL Level: LOW

Date Analyzed: 11/09/98 GC Column: DB624

Sample Weight: 5.3 g Purge Volume: 5.0 ml Instrument ID: VOAMS1.i % Moisture: 13

Lab File ID: a6977.d

#### VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene	ND ND ND ND 10 B 60 2.2J ND ND ND ND ND ND ND ND ND ND	5.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6
Styrene Xylene (Total)	ND 6.0	5.4 5.4

Client ID: MW-4C S-3

Site: Yonkers Waterfront

Lab Sample No: 93684 Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Analyzed: 11/09/98

GC Column: DB624 Instrument ID: VOAMS1.i Lab File ID: a6977.d

Matrix: SOIL Level: LOW

Sample Weight: 5.3 g Purge Volume: 5.0 ml % Moisture: 13.0

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1. C10H14 Aromatic/Unknown Hydrocarbon 2. 2,3-dihydro-methyl-1H-Indene isomer 3. Ethyldimethylbenzene isomer 4. C10H14 Aromatic/Unknown 5. Unknown Alkane 6. 2,3-dihydro-methyl-1H-Indene isomer 7. 2,3-dihydro-dimethyl-1H-Indene isomer 8. 2,3-dihydro-dimethyl-1H-Indene isomer/ 9. Unknown Aromatic 10. Methylnaphthalene isomer 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.	16.48 17.61 17.83 17.92 18.30 18.48 18.82 19.01 19.41 21.21	21 30 26 25 25 29 49 35 31 22	
			- 1

TOTAL ESTIMATED CONCENTRATION 293

Client ID: MW-4C\_S-3

Site: Yonkers Waterfront

Lab Sample No: 93684 Lab Job No: I685

Date Sampled: 10/30/98
Date Received: 10/30/98

Date Extracted: 11/05/98 Date Analyzed: 11/10/98

GC Column: DB-5

Instrument ID: BNAMS2.i

Lab File ID: s8744.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

% Moisture: 13

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	380 380 380 380 380 380 380 380 380 1500 1500

Client ID: MW-4C S-3 Lab Sample No: 93684

Site: Yonkers Waterfront Lab Job No: I685

Date Sampled: 10/30/98
Date Received: 10/30/98
Date Extracted: 11/05/98
Date Analyzed: 11/10/98
GC Column: DB-5 Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Instrument ID: BNAMS2.i % Moisture: 13

Lab File ID: s8744.d

	Analytical Results	Quantitation
Paramotor	Units: ug/kg	Limit
<u>Parameter</u>	<u>(Dry Weight)</u>	<u>Units: ug/kg</u>
bis(2-Chloroethyl)ether	ND	38
1,3-Dichlorobenzene	ND	380
1,4-Dichlorobenzene	ND	380
1,2-Dichlorobenzene	ND	380
bis(2-chloroisopropyl)ether	ND	
N-Nitroso-di-n-propylamine	ND	380
Hexachloroethane	ND ND	38
Nitrobenzene	ND ND	38
Isophorone		38
bis(2-Chloroethoxy)methane	ND	380
1,2,4-Trichlorobenzene	ND	380
Naphthalene	ND	38
4-Chloroaniline	33 J	380
Hexachlorobutadiene	ND	380
	ND 100 T	77
2-Methylnaphthalene	120 J	380
Hexachlorocyclopentadiene	ND	380
2-Chloronaphthalene 2-Nitroaniline	ND	380
	ND	770
Dimethylphthalate	ND	380
Acenaphthylene	24_J	380
2,6-Dinitrotoluene	ND	_77
3-Nitroaniline	ND	770
Acenaphthene	25 J	380
Dibenzofuran	24_J	380
2,4-Dinitrotoluene	ND	77
Diethylphthalate	ND	380
4-Chlorophenyl-phenylether	ND	380
Fluorene	30 J	380
4-Nitroaniline	ND	770
N-Nitrosodiphenylamine	ND	380
4-Bromophenyl-phenylether	ND	380
Hexachlorobenzene	ND	38
Phenanthrene	220 J	380
Anthracene	47 J	380

Client ID: MW-4C S-3 Lab Sample No: 93684

Site: Yonkers Waterfront Lab Job No: 1685

Date Sampled: 10/30/98 Matrix: SOIL Date Received: 10/30/98
Date Extracted: 11/05/98
Date Analyzed: 11/10/98
GC Column: DB-5
Instrument ID: BNAMS2.i Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

% Moisture: 13 Lab File ID: s8744.d

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	17 J ND 250 J 200 J ND ND 120 150 J 280 J ND 140 56 110 63	380 380 380 380 380 770 38 380 380 380 380 38
Dibenz(a,h)anthracene Benzo(g,h,i)perylene	24 J 71 J	38 38 380

Client ID: MW-4C S-3

Site: Yonkers Waterfront

Date Sampled: 10/30/98 Date Received: 10/30/98

Date Extracted: 11/05/98
Date Analyzed: 11/10/98
GC Column: DB-5
Instrument ID: BNAMS2.i Lab File ID: s8744.d

Lab Sample No: 93684

Lab Job No: 1685

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0 % Moisture: 13.0

SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS

METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
1. Unknown Alkane/Unknown 2. Unknown Alkane 3.	17.68	420	
	1		

TOTAL ESTIMATED CONCENTRATION 940

Client ID: MW-4C\_S-3
Site: Yonkers Waterfront

Lab Sample ID: 93684 Lab Job No: I685

Date Sampled: 10/30/98
Date Received: 10/30/98

Matrix: SOIL Level: LOW

Date Received: 10/30/98
Date Extracted: 11/02/98
Date Analyzed: 11/06/98

Sample Weight: 15 g
Extract Final Volume: 10.0 ml

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC5.i

Dilution Factor: 1.0

Instrument ID: PESTGC5.i Front File ID: pf011684.d Rear File ID: pr011684.d Dilution Factor: 1 % Moisture: 13

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg <u>(Dry Weight)</u>	Quantitation Limit <u>Units: ug/kg</u>	Column
Aroclor-1016	ND	77	R
Aroclor-1221	ND	77	R
Aroclor-1232	ND	77	R
Aroclor-1242	ND	77	R
Aroclor-1248	ND	77	R
Aroclor-1254	ND	77	R
Aroclor-1260	ND	77	R
Aroclor-1262	ND	77	R
Aroclor-1268	ND	77	R

Client ID: MW-4C S-3
Site: Yonkers Waterfront

Lab Sample No: 93684

Lab Job No: 1685

Date Sampled: 10/30/98
Date Received: 10/30/98

Matrix: SOLID Level: LOW

% Moisture: 13.0

#### METALS ANALYSIS

	Analytical Result	Instrument		
	Units: mg/kg	Detection		
<u>Analyte</u>	(Dry Weight)	Limit	Qual	<u>M</u>
				===
Aluminum	8940	19.3		P
Antimony	ND	1.0	N	P
Arsenic	2.6	0.64		
Barium	63.7	0.32		<b>PPPPPPPPPP</b>
Beryllium	0.33	0.046	В	P
Cadmium	ND	0.092		P
Calcium	5720	18.9		P
Chromium	20.8	0.25	*	P
Cobalt	9.2	0.30	В	P
Copper	44.5	0.67		P
Iron	14700	10.9		P
Lead	27.7	0.46		P
Magnesium	6310	16.0		P
Manganese	296	0.21		P
Mercury	0.1.1	0.019		CV
Nickel	28.4	0.48		
Potassium	1500	56.4		P
Selenium	ND	0.97		P
Silver	ND	0.32		P
Sodium	635	111	В	P
Thallium	ND	1.0		P P P P P
Vanadium	26.2	0.60		P
Zinc	48.6	0.90	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: B-5C S-1

Site: Yonkers Waterfront

Lab Sample No: 93685 Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98

Date Analyzed: 11/09/98 GC Column: DB624

Instrument ID: VOAMS1.i

Lab File ID: a6978.d

Matrix: SOIL Level: LOW

Sample Weight: 5.9 q Purge Volume: 5.0 ml

% Moisture: 6

#### VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Chloromethane	ND	4.5
Bromomethane	ND	4.5
Vinyl Chloride	ND	4.5
Chloroethane	ND	4.5
Methylene Chloride	4.1B	2.7
Acetone	21	4.5
Carbon Disulfide	1.0J	4.5
1,1-Dichloroethene	ND .	1.8
1,1-Dichloroethane	ND	4.5
trans-1,2-Dichloroethene	ND .	4.5
cis-1,2-Dichloroethene	ND	4.5
Chloroform	ND	4.5
1,2-Dichloroethane	ND	1.8
2-Butanone	ND	4.5
1,1,1-Trichloroethane	ND	4.5
Carbon Tetrachloride	ND	1.8
Bromodichloromethane	ND	0.9
1,2-Dichloropropane	ND	0.9
cis-1,3-Dichloropropene	ND	4.5
Trichloroethene	ND	0.9
Dibromochloromethane	ND	4.5
1,1,2-Trichloroethane	ND	2.7
Benzene	0.9	0.9
trans-1,3-Dichloropropene	ND	4.5
Bromoform	ND	3.6
4-Methyl-2-Pentanone	ND	4.5
2-Hexanone	ND	4.5
Tetrachloroethene	ND	0.9
1,1,2,2-Tetrachloroethane Toluene	ND	0.9
Chlorobenzene	0.8J	4.5
Ethylbenzene Ethylbenzene	ND	4.5
Styrene	0.5J	3.6
Xylene (Total)	ND	4.5
Myrene (10car)	0.8J	4.5

Client ID: B-5C S-1

Site: Yonkers Waterfront

Lab Sample No: 93685

Lab Job No: I685

Date Sampled: 10/30/98 Date Received: 10/30/98

Date Analyzed: 11/09/98

GC Column: DB624

Instrument ID: VOAMS1.i Lab File ID: a6978.d

Matrix: SOIL Level: LOW

Sample Weight: 5.9 g Purge Volume: 5.0 ml

% Moisture: 6.1

#### **VOLATILE ORGANICS - GC/MS** TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND 2			
5. 6.			
8. 9. 10.			
12. 13. 14.			
16. 17.			
18. 19. 20. 21.			
23. 24. 25.			
27. 28.			
29. 30.			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **B-5C\_S-1**Site: Yonkers Waterfront

Lab Sample No: 93685 Lab Job No: I685

Date Sampled: 10/30/98 Date Received: 10/30/98

Date Extracted: 11/05/98
Date Analyzed: 11/12/98
GC Column: DB-5
Instrument ID: BNAMS2.i

Lab File ID: s8808.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 5.0 ml

Dilution Factor: 1.0

% Moisture: 6

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol	ND ND ND	890 890 890
4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol	ND ND	890 890
2,4-Dichlorophenol 4-Chloro-3-methylphenol	ND ND ND	890 890 890
2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol	ND ND ND	890 890 3500
4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND	3500 3500 3500

Client ID: B-5C\_S-1 Lab Sample No: 93685
Site: Yonkers Waterfront Lab Job No: I685

Date Sampled: 10/30/98 Matrix: SOIL Date Received: 10/30/98 Level: LOW

Date Extracted: 11/05/98 Sample Weight: 30.0 g

Date Analyzed: 11/12/98 Extract Final Volume: 5.0 ml GC Column: DB-5 Dilution Factor: 1.0

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
hig/2 (hlamathul) athan	NTD	
bis (2-Chloroethyl) ether	ND	89
1,3-Dichlorobenzene	ND	890
1,4-Dichlorobenzene	ND	890
1,2-Dichlorobenzene	ND	890
bis(2-chloroisopropyl)ether N-Nitroso-di-n-propylamine	, ND	890
Hexachloroethane	ND	89
Nitrobenzene	, ND	89
Isophorone	ND ND	89
bis(2-Chloroethoxy)methane	ND	890
1,2,4-Trichlorobenzene		890
Naphthalene	ND ND	89
4-Chloroaniline	ND ND	890 890
Hexachlorobutadiene	ND	
2-Methylnaphthalene		180
Hexachlorocyclopentadiene	ND	890
2-Chloronaphthalene	ND ND	890 890
2-Nitroaniline	ND	1800
Dimethylphthalate	ND	890
Acenaphthylene	23 J	890
2,6-Dinitrotoluene	ND	180
3-Nitroaniline	ND	1800
Acenaphthene	19 J	890
Dibenzofuran	ND	890
2,4-Dinitrotoluene	. ND	180
Diethylphthalate	ND	890
4-Chlorophenyl-phenylether	ND	890
Fluorene	24 J	890
4-Nitroaniline	ND	1800
N-Nitrosodiphenylamine	ND	890
4-Bromophenyl-phenylether	ND	890
Hexachlorobenzene	ND	89
Phenanthrene	200 J	890
Anthracene	56 J	890

Instrument ID: BNAMS2.i

Lab File ID: s8808.d

Client ID: B-5C S-1 Lab Sample No: 93685

Site: Yonkers Waterfront Lab Job No: I685

Matrix: SOIL Date Sampled: 10/30/98 Date Received: 10/30/98 Level: LOW

Date Extracted: 11/05/98
Date Analyzed: 11/12/98
GC Column: DB-5 Sample Weight: 30.0 g

Extract Final Volume: 5.0 ml

Dilution Factor: 1.0

% Moisture: 6

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	ND ND 390 J 430 J ND ND 170 200 J 340 J ND 280 90 180 75 J	890 890 890 890 1800 890 890 890 890 899
Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND 84 J	89 890

Client ID: B-5C S-1

Site: Yonkers Waterfront

Lab Sample No: 93685 Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Extracted: 11/05/98 Matrix: SOIL Level: LOW

Date Analyzed: 11/12/98

Sample Weight: 30.0 g

Extract Final Volume: 5.0 ml

GC Column: DB-5
Instrument ID: BNAMS2.i

Dilution Factor: 1.0 % Moisture: 6.1

Lab File ID: s8808.d

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

	Y	· · · · · · · · · · · · · · · · · · ·	
COMPOUND NAME	RT	EST. CONC.	Q
=======================================	======		
1. Unknown	14.56	760	1
2. Unknown	15.10	4200	<del></del>
3. Unknown	26.08		
		820	
4. Unknown Alkane/Unknown	26.77	1000	
5. Unknown Alkane/Unknown	27.69	960	
6. Unknown	27.82	760	
7. Unknown	28.80	990	
8. Unknown	28.93	1600	
9. Unknown	29.55	1100	
10. Unknown	30.55	2000	
11. Unknown	31.81	2400	
12. Unknown	33.81		
	33.81	760	
13			
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TOTAL ESTIMATED CONCENTRATION

17350

Client ID: B-5C S-1

Site: Yonkers Waterfront

Lab Sample ID: 93685

Lab Job No: I685

Date Sampled: 10/30/98

Date Received: 10/30/98
Date Extracted: 11/02/98

Date Analyzed: 11/06/98 GC Front Column: DB-5 GC Rear Column: DB-608

Instrument ID: PESTGC5.i Front File ID: pf011685.d Rear File ID: pr011685.d Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume: 10.0 ml

Dilution Factor: 1.0

% Moisture: 6

## ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>	<u>Column</u>
Aroclor-1016	ND	71	R
Aroclor-1221	ND	71	R
Aroclor-1232	ND	71	R
Aroclor-1242	ND .	71	R
Aroclor-1248	ND	71	R
Aroclor-1254	ND	71	R
Aroclor-1260	ND -	71	R
Aroclor-1262	ND	71	R
Aroclor-1268	ND	71	R

Client ID: B-5C S-1A1 Site: Yonkers Waterfront

Lab Sample ID: 93685A1

Lab Job No: 1685

Matrix: SOIL

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Extracted: 11/02/98 Date Analyzed: 11/20/98 GC Front Column: DB-1701

Level: LOW Sample Weight: 15 g

Extract Final Volume: 10.0 ml

Dilution Factor: 1.0

% Moisture:

GC Rear Column: DB-608 Instrument ID: PESTGC4.i Front File ID: wf016968.d Rear File ID: wr016968.d

Parameter

Chlordane

#### ORGANOCHLORINE PESTICIDES - GC/ECD METHOD 8081A

Analytical Results Units: ug/kg

210

Quantitation Limit

(Dry Weight)

Units: uq/kq Column

71 R

Client ID: B-5C S-1

Site: Yonkers Waterfront

Lab Sample No: 93685

Lab Job No: I685

Date Sampled: 10/30/98
Date Received: 10/30/98

Matrix: SOLID Level: LOW

% Moisture: 6.1

### METALS ANALYSIS

	Analytical Result	Instrument		re.
_	Units: mg/kg	Detection		
<u>Analyte</u>	(Dry Weight)	<u>Limit</u>	<u>Qual</u>	<u>M</u>
Aluminum	7050	17.9		P
Antimony	ND .	0.94	N	P
Arsenic	1.8	0.60		P
Barium	38.7	0.30	В	P
Beryllium	0.23	0.043	В	P
Cadmium	ND	0.085		P
Calcium	78800	43.7		P
Chromium	10.5	0.23	*	P
Cobalt	7.3	0.28	В	P
Copper	28.0	0.62		P
Iron	20300	10.1		P
Lead	74.4	0.43		P P
Magnesium	29100	14.8		P
Manganese	285	0.19		P
Mercury	0.03	0.018	В	CV
Nickel	13.5	0.45		P
Potassium	712	52.2	В	P
Selenium	ND	0.89		P
Silver	nD ND	0.30		P
Sodium	690	103	В	P
Thallium	ND	0.96		P
Vanadium	41.4	0.55		P
Zinc	50.3	2.1	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: B-6C S-1 Lab Sample No: 93686 Site: Yonkers Waterfront Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Analyzed: 11/10/98 Matrix: SOIL Level: HIGH

GC Column: DB624

Instrument ID: VOAMS2.i

Lab File ID: b8965.d

Sample Weight: 5.1 g

Methanol Ext. Volume: 10.0 ml Ext. Dilution Factor: 50.0

% Moisture: 11

#### VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Chloromethane	ND	550
Bromomethane	ND	550
Vinyl Chloride	ND	550
Chloroethane	ND	550
Methylene Chloride	ND	330
Acetone	ND	550
Carbon Disulfide	ND	550
1,1-Dichloroethene	ND	220
1,1-Dichloroethane	ND	550
trans-1,2-Dichloroethene	ND	550
cis-1,2-Dichloroethene	ND	550
Chloroform	ND	550
1,2-Dichloroethane	ND	220
2-Butanone	ND	550
1,1,1-Trichloroethane	ND	550
Carbon Tetrachloride	ND	220
Bromodichloromethane	ND	110
1,2-Dichloropropane	ND	110
cis-1,3-Dichloropropene Trichloroethene	ND	× 550
Dibromochloromethane	ND	110
1,1,2-Trichloroethane	ND	550
Benzene	ND	330
trans-1,3-Dichloropropene	ND ND	110
Bromoform	, ND ND	550
4-Methyl-2-Pentanone	ND ND	440
2-Hexanone	ND ND	550 550
Tetrachloroethene	ND ND	550 110
1,1,2,2-Tetrachloroethane	ND ND	110
Toluene	ND	550
Chlorobenzene	ND	550
Ethylbenzene	ND	440
Styrene	ND	550
Xylene (Total)	ND	550

Client ID: B-6C\_S-1

Site: Yonkers Waterfront

Lab Sample No: 93686 Lab Job No: I685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Analyzed: 11/10/98

GC Column: DB624

Instrument ID: VOAMS2.i

Lab File ID: b8965.d

Matrix: SOIL Level: HIGH

Sample Weight: 5.1 g

Methanol Ext. Volume: 10.0 ml Ext. Dilution Factor: 50.0

% Moisture: 11.0

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Propane, 2-methoxy-2-methyl- 2. Unknown Siloxane 3.	8.27	==========	1

TOTAL ESTIMATED CONCENTRATION 2850

Client ID: B-6C\_S-1

Site: Yonkers Waterfront

Lab Sample No: 93686

Lab Job No: I685

Date Sampled: 10/30/98 Date Received: 10/30/98

Date Extracted: 11/05/98 Date Analyzed: 11/12/98

GC Column: DB-5

Instrument ID: BNAMS2.i

Lab File ID: s8807.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 5.0

% Moisture: 11

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	1900 1900 1900 1900 1900 1900 1900 1900
4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND	7500 7500 7500

Client ID: B-6C S-1 Lab Sample No: 93686

Site: Yonkers Waterfront Lab Job No: 1685

Date Sampled: 10/30/98 Matrix: SOIL Level: LOW

Date Received: 10/30/98 Date Extracted: 11/05/98 Date Analyzed: 11/12/98 Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

GC Column: DB-5 Dilution Factor: 5.0

Instrument ID: BNAMS2.i % Moisture: 11

Lab File ID: s8807.d

	Analytical Results Units: ug/kg	Quantitation
Parameter	(Dry Weight)	Limit <u>Units: ug/kg</u>
bis(2-Chloroethyl)ether	ND	190
1,3-Dichlorobenzene	ND	1900
1,4-Dichlorobenzene	ND	1900
1,2-Dichlorobenzene	ND	1900
bis(2-chloroisopropyl)ether	ND	1900
N-Nitroso-di-n-propylamine	ND	190
Hexachloroethane	ND .	190
Nitrobenzene	ND	190
Isophorone	ND	1900
bis(2-Chloroethoxy)methane	ND .	1900
1,2,4-Trichlorobenzene	ND	190
Naphthalene	ND	1900
4-Chloroaniline	ND	1900
Hexachlorobutadiene	ND	370
2-Methylnaphthalene	ND	1900
Hexachlorocyclopentadiene	ND	1900
2-Chloronaphthalene	ND	1900
2-Nitroaniline	ND	3700
Dimethylphthalate	ND	1900
Acenaphthylene	ND	1900
2,6-Dinitrotoluene	ND	370
3-Nitroaniline	ND	3700
Acenaphthene	310J	1900
Dibenzofuran	ND	1900
2,4-Dinitrotoluene	ND	370
Diethylphthalate	ND	1900
4-Chlorophenyl-phenylether	ND	1900
Fluorene	ND	1900
4-Nitroaniline	ND	3700
N-Nitrosodiphenylamine	ND	1900
4-Bromophenyl-phenylether	ND	1900
Hexachlorobenzene	ND	190
Phenanthrene	100_J	1900
Anthracene	ND	1900

Client ID: B-6C S-1 Lab Sample No: 93686

Site: Yonkers Waterfront Lab Job No: 1685

Date Sampled: 10/30/98 Matrix: SOIL Date Received: 10/30/98 Level: LOW

Date Extracted: 11/05/98
Date Analyzed: 11/12/98
GC Column: DB-5
Instrument ID: BNAMS2.i Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 5.0

% Moisture: 11 Lab File ID: s8807.d

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND 130 J 220 J ND ND ND ND ND ND ND ND ND ND ND ND ND	1900 1900 1900 1900 1900 1900 1900 1900
13 / / : / <u>: / : - / : / : / : / : / : / : / : / : / : / : / : / : - </u>	40 0	1900

Client ID: B-6C S-1

Site: Yonkers Waterfront

Lab Sample No: 93686

Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98

Date Extracted: 11/05/98
Date Analyzed: 11/12/98
GC Column: DB-5
Instrument ID: BNAMS2.i Lab File ID: s8807.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 5.0

% Moisture: 11.0

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
		49/12	
1. C13H28 Alkane	15.29	11000	
2. Unknown Cycloalkane/Unknown	15.67		
3. C14H30 Alkane	15.89		
4. Ünknown	15.93		
5. C14H30 Alkane	16.33		
6. Unknown Alkane	16.89		
7. Unknown	17.12	7400	
8. Unknown Alkane	17.65	15000	1140
9. Trimethylnaphthalene isomer	18.29	4600	
10. Trimethylnaphthalene isomer	18.52	4800	
11. Trimethylnaphthalene isomer	18.64	5700	
12. Trimethylnaphthalene isomer/Unknown	18.79	4800	
13. Unknown Alkane	19.18		
14. Unknown Alkane	19.63		
15. Dimethyl-1,1-biphenyl isomer	19.99	1	
16. C20H42 Alkane	20.39	8800	
17. Unknown	20.77	4100	
18. Unknown Alkane/Unknown	20.97	4100	
19. Methyldibenzothiophene isomer	21.13	4900	
20. Dimethyldibenzothiophene isomer	21.95	3800	
21			
22.			
23			
27.			
20.			
20.			
25.			
30			

TOTAL ESTIMATED CONCENTRATION

154300

Client ID: B-6C S-1

Site: Yonkers Waterfront

Lab Sample ID: 93686

Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98

Date Extracted: 11/02/98
Date Analyzed: 11/06/98

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC5.i Front File ID: pf011686.d Rear File ID: pr011686.d Matrix: SOIL Level: LOW

Sample Weight: 15 g

10.0 ml

Extract Final Volume: Dilution Factor: 1.0

% Moisture: 11

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>	<u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND ND ND ND ND ND	75 75 75 75 75 75 75 75	R R R R R R R R

Client ID: B-6C S-1A1 Site: Yonkers Waterfront Lab Sample ID: 93686A1

Lab Job No: I685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Extracted: 11/02/98

Date Analyzed: 11/20/98

GC Front Column: DB-1701 GC Rear Column: DB-608 Instrument ID: PESTGC4.i Front File ID: wf016973.d Rear File ID: wr016973.d

Parameter

Chlordane

Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume: 10.0 ml

Dilution Factor: 1.0

% Moisture: 11

#### ORGANOCHLORINE PESTICIDES - GC/ECD METHOD 8081A

Analytical Results Units: ug/kg (Dry Weight)

Ouantitation Limit

Units: uq/kq Column

75 R 190

Client ID: B-6C S-1 Site: Yonkers Waterfront Lab Sample No: 93686 Lab Job No: I685

Date Sampled: 10/30/98 Date Received: 10/30/98

Matrix: SOLID Level: LOW

% Moisture: 11.0

## METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Oual	<u>M</u>
Aluminum	6810	18.9		P
Antimony	ND	0.99	N	P
Arsenic	1.3	0.63		P
Barium	15.4	0.31	В	P
Beryllium	0.18	0.045	B	P
Cadmium	ND	0.090		P
Calcium	40900	18.4		P
Chromium	5.4	0.25	*	P
Cobalt	6.6	0.29	В	P
Copper	39.9	0.65		P
Iron	18800	10.7		P
Lead	11.3	0.45		P
Magnesium	18400	15.7		P
Manganese	212	0.20		P
Mercury	ND	0.019		CV
Nickel	8.1	0.47	В	P
Potassium	279	55.1	В	P
Selenium	ND	0.94		
Silver	ND	0.31		P
Sodium	1150	108		P P P
Thallium	ND	1.0		P
Vanadium	41.3	0.58		P
Zinc	28.4	0.88	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: B-7C S-4 Lab Sample No: 93687 Site: Yonkers Waterfront Lab Job No: I685

Date Sampled: 10/30/98 Matrix: SOIL
Date Received: 10/30/98 Level: LOW

Date Analyzed: 11/12/98 Sample Weight: 5.1 g
GC Column: DB624 Purge Volume: 5.0 ml
Instrument ID: VOAMS1.i % Moisture: 18

Lab File ID: a7041.d

#### VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	ND ND ND ND 2.4JB 34 ND ND ND ND ND ND ND ND ND ND ND ND ND	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0
Xylene (Total)	ND	6.0

Client ID: B-7C S-4

Site: Yonkers Waterfront

Lab Sample No: 93687

Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Analyzed: 11/12/98

GC Column: DB624 Instrument ID: VOAMS1.i Lab File ID: a7041.d

Matrix: SOIL Level: LOW

Sample Weight: 5.1 g Purge Volume: 5.0 ml

% Moisture: 18.0

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
		===========	1
1 The land of the	2 65		
1. Unknown	3.65	1	il
2. Propane, 2-methyl-	4.01	14	
3. Butane	4.32	16	
4. Butane, 2-methyl-	5.27	16	
4. Butane, 2-metry1-			ll
5. Pentane	5.71	7.4	l
6. Pentane, 2-methyl-	7.19	9.6	1 1
7. Unknown Cycloalkane	13.56	7.0	
8 Trimethylbenzene isomer	16.22	7.9	l
7. Unknown Cycloalkane 8. Trimethylbenzene isomer 9. Unknown Siloxane			
9. Unknown Siloxane	17.25	8.0	ll
10			!1
11.			
12			<del></del>
12.			
			l
14. 15. 16.			ll
15	i		
16.			
			ı — i
17.			
		]	ll
20			1
21.			
22			
			ll
1 23.			
1			ll
1 23.			
26.			
26.			ıI
1 - 7 - 7			ı——I
1 20.			
22.	]		i
30			
	l ————		·

TOTAL	ESTIMATED	CONCENTRATION	92

Lab File ID: s8755.d

Client ID: B-7C S-4 Lab Sample No: 93687 Site: Yonkers Waterfront Lab Job No: I685

Date Sampled: 10/30/98 Date Received: 10/30/98 Matrix: SOIL Level: LOW

Date Extracted: 11/05/98

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml Date Analyzed: 11/10/98 GC Column: DB-5 Instrument ID: BNAMS2.i

Dilution Factor: 20.0

% Moisture: 18

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND 180 J ND ND ND ND ND ND ND ND ND ND ND ND ND	8100 8100 8100 8100 8100 8100 8100 8100

Client ID: B-7C-S-4 Lab Sample No: 93687 Site: Yonkers Waterfront Lab Job No: I685

Date Sampled: 10/30/98 Matrix: SOIL Date Received: 10/30/98 Level: LOW

Date Extracted: 11/05/98
Date Extracted: 11/05/98
Date Analyzed: 11/10/98
GC Column: DB-5
Instrument ID: BNAMS2.i Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 20.0

% Moisture: 18

Lab File ID: s8755.d

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Dis(2-Chloroethyl)ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis(2-chloroisopropyl)ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis(2-Chloroethoxy)methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline	(Dry Weight)  ND  ND  ND  ND  ND  ND  ND  ND  ND  N	Units: ug/kg  810 8100 8100 8100 8100 8100 8100 810
N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene	ND ND ND ND 10000 2700 J	16000 8100 8100 810 8100 8100

Client ID: B-7C\_S-4
Site: Yonkers Waterfront Lab Sample No: 93687

Lab Job No: I685

Matrix: SOIL Date Sampled: 10/30/98 Date Received: 10/30/98 Level: LOW

Date Extracted: 11/05/98
Date Analyzed: 11/10/98
GC Column: DB-5
Instrument ID: BNAMS2.i Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

Dilution Factor: 20.0

% Moisture: 18 Lab File ID: s8755.d

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Carbazole	880 J	8100
Di-n-butylphthalate	ND	8100
Fluoranthene	11000	8100
Pyrene	10000	8100
Butylbenzylphthalate	ND	8100
3,3'-Dichlorobenzidine	ND	16000
Benzo(a)anthracene	6100	810
Chrysene	7500 J	8100
bis(2-Ethylhexyl)phthalate	ND	8100
Di-n-octylphthalate	ND	8100
Benzo(b)fluoranthene	6800	810
Benzo(k)fluoranthene	2400	810
Benzo(a)pyrene	5300	810
Indeno(1,2,3-cd)pyrene	3100	810
Dibenz(a,h)anthracene	940	810
Benzo(g,h,i)perylene	3200 J	8100

Client ID: B-7C S-4

Site: Yonkers Waterfront

Lab Sample No: 93687 Lab Job No: I685

Date Sampled: 10/30/98
Date Received: 10/30/98
Date Extracted: 11/05/98

Date Analyzed: 11/10/98

GC Column: DB-5

Instrument ID: BNAMS2.i Lab File ID: s8755.d Matrix: SOIL Level: LOW

Sample Weight: 30.0 g

Extract Final Volume: 2.0 ml

Dilution Factor: 20.0

% Moisture: 18.0

## SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	_
1. C20H12 PAH			
2. Unknown	28.27	1	
3	31.95	7500	
3			
4			
0.			
±0.			
±4.			
19			
44.			
44.			
25.			
	<del></del> ,		
26. 27.	·		
27. 28.			
28	i		
29. 30.			
30.			

TOTAL ESTIMATED CONCENTRATION 16300

Client ID: B-7C S-4

Site: Yonkers Waterfront

Lab Sample ID: 93687 Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98

Date Extracted: 11/02/98
Date Analyzed: 11/06/98
GC Front Column: DB-5
GC Rear Column: DB-608
Instrument ID: PESTGC5.i Front File ID: pf011687.d

Rear File ID: pr011687.d

Matrix: SOIL Level: LOW

Sample Weight: 15 g

Extract Final Volume: 10.0 ml Dilution Factor: 1.0

% Moisture: 18

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg <u>(Dry Weight)</u>	Quantitation Limit <u>Units: ug/kg</u>	Column
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	82 82 82 82 82 82 82 82 82	R R R R R R R R

Client ID: B-7C S-4

Site: Yonkers Waterfront

Lab Sample No: 93687

Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98

Matrix: SOLID Level: LOW

% Moisture: 18.0

## METALS ANALYSIS

	Analytical			
	Result	Instrument		
	Units: mg/kg	Detection		
<u>Analyte</u>	(Dry Weight)	Limit	_Oual	<u>M</u>
			<u> </u>	1.1
Aluminum	2790	20.5		P
Antimony	ND	1.1	N	P
Arsenic	6.5	0.68		P
Barium	306	0.34		P
Beryllium	0.29	0.049	В	P
Cadmium	0.72	0.098	В	P
Calcium	4050	20.0		P
Chromium	15.0	0.27	*	P
Cobalt	5.7	0.32	В	P
Copper	87.6	0.71		P
Iron	17400	11.6		P
Lead	998	0.49		P
Magnesium	1780	17.0		
Manganese	111	0.22		P P
Mercury	1.6	0.020		CV
Nickel	15.0	0.51		
Potassium	215	59.8	В	P
Selenium	ND	1.0		P
Silver Sodium	ND	0.34		P
Thallium	276	118	В	P
	ND	1.1		P
Vanadium Zinc	15.5	0.63		P P P P P P
211IC	751	0.95	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: B-8C S-1 Lab Sample No: 93688 Site: Yonkers Waterfront Lab Job No: I685

Date Sampled: 10/30/98 Matrix: SOIL Level: LOW

Date Received: 10/30/98 Date Analyzed: 11/09/98 GC Column: DB624 Sample Weight: 5.1 g Purge Volume: 5.0 ml Instrument ID: VOAMS1.i % Moisture: 12

Lab File ID: a6980.d

#### VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene	ND ND ND 3.9B 46 ND ND ND ND ND ND ND ND ND ND ND ND ND	5.666366266662662116163164661166 5.55355255521153154551155
Styrene Xylene (Total)	ND ND ND	4.4 5.6 5.6

Client ID: B-8C S-1

Site: Yonkers Waterfront

Lab Sample No: 93688

Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Analyzed: 11/09/98

GC Column: DB624

Instrument ID: VOAMS1.i

Lab File ID: a6980.d

Matrix: SOIL Level: LOW

Sample Weight: 5.1 g Purge Volume: 5.0 ml

% Moisture: 12.5

# VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND  2.	RT		Q ====================================
25. 26. 27. 28. 29. 30.			

TOTAL ESTIMATED CONCENTRATION

46

0.0

Lab File ID: s8745.d

Client ID: B-8C S-1 Lab Sample No: 93688 Site: Yonkers Waterfront Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Matrix: SOIL Level: LOW

Date Extracted: 11/05/98 Sample Weight: 30.0 g Date Analyzed: 11/10/98

Extract Final Volume: 2.0 ml GC Column: DB-5 Instrument ID: BNAMS2.i

Dilution Factor: 1.0

% Moisture: 12

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	380 380 380 380 380 380 380 380 380 1500 1500

Client ID: B-8C\_S-1 Site: Yonkers Waterfront Lab Sample No: 93688

Lab Job No: I685

Date Sampled: 10/30/98 Matrix: SOIL Date Received: 10/30/98 Level: LOW

Date Extracted: 11/05/98 Sample Weight: 30.0 g Date Analyzed: 11/10/98 Extract Final Volume: 2.0 ml

GC Column: DB-5 Instrument ID: BNAMS2.i Lab File ID: s8745.d Dilution Factor: 1.0

% Moisture: 12

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Parameter  bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran	Units: ug/kg (Dry Weight)  ND ND ND ND ND ND ND ND ND ND ND ND ND	Limit Units: ug/kg  38 380 380 380 380 38 38 38 38 380 380
2,4-Dinitrotoluene Diethylphthalate	ND ND ND	380 76 380
4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine	ND ND ND ND	380 380 760 380
4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene	ND ND 19 J ND	380 38 380 380

Client ID: B-8C\_S-1
Site: Yonkers Waterfront Lab Sample No: 93688 Lab Job No: I685

Date Sampled: 10/30/98 Date Received: 10/30/98
Date Extracted: 11/05/98
Date Analyzed: 11/10/98
GC Column: DB-5
Instrument ID: BNAMS2.i

Lab File ID: s8745.d

Matrix: SOIL Level: LOW

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

% Moisture: 12

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	ND ND 13 J 10 J ND ND ND 11 J ND 500 ND ND ND ND ND ND ND ND	380 380 380 380 380 760 38 380 380 380 380 38
Benzo(g,h,i)perylene	ND	38 380

Client ID: B-8C S-1

Site: Yonkers Waterfront

Lab Sample No: 93688 Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98 Date Extracted: 11/05/98

Level: LOW

Matrix: SOIL

Date Analyzed: 11/10/98 GC Column: DB-5

Sample Weight: 30.0 g Extract Final Volume: 2.0 ml

Dilution Factor: 1.0 % Moisture: 12.5

Instrument ID: BNAMS2.i Lab File ID: s8745.d

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

1. Benzenesulfonamide, N,4-dimethyl- 2. Unknown 3.	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
22. 23. 24. 25. 26. 27. 28. 29.	2. Unknown 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25.	19.64	470	

TOTAL ESTIMATED CONCENTRATION 910

Client ID: B-8C S-1

Site: Yonkers Waterfront

Lab Sample ID: 93688 Lab Job No: 1685

Date Sampled: 10/30/98 Date Received: 10/30/98
Date Extracted: 11/02/98
Date Analyzed: 11/06/98
GC Front Column: DB-5

GC Rear Column: DB-608

Instrument ID: PESTGC5.i Front File ID: pf011681.d Rear File ID: pr011681.d

Matrix: SOIL Level: LOW

Sample Weight: 15 g

10.0 ml

Extract Final Volume: Dilution Factor: 1.0

% Moisture: 12

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit <u>Units: ug/kg</u>	<u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND ND ND ND ND ND	76 76 76 76 76 76 76 76	R R R R R R R R

Client ID: B-8C S-1
Site: Yonkers Waterfront

Lab Sample No: 93688

Lab Job No: 1685

Date Sampled: 10/30/98
Date Received: 10/30/98

Matrix: SOLID Level: LOW

% Moisture: 12.5

## METALS ANALYSIS

Analyte	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	_Oual		<u>M</u>
					171
Aluminum	8030	19.2			P
Antimony	ND	1.0	N		P
Arsenic	1.3	0.64			P
Barium	36.2	0.32	В		P
Beryllium	0.34	0.046	В		P P P
Cadmium	ND	0.091			P P
Calcium	1340	18.7			P
Chromium	12.8	0.25	*	)	P
Cobalt	5.5	0.30	В		P P P
Copper	15.0	0.66			P
Iron	12500	10.9			P
Lead	36.7	0.46			P
Magnesium	2870	15.9			P P P P
Manganese	230	0.21			P
Mercury	0.05	0.019			CV
Nickel	13.8	0.48			P
Potassium	522	56.0	В		P
Selenium	ND	0.96			P
Silver	ND	0.32			P P P P
Sodium	425	110	В		P
Thallium	ND	1.0			P
Vanadium	17.5	0.59			P P
Zinc	36.1	0.89	N*		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

The To Your Success

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Whippany NJ 07981

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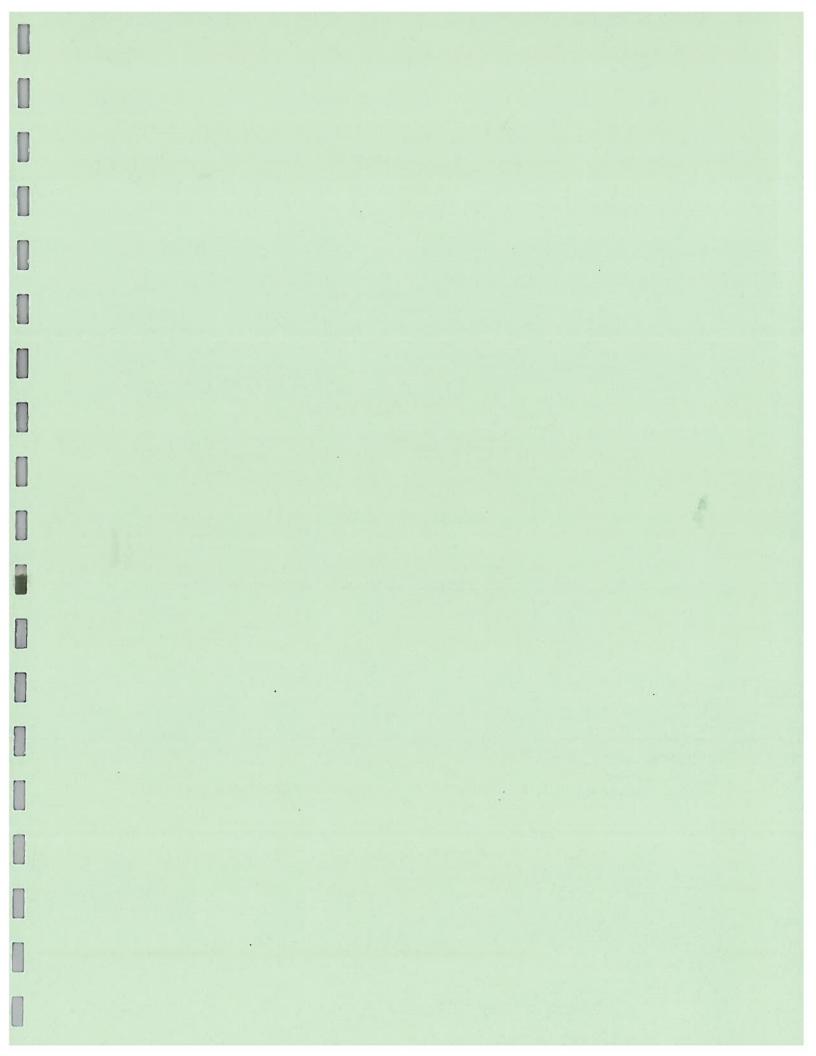
CHAIN OF CUSTODY

566 I 685

No. C2703

PM NON-CONFORMANCE Volume: . Temp: \_ **Initials:** DESCRIPTION For Lab Use Only Custody Seal #(s) Cooler Temp.(s) Holding Time: # of Coolers: Container: \_ Job No. Quote No. Logged By: Date Due: \_ Preserved: **Broken:** Other BAL ПΩ Very Your FIELD BOOK: 7.00cm (5) ANALYSIS REQUIRED BROMONA 9366 BUN 9363 9283 250EV 3000 9264 PUNNS 23 8810d 70005 X Vr174 ጲ 100 100 PO# Bill To X Оп OOZHE **UK @Date UTime WMtx** SD DELLVERABIES 3 පු HERPOUT Proj. Type: NJPDES, NPDES, ISRA, CLP, CERCLA, RCRA, S Reporting Type: NJ Reg Format, NJ Reduced Format, UST, ACO, MOA, OTHER AYS DEC CLP, Level II, Level I (Data Sum), 745m COMMENTS: (Please include hazards on site.) 16-50-01 0-3 10-30 5 30 0-2 02-0 Project Name/no.: Youkers OTHER (CLP, SW846, EPA 600 Other ASP Client Contact: Perin DW, OTHER TAT: 1wk, Wwk, 3wk, Client ID (10 CHAR) B-60 B-80 B-5C STL Contact: Protocol: Client: <u>@</u> 7 (S) <u>ම</u> <u>(P</u> <u>@</u> <u>(5)</u>

(	Print Name and Company	Signature	Custody Seal # (c)	Date/Time
(4	[7] Sampled By: 16×1.3 PE121	Kai Do Oc. Oc.	(c) " mac (many	Cae, 100
ı	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	1 ( M) . M		10-50-18 11 30
	Keceived by: ~ La VAC 3633 0d - L- WIND ACT	the at		8 J / /5/84/1
	Relinquished By. STU JACABSON	14 12/11		0 0 0
		The state of the s		10/2/68 / 1/10
	Received By:	D SCHEEN		0101 136186
		- PERCAPAGE STREET		101/01/01/01
	Kelinquished By:	I HEDEMINGS, WOOD		_
	Received Bv.			
				/
	Mtx = Matrix of Sample. (Al=Air, AQ=Aqueous, LE=Leachate, ML=Misc Liquid, MS=Misc Solids, OII SE=Sediment, SI = Sludge SO=Soil)	e, ML=Misc Liquid, MS=Misc Solids. OIL., SF=9	Sediment SI = Sludge SO = Soil)	
			(1100-00 /20 00 00 /000)	



Client ID: MW-2C Lab Sample No: 95705 Site: Yonkers Waterfront Lab Job No: 1963

Date Sampled: 11/09/98 Date Received: 11/09/98 Date Analyzed: 11/23/98 Matrix: WATER Level: LOW

Purge Volume: 5.0 ml GC Column: DB624 Dilution Factor: 2.0

Instrument ID: VOAMS3.i Lab File ID: c2976.d

#### **VOLATILE ORGANICS - GC/MS** METHOD 8260B

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	220	6.0
Acetone	ND	10
Carbon Disulfide	ND	10
1,1-Dichloroethene	ND	4.0
1,1-Dichloroethane	ND	10
trans-1,2-Dichloroethene	ND	10
cis-1,2-Dichloroethene	ND	10
Chloroform	ND	10
1,2-Dichloroethane	ND	4.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	10
Carbon Tetrachloride	ND	4.0
Bromodichloromethane	ND	2.0
1,2-Dichloropropane	ND	2.0
cis-1,3-Dichloropropene	ND	10
Trichloroethene	ND	2.0
Dibromochloromethane	ND	10
1,1,2-Trichloroethane	ND	6.0
Benzene	ND	2.0
trans-1,3-Dichloropropene	ND	10
Bromoform	ND	8.0
4-Methyl-2-Pentanone	ND	10
2-Hexanone	ND	10
Tetrachloroethene	ND	2.0
1,1,2,2-Tetrachloroethane Toluene	ND	2.0
Chlorobenzene	ND	10
Ethylbenzene	ND	10
Styrene	ND	8.0
Xylene (Total)	ND	10
my reme (local)	ND	10

Client ID: MW-2C Lab Sample No: 95705 Site: Yonkers Waterfront Lab Job No: 1963

Date Sampled: 11/09/98 Matrix: WATER Date Received: 11/09/98 Level: LOW Date Analyzed: 11/23/98

GC Column: DB624
Instrument ID: VOAMS3.i Lab File ID: c2976.d

Purge Volume: 5.0 ml Dilution Factor: 2.0

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
		ug/l	
	=======	=========	====
1NO VOLATILE ORGANIC COMPOUNDS FOUND	i		İ
2.			
3			
4.	l ———		
4			<b></b>
5			
l '			
,	l		
l J.			
1 -0.			
) and and a			
13.			
14.			
14			<b></b> .
15.			
			i
-0.			
±2•			
20.			
21.			
22.			
22.			
<b>2 .</b>			
_, .			' <del></del>
30			

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-2C Lab Sample No: 95705 Site: Yonkers Waterfront Lab Job No: 1963

Date Sampled: 11/09/98 Matrix: WATER Date Received: 11/09/98 Level: LOW

Date Extracted: 11/16/98 Date Analyzed: 11/18/98 Sample Volume: 680 ml Extract Final Volume: 2.0 ml

GC Column: DB-5 Dilution Factor: 1.0

Instrument ID: BNAMS5.i Lab File ID: q8244.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol	2.4J	. 15
2-Chlorophenol	ND	15
2-Methylphenol	ND	15
4-Methylphenol	0.4J	15
2-Nitrophenol	ND	15
2,4-Dimethylphenol	ND	15
2,4-Dichlorophenol	· ND	15
4-Chloro-3-methylphenol	ND	15
2,4,6-Trichlorophenol	ND	15
2,4,5-Trichlorophenol	ND	15
2,4-Dinitrophenol	ND	59
4-Nitrophenol	ND	59
4,6-Dinitro-2-methylphenol	ND	59
Pentachlorophenol	ND	59

Client ID: MW-2C Lab Sample No: 95705

Site: Yonkers Waterfront Lab Job No: 1963

Date Sampled: 11/09/98 Matrix: WATER Date Received: 11/09/98 Level: LOW

Date Extracted: 11/16/98 Sample Volume: 680 ml

Date Analyzed: 11/18/98 GC Column: DB-5 Extract Final Volume: 2.0 ml

Dilution Factor: 1.0 Instrument ID: BNAMS5.i

Lab File ID: q8244.d

Parameter	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	1.5 15 15 15 1.5 1.5 1.5 1.5 1.5 1.5 1.5
	112	15

Lab File ID: q8244.d

Client ID: MW-2C Site: Yonkers Waterfront Lab Sample No: 95705

Lab Job No: 1963

Date Sampled: 11/09/98 Matrix: WATER Date Received: 11/09/98 Level: LOW

Date Extracted: 11/16/98
Date Analyzed: 11/18/98
GC Column: DB-5
Instrument ID: BNAMS5.i Sample Volume: 680 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole	ND	15
Di-n-butylphthalate	ND	15
Fluoranthene	ND	15
Pyrene	ND	15
Butylbenzylphthalate	ND	15
3,3'-Dichlorobenzidine	ND	29
Benzo(a)anthracene	ND	1.5
Chrysene	ND	15
bis(2-Ethylhexyl)phthalate	3.2J	15
Di-n-octylphthalate	ND	15
Benzo(b)fluoranthene	ND	1.5
Benzo(k) fluoranthene	ND	1.5
Benzo(a)pyrene	ND	1.5
Indeno(1,2,3-cd)pyrene	ND	1.5
Dibenz(a,h)anthracene	ND	1.5
Benzo(g,h,i)perylene	ND	15

Client ID: MW-2C

Site: Yonkers Waterfront

Lab Sample No: 95705 Lab Job No: 1963

Date Sampled: 11/09/98 Date Received: 11/09/98 Date Extracted: 11/16/98
Date Analyzed: 11/18/98
GC Column: DB-5
Instrument ID: BNAMS5.i

Lab File ID: q8244.d

Level: LOW Sample Volume: 680 ml

Matrix: WATER

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
1NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17		ug/l	
18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.			

TOTAL	ESTIMATED	CONCENTRATION	0.0

Client ID: MW-2C

Site: Yonkers Waterfront

Lab Sample ID: 95705 Lab Job No: I963

Matrix: WATER

Sample Volume: 560 ml

Extract Final Volume: 5.0 ml

Dilution Factor: 1.0 Front File ID: zf035269.d Rear File ID: zr035269.d

Date Sampled: 11/09/98
Date Received: 11/09/98
Date Extracted: 11/13/98
Date Analyzed: 11/13/98
GC Front Column: DB-5
GC Rear Column: DB-608
Instrument ID: PESTGC3.i

## ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

		Method Detecti	.on
Parameter	Analytical Results <u>Units: ug/l</u>	Limit	Quant.
	dires: ug/I	<u>Units: ug/l</u>	<u>Column</u>
Aroclor-1016	ND	0.89	R
Aroclor-1221	ND	0.89	R R
Aroclor-1232	ND	0.89	R R
Aroclor-1242	ND	0.89	R
Aroclor-1248	ND	0.89	R
Aroclor-1254	ND	0.89	R
Aroclor-1260	ND	0.89	R
Aroclor-1262	ND	0.89	R
Aroclor-1268	ND	0.89	R

Client ID: MW-4C

Site: Yonkers Waterfront

Lab Sample No: 95706

Lab Job No: 1963

Date Sampled: 11/09/98
Date Received: 11/09/98
Date Analyzed: 11/19/98

GC Column: DB624 Instrument ID: VOAMS2.i Lab File ID: b9122.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

## VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethene trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene	Units: ug/l  ND ND ND ND ND ND ND ND ND ND ND ND ND	
Ethylbenzene Styrene Xylene (Total)	ND ND ND	4.0 5.0 5.0

Client ID: MW-4C Site: Yonkers Waterfront

Lab Sample No: 95706

Lab Job No: 1963

Date Sampled: 11/09/98 Date Received: 11/09/98

Date Analyzed: 11/19/98

GC Column: DB624 Instrument ID: VOAMS2.i Lab File ID: b9122.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/MS** TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND			
2			
6			
8. 9. 10.			10
12.			
13. 14. 15.			
17. 18.			
20			<u> </u>
23.			
24. 25. 26.			
28			
30			

TOTAL	ESTIMATED	CONCENTRATION	0.0

Client ID: MW-4C

Site: Yonkers Waterfront

Lab Sample No: 95706

Lab Job No: 1963

Date Sampled: 11/09/98

Date Received: 11/09/98

Date Extracted: 11/16/98

Date Analyzed: 11/18/98

GC Column: DB-5

Instrument ID: BNAMS5.i

Lab File ID: q8245.d

Matrix: WATER Level: LOW

Sample Volume: 670 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	lytical Result <u>Units: ug/l</u>	Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	15 15 15 15 15 15 15 15 15 60 60 60

Client ID: MW-4C Lab Sample No: 95706
Site: Yonkers Waterfront Lab Job No: 1963

Date Sampled: 11/09/98
Date Received: 11/09/98
Date Extracted: 11/16/98

Matrix: WATER
Level: LOW
Sample Volume:

Date Extracted: 11/16/98

Date Analyzed: 11/18/98

Extract Final Volume: 2.0 ml

C Column: DB-5 Dilution Factor: 1.0

GC Column: DB-5 Instrument ID: BNAMS5.i Lab File ID: q8245.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis(2-Chloroethyl)ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis(2-chloroisopropyl)ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis(2-Chloroethoxy)methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene		1.5 15 15 15 1.5 1.5 1.5 1.5 1.5 1.5 1.5
Anthracene	ND ND	15 15

Lab File ID: q8245.d

Client ID: MW-4C Lab Sample No: 95706

Site: Yonkers Waterfront Lab Job No: 1963

Date Sampled: 11/09/98 Matrix: WATER Date Received: 11/09/98 Level: LOW

Date Extracted: 11/16/98 Sample Volume: 670 ml

Extract Final Volume: 2.0 ml

Date Analyzed: 11/18/98 GC Column: DB-5 Instrument ID: BNAMS5.i Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result Units: ug/l	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene	Units: ug/l  ND ND ND ND ND ND ND ND ND ND ND ND ND	<u>Units: ug/l</u> 15 15 15 15 15 15 15 30 1.5 15 15 15
Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND ND ND ND	1.5 1.5 1.5 1.5

Client ID: MW-4C

Site: Yonkers Waterfront

Lab Sample No: 95706 Lab Job No: 1963

Date Sampled: 11/09/98
Date Received: 11/09/98
Date Extracted: 11/16/98

Date Analyzed: 11/18/98

GC Column: DB-5

Instrument ID: BNAMS5.i Lab File ID: q8245.d Matrix: WATER Level: LOW

Sample Volume: 670 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND	=======		=====
2. 3. 4.			
5			
7			
9			
11			
13.			
15.			
17.			
19.			
21.			
22. 23. 24.			
24.			
26.			
28.			
29. 30.			

TOTAL ESTIMATED CONCENTRATION

0.0

Client ID: MW-4C

Site: Yonkers Waterfront

Lab Sample ID: 95706 Lab Job No: I963

Date Sampled: 11/09/98 Date Received: 11/09/98

Date Extracted: 11/13/98
Date Analyzed: 11/13/98
GC Front Column: DB-5

GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC3.i Matrix: WATER

Sample Volume: 710 ml

Extract Final Volume: 5.0 ml

Dilution Factor: 1.0 Front File ID: zf035270.d Rear File ID: zr035270.d

## ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results <u>Units: ug/l</u>	Method Detection Limit Quant. <u>Units: ug/l</u> Column
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.70 R 0.70 R 0.70 R 0.70 R 0.70 R 0.70 R 0.70 R 0.70 R

Client ID: Field Blank Site: Yonkers Waterfront

Lab Sample No: 95709 Lab Job No: 1963

Date Sampled: 11/09/98
Date Received: 11/09/98
Date Analyzed: 11/19/98
GC Column: DB624
Instrument ID: VOAMS2.i

Matrix: WATER Level: LOW

Lab File ID: b9125.d

Purge Volume: 5.0 ml Dilution Factor: 1.0

## VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene		
Xylene (Total)	ND ND	5.0 5.0

Client ID: Field\_Blank Site: Yonkers Waterfront

Lab Sample No: 95709 Lab Job No: 1963

Date Sampled: 11/09/98 Date Received: 11/09/98 Date Analyzed: 11/19/98

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 1.0

GC Column: DB624 Instrument ID: VOAMS2.i Lab File ID: b9125.d

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	C
1. NO VOLATILE ORGANIC COMPOUNDS FOUND	======	=======================================	===
2			
5			
7			
9.			
1.		×	
2			
••			
5			
3.			
).		1/4	

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: Field\_Blank Site: Yonkers Waterfront

Lab Sample No: 95709 Lab Job No: I963

Date Sampled: 11/09/98 Date Received: 11/09/98 Date Extracted: 11/16/98 Date Analyzed: 11/18/98

Matrix: WATER Level: LOW

Sample Volume: 730 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

GC Column: DB-5 Instrument ID: BNAMS5.i Lab File ID: q8248.d

Parameter	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	Units: ug/l  14 14 14 14 14 14 14 14 14 14 14 14
4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND	55 55 55

Client ID: Field\_Blank Lab Job No: 1963 Site: Yonkers Waterfront

Date Sampled: 11/09/98 Matrix: WATER Date Received: 11/09/98 Level: LOW

Date Extracted: 11/16/98 Sample Volume: 730 ml

Extract Final Volume: 2.0 ml Dilution Factor: 1.0

Date Analyzed: 11/18/98 GC Column: DB-5 Instrument ID: BNAMS5.i Lab File ID: q8248.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether	Analytical Result  Units: ug/l  ND  ND  ND  ND  ND  ND  ND  ND  ND  N	Limit
Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene Phenanthrene Anthracene	ND ND ND ND ND ND ND	14 27 14 14 1.4 1.4 14

Client ID: Field Blank Lab Sample No: 95709

Site: Yonkers Waterfront Lab Job No: 1963

Date Sampled: 11/09/98 Matrix: WATER Date Received: 11/09/98 Date Extracted: 11/16/98 Date Analyzed: 11/18/98 Level: LOW

Sample Volume: 730 ml Extract Final Volume: 2.0 ml

GC Column: DB-5 Instrument ID: BNAMS5.i Dilution Factor: 1.0 Lab File ID: q8248.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	14 14 14 14 14 27 1.4 14 14 1.4 1.4 1.4 1.4

Client ID: Field Blank Site: Yonkers Waterfront Lab Sample No: 95709 Lab Job No: 1963

Date Sampled: 11/09/98 Date Received: 11/09/98 Date Extracted: 11/16/98 Date Analyzed: 11/18/98

Matrix: WATER Level: LOW

Sample Volume: 730 ml

Extract Final Volume: 2.0 ml

GC Column: DB-5

Dilution Factor: 1.0

Instrument ID: BNAMS5.i Lab File ID: q8248.d

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	Q
1 NO CEMT NOTABLE OPCANTS COMPOUNDS BOLDED	======	=======================================	====
1NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2			
J •			
4.			
5			
0.			
7			
<b>0.</b>			
9.			
11.			
12.			
14.	·		
±2.			
20.			
— · · ·			
10.			
±>•			
20.			
<b></b>			
45		<del></del>	
<b>24.</b>			
27.			
20.			
21.			
20.			
43			
30			
	li		
	1		
TOTAL ESTIMATED CONCE	**************************************	0.0	

Client ID: Field\_Blank Site: Yonkers Waterfront Lab Sample ID: 95709 Lab Job No: 1963

Matrix: WATER

Date Sampled: 11/09/98
Date Received: 11/09/98
Date Extracted: 11/13/98
Date Analyzed: 11/13/98
GC Front Column: DB-5

Sample Volume: 670 ml Extract Final Volume: 5.0 ml

Date Analyzed: 11/13/98 GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC3.i Dilution Factor: 1.0 Front File ID: zf035273.d Rear File ID: zr035273.d

#### ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

<u>Parameter</u>	Analytical Results <u>Units: ug/l</u>	Method Detecti Limit Units: ug/l	on Quant. <u>Column</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	ND ND ND ND ND ND ND ND	0.75 0.75 0.75 0.75 0.75 0.75 0.75	R R R R R R R

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 95710 Lab Job No: 1963

Date Sampled: 11/09/98
Date Received: 11/09/98
Date Analyzed: 11/19/98

Matrix: WATER Level: LOW

GC Column: DB624

Purge Volume: 5.0 ml Dilution Factor: 1.0

Instrument ID: VOAMS2.i Lab File ID: b9126.d

# VOLATILE ORGANICS - GC/MS METHOD 8260B

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene Xylene (Total)		5.0 5.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6

Client ID: Trip\_Blank Site: Yonkers Waterfront

Lab Sample No: 95710 Lab Job No: I963

Date Sampled: 11/09/98 Date Received: 11/09/98 Date Analyzed: 11/19/98

Matrix: WATER Level: LOW

GC Column: DB624 Instrument ID: VOAMS2.i

Purge Volume: 5.0 ml Dilution Factor: 1.0

Lab File ID: b9126.d

## VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
2. NO VOLATILE ORGANIC COMPOUNDS FOUND			====
4			
6			
9.		-	
11			
14.			
16			
19.			
21.			
24.			
26.			
28.			
30			
			- 1

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-4AC

Site: Yonkers Waterfront

Lab Sample No: 95711

Lab Job No: 1963

Date Sampled: 11/09/98

Date Received: 11/09/98
Date Analyzed: 11/22/98
GC Column: DB624
Instrument ID: VOAMS2.i

Lab File ID: b9170.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 2.0

## VOLATILE ORGANICS - GC/MS METHOD 8260B

Chloromethane         ND         10           Bromomethane         ND         10           Vinyl Chloride         ND         10           Chloroethane         ND         10           Methylene Chloride         260         6.0           Acetone         ND         10           Carbon Disulfide         ND         10           1,1-Dichloroethene         ND         10           1,1-Dichloroethane         ND         10           1,1-Dichloroethane         ND         10           trans-1,2-Dichloroethene         ND         10           Chloroform         ND         10           Chloroform         ND         10           1,2-Dichloroethane         ND         10           1,1,1-Trichloroethane         ND         10           2-Butanone         ND         10           1,1,1-Trichloroethane         ND         10           Bromodichloromethane         ND         2.0           1,2-Dichloropropane         ND         2.0           cis-1,3-Dichloropropene         ND         10           Trichloroethane         ND         10           Dibromochloromethane         ND         10	<u>Parameter</u>	Analytical Result Units: ug/l	Quantitation Limit <u>Units: ug/l</u>
Styrene ND 8.0  Xylene (Total)	Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene	Units: ug/l ND ND ND ND ND ND ND ND ND ND ND ND ND	Units: ug/l  10 10 10 10 10 6.0 10 10 10 10 10 10 10 2.0 2.0 10 2.0 10 8.0 10 10 2.0 10 2.0 10 10 2.0 10
	Styrene	ND	10

Client ID: MW-4AC

Site: Yonkers Waterfront

Lab Sample No: 95711

Lab Job No: 1963

Date Sampled: 11/09/98
Date Received: 11/09/98
Date Analyzed: 11/22/98

GC Column: DB624 Instrument ID: VOAMS2.i Lab File ID: b9170.d

Matrix: WATER Level: LOW

Purge Volume: 5.0 ml Dilution Factor: 2.0

#### VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8260B

COMPOUND NAME	RT	EST. CONC.	Q
1NO VOLATILE ORGANIC COMPOUNDS FOUND			
3. 4. 5.			
7			
9. 10. 11.			
13.			
15. 16.			
18.			
21.			
23. 24. 25.			
27.			
28. 29. 30.		м.	

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: MW-4AC

Site: Yonkers Waterfront

Lab Sample No: 95711

Lab Job No: 1963

Date Sampled: 11/09/98

Date Received: 11/09/98

Date Extracted: 11/16/98
Date Analyzed: 11/18/98
GC Column: DB-5
Instrument ID: BNAMS5.i Lab File ID: q8249.d

Matrix: WATER Level: LOW

Sample Volume: 700 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol	ND	14
2-Chlorophenol	ND	14
2-Methylphenol	ND	. 14
4-Methylphenol	ND	14
2-Nitrophenol	ND	14
2,4-Dimethylphenol	ND	14
2,4-Dichlorophenol	ND	14
4-Chloro-3-methylphenol	ND	14
2,4,6-Trichlorophenol	ND	14
2,4,5-Trichlorophenol	ND	14
2,4-Dinitrophenol	ND	57
4-Nitrophenol	ND	57
4,6-Dinitro-2-methylphenol	ND	57
Pentachlorophenol	ND	57

Client ID: MW-4AC

Site: Yonkers Waterfront

Lab Sample No: 95711

Lab Job No: 1963

Date Sampled: 11/09/98

Date Received: 11/09/98

Date Extracted: 11/16/98
Date Analyzed: 11/18/98
GC Column: DB-5
Instrument ID: BNAMS5.i

Lab File ID: q8249.d

Matrix: WATER Level: LOW

Sample Volume: 700 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Parameter	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Phenol 2-Chlorophenol 2-Methylphenol 4-Methylphenol 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol	ND ND ND ND ND ND ND ND ND ND ND ND ND N	14 14 14 14 14 14 14 14 157 57 57

ENVIROTECH RESEARCH, INC. Client ID: MW-4AC Lab Sample No: 95711

Site: Yonkers Waterfront Lab Job No: 1963

Date Sampled: 11/09/98 Matrix: WATER Date Received: 11/09/98 Level: LOW

Date Extracted: 11/16/98
Date Analyzed: 11/18/98
GC Column: DB-5
Instrument ID: BNAMS5.i Sample Volume: 700 ml

Extract Final Volume: 2.0 ml

Dilution Factor: 1.0

Lab File ID: q8249.d

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
bis (2-Chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis (2-Chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 2-Methylnaphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene 2-Nitroaniline Dimethylphthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Dibenzofuran 2,4-Dinitrotoluene Diethylphthalate 4-Chlorophenyl-phenylether Fluorene 4-Nitroaniline N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene		1.4 14 14 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.
Phenanthrene Anthracene	ND ND	1.4 14 14

Lab File ID: q8249.d

Client ID: MW-4AC Lab Sample No: 95711

Site: Yonkers Waterfront Lab Job No: 1963

Date Sampled: 11/09/98 Matrix: WATER Date Received: 11/09/98 Level: LOW

Date Extracted: 11/16/98
Date Analyzed: 11/18/98
GC Column: DB-5 Sample Volume: 700 ml Extract Final Volume: 2.0 ml

Dilution Factor: 1.0 Instrument ID: BNAMS5.i

<u>Parameter</u>	Analytical Result <u>Units: ug/l</u>	Quantitation Limit <u>Units: ug/l</u>
Carbazole Di-n-butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	14 14 14 14 28 1.4 14 14 11 1.4 1.4 1.4

Client ID: MW-4AC

Site: Yonkers Waterfront

Lab Sample No: 95711 Lab Job No: 1963

Date Sampled: 11/09/98 Date Received: 11/09/98 Date Extracted: 11/16/98

Matrix: WATER Level: LOW

Date Analyzed: 11/18/98

Sample Volume: 700 ml Extract Final Volume: 2.0 ml

GC Column: DB-5

Dilution Factor: 1.0

Instrument ID: BNAMS5.i Lab File ID: q8249.d

#### SEMI-VOLATILE ORGANICS - GC/MS TENTATIVELY IDENTIFIED COMPOUNDS METHOD 8270C

COMPOUND NAME	RT	EST. CONC.	
<ol> <li>Unknown</li> <li>Unknown</li> <li>Unknown</li> </ol>	11.49 12.56 15.03	43 14 16	
6. 7. 8.			
10. 11. 12.			
14			
18. 19. 20.			
22. 23. 24.			
26. 27. 28.			
29. 30.			

TOTAL ESTIMATED CONCENTRATION

Client ID: MW-4AC

Site: Yonkers Waterfront

Lab Sample ID: 95711 Lab Job No: I963

Date Sampled: 11/09/98

Date Received: 11/09/98 Date Extracted: 11/13/98

Date Analyzed: 11/13/98 GC Front Column: DB-5 GC Rear Column: DB-608 Instrument ID: PESTGC3.i Matrix: WATER

Sample Volume: 610 ml

Extract Final Volume: 5.0 ml

Dilution Factor: 1.0

Front File ID: zf035274.d Rear File ID: zr035274.d

# ORGANOCHLORINE PCBs - GC/ECD METHOD 8082

	7007	Method Detect:	ion
<u>Parameter</u>	Analytical Results	Limit	Quant.
	<u>Units: ug/l</u>	<u> Units: ug/l</u>	Column
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262	ND ND ND ND ND ND ND ND	0.82 0.82 0.82 0.82 0.82 0.82 0.82	R R R R R R
Aroclor-1268	ND	0.82 0.82	R R

Client ID: MW-2C-Dis Site: Yonkers Waterfront

Lab Sample No: 95712

Lab Job No: 1963

Date Sampled: 11/09/98
Date Received: 11/09/98

Matrix: WATER Level: LOW

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: ug/l	Instrument Detection Limit	<u>Oual</u>	<u>M</u>
Aluminum	ND	58.2		P
Antimony	ND	4.6		
Arsenic	ND	. 3.8		P
Barium	592	1.4		P
Beryllium	ND	0.20		P
Cadmium	ND	0.40		P
Calcium	187000	42.2		P
Chromium	ND	1.0		P
Cobalt	1.9	1.2	В	99999999999
Copper	ND	3.5		P
Iron	333	41.5		P
Lead	ND	2.5		P
Magnesium	18900	40.3		P
Manganese	3180	1.1		P
Mercury	<sup>®</sup> ND	0.10		CV
Nickel	2.9	2.1	В	P
Potassium	18800	1647		P P P
Selenium	ND	4.8		P
Silver	ND	1.4		P
Sodium	89800	426		P
Thallium	ND	4.8		P
Vanadium	ND	1.9		P P
Zinc	276	4.5		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: MW-4C-Dis
Site: Yonkers Waterfront

Lab Sample No: 95713 Lab Job No: 1963

Date Sampled: 11/09/98
Date Received: 11/09/98

Matrix: WATER Level: LOW

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	<u>Oual</u>	<u>M</u>
Aluminum	305	116	В	P
Antimony	ND	9.2		P
Arsenic	9.0	7.6		P
Barium	446	2.8		P
Beryllium	ND	0.40		P
Cadmium	ND	0.40		P
Calcium	267000	42.2		P
Chromium	ND	1.0		P
Cobalt	ND	1.2		P
Copper	ND	3.5		P
Iron	3650	41.5		P
Lead	5.1	2.5	В	P
Magnesium	156000	40.3		P
Manganese	4870	1.1		P
Mercury	ND	0.10		CV
Nickel	ND	2.1		P
Potassium	65500	300		₽
Selenium	ND	4.8		P
Silver	ND	1.4		P
Sodium	1330000	426		P
Thallium	ND	4.8		P
Vanadium	ND	1.9		P
Zinc	107	4.5		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: Field Blank-Dis Site: Yonkers Waterfront

Lab Sample No: 95716

Lab Job No: 1963

Date Sampled: 11/09/98 Date Received: 11/09/98

Matrix: WATER Level: LOW

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	<u>Oual</u>	<u>M</u>
Aluminum	ND	58.2		P
Antimony	ND	4.6		P
Arsenic	ND	3.8		P
Barium	ND ·	1.4		
Beryllium	ND	0.20		P P P
Cadmium	ND	0.40		P
Calcium	ND	42.2		P
Chromium	ND	1.0		P
Cobalt	ND	1.2		P P
Copper	ND	3.5		P
Iron	ND	41.5		
Lead	ND	2.5		P P P
Magnesium	ND	40.3		P
Manganese	ND	1.1		P
Mercury	ND	0.10		CV
Nickel	ND	2.1		P
Potassium	ND	300		P
Selenium	ND	4.8		P
Silver	ND	1.4		P
Sodium	ND	426		P
Thallium	ND	4.8		P
Vanadium	ND	1.9		P
Zinc	8.0	4.5	В	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

Client ID: MW-4AC-Dis Site: Yonkers Waterfront

Lab Sample No: 95717

Lab Job No: 1963

Date Sampled: 11/09/98 Date Received: 11/09/98

Matrix: WATER Level: LOW

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result <u>Units: ug/l</u>	Instrument Detection <u>Limit</u>	<u> Oual</u>	<u>M</u>
Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium	278 ND 10.4 442 ND ND 261000 ND ND ND 3590 5.3 153000 4740 ND ND ND ND 1290000 ND ND	58.2 4.6 3.8 1.4 0.20 0.40 42.2 1.0 1.2 3.5 41.5 2.5 40.3 1.1 0.10 2.1 300 4.8 1.4 426 4.8 1.9	В	99999999999 8999999999
Zinc	90.1	4.5		P P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report) M Column - Method Code (See Section 2 of Report)

# STL - Envirotech

777 New Durham Road Edison, New Jersey 08817 Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

255 Z, 957 456 997 951 LAB USE ONLY PAGE / OF Project No: 2570 11E56 1983 Numbers 25307 25,40 35.208 Job No: 30556 Sample 95,205 Ed Virote Car Water Metals Filtered (Yes/No)? LISIS Other: andial The yelak (thialpend NY: Ruch plissolved Tail Helals Incl 不了 YOUNGS TOMETHERNY Company Company Company Company ANALYSIS REQUESTED (ENTER TO BELOW TO INDICATE REQUEST) solawn Plus State (Location of site): NJ: Site/Project Identification Regulatory Program: 2) R P. en Ber ॥ ह्य कि 7 × 701 Received by " 4 Received by Received by Received by 120/2 4 × × FILTERIES ଳ 4 11-7-11 32 ENVINO TECH 119-98 1/640 R γ, ス 1 KILLY RELL Samplers Name ( Printed ) No. of. Water: Cont. Soli Date / Time Date / Time Date / Time Date / Time Rush Charges Authorized For: 0 nalysis Turnaround Time Matrix 4000 Fare Ø A \* 2 Week Standard 1 Week Preservation Used (1= ICE, 2 = HCi, 3 = H<sub>2</sub>SO<sub>4</sub>, 4 = HNO<sub>3</sub>, 5 = NaOH Other P.O. # Time 20 102.72 11-9-95 11-9 97 1-9-48 1-9-63 11/2/29 11-9-11 11-9.95 Date 914 949 7557 7 = Other Sammes Company Company Company Company State > WATERNIT 34 S. BROMOWY Sample Identification P. D. Blanik ELELD BLOWN! MW-4AC Name ( for report and Invoice ) MW. 4A MV- 3A 6 = Other Mri - 40 NIW - 20 1250 WHITE PIMINS Special Instructions 3887 PH MF TONKERLS AKRF Relinquished by Relinquished by Relinquished by Relinquished to Company Address 2

Laboratory Certifications: New Jersey (12543), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

Massachusetts (M-NJ312), North Carolina (No. 578)